

E1-12

202, 1006 (New), 1007 (New), 1014.3, 1015, 1020.1, 1021 (IFC [B] 1006 (New), 1007 (New), 1014.3, 1015, 1020.1, 1021)

Proposed Change as Submitted

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

Revise as follows:

SECTION 202 DEFINITIONS

COMMON PATH OF EGRESS TRAVEL. That portion of the exit access travel distance measured from the most remote point within a story to that point where ~~which the occupants are required to traverse before two~~ have separate and distinct paths of egress travel access to two exits or exit access doorways are available. Paths that merge are common paths of travel. Common paths of egress travel shall be included within the permitted travel distance.

Revise as follows:

1014.3 (IFC [B] 1014.3) Common path of egress travel. The common path of egress travel shall not exceed the common path of egress travel distances in Table 1014.3.

**TABLE 1014.3 (TABLE [B] 1014.3)
COMMON PATH OF EGRESS TRAVEL**

OCCUPANCY	WITHOUT SPRINKLER SYSTEM (feet)		WITH SPRINKLER SYSTEM (feet)
	Occupant Load		
	OL ≤ 30	OL > 30	
B, S ^d	100	75	100 ^a
U	100	75	75 ^a
F	75	75	100 ^a
H-1, H-2, H-3	Not Permitted	Not Permitted	25 ^a
R-2	75	75	125 ^b
R-3 ^e	75	75	125 ^b
I-3	100	100	100 ^a
All others ^c	75	75	75 ^{a,b}

For SI: 1 foot = 304.8 mm.

- a. Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.
- b. Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2. See Section 903 for occupancies where automatic sprinkler systems are permitted in accordance with Section 903.3.1.2.
- c. For a room or space used for assembly purposes having fixed seating, see Section 1028.8.
- d. The length of a common path of egress travel in a Group S-2 open parking garage shall not be more than 100 feet (30 480 mm).
- e. The length of a common path of egress travel in a Group R-3 occupancy located in a mixed-occupancy building.
- f. For the distance limitations in Group I-2, see Section 407.4.

SECTION 1015 1006 (IFC [B] 1015 1006) NUMBERS OF EXITS AND EXIT ACCESS DOORWAYS

1015.1 1006.1 (IFC [B] 1015.1 1006.1) General Exits or exit access doorways from spaces. The number of exits or exit access doorways required within the means of egress system shall comply with the provisions of Section 1006.2 for spaces and Section 1006.3 for stories. ~~Two exits or exit access doorways from any space shall be provided where one of the following conditions exists:~~

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

Exceptions:

1. In Group R-2 and R-3 occupancies, one *means of egress* is permitted within and from individual dwelling units with a maximum *occupant load* of 20 where the dwelling unit is equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2.
2. Care suites in Group I-2 occupancies complying with Section 407.4.3.
2. The *common path of egress travel* exceeds one of the limitations of Section 1014.3.
3. Where required by Section 1015.3, 1015.4, 1015.5, or 1015.6.

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

**TABLE 1015.1 (IFC [B] TABLE 1015.1)
SPACES WITH ONE EXIT OR EXIT ACCESS DOORWAY**

OCCUPANCY	MAXIMUM OCCUPANT LOAD
A, B, E, F, M, U	49
H-1, H-2, H-3	3
H-4, H-5, I-1, I-2, I-3, I-4, R	10
S	29

1006.2 (IFC [B] 1006.2) Egress from spaces. Rooms, areas or spaces, including mezzanines, within a story or basement shall be provided with the number of exits or access to exits in accordance with this section.

1006.2.1 (IFC [B] 1006.2.1) Egress based on occupant load and common path of egress travel distance. Two exits or exit access doorways from any space shall be provided where the design occupant load or the common path of egress travel distance exceeds the values listed in Table 1006.2.1.

Exceptions:

1. In Group R-2 and R-3 occupancies, one *means of egress* is permitted within and from individual dwelling units with a maximum *occupant load* of 20 where the dwelling unit is equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2 and the common path of egress travel does not exceed 125 feet (38 100 mm).
2. Care suites in Group I-2 occupancies complying with Section 407.4.

**TABLE 1006.2.1 (IFC [B] 1006.2.1)
SPACES WITH ONE EXIT OR EXIT ACCESS DOORWAY**

<u>OCCUPANCY</u>	<u>MAXIMUM OCCUPANT LOAD OF SPACE</u>	<u>MAXIMUM COMMON PATH OF EGRESS TRAVEL DISTANCE (feet)</u>		
		<u>WITHOUT SPRINKLER SYSTEM</u>		<u>WITH SPRINKLER SYSTEM</u>
		<u>Occupant Load</u>		
		<u>OL ≤ 30</u>	<u>OL > 30</u>	
<u>A^a, E, M, U</u>	<u>49</u>	<u>75</u>	<u>75</u>	<u>75^b</u>
<u>B</u>	<u>49</u>	<u>100</u>	<u>75</u>	<u>100^b</u>
<u>F</u>	<u>49</u>	<u>75</u>	<u>75</u>	<u>100^b</u>
<u>H-1, H-2, H-3</u>	<u>3</u>	<u>NP</u>	<u>NP</u>	<u>25^b</u>

<u>OCCUPANCY</u>	<u>MAXIMUM OCCUPANT LOAD OF SPACE</u>	<u>MAXIMUM COMMON PATH OF EGRESS TRAVEL DISTANCE (feet)</u>		
		<u>WITHOUT SPRINKLER SYSTEM</u>		<u>WITH SPRINKLER SYSTEM</u>
		<u>Occupant Load</u>		
		<u>OL ≤ 30</u>	<u>OL > 30</u>	
<u>H-4, H-5, I-1, I-2, I-4, R-1, R-3, R-4</u>	<u>10</u>	<u>NP</u>	<u>NP</u>	<u>75^b</u>
<u>I-3</u>	<u>10</u>	<u>NP</u>	<u>NP</u>	<u>100^b</u>
<u>R-2</u>	<u>10</u>	<u>NP</u>	<u>NP</u>	<u>125^c</u>
<u>R-3</u>	<u>10</u>	<u>NP</u>	<u>NP</u>	<u>125^d</u>
<u>S</u>	<u>29</u>	<u>100</u>	<u>75^e</u>	<u>100^b</u>
<u>U</u>	<u>49</u>	<u>100</u>	<u>75</u>	<u>75^b</u>

For SI: 1 foot = 304.8 mm.

NP – Not Permitted

- For a room or space used for assembly purposes having fixed seating, see Section 1028.8.
- Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.
- Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2. See Section 903 for occupancies where automatic sprinkler systems are permitted in accordance with Section 903.3.1.2.
- The length of common path of egress travel distance in a Group R-3 occupancy located in a mixed occupancy building shall be not more than 125 feet (38 100 mm).
- The length of common path of egress travel distance in a Group S-2 open parking garage shall be not more than 100 feet (30 480 mm).

~~4045.1.4~~ 1006.2.1.1 (IFC [B] ~~4045.1.4~~ 1006.2.1.1) Three or more exits or exit access doorways.

Three exits or exit access doorways shall be provided from any space with an occupant load of 501-1,000. Four exits or exit access doorways shall be provided from any space with an occupant load greater than 1,000.

~~1015.2 (IFC [B] 1015.2) Exit or exit access doorway arrangement.~~ (relocated to new Section 1007)

~~1015.2.1 (IFC [B] 1015.2.1) Two exits or exit access doorways.~~ (relocated to new Section 1007)

~~1015.2.2 (IFC [B] 1015.2.2) Three or more exits or exit access doorways.~~ (relocated to new Section 1007)

1006.2.2 (IFC [B] 1006.2.2) Egress based on use. The numbers of exits or access to exits shall be in accordance with this section.

~~4045.3~~ 1006.2.2.1 (IFC [B] ~~4045.3~~ 1006.2.2.1) Boiler, incinerator and furnace rooms. Two *exit access doorways* are required in boiler, incinerator and furnace rooms where the area is over 500 square feet (46 m²) and any fuel-fired equipment exceeds 400,000 British thermal units (Btu) (422 000 KJ) input capacity. Where two *exit access doorways* are required, one is permitted to be a fixed ladder or an *alternating tread device*. *Exit access doorways* shall be separated by a horizontal distance equal to one-half the length of the maximum overall diagonal dimension of the room.

~~4045.4~~ 1006.2.2.2 (IFC [B] ~~4045.4~~ 1006.2.2.2) Refrigeration machinery rooms. Machinery rooms larger than 1,000 square feet (93 m²) shall have not less than two *exits* or *exit access doors*. Where two *exit access doorways* are required, one such doorway is permitted to be served by a fixed ladder or an *alternating tread device*. *Exit access doorways* shall be separated by a horizontal distance equal to one-half the maximum horizontal dimension of room.

All portions of machinery rooms shall be within 150 feet (45 720 mm) of an *exit* or *exit access doorway*. An increase in travel distance is permitted in accordance with Section 1016.1.

Doors shall swing in the direction of egress travel, regardless of the *occupant load* served. Doors shall be tight fitting and self-closing.

1045.5 1006.2.2.3 (IFC [B] 1045.5 1006.2.2.3) Refrigerated rooms or spaces. Rooms or spaces having a floor area larger than 1,000 square feet (93 m²), containing a refrigerant evaporator and maintained at a temperature below 68°F (20°C), shall have access to not less than two *exits* or *exit access* doors.

Travel distance shall be determined as specified in Section 1016.1, but all portions of a refrigerated room or space shall be within 150 feet (45 720 mm) of an *exit* or *exit access* door where such rooms are not protected by an *approved automatic sprinkler* system. Egress is allowed through adjoining refrigerated rooms or spaces.

Exception: Where using refrigerants in quantities limited to the amounts based on the volume set forth in the *International Mechanical Code*.

1045.6 1006.2.2.4 (IFC [B] 1045.6 1006.2.2.4) Day care facilities. Day care facilities, rooms or spaces where care is provided for more than 10 children that are 2-1/2 years of age or less, shall have access to not less than two exits or exit access doorways.

SECTION 1021 (IFC [B] 1021) NUMBER OF EXITS AND EXIT CONFIGURATION

1021.3.1 (IFC [B] 1021.3.1) 1006.3 (IFC [B] 1006.3) Access to exits at adjacent levels. Egress from stories or occupied roofs ~~The means of egress system serving any story or occupied roof shall be provided with the number of exits or access to exits based on the aggregate occupant load served in accordance with this section.~~ Access to exits at other levels shall be by stairways or ramps. Where access to exits occurs from adjacent building levels, the horizontal and vertical exit access travel distance to the closest exit shall not exceed that specified in Section 1016.1. Access to exits at other levels shall be from an adjacent story.

Each story above the second story of a building shall have a minimum of one interior or exterior exit stairway, or interior or exterior exit ramp. Where a minimum of three or more exits, or access to exits are required, a minimum of 50 percent of the required exits shall be interior or exterior exit stairways or ramps.

Exception: Landing platforms or roof areas for helistops that are less than 60 feet (18 288 mm) long, or less than 2,000 square feet (186 m²) in area, shall be permitted to access the second exit by a fire escape, alternating tread device or ladder leading to the story or level below.

Exceptions:

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

1021.1 (IFC [B] 1021.1) 1006.3.1 (IFC [B] 1006.3.1) General Egress based on occupant load. Each story and occupied roof shall have the minimum number of exits, or access to exits, as specified in Table 1006.3.1 this section. A single exit or access to a single exit shall be permitted in accordance with Section 1006.3.3. The required number of exits, or exit access stairways or ramps providing access to exits, from any story shall be maintained until arrival at the exit discharge grade or a public way. ~~Exits or access to exits from any story shall be configured in accordance with this section.~~ Each story above the second story of a building shall have a minimum of one interior or exterior exit stairway, or interior or exterior exit ramp. At each story above the second story that requires a minimum of three or more exits, or access to exits, a minimum of 50 percent of the required exits shall be interior or exterior exit stairways, or interior or exterior exit ramps.

Exceptions:

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

TABLE 1006.3.1 (IFC [B] TABLE 1006.9.3.1)
MINIMUM NUMBER OF EXITS OR ACCESS TO EXITS PER STORY

<u>OCCUPANT LOAD PER STORY</u>	<u>MINIMUM NUMBER OF EXITS OR ACCESS TO EXITS FROM STORY</u>
1-500	<u>2</u>
501-1,000	<u>3</u>
More than 1,000	<u>4</u>

1021.2.4 (IFC [B] 1021.2.4) Three or more exits. ~~Three exits, or exit access stairways or ramps providing access to exits at other stories, shall be provided from any story or occupied roof with an occupant load from 501 to and including 1,000. Four exits, or exit access stairways or ramps providing access to exits at other stories, shall be provided from any story or occupied roof with an occupant load greater than 1,000.~~

1021.2.5 1006.3.2 (IFC [B] 1021.2.5 1006.3.2) Additional exits. In buildings over 420 feet in height, additional exits shall be provided in accordance with Section 403.5.2.

1021.2 1006.3.3 (IFC [B] 1021.2 1006.3.3) Single exits Exits from stories. ~~Two exits, or exit access stairways or ramps providing access to exits, from any story or occupied roof shall be provided~~ A single exit or access to a single exit shall be permitted from any story or occupied roof, where one of the following conditions exists:

1. The occupant load or number of dwelling units ~~exceeds one of~~ and common path of egress travel distance does not exceed the values in Table 1006.3.3(1) or 1006.3.3(2) ~~1021.2(1) or 1021.2(2).~~
2. ~~The exit access travel distance exceeds that specified in Table 1021.2(1) or 1021.2(2) as determined in accordance with the provisions of Section 1016.1.~~
3. ~~Helistop landing areas located on buildings or structures shall be provided with two exits, or exit access stairways or ramps providing access to exits.~~

Exceptions:

- ~~42.~~ Rooms, areas and spaces complying with Table 1006.2.1 ~~Section 1015.1~~ with exits that discharge directly to the exterior at the level of exit discharge, are permitted to have one exit.
- ~~23.~~ Group R-3 occupancy buildings shall be permitted to have one exit.
- ~~34.~~ Parking garages where vehicles are mechanically parked shall be permitted to have one exit or access to a single exit.
- ~~45.~~ Air traffic control towers shall be provided with the minimum number of exits specified in Section 412.3.
- ~~5.~~ Individual dwelling units in compliance with Section 1021.2.3.
- ~~6.~~ Group R-3 and R-4 congregate residences shall be permitted to have one exit.
- ~~7.~~ Exits serving specific spaces or areas need not be accessed by the remainder of the story when all of the following are met:
 - ~~7.1~~ The number of exits from the entire story complies with Section 1021.2.4;
 - ~~7.2~~ The access to exits from each individual space in the story complies with Section 1015.1, and
 - ~~7.3~~ All spaces within each portion of a story shall have access to the minimum number of approved independent exits based on the occupant load of that portion of the story, but not less than two exits.

~~1021.2.3 (IFC [B] 1021.2.3) Single-story or multi-story dwelling units.~~

7. Individual single-story or multi-story dwelling units shall be permitted to have a single exit or access to a single exit from the dwelling unit provided that all of the following criteria are met:
- 7.1.4. The dwelling unit complies with Section ~~4015.4~~ 1006.2.1 as a space with one means of egress and
- 7.2.2. Either the exit from the dwelling unit discharges directly to the exterior at the level of exit discharge, or the exit access outside the dwelling unit's entrance door provides access to not less than two approved independent exits.

**~~TABLE 1021.2(1) TABLE 1006.3.3(1) (IFC [B] TABLE 1021.2(1) TABLE 1006.3.3(1))~~
STORIES WITH ONE EXIT OR ACCESS TO ONE EXIT FOR R-2 OCCUPANCIES**

STORY	OCCUPANCY	MAXIMUM NUMBER OF DWELLING UNITS	MAXIMUM COMMON PATH OF EGRESS EXIT ACCESS TRAVEL DISTANCE (feet)
Basement, first, second or third story <u>above grade plane</u>	R-2 ^{a, b}	4 dwelling units	125 feet
Fourth story and above <u>grade plane and higher</u>	NP	NA	NA

For SI: 1 foot = 3048 mm.

NP – Not Permitted

NA – Not Applicable

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

b. This table is used for Group R-2 occupancies consisting of dwelling units. For Group R-2 occupancies consisting of sleeping units, use Table 1006.3.3(2) ~~1021.2(2)~~..

**~~TABLE 1021.2(2) TABLE 1006.3.3(2) (IFC [B] TABLE 1021.2(2) TABLE 1006.3.3(2))~~
STORIES WITH ONE EXIT OR ACCESS TO ONE EXIT FOR OTHER OCCUPANCIES**

STORY	OCCUPANCY	MAXIMUM OCCUPANTS <u>LOAD</u> PER STORY	MAXIMUM COMMON PATH OF EGRESS EXIT ACCESS TRAVEL DISTANCE (feet)
First story <u>above or below grade plane</u>	A, B ^a , E F ^a , M, U, S ^a	49 occupants	75 feet
	H-2, H-3	3 occupants	25 feet
	H-4, H-5, I, R-1, R-2 ^{b, c} , R-4	10 occupants	75 feet
	S	29 occupants	100 feet
Second story <u>above grade plane</u>	B, F, M, S	29 occupants	75 feet
Third story and above <u>grade plane and higher</u>	NP	NA	NA

For SI: 1 foot = 304.8 mm.

NP – Not Permitted

NA – Not Applicable

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

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

c. This table is used for Group R-2 occupancies consisting of sleeping units. For Group R-2 occupancies consisting of dwelling units, use Table 1006.3.3(1) ~~1021.2(1)~~..

~~1021.2.1~~ 1006.3.3.1 (IFC [B] ~~1021.2.1~~ 1006.3.3.1) Mixed occupancies. Where one exit, or exit access stairway or ramp providing access to exits at other stories, is permitted to serve individual stories, mixed occupancies shall be permitted to be served by single exits provided each individual occupancy complies with the applicable requirements of Table 1006.3.3(1) ~~1021.2(1)~~ or Table 1006.3.3(2) ~~1021.2(2)~~ for that occupancy. Where applicable, cumulative occupant loads from adjacent occupancies shall be considered in accordance with the provisions of Section 1004.1. In each story of a mixed occupancy building, the maximum number of occupants served by a single exit shall be such that the sum of the ratios of the calculated number of occupants of the space divided by the allowable number of occupants for each occupancy does not exceed one.

~~1021.2.2~~ 1006.3.4 (IFC [B] ~~1021.2.2~~ 1006.3.4) Basements. A basement provided with one exit shall not be located more than one story below grade plane.

~~1021.3 (IFC [B] 1021.3) Exit configuration.~~ ~~Exits, or exit access stairways or ramps providing access to exits at other stories, shall be arranged in accordance with the provisions of Section 1015.2 through 1015.2.2. Exits shall be continuous from the point of entry into the exit to the exit discharge.~~

~~1021.4~~ 1006.3.5 (IFC [B] ~~1021.4~~ 1006.3.5) Vehicular ramps. Vehicular ramps shall not be considered as an exit access ramp unless pedestrian facilities are provided.

1006.3.6 (IFC [B] 1006.3.6) Helistop Platforms. Helistop landing areas located on buildings or structures shall be provided with two exits, or exit access stairways or ramps providing access to exits.

Exception: Landing platforms or roof areas for helistops that are less than 60 feet (18 288 mm) long, or less than 2,000 square feet (186 m²) in area, shall be permitted to access the second exit by a fire escape, alternating tread device or ladder leading to the story or level below.

SECTION 1007(IFC [B] 1007) **EXIT AND EXIT ACCESS DOORWAY CONFIGURATION**

~~1045.2~~ 1007.1 (IFC [B] ~~1045.2~~ 1007.1) General Exit or exit access doorway arrangement. Exits and exit access doorways serving spaces, including individual building stories, shall be separated in accordance with the provisions of this section. Required exits shall be located in a manner that makes their availability obvious. Exits shall be unobstructed at all times. Exit and exit access doorways shall be arranged in accordance with Sections 1015.2.1 and 1015.2.2.

~~1045.2.1~~ 1007.1.1 (IFC [B] ~~1045.2.1~~ 1007.1.1) Two exits or exit access doorways. Where two exits or exit access doorways are required from any portion of the exit access, the exit doors or exit access doorways shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the story or area to be served measured in a straight line between exit doors or exit access doorways. Interlocking or scissor stairs shall be counted as one exit stairway.

Exceptions:

- 1 2. Where a building is equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2, the separation distance of the exit doors or exit access doorways shall not be less than one-third of the length of the maximum overall diagonal dimension of the area served.
- 2 4. Where interior exit stairways are interconnected by a 1-hour fire-resistance-rated corridor conforming to the requirements of Section 1018, the required exit separation shall be measured along the shortest direct line of travel within the corridor.

~~1045.2.2~~ 1007.1.2 (IFC [B] ~~1045.2.2~~ 1007.1.2) Three or more exits or exit access doorways. Where access to three or more exits is required, at least two exit doors or exit access doorways shall be arranged in accordance with the provisions of Section 1007.1.1. Additional required exits, or access to exits shall be located a reasonable distance apart such that if one becomes involved, the others will be

available.

1007.2 (IFC [B] 1007.2) Measurement. The required separation distance between exits or exit access doorways shall be measured in accordance with the following:

1. The separation distance to exit or exit access doorways shall be measured to the nearest point along the width of the doorway.
2. The separation distance to exit access stairways shall be measured to the closest riser.
3. The separation distance to exit access ramps shall be measured to the start of the ramp run.

(Renumber remaining sections.)

SECTION 1020 (IFC [B] 1020) EXITS

1020.1 (IFC [B] 1020.1) General. Exits shall comply with Sections 1020 through 1026 and the applicable requirements of Sections 1003 through 1013. An exit shall not be used for any purpose that interferes with its function as a means of egress. Once a given level of exit protection is achieved, such level of protection shall not be reduced until arrival at the exit discharge. Exits shall be continuous from the point of entry into the exit to the exit discharge.

Reason: This proposal is submitted by the ICC Building Code Action Committee (BCAC). The BCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the BCAC has held 3 open meetings and over 15 workgroup calls which included members of the BCAC as well as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: <http://www.iccsafe.org/cs/BCAC/Pages/default.aspx>.

This proposal is a continuation of Item E5-09/10 that was approved for inclusion in the 2012 IBC. That is, the proposal intends to clarify current IBC means of egress requirements resulting in greater user friendliness and increased uniformity in the application of these important provisions.

Currently, both Sections 1015 and 1021 contain provisions for the determination of the number of exits and exit access doorways. The relationship between the two sections is not particularly obvious to many code practitioners. This proposal combines the two sections and places their various provisions in technical context. This is partially achieved through formatting. Section 1015.2 prescribes the provisions for the determination of the number of required exits or exit access to exits from any individual space. Section 1015.3 provides the provisions for the determination of the number of required exits or access to exits from stories or occupied roofs.

Recognizing the importance of tables during the design/review process, improvements were made to improve understanding and consistency. Fundamental to the proper determination of the number of required exits is the consideration of design occupant loads and occupant remoteness. Currently, only Table 1021.2(2) includes both variables (number of occupants per story and exit access travel distance). Section 1015.1 currently addresses the occupant load in Table 1015.1; however, it requires the user to determine occupant remoteness requirements at Section 1014.3 that are indicated as "common path of egress travel." For the 2012 Edition of the IBC, common path of egress travel provisions have been consolidated into a tabular format. The only remaining text of Section 1014.3 states, "The common path of egress travel shall not exceed the common path of egress travel distances in Table 1014.3," without contextual reference to Section 1015.1 that requires that two exits or exit access doorways from any space shall be provided where the common path of egress travel exceeds one of the limitations of Section 1014.3. This technical disconnect is repaired through the consolidation of Tables 1015.1 and 1014.3 in a format already contained in Table 1021.1(2). The current difference in occupant remoteness terminology (exit access travel distance vs. common path of egress travel) was resolved in favor of common path of egress travel distance.

To increase consistency in interpretations and application, the definition of "COMMON PATH OF EGRESS TRAVEL" has been modified. The proposed language emphasizes that the common path of egress travel is initially measured identically to exit access travel distance; however, technically terminates at an earlier point (that point where an occupant has separate and distinct access to two exits or exit access doorways vs. to an entrance to an exit). The somewhat vague wording in the current definition results in inconsistent applications of this important provision. It should be noted that the *NFPA 101 Handbook* states that common path of egress travel is a portion of the exit access travel distance. Many rely on that document to interpret IBC requirements. Additionally, the merging provision has been deleted. This is a moot point because once a second exit or exit access doorway (to include any point where an occupant enters an intervening room, corridor, exit access stairway or exit access ramp) is required, it must be separated in accordance with Section 1015.2. In recent code development cycles, many definitions have been edited to more accurately describe means of egress design requirements in context with the IBC system philosophy. This is another example of more accurately describing what is intended.

The establishment of a single method and term for the determination of occupant remoteness will greatly benefit code practitioners. The resultant Table 1006.2.1 is consistent in format, terminology and application to Table 1006.3.3(2) and will result in more accurate and consistent determination of the required number of exits and access to exits.

This proposal deletes current Section 1021.2, Exception 7. This provision was new to the 2009 Edition of the IBC and, according to the proponent's reason statement, was intended to coordinate the fragmented requirements of Sections 1015 and 1021. The consolidation of the two sections eliminates the need for the provision. The exception can be considered moot because

it represents an exception to a non-requirement. There is no requirement for specific spaces to be accessed by the remainder of the story. The performance nature of number of exits/exit access provisions allows each space to be designed based on its own technical merit on an individual and collective basis. The conditions of the exception simply restate fundamental means of egress provisions. Based on the stated requirements of this proposal, the deleted exception is unnecessary.

Formerly, both Sections 1015 and 1021 contained provisions for the determination of exit/exit access configuration/arrangement/separation. Inasmuch as this issue is a major means of egress design requirement, the provisions have been consolidated into a new stand-alone section, Section 1007. Additionally, separation measurement provisions have been clarified. Currently, there are no specific measurement points for the determination of exit/exit access separation. New Section 1007.2 provides guidance for measuring to doors, exit access stairways and exit access ramps. This will reduce subjectivity in the determination of exit/exit access configuration.

Numbers of exits/exit access doorways and exit/exit access doorway configuration provisions have been located in Sections 1006 and 1007 respectively. This creates a sectional sequence for occupant load based means of egress provisions. Section 1004 covers design occupant load determination. Means of egress sizing requirements based on occupant load are contained in Section 1005. Now, occupant load based numbers requirements are placed in Section 1006 with multiple exit/exit access doorway arrangement provisions following in Section 1007. This logical format should assist designers and enforcement officials alike.

It was also determined that a general exit provision addressing exit continuity is incorrectly located in current Section 1021.3. It has been properly located in Section 1020.1.

In summary, this proposal represents a continuing effort to improve means of egress provisions for the purposes of philosophical functionality, technical consistency and user friendliness. Approval of this proposal will simplify the interpretation and application of IBC means of egress provisions while maintaining the highest traditions of fire and life safety.

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

1015-E-BAJNAI-BCAC.docx

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: Consolidation of information for number of exits from a space and floor (Section 1015 and 1022) reduces duplication of language and should simplify the code for the users. The understanding on the common path of travel requirements should be enhanced. In the definition for 'common path of travel', by the addition of 'exit access doorways', there is concern that where two exit access doorways are available, that this could be interpreted as ending the common path of travel. Adding back into the definition, "paths that merge are common path of travel" would address the issue. There may also be a problem with proposed travel distance measurements in new Section 1007.2.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment 1:

Gregory R. Keith, Professional heuristic Development, representing The Boeing Company, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

COMMON PATH OF EGRESS TRAVEL. That portion of the exit access travel distance measured from the most remote point of each room, area or space within a story to that point where the occupants have separate and distinct access to two exits or exit access doorways.

(Portions of code change remain unchanged)

Commenter's Reason: This public comment is intended to clarify the intent of the definition for common path of egress travel. The original proposal was based on the last sentence of the 2012 IBC definition, "Common paths of travel shall be included within the permitted travel distance." and the language in Section 1016.3, "Exit access travel distance shall be measured from the most remote point within a story..." The original E1-12 definition could be interpreted such that the common path or egress travel need be considered from only one point (the most remote) on a given story. Obviously, all potential paths of egress travel need to be considered when establishing occupant remoteness for the purposes of determining multiple exit or exit access doorway requirements. Clarifying that the path of travel originating from any room, area or space should be evaluated when determining common paths of egress travel will eliminate literal interpretations of the original definition. Additionally, the reference to a single story has been eliminated. Section 1021.3.1 allows for access to exits at an adjacent level. Common path of egress travel requirements could potentially apply to a multi-level design condition. Approval of this modification will clarify the definition of

common path of egress travel for the benefit of all users. This modification is consistent with the 2012 means of egress requirements established by Item E5-09/10.

Public Comment 2:

William E. Koffel, P.E., Koffel Associates, Inc., requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

COMMON PATH OF EGRESS TRAVEL. That portion of the exit access travel distance measured from the most remote point within a story to that point where the occupants have separate and distinct access to two exits or exit access doorways. Paths that merge are common paths of travel.

Commenter's Reason: I testified in opposition to the proposed change to the definition of "common path of egress travel" in Dallas since the language proposed in E1 would allow the common path of egress travel measurement to stop at a point where occupants have separate and distinct access to two exits. For example, if a room has two exit access doorways one could stop measuring common path of travel at a point in the room where access to the two doors is by a separate and distinct path. However, if those doors lead to a dead-end corridor and the occupant needs to travel in one direction in the corridor, there is still a common path of travel.

This issue was noted by the Committee in the Report of the Public Hearing:

In the definition for 'common path of travel', by the addition of 'exit access doorways', there is concern that where two exit access doorways are available, that this could be interpreted as ending the common path of travel. Adding back into the definition, "paths that merge are common path of travel" would address the issue.

The Public Comment has been submitted to address the concern I raised by including the solution recommended by the Committee.

Public Comment 3:

Lee J. Kranz, City of Bellevue Washington representing Washington Association of Building Officials Technical Code Development Committee, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

SECTION 202 DEFINITIONS

COMMON PATH OF EGRESS TRAVEL. That portion of the exit access travel distance measured from the most remote point within a story to that point where the occupants have separate and distinct access to two exits or exit access doorways. Paths that merge are common paths of travel. Common paths of egress travel shall be included within the permitted travel distance.

1007.2 (IFC [B] 1007.2) Measurement. The required separation distance between exits or exit access doorways shall be measured in accordance with the following:

1. The separation distance to exit or exit access doorways shall be measured to the nearest point along the width doorway.
2. The separation distance to exit access stairways shall be measured to the nearest point along the width of the closest riser.
3. The separation distance to exit access ramps shall be measured to the nearest point along the width of the start of the ramp run.

Commenter's Reason: Code change E1-12 was approved by the Egress Committee in Dallas but there was discussion about the need to maintain the "Paths that merge are common paths of travel" text. This language is needed to clarify that merging paths are still counted as part of the common path of travel and the measurement continues until the point where two separated paths are available. The length of a common path of travel is limited to insure that occupants will not have to travel excessive distances to reach safety or to the point where if one path is compromised the other will be tenable.

Section 1007.2 provides a more specific and precise method of measuring the required separation between exits or exit access points. The proposed changes to items #2 and #3 create consistency with the methodology used in item #1 of Section 1007.2.

In the Hearings Results, the Committee action indicated that *"The understanding on the common path of travel requirements should be enhanced. In the definition for 'common path of travel', by the addition of 'exit access doorways', there is concern that where two exit access doorways are available, that this could be interpreted as ending the common path of travel. Adding back into the definition, "paths that merge are common path of travel" would address the issue. There may also be a problem with proposed*

travel distance measurements in new Section 1007.2.” This public comment addresses the issues discussed at the Code Development Hearings for E1-12.

Public Comment 4:

Dennis Richardson, PE, CBO, City of Salinas, representing Tri-Chapter (Peninsula, East Bay and Monterey Chapters, ICC), requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

SECTION 202 DEFINITIONS

COMMON PATH OF EGRESS TRAVEL. ~~That portion of the exit access travel distance measured from the most remote point within a story to that point where~~ the occupants are required to traverse before two have separate and distinct paths of egress travel access to two exits or ~~exit access doorways~~ are available. Paths that merge are common paths of travel. Common paths of egress travel shall be included within the permitted travel distance.

(Portions of code change remain unchanged)

Commenter’s Reason: E1-12 makes improvements to clarify how the maximum occupant load in a space as well as the maximum common path of egress travel both contribute to determining whether or not a space needs two exits or exit access doors.

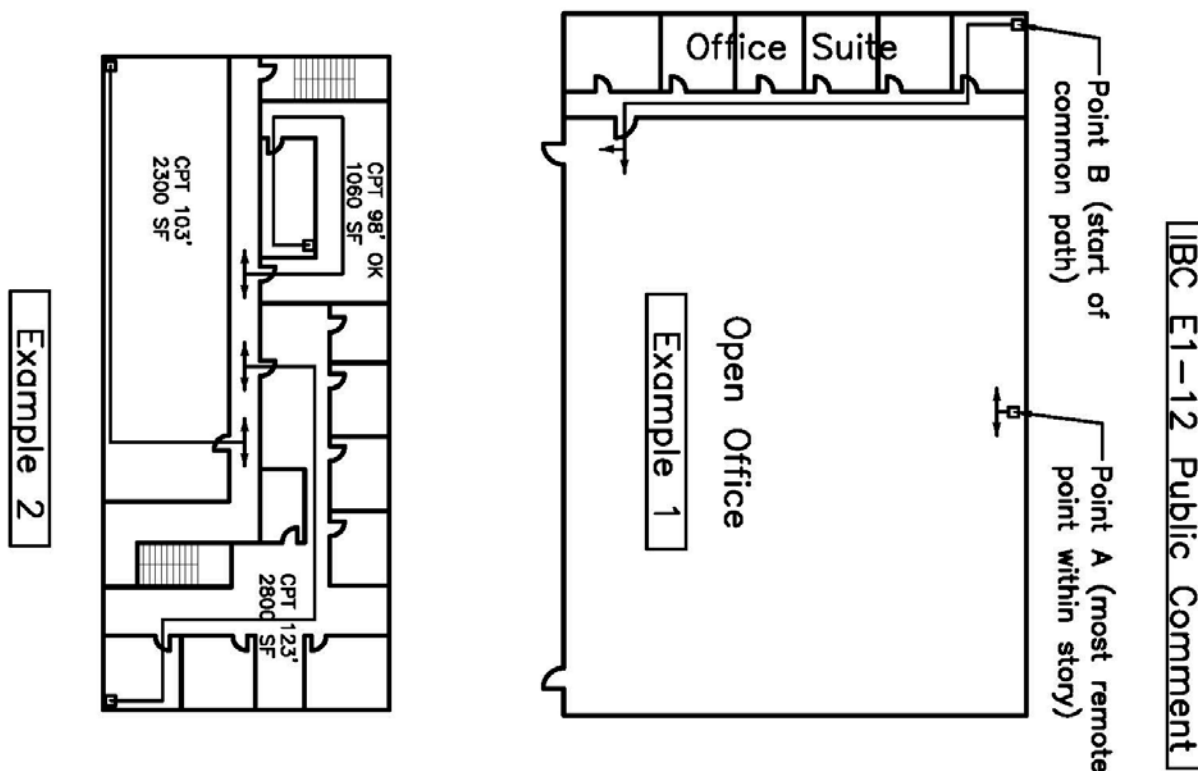
E1-12 also introduced a new definition for Common Path of Egress Travel which was intended to increase the consistency in interpretations and application of the definition as follows: “COMMON PATH OF EGRESS TRAVEL. That portion of the exit access travel distance measured from the most remote point within a story to that point where the occupants have separate and distinct access to two exits or exit access doorways.”

This definition creates additional confusion and needs more work in the next code cycle. This public comment proposes to replace the new definition with the existing definition of common path of egress travel. The balance of E1-12 remains unchanged. It is felt the current definition will continue to serve until improvements are made to what was proposed.

The new definition approved as part of E1-12 will create more confusion as it refers to a specific instance within a story measured from the most remote point of the story as the only starting point to measure common path of egress travel (see point A in Example 1; E1-12 public comment example). This specific point could coincide with the common path of egress travel starting point but in most instances with different tenants or suites, the starting point to measure common path of travel from a space has nothing to do with the most remote point within a story (see point B in example 1; E1-12 public comment example). There often are multiple points in a story (different spaces) where the common path of egress travel could be critical (see Example 2; E1-12 public comment example).

The intent of the common path of egress travel is to look at the entire exit access not just along the exit access travel distance path from just the most remote point within the story. There is a fatal flaw in the new definition approved along with E1-12. The definition should revert back to the previous definition until a new definition can be proposed in the next code cycle or is successfully updated by public comment in this cycle.

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



Public Comment 5:

Hope Medina and Kirk Nagle, Town of Castle Rock and City of Arvada, representing selves, requests Disapproval.

Commenter's Reason: The new table is confusing, and lacking some clarity. In table 1006.2.1 there are several inconsistencies. R3 with a sprinkler has a maximum travel distance of 75 and a maximum travel distance of 100. I have no idea which one I should use. The original table 1015.1 was for the single exit requirement for mixed occupancies and table 1014.3 listed the common path of egress travel which was much less confusing. The R4 is listed with no values for maximum common travel distance with a sprinkler or without a sprinkler so I am assuming the distance is infinity. The R3 occupancy is only allowing a common path of egress when there is a sprinkler. The U occupancy is listing a without a sprinkler an occupant load of less than thirty a travel distance of 100 but with a sprinkler a travel distance of 75: not sure how to determine what occupant load to use here.. The values do not offer clarity and make this table unusable. In 1006.2.1 exception 1 has one means of egress with an occupant load of 20 when equipped with a fire sprinkler system list the common path of egress as 125 feet which conflicts with 1006.2.1 the maximum occupant load is 10 with a travel distance of 125 feet, and it also conflicts with a maximum occupant load of 10 with a travel distance of 75 feet. This code needs to be rewritten to be useful. This code change does not repair any current issues in fact it creates more confusion for the code user.

E1-12

Final Action: AS AM AMPC_____ D

E2-12, Part III

PART III – INTERNATIONAL FIRE CODE

IFC 508.1.5, 905.3.3, 905.4, 905.4.1, 907.2.13.2, 907.5.2.2, 1104.5, 1104.6.1, 1104.9, 1104.10, 1104.10.1, 1104.12, 1104.16, 1104.16.1, 1104.16.2, 1104.16.3, 1104.16.4, 1104.16.5, 1104.16.5.1, 1104.16.6, 1104.16.7, 1104.20, 1104.21, 1104.23, 3313.1, 5704.2.9.4, 5706.5.1.12; (IBC [F] 911.1.5, 905.3.3, 905.4, 905.4.1, 907.2.13.2, 907.5.2.2, 3311.1

NOTE: PART I, II & IV DID NOT RECEIVE A PUBLIC COMMENT AND IS ON THE CONSENT AGENDA. PART I, II & IV REPRODUCED FOR INFORMATIONAL PURPOSES ONLY FOLLOWING ALL OF PART III

Proposed Change as Submitted

Proponent: Carl Baldassarra, P.E., FSFPE, Chair, ICC Code Technology Committee

PART III – INTERNATIONAL FIRE CODE

Revise as follows:

IFC CHAPTER 5 FIRE SERVICE FEATURES

IFC SECTION 508 (IBC [F] 911) FIRE COMMAND CENTER

IFC 508.1.5 (IBC [F] 911.1.5) Required features. The fire command center shall comply with NFPA 72 and shall contain the following features:

1. The emergency voice/alarm communication system control unit.
2. The fire department communications system.
3. Fire detection and alarm system annunciator.
4. Annunciator unit visually indicating the location of the elevators and whether they are operational.
5. Status indicators and controls for air distribution systems.
6. The fire-fighter's control panel required by Section 909.16 for smoke control systems installed in the building.
7. Controls for unlocking interior exit stairway doors simultaneously.
8. Sprinkler valve and waterflow detector display panels.
9. Emergency and standby power status indicators.
10. A telephone for fire department use with controlled access to the public telephone system.
11. Fire pump status indicators.
12. Schematic building plans indicating the typical floor plan and detailing the building core, *means of egress*, fire protection systems, fire-fighting equipment and fire department access and the location of *fire walls*, *fire barriers*, *fire partitions*, *smoke barriers* and smoke partitions.
13. An approved Building Information Card that contains, but is not limited to, the following information:
 - 13.1 General building information that includes: property name, address, the number of floors in the building (above and below grade), use and occupancy classification (for mixed uses, identify the different types of occupancies on each floor), estimated building population (i.e., day, night, weekend);
 - 13.2 Building emergency contact information that includes: a list of the building's emergency contacts (e.g., building manager, building engineer, etc.) and their respective work phone number, cell phone number, email address;

- 13.3 Building construction information that includes: the type of building construction (e.g., floors, walls, columns, and roof assembly);
- 13.4 Exit access and exit stair stairway information that includes: number of exit access and exit stair stairway in building, each exit access and exit stair stairway designation and floors served, location where each exit access and exit stair stairway discharges, interior exit stairs stairways that are pressurized, exit stairs stairways provided with emergency lighting, each exit stairs stairways that allows reentry, exit stairs stairways providing roof access; elevator information that includes: number of elevator banks, elevator bank designation, elevator car numbers and respective floors that they serve, location of elevator machine rooms, location of sky lobby, location of freight elevator banks;
- 13.5 Building services and system information that includes: location of mechanical rooms, location of building management system, location and capacity of all fuel oil tanks, location of emergency generator, location of natural gas service;
- 13.6 Fire protection system information that includes: locations of standpipes, location of fire pump room, location of fire department connections, floors protected by automatic sprinklers, location of different types of sprinkler systems installed (e.g., dry, wet, pre-action, etc.);
- 13.7 Hazardous material information that includes: location of hazardous material, quantity of hazardous material.
- 14. Work table.
- 15. Generator supervision devices, manual start and transfer features.
- 16. Public address system, where specifically required by other sections of this code.
- 17. Elevator fire recall switch in accordance with ASME A17.1.
- 18. Elevator emergency or standby power selector switch(es), where emergency or standby power is provided.

IFC CHAPTER 9 FIRE PROTECTION SYSTEMS

IFC SECTION 905 STANDPIPE SYSTEMS

IFC 905.3.3 (IBC [F] 905.3.3) Covered and open mall buildings. Covered mall and open mall buildings shall be equipped throughout with a standpipe system where required by Section 905.3.1. Mall buildings not required to be equipped with a standpipe system by Section 905.3.1 shall be equipped with Class I hose connections connected to the *automatic sprinkler system* sized to deliver water at 250 gallons per minute (946.4 L/min) at the most hydraulically remote hose connection while concurrently supplying the automatic sprinkler system demand. The standpipe system shall be designed to not exceed a 50 pounds per square inch (psi) (345 kPa) residual pressure loss with a flow of 250 gallons per minute (946.4 L/min) from the fire department connection to the hydraulically most remote hose connection. Hose connections shall be provided at each of the following locations:

- 1. Within the mall at the entrance to each *exit* passageway or *corridor*.
- 2. At each floor-level landing within ~~enclosed~~ interior exit stairways opening directly on the mall.
- 3. At exterior public entrances to the mall of a covered mall building.
- 4. At public entrances at the perimeter line of an open mall building.

IFC 905.4 (IBC [F] 905.4) Location of Class I standpipe hose connections. Class I standpipe hose connections shall be provided in all of the following locations:

- 1. In every required interior exit stairway, a hose connection shall be provided for each floor level above or below grade. Hose connections shall be located at an intermediate floor level landing between floors, unless otherwise *approved* by the fire code official.
- 2. On each side of the wall adjacent to the *exit* opening of a *horizontal exit*.

Exception: Where floor areas adjacent to a *horizontal exit* are reachable from an interior exit stairway hose connections by a 30-foot (9144 mm) hose stream from a nozzle attached to 100 feet (30 480 mm) of hose, a hose connection shall not be required at the *horizontal exit*.

3. In every *exit* passageway, at the entrance from the *exit* passageway to other areas of a building.

Exception: Where floor areas adjacent to an *exit* passageway are reachable from an interior exit stairway hose connections by a 30-foot (9144 mm) hose stream from a nozzle attached to 100 feet (30 480 mm) of hose, a hose connection shall not be required at the entrance from the *exit* passageway to other areas of the building.

4. In covered mall buildings, adjacent to each exterior public entrance to the mall and adjacent to each entrance from an exit passageway or exit corridor to the mall. In open mall buildings, adjacent to each public entrance to the mall at the perimeter line and adjacent to each entrance from an exit passageway or exit corridor to the mall.
5. Where the roof has a slope less than four units vertical in 12 units horizontal (33.3-percent slope), a hose connection shall be located to serve the roof or at the highest landing of a an interior exit stairway with ~~stair~~ access to the roof provided in accordance with Section 1009.16.
6. Where the most remote portion of a nonsprinklered floor or *story* is more than 150 feet (45 720 mm) from a hose connection or the most remote portion of a sprinklered floor or *story* is more than 200 feet (60 960 mm) from a hose connection, the fire code official is authorized to require that additional hose connections be provided in *approved* locations.

IFC 905.4.1 (IBC [F] 905.4.1) Protection. Risers and laterals of Class I standpipe systems not located within an ~~enclosed interior exit stairway or pressurized enclosure~~ shall be protected by a degree of *fire resistance* equal to that required for vertical enclosures in the building in which they are located.

Exception: In buildings equipped throughout with an *approved automatic sprinkler system*, laterals that are not located within an ~~enclosed interior exit stairway or pressurized enclosure~~ are not required to be enclosed within fire-resistance- rated construction.

IFC SECTION 907 (IBC [F] 907) FIRE ALARM AND DETECTION SYSTEMS

IFC 907.2.13.2 (IBC [F] 907.2.13.2) Fire department communication system. Where a wired communication system is *approved* in lieu of an emergency responder radio coverage system in accordance with Section 510 of the *International Fire Code*, the wired fire department communication system shall be designed and installed in accordance with NFPA 72 and shall operate between a fire command center complying with Section 911, elevators, elevator lobbies, emergency and standby power rooms, fire pump rooms, *areas of refuge* and inside ~~enclosed interior exit stairways~~. The fire department communication device shall be provided at each floor level within the ~~enclosed interior exit stairway~~.

IFC 907.5.2.2 (IBC [F] 907.5.2.2) Emergency voice/alarm communication systems. Emergency voice/alarm communication systems required by this code shall be designed and installed in accordance with NFPA 72. The operation of any automatic fire detector, sprinkler waterflow device or manual fire alarm box shall automatically sound an alert tone followed by voice instructions giving *approved* information and directions for a general or staged evacuation in accordance with the building's fire safety and evacuation plans required by Section 404 of the *International Fire Code*. In high-rise buildings, the system shall operate on a minimum of the alarming floor, the floor above and the floor below. Speakers shall be provided throughout the building by paging zones. At a minimum, paging zones shall be provided as follows:

1. Elevator groups.
2. Interior Exit stairways.
3. Each floor.
4. *Areas of refuge* as defined in Section 1002.1.

Exception: In Group I-1 and I-2 occupancies, the alarm shall sound in a constantly attended area and a general occupant notification shall be broadcast over the overhead page.

IFC CHAPTER 11 CONSTRUCTION REQUIREMENTS FOR EXISTING BUILDINGS

IFC SECTION 1104 MEANS OF EGRESS FOR EXISTING BUILDINGS

IFC 1104.5 Illumination emergency power. The power supply for *means of egress* illumination shall normally be provided by the premises' electrical supply. In the event of power supply failure, illumination shall be automatically provided from an emergency system for the following occupancies where such occupancies require two or more *means of egress*:

- 1 and 2 (*No change*)
3. Group E in interior ~~stairs~~ exit access and exit stairways and ramps, *corridors*, windowless areas with student occupancy, shops and laboratories.
- 4 through 9 (*No change*)

IFC 1104.6.1 Height of guards. Guards shall form a protective barrier not less than 42 inches (1067 mm) high.

Exceptions:

1. Existing guards on the open side of ~~stairs~~ stairways shall be not less than 30 inches (760 mm) high.
2. Existing guards within *dwelling units* shall be not less than 36 inches (910 mm) high.
3. Existing guards in assembly seating areas.

IFC 1104.9 Revolving doors. Revolving doors shall comply with the following:

1. A revolving door shall not be located within 10 feet (3048 mm) of the foot or top of ~~stairs~~ stairways or escalators. A dispersal area shall be provided between the ~~stairs~~ stairways or escalators and the revolving doors.
2. The revolutions per minute for a revolving door shall not exceed those shown in Table 1104.9.
3. Each revolving door shall have a conforming side hinged swinging door in the same wall as the revolving door and within 10 feet (3048 mm).

Exceptions:

1. A revolving door is permitted to be used without an adjacent swinging door for street-floor elevator lobbies provided a stairway, escalator or door from other parts of the building does not discharge through the lobby and the lobby does not have any occupancy or use other than as a means of travel between elevators and a street.
2. Existing revolving doors where the number of revolving doors does not exceed the number of swinging doors within 20 feet (6096 mm).

IFC 1104.10 Stair dimensions for existing ~~stairs~~ stairways. Existing ~~stairs~~ stairways in buildings shall be permitted to remain if the rise does not exceed 8 1/4 inches (210 mm) and the run is not less than 9 inches (229 mm). Existing ~~stairs~~ stairways can be rebuilt.

Exception: Other ~~stairs~~ stairways *approved by the fire code official*.

IFC 1104.10.1 Dimensions for replacement ~~stairs~~ stairways. The replacement of an existing *stairway* in a structure shall not be required to comply with the new *stairway* requirements of Section 1009 where the existing space and construction will not allow a reduction in pitch or slope.

IFC 1104.12 Circular ~~Curved~~ stairways. Existing ~~circular stairs~~ curved stairways shall be allowed to continue in use provided the minimum depth of tread is 10 inches (254 mm) and the smallest radius shall not be less than twice the width of the *stairway*.

IFC 1104.16 Fire escape ~~stairs~~ stairways. Fire escape ~~stairs~~ stairways shall comply with Sections 1104.16.1 through 1104.16.7.

IFC 1104.16.1 Existing means of egress. Fire escape ~~stairs~~ stairways shall be permitted in existing buildings but shall not constitute more than 50 percent of the required *exit* capacity.

IFC 1104.16.2 Protection of openings. Openings within 10 feet (3048 mm) of fire escape ~~stairs~~ stairways shall be protected by opening protectives having a minimum 3/4-hour *fire protection rating*.

Exception: In buildings equipped throughout with an *approved automatic sprinkler system*, opening protection is not required.

IFC 1104.16.3 Dimensions. Fire escape ~~stairs~~ stairways shall meet the minimum width, capacity, riser height and tread depth as specified in Section 1104.10.

IFC 1104.16.4 Access. Access to a fire escape ~~stair~~ stairway from a *corridor* shall not be through an intervening room. Access to a fire escape ~~stair~~ stairway shall be from a door or window meeting the criteria of Section 1005.1. Access to a fire escape ~~stair~~ stairway shall be directly to a balcony, landing or platform. These shall be no higher than the floor or window sill level and no lower than 8 inches (203 mm) below the floor level or 18 inches (457 mm) below the window sill.

IFC 1104.16.5 Materials and strength. Components of fire escape ~~stairs~~ stairways shall be constructed of noncombustible materials. Fire escape ~~stairs~~ stairways and balconies shall support the dead load plus a live load of not less than 100 pounds per square foot (4.78 kN/m²). Fire escape ~~stairs~~ stairways and balconies shall be provided with a top and intermediate handrail on each side.

IFC 1104.16.5.1 Examination. Fire escape ~~stairs~~ stairways and balconies shall be examined for structural adequacy and safety in accordance with Section 1104.16.5 by a registered design professional or others acceptable to the *fire code official* every five years, or as required by the *fire code official*. An inspection report shall be submitted to the *fire code official* after such examination.

IFC 1104.16.6 Termination. The lowest balcony shall not be more than 18 feet (5486 mm) from the ground. Fire escape ~~stairs~~ stairways shall extend to the ground or be provided with counterbalanced ~~stairs~~ stairways reaching the ground.

Exception: For fire escape ~~stairs~~ stairways serving 10 or fewer occupants, an *approved* fire escape ladder is allowed to serve as the termination.

IFC 1104.16.7 Maintenance. Fire escapes stairways shall be kept clear and unobstructed at all times and shall be maintained in good working order.

IFC 1104.20 Stairway discharge identification. An interior *exit stairway* or *ramp* which continues below its *level of exit discharge* shall be arranged and marked to make the direction of egress to a *public way* readily identifiable.

Exception: ~~Stairs~~ Stairways that continue one-half story beyond their *levels of exit discharge* need not be provided with barriers where the *exit discharge* is obvious.

IFC 1104.21 Exterior stairway protection. Exterior ~~exit stairs~~ stairways shall be separated from the interior of the building as required in Section 1026.6. Openings shall be limited to those necessary for egress from normally occupied spaces.

Exceptions:

1. Separation from the interior of the building is not required for buildings that are two stories or less above grade where the *level of exit discharge* serving such occupancies is the first story above grade.
2. Separation from the interior of the building is not required where the exterior *stairway* is served by an exterior balcony that connects two remote exterior *stairways* or other *approved exits*, with a perimeter that is not less than 50 percent open. To be considered open, the opening shall be a minimum of 50 percent of the height of the enclosing wall, with the top of the opening not less than 7 feet (2134 mm) above the top of the balcony.
3. Separation from the interior of the building is not required for an exterior *stairway* located in a building or structure that is permitted to have unenclosed interior *stairways* in accordance with Section 1022.
4. Separation from the interior of the building is not required for exterior *stairways* connected to open ended *corridors*, provided that:
 - 4.1. The building, including *corridors* and ~~stairs~~ stairways, is equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2.
 - 4.2. The open-ended *corridors* comply with Section 1018.
 - 4.3. The open-ended *corridors* are connected on each end to an exterior *exit stairway* complying with Section 1026.
 - 4.4. At any location in an open-ended *corridor* where a change of direction exceeding 45 degrees (0.79 rad) occurs, a clear opening of not less than 35 square feet (3 m²) or an exterior *stairway* shall be provided. Where clear openings are provided, they shall be located so as to minimize the accumulation of smoke or toxic gases.

IFC 1104.23 Stairway floor number signs. Existing ~~stairs~~ stairways shall be marked in accordance with Section 1022.8.

**IFC CHAPTER 33
FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION**

**IFC SECTION 3313 (IBC [F] 3311; IEBC [F] 1506.1)
STANDPIPES**

IFC 3313.1 (IBC [F] 3311.1; IEBC [F] 1506.1) Where required. In buildings required to have standpipes by Section 905.3.1, no fewer than one standpipe shall be provided for use during construction. Such standpipes shall be installed when the progress of construction is not more than 40 feet (12 192 mm) in height above the lowest level of fire department vehicle access. Such standpipe shall be provided with fire department hose connections at accessible locations adjacent to usable ~~stairs~~ stairways. Such standpipes shall be extended as construction progresses to within one floor of the highest point of construction having secured decking or flooring.

**IFC CHAPTER 57
FLAMMABLE AND COMBUSTIBLE LIQUIDS**

**IFC SECTION 5704
STORAGE**

IFC 5704.2.9.4 ~~Stairs~~ Stairways, platforms and walkways. ~~Stairs~~ Stairways, platforms and walkways shall be of noncombustible construction and shall be designed and constructed in accordance with NFPA 30 and the *International Building Code*.

IFC 5706.5.1.12 Loading racks. Where provided, loading racks, ~~stairs~~ stairways or platforms shall be constructed of noncombustible materials. Buildings for pumps or for shelter of loading personnel are allowed to be part of the loading rack. Wiring and electrical equipment located within 25 feet (7620 mm) of any portion of the loading rack shall be in accordance with Section 5703.1.1.

Reason: The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The code issues are assigned to the CTC by the ICC Board as "areas of study". Information on the CTC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website: <http://www.iccsafe.org/cs/cc/ctc/index.html>. Since its inception in April, 2005, the CTC has held twenty-two meetings – all open to the public.

The intent is for the consistent use of the defined terms for 'stair' and 'stairway' throughout the all the codes. Stair is used when talking about individual steps or stepped aisles. Stairway is used when the provisions are applicable to a series of steps, or flights and landings between stories. In addition, when terms such as 'exit access stairway' and 'exit access ramp' follow each other in a list, consistently eliminate a couple of words by saying 'exit access stairway and ramp.' When the provisions are equally appropriate for ramps and stairways, ramps is added.

Cost Impact: None

202-E-BALDASSARRA-CTC.DOC

Public Hearing Results

PART III – IFC

Committee Action:

Approved as Submitted

Committee Reason: The proposal revised the use of 'stair' and 'stairway' throughout the code so that the application matches how the defined terms. This will clarify when requirements are intended for a change in elevation (i.e., stair) vs. a change in story (i.e., stairway). There was a question from the committee whether in Section 508.1.5, Item 7 should include 'exterior exit stairway'.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Carl Baldassarra, P.E., FSFPE, Chair, ICC Code Technology Committee, requests Approval as Modified by this Public Comment

Modify the proposal as follows:

IFC 508.1.5 (IBC [F] 911.1.5) Required features. The fire command center shall comply with NFPA 72 and shall contain the following features:

1. through 6. *(no change)*
7. Controls for unlocking ~~interior exit~~ stairway doors simultaneously.
8. through 18. *(no change)*

(Portions of proposal not shown remain unchanged.)

Commenter's Reason: The modification to IFC Section 508.1.5 (IBC 911.1.5) Item 7 is due to a concern brought up by one of the Means of Egress Code Development committee regarding possible fire department access requirement from exterior exit stairways when dealing with locked exit stairway doors. The proposal is to not add the words "interior exit" so that the requirement for unlocking would be the same for interior exit stairways as exterior exit stairways.

The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The code issues are assigned to the CTC by the ICC Board as "Areas of Study". The Area of Study for this code change and public comment is called "Unenclosed exit stairways". Information on the CTC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website: <http://www.iccsafe.org/cs/CTC/Pages/UnenclosedExitStairs.aspx>. Since its inception in April, 2005, the CTC has held twenty-four meetings – all open to the public. In addition to holding face-to-face meetings, the CTC established Study Groups

where any interested party can participate in conference calls on specific subjects such as this area of study without having to attend the face-to-face meetings.

E_-12

Final Action: AS AM AMPC_____ D

NOTE: PARTS I, II AND IV REPRODUCED FOR INFORMATIONAL PURPOSES ONLY – SEE ABOVE

E2-12

PART I – INTERNATIONAL BUILDING CODE

IBC 202, 403.5.1, 403.5.2, 505.3, 707.6, 707.7.1, 713.1, Table 716.5, 718.2.4, Table 803.9, 909.20.1, 909.20.4.4, 909.20.5, 909.20.6, 909.20.6.2, 1007.7.2, 1008.1.4.1, 1008.1.9.11, 1009.3, 1009.7.4, 1009.9.3, 1010.2, 1011.4, 1012.6, 1013.2, 1015.2.1, 1019.2, 1021.1, 1022.1, 1022.7, 1022.9, Table 1028.6.2, 1028.7, 1205.4, 1207.1, 2110.1.1, 2308.12.7, 2406.4.6, 2406.4.7, 3406.1.3, 3406.4, 3411.8.4; (IFC [B] 1007.7.2, 1008.1.4, 1008.1.9.11, 1009.3, 1009.7.4, 1009.9.3, 1010.2, 1011.4, 1012.6, 1013.2, 1015.2.1, 1019.2, 1021.1, 1022.1, 1022.7, 1022.9, Table 1028.6.2, 1028.7; IEBC [B] 405.1.3, 405.4, 410.8.4);

PART II - INTERNATIONAL MECHANICAL CODE

IMC 306.5.1, 1107.2; (IFGC [M] 306.5.1)

PART IV – INTERNATIONAL EXISTING BUILDING CODE

IEBC 804.1.1, 805.3.1.1, 805.3.1.2.1, 805.3.1.2.3, 805.4.3, 805.4.3.1, 805.9.1, 805.10.1, 806.2, 902.2.1, 1102.2, 1203.9, 1205.11

Proponent: Carl Baldassarra, P.E., FSFPE, Chair, ICC Code Technology Committee

PART I – INTERNATIONAL BUILDING CODE

Revise as follows:

CHAPTER 2 DEFINITIONS

SECTION 202 DEFINITIONS

EQUIPMENT PLATFORM. An unoccupied, elevated platform used exclusively for mechanical systems or industrial process equipment, including the associated elevated walkways, ~~stairs~~ stairways, ~~alternating tread devices~~ and ladders necessary to access the platform (see Section 505.3).

EXIT. That portion of a *means of egress* system between the *exit access* and the *exit discharge* or *public way*. Exit components include exterior exit doors at the *level of exit discharge*, *interior exit stairways*, ~~interior exit~~ and *ramps*, *exit passageways*, *exterior exit stairways* and ~~exterior exit ramps~~ and *horizontal exits*.

EXIT ACCESS DOORWAY. A door or access point along the path of egress travel from an occupied room, area or space where the path of egress enters an intervening room, *corridor*, *exit access stair* stairway or ~~exit access~~ ramp.

FLOOR AREA, GROSS. The floor area within the inside perimeter of the *exterior walls* of the building under consideration, exclusive of vent *shafts* and *courts*, without deduction for *corridors*, *stairways*, ramps, closets, the thickness of interior walls, columns or other features. The floor area of a building, or portion thereof, not provided with surrounding *exterior walls* shall be the usable area under the horizontal projection of the roof or floor above. The gross floor area shall not include *shafts* with no openings or interior *courts*.

FLOOR AREA, NET. The actual occupied area not including unoccupied accessory areas such as *corridors*, *stairways*, ramps toilet rooms, mechanical rooms and closets.

SCISSOR STAIR STAIRWAY. Two interlocking *stairways* providing two separate paths of egress located within one ~~stairwell~~ exit enclosure.

STAIR STAIRWAY, SCISSOR. See "Scissor stair stairway."

Revise as follows:

CHAPTER 4 SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY

SECTION 403 HIGHRISE BUILDINGS

403.5.1 Remoteness of interior exit stairways. Required *interior exit stairways* shall be separated by a distance not less than 30 feet (9144 mm) or not less than one-fourth of the length of the maximum overall diagonal dimension of the building or area to be served, whichever is less. The distance shall be measured in a straight line between the nearest points of the *interior exit*

stairways. In buildings with three or more *interior exit stairways*, no fewer than two of the *interior exit stairways* shall comply with this section. Interlocking or *scissor stairs stairways* shall be counted as one *interior exit stairway*.

403.5.2 Additional exit stairway. For buildings other than Group R-2 that are more than 420 feet (128 000 mm) in *building height*, one additional *exit stairway* meeting the requirements of Sections 1009 and 1022 shall be provided in addition to the minimum number of *exits* required by Section 1021.1. The total width of any combination of remaining *exit stairways* with one *exit stairway* removed shall be not less than the total width required by Section 1005.1. *Scissor stairs stairways* shall not be considered the additional *exit stairway* required by this section.

Exception: An additional *exit stairway* shall not be required to be installed in buildings having elevators used for occupant self-evacuation in accordance with Section 3008.

Revise as follows:

CHAPTER 5 GENERAL BUILDING HEIGHTS AND AREAS

SECTION 505 MEZZANINES AND EQUIPMENT PLATFORMS

IBC 505.3 Equipment platforms. *Equipment platforms* in buildings shall not be considered as a portion of the floor below. Such *equipment platforms* shall not contribute to either the *building area* or the number of *stories* as regulated by Section 503.1. The area of the *equipment platform* shall not be included in determining the *fire area* in accordance with Section 903. *Equipment platforms* shall not be a part of any *mezzanine* and such platforms and the walkways, *stairs stairways*, *alternating tread devices* and ladders providing access to an *equipment platform* shall not serve as a part of the *means of egress* from the building.

Revise as follows:

CHAPTER 7 FIRE AND SMOKE PROTECTION FEATURES

SECTION 707 FIRE BARRIERS

707.6 Openings. Openings in a fire barrier shall be protected in accordance with Section 716. Openings shall be limited to a maximum aggregate width of 25 percent of the length of the wall, and the maximum area of any single opening shall not exceed 156 square feet (15 m²). Openings in enclosures for exit access stairways and ramps, interior exit stairways and ramps and exit passageways shall also comply with Sections 1022.3 and 1023.5, respectively.

Exceptions:

1. Openings shall not be limited to 156 square feet (15 m²) where adjoining floor areas are equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.
2. Openings shall not be limited to 156 square feet (15 m²) or an aggregate width of 25 percent of the length of the wall where the opening protective is a fire door serving enclosures for exit access stairways, ~~exit access~~ and ramps, and interior exit stairways and interior exit ramps.
3. Openings shall not be limited to 156 square feet (15 m²) or an aggregate width of 25 percent of the length of the wall where the opening protective has been tested in accordance with ASTM E 119 or UL263 and has a minimum fire-resistance rating not less than the fire-resistance rating of the wall.
4. Fire window assemblies permitted in atrium separation walls shall not be limited to a maximum aggregate width of 25 percent of the length of the wall.
5. Openings shall not be limited to 156 square feet (15 m²) or an aggregate width of 25 percent of the length of the wall where the opening protective is a fire door assembly in a fire barrier separating an enclosure for exit access stairways, ~~exit access~~ and ramps, and interior exit stairways and interior exit ramps from an exit passageway in accordance with Section 1022.2.1.

707.7.1 Prohibited penetrations. Penetrations into enclosures for exit access stairways, ~~exit access~~ and ramps, interior exit stairways, ~~interior exit~~ and ramps or an exit passageway shall be allowed only when permitted by Section 1009.3.1.5, 1022.5 or 1023.6, respectively.

SECTION 713 SHAFT ENCLOSURES

713.1 General. The provisions of this section shall apply to shafts required to protect openings and penetrations through floor/ceiling and roof/ceiling assemblies. Exit access stairways and ~~exit access~~ ramps shall be protected in accordance with the applicable provisions of Section 1009. Interior exit stairways and ~~interior exit~~ ramps shall be protected in accordance with the requirements of Section 1022.

Revise as follows:

**SECTION 716
OPENING PROTECTIVES**

**TABLE 716.5
OPENING FIRE PROTECTION ASSEMBLIES, RATINGS AND MARKINGS**

Type of Assembly
Fire barriers having a required fire resistance rating of 1 hour: Enclosures for shafts, exit access stairways, exit access and ramps, interior exit stairways, interior exit and ramps and exit passageway walls

(Portions of table not shown remain unchanged.)

**SECTION 718
CONCEALED SPACES**

718.2.4 Stairways. Fireblocking shall be provided in concealed spaces between *stair* stringers at the top and bottom of the run. Enclosed spaces under ~~stairs~~ stairways shall also comply with Section 1009.9.3.

Revise as follows:

**CHAPTER 8
INTERIOR FINISHES**

**SECTION 803
WALL AND CEILING FINISHES**

**TABLE 803.9
INTERIOR WALL AND CEILING FINISH REQUIREMENTS BY OCCUPANCY^k**

Group	SPRINKLERED			NONSPRINKLERED		
	Interior exit stairways, interior exit and ramps and exit passageways ^{a, b}	Corridors and enclosure for exit access stairways and exit access ramps	Rooms and enclosed spaces ^c	Interior exit stairways, interior exit and ramps and exit passageways ^{a, b}	Corridors and enclosure for exit access stairways and exit access ramps	Rooms and enclosed spaces ^c

- b. In other than Group I-2 occupancies in buildings less than three stories above grade plane of other than Group I-3, Class B interior finish for nonsprinklered buildings and Class C interior finish for sprinklered buildings shall be permitted in interior exit stairways and ramps.
- j. Class B materials shall be permitted as wainscoting extending not more than 48 inches above the finished floor in corridors and exit access stairways and ramps.

(Portions of table and notes not shown remain unchanged)

Revise as follows:

**CHAPTER 9
FIRE PROTECTION SYSTEMS**

**SECTION 909
SMOKE CONTROL SYSTEMS**

909.20.1 Access. Access to the ~~stair~~ stairway shall be by way of a vestibule or an open exterior balcony. The minimum dimension of the vestibule shall not be less than the required width of the *corridor* leading to the vestibule but shall not have a width of less than 44 inches (1118 mm) and shall not have a length of less than 72 inches (1829 mm) in the direction of egress travel.

909.20.4.4 Stair Stairway shaft air movement system. The ~~stair~~ stairway shaft shall be provided with a dampered relief opening and supplied with sufficient air to maintain a minimum positive pressure of 0.10 inch of water (25 Pa) in the shaft relative to the vestibule with all doors closed.

909.20.5 Stair Stairway pressurization alternative. Where the building is equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1, the vestibule is not required, provided that interior *exit stairways* are pressurized to a minimum of 0.10 inches of water (25 Pa) and a maximum of 0.35 inches of water (87 Pa) in the shaft relative to the building measured with all ~~interior exit~~ stairway doors closed under maximum anticipated conditions of stack effect and wind effect.

909.20.6 Ventilating equipment. The activation of ventilating equipment required by the alternatives in Sections 909.20.4 and 909.20.5 shall be by smoke detectors installed at each floor level at an *approved* location at the entrance to the smokeproof enclosure. When the closing device for the ~~stair~~ stairway shaft and vestibule doors is activated by smoke detection or power

failure, the mechanical equipment shall activate and operate at the required performance levels. Smoke detectors shall be installed in accordance with Section 907.3.

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

Revise as follows:

CHAPTER 10 MEANS OF EGRESS

SECTION 1007 (IFC [B] 1007) ACCESSIBLE MEANS OF EGRESS

1007.7.2 (IFC [B] 1007.7.2) Outdoor facilities. Where *exit access* from the area serving outdoor facilities is essentially open to the outside, an exterior area of assisted rescue is permitted as an alternative to an *area of refuge*. Every required exterior area of assisted rescue shall have direct access to an *interior exit stairway*, exterior *exit stairway*, or elevator serving as an *accessible means of egress* component. The exterior area of assisted rescue shall comply with Section 1007.7.3 through 1007.7.6 and shall be provided with a two-way communication system complying with Sections 1007.8.1 and 1007.8.2.

SECTION 1008 (IFC [B] 1008) DOORS, GATES AND TURNSTILES

1008.1.4.1 (IFC [B] 1008.1.4.1) Revolving doors. Revolving doors shall comply with the following:

1. Each revolving door shall be capable of collapsing into a bookfold position with parallel egress paths providing an aggregate width of 36 inches (914 mm).
2. A revolving door shall not be located within 10 feet (3048 mm) of the foot of or top of *stairs stairways* or escalators. A dispersal area shall be provided between the *stairs stairways* or escalators and the revolving doors.
3. The revolutions per minute (rpm) for a revolving door shall not exceed those shown in Table 1008.1.4.1.
4. Each revolving door shall have a side-hinged swinging door which complies with Section 1008.1 in the same wall and within 10 feet (3048 mm) of the revolving door.
5. Revolving doors shall not be part of an *accessible route* required by Section 1007 and Chapter 11.

1008.1.9.11 (IFC [B] 1008.1.9.11) Stairway doors. Interior *stairway means of egress* doors shall be openable from both sides without the use of a key or special knowledge or effort.

Exceptions:

1. *Stairway* discharge doors shall be openable from the egress side and shall only be locked from the opposite side.
2. This section shall not apply to doors arranged in accordance with Section 403.5.3.
3. In *stairways* serving not more than four stories, doors are permitted to be locked from the side opposite the egress side, provided they are openable from the egress side and capable of being unlocked simultaneously without unlatching upon a signal from the fire command center, if present, or a signal by emergency personnel from a single location inside the main entrance to the building.
4. *Stairway exit* doors shall be openable from the egress side and shall only be locked from the opposite side in Group B, F, M and S occupancies where the only interior access to the tenant space is from a single *exit stair stairway* where permitted in Section 1021.2.
5. *Stairway exit* doors shall be openable from the egress side and shall only be locked from the opposite side in Group R-2 occupancies where the only interior access to the dwelling unit is from a single *exit stair stairway* where permitted in Section 1021.2.

SECTION 1009 (IFC [B] 1009) STAIRWAYS

1009.3 (IFC [B] 1009.3) Exit access stairways. Floor openings between stories created by *exit access stairways* shall be enclosed.

Exceptions:

1. In other than Group I-2 and I-3 occupancies, *exit access stairways* that serve, or atmospherically communicate between, only two stories are not required to be enclosed.
2. *Exit access stairways* serving and contained within a single residential dwelling unit or sleeping unit in Group R-1, R-2 or R-3 occupancies are not required to be enclosed.
3. In buildings with only Group B or M occupancies, *exit access stairway* openings are not required to be enclosed provided that the building is equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1, the area of the floor opening between stories does not exceed twice the horizontal projected area of the *exit access stairway*, and the opening is protected by a draft curtain and closely spaced sprinklers in accordance with NFPA 13.

4. In other than Groups B and M occupancies, *exit access stairway* openings are not required to be enclosed provided that the building is equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1, the floor opening does not connect more than four stories, the area of the floor opening between stories does not exceed twice the horizontal projected area of the *exit access stairway*, and the opening is protected by a draft curtain and closely spaced sprinklers in accordance with NFPA 13.
5. *Exit access stairways* within an *atrium* complying with the provisions of Section 404 are not required to be enclosed.
6. *Exit access stairways and ramps* in open parking garages that serve only the parking garage are not required to be enclosed.
7. *Exit access* Stairways serving outdoor facilities where all portions of the *means of egress* are essentially open to the outside are not required to be enclosed.
8. *Exit access stairways* serving stages, platforms and *technical production areas* in accordance with Sections 410.6.2 and 410.6.3 are not required to be enclosed.
9. *Exit access* Stairways are permitted to be open between the balcony, gallery or press box and the main assembly floor in occupancies such as theaters, *places of religious worship*, auditoriums and sports facilities.
10. In Group I-3 occupancies, *exit access stairways* constructed in accordance with Section 408.5 are not required to be enclosed.

1009.7.4 (IFC [B] 1009.7.4) Dimensional uniformity. Stair treads and risers shall be of uniform size and shape. The tolerance between the largest and smallest riser height or between the largest and smallest tread depth shall not exceed 3/8 inch (9.5 mm) in any *flight of stairs*. The greatest *winder* tread depth at the walkline within any *flight of stairs* shall not exceed the smallest by more than 3/8 inch (9.5 mm).

Exceptions:

1. Nonuniform riser dimensions of *aisle stairs* complying with Section 1028.11.2.
2. Consistently shaped *winders*, complying with Section 1009.7, differing from rectangular treads in the same *stairway flight of stairs*.

