GROUP A BCAC
MOE Work Group
OCTOBER 2-3, 2018
REPORT FOR PUBLIC COMMENTS

ITEM	MONOGRAPH CCP#	Related Change	CAH RESULTS	TOPIC	PUBLIC COMMENT SUBMITTED?
IBC 10-1	E13-18		AS	Electrical rooms	Keith-AMPC
IBC 10-1	E64-18		AM	Electrical rooms	BCAC - AMPC
IBC10-1		E15-18 Part 1	AS	Refrigeration machinery rooms	BCAC - AMPC
IBC10-1		E15-18 Part 2	AS	Refrigeration machinery rooms	Pate - AMPC
IBC 4-3/IBC 2-3	E20-18		D	Atriums and open stairways	Rice-AMPC
		E18-18	AM	Atriums and open stairways	Kranz-AMPC Collins-AS Siu-AS
		E21-18	D	Atriums and open stairways	Keith-AS
		E96-18	D	Atriums and open stairways	Keith -AS
		G1-18	D	Atriums and open stairways	Thomas -AMPC
		G32-18	AM	Atriums and open stairways	Wakefield - AMPC
		G34-18	AM	Atriums and open stairways	Dodge-D
		G35-18	AS	Atriums and open stairways	BCAC-AMPC
IBC General 05				IBC/A117.1 Coord	
		P24-18	AM	IBC/A117.1 Coord	Anderson-AMPC
		SP8-18	AS	IBC/A117.1 Coord	Hatfield-AMPC
		P25-18	AS		Anderson-AMPC
IBC 11-1				Power doors	
IBC11-1		E115-18	AS	Power doors	Chappell-AMPC Chappell-AMPC Kranz-AMPC
IBC 2-2	E24-18		AS	Common path of travel	Keith-D
IBC 10-4/IRC 3-1	E107-18		AM	Emergency Escape and Rescue Openings	Keith-AMPC
IBC 10-4/IRC 3-1	E108-18		D	Emergency Escape and Rescue Openings	BCAC - AMPC

IBC 10-4/IRC 3-1	E109-18		D	Emergency Escape and Rescue Openings	BCAC - AS
IBC 10-5	E106-18		D	Social stairway	BCAC -AMPC Boecker-AMPC
IBC 10-7	E58-18		D	Delayed egress	BCAC - AMPC Sujeski-AMPC
IBC 10-9	E22-18		D	Occupied roof	BCAC - AMPC
IBC 10-9	E29-18		D	Occupied roof	See E30
IBC 10-9	G136-18		AS	Occupied roof	Woestman-AMPC
	E30-18		AS	Occupied roof	BCAC - AMPC BCAC - AMPC Chappell-AMPC Chappell-AMPC
IBC 10-10	E51-18		D	vestibules from SEPCAC	BCAC - AMPC Boecker-AS Collins - AS
NA	G140		D	signs at elevators	BCAC - AMPC
NA	E86-18		AM	travel distance	BCAC - AMPC
NA	E38-18		AM	exit discharge/egress court split	BCAC - AMPC Keith-AMPC

E13-18

IBC: 1006.2.2, (IFC[BE] 1006.2.2)

Proposed Change as Submitted

Proponent: Ed Kulik, Chair, representing ICC Building Code Action Committee (bcac@iccsafe.org)

2018 International Building Code

Revise as follows

1006.2.2 Egress based on use. The numbers, types and locations of *exits* or access to *exits* shall be provided in the uses described in Sections 1006.2.2.1 through 1006.2.2.6.

Reason: The subsections of 1006.2.2 includes not only the number of exits and exit access doorways, but also requirements regarding the exit and exit access doors, types of exit access, and their locations. This provides clarity in the scoping of this section.
This proposal is submitted by the ICC Building Code Action Committee (BCAC). BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2017 the BCAC has held 3 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as w ell as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: https://www.iccsafe.org/codes-tech-support/codes/codedevelopment-process/building-code-action-committee-bcac.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This proposal is a clarification reminder of the scope of requirements included in the identified sections.

E13-18

Public Hearing Results

Committee Action: **As Submitted**

Committee Reason: This addition provides clarity for the scoping of this section. (Vote: 13-1)

Assembly Action: **None**

E13-18

Individual Consideration Agenda

Public Comment 1:

Proponent: Gregory Keith, representing The Boeing Company (grkeith@mac.com)requests As Modified by This Public Comment.

Modify as follows:

2018 International Building Code

1006.2.2 Egress based on use. The numbers, configuration and types ~~and locations~~ of components of *exits* or access to *exits* shall be provided in the uses described in Sections 1006.2.2.1 through 1006.2.2.6.

Commenter's Reason: The original proposal has merit, however the terminology in not consistent with Chapter 10 verbiage. Typically, Section 1006 addresses the required numbers of exits or exit access doorways. Section 1006.2.2 is titled Egress based on use and prescribes various means of egress design requirements for specified uses. The original proposal sought to clarify that fact. This public comment simply replaces some of the terminology with language typically used in Chapter 10. The word location has been replaced with the word configuration. Section 1007 deals with this issue and is titled Exit and exit access doorway configuration. This places the requirements in context and will assist in user comprehension. Also, the word types has been appropriately expanded to state types of components. Means of egress components are identified throughout Chapter 10 and several of these components are referenced in Section 1006.2.2. Approval of this public comment will provide more technically accurate verbiage thereby increasing user understanding and uniformity in the application of these provisions.

Cost Impact: The net effect of the public comment and code change proposal will not increase or decrease the cost of construction
The public comment is editorial and will not affect the cost of design or construction.

E13-18

E64-18

IBC: 1010.1.10, 1010.1.10.1 (New), (IFC[BE] 1010.1.10, 1010.1.10.1 (New))

Proposed Change as Submitted

Proponent: Ed Kulik, Chair, representing ICC Building Code Action Committee (bcac@iccsafe.org)

2018 International Building Code

Revise as follows

1010.1.10 Panic and fire exit hardware. Swinging doors serving a Group H occupancy and swinging doors serving rooms or spaces with an *occupant load* of 50 or more in a Group A or E occupancy shall not be provided with a latch or lock other than *panic hardware* or *fire exit hardware*.

Exceptions:

1. A main exit of a Group A occupancy shall be permitted to have locking devices in accordance with Section 1010.1.9.4, Item 2.
2. Doors provided with *panic hardware* or *fire exit hardware* and serving a Group A or E occupancy shall be permitted to be electrically locked in accordance with Section 1010.1.9.9 or 1010.1.9.10.

~~Electrical rooms with equipment rated 1,200 amperes or more and over 6 feet (1829 mm) wide, and that contain overcurrent devices, switching devices or control devices with exit or *exit access* doors, shall be equipped with *panic hardware* or *fire exit hardware*. The doors shall swing in the direction of egress travel.~~

Add new text as follows

1010.1.10.1 Rooms with electrical equipment. Exit or exit access doors serving transformer vaults, rooms designated for batteries or energy storage systems, or modular data centers shall be equipped with panic hardware or fire exit hardware. Where rooms contain electrical rooms with equipment rated 800 amperes or more that contain overcurrent devices, switching devices or control devices and where the exit or exit access door is less than 25 feet from the equipment working space, shall be equipped with panic hardware or fire exit hardware. The doors shall swing in the direction of egress travel.

Reason: The current requirements in the International Building Code are not in alignment with the requirements in NFPA 70, the National Electrical Code. Section 110.26(C)(3) requires where there are exit or exit access doors serving a room with electrical equipment rated 800 amperes or more those doors shall be equipped with listed panic hardware. Equipment rated 1200 amperes or more is used to determine the number and locations of exits or exit access doorways, which is addressed in Section 1006.2.2. Also, NFPA 70 for transformer vaults (in Sections
This proposal is submitted by the ICC Building Code Action Committee (BCAC). BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2017 the BCAC has held 3 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as w ell as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: https://www.iccsafe.org/codes-tech-support/codes/codedevelopment-process/building-code-action-committee-bcac.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
Chapter 27 of the IBC already requires electrical installations to comply with the provisions of NFPA 70. This proposal aligns the requirements in the IBC with NFPA 70.

E64-18

Public Hearing Results

Committee Action: **As Modified**

Committee Modification: 1010.1.10.1 Rooms with electrical equipment. Exit or exit access doors serving transformer vaults, rooms designated for batteries or energy storage systems, or modular data centers shall be equipped with panic hardware or fire exit hardware. Where rooms contain electrical rooms with equipment rated 800 amperes or more that contain overcurrent devices, switching devices or control devices and where the exit or exit access door is less than 25 feet from the equipment working space, shall be equipped with panic hardware or fire exit hardware. The doors shall swing in the direction of egress travel.

Committee Reason: By adding travel distance, the modification did add a missing part for coordination with the National Electrical Code. However, there is concern on if 'equipment work space' would be understood and how the distance should be measured.
This proposal would coordinate with the committee action on E17-18. The terms for what types of rooms are addressed is in the National Electrical Code, so which rooms should be understood. It was suggested that perhaps the NEC references in E17-18 should also be added into this section in a public comment. (Vote 10-3)

Assembly Action: **None**

E64-18

Individual Consideration Agenda

Public Comment 1:

Proponent: Ed Kulik, representing ICC Building Code Action Committee (bcac@iccsafe.org)requests As Modified by This Public Comment.

Further modify as follows:

2018 International Building Code

1010.1.10.1 Rooms with electrical equipment. Exit or exit access doors serving transformer vaults, rooms designated for batteries or energy storage systems, or modular data centers shall be equipped with panic hardware or fire exit hardware. ~~Where rooms contain~~ Rooms containing electrical ~~rooms with~~ equipment rated 800 amperes or more and that contain overcurrent devices, switching devices or control devices and where the exit or exit access door is less than 25 feet from the equipment working space as required by NFPA 70, ~~shall be equipped with~~ such doors shall not be provided with a latch or lock other than panic hardware or fire exit hardware. The doors shall swing in the direction of egress travel.

Commenter's Reason: The change at the beginning of the sentence is editorial for better english. To assist the code user regarding the specific requirements for "working space", a further modification is proposed to reference NFPA 70, which contains those requirements. Also, clarification is proposed to ensure that no latch or lock is to be provided, other than the panic or fire exit hardware.
To coordinate with E17-18 it is the intent of the BCAC to direct the code user to the new requirements in Section 1006.2.2.4 for electrical rooms. The new Section 1006.2.2.4 directs the code user to the specific sections in NFPA 70 for the working space requirements, including the definition of these spaces. However, reference to this section cannot be made at this time because the section does not exist in the 2018 code.

Cost Impact: The net effect of the public comment and code change proposal will not increase or decrease the cost of construction
Chapter 27 of the IBC already requires electrical installations to comply with the provisions of NFPA 70. This proposal aligns the requirements in the IBC with NFPA 70. Also, the clarification will assist the code user in locating the specific requirements.

E64-18

E15-18 Part I

PART 1 - IBC: 1006.2.2.2; (IFC[BE] 1006.2.2)

PART 2 - IMC: 1105.10 [BE] (New)

Proposed Change as Submitted

Proponent: Jeffrey Shapiro, representing International Institute of Ammonia Refrigeration (jeff.shapiro@intlcodeconsultants.com)

THIS IS A TWO PART CODE CHANGE. PART I WILL BE HEARD BY THE MEANS OF EGRESS COMMITTEE. PART II WILL BE HEARD BY THE MECHANICAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER OF THESE COMMITTEES.

2018 International Building Code

Revise as follows

1006.2.2.2 Refrigeration machinery rooms. Machinery rooms larger than 1,000 square feet (93 m^2) shall have not less than two *exits* or *exit access doorways*. 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 the room.
All portions of machinery rooms shall be within 150 feet (45 720 mm) of an *exit* or *exit access doorway*. An increase in *exit access* travel distance is permitted in accordance with Section 1017.1.

Exit and *exit access doorways* shall swing in the direction of egress travel and shall be equipped with panic hardware, regardless of the *occupant load* served. Exit and *exit access doorways* shall be tight fitting and self-closing.

Reason: It is appropriate for refrigeration machinery rooms to have panic hardware on means of egress doors to protect occupants because of the risk of a rapid release of hazardous or asphyxiant gases. The need for rapid escape from refrigeration machinery rooms is not unlike what is needed for Group H Occupancies, which are required by Section 1010.1.10 to have panic hardware on all swinging doors. Likewise, IIAR 2 includes this requirement for ammonia refrigeration machinery rooms.
It is also recommended that this section be duplicated in the IMC to ensure that the requirements are not overlooked by machinery room designers. The requirement in the IBC is not readily found as a refrigeration machinery room requirement since it is isolated in the means of egress chapter.

Cost Impact: The code change proposal will increase the cost of construction
For machinery rooms that would not already have been provided with panic hardware on means of egress doors, the requirement to have panic hardware will constitute an increased cost.

E15-18 Part I

Public Hearing Results

Committee Action: **As Submitted**

Committee Reason: Adding panic hardware to refrigeration machinery rooms will improve safety for these rooms. There should be a public comment to add this to the list for panic hardware in Section 1010.1.10. (Vote: 14-0)

Assembly Action: **None**

E15-18 Part I

Individual Consideration Agenda

Public Comment 1:

Proponent: Ed Kulik, representing ICC Building Code Action Committee (bcac@iccsafe.org)requests As Modified by This Public Comment.

Modify as follows:

2018 International Building Code

1010.1.10.1 Refrigeration machinery room Swinging doors in refrigeration machinery rooms, where required by Section 1006.2.2.2, shall not be provided with a latch or lock other than panic hardware or fire exit hardware.

Commenter's Reason: The formatting is to be consistent with E64-18 for panic hardware in electrical rooms. Panic hardware for electrical rooms in Section 1010.1.10 was moved into a new subsection. The new requirement for panic hardware in refrigeration machinery rooms should be addressed the same and included in Section 1010.10.
This public comment is submitted by the ICC BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions there of. In 2017 and 2018 the BCAC has held 5 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as well as any interested party to discuss and debate the proposed changes and public comments. Related documentation and reports are posted on the BCAC website at: https://www.iccsafe.org/codes-tech-support/codes/codedevelopment-process/building-code-action-committee-bcac

Cost Impact: The net effect of the public comment and code change proposal will increase the cost of construction
The modification is a pointer from the panic hardware section to the new section approved by the committee. The original proposal would add panic hardware in these spaces.

E15-18 Part I

E15-18 Part I

PART 1 - IBC: 1006.2.2.2; (IFC[BE] 1006.2.2)

PART 2 - IMC: 1105.10 [BE] (New)

Proposed Change as Submitted

Proponent: Jeffrey Shapiro, representing International Institute of Ammonia Refrigeration (jeff.shapiro@intlcodeconsultants.com)

THIS IS A TWO PART CODE CHANGE. PART I WILL BE HEARD BY THE MEANS OF EGRESS COMMITTEE. PART II WILL BE HEARD BY THE MECHANICAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER OF THESE COMMITTEES.

2018 International Building Code

Revise as follows

1006.2.2.2 Refrigeration machinery rooms. Machinery rooms larger than 1,000 square feet (93 m^2) shall have not less than two *exits* or *exit access doorways*. 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 the room.
All portions of machinery rooms shall be within 150 feet (45 720 mm) of an *exit* or *exit access doorway*. An increase in *exit access* travel distance is permitted in accordance with Section 1017.1.

Exit and *exit access doorways* shall swing in the direction of egress travel and shall be equipped with panic hardware, regardless of the *occupant load* served. Exit and *exit access doorways* shall be tight fitting and self-closing.

Reason: It is appropriate for refrigeration machinery rooms to have panic hardware on means of egress doors to protect occupants because of the risk of a rapid release of hazardous or asphyxiant gases. The need for rapid escape from refrigeration machinery rooms is not unlike what is needed for Group H Occupancies, which are required by Section 1010.1.10 to have panic hardware on all swinging doors. Likewise, IIAR 2 includes this requirement for ammonia refrigeration machinery rooms.
It is also recommended that this section be duplicated in the IMC to ensure that the requirements are not overlooked by machinery room designers. The requirement in the IBC is not readily found as a refrigeration machinery room requirement since it is isolated in the means of egress chapter.

Cost Impact: The code change proposal will increase the cost of construction
For machinery rooms that would not already have been provided with panic hardware on means of egress doors, the requirement to have panic hardware will constitute an increased cost.

E15-18 Part I

Public Hearing Results

Committee Action: **As Submitted**

Committee Reason: Adding panic hardware to refrigeration machinery rooms will improve safety for these rooms. There should be a public comment to add this to the list for panic hardware in Section 1010.1.10. (Vote: 14-0)

Assembly Action: **None**

E15-18 Part I

Individual Consideration Agenda

Public Comment 2:

Proponent: Timothy Pate, representing Colorado Chapter Code Change Committee (tpate@broomfield.org)requests As Modified by This Public Comment.

Modify as follows:

2018 International Building Code

1010.1.10 Panic and fire exit hardware. Swinging doors serving a Group H occupancy and swinging doors serving rooms or spaces with an *occupant load* of 50 or more in a Group A or E occupancy shall not be provided with a latch or lock other than *panic hardware* or *fire exit hardware*.

Exceptions:

1. A main exit of a Group A occupancy shall be permitted to have locking devices in accordance with Section 1010.1.9.4, Item 2.
2. Doors provided with *panic hardware* or *fire exit hardware* and serving a Group A or E occupancy shall be permitted to be electrically locked in accordance with Section 1010.1.9.9 or ~~1010.1.9.10.~~1010.1.9.10.

Electrical rooms with equipment rated 1,200 amperes or more and over 6 feet (1829 mm) wide, and that contain overcurrent devices, switching devices or control devices with exit or *exit access* doors, shall be equipped with *panic hardware* or *fire exit hardware*. The doors shall swing in the direction of egress travel.

Refrigeration machinery rooms larger than 1,000 square feet (93 m^2) shall have not less than two exits or exit access doorways that swing in the direction of egress travel and are equipped with panic hardware or fire exit hardware.

Commenter's Reason: This proposed modification is to add a additional language in the code section that lists where you need panic hardware so code users will know that the requirement for panic hardware was added in the section for refrigeration machinery rooms.

Cost Impact: The net effect of the public comment and code change proposal will not increase or decrease the cost of construction
This is to add language in separate section as a reminder of the new language in the original section

E15-18 Part I

E20-18

IBC: 1006.3.1, (IFC[BE] 1006.3.1)

Proposed Change as Submitted

Proponent: Ed Kulik, Chair, representing ICC Building Code Action Committee (bcac@iccsafe.org)

2018 International Building Code

1006.3 Egress from stories or occupied roofs. The *means of egress* system serving any *story* or occupied roof shall be provided with the number of separate and distinct *exits* or access to *exits* based on the aggregate *occupant load* served in accordance with this section. Where *stairways* serve more than one *story*, only the *occupant load* of each *story* considered individually shall be used in calculating the required number of *exits* or access to *exits* serving that *story*.

Delete without substitution

~~**1006.3.1 Adjacent story.** The path of egress travel to an *exit* shall not pass through more than one adjacent *story*.~~

~~**Exception:** The path of egress travel to an *exit* shall be permitted to pass through more than one adjacent *story* in any of the following:~~

1. ~~In Group R-1, R-2 or R-3 occupancies, exit access stairways and *ramps* connecting four stories or less serving and contained within an individual dwelling unit, sleeping unit or live/work unit.~~
2. ~~Exit access stairways serving and contained within a Group R-3 congregate residence or a Group R-4 facility.~~
3. ~~Exit access stairways and *ramps* in open parking garages that serve only the parking garage.~~
4. ~~Exit access stairways and *ramps* serving *open-air assembly seating* complying with the exit access travel distance requirements of Section 1029.7.~~
5. ~~Exit access stairways and *ramps* 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.~~

Reason: The current list of exceptions allows for exit access stairways within 5 of the 8 options to use travel distance without a story limitation (individual dwelling units(#2), Group R-3 and R-4 congregate residences(#3), open parking garages(#6), open air seating(#7) and balconies(#8)). The 3 options currently limited to one story are the 2 story configuration (#1), water curtains around stairways opening (#4) and atriums (#5). These exceptions were added to the code by E27-15.
Travel distance, rather than stories should be the controlling factor. There would be no impact on two story configurations. Deletion of the requirement would allow for exit access travel distance to be measured down the open exit access stairway, regardless of the number of stories. This would now include open exit access stairways that use water curtains around stairways opening (#4) and atriums with smoke protection (#5). With the removal of the limitation for one story, none of the exceptions are needed.

This would be consistent with the BCAC proposal to revise measurement for travel distance along open exit access stairways in atriums.

This proposal is submitted by the ICC Building Code Action Committee (BCAC). BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2017 the BCAC has held 3 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as w ell as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: https://www.iccsafe.org/codes-tech-support/codes/codedevelopment-process/building-code-action-committee-bcac.

Cost Impact: The code change proposal will decrease the cost of construction
This will reduce the cost in those situations where an enclosure would have been required for the stairway in buildings with more than two stories.