Where the bottom or top riser adjoins a sloping *public way*, walkway or driveway having an established grade and serving as a landing, the bottom or top riser is permitted to be reduced along the slope to less than 4 inches (102 mm) in height, with the variation in height of the bottom or top riser not to exceed one unit vertical in 12 units horizontal (8-percent slope) of *stairway stair* width. The *nosings* or leading edges of treads at such nonuniform height risers shall have a distinctive marking stripe, different from any other *nosings* marking provided on the *stair flight*. The distinctive marking stripe shall be visible in descent of the *stair* and shall have a slip-resistant surface. Marking stripes shall have a width of at least 1 inch (25 mm) but not more than 2 inches (51 mm).

1009.9.3 (IFC [B] 1009.9.3) Enclosures under interior stairways. The walls and soffits within enclosed usable spaces under enclosed and unenclosed *stairways* shall be protected by 1-hour fire-resistance-rated construction or the *fire-resistance rating* of the *stairway* enclosure, whichever is greater. Access to the enclosed space shall not be directly from within the *stair stairway* enclosure.

Exception: Spaces under *stairways* serving and contained within a single residential dwelling unit in Group R-2 or R-3 shall be permitted to be protected on the enclosed side with 1/2-inch (12.7 mm) gypsum board.

SECTION 1010 (IFC [B] 1010) RAMPS

1010.2 (IFC [B] 1010.2) Enclosure. All *interior exit ramps* shall be enclosed in accordance with the applicable provisions of Section 1022. *Exit access ramps* shall be enclosed in accordance with the provisions of ~~Section~~ Sections 1009.2, 1009.3 and 1009.4 for enclosure of *stairways*.

SECTION 1011 (IFC [B] 1011) EXIT SIGNS

1011.4 (IFC [B] 1011.4) Raised character and Braille exit signs. A sign stating EXIT in raised characters and Braille and complying with ICC A117.1 shall be provided adjacent to each door to an *area of refuge*, an exterior area for assisted rescue, an *exit stairway*, ~~an exit~~ or ramp, an *exit passageway* and the *exit discharge*.

SECTION 1012 (IFC [B] 1012) HANDRAILS

1012.6 (IFC [B] 1012.6) Handrail extensions. *Handrails* shall return to a wall, *guard* or the walking surface or shall be continuous to the *handrail* of an adjacent *stair flight of stairs* or *ramp* run. Where *handrails* are not continuous between *flights*, the *handrails* shall extend horizontally at least 12 inches (305 mm) beyond the top riser and continue to slope for the depth of one tread beyond the bottom riser. At *ramps* where *handrails* are not continuous between runs, the *handrails* shall extend horizontally above the landing 12 inches (305 mm) minimum beyond the top and bottom of *ramp* runs. The extensions of *handrails* shall be in the same direction of the *stair flights of stairs* at *stairways* and the *ramp* runs at *ramps*.

Exceptions:

1. *Handrails* within a *dwelling unit* that is not required to be *accessible* need extend only from the top riser to the bottom riser.
2. *Aisle handrails* in rooms or spaces used for assembly purposes in accordance with Section 1028.13.
3. *Handrails* for *alternating tread devices* and ship ladders are permitted to terminate at a location vertically above the top and bottom risers. *Handrails* for *alternating tread devices* and ship ladders are not required to be continuous between *flights* or to extend beyond the top or bottom risers.

**SECTION 1013 (IFC [B] 1013)
GUARDS**

1013.2 (IFC [B] 1013.2) Where required. *Guards* shall be located along open-sided walking surfaces, including *mezzanines*, *equipment platforms*, *stairs*, *ramps* and landings that are located more than 30 inches (762 mm) measured vertically to the floor or grade below at any point within 36 inches (914 mm) horizontally to the edge of the open side. *Guards* shall be adequate in strength and attachment in accordance with Section 1607.8.

Exception: *Guards* are not required for the following locations:

1. On the loading side of loading docks or piers.
2. On the audience side of *stages* and raised *platforms*, including ~~steps~~ *stairs* leading up to the *stage* and raised *platforms*.
3. On raised *stage* and *platform* floor areas, such as runways, *ramps* and side *stages* used for entertainment or presentations.
4. At vertical openings in the performance area of *stages* and *platforms*.
5. At elevated walking surfaces appurtenant to *stages* and *platforms* for access to and utilization of special lighting or equipment.
6. Along vehicle service pits not accessible to the public.
7. In assembly seating where *guards* in accordance with Section 1028.14 are permitted and provided.

**SECTION 1015 (IFC [B] 1015)
EXIT AND EXIT ACCESS DOORWAYS**

1015.2.1 (IFC [B] 1015.2.1) Two exits or exit access doorways. Where two *exits* or *exit access doorways* are required from any portion of the *exit access*, the *exit* doors or *exit access doorways* shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the building or area to be served measured in a straight line between *exit* doors or *exit access doorways*. Interlocking or scissor *stairs* *stairways* shall be counted as one *exit stairway*.

Exceptions:

1. Where *interior exit stairways* are interconnected by a 1-hour fire-resistance-rated *corridor* conforming to the requirements of Section 1018, the required *exit* separation shall be measured along the shortest direct line of travel within the *corridor*.
2. Where a building is equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2, the separation distance of the *exit* doors or *exit access doorways* shall not be less than one-third of the length of the maximum overall diagonal dimension of the area served.

**SECTION 1019 (IFC [B] 1019)
EGRESS BALCONIES**

1019.2 (IFC [B] 1019.2) Wall separation. Exterior egress balconies shall be separated from the interior of the building by walls and opening protectives as required for *corridors*.

Exception: Separation is not required where the exterior egress balcony is served by at least two *stairs* *stairways* and a deadend travel condition does not require travel past an unprotected opening to reach a *stair* *stairway*.

**SECTION 1021 (IFC [B] 1021)
NUMBER OF EXITS AND EXIT CONFIGURATION**

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

Exceptions:

1. *Interior exit stairways* and *interior exit ramps* are not required in *open parking garages* where the *means of egress* serves only the *open parking garage*.

2. *Interior exit stairways and interior exit ramps* are not required in outdoor facilities where all portions of the *means of egress* are essentially open to the outside.

SECTION 1022 (IFC [B] 1022) INTERIOR EXIT STAIRWAYS AND RAMPS

1022.1 (IFC [B] 1022.1) General. *Interior exit stairways and interior exit ramps* serving as an *exit* component in a *means of egress* system shall comply with the requirements of this section. *Interior exit stairways and ramps* shall lead directly to the exterior of the building or shall be extended to the exterior of the building with an *exit passageway* conforming to the requirements of Section 1023, except as permitted in Section 1027.1. An *interior exit stairway or ramp* shall not be used for any purpose other than as a *means of egress*.

1022.7 (IFC [B] 1022.7) Interior exit stairway and ramp exterior walls. *Exterior walls* of the *interior exit stairway and ramp* shall comply with the requirements of Section 705 for exterior walls. Where nonrated walls or unprotected openings enclose the exterior of the *stairway or ramps* and the walls or openings are exposed by other parts of the building at an angle of less than 180 degrees (3.14 rad), the building *exterior walls* within 10 feet (3048 mm) horizontally of a nonrated wall or unprotected opening shall have a *fire-resistance rating* of not less than 1 hour. Openings within such *exterior walls* shall be protected by opening protectives having a *fire protection rating* of not less than 3/4 hour. This construction shall extend vertically from the ground to a point 10 feet (3048 mm) above the topmost landing of the *stairway, ramp* or to the roof line, whichever is lower.

1022.9 (IFC [B] 1022.9) Stairway identification signs. A sign shall be provided at each floor landing in an *interior exit stairway and ramp* connecting more than three stories designating the floor level, the terminus of the top and bottom of the *interior exit stairway and ramp* and the identification of the *stair stairway or ramp*. The signage shall also state the story of, and the direction to, the *exit discharge* and the availability of roof access from the *interior exit stairway and ramp* for the fire department. The sign shall be located 5 feet (1524 mm) above the floor landing in a position that is readily visible when the doors are in the open and closed positions. In addition to the *stairway* identification sign, a floor level sign in raised characters and braille complying with ICC A117.1 shall be located at each floor level landing adjacent to the door leading from the *interior exit stairway and ramp* into the *corridor* to identify the floor level.

SECTION 1028 (IFC [B] 1028) ASSEMBLY

TABLE 1028.6.2 (IFC [B] Table 1028.6.2)
WIDTH OF AISLES FOR SMOKE-PROTECTED ASSEMBLY

TOTAL NUMBER OF SEATS IN THE SMOKEPROTECTED ASSEMBLY SEATING	INCHES OF CLEAR WIDTH PER SEAT SERVED			
	Stairs and aisle steps <u>stairs</u> with handrails within 30 inches	Stairs and aisle steps <u>stairs</u> without handrails within 30 inches	Passageways, doorways and <u>Level and ramped aisles</u> ramps not steeper than 1 in 10 in slope	Ramps Ramped <u>aisles</u> steeper than 1 in 10 in slope

(Portions of table not shown remain unchanged)

1028.7 (IFC [B] 1028.7) Travel distance. *Exits and aisles* shall be so located that the travel distance to an *exit* door shall not be greater than 200 feet (60 960 mm) measured along the line of travel in nonsprinklered buildings. Travel distance shall not be more than 250 feet (76 200 mm) in sprinklered buildings. Where *aisles* are provided for seating, the distance shall be measured along the *aisles* and *aisle accessway* without travel over or on the seats.

Exceptions:

1. *Smoke-protected assembly seating:* The travel distance from each seat to the nearest entrance to a vomitory or concourse shall not exceed 200 feet (60 960 mm). The travel distance from the entrance to the vomitory or concourse to a *stair stairway, ramp* or walk on the exterior of the building shall not exceed 200 feet (60 960 mm).
2. *Open-air seating:* The travel distance from each seat to the building exterior shall not exceed 400 feet (122 m). The travel distance shall not be limited in facilities of Type I or II construction.

Revise as follows:

CHAPTER 12 INTERIOR ENVIRONMENT

SECTION 1205 LIGHTING

1205.4 Stairway illumination. *Stairways* within *dwelling units* and *exterior stairways* serving a *dwelling unit* shall have an illumination level on tread runs of not less than 1 foot-candle (11 lux). *Stairs Stairways* in other occupancies shall be governed by Chapter 10.

**SECTION 1207
SOUND TRANSMISSION**

1207.1 Scope. This section shall apply to common interior walls, partitions and floor/ceiling assemblies between adjacent *dwelling units* or between *dwelling units* and adjacent public areas such as halls, *corridors*, *stairs* *stairways* or service areas.

Revise as follows:

**CHAPTER 21
MASONRY**

**SECTION 2110
GLASS UNIT MASONRY**

2110.1.1 Limitations. Solid or hollow *approved* glass block shall not be used in fire walls, party walls, fire barriers, fire partitions or smoke barriers, or for load-bearing construction. Such blocks shall be erected with mortar and reinforcement in metal channel-type frames, structural frames, masonry or concrete recesses, embedded panel anchors as provided for both exterior and interior walls or other *approved* joint materials. Wood strip framing shall not be used in walls required to have a fire-resistance rating by other provisions of this code.

Exceptions:

1. Glass-block assemblies having a fire protection rating of not less than 3/4 hour shall be permitted as opening protectives in accordance with Section 716 in fire barriers, fire partitions and smoke barriers that have a required fire-resistance rating of 1 hour or less and do not enclose exit stairways, ~~exit and~~ ramps or exit passageways.
2. Glass-block assemblies as permitted in Section 404.6, Exception 2.

Revise as follows:

**CHAPTER 23
WOOD**

**SECTION 2308
CONVENTIONAL LIGHT-FRAMED CONSTRUCTION**

2308.12.7 Anchorage of exterior means of egress components. Exterior egress balconies, exterior ~~exit~~ stairways or ramps and similar *means of egress* components shall be positively anchored to the primary structure at not over 8 feet (2438 mm) o.c. or shall be designed for lateral forces. Such attachment shall not be accomplished by use of toenails or nails subject to withdrawal.

Revise as follows:

**CHAPTER 24
GLASS AND GLAZING**

**SECTION 2406
SAFETY GLAZING**

2406.4.6 Glazing adjacent to stairs stairways and ramps. Glazing where the bottom exposed edge of the glazing is less than 60 inches (1524 mm) above the plane of the adjacent walking surface of stairways, landings between flights of stairs, and ramps shall be considered a hazardous location.

Exceptions:

1. The side of a stairway, landing or ramp that has a guard complying with the provisions of Sections 1013 and 1607.8, and the plane of the glass is greater than 18 inches (457 mm) from the railing.
2. Glazing 36 inches (914 mm) or more measured horizontally from the walking surface.

2406.4.7 Glazing adjacent to the bottom stair stairway landing. Glazing adjacent to the landing at the bottom of a stairway where the glazing is less than 36 inches (914 mm) above the landing and within 60 inches (1524 mm) horizontally of the bottom tread shall be considered a hazardous location.

Exception: Glazing that is protected by a guard complying with Sections 1013 and 1607.8 where the plane of the glass is greater than 18 inches (457 mm) from the guard.

Revise as follows:

**CHAPTER 34
EXISTING STRUCTURES**

**SECTION 3406 (IEBC [B] 405)
FIRE ESCAPES**

3406.1.3 (IEBC [B] 405.1.3) New fire escapes. New fire escapes for existing buildings shall be permitted only where exterior *stairs stairways* cannot be utilized due to lot lines limiting *stair stairway* size or due to the sidewalks, alleys or roads at grade level. New fire escapes shall not incorporate ladders or access by windows.

3406.4 (IEBC [B] 405.4) Dimensions. *Stairs* shall be at least 22 inches (559 mm) wide with risers not more than, and treads not less than, 8 inches (203 mm) and landings at the foot of *stairs stairways* not less than 40 inches (1016 mm) wide by 36 inches (914 mm) long, located not more than 8 inches (203 mm) below the door.

**SECTION 3411 (IEBC [B] 410)
ACCESSIBILITY FOR EXISTING BUILDINGS**

3411.8.4 (IEBC [B] 410.8.4) Stairs Stairways and escalators in existing buildings. In *alterations*, change of occupancy or *additions* where an escalator or *stair stairway* is added where none existed previously and major structural modifications are necessary for installation, an *accessible* route shall be provided between the levels served by the escalator or *stairs stairways* in accordance with Sections 1104.4 and 1104.5.

PART II - INTERNATIONAL MECHANICAL CODE

Revise as follows:

**IMC CHAPTER 3
GENERAL REGULATIONS**

**IMC SECTION 306
ACCESS AND SERVICE SPACE**

IMC 306.5.1 (IFGC [M] 306.5.1) Sloped roofs. Where appliances, *equipment*, fans or other components that require service are installed on a roof having a slope of three units vertical in 12 units horizontal (25-percent slope) or greater and having an edge more than 30 inches (762 mm) above grade at such edge, a level platform shall be provided on each side of the *appliance* or *equipment* to which access is required for service, repair or maintenance. The platform shall be not less than 30 inches (762 mm) in any dimension and shall be provided with guards. The guards shall extend not less than 42 inches (1067 mm) above the platform, shall be constructed so as to prevent the passage of a 21-inch diameter (533 mm) sphere and shall comply with the loading requirements for guards specified in the *International Building Code*. Access shall not require walking on roofs having a slope greater than four units vertical in 12 units horizontal (33-percent slope). Where access involves obstructions greater than 30 inches (762 mm) in height, such obstructions shall be provided with ladders installed in accordance with Section 306.5 or *stairs stairways* installed in accordance with the requirements specified in the *International Building Code* in the path of travel to and from appliances, fans or *equipment* requiring service.

**IMC CHAPTER 11
REFRIGERATION**

**IMC SECTION 1107
REFRIGERANT PIPING**

IMC 1107.2 Piping location. Refrigerant piping that crosses an open space that affords passageway in any building shall be not less than 7 feet 3 inches (2210 mm) above the floor unless the piping is located against the ceiling of such space. Refrigerant piping shall not be placed in any elevator, dumbwaiter or other shaft containing a moving object or in any shaft that has openings to living quarters or to means of egress. Refrigerant piping shall not be installed in an enclosed public stairway, *stair stairway* landing or means of egress.

PART IV – INTERNATIONAL EXISTING BUILDING CODE

**IEBC CHAPTER 8
ALTERATIONS—LEVEL 2**

**IEBC SECTION 804
FIRE PROTECTION**

IEBC 804.1.1 Corridor ratings. Where an approved automatic sprinkler system is installed throughout the story, the required fire-resistance rating for any corridor located on the story shall be permitted to be reduced in accordance with the *International Building Code*. In order to be considered for a corridor rating reduction, such system shall provide coverage for the *stairwell stairway* landings serving the floor and the intermediate landings immediately below.

**IEBC SECTION 805
MEANS OF EGRESS**

IEBC 805.3.1.1 Single-exit buildings. Only one exit is required from buildings and spaces of the following occupancies:

1. through 8. (*No change*)
9. In buildings of Group R-2 occupancy of any height with not more than four dwelling units per floor; with a smokeproof enclosure or outside stair stairway as an exit; and with such exit located within 20 feet (6096 mm) of travel to the entrance doors to all dwelling units served thereby.
10. (*No change*)

IEBC 805.3.1.2.1 Fire escape access and details. Fire escapes shall comply with all of the following requirements:

1. and 2. (*No change*)
3. Newly constructed fire escapes shall be permitted only where exterior stairs stairways cannot be utilized because of lot lines limiting the stair stairway size or because of the sidewalks, alleys, or roads at grade level.
4. Openings within 10 feet (3048 mm) of fire escape stairs stairways shall be protected by fire assemblies having minimum 3/4-hour fire-resistance ratings.
Exception: Opening protection shall not be required in buildings equipped throughout with an approved automatic sprinkler system.
5. (*No change*)

IEBC 805.3.1.2.3 Dimensions. Stairs Stairways shall be at least 22 inches (559 mm) wide with risers not more than, and treads not less than, 8 inches (203 mm). Landings at the foot of stairs stairways shall not be less than 40 inches (1016 mm) wide by 36 inches (914 mm) long and located not more than 8 inches (203 mm) below the door.

IEBC 805.4.3 Door closing. In any *work area*, all doors opening onto an exit passageway at grade or an exit stair stairway shall be self-closing or automatic-closing by listed closing devices.

Exceptions:

1. Where exit enclosure is not required by the *International Building Code*.
2. Means of egress within or serving only a tenant space that is entirely outside the *work area*.

IEBC 805.4.3.1 Supplemental requirements for door closing. Where the *work area* exceeds 50 percent of the floor area, doors shall comply with Section 805.4.3 throughout the exit stair stairway from the *work area* to, and including, the level of exit discharge.

IEBC 805.9.1 Minimum requirement. Every required exit stairway that is part of the means of egress for any *work area* and that has three or more risers and is not provided with at least one handrail, or in which the existing handrails are judged to be in danger of collapsing, shall be provided with handrails for the full length of the ~~run-of-steps~~ stairway on at least one side. All exit stairways with a required egress width of more than 66 inches (1676 mm) shall have handrails on both sides.

IEBC 805.10.1 Minimum requirement. Every open portion of a stair stairway, landing, or balcony that is more than 30 inches (762 mm) above the floor or grade below and is not provided with guards, or those portions in which existing guards are judged to be in danger of collapsing, shall be provided with guards.

**IEBC SECTION 806
ACCESSIBILITY**

IEBC 806.2 Stairs Stairways and escalators in existing buildings. In *alterations* where an escalator or stair stairway is added where none existed previously, an accessible route shall be provided in accordance with Sections 1104.4 and 1104.5 of the *International Building Code*.

**IEBC CHAPTER 9
ALTERATIONS—LEVEL 3**

**IEBC SECTION 902
SPECIAL USE AND OCCUPANCY**

IEBC 902.2.1 Emergency controls. Emergency controls for boilers and furnace equipment shall be provided in accordance with the *International Mechanical Code* in all buildings classified as day nurseries, children's shelter facilities, residential childcare facilities, and similar facilities with children below the age of 21/2 years or that are classified as Group I-2 occupancies, and in group homes, teaching family homes, and supervised transitional living homes in accordance with the following:

1. Emergency shutoff switches for furnaces and boilers in basements shall be located at the top of the stairs stairways leading to the basement; and
2. Emergency shutoff switches for furnaces and boilers in other enclosed rooms shall be located outside of such room.

**IEBC CHAPTER 11
ADDITIONS**

IEBC SECTION 1102

HEIGHTS AND AREAS

IEBC 1102.2 Area limitations. No *addition* shall increase the area of an *existing building* beyond that permitted under the applicable provisions of Chapter 5 of the *International Building Code* for new buildings unless fire separation as required by the *International Building Code* is provided.

Exception: In-filling of floor openings and nonoccupiable appendages such as elevator and exit stair stairway shafts shall be permitted beyond that permitted by the *International Building Code*.

IEBC CHAPTER 12 HISTORIC BUILDINGS

IEBC SECTION 1203 FIRE SAFETY

IEBC 1203.9 Stairway railings. Grand stairways shall be accepted without complying with the handrail and guard requirements. Existing handrails and guards at all stairs stairways shall be permitted to remain, provided they are not structurally *dangerous*.

IEBC SECTION 1205 CHANGE OF OCCUPANCY

IEBC 1205.11 Stairs Stairways and guards railings. Existing stairways shall comply with the requirements of these provisions. The *code official* shall grant alternatives for stairways and guards if alternative stairways are found to be acceptable or are judged to meet the intent of these provisions. Existing stairways shall comply with Section 1203.

Exception: For buildings less than 3,000 square feet (279 m²), existing conditions are permitted to remain at all stairs stairways and rails guards.

IEBC Resource A

2.1 Preliminary evaluation

Exterior Nonbearing Walls: The fire resistance of the exterior walls is important for two reasons. These walls (both bearing and non-bearing) are depended upon to: a) contain a fire within the building of origin; or b) keep an exterior fire *outside* the building. It is therefore important to indicate on the drawings where any openings are located as well as the materials and construction of all doors or shutters. The drawings should indicate the presence of wired glass, its thickness and framing, and identify the materials used for windows and door frames. The protection of openings adjacent to exterior means of escape (e.g., exterior stairs stairways, fire escapes) is particularly important. The ground floor drawing should locate the building on the property and indicate the precise distances to adjacent buildings.

The field investigator should be alert for differences in function as well as in materials and construction details. In general, the details within apartments are not as important as the major exit paths and stairwells exit stairways. The preliminary field investigation should attempt to determine the thickness of all walls. A term introduced below called "thickness design" will depend on an accurate ($\pm 1/4$ inch) determination. Even though this initial field survey is called "preliminary," the data generated should be as accurate and complete as possible.

The field investigator should note the exact location from which observations are recorded. For instance, if a hole is found through a stairwell wall enclosing an exit stairway which allows a cataloguing of the construction details, the field investigation notes should reflect the location of the "find." At the preliminary stage it is not necessary to core every wall; the interior details of construction can usually be determined at some location.

Doors: Doors to stairways and hallways represent some of the most important fire elements to be considered within a building. The uses of the spaces separated largely controls the level of fire performance necessary. Walls and doors enclosing stairs stairways or elevator shafts would normally require a higher level of performance than between a bedroom and bath. The various uses are differentiated in Figure 1.

Rule 7: The fire endurance of asymmetrical constructions depends on the direction of heat flow.

This rule is a consequence of Rules 4 and 6 as well as other factors. This rule is useful in determining the relative protection of corridors and stairwells walls enclosing an exit stairway from the surrounding spaces. In addition, there are often situations where a fire is more likely, or potentially more severe, from one side or the other.

Reason: The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The code issues are assigned to the CTC by the ICC Board as "areas of study". Information on the CTC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website: <http://www.iccsafe.org/cs/cc/ctc/index.html>. Since its inception in April, 2005, the CTC has held twenty-two meetings – all open to the public.

The intent is for the consistent use of the defined terms for 'stair' and 'stairway' throughout the all the codes. Stair is used when talking about individual steps or stepped aisles. Stairway is used when the provisions are applicable to a series of steps, or flights and landings between stories. In addition, when terms such as 'exit access stairway' and 'exit access ramp' follow

each other in a list, consistently eliminate a couple of words by saying 'exit access stairway and ramp.' When the provisions are equally appropriate for ramps and stairways, ramps is added.

PART I – IBC MEANS OF EGRESS

Committee Action:

Approved as Submitted

Committee Reason: The proposal revised the use of 'stair' and 'stairway' throughout the code so that the application matches the defined terms. This will clarify when requirements are intended for a change in elevation (i.e., stair) vs. a change in story (i.e., stairway). There was some concern about the style choice to say 'exit access stairway and ramp' vs. using the specific defined terms 'exit access stairways and exit access ramps'.

Assembly Action:

None

PART II – IMC

Committee Action:

Approved as Submitted

Committee Reason: The proposal revised the use of 'stair' and 'stairway' throughout the code so that the application matches the defined terms. This will clarify when requirements are intended for a change in elevation (i.e., stair) vs. a change in story (i.e., stairway).

Assembly Action:

None

PART IV – IEBC

Committee Action:

Approved as Submitted

Committee Reason: The proposal revised the use of 'stair' and 'stairway' throughout the code so that the application matches the defined terms. This will clarify when requirements are intended for a change in elevation (i.e., stair) vs. a change in story (i.e., stairway).

Assembly Action:

None

E3-12

202, 405.7.1, 410.6.1, 411.7, [F] 414.7.2, 716.5.3, 1004.3, 1008.1.4.4, 1015, 1018.4, 1028.9 (IFC 5005.4.4, [B]1004.3, [B]1008.1.4.4, [B]1015, [B] 1018.4, [B]1028.9)

Proposed Change as Submitted

Proponent: Gregory R. Keith, Professional heuristic Development, representing The Boeing Company (grkeith@mac.com)

Revise as follows:

SECTION 202 DEFINITIONS

EXIT ACCESS POINT DOORWAY. A ~~door or access~~ point along the path of egress travel from an occupied room, area or space where the path of egress enters an intervening room, corridor, exit access ~~stair~~ stairway or exit access ramp.

Revise as follows:

405.7.1 Number of exits. Each floor level shall be provided with no fewer than two exits. Where compartmentation is required by Section 405.4, each compartment shall have no fewer than one exit and shall also have no fewer than one exit access point ~~doorway~~ into the adjoining compartment.

410.6.1 Arrangement. Where two or more exits or exit access points ~~doorways~~ from the stage are required in accordance with Section 1015.1, no fewer than one exit or exit access point ~~doorway~~ shall be provided on each side of a stage.

411.7 Exit marking. Exit signs shall be installed at the required exit or exit access points ~~doorways~~ of amusement buildings in accordance with this section and Section 1011. Approved directional exit markings shall also be provided. Where mirrors, mazes or other designs are utilized that disguise the path of egress travel such that they are not apparent, approved and listed low-level exit signs that comply with Section 1011.5, and directional path markings listed in accordance with UL 1994, shall be provided and located not more than 8 inches (203 mm) above the walking surface and on or near the path of egress travel. Such markings shall become visible in an emergency. The directional exit marking shall be activated by the automatic fire detection system and the automatic sprinkler system in accordance with Section 907.2.12.2.

[F] 414.7.2 (IFC 5005.4.4) Dispensing, use and handling. Where hazardous materials having a hazard ranking of 3 or 4 in accordance with NFPA 704 are transported through corridors, interior exit stairways or ramps, or exit passageways there shall be an emergency telephone system, a local manual alarm station or an approved alarm-initiating device at not more than 150-foot (45 720 mm) intervals and at each exit and exit access point ~~doorway~~ throughout the transport route. The signal shall be relayed to an approved central, proprietary or remote station service or constantly attended on-site location and shall initiate a local audible alarm.

716.5.3 Door assemblies in corridors and smoke barriers. Fire door assemblies required to have a minimum fire protection rating of 20 minutes where located in corridor walls or smoke barrier walls having a fire-resistance rating in accordance with Table 716.5 shall be tested in accordance with NFPA 252 or UL 10C without the hose stream test.

Exceptions:

1. Viewports that require a hole not larger than 1 inch (25 mm) in diameter through the door, have at least a 0.25-inch-thick (6.4 mm) glass disc and the holder is of metal that will not melt out where subject to temperatures of 1,700°F (927°C).
2. Corridor door assemblies in occupancies of Group I-2 shall be in accordance with Section 407.3.1.
3. Unprotected openings shall be permitted for corridors in multitheater complexes where each motion picture auditorium has at least one-half of its required exit or exit access points ~~doorways~~ opening directly to the exterior or into an exit passageway.
4. Horizontal sliding doors in smoke barriers that comply with Sections 408.3 and 408.8.4 in occupancies in Group I-3.

Revise as follows:

1004.3 (IFC [B] 1004.3) Posting of occupant load. Every room or space that is an assembly occupancy shall have the occupant load of the room or space posted in a conspicuous place, near the main exit or exit access point ~~doorway~~ from the room or space. Posted signs shall be of an approved legible permanent design and shall be maintained by the owner or authorized agent.

1008.1.4.4 (IFC [B] 1008.1.4.4) Security grilles. In Groups B, F, M and S, horizontal sliding or vertical security grilles are permitted at the main exit and shall be openable from the inside without the use of a key or special knowledge or effort during periods that the space is occupied. The grilles shall remain secured in the full-open position during the period of occupancy by the general public. Where two or more means of egress are required, not more than one-half of the exits or exit access points ~~doorways~~ shall be equipped with horizontal sliding or vertical security grilles.

**SECTION 1015 (IFC [B] 1015)
EXIT AND EXIT ACCESS POINTS ~~DOORWAYS~~**

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

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

Exceptions:

1. In Group R-2 and R-3 occupancies, one means of egress is permitted within and from individual dwelling units with a maximum occupant load of 20 where the dwelling unit is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.
2. Care suites in Group I-2 occupancies complying with Section 407.4.3.
2. The common path of egress travel exceeds one of the limitations of Section 1014.3.
3. Where required by Section 1015.3, 1015.4, 1015.5, or 1015.6.

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

**TABLE 1015.1 (IFC [B] TABLE 1015.1)
SPACES WITH ONE EXIT OR EXIT ACCESS POINT DOORWAY**

OCCUPANCY	MAXIMUM OCCUPANT LOAD
A, B, E, F, M, U	49
H-1, H-2, H-3	3
H-4, H-5, I-1, I-2, I-3, I-4, R	10
S	29

1015.1.1 (IFC [B] 1015.1.1) Three or more exits or exit access points ~~doorways~~. Three exits or exit access points ~~doorways~~ shall be provided from any space with an occupant load of 501 to 1,000. Four exits or exit access points ~~doorways~~ shall be provided from any space with an occupant load greater than 1,000.

1015.2 (IFC [B] 1015.2) Exit or exit access point ~~doorway~~ arrangement. Required exits shall be located in a manner that makes their availability obvious. Exits shall be unobstructed at all times. Exit and exit access points ~~doorways~~ shall be arranged in accordance with Sections 1015.2.1 and 1015.2.2.

1015.2.1 (IFC [B] 1015.2.1) Two exits or exit access points ~~doorways~~. Where two exits or exit access points ~~doorways~~ are required from any portion of the exit access, the exit doors or exit access points ~~doorways~~ shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the building or area to be served measured in a straight line between exit doors or exit access points ~~doorways~~. Interlocking or scissor stairs shall be counted as one exit stairway.

Exceptions:

1. Where interior exit stairways are interconnected by a 1-hour fire-resistance-rated corridor conforming to the requirements of Section 1018, the required exit separation shall be measured along the shortest direct line of travel within the corridor.
2. Where a building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2, the separation distance of the exit doors or exit access points ~~doorways~~ shall not be less than one-third of the length of the maximum overall diagonal dimension of the area served.

1015.2.2 (IFC [B] 1015.2.2) Three or more exits or exit access points ~~doorways~~. Where access to three or more exits is required, at least two exit doors or exit access points ~~doorways~~ shall be arranged in accordance with the provisions of Section 1015.2.1.

1015.3 (IFC [B] 1015.3) Boiler, incinerator and furnace rooms. Two exit access points ~~doorways~~ are required in boiler, incinerator and furnace rooms where the area is over 500 square feet (46 m²) and any fuel-fired equipment exceeds 400,000 British thermal units (Btu) (422 000 KJ) input capacity. Where two exit access points ~~doorways~~ are required, one is permitted to be a fixed ladder or an alternating tread device. Exit access points ~~doorways~~ shall be separated by a horizontal distance equal to one-half the length of the maximum overall diagonal dimension of the room.

1015.4 (IFC [B] 1015.4) Refrigeration machinery rooms. Machinery rooms larger than 1,000 square feet (93 m²) shall have not less than two exits or exit access points ~~doorways~~. Where two exit access points ~~doorways~~ are required, one such doorway is permitted to be served by a fixed ladder or an alternating tread device. Exit access points ~~doorways~~ shall be separated by a horizontal distance equal to one-half the maximum horizontal dimension of room.

All portions of machinery rooms shall be within 150 feet (45 720 mm) of an exit or exit access point ~~doorway~~. An increase in travel distance is permitted in accordance with Section 1016.1.

Doors shall swing in the direction of egress travel, regardless of the occupant load served. Doors shall be tight fitting and self-closing.

1015.5 (IFC [B] 1015.5) Refrigerated rooms or spaces. Rooms or spaces having a floor area larger than 1,000 square feet (93 m²), containing a refrigerant evaporator and maintained at a temperature below 68°F (20°C), shall have access to not less than two exits or exit access points ~~doorways~~.

Travel distance shall be determined as specified in Section 1016.1, but all portions of a refrigerated room or space shall be within 150 feet (45 720 mm) of an exit or exit access point ~~doorway~~ where such rooms are not protected by an approved automatic sprinkler system. Egress is allowed through adjoining refrigerated rooms or spaces.

Exception: Where using refrigerants in quantities limited to the amounts based on the volume set forth in the International Mechanical Code.

1015.6 (IFC [B] 1015.6) Day care means of egress. Day care facilities, rooms or spaces where care is provided for more than 10 children that are 2-1/2 years of age or less, shall have access to not less than two exits or exit access points ~~doorways~~.

1018.4 (IFC [B] 1018.4) Dead ends. Where more than one exit or exit access point ~~doorway~~ is required, the exit access shall be arranged such that there are no dead ends in corridors more than 20 feet (6096 mm) in length.

Exceptions:

1. In occupancies in Group I-3 of Occupancy Condition 2, 3 or 4 (see Section 308.5), the dead end in a corridor shall not exceed 50 feet (15 240 mm).
2. In occupancies in Groups B, E, F, I-1, M, R-1, R-2, R-4, S and U, where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, the length of the dead-end corridors shall not exceed 50 feet (15 240 mm).
3. A dead-end corridor shall not be limited in length where the length of the dead-end corridor is less than 2.5 times the least width of the dead-end corridor.

1028.9 (IFC [B] 1028.9) Assembly aisles are required. Every occupied portion of any building, room or space used for assembly purposes that contains seats, tables, displays, similar fixtures or equipment shall be provided with aisles leading to exits or exit access points ~~doorways~~ in accordance with this section. Aisle accessways for tables and seating shall comply with Section 1028.10.1.

Reason: The term exit access doorway is a misnomer. By definition, the term exit access doorway includes any access point along the path of egress travel including exit access stairways and ramps. Given the literal nature of the term "doorway," without consulting the definition, most code users would not necessarily associate stairways and ramps when they read the word doorway. This distinction becomes important with the 2012 Edition of the IBC. E5-09/10 introduced the terms "exit access stairway" and "exit access ramp" into Chapter 10. These definitions are particularly significant because the concept of accessing exits at an adjacent story by way of exit access stairways and ramps has been formalized in the 2012 IBC.

There are several requirements that relate to the establishment of these terms. For instance, Section 1015.2 states, "Exit and exit access doorways shall be arranged in accordance with Sections 1015.2.1 and 1015.2.2." It is important that required exits and exit access stairways serving a given story are properly separated. The fact that the requirement refers only to exits and exit access doorways can be misleading. By requiring the separation of exits and exit access points, it is clear to code practitioners that any specified exit access component, whether it be a door, doorway, exit access stairway or exit access ramp, must comply with the provision.

It is not in the best interests of either the design or enforcement communities for the IBC to be misleading through its terminology. It is imperative that the IBC articulate what is intended in the clearest fashion possible. This is particularly important at a time when the IBC means of egress definitions and provisions are being technically and editorially adjusted. Approval of this proposal will increase uniformity in the application of fundamental means of egress provisions.

Cost Impact: None

202-Exit access doorway-E-Keith.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The committee felt that this new term might confuse the issue rather than clarify this for code users. Exit access points would be confusing when looking at exit sign placement, locations of pull stations. The committee was concerned that the use of this term may possibly reduce the concept of compartmentation or blur the line for measurement of where to measure travel distance.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Gregory R. Keith, Professional heuristic Development, representing The Boeing Company, requests Approval as Modified by this Public Comment

Modify the proposal as follows:

EXIT ACCESS POINTS DOORWAY. A door or doorway point along the path of egress travel from an occupied room, area or space where such the path of egress travel enters an intervening room, or corridor, ~~exit access stairway or exit access ramp~~.

EXIT ACCESS POINT. A point along the path of egress travel from an occupied room, area or space where such path of egress travel enters an exit access stairway or exit access ramp.

405.7.1 Number of exits. Each floor level shall be provided with no fewer than two exits. Where compartmentation is required by Section 405.4, each compartment shall have no fewer than one exit and shall also have no fewer than one exit, or exit access doorway or exit access point into the adjoining compartment.

410.6.1 Arrangement. Where two or more exits, or exit access doorways or exit access points from the stage are required in accordance with Section 1015.1, no fewer than one exit, or exit access doorway or exit access point shall be provided on each side of a stage.

411.7 Exit marking. Exit signs shall be installed at the required exits, or exit access doorways or exit access points of amusement buildings in accordance with this section and Section 1011. Approved directional exit markings shall also be provided. Where mirrors, mazes or other designs are utilized that disguise the path of egress travel such that they are not apparent, approved and listed low-level exit signs that comply with Section 1011.5, and directional path markings listed in accordance with UL 1994, shall be provided and located not more than 8 inches (203 mm) above the walking surface and on or near the path of egress travel. Such markings shall become visible in an emergency. The directional exit marking shall be activated by the automatic fire detection system and the automatic sprinkler system in accordance with Section 907.2.12.2.

[F] 414.7.2 (IFC 5005.4.4) Dispensing, use and handling. Where hazardous materials having a hazard ranking of 3 or 4 in accordance with NFPA 704 are transported through corridors, interior exit stairways or ramps, or exit passageways there shall be an emergency telephone system, a local manual alarm station or an approved alarm-initiating device at not more than 150-foot (45 720 mm) intervals and at each exit, or exit access doorway or exit access point throughout the transport route. The signal shall be relayed to an approved central, proprietary or remote station service or constantly attended on-site location and shall initiate a local audible alarm.

716.5.3 Door assemblies in corridors and smoke barriers. Fire door assemblies required to have a minimum fire protection rating of 20 minutes where located in corridor walls or smoke barrier walls having a fire-resistance rating in accordance with Table 716.5 shall be tested in accordance with NFPA 252 or UL 10C without the hose stream test.

Exceptions:

1. Viewports that require a hole not larger than 1 inch (25 mm) in diameter through the door, have at least a 0.25-inch-thick (6.4 mm) glass disc and the holder is of metal that will not melt out where subject to temperatures of 1,700°F (927°C).
2. Corridor door assemblies in occupancies of Group I-2 shall be in accordance with Section 407.3.1.
3. Unprotected openings shall be permitted for corridors in multitheater complexes where each motion picture auditorium has at least one-half of its required exit, or exit access doorway or exit access points opening directly to the exterior or into an exit passageway.

4. Horizontal sliding doors in smoke barriers that comply with Sections 408.3 and 408.8.4 in occupancies in Group I-3.

1004.3 (IFC [B] 1004.3) Posting of occupant load. Every room or space that is an assembly occupancy shall have the occupant load of the room or space posted in a conspicuous place, near the main exit, ~~or exit access doorway or exit access point~~ from the room or space. Posted signs shall be of an approved legible permanent design and shall be maintained by the owner or authorized agent.

1008.1.4.4 (IFC [B] 1008.1.4.4) Security grilles. In Groups B, F, M and S, horizontal sliding or vertical security grilles are permitted at the main exit and shall be openable from the inside without the use of a key or special knowledge or effort during periods that the space is occupied. The grilles shall remain secured in the full-open position during the period of occupancy by the general public. Where two or more means of egress are required, not more than one-half of the exits, ~~or exit access doorways or exit access points~~ shall be equipped with horizontal sliding or vertical security grilles.

SECTION 1015 EXITS, ~~AND EXIT ACCESS~~ DOORWAYS AND EXIT ACCESS POINTS

1015.1 Exits, ~~or exit access doorways or exit access points~~ from spaces. Two exits, ~~or exit access doorways or exit access points~~ from any space shall be provided where one of the following conditions exists:

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

Exceptions:

1. In Group R-2 and R-3 occupancies, one means of egress is permitted within and from individual dwelling units with a maximum occupant load of 20 where the dwelling unit is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.
2. Care suites in Group I-2 occupancies complying with Section 407.4.
2. The common path of egress travel exceeds one of the limitations of Section 1014.3.
3. Where required by Section 1015.3, 1015.4, 1015.5, or 1015.6.

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

**TABLE 1015.1
SPACES WITH ONE EXIT, ~~OR~~
EXIT ACCESS DOORWAY OR EXIT ACCESS POINT**

OCCUPANCY	MAXIMUM OCCUPANT LOAD
A, B, E, F, M, U	49
H-1, H-2, H-3	3
H-4, H-5, I-1, I-2, I-3, I-4, R	10
S	29

1015.1.1 Three or more exits, ~~or exit access doorways or exit access points~~. Three exits, ~~or exit access doorways or exit access points~~ shall be provided from any space with an occupant load of 501 to 1,000. Four exits, ~~or exit access doorways or exit access points~~ shall be provided from any space with an occupant load greater than 1,000.

1015.2 Exit, ~~or exit access doorway or exit access point~~ arrangement. Required exits shall be located in a manner that makes their availability obvious. Exits shall be unobstructed at all times. Exits, ~~and exit access doorways and exit access points~~ shall be arranged in accordance with Sections 1015.2.1 and 1015.2.2.

1015.2.1 Two exits, ~~or exit access doorways or exit access points~~. Where two exits, ~~or exit access doorways or exit access points~~ are required from any portion of the exit access, the exit doors, ~~or exit access doorways or exit access points~~ shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the building or area to be served measured in a straight line between exit doors, ~~or exit access doorways or exit access points~~. Interlocking or scissor stairs shall be counted as one exit stairway.

Exceptions:

1. Where interior exit stairways are interconnected by a 1-hour fire-resistance-rated corridor conforming to the requirements of Section 1018, the required exit separation shall be measured along the shortest direct line of travel within the corridor.
2. Where a building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2, the separation distance of the exit doors, ~~or exit access doorways or exit access points~~ shall not be less than one-third of the length of the maximum overall diagonal dimension of the area served.

1015.2.2 Three or more exits, ~~or exit access doorways or exit access points~~. Where access to three or more exits, ~~doors or exit access doorways or exit access points~~ is required, at least two exit doors exits, ~~or exit access doorways or exit access points~~ shall be arranged in accordance with the provisions of Section 1015.2.1.

1015.3 Boiler, incinerator and furnace rooms. Two exits, exit access doorways or exit access points are required in boiler, incinerator and furnace rooms where the area is over 500 square feet (46 m²) and any fuel-fired equipment exceeds 400,000 British thermal units (Btu) (422 000 KJ) input capacity. Where two exits, exit access doorways or exit access points are required, one is permitted to be a fixed ladder or an alternating tread device. Exits, exit access doorways or exit access points shall be separated by a horizontal distance equal to one-half the length of the maximum overall diagonal dimension of the room.

1015.4 Refrigeration machinery rooms. Machinery rooms larger than 1,000 square feet (93 m²) shall have not less than two exits, or exit access doorways or exit access points. Where two exits, exit access doorways or exit access points are required, one such exit, exit access doorway or exit access point is permitted to be served by a fixed ladder or an alternating tread device. Exits, exit access doorways or exit access points shall be separated by a horizontal distance equal to one-half the maximum horizontal dimension of room.

All portions of machinery rooms shall be within 150 feet (45 720 mm) of an exit, or exit access doorway or exit access point. An increase in travel distance is permitted in accordance with Section 1016.1.

Doors shall swing in the direction of egress travel, regardless of the occupant load served. Doors shall be tight fitting and self-closing.

1015.5 Refrigerated rooms or spaces. Rooms or spaces having a floor area larger than 1,000 square feet (93 m²), containing a refrigerant evaporator and maintained at a temperature below 68°F (20°C), shall have access to not less than two exits, or exit access doorways or exit access points.

Travel distance shall be determined as specified in Section 1016.1, but all portions of a refrigerated room or space shall be within 150 feet (45 720 mm) of an exit, or exit access doorway or exit access point where such rooms are not protected by an approved automatic sprinkler system. Egress is allowed through adjoining refrigerated rooms or spaces.

Exception: Where using refrigerants in quantities limited to the amounts based on the volume set forth in the International Mechanical Code.

1015.6 Day care means of egress. Day care facilities, rooms or spaces where care is provided for more than 10 children that are 2-1/2 years of age or less, shall have access to not less than two exits, or exit access doorways or exit access points.

1018.4 (IFC [B] 1018.4) Dead ends. Where more than one exit, or exit access doorway or exit access point is required, the exit access shall be arranged such that there are no dead ends in corridors more than 20 feet (6096 mm) in length.

Exceptions:

1. In occupancies in Group I-3 of Occupancy Condition 2, 3 or 4 (see Section 308.5), the dead end in a corridor shall not exceed 50 feet (15 240 mm).
2. In occupancies in Groups B, E, F, I-1, M, R-1, R-2, R-4, S and U, where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, the length of the dead-end corridors shall not exceed 50 feet (15 240 mm).
3. A dead-end corridor shall not be limited in length where the length of the dead-end corridor is less than 2.5 times the least width of the dead-end corridor.

1028.9 (IFC [B] 1028.9) Assembly aisles are required. Every occupied portion of any building, room or space used for assembly purposes that contains seats, tables, displays, similar fixtures or equipment shall be provided with aisles leading to exits, or exit access doorways or exit access points in accordance with this section. Aisle accessways for tables and seating shall comply with Section 1028.10.1.

Commenter's Reason: Based on means of egress code committee comments that the new term, "exit access point," might confuse code users with respect to exit sign placement and locations of pull stations, the definition of exit access doorway has been restored. The original reason for the proposal submittal was that the current definition of EXIT ACCESS DOORWAY contained additional exit access components; specifically, exit access stairways and exit access ramps. Those terms are independently defined in the IBC and need not be included in the definition of exit access doorway. A new term "exit access point" is created for purposes of technical clarification and is intended to identify how to accurately determine numbers of required exits or access to exits from spaces and exit/exit access configuration. The term is integrated into Section 1015 and helps to indicate what combination of means of egress components may be used to satisfy the various requirements contained in that section. For instance, Section 1015.2.1 presently requires separation between exits and exit access doorways. Based on the current definition of exit access doorway, exit access stairways and ramps would also be required to be properly separated. As a matter of practice, most code practitioners do not normally consult definitions and that technical subtlety might be lost. The creation of a definition for EXIT ACCESS POINT and the reference to that term in applicable sections will assist design professionals and code enforcement officials and result in more consistent interpretation and application of these fundamental provisions. This public comment has addressed the concerns of the means of egress committee.

E3-12

Final Action: AS AM AMPC_____ D

E4 – 12

202, 1026.3 (IFC [B] 1026.3)

Proposed Change as Submitted

Proponent: Gregory R. Keith, Professional heuristic Development, representing The Boeing Company (grkeith@mac.com)

Revise as follows:

SECTION 202 DEFINITIONS

EXIT ACCESS RAMP. ~~An interior ramp~~ that is not a required *interior or exterior exit ramp*.

EXIT ACCESS STAIRWAY. ~~An interior stairway~~ that is not a required *interior or exterior exit stairway*.

EXTERIOR EXIT RAMP. An exit component that serves to meet one or more means of egress design requirements, such as required number of exits or exit access travel distance, and is open to yards, courts or public ways.

EXTERIOR EXIT STAIRWAY, EXTERIOR. ~~An exit component that serves to meet one or more means of egress design requirements, such as required number of exits or exit access travel distance, and is open to that is open on at least one side, except for required structural columns, beams, handrails and guards. The adjoining open areas shall be either yards, courts or public ways. The other sides of the exterior stairway need not be open.~~

INTERIOR EXIT RAMP. An exit component that serves to meet one or more *means of egress* design requirements, such as required number of *exits* or *exit access* travel distance, and provides for a protected path of egress travel to the *exit discharge* or *public way*.

INTERIOR EXIT STAIRWAY. An exit component that serves to meet one or more *means of egress* design requirements, such as required number of *exits* or *exit access* travel distance, and provides for a protected path of egress travel to the *exit discharge* or *public way*.

RAMP. A walking surface that has a running slope steeper than one unit vertical in 20 units horizontal (5-percent slope).

STAIRWAY. One or more *flights* of *stairs*, either exterior or interior, with the necessary landings and platforms connecting them, to form a continuous and uninterrupted passage from one level to another.

~~**STAIRWAY, INTERIOR.** A stairway not meeting the definition of an exterior stairway.~~

Revise as follows:

1026.3 (IFC [B] 1026.3) Open side. *Exterior exit stairways and ramps* serving as an element of a required *means of egress* shall be open on at least one side, except for required structural columns, beams, handrails and guards. An open side shall have a minimum of 35 square feet (3.3 m²) of aggregate open area adjacent to each floor level and the level of each intermediate landing. The required open area shall be located not less than 42 inches (1067 mm) above the adjacent floor or landing level.

Reason: Several new means of egress terms were created and defined in the 2012 Edition of the International Building Code. They include, "EXIT ACCESS STAIRWAY," "EXIT ACCESS RAMP," "INTERIOR EXIT STAIRWAY" and "INTERIOR EXIT RAMP." These, and other terms, are fundamental to the design of any means of egress system. There is a precise relationship between these terms. It is proposed to modify the definition of both "EXIT ACCESS STAIRWAY" and "EXIT ACCESS RAMP" by deleting the

word "interior." This is appropriate in that the exit access can be exterior to the building and changes in floor level can occur along the path of egress travel. Since an exit access stairway or ramp can be interior or exterior to the building, it is clarified that they are not exterior exit stairways or ramps as well.

Exterior exit stairways and exterior exit ramps are exit components according to the definition of "EXIT" in Section 202 and Section 1022.1. Both of these terms are currently undefined in the IBC. There is, however, a definition for "STAIRWAY, EXTERIOR." An exterior stairway is not a means of egress component, per se, in the IBC. It is proposed to replace the definition of "STAIRWAY, EXTERIOR" with a definition for "EXTERIOR EXIT STAIRWAY." The proposed definition is consistent with the current definition except for the distinction that such stairways are open to yards, courts or public ways consistent with the requirements in Section 1026.4. Additionally, Section 1026.3 has been modified to add technical language formerly contained in the definition of "STAIRWAY, EXTERIOR" as regards in impact of structural columns, beams, handrails and guards on openness determination. A companion definition for exterior exit ramps has been created which is consistent with the proposed definition of exterior exit stairway.

Lastly, it is proposed to delete the current definition of "STAIRWAY, INTERIOR." This definition is nonsensical, obsolete and out of current technical context. The current definition of "EXIT ACCESS STAIRWAY" effectively replaces this definition.

The definitions of "INTERIOR EXIT RAMP," "INTERIOR EXIT STAIRWAY," "RAMP" and "STAIRWAY" have been included for reference purposes so the relationship of the various terms can be seen.

In summary, the proposed modifications to these means of egress component definitions will provide necessary clarity for users who are designing or analyzing a means of egress system. It is imperative that IBC definitions be technically accurate and properly descriptive. Approval of this proposal will allow for more consistent interpretations and applications of important IBC means of egress provisions.

Cost Impact: None

202-Exit access doorways-E-Keith.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: There was a concern that ramps or stairways within the exit discharge would fall within the definition of exit access ramps and stairways.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Gregory R. Keith, Professional heuristic Development, representing The Boeing Company, requests Approval as Modified by this Public Comment

Modify the proposal as follows:

EXIT ACCESS RAMP. A ramp within the exit access portion of the means of egress system ~~that is not a required interior or exterior exit ramp.~~

EXIT ACCESS STAIRWAY. A stairway within the exit access portion of the means of egress system ~~that is not a required interior or exterior exit stairway.~~

(Portions of proposal not shown remain unchanged.)

Commenter's Reason: The ICC Means of Egress Code Development Committed disapproved Item E4-12 at the 2012 ICC code development hearings in Dallas, Texas. In its published reason statement, the committee noted, "There was a concern that ramps or stairways within the exit discharge would fall within the definition of exit access ramps and stairways." Based on that comment, and the fact that the concern was over current text, the proposed definitions for exit access stairways and exit access ramps have been revised to indicate that exit access stairways and ramps occur within the exit access portion of the means of egress system. Given that the formal technical relationship between exit access stairways and ramps and interior exit stairways and ramps has

been established in the 2012 Edition of the IBC, it is important that these key definitions accurately describe their role in the proper design of a means of egress system. Approval of this public comment will provide necessary clarification to these fundamental means of egress provisions.

E4-12

Final Action: AS AM AMPC_____ D

E7-12

202, 403.5.1, 505.2.3, 707.3.3, 707.5.1, 707.7.1, 711.4, 712.1.8, 712.1.12, 713.1, 1001.2, 1007.2, 1007.3, 1007.6.2, 1009.2-1009.3.1.8, 1010.2, 1011.1, 1015.1, 1015.2, 1015.2.1, 1015.2.1.1 (New), 1015.2.2, 1015.2.3 (New), 1015.2.3.1 (New), 1016.3, 1018 (New), 1026.6, 1027.1, 1028.5 (IFC [B] 1001.2, 1007.2, 1007.3, 1007.6.2, 1009.2-1009.3.1.8, 1010.2, 1011.1, 1015.1, 1015.2, 1015.2.1, 1015.2.1.1 (New), 1015.2.2, 1015.2.3 (New), 1015.2.3.1 (New), 1016.3, 1018 (New), 1026.6, 1027.1, 1028.5)

Proposed Change as Submitted

Proponent: Carl Baldassarra, P.E., FSFPE, Chair, ICC Code Technology Committee

Revise as follows:

SECTION 202 DEFINITIONS

EXIT ACCESS RAMP. An ~~interior~~ ramp that is not a required ~~interior~~ exit ramp.

EXIT ACCESS STAIRWAY. An ~~interior~~ stairway that is not a required ~~interior~~ exit stairway.

Revise as follows:

SECTION 1001 ADMINISTRATION

1001.2 (IFC [B] 1001.2) Minimum requirements. It shall be unlawful to alter a building or structure in a manner that will reduce the number of exits or the capacity of the means of egress to less than required by this code. Means of egress shall be designed to be continuous and unobstructed.

SECTION 1007 (IFC [B] 1007) ACCESSIBLE MEANS OF EGRESS

1007.2 (IFC [B] 1007.2) Continuity and components. Each required *accessible means of egress* shall be continuous to a *public way* and shall consist of one or more of the following components:

1. *Accessible* routes complying with Section 1104.
2. *Interior exit stairways* complying with Sections 1007.3 and 1022.
3. ~~Interior exit access stairways~~ complying with Sections 1007.3 and ~~1009.3~~ 1018.2 or 1018.3.
4. *Exterior exit stairways* complying with Sections 1007.3 and 1026 and serving levels other than the *level of exit discharge*.
5. Elevators complying with Section 1007.4.
6. Platform lifts complying with Section 1007.5.
7. *Horizontal exits* complying with Section 1025.
8. *Ramps* complying with Section 1010.
9. *Areas of refuge* complying with Section 1007.6.
10. Exterior area for assisted rescue complying with Section 1007.7.

1007.3 (IFC [B] 1007.3) Stairways. In order to be considered part of an *accessible means of egress*, a *stairway* between stories shall have a clear width of 48 inches (1219 mm) minimum between *handrails* and shall either incorporate an *area of refuge* within an enlarged floor-level landing or shall be accessed from either an *area of refuge* complying with Section 1007.6 or a *horizontal exit*. *Exit access stairways* that connect levels in the same story are not permitted as part of an *accessible means of egress*.

Exceptions:

1. Exit access stairways providing means of egress from mezzanines are permitted as part of an accessible means of egress.
24. The clear width of 48 inches (1219 mm) between *handrails* is not required in buildings equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2.
32. *Areas of refuge* are not required at *stairways* in buildings equipped throughout by an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2.
43. The clear width of 48 inches (1219 mm) between *handrails* is not required for *stairways* accessed from a *horizontal exit*.
54. *Areas of refuge* are not required at *stairways* serving *open parking garages*.
65. *Areas of refuge* are not required for smoke protected seating areas complying with Section 1028.6.2.
76. The *areas of refuge* are not required in Group R-2 occupancies.

1007.6.2 (IFC [B] 1007.6.2) Separation. Each *area of refuge* shall be separated from the remainder of the story by a *smoke barrier* complying with Section 709 or a *horizontal exit* complying with Section 1025. Each *area of refuge* shall be designed to minimize the intrusion of smoke.

Exception: *Areas of refuge* located within an enclosure for ~~exit access stairways or interior exit stairways~~.

SECTION 1009 (IFC [B] 1009) STAIRWAYS

1009.1 (IFC [B] 1009.1) General. Stairways serving occupied portions of a building shall comply with the requirements of this section.

~~1009.2 (IFC [B] 1009.2) Interior exit stairways.~~ ~~Interior exit stairways shall lead directly to the exterior of the building or shall be extended to the exterior of the building with an exit passageway conforming to the requirements of Section 1023, except as permitted in Section 1027.1.~~

~~1009.2.1 (IFC [B] 1009.2.1) Where required.~~ ~~Interior exit stairways shall be included, as necessary, to meet one or more means of egress design requirements, such as required number of exits or exit access travel distance.~~

~~1009.2.2 (IFC [B] 1009.2.2) Enclosure.~~ ~~All interior exit stairways shall be enclosed in accordance with the provisions of Section 1022.~~

~~1009.3 (IFC [B] 1009.3) Exit access stairways.~~ ~~Relocated to 1018.3~~

~~1009.3.1 (IFC [B] 1009.3.1) Construction.~~ ~~Where required, enclosures for exit access stairways shall be constructed in accordance with this section. Exit access stairway enclosures shall be constructed as fire barriers in accordance with Section 707 or horizontal assemblies in accordance with Section 711, or both.~~

~~1009.3.1.1 (IFC [B] 1009.3.1.1) Materials.~~ ~~Exit access stairway enclosures shall be of materials permitted by the building type of construction.~~

~~1009.3.1.2 (IFC [B] 1009.3.1.2) Fire-resistance rating.~~ ~~Exit access stairway enclosures shall have a fire-resistance rating of not less than 2 hours where connecting four stories or more, and not less than 1 hour where connecting less than four stories. The number of stories connected by the exit access stairway enclosures shall include any basements, but not any mezzanines. Exit access stairway enclosures shall have a fire-resistance rating not less than the floor assembly penetrated, but need not exceed 2 hours.~~

~~1009.3.1.3 (IFC [B] 1009.3.1.3) Continuity.~~ ~~Exit access stairway enclosures shall have continuity in~~

accordance with Section 707.5 for fire barriers or Section 711.4 for horizontal assemblies as applicable.

1009.3.1.4 (IFC [B] 1009.3.1.4) Openings. Openings in an exit access stairway enclosure shall be protected in accordance with Section 716 as required for fire barriers. Doors shall be self- or automatic-closing by smoke detection in accordance with Section 716.5.9.3.

1009.3.1.4.1 (IFC [B] 1009.3.1.4.1) Prohibited openings. Openings other than those necessary for the purpose of the exit access stairway enclosure shall not be permitted in exit access stairway enclosures.

1009.3.1.5 (IFC [B] 1009.3.1.5) Penetrations. Penetrations in an exit access stairway enclosure shall be protected in accordance with Section 714 as required for fire barriers.

1009.3.1.5.1 (IFC [B] 1009.3.1.5.1) Prohibited penetrations. Penetrations other than those necessary for the purpose of the exit access stairway enclosure shall not be permitted in exit access stairway enclosures.

1009.3.1.6 (IFC [B] 1009.3.1.6) Joints. Joints in an exit access stairway enclosure shall comply with Section 715.

1009.3.1.7 (IFC [B] 1009.3.1.7) Ducts and air transfer openings. Penetrations of an exit access stairway enclosure by ducts and air transfer openings shall comply with Section 717.

1009.3.1.8 (IFC [B] 1009.3.1.8) Exterior walls. Where exterior walls serve as a part of an exit access stairway enclosure, such walls shall comply with the requirements of Section 705 for exterior walls and the fire-resistance-rated enclosure requirements shall not apply.

(Renumber remaining sections)

SECTION 1010 RAMPS

1010.2 (IFC [B] 1010.2) Enclosure. All interior exit ramps shall be enclosed in accordance with the applicable provisions of Section 1022. Exit access ramps shall be enclosed in accordance with the provisions of Section 1009.3 for enclosure of stairways.

(Renumber remaining sections)

SECTION 1011 (IFC [B] 1011) EXIT SIGNS

1011.1 (IFC [B] 1011.1) Where required. *Exits* and *exit access doors* shall be marked by an *approved exit* sign readily visible from any direction of egress travel. The path of egress travel to *exits* and within *exits* shall be marked by readily visible *exit* signs to clearly indicate the direction of egress travel in cases where the *exit* or the path of egress travel is not immediately visible to the occupants. Intervening *means of egress doors* within *exits* shall be marked by *exit* signs. *Exit* sign placement shall be such that no point in an *exit access corridor* or *exit passageway* is more than 100 feet (30 480 mm) or the *listed* viewing distance for the sign, whichever is less, from the nearest visible *exit* sign.

Exceptions:

1. *Exit* signs are not required in rooms or areas that require only one *exit* or *exit access*.
2. Main exterior *exit* doors or gates that are obviously and clearly identifiable as *exits* need not have *exit* signs where *approved* by the *building official*.
3. *Exit* signs are not required in occupancies in Group U and individual sleeping units or dwelling units in Group R-1, R-2 or R-3.

4. *Exit* signs are not required in dayrooms, sleeping rooms or dormitories in occupancies in Group I-3.
5. In occupancies in Groups A-4 and A-5, *exit* signs are not required on the seating side of vomitories or openings into seating areas where *exit* signs are provided in the concourse that are readily apparent from the vomitories. Egress lighting is provided to identify each vomitory or opening within the seating area in an emergency.

SECTION 1015 (IFC [B] 1015) EXITS AND EXIT ACCESS DOORWAYS

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

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

Exceptions:

1. In Group R-2 and R-3 occupancies, one *means of egress* is permitted within and from individual dwelling units with a maximum *occupant load* of 20 where the dwelling unit is equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2.
2. Care suites in Group I-2 occupancies complying with Section 407.4.3.
2. The *common path of egress travel* exceeds one of the limitations of Section 1014.3.
3. Where required by Section 1015.3, 1015.4, 1015.5, or 1015.6.

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

1015.2 (IFC [B] 1015.2) Exit or exit access doorway arrangement. Required exits shall be located in a manner that makes their availability obvious. ~~Exits shall be unobstructed at all times.~~ Exits, and exit access doorways, and exit access stairways and ramps shall be arranged in accordance with Sections 1015.2.1 and 1015.2.2.

1015.2.1 (IFC [B] 1015.2.1) Two exits or exit access doorways. Where two *exits* or *exit access doorways* and exit access stairways and ramps are required from any portion of the *exit access*, the *exit doors* or *exit access doorways* and exit access stairways and ramps shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the building or area to be served measured in a straight line between ~~exit doors~~ or *exit access doorways* and exit access stairways and ramps. Interlocking or *scissor stairs* shall be counted as one *exit stairway*.

Exceptions:

1. Where interior exit stairways are interconnected by a 1-hour fire-resistance-rated corridor conforming to the requirements of Section 1018, the required exit separation shall be measured along the shortest direct line of travel within the corridor.
2. Where a building is equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2, the separation distance of the *exit doors* or *exit access doorways* and exit access stairways and ramps shall not be less than one-third of the length of the maximum overall diagonal dimension of the area served.

1015.2.1.1 (IFC [B] 1015.2.1.1) Measurement point. The separation distance required in Section 1015.2.1 shall be measured in accordance with the following:

1. The separation distance to exit or exit access doorways shall be measured to any point along the width of the doorway.
2. The separation distance to exit access stairways shall be measured to the closest riser.
3. The separation distance to exit access ramps shall be measured to the start of the ramp run.

1015.2.2 (IFC [B] 1015.2.2) Three or more exits or exit access doorways. Where access to three or more exits is required, at least two ~~exit doors or exit access doorways~~ shall be arranged in accordance with the provisions of Section 1015.2.1.

1015.2.3 (IFC [B] 1015.2.3) Remoteness of exit access stairways or ramps. Where two exit access stairways or ramps provide the required means of egress to exits at another story, the required separation distance shall be maintained for all portions of such exit access stairways or ramps.

1015.2.3.1 (IFC [B] 1015.2.3.1) Three or more exit access stairways or ramps. Where more than two exit access stairways or ramps provide the required means of egress, at least two shall be arranged in accordance with 1015.2.3.

SECTION 1016 (IFC [B] 1016) EXIT ACCESS TRAVEL DISTANCE

1016.3 (IFC [B] 1016.3) Measurement. Exit access travel distance shall be measured from the most remote point within a story along the natural and unobstructed path of horizontal and vertical egress travel to the entrance to an exit.

Exceptions Exception:

4. In open parking garages, exit access travel distance is permitted to be measured to the closest riser of an exit access stairway or the closest slope of an exit access ramp.
2. ~~In outdoor facilities with open exit access components, exit access travel distance is permitted to be measured to the closest riser of an exit access stairway or the closest slope of an exit access ramp.~~

SECTION 1018 (IFC [B] 1018) EXIT ACCESS STAIRWAYS AND RAMPS

1018.1 (IFC [B] 1018.1) General. Exit access stairways and ramps serving as an exit access component in a means of egress system shall comply with the requirements of this section. The number of stories connected by exit access stairways and ramps shall include basements, but not mezzanines.

1018.2 (IFC [B] 1018.2) All occupancies. Exit access stairways and ramps that serve floor levels within a single story are not required to be enclosed.

1018.3 (IFC [B] 1018.3) ~~4009.3(IFC [B] 4009.3)~~ Occupancies other than Group I-2 and I-3. Exit access stairways. Floor openings between stories created by exit access stairways shall be enclosed. In other than Group I-2 and I-3 occupancies, floor openings containing exit access stairways or ramps that do not comply with one of the conditions listed in this section shall be enclosed with a shaft enclosure constructed in accordance with Section 713.

Exceptions:

1. ~~In other than Group I-2 and I-3 occupancies, Exit access stairways and ramps that serve, or atmospherically communicate between, only two stories, are not required to be enclosed. Such interconnected stories shall not be open to other stories.~~
2. In Group R-1, R-2 or R-3 occupancies, exit access stairways and ramps connecting four stories or less serving and contained within a single residential an individual dwelling unit or

~~sleeping unit or live/work unit in Group R-1, R-2 or R-3 occupancies are not required to be enclosed.~~

- ~~3. In buildings with only Group B or M occupancies, Exit access stairways and ramps in openings are not required to be enclosed provided that the buildings is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, where the area of the floor vertical opening between stories does not exceed twice the horizontal projected area of the exit access stairway or ramp, 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 occupancies, this provision is limited to openings that do not connect more than four stories.~~
- ~~4. In other than Groups B and M occupancies, exit access stairway openings are not required to be enclosed provided that the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, the floor opening does not connect more than four stories, the area of the floor opening between stories does not exceed twice the horizontal projected area of the exit access stairway, and the opening is protected by a draft curtain and closely spaced sprinklers in accordance with NFPA 13.~~
- ~~45. Exit access stairways and ramps within an atrium complying with the provisions of Section 404 are not required to be enclosed.~~
- ~~56. Exit access stairways and ramps in open parking garages that serve only the parking garage are not required to be enclosed.~~
- ~~67. Exit access stairways and ramps serving outdoor facilities where all portions of the means of egress are essentially open to the outside are not required to be enclosed open-air seating complying with the exit access travel distance requirements of Section 1028.7.~~
- ~~8. Exit access stairways serving stages, platforms and technical production areas in accordance with Sections 410.6.2 and 410.6.3 are not required to be enclosed.~~
- ~~79. Exit access stairways and ramps serving are permitted to be open between the balcony, gallery or press box and the main assembly floor in occupancies such as theaters, places of religious worship, auditoriums and sports facilities.~~
- ~~10. In Group I-3 occupancies, exit access stairways constructed in accordance with Section 408.5 are not required to be enclosed.~~

1018.4 (IFC [B] 1018.4) Group I-2 and I-3 occupancies. In Group I-2 and I-3 occupancies, floor openings between stories containing exit access stairways or ramps are required to be enclosed with a shaft enclosure constructed in accordance with Section 713.

Exception: In Group I-3 occupancies, exit access stairways or ramps constructed in accordance with Section 408 are not required to be enclosed.

(Renumber Subsequent Sections)

SECTION 1026 (IFC [B] 1026) EXTERIOR EXIT STAIRWAYS AND RAMPS

1026.6 (IFC [B] 1026.6) Exterior stairway and ramp protection. *Exterior exit stairways and ramps* shall be separated from the interior of the building as required in Section 1022.2. Openings shall be limited to those necessary for egress from normally occupied spaces.

Exceptions:

1. Separation from the interior of the building is not required for occupancies, other than those in Group R-1 or R-2, in buildings that are no more than two stories above *grade plane* where a *level of exit discharge* serving such occupancies is the first story above *grade plane*.
2. Separation from the interior of the building is not required where the *exterior exit stairway* or *ramp* is served by an exterior *ramp* or balcony that connects two remote *exterior stairways* or other *approved exits* with a perimeter that is not less than 50 percent open. To be considered open, the opening shall be a minimum of 50 percent of the height of the enclosing wall, with the top of the openings no less than 7 feet (2134 mm) above the top of the balcony.

3. ~~Separation from the interior of the building is not required for an exterior stairway or ramp located in a building or structure that is permitted to have unenclosed exit access stairways in accordance with Section 1009.3.~~
4. Separation from the interior of the building is not required for exterior exit stairways or ramps connected to open-ended corridors, provided that Items 3.1 4.4 through 3.5 4.5 are met:
 - 4.13.1. The building, including corridors, stairways or ramps, shall be equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2.
 - 4.23.2. The open-ended corridors comply with Section 1018.
 - 4.33.3. The open-ended corridors are connected on each end to an exterior exit stairway or ramp complying with Section 1026.
 - 4.43.4. The exterior walls and openings adjacent to the exterior exit stairway or ramp comply with Section 1022.7.
 - 4.53.5. At any location in an open-ended corridor where a change of direction exceeding 45 degrees (0.79 rad) occurs, a clear opening of not less than 35 square feet (3.3 m²) or an exterior stairway or ramp shall be provided. Where clear openings are provided, they shall be located so as to minimize the accumulation of smoke or toxic gases.

SECTION 1027 (IFC [B] 1027) EXIT DISCHARGE

1027.1 (IFC [B] 1027.1) General. Exits shall discharge directly to the exterior of the building. The exit discharge shall be at grade or shall provide direct access to grade. The exit discharge shall not reenter a building. The combined use of Exceptions 1 and 2 below shall not exceed 50 percent of the number and capacity of the required exits.

Exceptions:

1. A maximum of 50 percent of the number and capacity of interior exit stairways and ramps is permitted to egress through areas on the level of exit discharge provided all of the following are met:
 - 1.1 ~~Such~~ Discharge of interior exit stairways and ramps shall be provided with enclosures egress to a free and unobstructed path of travel to an exterior exit door and such exit is readily visible and identifiable from the point of termination of the enclosure.
 - 1.2 The entire area of the level of exit discharge is separated from areas below by construction conforming to the fire-resistance rating for the enclosure.
 - 1.3 The egress path from the interior exit stairway and ramp on the level of exit discharge is protected throughout by an approved automatic sprinkler system. All portions of the level of exit discharge with access to the egress path shall either be protected throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, or separated from the egress path in accordance with the requirements for the enclosure of interior exit stairways or ramps.
 - 1.4 Where a required interior exit stairway or ramp and an exit access stairway or ramp serve the same floor level and terminate at the same level of exit discharge, the termination of the exit access stairway or ramp and the exit discharge door of the interior exit stairway or ramp shall be separated by a distance of not less than 30 feet (9144 mm) or not less than one-fourth the length of the maximum overall diagonal dimension of the building, whichever is less. The distance shall be measured in a straight line between the exit discharge door from the interior exit stairway or ramp and the last tread of the exit access stairway or termination of slope of the exit access ramp.
2. A maximum of 50 percent of the number and capacity of the interior exit stairways and ramps is permitted to egress through a vestibule provided all of the following are met:
 - 2.1 The entire area of the vestibule is separated from areas below by construction conforming to the fire-resistance rating ~~for~~ of the interior exit stairway or ramp enclosure.

- 2.2 The depth from the exterior of the building is not greater than 10 feet (3048 mm) and the length is not greater than 30 feet (9144 mm).
- 2.3 The area is separated from the remainder of the *level of exit discharge* by construction providing protection at least the equivalent of *approved* wired glass in steel frames.
- 2.4 The area is used only for *means of egress* and *exits* directly to the outside.
- 3. *Horizontal exits* complying with Section 1025 shall not be required to discharge directly to the exterior of the building.

SECTION 1028 (IFC [B] 1028) ASSEMBLY

1028.5 (IFC [B] 1028.5) Interior balcony and gallery means of egress. For balconies, galleries or press boxes having a seating capacity of 50 or more located in a building, room or space used for assembly purposes, at least two means of egress shall be provided, with one from each side of every balcony, gallery or press box ~~and at least one leading directly to an exit.~~

Revise as follows:

SECTION 403 HIGH-RISE BUILDINGS

403.5.1 Remoteness of interior exit stairways. Required *interior exit stairways* shall be separated by a distance not less than 30 feet (9144 mm) or not less than one-fourth of the length of the maximum overall diagonal dimension of the building or area to be served, whichever is less. The distance shall be measured in a straight line between the nearest points of the enclosure surrounding the interior exit stairways. In buildings with three or more *interior exit stairways*, no fewer than two of the *interior exit stairways* shall comply with this section. Interlocking or *scissor stairs* shall be counted as one *interior exit stairway*.

Revise as follows:

SECTION 505 MEZZANINES AND EQUIPMENT PLATFORMS

505.2.3 Openness. A *mezzanine* shall be open and unobstructed to the room in which such *mezzanine* is located except for walls not more than 42 inches (1067 mm) in height, columns and posts.

Exceptions:

- 1. *Mezzanines* or portions thereof are not required to be open to the room in which the *mezzanines* are located, provided that the *occupant load* of the aggregate area of the enclosed space is not greater than 10.
- 2. A *mezzanine* having two or more ~~*means of egress* exits or access to exits~~ is not required to be open to the room in which the *mezzanine* is located ~~if at least one of the *means of egress* provides direct access to an exit from the *mezzanine* level.~~
- 3. *Mezzanines* or portions thereof are not required to be open to the room in which the *mezzanines* are located, provided that the aggregate floor area of the enclosed space is not greater than 10 percent of the *mezzanine* area.
- 4. In industrial facilities, *mezzanines* used for control equipment are permitted to be glazed on all sides.
- 5. In occupancies other than Groups H and I, that are no more than two *stories* above *grade plane* and equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1, a *mezzanine* having two or more *means of egress* shall not be required to be open to the room in which the *mezzanine* is located.

Revise as follows:

SECTION 707 FIRE BARRIERS

707.3.3 Enclosures for exit access stairways. The *fire-resistance rating* of the fire barrier separating building areas from an exit access stairway or ramp shall comply with Section ~~4009.3.1.2~~ 713.4.

707.5.1 Supporting construction. The supporting construction for a *fire barrier* shall be protected to afford the required *fire-resistance rating* of the *fire barrier* supported. Hollow vertical spaces within a *fire barrier* shall be fireblocked in accordance with Section 718.2 at every floor level.

Exceptions:

1. The maximum required *fire-resistance rating* for assemblies supporting *fire barriers* separating tank storage as provided for in Section 415.8.2.1 shall be 2 hours, but not less than required by Table 601 for the building construction type.
2. Shaft enclosures shall be permitted to terminate at a top enclosure complying with Section 713.12.
3. Supporting construction for 1-hour *fire barriers* required by Table 509 in buildings of Type IIB, IIIB and VB construction is not required to be fire-resistance rated unless required by other sections of this code.
4. Interior exit stairway and ramp enclosures required by Section 1022.2 and exit access stairway and ramp enclosures required by ~~Section 1009.3~~ Sections 1018.3 and 1018.4 shall be permitted to terminate at a top enclosure complying with Section 713.12.

707.7.1 Prohibited penetrations. Penetrations into enclosures for ~~exit access stairways, exit access ramps, interior exit stairways, interior exit and ramps or an exit passageway shall be allowed only when~~ where permitted by Section ~~4009.3.1.5~~, 1022.5 or 1023.6, ~~respectively~~.

SECTION 711 HORIZONTAL ASSEMBLIES

711.4 Continuity. Assemblies shall be continuous without openings, penetrations or joints except as permitted by this section and Sections 712.1, 714.4, 715, ~~4009.3~~ 1018 and 1022.1. Skylights and other penetrations through a fire-resistance-rated roof deck or slab are permitted to be unprotected, provided that the structural integrity of the fire-resistance-rated roof assembly is maintained. Unprotected skylights shall not be permitted in roof assemblies required to be fire-resistance rated in accordance with Section 705.8.6. The supporting construction shall be protected to afford the required *fire-resistance rating* of the *horizontal assembly* supported.

Exception: In buildings of Type IIB, IIIB or VB construction, the construction supporting the *horizontal assembly* is not required to be fire-resistance-rated at the following:

1. Horizontal assemblies at the separations of incidental uses as specified by Table 509, provided the required *fire-resistance rating* does not exceed 1 hour.
2. Horizontal assemblies at the separations of *dwelling units* and *sleeping units* as required by Section 420.3.
3. Horizontal assemblies at *smoke barriers* constructed in accordance with Section 709.

SECTION 712 VERTICAL OPENINGS

712.1 General. The provisions of this section shall apply to the vertical opening applications listed in Sections 712.1.1 through 712.1.18.

712.1.1 Shaft enclosures. Vertical openings contained entirely within a shaft enclosure complying with Section 713 shall be permitted.

712.1.8 Two story openings. In other than Groups I-2 and I-3, a floor opening that is not used as one of the application listed in this section shall be permitted if it complies with all the items below.

1. Does not connect more than two stories.
- ~~2. Does not contain a stairway or ramp required by Chapter 10.~~
- ~~23.~~ Does not penetrate a horizontal assembly that separates fire areas or smoke barriers that separate smoke compartments.
- ~~34.~~ Is not concealed within the construction of a wall or a floor/ceiling assembly.
- ~~45.~~ Is not open to a corridor in Group I and R occupancies.
- ~~56.~~ Is not open to a corridor on nonsprinklered floors.
- ~~67.~~ Is separated from floor openings and air transfer openings serving other floors by construction conforming to required shaft enclosures.

712.1.12 Unenclosed Exit access stairways and ramps. Vertical floor openings ~~created by unenclosed~~ containing exit access stairways or ramps in accordance with ~~Sections 1009.2 and 1009.3~~ Section 1018 shall be permitted.

SECTION 713 SHAFT ENCLOSURES

713.1 General. The provisions of this section shall apply to shafts required to protect openings and penetrations through floor/ceiling and roof/ceiling assemblies. ~~Exit access stairways and exit access ramps shall be protected in accordance with the applicable provisions of Section 1009.~~ Interior exit stairways and ~~interior exit ramps~~ shall be protected in accordance with the requirements of Section 1022.

Reason: The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The code issues are assigned to the CTC by the ICC Board as “areas of study”. Information on the CTC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website: <http://www.iccsafe.org/cs/cc/ctc/index.html>. Since its inception in April, 2005, the CTC has held twenty-two meetings – all open to the public.

The most substantial part of this change is the relocation of exit access specific stair requirements from the general stair section 1009 to a stand alone section 1018. Another substantial purpose of this code change proposal is for coordination between the open stairway code change from this committee for the last cycle (E5-09/10) and other changes that occurred during the same cycle. In addition, there were areas that needed to be clarified as part of coordination. The CTC also reviewed the concerns raised in the E5 09/10 Public Comments and addressed some outstanding issues from the public comments. Below are the specific reason statements for each section proposed for change:

202 (and 1026.6 exception #3)-The word “interior” was deleted from the definition of exit access stairway and ramp. Generally, this is done because there is no need to restrict exit access to interior elements. Specifically, this was done in coordination with the proposed deletion of exception #3 to section 1026.6. Exception #3 was a holdover from when what are currently exit access stairs were exit stairs. Exception #3 was there to coordinate the allowance for an exterior exit stair to be unprotected when an interior exit stair would be allowed to be unprotected. E5 changed the unenclosed exit stair to an exit access stair. In keeping with that methodology this exception is being deleted and “interior” is being removed from the exit access stair and ramp definitions so that the provisions that allow an unenclosed exit access stair are equally applicable to interior or exterior stairways. Rather than use exception #3 to 1026.6 for a exterior stair without protection the exit access provisions would be used for the exterior stair.

1001.2 – The new sentence in 1001.2 was a requirement in two sentences in 1015.2 that is proposed to be relocated here as it is a more general requirement. This was done as part of some additional proposed revisions to section 1015.2 that will be explained below in section order.

1007.2 -This is another coordination change related to the relocation of the access stair provisions from 1009.3 to 1018.

1007.3 – The last sentence of the main paragraph states that exit access stairways connecting levels in the same story are not permitted as part of an accessible means of egress. While this is true for split level floors or stepped aisles, this should not be true for mezzanines. While they are considered part of the floor below for height and area requirements, mezzanines are required to be elevated over 7'-0" (Section 505.2) similar to a story change in level.

1007.6.2-The exception should only apply to exit stairways based on mandatory enclosure requirements for exit stairways. Exit access stairs may be open or enclosed with non-rated "enclosures" therefore the requirement needs to be clear that separation of areas of refuge serving exit access stairways must comply with 1007.6.2.

1009.2, 1009.3 and subsections- This proposed change will remove the specific requirements for exit access stairways for the general stairway section 1009. 1009 will remain a general stair design section for all stairway details that are not means of egress system specific such as tread and riser dimensions, headroom, widths, etc. The specific enclosure requirements regarding exit access stairs are proposed to be addressed in a new stand alone section, 1018. This is in keeping with the same organization already in chapter 10 for the specific protection requirements for interior exit stairways and ramps and exterior exit stairways and ramps, as well as exit passageways and horizontal exits, each having a dedicated section that addresses the specific protection requirements for each means of egress element. The idea is to separate the general requirements from the specific requirements with regards to each type of MOE element.

1009.3.1 through 1009.3.1.8 - These sections explain how to construct a rated shaft enclosure around an exit access stair when a fire rating is required based on floor penetration limits being exceeded to prevent vertical smoke and heat migration. They were deleted entirely and not relocated to 1018 because the new sections 1018.3 and 1018.4 are proposed to reference to Section 713 for floor opening enclosure construction requirements. The original concept in E5 09/10 was to repeat the shaft enclosure requirements in the exit access stair section as exit access stair enclosure construction requirements. It was decided that this added unneeded text to the code and because it was a duplicate of requirements based on 713 that a change to one section may not be made to the companion section and therefore has the potential to set up an inconsistency with the two code sections that are intended to be the same.

1010.2 - This section is proposed to be deleted because it is not necessary. Just as 1009 is the general requirements for stairs 1010 is the general requirements for ramps. The specific requirements are addressed in stand alone sections that do not need to be cross referenced from the general section or vice versa.

1011.1 - "Exit access doors" is proposed for deletion in the first sentence because marking the path of egress travel is addressed in the remainder of section and exit access doors are part of the path of egress travel.

1015.1 - Revised to include mezzanines to clarify a mezzanine is a space, not a story, for purposes of means of egress. This also clarifies the 2012 IBC revision to Section 505 where mezzanines now reference Chapter 10 for means of egress. 505.3 Egress was deleted from the 2009 edition and replaced with 505.2.2, which is just a reference to chapter 10.

1015.2 -The second sentence was moved to 1001.1 because it is a more general requirement. Exit access stairways and ramps is proposed to be added to the third sentence because by definition an exit access doorway is a point where a path of travel enters an unenclosed exit access stairway but not the stairway itself. Therefore, current code text will allow exit access stairs to diverge towards each other reducing the distance between the stairways to less than the minimum separation. This is the beginning of a few changes to section 1015 that will prohibit diverging exit access stairs to less than the required separation distance for exit access doorways. Further modifications detailed below detail arrangement of exit access stairways in addition to exit access doorways, therefore, the elements were added to 1015.2 for consistency with the next proposed changes to 1015.2.1 and 1015.2.2.

1015.2.1 and 1015.2.2- In three places the word "doors" was deleted after "exit" because exit stands on its own and does not need to specifically reference and exit door.

1015.2.1.1- When exit access stairs are used the point where the path of travel enters the stairway is by definition an "exit access doorway". There is concern that there will be confusion regarding how to measure the distance between "exit access doorways" when unenclosed exit access stairways are used. The three measurement methods are proposed to be added to clearly state how to measure between doors, stairways and ramps when they need to meet separation requirements per section 1015.

1015.2.3 and 1015.2.3.1-This proposed section and sub-section are intended to require that the minimum separation distances between exit access stairways and ramps be maintain for the entire length of travel on the stairway or ramp. This is to prohibit stair and ramp runs that meet separation distance requirements at the first riser or beginning slope, from converging towards another stair or ramp such that the separation is reduced as the occupant goes up or down the stair or ramp run. Exit access stairs and ramps should maintain the required distance, just as doors, until egress travel over the ramp or stair is completed.

1016.3 - This is a companion change to 1018.3 exception #6 (previous #7 to 1009.2.2) detailed below regarding outdoor facilities. The exception to 1018.3 was changed to match the requirements for open air seating as regulated by section 10128.7, which allows unlimited travel distance in non-combustible construction that has open air seating and 400 feet in combustible construction. This change deletes the measurement of the travel distance to the closest riser in outdoor facilities and replaces it with the 400 foot or unlimited travel distance per 1028.7. The intent is to coordinate the various travel distance requirements regarding open air seating facilities.

New Section 1018 Exit access stairways and ramps-

Current section 1009.3 is proposed to be relocated to new section 1018. This is the most significant aspect of this code change proposal. This part of the proposed change creates a new stand alone code section for exit access stairway and ramp specific requirements so that the specific requirements for exit access stairs are separate from the general requirements. This is in keeping with the same organization already in chapter 10 for the specific protection requirements for interior exit stairways and ramps and exterior exit stairways and ramps, as well as exit passageways and horizontal exits, each having a dedicated section that addresses the specific protection requirements for each means of egress element. The specific enclosure requirements regarding exit access

stairs are proposed to be addressed in the new section, 1018. 1009 will remain a general stair design section for all stairway details that are not means of egress system specific such as tread and riser dimensions, headroom, widths, etc.

New 1018.1 – This is just a general scoping section. The statement that stories include basements but not mezzanines was included in this section.

New 1018.2 - This section clarifies that steps/ramps between levels within a story are always permitted to be open. Enclosure requirements are not required until openings between stories are created for exit access stairways/ramps.

New 1018.3 (relocated 1009.3) – This proposed section is the text relocated from 1009.3 with some changes to the format and some changes to the specific exemptions. The code change text is formatted with underlines and strike-throughs of the relocated 1009.3 text. Each specific change is explained as follows:

New 1018.3 As an alternative to the rule with exceptions format the section was reformatted with the exceptions reconfigured as conditions which permit unprotected floor openings for exit access stairs/ramps. This is in keeping with the philosophy introduced with the vertical openings code change approved for the 2012 edition, which reconfigured the shaft enclosure exceptions to options. As part of the reformatting the statement “not required to be enclosed” has been removed from the exceptions to the body of section 1018.3. Additionally “and ramps” has been added to each condition; this was done to make it clear that the entire section addresses ramps and stairs equally. Previous section 1009.3.1 and 1009.3.1.1 through 1009.3.1.8 were the enclosure requirements applicable when a floor opening is required to be protected with a fire rated enclosure; this was deleted and not relocated to 1018. These sections were deleted entirely and not relocated to 1018 because the new sections 1018.3 and 1018.4 are proposed to reference to Section 713 for floor opening enclosure construction requirements. The original concept in E5 09/10 was to repeat the shaft enclosure requirements in the exit access stair section as exit access stair enclosure construction requirements. It was decided that this added unneeded text to the code and because it was a duplicate of requirements based on 713 that a change to one section may not be made to the companion section and therefore has the potential to set up an inconsistency with the two code sections that are intended to be the same.

1018.3 Exception/condition #1-Group I-2 and I-2 deleted from condition #1 and moved down to a new Section 1018.4, which addresses group I-2 and I-1. The restriction that requires all group I-2 and I-3 stairway floor openings to be protected with a shaft has not been changed. The last sentence stating “such interconnected stories shall not be open to other stories” was added to clarify that the first condition can only be used when there are no openings to other stories, other than the two stories connected by the exit access stair. This is to prevent other permitted floor openings from being used with this allowed opening to create a staggered opening condition where more than two stories can atmospherically communicate.

1018.3 Exception/condition #2-The use group limitation of this condition was moved from the end of the sentence to the beginning to make it easier to use so the code user can quickly identify the scope of the condition. Additionally “live/work unit” was added to the types of units that can use this condition. Unenclosed exit access stairs are permitted in live/work units per 419.4 and live/work unit is a type of group R-2 unit distinct from dwelling units and sleeping units.

1018.3 Exception/condition #3 and Deletion of exception #4-The term floor opening was replaced with vertical opening because the opening in this condition can be between multiple floors. Exception #4 was the same exception as exception #3 except that it applies to groups other than B and M with the only difference being that the opening is limited to 4 stories for groups other than B and M. To reduce the amount of text and number of conditions the “other than group B and M” provision was moved to condition #3 as the last sentence in condition #3.

1018.3 Exception/condition #4 and #5-Just reformatting as described in the 1018.3 general explanation.

1018.3 Exception/condition #6- This condition was modified with input from Ed Roether, who is an expert in stadium design. “Outdoor facilities where all portions of the means of egress are essentially open to the outside” is proposed to be changed to “open-air seating”, which is the term used in section 1028.7 regarding travel distance in assembly seating. This condition is proposed to be changed to be coordinated with the requirements for open air seating as regulated by section 1028.7, which allows unlimited travel distance in non-combustible construction that has open air seating and 400 feet in combustible construction.

1018.3 previous exception #8-This exception was deleted because the 2012 IBC section 410.6 was modified to address the specific means of egress requirements for stages and technical production areas. New section 410.6.2 in the 2012 IBC specifically exempts stage and technical production areas from stair/ramp enclosure therefore this exception/condition is redundant and not needed.

1018.3 Exception/condition #7-Just reformatting as described in the 1018.3 general explanation.

1018.3 previous exception #10 deleted– This exception was moved to 1018.4

New 1018.4 – This is the relocated and reformatted requirement for group I-2 and I-3 exit access stair/ramp enclosure as part of the reformat from exceptions to conditions. Additionally, as noted above, the previous exception #10 was relocated as an exception to this requirement because it is a specific exception for group I-3.

1026.6 Exception #3 deletion- 1026.6 exception #3 was a holdover from when what are currently exit access stairs were exit stairs. Exception #3 was there to coordinate the allowance for an exterior exit stair to be unprotected when an interior exit stair would be allowed to be unprotected. E5 changed the unenclosed exit stair to an exit access stair. In keeping with that methodology this exception is being deleted and “interior” is being removed from the exit access stair and ramp definitions so that the provisions that

allow an unenclosed exit access stair are equally applicable to interior or exterior stairways. Rather than use exception #3 to 1026.6 for to create an exterior exit stair without protection the exit access provisions would be used for the exterior stair.

1027.1 exception #1.1-This is an editorial change that clarifies the exit stairways/ramps must have the free path of travel. This is a companion to the new section 1.4 described below.

1027.1 exception #1.4-This limitation is proposed to prevent an exit access stair and separate exit stair, which begin on the same floor, from termination to close together on the exit discharge floor. This is proposed so that one localized fire event on the exit discharge floor will not take out the termination of both means of egress components when an exit stair is permitted to discharge into the building. The 30 feet or $\frac{1}{4}$ diagonal separation distances were based on the 30 feet or $\frac{1}{4}$ diagonal that is specified for separation of interior stairways in high-rise section 403.5.1.

1028.5 and 505.2.3- "and at least one leading directly to an exit" is proposed for deletion. ICC staff asked for the committee to look at this do to numerous interpretive questions regarding what "leading directly to an exit" means. In both of these cases exit access stairs serving 2 stories could meet 1018.3 exception #1 and since neither condition qualifies as a story allowing exit access stairways is consistent with the provisions of 1018.3. Since "directly to an exit" can be interpreted to mean the mezzanine floor or balcony must have at least one exit at the mezzanine or balcony level that text is proposed to be deleted to allow exit access stairs to be used in both cases for both sets of stairways.

403.5.1-This is in response to E5 public comments. The intent of the separation required by this section is specific to the enclosure, not the stairway, therefore this language has been corrected.

505.2.3 – See reason statement for 1028.5.

707.3.3 and 707.5.1-These changes are to coordinate with the change in section numbering that occurred with moving the exit access stairway and ramp provisions from 1009 to 1018 and the change to reference section 713 for exit access stairway and ramp rated enclosure design requirements. References related to if an enclosure is required refer to sections in 1018, which is where the requirements for when a rated enclosure is required are proposed to be relocated. References related to the construction of the rated enclosure refer to section 713, which is where the requirements for how to rate the enclosure are located.

707.7.1-References to exit access stairways and ramps are proposed to be removed from this section because section 1018 is proposed to reference section 713 for exit access stairway and ramp rated enclosure design. Existing section 713.7.1 addresses prohibited openings therefore this reference is no longer needed in section 707.7.1.

711.4- See reason statement for 707.3.3 above.

712.1.8- Criteria #2 was proposed to be deleted and was approved to be deleted in E5 09/10 but was inadvertently reinstated do to a language change proposed to the same text in FS 56 09/10. Floor openings for open exit access stairways are intended to be protected in accordance with the exit access stair provision in 1009.3 (1018 per this proposal). If Criteria #2 is retained it will cause inconsistency with the exit access stairway provisions. It was the intent of E5 09/10 to have all exit access stair related opening protection requirements provided in the exit access stair provisions in chapter 10.

712.1.12 – This section has the terminology updated from "unenclosed" to "exit access" stairway to coordinate with terminology approved in E5-09/10. Additionally the section references are updated from 1009.3 to 1018 to coordinate with the relocation of exit access stair provisions from 1009.3 to 1018, which is explained further below in the reason statement. The purpose of the section is to act as a pointer to the exit access stairway vertical opening requirements that are all provided in proposed section 1018 (previous section 1009.3) for any vertical opening that contains an exit access stairway.

713.1 – This is another coordination change related to the relocation of the access stair provisions from 1009.3 to 1018. The enclosure requirements for exit access stairways in 1018 now reference Section 713 for rated enclosure construction requirements, rather than repeating the requirements in chapter 10, therefore this sentence is no longer needed.

Cost Impact: None

1009-E-BALDASSARRA

Public Hearing Results

Committee Action:

Approved as Modified

Modify proposal as follows:

1001.2 (IFC [B] 1001.2) Minimum requirements. It shall be unlawful to alter a building or structure in a manner that will reduce the number of exits or the capacity of the means of egress to less than required by this code. ~~Means of egress shall be designed to be continuous and unobstructed.~~

1015.2 (IFC [B] 1015.2) Exit or exit access doorway arrangement. Required exits shall be located in a manner that makes their availability obvious. Exits, exit access doorways, and exit access stairways and ramps shall be arranged in accordance with Sections 1015.2.1 and 1015.2.2 this section.

1015.2.1 (IFC [B] 1015.2.1) Two exits or exit access doorways. Where two ~~exits, or exit access doorways, and exit access stairways or and ramps, or any combination thereof,~~ are required from any portion of the *exit access*, ~~the exit or exit access doorways and exit access stairways and ramps~~ they shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the building or area to be served measured in a straight line between ~~exit or exit access doorways and exit access stairways and ramps~~ them. Interlocking or *scissor stairs* shall be counted as one *exit stairway*.

Exceptions:

1. Where interior exit stairways are interconnected by a 1-hour fire-resistance-rated corridor conforming to the requirements of Section 1018, the required exit separation shall be measured along the shortest direct line of travel within the corridor.
2. Where a building is equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2, the separation distance ~~of the exit or exit access doorways, and exit access stairways and ramps~~ shall not be less than one-third of the length of the maximum overall diagonal dimension of the area served.

Committee Reason: The committee proposed a modification to Section 1001.2 is to remove the proposed last sentence. That language is not needed as it is already included in the definition for 'means of egress.' The modification to Section 1015.2 and 1015.2.1 was proposed by the proponent due to a grammatical error. The revised proposal will allow for all four components, 1) exits, 2) exit access doorways, 3) exit access stairways, and 4) exit access ramps, not be considered when evaluating arrangements of exit access elements. The remainder of the proposal is a good cleanup related to the open stairway change, E5-09/10. The deletion of the separation (1009.3) requirements in favor of a reference to stairway separation requirements (Section 713 in new Section 1018.3) removes redundant language and will allow for consistency in the future. The new Section 1018, as a section for exit access stairway separation, is consistent with the idea of interior exit stairway separation in Section 1022 and exterior exit stairway separation in Section 1026. The new language regarding convergence of open exit stairways addressed this safety concern in an appropriate manner (1027.1).

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Al Godwin, CBO, CPM, representing Aon Fire Protection Engineering Corporation, requests Approval as Modified by this Public Comment.

Further modify the proposal as follows:

**SECTION 1011 (IFC [B] 1011)
EXIT SIGNS**

1011.1 (IFC [B] 1011.1) Where required. *Exits and exit access doors* shall be marked by an *approved exit* sign readily visible from any direction of egress travel. The path of egress travel to *exits* and within *exits* shall be marked by readily visible *exit* signs to clearly indicate the direction of egress travel in cases where the *exit* or the path of egress travel is not immediately visible to the occupants. Intervening *means of egress* doors within *exits* shall be marked by *exit* signs. *Exit* sign placement shall be such that no point in an *exit access corridor* or *exit passageway* is more than 100 feet (30 480 mm) or the *listed* viewing distance for the sign, whichever is less, from the nearest visible *exit* sign.

Exceptions:

1. *Exit* signs are not required in rooms or areas that require only one *exit* or *exit access*.
2. Main exterior *exit* doors or gates that are obviously and clearly identifiable as *exits* need not have *exit* signs where *approved by the building official*.
3. *Exit* signs are not required in occupancies in Group U and individual sleeping units or dwelling units in Group R-1, R-2 or R-3.
4. *Exit* signs are not required in dayrooms, sleeping rooms or dormitories in occupancies in Group I-3.
5. In occupancies in Groups A-4 and A-5, *exit* signs are not required on the seating side of vomitories or openings into seating areas where *exit* signs are provided in the concourse that are readily apparent from the vomitories. Egress lighting is provided to identify each vomitory or opening within the seating area in an emergency.

Commenter's Reason: The original proposal deleted the phrase "and *exit access doors*." These are the exit access doors out of rooms, offices, banquet halls, conference rooms, etc. Exit signs have always been required at these locations unless complying with the exceptions. The term "*Exits*" is not inclusive of *exit access* doors.

Without this phrase, exit signs will only be required in the *exit access* "in cases where the exit or path of egress travel is not immediately visible". As such, each room has to be evaluated as to whether exit signs are needed.
The phrase should be left in.

E7-12

Final Action: AS AM AMPC_____ D

E12-12

1003.4.1 (New) [IFC [B] 1003.4.1 (New)]

Proposed Change as Submitted

Proponent: Eric Astrachan, Executive Director, Tile Council of North America, Inc.
(eastrachan@tileusa.com)

Add new text as follows:

1003.4.1 (IFC [B] 1003.4.1) Ceramic and Porcelain Tile. Tiles specified for interior floor surfaces of the means of egress shall comply with ANSI A137.1, Section 6.2.2.1.10.

Reason: Currently, Section 1003.4 requires that walking surfaces of the means of egress be "slip resistant" with no method of measurement, quantitative threshold, or general principles to help the specifier, end-user, and code official.

The purpose of this revision is to provide these criteria for ceramic tiles used for interior floor surfaces of the means of egress. Section 6.2.2.1.10 of the ANSI A137.1-2012 standard for ceramic tile sets forth a quantitative minimum threshold, means of measurement, and general principles regarding slip resistance based on the consensus of a broad range of stakeholders.

Cost Impact: None

1003.4.1 (New)-E-Astrachan.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The edition of the standard referenced is not yet available in print. The standard is only for ceramic and porcelain tile. It seems inappropriate to require one type of flooring materials to meet slip resistance requirements and not others. It might possibly be interpreted that other types of floor finishes were not permitted in certain locations. Field testing would require a special device that most code official will not have. Third party testing might not always be an option. If tiles manufactured in the United States already meet this standard, is this information part of their standard product information? That would be needed for code officials to be able to verify compliance with this proposed requirement.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Eric Astrachan, Executive Director, Tile Council of North America, Inc. requests Approval as Submitted.

Commenter's Reason: If the proposed change is not approved, Section 1003.4 will continue to require walking surfaces of the means of egress to be "slip resistant" with no method of measurement, quantitative threshold, or general principles to help the specifier, end-user, and code official. As expressed in our original proposal, the proposed change establishes these criteria for ceramic tile and porcelain tiles used for interior floor surfaces of the means of egress by referencing the relevant section (Section 6.2.2.1.10) of the standard for ceramic tile, ANSI A137.1-2012.

During the Development Hearing, members of the Means of Egress Code Committee spoke favorably regarding the criteria proposed but were concerned that the edition of the referenced standard was not yet available in print. Members of the Committee expressed their reluctance that the proposal had to be disapproved for this reason by a very close 8 to 7 vote and strongly encouraged its resubmission for consideration once the published version of the standard is available. Other concerns had to do with establishing if the information needed by code officials would be part of standard product information.

In August 2012 ANSI A137.1-2012 will be available in its published form (draft copies are available now). Further, the criteria proposed (Section 6.2.2.1.10 from ANSI A137.1-2012) will also be included in its entirety in the "2013 TCNA Handbook for Ceramic, Glass, and Stone Tile Installation" (commonly known as the "TCA Handbook" and referenced in Section 9300 specifications).

Additionally, tile manufacturers are already providing the information needed by code officials as part of standard product information. Links to manufacturer catalogs confirming such can be provided if desired.

With the concerns of the Committee addressed, we respectfully request that E12-12 should be approved as originally submitted (AS).

E12-12

Final Action:	AS	AM	AMPC_____	D
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E14-12

1003.6, 1004.1.1, 1004.1.1.1, 1004.1.1.2, 1004.1.2, 1005.3.1, 1005.4, 1015.1, 1020.1, 1021.2 (IFC [B] 1003.6, 1004.1.1, 1004.1.1.1, 1004.1.1.2, 1004.1.2, 1005.3.1, 1005.4, 1015.1, 1020.1, 1021.2)

Proposed Change as Submitted

Proponent: Gregory R. Keith, Professional heuristic Development, representing The Boeing Company (grkeith@mac.com)

Revise as follows:

1003.6 (IFC [B] 1003.6) Means of egress continuity. The path of egress travel along a *means of egress* shall not be interrupted by any building element other than a *means of egress* component as specified in this chapter. Obstructions shall not be placed in the required width of a *means of egress* except projections permitted by this chapter. ~~The required capacity of a means of egress system shall not be diminished along the path of egress travel.~~

~~1004.1.2~~ **1004.2 (IFC [B] ~~1004.1.2~~ 1004.2) Areas without fixed seating.** The number of occupants shall be computed at the rate of one occupant per unit of area as prescribed in Table 1004.1.2. For rooms, areas or spaces without fixed seating, the occupant load shall not be less than that number determined by dividing the floor area under consideration by the occupant load factor assigned to the function of the space as set forth in Table 1004.1.2. Where an intended function is not listed in Table 1004.1.2, the building official shall establish a function based on a listed function that most nearly resembles the intended function.

(Renumber subsequent sections)

1005.1 (IFC [B] 1005.1) General. All portions of the means of egress system shall be sized in accordance with this section.

Exception: Means of egress complying with Section 1028.

~~1004.1.4~~ **1005.1.1 (IFC [B] ~~1004.1.4~~ 1005.1.1) Cumulative occupant loads.** Where the path of egress travel includes intervening rooms, areas or spaces, ~~cumulative occupant loads~~ the required capacity shall be determined in accordance with this section.

~~1004.1.1.1~~ **1005.1.1.1 (IFC [B] ~~1004.1.1.1~~ 1005.1.1.1) Intervening spaces.** Where occupants egress from one room, area or space through another, the ~~design occupant load~~ required capacity shall be based on the cumulative that portion of the occupant loads having required egress through adjacent of all rooms, areas or spaces added to the occupant load of the space under consideration to that point along the path of egress travel.

~~1004.1.1.2~~ **1005.1.1.2 (IFC [B] ~~1004.1.1.2~~ 1005.1.1.2) Adjacent levels.** ~~The occupant load of a mezzanine or story with egress through a room, area or space on an adjacent level shall be added to the occupant load of that room, area or space. Where interior and exterior exit stairways or ramps serve more than one story, only the occupant load of each story considered individually shall be used in calculating the required capacity of such stairways or ramps serving that story. Where exit access stairways or ramps provide required access to an exit at an adjacent story, the required capacity of the adjacent story shall be based on that portion of the occupant load of the mezzanine or story having required egress through such adjacent story added to the occupant load of that story.~~

1005.3.1 (IFC [B] 1005.3.1) Stairways. The capacity, in inches, of means of egress stairways shall be calculated by multiplying the occupant load served by such stairway by a means of egress capacity factor

of 0.3 inches (7.62 mm) per occupant. ~~Where stairways serve more than one story, only the occupant load of each story considered individually shall be used in calculating the required capacity of the stairways serving that story.~~

Exception: For other than Group H and I-2 occupancies, the capacity, in inches, of means of egress stairways shall be calculated by multiplying the occupant load served by such stairway by a means of egress capacity factor of 0.2 inches (5.1 mm) per occupant in buildings equipped throughout with and automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 and an emergency voice/alarm communication system in accordance with Section 907.5.2.2.

1005.4 (IFC [B] 1005.4) Continuity. The capacity of the means of egress required from any room, area, space, mezzanine or story of a building shall not be reduced along the path of egress travel until arrival at the public way.

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

1. The *occupant load* of the space exceeds one of the values in Table 1015.1. When occupants egress through the space, that portion of the occupant load having required egress through such space to that point along the path of egress travel shall be added to the occupant load of the space under consideration.

Exceptions:

1. In Group R-2 and R-3 occupancies, one *means of egress* is permitted within and from individual dwelling units with a maximum *occupant load* of 20 where the dwelling unit is equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2.
2. Care suites in Group I-2 occupancies complying with Section 407.4.
2. The *common path of egress travel* exceeds one of the limitations of Section 1014.3.
3. Where required by Section 1015.3, 1015.4, 1015.5, or 1015.6.

Once established, the required number of exits or exit access doorways shall be maintained until arrival at the exit discharge or public way.

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

1020.1 (IFC [B] 1020.1) General. *Exits* shall comply with Sections 1020 through 1026 and the applicable requirements of Sections 1003 through 1013. An *exit* shall not be used for any purpose that interferes with its function as a *means of egress*. Once a given level of exit protection is achieved, such level of protection shall not be reduced until arrival at the *exit discharge*. Within a building, once established, the required number of exits shall be maintained until arrival at the exit discharge or public way.

1021.2 (IFC [B] 1021.2) Exits from stories. Two exits, or exit access stairways or ramps providing access to exits, from any story or occupied roof shall be provided where one of the following conditions exists:

1. The occupant load or number of dwelling units exceeds one of the values in Table 1021.2(1) or 1021.2(2). When exit access stairways or ramps provide required access to an exit at an adjacent story, the occupant load of the adjacent story shall be based on that portion of the occupant load of the mezzanine or story having required egress through such adjacent story added to the occupant load story under consideration.
2. The exit access travel distance exceeds that specified in Table 1021.2(1) or 1021.2(2) as

determined in accordance with the provisions of Section 1016.1.

3. Helistop landing areas located on buildings or structures shall be provided with two exits, or exit access stairways or ramps providing access to exits.

Exceptions:

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

Reason: The 2012 Edition of the IBC is significant in that many fundamental Chapter 10 provisions have been clarified by modifying terminology or technical correlation. E10-09/10 and E22-09/10 were two such contributing proposals. Through those proposals, Sections 1004 and 1005 were altered to place means of egress occupant load determination and sizing provisions in functional context. When provisions are placed in proper technical context so as to gain consistency in interpretation and application, additional clarification is often required to complete the thought process and maximize understanding of the intent of the specific requirement.

Proposed revisions are explained in numerical order. Presently, means of egress capacity continuity requirements are located in two sections, Section 1003.6 and 1005.4. Section 1003.6 does not contain a key requirement that the required capacity shall not be reduced until arrival at the public way. The two sections have been consolidated, clarified and located in technical context in Section 1005.4. Code users are not well served by having fundamental code requirements fragmented at two separate locations. Section 1005 is the logical location for this important means of egress sizing provision.

This proposal places cumulative occupant load application requirements in the technical context of various means of egress design requirements such as required capacity and minimum numbers of exits or access to exits. Relocation of the cumulative occupant load provisions from Section 1004.1.1 inadvertently removes the spatial charging language of "rooms, areas or spaces" from Section 1004. Therefore, these terms are replaced in technical context in the next section, Section 1004.1.2, and technical continuity is maintained.

Section 1005.1 now contains provisions for how cumulative occupants loads are to be specifically applied in the determination of means of egress capacity requirements. Additionally, provisions have been clarified be consistent with current IBC means of egress capacity philosophy. For instance, 2012 Section 1004.1.1.2 (proposed Section 1005.1.1.2) implies that 100 percent of the occupant load of an adjacent level is to be added to the occupant load of a space under consideration at another building level. This proposal clarifies that only that portion of the occupant load having required egress through the adjacent level needs to be considered. Additionally, the last sentence of Section 1005.3.1 has been clarified and relocated in context in new Section 1005.1.1.2. It clarifies that cumulative occupant loads are not considered only when exit stairways (interior and exterior exit stairways) are employed in the design of the means of egress system. The current language states that any stairway, to include required exit access stairways, need not consider cumulative occupant loads. Historically, occupant loads from adjacent stories have not been considered when determining the required capacity for only exit components.

As previously discussed, means of egress capacity continuity provisions have been consolidated and located in technical context in Section 1005.4.

Cumulative occupant load provisions specifically applicable to the determination of the number of exits or exit access doorways from an individual room, area or space have been placed in context in Section 1015.1. Presently, the requirement that, "cumulative occupant loads from adjacent occupancies shall be considered in accordance with the provisions of Section 1004.1." is located as an afterthought cross-reference as the last sentence of Section 1015.1. The actual requirement has been articulated and placed in technical context in the section. Additionally, currently there is no requirement to maintain the required number of exits or exit access doorways, once established, until arrival at the exit discharge or public way. This logical requirement will now be legally charged.

Section 1020.1 has also been revised to include a legal requirement that the required number of exits be maintained within a building.

Section 1021.2 has been modified to include guidance as to what portion of the occupant loads of an adjacent story are to be applied in the determination of the number of exits required from a story above or below. Also, Exception 7 to Section 1021.2 has been deleted as there is currently no requirement for specific spaces to have access to all exits on a story.

In summary, this proposal clarifies how cumulative occupant loads are to be applied in the determination of specific means of egress design requirements. The general provisions currently located in Section 1004.1.1 are replaced by more specifically applicable requirements located in context at Sections 1005.1.1, 1015.1 and 1021.2. The provisions have also been clarified to indicate what portions of occupant loads from adjacent spaces are to be considered under the various design conditions. It should be noted that this proposal is consistent with current IBC means of egress design philosophy. Approval of this proposal will provide necessary guidance to designers and enforcement officials in these fundamental means of egress areas and will lead to more consistent interpretation and application of these important provisions. Through improved formatting and language this proposal further clarifies 2012 IBC means of egress provisions and increases functionality and technical continuity in this important area of life safety.

Cost Impact: None

1004.1.1.1-E-Keith.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: Section 1021.1 would require exits to be sized on the first floor for the occupants for both the 1st and 2nd floor. This would be in conflict with the cascading stairway loading that has been utilized in the code for years. The language "capacity shall not be diminished" needs to stay in the code. E14, E15 and E17 should be worked on together. Part of the issue might be addressed by E7 changes to 1027.1.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Gregory R. Keith, Professional heuristic Development, representing The Boeing Company requests Approval as Modified by this Public Comment

Modify the proposal as follows:

1003.6 Means of egress continuity. The path of egress travel along a *means of egress* shall not be interrupted by any building element other than a *means of egress* component as specified in this chapter. Obstructions shall not be placed in the required width of a *means of egress* except projections permitted by this chapter.

1004.1.1 Cumulative occupant loads. Where the path of egress travel includes intervening rooms, areas or spaces, cumulative occupant loads shall be determined in accordance Sections 1005.1, 1015.1 and 1021.2.

1004.2 Areas without fixed seating. The number of occupants shall be computed at the rate of one occupant per unit of area as prescribed in Table 1004.1.2. For rooms, areas or spaces without fixed seating, the occupant load shall not be less than that number determined by dividing the floor area under consideration by the occupant load factor assigned to the function of the space as set forth in Table 1004.1.2. Where an intended function is not listed in Table 1004.1.2, the building official shall establish a function based on a listed function that most nearly resembles the intended function.

1005.1 General. All portions of the means of egress system shall be sized in accordance with this section.

Exception: Means of egress complying with Section 1028.

1005.1.1 Cumulative occupant loads. Where the path of egress travel includes intervening rooms, areas or spaces, the required capacity shall be determined in accordance with this section.

1005.1.1.1 Intervening spaces. Where occupants egress from one room, area or space through another, the required capacity shall be based on that portion of the cumulative occupant loads having required egress through adjacent rooms, areas or spaces added to the occupant load of the space under consideration to that point along the path of egress travel. The portion of the occupant load from adjacent rooms, areas or spaces shall be based on the capacity of the means of egress components providing access to the space under consideration, calculated in accordance with the provisions of Section 1005.3.2.

1005.1.1.2 Adjacent levels. Where interior and exterior exit stairways or ramps serve more than one story, only the occupant load of each story considered individually shall be used in calculating the required capacity of the stairways or ramps serving that story. Where exit access stairways or ramps provide required access to an exit at an adjacent story, the required capacity of the adjacent story shall be based on that portion of the occupant load of the mezzanine or story having required egress through such adjacent story added to the occupant load of that story. The portion of the occupant load from adjacent mezzanines or stories shall be based on the capacity of the means of egress components providing required access to the story under consideration, calculated in accordance with the provisions of Section 1005.3.1.

1005.3.1 Stairways. The capacity, in inches, of means of egress stairways shall be calculated by multiplying the occupant load served by such stairway by a means of egress capacity factor of 0.3 inches (7.62 mm) per occupant.

Exception: For other than Group H and I-2 occupancies, the capacity, in inches, of means of egress stairways shall be calculated by multiplying the occupant load served by such stairway by a means of egress capacity factor of 0.2 inches (5.1 mm) per occupant in buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 and an emergency voice/alarm communication system in accordance with Section 907.5.2.2.

1005.4 Continuity. The capacity of the means of egress required from any room, area, space, mezzanine or story of a building shall not be reduced along the path of egress travel until arrival at the public way.

1015.1 Exits or exit access doorways from spaces. Two exits or exit access doorways from any room, area or space shall be provided where one of the following conditions exists:

1. The *occupant load* of the space exceeds one of the values in Table 1015.1. Where occupants egress through a the space, that portion of the cumulative occupant loads having required egress through such space to that point along the path of egress travel shall be added to the occupant load of the space under consideration. The portion of the occupant load from adjacent rooms, areas or spaces shall be based on the capacity of the means of egress components providing access to the space under consideration, calculated in accordance with the provisions of Section 1005.3.2.

Exceptions:

1. The number of exits from foyers, lobbies, vestibules and similar spaces need not be based on the cumulative occupant loads for areas discharging through such spaces, where the capacity of the exits from such spaces is based on applicable cumulative occupant loads.
2. In Group R-2 and R-3 occupancies, one *means of egress* is permitted within and from individual dwelling units with a maximum *occupant load* of 20 where the dwelling unit is equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2.
- 2.3. Care suites in Group I-2 occupancies complying with Section 407.4.
2. The *common path of egress travel* exceeds one of the limitations of Section 1014.3.
3. Where required by Section 1015.3, 1015.4, 1015.5, or 1015.6.

Once established, the required number of exits or exit access doorways shall be maintained until arrival at the exit discharge or public way.

Where a building contains mixed occupancies, each individual occupancy shall comply with the applicable requirements for that occupancy.

1020.1 General. Exits shall comply with Sections 1020 through 1026 and the applicable requirements of Sections 1003 through 1013. An *exit* shall not be used for any purpose that interferes with its function as a *means of egress*. Once a given level of exit protection is achieved, such level of protection shall not be reduced until arrival at the *exit discharge*. Within a building, once established, the required number of exits shall be maintained until arrival at the exit discharge or public way.

1021.2 Exits from stories. Two exits, or exit access stairways or ramps providing access to exits, from any story or occupied roof shall be provided where one of the following conditions exists:

1. The occupant load or number of dwelling units exceeds one of the values in Table 1021.2(1) or 1021.2(2). Where exit access stairways or ramps provide required access to an exit at an adjacent story, the occupant load of the adjacent story shall be based on that portion of the occupant load of the mezzanine or story having required egress through such adjacent story added to the occupant load of the story under consideration. Where interior and exterior exit stairways or ramps serve more than one story, only the occupant load of each story considered individually shall be used in calculating the required number of exits serving that story. Where exit access stairways or ramps provide required access to an exit at an adjacent story, the occupant load of a mezzanine or story need not be considered in the calculation of the required number of exits serving such adjacent story.

Exception: Where the only access to required exits from a mezzanine is through an adjacent story, the entire occupant load of such mezzanine shall be added to the occupant load of the adjacent story.

2. The exit access travel distance exceeds that specified in Table 1021.2(1) or 1021.2(2) as determined in accordance with the provisions of Section 1016.1.

3. Helistop landing areas located on buildings or structures shall be provided with two exits, or exit access stairways or ramps providing access to exits.

Exceptions:

1. Rooms, areas and spaces complying with Section 1015.1 with exits that discharge directly to the exterior at the level of exit discharge, are permitted to have one exit.
2. Group R-3 occupancy buildings shall be permitted to have a one exit.
3. Parking garages where vehicles are mechanically parked shall be permitted to have one exit,
4. Air traffic control towers shall be provided with the minimum number of exits specified in Section 412.3.
5. Individual dwelling units in compliance with Section 1021.2.3.
6. Group R-3 and R-4 congregate residences shall be permitted to have one exit.

Commenter's Reason: Four code change submittals (E14-12 through E17-12) were intended to address the issue of proper determination of cumulative occupant loads. The committee seemed to agree that there was confusion; however, did not agree on the appropriate remedy.

This is a very subtle issue that impacts format, location and technical context. Currently, cumulative occupant load determination provisions are located in Section 1004, Occupant Loads. By providing general cumulative occupant load determination requirements in Section 1004.1.1, there is the inference that cumulative occupant loads are applied uniformly for all means of egress design requirements. Such is not necessarily the case. Means of egress design requirements are intended to accomplish two goals: To maintain occupant tenability (i.e. exit access travel distance and intervening space provisions) and to adequately size and apportion the applicable means of egress components (i.e. capacity, numbers and configuration provisions). Occupant loads have virtually nothing to do with occupant tenability issues. On the other hand, capacity and numbers of exits/access to exits requirements are primarily occupant load driven. Capacity or sizing is the primary concern. The means of egress system must be appropriately sized to accommodate all occupants or combinations of occupants that could potentially use a given means of egress component. Accordingly, capacity provisions should be very liberally applied to all building designs. Numbers of exits/access to exits provisions are intended to complement capacity requirements by providing necessary opportunity/availability to reasonably egress the space, story or building should a fire event block a portion of the means of egress system. While capacity provisions are critical to occupant accommodation, numbers provisions beyond two have a point of diminishing return when considering cumulative occupant loads, especially where adjacent building levels are concerned.

This proposal describes the application of cumulative occupant loads in the context of the specific design requirement. Sections 1005.1.1 and 1005.1.2 generally require that capacity will be based on that portion of cumulative occupant loads that egress through a given space or story. Section 1015.1, Item 1, Exception 1 notes that foyers, lobbies, etc. need not have increased numbers of exits based on cumulative occupant loads. Please note that the capacity of the lobby exit is based on cumulative occupant loads. Section 1021.2 states that numbers of exits from a given story need not include contributing occupant loads from adjacent stories unless there are no other exits from an adjacent mezzanine. Again, bearing in mind that the required capacity from the exit level story would be based on applicable cumulative occupant loads, it is not necessary to consider cumulative occupant loads when determining the number of exits from a given story because of availability and opportunity. For a given story, there is no need to potentially increase the number of exits below for two reasons. If the fire event is on the lower story, occupants above may egress at their level without entering the fire floor. If the fire is at the upper level, there is no need for additional exits at the story below because there is no fire jeopardizing any of the exits. Additionally, there is reduced competition for the exits at the lower level based on rate of travel considerations. The increased size (capacity) of the means of egress system at the level below also mitigates the need for additional exits at that level.

This methodology is consistent with those remarks applicable to Section 1004.1.1.2 as stated in the *2012 IBC Code and Commentary, Vol. 1* that states:

"The egress requirements for mezzanines or second floors that use exit access stairways to move to the ground level are handled similar to those spaces with accessory areas addressed in Section 1004.1.1.1, versus the requirements for exiting from multiple levels in 1021. That is, that portion of the mezzanine/second floor occupant load that travels through the floor below to the exit is to be added to the occupant load of the space on the floor below. The sizing and number of the egress components must reflect this combined occupant load. This does not apply to the means of egress from a mezzanine/second floor that does not require travel through another level (i.e., an interior exit stairway serving the mezzanine/second floor)."

The IBC needs to identify how to apply cumulative occupant load provisions for various means of egress design scenarios and articulate those provisions so that they are universally understood by all code practitioners. This proposal is consistent with E5-09/10 means of egress philosophy contained in the 2012 IBC: however, restores the so-called "cascade effect" design considerations contained in earlier editions of the IBC as well as legacy codes.

E14-12

Final Action: AS AM AMPC____ D

E15-12

1004.1.1, 1004.1.1.1, 1004.1.1.2, 1004.1.1.3, 1014.2 (IFC [B] 1004.1.1, 1004.1.1.1, 1004.1.1.2, 1004.1.1.3, 1014.2)

Proposed Change as Submitted

Proponent: Dennis Richardson, PE; Building Official, City of Salinas, representing Tri-Chapter (Peninsula, East Bay and Monterey Bay Chapters of ICC)

Revise as follows:

1004.1.1 (IFC 1004.1.1) Cumulative occupant loads. Where the path of egress travel includes intervening rooms, areas or spaces, cumulative occupant loads shall be determined in accordance with this section.

1004.1.1.1 (IFC [B] 1004.1.1.1) Intervening spaces. Where occupants egress from one room, area or space through another ~~others~~, the ~~design occupant load~~ shall be assigned individually for each area and considered as required by Section 1014.2. ~~be based on the cumulative occupant loads of all rooms, areas or spaces to that point along the path of egress travel.~~

1004.1.1.2 (IFC [B] 1004.1.1.2) Adjacent levels for mezzanines. The ~~occupant load~~ of a ~~mezzanine or story~~ with all required egress through a room, area or space on an adjacent level shall be added to the ~~occupant load~~ of that room, area or space.

Where a mezzanine is served by a means of egress, independent of the room or space in which it is located, the portion of occupant load accumulated to the room or space shall be added to the occupant load of that room or space.

Exceptions:

1. Where a mezzanine is not required to be open in accordance with Exception 2 of Section 505.2.3, provided the loss of all exit access, through the room or space the mezzanine is located in, shall not reduce the available capacity from the mezzanine to less than 50% of the required egress capacity from the mezzanine.
2. Where a mezzanine is not required to be open in accordance with Exception 5 of Section 505.2.3.

1004.1.1.3 (IFC [B] 1004.1.1.3) Adjacent stories. The portion of the occupant load accumulated from a story with exit access through an adjacent story shall be added to the story where access to an exit along that path is provided.

Exceptions:

1. In occupancies other than Group H and I, provided the loss of all exit access through the adjacent story shall not reduce the available egress capacity from the story under consideration to less than 50 percent of its required egress capacity.
2. In occupancies other than Group H and I, where unenclosed exit access stairways serving only the first and second stories of a building equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, provided at least two means of egress are provided from both floors.

1014.2 (IFC [B] 1014.2) Egress through intervening spaces. Egress through intervening spaces shall comply with this section. The capacity and minimum number of exits or exit access doorways and paths

required from all interconnected portions of the exit access on a given story shall be considered individually for each room and in the aggregate for each portion of the exit access. The capacity and minimum number of exits or exit access doorways shall be provided based on the requirements in Sections 1005 and 1015, Egress capacity along any path of egress shall be based on the portion of the occupant loads from rooms, areas or spaces accumulated along that egress path.

1. Egress from a room or space shall not pass through adjoining or intervening rooms or areas, except where such adjoining rooms or areas and the area served are accessory to one or the other, are not a Group H occupancy and provide a discernible path of egress travel to an exit.

Exception: Means of egress are not prohibited through adjoining or intervening rooms or spaces in a Group H, S or F occupancy when the adjoining or intervening rooms or spaces are the same or a lesser hazard occupancy group.

2. An exit access shall not pass through a room that can be locked to prevent egress.
3. Means of egress from dwelling units or sleeping areas shall not lead through other sleeping areas, toilet rooms or bathrooms.
4. Egress shall not pass through kitchens, storage rooms, closets or spaces used for similar purposes.

Exceptions:

1. Means of egress are not prohibited through a kitchen area serving adjoining rooms constituting part of the same dwelling unit or sleeping unit.
2. Means of egress are not prohibited through stockrooms in Group M occupancies when all of the following are met:
 - 2.1 The stock is of the same hazard classification as that found in the main retail area;
 - 2.2 Not more than 50 percent of the exit access is through the stockroom;
 - 2.3 The stockroom is not subject to locking from the egress side; and
 - 2.4 There is a demarcated, minimum 44-inch-wide (1118 mm) aisle defined by full- or partial-height fixed walls or similar construction that will maintain the required width and lead directly from the retail area to the exit without obstructions.

Reason: A number of code changes over the past two code cycles have, when combined together, made the code more restrictive as written or interpreted even though as advertised the individual code changes were not intended to increase the cost of construction. The issue primarily revolves around the assignment or accumulation of occupant load from one location to another and whether or not all, or none, or a portion of the occupant load from one area obtaining access to required exits through another story or area is added to the occupant load of that story or area for determination of the number of exits or exit access doorways and egress width.

This code change addresses two areas of concern that the committee may wish to consider separately: Egress on a given level and egress from one story or level through another by way of unenclosed exit access stairways.

In summary on a given level: This code change reinforces the concept that the occupant load is assigned to each occupied area individually. When there are intervening rooms, each area must be considered both individually and in the aggregate with other portions of the exit access to determine the number and width of exit access. Portions of the occupant load are accumulated along egress paths to determine the capacity of individual egress elements along those paths. But once occupants from one area make a choice and head out along one of several independent paths of egress travel, their occupant load is not added to some other area to determine how many paths of travel would be required from that different area as if a second fire were to occur at the same time in that area. Example D is provided at the end of this reason statement.

In summary on separate levels: This code change also attempts to treat egress design along unenclosed exit access stairways through adjacent stories or through adjacent levels (in the case of mezzanines) in a similar manner recognizing previous limited instances where open exit access stairways from stories were considered as exits and the capacity (width) was required to be maintained but the occupant load was not added to the adjacent story providing exit access. Example A is provided in this reason statement.

This code change also recognizes mezzanines with independent egress can function similar to a story in a building. Example B is provided in this reason statement.

This code change recognizes mezzanines with sole egress through a room or area should have the occupant load added to that room or area. Example C is provided in this reason statement.

In order to treat open exit access stairways, for both adjacent stories and levels (mezzanines), equally there must be some limitation on the loss of provided egress capacity from a mezzanine or story that gains a portion of its egress capacity through adjacent levels.

Except for the limited previous exceptions of occupancies other than H or I on the first or second floor equipped with sprinklers throughout (Example E), this code change places a limit of the loss of egress capacity through adjacent levels to no more than 50% of the required capacity. In the event more than 50% of required egress capacity would be blocked if egress through the adjacent level is lost then this code change requires the portion of occupant load to be added to the story or level where exit access is provided. This is consistent with the concept found in 2012 IBC section 1005.5 and is necessary in the case where two of three means of egress from a mezzanine could be open or two of four means of egress from a story could have open exit access through a story (both cases with more than 50% of the required capacity unprotected through the adjacent level or story).

Description of Examples A, B and C: All three examples are a 10 story office building with a parking garage at the first two floors. Upper floors are cut away to help with view. All doors shown are 3'-0" x 6'-8" with 32" net clear. Typical design of each floor of the office building is for 850 occupants. Building is equipped throughout with a sprinkler system per Section 903.3.1.1 (NFPA 13). Each floor requires 3 exits or exit access stairways in accordance with Section 1021.2.4. A minimum of two interior or exterior exit stairways are required from each story above the second floor per Section 1021.1.

Total required net exit door width from each typical story = $850 \times .15 = 127.5$ inches < 128 inches provided, OK.

Loss of any one exit at interior exit stairway 1 results in no more than 50% of required capacity; Distribution of egress capacity OK per Section 1005.5.

Example A: An two story open office suite covers the entire 3rd and 4th floors is and has a portion of the floor cut away. Access to interior exit stairway 1 is provided from the 4th floor using unenclosed exit access stairway 1. The occupant load of the 3rd floor is 850 without considering any occupant load from the adjacent floor. Occupant load of the partially cut away 4th floor is now 600. The portion of occupant load going to interior exit access stair way = $600 - 2 \times 32 / .15 = 174$. Required width of exit access stair 1 = $174 \times .20 = 34.6$ inches therefore use 44 inch minimum exit access stair per Section 1009.4.

What occupant load is the third floor designed for? Are the typical floor exit doors and number of interior exit stairs code compliant?

If the portion of occupant load from the 4th floor utilizing the unenclosed exit access stair is added to the third floor occupant load (or all of the occupant load depending how the current code is interpreted), the third floor will now be over 1000 occupant load and 4 means of egress will be required from the third floor down through the building even though the occupant load for the overall building is reduced and previous codes would have allowed this condition in occupancies other than H and I.

This code change, for a B occupancy, would require the portion of the occupant load from the 4th floor to be added to the 3rd floor only if the exit access capacity required from the 4th floor would be reduced to less than 50% of required capacity if the exit access through the adjacent 3rd floor was blocked. In this example the egress would be ok as drawn. For H or I occupancies the portion of occupant load accumulated along the exit access stairway would be added to the occupant load of the story below as a requirement after this code change.

Example B: In this example the third floor does not communicate with any other floor but a mezzanine with an occupant load of 350 is installed. The mezzanine is served by an independent exit going into interior exit stairway 3 and by exit access stairway 1 providing access to the 3rd floor. The occupant load of the 3rd floor is 850 without considering any occupant load from the mezzanine.

What occupant load is the third floor designed for? Are the typical floor exit doors and number of interior exit stairs code compliant?

According to the current code all or a portion of the occupant load from the mezzanine (depending on how it is interpreted) would need to be added to the 3rd floor and in either case, even though the mezzanine has direct access to an exit the building would now require 4 means of egress from the 3rd floor down.

This code change for a B occupancy as shown, would require the portion of the occupant load from the third floor mezzanine to be added to the 3rd floor only if the exit access capacity required from the mezzanine would be reduced to less than 50% of required capacity if the exit access through the 3rd floor was blocked. For H or I occupancies the portions of occupant load accumulated along the exit access stairway would be added to the occupant load of the story below as a requirement of this code change.

For the B occupancy, egress would be ok as shown in the example.

Example C: In this example the third floor does not communicate with any other floor but a mezzanine with an occupant load of 350 is installed and the sole egress from the mezzanine is by two exit access stairways to the 3rd floor. The occupant load of the 3rd floor is 850 without considering any occupant load from the mezzanine.

What occupant load is the third floor designed for? Are the typical floor exit doors and number of interior exit stairs code compliant?

This example would be treated as required by current code where all of the occupant load from the mezzanine is added to the occupant load of the 3rd floor open office below. 3rd floor would now require 4 exits as the occupant load from the third story including the mezzanine would be greater than 1000.

Example D: In this example, the occupant loads assigned to each room or area based on 2012 IBC section 1004.1.2 and the function of the space. All door hardware is either panic or classroom hardware and in all cases is openable in the direction of door swing without the use of a key or special knowledge or effort. All door hardware can be locked with a key in the direction opposite of door swing for security purposes of individual areas. For this example each door is a single leaf from 36 inch minimum up to 48 inch maximum and the building is equipped throughout with an NFPA 13 sprinkler system. If additional door width is required at a door location, based on capacity, two 36" doors are provided.

In layout D.1, all rooms have adequate means of egress for the occupant load contained in the room when evaluated on an individual basis. The occupant load of the entire story is 700 and the story has an adequate number of exits when looked at in the aggregate (doors 3.1, 5.1 and 7.1).

When the Accounting Office and General Office are looked at in the aggregate, they have adequate egress for an aggregate occupant load of 400 for this portion of the exit access (doors 5.1 and 6.1 which both must be have capacity for 200 occupants). The lobby has a total of 20 occupant load and door 7.1 must be sized for an accumulated occupant load along this egress path of 360 (200 from door 6.1, 140 from door 4.1 and 20 from the lobby). Utilizing the concept of one fire, if there was a fire in the lobby then all occupants would have adequate access to other means of egress through doors 5.1 and 3.1. If the fire occurred when doors 4.1 and 6.1 are locked from the lobby side then the limited number of occupants in the lobby have access to adequate egress through door 7.1.

If the fire occurs in another room, the general office for example, the portion of occupant load from the general office and the sales office with egress through the lobby are not added to the occupant load of the lobby to determine the number of exits or exit access doors from the lobby but the occupant load is accumulated along this path to determine the required capacity of doors 7.1 along this path. Because those individuals from other rooms, if exiting from a fire through the lobby, would have already exercised their option of two means of egress from the room where the occupants originated and there is no need to add the occupants or the portion of the design occupant load through the lobby to the occupant load of the lobby to determine the number of means of egress from the lobby. The code does not assume both a fire that persons are exiting from and then encountering another different fire along the way.

Egress in layout D.1 would meet the code as revised by the proposed change.

In layout D.2, all rooms have adequate means of egress for the occupant load contained in the room when evaluated on an individual basis. The occupant load of the entire story is still 700 and the story has an adequate number of exits when looked at in the aggregate (doors 3.2, 5.2 and 7.2). Since the sales office also has required egress through the general office, the accounting office, general office and sales office must be looked at in the aggregate and based on the total aggregate occupant load of 680 for this portion of the exit access. Three exit or exit access doors are required and provided from this portion of the exit access (door 3.2, 5.2, and 6.2). The capacity of door 5.2 and 6.2 must be designed based on an accumulated occupant load 270 along each egress path which is determined as follows: (140, the portion from the sales office, plus 100 from the accounting office, and 300 from the general office) all divided by 2= 270. The capacity of door 7.2 is determined based on the occupant load of 270 used to determine the occupant load of door 6.2 along with the accumulated occupant load of 20 from the lobby for a total occupant load of 290 for the capacity of door 7.2 along the continuation of this egress path. This is consistent with Figure 1004.4.4 of the 1012 IBC Commentary and its accompanying explanation.

Egress in layout D.2 would meet the code as revised by the proposed change.

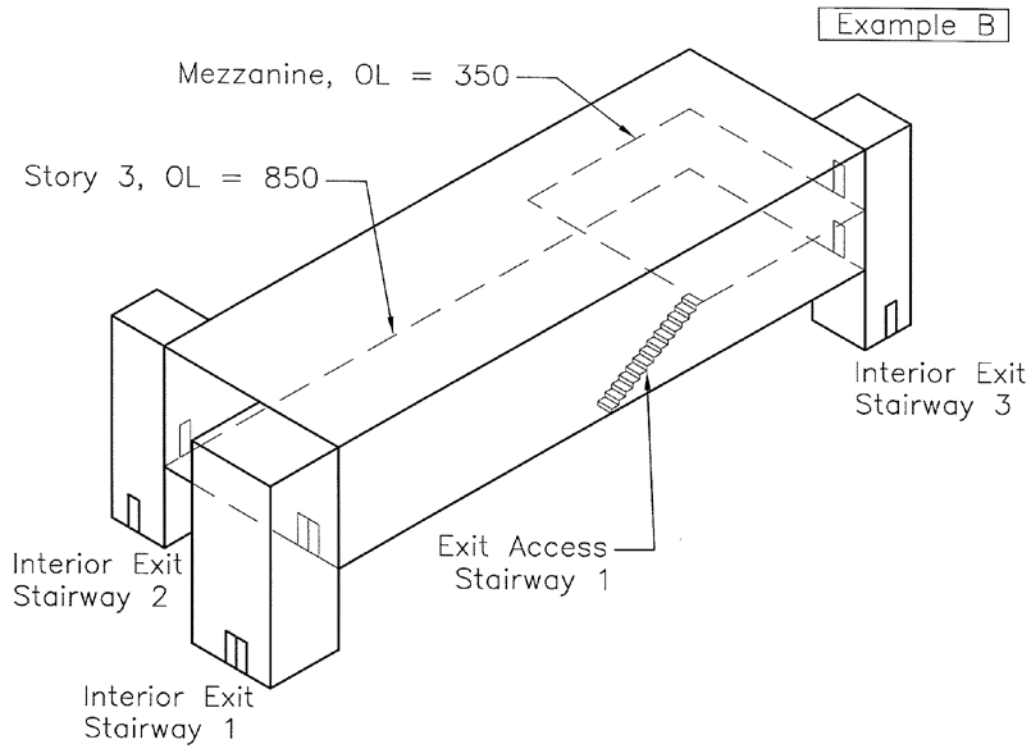
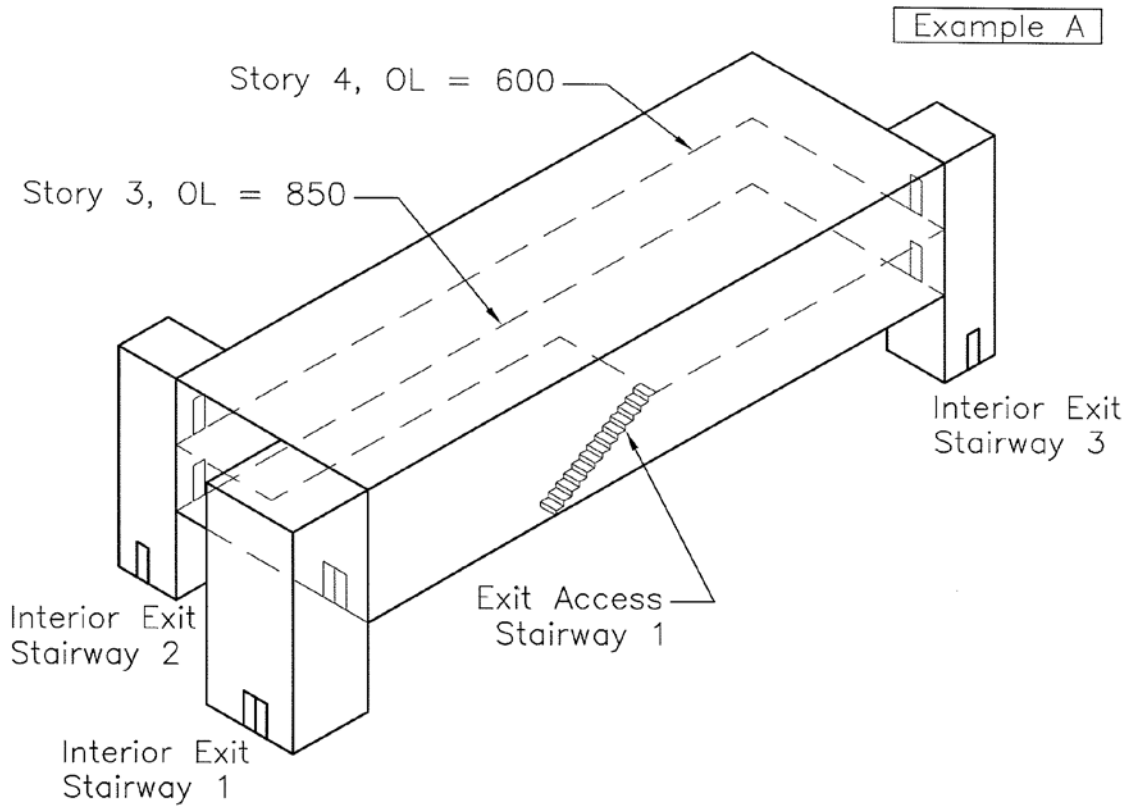
This example has adequate egress from each room, story and portion of the exit access when considered in the aggregate but it would not comply with the 2009 IBC because all occupants do not have access to all required exits from the story as was required by 2009 IBC section 1021.1 This was resolved by E5 and E120 in the past code cycle. This example would also not comply with the literal read of the 2012 IBC because all of the occupant load from the sales office and the accounting office would be added to the general office for a total of 680 requiring three means of egress from the general office.

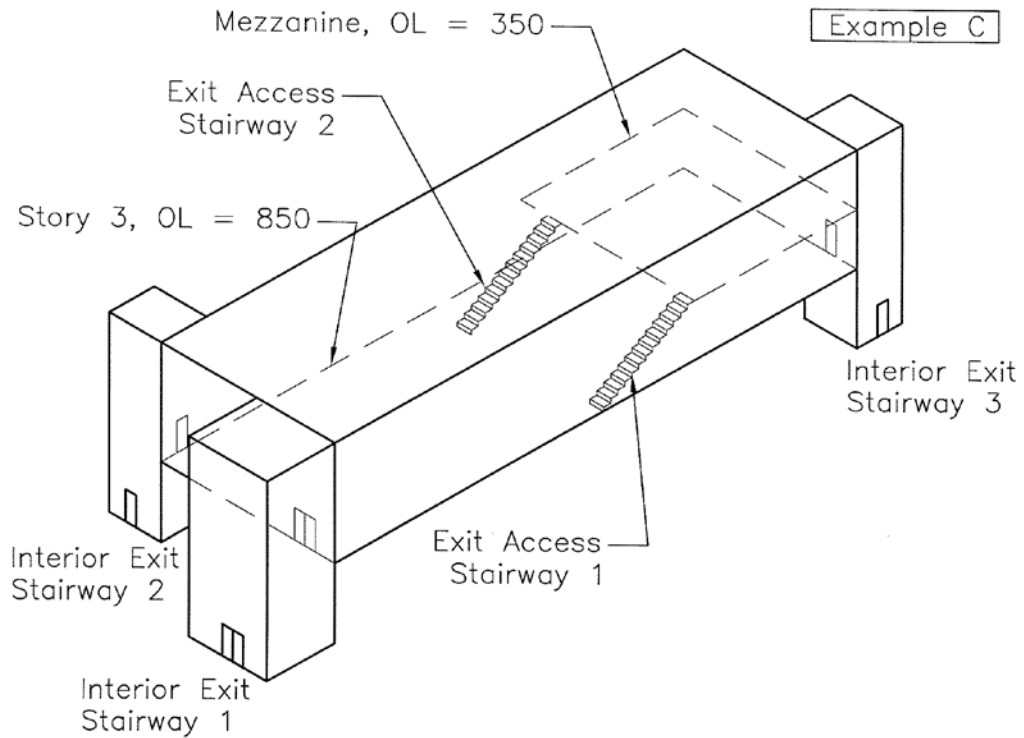
Example E: This example illustrates an egress system allowed for occupancies other than H and I in the first two floors of a building equipped throughout with an NFPA 13 sprinkler system. This arrangement was allowed under the 2006 IBC section 1020.1, exception 9 without adding the occupant load to the floor below. This code change would continue to allow this configuration as long as the capacity from each floor is maintained as required by the code.

This configuration would apparently not meet the current code as the occupant load or a portion of the occupant load from the second floor would currently be required to be added to the occupant load of the first floor causing the occupant load to have three exits. This was apparently an unintended consequence of E122 06/07.

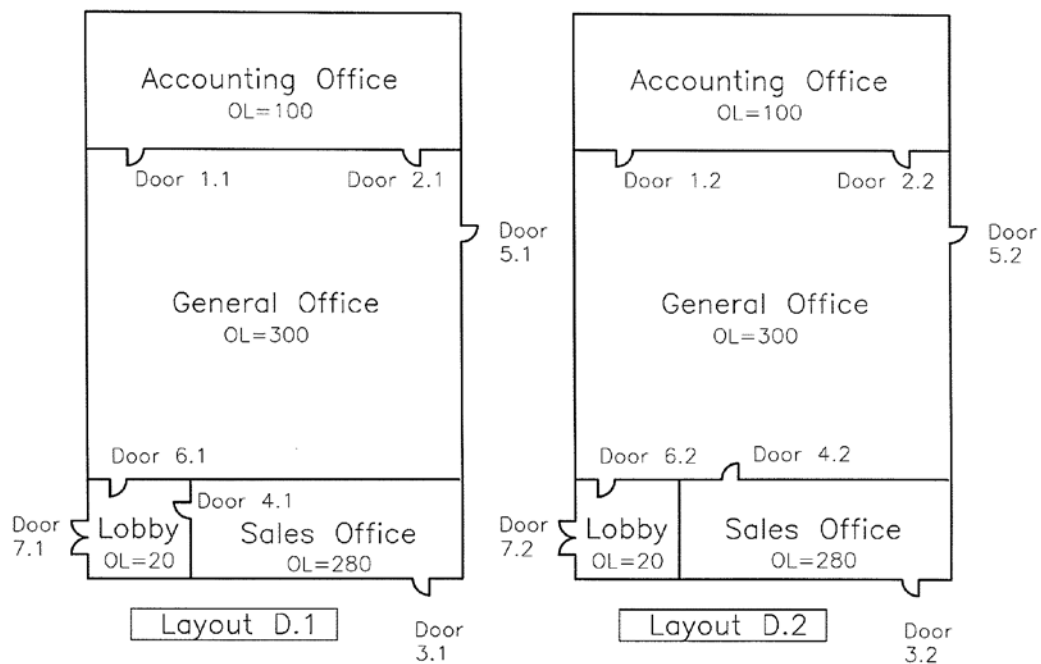
In Conclusion: This code change would clarify egress from a single level through intervening rooms would have occupant load assigned to each room and be evaluated both individually and in the aggregate for each portion of the exit access.

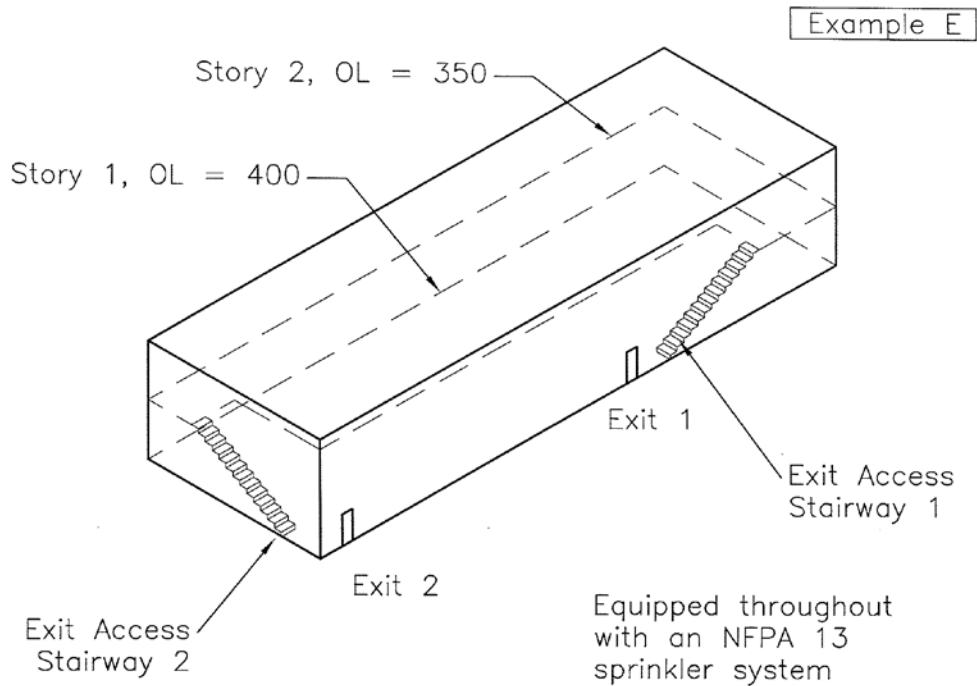
This code change would still require occupant load from an adjacent story or level to be added to an adjacent level when the sole egress occurs through the story. This code change provides a framework utilizing existing exceptions for the egress through an adjacent story or level to be considered in a similar manner depending on the degree of independent egress from the story or mezzanine.