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The exceptions that permit the travel on exit access stairways to go more than one story were carefully considered. This should not be extended to stairways with draft curtains or atriums. This is too great of an opportunity for smoke migration within high rise buildings. (Vote: 14-0)

Assembly Action: **None**

E20-18

Individual Consideration Agenda

Public Comment 1:

Proponent: Sarah Rice, representing Himself (srice@preview-group.com); Stephen Thomas, Colorado Code Consulting, LLC (sthomas@coloradocode.net); Wayne Jewell (wayne.jewell@greenoaktwp.com)requests As Modified by This Public Comment.

Replace as follows:

2018 International Building Code

1006.3.1 Adjacent story. The path of egress travel to an *exit* shall not pass through more than one adjacent *story*.

~~Exception~~Exceptions:

1. The path of egress travel to an *exit* shall be permitted to pass through more than one adjacent *story* in any of the following:

~~1.~~1.1. In Group R-1, R-2 or R-3 occupancies, exit access stairways and *ramps* connecting four stories or less serving and contained within an individual dwelling unit, sleeping unit or live/work unit.
~~2.~~1.2. Exit access stairways serving and contained within a Group R-3 congregate residence or a Group R-4 facility.
~~3.~~1.3. Exit access stairways and *ramps* in open parking garages that serve only the parking garage.
~~4.~~1.4. Exit access stairways and *ramps* serving *open-air assembly seating* complying with the exit access travel distance requirements of Section 1029.7.
~~5.~~1.5. Exit access stairways and *ramps* 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.

2. The path of egress travel shall be permitted to pass through not more than three stories where not less than two exits can be entered within the exit access travel distances specified in Section 1017.2.

Commenter's Reason: The one story limitation for egress to an exit via an exit access stair/ramp was introduced in the 2012 IBC via Code Change E5-09/10, from the ICC Code Technology Committee. As the concept of allowing access to another exit via an exit access stair was previously limited to 2 stories in the 2009 IBC, it was consistent to incorporate that limitation. But as communities have fully embraced and adopted the 2012, 2015 and now the 2018 IBC and the design community is looking to utilize this design options, the constraints of trying to fully use the 1-story limitation are becoming visible. This is confirmed by the submittal of the code change itself - in that it has been brought forth by the ICC Building Code Action Committee (BCAC) which is comprised of a very knowledgeable group of enforcement official, industry representatives and code uses.
We the proponents agree with the BCAC that the 1-story limitation is too restrictive, but we feel that not having a limitation is too extreme. Our proposed modification seeks to allow the use of exit access stairs/ramps to access an exit on another story with 1) a three (3) story limit, and 2) a requirement that at least 2 exits be located within the exit access travel distances specified in Section 1017.

We reviewed the code related provisions to the location of exits (i.e., exit access travel distance), the enclosure of exits (i.e., fire rating) and for the protection methods required of exit access stairs in Section 1019.1 (i.e., configuration limits, draft curtains and closely spaced sprinklers). As the overarching requirement associated with the means of egress for a building is that an occupant can get to a protected location in the exit access travel distances in Section 1017, we examined how it can be complied with when both a horizontal and vertical path is available. We feel that the protection

method afforded a 3-story exit access stair using Item 4 in Section 1019.1 combined with the mandate that an occupant must be able to reach a minimum of 2 exits within the exit access travel distance specified in Section 1017 affords the intended safety to the building occupants and ask that you support this modification.

Cost Impact: The net effect of the public comment and code change proposal will decrease the cost of construction The implementation of the concept outlined in this proposal will not increase the cost of construction, but may decrease the cost of construction.

E20-18

E18-18

IBC: SECTION 1006.3, 1006.3.1, 1019.3 (IFC[BE] 1006.3, 1006.3.1, 1019.3)

Proposed Change as Submitted

Proponent: David Collins, representing The American Institute of Architects (dcollins@preview-group.com)

2018 International Building Code

SECTION 1006 NUMBER OF EXITS AND EXIT ACCESS DOORWAYS

1006.1 General. 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, including *mezzanines*, and Section 1006.3 for *stories* or occupied roofs.

Revise as follows

1006.3 Egress from stories or occupied roofs. The *means of egress* system serving any *story* or occupied roof shall be provided with the number of separate and distinct *exits* or access to *exits* based on the aggregate *occupant load* served in accordance with this section. ~~Where *stairways* serve more than one *story*, only the *occupant load* of each *story* considered individually shall be used in calculating the required number of *exits* or access to *exits* serving that *story*.~~

Add new text as follows

1006.3.1 Occupant load. Where stairways serve more than one story, or more than one story and an occupied roof, only the occupant load of each story or occupied roof, considered individually, shall be used in when calculating the required number of exits or access to exits serving that story.

Revise as follows

~~**1006.3.1**~~ **1006.3.2** ~~**Adjacent story.**~~ **Path of egress travel.** The path of egress travel to an *exit* shall not pass through more than one adjacent *story*.
Exception: The path of egress travel to an *exit* shall be permitted to pass through more than one adjacent *story* in any of the following:

1. In Group R-1, R-2 or R-3 occupancies, exit access stairways and *ramps* connecting four stories or less serving and contained within an individual dwelling unit, sleeping unit or live/work unit.
2. Exit access stairways serving and contained within a Group R-3 congregate residence or a Group R-4 facility.
3. Exit access stairways and ramps within an atrium comply with the provisions of Section 404.
4. Exit access stairways and *ramps* in open parking garages that serve only the parking garage.
5. ~~4~~ Exit access stairways and *ramps* serving *open-air assembly seating* complying with the exit access travel distance requirements of Section 1029.7.
6. ~~5~~ Exit access stairways and *ramps* 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.
7. Exterior exit access stairways and ramps between occupied roofs.

~~**1006.3.2**~~**1006.3.3 Egress based on occupant load.** Each *story* and occupied roof shall have the minimum number of separate and distinct *exits*, or access to *exits*, as specified in Table 1006.3.2. 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 or occupied roof shall be maintained until arrival at the *exit discharge* or a *public way*.

1019.3 Occupancies other than Groups I-2 and I-3. 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.

1. *Exit access stairways* and *ramps* that serve or atmospherically communicate between only two stories. 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 an individual *dwelling unit* or *sleeping unit* or *live/work unit*.
3. *Exit access stairways* serving and contained within a Group R-3 congregate residence or a Group R-4 facility are not required to be enclosed.
4. *Exit access stairways* and *ramps* in buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1, where the area of the vertical opening between stories does not exceed twice the horizontal projected area of the *stairway* or *ramp* and the opening is protected by a draft curtain and closely spaced sprinklers in accordance with NFPA 13. In other than Group B and M occupancies, this provision is limited to openings that do not connect more than four stories.
5. *Exit access stairways* and *ramps* within an *atrium* complying with the provisions of Section 404.
6. *Exit access stairways* and *ramps* in *open parking garages* that serve only the parking garage.
7. *Exit access stairways* and *ramps* serving *smoke-protected or open-air assembly seating* complying with the *exit access* travel distance requirements of Section 1029.7.
8. *Exit access stairways* and *ramps* 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.
9. Exterior exit access stairways or ramps between occupied roofs.

Reason: The title of this section includs stories and occupied roof, but the section gives no guidance regarding the occupied roof. This change will clarify the application of the provisions to an occupied roof and another story. As has been the practice, the occupant load of each story or with this change, the occupant load of the roof (which isn't a story) will be used to determine the required occupant load for the stair serving it.
In addition, the two exceptions will recognize an exit access stairway located in an atrium and an exit access stairway serving an occupied roof to pass through more than one story. This change will make it clear that a stair in an atrium that is NOT part of the means of egress is always acceptable and not limited to the one adjacent story criteria.

Cost Impact: The code change proposal will decrease the cost of construction
This change will simplify design decisions, review and approval of projects, reducing the cost of construction.

E18-18

Public Hearing Results

Committee Action: As Modified

Committee Modification: 1006.3.1 Occupant load. Where stairways serve more than one story, or more than one story and an occupied roof, only the occupant load of each story or occupied roof, considered individually, shall be used ~~in~~ when calculating the required number of exits or access to exits serving that story.
1006.3.2 Path of egress travel. The path of egress travel to an exit shall not pass through more than one adjacent story.

Exception: The path of egress travel to an exit shall be permitted to pass through more than one adjacent story in any of the following:

In Group R-1, R-2 or R-3 occupancies, exit access stairways and ramps connecting four stories or less serving and contained within an individual dwelling unit, sleeping unit or live/work unit.
Exit access stairways serving and contained within a Group R-3 congregate residence or a Group R-4 facility.
Exit access stairways and ramps within an atrium comply with the provisions of Section 404.
Exit access stairways and ramps in open parking garages that serve only the parking garage.
Exit access stairways and ramps serving open-air assembly seating complying with the exit access travel distance requirements of Section 1029.7.
Exit access stairways and ramps 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.
~~Exterior~~ Exit access stairways and ramps ~~between~~ serving occupied roofs.

1019.3 Occupancies other than Groups I-2 and I-3.

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.

1. *Exit access stairways* and *ramps* that serve or atmospherically communicate between only two stories. 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 an individual *dwelling unit* or *sleeping unit* or *live/work unit*.

3. *Exit access stairways* serving and contained within a Group R-3 congregate residence or a Group R-4 facility are not required to be enclosed.

4. *Exit access stairways* and *ramps* in buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1, where the area of the vertical opening between stories does not exceed twice the horizontal projected area of the *stairway* or *ramp* and the opening is protected by a draft curtain and closely spaced sprinklers in accordance with NFPA 13. In other than Group B and M occupancies, this provision is limited to openings that do not connect more than four stories.

5. *Exit access stairways* and *ramps* within an *atrium* complying with the provisions of Section 404.

6. *Exit access stairways* and *ramps* in *open parking garages* that serve only the parking garage.

7. *Exit access stairways* and *ramps* serving *smoke-protected or open-air assembly seating* complying with the *exit access* travel distance requirements of Section 1029.7.

8. *Exit access stairways* and *ramps* 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.

9. ~~Exterior~~ Exit access stairways or ramps ~~between~~ serving occupied roofs.

Committee Reason: The modification to Section 1006.3.1 is an editorial correction for better English.
The modification to Section 1006.3.2 will allow for the exit access stairways to move down from the occupied roof and into the building for means of egress from the roof. As a new exception, the exit access travel distance, not the number of stories, will be the limiting factor. Without the modification, Section 1006.3.2 Exception 7 would only be applicable if there were multiple roofs and it would limit the application to exterior exit access stairways.

This proposal separates out occupied roofs into a new Section 1006.3.1 which will clarify how egress is addressed for occupied roofs. There was no discussion on the new Exception 3 for Section 1006.3.2. (Vote: 9-5)

Assembly Action: **None**

Individual Consideration Agenda

Public Comment 1:

Proponent: Lee Kranz, representing Washington Association of Building Officials Technical Code Development Committee (lkranz@bellevuewa.gov)requests As Modified by This Public Comment.

Modify as follows:

2018 International Building Code

SECTION 1006 NUMBER OF EXITS AND EXIT ACCESS DOORWAYS

1006.1 General. 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, including *mezzanines*, and Section 1006.3 for *stories* or occupied roofs.

1006.3 Egress from stories or occupied roofs. The *means of egress* system serving any *story* or occupied roof shall be provided with the number of separate and distinct *exits* or access to *exits* based on the aggregate *occupant load* served in accordance with this section.

1006.3.1 Occupant load. Where stairways serve more than one story, or more than one story and an occupied roof, only the occupant load of each story or occupied roof, considered individually, shall be used when calculating the required number of exits or access to exits serving that story.

1006.3.2 Path of egress travel.. The path of egress travel to an *exit* shall not pass through more than one adjacent *story*.
Exception: The path of egress travel to an *exit* shall be permitted to pass through more than one adjacent *story* in any of the following:

1. In Group R-1, R-2 or R-3 occupancies, exit access stairways and *ramps* connecting four stories or less serving and contained within an individual dwelling unit, sleeping unit or live/work unit.
2. Exit access stairways serving and contained within a Group R-3 congregate residence or a Group R-4 facility.
3. Exit access stairways and ramps within an atrium comply with the provisions of Section 404.
4. Exit access stairways and *ramps* in open parking garages that serve only the parking garage.
5. Exit access stairways and *ramps* serving *open-air assembly seating* complying with the exit access travel distance requirements of Section 1029.7.
6. Exit access stairways and *ramps* 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.
7. ~~Exit access stairways and ramps serving occupied roofs.~~

1006.3.3 Egress based on occupant load. Each *story* and occupied roof shall have the minimum number of separate and distinct *exits*, or access to *exits*, as specified in Table 1006.3.2. 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 or occupied roof shall be maintained until arrival at the *exit discharge* or a *public way*.

1019.3 Occupancies other than Groups I-2 and I-3. 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.

1. *Exit access stairways* and *ramps* that serve or atmospherically communicate between only two stories. 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 an individual *dwelling unit* or *sleeping unit* or *live/work unit*.
3. *Exit access stairways* serving and contained within a Group R-3 congregate residence or a Group R-4 facility are not required to be enclosed.
4. *Exit access stairways* and *ramps* in buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1, where the area of the vertical opening between stories does not exceed twice the horizontal projected area of the *stairway* or *ramp* and the opening is protected by a draft curtain and closely spaced sprinklers in accordance with NFPA 13. In other than Group B and M occupancies, this provision is limited to openings that do not connect more than four stories.
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8. *Exit access stairways* and *ramps* 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.
9. ~~*Exit access stairways or ramps serving occupied roofs.*~~

Commenter's Reason: We have no objection to the new Exception 3 in Section 1006.3.2, and we agree with the grammatical edit to Section 1006.3.1. This public comment preserves those two features of the original code change proposal. However, we do not agree with the as-modified version of 1006.3.2.

The floor modification to Section 1006.3.2, changing "<u>exterior</u> exit access stairways or ramps <u>between</u> occupied roofs" to "exit access stairways and ramps <u>serving</u> occupied roofs" [emphasis ours] is flawed as it overly-broadened the scope of the original exception, and violated the intent of the charging language in 1006.3.2.

Section 1006.3.2 (in the new numbering scheme) essentially requires two enclosed exits be available in the adjacent story below, if a story is using an exit access stairway as its second means of egress. This principle has been debated in several cycles, and has been upheld by the membership despite several attempts to delete the requirement.

The as-modified exception will allow an occupied roof to be served only by one vertical exit enclosure, along with an unenclosed exit access stairway. For an office building, the unenclosed exit access stairway can pass through an unlimited number of stories. (An unlimited open exit access stairway is allowed in an M Occupancy, but a roof deck is not likely.) In the vast majority of cases, it is unlikely the exit travel distance down the unenclosed exit access stairway will be limited because exit travel distance is measured to the <u>nearest</u> exit—which will likely be the vertical exit enclosure.

Should this exception survive in the as-modified form, the next logical step would be deletion of the entire section in the next cycle. If an unoccupied roof is allowed to have one enclosed stair and one unenclosed stair as its means of egress, why require two enclosed stairs for any story? We believe this is a dangerous precedent to set, and ask for the membership's support in preventing any erosion of the principle stated above.

Cost Impact: The net effect of the public comment and code change proposal will not increase or decrease the cost of construction
Corrects an egress issue created by a floor modification. There should be no impact on the cost of construction from the original proposal.

E18-18

E18-18

IBC: SECTION 1006.3, 1006.3.1, 1019.3 (IFC[BE] 1006.3, 1006.3.1, 1019.3)

Proposed Change as Submitted

Proponent: David Collins, representing The American Institute of Architects (dcollins@preview-group.com)

2018 International Building Code

SECTION 1006 NUMBER OF EXITS AND EXIT ACCESS DOORWAYS

1006.1 General. 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, including *mezzanines*, and Section 1006.3 for *stories* or occupied roofs.

Revise as follows

1006.3 Egress from stories or occupied roofs. The *means of egress* system serving any *story* or occupied roof shall be provided with the number of separate and distinct *exits* or access to *exits* based on the aggregate *occupant load* served in accordance with this section. ~~Where *stairways* serve more than one *story*, only the *occupant load* of each *story* considered individually shall be used in calculating the required number of *exits* or access to *exits* serving that *story*.~~

Add new text as follows

1006.3.1 Occupant load. Where stairways serve more than one story, or more than one story and an occupied roof, only the occupant load of each story or occupied roof, considered individually, shall be used in when calculating the required number of exits or access to exits serving that story.

Revise as follows

~~**1006.3.1**~~ **1006.3.2** ~~**Adjacent story.**~~ **Path of egress travel.** The path of egress travel to an *exit* shall not pass through more than one adjacent *story*.
Exception: The path of egress travel to an *exit* shall be permitted to pass through more than one adjacent *story* in any of the following:

1. In Group R-1, R-2 or R-3 occupancies, exit access stairways and *ramps* connecting four stories or less serving and contained within an individual dwelling unit, sleeping unit or live/work unit.
2. Exit access stairways serving and contained within a Group R-3 congregate residence or a Group R-4 facility.
3. Exit access stairways and ramps within an atrium comply with the provisions of Section 404.
4. Exit access stairways and *ramps* in open parking garages that serve only the parking garage.
5. ~~4~~ Exit access stairways and *ramps* serving *open-air assembly seating* complying with the exit access travel distance requirements of Section 1029.7.
6. ~~5~~ Exit access stairways and *ramps* 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.
7. Exterior exit access stairways and ramps between occupied roofs.

~~**1006.3.2**~~**1006.3.3 Egress based on occupant load.** Each *story* and occupied roof shall have the minimum number of separate and distinct *exits*, or access to *exits*, as specified in Table 1006.3.2. 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 or occupied roof shall be maintained until arrival at the *exit discharge* or a *public way*.

1019.3 Occupancies other than Groups I-2 and I-3. 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.

1. *Exit access stairways* and *ramps* that serve or atmospherically communicate between only two stories. 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 an individual *dwelling unit* or *sleeping unit* or *live/work unit*.
3. *Exit access stairways* serving and contained within a Group R-3 congregate residence or a Group R-4 facility are not required to be enclosed.
4. *Exit access stairways* and *ramps* in buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1, where the area of the vertical opening between stories does not exceed twice the horizontal projected area of the *stairway* or *ramp* and the opening is protected by a draft curtain and closely spaced sprinklers in accordance with NFPA 13. In other than Group B and M occupancies, this provision is limited to openings that do not connect more than four stories.
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8. *Exit access stairways* and *ramps* 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.
9. Exterior exit access stairways or ramps between occupied roofs.

Reason: The title of this section includs stories and occupied roof, but the section gives no guidance regarding the occupied roof. This change will clarify the application of the provisions to an occupied roof and another story. As has been the practice, the occupant load of each story or with this change, the occupant load of the roof (which isn't a story) will be used to determine the required occupant load for the stair serving it.
In addition, the two exceptions will recognize an exit access stairway located in an atrium and an exit access stairway serving an occupied roof to pass through more than one story. This change will make it clear that a stair in an atrium that is NOT part of the means of egress is always acceptable and not limited to the one adjacent story criteria.

Cost Impact: The code change proposal will decrease the cost of construction
This change will simplify design decisions, review and approval of projects, reducing the cost of construction.

E18-18

Public Hearing Results

Committee Action: As Modified

Committee Modification: 1006.3.1 Occupant load. Where stairways serve more than one story, or more than one story and an occupied roof, only the occupant load of each story or occupied roof, considered individually, shall be used ~~in~~ when calculating the required number of exits or access to exits serving that story.
1006.3.2 Path of egress travel. The path of egress travel to an exit shall not pass through more than one adjacent story.

Exception: The path of egress travel to an exit shall be permitted to pass through more than one adjacent story in any of the following:

In Group R-1, R-2 or R-3 occupancies, exit access stairways and ramps connecting four stories or less serving and contained within an individual dwelling unit, sleeping unit or live/work unit.
Exit access stairways serving and contained within a Group R-3 congregate residence or a Group R-4 facility.
Exit access stairways and ramps within an atrium comply with the provisions of Section 404.
Exit access stairways and ramps in open parking garages that serve only the parking garage.
Exit access stairways and ramps serving open-air assembly seating complying with the exit access travel distance requirements of Section 1029.7.
Exit access stairways and ramps 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.
~~Exterior~~ Exit access stairways and ramps ~~between~~ serving occupied roofs.

1019.3 Occupancies other than Groups I-2 and I-3.

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.

1. *Exit access stairways* and *ramps* that serve or atmospherically communicate between only two stories. 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 an individual *dwelling unit* or *sleeping unit* or *live/work unit*.

3. *Exit access stairways* serving and contained within a Group R-3 congregate residence or a Group R-4 facility are not required to be enclosed.

4. *Exit access stairways* and *ramps* in buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1, where the area of the vertical opening between stories does not exceed twice the horizontal projected area of the *stairway* or *ramp* and the opening is protected by a draft curtain and closely spaced sprinklers in accordance with NFPA 13. In other than Group B and M occupancies, this provision is limited to openings that do not connect more than four stories.