IBC 1004.1, Example D





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

Staff Note: The version of E15-12 shown above was part of the errata posted on the ICC website and also appeared in the Report of Hearings.

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The proposal seems to treat the 2nd floor like a mezzanine regardless of how close the exit access stairways are to the exterior exits in the level of exit discharge. This would be in conflict with the cascading stairway loading that has been utilized in the code for years. "Loss of exit access" is too open for interpretation. The proposed language is very confusing. The intent is not clearly expressed. Disapproval is also consistent with the committee vote on E17.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Dennis Richardson, PE; Building Official, City of Salinas, representing Tri-Chapter (Peninsula, East Bay and Monterey Bay Chapters of ICC), requests Approval as Modified by this Public Comment

Replace the proposal with the following:

1004.1.1 Cumulative occupant loads. Where the path of egress travel includes intervening rooms, areas or spaces, cumulative occupant loads shall be determined in accordance with this section.

1004.1.1.1 (IFC [B] 1004.1.1.1) Intervening spaces or accessory areas. Where occupants egress from one or more room, area or space through another others, the design *occupant load* shall be the combined occupant load of interconnected accessory or

intervening spaces. Design of egress path capacity shall be based on the cumulative portion of occupant loads of all rooms, areas or spaces to that point along the path of egress travel.

1004.1.1.2 (IFC [B] 1004.1.1.2) Adjacent levels for mezzanines. That portion of the occupant load of a mezzanine or story with required egress through a room, area or space on an adjacent level shall be added to the occupant load of that room, area or space.

1004.1.1.3 (IFC [B] 1004.1.1.3) Adjacent stories. Other than for the egress components designed for convergence in accordance with Section 1005.6, the occupant load from separate stories shall not be added.

Commenter's Reason: Over the past two code cycles there have been numerous changes to the egress provisions. Along the way a number of basic premises of the code have been slightly modified with the result of inconsistent interpretation and application of the code.

The goal of this code change is to state how occupant load is addressed in one place (Section 1004) so that the user can consistently apply the occupant load in other sections utilized to calculate the width (or capacity) and determine the number of exits or exit access paths. During the past two code cycles seemingly straight forward changes have had the effect of making the code more restrictive through interpretation even though they were not advertised as such.

1004.1.1.1 Intervening spaces: The current code as written gives inconsistent interpretations as shown in the 2012 ICC Code and Commentary Figure 1004.1.1 on page 10-10 and Figure 1021.2(1) on page 10-135. In Figure 1004.1.1, if interpreted literally as written, a small lobby with 10 occupant load with one path of exit travel through it would either have all or part of the occupant load from the next room added to it to determine both number and capacity of exits. If the code is applied literally in this example, then the design occupant load (now much larger) would require two exits or exit access from the lobby on its own even though the large room driving egress already has access to two exits. In the example accompanying Figure 1021.2(1) part of the occupant load is added to the corridor to determine the corridor now needs three exits which is incorrect as the room driving this condition already had access to three exits or exit access and the overall story only needs three exits.

Instead of taking occupant load from one space and adding it to another as implied by the current code for the overall design occupant load, this public comment emphasizes rooms that share an egress path must be looked at for the occupant load in the aggregate to address number of exits, door swing, hardware, etc. and each path of egress travel width (or capacity) must be designed for an accumulation of the portion of occupant load with egress along that path. Each individual room must also have access to the required egress as currently required by code.

1004.1.1.2 Mezzanines: Egress from mezzanines has been treated differently than stories in the IBC code for a number of years. The concept provided here is only the portion of occupant load with required egress through the room, area or space shall be added to the occupant load of the room, area or space below. This accounts for mezzanines where there is considerable independent egress directly off of the mezzanine and also for the conditions where some or all of the required egress from the mezzanine is through the level below.

1004.1.1.3 Stories: Historically in the IBC occupant load has not needed to be accumulated through exits from one story to another as long as both the maximum number and capacity at any story is maintained in the stories below. This has been referred to the "cascading stairway" loading effect. The concern of "conflict with the cascading stairway loading utilized by the code for years" was mentioned by the egress committee in the disapproval of E14, E15 and E17. In past codes, there is one instance where occupant load is added between stories when there is convergence with egress to a central level occurring at the same time from both above and below. This is acknowledged in this public comment.

The loss of the cascading loading for stairways may have occurred, in the minds of some, when unenclosed exit stairways found in section 1020, exceptions 8 and 9, of the 2006 IBC were relocated by E122-06/07 from the exit provisions to the exit access provisions. E122-06/07 stated it did not increase the cost of construction and there was no discussion in the E122-06/07 reason of any effect on cascading stairway loading at that time. Yet by renaming unenclosed exit stairs as unenclosed exit access stairs some practitioners interpreted this as a need to now add the portion of occupant load from an exit access stairway to the story below (as part of the exit access) instead of maintaining both the capacity and number of means of egress from the story as has historically been done for exits. This cascade stairway loading concept was alive and well regarding egress width from a story in section 1004.4 of the 2006 IBC, again in the last sentence of section 1005.1 of the 2006 IBC, and finally addressed for the number of exits from a story in 2006 IBC section 1019.1. The last section of this public comment attempts to address this issue to ensure, even though egress through an adjacent story has been reorganized, the intent of maintaining the cascade stairway loading is maintained as pointed out by the egress committee.

E15-12

Final Action:

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E17-12

1004.1.1.2, 1005.3.1, 1005.3.2 (IFC [B] 1004.1.1.2, 1005.3.1, 1005.3.2)

Proposed Change as Submitted

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

Revise as follows:

1004.1.1.2 (IFC [B] 1004.1.1.2) Adjacent levels. That portion of the occupant load of a mezzanine or story with required egress through a room, area or space on an adjacent story level shall be added to the occupant load of that room, area or space.

1005.3.1 (IFC [B] 1005.3.1) Stairways. The capacity, in inches, of means of egress stairways shall be calculated by multiplying the occupant load served by such stairway by a means of egress capacity factor of 0.3 inches (7.62 mm) per occupant. Where interior or exterior exit stairways serve more than one story, only the occupant load of each story considered individually shall be used in calculating the required capacity of the stairways serving that story. Where exit access stairways provide required access to an exit at an adjacent story, the occupant load determined in accordance with Section 1004.1.1.2 shall be used in calculating the required capacity of the means of egress serving that story.

Exception: For other than Group H and I-2 occupancies, the capacity, in inches (mm), of *means of egress stairways* shall be calculated by multiplying the *occupant load* served by such *stairway* by a *means of egress* capacity factor of 0.2 inch (5.1 mm) per occupant in buildings equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2 and an *emergency voice/alarm communication system* in accordance with Section 907.5.2.2.

1005.3.2 (IFC [B] 1005.3.2) Other egress components. The capacity, in inches (mm), of *means of egress* components other than *stairways* shall be calculated by multiplying the *occupant load* served by such component by a *means of egress* capacity factor of 0.2 inch (5.1 mm) per occupant. Where exit access ramps provide required access to an exit at an adjacent story, the occupant load determined in accordance with Section 1004.1.1.2 shall be used in calculating the required capacity of the means of egress serving that story.

Exception: For other than Group H and I-2 occupancies, the capacity, in inches (mm), of *means of egress* components other than *stairways* shall be calculated by multiplying the *occupant load* served by such component by a *means of egress* capacity factor of 0.15 inch (3.8 mm) per occupant in buildings equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2 and an *emergency voice/alarm communication system* in accordance with Section 907.5.2.2.

Reason: This proposal is submitted by the ICC Building Code Action Committee (BCAC). The BCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the BCAC has held 3 open meetings and over 15 workgroup calls which included members of the BCAC as well as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: <http://www.iccsafe.org/cs/BCAC/Pages/default.aspx>.

The 2012 Edition of the IBC has formalized the concept of accessing exits from adjacent stories. Accordingly, several means of egress design details need to be clarified so as to be consistent with the intent of Section 1021. Currently, Section 1004.1.1.2 literally requires that (100% of) the occupant load of a mezzanine or story with egress through a room, area or space on an adjacent level shall be added to the occupant load of that room, area or space. That would be appropriate if there were no other exits serving the mezzanine or story. However, if the mezzanine or story also has other independent exits that do not egress through the adjacent story, it is reasonable to assume these other independent exits can and will be used by the occupants of that mezzanine or story. This proposal clarifies that only that portion of the occupant load of the level of origin actually using exit access stairways need be used in determining means of egress requirements for the adjacent story. To be consistent with this philosophy, Section 1005.3.2 has also been modified to state an identical provision for exit access ramps which provide required access to an exit at an adjacent story.

Additionally, Section 1005.3.1 has been modified to clarify that only the occupant load of a story directly accessing an interior exit stairway need be considered in determining the required capacity of such interior exit stairway that serves additional stories. The cascade effect is accounted for in the means of egress capacity factor for stairways in Section 1005.3.1. A cross-reference to the method for determining the required capacity for areas served by exit access stairways from an adjacent level has also been provided.

Section 1004.6 (Mezzanine levels) of the 2009 IBC reads very similarly to Section 1004.1.1.2 (Adjacent levels) of the 2012 IBC. The 2009 IBC Commentary states, "The egress requirements for mezzanines are handled similar to those addressed in Section 1004.1 with accessory areas versus the requirements for exiting from multiple levels in Section 1004.4. That is, that portion of the mezzanine occupant load that discharges to the floor below is to be added to the occupant load of the space on the floor below. The sizing and number of the egress components must reflect this combined occupant load. This does not apply to the means of egress from a mezzanine that does not require travel through another level (i.e., an exit stairway serving the mezzanine)."

Clarification is achieved by adding the "that portion" language in the commentary to the actual provision. Approval of this proposal is consistent with the means of egress philosophy contained in the 2012 IBC and will result in the more consistent interpretation and application of fundamental means of egress design provisions.

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

1004.1.1.2-E-BAJNAI-BCAC.docx

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The term "portion of the occupant load" is too open for interpretation and is confusing. Elimination of the enclosures for the stairways does not change how the occupants move to egress from the space. This would be in conflict with the cascading stairway loading that has been utilized in the code for years. This would have significant effect on the size and number of exits in a two story building with two exit access stairways.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Charles S. Bajnai, Chesterfield County, VA, ICC Building Code Action Committee, requests Approval as Modified by this Public Comment

Replace the proposal with the following:

1004.1.1.2 (IFC [B] 1004.1.1.2) Adjacent levels. That portion of the occupant load of a mezzanine or story with required egress through a room, area or space on an adjacent story level shall be added to the occupant load of that room, area or space.

Commenter's Reason: This public comment is submitted by the ICC Building Code Action Committee (BCAC). The BCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the BCAC has held 5 open meetings and numerous workgroup calls which included members of the BCAC as well as any interested party to discuss and debate the proposed changes and the public comments. Related documentation and reports are posted on the BCAC website at: <http://www.iccsafe.org/cs/BCAC/Pages/default.aspx>.

Revision to the code text is made to clarify the Code's intent and be consistent with the 2012 IBC Commentary under Section 1004.1.1.2.

The 2012 IBC Commentary under Section 1004.1.1.2 states:

"The egress requirements for mezzanines or second floors that use exit access stairways to move to the ground level are handled similar to those spaces with accessory areas addressed in Section 1004.1.1.1, versus the requirements for exiting from multiple levels in 1021. That is, ***that portion of the mezzanine/second floor occupant load that travels through the floor below to the exit is to be added to the occupant load of the space on the floor below.*** The sizing and number of the egress components must reflect this combined occupant load. This does not apply to the means of egress from a mezzanine/second floor that does not require travel through another level (i.e., an interior exit stairway serving the mezzanine/second floor)."

E17-12

Final Action:

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E18-12

Table 1004.1.2 (IFC [B] Table 1004.2)

Proposed Change as Submitted

Proponent: Al Godwin, CBO, CPM, Aon Fire Protection Engineering representing Aon Fire Protection Engineering (al.godwin@aon.com)

Revise as follows:

**TABLE 1004.1.2 (IFC [B] TABLE 1004.1.2)
MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANCY**

FUNCTION OF SPACE	OCCUPANCY LOAD FACTOR
Mercantile	
Areas on other floors	60 gross
Basement and grade floor areas	30 gross
<u>Primary floors of the retail space^b</u>	<u>30 gross</u>
<u>Floors and mezzanine other than the primary floors</u>	<u>60 gross</u>
Storage, stock, shipping areas	300 gross

(Portions of table and notes not shown remain unchanged.)

- b. The primary floor is the entry floor of the retail space. More than one floor will be considered a primary floor where customer entry from outside the retail space can occur on different levels. Other floors are secondary floors, mezzanines, and basements that customers can only access once inside the retail space.

Reason: It has never been made clear if the grade floor is the 1st floor of the retail space, or only those floors at grade. What about retail spaces that are on the 2nd floor of a strip center or mall? Is it assumed that they will not be as crowded as a retail space on the 1st floor? What if there are two grade floors? Why does a basement level have the same occupant load as the "grade floor."

This revision is provided to hopefully clarify the requirement. At least provide better clarification in the commentary.

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

Staff Note: The original proposal had an errata in the 2nd column in the struck-out language. The proposal as shown has been corrected.

T1004.1.2-E-Godwin.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The issue is more the occupant load of the space rather than if this is the entry floor or not. A store could have a primary retail space on more than one floor. This proposal would not work for malls. "Primary floor" would not have consistent interpretation.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment 1:

AI Godwin, CBO, CPM, Aon Fire Protection Engineering representing Aon Fire Protection Engineering, requests Approval as Submitted

Commenter's Reason: When published in the monograph the "60 gross" and "30 gross" of the existing struck through language were transposed. This added confusion to the proposal.

The Committee stated that the issue is not what floor they are on but the occupant load of the space. However, the current code already assumes that the grade floor and basement floor will have the largest occupant load regardless of what products are present on these or other floors that might attract customers. This proposal is only to clarify that the "grade floor" of a retail space is the entry floor of the retail space. Thus, a retail space whose entry floor is on the second level would use the 30 factor and not the 60 factor.

Also included is direction that in some buildings like malls, 2 story retails spaces may have two "grade" or entry floors.

Public Comment 2:

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

Replace the proposal with the following:

**TABLE 1004.1.2 (IFC [B] TABLE 1004.1.2)
MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANCY**

FUNCTION OF SPACE	OCCUPANT LOAD FACTOR ^a
Mercantile	<u>60 gross</u>
Areas on other floors	<u>60 gross</u>
Basement and grade floor areas	<u>30 gross</u>
Storage, stock, shipping areas	<u>300 gross</u>

(Portions of table and notes not shown remain unchanged.)

Commenter's Reason: The original proposal tried to define what the primary floor was for mercantile occupancies. This public comments attempts to make this requirement easier for the code user. The different occupant load factors for various floors were originally based on multi-story single operator buildings. However, the use of these buildings is no longer the same as they were. Many of the big box retailers are now constructing multi-story buildings. We do not believe the number of occupants will be any different on different floors. Therefore, we are recommending that a single occupant load factor be used for all floors.

60 square feet per occupant was selected because it is a more reasonable number in today's retail environment. Much of the floor area is covered with display cases and counters. The actual number of people, even at Christmas time or Black Friday, would not exceed the 60 square feet limit. This occupant load factor is more reasonable and still provides the required number and capacity of exits from the building.

E18-12

Final Action: AS AM AMPC____ D

E19-12

1004.2 (IFC [B] 1004.2)

Proposed Change as Submitted

Proponent: Al Godwin, CBO, CPM, Aon Fire Protection Engineering representing Aon Fire Protection Engineering (al.godwin@aon.com)

Revise as follows:

1004.2 (IFC [B] 1004.2) Increased occupant load. The *occupant load* permitted in any building, or portion thereof, is permitted to be increased where approved by the *building official* from that number established for the occupancies in Table 1004.1.2, provided that all other requirements of this the code or any other applicable codes are also met based on such modified number and the *occupant load* does not exceed one occupant per 7 square feet (0.65 m²) of net occupiable floor space.

In making the decision, the *building official* shall be permitted to consider such issues as:

1. Is this a temporary or permanent increase;
2. The function and operation of the business;
3. Openness of egress flow;
4. Management control of crowd and evacuation issues;
5. The effect of seating or tables on the egress path;
6. Is alcohol present.

After review, the *building official* shall be permitted to require a lesser density.

Where required by the *building official*, an approved aisle, seating or fixed equipment diagram substantiating any increase in *occupant load* shall be submitted. Where required by the *building official*, such diagram shall be posted.

Reason: As written, the 1:7 seems automatic if extra exits and width are provided. Some designers have felt that it is automatic and expressed opposition when other factors were brought into the evaluation. However, there are many issues that should be considered in evaluating the increase. Only a few are listed.

There is a difference in increasing the occupant load for rooms used for code hearings than rooms used as a night club, with low lights and patrons consuming alcohol. To allow an occupant load increase requires a different evaluation.

Also, there are other codes that are affected as well. An occupant load increase may change the alarm specifications, the restroom requirements, the fresh air requirements, etc. All of these factors are part of the evaluation.

Cost Impact: This code proposal will not increase the cost of construction since no extra construction costs are involved.

1004.2-E-Godwin.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: To design a space for an increased occupant load the designer is already exceeding minimum code requirements and there is already a maximum number permitted. The proposed language is too subjective. The intent is already addressed in the codes, therefore the proposed language is largely duplicative.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Al Godwin, CBO, CPM, representing Aon Fire Protection Engineering Corporation, requests Approval as Modified by this Public Comment.

Replace the proposal with the following:

1004.2 Increased occupant load. The *occupant load* permitted in any building, or portion thereof, is permitted to be increased, where approved by the building official, from that number established for the occupancies in Table 1004.1.2, provided that all other requirements of the code are also met based on such modified number and the *occupant load* does not exceed one occupant per 7 square feet (0.65 m²) of net occupiable floor space. Where required by the *building official*, an approved aisle, seating or fixed equipment diagram substantiating any increase in *occupant load* shall be submitted. Where required by the *building official*, such diagram shall be posted. Where required by the *building official*, an approved aisle, seating or fixed equipment diagram substantiating any increase in *occupant load* shall be submitted. Where required by the *building official*, such diagram shall be posted.

Commenter's Reason: While all of the items listed in the original proposal and the reason statement are applicable, the Committee felt that these items will be addressed before an increase will be permitted. As such, the proposal was a duplicate of provisions that already exists.

Therefore, the proposal has been reduced to just add "when approved by the building official." As currently written, it is not clear if 7 square foot per person is a right that can be claimed anytime extra doors are present, or if the building official has some decision making authority. This will clarify that it is not a right but is subject to review.

The commentary should identify that in making this decision, the building official should consider all of the items in the original proposal and those listed in the Reason statement.

E19-12

Final Action:	AS	AM	AMPC_____	D
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E25-12

1006.1.1 (New) [IFC [B] 1006.1.1(New)]

Proposed Change as Submitted

Proponent: John Williams, CBO, Chair, ICC Ad Hoc Committee on Health Care

Add new text as follows:

1006.1.1 (IFC [B] 1006.1.1) Occupancy sensors. Occupancy sensors shall be permitted to activate the required illumination for the means of egress provided they meet all of the following conditions:

1. The occupancy sensors operate as fail safe devices when the occupancy sensor fails;
2. Where the occupancy sensor is activated by an occupant the area served is illuminated for a minimum duration of 15 minutes;
3. The occupancy sensor operates as a fail safe device in the event of a power supply failure to the emergency lighting system required by Section 1006.3.
4. The means of egress is not required to have illumination to charge luminous egress path markings in accordance with Section 1024.5

Reason: This change permits the use of occupancy sensors which has been allowed in some jurisdictions. It also helps reduce energy as mandated by DOE. There are several proposals from the Adhoc Health Care Committee dealing with Section 1006. The proposals can be accepted individually, however, the proposals can work together.

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

Cost Impact: None

1006.1-E-Williams-Adhoc.docx

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: Allowance for automatic controls is needed as part of energy conservation and green building concerns. It is recognized that timers are used to turn on the lights to charge the photoluminescent stripes required in high-rises by Section 1024. However, there is a concern that there are currently no standards for testing or listing of these controls – specifically looking for a fail-safe device. These automatic controls should be limited to general means of egress lighting and not relied on for emergency means of egress lighting. This disapproval is consistent with E22 and E24.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment 1:

John Williams, Adhoc Health Care – MOE study group, requests Approval as Modified by this Public Comment.

Replace the proposal with the following:

1006.1 (IFC [B] 1006.1) Illumination required. The *means of egress*, including the *exit discharge*, shall be illuminated at all times the building space served by the *means of egress* is occupied.

Exceptions:

1. Occupancies in Group U.
2. *Aisle accessways* in Group A.
3. *Dwelling units* and *sleeping units* in Groups R-1, R-2 and R-3.
4. *Sleeping units* of Group I occupancies.
5. Portions of the *means of egress* provided with automatic lighting controls installed in accordance with Section 1006.1.1.

1006.1.1 (IFC [B] 1006.1.1) Occupancy sensors Automatic lighting controls. ~~Occupancy sensors~~ Automatic lighting controls shall be permitted to activate the required illumination for the means of egress provided they meet all of the following conditions:

1. The controls shall be configured to provide the required illumination within each room or space while occupied.
2. Where provided, occupant sensors shall activate the required illumination the occupancy sensor is activated by an occupant the area served is illuminated for a minimum duration of 15 minutes.
4. Where the automatic lighting controls fail, the controls shall fail in the on or operating state. The occupancy sensors operate as fail-safe devices when the occupancy sensor fails;
4. Occupant sensors shall not extinguish lighting The means of egress is not required to have illumination to charge luminous egress path markings in accordance with Section 1024.5
3. 5. All designated emergency lighting luminaries in the means of egress path shall operate in the event of emergency system activation providing light levels in accordance with Section 1006.3. The occupancy sensor operates as a fail-safe device in the event of a power supply failure to the emergency lighting system required by Section 1006.3.
6. The automatic lighting controls shall be tested as a component of the emergency lighting equipment in accordance with the IFC Section 604.5.

Commenter's Reason: The revised proposal responded to the committee's comments. The testing section was added in Item 6. Item 5 refines how the emergency means of egress lighting if used. We refined other areas of the proposal to indicate the need to fail on and not interfere with any of the luminous marking system needs.

Today's practice:

	Emergency fixture options		
	Battery powered wall fixtures	Battery back-up ceiling fixtures	Designated fixtures connected to emergency panels
Normal power ON	OFF as standard feature	May be turned OFF when space unoccupied, maybe left ON depending on design	Mostly ON 24/7
Normal power OFF	ON as standard feature	ON as standard feature	ON when transfer switch connects to emergency generator

Change we would like to see with this proposal:

	Emergency fixture options		
	Battery powered wall fixtures	Battery back-up ceiling fixtures	Designated fixtures connected to emergency panels
Normal power ON	OFF as standard feature	Turned OFF when space unoccupied	Turned OFF when space unoccupied
Normal power OFF	ON as standard feature	ON as standard feature	ON when transfer switch connects to emergency generator

The AHC was established by the ICC Board of Directors to evaluate and assess contemporary code issues relating to hospitals and ambulatory healthcare facilities. The AHC is composed of building code officials, fire code officials, hospital facility engineers, and state healthcare enforcement representatives. The goals of the committee are to ensure that the ICC family of codes appropriately addresses the fire and life safety concerns of a highly specialized and rapidly evolving healthcare delivery system. This process is part of a joint effort between ICC and the American Society for Healthcare Engineering (ASHE), a subsidiary of the American Hospital Association, to eliminate duplication and conflicts in healthcare regulation. Since its inception in April, 2011, the AHC has held 7 open meetings and over 100 workgroup calls which included members of the AHC as well as any interested party to discuss and debate the proposed changes. All meeting materials and reports are posted on the AHC website at: <http://www.iccsafe.org/cs/AHC/Pages/default.aspx>.

Public Comment 2:**Wade Rudolph, CBET, CHFM, Sacred Heart Hospital representing Wisconsin Healthcare Engineers Association Codes & Standards Committee, requests Approval as Submitted**

The proposal as submitted by John Williams, CBO, Chair, ICC Ad Hoc Committee on Healthcare should be accepted as proposed.

The rationale provided by the ICC Review committee substantiates that the proposal is acceptable for safe egress out of the building for almost 100% of the time, but is somehow not reliable for egress in a fire event. This logic does not make sense.

The concern that there is no current standard to test the devices is not valid, as the industry will create a test upon acceptance.

Hospitals are required to have illumination of means of egress and have invested a substantial amount of money into emergency generators, and emergency power distribution systems that have proven to be reliable in many situations. To require an additional luminous egress path markings is redundant. Hospitals already have normal power plus emergency power. The need for the markings is an expense that will add no more value to safe egress in the event of a fire.

Healthcare depends on emergency power systems to support life safety functions such as surgery, emergency services and the like, so to not consider this emergency power as a reliable source for egress illumination defies logic.

Healthcare costs are a major national concern. To increase construction costs with three required redundant systems is not good use of healthcare resources that should be allocated to the patient at the bedside.

I am submitting this request on behalf of the Wisconsin Healthcare Engineers Association Codes & Standards committee representing over 700 members in the State of Wisconsin.

Thank you for your time and consideration of my comments.

E25-12

Final Action: AS AM AMPC____ D

E37-12

1007.1 (IFC [B] 1007.1)

Proposed Change as Submitted

Proponent: Gene Boecker, AIA, Code Consultants, Inc, representing self
(geneb@codeconsultants.com)

Revise as follows:

1007.1 (IFC [B] 1007.1) Accessible means of egress required. Accessible means of egress shall comply with this section. Accessible spaces shall be provided with not less than one accessible means of egress. Where more than one means of egress are required by Section 1015.1 or 1021.1 from any accessible space, each accessible portion of the space shall be served by not less than two accessible means of egress.

Exceptions:

1. Accessible means of egress are not required in alterations to existing buildings.
2. One accessible means of egress is required from an accessible mezzanine level in accordance with Section 1007.3, 1007.4 or 1007.5.
3. In assembly areas with sloped or stepped aisles, one accessible means of egress is permitted where the common path of travel is accessible and meets the requirements in Section 1028.8.
4. Accessible means of egress are not required from levels of parking garages that do not contain accessible parking spaces.

Reason: According to Section 1105.1.1 and 1106.6 of the IBC, accessible parking is required on levels that have a direct connection to the building. Van accessible parking is allowed to be limited to the ground floor level. Hence accessible parking is not required on all levels of a parking garage.

It is often unclear whether an accessible means of egress, once provided for the accessible parking spaces within a garage on a single level, should be applied throughout the structure. Because the intent for accessible means of egress is to provide access for individuals with mobility disabilities, this would not be necessary on parking garage levels without accessible parking spaces.

Section 1007.2.1 of the IBC requires an elevator to serve as an accessible mean of egress in buildings where a required accessible floor is more than four stories above the level of exit discharge (a five story building). While accessible parking is not required on the upper levels of a garage (without access to the building on those levels) that does not mean that the upper levels are not to be designed for accessibility. It simply means that they are not required to be designed for mobility disabilities. The floors must still be designed for other types of disabilities. Protruding objects/headroom obstructions are still required to be addressed for visual disabilities and a telephone bank would need to provide units for the hearing impaired. Tactile exit signs are unaffected by this proposal because they are required under Section 1011.4 and are not a part of the accessible means of egress provisions in Section 1007.

Similarly, although the code contains an exemption for areas of refuge for parking garages, a 48 inch clear width between handrails would still be required since an open parking garage is usually without sprinklers. The purpose of the 48 inch clear width is to facilitate fire fighter capability to carry a wheelchair down the stairs. If there is no accessible parking on the upper levels, this too should not be a requirement.

While accessible parking may be provided on multiple levels because building entrances are provided at various levels, full compliance should not be necessary at levels where mobility accessibility is not an issue. If accessible parking is provided on all levels, then the accessible means of egress should be provided on all levels as well. However, if accessible parking is provided on only the grade level of an eight-level parking garage, the requirements for an accessible means of egress elevator should not apply and the stairways serving the upper levels should be designed based on required capacity rather than a blanket 48 inch between handrail requirement.

Cost Impact: The code change proposal will reduce the cost of construction in some instances.

1007.1 #2-E-Boecker.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The allowance for no accessible means of egress on levels of parking garages that do not contain accessible parking spaces conflicts with the needs of persons with mobility impairments that are not using accessible parking spaces.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Gene Boecker, AIA, Code Consultants, Inc (CCI), requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1007.1 (IFC [B] 1007.1) Accessible means of egress required. Accessible means of egress shall comply with this section. Accessible spaces shall be provided with not less than one accessible means of egress. Where more than one means of egress are required by Section 1015.1 or 1021.1 from any accessible space, each accessible portion of the space shall be served by not less than two accessible means of egress.

Exceptions:

1. Accessible means of egress are not required in alterations to existing buildings.
2. One accessible means of egress is required from an accessible mezzanine level in accordance with Section 1007.3, 1007.4 or 1007.5.
3. In assembly areas with sloped or stepped aisles, one accessible means of egress is permitted where the common path of travel is accessible and meets the requirements in Section 1028.8.
4. Accessible means of egress are not required from levels of parking garages that do not contain accessible parking spaces. In parking garages, the second accessible means of egress shall be permitted to use the parking garage drive aisles.

Commenter's Reason: The committee disapproved this based on the assumption that disabled people who choose not to park in the designated spaces need to have an accessible means of egress. Fundamentally, this argument is flawed. The code does not require all doors to act as exits - even if they lead to the outside - only those which are designated as exits. If other doors are provided, while occupants can use them if they so choose, the code does not obligate the designer to construct them as exits. Irrespective of the concerns expressed, this is a design issue that continues to come up in discussions and should have a resolution.

If it is important that accessible means of egress be provided from all parts of a parking garage, regardless of whether or not there are marked spaces, then the code should require all spaces to be designed for Accessibility. It does not do so because it recognizes specific locations which must be set aside.

Garages often have a configuration where the drive aisle slopes from one end of the garage to the other. At one end is a set of stairs. Diagonally opposite that is another set of stairs. An elevator may or may not be provided at one end. If an elevator is not present, then the second accessible means of egress is down the drive aisle to the far corner of the garage. The drive aisle is not required to be designed for accessibility. It usually has a slope of 10 percent rather than a maximum of 8.3 percent; and, the drive aisle does not have landings at 30 inch vertical increments or handrails on both sides. Hence it is not a ramp which is designed to meet accessibility needs. If an elevator is provided, the second accessible means of egress must be provided with emergency standby power. This is an added cost of \$35,000 to \$100,000 depending on geographic location and height of the garage.

The proposed amendment accepts the premise that there may be persons with disabilities on levels other than those with designated spaces. However, it offers a suggestion that the drive aisle be used as the second accessible means of egress. One accessible means of egress can be the stairs near the side where the accessible spaces are provided. This stairway must be widened to 48 inches clear between handrails. According to the concerns expressed by the committee, this would need to be extended upward to the full height of the stair. While questionable relative to the code assumptions as stated in the first paragraph, this is a relatively small expense to the overall garage. The real concern is how to provide the second accessible means of egress. The sloped drive aisles create a limitation in design and the emergency standby power represents a significant increase in cost.

The proposal seeks a third alternative, still keeping with the concerns expressed by the committee. Because the path of egress in a garage is most often in descent, the sloped aisles, although greater than the slopes for accessible design, should be acceptable. The slope is in the same direction as gravity. Breaking is a concern but not overcoming the vertical change in elevation. Additionally, parking garages have a significant safety record for human life. This is a reasonable alternative to the interpretation that it is necessary to provide something for a part of the building where the need is not evident.

E37-12

Final Action:	AS	AM	AMPC_____	D
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E39-12

1007.3, 1007.4 (IFC [B] 1007.3, 1007.4)

Proposed Change as Submitted

Proponent: Carl Baldassarra, P.E., FSFPE, Chair, ICC Code Technology Committee

Revise as follows:

1007.3 (IFC [B] 1007.3) Stairways. In order to be considered part of an *accessible means of egress*, a *stairway* between stories shall have a clear width of 48 inches (1219 mm) minimum between *handrails* and shall either incorporate an *area of refuge* within an enlarged floor-level landing or shall be accessed from either an *area of refuge* complying with Section 1007.6 or a ~~horizontal exit~~. *Exit access stairways* that connect levels in the same story are not permitted as part of an *accessible means of egress*.

Exceptions:

1. The clear width of 48 inches (1219 mm) between *handrails* is not required in buildings equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2.
2. *Areas of refuge* are not required at *stairways* in buildings equipped throughout by an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2.
3. The clear width of 48 inches (1219 mm) between *handrails* is not required for *stairways* ~~accessed from a horizontal exit~~ from a refuge area in conjunction with a horizontal exit.
4. *Areas of refuge* are not required at *stairways* serving *open parking garages*.
5. *Areas of refuge* are not required for smoke protected seating areas complying with Section 1028.6.2.
6. ~~The~~ *Areas of refuge* are not required at stairways in Group R-2 occupancies.
7. *Areas of refuge* are not required at stairways in Group I-3 facilities.
8. *Areas of refuge* are not required for stairways accessed from a refuge area in conjunction with a horizontal exit.

1007.4 (IFC [B] 1007.4) Elevators. In order to be considered part of an *accessible means of egress*, an elevator shall comply with the emergency operation and signaling device requirements of Section 2.27 of ASME A17.1. Standby power shall be provided in accordance with Chapter 27 and Section 3003. The elevator shall be accessed from either an *area of refuge* complying with Section 1007.6 or a *horizontal exit*.

Exceptions:

1. ~~Elevators are not required to be accessed from an area~~ *Areas of refuge or horizontal exit are not required at the elevator* in *open parking garages*.
2. *Areas of refuge* are not required at elevators in Group I-3 facilities.
- ~~32. Elevators are not required to be accessed from an area~~ *Areas of refuge or horizontal exit* in are not required in buildings and facilities equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2.
- ~~43. Areas of refuge are not required at Elevators not required to be located in a shaft in accordance with Section 712 are not required to be accessed from an area of refuge or horizontal exit.~~
- ~~54. Areas of refuge are not required at Elevators are not required to be accessed from an area of refuge or horizontal exit for serving~~ smoke protected seating areas complying with Section 1028.6.2.
6. *Areas of refuge* are not required for elevators accessed from a refuge area in conjunction with a horizontal exit.

Reason: This proposal is for the most part editorial and makes the language in the exceptions consistent. There is with one new items added and one relocation for added clarity.

"Areas of refuge are not required at stairways/elevators in Group I-3 facilities" is a new exception to coordinate with the DOJ 2010 ADA Standards for Accessible Design. The Department of Justice (ADA 207.2 Exception 2) had concerns that areas of refuge could pose security risks in correctional facilities due to their enclosed nature, and a building designer has the option of locating a facility's accessible spaces such that an elevator need never be used as part of an accessible means of egress.

"Areas of refuge are not required for stairways/elevators accessed from a refuge area in conjunction with a horizontal exit" clarifies that a redundant area of refuge is not needed immediately adjacent to the elevator where a refuge area and horizontal exit to the elevator are provided.

The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The code issues are assigned to the CTC by the ICC Board as "areas of study". Information on the CTC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website: <http://www.iccsafe.org/cs/cc/ctc/index.html>. Since its inception in April, 2005, the CTC has held twenty-two meetings – all open to the public.

Cost Impact: None

1007.3 #2-E-BALDASSARRA-CTC.docx

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The language in the most part is editorial and clarifies and coordinates the exceptions in 1007.3 and 1007.4. Moving 'horizontal exits' from the main body into an exception helps identify the compartment formed by the horizontal exit as an alternative for smoke protection offered by and area of refuge. However, the committee wanted some additional information on why it was appropriate to not require areas of refuge in Group I-3 since the residents are not capable of self preservation.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Carl Baldassarra, Code Technologies Committee – Open stairway study group, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1007.3 (IFC [B] 1007.3) Stairways. In order to be considered part of an *accessible means of egress*, a *stairway* between stories shall have a clear width of 48 inches (1219 mm) minimum between *handrails* and shall either incorporate an *area of refuge* within an enlarged floor-level landing or shall be accessed from either an *area of refuge* complying with Section 1007.6 or a *horizontal exit*. *Exit access stairways* that connect levels in the same story are not permitted as part of an *accessible means of egress*.

Exceptions:

1. The clear width of 48 inches (1219 mm) between *handrails* is not required in buildings equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2.
2. *Areas of refuge* are not required at *stairways* in buildings equipped throughout by an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2.
3. The clear width of 48 inches (1219 mm) between *handrails* is not required for *stairways* from a refuge area in conjunction with a horizontal exit.
4. *Areas of refuge* are not required at *stairways* serving *open parking garages*.
5. *Areas of refuge* are not required for smoke protected seating areas complying with Section 1028.6.2.
6. The *Areas of refuge* are not required at stairways in Group R-2 occupancies.
- ~~7. Areas of refuge are not required at stairways in Group I-3 facilities.~~
- ~~7.8.~~ Areas of refuge are not required for stairways accessed from a refuge area in conjunction with a horizontal exit.

1007.4 (IFC [B] 1007.4) Elevators. In order to be considered part of an *accessible means of egress*, an elevator shall comply with the emergency operation and signaling device requirements of Section 2.27 of ASME A17.1. Standby power shall be provided in

accordance with Chapter 27 and Section 3003. The elevator shall be accessed from either an *area of refuge* complying with Section 1007.6 or a *horizontal exit*.

Exceptions:

1. *Areas of refuge are not required at the elevator in open parking garages.*
- ~~2. *Areas of refuge are not required at elevators in Group I-3 facilities.*~~
- ~~3.2. *Areas of refuge are not required in buildings and facilities equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2.*~~
- 4.3. *Areas of refuge are not required at Elevators not required to be located in a shaft in accordance with Section 712.*
- 5.4. *Areas of refuge are not required at Elevators serving smoke protected seating areas complying with Section 1028.6.2.*
- ~~6.5. *Areas of refuge are not required for elevators accessed from a refuge area in conjunction with a horizontal exit.*~~

Commenter's Reason: E39 was denied by the Means of Egress Committee based on a question that was asked by a committee member regarding providing the exemption to exempt the area of refuge requirement for group I-3 occupancies; specifically, the committee member questioned the addition of exception #7 to 1007. Unfortunately our work group representatives were not at the microphone when the question was raised so we failed to provide a response to the question. The proposals text regarding horizontal exits and elevators was not questioned or challenged by floor testimony or committee deliberations.

Exception #7 to 1007 was added for consistency with the ADA 207.2 exception 2, which exempts group I-3 (detention) occupancies from area of refuge requirements do to security concerns. Furthermore, the life safety concerns are already addressed by the increase fire protection features and constant supervision that is provided in group I-3 facilities. Per the 2012 edition of the IBC group I-3 occupancies are already exempted from area of refuge requirements per current exemption # 2 to 1007, which exempts buildings that are sprinkled per 903.3.1.1. IBC section 903.2.3 requires group I occupancies to be sprinkled per 903.3.1.1. It is a valid argument that proposed exception #7 to 1007 is redundant therefore not needed; therefore our public comment proposes to delete exception #7 from the code change. The proposals text regarding horizontal exits and elevators is unaffected by this public comment.

The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The code issues are assigned to the CTC by the ICC Board as "Areas of Study". The Area of Study for this code change and public comment is called "IBC Coordination with the new ADAAG". Information on the CTC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website <http://www.iccsafe.org/cs/CTC/Pages/IBCCoordination-ADAAG.aspx>. Since its inception in April, 2005, the CTC has held twenty-four meetings – all open to the public. In addition to holding face-to-face meetings, the CTC established Study Groups where any interested party can participate in conference calls on specific subjects such as this area of study without having to attend the face-to-face meetings.

E39-12

Final Action: AS AM AMPC____ D

E42-12

1007.5 (IFC [B] 1007.5)

Proposed Change as Submitted

Proponent: Jerome Seville, Commonwealth of Pennsylvania representing self (Jseville@pa.gov)

Revise as follows:

1007.5 (IFC [B] 1007.5) Platform lifts. Platform (wheelchair) lifts shall not serve as part of an *accessible means of egress*, except where allowed as part of a required *accessible route* in Section 1109.8, Items 1 through 9. Platform lifts permitted to serve as part of an accessible route by Item 10 in Section 1109.8 shall not serve as part of an accessible means of egress for Group I-1 or I-2 facilities or where the exit will serve more than 200 occupants. Standby power shall be provided in accordance with Chapter 27 for platform lifts permitted to serve as part of a *means of egress*.

Reason: There will be occupancies, even in new construction, where the only practical means of access into the structure will be by a wheelchair lift. With the entrance constituting one of the means of egress, it would be beneficial to allow the use of the lift to exit.

Assisted living facilities, hospitals and nursing homes (Groups I-1 and I-2) have a higher excepted number of people that may have difficulty with stairways. The occupancy limit of 200 for other occupancies is being based upon IBC Section 1007.6.1, where it is being assumed that there will be one wheelchair individual per 200 occupants; thus only one wheelchair in the area being evacuated by the lift.

Cost Impact: None

1007.5-E-Seville.doc

Public Hearing Results

Committee Reason: This proposal does not seem to be consistent with the intent of accessibility and actually lessens access. If this allowing egress through this platform lift option is a concern, limiting to the option to just Group I-1 and I-2 does not seem sufficient.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Jerome Seville, Commonwealth of Pennsylvania representing self, requests Approval as Modified by this Public Comment.

Replace the proposal as follows:

1007.5 (IFC [B] 1007.5) Platform lifts. Platform (wheelchair) lifts shall not serve as part of an *accessible means of egress*, except where allowed as part of a required *accessible route* in Section 1109.8 Items 1 through 9. In other than Group I-1 and I-2 occupancies, platform lifts allowed as part of a required accessible route in Section 1109.8, Item 10 shall be permitted to serve as one of the accessible means of egress provided the occupant load of the area being served does not exceed 200. Standby power shall be provided in accordance with Chapter 27 for platform lifts permitted to serve as part of a *means of egress*.

Commenter's Reason: Section 1109.8, Item 10 allows for platform lifts to be used as part of an accessible route into a building where the existing site constraints make use of a ramp or elevator infeasible. There will be infills or complete changes of occupancies in urban areas, particularly in hilly jurisdictions, where the only practical means of access into the structure will be by a wheelchair lift. With the entrance constituting one of the means of egress, it would be beneficial to allow the use of the lift to exit for smaller buildings. Additionally, this text limits the use of the Item #10 allowance to only one of the accessible means of egress.

Because Section 1007.1 requires at least two accessible means of egress in most buildings. The second accessible means of egress would still be required to meet the provisions of Section 1007.

The occupancy limit of 200 is consistent with IBC Section 1007.6.1, which assumes only one person using a wheelchair in the area of the exit. ASME A18.1, to which standby power to a wheelchair lift must adhere to, mandates that if by battery the lift must be able to go five (5) complete cycles under full load. However, Group I-1 and I-2 occupancies should be excluded from this allowance since by their very nature; there could be a higher number of individuals in wheelchairs which may exceed the 5 cycle limit of the standby power source.

E42-12

Final Action:	AS	AM	AMPC____	D
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E48-12

1007.8 (IFC [B] 1007.8)

Proposed Change as Submitted

Proponent: Steve Pfeiffer representing City of Seattle, Dept of Planning & Development
(steve.pfeiffer@seattle.gov)

Revise as follows:

1007.8 (IFC [B] 1007.8) Two-way communication. A two-way communication system complying with Sections 1007.8.1 and 1007.8.2 shall be provided at the landing serving each elevator ~~landing or bank of elevators~~ on each accessible floor that is one or more stories above or below the story of exit discharge. ~~complying with Sections 1007.8.1 and 1007.8.2.~~

Exceptions:

1. Two-way communication systems are not required at the landing serving each elevator ~~landing or bank of elevators~~ where the two-way communication system is provided within areas of refuge in accordance with Section 1007.6.3.
2. Two-way communication systems are not required on floors provided with exit ramps conforming to the provisions of Section 1010.

Reason: The purpose of this change is to clarify which elevator landings are required to have a two-way communication system where there are multiple elevators or banks of elevators on an accessible floor. The current language is clear where there is only one elevator, but if there are multiple elevators, it's unclear whether communication is required at one elevator, each elevator, or whether a communication device serving a bank of elevators would suffice. This change would require a single two-way communication at the landing for each single elevator or each bank of elevators on the floor. References to Sections 1007.8.1 and 1007.8.2 are also relocated as to more clearly apply to the communication system rather than the story of exit discharge.

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

1007.8-E-Pfeiffer.doc

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: This revision will clarify that only a single two-way communication system is required at a group of elevators. However, there is a question if this language would now require two-way communication at the back-of-house service elevators, including freight elevators.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Gene Boecker, AIA, representing Code Consultants, Inc (CCI), and Rick Lupton, Dept. of Planning & Development representing City of Seattle, WA, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1007.8 (IFC [B] 1007.8) Two-way communication. A two-way communication system complying with Sections 1007.8.1 and 1007.8.2 shall be provided at the landing serving each elevator or bank of elevators on each *accessible* floor that is one or more stories above or below the *story of exit discharge*.

Exceptions:

1. Two-way communication systems are not required at the landing serving each elevator landing or bank of elevators where the two-way communication system is provided within *areas of refuge* in accordance with Section 1007.6.3.
2. Two-way communication systems are not required on floors provided with *exit ramps* conforming to the provisions of Section 1010.
3. Two-way communications systems are not required at the landings serving only service elevators that are not designated as part of the accessible means of egress or serve as part of the required accessible route into a facility.
4. Two-way communications systems are not required at the landings serving only freight elevators.
5. Two-way communication systems are not required at the landing serving a private residence elevator.

Commenter's Reason: The committee expressed concern that the language as written could be confusing relative to whether or not "every" elevator meant back-of-house elevators. The added two exceptions clarifies the original intent that service and freight elevators are not included. Exception #3 was worded in such a way that a service elevator would require the two-way communications system if it was the designated accessible means of egress off the floor or the required accessible route onto the floor. Freight elevators are not intended for passenger use and should not be required to have two-way communications system. Private residence elevators can only be used within individual dwelling units and the two-way communication system would not be practical.

E48-12

Final Action: AS AM AMPC____ D

E54-12

202, 1008.1.2, 1008.1.4.3 (IFC [B] 1008.1.2, 1008.1.4.3)

Proposed Change as Submitted

Proponent: John Woestman, Kellen Company, representing Builders Hardware Manufacturers Association (BHMA) (jwoestman@kellencompany.com)

Add the definition as follows:

SECTION 202 DEFINITIONS

HORIZONTAL SLIDING ACCORDION FOLDING DOOR. An accordion-folding style multiple-section track-hung moveable door assembly.

Revise as follows:

1008.1.2 (IFC [B] 1008.1.2) Door swing. Egress doors shall be of the pivoted or side-hinged swinging type.

Exceptions:

1. Private garages, office areas, factory and storage areas with an *occupant load* of 10 or less.
2. Group I-3 occupancies used as a place of detention.
3. Critical or intensive care patient rooms within suites of health care facilities.
4. Doors within or serving a single *dwelling unit* in Groups R-2 and R-3.
5. In other than Group H occupancies, revolving doors complying with Section 1008.1.4.1.
6. In other than Group H occupancies, *horizontal sliding accordion folding doors* complying with Section 1008.1.4.3 are permitted in a *means of egress*.
7. Power-operated doors in accordance with Section 1008.1.4.2.
8. Doors serving a bathroom within an individual *sleeping unit* in Group R-1.
9. In other than Group H occupancies, manually operated horizontal sliding doors are permitted in a *means of egress* from spaces with an *occupant load* of 10 or less.

Doors shall swing in the direction of egress travel where serving a room or area containing an *occupant load* of 50 or more persons or a Group H occupancy.

1008.1.4.3 (IFC [B] 1008.1.4.3) Horizontal sliding accordion folding doors. In other than Group H occupancies, *horizontal sliding accordion folding doors* permitted to be a component of a *means of egress* in accordance with Exception 6 to Section 1008.1.2 shall comply with all of the following criteria:

1. The doors shall be power operated and shall be capable of being operated manually in the event of power failure.
2. The doors shall be openable by a simple method from both sides without special knowledge or effort.
3. The force required to operate the door shall not exceed 30 pounds (133 N) to set the door in motion and 15 pounds (67 N) to close the door or open it to the minimum required width.
4. The door shall be openable with a force not to exceed 15 pounds (67 N) when a force of 250 pounds (1100 N) is applied perpendicular to the door adjacent to the operating device.
5. The door assembly shall comply with the applicable *fire protection rating* and, where rated, shall be self-closing or automatic closing by smoke detection in accordance with Section 716.5.9.3, shall be installed in accordance with NFPA 80 and shall comply with Section 716.
6. The door assembly shall have an integrated standby power supply.

7. The door assembly power supply shall be electrically supervised.
8. The door shall open to the minimum required width within 10 seconds after activation of the operating device.

Reason: This proposal is intended to clarify the IBC.

Our BHMA members are seeing code officials, specifiers, and other stakeholders questioning or attempting to apply the requirements of 1008.1.4.3 to the doors included in 1008.1.4.2. Currently, both IBC Sections 1008.1.4.2 and 1008.1.4.3 could be (incorrectly) interpreted as applying to the same types of sliding doors (power-operated horizontal sliding doors). However, the intent of the code is that these sections apply to doors of significantly different configurations.

The doors of 1008.1.4.2 are the more common power-operated doors such as the doors installed at the entrances to stores, businesses, hospitals, and the like. When a pedestrian is not present, these doors usually are in a closed position, and are powered open for passage, and then powered closed. The power operated doors included within the scope of the standards referenced in 1008.1.4.2 are rarely used where a fire-rated opening protective is required.

The doors in 1008.1.4.3 are an accordion-style folding door assembly which slides horizontally. In the opening, these doors are usually kept in an open position like many other fire-rated doors or smoke-rated doors protecting elevator lobbies, or other gathering areas. The doors in 1008.1.4.3 may travel on a track in a straight line, but may also travel on a track that has a curve or curves.

The proposed definition and text revisions are intended to not revise the technical requirements of the IBC.

Cost Impact: None

1008.1.2-E-Weestman.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The proposal would eliminate design options for horizontal sliding doors. The definition could encompass room dividers. This proposal would only allow for one type of technology.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

John Weestman, Kellen Company, representing Builders Hardware Manufacturers Association (BHMA), requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

SECTION 202 DEFINITIONS

HORIZONTAL SLIDING ACCORDION FOLDING DOOR. An accordion-folding style multiple-section track-hung moveable door assembly.

1008.1.2 (IFC [B] 1008.1.2) Door swing. Egress doors shall be of the pivoted or side-hinged swinging type.

Exceptions:

1. Private garages, office areas, factory and storage areas with an *occupant load* of 10 or less.
2. Group I-3 occupancies used as a place of detention.
3. Critical or intensive care patient rooms within suites of health care facilities.
4. Doors within or serving a single *dwelling unit* in Groups R-2 and R-3.
5. In other than Group H occupancies, revolving doors complying with Section 1008.1.4.1.
6. In other than Group H occupancies, special purpose horizontal sliding, accordion, or folding doors assemblies complying with Section 1008.1.4.3 are permitted in a *means of egress*.
7. Power-operated doors in accordance with Section 1008.1.4.2.
8. Doors serving a bathroom within an individual *sleeping unit* in Group R-1.
9. In other than Group H occupancies, manually operated horizontal sliding doors are permitted in a *means of egress* from spaces with an *occupant load* of 10 or less.

Doors shall swing in the direction of egress travel where serving a room or area containing an *occupant load* of 50 or more persons or a Group H occupancy.

1008.1.4.3 (IFC [B] 1008.1.4.3) Special purpose horizontal sliding, accordion, or folding doors. In other than Group H occupancies, special purpose horizontal sliding, accordion, or folding doors assemblies permitted to be a component of a *means of egress* in accordance with Exception 6 to Section 1008.1.2 shall comply with all of the following criteria:

1. The doors shall be power operated and shall be capable of being operated manually in the event of power failure.
2. The doors shall be openable by a simple method from both sides without special knowledge or effort.
3. The force required to operate the door shall not exceed 30 pounds (133 N) to set the door in motion and 15 pounds (67 N) to close the door or open it to the minimum required width.
4. The door shall be openable with a force not to exceed 15 pounds (67 N) when a force of 250 pounds (1100 N) is applied perpendicular to the door adjacent to the operating device.
5. The door assembly shall comply with the applicable *fire protection rating* and, where rated, shall be self-closing or automatic closing by smoke detection in accordance with Section 716.5.9.3, shall be installed in accordance with NFPA 80 and shall comply with Section 716.
6. The door assembly shall have an integrated standby power supply.
7. The door assembly power supply shall be electrically supervised.
8. The door shall open to the minimum required width within 10 seconds after activation of the operating device.

Commenter's Reason: This proposal seeks to differentiate the means of egress requirements of the horizontal sliding doors addressed in Section 1008.1.4.3 of the IBC from other sections of the IBC addressing means of egress requirements of other horizontal sliding doors, and especially the power operated doors addressed by section 1008.1.4.2. No technical changes to the IBC are sought. This public comment attempts to address the committee's comments and stakeholder feedback regarding the proposal.

Below are several examples of the horizontal sliding doors addressed by this section of the IBC (Section 1008.1.4.3).



Door in normally-open position (left), and partially deployed (right). Source: www.wondoor.com



Source: www.wondoor.com

The doors addressed by Section 1008.1.4.3 are commonly in the normally-open position (hidden in their enclosure). In the event of fire or smoke, where these doors are installed in the means of egress, this section of the code requires the doors to be power operated but also openable manually to the required minimum egress width. Items 1 through 8 of Section 1008.1.4.3 when taken together, provide a unique set of requirements that apply only to doors of this type of configuration.

E54-12

Final Action: AS AM AMPC_____ D

E56-12

202, 1008.1.4.1, Table 1008.1.4.1, 1008.1.4.1.1, 1008.1.4.1.2, Chapter 35 (IFC [B]
202, 1008.1.4.1, Table 1008.1.4.1, 1008.1.4.1.1, 1008.1.4.1.2, Chapter 80)

Proposed Change as Submitted

Proponent: John Woestman, Kellen Company, representing Builders Hardware Manufacturers Association (BHMA) (jwoestman@kellencompany.com)

Add the definition as follows:

SECTION 202 DEFINITIONS

BREAKOUT. For revolving doors, a process whereby wings or door panels can be pushed open manually for *means of egress* travel.

Revise as follows:

1008.1.4.1 (IFC [B] 1008.1.4.1) Revolving doors. Revolving doors shall comply with the following:

1. Revolving doors shall comply with BHMA A156.27 and shall be installed in accordance with the manufacturer's installation instructions.
- ~~2.~~ Each revolving door shall be capable of collapsing into a bookfold position with parallel egress paths providing an aggregate width of 36 inches (914 mm). Each revolving door shall be capable of breakout in accordance with BHMA A156.27 and shall provide an aggregate width of not less than 36 inches (914 mm).
- ~~2-3.~~ A revolving door shall not be located within 10 feet (3048 mm) of the foot of or top of *stairs* or escalators. A dispersal area shall be provided between the *stairs* or escalators and the revolving doors.
- ~~3-4.~~ The revolutions per minute (rpm) for a revolving door shall not exceed ~~those shown in Table 1008.1.4.1~~ the maximum rpm as specified in BHMA A156.27.
- ~~5.~~ An emergency stop switch shall be provided near each entry point of a revolving door within 48 inches (1220 mm) of the door and between 24 inches (610 mm) and 48 inches (1220 mm) above the floor. The activation area of the emergency stop switch button shall be not less than 1 inch (25 mm) in diameter and shall be red.
- ~~4-6.~~ Each revolving door shall have a side-hinged swinging door which complies with Section 1008.1 in the same wall and within 10 feet (3048 mm) of the revolving door.
- ~~5-7.~~ Revolving doors shall not be part of an *accessible route* required by Section 1007 and Chapter 11.

**TABLE 1008.1.4.1 (IFC [B] TABLE 1008.1.4.1)
REVOLVING DOOR SPEEDS**

INSIDE DIAMETER (feet-inches)	POWER-DRIVEN-TYPE SPEED CONTROL (rpm)	MANUAL-TYPE SPEED CONTROL (rpm)
6-6	11	12
7-0	10	11
7-6	9	11
8-0	9	10
8-6	8	9
9-0	8	9
9-6	7	8
10-0	7	8

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

1008.1.4.1.1 (IFC [B] 1008.1.4.1.1) Egress component. A revolving door used as a component of a *means of egress* shall comply with Section 1008.1.4.1 and the following three conditions:

1. Revolving doors shall not be given credit for more than 50 percent of the required egress capacity.
2. Each revolving door shall be credited with no more than a 50-person capacity.
3. Each revolving door shall ~~be capable of being collapsed when a force of not more than 130 pounds (578 N) is applied within 3 inches (76 mm) of the outer edge of a wing provide for egress in accordance with BHMA A156.27 with a *breakout* force of not more than 130 pounds.~~

1008.1.4.1.2 (IFC [B] 1008.1.4.1.2) Other than egress component. A revolving door used as other than a component of a *means of egress* shall comply with Section 1008.1.4.1. The ~~collapsing *breakout*~~ force of a revolving door not used as a component of a *means of egress* shall not be more than 180 pounds (801 N).

Exception: A ~~collapsing *breakout*~~ force in excess of 180 pounds (801 N) is permitted if the collapsing force is reduced to not more than 130 pounds (578 N) when at least one of the following conditions is satisfied:

1. There is a power failure or power is removed to the device holding the door wings in position.
2. There is an actuation of the *automatic sprinkler system* where such system is provided.
3. There is an actuation of a smoke detection system which is installed in accordance with Section 907 to provide coverage in areas within the building which are within 75 feet (22 860 mm) of the revolving doors.
4. There is an actuation of a manual control switch, in an *approved* location and clearly defined, which reduces the ~~holding *breakout* force to below the not more than 130-pounds (578 N) force level.~~

Add standard to Chapter 35 (IFC Chapter 80) as follows:

BHMA

A 156.27-11 Power and Manual Operated Revolving Pedestrian Doors

Reason: This proposal updates the requirements currently in the IBC for revolving doors and introduces the 2011 edition of BHMA A156.27 American National Standard for Power and Manual Operated Revolving Pedestrian Doors into the IBC.

Revolving doors currently being installed in commercial buildings range from 6 feet to 24 feet in diameter and include manually operated revolving doors and numerous types and sizes of automatic revolving doors (i.e. power operated revolving doors).

The latest edition of BHMA A156.27 includes in its scope a wide variety of manual and power operated revolving doors, many of which are not included within the scope of the current IBC requirements. The requirements in A156.27 include the maximum allowable door speed (RPM), based on type and size of revolving door, and ranges from maximum 12 RPM for the smallest manual revolving door to maximum 0.3 RPM for the largest power operated revolving door.

BHMA A156.27 includes requirements for egress including minimum egress width and maximum breakout force, and also includes requirements for signage, glazing, sensors, an emergency stop switch, and other criteria.

The existing Table 1008.1.4.1 is recommended to be deleted as there are five (5) expanded and updated tables in A156.27 addressing maximum allowable door speeds (RPM) for manually operated revolving doors and the various types and sizes of power operated revolving doors.

Cost Impact: Proposal updates IBC to current industry standards and practices resulting in no cost impact.

Analysis: A review of the standard proposed for inclusion in the code, BHMA A156.27-11 with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2012.

1008.1.4.1-E-Woestman.doc

Public Hearing Results

Committee Action:

Disapproved

For staff analysis of the content of the BMHA A156.27-11 standard relative to CP#28, Section 3.6, please visit: <http://www.iccsafe.org/cs/codes/Documents/2009-10cycle/ProposedChanges/Standards-Analysis.pdf> :

Committee Reason: The scope of the referenced standard, BMHA A156.27-11, states that the standard is not for custom installation. There is some concern that this could be interpreted as not requiring compliance with the standard with any custom installation. The ICC Standards Review Committee felt that there were some non-mandatory language in the standard. The committee felt that Table 1008.14.1 in the code aided code official in determining compliance for revolving doors.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

John Woestman, Kellen Company, representing Builders Hardware Manufacturers Association (BHMA), requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1008.1.4.1 (IFC [B] 1008.1.4.1) Revolving doors. Revolving doors shall comply with the following:

1. Revolving doors shall comply with BHMA A156.27 and shall be installed in accordance with the manufacturer's installation instructions.
2. Each revolving door shall be capable of *breakout* in accordance with BHMA A156.27 and shall provide an aggregate width of not less than 36 inches (914 mm).
3. A revolving door shall not be located within 10 feet (3048 mm) of the foot of or top of *stairs* or escalators. A dispersal area shall be provided between the *stairs* or escalators and the revolving doors.
4. The revolutions per minute (rpm) for a revolving door shall not exceed the maximum rpm as specified in BHMA A156.27. Manual revolving doors shall comply with Table 1008.1.4.1(1). Automatic or power operated revolving doors shall comply with Table 1008.1.4.1(2).
5. An emergency stop switch shall be provided near each entry point of a automatic or power operated revolving doors within 48 inches (1220 mm) of the door and between 24 inches (610 mm) and 48 inches (1220 mm) above the floor. The activation area of the emergency stop switch button shall be not less than 1 inch (25 mm) in diameter and shall be red.
6. Each revolving door shall have a side-hinged swinging door which complies with Section 1008.1 in the same wall and within 10 feet (3048 mm) of the revolving door.
7. Revolving doors shall not be part of an *accessible route* required by Section 1007 and Chapter 11.

Table 1008.1.4.1(1)(IFC [B] Table 1008.1.4.1(1))
Maximum Door Speed Manual Revolving Doors

<u>Revolving Door Maximum Nominal Diameter (ft-in)</u>	<u>Maximum Allowable Revolving Door Speed (rpm)</u>
<u>6-0</u>	<u>12</u>
<u>7-0</u>	<u>11</u>
<u>8-0</u>	<u>10</u>
<u>9-0</u>	<u>9</u>
<u>10-0</u>	<u>8</u>

Table 1008.1.4.1(2) (IFC [B] Table 1008.1.4.1(2))
Maximum Door Speed Automatic or Power Operated Revolving Doors

<u>Revolving Door Maximum Nominal Diameter (ft-in)</u>	<u>Maximum Allowable Revolving Door Speed (rpm)</u>
<u>8-0</u>	<u>7.2</u>
<u>9-0</u>	<u>6.4</u>
<u>10-0</u>	<u>5.7</u>
<u>11-0</u>	<u>5.2</u>
<u>12-0</u>	<u>4.8</u>
<u>12-6</u>	<u>4.6</u>
<u>14-0</u>	<u>4.1</u>
<u>16-0</u>	<u>3.6</u>
<u>17-0</u>	<u>3.4</u>
<u>18-0</u>	<u>3.2</u>
<u>20-0</u>	<u>2.9</u>
<u>24-0</u>	<u>2.4</u>

(Portion of proposal not shown remains unchanged.)

Commenter's Reason: This proposal and public comment build on the existing requirements for revolving doors in the IBC, updates the IBC, and attempts to address the committee's comments.

Revolving doors range from (smaller) manually operated revolving door systems to automatic (power operated) revolving doors of small to large diameter (8' to 24' diameter). Several types of revolving doors are illustrated below.



Manual Revolving Doors (7' dia.)



Automatic Revolving Door (8' dia.)



Automatic Revolving Door (20' dia.)

This proposal references BHMA A156.27 which includes the same egress-related requirements currently in the IBC (i.e. breakout function and maximum forces, etc.) and includes numerous additional safety-related requirements for revolving doors which are currently not required by the IBC. For example, BHMA A156.27 requires manually operated revolving doors to contain governors to limit the rotational speed of the door and requires automatic, or power operated, revolving doors to incorporate numerous sensors and switches, and complex motor controls to safely operate the door.

Addressing the committee's reasons for disapproving this proposal:

1. Custom installations.
Custom installation would likely be addressed in a manner similar to today. The mandatory requirements of this section of the IBC would apply (i.e. means of egress / breakout, emergency stop switches, maximum speed, etc.) as would the provisions of the proposed standard, BHMA A156.27. With approval of this proposal for the IBC, far fewer revolving door applications would not be addressed by IBC requirements.
2. Non-mandatory language in the proposed standard.
ICC staff's analysis of the proposed standard states: "No permissive or unenforceable language was noted. No proprietary references were noted. The standard indicates that it was developed through a consensus process. The consensus process is ANSI."
However, the ICC Standard Review Committee found "very occasional use of permissive language".
Addressing the ICC SRC findings: in the proposed standard, the very occasional use of permissive language allows options for complying with mandatory requirements of the standard.

For example, sensors are required in specified locations on automatic revolving doors, and cushioning devices are also required in specified locations. The language in the standard allows these mandatory requirements to be met with the (required) sensor built into the (required) cushioning device, or the (required) sensor may be an item mounted separately from the (required) cushioning device.

3. Including Table 1008.1.4.1 in the code.

Existing Table 1008.1.4.1 is replaced with two tables: one table for manual revolving doors, and a second table for automatic, or power operated, revolving doors.

The table for automatic revolving doors is expanded to include revolving door diameters larger than currently included in Table 1008.1.4.1, and the maximum allowable RPM is revised downward (slower) for safety reasons and to be consistent with the current industry standard, BHMA A156.27.

BHMA A156.27 includes provisions for acceptable door speeds (max. RPM), egress / breakout requirements for the various types and configurations of revolving doors (consistent with current and proposed IBC requirements), glazing (consistent with Federal and IBC requirements for safety glazing), kinetic energy, and safety requirements such as emergency stop switches, sensors, and speed controls. These provisions enhance current IBC requirements.

E56-12

Final Action:	AS	AM	AMPC_____	D
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E57-12

202, 1008.1.4.2 (IFC [B] 202, 1008.1.4.2)

Proposed Change as Submitted

Proponent: John Woestman, Kellen Company, representing Builders Hardware Manufacturers Association (BHMA) (jwoestman@kellencompany.com)

Add the following definition:

SECTION 202 DEFINITIONS

LOW ENERGY POWER-OPERATED DOOR. Swinging door which open automatically upon an action by an pedestrian, such as pressing a push plate or waving a hand in front of a sensor. The door closes automatically, and operates with decreased forces and decreased speeds. See also POWER ASSISTED DOOR and POWER OPERATED DOOR.

POWER-OPERATED DOOR. Swinging, sliding, or folding door which open automatically when approached by a pedestrian or open automatically upon an action by an pedestrian. The door closes automatically, and include provisions such as presence sensors to prevent entrapment. See also LOW ENERGY POWER OPERATED DOOR and POWER ASSISTED DOOR.

POWER-ASSISTED DOOR. Swinging door which opens by reduced pushing or pulling force on the door operating hardware. The door closes automatically after the pushing or pulling force is released, and function with decreased forces. See also LOW ENERGY POWER OPERATED DOOR and POWER OPERATED DOOR.

Revise as follows:

1008.1.4.2 (IFC [B] 1008.1.4.2) Power-operated doors. Where *means of egress* doors are operated or assisted by power, ~~such as doors with a photoelectric-actuated mechanism to open the door upon the approach of a person, or doors with power-assisted manual operation,~~ the design shall be such that in the event of power failure, the door is capable of being opened manually to permit *means of egress* travel or closed where necessary to safeguard *means of egress*. The forces required to open these doors manually shall not exceed those specified in Section 1008.1.3, except that the force to set the door in motion shall not exceed 50 pounds (220 N). The door shall be capable of swinging open from any position to the full width of the opening in which such door is installed when a force is applied to the door on the side from which egress is made. ~~Full-p~~Power-operated swinging doors, power-operated sliding doors, and power-operated folding doors shall comply with BHMA A156.10. Power-assisted swinging doors and low energy power-operated swinging doors shall comply with BHMA A156.19.

Exceptions:

1. Occupancies in Group I-3.
2. Horizontal sliding doors complying with Section 1008.1.4.3.
3. For a biparting door in the emergency breakout mode, a door leaf located within a multiple-leaf opening shall be exempt from the minimum 32-inch (813 mm) single-leaf requirement of Section 1008.1.1, provided a minimum 32-inch (813 mm) clear opening is provided when the two biparting leaves meeting in the center are broken out.

Reason: This proposal is intended to clarify the IBC and while not revising the technical requirements of the code.

The proposed definitions and text revisions are intended to more closely align the IBC with the standards currently referenced in Section 1008.1.4.2.

The doors of Section 1008.1.4.2 are the various types of power-operated doors such as the doors installed at the entrances to buildings, and may be installed within these same buildings.

Cost Impact: None.

1008.1.4.2-E-Woestman.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The definitions have some dangling clauses. Is the door supposed to close even if it is open only halfway. The text in 1008.1.4.2 added swinging and sliding in the door descriptions, but the types are not part of the definitions.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

John Woestman, Kellen Company, representing Builders Hardware Manufacturers Association (BHMA), requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

SECTION 202 DEFINITIONS

LOW ENERGY POWER-OPERATED DOOR. Swinging door which opens automatically upon an action by a an pedestrian, such as pressing a push plate or waving a hand in front of a sensor. The door closes automatically, and operates with decreased forces and decreased speeds. See also POWER-ASSISTED DOOR and POWER-OPERATED DOOR.

POWER-OPERATED DOOR. Swinging, sliding, or folding door which opens automatically when approached by a pedestrian or opens automatically upon an action by a an pedestrian. The door closes automatically, and includes provisions such as presence sensors to prevent entrapment. See also LOW ENERGY POWER-OPERATED DOOR and POWER-ASSISTED DOOR.

POWER-ASSISTED DOOR. Swinging door which opens by reduced pushing or pulling force on the door operating hardware. The door closes automatically after the pushing or pulling force is released, and ~~function~~ functions with decreased forces. See also LOW ENERGY POWER-OPERATED DOOR and POWER-OPERATED DOOR.

1008.1.4.2 (IFC [B] 1008.1.4.2) Power-operated doors. Where *means of egress* doors are operated or assisted by power, the design shall be such that in the event of power failure, the door is capable of being opened manually to permit *means of egress* travel or closed where necessary to safeguard *means of egress*. The forces required to open these doors manually shall not exceed those specified in Section 1008.1.3, except that the force to set the door in motion shall not exceed 50 pounds (220 N). The door shall be capable of swinging open from any position to the full width of the opening in which such door is installed when a force is applied to the door on the side from which egress is made. Power-operated swinging doors, power-operated sliding doors, and power-operated folding doors shall comply with BHMA A156.10. Power-assisted swinging doors and low energy power-operated swinging doors shall comply with BHMA A156.19.

Commenter's Reason: This intent of this proposal and this public comment is to improve the code by defining / describing the types of doors this section of the code applies to while not revising the technical requirements of the code. We've attempted to address the committee's comments with revisions to the definitions and slight changes to 1008.1.4.2 (adding a comma, and deleting a comma).

Below is a summary of these doors:

Power-Operated Doors

Power-operated doors are commonly installed at the busy entrances of commercial buildings. These relatively fast moving automatic doors have motion sensors or mats to activate the doors, and other sensors to protect pedestrians.



Power-Operated Doors – Three Examples

Low Energy Power-Operated Doors

To enhance accessibility in public buildings, side-hinged doors are commonly installed as low-energy power-operated doors. These doors operate at slower speeds and lower forces, compared to the faster moving power-operated door. Low energy power-operated doors are commonly activated by pressing a push plate, and open fully once activated. In addition, these doors can be activated by pushing or pulling on the door itself, to cause the door to open fully.

Notice the post mounted push plate, left image below, and the wall mounted push plate, right image below.



Low Energy Power-Operated Doors – Two Examples

Power-assisted doors

Power assisted doors reduce the force or effort it takes to open the door while it is being pushed or pulled. The user activates the door with a slight push or pull of the door handle. As soon as the push or pull force is removed, the door will start to close.

E57-12

Final Action: AS AM AMPC_____ D

E59-12

1008.1.5 (IFC [B] 1008.1.5)

Proposed Change as Submitted

Proponent: David R. Scott, AIA, representing Target Corporation (David.Scott@Target.com)

Revise as follows:

1008.1.5 (IFC [B] 1008.1.5) Floor elevation. There shall be a floor or landing on each side of a door. Such floor or landing shall be at the same elevation on each side of the door. Landings shall be level except for exterior landings, which are permitted to have a slope not to exceed 0.25 unit vertical in 12 units horizontal (2-percent slope).

Exceptions:

1. Doors serving individual dwelling units in Groups R-2 and R-3 where the following apply:
 - 1.1 A door is permitted to open at the top step of an interior flight of stairs, provided the door does not swing over the top step.
 - 1.2 Screen doors and storm doors are permitted to swing over stairs or landings.
2. Exterior doors as provided for in Section 1003.5, Exception 1, and Section 1020.2, which are not on an accessible route.
3. In Group R-3 occupancies not required to be Accessible units, Type A units or Type B units, the landing at an exterior doorway shall not be more than 73/4 inches (197 mm) below the top of the threshold, provided the door, other than an exterior storm or screen door, does not swing over the landing.
4. Variations in elevation due to differences in finish materials, but not more than 1/2 inch (12.7mm).
5. Exterior decks, patios or balconies that are part of Type B dwelling units, have impervious surfaces and that are not more than 4 inches (102 mm) below the finished floor level of the adjacent interior space of the dwelling unit.
6. Doors serving equipment spaces not required to be accessible in accordance with Section 1103.2.9 and serving an occupant load of 5 or less shall be permitted to have the landings on both sides to be at different levels provided the elevation difference is not more than 7 inches (178 mm).

Reason: Equipment spaces are utilized by personal familiar with the layout and function of such space. This would not constitute a hazard type situation stepping down from the equipment spaces.

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

1008.1.5-E-OLIPHANT

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: This options if preferred over E58. This proposal addresses the issue of type of space and limits occupant load. The people using this area will be familiar with the space, so the concern for the step/threshold as a tripping hazard is limited.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Eirene Oliphant, MCP, BRR Architecture, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1008.1.5 (IFC [B] 1008.1.5) Floor elevation. There shall be a floor or landing on each side of a door. Such floor or landing shall be at the same elevation on each side of the door. Landings shall be level except for exterior landings, which are permitted to have a slope not to exceed 0.25 unit vertical in 12 units horizontal (2-percent slope).