5. *Exit access stairways* and *ramps* within an *atrium* complying with the provisions of Section 404.

6. *Exit access stairways* and *ramps* in *open parking garages* that serve only the parking garage.

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9. ~~Exterior~~ Exit access stairways or ramps ~~between~~ serving occupied roofs.

Committee Reason: The modification to Section 1006.3.1 is an editorial correction for better English.
The modification to Section 1006.3.2 will allow for the exit access stairways to move down from the occupied roof and into the building for means of egress from the roof. As a new exception, the exit access travel distance, not the number of stories, will be the limiting factor. Without the modification, Section 1006.3.2 Exception 7 would only be applicable if there were multiple roofs and it would limit the application to exterior exit access stairways.

This proposal separates out occupied roofs into a new Section 1006.3.1 which will clarify how egress is addressed for occupied roofs. There was no discussion on the new Exception 3 for Section 1006.3.2. (Vote: 9-5)

Assembly Action: **None**

E18-18

Individual Consideration Agenda

Public Comment 2:

Proponent: David Collins, representing The American Institute of Architects (dcollins@preview-group.com)requests As Submitted.

Commenter's Reason: As originally submitted I was simply trying to clarify in Sections 1006.3.2, exception 7 that if there were more than one occupied roof on a building that an exterior exit access stairways could be used for exit access off the roof(s). The modification, while originally seeming to be simple, complicated the exception by allowing the exit access stair from a roof to go any number of stories down through the building and not be limited by the "one adjacent story" limitation in the charging language since this is an exception.
That was not my intent and I do not believe it should be a part of this code change. Therefore I ask that the membership disapprove the change As Modified and instead approve it As Submitted.

Cost Impact: The net effect of the public comment and code change proposal will not increase or decrease the cost of construction
By not accepting the modification, the cost of construction will not be affected.

E18-18

E18-18

IBC: SECTION 1006.3, 1006.3.1, 1019.3 (IFC[BE] 1006.3, 1006.3.1, 1019.3)

Proposed Change as Submitted

Proponent: David Collins, representing The American Institute of Architects (dcollins@preview-group.com)

2018 International Building Code

SECTION 1006 NUMBER OF EXITS AND EXIT ACCESS DOORWAYS

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Revise as follows

1006.3 Egress from stories or occupied roofs. The *means of egress* system serving any *story* or occupied roof shall be provided with the number of separate and distinct *exits* or access to *exits* based on the aggregate *occupant load* served in accordance with this section. ~~Where *stairways* serve more than one *story*, only the *occupant load* of each *story* considered individually shall be used in calculating the required number of *exits* or access to *exits* serving that *story*.~~

Add new text as follows

1006.3.1 Occupant load. Where stairways serve more than one story, or more than one story and an occupied roof, only the occupant load of each story or occupied roof, considered individually, shall be used in when calculating the required number of exits or access to exits serving that story.

Revise as follows

~~**1006.3.1**~~ **1006.3.2** ~~**Adjacent story.**~~ **Path of egress travel.** The path of egress travel to an *exit* shall not pass through more than one adjacent *story*.
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7. Exterior exit access stairways and ramps between occupied roofs.

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Reason: The title of this section includs stories and occupied roof, but the section gives no guidance regarding the occupied roof. This change will clarify the application of the provisions to an occupied roof and another story. As has been the practice, the occupant load of each story or with this change, the occupant load of the roof (which isn't a story) will be used to determine the required occupant load for the stair serving it.
In addition, the two exceptions will recognize an exit access stairway located in an atrium and an exit access stairway serving an occupied roof to pass through more than one story. This change will make it clear that a stair in an atrium that is NOT part of the means of egress is always acceptable and not limited to the one adjacent story criteria.

Cost Impact: The code change proposal will decrease the cost of construction
This change will simplify design decisions, review and approval of projects, reducing the cost of construction.

E18-18

Public Hearing Results

Committee Action: As Modified

Committee Modification: 1006.3.1 Occupant load. Where stairways serve more than one story, or more than one story and an occupied roof, only the occupant load of each story or occupied roof, considered individually, shall be used ~~in~~ when calculating the required number of exits or access to exits serving that story.
1006.3.2 Path of egress travel. The path of egress travel to an exit shall not pass through more than one adjacent story.

Exception: The path of egress travel to an exit shall be permitted to pass through more than one adjacent story in any of the following:

In Group R-1, R-2 or R-3 occupancies, exit access stairways and ramps connecting four stories or less serving and contained within an individual dwelling unit, sleeping unit or live/work unit.
Exit access stairways serving and contained within a Group R-3 congregate residence or a Group R-4 facility.
Exit access stairways and ramps within an atrium comply with the provisions of Section 404.
Exit access stairways and ramps in open parking garages that serve only the parking garage.
Exit access stairways and ramps serving open-air assembly seating complying with the exit access travel distance requirements of Section 1029.7.
Exit access stairways and ramps 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.
~~Exterior~~ Exit access stairways and ramps ~~between~~ serving occupied roofs.

1019.3 Occupancies other than Groups I-2 and I-3.

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.

1. *Exit access stairways* and *ramps* that serve or atmospherically communicate between only two stories. 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 an individual *dwelling unit* or *sleeping unit* or *live/work unit*.

3. *Exit access stairways* serving and contained within a Group R-3 congregate residence or a Group R-4 facility are not required to be enclosed.

4. *Exit access stairways* and *ramps* in buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1, where the area of the vertical opening between stories does not exceed twice the horizontal projected area of the *stairway* or *ramp* and the opening is protected by a draft curtain and closely spaced sprinklers in accordance with NFPA 13. In other than Group B and M occupancies, this provision is limited to openings that do not connect more than four stories.

5. *Exit access stairways* and *ramps* within an *atrium* complying with the provisions of Section 404.

6. *Exit access stairways* and *ramps* in *open parking garages* that serve only the parking garage.

7. *Exit access stairways* and *ramps* serving *smoke-protected or open-air assembly seating* complying with the *exit access* travel distance requirements of Section 1029.7.

8. *Exit access stairways* and *ramps* 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.

9. ~~Exterior~~ Exit access stairways or ramps ~~between~~ serving occupied roofs.

Committee Reason: The modification to Section 1006.3.1 is an editorial correction for better English.
The modification to Section 1006.3.2 will allow for the exit access stairways to move down from the occupied roof and into the building for means of egress from the roof. As a new exception, the exit access travel distance, not the number of stories, will be the limiting factor. Without the modification, Section 1006.3.2 Exception 7 would only be applicable if there were multiple roofs and it would limit the application to exterior exit access stairways.

This proposal separates out occupied roofs into a new Section 1006.3.1 which will clarify how egress is addressed for occupied roofs. There was no discussion on the new Exception 3 for Section 1006.3.2. (Vote: 9-5)

Assembly Action: **None**

E18-18

Individual Consideration Agenda

Public Comment 3:

Proponent: Jonathan Siu, City of Seattle Department of Construction and Inspections, representing City of Seattle Department of Construction and Inspections (jon.siu@seattle.gov)requests As Submitted.

Commenter's Reason: This public comment requests the proposal be returned to its originally-proposed text. Our main concern relates to the changes made by the Means of Egress Committee in Exception 7 to 1006.3.2 and Exception 9 to Section 1019.3. We fully support all of the language the proponent originally submitted. We do not support the Committee-approved floor modification submitted at the Committee Action Hearings in Columbus.
Once we had a chance to fully evaluate the effects of the modification introduced on the floor in Columbus and subsequently approved by the Committee, it became obvious to us that the modified text in the exceptions is not in keeping with the intent of the charging language in Section 1006.3.2, and sets a dangerous precedent.

The charging language in Section 1006.3.2 (using the numbering system proposed by this code change proposal) was originally introduced to prevent situations shown in Figure 1 below. This figure illustrates a multi-story building that has one (enclosed) interior exit stair and one (unenclosed) exit access stairway. Prior to the introduction of the code text in 1006.3.2, the code would have allowed this situation in a B or M occupancy. (Recall that in a B or M Occupancy, an unenclosed exit access stairway is not limited in height.)

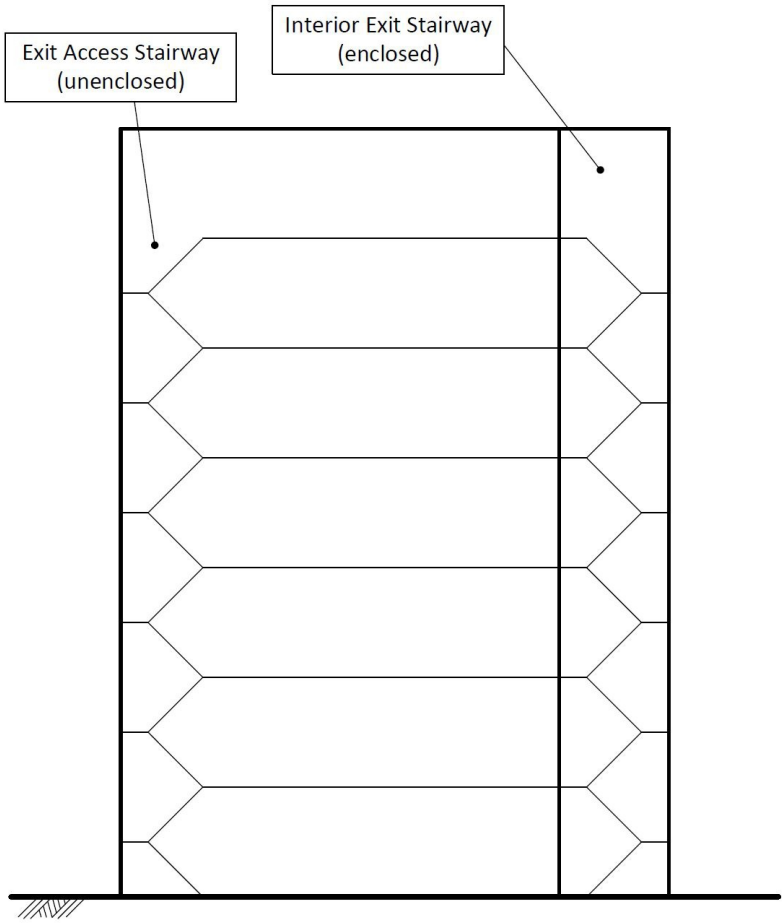


Fig. 1 – IBC Sec. 1006.3.2 prevents this configuration

Section 1006.3.2 essentially requires a path of egress to transition from an unenclosed exit access stairway to an interior exit stair within one story. Note that this principle of transitioning from an unenclosed exit access stairway to an (enclosed) interior exit stair in the adjacent story below was cited in the reason statement for Code Change Proposal E27-15, and was upheld by the Means of Egress Committee in Columbus in their disapproval of Code Change Proposal E20-18 by a 14-0 vote. The reason they gave for disapproval was, "The exceptions that permit the travel on exit access stairways to go more than one story were carefully considered. This should not be extended to stairways with draft curtains or atriums. This is too great of an opportunity for smoke migration within high rise buildings."

However, this proposal with the floor modification approved by the Committee would allow a similar, dangerous situation for a roof deck, as shown in Figure 2. This figure depicts a multi-story building with an occupied roof. All stories have access to the two interior exit stairs. The occupied roof is served by an interior exit stair (on the right), and an unenclosed exit access stairway. Because the modification introduced on the floor at the Committee Action Hearings in Columbus exempts stairs serving an occupied roof from the shall not pass through more than one adjacent story restriction, this means that the unenclosed exit access stairway is not required to transition to the enclosed exit stair on the left of the figure at the uppermost story. That is, the exit access stair could be isolated from the second enclosed exit stair. This is a dangerous precedent to set, as one could argue if an unenclosed exit access stairway of unlimited height (in a B or M occupancy) is allowed to be the second means of egress for an occupied roof, why should there be any restriction on using the same arrangement for a story?

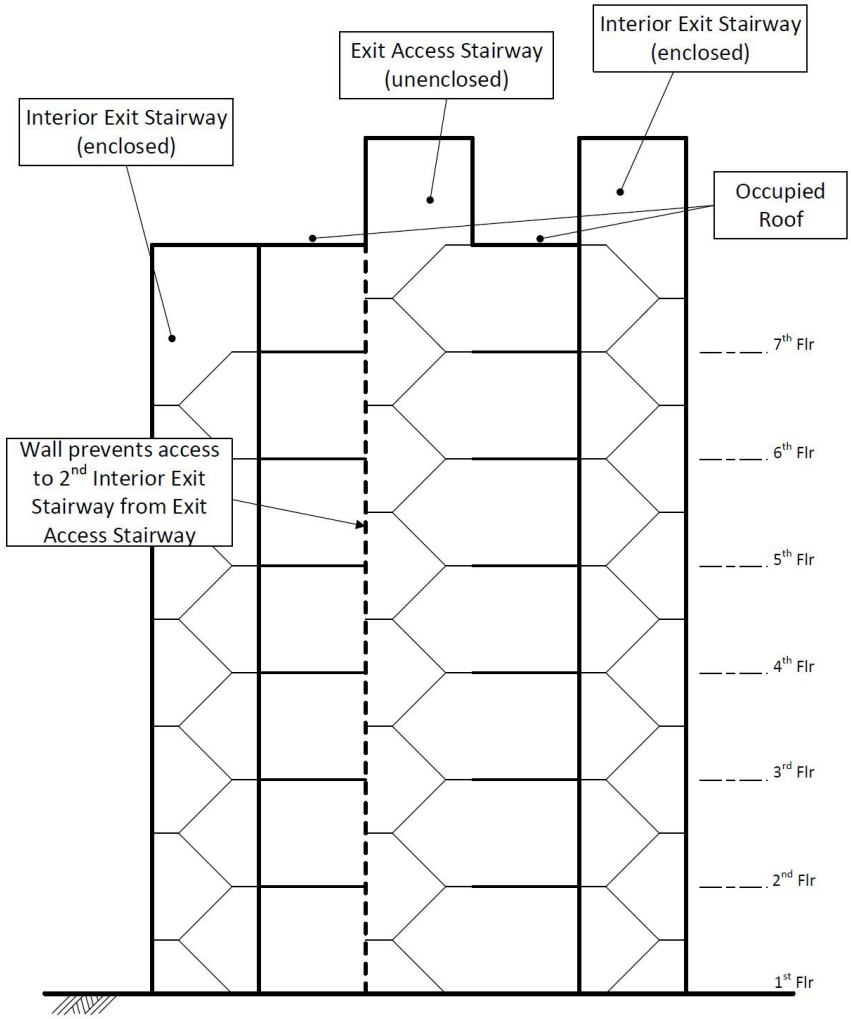


Fig. 2 - E18-18 As Modified – Occupied Roof Served by Exit Access Stairway

This is not a hypothetical issue, as we in Seattle have recently seen several applications for high rise office building tenants sporting unenclosed convenience stairs extending as many as 10 or 12 stories through the building. In those buildings, it can easily be conceived that the convenience stairs would become the only second means of egress for all the stories they serve. Extending the concept of unenclosed stairs serving an occupied roof to these stories would be done in a heartbeat, if this as-modified proposal were to survive.

This public comment returns to the originally proposed text of Section 1006.3.2, Exception 7, and Section 1019.3, Exception 9, and keeps them in alignment. We believe the proponent of the original code change had a legitimate issue that is addressed with his proposed language. There are cases of buildings with multiple roof levels with roof decks (Figure 3), or roofs with multiple levels of roof decks (Figure 4) where an exterior stair connecting the occupied roofs need not count toward the one adjacent story, as smoke will not accumulate at those levels.

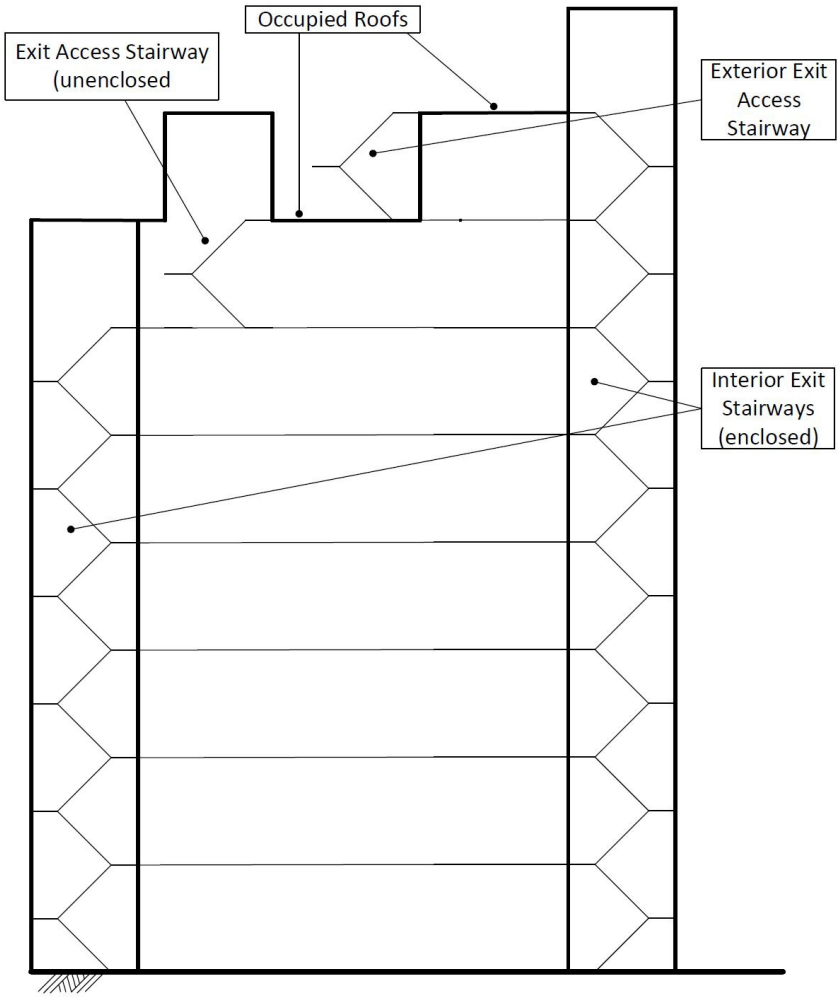


Fig. 3 - E18-18 As Submitted – Decks on Different Roof Levels

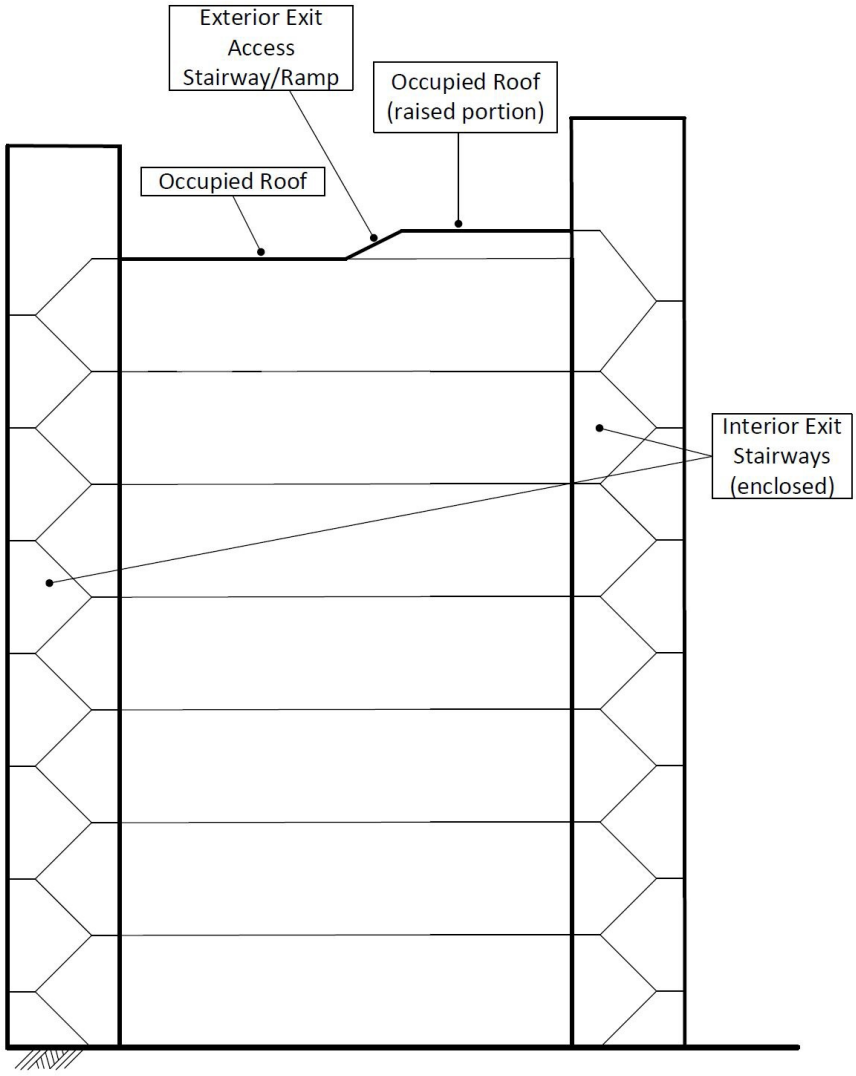


Fig. 4 - E18-18 As Submitted – Decks on Same Roof Level

We urge the ICC Governmental Voting Representatives to continue your support of the current requirements, and support this proposal As Submitted (AS). The current As Modified (AM) status cannot be allowed to carry into the 2021 IBC.

Cost Impact: The net effect of the public comment and code change proposal will decrease the cost of construction Since this public comment returns the substantive portions of the proposal to its As Submitted status, the cost impact statement is unchanged from the statement submitted with the original code change proposal: "This change will simplify design decisions, review and approval of projects, reducing the cost of construction."

E18-18

E21-18

IBC: 1006.3.1, (IFC[BE] 1006.3.1)

Proposed Change as Submitted

Proponent: Gregory Keith, representing The Boeing Company (grkeith@mac.com); Douglas Evans, representing DHE FPE LLC (dhefpe@gmail.com)

2018 International Building Code

Delete and substitute as follows

~~**1006.3.1 Adjacent story.** The path of egress travel to an *exit* shall not pass through more than one adjacent *story*.~~

~~**Exception:** The path of egress travel to an *exit* shall be permitted to pass through more than one adjacent *story* in any of the following:~~

1. ~~In Group R-1, R-2 or R-3 occupancies, exit access stairways and *ramps* connecting four stories or less serving and contained within an individual dwelling unit, sleeping unit or live/work unit.~~
2. ~~Exit access stairways serving and contained within a Group R-3 congregate residence or a Group R-4 facility.~~
3. ~~Exit access stairways and *ramps* in open parking garages that serve only the parking garage.~~
4. ~~Exit access stairways and *ramps* serving *open-air assembly seating* complying with the exit access travel distance requirements of Section 1029.7.~~
5. ~~Exit access stairways and *ramps* 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.~~

1006.3.1 Access to exits at other levels. In other than Group I-2 and I-3 occupancies, access to exits at other building levels utilizing unenclosed exit access stairways and ramps shall be permitted. Such exit access stairways and ramps shall comply with one or more of the conditions listed in Section 1019.3. Regardless of the number of stories permitted to be served by the unenclosed exit access stairway or ramp, the exit access travel distance to the entrance to an exit shall not exceed the limitations set forth in Section 1017.2.

Reason:
This was the original intent of the ICC Code Technology Committee proposal E5-09/10 that was approved for the 2015 editon of the IBC. The logic was to allow the long established vertical opening exceptions to stand on their own merit. If these specific conditions have been deemed to provide acceptable fire migration limits, it stands to reason that exit access travel distance may occur within those tenable environments.

However, a separate proposal overlaid the E5 provisions in Section 1006.3 by limiting path of egress travel to an exit only from an adjacent level. This effectively rendered the CTC methodology as moot.

Realizing that the single adjacent story provision was overly restrictive and did not recognize former exit access provisions, five exceptions to the adjacent story requirement were created for the 2018 edition based on the conditions contained in Section 1019.3. Inexplicably, only five of the eight conditions were referenced.

This proposal completes the correction by eliminating the base restriction and the five accompanying exceptions. In doing so, it returns to the original CTC methodology and recognizes all empirical Section 1019.3 fire migration scenarios that have been contained in the IBC and legacy codes for decades. Additionally, it describes the procedure for determining how to access exits at other stories by way of exit access stairways or ramps. Approval of this proposal will allow for the more flexible design of the exit access portion of the means of egress system and achieve more consistent interpretations of the provision.

Cost Impact: The code change proposal will decrease the cost of construction
The proposal will allow for access to exits by unenclosed exit access stairways in atriums and buildings with specifically protected vertical openings

Staff Note: Section 1006.3.1 was added to the 2018 IBC by code proposal E27-15.

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The exceptions that permit the travel on exit access stairways to go more than one story were carefully considered. This should not be extended to stairways with draft curtains or atriums as permitted in Section 1019. This is too great of an opportunity for smoke migration within high rise buildings. The additional language adds no additional information. Disapproval would be consistent with the committee action on E20. (Vote: 14-0)

Assembly Action: **None**

E21-18

Individual Consideration Agenda

Public Comment 1:

Proponent: Gregory Keith, representing DHE FPE LLC (grkeith@mac.com); Douglas Harold Evans, DHE FPE LLC, representing DHE FPE LLC (dhefpe@gmail.com)requests As Submitted.

Commenter's Reason: Item E21-18 was intended to clarify provisions for access to exits at other levels and to make those provisions consistent with Section 1019.3 that permits unenclosed exit access stairways and ramps. The committee disapproved the proposal citing that Section 1019.3, Conditions 4 and 5 were potentially unsafe. In the committee's reason statement they noted that, "This should not be extended to stairways with draft curtains or atriums as permitted in Section 1019. This is too great of an opportunity for smoke migration in high rise buildings." The fact of the matter is that all of the conditions listed in Section 1019.3 have been long recognized as providing acceptable levels of control of smoke migration. Indeed, Conditions 4 and 5 were provisions that were permitted by all of the legacy codes for numerous decades. To now arbitrarily question their efficacy is inappropriate. There has been no life loss history resulting from the design conditions in question. Additionally, the committee should be reminded that the proposal limits occupant exposure within those areas based on the allowable travel distance. Regardless of the smoke migration potential, a given occupant will be limited to less than two minutes of travel time based on the permitted exit access travel distance. The committee thinking is also inconsistent in that they regard access to an exit within an atrium as a risk, yet at Item E96-18 they voted to retain Exception 2 to Section 1023.2 which permits an unenclosed stairway within an atrium (high rise or otherwise) to serve as a formal exit.
The concept of accessing exits at other building levels by way of exit access stairways was formalized in the International Code Council, Code Technology Committee's proposal E5-09/10. That proposal recognized that there were a number of currently permitted design conditions that allowed for vertical openings greater than a simple adjacent story. All of the conditions cited at Section 1019.3 are frequently utilized in building design and have been empirically validated for decades. The premise of the CTC Means of Egress Committee was that if a given opening was currently permitted based on fire and smoke migration concerns, it should be safe to allow for exit access travel in such areas within applicable exit access travel distance limitations.

The ICC Building Code Action Committee agrees with this approach. They submitted two proposals (E19-18 and E20-18) which accomplished essentially the same technical end as E21-18. The committee disapproved both of those proposals citing the same smoke development concerns. This public comment supports Item E21-18. E21 is preferred because it states the prescribed design conditions associated with the use of exit access stairways to access exits at other building levels so as to enhance user comprehension and uniformity of application. Included is the requirement that such exit access stairway or ramp meets one of the specific conditions detailed at Section 1019.3. Also, it stipulates that exit access travel on such stairways or ramps shall not exceed the limitations of Section 1017.2.

This concept has been well studied and supported by the ICC CTC and BCAC for almost a decade. This public comment will cause that vision to finally become reality. The lack of pertinent life loss history indicates that access to exits at other building levels in accordance with this public comment will be safe for building occupants.

Cost Impact: The net effect of the public comment and code change proposal will decrease the cost of construction
This proposal will allow for access to exits by unenclosed exit access stairways and ramps in atriums and buildings with specifically protected vertical openings.

E21-18

E96-18

IBC: 1023.2, (IFC[BE] 1023.2)

Proposed Change as Submitted

Proponent: Gregory Keith, representing The Boeing Company (grkeith@mac.com); Douglas Evans, representing DHE FPE LLC (dhefpe@gmail.com)

2018 International Building Code

Revise as follows

1023.2 Construction. Enclosures for interior exit *stairways* and *ramps* shall be constructed as *fire barriers* in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 711, or both. *Interior exit stairway* and *ramp* 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 interior exit *stairways* or *ramps* shall include any *basements*, but not any *mezzanines*. *Interior exit stairways* and *ramps* shall have a fire-resistance rating not less than the floor assembly penetrated, but need not exceed 2 hours.

~~Exceptions~~ Exception:

1. *Interior exit stairways* and *ramps* in Group I-3 occupancies in accordance with the provisions of Section 408.3.8.
2. ~~*Interior exit stairways* within an *atrium* enclosed in accordance with Section 404.6.~~

Reason:
Exception 2 to interior exit stairway enclosure construction within an atrium space was introduced in the 2015 Edition of the IBC. The proponent's published reason statement contended that the inherent one-hour atrium enclosure protection and required smoke control was equivalent to a one-hour interior exit stairway enclosure. Although equivalency to a one-hour enclosure can be debated, exit stairways serving four or more stories are required to be of 2-hour fire resistance-rated construction. The atrium enclosure protection is also exempted on three levels (404.6 Exception 3), which allows these stairs open to those levels.

This provision is also philosophically flawed on many levels. Interior exit stairway enclosures are to be used for no purpose other than as a means of egress. Opening and penetration protection requirements are intended to limit exposure of the enclosure.

The plural in Exception 2 (stairways) allows all required exits to be through the atrium. The current exception allows occupants unlimited egress travel distance down unenclosed stairways even if the stairs are within the smoke plume. Furthermore, compliance with Section 909 is typically reliant on fans, dampers, secondary power supplies and the ever changing fuel loading on the atrium floor. In high-rise buildings, such stairways are required to be within smokeproof enclosures.

Allowing unlimited travel distance on an unenclosed stairway is technically and philosophically inconsistent with the exit access travel distance limitations stated at Section 404.9. Those provisions allow for a maximum of 200 feet of travel at other than the level of exit discharge. The *IBC Code and Commentary, Volume I* states, “Since smoke is being drawn into the atrium, the time allotted to reach an exit through the atrium is limited.” It would seem logical that that same thinking would apply to an unenclosed interior exit stairway.

Additionally, Section 905.4 requires a standpipe hose connection for each story in every required interior exit stairway since these enclosures provide a protected space for fire department operations. Obviously, there is no passive standpipe hose connection protection in an unenclosed interior exit stairway.

Traditionally, exit access stairways within atrium spaces have been allowed to be unenclosed (Section 1019.3, Condition 5). However, exit access travel distance limitations in Section 1017.2 apply. In fact, Table 1017.2 Footnote a, references Section 404.9 travel distance limitations through an atrium space. This minimally creates confusion, if not a contradiction.

This proposal restores the original ICC Code Technology Committee philosophy that interior exit stairways always be enclosed with no exceptions. Removal of the current exception ensures a protected path of means of egress travel for building occupants between the exit access and exit discharge portions of the means of egress system.

Cost Impact: The code change proposal will increase the cost of construction
Approval of this proposal will increase the cost of construction only in buildings having an atrium where an unenclosed interior exit stairway is desired. If the building otherwise has the required number of exits, such a stairway would be regarded as an exit access stairway and there would be no cost impact.

E96-18

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: This is currently permitted. Additional protection items for exit stairways within an atrium was added by G35-18. There is no history of problems with exit stairways within atriums, so there is no reason to eliminate the option.
A portion of the committee felt that smoke protected atriums do not offer the same level of protection as an exit enclosure. If both exit stairways are within atriums this could be a serious issue. There was also a concern that there is no limit on the travel distance on an exit stairway in an atrium. (Vote 8-7)

Assembly Action: **None**

E96-18

Individual Consideration Agenda

Public Comment 1:

Proponent: Gregory Keith, representing DHE FPE LLC (grkeith@mac.com); Douglas Harold Evans, DHE FPE LLC, representing DHE FPE LLC (dhefpe@gmail.com)requests As Submitted.

Commenter's Reason: Code change proposal E96-18 attempted to remove Exception 2 of Section 1023.2. That exception was introduced into the 2015 Edition of the IBC. Section 1023 provides the requirements for interior exit stairways and ramps. By definition, exterior exit stairways and ramps are exit components. Components in the exit portion of the means of egress system are regarded as providing a highly protected environment for occupants as they egress a building. Typically, interior exit stairways and ramps are one- or two hour-rated assemblies with restricted opening protection. For this reason, occupants may travel unlimited distances in such exit components.
Exception 2 permits an unenclosed stairway within an atrium to qualify as an interior exit stairway (exit component). Such a design is problematic. Clearly, occupants have no passive fire resistance-rated protection normally associated with exit components. The assumption is that the smoke control required within an atrium space will provide equivalent protection. Typically, atrium spaces employ the exhaust method of smoke control. This technique causes generated smoke to be exhausted vertically up through the atrium and exhausted from the top of the space. This could prove to compromise the exit path. Fundamentally, the provision violates numerous philosophical principals. One, an exit is to be used for no other purpose than a means of egress. The atrium is a fully functional area with associated fuel loads. And one, an exit is required to lead directly to the exterior of the building or shall be extended to the exterior of the building with an exit passageway. The unenclosed stairway would typically terminate within the lowest level of the atrium space. And one, Section 404.9.3 limits exit access travel distance within an atrium at other than the level of exit discharge to 200 feet. The allowance for unlimited travel distance on an unenclosed atrium stairway is in contravention with the fundamental atrium travel protection requirements. And one, the fire service typically uses enclosed interior exit stairways as staging areas and protected access to required standpipes. This ability is lost with an unenclosed stairway.

At the committee hearings in Columbus, Ohio, Item E96-18 proved to be very contentious. The committee vote was 7 to 7. The Chair voted against the proposal because it was felt that the provision should not be removed from the code based on the Chair s vote. In the committee s reason statement for disapproval of Item E96-18 it was stated that additional protective measures had been introduced with the approval of Item G35-18. In fact, none of those requirements address any of the concerns identified in the previous paragraph. That same reason statement noted that, A portion of the committee felt the smoke protected atriums do not offer the same level of protection as an exit enclosure. Additionally stated, There was also a concern that there is no limit on the travel distance on an exit stairway in an atrium. (Vote 8-7) If you believe that an unclosed stairway within an atrium provides the same degree of occupant protection as a fire resistance-rated enclosure with commensurate opening and penetration protection, please do not support this public comment. If you believe that an exit component should provide for a reliably safe path of travel to the exterior of the building, please break the stalemate by supporting this public comment. Approval of this public comment will restore the appropriate level of occupant safety normally associated with an exit component.

Cost Impact: The net effect of the public comment and code change proposal will increase the cost of construction Approval of this public comment will increase the cost of construction only in buildings having an atrium where an unenclosed interior exit stairway is desired. If the building otherwise has the required number of exits, such a stairway would be regarded as an exit access stairway and there would be no cost impact.

E96-18

G1-18

IBC: 202, 202

Proposed Change as Submitted

Proponent: Stephen Thomas, Colorado Code Consulting, LLC, representing Colorado Chapter ICC (sthomas@coloradocode.net)

2018 International Building Code

SECTION 202 DEFINITIONS

Revise as follows

~~**[BG]**~~ **ATRIUM.** An opening connecting two or more stories other than ~~enclosed stairways~~interior exit stairways or ramps, exit access stairways or ramps, 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.

Reason: The terms "interior exit stairways or ramps" and "exit access stairway or ramps" referenced in Chapter 10 were added in the 2012 and 2015 IBC. However, they were not referenced in the Atrium definition. This change is only intended to clean up the language and provide consistency within the code. It may be considered to be editorial.

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

The change is editorial in nature. Therefore, there is no cost implication.

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: While the testimony of the proponents was clear, the proposal results in confusion. It is better to leave the definition we have and not add confusion based on regulations and exemptions in Chapter 10. (Vote 9-5)

Assembly Action: **None**

G1-18

Individual Consideration Agenda

Public Comment 1:

Proponent: Stephen Thomas, Colorado Code Consulting, LLC, (sthomas@coloradocode.net) representing Colorado Chapter ICC ; Sarah Rice, representing The American Institute of Architects (srice@preview-group.com) ; David Collins, representing The American Institute of Architects (dcollins@preview-group.com) ; Wayne Jewell (wayne.jewell@greenoaktwp.com)requests As Modified by This Public Comment.

Replace as follows:

2018 International Building Code

[BG] ATRIUM. ~~An opening~~ A vertical space which is closed at the top 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~~in Groups I-2 and I-3 Occupancies or three stories in all other occupancies.

712.1.7 Atriums. Atriums complying with Section 404 that connect two or more stories in Groups I-2 or I-3 Occupancies or three stories in other occupancies shall be permitted.

Exceptions:

1. Atriums shall not be permitted within Group H Occupancies.
2. Balconies or stories within Groups A-1, A-4 and A-5, and mezzanines that comply with Section 505 shall not be considered a story as it applies to this section

~~In other than Group H occupancies, atriums complying with Section 404 shall be permitted~~

.

Commenter's Reason: The original intent of the proposal was to just add language that agreed with the current code language. However, the discussion at the Committee Hearing moved to the fact that the entire definition needed to be revised. I agreed to work with others who were interested and come up with a revised definition that did not have a laundry list and clarified what an atrium is. We also removed technical requirements from the definition. The definition in this public comment is much more simple than the previous one and defines what an atrium is.
In addition, a change was made to the language in Section 712.1.7 to bring some of the language from the previous definition into the actual code requirement and revise the language to be easier to understand. There is no intent to change any technical requirements in this public comment.

There is a lot of confusion around a two story atrium since the definition starts out saying "An opening connecting two or more stories". Many people confuse this requirement with openings between two stories in Section 712.1.9. The two-story language has been removed from the definition. We then clarified the intent in Section 712.1.7 by saying that two-story atriums in Groups I-2 and I-3 Occupancies and three-story atriums in all other occupancies must comply with Section 404. So, if you have an opening just between two stories in other than Groups 1-2 or I-3, Section 712.1.9 would apply. If the opening connects three or more stories, it would then be an atrium and need to comply with Section 404. We also revised the language from "In other than Group H Occupancies". to an exception stating that the atrium provisions do not apply to Group H Occupancies.

The definition also had an exception within it for balconies and similar areas in assembly occupancies. This exception was relocated into an exception in Section 712.1.7 to maintain that allowance of balconies and mezzanines in Assembly uses.

Cost Impact: The net effect of the public comment and code change proposal will not increase or decrease the cost of construction
This is just a clarification of language.

G1-18

G32-18

IBC: 404.5

Proposed Change as Submitted

Proponent: Sarah Rice, representing Myself (srice@preview-group.com)

2018 International Building Code

Revise as follows

404.5 Smoke control. A smoke control system shall be installed in accordance with Section 909.

~~**Exception**~~ **Exceptions:**

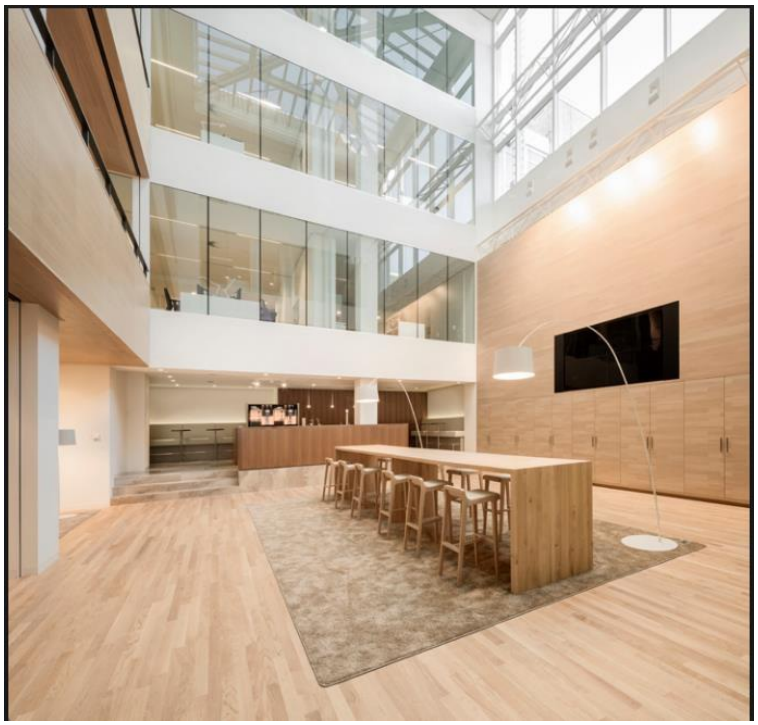
1. In other than Group I-2, and Group I-1, Condition 2, smoke control is not required for *atriums* that connect only two stories.
2. A smoke control system is not required for atriums connecting more than two stories when all of the following are met:

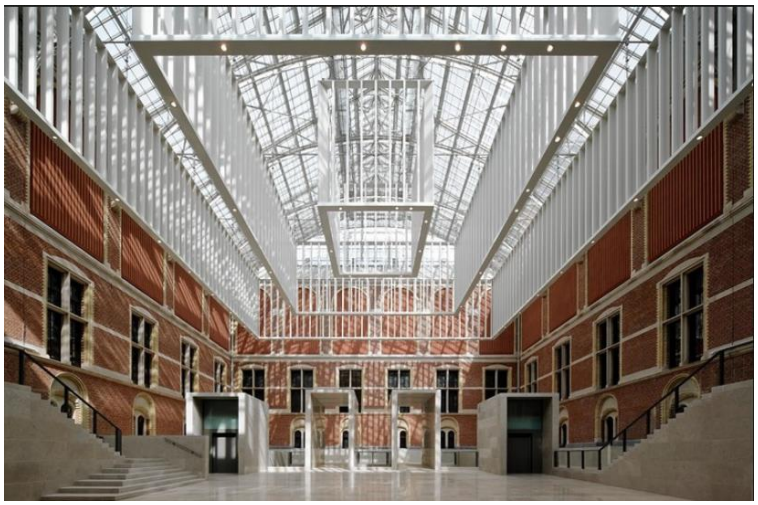
    2.1. Only the 2 lowest stories shall be permitted to be open to the atrium.
    2.2. All stories above the lowest 2 stories shall be separated from the atrium in accordance with Section 404.6.