Exceptions:

1. Doors serving individual dwelling units in Groups R-2 and R-3 where the following apply:
 - 1.1 A door is permitted to open at the top step of an interior flight of stairs, provided the door does not swing over the top step.
 - 1.2 Screen doors and storm doors are permitted to swing over stairs or landings.
2. Exterior doors as provided for in Section 1003.5, Exception 1, and Section 1020.2, which are not on an accessible route.
3. In Group R-3 occupancies not required to be Accessible units, Type A units or Type B units, the landing at an exterior doorway shall not be more than 73/4 inches (197 mm) below the top of the threshold, provided the door, other than an exterior storm or screen door, does not swing over the landing.
4. Variations in elevation due to differences in finish materials, but not more than 1/2 inch (12.7mm).
5. Exterior decks, patios or balconies that are part of Type B dwelling units, have impervious surfaces and that are not more than 4 inches (102 mm) below the finished floor level of the adjacent interior space of the dwelling unit.
6. Doors serving equipment spaces not required to be accessible in accordance with Section 1103.2.9 and serving an occupant load of 5 or less shall be permitted to have the landings a landing on both sides one side to be at different levels provided the elevation difference is not more than 7 inches (178 mm) above or below the landing on the egress side of the door.

Commenter's Reason: The committee disapproved the E58 proposal believing that the proposed language would allow for both sides of the floor to be 7 inches below the threshold which would result in a 7 inch high threshold, thus creating a tripping hazard. The committee also suggested that a limit on the occupant load be provided. The only difference between E58 and E59 was the occupant load, otherwise the proposed code language was identical. The committee approved E59 due to the limited occupant load of 5. However, the tripping hazard language remains. This public comment is being provided in an effort to make sure the intent of the language was clear, that the floor level cannot be below 7 inches on both sides of the door.

E59-12

Final Action:	AS	AM	AMPC_____	D
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E64-12

1008.1.9.3 (IFC [B] 1008.1.9.3)

Proposed Change as Submitted

Proponent: Jeff Sprout, AIA, Target, representing Target Corporation (jeff.sprout@target.com)

Revise as follows:

1008.1.9.3 (IFC [B] 1008.1.9.3) Locks and latches. Locks and latches shall be permitted to prevent operation of doors where any of the following exists:

1. Places of detention or restraint.
2. In buildings in occupancy Group A having an *occupant load* of 300 or less, Groups B, F, M and S, and in *places of religious worship*, the main ~~exterior~~ door or doors are permitted to be equipped with key-operated locking devices from the egress side provided:
 - 2.1. The locking device is readily distinguishable as locked;
 - 2.2. A readily visible durable sign is posted on the egress side on or adjacent to the door stating: THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED. The sign shall be in letters 1 inch (25 mm) high on a contrasting background; and

Exception: Buildings shall not be considered “occupied” after business hours in multiple-exit buildings where employees, security and cleaning crews have access to other exits without requiring the use of a key or in small buildings with one exit.

- 2.3. The use of the key-operated locking device is revokable by the *building official* for due cause.
3. Where egress doors are used in pairs, *approved* automatic flush bolts shall be permitted to be used, provided that the door leaf having the automatic flush bolts has no doorknob or surface-mounted hardware.
4. Doors from individual *dwelling* or *sleeping units* of Group R occupancies having an *occupant load* of 10 or less are permitted to be equipped with a night latch, dead bolt or security chain, provided such devices are openable from the inside without the use of a key or tool.
5. *Fire doors* after the minimum elevated temperature has disabled the unlatching mechanism in accordance with listed fire door test procedures.

Reason: Provide clarification to the intent of the required signage in that it does not pertain to “after business hours” when employees, security and cleaning crews have access to other exits without requiring the use of a key or to small building that require only one exit. The above statement is supported by the code commentary as provided for Exception 2.

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

1008.1.9.3-E-SPROUT

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The proposed language has not limited the number of employees that could be in the building ‘after business hours’. There are no qualifications for travel distances or number of exist available to staff when the front doors are locked.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Jeff Sprout, AIA, representing Target Corporation, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1008.1.9.3 Locks and latches. Locks and latches shall be permitted to prevent operation of doors where any of the following exist:

1. Places of detention or restraint.
 2. In building in occupancy Group A having a occupant load of 300 or less, Groups B, F, M and S, and in placed of religious worship, the main door or doors are permitted to be equipped with key-operated locking devices from the egress side provided:
 - 2.1. The locking device is readily distinguishable as locked;
 - 2.2. A readily visible durable sign is posted on the egress side on or adjacent to the door stating: THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED. The sign shall be in letters 1 inch (25 mm) high on a contrasting background. For the purpose of this provision, buildings shall not be considered to be "occupied" after business hours; and
 - 2.3. The use of a key-operated locking device is revocable by the *building official* for due cause.
- Exception:** ~~Buildings shall not be considered "occupied" after business hours in multiple exit buildings where employees, security and cleaning crews have access to other exits without requiring the use of a key or in small buildings with one exit.~~
3. Where egress doors are used in pairs, approved automatic flush bolts shall be permitted to be used, provided that the door leaf having the automatic flush bolts has no doorknob or surface-mounted hardware.
 4. Doors from individual dwelling or sleeping units of Group R occupancies having an occupant load of 10 or less are permitted to be equipped with a night latch, dead bolt or security chain, provided such devices are openable from the inside without the use of a key or tool.
 5. Fire doors after the minimum elevated temperature has disabled the unlatching mechanism in accordance with the listed fire door test procedures.

Commenter's Reason: Committee comments included how to address the number of employees in the building after business hours, as well as addressing qualifications for travel distances or number of exits available to staff when the front doors are locked. The code commentary indicates that the locking arrangement is only permitted on the main exit and therefore, the employees, security and cleaning crews will have access to other exits without requiring the use of a key. This allowance is also available to small buildings with just one exit. Inherently, the number of employees after business hour will be limited to a small number and who will be familiar with the building surroundings and location of other exits in multiple exit buildings. The location or these other exits would need to follow travel distance requirements elsewhere in the code.

E64-12

Final Action: AS AM AMPC_____ D

E65-12

1008.1.9.3 (IFC [B] 1008.1.9.3)

Proposed Change as Submitted

Proponent: Lee J. Kranz, City of Bellevue, Washington, representing Washington Association of Building Officials Technical Code Development Committee (lkranz@bellevuewa.gov)

Revise as follows:

1008.1.9.3 (IFC [B] 1008.1.9.3) Locks and latches. Locks and latches shall be permitted to prevent operation of doors where any of the following exists:

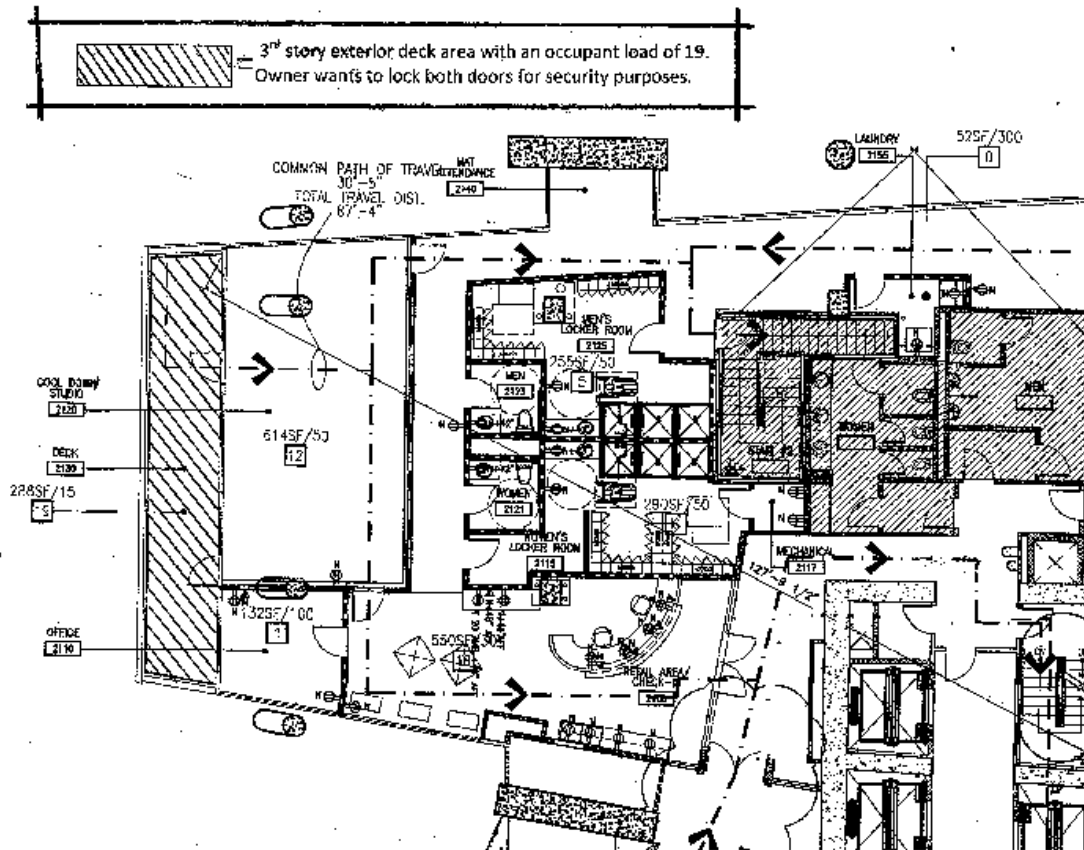
1. Places of detention or restraint.
2. In buildings in occupancy Group A having an *occupant load* of 300 or less, Groups B, F, M and S, and in *places of religious worship*, the main exterior door or doors are permitted to be equipped with key-operated locking devices from the egress side provided:
 - 2.1. The locking device is readily distinguishable as locked;
 - 2.2. A readily visible durable sign is posted on the egress side on or adjacent to the door stating: THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED. The sign shall be in letters 1 inch (25 mm) high on a contrasting background; and
 - 2.3. The use of the key-operated locking device is revokable by the *building official* for due cause.
3. Where egress doors are used in pairs, *approved* automatic flush bolts shall be permitted to be used, provided that the door leaf having the automatic flush bolts has no doorknob or surface-mounted hardware.
4. Doors from individual *dwelling* or *sleeping units* of Group R occupancies having an *occupant load* of 10 or less are permitted to be equipped with a night latch, dead bolt or security chain, provided such devices are openable from the inside without the use of a key or tool.
5. *Fire doors* after the minimum elevated temperature has disabled the unlatching mechanism in accordance with listed fire door test procedures.
6. Where occupants must re-enter the building for egress purposes, doors serving outdoor areas of Group R-3 occupancies and individual sleeping units or dwelling units of Group R-2 occupancies with an occupant load of 10 or less are permitted to be equipped with locks or latches provided such devices are openable from the inside without the use of a key or special knowledge or effort.
7. Egress doors serving outdoor areas having an occupant load of 300 or less where single or multiple paths of egress travel from the outdoor area are required to pass through the building are permitted to be equipped with locks or latches provided
 - 7.1 The locking device is readily distinguishable as locked on the interior side.
 - 7.2 A readily visible durable sign is posted on the interior side on or adjacent to the door stating: THIS DOOR TO REMAIN UNLOCKED WHEN THE OUTDOOR AREA IS OCCUPIED. The sign shall be in letters 1 inch high on a contrasting background.
 - 7.3 The use of the key-operated locking device is revokable by the building official for due cause.

Reasoning:

Item #6: Currently there are no provision in the code that allow locks or latches to be installed on doors serving outdoor areas of R-3 or R-2 sleeping units or dwelling units where the occupants must re-enter the building for egress purposes. Exception #2 of IBC Section 1004.5 is unclear in this regard. It is common practice to install locks or latches on exterior doors serving these outdoor areas to maintain security. Occupant loads exceeding 10 persons would not be allowed to use the provision, similar to item #4 of this section.

Item #7: Currently egress doors serving outdoor areas, where single or multiple paths of egress travel are required to pass through the building, are not permitted to have locks or latches. For security purposes, building owners or tenants typically install locks on required egress doors from these areas. When occupants must re-enter the building, as is typical for elevated decks where an exterior stair from the deck is impractical, IBC Section 1004.5 requires an unobstructed path of egress from these outdoor areas, similar to any occupied room in the building.

The sketch below illustrates this situation. The deck shown is on the 4th floor of the building. The installation of an exterior stairway is not practical. The owner wants to lock the doors for security purposes but this is a problem because, per IBC Section 1004.5, occupants must be able to egress from the deck at any time.



Cost Impact: The code change proposal will increase the cost of construction. This is due to the cost of installing a sign above the door and a locking device which is distinguishable as "locked".

1008.1.9.3 #2-E-KRANZ

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: There are other alternatives available to allow for this real world condition of outdoor areas exiting through a building. For new item 6, what is the justification for not allowing key locks for private balconies? There was no justification for the 300 occupant load limit in new Item 7. Since these are such different issues, they should be submitted as separate code changes.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Lee J Kranz, City of Bellevue Washington, representing WABO TCD, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1008.1.9.3 (IFC [B] 1008.1.9.3) Locks and latches. Locks and latches shall be permitted to prevent operation of doors where any of the following exists:

1. Places of detention or restraint.
2. In buildings in occupancy Group A having an occupant load of 300 or less, Groups B, F, M and S, and in places of religious worship, the main exterior door or doors are permitted to be equipped with key-operated locking devices from the egress side provided:
 - 2.1. The locking device is readily distinguishable as locked;
 - 2.2. A readily visible durable sign is posted on the egress side on or adjacent to the door stating: THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED. The sign shall be in letters 1 inch (25 mm) high on a contrasting background; and
 - 2.3. The use of the key-operated locking device is revokable by the building official for due cause.
3. Where egress doors are used in pairs, approved automatic flush bolts shall be permitted to be used, provided that the door leaf having the automatic flush bolts has no doorknob or surface-mounted hardware.
4. Doors from individual dwelling or sleeping units of Group R occupancies having an occupant load of 10 or less are permitted to be equipped with a night latch, dead bolt or security chain, provided such devices are openable from the inside without the use of a key or tool.
5. Fire doors after the minimum elevated temperature has disabled the unlatching mechanism in accordance with listed fire door test procedures.
- ~~6. Where occupants must re-enter the building for egress purposes, doors serving outdoor areas of Group R-3 occupancies and individual sleeping units or dwelling units of Group R-2 occupancies with an occupant load of 10 or less are permitted to be equipped with locks or latches provided such devices are openable from the inside without the use of a key or special knowledge or effort.~~
- ~~6.7. Egress doors serving outdoor areas having an occupant load of 100 300 or less where single or multiple paths of egress travel from the outdoor area are required to pass through the building are permitted to be equipped with locks or latches provided:~~
 - ~~6.1 7-1~~ The locking device is readily distinguishable as locked on the interior side;
 - ~~6.2 7-2~~ A readily visible durable sign is posted on the interior side on or adjacent to the door stating: THIS DOOR TO REMAIN UNLOCKED WHEN THE OUTDOOR AREA IS OCCUPIED. The sign shall be in letters 1 inch high on a contrasting background;
 - ~~6.3~~ A two-way communication system complying with Sections 1007.8.1 and 1007.8.2 shall be provided on the egress side.
 - ~~6.4 7-3~~ The use of the key-operated locking device is revokable by the building official for due cause.

Commenter's Reason: IBC Section 1004.5 requires an unobstructed path of egress from outdoor areas where single or multiple paths of egress travel are required to pass through the building. This is typical of any occupied room in the building when the path of egress travel must be through the building. Currently egress doors serving outdoor areas are not permitted to have locks or latches. For security purposes, building owners or tenants typically install locks on required egress doors from these areas in violation of the code. Many building officials allow the locks and latches on doors serving the outdoor areas using the modification provisions of Sections 104.10 & 104.11. Since this situation occurs on a regular basis it makes sense to provide a reasonable standard for safety of the occupants.

The MOE Committee in Dallas made 3 suggestions to modify this proposal. They include: 1) elimination of item #6 permitting locks and latches on R-2 and R-3 outdoor areas, 2) reduce the maximum occupant load of the outdoor area in item #7, and 3) include provision for a two-way communication device accessible from the outdoor area. All 3 of these suggestions have been made to the attached public comment.

The two-way communication system requirements are currently included in IBC Section 1007.8.1 & 1007.8.2. Section 1007.8.1 specifies connection to a fire command center or central control point approved by the fire department. If the central control point is not constantly attended then connections to a monitoring location or 911 dispatch is permitted.

Approval of the revised proposal is recommended.

E65-12

Final Action:	AS	AM	AMPC _____	D
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E66-12

1008.1.9.6 (IFC [B] 1008.1.9.6)

Proposed Change as Submitted

Proponent: Carl Baldassarra, P.E., FSFPE, Chair, ICC Code Technology Committee

Revise as follows:

1008.1.9.6 (IFC [B] 1008.1.9.6) Special locking arrangements in doors in Group Groups I-1 assisted living facilities and I-2. Approved, special egress locks shall be permitted in a Group I-1 assisted living facilities or I-2 occupancy occupancies where the clinical needs of persons receiving care require such locking. Special egress locks shall be permitted in such occupancies where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or an approved automatic-smoke or heat detection system installed in accordance with Section 907, provided that the doors are installed and operate in accordance with Items 1 through 7 below.

1. The doors unlock upon actuation of the automatic sprinkler system or automatic fire detection system.
2. The doors unlock upon loss of power controlling the lock or lock mechanism.
3. The door locks shall have the capability of being unlocked by a signal from the fire command center, a nursing station or other approved location.
4. A building occupant shall not be required to pass through more than one door equipped with a special egress lock before entering an exit.
5. The procedures for the operation(s) of the unlocking system shall be described and approved as part of the emergency planning and preparedness required by Chapter 4 of the International Fire Code.
6. All clinical staff shall have the keys, codes or other means necessary to operate the locking devices.
7. Emergency lighting shall be provided at the door.

Exception: Items 1 through 4 shall not apply to doors to areas where persons which because of clinical needs require restraint or containment as part of the function of a psychiatric treatment area.

Reason: The current text allows special provisions in the path of egress for Group I-2 when patient care, most often due to issues of elopement, allows for staff to control access to the exits. This allowance should be permitted in assisted living facilities in order to allow proper care for residents in the initial stages of Alzheimer's, therefore, this allowance needs to be extended to Group I-1 assisted living facilities.

The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The code issues are assigned to the CTC by the ICC Board as "areas of study". Information on the CTC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website: <http://www.iccsafe.org/cs/cc/ctc/index.html>. Since its inception in April, 2005, the CTC has held twenty-two meetings – all open to the public.

Cost Impact: Increase

1008.1.9.6-E-BALDASSARRA-CTC.docx

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: Increasing the scope to include Group I-1 assisted living facilities provides for sensible on-site security for residents in assisted living facilities where there may be elopement concerns for residents (i.e., Alzheimer or dementia wards). The CTC committee may need to put in a public comment to coordinate these limits with the Group I-1, Condition 1 and Condition 2 approved in G31-12.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Carl Baldasarra, Code Technologies Committee – Open stairway study group, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1008.1.9.6 (IFC [B] 1008.1.9.6) Special locking arrangements in doors in Groups I-1 assisted living facilities and I-2.

Approved, special egress locks shall be permitted in a Group I-1 assisted living facilities or I-2 occupancies where the clinical needs of persons receiving care require such locking. Special egress locks shall be permitted in such occupancies where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or an approved automatic smoke or heat detection system installed in accordance with Section 907, provided that the doors are installed and operate in accordance with Items 1 through 7 below.

1. The doors unlock upon actuation of the automatic sprinkler system or automatic fire detection system.
2. The doors unlock upon loss of power controlling the lock or lock mechanism.
3. The door locks shall have the capability of being unlocked by a signal from the fire command center, a nursing station or other approved location.
4. A building occupant shall not be required to pass through more than one door equipped with a special egress lock before entering an exit.
5. The procedures for the operation(s) of the unlocking system shall be described and approved as part of the emergency planning and preparedness required by Chapter 4 of the International Fire Code.
6. All clinical staff shall have the keys, codes or other means necessary to operate the locking devices.
7. Emergency lighting shall be provided at the door.

Exception: Items 1 through 4 shall not apply to doors to areas where persons which because of clinical needs require restraint or containment as part of the function of a psychiatric treatment area.

Commenter's Reason: Elopement potential exists in all Group I-1, therefore this option should not be limited to just assisted living. This would not affect revisions made to this section in E67, which clarified the requirements for this type of lock.

The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The code issues are assigned to the CTC by the ICC Board as "Areas of Study". The Area of Study for this code change and public comment is called "Care Facilities". Information on the CTC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website: <http://www.iccsafe.org/cs/CTC/Pages/CareFacilities.aspx>. Since its inception in April, 2005, the CTC has held twenty-four meetings – all open to the public. In addition to holding face-to-face meetings, the CTC established Study Groups where any interested party can participate in conference calls on specific subjects such as this area of study without having to attend the face-to-face meetings.

E66-12

Final Action:

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D

E69-12

1008.1.9.6 (IFC [B] 1008.1.9.6)

Proposed Change as Submitted

Proponent: John Williams, CBO, Chair, ICC Ad Hoc Committee on Health Care and Carl Baldassarra, P.E., FSFPE, Chair, ICC Code Technology Committee

Revise as follows:

1008.1.9.6 (IFC [B] 1008.1.9.6) Special locking arrangements in Group I-2. Approved, special egress locks shall be permitted in a Group I-2 occupancy where the clinical needs of persons receiving care require such locking. Special egress locks shall be permitted in such occupancies where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or an approved automatic smoke or heat detection system installed in accordance with Section 907, provided that the doors are installed and operate in accordance with Items 1 through 7 below.

1. The doors unlock upon actuation of the automatic sprinkler system or automatic fire detection system.
2. The doors unlock upon loss of power controlling the lock or lock mechanism.
3. The door locks shall have the capability of being unlocked by a signal from the fire command center, a nursing station or other approved location.
4. A building occupant shall not be required to pass through more than one door equipped with a special egress lock before entering an exit.
5. The procedures for the operation(s) of the unlocking system shall be described and approved as part of the emergency planning and preparedness required by Chapter 4 of the International Fire Code.
6. All clinical staff shall have the keys, codes or other means necessary to operate the locking devices.
7. Emergency lighting shall be provided at the door.

Exception Exceptions:

1. Items 1 through 4 shall not apply to doors to areas where persons which because of clinical needs require restraint or containment as part of the function of a ~~psychiatric~~ treatment area.
2. Items 1 through 4 shall not apply to doors to areas where a listed egress control system is utilized to reduce the risk of child abduction.

Reason: This section deals with the use of electric locks to enhance the capabilities of egress control. Egress control serves three primary purposes. These are to control the elopement of ambulatory patients not capable of self preservation; the containment of patients that, due to their mental condition, could do harm to others; the prevention of the abduction of babies and children. Exceptions allow for the use of listed child abduction security systems and even mechanical locks (non-electric.)

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

This proposal is being co-sponsored by the ICC Code Technology Committee. The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The code issues are assigned to the CTC by the ICC Board as "areas of study". Information on the CTC, including: meeting agendas; minutes; reports; resource

documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website: <http://www.iccsafe.org/cs/cc/ctc/index.html>. Since its inception in April, 2005, the CTC has held twenty-two meetings – all open to the public.

Cost Impact: None

1008.1.9.6#1-E-WILLIAMS-ADHOC.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: While the issue of child abduction is important to consider, the proposal does not limit the exception to specific areas such as the nursery or pediatric wards.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment 1:

John Williams, Adhoc Health Care – MOE study group, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1008.1.9.6 (IFC [B] 1008.1.9.6) Special locking arrangements in Group I-2. Approved, special egress locks shall be permitted in a Group I-2 occupancy where the clinical needs of persons receiving care require such locking. Special egress locks shall be permitted in such occupancies where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or an approved automatic smoke or heat detection system installed in accordance with Section 907, provided that the doors are installed and operate in accordance with Items 1 through 7 below.

1. The doors unlock upon actuation of the automatic sprinkler system or automatic fire detection system.
2. The doors unlock upon loss of power controlling the lock or lock mechanism.
3. The door locks shall have the capability of being unlocked by a signal from the fire command center, a nursing station or other approved location.
4. A building occupant shall not be required to pass through more than one door equipped with a special egress lock before entering an exit.
5. The procedures for the operation(s) of the unlocking system shall be described and approved as part of the emergency planning and preparedness required by Chapter 4 of the International Fire Code.
6. All clinical staff shall have the keys, codes or other means necessary to operate the locking devices.
7. Emergency lighting shall be provided at the door.

Exceptions:

1. Items 1 through 4 shall not apply to doors to areas where persons which because of clinical needs require restraint or containment as part of the function of a treatment area.
2. Items 1 through 4 shall not apply to doors to areas where a listed egress control system is utilized to reduce the risk of child abduction from nursery and obstetric areas of a Group I-2 hospital.

Commenter's Reason: This issue of protection against child abduction is an important one for hospitals. However, we also understand the code development committee's concern that the proposed exception could be read to allow for an entire hospital to be locked down. The modification will limit these systems to the high risk areas of the nursery and obstetric areas only.

The AHC was established by the ICC Board of Directors to evaluate and assess contemporary code issues relating to hospitals and ambulatory healthcare facilities. The AHC is composed of building code officials, fire code officials, hospital facility engineers, and state healthcare enforcement representatives. The goals of the committee are to ensure that the ICC family of codes appropriately addresses the fire and life safety concerns of a highly specialized and rapidly evolving healthcare delivery system. This process is part of a joint effort between ICC and the American Society for Healthcare Engineering (ASHE), a subsidiary of the American Hospital Association, to eliminate duplication and conflicts in healthcare regulation. Since its inception in April, 2011, the AHC has held 7 open meetings and over 100 workgroup calls which included members of the AHC as well as any interested party to discuss and debate the proposed changes. All meeting materials and reports are posted on the AHC website at: <http://www.iccsafe.org/cs/AHC/Pages/default.aspx>

Public Comment 2:

Wade Rudolph, CBET, CHFM, Sacred Heart Hospital, representing Wisconsin Healthcare Engineers Association Codes & Standards Committee, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1008.1.9.6 (IFC [B] 1008.1.9.6) Special locking arrangements in Group I-2. Approved, special egress locks shall be permitted in a Group I-2 occupancy where the clinical needs of persons receiving care require such locking. Special egress locks shall be permitted in such occupancies where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or an approved automatic smoke or heat detection system installed in accordance with Section 907, provided that the doors are installed and operate in accordance with Items 1 through 7 below.

1. The doors unlock upon actuation of the automatic sprinkler system or automatic fire detection system.
2. The doors unlock upon loss of power controlling the lock or lock mechanism.
3. The door locks shall have the capability of being unlocked by a signal from the fire command center, a nursing station or other approved location.
4. A building occupant shall not be required to pass through more than one door equipped with a special egress lock before entering an exit.
5. The procedures for the operation(s) of the unlocking system shall be described and approved as part of the emergency planning and preparedness required by Chapter 4 of the International Fire Code.
6. All clinical staff shall have the keys, codes or other means necessary to operate the locking devices.
7. Emergency lighting shall be provided at the door.

Exceptions:

1. Items 1 through 4 shall not apply to doors to areas where persons which because of clinical needs require restraint or containment as part of the function of a treatment area.
2. Items 1 through 4 shall not apply to doors to areas where a listed egress control system is utilized to reduce the risk of child abduction from maternity, pediatric, or adolescent units in a Group I-2 hospital.

Commenter's Reason: The proposal as submitted by John Williams, CBO, Chair, ICC Ad Hoc Committee on Healthcare should be accepted as modified.

The committee made a reasonable recommendation to limit the areas in healthcare where there types of systems should be allowed. The modified language is provided to meet the request of the committee in order to gain adoption.

I am submitting this request on behalf of the Wisconsin Healthcare Engineers Association Codes & Standards committee representing over 700 members in the State of Wisconsin.

Thank you for your time and consideration of my comments.

E69-12

Final Action: AS AM AMPC_____ D

E74-12

1008.1.9.7 (IFC [B] 1008.1.9.7)

Proposed Change as Submitted

Proponent: John Williams, CBO, Chair, ICC Ad Hoc Committee on Health Care and Carl Baldassarra, P.E., FSFPE, Chair, ICC Code Technology Committee

Revise as follows:

1008.1.9.7 (IFC [B] 1008.1.9.7) Delayed egress locks. *Approved, listed, delayed egress locks* locking systems, shall be permitted to be installed on doors serving any occupancy except Group A, E, and H occupancies in buildings that are equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or an *approved* automatic smoke or heat detection system installed in accordance with Section 907, provided that the doors unlock in accordance with Items 1 through 6 below. A building occupant shall not be required to pass through more than one door equipped with a delayed egress lock before entering an *exit*.

1. The doors unlock upon actuation of the *automatic sprinkler system* or automatic fire detection system.
2. The doors unlock upon loss of power controlling the lock or lock mechanism.
3. The door locks shall have the capability of being unlocked by a signal from the fire command center.
4. The initiation of an irreversible process which will release the latch in not more than 15 seconds when a force of not more than 15 pounds (67 N) is applied for *1 second* to the release device. Initiation of the irreversible process shall activate an audible signal in the vicinity of the door. Once the door lock has been released, by the application of force to the releasing device, relocking rearming shall be by manual means only.

Exception: Where approved, a delay of not more than 30 seconds is permitted on a delayed egress door.

5. A sign shall be provided on the door located above and within 12 inches (305mm) of the release device reading: PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 (30) SECONDS.

Exception: Where approved, the installation of a sign is not required when it interferes with the safety of the residents in Group I occupancies.

6. Emergency lighting shall be provided at the door.

Reason: The intent is for all proposals for Section 1008.1.9.7 to work together. Three changes are submitted in order to keep the discussions separate.

The new exception to Item 5 - Providing escape instructions to first stage Alzheimer's disease patients who often still can read is unwise. Staff is there to assist in a fire.

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

This proposal is being co-sponsored by the ICC Code Technology Committee. The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The code issues are assigned to the CTC by the ICC Board as "areas of study". Information on the CTC, including: meeting agendas; minutes; reports; resource

documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website: <http://www.iccsafe.org/cs/cc/ctc/index.html>. Since its inception in April, 2005, the CTC has held twenty-two meetings – all open to the public.

Cost Impact: None

1008.1.9.7#1-E-WILLIAMS-ADHOC.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The signage is necessary at doors with delayed egress locking systems for visitors within the Group I-1 facilities. Disapproval is consistent with committee action on E75-12.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

John Williams, Adhoc Health Care – MOE study group, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

IBC 1008.1.9.7 (IFC [B] 1008.1.9.7) Delayed egress locks. *Approved, listed,* delayed egress locking systems, shall be permitted to be installed on doors serving any occupancy except Group A, E, and H occupancies in buildings that are equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or an *approved* automatic smoke or heat detection system installed in accordance with Section 907, provided that the doors unlock in accordance with Items 1 through 6 below. A building occupant shall not be required to pass through more than one door equipped with a delayed egress lock before entering an *exit*.

1. The doors unlock upon actuation of the *automatic sprinkler system* or automatic fire detection system.
2. The doors unlock upon loss of power controlling the lock or lock mechanism.
3. The door locks shall have the capability of being unlocked by a signal from the fire command center.
4. The initiation of an irreversible process which will release the latch in not more than 15 seconds when a force of not more than 15 pounds (67 N) is applied for *1 second* to the release device. Initiation of the irreversible process shall activate an audible signal in the vicinity of the door. Once the door lock has been released, by the application of force to the releasing device, relocking rearming shall be by manual means only.

Exception: Where approved, a delay of not more than 30 seconds is permitted on a delayed egress door.

5. A sign shall be provided on the door located above and within 12 inches (305mm) of the release device reading: PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 (30) SECONDS.

Exception: Where approved, in Group I occupancies, the installation of a sign is not required ~~when the instructions compromise the safety of the residents in Group I occupancies where persons who because of clinical needs require restraint or containment as part of the function of the treatment area.~~

6. Emergency lighting shall be provided at the door.

Commenter's Reason: When housing dementia patient, especially first stage Alzheimer patients, reading is often still in their capabilities. They are ambulatory, often in good physical condition, but not capable of self preservation. Their greatest dangers are elopement into traffic, ice and snow, darkness and wildlife. The intent of the proposed exception is to address this important safety issue. Families are relying on these facilities to keep their loved ones safe. Allowance for this exception is where approved by the code official.

The MOE committee had a concern that the instruction signage at delayed egress locks was needed for visitors. In all Group I facilities, staff is trained to assist in evacuation of all occupants, including residents and visitors. In addition, delayed egress systems already include connection to both the sprinkler system and the fire detection system, both required under this section. In the event of a activation of the fire alarm or sprinkler system or power failure, all delayed egress doors unlock from the inside and allow unobstructed egress. Dementia units are staffed to assist residents and visitors in fire and weather emergencies with practiced emergency plans. Having a direct signage at the door adds to the likelihood that there will be elopements. All doors with delayed egress systems will still be required to have exit signs.

Where facilities that are faced with a choice between delayed egress with escape instructions at each door, or going to a full lockdown such as controlled egress, the facility will always pick pursuit of the latter due to concerns for patient safety.

Several of the locking options do allow locking occupants in where there are staff releases the locks. This option would allow a facility to address patient safety without totally relying on staff to open exit doors in a fire event.

The AHC was established by the ICC Board of Directors to evaluate and assess contemporary code issues relating to hospitals and ambulatory healthcare facilities. The AHC is composed of building code officials, fire code officials, hospital facility engineers, and state healthcare enforcement representatives. The goals of the committee are to ensure that the ICC family of codes appropriately addresses the fire and life safety concerns of a highly specialized and rapidly evolving healthcare delivery system. This process is part of a joint effort between ICC and the American Society for Healthcare Engineering (ASHE), a subsidiary of the American Hospital Association, to eliminate duplication and conflicts in healthcare regulation. Since its inception in April, 2011, the AHC has held 7 open meetings and over 100 workgroup calls which included members of the AHC as well as any interested party to discuss and debate the proposed changes. All meeting materials and reports are posted on the AHC website at: <http://www.iccsafe.org/cs/AHC/Pages/default.aspx>

E74-12

Final Action:

AS

AM

AMPC ____

D

E76-12

1008.1.9.7(New) [IFC [B] 1008.1.9.7(New)]

Proposed Change as Submitted

Proponent: Bryan M Romney, Building Official, University of Utah, Salt Lake City, Utah, representing self

Add new text as follows:

1008.1.9.7 (IFC [B] 1008.1.9.7) Security locking arrangements. Approved special security egress locking systems shall be permitted on Group A occupancies including, but not limited to, museums, art galleries, special collections libraries and courtrooms; and Group B or M occupancies; for doors in the means of egress serving rooms or spaces where security needs of persons or building contents required such locking. Special egress locks shall be permitted in these occupancies where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or an approved automatic smoke or heat detection system installed in accordance with Section 907, provided that the doors are installed and operate in accordance with all of the following:

1. The doors unlock upon actuation of the automatic sprinkler system or automatic fire detection system.
2. The doors unlock upon loss of power controlling the lock or lock mechanism.
3. The door locks shall have the capability of being unlocked by a signal from an approved location that is constantly attended when the building is occupied.
4. Doors equipped with a security locking arrangement are monitored by either direct line of sight or remote monitoring from the constantly attended station.
5. A building occupant shall not be required to pass through more than one door equipped with a special security egress locking system before entering an exit.
6. The procedures for the operation of the special security egress locking system shall be described and approved as part of the emergency planning and preparedness required by Chapter 4 of the International Fire Code.
7. All security staff or persons identified in the procedures for Item 6 shall have the keys, codes, or other means necessary to operate the locking devices.
8. Emergency lighting shall be provided at the door.

(Renumber subsequent sections)

Reason: Chapter 10 does not provide a method for special locking or controlled egress except for Group I-1 and I-3 Occupancies. Other occupancy groups have needs for special locking arrangements either for securing persons or building contents. Examples include courtrooms where people posing a flight risk need special secure egress considerations. Research labs and animal housing facilities frequently require controlled egress systems such as card or biometric ingress and egress control systems. Libraries with rare book collections, art galleries, museums or mercantile occupancies where building contents area at risk of being stolen have needs for special security egress locking systems. This code addition would permit the code official to approve special locking arrangements in other occupancy groups where a demonstrated need exists. The procedure by which the special locking arrangement functions is to be reviewed and approved by the code official as outlined in Item 6. This item would allow the code official to approve special security egress locking systems under prescriptive requirement of Chapter 10 without having to approve an alternate design or method outlined in Section 104.11. This code addition represents a significantly more defensible code provisions than the more interpretive alternative design route. This code addition allows an already existing code provisions for controlled egress doors in Group I-2 occupancies to be allowed for other occupancy groups where a demonstrated need exists. No new or unproven code protocol is created in this code addition, only an existing, proven, and verified provision is being extended to other occupancy groups which for years have had critically security needs not allowed by the code.

Cost Impact: No initial construction cost impact. The IFC may require ongoing inspections of the Chapter 4 emergency planning and preparedness protocol compliance.

1008.1.9.7-E-ROMNEY.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The allowance for this type of locking arrangement for all Group B and M is too broad. In areas where high security is needed, allowances for this suggested type of locking arrangement could be addressed through alternative means. Stronger approval language is needed. A reference to UL294 would be consistent with other committee actions to the locking options.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Bryan M. Romney, University of Utah representing self, requests Approval as Modified by this Public comment.

Modify the proposal as follows:

1008.1.9.7 (IFC [B] 1008.1.9.7) Security locking arrangements. *Approved* Special security egress locking systems shall be permitted when approved by building official in Group A-3, B, and M Occupancies ~~on Group A including, but not limited to museums, art galleries, special collections libraries and courtrooms; and Group B, or M occupancies;~~ for doors in the means of egress serving rooms or spaces where security needs of persons or building contents ~~required~~ **require** such locking. Special egress locks shall be permitted in such occupancies where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or an approved automatic smoke or heat detection system installed in accordance with Section 907, provided that the doors are installed and operate in accordance with ~~all of the following: Items 1 through 9.~~

1. The doors unlock upon actuation of the automatic sprinkler system or automatic fire detection system.
2. The doors unlock upon loss of power controlling the lock or lock mechanism.
3. The door locks shall have the capability of being unlocked by a signal from an approved location that is constantly attended when the building is occupied.
4. Doors equipped with a security locking arrangement are monitored by either direct line of sight or remote monitoring from the constantly attended station.
5. A building occupant shall not be required to pass through more than one door equipped with a special security egress locking system before entering an exit.
6. The procedures for the operation of the special security egress locking system shall be described and approved as part of the emergency planning and preparedness required by Chapter 4 of the International Fire Code.
7. All security staff or persons identified in the procedures for Item 6 shall have the keys, codes, or other means necessary to operate the locking devices.
8. Emergency lighting shall be provided at the door.
9. All components of door locking system shall be listed in accordance with UL 294.

(Renumber subsequent sections)

Commenter's Reason: Chapter 10 does not provide a method for special locking or controlled egress except for Group I-2 (Section 1008.1.9.6) and Correctional Facility (Section 1008.1.9.10) Occupancies. Other occupancy groups have needs for special locking arrangements either for securing persons or building contents. Examples include courtrooms where people posing a flight risk need special secure egress considerations. Research labs and animal housing facilities frequently require controlled egress systems such as card or biometric ingress and egress control systems. Libraries with rare book collections, art galleries, museums or mercantile occupancies where building contents are at risk of being stolen have needs for special security egress locking systems. Airports frequently control egress from terminal and concourse areas to prevent unauthorized access to exterior flight deck or tarmac areas.

This code addition would allow the code official to approve special locking arrangements in Occupancy Groups A-3, B, and M where a demonstrated need exists. The intent of this special security egress locking system is to control egress under normal building conditions and not restrict egress under emergency situations. Item 6 requires the protocol for operation of this system to be reviewed and approved by the code official.

This code change would allow the code official to approve special security egress locking systems under the prescriptive requirements of Chapter 10 without having to deal with the risks of an alternate design or method outlined in Section 104.11. This code addition represents a significantly more defensible code provision than the more interpretive alternative design method.

This code addition allows an already existing code provision for controlled egress doors in Group I-2 occupancies (Section 1008.1.9.6) to be extended to other occupancy groups where a demonstrated need exists. No new or unproven code protocol is created in this code change; only an existing, proven, and verified protocol is being extended to other occupancy groups which have

equally critical security needs not permitted by the code. This code addition will provide a means for the code official to approve a special locking system at the design stage rather than discovering a noncompliant locking system during final inspection or after the Certificate of Occupancy is issued.

The Means of Egress Committee rejected the original proposed code change in Dallas because it was felt that the proposed code section was too broad and open-ended. This public comment by the proponent is to address both of the Committee's concerns and limit the usage of controlled egress systems to specific occupant groups with low to medium fire hazard ratings. The proponent also added to the original proposal that the building official is to approve all applications of the controlled egress system, thus eliminating an expectation of entitlement. The proponent added the requirement that the door locking system is to comply with UL 294. This standard is included so as to be consistent with other locking systems found in Chapter 10.

The proponent has the endorsement of Bonneville and Utah Chapters of ICC.

E76-12

Final Action:	AS	AM	AMPC_____	D
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E85-12

1022.6 (New), 1023.7 (New), 1025.4 (New) [IFC 1022.6 (New), 1023.7 (New), 1025.4 (New)]

Proposed Change as Submitted

Proponent: Lee J. Kranz, City of Bellevue, Washington, representing Washington Association of Building Officials Technical Code Development Committee (lkranz@bellevuewa.gov)

Add new text as follows:

1022.6 (IFC [B] 1022.6) Standpipes. Class 1 standpipe hose connections shall be provided in accordance with Item 1 or 5 of Section 905.4 and NFPA 14.

(Renumber subsequent sections)

1023.7 (IFC [B] 1023.7) Standpipes. Class 1 standpipe hose connections shall be provided in accordance with Item 3 of Section 905.4 and NFPA 14.

1025.4 (IFC [B] 1025.5) Standpipes. Class 1 standpipe hose connections shall be provided in accordance with Item 2 of Section 905.4 and NFPA 14.

(Renumber subsequent sections)

Reason: Placing references to Section 905.4 and NFPA 14 standpipe requirements in exit stairways, horizontal exits and exit passageways will help designers and reviewers to include this requirement early in the design process. During the means of egress design process, the requirement for standpipes for horizontal exits and exit passageways are frequently overlooked and may have significant cost impacts to correct. Including the standpipe references in Sections 1023 and 1025 will make the design team aware of the requirement early in the design process and help insure cost impacts are considered at the appropriate time. Adding the requirement in Section 1022 is for consistency.

The intent is to have an IFC change to clarify that standpipes should be located within the enclosure for interior exit stairways. Literally the current text, by saying all required stairways, would require standpipes on exit access stairways and exterior exit stairway. If it is felt that standpipes should be provided in these locations, a modification would be to add this same language in a new Section 1009.3.1.8 for exit access stairways and 1026.7 for exterior exit stairways.

Cost Impact: None

1023.7-E-Kranz.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The committee agreed that placement of stand pipes in a building is an important element that sometimes can be missed during the planning stage/building review. However, the proposed text could be interpreted to require stand pipes for all buildings, not just where required. It was suggested that a more appropriate reference would be 905.3.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Lee J. Kranz, City of Bellevue Washington representing Washington Association of Building Officials Technical Code Development Committee, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1022.6 (IFC [B] 1022.6) Standpipes. Where required by IBC Section 905.4, item 1 or 5, Class 1 standpipe hose connections shall be installed provided in accordance with ~~Item 1 or 5 of Section 905.4 and NFPA 14.~~

(Renumber subsequent sections)

1023.7 Standpipes. Where required by IBC Section 905.4, item 3, Class 1 standpipe hose connections shall be installed provided in accordance with ~~IBC Section 905.4, item 3 and NFPA 14.~~

1025.5 Standpipes. Where required by IBC Section 905.4, item 2, Class 1 standpipe hose connections shall be installed provided in accordance with ~~IBC Section 905.4, item 2 and NFPA 14.~~

(Renumber subsequent sections)

Commenter's Reason: The MOE Committee in Dallas agreed that placing references to the standpipe provisions in Sections 1022, 1023 and 1025 was important but indicated that the text, as submitted, could be interpreted to require standpipes in all situations where interior exit stairways, exit passageways or horizontal exits were provided, regardless of the exceptions contained in Section 905.4. The provisions have been re-worded to clarify the intent.

Placing references to Section 905.4 standpipe requirements in sections 1022, 1023 and 1025 will help designers and reviewers to be aware of this important requirement and will insure that the standpipes, if required, are considered early in the design process to reduce costs during construction. The reference to NFPA 14 installation standards is consistent with IBC Section 905.2.

E85-12

Final Action:	AS	AM	AMPC_____	D
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E90-12

1009.3 (IFC [B] 1009.3)

Proposed Change as Submitted

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

Revise as follows:

1009.3 (IFC [B] 1009.3) Exit access stairways. Floor openings between stories created by exit access stairways shall be enclosed.

Exceptions:

1. In other than Group I-2 and I-3 occupancies, exit access stairways that serve, or atmospherically communicate between, only two stories, are not required to be enclosed.
2. Exit access stairways serving and contained within a single residential dwelling unit or sleeping unit in Group R-1, R-2 or R-3 occupancies are not required to be enclosed.
3. In buildings with only Group B or M occupancies, exit access stairway openings are not required to be enclosed provided that the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, the area of the floor opening between stories does not exceed twice the horizontal projected area of the exit access stairway, and the opening is protected by a draft curtain and closely spaced sprinklers in accordance with NFPA 13.
- ~~4. In other than Groups B and M occupancies, exit access stairway openings are not required to be enclosed provided that the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, the floor opening does not connect more than four stories, the area of the floor opening between stories does not exceed twice the horizontal projected area of the exit access stairway, and the opening is protected by a draft curtain and closely spaced sprinklers in accordance with NFPA 13.~~
- ~~45.~~ Exit access stairways within an atrium complying with the provisions of Section 404 are not required to be enclosed.
- ~~56.~~ Exit access stairways and ramps in open parking garages that serve only the parking garage are not required to be enclosed.
- ~~67.~~ Stairways serving outdoor facilities where all portions of the means of egress are essentially open to the outside are not required to be enclosed.
- ~~78.~~ Exit access stairways serving stages, platforms and technical production areas in accordance with Sections 410.6.2 and 410.6.3 are not required to be enclosed.
- ~~89.~~ Stairways are permitted to be open between the balcony, gallery or press box and the main assembly floor in occupancies such as theaters, places of religious worship, auditoriums and sports facilities.
- ~~940.~~ In Group I-3 occupancies, exit access stairways constructed in accordance with Section 408.5 are not required to be enclosed.

Reason: The purpose of this code change is to delete the allowance for connecting up to four stories with an unenclosed exit access stairway. This language is the result of a re-write of code language last cycle that was purported to be editorial in nature. When I attempted to point out this change was expanding allowance of the connection of four stories in testimony at the final action hearings I was repeatedly interrupted by the supporters of the proposal and in their testimony they denied there was a change or increase in the allowance for interconnecting floor levels.

If you review the previous language found in the 2009 IBC at Section 708.2, Exception 2 you will find that this allowance did not permit a stairway **that was a portion of the means of egress** to be unenclosed under this concept. Since an "extra" stairway not need for, nor allowed to be considered a portion of the means of egress, would be an added cost that used up valuable square footage, this application of the code was rare. (That is if in fact it was done as provided for by the code and no credit for egress including travel distance was taken)

2009 International Building Code

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

Exceptions:

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 .

With the revised language the code now allows unenclosed "exit access stairways" to connect up to four stories of a building. This is a major technical change; it allows the use of unenclosed stairways that ARE part of the means of egress. The purpose of adding the term "exit access stairway" to the code was to provide for recognition of the stairs for use in exit access provided the travel distance was measured. See 2012 IBC, Section 1016.3.1 below. So we find that the change was not just editorial, it was a significant reduction in safety provided from the spread of smoke or heat.

2012 International Building Code

1016.3.1 Exit access stairways and ramps. Travel distance on exit access stairways or ramps shall be included in the exit access travel distance measurement. The measurement along stairways shall be made on a plane parallel and tangent to the stair tread nosings in the center of the stair and landings. The measurement along ramps shall be made on the walking surface in the center of the ramp and landings.

The problem with this section is not just a matter of increased allowances from one edition to another contrary to presentation. The section in question, 2012 IBC, Section 1009.3 Exception 4, is in direct conflict with the "atrium" provisions of Section 404.1 wherein additional fire protection features are required when we have an atrium, which is defined as an opening connecting two or more stories "other than enclosed stairways"... etc. Actually, if you apply the allowance for connecting floor levels with unenclosed stairs, you currently have an atrium by definition and design both in the older edition of the code and the present edition. Also note that there is no qualifier as to the size of an opening when dealing with atriums. It is just recognition that we have an opening that can allow the upward travel of smoke and heat due to the lack of an enclosing shaft.

SECTION 404 ATRIUMS

404.1 General. In other than Group H occupancies, and where permitted by Section 712.1.6, the provisions of Sections 404.1 through 404.9 shall apply to buildings or structures containing vertical openings defined as "Atriums."

ATRIUM. An opening connecting two or more stories other than enclosed stairways, elevators, hoistways, escalators, plumbing, electrical, air-conditioning or other equipment, which is closed at the top and not defined as a mall. Stories, as used in this definition, do not include balconies within assembly groups or mezzanines that comply with Section 505.

Now objectors may argue that this is a matter of two different features, but a plain reading of the definition of an atrium and recognition of why we add fire protection features regardless of the size of the atrium clearly identifies that there is no difference. Whether I have a large atria with an open stairway in the middle, or a small atria with a stairway up through it does not change the fact that it is a path upward for smoke and heat. Since the atrium and the unenclosed exit access stairs present the same hazard, upward travel of smoke and heat, why such a major difference in the required fire protection features?

The new language is a major change from the last edition of the code, contrary to how it was presented to the committee and the membership, it allows a means of egress path where you might be traveling down into the smoke and/or heat, and it is in conflict with long recognized protection features for atriums, i.e, unenclosed holes in floor/ceiling assemblies,

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

1009.3-E-Davidson.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: Section 1009.3, Exception 4 is a long standing allowance in the code. No technical or anecdotal information was provided to indicate that this allowance is a safety issue. Removal of this exception would take out the option of the opening as well as the stairway.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Robert J Davidson, Davidson Code Concepts, LLC, representing self, requests Approval as Submitted.

Commenter's Reason: The committee reason indicated that *Section 1009.3, Exception 4 is a long standing allowance in the code. No technical or anecdotal information was provided to indicate that this allowance is a safety issue.* This is not factual, the use of stairways that are part of the means of egress, (in this case 'exit access stairways), was not permitted by the previous code. The code change that provided this language was testified to as editorial. It can't be editorial if it wasn't previously allowed.

In this case language was improperly slipped into the code during the last cycle and when it gets identified the committee faults the person that identifies the sleight of hand for not having technical data to support the fix. Does this make sense? What about the lack of technical justification for the so called "editorial" changes that occurred?

Totally ignored by the committee in discussion during the hearing and in the reason statement is the fact that based upon current code language if you connect 3 or more floors with one of these stairways you have an atrium that requires the installation of all of the fire protection features found in Section 404.1. The fact that the code already has such requirements for atriums documents the "safety issue" the committee claims was not indicated.

E90-12

Final Action:	AS	AM	AMPC_____	D
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E91-12

1009.6, 1009.8, 1009.8.1-1009.8.5(New) [IFC [B] 1009.6, 1009.8, 1009.8.1-1009.8.5(New)]

Proposed Change as Submitted

Proponent: David W. Cooper, Stairway Manufacturing and Design Consultants representing Stairway Manufacturers' Association (sma@stairways.org)

Revise as follows:

1009.6 (IFC [B] 1009.6) Walkline. The walkline across *winder* treads and landings shall be ~~concentric~~ parallel to the direction of travel and concentric through the turn. The walkline shall be ~~and~~ located 12 inches (305 mm) from the side where the *winders* are narrower or from the side of shortest distance through the turn at a landing. The 12-inch (305 mm) dimension shall be measured from the widest point of the clear ~~stair~~ width at the walking surface ~~of the winder~~. If *winders* are adjacent within the *flight*, the point of the widest clear *stair* width of the adjacent *winders* shall be used.

1009.8 (IFC [B] 1009.8) Stairway landings. There shall be a floor or landing at the top and bottom of each *stairway flight of stairs*. ~~The width of landings shall not be less than the width of stairways they serve. Every landing shall have a minimum width measured perpendicular to the direction of travel equal to the width of the stairway. Where the stairway has a straight run the depth need not exceed 48 inches (1219 mm). Doors opening onto a landing shall not reduce the landing to less than one-half the required width. When fully open, the door shall not project more than 7 inches (178 mm) into a landing. When wheelchair spaces are required on the stairway landing in accordance with Section 1007.6.1, the wheelchair space shall not be located in the required width of the landing and doors shall not swing over the wheelchair spaces.~~

Exception: *Aisle stairs* complying with Section 1028.

1009.8.1 (IFC [B] 1009.8.1) Stairway landing width. The minimum width of landings shall be not less than the required width of the stairway. Every landing shall have a width at the top and bottom of each flight no less than the width of the flight at the junction with the landing. The minimum width of a landing at any point shall be not less than the width of the narrowest flight served as measured perpendicular to the walkline.

1009.8.2 (IFC [B] 1009.8.2) Stairway landing depth. At landings of straight run stairways and at stairway landing turns of 90 degrees or less between adjoining flights, the minimum landing depth shall be not less than the smaller of the minimum landing width or the value from Table 1009.8.2. Landings shall be measured between the vertical planes of the foremost projection of the tread and landing nosings at the intersections with the walkline.

Table 1009.8.2 (IFC [B] Table 1009.8.2)**Landing Depth**

Range of stairway turn at landing (degrees)		Minimum Landing Depth	
<u>Greater than</u>	<u>Less than or Equal to</u>	<u>Stairways other than spiral stairways and stairways within dwelling units and sleeping units (inches)</u>	<u>Spiral stairways and stairways within dwelling units and sleeping units (inches)</u>
85	90	21	18
80	85	23	19
75	80	24	20
70	75	26	21
65	70	27	22
60	65	29	23
55	60	30	24
50	55	32	25
45	50	33	26
40	45	35	27
35	40	36	28
30	35	38	29
25	30	39	30
20	25	41	31
15	20	42	32
10	15	44	33
5	10	45	34
0	5	47	35
0	0	48	36

For SI: 1 inch = 25.4 mm

1009.8.3 (IFC [B] 1009.8.3) Stairway landing shape. Walls and guards at the sides of landings shall be permitted to be curved or segmented.

1009.8.4 (IFC [B] 1009.8.4) Obstructions at stairway landings. The required width and depth of landings shall be unobstructed.

Exception: Encroachments complying with Section 1005.7.

1009.8.5 (IFC [B] 1009.8.5) Wheelchair spaces at stairway landings. Where *wheelchair spaces* are located on the *stairway* landing in accordance with Section 1007.6.1, the *wheelchair space* shall not be located in the required width or depth of the landing and doors shall not swing over the *wheelchair spaces*.

Reason: The intent of this proposal is to clarify stairway landing requirements. These provisions are not intended to be applicable to the unique configurations required within assembly seating areas. Those are addressed in Section 1028.

This proposal separates the component requirements of this section, allows a more precise understanding needed for both design and enforcement of required width and depth and provides a needed minimum landing depth requirement. In addition it provides a new requirement for landing shape that has previously been left to interpretation with needed explanation only offered within the code commentaries.

Landing Width: It is not uncommon that the widths of the flights vary within a stairway and the widths of different stairways sharing the same landing at a common floor level also vary. In fact different stairway widths may be required as passenger loads increase in the direction of egress. The current language is ambiguous as it does not clearly state what "The" width is when there is more than one stairway width or flight width at a landing.

Landing Depth is as critical as tread depth: Just as critical to good stairway design as tread depth is the depth of the landing. Landings should be designed to allow enough space to turn. Likewise and as the turning diminishes the landing should be of sufficient depth to prevent over stepping. Currently the code confuses landing depth as an element of its width without a specific depth requirement. The only specific reference to landing depth within this section serves to establish a "need not exceed dimension" of 48 inches (36 inches residential) for stairways with a straight run. Landing depth is especially critical at stairway landings that turn less than 90 degrees. Landing turns that are greater than 90 degrees are not addressed in this proposal because sufficient landing depth is provided by nature of the geometry. The intent of this proposal is not to increase the depth required at landings by the most common interpretations of the current code but to provide a clear application of the concept of landing depth at

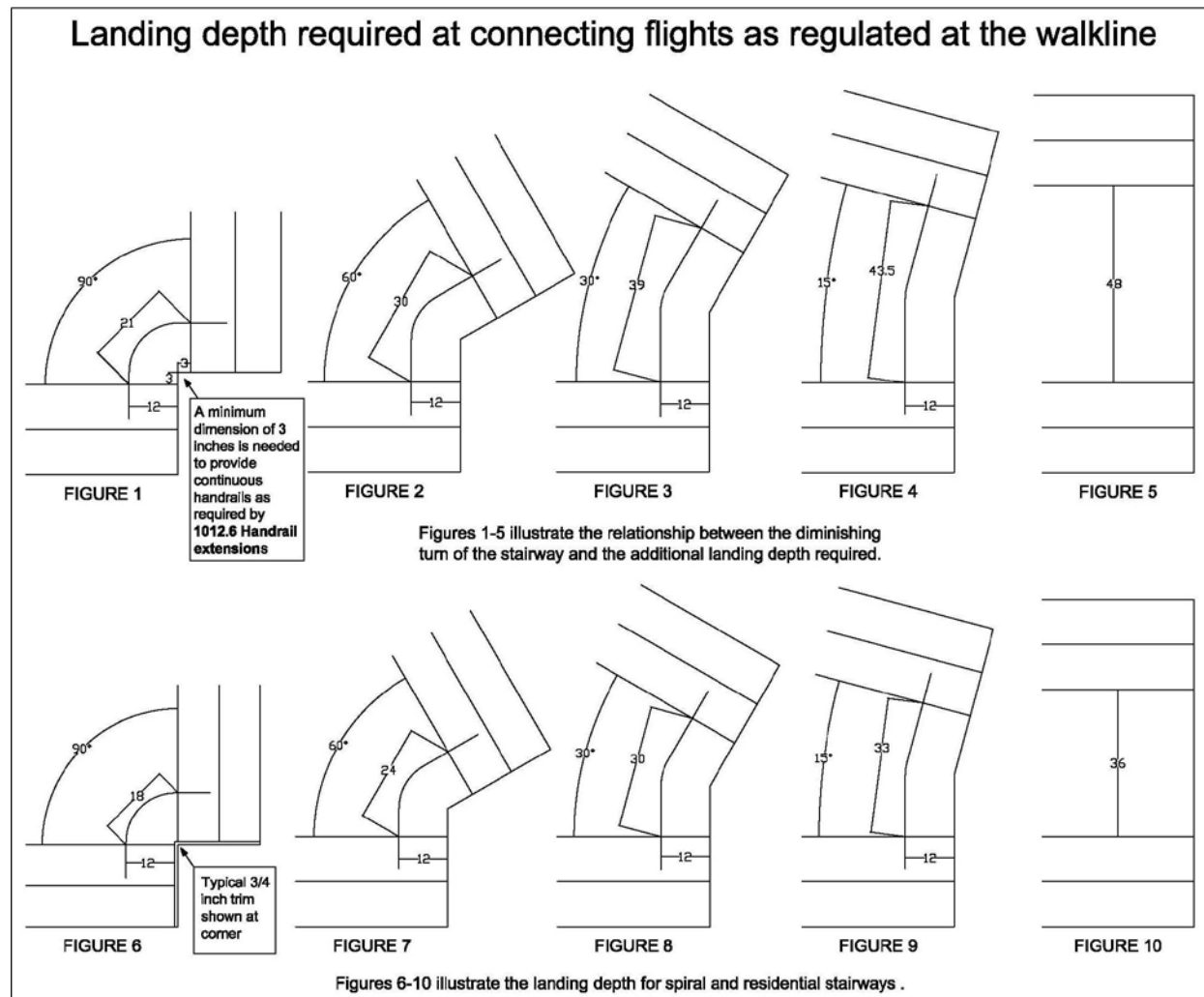
the walkline as experienced by the user. This proposal clarifies the current rectilinear requirements and provides a design solution that works regardless of the shape of the landing.

The Walkline can be used to regulate landing Depth: In order to regulate landing depth at the walkline, 1009.6 *Walkline*, has been modified to include landings. The modification recognizes that the walkline has both straight elements that are parallel and curved elements that are concentric and relates the walkline to both winders and landings. The walkline is referenced in a new landing depth section and a relationship is provided for controlling the depth of a landing where flights meet. The measuring criteria for landing depth is congruous with the criteria for measuring tread depth as found in 1009.7.2 *Riser height and tread depth*.

As illustrated in Figures 1 - 10 this proposal requires the landing depth increase as the angle of the turn diminishes to prevent overstepping of the landing and allow the space required to negotiate the turn. This correlates with the 48 inch "need not to exceed" depth of landings specified for stairways with straight runs currently in the code. Figure 1 and 6 shows a minimal 90 degree landing as built in accordance with the code. The landing in figure 1 has the minimum dimension necessary to provide for the continuous handrail connection as required in **1012.6 Handrail extensions**. The minimum landing currently possible has a depth at the walkline as shown of 21 inches and is the minimum allowed by this proposal for a landing turn of 90 degrees. Since the code currently has a "need not exceed limit" of 48 inches applicable to the condition where the stairway is straight run a simple linear relationship between these two conditions allows for calculation of the data in **Table 1** increasing the landing depth by a constant increment as the turning decreases. Figures 2-5 clearly illustrate examples from the table.

Figure 6 shows a typical residential landing and figures 7-10 again illustrate examples from the table and the incremental increase needed for both spiral stairways and residential applications.

It should be noted that this proposal further provides a viable landing depth whether or not the adjoining flights are curved as it is related to the degree of turning only at the landing of the stairway.



Minimum Landing Depth: If the landing depth, determined from the table, exceeds the minimum stairway width then the minimum stairway width shall be the minimum landing depth. If the stairway width exceeds the landing depth from the table then the landing depth from the table is the minimum landing depth.

Spiral stairways and stairways with in dwelling units: Figures 5-10 illustrate the landing conditions for stairways within dwelling units and spiral stairways and coordinates closely with the 2012 IRC. It allows a smaller 90 degree value of 18 inches where section 1012.6 **Handrail Extensions** does not apply and correlates the incremental increase in depth with the minimum depth of 36 inches for residential stairways with a straight run. Particularly in residential applications this proposal helps to define the difference between a landing and a winder.

Landing Shape: The shape of landings is not regulated in the code and is sometimes interpreted to permit only rectangular shapes. Clearly landings take different shapes dependent upon the angle at which flights meet. The unused outside corner of landings that is beyond the width measured perpendicular to the direction of travel is not needed for egress. Although this is explained in the ICC commentaries this proposal incorporates a new section titled landing shape to provide for consistent interpretation and enforcement.

Doors and Wheelchair Space at Landings: The language for obstructions has been updated to reference 1005.7. The requirements are the same, but the new language would be consistent with text in aisle, corridors and exit passageways. The language for wheelchair spaces is existing.

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

1009.6-E-Cooper.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The proposal provides technical criteria for stairway landings of unusual shape which are currently not addressed in the code. However, it is not clear how the Table 1009.8.2 can be used for angles between the specific angles specified or how a designer would measure the angle of a stairway. Since the understanding of the table really needs the graphics provided in the reason for clarification, perhaps this could be considered as alternative means and covered in the commentary. Some of the language deleted from 1009.8 deals with means of egress width and accessibility requirements. This should not be lost.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

David W. Cooper, Stair Manufacturing and Design Consultants, representing Stairway Manufacturers' Association, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1009.6 (IFC [B] 1009.6) Walkline. The walkline across *winder* treads and landings shall be parallel to the direction of travel and concentric through the turn. The walkline shall be located 12 inches (305 mm) from the side where the *winders* are narrower or from the side of shortest distance through the turn at a landing. The 12-inch (305 mm) dimension shall be measured from the widest point of the clear width at the walking surface. If *winders* are adjacent adjoining within the *flight*, the point of the widest clear stair width at the walking surface of the adjacent adjoining *winders* shall be used.

1009.8 (IFC [B] 1009.8) Stairway landings. There shall be a floor or landing at the top and bottom of each *flight of stairs*.

Exception: *Aisle stairs* complying with Section 1028.

1009.8.1 (IFC [B] 1009.8.1) Stairway landing width. The minimum width of landings shall be not less than the required width of the stairway. Every landing shall have a width at the top and bottom of each flight no less than the width of the *flight* at the junction with the landing. The minimum width of a landing at any point shall be not less than the width of the narrowest flight served as measured perpendicular to the walkline.

1009.8.2 (IFC [B] 1009.8.2) Stairway landing depth. At landings of straight run stairways landings having no landing turn measuring 0 degrees and at stairway landing turns of less than 90 degrees or less between adjoining flights, the minimum landing depth shall be 44 inches (1118 mm) minus 1¼ inches (31.8 mm) for each 5 degrees increment of turn at the landing up to 90 degrees as not less than the smallest of the minimum landing width or the value from Table 1009.8.2. Landing shall be measured between the vertical planes of the foremost projection of the tread and landing nosings at the intersections with the walkline. Landing turns of 90 degrees shall have a minimum of depth of 21½ inches (546 mm) at the walkline.

Exception: Spiral stairways and stairways within dwelling and sleeping units shall have a minimum landing depth of 36 inches (914 mm) minus 1 inch (25.4 mm) for each 5 degrees increment of turn at the landing up to 90 degrees as measured between the vertical planes of the foremost projection of the tread and landing nosings at the intersections with the walkline. Landing turns of 90 degrees shall have a minimum of depth of 18 inches (457 mm) at the walkline.

Table 1009.8.2 (IFC [B] Table 1009.8.2)
Landing Depth
(Delete table in its entirety.)

1009.8.3 (IFC [B] 1009.8.3) Stairway landing shape. Walls and guards at the The sides of landings at adjoining walls and guards shall be permitted allowed to be curved or segmented.

1009.8.4 (IFC [B] 1009.8.4) Obstructions at stairway landings. The required width and depth of landings shall be unobstructed.

Exception: Encroachments complying with Section 1005.7.

1009.8.5 (IFC [B] 1009.8.5) Wheelchair spaces at stairway landings. When *wheelchair spaces* are located on the *stairway* landing in accordance with Section 1007.6.1, the *wheelchair space* shall not be located in the required width or depth of the landing and doors shall not swing over the *wheelchair spaces*.

Commenter's Reason: The modification preserves the committee's interest in addressing the technical criteria for landings that is not currently addressed in the code. In particular

- the distinction between width and depth
- the depth of landings at the walkline
- the depth of landings at both curved and angular flights that meet at a landing
- the periphery shape of landings are addressed
- based on current minimum depths allowed

The table that confused the committee has been removed and substituted with simple arithmetic that results in the landing depth dimension. Part of the confusion noted by the committee was that the data in the table was rounded and thereby misrepresented. A corrected table is shown here to clarify that the increments are equal and lineal and comply with the calculations made from the modified code text. The drawings submitted with the original proposal are no longer needed to understand the code text which now stands alone. By qualifying that landings of straight run stairs have 0 degrees of turn the needed clarification the committee requested for ease of use has been provided.

Changes in the walkline section correct a submission error by substituting parallel text from the previous sentence and offering the more specific term "adjoining" to replace the somewhat subjective term "adjacent".

The essential requirements related to egress width and accessibility that the committee noted as deleted and critical, were in fact not eliminated but appeared on the next page of the monologue, simply relocated in new sections 1009.8.1, 1009.8.4 and 1009.8.5. Section 1009.8.4 provides an updated reference to 1005.7. The requirements are the same, but the new language would be consistent with text in aisle, corridors and exit passageways. The language in 1009.8 for wheelchair spaces is intact, simply relocated to 1009.8.5.

This is a much needed change that will address many issues that are inconsistently interpreted and often require reference to the commentary or other resources not in common use by designers, contractors, or enforcing officials. The committee recognized this and their other stated concerns have all been addressed in this modification.

This change allows us to consistently regulate landing depth with the same fundamentals as tread depth and relate it clearly to the users' walkline on the stairway regardless of the stairway plan-configuration. It is based on those requirements already understood in the code and does not change them but simply fills in the blanks that have been missing answers and left to interpretation. Your thorough consideration and approval as modified will be greatly appreciated by all that use the code.

E91-12

Final Action: AS AM AMPC_____ D

E94-12

1009.7.5.3 (IFC [B] 1009.7.5.3)

Proposed Change as Submitted

Proponent: Carl Baldassarra, P.E., FSFPE, Chair, ICC Code Technology Committee

Revise as follows:

1009.7.5.3 (IFC [B] 1009.7.5.3) Solid Risers. Risers shall be solid.

Exceptions:

1. Solid risers are not required for *stairways that serve as the means of egress from areas exempted from accessibility in accordance with Section 1103.2.* ~~that are not required to comply with Section 1007.3, provided that the opening between treads does not permit the passage of a sphere with a diameter of 4 inches (102 mm).~~
2. Solid risers are not required within Type B or non-accessible dwelling or sleeping units.
3. Means of egress stairways shall be permitted to have openings between treads that do not permit the passage of a sphere with a diameter of 4 inches (102 mm).
24. Solid risers are not required for occupancies in Group I-3 or in Group F, H and S occupancies other than areas accessible to the public. ~~There are no restrictions on the size of the opening in the riser.~~
35. Solid risers are not required for *spiral stairways* constructed in accordance with Section 1009.12.
46. Solid risers are not required for *alternating tread devices* constructed in accordance with Section 1009.13.

Reason: The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The code issues are assigned to the CTC by the ICC Board as "areas of study". Information on the CTC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website: <http://www.iccsafe.org/cs/cc/ctc/index.html>. Since its inception in April, 2005, the CTC has held twenty-two meetings – all open to the public.

The intent of this proposal is coordination with ADA requirements for solid risers on stairways as well as provide for a more logical and consistent application of solid risers.

The 1991 ADA only scoped stairways that connected levels that did not have an accessible route. The 2010 ADA Standard scopes stairways that are part of a means of egress, not just stairways that are part of an accessible means of egress. Therefore, the current Section 1009.7.5.3, Exception 1 was not coordinated with either the 1991 or 2010 ADA stairway provisions.

If an area is not required to be accessible, the route to that space is also exempted from ADA requirements; therefore, means of egress stairways from these areas are not covered by ADA. IBC Section 1103.2 has similar exceptions for accessible areas. For example, 1103.2.7 exempts areas raised for purposes of life safety, fire safety or security. With the proposed revisions in Section 1009.7.5.3, exception 1, stairways serving these areas are not required to have solid risers.

The new exception 2 would allow open risers on stairways within dwelling units or sleeping units that were covered by ADA (i.e., Accessible units or Type A units). Open risers are a common with stairways that provide access to basements within a residence.

One of the reasons for providing closed risers is to limit the chance that a cane could catch between risers. The 4" maximum opening would limit this as well as meet the 4" opening limits currently in the code for child protection.

Current exception 2 (new exception 4) has the last sentence deleted. This text is not needed, plus it could lead code users to think that other exceptions had size limitations.

Cost Impact: None

1009.7.5.3-E-BALDASSARRA-CTC.docx

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: Application of Exception #3 is too broad. The proponent asked for disapproval so that CTC and the proponent of E95 can work together to clarify what openings are permitted. Section 504.3 of the 2010 ADA Standard for Accessible Design does specify solid risers. The intent is to clarify which size opening should be permitted and still have the risers perform as if they were solid.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Carl Baldassarra, Code Technologies Committee, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1009.7.5 (IFC [B] 1009.7.5) Solid Risers Riser Opening Limitations. Risers shall be solid not have openings that allow passage of a sphere ½ inches (12.7 mm) in diameter.

Exceptions:

1. ~~Solid risers are not required for stairways that serve as the means of egress from areas exempted from accessibility in accordance with Section 1103.2.~~
21. ~~Solid risers are not required Risers within Type B or non-accessible dwelling or sleeping units not required to be Accessible or Type A units, provided that the openings between the lower adjacent tread, floor, or landing and the lower edge of the riser that do not allow permit the passage of a sphere with a diameter of 4 inches (102 mm) in diameter.~~
3. ~~Means of egress stairways shall be permitted to have openings between the lower adjacent tread, floor, or landing and the lower edge of the riser that do not permit the passage of a sphere with a diameter of 4 inches (102 mm).~~
42. ~~Solid risers are not required Risers for occupancies in Group I-3 or in Group F, H and S occupancies other than in areas not accessible to the public shall have no opening limitation.~~
53. ~~Solid risers are not required Risers for *spiral stairways* constructed in accordance with Section 1009.12 shall have no opening limitation.~~
64. ~~Solid risers are not required Risers for *alternating tread devices* constructed in accordance with Section 1009.13 shall have no opening limitation.~~
75. ~~Solid risers are not required Risers for ship ladders constructed in accordance with Section 1009.14 shall have no opening limitation.~~

Commenter's Reason: The intent of this public comment is coordination with ADA intent for solid risers but acknowledging what types of openings should be permitted. Generally, most stairways will have risers with a maximum opening size of ½ inch. Within residential units (other than Accessible or Type A units) stairways shall be permitted tread with a 4 inch opening similar to the guard requirements. Solid treads are not required in jails or not public areas in factories and storage for safety reasons. Solid risers would not allow adequate foot placement on the treads for spiral stairways, alternating tread devices or ships ladders.

The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The code issues are assigned to the CTC by the ICC Board as "Areas of Study". The Area of Study for this code change and public comment is called "IBC Coordination with the new ADAAG". Information on the CTC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website <http://www.iccsafe.org/cs/CTC/Pages/IBCCoordination-ADAAG.aspx>. Since its inception in April, 2005, the CTC has held twenty-four meetings – all open to the public. In addition to holding face-to-face meetings, the CTC established Study Groups where any interested party can participate in conference calls on specific subjects such as this area of study without having to attend the face-to-face meetings.

E94-12

Final Action:

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E95-12

1009.7.5, 1009.7.5.3 (IFC [B] 1009.7.5, 1009.7.5.3)

Proposed Change as Submitted

Proponent: David W. Cooper / Stairway Manufacturing and Design Consultants / Representing: Stairway Manufacturers' Association (sma@stairways.org)

Revise as follows:

~~1009.7.5.3 (IFC [B] 1009.7.5.3)~~ **1009.7.5 (IFC [B] 1009.7.5) Solid Risers.** Risers shall be solid.

Exceptions:

1. Solid risers are not required for stairways that serve as the means of egress from areas exempted from accessibility in accordance with Section 1103.2. are not required to comply with Section 1007.3.
2. Solid risers are not required within Type B or non-accessible dwelling or sleeping units provided that the openings between the lower adjacent tread, floor, or landing and the lower edge of the riser that do not permit the passage of a sphere with a diameter of 4 inches (102 mm).
3. Means of egress stairways shall be permitted to have openings between the lower adjacent tread, floor, or landing and the lower edge of the riser that do provided that the opening between treads does not permit the passage of a sphere with a diameter of 4 inches (102 mm).
24. Solid risers are not required for occupancies in Group I-3 or in Group F, H and S occupancies other than areas accessible to the public. There are no restrictions on the size of the opening in the riser.
35. Solid risers are not required for spiral stairways constructed in accordance with Section 1009.12.
46. Solid risers are not required for alternating tread devices constructed in accordance with Section 1009.13.
7. Solid risers are not required for ship ladders constructed in accordance with Section 1009.14

~~1009.7.5~~ **1009.7.6 (IFC [B] 1009.7.5 1009.7.6) Nosing and riser profile.** The radius of curvature at the leading edge of the tread shall be not greater than 9/16 inch (14.3 mm). Beveling of *nosings* shall not exceed 9/16 inch (14.3 mm). Risers shall be ~~solid and~~ vertical or sloped under the tread above from the underside of the *nosing* above at an angle not more than 30 degrees (0.52 rad) from the vertical.

~~1009.7.5.4~~ **1009.7.6.1 (IFC [B] 1009.7.5.4 1009.7.6.1) Nosing projection size.** The leading edge (*nosings*) of treads shall project not more than 1 ¼ inches (32 mm) beyond the tread below.

~~1009.7.5.2~~ **1009.7.6.2 (IFC [B] 1009.7.5.2 1009.7.6.2) Nosing projection uniformity.** All *nosing* projections of the leading edges shall be of uniform size, including the projections of the *nosings* leading edge of the floor at the top of a *flight*.

(Renumber subsequent sections)

Reason: Section **1009.7.5 Nosing and riser profile** is a constant source of controversy and misunderstanding. The reference to solid risers does not belong in the section that describes the profile or outline of a step. Notably masked in exception 1 by double negatives is the requirement for the limitation of openings in risers.

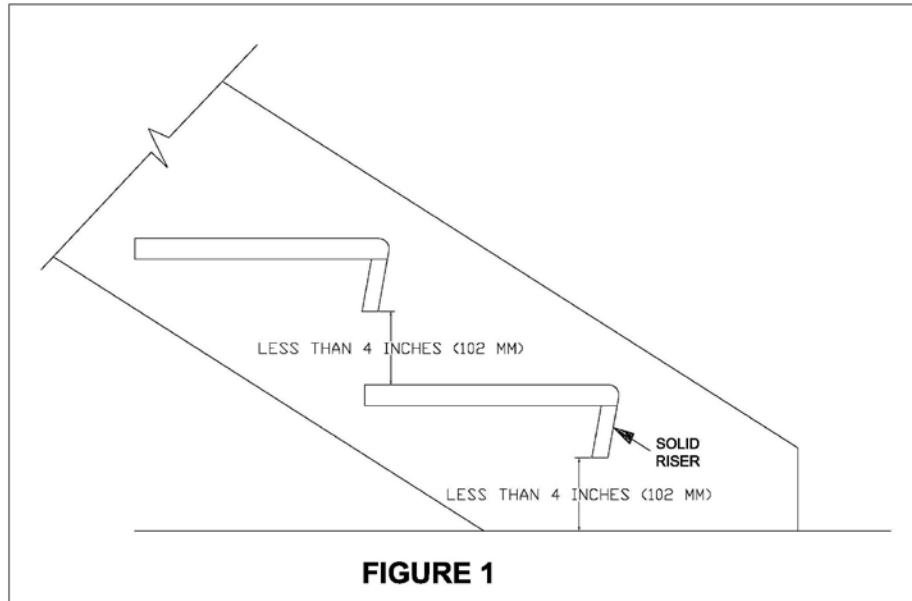
This proposal clarifies the scoping for use of solid risers and coordinates with the new ADA guidelines as outlined by the CTC. **Solid risers**, as a new and separate section subsection of **1009.7 Treads and risers** will appear prior to Nosing and riser profile. This allows easier identification of the opening limitation between treads and adjoining floors or landings that was previously misunderstood or not found. Exceptions 2 and 3 are similar to the CTC's proposal but assures that an opening limitation applies to Type B units as well as egress stairs and also provides that if an opening is used in the riser, it is in the lower portion of the riser

height, as shown in **Figure 1**, allowing design options that may provide additional heel clearance in descent and the appropriate design of tread nosings compliant with ADA guidelines that are important in ascent.

It is worth noting that the stairs covered in exception 2 would likely be means of egress stairs and would be covered by exception 3. If the committee wishes to modify this proposal by eliminating exception 2 in its entirety it would seem to work as well with less verbiage.

The out of place reference to solid risers has been eliminated from 1009.7.5 *Nosing and riser profile*. The profile of a stair nosing and riser are aptly described without the misplaced reference to the composition of risers. The content of the exceptions has been moved from 1009.7.5 *Nosing and riser profile* to the new section and coordinated with ADA guidelines.

Exception 7 adds ship ladders that were not previously included but should be as their use is made safer with the additional space for overhang of the toes in both ascent and in the typical backing down descent common to ladder use.



Cost Impact: This will not affect the cost of construction

1009.7.5 #2-E-Cooper.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: While the committee agreed that the proponents of E94 and E95 should work together regarding coordination with openings in stairway risers and ADA, they felt that the addition of ships ladders in section was valid.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment 1:

David W. Cooper, Stair Manufacturing and Design Consultants, representing Stairway Manufacturers' Association, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1009.7.5 (IFC [B] 1009.7.5)-Solid Risers Riser Opening Limitations. Risers shall be solid. Openings in risers between the walking surface of the adjacent tread, floor, or landing below and the lower edge of the riser above shall not allow passage of a sphere 2½ inches (63.5 mm) in diameter. Openings in risers 2-1/2 inches (63.5 mm) or higher above the walking surface of the adjacent tread, floor or landing below shall not allow the passage of a sphere ½ inch (12.7 mm) in diameter.

Exceptions:

1. ~~Solid risers are not required for stairways that serve as the means of egress from areas exempted from accessibility in accordance with Section 1103.2.~~
21. Other than within Accessible and Type A dwelling and sleeping units, in Group R-3 occupancies; within dwelling and sleeping units in Group R-2 occupancies; and in Group U occupancies that are accessory to a Group R-3 occupancy or accessory to individual dwelling and sleeping units in Group R-2 occupancies; opening in risers shall not allow Solid risers are not required within Type B or non-accessible dwelling or sleeping units provided that the openings between the lower adjacent tread, floor, or landing and the lower edge of the riser that do not permit the passage of a sphere with a diameter of 4 inches (102 mm) in diameter through the allowed opening.
3. ~~Means of egress stairways shall be permitted to have openings between the lower adjacent tread, floor, or landing and the lower edge of the riser that do not permit the passage of a sphere with a diameter of 4 inches (102 mm).~~
42. ~~Solid risers are not required Risers for occupancies in Group I-3 or in Group F, H and S occupancies other than areas accessible to the public shall have no opening limitation.~~
53. ~~Solid risers are not required Risers for spiral stairways constructed in accordance with Section 1009.12 shall have no opening limitation.~~
64. ~~Solid risers are not required Risers for alternating tread devices constructed in accordance with Section 1009.13 shall have no opening limitation.~~
75. ~~Solid risers are not required Risers for ship ladders constructed in accordance with Section 1009.14 shall have no opening limitation.~~

(Portions of proposal not shown remain unchanged)

Commenter's Reason: This modification preserves the intents of the original proposal but better clarifies the requirements and exceptions while making needed changes to coordinate with the 2010 ADA Standard. After working with the CTC to coordinate with the ADA Standard we saw no substantiation to support only a ½" sphere rule limitation, and further find that it would represent a substantial safety hazard where the removal of snow and debris on stairs is an issue.

The title clearly reflects that the issue is to limit the openings in risers. Both the A117.1 and 2010 ADA standards require that "Risers shall not be open" but does not require solid risers. Limitation of the openings in risers should be the requirement.

The 2½ inches opening in the lower portion of the riser serves to restrict penetration of canes and crutches and allows for removal of snow and ice accumulations that foreshorten the tread depth and stair width causing safety issues for all, especially crutch and cane users who by nature take a wider "stance" with their supportive mobility aid. "White" canes are typically used at an angle of approximately 40 degrees or more from the horizontal to detect the bottom riser of a flight on approach. "White" canes are not used in this manner on stairs. Once the step is detected, the cane is folded or held vertical and the stair is ascended without the use of the cane at an angle that would allow penetration of the riser. Supportive crutches and canes follow the user from behind on ascent and lead in descent to prevent "pole vaulting" making the riser inaccessible to the tip and lower extension of the mobility aid because it is in a near vertical position or at an opposing angle. The standards already provide a sphere rule limitation of ½ inch in treads to provide the needed surface to support the tips of supportive mobility aids. Such limitation is not required in the riser surface but should be allowed to provide for commonly used "expanded" metal or "mesh" products.

The original exceptions one and three have been eliminated to coordinate with the new 2010 ADA standard.

The original exception two has been modified to clarify the limited residential applications where a larger sphere rule in the bottom portion of the riser is acceptable and provide for compliance by allowing needed freedom of design.

The remaining exceptions have been modified to more clearly emphasize that no limits apply to the openings in the risers in each of the cited applications.

Public Comment 2:

Glenn Mathewson, representing North American Deck and Railing Association, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1009.7.5 (IFC [B]1009.7.5) Solid-Risers opening limitations. Risers shall be solid. Openings in risers between the walking surface of the adjacent tread or landing below and the lower edge of the riser above shall not permit the passage of a sphere 4 inches (102 mm) in diameter.

Exceptions

1. ~~Solid risers are not required for stairways that serve as the means of egress from areas exempted from accessibility in accordance with Section 1103.2.~~
2. ~~Solid risers are not required within Type B or non-accessible dwelling or sleeping units provided that the openings between the lower adjacent tread, floor, or landing and the lower edge of the riser that do not permit the passage of a sphere with a diameter of 4 inches (102 mm).~~
3. ~~Means of egress stairways shall be permitted to have openings between the lower adjacent tread, floor, or landing and the lower edge of the riser that do not permit the passage of a sphere with a diameter of 4 inches (102 mm).~~
41. ~~Solid risers are not required for occupancies~~ Openings shall not be limited in Group I-3, or in Group F, H and S occupancies other than in areas not accessible to the public. There are no restrictions on the size of the opening in the riser.

- ~~52. Solid risers are not required for Openings shall not be limited on spiral stairways, constructed in accordance with Section 1009.12.~~
~~6. Solid risers are not required for alternating tread devices, constructed in accordance with Section 1009.13.~~
~~7. Solid risers are not required for and ship ladders constructed in accordance with Section 1009.14~~

(Portions of proposal not shown remain unchanged)

Commenter's Reason: The proposed section title is more appropriate for the nature of the subject and is consistent language with Section 1013.4 "Opening Limitations" (for guards). In regions with snowfall, solid risers will collect compacted snow in the inside corner created between a solid riser and a tread. Snow is pushed into the corner by the toe or heel of stair users. The compacted snow may form into ice and remain for extended periods, ultimately shortening the length of the tread depth. The use of partially open risers allows the snow to be pushed through the riser, and creates an inherently safer stairway to all users, regardless of the maintenance practices of snow removal.

The committee did not provide any comment in their disapproval regarding the intent of the proposed modifications in E94 and E95, and rather seemed concerned about the language. Therefore, the modifications in this public comment are designed to streamline the text of both proposals, while providing an equivalent intent.

The language of Section 1009.7.5 is unnecessarily complicated and the exceptions essentially become the rule. The inclusion of exception #3 in both E94 and E95 regarding "means of egress stairways" allows partially open risers in every stairway, and thus becomes the general provision.

It is unnecessary to specify the other IRC sections related to spiral stairways and alternating tread devices, as these are IBC-defined terms. By definition, if you are dealing with one of these stairway types, you will always have to comply with the provisions of their specific IBC sections. This is unrelated to their unrestricted riser openings in this section. Ships ladders are not defined, and thus the reference to their respective chapter is appropriate.

E95-12

Final Action:	AS	AM	AMPC_____	D
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E98-12

1009.10 (IFC [B] 1009.10)

Proposed Change as Submitted

Proponent: David W. Cooper, Stairway Manufacturing and Design Consultants representing Stairway Manufacturers' Association (sma@stairways.org)

Revise as follows:

~~1009.10~~1009.4 (IFC [B] ~~1009.10~~1009.4) Vertical Total rise. A flight of stairs shall not have a total vertical rise greater than ~~42 feet (3658 mm)~~ 147 inches (3734 mm) between floor levels or landings.

Exceptions:

1. *Aisle stairs* complying with Section 1028.
2. *Alternating tread devices* used as a *means of egress* shall not have a rise greater than 20 feet (6096 mm) between floor levels or landings.
3. *Spiral stairways* used as a *means of egress* from *technical production areas*.

(Renumber subsequent sections)

Reason: This section has been renamed to use the term "Total rise" that is common to the industry however the adjective "vertical" remains within the requirement for clear definition by all. The use of industry terms has been substantiated throughout the code.

The elevation of 147 inches is a multiple of the maximum riser heights of, 7 inches (178 mm) commercial and 7-3/4 inches (197 mm) residential, allowed for IBC stairways. (See Table 1) This minor change of just 3 inches (76 mm) in the total rise of the flight would in many cases eliminate the cost of incorporating a landing and the space required, in many instances reducing costs of construction. As can be seen in the table below this change would require no additional steps in the stair than the current code requires and a change in riser height of just 5/32 inch (4 mm) or less when the minimum number of risers is desired. This represents no discernable difference consequential to the user.

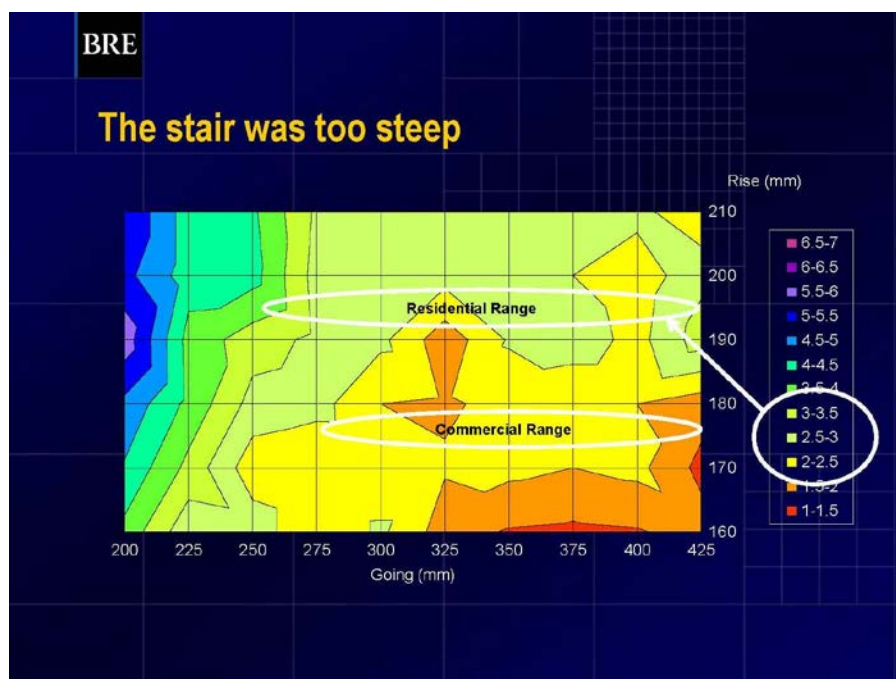


Figure 1 Residential Range = 7.58" (193mm) – 7.74" (197mm), Commercial Range = 6.84" (174mm) – 7" (178mm) see Table 1 Please note that the described circled ranges have been added to figures 1&2 by the proponent for the purpose of explanation.



Figure 2 Residential Range = 7.58" (193mm) – 7.74" (197mm), Commercial Range = 6.84" (174mm) – 7" (178mm) see Table 1
Please note that the described circled ranges have been added to figures 1&2 by the proponent for the purpose of explanation.

	Vertical Rise	# Risers	Riser Height Inches	Change in Riser Height inches	Riser Height mm	Change in Riser Height mm
Most Occupancies	144	21	6.86		174	
	147	21	7.00	0.14	178	4
Dwelling Units	144	19	7.58		193	
	147	19	7.74	0.16	197	4

Table 1

Testing in support of this proposal, as shown in the data presentations (Figure 1 and 2) from; "The Influence of Rise and Going, Combinations on Stair Safety" by M S Roys, June 2004, 7th World Conference on Injury Prevention and Safety Promotion, Vienna¹, the minor variation in rise does not produce any consequential effect that can be noticed by users when comparing riser heights within the range in question. *Please note that the circled ranges have been added to figure 1 & 2 by the proponent for the purpose of explanation.* Figures one and two can be related to the perceived energy required in ascent as described by the subjective rating of the steepness of the stair and the need to pull oneself up the stair using the handrail. In these figures the user's ratings are on a scale of 1-7 and color coded. The visual display of the data shows little difference in the users ratings over the range in question.

Additional testing data from this same study further illustrates little difference in the user's perception of riser height. When asked to rate descent of the stairway in response to the statement "I felt safe when walking down the stair" the risers heights of 6.69 inches, 7.09 inches, 7.48 inches (170 mm, 180 mm, 190 mm) all were rated the same with a tread depth of 10.83 inches (275 mm). Compared with the same tread depth the riser heights of 7.87 inches, 6.30 inches (200 mm, 160 mm) were within approximately 0.5 points on a scale of 7 points further indicating little difference being perceived by the users. This provides further validation that the change proposed is reasonable and will not affect stair safety.

Relocation of Section – Vertical Rise is the first consideration and arguably most significant factor in determining the design of a stairway. It is of consequence to the number of treads and landings affecting width, headroom, and step geometry. This section is buried in the code and the fact that it is overlooked is of consequence. This proposal moves the section to head the stairway geometry requirements to assimilate the sequence of use in design.

Construction cost reduction – It is common for the total rise to exceed 144 inches (3658 mm) with oversight of the requirement or minor changes in floor systems and finish flooring options. This requires the addition of an intermediate landing. Adding a landing increases the footprint of the stairway and the cost if the space is available.

Understanding and Compliance – This change will not increase the number of risers needed in the stairway or make the stairway less safe, or add any significantly perceived increase in energy to climb the stairway. This needed change provides a direct relationship between the vertical rise requirement and the requirements for riser height that would assure better understanding and compliance.

Bibliography:

1. "The influence of rise and going combinations on stair safety"; M.S. Roys, 7th World Conference on Injury Prevention and Safety Promotion, Vienna, June 2004

Cost Impact: This will reduce the cost of construction.

1009.10-E-Cooper.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The committee recognized that with the suggested 147" maximum run that the number of risers would not increase within the run; and the new height is an allowance for using 7 inches for all risers within the run. However, the committee felt that the data presented should include if the injury rate would be different with this increased stairway run.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

David W. Cooper, Stair Manufacturing and Design Consultants, representing Stairway Manufacturers' Association, requests Approval as Submitted.

Commenter's Reason: The committee's concern for increased injury is unfounded. Injury data is not available. The NEISS does not categorize stair accident data regarding stair dimensions. The conclusive data presented from the study of persons using stairs of various dimensions shows that the users experience does not change within the range of this possible minor increase in riser height using the same number of risers as is currently allowed. The increase is less than 5/32 of an inch. The risers of the stair would not exceed the allowed limitations of maximum riser height of 7" inches public and 7 ¾ residential. This is a reasonable change adding only 3 inches to the allowed total rise of a stairway based on current research and testing done long since the legacy of 144 inches was adopted.

This needed change will be of consequence in reducing the cost of construction by eliminating the additional space for the landing that is currently required and simplification of structural support of flights separated by a landing. It not only shortens the overall span of the stairway, it serves to decrease the distance the user needs to traverse.

E98-12

Final Action:

AS

AM

AMPC_____

D

E99-12

1009.11 (IFC [B] 1009.11)

Proposed Change as Submitted

Proponent: David W. Cooper, Stairway Manufacturing and Design Consultants representing Stairway Manufacturers' Association (sma@stairways.org)

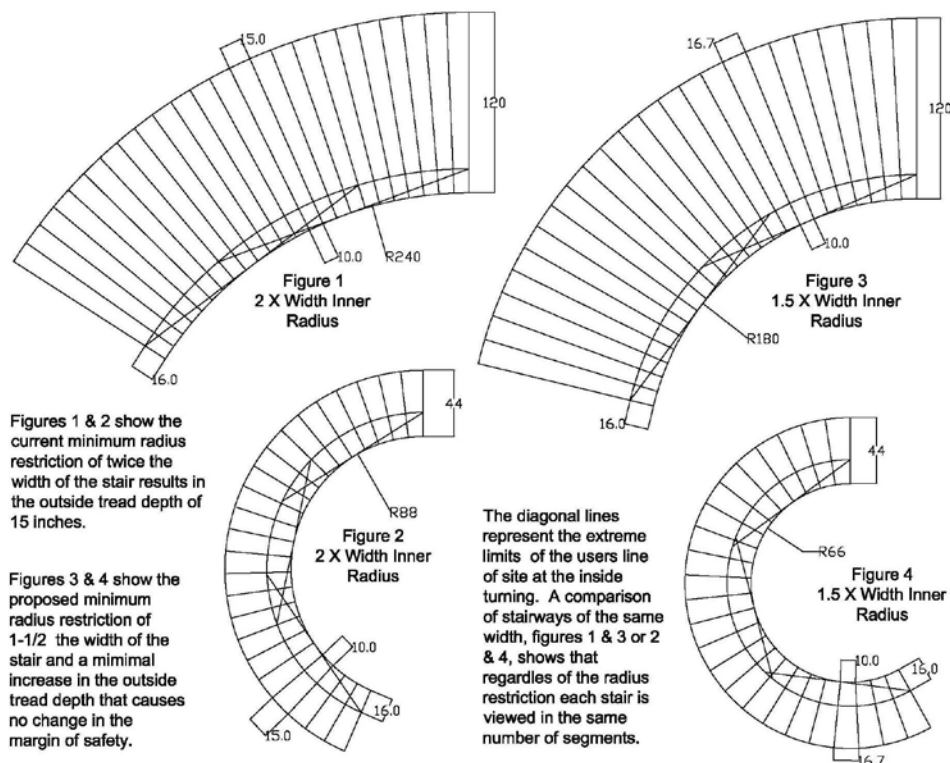
Revise as follows:

1009.11 (IFC [B] 1009.11) Curved stairways. Curved stairways with *winder* treads shall have treads and risers in accordance with Section 1009.7 and the smallest radius shall not be less than ~~twice~~ 1.5 times the required width of the stairway.

Exception: The radius restriction shall not apply to curved stairways for occupancies in Group R-3 and within individual *dwelling units* in occupancies in Group R-2.

Reason: The current radius restriction of twice the radius has little basis other than a rule of thumb handed down from the legacy codes and causes unnecessary restriction of curved stairway design without enhancing the safety of the user. Reducing the smallest radius restriction to 1.5 times the width is a more reasonable standard that will allow greater freedom of design. See **Figures 1 - 4** illustrating that only a slight increase in tread depth of less than 1 3/4 inches is realized at the outside radius and that the additional turning of the stairway does not substantially affect the view of other users that would be proximal on the stairway.

The examples below illustrate that a reduction in the minimum radius restriction will not affect the safe use of curved stairways due to tread depth or the turning of the stairway.



The dimension used for the line of sight indicated by the diagonal lines drawn across the stairs is sixteen inches accommodating the required handrail and the proximal position of the stairway passenger. The position is based on the most common lateral displacement of 350 mm (13.8 inches)¹ from the center of the handrail to the center of the body for the handrail slope of 33° that is common to IBC compliant stairways. Added to this is half the allowed handrail width of 2 1/4 inches and the minimum clearance of 1 1/2 inches totaling 16.4 inches.

The inconsequence of the minor increase in tread depth width is substantiated by testing performed by Mike Roys² as shown in **Figure 5**. Both the 15 inch (381 mm) and 16.7 inch (424 mm) tread depths lie in the same range of preference as indicated within the red circle. *The circle was added by the proponent for the purpose of explanation.*

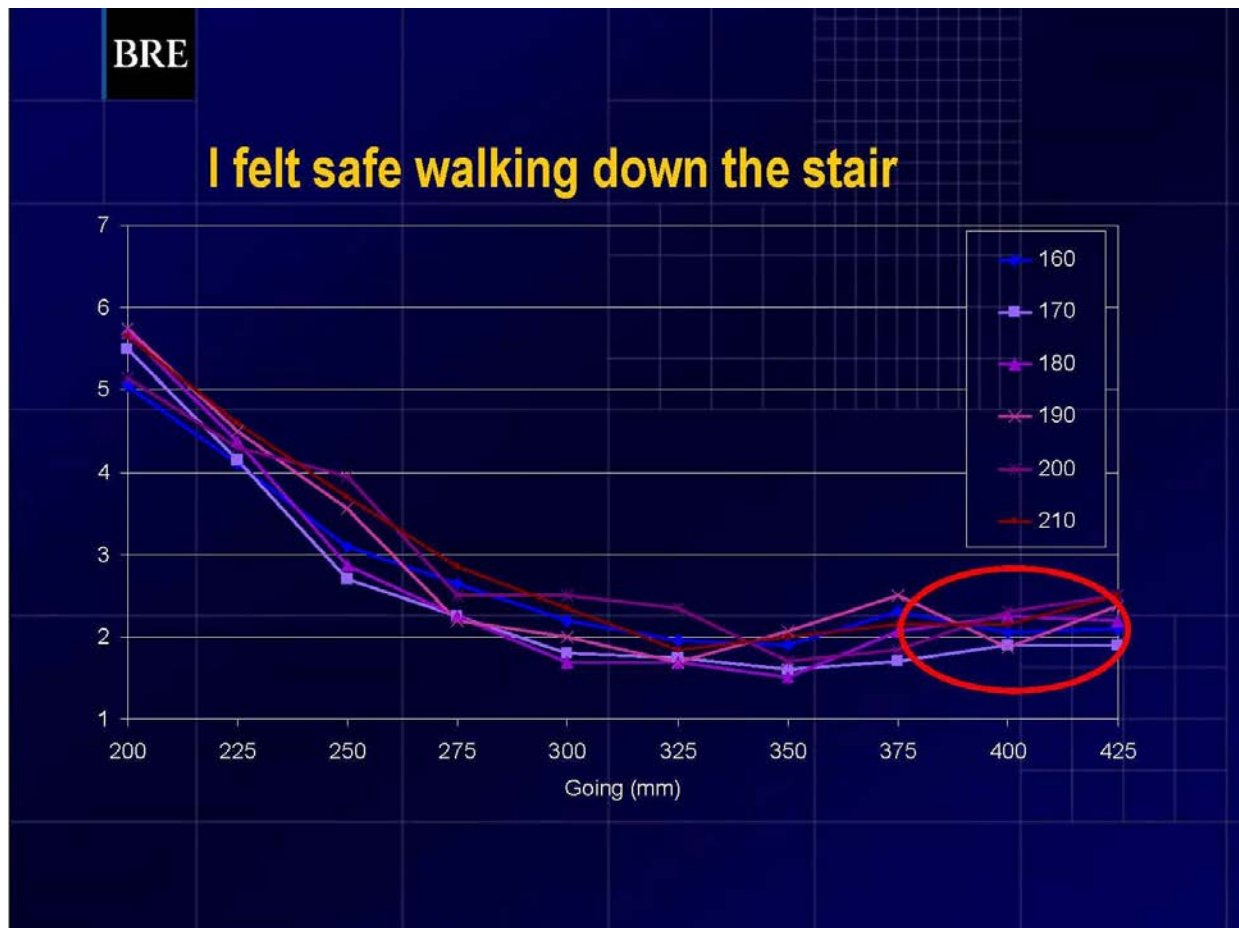


Figure 5

Bibliography

1. "Biomechanical Assessment of Handrail Parameters With Special Consideration to the Needs of Elderly Users"; B.E. Maki, et al, West Park Research, May 5, 1983
2. "The influence of rise and going combinations on stair safety"; M.S. Roys, 7th World Conference on Injury Prevention and Safety Promotion, Vienna, June 2004

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

1009.11-E-Cooper.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The committee wanted to know if the increased curvature would increase the egress time or not.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

David W. Cooper, Stair Manufacturing and Design Consultants, representing Stairway Manufacturers' Association, requests Approval as Submitted.

Commenter's Reason: The committee failed to raise the question of increased egress time with the proponent during testimony yet cited it as their reason to disapprove. The supporting information provided shows that there is no change in the users experience traversing the slightly larger step realized at the outer most portion of the stair. The increase of only 1.7 inches would not require the user to take any additional steps in traverse of the stairway and would therefore, of its own, not increase the time of egress.

Also related to egress speed is the range of visual perception both of the stairway and other users ahead on the stairway. The line of sight is clearly shown in figures 1 through 4 as not being changed in terms of the stairway segments in view at the tightest side of the turn. Finally the proposed change in the degree of turning required at each step is negligible if perceivable at all by the user.

Recent WTC egress research shows a clear advantage to eliminating landing turns to speed stairway egress. Curved stairways offer a design alternative that allows for a continuous flow without sharp turns, and increased visual perception of the path ahead compared to multiple flights separated by landing turns. Curved stairways do not require the needed change of stride required to negotiate landings that causes significant backups in crowded egress situations. The legacy code is over restrictive. The proposed decrease in the minimum radius is reasonable, based on current research and testing and will not affect safe egress but rather offer greater flexibility in design.

E99-12

Final Action: AS AM AMPC____ D

E103-12

1011.6.3 (IFC [B] 1011.6.3)

Proposed Change as Submitted

Proponent: John Williams, CBO, Chair, ICC Ad Hoc Committee on Health Care

Revise as follows:

1011.6.3 (IFC [B] 1011.6.3) Power source. *Exit* signs shall be illuminated at all times. To ensure continued illumination for a duration of not less than 90 minutes in case of primary power loss, the sign illumination means shall be connected to an emergency power system provided from storage batteries, unit equipment or an on-site generator. The installation of the emergency power system shall be in accordance with Chapter 27.

Exceptions:

1. Approved exit sign illumination means that provide continuous illumination independent of external power sources for a duration of not less than 90 minutes, in case of primary power loss, are not required to be connected to an emergency electrical system.
2. Group I-2 hospital exit sign illumination shall not be provided by unit equipment battery only.

Reason: The IBC and IFC both have the same requirements. NFPA is less restrictive for UL listings of equipment. NFPA 70 is not referenced by IBC/IFC as does NFPA 99. IBC/IFC permit batteries.

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

1017.3-E-WILLIAMS-ADHOC.doc

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: The requirement matches federal requirements for hospitals already in place and improves the reliability of the exit signage. The committee suggested that perhaps better wording would to require what the signage needed to be connected to rather than an exception for batteries. This might limit the mis-interpretation that remote batteries might be an option.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

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

Modify the proposal as follows:

1011.6.3 (IFC [B] 1011.6.3) Power source. *Exit* signs shall be illuminated at all times. To ensure continued illumination for a duration of not less than 90 minutes in case of primary power loss, the sign illumination means shall be connected to an emergency power system provided from storage batteries, unit equipment or an on-site generator. The installation of the emergency power system shall be in accordance with Chapter 27.

Exceptions:

1. *Approved exit* sign illumination means that provide continuous illumination independent of external power sources for a duration of not less than 90 minutes, in case of primary power loss, are not required to be connected to an emergency electrical system.
2. Group I-2 hospital Condition 2 exit sign illumination shall not be provided by unit equipment battery only.

Commenter's Reason: Code change E103 is a technical change which proposes to revise the exception to note that exit sign illumination for hospitals is not to be provided by unit equipment batteries only. This was approved by the committee in Dallas. The purpose of this public comment is limited to the editorial coordination of terminology with the approval of Code change G257 (see below). In this case, hospitals are Group I-2 Condition 2. Since G257 deals only with terminology, this public comment is being submitted to E102 in order to focus the attention on the coordination of terminology issue.

At the Code Development Hearing, the IBC - General committee approved as modified G257-12 which created two occupancy conditions for Group I-2, similar to what is currently in the IBC for Group I-3. The end result is that where warranted based on the type of occupancy, the code would designate Group I-2 hospitals as Group I-2 Condition 2. As indicated in the reason statement for G257, the benefit of the condition concept, when compared to creating new use groups, (i.e. Group I-5 or I-6) is that a majority of code requirements would still apply to all Group I-2 occupancies.

Following the successful action on G257, the ICC Ad Hoc Committee for Healthcare (AHC) did a word search of the IBC along with a review of code changes submitted in the 2012 Cycle which are unique to hospitals and nursing homes to determine whether or not the condition designation was necessary in order to distinguish between the two typical Group I-2 occupancies – hospitals (Condition 2) and nursing homes (Condition 1). As noted above, the majority of the code requirements do not differentiate based on these two types of Group I-2 and as such the number of instances where the Group I-2 condition designation is necessary is kept to a minimum. Code change E103 is one such application where the Group I-2 Condition 2 designation is warranted and therefore this public comment is being submitted by the AHC.

The AHC was established by the ICC Board of Directors to evaluate and assess contemporary code issues relating to hospitals and ambulatory healthcare facilities. The AHC is composed of building code officials, fire code officials, hospital facility engineers, and state healthcare enforcement representatives. The goals of the committee are to ensure that the ICC family of codes appropriately addresses the fire and life safety concerns of a highly specialized and rapidly evolving healthcare delivery system. This process is part of a joint effort between ICC and the American Society for Healthcare Engineering (ASHE), a subsidiary of the American Hospital Association, to eliminate duplication and conflicts in healthcare regulation. Since its inception in April, 2011, the AHC has held 7 open meetings and over 100 workgroup calls which included members of the AHC as well as any interested party to discuss and debate the proposed changes. All meeting materials and reports are posted on the AHC website at: <http://www.iccsafe.org/cs/AHC/Pages/default.aspx>.

Staff analysis: Code change G257 was Approved as Modified at the Code Development Hearings and a public comment has not been submitted. Accordingly it has been placed on the consent agenda.

E103-12

Final Action: AS AM AMPC____ D

E104-12

1012.8 (IFC [B] 1012.8)

Proposed Change as Submitted

Proponent: Gene Boecker, AIA, Code Consultants, Inc, representing self
(geneb@codeconsultants.com)

Revise as follows:

1012.8 (IFC [B] 1012.8) Projections. On ramps, the clear width between handrails shall be 36 inches (914 mm) minimum. Projections into the required width of stairways and ramps at each side shall not exceed 41/2 inches (114 mm) at or below the handrail height. Projections into the required width shall not be limited above the minimum headroom height required in Section 1009.5. Projections due to intermediate handrails shall not constitute a reduction in the egress width provided that each intermediate handrail is not wider than 2-1/4 inches (57 mm).

Reason: The intent, when this provision was originally added, was to allow intermediate handrails to not count against the required width since it was required on wide stairs and provided added safety on ramps. Because the prior code text was unclear what effect a handrail had on the allowed projections into the stair or ramp and what that did for the overall capacity of the egress element some change was necessary. When a person moves on a stair or ramp, using the handrail, the arm is over the railing. The person on the other side of the railing does likewise. This type of condition does not effectively reduce the capacity of the egress element and increases safety by virtue of the handrail itself.

However, double railings widen the space between columns of people on ramps and stairs and can reduce capacity. A set of handrails separated by 10 inches may be helpful in providing each column with a handrail but it should be taken into consideration when calculating the capacity of the ramp or stair. The proposal uses a 2-1/4 inch dimension to allow for non-circular handrails which might meet the requirements of Section 1012.3.1 for Type I handrails. Thus, if a single railing (or multiple single railings) is placed within a stair or ramp, each railing, if less than 2-1/4 inches in width, would not count to decrease the capacity of the egress element or required width.

However, if a set of double railings would be provided within the stair or ramp, the minimum overall width of a double railing would be 4 inches (two 1-1/4 inch railings, plus 1-1/2 inch clear between railings per Section 1012.3.1 and 1012.7). This would need to be deducted from the total width of the stair or ramp.

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

1012.8-E-Boecker.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The proposed language could be interpreted to not allow a double handrail no matter how wide the stairway. This is needed for stairways with heavy traffic moving in two directions, such as schools during passing periods. The proponent should come back with a proposal that addresses limits for the typical double handrail.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Gene Boecker, AIA, Code Consultants, Inc (CCI), requests Approval as Modified by this Public Comment.

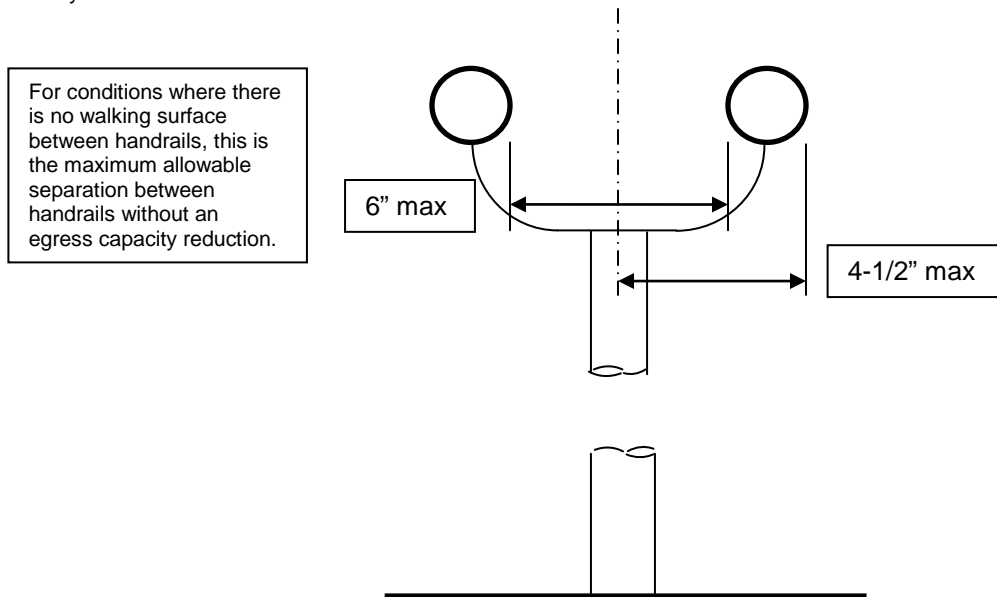
Modify the proposal as follows:

1012.8 (IFC [B] 1012.8) Projections. On ramps, the clear width between handrails shall be 36 inches (914 mm) minimum. Projections into the required width of stairways and ramps at each side shall not exceed 41/2 inches (114 mm) at or below the

handrail height. Projections into the required width shall not be limited above the minimum headroom height required in Section 1009.5. Projections due to intermediate handrails shall not constitute a reduction in the egress width provided that each intermediate handrail is not wider than 2-1/4 inches (57 mm). Where a pair of intermediate handrails are provided within the stairway width without a walking surface between the pair of intermediate handrails and the distance between the pair of intermediate handrails is greater than 6 inches (152 mm), the available egress width shall be reduced by the distance between the closest edges of each such intermediate pair of handrails that is greater than six inches (152 mm).

Commenter's Reason: The committee didn't think that the language was adequate for what to do when a pair of handrails is provided. The proposal addresses that by offering a method to calculate the egress width. The illustration shows in simple terms the dimension that must be deducted from the overall width of the stairway. Because handrails are allowed to protrude on the sides without reducing the egress width and a single intermediate handrail does not reduce the egress width, this solution is the simplest method for evaluating conditions where two handrails are provided without a walking surface between them.

If the handrails touch one another then there is no reduction. However, because at least 1-1/2 inches must be provided for clearance around the handrail according to Section 1012.7, the handrails must be at least 1-1/2 inches apart. In this configuration, no reduction is applied. If the handrails are 6 inches apart, and a thin barrier was provided at mid-point as a wall, the configuration would be like two stairways, side-by-side. On each side of the thin barrier, the handrail would be projecting 4-1/2 inches (half of six inches plus the 1-1/2 inch diameter railing) into the stair, exactly what is allowed by Section 1012.8. Therefore the maximum between handrails is 6 inches. If the pair of railings is located 12 inches apart, the stairway width available for egress would be reduced by 6 inches.



This methodology addresses the committee's concerns and recognizes that fact the intermediate handrails are capable of reducing the available width in stairways if designed in such a manner that it is not possible to walk on both sides of the handrails. ICC staff have indicated that there have been attempted designs with 12 -18 inches between handrails, based on the original language. This clearly infringes on the ability of the stair to convey the proper number of people to egress since it reduces the effective width. The proposal addresses that issue and also the concerns of the committee and other testifying, that the provisions recognize allowed protrusions.

E104-12

Final Action:

AS

AM

AMPC____

D

E106-12

1013.3 (IFC [B] 1013.3)

Proposed Change as Submitted

Proponent: Carl Baldassarra, P.E., FSFPE, Chair, ICC Code Technology Committee

Revise as follows:

1013.3 (IFC [B] 1013.3) Height. Required guards shall not be less than 42 inches (1067 mm) high, measured vertically as follows:

1. From the adjacent walking surfaces,
2. On the line connecting the leading edges of the tread nosings, and
3. On ramps from the ramp surface at the guard.
4. From a seatboard where a guard would be required at the walking surface and the seatboard is part of the guard or adjacent to the guard.

Exceptions:

1. For one- and two- family dwellings and townhouses in Group R-2 and R-3, For occupancies in Group R-3 not more than three stories above grade in height and required guards within individual dwelling units and in areas serving the dwelling unit in occupancies in Group R-2 not more than three stories above grade in height with separate means of egress, required guards shall not be less than 36 inches (914 mm) in height measured vertically above the adjacent walking surfaces or fixed seating seatboard.
2. For Group R-2 and R-3 units, required guards within the dwelling unit shall not be less than 36 inches (914 mm) in height measured vertically above the adjacent walking surface or seatboard.
- ~~32.~~ For occupancies in Group R-3, and within individual dwelling units in occupancies in Group R-2, guards on the open sides of stairs shall have a height not less than 34 inches (864 mm) measured vertically from a line connecting the leading edges of the treads.
- ~~43.~~ For occupancies in Group R-3, and within individual dwelling units in occupancies in Group R-2, where the top of the guard also serves as a handrail on the open sides of stairs, the top of the guard shall not be less than 34 inches (864 mm) and not more than 38 inches (965 mm) measured vertically from a line connecting the leading edges of the treads.
- ~~54.~~ The guard height in assembly seating areas shall comply with Section 1028.14.
- ~~6.5.~~ Along alternating tread devices and ship ladders, guards whose top rail also serves as a handrail, shall have height not less than 30 inches (762 mm) and not more than 34 inches (864 mm), measured vertically from the leading edge of the device tread nosing.

Reason: The purpose of this change is to require higher guards when a fixed bench is part of or immediately adjacent to a guard. The concern is child safety for when children stand on a seat and possibly tip over the guard. The reference back to the floor surface in new Item 4 is to clarify where the measurement for the drop-off for where a guard is required is different from the measurement for the guard height.

The changes to Exception 1 is to coordinate better with IRC. The guard height is permitted to be 36" both inside and outside the individual dwelling unit. Where a balcony or deck had a bench constructed as part of the guard, the guard height above the bench would be 36".

New exception 2 is to allow a 36" high guard along an interior balcony or mezzanine within a Group R-2 multi-story apartment. This would allow guards and handrails along stairways (current exceptions 2 and 3) to not have a large change in elevation at the top landing to meet up with the guard. For these buildings, if there is an exterior balcony for a unit, the guard height would be 42" minimum. That would include measurement from a bench if it was constructed as part of the guard.

The intent of this proposal is to coordinate with the proposal for perimeter guards along assembly seating being proposed by the ICC 300 Bleacher Safety Committee. It is not the intent for these provisions to apply to fixed assembly seating arrangements.

There types of facilities have issues of line-of-sight, requirements for handrails and guards along aisle that are stepped, ramped or level, crowd issues, etc. that are more appropriately handled in Section 1028.

The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The code issues are assigned to the CTC by the ICC Board as "areas of study". Information on the CTC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website: <http://www.iccsafe.org/cs/cc/ctc/index.html>. Since its inception in April, 2005, the CTC has held twenty-two meetings – all open to the public.

Cost Impact: None

1013.3-E-Baldassarra-CTC.docx

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: 'Seatboard' is not defined in relation to this specific area. Seatboards are understood in bleachers, but requirements for guards in assembly seating areas are addressed in Section 1028 and ICC 300. If there is an understanding of what a seatboard might be, there is no indications of how close a seatboard has to be to be considered adjacent, and there no requirements for the seat to be fixed or not. A suggestion was requiring where the seatboard was within 36 inches horizontal of the falling hazard, similar to the guard requirements. Measuring the height for the guard from a different elevation (i.e., seatboard) other than the floor where the drop off is determined is confusing.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Carl Baldassarra, P.E., FSFPE, Chair, ICC Code Technology Committee requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1013.3 (IFC [B] 1013.3) Height. Required guards at open-sided walking surfaces, including stairways, ramps, porches, balconies or landings, shall not be less than 42 inches (1067 mm) high measured vertically above the adjacent walking surface, adjacent fixed seating or the line connecting the leading edges of the treads as follows:

1. ~~From the adjacent walking surfaces;~~
2. ~~On the line connecting the leading edges of the tread nosings, and~~
3. ~~On ramps from the ramp surface at the guard.~~
4. ~~From a seatboard where a guard would be required at the walking surface and the seatboard is part of the guard or adjacent to the guard.~~

Exceptions:

1. For one- and two- family dwellings and townhouses in Group R-2 and R-3, required guards within individual dwelling units and in areas serving the dwelling unit shall not be less than 36 inches (914 mm) in height measured vertically above the adjacent walking surfaces or seatboard fixed seating.
2. For Group R-2 and R-3 units, required guards within the dwelling unit shall not be less than 36 inches (914 mm) in height measured vertically above the adjacent walking surface or seatboard fixed seating
3. For occupancies in Group R-3, and within individual dwelling units in occupancies in Group R-2, guards on the open sides of stairs shall have a height not less than 34 inches (864 mm) measured vertically from a line connecting the leading edges of the treads.
4. For occupancies in Group R-3, and within individual dwelling units in occupancies in Group R-2, where the top of the guard also serves as a handrail on the open sides of stairs, the top of the guard shall not be less than 34 inches (864 mm) and not more than 38 inches (965 mm) measured vertically from a line connecting the leading edges of the treads.
5. The guard height in assembly seating areas shall comply with Section 1028.14.
6. Along alternating tread devices and ship ladders, guards whose top rail also serves as a handrail, shall have height not less than 30 inches (762 mm) and not more than 34 inches (864 mm), measured vertically from the leading edge of the device tread nosing.

Commenter's Reason: The reason for disapproval of this change was due to the term "seatboard" being undefined. This modification mirrors the approved text from the IRC (Section R312.1.2) in an effort to both clarify the terminology and to achieve consistency with the IRC. The IRC does not use the term "seatboard" but rather "fixed seating". The public comment retains the 42" guard height (IRC is 36") and the IBC exceptions are retained, with the change from "seatboard" to "fixed seating", as the IBC scope is different than that of the IRC. In addition, there seemed to be some confusion at the Code Development Hearings regarding this being applied to assembly seating. Guards for assembly seating are clearly regulated by Exception 5 which requires compliance with Section 1028.14. Similarly, concerns were noted at the hearing with the term "adjacent" as it may be viewed as interpretive. A word search of the term "adjacent" in the IBC uncovered that it is used 219 times in the IBC.

The picture below clearly illustrates the hazard to children falling over the guard where the adjacent fixed seating becomes a walking surface for a child.



The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The code issues are assigned to the CTC by the ICC Board as "Areas of Study". The Area of Study for this code change and public comment is called "Climbable Guards". Information on the CTC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website: <http://www.iccsafe.org/cs/CTC/Pages/ClimbableGuards.aspx> Since its inception in April, 2005, the CTC has held twenty-four meetings – all open to the public. In addition to holding face-to-face meetings, the CTC established Study Groups where any interested party can participate in conference calls on specific subjects such as this area of study without having to attend the face-to-face meetings.

E106-12

Final Action: AS AM AMPC_____ D

E112-12

1014.3.1 (New) [IFC [B] 1014.3.1 (New)]

Proposed Change as Submitted

Proponent: Brad Emerick, P.E., City and County of Denver Fire Prevention representing the Fire Marshals Association of Colorado (FMAC) (brad.emerick@denvergov.org)

Add new text as follows:

1014.3.1 (IBC [F] 1014.3.1) Paths of egress travel. From the terminus of the *common path of egress travel*, two separate and distinct paths shall be provided that diverge at a minimum rate of 7 feet for every 10 feet of travel along the paths. Divergence shall continue until one of the following is attained:

1. The paths are separated by a distance equal to the separation required by Section 1015.2.1, or
2. An exit access doorway or exit is reached by one of the paths.

Exception: Where a building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2, the divergence rate shall not be less than 5 feet for every 10 feet traveled along the paths until Item 1 or 2 above is attained.

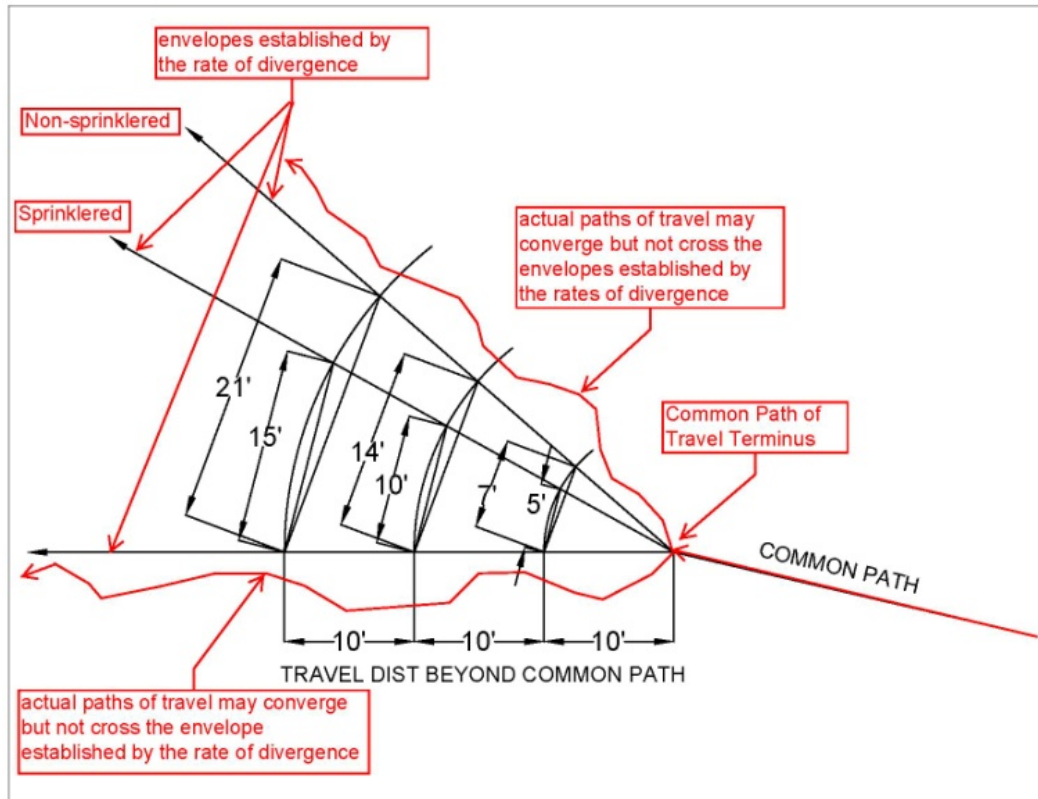
Reason: The only place in the code requiring “two separate and distinct paths” is in a definition. Though it’s not always possible, in general, requirements should be in the body of the code.

In addition, the letter of the code allows the “two separate and distinct paths” required in the definition of Common Path of Egress Travel to parallel each other (even converge as long as they do not merge) with no minimum separation distance. The only criteria are that the paths be “separate and distinct” which are not defined. Because no minimum separation is established, the primary intent of two paths (i.e., that a single incident cannot block both) is repeatedly contested. Previous proposals to codify the concept that these paths be divergent were voted down in part because a fixed separation could not be applied at the point where the Common Path of Egress Travel terminates (terminus).

The proposed section attempts to address these by establishing a minimum divergence rate in the body of the code based on distance traversed from the terminus of the common path. An exception is proposed that is consistent with the reduced exit or exit access separation permitted for a sprinklered building (i.e., sprinklered ~ 2/3 non-sprinklered).

Though the divergence rates of 45 degrees (non-sprinklered) and 30 degrees (sprinklered) were in the original draft of this proposal, the rates of 7 feet per 10 feet of travel (approximately a 42 degree angle) and 5 feet per 10 feet of travel (approximately a 29 degree angle) are expressed in a way that is easier to verify on drawings and in the field.

The figure below depicts a common path of travel coming in from the lower right, and the two rates of divergence (sprinklered and non-sprinklered) from its terminus. The straight lines with arrows represent the envelopes established by the proposed divergence rates. To keep the number of lines on the drawing to a minimum, both rates are measured from a common horizontal line. The squiggly red lines outside the non-sprinklered divergence rate represent actual travel paths and attempt to illustrate that in a non-sprinklered building, these paths may converge as long as they do not cross the envelope established by the minimum divergence rate of 7 feet for every 10 feet of travel. The sprinklered divergence rate is depicted for comparison.



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

1014.3.1(new)-E-Emerick.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: This is an overly complex solution to a problem that may not exist. In addition, it may conflict with other provisions in the code such as the stairway separation of 30 feet permitted in high rise buildings and allowances for protected paths of travel.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Brad Emerick, PE, Denver Fire Department Fire Prevention Division, representing Fire Marshal's Association of Colorado (FMAC), requests Approval as Submitted.

Commenter's Reason: The Means of Egress (MOE) is a pedestrian path through a building to a safe location outside the building. The code regulates the width, change in elevation, obstacles, length, protection level, etc., of this path. Initially, only a single path is required from any point in a building (*the common path of egress travel* or CPT). If at the CPT terminus, occupants traveling on the CPT have not reached an exit or exit discharge, then they are to be provided "separate and distinct access to two exits or exit access doorways" (previously "two separate and distinct paths...to two exits"). This segment of the MOE path – between the end of the CPT and the exit access doorway or exit – is the only portion not regulated clearly by the code.

The intent is to have the two paths diverge at some minimum rate in order to preclude a single event from blocking both. Mandating the paths separate at 180° is not reasonable – but neither is permitting the paths to parallel each other with only a body-width separation (which is permitted by the letter of the code). Every divergence rate in between is open to the interpretation of “separate and distinct” which fosters inconsistency.

Several designs have been proposed in our jurisdiction where the two paths parallel each other 6 to 10 feet apart and unfortunately one was permitted on appeal. On that particular application two exits were separated by 1/3 the diagonal dimension of the area served but were both located along a 10-foot wide hallway extending away from the dining area. The CPT ended prior to all occupants reaching the first exit but occupants had to pass by the first exit to reach the second. Though the paths were parallel, because they were separated by about 10 feet, they were deemed separate and distinct (citing the letter of the code). In reality this configuration is just an extension the CPT and violates the intent of the code.

This proposal would establish minimum, reasonable divergence rates for the two paths required from the end of the CPT. Two rates are proposed that are consistent with the exit or exit access separation permitted for sprinklered and non-sprinklered buildings. Under this proposal, the paths are only required to diverge until they are separated by a distance equal to the separation required for exit access doorways or exits, or until one of the paths reaches an exit access doorway or exit – whichever occurs first.

Though the divergence rates of 45 degrees (non-sprinklered) and 30 degrees (sprinklered) were originally contemplated for this proposal, the rates of 7 feet per 10 feet of travel (an approximately 42 degree angle) and 5 feet per 10 feet of travel (an approximately 29 degree angle) are expressed in a way that is easier to verify on drawings and in the field.

E112-12

Final Action:	AS	AM	AMPC_____	D
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E121-12

Table 1018.1 (IFC [B] Table 1018.1)

Proposed Change as Submitted

Proponent: Thomas S. Zaremba, Roetzel & Andress, Glazing Industry Code Committee (“GICC”) and Primary Fire Rated Glazing Manufacturers (tzaremba@ralaw.com)

Revise as follows:

**TABLE 1018.1 (IFC [B] TABLE 1018.1)
CORRIDOR FIRE-RESISTANCE RATING**

OCCUPANCY	OCCUPANT LOAD SERVED BY CORRIDOR	REQUIRED FIRE-RESISTANCE RATING (hours) ^c	
		Without sprinkler system	With sprinkler system
H-1, H-2, H-3	All	Not permitted	1
H-4, H-5	Greater than 30	Not permitted	1
A, B, E , F, M, S, U	Greater than 30	1	0
<u>E</u>	<u>Greater than 30</u>	<u>1</u>	<u>1</u>
R	Greater than 10	Not permitted	0.5
I-2 ^a	All	Not permitted	0
I-1, I-3	All	Not permitted	1 ^b

Reason: According to a June 2011 NFPA Research Report: “U.S. fire departments responded to an estimated average of **6,260 structure fires** in educational properties in 2005-2009, annually. These fires caused annual averages of **85 civilian fire injuries** and **\$112 million in direct property damage**. The majority of fires and losses in educational properties were in nursery through high schools.” Source: Evarts, *Structure Fires in Educational Properties*, NFPA Fire Analysis and Research Division (June 2011); emphasis added.

Day Care Centers averaged 590 structure fires; 8 injuries; and \$4.5 Million in direct property damage annually while K-12 educational facilities averaged an annual 4510 structure fires; 68 injuries; and \$95 Million in direct property damage. Source: Evarts, *Structure Fires in Educational Properties*, NFPA Fire Analysis and Research Division (June 2011).

Most educational facilities built since the late 1970s are required to have automatic sprinkler and other fire/smoke alarm systems which, according to FEMA, likely explains why no deaths from school structure fires were reported in 2002. As displayed in the 2002 FEMA Table below, fires in educational facilities were generally less damaging than non-residential fires; **however**, it is important to note that **fires in schools were generally more injurious than other non-residential structure fires**.

**LOSS MEASURES FOR SCHOOL STRUCTURE FIRES
(2002)**

Loss Measure	All Non-Residential Structure Fires	School Structure Fires
\$ Loss/Fire	\$21,505	\$15,956
Injuries/1,000 Fires	14.4	22.0
Fatalities/1,000 Fires	1.1	0.0

Source: FEMA, *Topical Fire Research Series, School Fires*, Vol. 4, Issue 6 (December 2004); emphasis added.

Clearly, the documented number of fires, injuries and the extensive damage done annually to educational occupancies, warrants increased fire protection for students, teachers, property and fire service members entering the buildings after fires are reported, either to rescue students that may be missing from the evacuation count, or to just put out the fires.

In the past, the principal impediment to adopting added fire protection features has been the increased cost of construction. However, SSOE Group, a world-wide architectural firm with extensive experience in the design of educational occupancies, recently completed a study of the costs associated with adding fire rated exit corridors to schools with automatic sprinkler systems. SSOE took the actual costs of three different schools that it had actually designed recently with automatic sprinkler systems and determined the additional costs necessary to fire rate their exit corridors in accordance with the 2009 edition of the IBC.

SSOE used three different schools as the basis for its report. The first is a 69,200 sq.ft. elementary school. The second is a 175,502 sq.ft. middle school. The third is a 401,797 sq.ft. high school.

SSOE's summary comparing the costs to install automatic sprinkler systems to the costs of fire rating the exit corridors in these schools is set out below. From SSOE's summary, it is clear that adding fire rated corridors actually costs **less** than it does to install automatic sprinkler systems.

COST SUMMARY	Elementary school	Middle School	High School
Total Building Cost less equipment	\$10,427,000.00	\$18,929,000.00	\$42,851,000.00
Automatic sprinkler systems			
Initial cost	\$188,916.00	\$367,688.01	\$643,280.31
Maintenance over life cycle	\$5,476.78	\$5,476.78	\$5,476.78
Fire protection totals	\$194,392.78	\$373,164.79	\$648,757.08
Fire rated exit corridors			
Initial commissioning cost	\$1,580.00	\$4,385.00	\$7,116.00
FRJS	\$38,710.00	\$107,432.50	\$174,342.00
Costs for door upgrades	\$15,550.00	\$17,450.00	\$55,350.00
Pv of Annual inspection costs	\$10,588.44	\$25,193.18	\$33,590.90
Cost difference for fire rated glazing	\$83,910.00	\$115,740.00	\$121,640.00
Duct penetrations	\$16,924.80	\$24,403.20	\$41,229.60
Other penetrations	\$5,266.67	\$14,616.67	\$23,720.00
PV of Additional penetrations over life cycle	\$1,825.59	\$4,563.98	\$4,563.98
Fire rated exit corridor totals	\$174,355.50	\$313,784.53	\$461,552.48
Fire rated corridor costs as a percentage of Automatic Sprinkler System	89.69%	84.09%	71.14%
Fire rated corridor costs as a percentage of Total Building Costs	1.67%	1.66%	1.08%

Adding fire rated exit corridors to E-occupancies will result in inherently safer school buildings at less cost than including automatic sprinkler systems. Moreover, according to the SSOE report, the added cost of adding fire rated corridors represents less than 2% of the total cost to build these schools or only:

1. 1.6% of the total \$10.427 million cost to build the 69,200 sq. ft. elementary school;
2. 1.6% of the total \$18.929 million cost to build the 172, 502 sq. ft. middle school; and
3. 1.08% of the total \$42.851 million cost to build the 401,797 sq. ft. high school.

Finally, the base schools used in the SSOE were built with an expected life of fifty (50) years. When the costs of adding fire rated corridors are amortized over the 50 year anticipated life of these school buildings, the added cost is absolutely nominal.

As to those schools affected by the proposal, it would add compartmentalization and provide redundant life safety and fire protection features to E-occupancies to the same level of fire protection that is currently required in a number of I-occupancies

(including assisted living facilities, congregate care facilities, halfway houses and social rehabilitation facilities). If adopted, this proposal would affect only E-occupancies (including day care centers) that are greater than 12,000 sq. ft. in size.

E-occupancies are a special case. They involve children. Fire and life safety protections should be redundant in E-occupancies, especially given the large number of fires experienced annually; the large number of injuries related to fires that are experienced annually; the large dollar losses experienced annually from fires in school properties; and the small overall cost to add fire rated corridors.

As the number of students served by our school systems increases with increasingly smaller adult-to-student ratios, the small added cost of construction should **not** be any impediment to the increased level of protection that this proposal would provide our children, their teachers and the fire service.

We urge the Committee to support this proposal.

Bibliography: 1. Evarts, *Structure Fires in Educational Properties*, NFPA Fire Analysis and Research Division (June 2011).
2. FEMA, *Topical Fire Research Series, School Fires*, Vol. 4, Issue 6 (December 2004).
3. SSOE, *Fire Rated Corridor Construction in Schools* (December 2011).

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

T1018.1-E-Zaremba.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: Correlation between a 1 hour rated corridor and a reduction in fire loss has not been provided. Fire data provided showed that current school design has one of the best safety records for life and property. Another concern raised was the situation of lock downs during an attack event within the school. Lock downs can be for dangerous situations outside the school. No data has been provided to indicate how a rated corridors will protect against an internal attack. To build for a combined sprinkler failure, lock down situation and fire attack scenario is too restrictive for everyday design. The increase in cost would not just be walls, but would also include fire rated doors, fire dampers, etc., therefore adding this requirement would be a significant increase in cost without sufficient justification. In addition, school administration now often requires teachers to keep door open for visual communication with the classrooms. Teachers and students use classroom doors continually during passing periods. Closers, as required on fire doors, would be a conflict with both situations.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment :

Thomas S. Zaremba, Roetzel & Andress, representing Glazing Industry Code Committee and Primary Fire Rated Glazing Manufacturers; and Robert J Davidson, Davidson Code Concepts, LLC, representing self; requests Approval as Submitted.

Commenter's Reason (Zaremba): The question posed by this code change is whether sprinklered E-occupancies should also have rated exit corridors?

The Committee disapproved it. Proponents are asking the membership to revisit this question and adopt E121-12 "as submitted."

E121-12 presents documented evidence that:

- Educational properties sustained an estimated annual average of **6,260 structure fires** between 2005 and 2009.
- During that time period, these school fires caused annual averages of **85 injuries** and **\$112 million** in direct **property damage**.
- Day care facilities averaged **590 structure fires**, **8 injuries** and **\$4.5 million** in direct **property damage** annually.
- K-12 educational facilities sustained an annual average of **4,510 structure fires**, **68 injuries** and **\$95 million** in direct **property damage**.
- In 2002, on average, school structural fires resulted in **22 injuries per 1,000 fires**, significantly higher than the 14.4 injuries sustained per 1,000 fires in non-residential structure fires.

In disapproving the proposal, the Committee misinterpreted this data. In its reason statement, the Committee concluded that this “[f]ire data ... showed that current school design has one of the best safety records for life and property.” In fact, however, the data shows that:

- there are a very large number of school structural fires annually,
- school structural fires have a significantly higher number of injuries per 1,000 fires than other non-residential occupancies, and
- school fires cause millions of dollars in property damage every year.

The Committee also said that adopting E121-12 would represent “a significant increase in cost without sufficient justification.” Proponents will address increased cost and justification for E121-12 separately below.

Respecting cost, Proponents of E121-12 submitted detailed information from a Report prepared by SSOE (an architectural firm operating world wide) to provide the Committee, and now the Membership, with accurate information as to the additional costs necessary to add fire rated corridors to three different types and sizes of sprinklered school buildings.

First, the cost data for the three schools presented with E121-12 are **actual** costs. SSOE was able to use actual costs because it actually designed the three sprinklered schools it used in its Report. The first school was a 69,200 sq. ft. elementary. The second was a 175,502 sq. ft. middle school and the third was a 401,797 sq. ft. high school. Second, it should be noted that, in its reason statement, the Committee said that “[t]he increase in cost would not just be walls, but would also include fire rated doors, fire dampers, etc.,” suggesting that Proponents had presented data that only included the added costs of fire rating the corridor walls. The Committee misunderstood the data that was presented because it clearly included **all** costs necessary to completely fire rate the exit corridors of all three schools, including their walls, doors, windows, fire dampers, etc.

Significantly, The SSOE report concluded that the added cost to fire rate the exit corridors of these schools was actually **less** than the costs actually incurred to install automatic sprinkler systems. In that regard, adding rated corridors would cost approximately 8% less than it cost to install sprinklers in the smallest of the three schools (the elementary school); 15% less than it cost to install sprinklers in the middle school; and 29% less than it cost to install sprinklers in the high school.

More importantly, the SSOE Report concluded that adding fire rated exit corridors would only add:

- 1.6% (or \$174,355.50) to the \$10.427 million actual cost to build the 69,200 sq. ft. elementary school,
- 1.6% (or \$313,784.53) to the \$18.929 million actual cost to build the 172,502 sq. ft. middle school, and
- 1.08% (or \$461,552.48) to the \$42.851 million actual cost to build the 401,797 sq. ft. high school.

SSOE designed each of these school buildings to have a useful life of fifty or more years. When the relatively small added cost to fire rate the exit corridors is amortized over the useful lives of these buildings, that additional \$4,000 to \$10,000 per year cost can only be considered nominal.

Even though adding fire rated corridors would add only 1.6%, or less, to the total costs of these buildings, the question remains: Are these cost increases, no matter how small, justified?

To answer that question, it is safe to assume that **no** safety system can ever be considered foolproof or infallible. This premise can be found in a 1998 code change proposal that was submitted during the process of drafting the ICC. There, two Fire Prevention Officers representing the California Fire Chief's Association, proposed a change to the First Draft of the International Building Code (T1006.3.1-3). In it, they proposed that corridors in Educational (and six other) occupancies should have a required fire resistance rating of 2 hours with or without sprinklers. In support of their proposal, they said that: “In California, fire sprinkler systems fail. Safe egress for tenants through corridors cannot be **solely** dependent upon fire sprinkler systems.” (Emphasis added.)

From that premise, the analysis moves to a proposal submitted in 1999 by the legendary John G. “Gus” Degenkolb, a Los Angeles Battalion Chief and Fire Protection Engineer. He proposed a 0.5 hour rated corridor in E- (and six other) occupancies (E225-99). His rational was, simple: “A corridor is defined as an enclosed exit access component that defines and provides a path of egress travel to an exit. Once in a corridor, movement is restricted to travel within the enclosing walls and along the length of the corridor until a door to another atmosphere is provided. As such, it should have some level of resistance to the transmission of smoke from the area adjacent to the corridor.”

His rational was not based solely on logic, but on **actual fire tests** that he and others conducted in a Los Angeles school building, less than a year after the deaths of 95 students and teachers in the Our Lady of the Angels School fire in Chicago, Illinois. The report of these tests are found in “*Operation School Burning*,” published by the National Fire Protection Agency (1959).

Four findings from “*Operation School Burning*” are instructive in answering the question: Are cost increases related to adopting E121-12 justified?

The first relevant finding from *Operation School Burning* is that “smoke (specifically as it pertains to visibility and irritant effects) was the principal life safety hazard” and that in the absence of automatic sprinklers “untenable smoke conditions were reached in 2 to 7 minutes from the start of the fire on at least one entire floor above the fire.” A second finding was that “[w]ith a complete automatic sprinkler system, untenable smoke conditions were not reached in any corridors except two local areas closest to the test fire.” A third finding was that: “[W]hen the test fire was arranged so as to provide extensive shielding against sprinkler water distribution, untenable smoke conditions developed in the corridor of fire origin and those above.” The fourth finding was that: “Partial automatic sprinklers (sprinklers installed in corridors and stairways but not over the test fire) did not prevent smoke spread throughout the building even when installed to provide a water curtain between the test fire and the corridors.”

In the absence of redundancy, these findings suggest that if there is a sprinkler failure over the site of a fire in a school, whether due to a water supply failure, an obstruction in water distribution, or a simple sprinkler head failure, “untenable smoke” could pose a significant life safety hazard to students and teachers in a matter of minutes.

Based on NFPA's “*U.S. Experience with Sprinklers*” by John R. Hall, Jr. (March 2012), we know that “[s]prinklers operated in 91% of all reported structure fires large enough to activate sprinklers.... When sprinklers operated, they were effective 96% of the time, resulting in a combined performance of operating effectively in 88% of all reported fires where sprinklers were present in the area and the fire was large enough to activate them.”

Stated otherwise, for whatever reason, sprinklers may fail to operate effectively in 12% of the fires where sprinklers are present in the area and the fire is large enough to activate them. If a sprinkler fails in the area of a fire in one of the more than **6,000 school structure fires** that history tells us are likely to occur annually in this country, then, according to “*Operation School Burning*,” in the absence of the redundancy of fire rated corridors, “untenable smoke conditions” may well be reached in a matter of minutes.

Redundant safety systems in the form of automatic sprinklers **and** fire rated construction capable of containing the propagation of smoke and fire into exit corridors are **both** necessary to ensure the safety of our schools. Paraphrasing Gus Degenkolb, the exit corridors through which our students and teachers travel to reach a safe atmosphere should have some level of resistance to smoke or flame in areas adjacent to the corridor. Currently, if a school is sprinklered, exit corridors can be constructed from materials having no reliable ability to resist either smoke or flame.

Proponents submit that the small increase in cost and slight inconvenience associated with fire rating the exit corridors of sprinklered Educational Occupancies is more than adequately justified by the inherently safer school buildings that will result from the adoption of E121-12 as submitted.

Proponents urge you to support the adoption of E121-12 as submitted by voting against the standing motion to disapprove E121-12 and by voting in favor of a motion to adopt E121-12 as submitted.

Commenter’s Reason (Davidson): *“Correlation between a 1 hour rated corridor and a reduction in fire loss has not been provided. Fire data provided showed that current school design has one of the best safety records for life and property.”*

Past fire data was based on old assumptions, i.e., when the fire alarm went off students immediately lined up and exited the building. Since the events at Columbine High School and other schools across the U.S. that have been subjected to violent events the operation of the schools has changed and now “lock downs” are routine, i.e., once a lock down is enacted classroom doors are locked and staff and students are under orders to ignore fire alarms since they may be used to generate vulnerable victims. So the parameters that the old trade-off for sprinkler protection has changed and is no longer relevant. If the code has any basis at all, when a safety parameter code language is based upon is eliminated, the code should be modified relative to that change. It is irresponsible to go forward relying on old data that is no longer relevant.

“Another concern raised was the situation of lock downs during an attach event within the school. Lock downs can be for dangerous situations outside the school. No data has been provided to indicate how a rated corridors will protect against an internal attack. To build for a combined sprinkler failure, lock down situation and fire attack scenario is too restrictive for everyday design.”

Correct, lock downs can be for events outside the school and guess what, the same lock down rules apply, lock your doors and ignore the fire alarm. Because of this there are many more chances of fire occurring during a lock down event. The protection concerning an interior attack is if a fire occurs at that time either accidentally or started by the actors committing the crime. The committee believing that we should not recognize the possibility of a lock down and fire occurring at the same time and the inability of the sprinkler system to handle the fire can only be done by ignoring factual testimony and a complete lack of knowledge of events that have already occurred. In the Columbine High School attack they had propane cylinders rigged to explode and cause a catastrophic fire, fortunately the failed to go off. Similar attacks discovered and stopped in the planning stages included similar plans. Even the recent attack in Aurora included an explosion and fire expectation in the apartment building. Do we need for one of these events to be successful before we recognize the need to change in response to changing societal norms?

“In addition, school administration now often requires teachers to keep door open for visual communication with the classrooms.”

I don’t know where this statement arose from, but it is not factual. Classroom doors are typically kept shut to keep out the noise of someone in the hallway and to secure the classroom. Industry even markets locking systems specific to classrooms to lock them to the hallway side. School policy typically requires doors to be secured at the start of a class and kept secured throughout to eliminate ease of access by those that wish to harm teachers or students.