Reason: As stated in Section 909, the purpose of a smoke control systems is to provide a tenable environment for the evacuation or relocation of occupants. A smoke control system is NOT intended for the preservation of contents, the timely restoration of operations or for assistance in fire suppression or overhaul activities. Smoke control systems that are required and regulated by the IBC serve a different purpose than the smoke- and heat-venting provisions found in Section 910 and they are not considered exhaust systems under Chapter 5 of the International Mechanical Code.
In an atrium that connects more than 2 stories, the smoke control systems is intended to maintained the height of the lowest horizontal surface of the smoke layer interface to at least 6 feet above any walking surface that forms a portion of a required egress system within the smoke zone for a period of not less than either 20 minutes or 1.5 times the calculated egress time, whichever is less.

But what if the only walking surfaces in the atrium are on the 2 lowest stories of the atrium? What if all the walls above the 2 lowest stories are solid without operable openings? What purpose does the smoke control system then serve? We contend none. And if the smoke control system has no real value, then why install it? See Figures 1 - 3 for examples of these spaces.

This proposed change seeks to exempt atriums that connect more than 2 stories from having to have a smoke control system when 1) there are no walking surfaces in the atrium above the 2 lowest stories and 2) there are no operable windows or doors above the 2 lowest stories in the atrium and 3) the walls of the atrium on the upper levels are constructed per Section 404.6 - atrium enclosures..





Cost Impact: The code change proposal will decrease the cost of construction
The cost savings of not providing smoke control system in a building with an atrium will decrease the cost of construction.

G32-18

Public Hearing Results

Committee Action: As Modified

Committee Modification: Modify proposal as follows:
404.5 Smoke control.

A smoke control system shall be installed in accordance with Section 909.

Exceptions:

1. In other than Group I-2, and Group I-1, Condition 2, smoke control is not required for atriums that connect only two stories.
2. A smoke control system is not required for atriums connecting more than two stories when all of the following are met:
   2.1. Only the 2 lowest stories shall be permitted to be open to the atrium.
   2.2. All stories above the lowest 2 stories shall be separated from the atrium in accordance with ~~Section 404.6~~ the provision for a shaft in Section 713.4.

Committee Reason: Clarifies that the code allows a combination of an atrium with a shaft enclosure. The exception provides an alternative where a natural smoke sink is provided. The modification clarifies that the extension of the atrium needs to meet shaft construction requirements. The proposal doesn't redefine atrium, but replaces smoke control with a natural sink. The proponent may wish to consider via a public comment addressing a hatch or similar means to vent smoke at the top of the shaft. (Vote: 12-2)

Assembly Action: None

G32-18

Individual Consideration Agenda

Public Comment 1:

Proponent: Dustin Wakefield, representing Bureau of Capital Outlay Management (dustin.wakefield@dgs.virginia.gov)requests As Modified by This Public Comment.

Modify as follows:

2018 International Building Code

404.5 Smoke control. A smoke control system shall be installed in accordance with Section 909.

Exceptions:

1. In other than Group I-2, and Group I-1, Condition 2, smoke control is not required for *atriums* that connect only two stories.
2. A smoke control system is not required for atriums connecting more than two stories when all of the following are met:
   2.1. Only the 2 lowest stories shall be permitted to be open to the atrium.
   2.2. All stories above the lowest 2 stories shall be separated from the atrium in accordance with ~~the provision~~ the provisions for a shaft in Section ~~713.4.~~713. The rating of such shaft construction shall be equal to the rating of the floor assembly as required in Table 601 or the provisions of 713.4, whichever is greater. Openings and penetrations in the shaft construction shall be limited to those necessary for the purpose of the shaft.

Commenter's Reason: This modification is necessary to clarify that the intent of this provision is to effectively "turn up" the rated floor assemblies beginning at the floor above the bottom two interconnected levels, thereby creating a "high bay" space with no interconnection of stories above this point. As such, the revised text indicates that the minimum hourly rating of the shaft enclosure is either the rating of the floor, or the provisions of 713.4 for fire-resistance rating of shafts (depending on the number of stories connected).

With the originally proposed modification, there could be cases where 2-hour floors are required, such as in Type I construction, and only two or three additional floors are interconnected above the bottom two levels. This would result in a 1-hour separation for the shaft, which is insufficient based on the intent described above.

Furthermore, this modification brings into play the other shaft provisions of 713, including prohibited openings and penetrations. It is important that these are limited to those items that are necessary for the purpose of the shaft. In this case, this would account for egress doors into the atrium from the upper floor levels as well as penetrations for conduits, sprinklers, etc. that serve the atrium.

Bibliography: There are no applicable external references for this proposed modification.

Cost Impact: The net effect of the public comment and code change proposal will increase the cost of construction
Any cost increase associated with this proposed modification is anticipated to be minimal. The increase would be due to the increase from 1-hour shaft construction to 2-hour shaft construction in certain scenarios in Type 1 construction or where floors are required to be rated for 2 hours for other reasons, such as occupancy separation. There could also be ancillary cost increases due to re-routing of various MEP infrastructure that are not permitted to penetrate into the shaft enclosure.

The alternative is always to provide a smoke control system, which would typically overshadow any of the miscellanous increases in shaft wall construction cost or utility coordination.

G32-18

G34-18

IBC: 202, (New), 404.6, 716.4 (New), 716.4.1 (New), 716.4.2 (New), 716.4.3 (New), Chapter 35

Proposed Change as Submitted

Proponent: Tessa Quinones, The Hickman Group, representing Smoke Guard (admin@thehickmangroup.com)

THIS CODE CHANGE WILL BE HEARD BY THE IBC FIRE SAFETY COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THIS COMMITTEE

2018 International Building Code

SECTION 202 DEFINITIONS

FIRE PROTECTIVE CURTAIN ASSEMBLY. An assembly consisting of a fabric curtain, bottom bar, guides, coil, operating, and closing system.

404.6 Enclosure of atriums. *Atrium* spaces shall be separated from adjacent spaces by a 1-hour *fire barrier* constructed in accordance with Section 707 or a *horizontal assembly* constructed in accordance with Section 711, or both.

Exceptions:

1. A *fire barrier* is not required where a glass wall forming a smoke partition or a 20-minute fire protective curtain assembly is provided. The glass wall or fire protective curtain assembly shall comply with all of the following:

   1.1. Automatic sprinklers are provided along both sides of the separation wall, fire protective curtain assembly and doors, or on the room side only if there is not a walkway on the *atrium* side. The sprinklers shall be located between 4 inches and 12 inches (102 mm and 305 mm) away from the glass and at intervals along the glass or fire protective curtain assembly not greater than 6 feet (1829 mm). The sprinkler system shall be designed so that the entire surface of the glass or fire protective curtain assembly is wet upon activation of the sprinkler system without obstruction;

   1.2. The glass wall shall be installed in a gasketed frame in a manner that the framing system deflects without breaking (loading) the glass before the sprinkler system operates; and

   1.3. The fire protective curtain assembly shall be installed in accordance with Section 716.4 and shall be actuated in conjunction with the atrium smoke control system, and

   ~~1.3.~~1.4. Where glass doors are provided in the glass wall, they shall be either *self-closing* or automatic-closing.

2. A *fire barrier* is not required where a glass-block wall assembly complying with Section 2110 and having a $^{3}/_{4}$-hour *fire protection rating* is provided.
3. A *fire barrier* is not required between the *atrium* and the adjoining spaces of up to three floors of the *atrium* provided that such spaces are accounted for in the design of the smoke control system.
4. A fire barrier is not required between the atrium and the adjoining spaces where the atrium is not required to be provided with a smoke control system.

Add new text as follows

716.4 Fire protective curtain assembly. Approved fire protective curtain assemblies shall be constructed of any materials or assembly of component materials tested without hose stream in accordance with UL 10D, and shall comply with the Sections 716.4.1 through 716.4.3

716.4.1 Label. Fire protective curtain assemblies used as opening protectives in fire rated walls and smoke partitions shall be labeled in accordance with Section 716.2.9.

716.4.2 Smoke and draft control. Fire protective curtain assemblies used to protect openings where smoke and draft control assemblies are required shall comply with Section 716.2.1.4.

716.4.3 Installation. Fire protective curtain assemblies shall be installed in accordance with NFPA 80.

Add new standard(s) follows

UL LLC
333 Pfingsten Road
Northbrook IL 60062-2096

10D-14:

Standard for Fire Tests of Fire Protective Curtain Assemblies

Reason: During the last cycle, FS 102-15 was disapproved at least in part on the proposed use of fabric fire protective curtain assemblies as an opening protective having a one-hour fire protection rating and to replace one hour fire barriers. This proposal allows the use of a 20-minute fire protective curtain assembly as an alternative to a non-rated glass wall when protected with sprinklers for the enclosure of an atrium. In addition, the proposal allows fire protective curtain assemblies as an opening protective as permitted by other sections of the IBC.
Both of these applications are consistent with the scope of UL 10D which reads:

These requirements cover the evaluation of fire protective curtain assemblies intended to provide supplemental passive fire protection as part of an engineered fire protection system. Fire protective curtain assemblies provide nonstructural separation only, and are not intended to be substituted for structural hourly rated partitions or opening protectives that have been tested for fire endurance and hose stream performance.

The proposed definition and uses are consistent with NFPA 80-2016 and UL 10D. Some products can also pass UL 1784 for an "S" label.

The proposed requirement that the assembly be "approved" in addition to "listed" allows the Code Official to specifically approve the proposed application.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
The use of the fire protective curtain assembly is an option and as such, atria enclosures can continue to be constructed as currently permitted.

Analysis: A review of the standard proposed for inclusion in the code, UL 10D-14, 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, 2018.

G34-18

Public Hearing Results

Committee Action: As Modified

Committee Modification: 404.6 Enclosure of atriums.
Atrium spaces shall be separated from adjacent spaces by a 1-hour fire barrier constructed in accordance with Section 707 or a horizontal assembly constructed in accordance with Section 711, or both.

Exceptions:

1. A fire barrier is not required where a glass wall forming a smoke partition ~~or a 20-minute fire protective curtain assembly~~ is provided. The glass wall ~~or fire protective curtain assembly~~ shall comply with all of the following:
    1.1. Automatic sprinklers are provided along both sides of the separation wall, ~~fire protective curtain assembly~~ and doors, or on the room side only if there is not a walkway on the atrium side. The sprinklers shall be located between 4 inches and 12 inches (102 mm and 305 mm) away from the glass and at intervals along the glass ~~or fire protective curtain assembly~~ not greater than 6 feet (1829 mm). The sprinkler system shall be designed so that the entire surface of the glass ~~or fire protective curtain assembly~~ is wet upon activation of the sprinkler system without obstruction;
    1.2. The glass wall shall be installed in a gasketed frame in a manner that the framing system deflects without breaking (loading) the glass before the sprinkler system operates; and
    ~~1.3. The fire protective curtain assembly shall be installed in accordance with Section 716.4 and shall be actuated in conjunction with the atrium smoke control system, and~~
    ~~1.4.~~ 1.3 Where glass doors are provided in the glass wall, they shall be either self-closing or automatic-closing.
2. A fire barrier is not required where a glass-block wall assembly complying with Section 2110 and having a $^{3}/_{4}$-hour fire protection rating is provided.
3. A fire barrier is not required between the atrium and the adjoining spaces of up to three floors of the atrium provided that such spaces are accounted for in the design of the smoke control system.
4. A fire barrier is not required between the atrium and the adjoining spaces where the atrium is not required to be provided with a smoke control system.

Chapter 35- UL

10D-~~14~~ 17:

Standard for Fire Tests of Fire Protective Curtain Assemblies

Committee Reason: The proposal is a simplified version (after the modification) of the original. The products have been used for years through the alternative methods process, they should be recognized in the code. (Vote: 8-6)

Assembly Action: None

G34-18

Individual Consideration Agenda

Public Comment 1:

Proponent: David Dodge, representing McKeon Door Company (ddodge@mckeondoor.com)requests Disapprove.

Commenter's Reason: In the committee action hearings this code change was approved as modified. However, the modification didnot adequately address all concerns from both the committee and the assembly. The final committee votewas a marginal AM, 8 6. While it may be considered helpful to have something in the code regarding fireand smoke rated fabric assemblies, this code change is not yet ready for final approval and publication due tothe follow reasons: One of the most common architectural design uses of this new technology, fire and smoke rated fabrics, istoseparate vertical spaces horizontally into two-story spaces taking advantage of the exception in 404.5eliminating the need for smoke evacuation systems in the atrium when the vertical space is limited to twofloors only. UL10D, Fire Tests of Fire-Protective Curtain Assemblies was submitted as part of this codechange. A representative from UL testified that UL10D is nothing more than UL10C without the hose-stream requirement, see G34-18 CAH video segment: http://hearingvideos.iccsafe.org/videos/g34-18/

1. Our current code addresses horizontal applications either as fixed structural floor assemblies or opening protectives

within fixed structural floor assemblies as floor fire door assemblies that comply with NFPA 288. The scope of UL10D limits Fire-Protective Curtains to rated applications no greater than 20 minutes. The code change, as currently written could be misinterpreted to allow UL10D asjustification for acceptance of NFPA 288 criteria.

2. The new 716.4 language and the new 202 definition language contradict each other.

3. The new language as submitted, 716.4.2, suggests these opening protectives can be used in any firerated wall.

By disapproving this code change, the proponents can come back in the next cycle with a clean-up of theseissues and eliminate the possibility of mis-applications of this new technology in the future.

Cost Impact: The net effect of the public comment and code change proposal will not increase or decrease the cost of construction
The net effect of the public comment and code change proposal will not increase or decrease the cost of construction

G34-18

G35-18

IBC: 404.10.1

Proposed Change as Submitted

Proponent: David Collins, representing The American Institute of Architects (dcollins@preview-group.com)

THIS CODE CHANGE WILL BE HEARD BY THE MEANS OF EGRESS COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THIS COMMITTEE.

2018 International Building Code

Add new text as follows

404.10.1 Exit stairs in an atrium. Where an atrium contains an interior exit stairway all the following shall be met:

1. The exit stair shall have access from a minimum of two directions.
2. The distance between an exit stair in an atrium, and a minimum of one exit stair enclosed in accordance with Section 1023.2 shall comply with Section 1007.1.1.
3. Exit access travel distance within the atrium shall be measured to the nosing of the landing at the top of the stair on each level served.
4. At least one exit shall not be located in the same atrium.

Reason: An exit stair is currently permitted to be in an atrium enclosure by IBC Sections 2023.1 and 1023.2, which allows enclosure per Section 404.6. These new provisions for the conditions for use of an atrium for an exit stair adds four specific criteria for their use as an exit.
Provision 1 - Accessed from two directions

This means that the exit stair in the atrium must have two paths of travel to allow the occupants to pass by the stair.

Provision 2 - Separation distance

To make it clear that the exit stair in the atrium must be separated from at least one other eixt stair meeting IBC Section 1023.2 by the minimum separation disance prescribed in Section 1007.1.1.

Provision 3 - Travel distance

The travel distance with the atrium to the exit stair in the atrium is to be measured to the nosing at the level the stair is serving.

Provision 4 - At least one exit is not in the atrium.

Requires that at least one exit is not permitted to be in the same atrium. The current provisions of Section 404.10 prohibit more than 50% of exit stairs from egresing through the atrium at the level of exit discharge.

Cost Impact: The code change proposal will decrease the cost of construction
This change will facilitate design decisions, reduce the number of required exit enclosures in buildings with an atrium and help with review and approval, reducing the cost of construction.

G35-18

Public Hearing Results

Committee Action: **As Submitted**

Committee Reason: This proposal was approved because current Section 1023.2 already allows for a stairway within an atrium to be considered an exit stairway. This language in Items 2 and 3 would clarify that the exit access travel distance and exit separation requirements is measured to the top of the stairway. While the language in Item 1 for two directions could be subject to interpretation, Items 1 and 4 do further limit where a stairway in an atrium can serve as an exit, so this would improve safety. (Vote: 8-7)

Assembly Action: **None**

G35-18

Individual Consideration Agenda

Public Comment 1:

Proponent: Ed Kulik, representing ICC Building Code Action Committee (bcac@iccsafe.org)requests As Modified by This Public Comment.

Modify as follows:

2018 International Building Code

404.9 Exit access travel distance. *Exit access* travel distance for areas open to an *atrium* shall comply with the requirements of this section.

404.10~~.1~~ Exit ~~stairs~~ stairways in an atrium. Where an atrium contains an interior exit stairway all the following shall be met:

1. The ~~exit stair~~ entry to the exit stairway is the edge of the closest riser of the exit stairway.
2. The entry of the exit stairway shall have access from a minimum of two directions.
3. The distance between the entry to an exit ~~stair~~ stairway in an atrium, and the entrance to a minimum of one exit ~~stair~~ stairway enclosed in accordance with Section 1023.2 shall comply with the separation in Section 1007.1.1.
4. Exit access travel distance ~~within the atrium~~ shall be measured to the ~~nosing~~ closest riser of the ~~landing at the top of the stair on each level served~~ exit stairway.
5. ~~At least one exit shall not~~ Not more than 50 percent of the exit stairways shall be located in the same atrium.

404.~~10~~11 Interior exit stairways discharge. Not greater than 50 percent of *interior exit stairways* are permitted to egress through an atrium on the *level of exit discharge* in accordance with Section 1028.

Commenter's Reason: Open stairways in an atrium are permitted to be exit stairways per Section 1023.2 Exception 2. This proposal added additional criteria for that exit stairway. This modification does not change that allowance.
This section is not placed correctly. Current Section 404.10 is for exit discharge – thus the suggested title change for clarification. This new section deals with an exit stairway. Therefore, this should not be a subset of exit discharge through the lobby. This new section should be between exit access and exit discharge sections. The renumbering fixes this.

The correct term is exit stairway, not exit stair – this is revised in the title and the Items.

It is important to clarify that dispersion, separation and travel distance is to the entry/closest riser of the open stairway in the atrium and the entrance to the exit stairway, not the stairway itself or the enclosure. This is the reason for the added Item 1 and revisions to Items 2, 3 and 4.

In Item 4, the language for measurement of the travel distance in Item 4 should match use the same terminology for other open exit stairways in the exception in Section 1017.3. The phrase “on each level served” is redundant.

In Item 5, the proposed language is consistent with exit discharge allowances in Section 1028 – the current language would allow more than 50%.

This public comment is submitted by the ICC BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions there of. In 2017 and 2018 the BCAC has held 5 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as well as any interested party to discuss and debate the proposed changes and public comments. Related documentation and reports are posted on the BCAC website at: https://www.iccsafe.org/codes-tech-support/codes/codedevelopment-process/building-code-action-committee-bcac

Cost Impact: The net effect of the public comment and code change proposal will not increase or decrease the cost of construction

The modification is a clarification of the approved text and will have no changes in construction requirements. The original proposal provided guidance on how an exit stairway within an atrium should comply with exit access travel distance and separation. The new item 5 is consistent with the exit discharge allowances. Since there was already an allowance for no enclosure in Section 1023.2 Exception 2, the original proposal is not a decrease in cost of construction.

G35-18

P24-18

IPC: 404.1, 404.2, 404.3

Proposed Change as Submitted

Proponent: Dawn Anderson, representing self (gonedawning@yahoo.com); Dan Buuck, representing National Association of Home Builders (dbuuck@nahb.org); David Collins, representing the American Institute of Architects (dcollins@preview-group.com); Marsha Mazz, representing U.S. Access Board (mazz@Access-Board.gov); Dominic Marinelli, representing United Spinal Association (DMarinelli@accessibility-services.com)

2018 International Plumbing Code

Revise as follows

404.1 Where required. Accessible plumbing facilities and fixtures shall be provided in accordance with the International Building Code and ICC A117.1.