The I-Codes have added requirements for lock down plans to be submitted to the fire code official and for fire alarm systems to utilize an emergency voice/alarm communication system to ensure there is a method to inform staff and students when to evacuate after they ignore the fire alarm. The final piece needed is to protect the egress corridor from the effects of a fire that may occur or be started by the actor.

We protect prisoners in an I-3 with fire-resistance rated corridors, why would we not do that for our children as well?

E121-12

Final Action: AS AM AMPC____ D

E126-12

1019.4, 1026.5 (IFC [B] 1019.4, 1026.5)

Proposed Change as Submitted

Proponent: Steve Pfeiffer representing City of Seattle, Department of Planning & Development (steve.pfeiffer@seattle.gov)

Revise as follows:

1019.4 (IFC [B] 1019.4) Location. Exterior egress balconies shall have a minimum ~~fire~~ separation distance of 10 feet (3048 mm) measured at right angles from the exterior edge of the egress balcony to:

1. Adjacent lot ~~line~~ lines;
2. Other portions of the building; ~~and from~~
3. Other buildings on the same lot unless the adjacent building *exterior walls* and openings are protected in accordance with Section 705 based on *fire separation distance*.

1026.5 (IFC [B] 1026.5) Location. *Exterior exit stairways and ramps* shall have a minimum ~~fire~~ separation distance of 10 feet (3048 mm) measured at right angles from the exterior edge of the *stairway or ramp*, including landings, to:

1. Adjacent lot ~~line~~ lines;
2. Other portions of the building; ~~and from~~
3. Other buildings on the same lot unless the adjacent building *exterior walls* and openings are protected in accordance with Section 705 based on *fire separation distance*.

Reason: The purpose of this change is to clarify that an exterior exit stairway or egress balcony needs a minimum 10 feet separation where a building wraps around on itself, such as a U-shaped building. The phrase "at right angles" was added because the definition of fire separation distance measures from a wall rather than the exterior edge.

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

1019.4-E-Pfeiffer.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The proponent asked for additional time to reconsider some of the language in the proposal. There may be a concern with use of the term 'fire separation' when dealing with a single building. Right angles may not be the correct way to measure protection at a curved wall.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Steven Pfeiffer, City of Seattle, representing Department of Planning & Development, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1019.4 (IFC [B] 1019.4) Location. Exterior egress balconies shall have a minimum fire separation distance of 10 feet (3048 mm) measured at right angles from the exterior edge of the egress balcony to:

1. Adjacent lot lines;
2. Other portions of the building;
3. Other buildings on the same lot unless the adjacent building *exterior walls* and openings are protected in accordance with Section 705 based on *fire separation distance*.

For the purpose of this section other portions of the building shall be treated as separate buildings.

1026.5 (IFC [B] 1026.5) Location. *Exterior exit stairways and ramps* shall have a minimum fire separation distance of 10 feet (3048 mm) measured at right angles from the exterior edge of the *stairway or ramp*, including landings, to:

1. Adjacent lot lines;
2. Other portions of the building;
3. Other buildings on the same lot unless the adjacent building *exterior walls* and openings are protected in accordance with Section 705 based on *fire separation distance*.

For the purpose of this section other portions of the building shall be treated as separate buildings.

Commenter's Reason: This modification is proposed to clarify that an exterior exit stair or ramp, or exterior egress balcony always needs a minimum 10 feet separation, even where a building wraps around on itself, such as a U-shaped building. If both of a building's egress balconies or exterior stairways are within 10 feet of each other, a single fire could compromise both. The original proposal changed "fire separation distance" to "separation distance" which created a problem when measuring to the centerline of a street or alley. The original proposal would have not have allowed the separation between exterior balconies or stairways to be measured to the centerline of the street. This comment retains the provision that distance be measured at right angles because that provision is taken from the current definition of "fire separation distance".

E126-12

Final Action:	AS	AM	AMPC____	D
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E127-12

1015.2.2, 1021.1, Table 1021.1(New), 1021.2, Table 1021.2(1), Table 1021.2(2), 1021.2.1, 1021.2.2, 1021.2.3, 1021.2.4, 1021.2.5, 1021.3, 1021.3.1, 1021.4 (IFC [B] 1015.2.2, 1021.1, Table 1021.1(New), 1021.2, Table 1021.2(1), Table 1021.2(2), 1021.2.1, 1021.2.2, 1021.2.3, 1021.2.4, 1021.2.5, 1021.3, 1021.3.1, 1021.4)

Proposed Change as Submitted

Proponent: Wayne Jewell, Green Oak Township, representing self and Steve Thomas, Colorado Code Consulting, representing self

Revise as follows:

1015.2.2 (IFC [B] 1015.2.2) Three or more exits or exit access doorways. Where access to three or more *exits* is required, at least two *exit* doors or *exit access doorways* shall be arranged in accordance with the provisions of Section 1015.2.1. Additional required exit or exit access doorways shall be arranged a reasonable distance apart so that if one becomes, blocked, the others will be available.

SECTION 1021 (IFC [B] 1021) NUMBER OF EXITS AND EXIT CONFIGURATION

1021.1 (IFC [B] 1021.1) General. Each story and occupied roof shall have the minimum number of independent exits, or access to exits, as specified in this section Table 1021.1. A single exit or access to a single exit shall be permitted in accordance with Section 1021.2. The required number of exits, or exit access stairways or ramps providing access to exits, from any story shall be maintained until arrival at grade or a public way. ~~Exits or access to exits from any story shall be configured in accordance with this section.~~ Each story above the second story of a building shall have a minimum of one interior or exterior exit stairway, or interior or exterior exit ramp. At each story above the second story that requires a minimum of three or more exits, or access to exits, a minimum of 50 percent of the required exits shall be interior or exterior exit stairways, or interior or exterior exit ramps.

Exceptions:

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

TABLE 1021.1 (IFC [B] TABLE 1021.1)
MINIMUM NUMBER OF EXITS OR ACCESS TO EXITS PER STORY

<u>Occupant Load per Story</u>	<u>Minimum Number of Exits or Access to Exits From Story</u>
<u>1-500</u>	<u>2</u>
<u>501-1,000</u>	<u>3</u>
<u>More than 1,000</u>	<u>4</u>

1021.2 (IFC [B] 1021.2) Single exits from stories. A single exit or access to a single exit shall be permitted ~~Two exits, or exit access stairways or ramps providing access to exits,~~ from any story or occupied roof, ~~shall be provided where one of the following conditions exists:~~

1. ~~The occupant load, or number of dwelling units and exit access travel distance does not exceeds one of the values in Table 1021.2(1) or 1021.2(2).~~
2. ~~The exit access travel distance exceeds that specified in Table 1021.2(1) or 1021.2(2) as determined in accordance with the provisions of Section 1016.1.~~
3. ~~Helistop landing areas located on buildings or structures shall be provided with two exits, or exit access stairways or ramps providing access to exits.~~

Exceptions:

42. Rooms, areas and spaces complying with Section 1015.1 with exits that discharge directly to the exterior at the level of exit discharge, are permitted to have one exit or access to a single exit.
23. Group R-3 occupancy buildings shall be permitted to have one exit.
34. Parking garages where vehicles are mechanically parked shall be permitted to have one exit or access to a single exit.
4. ~~Air traffic control towers shall be provided with the minimum number of exits specified in Section 412.3.~~
5. ~~Individual dwelling units in compliance with Section 1021.2.3.~~
56. Group R-3 and R-4 congregate residences shall be permitted to have one exit or access to a single exit.
6. **1021.2.3 (IFC [B] 1021.2.3) Single-story or multi-story dwelling units.** Individual single-story or multi-story dwelling units shall be permitted to have a single exit or access to a single exit within and from the dwelling unit provided that all of the following criteria are met:
 - 6.1 The dwelling unit complies with Section 1015.1 as a space with one means of egress and
 - 6.2 Either the exit from the dwelling unit discharges directly to the exterior at the level of exit discharge, or the exit access outside the dwelling unit's entrance door provides access to not less than two approved independent exits.
7. ~~Exits serving specific spaces or areas need not be accessed by the remainder of the story when all of the following are met:~~
 - 7.1 ~~The number of exits from the entire story complies with Section 1021.2.4;~~
 - 7.2 ~~The access to exits from each individual space in the story complies with Section 1015.1; and~~
 - 7.3 ~~All spaces within each portion of a story shall have access to the minimum number of approved independent exits based on the occupant load of that portion of the story but not less than two exits.~~

**TABLE 1021.2(1) (IFC [B] TABLE 1021.2(1))
STORIES WITH ONE EXIT OR ACCESS TO ONE EXIT FOR R-2 OCCUPANCIES**

STORY	OCCUPANCY	MAXIMUM NUMBER OF DWELLING UNITS	MAXIMUM EXIT ACCESS TRAVEL DISTANCE
Basement, first, second or third story <u>above grade plane</u>	R-2 ^{a, b}	4 dwelling units	125 feet
Fourth story <u>above grade plane and higher above</u>	NP	NA	NA

For SI: 1 foot = 3048 mm.

NP – Not Permitted

NA – Not Applicable

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

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

**TABLE 1021.2(2) (IFC [B] TABLE 1021.2(2))
STORIES WITH ONE EXIT OR ACCESS TO ONE EXIT FOR OTHER OCCUPANCIES**

STORY	OCCUPANCY	MAXIMUM OCCUPANTS STORY	MAXIMUM EXIT ACCESS TRAVEL DISTANCE
First story <u>above or below grade plane</u> <u>basement</u>	A, B ^b , E F ^b , M, U, S ^b	49 occupants	75 feet
	H-2, H-3	3 occupants	25 feet
	H-4, H-5, I, R-1, R-2 ^{a,c} , R-4	10 occupants	75 feet
	S	29 occupants	100 feet
Second story <u>above grade plane</u>	B, F, M, S	29 occupants	75 feet
Third story <u>above grade plane and above higher</u>	NP	NA	NA

For SI: 1 foot = 304.8 mm.

NP – Not Permitted

NA – Not Applicable

- Buildings classified as Group R-2 equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 and provided with emergency escape and rescue openings in accordance with Section 1029.
- Group B, F and S occupancies in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 shall have a maximum travel distance of 100 feet.
- This Table is used for R-2 occupancies consisting of sleeping units. For R-2 occupancies consisting of dwelling units, use Table 1021.2(1).

1021.2.1 (IFC [B] 1021.2.1) Mixed occupancies. Where one exit, or exit access stairway or ramp providing access to exits at other stories, is permitted to serve individual stories, mixed occupancies shall be permitted to be served by single exits provided each individual occupancy complies with the applicable requirements of Table 1021.2(1) or Table 1021.2(2) for that occupancy. Where applicable, cumulative occupant loads from adjacent occupancies shall be considered in accordance with the provisions of Section 1004.1. In each story of a mixed occupancy building, the maximum number of occupants served by a single exit shall be such that the sum of the ratios of the calculated number of occupants of the space divided by the allowable number of occupants indicated in Table 1012.3(1) for each occupancy does not exceed one. Where dwelling units are located on a story with other occupancies, the actual number of dwelling units divided by 4 plus the ratio from the other occupancy does not exceed one.

1021.2.2 (IFC [B] 1021.2.2) Exits from specific space. Exits serving specific spaces or areas need not be accessed by the remainder of the story when all of the following are met:

- The number of exits from the entire story complies with Section 1021.4.1 1021.1;
- The access to exits from each individual space in the story complies with Section 1015.1; and
- All spaces within each portion of a story shall have access to the minimum number of approved independent exits based on the occupant load of that portion of the story but not less than two exits.

1021.2.2 (IFC [B] 1021.1.2) Basements. ~~A basement provided with one exit shall not be located more than one story below grade plane.~~

1021.2.3 (IFC [B] 1021.2.3) Single-story or multi-story dwelling units. ~~Individual single-story or multi-story dwelling units shall be permitted to have a single exit within and from the dwelling unit provided that all of the following criteria are met:~~

- ~~The dwelling unit complies with Section 1015.1 as a space with one means of egress and~~
- ~~Either the exit from the dwelling unit discharges directly to the exterior at the level of exit~~

~~discharge, or the exit access outside the dwelling unit's entrance door provides access to not less than two approved independent exits.~~

1021.2.4 (IFC [B] 1021.2.4) Three or more exits. Three exits, or exit access stairways or ramps providing access to exits at other stories, shall be provided from any story or occupied roof with an occupant load of 501-1,000. Four exits, or exit access stairways or ramps providing access to exits at other stories, shall be provided from any story or occupied roof with an occupant load greater than 1,000.

1021.2.5 (IFC [B] 1021.2.5) Additional exits. In buildings over 420 feet in height, additional exits shall be provided in accordance with Section 403.5.2.

1021.3 (IFC [B] 1021.3) Exit configuration. Exits, or exit access stairways or ramps providing access to exits at other stories, shall be arranged in accordance with the provisions of Section 1015.2 through 1015.2.2. Exits shall be continuous from the point of entry into the exit to the exit discharge.

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

Exception: Landing platforms or roof areas for helistops that are less than 60 feet (18 288 mm) long, or less than 2,000 square feet (186 m²) in area, shall be permitted to access the second exit by a fire escape, alternating tread device or ladder leading to the story or level below.

1021.3 1021.4 (IFC [B] 1021.3 1021.4) Vehicular ramps. Vehicular ramps shall not be considered as an exit access ramp unless pedestrian facilities are provided.

Reason: The intent of this proposal is to reorganize Section 1020 for clarity.

1015.2.2 – Separation for the 3rd exit was deleted by E82-04/05 as too subjective, however, this language should be reinserted because now there is no language to describe where additional exits are located.

1021.1 – The word ‘independent’ is added for clarity (no one should consider a double door as two exits). The minimum number of MOE have been moved into a table format for clarity and ease of reference for other requirements. The exceptions are not needed since the number required is based on exit and/or access to exits. Open parking and outdoor stadiums are exit access stairways from each floor above grade.

New Table 1021.1 – Requirements from 1021.1 and 1021.2.4 are relocated together into Table format. Allowances are extended to be number of exits and/or number of access to exits (i.e., exit access doorways, exit access stairways, exit access ramps).

1021.2 – This section is revised for a positive where permitted approach rather than exceptions.

- Item 1 & 2 – combined
- Existing item 3 – deleted because already addressed in 412.7.3 – need to be consistent in references for MOE
- New Item 2 and 4 – revised for exit and exit access
- Existing Exception 4 – deleted because already addressed in 412.3 - need to be consistent in references for MOE
- Existing Exception 5 - addressed in new Item 6
- New Item 5 - revised for exit and exit access
- New Item 6 – revised for exit and exit access; relocated from 1021.2.3. No reason to be separate section.
- Existing Exception 7 – Since this is exit configuration, not single exit, it has been relocated to new 1021.2.2.

Table 1021.2(1) and 1021.2(2) – Revise headings to limit number of basements to 1.

1021.2.1 – The additional sentence adopts the same ratio formula currently in the code but addresses what you would do when dwelling units were in the mix (i.e., there is no occupant load).

New 1021.2.2 – this was Section 1021.2 Exception 7. Relocated since this is exit configuration for situations where one exit may be within a tenant space and blocked from access from other tenants on the floor.

Existing 1021.2.2 - Deleted. Basements are now addressed in Table 1021.2(1) and 1021.2(2) so not needed here.

Existing 1021.2.3 – deleted and relocated to 1021.2 new Item 6.

Existing 1021.2.4 – deleted and relocated to Table 1021.1

Existing 1021.2.5 – deleted – 3rd stairway is not a required means of egress stairway and already addressed in 403.5.2. Code users should either reference all MOE in Chapter 4 or rely on Chapter 4 and not reference anything.

Existing 1021.3 - Delete. Now addressed in 1015.2 and 1015.2.1

Existing 1021.3.1 - Delete. Now addressed in 1015.2 and 1015.2.1. Helistops in exception are addressed in 412.7.3.

Cost Impact: None

1020-E- Jewell-Thomas.doc

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: This proposal clarifies the number of exits and separation of exits. There was some concerns regarding the additional sentence in Section 1015.2.2 regarding separation for the third and fourth exits. While not a specific measurement, the added language that says 'not blocked' should provide at least a limited indication of what would be an appropriate level of separation.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Ali M. Fattah P.E., representing City of San Diego Development Services Department, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

**TABLE 1021.2(1) (IFC [B] TABLE 1021.2(1))
STORIES WITH ONE EXIT OR ACCESS TO ONE EXIT FOR R-2 OCCUPANCIES**

STORY	OCCUPANCY	MAXIMUM NUMBER OF DWELLING UNITS	MAXIMUM EXIT ACCESS TRAVEL DISTANCE
Basement <u>level immediately below grade</u> , first, second or third story above grade plane	R-2 ^{a, b}	4 dwelling units	125 feet
Fourth story above grade plane and higher	NP	NA	NA

(Portions of proposal remained unchanged.)

Commenter's Reason: The Means of Egress Committee approved this code change submitted by Colorado Consulting modifying the requirements for single exit buildings. We are concerned that table 1021.2 (1) does not address the case where multiple basement exist below a buildings and we believe that the table applies to a single basement below grade plane. We are also concerned that a residential building on a sloped site may have multiple basements and that grade and not grade plane should be the differentiating factor. We request that the membership approve the proposed modification to the committee's action.

E127-12

Final Action: AS AM AMPC_____ D

E132-12

1021.2 (IFC [B] 1021.2)

Proposed Change as Submitted

Proponent: Philip Brazil, P.E., Senior Engineer, Reid Middleton, Inc., representing Washington Association of Building Officials, Technical Code Development Committee (pbrazil@reidmiddleton.com)

Revise as follows:

1021.2 (IFC [B] 1021.2) Exits from stories. Two *exits*, or *exit access stairways* or *ramps* providing access to *exits*, from any story or occupied roof shall be provided where one of the following conditions exists:

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

Exceptions:

1. Rooms, areas and spaces complying with Section 1015.1 with *exits* that discharge directly to the exterior at the *level of exit discharge*, are permitted to have one *exit*.
2. Group R-3 occupancy *buildings* shall be permitted to have one *exit*.
3. Parking garages where vehicles are mechanically parked shall be permitted to have one *exit*.
4. Air traffic control towers shall be provided with the minimum number of *exits* specified in Section 412.3.
5. Individual *dwelling units* in compliance with Section 1021.2.3.
- ~~6. Group R-3 and R-4 congregate residences shall be permitted to have one exit.~~
- ~~6.7. Exits~~ serving specific spaces or areas need not be accessed by the remainder of the story when all of the following are met:
 - ~~6.1.7.1.~~ The number of *exits* from the entire story complies with Section 1021.2.4;
 - ~~6.2.7.2.~~ The access to *exits* from each individual space in the story complies with Section 1015.1; and
 - ~~6.3.7.3.~~ All spaces within each portion of a story shall have access to the minimum number of *approved* independent *exits* based on the *occupant load* of that portion of the story, but not less than two exits.

Reason: Exception #6 was added by Proposal E5-09/10 but a reason for the exception was not given in the reason statement accompanying the proposal and there is no corresponding provision in the 2009 IBC. Note that the deletion has no effect on Group R-3 occupancies in that are permitted to have one exit by Exception #2.

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

1021.2-E-Brazil.doc

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: There is a question as to if there is a conflict with Table 1022.2.2 and Section 1021.2 for Group R-4 single exit provisions. Section 1021.2 Item 6 should be deleted until the issue can be fully discussed.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment 1:

Jonathan Siu, City of Seattle, Department of Planning & Development, representing Washington Association of Building Officials, Technical Code Development Committee, requests Approval as Modified by this Public Comment.

Replace the proposal as follows:

1021.2 Exits from stories. Two *exits*, or *exit access stairways* or *ramps* providing access to *exits*, from any story or occupied roof shall be provided where one of the following conditions exists:

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

Exceptions:

1. Rooms, areas and spaces complying with Section 1015.1 with *exits* that discharge directly to the exterior at the *level of exit discharge*, are permitted to have one *exit*.
- ~~2.3.~~ Group R-3 occupancy buildings shall be permitted to have one *exit*.
- ~~3.4.~~ Parking garages where vehicles are mechanically parked shall be permitted to have one *exit*.
- ~~4.5.~~ Air traffic control towers shall be provided with the minimum number of *exits* specified in Section 412.3.
- ~~5.~~ Individual *dwelling units* in compliance with Section 1021.2.3.
- ~~6.~~ Group R-3 and R-4 ~~congregate residences~~ *occupancies* shall be permitted to have one *exit*.
- ~~6.7.~~ *Exits* serving specific spaces or areas need not be accessed by the remainder of the story when all of the following are met:
 - ~~6.1~~ 7.1. The number of *exits* from the entire story complies with Section 1021.2.4;
 - ~~6.2~~ 7.2. The access to *exits* from each individual space in the story complies with Section 1015.1; and
 - ~~6.3~~ 7.3. All spaces within each portion of a story shall have access to the minimum number of *approved* independent *exits* based on the *occupant load* of that portion of the story, but not less than two exits.

Commenter's Reason: The intent of this proposal is to clean up the text that allows a single means of egress from R occupancies. While the Means of Egress Committee approved the original proposal as submitted, it has come to our attention there is a possibility the approved text is not consistent with the Fair Housing Act. Although there was no testimony to that effect in Dallas, we are submitting this public comment to head off the possibility of creating a conflict between the IBC and the Fair Housing Act.

The question of consistency with the Fair Housing Act revolves around how R-4 occupancies are treated. Our understanding of the Act is R-4 occupancies cannot be treated differently than R-3 occupancies. By deleting the exception for single exits for R-4 congregate residences, it could be construed that the code is treating the two occupancies differently. However, "congregate residences" is not a term that is used in the IBC anymore, so referring to R-4 congregate residences does not make sense. All the uses listed in Section 310.6 for an R-4 occupancy classification could be construed to be "congregate residences." On the other hand, if the "congregate care facilities" in Section 310.6 is thought to correspond with "congregate residences," we do not see a justification for limiting the application of this section to just congregate care facilities—all the uses listed in Section 310.6 are of similar hazard, else they would be placed in a different occupancy (most likely an I occupancy). For those reasons, we have proposed reinserting the exception for R-4's and to allow a single exit for all R-4 occupancies, not just congregate residences (whatever those are, in the context of the IBC).

For R-3 occupancies, the intent of the original proposal was to delete redundant text that allows R-3 occupancies to have one exit—both Exceptions 2 and 6 in the 2012 IBC allows this. Apparently, the Means of Egress Committee agreed with us that Exception 2 covered Exception 6. Since this public comment changes Exception 6 (now Exception 5 in the public comment) to apply to all R-3 occupancies, the intent of the original code change is still accomplished, but in a different way. In this case, Exception 2 is covered, and can be deleted.

Public Comment 2:

Steve Thomas, CBO, Denver, CO, representing self; Wayne Jewell, CBO, CPCA, Green-Oak, MI, representing self; request Approval as Submitted by this Public Comment

Replace the proposal as follows:

1021.2 (IFC [B] 1021.2) Exits from stories. Two *exits*, or *exit access stairways* or *ramps* providing access to *exits*, from any story or occupied roof shall be provided where one of the following conditions exists:

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

Exceptions:

1. Rooms, areas and spaces complying with Section 1015.1 with *exits* that discharge directly to the exterior at the *level of exit discharge*, are permitted to have one *exit*.
2. Group R-3 occupancy *buildings* shall be permitted to have one *exit*.
3. Parking garages where vehicles are mechanically parked shall be permitted to have one *exit*.
4. Air traffic control towers shall be provided with the minimum number of *exits* specified in Section 412.3.
5. Individual *dwelling units* in compliance with Section 1021.2.3.
6. Group R-3 congregate living facilities and R-4 congregate residences facilities shall be permitted to have one *exit*.
7. *Exits* serving specific spaces or areas need not be accessed by the remainder of the story when all of the following are met:
 - 7.1. The number of *exits* from the entire story complies with Section 1021.2.4;
 - 7.2. The access to *exits* from each individual space in the story complies with Section 1015.1; and
 - 7.3. All spaces within each portion of a story shall have access to the minimum number of *approved* independent *exits* based on the *occupant load* of that portion of the story, but not less than two exits.

1009.3 (IFC [B] 1009.3) Exit access stairways. Floor openings between stories created by *exit access stairways* shall be enclosed.

Exceptions:

1. In other than Group I-2 and I-3 occupancies, *exit access stairways* that serve, or atmospherically communicate between, only two stories are not required to be enclosed.
2. *Exit access stairways* serving and contained within a single residential *dwelling unit* or *sleeping unit* in Group R-1, R-2 or R-3 occupancies are not required to be enclosed.
3. *Exit access stairways* serving and contained within a Group R-3 congregate living facility or a Group R-4, facility are not required to be enclosed.

(No changes to remainder of section not shown. Renumber exceptions 3 through 10.)

1014.3 (IFC [B] 1014.3) Common path of egress travel. The *common path of egress travel* shall not exceed the *common path of egress travel* distances in Table 1014.3.

**TABLE 1014.3 (IFC TABLE [B] 1014.3)
COMMON PATH OF EGRESS TRAVEL**

OCCUPANCY	WITHOUT SPRINKLER SYSTEM (feet)		WITH SPRINKLER SYSTEM (feet)
	Occupant Load		
	≤30	> 30	
R-3, R-4 ^e	75	75	125 ^b

(No change to portions of table not shown)

For SI: 1 foot = 304.8 mm.

- a. Buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1.
- b. Buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2. See Section 903 for occupancies where *automatic sprinkler systems* are permitted in accordance with Section 903.3.1.2.
- c. For a room or space used for assembly purposes having *fixed seating*, see Section 1028.8.
- d. The length of a *common path of egress travel* in a Group S-2 *open parking garage* shall not be more than 100 feet (30 480 mm).
- e. The length of a *common path of egress travel* in a Group R-3 occupancy located in a mixed occupancy building or Group R-3 or R-4 within a congregate living facility.
- f. For the distance limitations in Group I-2, see Section 407.4.

Commenter's Reason: As stated in the proponents reason, Section 1021.2, Exception 6 was added as part of E5-09/10. The intent of this proposal is to have a complete package for the exit stairway requirements for congregate living facilities in Groups R-3 and R-4, as an alternative to deleting the allowance for one exit stairway in Section 1021.1, Exception 6.

Exception 2 to Section 1021.2 is for the building of Group R-3, which would typically be a one- or two-family dwelling unit. Exception 6 is for Group R-3 and R-4 occupancies includes congregate living facilities with 16 or fewer residents; by definition a *congregate living facility* can be a part of a building. A congregate living facility is defined as sleeping units with shared kitchen and bathing facilities, so these are not dwelling units. The number of occupants in these occupancies is very limited and the occupants are familiar with their surroundings. This provision allows the same standards of design as required for single family homes to be applied to these types of facilities, keeping the code in-line with the requirements of the Federal Fair Housing provisions.

While the original proposal chose to delete the allowance for a single stairway within these small congregate residences, this proposal's addition to Sections 1009.3 and 1014.3 attempts to coordinate the requirements for open stairways and travel distance to address these types of facilities.

E132-12

Final Action:	AS	AM	AMPC____	D
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E135-12

1021.2.1 (IFC [B] 1021.2.1)

Proposed Change as Submitted

Proponent: Steve Pfeiffer representing City of Seattle, Department of Planning & Development (steve.pfeiffer@seattle.gov)

Revise as follows:

1021.2.1 (IFC [B] 1021.2.1) Mixed occupancies. Where one exit, or exit access stairway or ramp providing access to exits at other stories, is permitted to serve individual stories, mixed occupancies shall be permitted to be served by single exits provided each individual occupancy complies with the applicable requirements of Table 1021.2(1) or Table 1021.2(2) for that occupancy. Where applicable, cumulative occupant loads from adjacent occupancies shall be considered in accordance with the provisions of Section 1004.1.

In each story of a mixed occupancy building, the maximum number of occupants served by a single exit shall be such that the sum of the ratios of the calculated number of occupants of the space divided by the allowable number of occupants for each occupancy does not exceed one.

In each story containing both Group R-2 dwelling units and other occupancies, the maximum number of dwelling units and occupants served by a single exit shall be such that the sum of the ratios of the actual number of dwelling units divided by 4, plus the calculated number of occupants of the rest of the story, divided by the allowable number of occupants for each occupancy, does not exceed one.

Reason: This change allows use of the “unity” formula when a story contains both dwelling units and some other occupancy. For example, a second story would be permitted to be served by a single exit if it contained one dwelling unit and an office with an occupant of 21 or fewer ($1/4 + 21/29 = 0.974 \leq 1$). Or, a second story could contain three dwellings and an office with an occupant load of 7 or fewer, yet still be served by a single exit ($3/4 + 7/29 = 0.991 \leq 1$). The first paragraph of this section requires each occupancy to comply with the travel distance requirements in the table.

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

1021.2.1-E-Pfeiffer.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason The proposed formula is difficult to understand. In E127, the last sentence in Section 1021.2.1 addresses this issue.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Rick Lupton, City of Seattle representing Dept. of Planning & Development, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1021.2.1 (IFC [B] 1021.2.1) Mixed occupancies. Where one exit, or exit access stairway or ramp providing access to exits at other stories, is permitted to serve individual stories, mixed occupancies shall be permitted to be served by single exits provided each individual occupancy complies with the applicable requirements of Table 1021.2(1) or Table 1021.2(2) for that occupancy. Where applicable, cumulative occupant loads from adjacent occupancies shall be considered in accordance with the provisions of Section 1004.1.

In each story of a mixed occupancy building, the maximum number of occupants served by a single exit shall be such that the sum of the ratios of the calculated number of occupants of the space divided by the allowable number of occupants for each occupancy does not exceed one. Where dwelling units are located on a story with other occupancies, the actual number of dwelling units divided by 4 plus the ratio from the other occupancy does not exceed one.

~~In each story containing both Group R-2 dwelling units and other occupancies, the maximum number of dwelling units and occupants served by a single exit shall be such that the sum of the ratios of the actual number of dwelling units divided by 4, plus the calculated number of occupants of the rest of the story, divided by the allowable number of occupants for each occupancy, does not exceed one.~~

Commenter's Reason: If E127 does not pass then this code change is still necessary to address what to do when dwelling units are mixed with another occupancy and applying the unity formula. The original proposal has been modified to incorporate more understandable language proposed in E127, addressing the committee's concern. If E127 passes at the Final Action Hearing then the proposal will be withdrawn.

E135-12

Final Action:	AS	AM	AMPC____	D
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E137-12

1022.1(IFC [B] 1022.1)

Proposed Change as Submitted

Proponent: Paul Armstrong, P.E., CBO, City of El Monte representing the ICC Orange Empire Chapter Code Committee (paul@jaspacific.com)

Revise as follows:

1022.1 (IFC [B] 1022.1) General. Interior exit stairways and interior exit ramps serving as an exit component in a means of egress system shall comply with the requirements of this section. Interior exit stairways and ramps shall be enclosed and lead directly to the exterior of the building or shall be extended to the exterior of the building with an extended exit passageway conforming to the requirements of Section 1023, except as permitted in Section 1027.1. An interior exit stairway or ramp shall not be used for any purpose other than as a means of egress.

Reason: Editorial revision. The proposed revision is added for clarification to the requirement for protection of interior exit stairways or ramps as found in Chapter 2, Definitions.

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

1022.1-E-Armstrong.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The proposed enclosure language is already addressed in Section 1009.2.2.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Carl Baldassarra, Chair, Code Technologies Committee, requests Approval as Submitted.

Commenter's Reason: This public comment is intended to correct an inadvertent error of omission with Item E7-12 that was approved as modified during the 2012 ICC code development hearings in Dallas, TX. E7-12 was intended to clarify and refine the provisions of Item E5-09/10 that was approved for inclusion in the 2012 IBC. E7-12 relocated the technical requirements for exit access stairways from Section 1009.3 to a new Section 1018. It also removed the provisions of Section 1009.2 applicable to interior exit stairways; however, failed to relocate them in Section 1022. It was not the intent of E-7 to remove the enclosure requirements for exit stairs from the code. The intent was to relocate the exit stair enclosure requirements to section 1022.

This oversight was discovered during the discussion of Item E137-12 at the Dallas code development hearings. Passage of E137-12 will fix this error and maintain the clear requirement that exit stairs shall be enclosed. The following language is currently contained in Section 1009.2 of the 2012 IBC.

1009.2 Interior exit stairways. Interior exit stairways shall lead directly to the exterior of the building or shall be extended to the exterior of the building with an exit passageway conforming to the requirements of Section 1023, except as permitted in Section 1027.1.

1009.2.1 Where required. Interior exit stairways shall be included, as necessary; to meet one or more means of egress design requirements, such as required number of exits or exit access travel distance.

1009.2.2 Enclosure. All interior exit stairways shall be enclosed in accordance with the provisions of Section 1022.

These inadvertently deleted provisions have been placed in proper technical context in Section 1022. Approval of this public comment will restore necessary charging language for the enclosure of interior exit stairways and ramps in the 2015 Edition of the IBC.

The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The code issues are assigned to the CTC by the ICC Board as "Areas of Study". The Area of Study for this code change and public comment is called "Unenclosed exit stairways". Information on the CTC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website: <http://www.iccsafe.org/cs/CTC/Pages/UnenclosedExitStairs.aspx>. Since its inception in April, 2005, the CTC has held twenty-four meetings – all open to the public. In addition to holding face-to-face meetings, the CTC established Study Groups where any interested party can participate in conference calls on specific subjects such as this area of study without having to attend the face-to-face meetings.

E137-12

Final Action:	AS	AM	AMPC_____	D
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E141-12

1022.3.1 (IFC [B] 1022.3.1)

Proposed Change as Submitted

Proponent: Dennis Richardson, PE; Building Official, City of Salinas, representing Tri-Chapter (Peninsula, East Bay and Monterey Bay Chapters of ICC) (dennisrichardsonpe@yahoo.com)

Revise as follows:

1022.3.1 (IFC [B] 1022.3.1) Extension. Where *interior exit stairways* and *ramps* are extended to an *exit discharge* or a *public way* by an *exit passageway*, the *interior exit stairway* and *ramp* shall be separated from the *exit passageway* by a *fire barrier* constructed in accordance with Section 707 or a *horizontal assembly* constructed in accordance with Section 711, or both. The *fire-resistance rating* shall be at least equal to that required for the *interior exit stairway* and *ramp*. A *fire door* assembly complying with Section 716.5 shall be installed in the *fire barrier* to provide a *means of egress* from the *interior exit stairway* and *ramp* to the *exit passageway*. Openings in the *fire barrier* other than the *fire door* assembly are prohibited. Penetrations of the *fire barrier* are prohibited.

Exception Exceptions:

1. Penetrations of the *fire barrier* in accordance with Section 1022.5 shall be permitted.
2. Separation between an interior exit stairway or ramp and the exit passageway shall not be required if there are no openings or penetrations in the exit passageway.

Reason: It is practice to utilize exit passageways and ramps as required to extend or connect the exit enclosure protection horizontally at building offsets and other obstructions until the stairway can then again proceed downward ultimately terminating at a discharge or being extended to the discharge. The purpose in having a door at this interface in the existing requirement is to prevent smoke from a possible open door or other penetration in the passageway from traveling up the exit enclosure. This is prevented if there are no openings or penetrations in the exit passageway. The exit passageway is constructed strictly as an extension of the enclosure at a horizontal offset. Egress can proceed faster if there are not intermediate doors contained at the enclosure transitions.

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

1022.3.1-E-Richardson.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: This proposed language is too restrictive for the exit passageway. It is not possible to build an exit passageway with no openings (i.e., lights, ventilation, sprinklers). Where interior exit stairways are connected by a passageway, a door should be provided for compartmentation of the exit path.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Dennis Richardson, PE, CBO, City of Salinas, representing Tri-Chapter (Peninsula, East Bay and Monterey Chapters, ICC), requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1022.3.1 Extension. Where *interior exit stairways* and *ramps* are extended to an *exit discharge* or a *public way* by an *exit passageway*, the *interior exit stairway* and *ramp* shall be separated from the *exit passageway* by a *fire barrier* constructed in accordance with Section 707 or a *horizontal assembly* constructed in accordance with Section 711, or both. The *fire-resistance rating* shall be at least equal to that required for the *interior exit stairway* and *ramp*. A *fire door* assembly complying with Section 716.5 shall be installed in the *fire barrier* to provide a *means of egress* from the *interior exit stairway* and *ramp* to the *exit passageway*. Openings in the *fire barrier* other than the *fire door* assembly are prohibited. Penetrations of the *fire barrier* are prohibited.

Exceptions:

1. Penetrations of the *fire barrier* in accordance with Section 1022.5 shall be permitted.
2. Separation between an interior exit stairway or ramp and the exit passageway extension shall not be required if there are no openings ~~or penetrations~~ in the exit passageway extension.

Commenter's Reason: The original proposed code change mistakenly included penetrations (along with openings) in exception 2 as prohibited from the exit passageway extension if no doors are provided. Members of the Egress Committee correctly pointed out that only openings would need to be prohibited in the passageway extension to obtain this exception and the original proposed exception was overly restrictive. This public comment has been revised accordingly.

E141-12

Final Action:	AS	AM	AMPC____	D
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E144-12

1022.10(New); [IFC [B] 1022.10 (New)]

Proposed Change as Submitted

Proponent: Carl Baldassarra, P.E., FSFPE, Chair, ICC Code Technology Committee

Add new text as follows:

1022.10 (IFC [B] 1022.10) Elevator Lobby identification signs. At landings in interior exit stairways where two or more doors lead to the floor level, the door leading to the elevator lobby shall be identified by signage located on the door or directly adjacent to the door stating "Elevator Lobby." Signage shall be in accordance with Section 1022.9.1 Items 4, 5 and 6.

(Renumber subsequent sections)

Reason: The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The code issues are assigned to the CTC by the ICC Board as "areas of study". Information on the CTC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website: <http://www.iccsafe.org/cs/cc/ctc/index.html>. Since its inception in April, 2005, the CTC has held twenty-two meetings – all open to the public.

This proposal is one of several proposals submitted by the CTC Elevator lobby SG. The ICC Executive Board directed the Code Technology Committee (CTC) to study the issue of elevator lobby separations in November 2010 due to the number of code change proposals submitted addressing this issue over a number of code change cycles. The Code Technology Committee formed a study group on the elevator lobby separation issue in December 2010. Note that this subject had been previously addressed by CABO/BCMC in 1986 with a similar conclusion. The code change proposals submitted are the result of the CTC's study of the issue. Note that the scope of the activity was as follows:

Scope

- Review the need for elevator lobbies, with emphasis on building use, building and hoistway height, active and passive fire protection features associated with the aforementioned.
- Review the differences and specific needs when dealing with elevator lobbies of traditional-use elevators, fire service elevators, and occupant evacuation elevators.
- Review related code provisions, such as egress from and through elevator lobbies.
- Review the appropriate use of alternatives including pressurization of hoistways, additional doors, roll-down style barriers, and gasketing systems.
- Review with members of elevator industry to scope the requirements of applicable elevator reference standards as it deals with elevator lobby design, use and construction.
- Review design and construction requirements for elevator lobbies, including but not limited to dimensions, location and separation.
- Review applicable code change history, technical studies and loss statistics as part of this review.

Based upon the extensive nature of this area of study, 5 Task Groups were formed during the process to provide in-depth review and to manage the number of issues. These task groups developed a number of proposals that were coordinated throughout the process.

More information on this CTC area of study can be found at the following link.
<http://www.iccsafe.org/cs/CTC/Pages/ElevatorLobbies.aspx>

The focus is on necessary signage for entrance into elevator lobbies from interior exit stairway landings. This issue is more specific to Fire service access elevators and the potential for multiple required doors. The code currently requires direct access from the lobby to a stairway and additionally the same stairway must have a door that opens directly to the floor based upon standpipe access issues (i.e. limiting the number of doors that need to be open to lay hose during a fire). Fire fighters and occupants need to readily determine which door leads to the enclosed elevator lobby therefore signage is necessary to assist in wayfinding. The enclosed elevator lobby could be for fire service access elevators (FSAE) or occupant evacuation elevators. Since the signage need can apply to either type of enclosed elevator lobby and is related to interior exit stairways the requirements are proposed in Section 1022.

See discussion on CTC elevator lobby proposal coordination in code change FS##-12

Cost impact:

1022.10-E-BALDASSARRA-CTC.docx

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: This signage is necessary for fire fighters when there is a fire service access elevator lobby. However, there could be some situations where there are two doors to the same level which do not have a fire service access elevator lobbies. There are also provisions that were approved by the General committee that would allow access to the fire service access elevator via a rated corridor. Additional revisions may be needed for further coordination.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment 1:

Lee J Kranz, City of Bellevue Washington, representing WABO TCD, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1022.10 (IFC [B] 1022.10) Elevator Lobby identification signs. At landings in interior exit stairways where two or more doors lead to the floor level, the any door leading with direct access to the an enclosed fire service access or occupant evacuation elevator lobby shall be identified by signage located on the door or directly adjacent to the door stating "Elevator Lobby." Signage shall be in accordance with Section 1022.9.1 Items 4, 5 and 6.

Commenter's Reason: As stated in the original proposal's reason statement, these signs are needed to provide direction for firefighters and building occupants where more than one door is provided for access to a floor from an interior exit stairway.

Although the Means of Egress Committee approved this proposal as submitted, they pointed out the text as proposed applies broadly to all elevator lobbies, as opposed to only those associated with fire service access or occupant evacuation elevators. In addition, the General Committee approved item G175-12, which provides exceptions to the requirement that fire service access and occupant evacuation elevator lobbies have direct access to an interior exit stairway.

This public comment coordinates this item with G175-12 and responds to the Means of Egress Committee comments by limiting the requirement for providing signage to those doors that open directly into enclosed fire service access or occupant evacuation elevator lobbies. The term "direct access" is defined via G175-12 as a "path of travel from a space to an immediately adjacent space through an opening in the common wall between the two spaces."

For reference, the relevant approved-as-submitted text of G175-12 follows:

G175-12 (Approved as Submitted)

Revise as follows:

3007.7.1 Interior exit stairway access. The fire service access elevator lobby shall have direct access from the enclosed elevator lobby to an enclosure for an *interior exit stairway*.

Exception: Access to an interior exit stairway shall be permitted to be through a protected path of travel that has a level of fire protection not less than the elevator lobby enclosure. The protected path shall be separated from the enclosed elevator lobby through an opening protected by a smoke and draft control assembly in accordance Section 716.5.3.

3008.7.1 Interior exit stairway access. The occupant evacuation elevator lobby shall have direct access from the enclosed elevator lobby to an *interior exit stairway* or *ramp*.

Exception: Access to an interior exit stairway shall be permitted to be through a protected path of travel that has a level of fire protection not less than the elevator lobby enclosure. The protected path shall be separated from the enclosed elevator lobby through an opening protected by a smoke and draft control assembly in accordance Section 716.5.3.

Add new definition as follows:

DIRECT ACCESS. A path of travel from a space to an immediately adjacent space through an opening in the common wall between the two spaces.

Public Comment 2:

Jonathan Siu, representing City of Seattle Dept of Planning & Development, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1022.10 (IFC [B] 1022.10) Elevator Lobby identification signs. At landings in interior exit stairways where two or more doors lead to the floor level, the any door leading with direct access to the an enclosed elevator lobby shall be identified by signage located on the door or directly adjacent to the door stating "Elevator Lobby." Signage shall be in accordance with Section 1022.9.1 Items 4, 5 and 6.

Commenter's Reason: As stated in the original proposal's reason statement, these signs are needed to provide direction for firefighters and building occupants where more than one door is provided for access to a floor from an interior exit stairway.

In approving this proposal as submitted, the Means of Egress Committee pointed out the text as proposed applies broadly to all elevator lobbies, as opposed to only those associated with fire service access or occupant evacuation elevators. Our response is if the signs are being provided to prevent confusion, both for firefighters and building occupants who are in the stairs, then it is immaterial as to what kind of lobby the door opens into—any "extra" doors are likely to cause confusion, and therefore, they should be provided with signs.

The change in the text to require the signage only for doors providing "direct access" to an enclosed lobby is to coordinate this proposal with Item G175-12, which was approved as submitted by the General Committee. G175-12 provides exceptions to the requirement that fire service access and occupant evacuation elevator lobbies have direct access to an interior exit stairway. The result of this public comment is if the door does not provide direct access to an enclosed lobby, it is not required to have signage.

For reference, the relevant approved-as-submitted text of G175-12 follows:

G175-12 (Approved as Submitted)

Revise as follows:

3007.7.1 Interior exit stairway access. The fire service access elevator lobby shall have direct access from the enclosed elevator lobby to an enclosure for an *interior exit stairway*.

Exception: Access to an interior exit stairway shall be permitted to be through a protected path of travel that has a level of fire protection not less than the elevator lobby enclosure. The protected path shall be separated from the enclosed elevator lobby through an opening protected by a smoke and draft control assembly in accordance Section 716.5.3.

3008.7.1 Interior exit stairway access. The occupant evacuation elevator lobby shall have direct access from the enclosed elevator lobby to an *interior exit stairway or ramp*.

Exception: Access to an interior exit stairway shall be permitted to be through a protected path of travel that has a level of fire protection not less than the elevator lobby enclosure. The protected path shall be separated from the enclosed elevator lobby through an opening protected by a smoke and draft control assembly in accordance Section 716.5.3.

Add new definition as follows:

DIRECT ACCESS. A path of travel from a space to an immediately adjacent space through an opening in the common wall between the two spaces.

E144-12

Final Action:	AS	AM	AMPC____	D
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E154-12

1026.6 (IFC [B] 1026.6)

Proposed Change as Submitted

Proponent: Dennis Richardson, PE; Building Official, City of Salinas, representing Tri-Chapter (Peninsula, East Bay and Monterey Bay Chapters of ICC) (dennisrichardsonpe@yahoo.com)

Revise as follows:

1026.6 (IFC [B] 1026.6) Exterior stairway and ramp protection. *Exterior exit stairways and ramps* shall be separated from the interior of the building as required in Section 1022.2. Openings shall be limited to those necessary for egress from normally occupied spaces. Where a vertical projection of the planes of the guard of an exterior stairway or ramp including landings are exposed by other parts of the building at an angle of less than 180 degrees (3.14 rad), the exterior wall shall be rated in accordance with Section 1022.7.

Exceptions:

1. Separation from the interior of the building is not required for occupancies, other than those in Group R-1 or R-2, in buildings that are no more than two stories above grade plane where a level of exit discharge serving such occupancies is the first story above grade plane.
2. Separation from the interior of the building is not required where the exterior stairway or ramp is served by an exterior ramp or balcony that connects two remote exterior stairways or other approved exits, with a perimeter that is not less than 50 percent open. To be considered open, the opening shall be a minimum of 50 percent of the height of the enclosing wall, with the top of the openings no less than 7 feet (2134 mm) above the top of the balcony.
3. Separation from the interior of the building is not required for an exterior stairway or ramp located in a building or structure that is permitted to have unenclosed exit access stairways in accordance with Section 1009.3.
4. Separation from the interior of the building is not required for exterior stairways or ramps connected to open-ended corridors, provided that Items 4.1 through 4.5 are met:
 - 4.1 The building, including corridors, stairways or ramps, shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.
 - 4.2 The open-ended corridors comply with Section 1018.
 - 4.3 The open-ended corridors are connected on each end to an exterior exit ramp or stairway complying with Section 1026.
 - 4.4 The exterior walls and openings adjacent to the exterior exit stairway or ramp comply with Section 1022.7.
 - 4.5 At any location in an open-ended corridor where a change of direction exceeding 45 degrees (0.79 rad) occurs, a clear opening of not less than 35 square feet (3.3 m²) or an exterior stairway or ramps shall be provided. Where clear openings are provided, they shall be located so as to minimize the accumulation of smoke or toxic gases.

Reason: Current practice as explained in the past two IBC Code and Commentary editions is to require this protection consistent with the requirement in Section 1022.7 for protection of interior stairways and ramp exterior walls. Section 1022.7 is not referenced in 1026.6 or in 1022.2. The proposed language is similar to 1022.7 except that instead of measuring the angle between the building exterior walls and the unprotected walls at the exterior of the stairway or ramp, the proposed language measures between the building exterior walls and a vertical projection for the planes of the guard of the exterior stairway and ramp including landings. If the current practice as outlined in the IBC Code and Commentary is not correct then this code change should be disapproved and the Code and Commentary should be updated.

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

1026.6-E-Richardson.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The idea of protecting the exterior stairway in a corner is valid, however, the proposed verbiage is confusing.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Dennis Richardson, PE, CBO, City of Salinas, representing Tri-Chapter (Peninsula, East Bay and Monterey Chapters, ICC), requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1026.6 Exterior stairway and ramp protection. *Exterior exit stairways and ramps shall be separated from the interior of the building as required in Section 1022.2. Openings shall be limited to those necessary for egress from normally occupied spaces. Where a vertical plane projecting from the edge projection of the planes of the guard of an exterior stairway or ramp and including landings is are exposed by other parts of the building at an angle of less than 180 degrees (3.14 rad), the exterior wall shall be rated in accordance with Section 1022.7.*

Exceptions:

1. Separation from the interior of the building is not required for occupancies, other than those in Group R-1 or R-2, in buildings that are no more than two stories above grade plane where a level of exit discharge serving such occupancies is the first story above grade plane.
2. Separation from the interior of the building is not required where the exterior stairway or ramp is served by an exterior ramp or balcony that connects two remote exterior stairways or other approved exits, with a perimeter that is not less than 50 percent open. To be considered open, the opening shall be a minimum of 50 percent of the height of the enclosing wall, with the top of the openings no less than 7 feet (2134 mm) above the top of the balcony.
3. Separation from the interior of the building is not required for an exterior stairway or ramp located in a building or structure that is permitted to have unenclosed exit access stairways in accordance with Section 1009.3.
4. Separation from the interior of the building is not required for exterior stairways or ramps connected to open-ended corridors, provided that Items 4.1 through 4.5 are met:
 - 4.1 The building, including corridors, stairways or ramps, shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.
 - 4.2 The open-ended corridors comply with Section 1018.
 - 4.3 The open-ended corridors are connected on each end to an exterior exit ramp or stairway complying with Section 1026.
 - 4.4 The exterior walls and openings adjacent to the exterior exit stairway or ramp comply with Section 1022.7.
 - 4.5 At any location in an open-ended corridor where a change of direction exceeding 45 degrees (0.79 rad) occurs, a clear opening of not less than 35 square feet (3.3 m²) or an exterior stairway or ramps shall be provided. Where clear openings are provided, they shall be located so as to minimize the accumulation of smoke or toxic gases.

Commenter's Reason: Current practice as explained in the past two IBC Code and Commentary editions is to require this protection consistent with the requirement in Section 1022.7 for protection of interior stairways and ramp exterior walls. Section 1022.7 is not referenced in 1026.6 or in 1022.2. The proposed language is similar to 1022.7 except that instead of measuring the angle between the building exterior walls and the unprotected walls at the exterior of the stairway or ramp, the proposed language measures between the building exterior walls and a vertical projection of the edge of an exterior stairway or ramp including landings. According to the egress committee, this concept is valid. The simplified language in this public comment conveys the interpretation found in the 2012 Code and Commentary.

E154-12

Final Action: AS AM AMPC____ D

E155-12

1027.1 (IFC [B] 1027.1)

Proposed Change as Submitted

Proponent: Robert J Davidson, Davidson Code Concepts LLC, representing SaftiFirst a Division of O'Keeffes, Inc. (rjd@davidsoncodeconcepts.com)

Revise as follows:

1027.1 (IFC [B] 1027.1) General. Exits shall discharge directly to the exterior of the building. The exit discharge shall be at grade or shall provide direct access to grade. The exit discharge shall not reenter a building. The combined use of Exceptions 1 and 2 shall not exceed 50 percent of the number and capacity of the required exits.

1. A maximum of 50 percent of the number and capacity of interior exit stairways and ramps is permitted to egress through areas on the level of exit discharge provided all of the following are met:
 - 1.1. Such enclosures egress to a free and unobstructed path of travel to an exterior exit door and such exit is readily visible and identifiable from the point of termination of the enclosure.
 - 1.2. The entire area of the level of exit discharge is separated from areas below by construction conforming to the fire-resistance rating for the enclosure.
 - 1.3. The egress path from the interior exit stairway and ramp on the level of exit discharge is protected throughout by an approved automatic sprinkler system. All portions of the level of exit discharge with access to the egress path shall either be protected throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, or separated from the egress path in accordance with the requirements for the enclosure of interior exit stairways or ramps.
2. A maximum of 50 percent of the number and capacity of the interior exit stairways and ramps is permitted to egress through a vestibule provided all of the following are met:
 - 2.1. The entire area of the vestibule is separated from areas below by construction conforming to the fire-resistance rating for the enclosure.
 - 2.2. The depth from the exterior of the building is not greater than 10 feet (3048 mm) and the length is not greater than 30 feet (9144 mm).
 - 2.3. The area is separated from the remainder of the level of exit discharge by construction providing 45 minutes of fire-resistance rated protection ~~at least the equivalent of approved wired glass in steel frames.~~
 - 2.4. The area is used only for means of egress and exits directly to the outside.
3. *Horizontal exits* complying with Section 1025 shall not be required to discharge directly to the exterior of the building.

Reason: The purpose of this proposal is to eliminate a left over reference to "wired glass" for purposes of fire protection. The last few cycles references to wired glass have been replaced with references to fire-rated glazing or other generic terms to eliminate a reference to a specific product.

The reference here is replaced with a requirement of 45 minutes of fire resistance because that is the level of fire-resistance rating historically associated with wired glass in steel frames and the code section is looking for that equivalent.

From NFPA 257-2007, "Standard on Fire Test for Window and Glass Block Assemblies":

***B.2.3** The current requirements for fire test duration are open, whereas previous editions limited the duration to 45 minutes. With the advent of new glazing materials that provide various levels of fire protection, the current requirements have responded to the needs of the industry and the fire protection community by establishing various fire protection ratings that are both longer and shorter than the previous 45-minute specification. The 45-minute limit was based on the ability of standard wired glass to perform satisfactorily in accordance with earlier editions of NFPA 257.*

Cost Impact: This code change will not increase construction costs.

1027.1-E-Davidson.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The proposed change for a 45 minutes fire resistance rating is an increase without technical justification. Wired glass is typically considered equivalent to a 45 minutes fire protection rating.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Robert J Davidson, Davidson Code Concepts, LLC, representing SaftiFirst a Division of O'Keefes, Inc., requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1027.1 (IFC [B] 1027.1) General. Exits shall discharge directly to the exterior of the building. The exit discharge shall be at grade or shall provide direct access to grade. The exit discharge shall not reenter a building. The combined use of Exceptions 1 and 2 shall not exceed 50 percent of the number and capacity of the required exits.

1. A maximum of 50 percent of the number and capacity of interior exit stairways and ramps is permitted to egress through areas on the level of exit discharge provided all of the following are met:
 - 1.1. Such enclosures egress to a free and unobstructed path of travel to an exterior exit door and such exit is readily visible and identifiable from the point of termination of the enclosure.
 - 1.2. The entire area of the level of exit discharge is separated from areas below by construction conforming to the fire-resistance rating for the enclosure.
 - 1.3. The egress path from the interior exit stairway and ramp on the level of exit discharge is protected throughout by an approved automatic sprinkler system. All portions of the level of exit discharge with access to the egress path shall either be protected throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, or separated from the egress path in accordance with the requirements for the enclosure of interior exit stairways or ramps.
2. A maximum of 50 percent of the number and capacity of the interior exit stairways and ramps is permitted to egress through a vestibule provided all of the following are met:
 - 2.1. The entire area of the vestibule is separated from areas below by construction conforming to the fire-resistance rating for the enclosure.
 - 2.2. The depth from the exterior of the building is not greater than 10 feet (3048 mm) and the length is not greater than 30 feet (9144 mm).
 - 2.3. The area is separated from the remainder of the level of exit discharge by ~~construction providing 45 minutes of fire-resistance-rated protection~~ a fire partition constructed in accordance with Section 708.

Exception: The maximum transmitted temperature rise is not required.

- 2.4. The area is used only for means of egress and exits directly to the outside.
3. *Horizontal exits* complying with Section 1025 shall not be required to discharge directly to the exterior of the building.

Commenter's Reason: The committee's reason for denial is confusing in that the statement indicates the suggested reference to a 45 minutes fire resistance rating is an increase without justification, then they state that the wired glass equivalent that currently exists is considered equivalent to a 45 minutes of protection.

I believe they were referring to the fact that the referenced wired glass equivalent does not have a maximum transmitted temperature rise rating. The suggested modification refers to a fire partition for the method of construction. Though the fire partition requires a one hour rating in accordance with Section 708, the impact is negligible based upon common construction methods and the use of code recognized terms and methods will provide for clarity in design and construction.

To address the committee's concern an exception to the maximum transmitted temperature rise has been added.

E155-12

Final Action:

AS

AM

AMPC_____

D

E160-12

1028.9.5, 1028.10.2.1, Table 1028.10.2.1, 1028.10.2.2; (IFC [B] 1028.9.5, 1028.10.2.1, Table 1028.10.2.1, 1028.10.2.2)

Proposed Change as Submitted

Proponent: Dan Casella, Chair, ICC 300 Development Committee, Standard for Bleachers, Folding and Telescopic Seating and Grandstands

Revise as follows:

1028.9.5 (IFC [B] 1028.9.5) Assembly aisle termination. Each end of an *aisle* shall terminate at cross *aisle*, foyer, doorway, vomitory or concourse having access to an *exit*.

Exceptions:

1. Dead-end *aisles* shall not be greater than 20 feet (6096 mm) in length.
2. Dead-end *aisles* longer than 16 rows ~~20 feet (6096 mm)~~ are permitted where seats beyond the 16th row ~~20 feet (6096 mm)~~ dead-end *aisle* are no more than 24 seats from another *aisle*, measured along a row of seats having a minimum clear width of 12 inches (305 mm) plus 0.6 inch (15.2 mm) for each additional seat above seven in the row where seats have backrests or beyond ten where seats are without backrests in the row.
3. For *smoke-protected assembly seating*, the dead end *aisle* length of vertical *aisles* shall not exceed a distance of 21 rows.
4. For *smoke-protected assembly seating*, a longer dead-end *aisle* is permitted where seats beyond the 21-row dead-end *aisle* are not more than 40 seats from another *aisle*, measured along a row of seats having an *aisle* accessway with a minimum clear width of 12 inches (305 mm) plus 0.3 inch (7.6 mm) for each additional seat above seven in the row where seats have backrests or beyond ten where seats are without backrests in the row.

1028.10.2.1 (IFC [B] 1028.10.2.1) Dual access. For rows of seating served by *aisles* or doorways at both ends, there shall not be more than 100 seats per row. The minimum clear width of 12 inches (305 mm) between rows shall be increased by 0.3 inch (7.6 mm) for every additional seat beyond 14 seats where seats have backrests or beyond 21 where seats are without backrests. ~~but~~ The minimum clear width is not required to exceed 22 inches (559 mm).

Exception: For *smoke-protected assembly seating*, the row length limits for a 12-inch-wide (305 mm) *aisle* accessway, beyond which the *aisle* accessway minimum clear width shall be increased, are in Table 1028.10.2.1.

**TABLE 1028.10.2.1 (IFC [B] TABLE 1028.10.2.1)
SMOKE-PROTECTED ASSEMBLY AISLE ACCESSWAYS**

TOTAL NUMBER OF SEATS IN THE SMOKE PROTECTED ASSEMBLY OCCUPANCY	MAXIMUM NUMBER OF SEATS PER ROW PERMITTED TO HAVE A MINIMUM 12-INCH CLEAR WIDTH AISLE ACCESSWAY			
	Aisle or doorway at both ends of row		Aisle or doorway at one end of row only	
	<u>Seats with backrests</u>	<u>Seats without backrests</u>	<u>Seats with backrests</u>	<u>Seats without backrests</u>
Less than 4,000	14	<u>21</u>	7	<u>10</u>
4,000	15	<u>22</u>	7	<u>10</u>
7,000	16	<u>23</u>	8	<u>11</u>
10,000	17	<u>24</u>	8	<u>11</u>

TOTAL NUMBER OF SEATS IN THE SMOKE PROTECTED ASSEMBLY OCCUPANCY	MAXIMUM NUMBER OF SEATS PER ROW PERMITTED TO HAVE A MINIMUM 12-INCH CLEAR WIDTH AISLE ACCESSWAY			
	Aisle or doorway at both ends of row		Aisle or doorway at one end of row only	
	<u>Seats with backrests</u>	<u>Seats without backrests</u>	<u>Seats with backrests</u>	<u>Seats without backrests</u>
13,000	18	<u>25</u>	9	<u>12</u>
16,000	19	<u>26</u>	9	<u>12</u>
19,000	20	<u>27</u>	10	<u>13</u>
22,000 and greater	21	<u>28</u>	11	<u>14</u>

For SI: 1 inch = 25.4 mm.

1028.10.2.2 (IFC [B] 1028.10.2.2) Single access. For rows of seating served by an *aisle* or doorway at only one end of the row, the minimum clear width of 12 inches (305 mm) between rows shall be increased by 0.6 inch (15.2 mm) for every additional seat beyond seven seats where seats have backrests or beyond ten where seats are without backrests. ~~but~~ the minimum clear width is not required to exceed 22 inches (559 mm).

Exception: For *smoke-protected assembly seating*, the row length limits for a 12-inch-wide (305 mm) *aisle accessway*, beyond which the *aisle accessway* minimum clear width shall be increased, are in Table 1028.10.2.1.

Reason: The intent of this proposal is for coordination with ICC 300 Section 407.3, 407.4 and 407.5.

This proposal is an extension of the recognition of the fact that bench seating without backrests allows easier and quicker lateral movement along a bleacher type row as compared with rows of seating which are provided with backrests. In seating with backrests, occupants typically must remain facing forward or approximately perpendicular to the aisle access and side step toward the aisle. The wider the aisle access, the more the occupants are allowed to turn and walk toward the aisle. When backrests are not present it is possible to turn and face parallel to the aisle access regardless of aisle access width. This in turn allows a walking style motion instead of side stepping.

Seating without backrests also allows easier vertical movements between rows without climbing over seatbacks or using aisles. Although this is not a consideration during normal egress, the benefits to crowd management, security, and emergency medical personnel are obvious.

Current IBC aisle access requirements are based on seating with backrests. For the minimum 12" aisle access, 6 seats are allowed between any seat and an aisle. From there that number of seats is increased with increases in aisle access width and smoke protection. This proposal increases the basic number of seats between any seat and an aisle for the minimum 12" aisle access from 6 to 9(single access) or 10(dual access). The increase factors for width and smoke protection remain unchanged.

Once the increased number is exceeded in a dual access or single access row, the calculation for the increased access aisle width would start at this point. Example of dual access:

Seats with backs – 30 seats; $30 - 14 = 16$; $16 \times 0.3" + 12" = 16.8"$ minimum access aisle width

Seats without backs – 30 seats; $30 - 21 = 9$; $9 \times 0.3" + 12" = 14.1"$ minimum access aisle width

This proposal also re-introduces the long standing and time tested dead end aisle limit of 16 rows for non-smoke protected seating. The 16 row limit is reasonable considering the attentiveness of people and typically shorter periods of occupancy involved with assembly. It also matches well with the 21 row limit already afforded to smoke protected seating.

The purpose of the ICC 300 standard is to establish the minimum requirements to safeguard the public health, safety and general welfare through structural strength, means of egress facilities, stability, and safety to life and property relative to the construction, alteration, repair, operation, and maintenance of new and existing temporary and permanent bench bleachers, folding and telescopic seating, and grandstands. Information can be downloaded from the following website:

<http://www.iccsafe.org/cs/standards/IS-BLE/Pages/default.aspx>. Since its inception in March 2000, the committee has produced 3 editions, the latest edition being 2012. All meeting are open to the public.

Cost Impact: None

1028.9.5-E-CASELLA-ICC 300.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: There was no technical justification provided for quicker vertical movement claimed in the reason or an increase in the dead end length.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Dan Casella, Chair, ICC 300 – Development Committee, Standard for Bleachers, Folding and Telescopic Seating and Grandstands; Gene Boecker, AIA, Code Consultants, Inc (CCI); requests Approval as Submitted.

Commenter's Reason (Casella): The proposal should be approved as submitted as part of the harmonization efforts between the assembly seating arrangements in IBC and the ICC 300 standard.

Quicker vertical movement applies only where seats are without backrests as indicated in the second paragraph of the reason statement.

Per IBC 1018.4, dead-end corridors may be extended from 20 feet to 50 feet under exceptions 1 and 2. 50 feet is approximately equivalent to a maximum of 16 rows of seating. Per IBC 903, sprinklers will typically be required for the A-1 and A-4 nonsmoke-protected applications where assembly aisles are provided. Again, the attentiveness of the people and the shorter period of occupancy allow for an increased dead-end length. In addition, ceilings must be higher to accommodate site lines in assembly seating. This results in larger room volumes for smoke accumulation and affords greater egress time to walk the increased length.

When the IBC was assembled from the BOCA, SBC and UBC codes, all three recognized the proposed 16 row dead-end limit for nonsmoker-protected assembly seating. We believe it was merely an oversight that this was not included in the IBC.

References:

- 1999 BOCA Section 1013.6.1 Exception 1
- 1997 SBC Section 1019.11.6.1 Exception 5
- 1997 UBC Section 1004.3.2.4 Exception 2

The purpose of the ICC 300 standard is to establish the minimum requirements to safeguard the public health, safety and general welfare through structural strength, means of egress facilities, stability, and safety to life and property relative to the construction, alteration, repair, operation, and maintenance of new and existing temporary and permanent bench bleachers, folding and telescopic seating, and grandstands. Information can be downloaded from the following website: <http://www.iccsafe.org/cs/standards/IS-BLE/Pages/default.aspx>. Since its inception in March 2000, the committee has produced 3 editions, the latest edition being 2012. All meeting are open to the public.

Commenter's Reason (Boecker): The proposal should be approved.

The proposal seeks to harmonize the IBC with the ICC 300 standard. The ICC 300 committee had extensive discussions on this issue and agreed that the revision was in keeping with the needs for assembly seating of this type. If this is not approved, there will be a gap between what is allowed in the ICC 300 Standard and what is allowed in the IBC. In a facility such as a high school with fixed seating on one side and a telescoping seating on the other, two different sets of rules would be in place if this is not approved.

The history of use demonstrates that this is an appropriate method of seating where no seat backs are provided

The purpose of the ICC 300 standard is to establish the minimum requirements to safeguard the public health, safety and general welfare through structural strength, means of egress facilities, stability, and safety to life and property relative to the construction, alteration, repair, operation, and maintenance of new and existing temporary and permanent bench bleachers, folding and telescopic seating, and grandstands. Information can be downloaded from the following website: <http://www.iccsafe.org/cs/standards/IS-BLE/Pages/default.aspx>. Since its inception in March 2000, the committee has produced 3 editions, the latest edition being 2012. All meeting are open to the public.

E160-12

Final Action: AS AM AMPC_____ D

E169-12

1103.2.2

Proposed Change as Submitted

Proponent: Carl Baldassarra, P.E., FSFPE, Chair, ICC Code Technology Committee

Delete without substitution:

~~1103.2.2 Existing buildings.~~ Existing buildings shall comply with Section 3411.

Reason: This exception is being deleted because it is not needed. Application of the building code for existing buildings begins in chapter 34. The scope of accessibility requirements for existing buildings is specified in chapter 34, specifically in section 3411. IBC chapter 11 is not the scoping chapter for existing building accessibility, therefore this exception in chapter 11 is simply redundant and not needed. It is technically an invalid exception because it is a scoping exception for a chapter that does not scope accessibility for existing buildings. Other chapters of the IBC do not have a similar exception because the general scope of the IBC is for new construction with Chapter 34 applicable to scope the IBC or IEBC for existing construction. The general scope of application of the IBC and IEBC to existing buildings is established in IBC Chapter 34; the IEBC as referenced by IBC section 3401.6 as an alternative to IBC chapter 34.

The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The code issues are assigned to the CTC by the ICC Board as "areas of study". Information on the CTC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website: <http://www.iccsafe.org/cs/cc/ctc/index.html>. Since its inception in April, 2005, the CTC has held twenty-two meetings – all open to the public.

Cost Impact: None

1103.2.2-E-BALDASSARRA-CTC.docx

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: While the committee agreed with the proponents reason that existing buildings are covered in Chapter 34, the pointer to the existing building requirements in Chapter 34 for accessibility requirements is needed for the more casual user. Coordination with the IEBC may also be necessary depending on other code changes in regards to Chapter 34.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Carl Baldassarra, Code Technologies Committee, requests Approval as Submitted.

Commenter's Reason: Code change G201 removed the existing building requirements from the IBC, therefore this reference is no longer valid. Accessibility requirements for existing buildings can be found in the IEBC.

The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The code issues are assigned to the CTC by the ICC Board as "Areas of Study". The Area of Study for this code change and public comment is called "IBC Coordination with the new ADAAG". Information on the CTC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website <http://www.iccsafe.org/cs/CTC/Pages/IBCCoordination-ADAAG.aspx>. Since its

inception in April, 2005, the CTC has held twenty-four meetings – all open to the public. In addition to holding face-to-face meetings, the CTC established Study Groups where any interested party can participate in conference calls on specific subjects such as this area of study without having to attend the face-to-face meetings.

E169-12

Final Action: AS AM AMPC_____ D

E174-12

1103.2.12

Proposed Change as Submitted

Proponent: Carl Baldassarra, P.E., FSFPE, Chair, ICC Code Technology Committee

Delete without substitution:

~~**1103.2.12 Day care facilities.** Where a day care facility is part of a *dwelling unit*, only the portion of the structure utilized for the day care facility is required to be accessible.~~

Reason: This exception is invalid within the context of the IBC. A day care facility cannot be part of a dwelling unit because they are two distinct occupancies. If a day care facility and a dwelling unit are in the same building then the building is a mixed occupancy building and the accessibility provisions for each occupancy are applicable, and no exception is required or appropriate. The dwelling unit portion would be a Group R-2 or R-3; the day care facility would be Group I-4, I-2 or E. Accessibility requirements would be scoped to each occupancy group accordingly.

The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The code issues are assigned to the CTC by the ICC Board as "areas of study". Information on the CTC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website: <http://www.iccsafe.org/cs/cc/ctc/index.html>. Since its inception in April, 2005, the CTC has held twenty-two meetings – all open to the public.

Cost Impact: None

1103.2.12-E-BALDASSARRA-CTC.docx

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: There is value in having this pointer remain since this can be a business in an IRC building.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Carl Baldassarra, Code Technologies Committee, requests Approval as Submitted.

Commenter's Reason: Day care facilities should not be singled out as a specific exception for several reasons. Day care conducted in *dwelling units* is most often found in IRC dwellings rather than IBC dwellings. Also, in efforts to coordinate with the ADAAG by providing a laundry list of exceptions in IBC Section 1103, it is not necessary to specify day care facilities. The ADAAG regulates business use of the home in a wide variety of possible uses, not just day care. Providing this specific exception can be misleading and unnecessary by narrowing the focus of regulated businesses in *dwelling units* to day care facilities. Where constructed new, any day care occupancy connected to any other occupancy would be considered a mixed use building and should be addressed as such. Therefore, this is literally already covered by Chapter 11.

The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The code issues are assigned to the CTC by the ICC Board as "Areas of Study". The Area of Study for this code change and public comment is called "IBC Coordination with the new ADAAG". Information on the CTC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website <http://www.iccsafe.org/cs/CTC/Pages/IBCCoordination-ADAAG.aspx>. Since its inception in April, 2005, the

CTC has held twenty-four meetings – all open to the public. In addition to holding face-to-face meetings, the CTC established Study Groups where any interested party can participate in conference calls on specific subjects such as this area of study without having to attend the face-to-face meetings.

E174-12

Final Action: AS AM AMPC_____ D

E176-12

1103.2.16 (New)

Proposed Change as Submitted

Proponent: David R. Scott, AIA, representing Target Corporation (David.Scott@Target.com)

Add new text as follows:

1103.2.16 Display areas. Display areas that do not exceed 300 square feet (30 m²) in area and are not open to the public are not required to be accessible.

Reason: Access to these display areas are not intended by the general public. We feel Section 1103.2.8 Limited access spaces, do not clearly identify that display areas would fall under this section. We have established a size of 300 sq. ft. to give a limit to a size of a display area as well as to tie into the size established in Section 1103.2.3.

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

1103.2.16 (New)-E-Scott.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The phrase "display areas" is too broad for uniform enforcement. The term "display window" might be better language for this exception. If this includes any type of employee work area, approach, enter and exit would be required.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

David Scott, AIA, representing Target Corporation, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1103.2.16 Display window areas. Display window areas that do not exceed 300 square feet (27.9 sq. meters) in floor area and are less than 7 feet in any plan dimension, and to which the general public is excluded, need not be made accessible.

Commenter's Reason: Committee comment indicated that "Display areas" could be too general or broad. We have revised this to "Display Window Areas" to help define the scope or area being addressed. Committee also indicated if this includes any type of employee work area, approach, enter and exit would be required. Per section 1208.1, a space is not considered a room or habitable space unless it is at least 7 ft. in any plan dimension. Additionally, section 1103.2.3 for work areas limit accessible requirement to 300 sq. ft. Therefore, a display window area that is less than 7 ft. in any plan dimension would not be considered a room or habitable space. The new language being proposed is to add clarity. If an area is considered too small to be considered a room or habitable space, it would also not be required to be accessible.

This proposed change will help tie section 1103.2.3 together with section 1208 and add clarity and consistency in the language.

E176-12

Final Action:

AS

AM

AMPC____

D

E183-12

1106.1, 1106.2

Proposed Change as Submitted

Proponent: Carl Baldassarra, P.E., FSFPE, Chair, ICC Code Technology Committee

Revise as follows:

1106.1 Required. Where parking is provided, accessible parking spaces shall be provided in compliance with Table 1106.1, ~~except and~~ as required by Sections 1106.2 through 1106.4. Where more than one parking facility is provided on a site, the number of parking spaces required to be accessible shall be calculated separately for each parking facility.

1106.2 Groups I-1, R-1, R-2 and R-4 ~~R-2 and R-3~~. In addition to the parking required by Table 1106.1, in Groups I-1, R-1, R-2 and R-4, where parking is provided for Accessible and Type A units, at least one accessible parking space shall be provided for each unit. ~~At least 2 percent, but not less than one, of each type of parking space provided for occupancies in Groups R-2 and R-3, which are required to have Accessible, Type A or Type B dwelling or sleeping units, shall be accessible.~~ Where parking is provided within or beneath a building, accessible parking spaces shall also be provided within or beneath the building.