Delete without substitution

~~**404.2 Accessible fixture requirements.** Accessible plumbing fixtures shall be installed with the clearances, heights, spacings and arrangements in accordance with ICC A117.1.~~

~~**404.3 Exposed pipes and surfaces.** Water supply and drain pipes under accessible lavatories and sinks shall be covered or otherwise configured to protect against contact. Pipe coverings shall comply with ASME A112.18.9.~~

Reason: Section 404.2 and 404.3 were added by P42-12. They should be removed for multiple reasons. The reference to IBC would also get a reference to ICC A117.1 in Section 1101.2, however, if there is a concern that this may be missed by plumbing inspectors, the reference can be added in Section 404.1.
In Section 404.2, the laundry list is incomplete on what is required in the A117.1 for accessible plumbing fixtures. Since standards are only referenced to the extent the code sends you there (Section 102.8), this could be misinterpreted as intending to limit requirements that would be applicable in the standard. The requirement for pipe protection is a technical requirement for accessible lavatories, address in A117.1 Section 606.6, so it should not be repeated here. The ASME A112.18.9 standard addresses the requirements for heat transfer, not cold, therefore it only addresses half the issue associated with water, and not all the issues associated with accidental contact. The test for hot water is substantially hotter than tempered water which is required for public lavatories. Also, if the pipes are protected from contact by some type of shield as indicated in the photo, there is no exception for compliance with the standard, even if there is no contact with the pipes. If ASME A112.18.9 should be referenced, this standard should be reviewed through the ICC A117.1 process for technical issues associated with accessibility requirements. It does not belong in the IPC.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
The proposal is only clarification that will eliminate potential conflicts between the IPC and ICC A117.1.

Public Hearing Results

Committee Action: **As Modified**

Committee Modification: 404.1 Where required. Accessible plumbing facilities and fixtures shall be provided in accordance with Chapter 11 of the International Building Code ~~and ICC A117.1~~.
404.2 Accessible fixture requirements. Accessible plumbing fixtures shall be installed in accordance with ICC A117.1.

404.3 Exposed pipes and surfaces. Water supply and drain pipes under accessible lavatories and sinks shall be covered or otherwise configured to protect against contact. Pipe coverings shall comply with ASME A112.18.9.

Committee Reason: For the Modification: Reference standard ASME A112.18.9 needs to be retained for the pipe coverings. The reference to standard A117.1 needs to be retained to point to the information needed for installation. For the Proposal: The Committee agreed with the published reason statement. (Vote:13-0)

Assembly Action: **None**

P24-18

Individual Consideration Agenda

Public Comment 1:

Proponent: Dawn Anderson, representing self (gonedawning@yahoo.com); Dan Buuck, representing National Association of Home Builders (dbuuck@nahb.org); David Collins, representing the American Institute of Architects (dcollins@preview-group.com); Dominic Marinelli, representing United Spinal Association (DMarinelli@accessibility-services.com)requests As Modified by This Public Comment.

Further modify as follows:

2018 International Plumbing Code

~~**404.3 Exposed pipes and surfaces.** Water supply and drain pipes under accessible lavatories and sinks shall be covered or otherwise configured to protect against contact. Pipe coverings shall comply with ASME A112.18.9.~~

Commenter's Reason: Section 404.3 should be deleted. The requirement for pipe protection under the accessible lavatory or sink is already stated in ICC A117.1 Section 606.6. ICC A117.1 Section 606.6 also states that there shall be no sharp or abrasive surfaces under the lavatory or sink, so only part of the requirement is in this section.
The standard referenced in Section 404.3, ASME A112.18.9, should be deleted. During the testimony it was stated that this standard was proposed to the ICC A117.1 and that they were told that standards are not in ICC A117.1. This is not the case – see Section ICC A117.1 Section 105.2 for a list of standards referenced. The ICC A117.1 committee rejected this standard because the standard only requires testing for hot water. It does not address the issue of accidental contact for sharp edges where someone moving under the sink could suffer cuts or bruises - even though that is stated in the purpose of the standard.

From a technical perspective, the test for hot water is substantially hotter than tempered water which is required for public lavatories - specifically 104 degrees Fahrenheit for 5 hours. What is the justification for this? Also, if the pipes are protected from contact by some type of shield, there is no exception for compliance with the standard, even if there is no possible contact with the pipes. The name of this standard is “Protectors/Insulators for Exposed Waste and Supplies on Accessible Fixture’, so this standard is not applicable for shielded locations. See the picture in the original proposal for an example.

Also, P25-18 proposed an additional standard ASTM C1822. The reason statement said the new standard covers all of ASME A112.18.9, so therefore this standard would also be redundant. This group does have a public comment to P25 asking for disapproval.

Cost Impact: The net effect of the public comment and code change proposal will not increase or decrease the cost of construction
The proposal is only clarification that will eliminate potential conflicts between the IPC and ICC A117.1.

P25-18

IPC: 404.3, Chapter 15

Proposed Change as Submitted

Proponent: Howard Ahern, representing Plumberex Speciality Products

2018 International Plumbing Code

Revise as follows

404.3 Exposed pipes and surfaces. Water supply and drain pipes under accessible lavatories and sinks shall be covered or otherwise configured to protect against contact. Pipe coverings shall comply with ASME A112.18.9 or ASTM C1822.

Add new standard(s) follows

ASTM

ASTM International
100 Barr Harbor Drive, P.O. Box
C700
West Conshohocken PA 19428-2959
US

C1822-2015:

Standard Specification for Insulating Covers on Accessible Lavatory Piping

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Reason: There is a new standard that has been developed specifically for insulating covers over water supply pipes and drain piping under accessible lavatories. The new standard is titled: ASTM C1822-2015 Standard Specification for Insulating covers on Accessible Lavatory Piping. The Standard was developed by the C16.40 Thermal Insulation Systems committee. The new standard covers all of ASME A112.18.9 requirements but is a more comprehensive standard than ASME A112.18.9 and has additional language covering requirements related to restrictions on cable tie fasteners associated with a Federal lawsuit.

This code modification allows both the ASME A112 18.9 standard and would also allow ASTM C1822 compliance. designers are able to comply with either standard . Both standards are needed for these products allowing compliance with either standard will help contractors and inspectors with compliance and identification, while also allowing greater compliance with Department of Justice 2010 Americans with Disability Act standard for Assessable Design Standard 606.5 and ANSI Standard A117.1.

Bibliography: Howard Ahern representing Plumberex Speciality Products.
Member ASME A112. 18.9 standard

Chairman ASTM C1822 Standard Committee

Cost Impact: The code change proposal will not increase or decrease the cost of construction
No cost increase would be associated with this modification as there are many under sink Insulation products sold nationwide which already complying with this standard that are of no increased cost to the industry.

Analysis: A review of the standard proposed for inclusion in the code, ASTM C1822-2015, 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, 2018.

P25-18

Public Hearing Results

Committee Action: **As Submitted**

Committee Reason: The Committee agreed with the published reason statement. (Vote:14-0)

Assembly Action: **None**

P25-18

Individual Consideration Agenda

Public Comment 1:

Proponent: Dawn Anderson, representing self (gonedawning@yahoo.com); Dan Buuck, representing National Association of Home Builders (dbuuck@nahb.org); David Collins, representing the American Institute of Architects (dcollins@preview-group.com); Dominic Marinelli, representing United Spinal Association (DMarinelli@accessibility-services.com)requests Disapprove.

Commenter's Reason: Similar to ASME A122.18.9 address in P24-18, this new standard requires testing at 140 degrees Fahrenheit for 5 hours. What is the 'accessibility' justification for this temperature or this amount of time?
It is not clear what federal lawsuit the reason statement is talking about, but the only requirement is that the insulating cover shall not be "attached by cable tie fasteners, adhesive or adhesive tape" (Section 10.7) This standard also includes requirements for surface burning characteristics (12.1) and rate of burning (12.4). What is the 'accessibility' justification for these requirements? The reason statement says compliance with this standard will not increase cost. Is that based on the code already requires compliance with ASME A112.18.9? While the standard is not considered proprietary, how many products on the market can meet these requirements?

Cost Impact: The net effect of the public comment and code change proposal will decrease the cost of construction
The original proposal said adding this additional standard would not be a cost increase. Meeting this additional standard will be a cost increase. Disapproval of this additional standard will remove that increase.

P25-18

SP8-18

ISPSC: 305.3, 305.3.1, 305.3.2, 305.3.3, 305.3.4, 305.4

Proposed Change as Submitted

Proponent: Dawn Anderson, representing self (gonedawning@yahoo.com); Dan Buuck, representing National Association of Home Builders (dbuuck@nahb.org); David Collins, representing the American Institute of Architects (dcollins@preview-group.com); Marsha Mazz, representing U.S. Access Board (mazz@Access-Board.gov); Dominic Marinelli, representing United Spinal Association (DMarinelli@accessibility-services.com)

2018 International Swimming Pool and Spa Code

Revise as follows

305.3 ~~Gates~~ Doors and gates. ~~Access~~ Doors and gates in barriers shall comply with the requirements of Sections 305.3.1 through 305.3.3 and shall be equipped to accommodate a locking device. Pedestrian access doors and gates shall open outward away from the pool or spa, shall be self-closing and shall have a self-latching device.

305.3.1 Utility or service doors and gates. ~~Gates~~ Doors and gates not intended for pedestrian use, such as utility or service doors and gates, shall remain locked when not in use.

305.3.2 Double or multiple doors and gates. Double doors and gates or multiple doors and gates shall have not fewer than one leaf secured in place and the adjacent leaf shall be secured with a ~~selflatching device. The gate and barrier shall not have openings larger than $^{1}/_{2}$ inch (12.7 mm) within 18 inches (457 mm) of the latch release mechanism. The~~ self-latching ~~device shall comply with the requirements of Section 305.3.3.~~device.

Delete and substitute as follows

~~**305.3.3 Latches.** Where the release mechanism of the self-latching device is located less than 54 inches (1372 mm) from grade, the release mechanism shall be located on the pool or spa side of the gate not less than 3 inches (76 mm) below the top of the gate, and the gate and barrier shall not have openings greater than $^{1}/_{2}$ inch (12.7 mm) within 18 inches (457 mm) of the release mechanism.~~

305.3.3 Latch release. For doors and gates in barrier, the door and gate latch release mechanisms shall be in accordance with the following:

1. Where door and gate latch release mechanisms are accessed from the outside of the barrier and are not of the self-locking type, such mechanism shall be located above the finished floor or ground surface in accordance with the following:
   - 1.1. At public pools and spas, not less than 52 inches (1219 mm) and not greater than 54 inches (1372 mm).
   - 1.2. At residential pools and spas, not less 54 inches (1372 mm)
2. Where door and gate latch release mechanisms are of the self-locking type such as where the lock is operated by means of a key, an electronic opener or the entry of a combination into an integral combination lock, the lock operation control and the latch release mechanism shall be located above the finished floor or ground surface in accordance with the following:
   - 2.1. At public pools and spas, not less than 34 inches and not greater than 48 inches (1219 mm).
   - 2.2. At residential pools and spas, at not greater than 54 inches (1372 mm).
3. At private pools, where the only latch release mechanism of a self-latching device for a gate is located on the pool and spa side of the barrier, the release mechanism shall be located at a point that is at least 3 inches (76 mm) below the top of the gate.

Add new text as follows

305.3.4 Barriers adjacent to latch release mechanisms. Where a latch release mechanism is located on the inside of a barrier, openings in the door, gate and barrier within 18 inches (457 mm) of the latch, shall not be greater than 1/2 inch (12.7 mm) in any dimension.

Revise as follows

305.4 Structure wall as a barrier. Where a wall of a dwelling or structure serves as part of the barrier and where doors, gates or windows provide direct access to the pool or spa through that wall, one of the following shall be required:

1. Operable windows having a sill height of less than 48 inches (1219 mm) above the indoor finished floor, doors and ~~doors~~ gates shall have an alarm that produces an audible warning when the window, door or their screens are opened. The alarm shall be *listed* and *labeled* as a water hazard entrance alarm in accordance with UL 2017.
2. In dwellings ~~or structures~~ not required to be Accessible units, Type A units or Type B units, the operable parts of the alarm deactivation switches shall be located at not less than 54 inches (1372 mm) ~~or more~~ above the finished floor.
3. In dwellings ~~or structures~~ that are required to be Accessible units, Type A units or Type B units, the operable parts of the alarm deactivation switches shall be located not greater than 54 inches (1372 mm) and not less than 48 inches (1219 mm) above the finished floor.
4. In structures other than dwellings, the operable parts of the alarm deactivation switches shall be located not greater than 54 inches (1372 mm) and not less than 48 inches (1220 mm) above the finished floor.

~~2.~~5. A *safety cover* that is *listed* and *labeled* in accordance with ASTM F1346 is installed for the pools and spas.

~~3.~~6. An *approved* means of protection, such as self-closing doors with self-latching devices, is provided. Such means of protection shall provide a degree of protection that is not less than the protection afforded by Item 1 or 2.

Reason: Section 305.3.3 deals with latches for all gates providing access to a pool. Section 305.4 deals with alarms for doors and windows in a barrier. The current text seems to be applicable more for residential pools than public pools. There are several reason for this proposal. Pools can be interior or exterior, so latch provisions should apply to doors as well as gates. The last sentence of 305.3.2 is not needed since Section 305.3 requires compliance with the whole section. Section 305.3.3 is dealing with a situation where you reach over a gate to open the latch. Fences around public pools are typically much higher. The requirements for latches should follow the IBC Section 1010.1.9.2. This section includes an exception for operable parts of manual latches to be above 48” so that they latch is outside the reach of children.

Section 305.4 Item 1 deals with the deactivation switch for alarms on doors or windows in a pool barrier. The same allowance for height protection for children is permitted. Dwelling units are separated from structures because this wall could be on a common corridor or in another building for pools that serve hotels, apartment buildings or other community buildings. In public areas these alarm shut offs must be accessible or addressed as employee only elements under Section 1103.2.2.

2018 IBC

1010.1.9.2 Hardware height. Door handles, pulls, latches, locks and other operating devices shall be installed 34 inches (864 mm) minimum and 48 inches (1219 mm) maximum above the finished floor. Locks used only for security purposes and not used for normal operation are permitted at any height.

Exception: Access doors or gates in barrier walls and fences protecting pools, spas and hot tubs shall be permitted to have operable parts of the release of latch on self-latching devices at 54 inches (1370 mm) maximum above the finished floor or ground, provided the self-latching devices are not also self-locking devices operated by means of a key, electronic opener or integral combination lock.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This is a clarification of the height for pool latches and alarms only. There is no change to the cost for construction.

SP8-18

Public Hearing Results

Committee Action: **As Submitted**

Committee Reason: The Committee agreed with the published reason statement. (Vote:10-2)

Assembly Action: **None**

SP8-18

Individual Consideration Agenda

Public Comment 1:

Proponent: Jennifer Hatfield, representing Association of Pool & Spa Professionals (jhatfield@apsp.org)requests As Modified by This Public Comment.

Further modify as follows:

2018 International Swimming Pool and Spa Code

305.3 Doors and gates. Doors and gates in barriers shall comply with the requirements of Sections 305.3.1 through 305.3.3 and shall be equipped to accommodate a locking device. Pedestrian access ~~doors and~~ gates shall open outward away from the pool or spa~~,~~. All doors and gates shall be self-closing and shall have a self-latching device.

Commenter's Reason: We believe an unintended consequence of the original proposal could be interpreting this section to now saying the door on a residential house must open inward, away from the pool (into the house). When the home is part of the barrier, the doors sometimes open out of the house, towards the pool. Purchasing and installing a new door to swing away from the pool is not cost-neutral.
This change simply makes a small change to ensure doors of a home, when used as a barrier would not be required to open outward away from the pool and spa.

Cost Impact: The net effect of the public comment and code change proposal will not increase or decrease the cost of construction
Without the public comment concerns exist that the original proposal will have an increase cost to construction if a door on a home has to be changed to address which direction it swings.

SP8-18

E115-18

IBC: 1105.1, 1105.1.1, Table TABLE 1105.1.1

Proposed Change as Submitted

Proponent: Joseph Hetzel, Thomas Associates, Inc., representing American Association of Automatic Door Manufacturers (Jhetzel@thomasamc.com)

2018 International Building Code

Revise as follows

1105.1 Public entrances. In addition to *accessible* entrances required by Sections ~~1105.1.1~~1105.1.2 through ~~1105.1.7~~ 1105.1.8, at least 60 percent of all *public entrances* shall be *accessible*.

Exceptions:

1. An *accessible* entrance is not required to areas not required to be *accessible*.
2. Loading and *service entrances* that are not the only entrance to a tenant space.

Add new text as follows

1105.1.1 Automatic doors. In facilities with the occupancies and building occupant loads indicated in Table 1105.1.1, at least one accessible exterior public entrance shall be either a full power-operated door or a low-energy power-operated door.

TABLE 1105.1.1
PUBLIC ENTRANCE WITH POWER-OPERATED DOOR

OCCUPANCY	BUILDING OCCUPANT LOAD GREATER THAN
A-1, A-2, A-3, A-4	300
B, M, R-1	500

Reason: 1. Enhances accessibility. It is widely accepted that automatic doors in general enhance overall accessibility, by accommodating a wide array of conditions people have that qualify them to need accessibility at facility entrances. This accommodates a wide variety of accessibility needs that manual doors being installed today cannot encompass.
2. Considers "transient" use. The Table directly addresses people who infrequently use public entrances so that they would need no special knowledge, skill or tool to enter a facility. All occupancies included in the Table experience such "transient" use.

3. Addresses a public need. The occupancies cited are associated with a serious existing need for automatic doors. The safety of both use and moving people in and out of buildings in those occupancies by using only manually operated doors is a major concern particularly in emergency situations.

4. Focuses on public entrances. The Table applies where the public is most likely to access facilities. Regarding which public entrance to choose for an automatic door if multiple entrances are accessible, this is left to the building designer on which would be best but the requirement of "at least one" door allows the designer to consider all entrances if feasible.

5. Occupancies involved are those most applicable to the public. The population requiring accessibility commonly needs accommodations to enter assembly, business, mercantile, and hotel/motel facilities as part of their everyday life. No code requirement for automatic doors means an increased safety risk and a decreased accessibility convenience.

6. Brings completion to accessible entrance provisions. The Table is needed in Section 1105, where accessible entrances are governed.

7. No disproportional economic burden. The thresholds have been chosen so as not to be a requirement for smaller occupancies such as small assembly facilities or strip mall businesses.

8. Addresses statistical need for accessibility. The thresholds also assume that a minimum of 2% of the population will be in need of accessibility at any given time for the specified occupancies. For an occupant load of 300, this means that at least six people will have the need that an automatic door will provide. The anticipated accessibility need should exceed this estimate a large enough percentage of time to constitute a critical mass of facilities needing power-operated doors when meeting the established thresholds.

9. Enhances public safety. Automatic doors are regulated by ANSI/BHMA safety standards intended to prevent people from coming in contact with moving doors. Facilities employing automatic doors are required to abide by these requirements, which affords protection to anyone - including children, the elderly, and/or those with accessibility needs - in the vicinity of moving doors while minimizing or preventing operational problems. Automatic doors are thus far safer in the marketplace than manually operated doors.

10. Favorably increases facility usage. Those with accessibility needs are less likely to choose to use a facility without an automatic door, therefore resulting in reduced institutional, social, and economic benefits to entities operating within a facility.

11. Occupant load thresholds have related code precedence. The justification of minimum occupant load uses Risk Category and minimum number of exits as starting points, since these are the only locations in the Code with occupancy thresholds to consider. Risk Category and minimum number of exits share a common concern with automatic doors because the threshold numbers represent a critical mass of people above which a unique set of code requirements need to apply. Following is an explanation of how the threshold numbers have been arrived at for each occupancy in the Table.

o Group A: Also from Table 1604.5, Risk Category III. The scope of public assemblies is an occupant load greater than 300.

o Groups B, M and R-1: From Table 1006.3.1, minimum number of exits or access to exits per story. Table 1006.3.1 states that three exits or exit access doorways shall be provided from any space with an occupant load of 501 to 1000, and four shall be provided with an occupant load greater than 1000. The proposed Table would set a threshold of three exits or exit access doorways, in a given story with a public entrance, to require an automatic door at that public entrance. R-1 is the applicable Group R occupancy because hotels and motels should be encompassed by the Table where the threshold occupant load would be appropriate for those structures.

12. Alleviates concerns about maximum manual force required to operate an entrance door. Although the IBC regulates this maximum force, any type of force needed to operate a manual door is a concern for the accessibility community. Automatic doors would require no force to operate.

13. Alleviates concerns about manual force variations. Wind pressures, internal building stack pressures, and/or increasing hardware friction are common concerns and affect manual operation of entrance doors all throughout the country. This concern is removed since automatic doors require no force to operate.

14. More than a "best practice" requirement. The requirement is a need, as opposed to a "best practice", because automatic doors encourage people to use facilities, are safer, and more efficiently move people in and out of buildings. It is widely known that people - particularly children, the elderly, and/or those with accessibility needs - have great difficulty, or find it impossible, to open entrance doors because of stack pressures, door configurations, door friction, wind, or door weight.

Cost Impact: The code change proposal will increase the cost of construction
The increased construction cost will be outweighed by the benefits provided to the public as outlined in our reasoning statement.

Public Hearing Results

Committee Action: **As Submitted**

Committee Reason: Having one automatic door on these types of facilities would address the needs of person with mobility impairments or persons with not enough strength to open exterior doors. The use group and occupant loads are appropriate levels for application. (Vote 13-0)

Assembly Action: **None**

E115-18

Individual Consideration Agenda

Public Comment 1:

Proponent: Micah Chappell, Seattle Department of Construction and Inspections, representing Seattle Department of Construction and Inspection (micah.chappell@seattle.gov)requests As Modified by This Public Comment.

Modify as follows:

2018 International Building Code

1105.1.1 Automatic doors. In facilities with the occupancies and building occupant loads indicated in Table 1105.1.1, ~~at least one accessible exterior public entrance shall~~ *public entrances* that are required to be *accessible* shall have one door be either a full power-operated door or a low-energy power-operated door. Where the public entrance includes a vestibule, at least one door into and one door out of the vestibule shall meet the requirements of this section.

Commenter's Reason: The original proposal provides additional easy if ingress and egress and was a good start in getting automatic doors installed at one required accessible entrance, but seemed to indicate that if you had a bank of doors at the required public entrance, that all of those doors needed to be automatic. We also added to the proposal that all public entrances that are required to be accessible provide one automatic door, considering if you had a large facility, the accessible public entrances could be a significant distance apart making access to an automatic door more difficult. Additionally the proposal did not address what needed to be installed when the accessible public entrance has a vestibule with doors arranged in series.

Cost Impact: The net effect of the public comment and code change proposal will increase the cost of construction This proposal will cause a minor increase in construction cost for the occupancy classifications that are required to meet this standard.

E115-18

E115-18

IBC: 1105.1, 1105.1.1, Table TABLE 1105.1.1

Proposed Change as Submitted

Proponent: Joseph Hetzel, Thomas Associates, Inc., representing American Association of Automatic Door Manufacturers (Jhetzel@thomasamc.com)

2018 International Building Code

Revise as follows

1105.1 Public entrances. In addition to *accessible* entrances required by Sections ~~1105.1.1~~1105.1.2 through ~~1105.1.7~~ 1105.1.8, at least 60 percent of all *public entrances* shall be *accessible*.

Exceptions:

1. An *accessible* entrance is not required to areas not required to be *accessible*.
2. Loading and *service entrances* that are not the only entrance to a tenant space.

Add new text as follows

1105.1.1 Automatic doors. In facilities with the occupancies and building occupant loads indicated in Table 1105.1.1, at least one accessible exterior public entrance shall be either a full power-operated door or a low-energy power-operated door.

TABLE 1105.1.1
PUBLIC ENTRANCE WITH POWER-OPERATED DOOR

OCCUPANCY	BUILDING OCCUPANT LOAD GREATER THAN
A-1, A-2, A-3, A-4	300
B, M, R-1	500

Reason: 1. Enhances accessibility. It is widely accepted that automatic doors in general enhance overall accessibility, by accommodating a wide array of conditions people have that qualify them to need accessibility at facility entrances. This accommodates a wide variety of accessibility needs that manual doors being installed today cannot encompass.
2. Considers "transient" use. The Table directly addresses people who infrequently use public entrances so that they would need no special knowledge, skill or tool to enter a facility. All occupancies included in the Table experience such "transient" use.

3. Addresses a public need. The occupancies cited are associated with a serious existing need for automatic doors. The safety of both use and moving people in and out of buildings in those occupancies by using only manually operated doors is a major concern particularly in emergency situations.

4. Focuses on public entrances. The Table applies where the public is most likely to access facilities. Regarding which public entrance to choose for an automatic door if multiple entrances are accessible, this is left to the building designer on which would be best but the requirement of "at least one" door allows the designer to consider all entrances if feasible.

5. Occupancies involved are those most applicable to the public. The population requiring accessibility commonly needs accommodations to enter assembly, business, mercantile, and hotel/motel facilities as part of their everyday life. No code requirement for automatic doors means an increased safety risk and a decreased accessibility convenience.

6. Brings completion to accessible entrance provisions. The Table is needed in Section 1105, where accessible entrances are governed.

7. No disproportional economic burden. The thresholds have been chosen so as not to be a requirement for smaller occupancies such as small assembly facilities or strip mall businesses.

8. Addresses statistical need for accessibility. The thresholds also assume that a minimum of 2% of the population will be in need of accessibility at any given time for the specified occupancies. For an occupant load of 300, this means that at least six people will have the need that an automatic door will provide. The anticipated accessibility need should exceed this estimate a large enough percentage of time to constitute a critical mass of facilities needing power-operated doors when meeting the established thresholds.

9. Enhances public safety. Automatic doors are regulated by ANSI/BHMA safety standards intended to prevent people from coming in contact with moving doors. Facilities employing automatic doors are required to abide by these requirements, which affords protection to anyone - including children, the elderly, and/or those with accessibility needs - in the vicinity of moving doors while minimizing or preventing operational problems. Automatic doors are thus far safer in the marketplace than manually operated doors.

10. Favorably increases facility usage. Those with accessibility needs are less likely to choose to use a facility without an automatic door, therefore resulting in reduced institutional, social, and economic benefits to entities operating within a facility.

11. Occupant load thresholds have related code precedence. The justification of minimum occupant load uses Risk Category and minimum number of exits as starting points, since these are the only locations in the Code with occupancy thresholds to consider. Risk Category and minimum number of exits share a common concern with automatic doors because the threshold numbers represent a critical mass of people above which a unique set of code requirements need to apply. Following is an explanation of how the threshold numbers have been arrived at for each occupancy in the Table.

o Group A: Also from Table 1604.5, Risk Category III. The scope of public assemblies is an occupant load greater than 300.

o Groups B, M and R-1: From Table 1006.3.1, minimum number of exits or access to exits per story. Table 1006.3.1 states that three exits or exit access doorways shall be provided from any space with an occupant load of 501 to 1000, and four shall be provided with an occupant load greater than 1000. The proposed Table would set a threshold of three exits or exit access doorways, in a given story with a public entrance, to require an automatic door at that public entrance. R-1 is the applicable Group R occupancy because hotels and motels should be encompassed by the Table where the threshold occupant load would be appropriate for those structures.

12. Alleviates concerns about maximum manual force required to operate an entrance door. Although the IBC regulates this maximum force, any type of force needed to operate a manual door is a concern for the accessibility community. Automatic doors would require no force to operate.

13. Alleviates concerns about manual force variations. Wind pressures, internal building stack pressures, and/or increasing hardware friction are common concerns and affect manual operation of entrance doors all throughout the country. This concern is removed since automatic doors require no force to operate.

14. More than a "best practice" requirement. The requirement is a need, as opposed to a "best practice", because automatic doors encourage people to use facilities, are safer, and more efficiently move people in and out of buildings. It is widely known that people - particularly children, the elderly, and/or those with accessibility needs - have great difficulty, or find it impossible, to open entrance doors because of stack pressures, door configurations, door friction, wind, or door weight.

Cost Impact: The code change proposal will increase the cost of construction
The increased construction cost will be outweighed by the benefits provided to the public as outlined in our reasoning statement.

Public Hearing Results

Committee Action: **As Submitted**

Committee Reason: Having one automatic door on these types of facilities would address the needs of person with mobility impairments or persons with not enough strength to open exterior doors. The use group and occupant loads are appropriate levels for application. (Vote 13-0)

Assembly Action: **None**

E115-18

Individual Consideration Agenda

Public Comment 2:

Proponent: Micah Chappell, representing Seattle Department of Construction and Inspection (micah.chappell@seattle.gov)requests As Modified by This Public Comment.

Modify as follows:

2018 International Building Code

TABLE 1105.1.1[a]
PUBLIC ENTRANCE WITH POWER-OPERATED DOOR

OCCUPANCY	BUILDING OCCUPANT LOAD GREATER THAN
A-1, A-2, A-3, A-4	300
B, M, R-1	500

a. In mixed-use facilities, when the total sum of the building occupant load is greater than those listed, the most restrictive building occupant load shall apply.

Commenter's Reason: The table did not address mixed-use facilities when applying this section and the proposed footnote provides a definitive path for the Code Official. An example of why this footnote for mixed-use facilities is needed would be if you had both a M occupancy and an A-3 occupancy. The M occupancy has an occupant load of 350 and the A-2 occupancy has an occupant load of 250, individually they do not exceed the requirements of the table so the requirements would not apply, but the total sum of the building occupant load would exceed the limits of the table. So as this example shows the original proposal did not provide guidance on how to apply the section to mixed-use facilities. We believe the footnote addresses this issue.

Cost Impact: The net effect of the public comment and code change proposal will increase the cost of construction This proposal will cause a minor increase the cost of construction.

E115-18

E115-18

IBC: 1105.1, 1105.1.1, Table TABLE 1105.1.1

Proposed Change as Submitted

Proponent: Joseph Hetzel, Thomas Associates, Inc., representing American Association of Automatic Door Manufacturers (Jhetzel@thomasamc.com)

2018 International Building Code

Revise as follows

1105.1 Public entrances. In addition to *accessible* entrances required by Sections ~~1105.1.1~~1105.1.2 through ~~1105.1.7~~ 1105.1.8, at least 60 percent of all *public entrances* shall be *accessible*.

Exceptions:

1. An *accessible* entrance is not required to areas not required to be *accessible*.
2. Loading and *service entrances* that are not the only entrance to a tenant space.

Add new text as follows

1105.1.1 Automatic doors. In facilities with the occupancies and building occupant loads indicated in Table 1105.1.1, at least one accessible exterior public entrance shall be either a full power-operated door or a low-energy power-operated door.

TABLE 1105.1.1
PUBLIC ENTRANCE WITH POWER-OPERATED DOOR

OCCUPANCY	BUILDING OCCUPANT LOAD GREATER THAN
A-1, A-2, A-3, A-4	300
B, M, R-1	500

Reason: 1. Enhances accessibility. It is widely accepted that automatic doors in general enhance overall accessibility, by accommodating a wide array of conditions people have that qualify them to need accessibility at facility entrances. This accommodates a wide variety of accessibility needs that manual doors being installed today cannot encompass.
2. Considers "transient" use. The Table directly addresses people who infrequently use public entrances so that they would need no special knowledge, skill or tool to enter a facility. All occupancies included in the Table experience such "transient" use.

3. Addresses a public need. The occupancies cited are associated with a serious existing need for automatic doors. The safety of both use and moving people in and out of buildings in those occupancies by using only manually operated doors is a major concern particularly in emergency situations.

4. Focuses on public entrances. The Table applies where the public is most likely to access facilities. Regarding which public entrance to choose for an automatic door if multiple entrances are accessible, this is left to the building designer on which would be best but the requirement of "at least one" door allows the designer to consider all entrances if feasible.

5. Occupancies involved are those most applicable to the public. The population requiring accessibility commonly needs accommodations to enter assembly, business, mercantile, and hotel/motel facilities as part of their everyday life. No code requirement for automatic doors means an increased safety risk and a decreased accessibility convenience.

6. Brings completion to accessible entrance provisions. The Table is needed in Section 1105, where accessible entrances are governed.

7. No disproportional economic burden. The thresholds have been chosen so as not to be a requirement for smaller occupancies such as small assembly facilities or strip mall businesses.

8. Addresses statistical need for accessibility. The thresholds also assume that a minimum of 2% of the population will be in need of accessibility at any given time for the specified occupancies. For an occupant load of 300, this means that at least six people will have the need that an automatic door will provide. The anticipated accessibility need should exceed this estimate a large enough percentage of time to constitute a critical mass of facilities needing power-operated doors when meeting the established thresholds.

9. Enhances public safety. Automatic doors are regulated by ANSI/BHMA safety standards intended to prevent people from coming in contact with moving doors. Facilities employing automatic doors are required to abide by these requirements, which affords protection to anyone - including children, the elderly, and/or those with accessibility needs - in the vicinity of moving doors while minimizing or preventing operational problems. Automatic doors are thus far safer in the marketplace than manually operated doors.

10. Favorably increases facility usage. Those with accessibility needs are less likely to choose to use a facility without an automatic door, therefore resulting in reduced institutional, social, and economic benefits to entities operating within a facility.

11. Occupant load thresholds have related code precedence. The justification of minimum occupant load uses Risk Category and minimum number of exits as starting points, since these are the only locations in the Code with occupancy thresholds to consider. Risk Category and minimum number of exits share a common concern with automatic doors because the threshold numbers represent a critical mass of people above which a unique set of code requirements need to apply. Following is an explanation of how the threshold numbers have been arrived at for each occupancy in the Table.

o Group A: Also from Table 1604.5, Risk Category III. The scope of public assemblies is an occupant load greater than 300.

o Groups B, M and R-1: From Table 1006.3.1, minimum number of exits or access to exits per story. Table 1006.3.1 states that three exits or exit access doorways shall be provided from any space with an occupant load of 501 to 1000, and four shall be provided with an occupant load greater than 1000. The proposed Table would set a threshold of three exits or exit access doorways, in a given story with a public entrance, to require an automatic door at that public entrance. R-1 is the applicable Group R occupancy because hotels and motels should be encompassed by the Table where the threshold occupant load would be appropriate for those structures.

12. Alleviates concerns about maximum manual force required to operate an entrance door. Although the IBC regulates this maximum force, any type of force needed to operate a manual door is a concern for the accessibility community. Automatic doors would require no force to operate.

13. Alleviates concerns about manual force variations. Wind pressures, internal building stack pressures, and/or increasing hardware friction are common concerns and affect manual operation of entrance doors all throughout the country. This concern is removed since automatic doors require no force to operate.

14. More than a "best practice" requirement. The requirement is a need, as opposed to a "best practice", because automatic doors encourage people to use facilities, are safer, and more efficiently move people in and out of buildings. It is widely known that people - particularly children, the elderly, and/or those with accessibility needs - have great difficulty, or find it impossible, to open entrance doors because of stack pressures, door configurations, door friction, wind, or door weight.

Cost Impact: The code change proposal will increase the cost of construction
The increased construction cost will be outweighed by the benefits provided to the public as outlined in our reasoning statement.

Public Hearing Results

Committee Action: **As Submitted**

Committee Reason: Having one automatic door on these types of facilities would address the needs of person with mobility impairments or persons with not enough strength to open exterior doors. The use group and occupant loads are appropriate levels for application. (Vote 13-0)

Assembly Action: **None**

E115-18

Individual Consideration Agenda

Public Comment 3:

Proponent: Lee Kranz, representing Washington Association of Building Officials Technical Code Development Committee (lkranz@bellevuewa.gov)requests As Modified by This Public Comment.

Modify as follows:

2018 International Building Code

1105.1.1 Automatic doors. In facilities with the occupancies and building occupant loads indicated in Table 1105.1.1, at least one accessible exterior public entrance shall have at least one door be either a full power-operated door or a low-energy power-operated door. Where the public entrance includes a vestibule, at least one door into and one door out of the vestibule shall meet the requirements of this section.

Commenter's Reason: This public comment is intended to address a potentially confusing aspect of the original proposal related to the number of door requiring the automatic opening device. This change will make it clear that only one of the doors into the building requires automatic opening when a bank of doors are provided.

Cost Impact: The net effect of the public comment and code change proposal will increase the cost of construction The cost will be higher because more doors will be required to have automatic opening devices.

Staff Analysis: The 2017 ICC A117.1 includes the following language for automatic door openers on vestibules.
404.3.2 Vestibules. Where an entrance includes a vestibule, at least one exterior door or gate and one interior door or gate in the vestibule shall have the same type of automatic door or gate opener.

E115-18

E24-18

IBC: 1006.3.3, TABLE 1006.3.3(1), TABLE 1006.3.3(2), (IFC[BE] 1006.3.3, TABLE 1006.3.3(1), TABLE 1006.3.3(2))

Proposed Change as Submitted

Proponent: Ed Kulik, Chair, representing ICC Building Code Action Committee (bcac@iccsafe.org)

2018 International Building Code

Revise as follows

1006.3.3 Single exits. 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*, number of *dwelling units* and ~~common path of egress~~ exit access travel distance do not exceed the values in Table 1006.3.3(1) or 1006.3.3(2).
2. Rooms, areas and spaces complying with Section 1006.2.1 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*.
3. Parking garages where vehicles are mechanically parked shall be permitted to have one *exit* or access to a single *exit*.
4. Group R-3 and R-4 occupancies shall be permitted to have one *exit* or access to a single *exit*.
5. Individual single-story or multistory *dwelling units* shall be permitted to have a single *exit* or access to a single *exit* from the *dwelling unit* provided that both of the following criteria are met:

    5.1. The *dwelling unit* complies with Section 1006.2.1 as a space with one *means of egress*.
    5.2. 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 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
Basement, 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

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 1030.
b. This table is used for R-2 occupancies consisting of *dwelling units.* For R-2 occupancies consisting of *sleeping units*, use Table 1006.3.3(2).

TABLE 1006.3.3(2)
STORIES WITH ONE EXIT OR ACCESS TO ONE EXIT FOR OTHER OCCUPANCIES

STORY	OCCUPANCY	MAXIMUM OCCUPANT LOAD PER STORY	MAXIMUM ~~COMMON PATH OF EGRESS~~ EXIT ACCESS TRAVEL DISTANCE (feet)
First story above or below grade plane	A, B[b], E F[b], M, U	49	75
	H-2, H-3	3	25
	H-4, H-5, I, R-1, R-2[a, c]	10	75
	S[b, d]	29	75
Second story above grade plane	B, F, M, S[d]	29	75
Third story above grade plane and higher	NP	NA	NA

For SI: 1 foot = 304.8 mm.

NP = Not Permitted.

NA = Not Applicable.

a. Buildings classified as Group R-2 equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2 and provided with *emergency escape and rescue openings* in accordance with Section 1030.
b. Group B, F and S occupancies in buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 shall have a maximum *exit access* travel distance of 100 feet.
c. This table is used for R-2 occupancies consisting of *sleeping units.* For R-2 occupancies consisting of *dwelling units*, use Table 1006.3.3(1).
d. The length of *exit access* travel distance in a Group S-2 *open parking garage* shall be not more than 100 feet.

Reason: There is a conflict in terminology used for single exit criteria for stories/buildings in the IBC Section/Tables 1006.3.3 and IEBC Section/Tables 805.3.1.1. The intent of this proposal is a clarification, without technical revisions. Below is the definition for common path of egress travel and exit access and a graphic from the IBC commentary illustrating the terms. Single exit stories/buildings cannot have a common path of egress travel since two exits are not required. The correct term is “exit access travel distance”. This would match the terminology in the column headings for single exit tables with the footnotes for the single exit tables in the IBC and the table heading and footnotes in the IEBC.

If you look at the history for the single exit tables, until the reorganization that combined single exit spaces and stories, the term used was ‘exit access travel distance.’

With the text incorrectly used in IBC Section 1006.3.3, it could be interpreted that the travel distance has to be to a place where there are two exits – which is on the ground floor - regardless if the stairway is an exit access or exit stairway. Exit access travel distance should stop at the door to the exit stairway.

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 access to two *exits* or *exit access* doorways.

EXIT ACCESS. That portion of a *means of egress* system that leads from any occupied portion of a building or structure to an *exit*.

This proposal is submitted by the ICC Building Code Action Committee (BCAC). BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2017 the BCAC has held 3 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as w ell as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: https://www.iccsafe.org/codes-tech-support/codes/codedevelopment-process/building-code-action-committee-bcac.

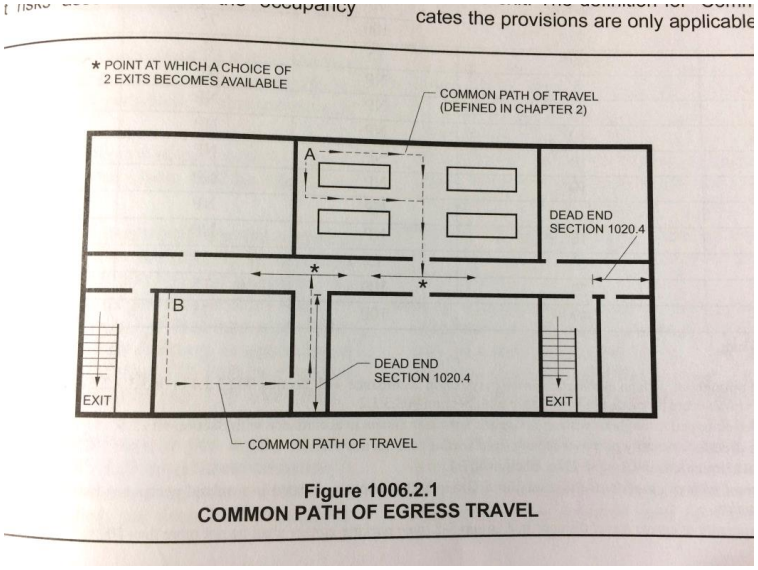


Figure 1006.2.1 from IBC Commentary

Cost Impact: The code change proposal will not increase or decrease the cost of construction As the proposal essentially provides clarification to a subject that has created confusion.