1106.3 Hospital outpatient facilities. At least 10 percent, but not less than one, of care recipient and visitor parking spaces provided to serve hospital outpatient facilities shall be accessible.

1106.4 Rehabilitation facilities and outpatient physical therapy facilities. At least 20 percent, but not less than one, of the portion of care recipient and visitor parking spaces serving rehabilitation facilities specializing in treating conditions that affect mobility and outpatient physical therapy facilities shall be accessible.

Reason: The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The code issues are assigned to the CTC by the ICC Board as "areas of study". Information on the CTC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website: <http://www.iccsafe.org/cs/cc/ctc/index.html>. Since its inception in April, 2005, the CTC has held twenty-two meetings – all open to the public.

When parking is provided for residents, this proposal would require an accessible space for each Accessible and Type A unit, as well as accessible parking for the remainder of the units. This should meet both ADA and FHA. Literally, current IBC is asking for 2% of the parking provided for the three types of accessible units. 2010 ADA requires 2% of parking for all units that are not Accessible or Type A only when there is more than one parking space per unit. Table 1106.1 already gets you more than 2%. (2010 ADA 208.3.2)

Since Accessible units also required in Group I-1 assisted living, and these facilities may provide parking for residents, this Group has been added to the list. If the assisted living facility does not provide parking spaces for residents, the parking lots would just meet the general parking lot requirements.

Section 1106.3 and 1106.4 are relevant to only portions of the parking facilities for hospitals and rehabilitation facilities. Areas such as employee parking should use Table 1106.1 for the number of accessible spaces.

Cost Impact: None

1106.1#2-E-BALDASSARRA-CTC.docx

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The proponent requested disapproval so that they can work with the National Association of Home Builders to address parking for Type B units and single family and townhouse complexes with no accessible units. There was also a question if the percentage asked for was consistent with the Fair Housing Act requirements.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Carl Baldassarra, Code Technologies Committee, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1106.1 Required. Where parking is provided, accessible parking spaces shall be provided in compliance with Table 1106.1, except and as required by Sections 1106.2 through 1106.4. Where more than one parking facility is provided on a site, the number of parking spaces required to be accessible shall be calculated separately for each parking facility.

1106.2 Groups I-1, R-1, R-2, R-3 and R-4. Accessible parking spaces shall be provided in Groups I-1, R-1, R-2, R-3 and R-4 occupancies in accordance with items 1 through 4 as applicable.

1. In Groups R-2, R-3, and R-4 occupancies which are required to have Accessible, Type A or Type B dwelling or sleeping units, at least 2 percent, but not less than one, of each type of parking space provided shall be accessible.
2. In Groups I-1 and R-1 occupancies accessible parking shall be provided in accordance with Table 1106.1.
3. In addition Where at least one parking space is provided for each dwelling unit or sleeping unit, to the parking required by Table 1106.1, in Groups I-1, R-1, R-2 and R-4, where parking is provided for Accessible and Type A units, at least one accessible parking space shall be provided for each Accessible and Type A unit.
4. Where parking is provided within or beneath a building, accessible parking spaces shall also be provided within or beneath the building.

Commenter's Reason: The intent of this public comment is to clarify and coordinate parking requirements for what may be considered residential occupancies under Fair Housing and ADA. The additional language in the base paragraph is to editorial to clarify requirements.

- Item 1 -** The proposed comment reintroduces the basic requirement that for Group R-2 and R-3 (and R-4 per Section 310.6) when parking is made available at least 2%, but no less than one, space must meet the accessible requirements. See also E218-12 for signage requirements. These spaces are not required to be signed as accessible providing the space is provided.
- Item 2 -** This is added as coordination with item 3. If this section will include where Accessible units are required, then accessible parking for R-1 and I-1 must be clear.
- Item 3 -** This comment also address the change in the ADA which requires a one-to-one ratio when parking is provided for each dwelling unit, an accessible parking space is required for each dwelling unit that is an Accessible or Type A dwelling Unit.
- Item 4 -** This is existing text.

The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The code issues are assigned to the CTC by the ICC Board as "Areas of Study". The Area of Study for this code change and public comment is called "IBC Coordination with the new ADAAG". Information on the CTC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website <http://www.iccsafe.org/cs/CTC/Pages/IBCCoordination-ADAAG.aspx>. Since its inception in April, 2005, the CTC has held twenty-four meetings – all open to the public. In addition to holding face-to-face meetings, the CTC established Study Groups where any interested party can participate in conference calls on specific subjects such as this area of study without having to attend the face-to-face meetings.

E183-12

Final Action:	AS	AM	AMPC____	D
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E186-12

1107.5.1.1, 1107.6.4.1

Proposed Change as Submitted

Proponent: Carl Baldassarra, P.E., FSFPE, Chair, ICC Code Technology Committee

Revise as follows:

1107.5.1 Group I-1. *Accessible units and Type B units shall be provided in Group I-1 occupancies in accordance with Sections 1107.5.1.1 and 1107.5.1.2.*

1107.5.1.1 Accessible units. In Group I-1, other than assisted living facilities, at least 4 percent, but not less than one, of the dwelling units and sleeping units shall be Accessible units. In Group I-1 assisted living facilities, at least 10 percent, but not less than one, of the dwelling units and sleeping units shall be Accessible units.

1107.5.1.2 Type B units. *In structures with four or more dwelling units or sleeping units intended to be occupied as a residence, every dwelling unit and sleeping unit intended to be occupied as a residence shall be a Type B unit.*

Exception: The number of *Type B units* is permitted to be reduced in accordance with Section 1107.7.

1107.6.4 Group R-4. *Accessible units and Type B units shall be provided in Group R-4 occupancies in accordance with Sections 1107.6.4.1 and 1107.6.4.2.*

1107.6.4.1 Accessible units. In Group R-4, other than assisted living facilities, at least one of the dwelling or sleeping units shall be an Accessible unit. In Group R-4 assisted living facilities, at least two of the dwelling or sleeping units shall be an Accessible unit.

1107.6.4.2 Type B units. *In structures with four or more dwelling units or sleeping units intended to be occupied as a residence, every dwelling unit and sleeping unit intended to be occupied as a residence shall be a Type B unit.*

Exception: The number of *Type B units* is permitted to be reduced in accordance with Section 1107.7.

Reason: The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The code issues are assigned to the CTC by the ICC Board as "areas of study". Information on the CTC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website: <http://www.iccsafe.org/cs/cc/ctc/index.html>. Since its inception in April, 2005, the CTC has held twenty-two meetings – all open to the public.

The intent of this code change is to establish a minimum number of Accessible units required in Assisted Living Facilities for Group I-1 and R-4. The 10% Accessible units is based on anticipated need in these types of facilities.

The current ADA requirements address residential facilities and long term care facilities, typically hospitals and nursing homes. The text does not directly address what the International Codes refer to as Assisted Living or Group I-1 facilities. The current text requires the following: 100% Accessible units in Group I-2 rehabilitation facilities; 50% Accessible units in Group I-2 nursing homes; 4% Accessible units in all Group I-1 and 2% Type A units in Group R-2 apartment buildings. The 2009 IBC had 10% Accessible units for residential board and care facilities, but the deletion of that term in the 2012 IBC resulted in the loss of that requirement. This addition will establish a minimum level for Group I-1 assisted living facilities while leaving other Group I-1 facilities to remain at 4%. Facilities can always choose to exceed this limit depending on the needs of their clientele and the desire of the facility to have optimum flexibility. Since these facilities are custodial care, and not nursing care, 10% Accessible units should meet demand.

The committee feels that if the building code addresses the minimum accessibility needs for these types of facilities, then the federal government may not feel that they need to establish additional accessibility requirements.

Cost Impact: Increase

1107.5.1-E-BALDASSARRA

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: This proposal fills a gap between apartment living and nursing homes. The 10% is based on the anticipated need in assisted living facilities. This provision was lost when the definition for residential care facilities was removed during the last cycle.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Carl Baldassarra, Code Technologies Committee, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1107.5.1.1 Accessible units. In Group I-1, ~~other than assisted living facilities Condition 1,~~ at least 4 percent, but not less than one, of the *dwelling units* and *sleeping units* shall be *Accessible units*. In Group I-1 ~~assisted living facilities Condition 2,~~ at least 10 percent, but not less than one, of the *dwelling units* and *sleeping units* shall be *Accessible units*.

1107.6.4.1 Accessible units. In Group R-4, ~~other than assisted living facilities Condition 1,~~ at least one of the *dwelling* or *sleeping units* shall be an *Accessible unit*. In Group R-4 ~~assisted living facilities Condition 2,~~ at least two of the *dwelling* or *sleeping units* shall be an *Accessible unit*.

Commenter's Reason: Code change E186 is a technical change which proposes to increase the required number of Accessible sleeping unit for assisted living arrangements where the anticipated need is greater than the current 4%. For Group I-1, Condition 2, this proposal will be consistent with anticipated need within these types of facilities. This proposal was approved by the committee in Dallas. The purpose of this public comment is limited to the editorial coordination of terminology with the approval of Code change G31-12.

At the Code Development Hearing, the IBC - General committee approved as submitted G31-12 which created two occupancy conditions for Group I-1, similar to what is currently in the IBC for Group I-3 and was approved for Group I-2 in G257. The end result is that where warranted, the code would call out Group I-1 into Condition 1, where residents can evacuate without assistance, and Group I-1, Condition 2, where residents may need limited assistance in evacuation. As indicated in the reason statement for G31, the benefit of the condition concept, when compared to creating new use groups, (i.e. Group I-5 or I-6) is that a majority of code requirements would still apply to all Group I-1 occupancies.

Following the successful action on G31, the Care Study Group for the Code Technologies Committee (CTC) did a review of code changes submitted in the 2012 Cycle which are unique to Group I-1 to determine whether or not the condition designation was necessary in order to distinguish between the two Group I-1 conditions. Code change E186 is one such application where the Group I-1, Condition 1 and Group I-1, Condition 2 designation is warranted, and therefore this public comment is being submitted by the CTC.

The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The code issues are assigned to the CTC by the ICC Board as "Areas of Study". The Area of Study for this code change and public comment is called "Care Facilities". Information on the CTC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website: <http://www.iccsafe.org/cs/CTC/Pages/CareFacilities.aspx>. Since its inception in April, 2005, the CTC has held twenty-four meetings – all open to the public. In addition to holding face-to-face meetings, the CTC established Study Groups where any interested party can participate in conference calls on specific subjects such as this area of study without having to attend the face-to-face meetings.

Staff analysis: Code changes G31 was Approved as Submitted and G257 was Approved as Modified at the Code Development Hearings. A public comment has not been submitted for either proposal. Accordingly it has been placed on the consent agenda.

E186-12

Final Action:

AS

AM

AMPC____

D

E191-12

1107.6.2.1.1, 1107.6.2.2, 1107.6.3, 1107.6.4, 1107.6.4.1, 1107.6.4.2

Proposed Change as Submitted

Proponent: Carl Baldassarra, P.E., FSFPE, Chair, ICC Code Technology Committee

Revise as follows:

1107.6.2 Group R-2. Accessible units, Type A units and Type B units shall be provided in Group R-2 occupancies in accordance with Sections 1107.6.2.1 and 1107.6.2.2.

1107.6.2.1 Apartment houses, monasteries and convents. Type A units and Type B units shall be provided in apartment houses, monasteries and convents in accordance with Sections 1107.6.2.1.1 and 1107.6.2.1.2.

1107.6.2.1.1 Type A units. In Group R-2 occupancies containing more than 20 dwelling units or sleeping units, at least 2 percent but not less than one of the units shall be a Type A unit. All Group R-2 units on a site shall be considered to determine the total number of units and the required number of Type A units. Type A units shall be dispersed among the various classes of units. Bedrooms within monasteries and convents shall be counted as sleeping units for the purpose of determining the number of units.

Exceptions:

1. The number of Type A units is permitted to be reduced in accordance with Section 1107.7.
2. Existing structures on a site shall not contribute to the total number of units on a site.

1107.6.2.1.2 Type B units. Where there are four or more dwelling units or sleeping units intended to be occupied as a residence in a single structure, every dwelling unit and sleeping unit intended to be occupied as a residence shall be a Type B unit.

Exception: The number of Type B units is permitted to be reduced in accordance with Section 1107.7.

1107.6.2.2 Group R-2 other than apartment houses, monasteries and convents. In Group R-2 occupancies, other than apartment houses, monasteries and convents, Accessible units and Type B units shall be provided in accordance with Sections 1107.6.2.2.1 and 1107.6.2.2.2. Bedrooms within congregate living facilities shall be counted as sleeping units for the purpose of determining the number of units.

1107.6.2.2.1 Accessible units. Accessible dwelling units and sleeping units shall be provided in accordance with Table 1107.6.1.1.

1107.6.2.2.2 Type B units. Where there are four or more dwelling units or sleeping units intended to be occupied as a residence in a single structure, every dwelling unit and every sleeping unit intended to be occupied as a residence shall be a Type B unit.

Exception: The number of Type B units is permitted to be reduced in accordance with Section 1107.7.

1107.6.3 Group R-3. In Group R-3 occupancies where there are four or more dwelling units or sleeping units intended to be occupied as a residence in a single structure, every dwelling unit and sleeping unit intended to be occupied as a residence shall be a Type B unit. Bedrooms within congregate living facilities shall be counted as sleeping units for the purpose of determining the number of units.

Exception: The number of Type B units is permitted to be reduced in accordance with Section 1107.7.

1107.6.4 Group R-4. Accessible units and Type B units shall be provided in Group R-4 occupancies in accordance with Sections 1107.6.4.1 and 1107.6.4.2. Bedrooms within congregate living facilities shall be counted as sleeping units for the purpose of determining the number of units.

1107.6.4.1 Accessible units. At least one of the ~~dwelling or~~ sleeping units shall be an Accessible unit.

1107.6.4.2 Type B units. In structures with four or more ~~dwelling units or~~ sleeping units intended to be occupied as a residence, every ~~dwelling unit and~~ sleeping unit intended to be occupied as a residence shall be a Type B unit.

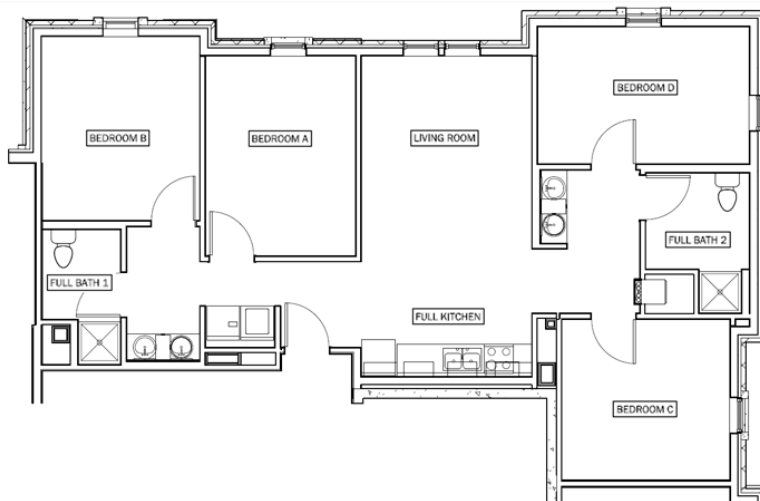
Exception: The number of Type B units is permitted to be reduced in accordance with Section 1107.7.

Reason: The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The code issues are assigned to the CTC by the ICC Board as "areas of study". Information on the CTC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website: <http://www.iccsafe.org/cs/cc/ctc/index.html>. Since its inception in April, 2005, the CTC has held twenty-two meetings – all open to the public.

The intent is to try and address the new style of dormitory facilities that operate like dorms, but look like apartments. There has also been the interpretation that fraternities and sororities are a single dwelling unit for purposes of accessibility. The statement about congregate residences should help address how to count units for these types of facilities. This should be extended to the 16 or fewer congregate residences permitted in Group R-3 and R-4.

Group R-4 facilities are group homes and therefore are always congregate residences; therefore they will not include dwelling units.

Below is an example of student on-campus housing at Indiana University. While it looks like an apartment, it is handled administratively by the university exactly the same as typical dorm room assignments.



Cost Impact: None

1107.6.2-E-BALDASSARRA-CTC.docx

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The proponent asked for disapproval in order to allow them to work on coordination between the 2010 ADA Standard for Accessible Design and the Fair Housing Act for the new style of dormitories that look more like apartments than the old style dorm layouts.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Carl Baldassarra, Code Technologies Committee, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1107.6.2.1.1 Type A units. In Group R-2 occupancies containing more than 20 dwelling units or sleeping units, at least 2 percent but not less than one of the units shall be a Type A unit. All Group R-2 units on a site shall be considered to determine the total number of units and the required number of Type A units. Type A units shall be dispersed among the various classes of units. Bedrooms within monasteries and convents shall be counted as sleeping units for the purpose of determining the number of units. Where the sleeping units are grouped into suites, only one sleeping unit in each suite shall be permitted to count towards the number of required Type A units.

Exceptions:

1. The number of Type A units is permitted to be reduced in accordance with Section 1107.7.
2. Existing structures on a site shall not contribute to the total number of units on a site.

1107.6.2.1.2 Type B units. Where there are four or more dwelling units or sleeping units intended to be occupied as a residence in a single structure, every dwelling unit and sleeping unit intended to be occupied as a residence shall be a Type B unit.

Exception: The number of Type B units is permitted to be reduced in accordance with Section 1107.7.

1107.6.2.2 Group R-2 other than apartment houses, monasteries and convents. In Group R-2 occupancies, other than apartment houses, monasteries and convents, Accessible units and Type B units shall be provided in accordance with Sections 1107.6.2.2.1 and 1107.6.2.2.2. Bedrooms within congregate living facilities shall be counted as sleeping units for the purpose of determining the number of units. Where the sleeping units are grouped into suites, only one sleeping unit in each suite shall be permitted to count towards the number of required Accessible units.

(Portions of proposal not shown remain unchanged.)

Commenter's Reason: The new style of dorm setups are looking like dwelling units but still operate as dormitories. In large facilities, the Accessible rooms should not be all grouped into one suite, so that the students have options. In congregate living arrangements in Group R-3 and R-4, with the maximum size at 16 occupants, this is not an issue, therefore further modification of these sections is not needed. This proposal is consistent with the intent in the DOJ Regulations for housing for education in the adoption of the 2010 ADA Standards for Accessible Design.

The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The code issues are assigned to the CTC by the ICC Board as "Areas of Study". The Area of Study for this code change and public comment is called "IBC Coordination with the new ADAAG". Information on the CTC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website <http://www.iccsafe.org/cs/CTC/Pages/IBCCoordination-ADAAG.aspx>. Since its inception in April, 2005, the CTC has held twenty-four meetings – all open to the public. In addition to holding face-to-face meetings, the CTC established Study Groups where any interested party can participate in conference calls on specific subjects such as this area of study without having to attend the face-to-face meetings.

E191-12

Final Action: AS AM AMPC____ D

E192-12

1107.7.2

Proposed Change as Submitted

Proponent: Cheryl Kent, U.S. Department of Housing and Urban Development (cheryl.d.kent@hud.gov)

Revise as follows:

1107.7.2 Multistory units. A multistory dwelling or sleeping unit which is not provided with elevator service is not required to be a Type B unit. Where a multistory unit is provided with external elevator service to only one floor, the floor provided with elevator service shall be the primary entry to the unit, shall comply with the requirements for a Type B unit and a kitchen and toilet facility shall be provided on that floor.

Reason: At the time that HUD's Fair Housing Accessibility Guidelines were drafted, HUD included provisions for multistory units when such units may be located in a building with a public elevator, requiring that the story that is served by the building elevator be the primary entry to the unit, that this story comply with the accessibility requirements of the Fair Housing Act with respect to the rooms located on the entry/accessible floor, and that this floor include a complying bathroom or powder room. It was HUD's expectation that the main living areas, including the kitchen, living and dining rooms would be on this story/floor, but that this story may not always include an accessible bathroom or powder room, so the Guidelines specifically stated that it would. Since that time, there have been new building types introduced into the housing market, including a few situations where multistory units, located in a building with a public elevator, did not have the kitchen located on the story with the primary entry; or there were multiple floors, rather than the typical, 2-story unit with kitchen, living and dining on the main entry level and bedrooms and bathrooms above. As the Fair Housing Act requires usable kitchens and bathrooms, it has been our position that the kitchen also needs to be on the primary entry level of such multistory units. This code change proposal is intended to incorporate this requirement.

Cost Impact: There should be no significant cost impact because the typical building situation in which a multistory unit may be located in a building with public elevator service most often already does include the primary living areas and the kitchen on the primary entry level. In those few situations where this may not be the case, this changed code language will make it clear, from the outset, before design and construction, that the story of the unit that is served by the building elevator will be the primary entry to the unit, will have rooms on this level that comply with the accessibility requirements, including an accessible kitchen and bathroom or powder room; thus assuring that costs, if any, will be minimal.

1107.7.2-E-Kent.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The proposed language could be read to require bathrooms and kitchens within a sleeping unit. Adding the words "where provided within the unit" would address the concern.

Assembly Action:

None

Individual Consideration Agenda

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

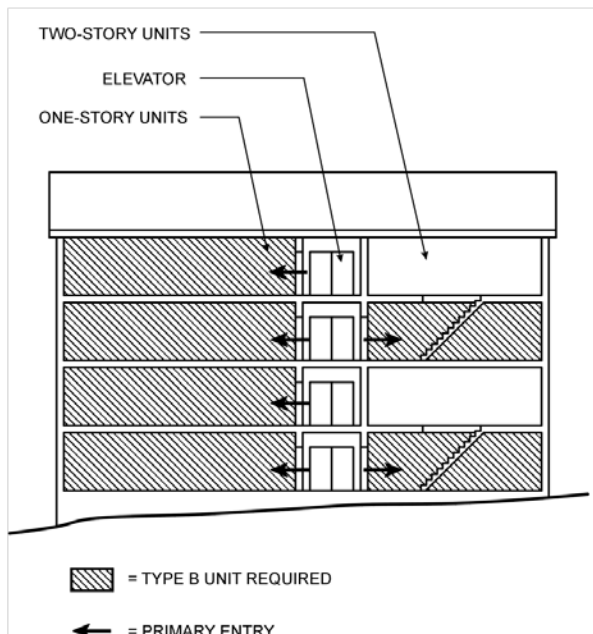
Public Comment 1:

Cheryl Kent, representing U.S. Department of Housing and Urban Development, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1107.7.2 Multistory units. A multistory dwelling or sleeping unit which is not provided with elevator service is not required to be a Type B unit. Where a multistory unit is provided with external elevator service to only one floor, the floor provided with elevator service shall be the primary entry to the unit, shall comply with the requirements for a Type B unit and where provided within the unit, a living area, a kitchen and a toilet facility shall be provided on that floor.

Commenter's Reason: The Committee indicated that the language as originally written was unclear as to whether HUD wanted the kitchen to be accessible (even if located on the upper story of the multistory unit, or whether HUD wanted to ensure that the kitchen was located on the accessible level. The Committee also expressed concern that some types of dwelling units may not have a kitchen within the unit. The changes above are intended to address the Committee's concerns and also further clarify HUD's interpretation of the language in HUD's Fair Housing Accessibility Guidelines, which this provision in the code is intended to reflect. As HUD explained in its reason statement for this proposed change, at the time that HUD's Fair Housing Accessibility Guidelines (the Guidelines) were drafted, HUD included provisions for multistory units when such units may be located in a building with a public elevator, requiring that the story that is served by the building elevator be the primary entry to the unit, that this story comply with the accessibility requirements of the Fair Housing Act with respect to the rooms located on the entry/accessible floor, and that this floor include a complying bathroom or powder room. It was HUD's expectation that the primary entry level of the dwelling unit would include those living areas typically found on the lower story of a multistory unit and would include the kitchen and the living area, but may not include a powder room or bathroom. For this reason, the Guidelines specified a powder room or bathroom would be included on the primary entry level. (See attached graphic). It has since come to HUD's attention that some multistory dwelling units are being built with only the primary entry to the unit and a bathroom or powder room on the story served by the building elevator, with no other rooms or spaces on this level that would comply with the requirements for a Type B unit. This is not what HUD intended and it is not how HUD interprets the language in the Guidelines. HUD is proposing the above modification to address the concerns of the Committee and to also make clear that the primary entry level must include the living area, as well as the kitchen and a toilet facility, with the understanding that this is when these facilities are provided within the dwelling unit. Once again, HUD wishes to emphasize that this proposed change applies only to multistory dwelling units or sleeping units that are located in a building with a public elevator, and not multistory units located in buildings without a public elevator (e.g. townhouses). While most multistory dwelling units that are located in a building with a public elevator will be likely to have a living area, a kitchen and a toilet facility within the unit, the language as modified makes it clear that when those facilities are, in fact, provided within the unit, they must be on the accessible/primary entry level. We believe the language as modified addresses the Committee's concerns.



Public Comment 2:

Gene Boecker, AIA, Code Consultants, Inc. (CCI), requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1107.7.2 Multistory units. A multistory dwelling or sleeping unit which is not provided with elevator service is not required to be a Type B unit. Where a multistory unit is provided with external elevator service to only one floor, the floor provided with elevator service shall be the primary entry to the unit, shall comply with the requirements for a Type B unit and, where provided within the unit, a kitchen and toilet facility shall be provided on that floor.

Commenter's Reason: The committee felt that the language as originally written could be misinterpreted and offered this suggestion to resolve the concern. This makes it clear that the intent is to locate the kitchen on the accessible level in multi-story units; but, only where there is a kitchen in the unit. The logical also applies to the toilet room.

Although it is unlikely that these elements would not be located within the unit, this addresses the concern and removes the objections to its approval.

E192-12

Final Action: AS AM AMPC____ D

E200-12

1109.2.3

Proposed Change as Submitted

Proponent: Carl Baldassarra, P.E., FSFPE, Chair, ICC Code Technology Committee

Revise as follows:

1109.2.3 Lavatories. Where lavatories are provided, at least 5 percent, but not less than one, shall be accessible. Where an accessible lavatory is located within the accessible water closet compartment that lavatory shall not be the only accessible lavatory in the multi-compartment toilet room. Where the total lavatories provided in a toilet room or bathing facility is six or more, at least one lavatory with enhanced reach ranges shall be provided.

Reason: Accessible lavatories must be available to all users of the toilet room any time the room is open. If the only accessible lavatory is within the accessible stall, others in the bathroom would not have access to that lavatory within the stall when the stall was in use. To prevent this, an additional accessible lavatory within the room should still be available for all users. It is not the intent of this section to prohibit someone from providing an accessible lavatory within an accessible stall, only that it not be the only one. This would be coordinated with ADA 213.3.4.

The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The code issues are assigned to the CTC by the ICC Board as "areas of study". Information on the CTC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website: <http://www.iccsafe.org/cs/cc/ctc/index.html>. Since its inception in April, 2005, the CTC has held twenty-two meetings – all open to the public.

Cost Impact: None

1109.2.3-E-BALDASSARRA-CTC.docx

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: This proposal will prevent someone from placing the only accessible lavatory within the accessible stall. This is consistent with the 2010 ADA Standard for Accessible Design.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Gene Boecker, AIA, Code Consultants, Inc (CCI), requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1109.2.3 Lavatories. Where lavatories are provided, at least 5 percent, but not less than one, shall be accessible. Where an accessible lavatory is located within the accessible water closet compartment that at least one additional accessible lavatory shall not be provided the only accessible lavatory in the multi-compartment toilet room outside the water closet compartment. Where the total lavatories provided in a toilet room or bathing facility is six or more, at least one lavatory with enhanced reach ranges shall be provided.

Commenter's Reason: The proposed language does not change the intent of the section. It rephrases the text into a requirement instead of something to avoid. As originally written, it is conceivable that a second accessible lavatory in a second accessible water closet compartment would meet the requirement. That is not the original intent and not in keeping with the intent to harmonize the

text with the ADA. The proposed language is specific in the manner in which the second lavatory must be provided and consistent with Section 213.3.4 of the 2010 ADA Standards for Accessible Design.

E200-12

Final Action: AS AM AMPC____ D

E203-12

1109.10(New), E105.4

Proposed Change as Submitted

Proponent: Cheryl Kent, U.S. Department of Housing and Urban Development (cheryl.d.kent@hud.gov)

Add a new section:

1109.10 Mail receptacles. Where provided, mail receptacles shall be accessible in accordance with Sections 1109.10.1 or 1109.10.2.

1109.10.1 Dwelling units and sleeping units. Where mail receptacles are provided for Accessible, Type A or Type B dwelling and sleeping units, accessible mail receptacles shall be provided in accordance with 1109.10.1.1 or 1109.10.1.2.

1109.10.1.1 Centralized mail receptacles. Where each individual mail compartment of a centralized mail receptacle is assigned to a specific dwelling unit or sleeping unit, the individual mail compartments shall comply with 1109.10.1.1.1 or 1109.10.1.1.2.

1109.10.1.1.1 Buildings without an elevator. In a structure without an elevator, all individual mail compartments assigned to Accessible Units, Type A Units and Type B Units in each location shall be accessible.

1109.10.1.1.2 Buildings with an elevator. In a structure with an elevator, fifty percent of all individual mail compartments in each location shall be accessible. Individual mail compartments assigned to Accessible and Type A units shall be included in the accessible mailboxes. In addition to the individual mail compartments assigned to dwelling or sleeping units, an additional number of individual mail compartments that is equal to ten percent of the total number of dwelling units and sleeping units, but not less than one, at each location shall be accessible.

1109.10.1.1.3 Parcel lockers. All parcel lockers of centralized mail receptacles shall be accessible.

1109.10.1.2 Individual house-mounted and curbside mail receptacles. Where an individual house-mounted or curbside mail receptacle serves a dwelling unit or sleeping unit that is required to be an Accessible unit, Type A unit or Type B unit, the mail receptacle shall be accessible.

1109.10.2 Other occupancies. Where mail receptacles are provided in occupancies not falling within the purview of Section 1109.10.1, at least 5 percent, but not less than one, of each type in each location, shall be accessible.

(Renumber subsequent sections)

Delete without substitution:

~~E105.4 Mailboxes.~~ Where mailboxes are provided in an interior location, at least 5 percent, but not less than one, of each type shall comply with ICC A117.1. In residential and institutional facilities, where mailboxes are provided for each dwelling unit or sleeping unit, mailboxes complying with ICC A117.1 shall be provided for each unit required to be an Accessible unit.

Reason: This proposed change is intended to specifically address accessibility requirements for mailboxes that are provided for buildings that are covered by the Fair Housing Act's (FHA) accessible design and construction requirements and HUD's Fair Housing Accessibility Guidelines (HUD's Guidelines). Under the IBC, dwelling units and sleeping units that are covered by the FHA and HUD's Guidelines are known as Type B Dwelling Units, so the focus of the proposal is on Type B Units; at the same time however, this proposal also will easily include Accessible Units and Type A units.

As background, it came to HUD's attention that Section E105.4 is being interpreted as applying to mailboxes serving Type B dwelling units. This was not HUD's understanding of the IBC, rather, we understood that Section 1107.3 covered mailboxes as well as all other types of public and common use facilities serving Type B dwelling units, and that absent specific scoping requirements to scope less than 100% of individual mailboxes, that all mailboxes were required to be accessible consistent with HUD's position in its Guidelines, which also does not scope less than 100% of mailboxes serving covered dwelling units. The above language will resolve this misunderstanding by striking the language in Appendix E and adding the new language outlined above.

HUD is also aware that HUD's position on mailboxes provided at FHAct covered buildings and current U.S. Postal Service regulations are not in harmony. HUD and U.S.P.S. held a number of discussions and meetings but are not in agreement on a resolution. Nevertheless, HUD recognizes that a 100% scoping requirement for mailboxes in hi-rise elevator buildings, coupled with situations where wall space may be limited, poses challenges for designers and builders in meeting the FHAct requirements as well as those in the IBC and ICC A117.1 for accessible reach ranges. Therefore, we recognize in this proposal that up to 50% of Type A or B units in a building with one or more elevators may not be served by an accessible mailbox. For this reason, this proposal relies on the provision of an additional number of unassigned mailboxes within the accessible reach range to be available, at the time of first occupancy, to serve persons with disabilities who may reside in these units and who may need an accessible mailbox.

Through this code change proposal, we are proposing a resolution that supports our on-going desire to promote consistency between the accessibility requirements in the FHAct and the IBC. In addition, HUD believes this proposal will resolve the conflict in a manner that is consistent with HUD's efforts to move toward more widely accepted accessible reach ranges that are in the more recent editions of the ICC A117.1 standard, as well as in recent government standards for the ADA. In this regard, although HUD's Guidelines use the 1986 edition of ICC A117.1, our proposal is in keeping with several of the more recent editions of IBC and ICC A117.1 that HUD has recognized as safe harbors for compliance under the FHAct, and which use the 48-inch maximum reach range for the high reach. Consequently, we are not recommending changes to the ICC A117.1 as part of this proposal, nor do we intend to do so.

We would like to ensure that architects and builders involved in designing and constructing buildings that are covered by the Fair Housing Act provide for accessibility of mailboxes consistent with HUD's regulations and Guidelines. Developers who deviate from these standards by providing mailboxes at higher reach ranges have been subject to enforcement proceedings brought by HUD as well as litigation brought by the Department of Justice. The Department of Justice has entered into a number of consent decrees which have required the developer to change the height of mailboxes serving covered multifamily dwellings. We believe this change is needed to ensure that the IBC is consistent with the Fair Housing Act and HUD's regulations and Guidelines, and to avoid unnecessary litigation with respect to mailboxes serving Type B dwelling units.

Cost Impact: There should be no significant cost impact since the IBC currently contains text at Section 1107.3 that would apply to mailboxes, like any other public and common use area, and again, absent scoping requirements, should have already been requiring 100% accessibility of mailboxes serving Type B dwelling units. However, by adding this new text to address mailboxes specifically, rather than just generally in Section 1107.3, the IBC will be assuring consistency with the Fair Housing Act, HUD's regulations and the Guidelines.

1109.16-E-Kent.doc

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: This proposal provides guidance for mailboxes, which are already shared and common spaces for housing covered by Section 1107.3. This proposal will address concerns and issues brought up by representatives from Housing and Urban Development and the U.S. Postal Service during the last cycle's hearings. 50% of the mailboxes within the range will allow for a reasonable number of mailboxes within a facility to be accessible. Asking for 100% can be too restrictive in for large complexes or dormitory facilities. The extra 5% would allow for mailboxes to be pre-assigned or not, depending on what the facility wishes.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment 1:

Thomas Meyers, Colorado Code Consulting, LLC., representing self, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1109.10.1.1.2 Buildings with an elevator. In a structure with an elevator, fifty percent of all individual mail compartments in each location shall be accessible. Individual mail compartments assigned to Accessible and Type A units shall be included in the accessible mailboxes. In addition to the individual mail compartments assigned to dwelling or sleeping units, an additional number

of individual mail compartments that is equal to ten percent of the total number of dwelling units and sleeping units, but not less than one, at each location shall be accessible.

(Portions of proposal not shown remain unchanged.)

Commenter's Reason: This proposal was approved on the merits of providing needed guidance on the number of mailboxes that are deemed accessible. The 50% requirement seems quite conservative. One rarely finds users confined to needing the accessible 15-48" wheelchair derived reach ranges in most circumstances, including senior or low income residential projects. The occasional need for an accessible (within reach range) mailbox will be fairly rare and certainly be accommodated within the 50% provided.

The added 10% in addition to the 50% is extremely restrictive. If the intent is to always have one available "just in case" a reasonable accommodation is requested, only one spare compartment is really necessary. Considering normal vacancy rates, it is very likely that among the 50% accessible, at least one box may be instantly available. If not, mailboxes can be easily switched among tenants to accommodate the need.

It should also be noted that the construction of such a large quantity of unused boxes is wasteful and unprecedented in the code. As a minimum standard document, the building code should not require capital investment and ongoing maintenance expenses to possibly accommodate a very unlikely eventuality.

Public Comment 2:

Steven Orlowski, representing National Association of Home Builders (NAHB), requests Disapproval.

Commenter's Reason: The original proposal submitted by HUD far exceeds the requirements by establishing a fifty percent requirement on buildings serviced by an elevator for all mailboxes to be within the acceptable reach ranges and adds requirements for parcel lockers which are not mentioned anywhere in the Fair Housing or ADA. The fifty percent requirement in the proposal will create conflicts between the IBC and the United States Postal Services standard 4B, which regulates both the height and width of wall-mounted centralized mail receptacles. Where there are a large number of mail receptacles servicing a multistory residential dwellings, there may not be enough wall space to accommodate fifty percent of the receptacles to be mounted between the 15" minimum and 48" maximum reach ranges. These requirements conflict with the minimum and maximum heights for centralized mailboxes under the USPS Standard 4b and NAHB urges the FAH assembly to disapprove this proposal.

E203-12

Final Action:	AS	AM	AMPC_____	D
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E206-12

1109.13.1

Proposed Change as Submitted

Proponent: Carl Baldassarra, P.E., FSFPE, Chair, ICC Code Technology Committee

Delete without substitution:

~~**1109.13.1 Operable window.** Where operable windows are provided in rooms that are required to be accessible in accordance with Sections 1107.5.1.1, 1107.5.2.1, 1107.5.3.1, 1107.5.4, 1107.6.1.1, 1107.6.2.1.1, 1107.6.2.2.1 and 1107.6.4.1, at least one window in each room shall be accessible and each required operable window shall be accessible.~~

Reason: This list is a reference for Accessible units and Type A units. Windows within dwelling units and sleeping units are addressed in ICC A117.1, therefore they are not needed here. The ADA/ABA 229.1 has some requirements for operable windows, but has a series of exceptions, including one for residential uses.

The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The code issues are assigned to the CTC by the ICC Board as "areas of study". Information on the CTC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website: <http://www.iccsafe.org/cs/cc/ctc/index.html>. Since its inception in April, 2005, the CTC has held twenty-two meetings – all open to the public.

Cost Impact: None

1109.13.1-E-BALDASSARRA-CTC.docx

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The proponent asked for disapproval in order to address scoping issues/differences between transient and non-transient lodging found in the 2010 ADA Standard for Accessible Design.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Carl Baldassarra, Code Technologies Committee, requests Approval as Submitted.

Commenter's Reason: The MOE committee disapproved this change because the CTC representative asked for some additional time to investigate some possible conflicts with ADA. The concern was over operable windows in Accessible units in transient lodging. Since there are window requirement in Accessible Units (ICC A117.1 1002.13) it would be appropriate to address the technical requirements at that location. Therefore, in our opinion there is no scoping conflict with ADA by removing this section from the IBC. A change proposal has been submitted to the ICC A117.1 to deal with the technical criteria for windows within Accessible or Type A dwelling units.

The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The code issues are assigned to the CTC by the ICC Board as "Areas of Study". The Area of Study for this code change and public comment is called "IBC Coordination with the new ADAAG". Information on the CTC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website <http://www.iccsafe.org/cs/CTC/Pages/IBCCoordination-ADAAG.aspx>. Since its inception in April, 2005, the

CTC has held twenty-four meetings – all open to the public. In addition to holding face-to-face meetings, the CTC established Study Groups where any interested party can participate in conference calls on specific subjects such as this area of study without having to attend the face-to-face meetings.

E206-12

Final Action: AS AM AMPC ____ D

E215-12

1109.15.4, 1110 (New)

Proposed Change as Submitted

Proponent: Carl Baldassarra, P.E., FSFPE, Chair, ICC Code Technology Committee

Revise as follows:

SECTION 1110 **RECREATIONAL FACILITIES**

1110.4 1109.15.4 Recreational and sports facilities exceptions. Recreational and sports facilities shall be required to be accessible shall be exempt from this chapter to and shall be on an accessible route to the extent specified in this section.

1110.4.13 Play Areas. Play areas containing play components designed and constructed for children shall be accessible and be located on an accessible route.

Reason: This proposal is part of a coordination effort with the 2010 ADA Standard for Accessible Design and the new technical provisions for recreational facilities found in 2009 ICC A117.1 Chapter 11. This overall proposal for recreational facilities has been divided into parts so that the membership can look at each type of recreational facilities on its own merit. The overall intent is to provide access to recreational facilities so that persons with mobility impairments can participate to the best of their ability. The requirements are not intended to change any essential aspects of that recreational activity.

This proposal contains scoping provisions for play areas. Currently, Section 402.6.3 addresses "structures intended as children's playgrounds" and Section 105.2 exempts "swings and other playground equipment accessory to detached one- and two-family dwellings" from permits. To the extent that children's play facilities are covered by the IBC, they should be accessible to children with disabilities. These scoping requirements are reasonable and are the result of recommendations from a regulatory negotiation committee the Access Board established for this purpose that included ASTM Public Playground, Soft Contained Play, and Playground Surfacing Systems Committees manufacturers of play equipment, landscape architects, government associations, elementary school associations, and organizations representing people with disabilities. Since the Access Board's guidelines were published in late 2000, manufacturers offer play equipment complying with these scoping and technical criteria. The 2009 edition of the ICC A117.1, Section 1108, contains technical criteria for play areas consistent with the 2010 ADA Standard.

The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The code issues are assigned to the CTC by the ICC Board as "areas of study". Information on the CTC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website: <http://www.iccsafe.org/cs/cc/ctc/index.html>. Since its inception in April, 2005, the CTC has held twenty-two meetings – all open to the public.

Cost Impact: None – This will be required by the 2010 ADA Standard for Accessible Design.

1110#4-E-BALDASSARRA-CTC.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The committee disapproved this change due to concerns over how technically playground equipment could be made accessible and that it may be very difficult to achieve. While some residential facilities may not have to comply with ADA requirements for access into or onto playground equipment, there were questions on if an accessible route would be required to the playground as a common use space for residents.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Carl Baldassarra, Code Technologies Committee; Gene Boecker, AIA, Code Consultants, Inc (CCI); requests Approval as Submitted.

Commenter's Reason (Baldassarra): The MOE committee disapproved this change because of testimony from NAHB and the National Apartment Association that pools and playgrounds connected with residential facilities are not required to comply with the 2010 ADA Standard for Accessible Design; therefore, asking them to comply with ICC A117.1 for playgrounds would be exceeding ADA requirements.

The MOE committee also stated that they were not sure how someone could make a playground accessible. These provisions are already in the 2009 ICC A117.1, Section 1108. These requirements were developed originally by the Access Board and included many representatives from the playground equipment industry.

The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The code issues are assigned to the CTC by the ICC Board as "Areas of Study". The Area of Study for this code change and public comment is called "IBC Coordination with the new ADAAG". Information on the CTC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website <http://www.iccsafe.org/cs/CTC/Pages/IBCCoordination-ADAAG.aspx>. Since its inception in April, 2005, the CTC has held twenty-four meetings – all open to the public. In addition to holding face-to-face meetings, the CTC established Study Groups where any interested party can participate in conference calls on specific subjects such as this area of study without having to attend the face-to-face meetings.

The requirements for playgrounds are basically as follows.

Play components are elements designed to offer opportunities to play, socialize or learn. They can be stand alone or part of a composite play structure. Swings, spring riders, water tables, playhouses, slides and climbers are just a few examples of play components. Ground-level play components are accessed from the ground, such as swings, spring riders or panels. Elevated play components are part of a composite structure accessed from a platform or deck, such as slides or climbers. All accessible play components must be integrated so there is not a separate "accessible" area.

At least one of each type of play component available at ground level must be on an accessible route. Additional ground-level play components may be required depending on the number of elevated play components provided. This two-part evaluation is designed to provide a variety of experiences for individuals who choose to remain with their mobility device and not transfer to elevated components. If ramps provided access to at least 50 percent of the elevated play components, which also include three different types, then additional ground level play components are not required. At least 50 percent of elevated play components must be accessed by ramps or transfer systems. Where elevated play areas have more than 20 components, at least 25 percent of the elevated play components must be accessed by a ramp. Where elevated play areas have 20 or fewer components, all the routes can be transfer systems (ICC A117.1 1108.3.2)

The surfaces around the play areas must consider wheelchair access as well as child fall safety issues. The smaller size of children and how they move around the space is also considered in the requirements. Ground-accessible routes are required to be at least 60 inches wide (to allow wheelchairs to pass) and with a maximum slope of 1:16. There are exceptions to deal with access around elements and transitions at changes in materials.

Where ramps are used for access to elevated play components, the maximum rise per ramp run is 12 inches, and handrails are at a height of 20 inches to 28 inches. A transfer platform is a series of steps allowing access to the elevated play areas. The first platform is between 11 and 18 inches above the ground and unobstructed on the transfer side. A series of platforms can then be used to move up into the structure, each with a maximum rise of 8 inches. The size of each platform/step is a minimum of 24 wide and at least 14 inches deep. Some type of support for stability must be provided, but options are left open (ICC A117.1 1108.4).

Play tables, including water or sand tables, should provide knee clearances of 24 inches high and with the table top or edge (i.e., at sand or water tables) not more than 31 inches high (ICC A117.1 1108.4.3.3).

Depending on the age of the children the play component is designed for, a better design would provide a lower reach range than required. Based on research from the U.S. Access Board, the recommended heights are 20 to 36 inches for 3- to 4-year-olds, 18 to 40 inches for 5- to 8-year-olds and 16 to 44 inches for 9- to 12-year-olds.

Soft, contained- play equipment allow individuals to enter a fully enclosed play environment that uses pliable materials such as plastic, soft padding and fabric. When three or fewer entry points are provided, at least one must be on an accessible route. When four or more entry points are provided, at least two must be on an accessible route (ICC A117.1 1108.4.1.2)

Following are examples of accessible playground elements.



Commenter's Reason (Boecker): The committee discussed whether play features could be made accessible. They are and they have been for some time now. The specific means to do so is identified in the 2009 ICC/ANSI A117.1 and the 2010 ADA Standards for Accessible Design. By the time the 2015 IBC is adopted, this issue will have been settled much more clearly than it is now because the 2010 Standards will have been in effect for a half dozen years.

Regarding the question of scoping in residential areas, the ICC should make it clear that, as an organization, it supports accessibility and would vote to have accessibility for play areas associated with residential occupancies just as much as non-residential occupancies. If the organization intends to demonstrate its desire for leadership in accessibility, then the scoping should include all occupancies and not be limited to that within the ADA. There are other areas in the code where the IBC requires accessibility and the ADA does not (e.g. churches). Access to play areas and play components is appropriate for all occupancies.

E215-12

Final Action: AS AM AMPC____ D

E216-12

1109.15.4, 1109.15.4.5, 1110 (New)

Proposed Change as Submitted

Proponent: Carl Baldassarra, P.E., FSFPE, Chair, ICC Code Technology Committee

Revise as follows:

SECTION 1110 **RECREATIONAL FACILITIES**

1110.4 ~~1109.15.4~~ Recreational and sports facilities exceptions. Recreational and sports facilities shall ~~be required to be accessible shall be exempt from this chapter to~~ and shall be on an accessible route to the extent specified in this section.

1110.4.14 Swimming pools, wading pools, hot tubs and spas. Swimming pools, wading pools, hot tubs and spas shall be accessible and be on an accessible route.

Exceptions:

1. Catch Pools or a designated section of a pool used as a terminus for a water slide flume shall not be required to provide an accessible means of entry, provided that a portion of the catch pool edge is on an accessible route.
2. Where spas or hot tubs are provided in a cluster, at least 5 percent, but no less than one spa or hot tub in each cluster, shall be accessible and be on an accessible route.

1110.4.14.1 ~~1109.15.4.5~~ Raised diving boards and diving platforms. Raised diving boards and diving platforms are not required to be accessible or to be on an accessible route.

1110.4.14.2 Water Slides. Water slides are not be required to be accessible or to be on an accessible route.

Reason: This proposal is part of a coordination effort with the 2010 ADA Standard for Accessible Design and the new technical provisions for recreational facilities found in 2009 ICC A117.1 Chapter 11. This overall proposal for recreational facilities has been divided into parts so that the membership can look at each type of recreational facilities on its own merit. The overall intent is to provide access to recreational facilities so that persons with mobility impairments can participate to the best of their ability. The requirements are not intended to change any essential aspects of that recreational activity.

This proposal contains scoping provisions for swimming pools, wading pools, hot tubs and spas. This is especially important that use swimming pools for exercise or rehabilitation. The exceptions for Section 1110.4.14 are exceptions for pools used only be water slides, and a percentage of hot tubs. These exceptions, along with the exceptions for diving boards and water slides are logical, and consistent with ADA. The 2009 edition of the ICC A117.1, Section 1109, contains technical criteria for play areas consistent with the 2010 ADA Standard. Criteria for entry points include options for pool lifts, sloped entries, transfer walls, transfer systems and pool stairs.

The *International Swimming Pool and Spa Code*, Section 307.9, references the IBC for accessibility requirements for pools.

The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The code issues are assigned to the CTC by the ICC Board as "areas of study". Information on the CTC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website: <http://www.iccsafe.org/cs/cc/ctc/index.html>. Since its inception in April, 2005, the CTC has held twenty-two meetings – all open to the public.

Cost Impact: None – This will be required by the 2010 ADA Standard for Accessible Design.

1110#5-E-BALDASSARRA-CTC.docx

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: The current text requires pools to be accessible. This proposal basically adds exceptions for water slides and catchment pools. This also coordinates with 2010 ADA Standard for Accessible Design and ICC A117.1.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment 1:

Carl Baldassarra, Code Technologies Committee, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1110.4.14 Swimming pools, wading pools, hot tubs and spas. Swimming pools, wading pools, hot tubs and spas shall be accessible and be on an accessible route.

Exceptions:

1. *Catch Pools or a designated section of a pool used as a terminus for a water slide flume* shall not be required to provide an *accessible* means of entry, provided that a portion of the *catch pool* edge is on an *accessible* route.
2. Where spas or hot tubs are provided in a cluster, at least 5 percent, but no less than one spa or hot tub in each cluster, shall be accessible and be on an accessible route.
3. Swimming pools, wading pools, spas and hot tubs that are required to be accessible by Section 1110.2.2 and 1110.2.3 are not required to provide accessible means of entry into the water.

(Portions of proposal not shown remain unchanged.)

Commenter's Reason: Code change E208 initiates the new recreation scoping section in Chapter 11. Section 1110.2 clarifies what recreational facilities associated with residential units are required to be fully accessible. Where units do not contain Accessible units, but do contain type B units, the Fair Housing Act only requires an accessible route to the pool, not access into the water. Lifts are very expensive to install and maintain. This proposal is asking for a step back for these limited residential facilities. Note that in both current and proposed language (E208) residential complexes that do not have Type B units (i.e., townhouse complex or group of single family homes) would not be required to provide even an accessible route to the pool.

The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The code issues are assigned to the CTC by the ICC Board as "Areas of Study". The Area of Study for this code change and public comment is called "IBC Coordination with the new ADAAG". Information on the CTC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website <http://www.iccsafe.org/cs/CTC/Pages/IBCCoordination-ADAAG.aspx>. Since its inception in April, 2005, the CTC has held twenty-four meetings – all open to the public. In addition to holding face-to-face meetings, the CTC established Study Groups where any interested party can participate in conference calls on specific subjects such as this area of study without having to attend the face-to-face meetings.

Public Comment 2:

Kelly Buckland, The National Council on Independent Living; Martha E. Ford, The Arc of the United States; Dominic Marinelli, United Spinal Association; and Patrick L. Wojahn, National Disability Rights Network; requests Approval as Submitted.

Commenter's Reason (Buckland): National Council on Independent Living (NCIL) is the longest-running national, cross-disability, grassroots organization run by and for people with disabilities. Founded in 1982, NCIL represents thousands of organizations and individuals including: Centers for Independent Living (CILs), Statewide Independent Living Councils (SILCs), individuals with disabilities, and other organizations that advocate for the human and civil rights of people with disabilities throughout the United States. There are currently over 700 physical locations across America actively providing Independent Living services to people with disabilities. NCIL envisions a world in which people with disabilities are valued equally and participate fully.

Commenter's Reason (Ford): The Arc of the United States (The Arc) is the largest national community-based organization advocating for and serving people with intellectual and developmental disabilities and their families. We have more than 140,000 members and more than 700 state and local chapters nationwide. The Arc strongly supports inclusion and access of people with disabilities in all aspects of community life.

Commenter's Reason (Marinelli): United Spinal Association's mission is to improve the quality of life of all people living with spinal cord injuries and disorders (SCI/D). We were founded in 1946 by a determined group of paralyzed WWII veterans in New York City who advocated for greater civil rights and independence for themselves and their fellow veterans. Since then, our core belief has remained unchanged. Despite living with SCI/D, a full, productive, and rewarding life is within the reach of anyone with the strength to believe it and the courage to make it happen. Today, United Spinal is the largest non-profit organization dedicated to helping people living with SCI/D. We are committed to providing active-lifestyle information, peer support and advocacy that empower individuals to achieve their highest potential in all facets of life.

Commenter's Reason (Wojahn): National Disability Rights Network (NDRN) is the nonprofit membership organization for the federally mandated Protection and Advocacy (P&A) Systems and Client Assistance Programs (CAP). Collectively, the P&A/CAP network is the largest provider of legally based advocacy services to people with disabilities in the United States.

Combined Commenter's Reason (Buckland, Ford, Marinelli, Wojahn):

E216-12 as presented and approved "As Submitted" in Dallas specifically requires pools to be accessible – with exceptions for water slides and catchment pools – harmonizing with the 2010 ADA Standards.

We object to the Exception proposed by the CTC that exempts pools, wading pools, spas and hot tubs serving R-2, R-3 and R-4 occupancies that contain Type A and Type B dwelling units from compliance A117.1 Section 1109 (accessible means of entry into the pool/spa).

As a point of clarification, our comments support the MOE Committee's approval of E216 at the ICC public hearing in Dallas last spring. At the CTC meeting held in Chicago in June, the CTC voted to provide a revised proposal for E216 that provides an exception that exempts swimming pools, wading pools and spas serving Type A and Type B units from having to provide an accessible means of entry into the water. We do not support this revision proposed by the CTC.

E216 as approved by the MOE committee in Dallas did not include the exception for swimming pools, wading pools and spas serving Type A and Type B units from having to provide an accessible means of entry into the water. We firmly believe that the inclusion of this Exception proposed by the CTC for pools and spas serving Type A and Type B units not only provides less access for people with disabilities, but it also creates a window of opportunity for the scoping in the IBC to potentially "dip below" the minimum ADA requirements for access into pools and spas serving Type A units. As the building code does not scope residential facilities in the same manner as the ADA, there will be instances where a Type A unit scoped by the IBC will be the same unit required by the ADA to meet accessibility requirements. Subsequently, providing an exception for pools and spas that serve Type A units has the potential of allowing a facility owner to comply with the "code" and at the same time violate the ADA. ICC and its committees have worked diligently for a number of years to avoid creating this exact problem. By accepting E216 as proposed at the CTC meeting in Chicago with the Exception for pools and spas that serve Type A units, this harmonization dilemma will be realized by building owners that have both ADA and IBC/A117.1 obligations.

Our collective membership overwhelmingly supports the new scoping and technical requirements found in the 2010 ADA Standards, the ICC International Building Code and A117.1 that provide access to a number of recreational elements, including swimming pools and spas. With these new requirements in place, people with disabilities will now be able to participate in sports and recreational activities, as opposed to being accommodated merely as spectators at these types of facilities. The addition of the technical criteria to Chapter 11 of A117.1 and the 2010 ADA Standards creates opportunities for our membership, and all people with disabilities, to more fully participate in sports and recreational activities and we applaud ICC's inclusion of these technical requirements in the standard.

Having said this, our comments today recognize that the Exception proposed to be added to E216 at the CTC meeting in Chicago jeopardize the IBC/ADA coordination efforts in those instances where Type A Units may also fall under the purview of the ADA, and we also urge the membership to ensure that pools and spas that are provided in multi-family developments containing Type A and Type B units remain accessible for people with disabilities – as the current editions of IBC/ANSI A117.1 require.

Our concerns with this Exception are summarized below:

1. Given that our membership finds that swimming pools and spas are very therapeutic for those living with SCI, we feel that swimming pools and spas provided as an amenity in multi-family residential occupancies should be accessible to people with disabilities paying rent that includes use of such amenities – just as that opportunity is afforded to renters/owners without disabilities. The National Center on Accessibility (NCA) has researched swimming statistics and found that approximately 52% of people with disabilities and 55.5% of people without disabilities reported swimming outdoors in the previous year. The same report from the NCA found that people with disabilities under the age of 25 and over the age of 75 participated in swimming activities at higher rates than people without disabilities. (1)

According to the Center for Disease Control (CDC) (2) and based on US Census Bureau 2010 statistical abstract of the United States Recreation and leisure activities: participation in selected sports activities 2008 (3) swimming is the second most popular sports activity in the United States and a good way to get regular aerobic physical activity. Just two and a half hours per week of aerobic physical activity, such as swimming, bicycling, or running can decrease the risk of chronic illnesses. This can also lead to improved health for people with diabetes and heart disease. Swimmers have about half the risk of death compared with inactive people. People report enjoying water-based exercise more than exercising on land and they can also exercise longer in water than on land without increased effort or joint or muscle pain.

2. Additionally, we know that several stakeholders have indicated that providing an Exception for swimming pools and spas to not have to provide an accessible route into the water if they serve Type B units is "in line" with Fair Housing Act requirements. We do

not feel that because the Fair Housing Act does not require an accessible route into the pool, the building code should fall in step and decrease the level of accessibility currently scoped in the Code. While the FHA requires an accessible route to the “edge of a pool” that serves covered multi-family dwelling units, the Department (HUD) declined to require an accessible route into pools while developing the FHA Design and Construction requirements in part due to a lack of “generally accepted standards” for providing access into pools. (4) Now, however, over 20 years later – we have standards in place via both the 2010 ADA Standards for Accessible Design and the 2009 edition of ICC ANSI A117.1 that provide technical requirements for access into swimming pools, wading pools and spas. Note that the US Access Board released the guidelines for achieving access into swimming pools in 2004 with the release of the ADA/ABA Accessibility Guidelines, that were subsequently adopted as an enforceable standard for entities required to comply with the ADA as of March 15, 2012. Given the US DOJ’s adoption of the 2010 ADA Standards for Accessible Design and the effective date of March 15, 2012 – all newly constructed swimming pools, wading pools and spas covered under the ADA must comply with the requirements for accessible means of entry into these areas. The US DOJ has extended the deadline for compliance with these new requirements for existing swimming pools, wading pools and spas until January 31, 2013. The lack of “generally accepted standards” of achieving access into swimming pools cited previously by HUD over twenty years ago has now been addressed with the issuance of the 2010 ADA Standards for Accessible Design and incorporation of technical requirements for achieving access into pools and spas within the ICC ANSI A117.1 standard.

We have additional concerns regarding access to swimming pools for FHA covered multi-family dwelling units. The FHA requirement for an accessible route to the “edge” of a swimming pool may not provide enough space to install a lift if requested by a tenant with a disability under FHA Reasonable Modification requirements. Given the standards in place now that outline the space needed for future installation of pool lifts in both the 2010 ADA Standards for Accessible Design and 1109 of ICC ANSI A117.1, FHA’s requirement for an accessible route to the edge of a pool may not be adequate to support a tenant’s right to request a modification (i.e. pool lift) if one is needed to allow them to independently use the pool.

3. From a “harmonization” perspective, we see faults with the inclusion of Exception 3 cited above that would exempt swimming pools, wading pools and spas serving Type A and Type B units from providing an accessible means of entry into the water because the window is then left open for building owners/managers to violate the 2010 ADA Standards for Accessible Design, therefore we agree with the MOE Committee’s approval of both E208 & E216 at the ICC public hearing in Dallas last month “As Submitted”. Incorporating the Exception proposed by the CTC will permit certain residential occupancies that provide swimming pools and spas in R-2, R-3 and R-4 settings that serve Type A units from having to provide accessible means of entry into pools – which conflicts with the ADA requirements for residential dwelling units designed and constructed or altered by public entities (ADA Title II Regulations) as well as certain ADA Title III entities (i.e. social service center establishments).

Thank you for the opportunity to present these comments on behalf of United Spinal Association, The National Council on Independent Living, The Arc of the United States and the National Disability Rights Network.

References:

1. The National Center on Accessibility study “People with Disabilities - National Survey of Recreation and the Environment” - <http://www.ncaonline.org/rec-leisure/nsre.shtml>
2. US Census Bureau 2010 statistical abstract of the United States Recreation and leisure activities: participation in selected sports activities 2008 [PDF - 2 pages]. Last verified on May 12, 2011) http://www.cdc.gov/healthywater/swimming/health_benefits_water_exercise.html
3. Preamble to HUD’s FHA Design and Construction Requirements - Fair Housing APP B3 – Page 9487

E216-12

Final Action:	AS	AM	AMPC____	D
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E224-12

1022.9, 1110.3 (IFC [B] 1022.9)

Proposed Change as Submitted

Proponent: Sharon Toji, Access Communications, representing self (SharonToji@me.com)

Revise as follows:

1110.3 Other signs. Signage indicating special accessibility provisions shall be provided as shown.

1. Each assembly area required to comply with Section 1108.2.7 shall provide a sign notifying patrons of the availability of assistive listening systems complying with the ICC A117.1 requirements for visual characters and shall include the International Symbol of Access for Hearing Loss. The sign shall be located outside the entrances to the assembly area.
Exception: Where ticket offices or windows are provided, signs are not required at each assembly area provided that signs are displayed at each ticket office or window informing patrons of the availability of assistive listening systems .
2. At each door to an *area of refuge*, an exterior area for assisted rescue, an egress *stairway*, *exit passageway* and *exit discharge*, signage shall be provided in accordance with Section 1011.4.
3. At *areas of refuge*, signage shall be provided in accordance with Section 1007.11.
4. At exterior areas for assisted rescue, signage shall be provided in accordance with Section 1007.11.
5. At two-way communication systems, signage shall be provided in accordance with Section 1007.8.2.
6. Within interior exit stairways and ramps, floor level signage shall be provided in accordance with Section 1022.9.

1022.9 (IFC [B] 1022.9) Stairway identification signs. A sign shall be provided at each floor landing in an *interior exit stairway* and *ramp* connecting more than three stories designating the floor level, the terminus of the top and bottom of the *interior exit stairway* and *ramp* and the identification of the *stair* or *ramp*. The signage shall also state the story of, and the direction to, the *exit discharge* and the availability of roof access from the *interior exit stairway* and *ramp* for the fire department. The sign shall be located 5 feet (1524 mm) above the floor landing in a position that is readily visible when the doors are in the open and closed positions. In addition to the *stairway* identification sign, a floor level sign in visual characters, raised characters and braille complying with ICC A117.1 shall be located at each floor level landing adjacent to the door leading from the *interior exit stairway* and *ramp* into the *corridor* to identify the floor level. On the level of exit discharge, a five pointed tactile star shall be placed to the left of the level designator. The diameter of the star shall be equal to the height of the raised character level designator, and shall be translated into contracted braille as "Main."

Reason: Proposed revisions bring the items into compliance with 2010 ADA, and add clarity for requirements for visual signage.

The location for the assistive listening sign is made more precise because the sign is too often located randomly where space is available inside the assembly or conference area, where it is not likely to be noticed or seen. I believe that the intent is to locate it where it will be seen at the entry point.

The five pointed star should be added to the floor designator in stairways, because this sign is to provide information analogous to the elevator hoistway signs, for persons who are blind and visually impaired who are, for various reasons, using the stairway for vertical access, rather than the elevator. It signals that they have reached the exit level, just as the stair does on the elevator hoistways.

Cost Impact: none, or a possible slight reduction in cost at some Areas of Refuge.

1110.3-E-Toji.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: Portions of this proposal are technical criteria that should be in ICC A117.1, not in the code. The language for the location of the assistive listening system signage is too broad to be uniformly enforced. Not all assembly spaces have one main door. The term 'outside' could be interpreted to be outside the room or outside the building.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Gene Boecker, AIA, Code Consultants, Inc (CCI), requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1110.3 Other signs. Signage indicating special accessibility provisions shall be provided as shown. 3

1. Each assembly area required to comply with Section 1108.2.7 shall provide a sign notifying patrons of the availability of assistive listening systems complying with the ICC A117.1 requirements for visual characters and shall include the International Symbol of Access for Hearing Loss. ~~The sign shall be located outside the entrances to the assembly area.~~

Exception: Where ticket offices or windows are provided, signs are not required at each assembly area provided that signs are displayed at each ticket office or window informing patrons of the availability of assistive listening systems .

2. At each door to an *area of refuge*, an exterior area for assisted rescue, an egress *stairway*, *exit passageway* and *exit discharge*, signage shall be provided in accordance with Section 1011.4.
3. At *areas of refuge*, signage shall be provided in accordance with Section 1007.11.
4. At exterior areas for assisted rescue, signage shall be provided in accordance with Section 1007.11.
5. At two-way communication systems, signage shall be provided in accordance with Section 1007.8.2.
6. Within interior exit stairways and ramps, ~~floor level~~ signage shall be provided in accordance with Section 1022.9.

1022.9 (IFC [B] 1022.9) Stairway identification signs. A sign shall be provided at each floor landing in an *interior exit stairway* and *ramp* connecting more than three stories designating the floor level, the terminus of the top and bottom of the *interior exit stairway* and *ramp* and the identification of the *stair* or *ramp*. The signage shall also state the story of, and the direction to, the *exit discharge* and the availability of roof access from the *interior exit stairway* and *ramp* for the fire department. The sign shall be located 5 feet (1524 mm) above the floor landing in a position that is readily visible when the doors are in the open and closed positions. In addition to the *stairway* identification sign, a floor level sign in visual characters, raised characters and braille complying with ICC A117.1 shall be located at each floor level landing adjacent to the door leading from the *interior exit stairway* and *ramp* into the *corridor* to identify the floor level. On the level of exit discharge, a five pointed tactile star shall be placed to the left of the ~~floor level designator~~ designation. The diameter of the star shall be ~~equal to the height of the raised character level designator~~ 2 inches, and shall be translated into contracted braille as "Main."

Commenter's Reason: The proponent was correct in that the change in 1110.3 is necessary to be in harmony with the 2010 ADA Standards for Accessible Design. The 2010 Standards require the symbol to be provided on the sign. The ICC/ANSI A117.1 does not require the sign. That requirement is in the IBC. Therefore, the proper place for the requirement relative to the International Symbol for Hearing Loss is in the IBC - not the A117.1. The 2010 Standards do not identify the location. It is agreed that the location stated as "outside": can be broadly interpreted and should therefore not be a part of this proposal.

The added language in item #6 is not necessary. The language in Section 1022.9 refers to the signage as stairway identification signage. Although the signage is required at each level, "floor level" would be an improper term when referring to the sign.

The text added to 1022.9 is a new requirement. Similar to the reasons noted above, the requirements for stairway identification signage are within the IBC and not the A117.1. Therefore, this is the proper place for such information if such information is to be included within the code. While the 2010 Standards do not require this signage, it is consistent with the marking for elevators which designate the level of discharge and consistent with the requirements in Section 1011.4 for tactile identification of the path of egress. The proposed added text would limit the size of the star to two. Some signs I have seen used number that were in excess of 10 inches. While that may be helpful in a darkened stairway to see, the intent with the tactile sign does not involve sight so the size should have a limitation for tactile use. The size of 2 inches is the same as that for the tactile star at elevator hoistways and is the maximum height for tactile characters according to Section 703.3.5 of the A117.1 Standard. The tactile star has been used as the

designation for the level of discharge in elevators for some time now and is understood. It should be used elsewhere that discharge level designation is required.

E224-12

Final Action: AS AM AMPC____ D

E225-12

E106 (New)

Proposed Change as Submitted

Proponent: Carl Baldassarra, P.E., FSFPE, Chair, ICC Code Technology Committee

Revise as follows:

SECTION E106 **RECREATIONAL FACILITIES**

E106.1 Golf Facilities. Golf facilities shall comply with E106.1.1 through E106.1.4.

E106.1.1 Golf Courses. Golf courses shall comply with E106.1.1.1 through E106.1.1.3.

E106.1.1.1 Teeing Grounds. Where one teeing ground is provided for a hole, the teeing ground shall be designed and constructed so that a golf car can enter and exit the teeing ground. Where two teeing grounds are provided for a hole, the forward teeing ground shall be designed and constructed so that a golf car can enter and exit the teeing ground. Where three or more teeing grounds are provided for a hole, at least two teeing grounds, including the forward teeing ground, shall be designed and constructed so that a golf car can enter and exit each teeing ground.

E106.1.1.2 Putting Greens. Putting greens shall be designed and constructed so that a golf car can enter and exit the putting green.

E106.1.1.3 Weather Shelters. Where provided, weather shelters shall be designed and constructed so that a golf car can enter and exit the weather shelter and shall be accessible.

E106.1.2 Practice Putting Greens, Practice Teeing Grounds, and Teeing Stations at Driving Ranges. At least 5 percent, but no fewer than one, of practice putting greens, practice teeing grounds, and teeing stations at driving ranges shall be designed and constructed so that a golf car can enter and exit.

E106.1.3 Accessible route. At least one accessible route shall connect accessible elements and spaces within the boundary of the golf course. In addition, accessible routes serving golf car rental areas; bag drop areas; course weather shelters complying with Section E106.1.1.3; course toilet rooms; practice putting greens; practice teeing grounds; and teeing stations at driving ranges complying with Section E106.1.2 shall comply with the accessible route requirements for golf courses in ICC A117.1.

Exception: Accessible golf car passages shall be permitted to be used for all or part of accessible routes required by this section.

E106.1.4 Teeing Grounds. When teeing grounds are being altered, teeing grounds shall comply with Section E106.1.1.1.

Exception: In existing golf courses, the forward teeing ground shall not be required to be one of the teeing grounds on a hole designed and constructed so that a golf car can enter and exit the teeing ground where compliance is not feasible due to terrain.

Reason: The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The code issues are assigned to the CTC by the ICC Board as "areas of study". Information on the CTC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website: <http://www.iccsafe.org/cs/cc/ctc/index.html>. Since its inception in April, 2005, the CTC has held twenty-two meetings – all open to the public.

This proposal is part of a coordination effort with the 2010 ADA Standard for Accessible Design and the new technical provisions for recreational facilities found in 2009 ICC A117.1 Chapter 11. This overall proposal for recreational facilities has been divided into parts so that the membership can look at each type of recreational facilities on its own merit. The overall intent is to provide access to recreational facilities so that persons with mobility impairments can participate to the best of their ability. The requirements are not intended to change any essential aspects of that recreational activity.

This proposal contains scoping provisions for constructed elements within golf facilities. Where an element within a golf course is subject to the building code, this will ensure that people with disabilities are not excluded from the recreational and business opportunities on the course. Please note that a passage sufficiently wide for a golf car substitutes for an accessible route. Today, golfers with disabilities use accessible golf cars, also known as single-rider carts, that are designed to have little impact on the greens and are operated with one-handed controls. Golfers sit in the swivel seats and position to hit the ball from a seated position. Technical criteria can be found in the 2009 edition of the ICC A117.1, Section 1106 and includes criteria for accessible routes, golf cart passage and weather shelters.

Cost Impact: None – This will be required by the 2010 ADA Standard for Accessible Design.

E106-E-BALDASSARRA-CTC.docx

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: While some committee members felt that placing golf courses in Appendix E is appropriate, others felt the built elements and accessible route should be in the codes, but not the golf course areas, such as the greens and tees, even in an appendix.

Assembly Action:

None

Individual Consideration Agenda

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

Public Comment:

Carl Baldassarra, Code Technologies Committee, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

SECTION E106 SECTION 1110 RECREATIONAL FACILITIES

1110.4 1109.15.4 Recreational and sports facilities exceptions. Recreational and sports facilities shall be required to be accessible shall be exempt from this chapter to and shall be on an accessible route to the extent specified in this section.

1110.4.13 E106.1 Golf Facilities. Golf facilities shall comply with E106.1.1 through E106.1.4 1110.4.13.1 and 1110.4.13.2.

E106.1.1 Golf Courses. Golf courses shall comply with E106.1.1.1 through E106.1.1.3.

E106.1.1.1 Teeing Grounds. Where one teeing ground is provided for a hole, the teeing ground shall be designed and constructed so that a golf car can enter and exit the teeing ground. Where two teeing grounds are provided for a hole, the forward teeing ground shall be designed and constructed so that a golf car can enter and exit the teeing ground. Where three or more teeing grounds are provided for a hole, at least two teeing grounds, including the forward teeing ground, shall be designed and constructed so that a golf car can enter and exit each teeing ground.

E106.1.1.2 Putting Greens. Putting greens shall be designed and constructed so that a golf car can enter and exit the putting green.

1110.4.13.1 E106.1.1.3 Weather Shelters. Where provided, weather shelters shall be designed and constructed so that a golf car can enter and exit the weather shelter and shall be accessible.

E106.1.2 Practice Putting Greens, Practice Teeing Grounds, and Teeing Stations at Driving Ranges. At least 5 percent, but no fewer than one, of practice putting greens, practice teeing grounds, and teeing stations at driving ranges shall be designed and constructed so that a golf car can enter and exit.

1110.4.13.2 E106.1.3 Accessible route. At least one accessible route shall connect accessible elements and spaces within the boundary of the golf course. In addition, Accessible routes serving golf car rental areas; bag drop areas; course weather shelters complying with Section E406.1.1.3-1110.4.13.1; course toilet rooms; practice putting greens; practice teeing grounds; and teeing stations at driving ranges complying with Section 1110.4.13.2 E106.1.2 shall comply with the accessible route requirements for golf courses in ICC A117.1.

Exception: Accessible golf car passages shall be permitted to be used for all or part of accessible routes required by this section.

E106.1.4 Teeing Grounds. When teeing grounds are being altered, teeing grounds shall comply with Section E106.1.1.1.

Exception: In existing golf courses, the forward teeing ground shall not be required to be one of the teeing grounds on a hole designed and constructed so that a golf car can enter and exit the teeing ground where compliance is not feasible due to terrain.

Commenter's Reason: The MOE committee felt the elements of the course itself should not be in the code, but rather the requirements should be limited to the constructed elements of a golfing facility. The proposal as modified is limited to constructed elements.

The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The code issues are assigned to the CTC by the ICC Board as "Areas of Study". The Area of Study for this code change and public comment is called "IBC Coordination with the new ADAAG". Information on the CTC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website <http://www.iccsafe.org/cs/CTC/Pages/IBCCoordination-ADAAG.aspx>. Since its inception in April, 2005, the CTC has held twenty-four meetings – all open to the public. In addition to holding face-to-face meetings, the CTC established Study Groups where any interested party can participate in conference calls on specific subjects such as this area of study without having to attend the face-to-face meetings.

E225-12

Final Action:	AS	AM	AMPC_____	D
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