E24-18

Public Hearing Results

Committee Action: **As Submitted**

Committee Reason: This is a good clarification for a point that has been confusing users of the codes. “Common path of travel” is not the correct term for single exit conditions – it is for two exit conditions. “Exit access” is the correct term for single exit buildings and stories. This will coordinate the terminology in the table with the current footnotes and similar sections in the IEBC. (Vote: 11-3)

Assembly Action: **None**

E24-18

Individual Consideration Agenda

Public Comment 1:

Proponent: Gregory Keith, representing The Boeing Company (grkeith@mac.com)requests Disapprove.

Commenter's Reason: IBC common path of egress travel provisions have evolved over many code development cycles. Those provisions are currently comprehensive, understandable and uniformly applied.
E24-18 which was approved by a vote of 11-3 represents a technical departure from current provisions. In the published reason statement justifying approval, the committee stated, "This is a good clarification for a point that has been confusing users of the codes." Perceived confusion results when current requirements are compared to former legacy code provisions. The reason statement continues, "Common path of travel is not the correct term for single exit conditions--it is for two exit conditions. Exit access is the correct term for single exit buildings and stories."

Presently, Section 1006.3.3 text and tables reference common path of egress travel as a qualifying criterion for the determination of multi-exit stories. Section 1006.3.3 establishes the single exit design condition as the default. Proposal E24-18 substitutes the term exit access travel distance in lieu of common path of egress travel for the previously stated reason. The proposal and its logic are severely flawed. In the published justification for approval the initial submittal states, "Single exit stories/buildings cannot have a common path of egress travel since two exits are not required." This statement is in direct contravention with the definition of common path of egress travel. That definition states, "That portion of exit access travel distance measured for the most remote point of each room, area or space to that point where the occupants have separate and distinct access to two exits or exit access doorways." By definition, all travel within a story served by a single exit is common path of egress travel as two exits are not available.

Section 1006 establishes the provisions for the determination of the required number of exits or exit access doorways from various building areas. As previously stated, the default is a single exit/exit access doorway design condition. A second exit is required when either of two considerations is exceeded. Those issues are occupant load and common path of egress travel. Specifically, when the common path of egress travel is exceeded (that is, occupants do not have separate and distinct access to two exits or exit access doorways) a second exit/exit access doorway becomes required. Accordingly, common path of egress travel is the correct term when referencing areas served by a single exit. Where E24 utilizes the term exit access travel distance, it should be noted that the definition of common path of egress travel states that common path of egress travel is that portion of exit access travel distance….. The specific term is appropriate.

Approval of E24-18 will create confusion among code practitioners. Table 1006.2.1 provides criteria for the determination of a second required exit/exit access doorway from individual rooms, areas or spaces. Those criteria are occupant load and common path of egress travel. Using a different criterion in Tables 1006.3.3.1 and 1006.3.3.2 for the determination of a second required exit from a given story begs the question: Why are there different terms used within the same section? The answer is that they should not be different.

There is no confusion if the code practitioner reads the definition of Section 202 and determines the applicable technical requirements of Section 1006. All provisions are in technical context. Approval of E24-18 will create confusion as opposed to providing clarification as hoped. The published reason statement also stated, "This will coordinate the terminology in the table with the current footnotes and similar sections in the IEBC." That coordination should occur as errata to current footnote and IEBC provisions so that they correctly reference common path of egress travel requirements in accordance with fundamental IBC provisions.

Approval of this public comment for disapproval of E24-18 will maintain current logical and understandable provisions for the determination of second exits from given building stories.

Cost Impact: The net effect of the public comment and code change proposal will not increase or decrease the cost of construction

Approval of this public comment will retain current code provisions.

E24-18

E107-18

IBC: SECTION 1030.1, (IFC[BE] 1030.1)

Proposed Change as Submitted

Proponent: Ed Kulik, Chair, representing ICC Building Code Action Committee (bcac@iccsafe.org)

2018 International Building Code

SECTION 1030 EMERGENCY ESCAPE AND RESCUE

Revise as follows

1030.1 ~~General.~~Where required. In addition to the *means of egress* required by this chapter, *emergency escape and rescue openings* shall be provided in the following occupancies:

1. Group R-2 occupancies located in stories with only one *exit* or *access* to only one *exit* as permitted by Tables 1006.3.3(1) and 1006.3.3(2).
2. Group R-3 and R-4 occupancies.

Basements and sleeping rooms below the fourth story above *grade plane* shall have not fewer than one ~~exterior~~ *emergency escape and rescue opening* in accordance with this section. Where *basements* contain one or more sleeping rooms, an *emergency escape and rescue* ~~*openings*~~*opening* shall be required in each sleeping room, but shall not be required in adjoining areas of the *basement*. Such openings shall open directly into a *public way* or to a *yard* or *court* that opens to a *public way*.

Exceptions:

1. *Basements* with a ceiling height of less than 80 inches (2032 mm) shall not be required to have *emergency escape and rescue openings*.
2. *Emergency escape and rescue openings* are not required from *basements* or sleeping rooms that have an exit door or *exit access* door that opens directly into a *public way* or to a yard, court or exterior ~~exit~~ egress balcony that opens to a *public way*.
3. *Basements* ~~without habitable spaces~~used only to house mechanical equipment and having not more than 200 square feet (18.6 m^2) in floor area shall not be required to have *emergency escape and rescue openings*.

   4. Storm shelters are not required to comply with this section where the shelter is constructed in accordance with ICC 500.

~~4.~~ 5. Within individual *dwelling* and *sleeping units* in Groups R-2 and R-3, where the building is equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3, *sleeping rooms* in *basements* shall not be required to have *emergency escape and rescue openings* provided that the basement has one of the following:

   ~~4.1~~5.1. One *means of egress* and one *emergency escape and rescue opening*.
   ~~4.2~~5.2. Two *means of egress*.

Reason: This is one of a series of 11 proposals to coordinate the Emergency Escape and Rescue Openings (EERO) technical criteria in the IBC and IRC. Please see the proposal for the definition of Emergency Escape and Rescue Openings for additional information. Due to the code development schedule the proposals for IBC will be proposed in Group A and the proposals for IRC will be proposed in Group B.
IBC

- The definition includes ‘exterior’, so it does not need to be repeated in the text.
- It was decided not to add the IRC defined ‘habitable attic’. If added to the IBC, would the IBC also have to pick up the definition and the number of stories below the habitable attic space? (the IRC definition says this is not a story).
- IBC Exception 2 – change to correct term for ‘exterior egress balcony’
- IBC Exception 3 – coordination with IRC, limit is just size without additional criteria for habitable.
- Add storm shelter exception to IBC. Reference ICC 500 so that the escape openings provided are what is specified for storm shelters.

There will be a similar proposal for the IRC in Group B.

This proposal is submitted by the ICC Building Code Action Committee (BCAC). BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2017 the BCAC has held 3 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as w ell as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: https://www.iccsafe.org/codes-tech-support/codes/codedevelopment-process/building-code-action-committee-bcac.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This is a coordination item for exceptions for EEROs already permitted between the codes.

E107-18

Public Hearing Results

Errata: The errata was the addition of Section 1030.1 Exception 4.

Committee Action: As Modified

Committee Modification: 1030.1 Where required. In addition to the means of egress required by this chapter, emergency escape and rescue openings shall be provided in the following occupancies:

1. Group R-2 occupancies located in stories with only one exit or access to only one exit as permitted by Tables 1006.3.3(1) and 1006.3.3(2).
2. Group R-3 and R-4 occupancies.

Basements and sleeping rooms below the fourth story above grade plane shall have not fewer than one emergency escape and rescue opening in accordance with this section. Where basements contain one or more sleeping rooms, an emergency escape and rescue opening shall be required in each sleeping room, but shall not be required in adjoining areas of the basement. Such openings shall open directly into a public way or to a yard or court that opens to a public way.

Exceptions:

1. Basements with a ceiling height of less than 80 inches (2032 mm) shall not be required to have emergency escape and rescue openings.
2. Emergency escape and rescue openings are not required from basements or sleeping rooms that have an exit door or exit access door that opens directly into a public way or to a yard, court or exterior egress balcony that opens to a public way.
3. Basements <u>without habitable space</u> ~~used only to house mechanical equipment~~and having not more than 200 square feet (18.6 m^2) in floor area shall not be required to have emergency escape and rescue openings.
4. Storm shelters are not required to comply with this section where the shelter is constructed in accordance with ICC 500.
5. Within individual dwelling and sleeping units in Groups R-2 and R-3, where the building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3, sleeping rooms in basements shall not be required to have emergency escape and rescue openings provided that the basement has one of the following:
   5.1. One means of egress and one emergency escape and rescue opening.
   5.2. Two means of egress.

Committee Reason: The modification restores Exception 3 to its original language. The revised language would require a EERO in a non-habitable basement that had other than mechanical equipment. This proposed exception works for single family homes, not is not great for Group R-2 occupancies.
This is a good coordination between the IBC and IRC requirements for emergency escape and rescue openings and also cleans up some of the language. The addition for coordination with storm shelters (see published errata) is needed. (Vote 14-0)

Assembly Action: None

E107-18

Individual Consideration Agenda

Public Comment 1:

Proponent: Gregory Keith, representing The Boeing Company (grkeith@mac.com)requests As Modified by This Public Comment.

Modify as follows:

2018 International Building Code

<u>1030.1</u> <u>General.</u> <u>Emergency escape and rescue openings shall comply with the requirements of this section.</u>

~~1030.1~~ <u>1030.2</u> Where required. In addition to the *means of egress* required by this chapter, *emergency escape and*

rescue openings shall be provided in the following occupancies:

1. Group R-2 occupancies located in stories with only one *exit* or *access* to only one *exit* as permitted by Tables 1006.3.3(1) and 1006.3.3(2).
2. Group R-3 and R-4 occupancies.

Basements and sleeping rooms below the fourth story above *grade plane* shall have not fewer than one *emergency escape and rescue opening* in accordance with this section. Where *basements* contain one or more sleeping rooms, an *emergency escape and rescue opening* shall be required in each sleeping room, but shall not be required in adjoining areas of the *basement*. Such openings shall open directly into a *public way* or to a *yard* or *court* that opens to a *public way*.

Exceptions:

1. *Basements* with a ceiling height of less than 80 inches (2032 mm) shall not be required to have *emergency escape and rescue openings*.
2. *Emergency escape and rescue openings* are not required from *basements* or sleeping rooms that have an exit door or *exit access* door that opens directly into a *public way* or to a yard, court or exterior egress balcony that opens to a *public way*.
3. *Basements* without habitable space and having not more than 200 square feet (18.6 m^2) in floor area shall not be required to have *emergency escape and rescue openings*.
4. Storm shelters are not required to comply with this section where the shelter is constructed in accordance with ICC 500.
5. Within individual *dwelling* and *sleeping units* in Groups R-2 and R-3, where the building is equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3, *sleeping rooms* in *basements* shall not be required to have *emergency escape and rescue openings* provided that the basement has one of the following:
   5.1. One *means of egress* and one *emergency escape and rescue opening*.
   5.2. Two *means of egress*.

Commenter's Reason: The ICC Building Code Action Committee submitted a series of proposals intended to clarify and coordinate Chapter 10 emergency escape and rescue opening provisions. The first in the series (E107-18) inadvertently removed necessary charging language from Section 1030. This public comment corrects that oversight. No technical changes are proposed. Inclusion of appropriate charging language is consistent with Item E38-18 which editorially corrected other Chapter 10 charging language provisions. Having proper enabling or charging provisions for various technical requirements is legally necessary for a model code adopted by a given political subdivision.

Cost Impact: The net effect of the public comment and code change proposal will not increase or decrease the cost of construction
This public comment is editorial in nature.

E107-18

E108-18

IBC: 1030.1.1, (IFC[BE] 1030.1.1)

Proposed Change as Submitted

Proponent: Ed Kulik, Chair, representing ICC Building Code Action Committee (bcac@iccsafe.org)

2018 International Building Code

Revise as follows

1030.1.1 Operational constraints and opening control devices. *Emergency escape and rescue openings* shall be operational from inside the room without the use of keys or tools. Window-opening control devices ~~complying with ASTM F2090 shall be permitted for use~~ on windows serving as a required *emergency escape and rescue opening* shall comply with ASTM F2090.

Reason: This is one of a series of 11 proposals to coordinate the Emergency Escape and Rescue Openings (EERO) technical criteria in the IBC and IRC. Please see the proposal for the definition of Emergency Escape and Rescue Openings for additional information. Due to the code development schedule the proposals for IBC will be proposed in Group A and the proposals for IRC will be proposed in Group B.
IBC - Last sentence reworded as a requirement to be consistent with IRC

This proposal is submitted by the ICC Building Code Action Committee (BCAC). BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2017 the BCAC has held 3 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as w ell as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: https://www.iccsafe.org/codes-tech-support/codes/codedevelopment-process/building-code-action-committee-bcac.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This is a coordination item for requirements for EEROs already permitted between the codes.

E108-18

Public Hearing Results

Committee Action: Disapproved

Committee Reason: There is an errata to the IRC to Section R310.1.1. This will make the current language in the IRC and IBC match, so this revision is not necessary. (Vote 14-0)

Assembly Action: None

Staff Analysis: The code language in IRC 2018 is as follows:
R310.1.1 Operational constraints and opening control devices. Emergency escape and rescue openings shall be operational from the inside of the room without the use of keys, tools or special knowledge. Window opening control devices on windows serving as a required emergency escape and rescue opening shall comply with ASTM F2090.

E108-18

Individual Consideration Agenda

Public Comment 1:

Proponent: Ed Kulik, representing ICC Building Code Action Committee (bcac@iccsafe.org)requests As Modified by This Public Comment.

Modify as follows:

2018 International Building Code

1030.1.1 Operational constraints and opening control devices. *Emergency escape and rescue openings* shall be operational from inside the room without the use of keys or tools. Window-opening control devices on windows serving as a required *emergency escape and rescue opening* shall comply with ~~ASTM F2090~~ Section 1015.8.

Commenter's Reason: The BCAC requested that this proposal be disapproved because there was a possibility that there was errata to the IRC that would make these sections the same. That was not the case. However, not all emergency escape and rescue openings (EEROs) are required to have a window opening control device that complies with ASTM F2090. The proposed revision will coordinate with Sections 1015.8. Section 1015.8 contains requirements other than compliance with the ASTM standard. The BCAC will provide coordinating proposals for EEROs for IRC in Group B.

Cost Impact: The net effect of the public comment and code change proposal will not increase or decrease the cost of construction
The standards are already included in Section 1015.8, so there is no change to requirements that would increase costs.

E108-18

E109-18

IBC: 1030.2, 1030.2.1, 1030.3, (IFC[BE] 1030.2, 1030.2.1, 1030.3)

Proposed Change as Submitted

Proponent: Ed Kulik, Chair, representing ICC Building Code Action Committee (bcac@iccsafe.org)

2018 International Building Code

Add new text as follows

1030.2 Emergency escape and rescue openings. . Emergency escape and rescue openings shall have minimum dimensions in accordance with Section 1030.2.1 through 1030.2.3.

Revise as follows

~~**1030.2**~~**1030.2.1 Minimum size.** *Emergency escape and rescue openings* shall have a minimum net clear opening of 5.7 square feet (0.53 m2).

Exception: The minimum net clear opening for *grade-floor emergency escape and rescue openings* shall be 5 square feet (0.46 m2).

~~**1030.2.1**~~**1030.2.2 Minimum dimensions.** The minimum net clear opening height dimension shall be 24 inches (610 mm). The minimum net clear opening width dimension shall be 20 inches (508 mm). The net clear opening dimensions shall be the result of normal operation of the opening.

~~**1030.3**~~**1030.2.3 Maximum height from floor.** ~~*Emergency*~~ *Where a window is provided as the emergency escape and rescue openings, such window* shall have the bottom of the clear opening not greater than 44 inches (1118 mm) measured from the floor.

Reason: This is one of a series of 11 proposals to coordinate the Emergency Escape and Rescue Openings (EERO) technical criteria in the IBC and IRC. Please see the proposal for the definition of Emergency Escape and Rescue Openings for additional information. Due to the code development schedule the proposals for IBC will be proposed in Group A and the proposals for IRC will be proposed in Group B.
This proposal deals with Minimum size, dimensions and height.

IBC 310.3 – revise to coordinate language and organization with the IRC.

There will be a similar proposal to Group B for IRC:

This proposal is submitted by the ICC Building Code Action Committee (BCAC). BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2017 the BCAC has held 3 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as w ell as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: https://www.iccsafe.org/codes-tech-support/codes/codedevelopment-process/building-code-action-committee-bcac.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This is a coordination item for requirements for EEROs already permitted between the codes.

E109-18

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The change in the text to Section 1030.2.3 appears to be mandating a window. There is no sill height given for other openings. Emergency escape and rescue openings can be doors or other acceptable openings. (Vote 13-1)

Assembly Action: **None**

E109-18

Individual Consideration Agenda

Public Comment 1:

Proponent: Ed Kulik, representing ICC Building Code Action Committee (bcac@iccsafe.org)requests As Submitted.

Commenter's Reason: One of the points of the 11 changes proposed for emergency escape and rescue opening (EERO) is that they can be doors or windows. The committee approved 9 of those changes during the code change hearings in April. This proposal is an important piece for coordination of the IRC and IBC requirements for EEROs.
To address the committee's concerns - The threshold on doors is addressed in Section 1010. Section 1030.2.3 does not mandate windows, but says if window option is chosen, then there is maximum height of the bottom edge so that people can crawl out.

A complete version on what this section would look like if all 11 proposals passed was in the reason statement of G5-18. The following is the section related to door and window sizes. Section 1030.3 was approved in code change E110-18.

1030.2 Emergency escape and rescue openings. Emergency escape and rescue opening shall have minimum dimensions in accordance with Section 1030.2.1 through 1030.2.3.

1030.2.1 Minimum size. *Emergency escape and rescue openings* shall have a minimum net clear opening of 5.7 square feet (0.53 m^2).

Exception: The minimum net clear opening for *grade-floor emergency escape and rescue openings* shall be 5 square feet (0.46 m^2).

1030.2.2 Minimum dimensions. The minimum net clear opening height dimension shall be 24 inches (610 mm). The minimum net clear opening width dimension shall be 20 inches (508 mm). The net clear opening dimensions shall be the result of normal operation of the opening.

1030.2.3 Maximum height from floor. Where a window is provided as the *Emergency escape and rescue openings,* such window shall have the bottom of the clear opening not greater than 44 inches (1118 mm) measured from the floor.

1030.3 Emergency escape and rescue doors. Where a door is provided as the required emergency escape and rescue opening, it shall be a swinging door or a sliding door.

The BCAC will provide coordinating proposals for EEROs for IRC in Group B.

Cost Impact: The net effect of the public comment and code change proposal will not increase or decrease the cost of construction
This is a coordination item for requirements for EEROs already permitted between the codes.

E109-18

E106-18

IBC: 1029.16, 1029.16.1, (IFC[BE] 1029.16. 1029.16.1)

Proposed Change as Submitted

Proponent: Ed Kulik, Chair, representing ICC Building Code Action Committee (bcac@iccsafe.org)

2018 International Building Code

Revise as follows

1029.16 Handrails. Ramped *aisles* having a slope exceeding one unit vertical in 15 units horizontal (6.7-percent slope) and stepped *aisles* shall be provided with *handrails* in compliance with Section 1014 located either at one or both sides of the *aisle* or within the *aisle* width. Where the stepped aisle have seating on one side and the aisle width is 74 inches (1880 mm) or greater, two handrails are required. Where two handrails are required, one of the handrails shall be within 30 inches horizontally of the end of the aisle accessways.

Exceptions:

1. *Handrails* are not required for ramped *aisles* with seating on both sides.
2. *Handrails* are not required where, at the side of the aisle, there is a *guard* with a top surface that complies with the graspability requirements of *handrails* in accordance with Section 1014.3.
3. *Handrail* extensions are not required at the top and bottom of stepped *aisles* and ramped *aisles* to permit crossovers within the *aisles*.

1029.16.1 Discontinuous handrails. Where there is seating on both sides of the aisle, the mid-aisle *handrails* shall be ~~discontinuous with~~ discontinuous. Where the stepped aisle is required to have two handrails, handrails not located on a guard or wall shall be discontinuous. The gaps or breaks at intervals shall not ~~exceeding~~ exceed five rows to facilitate access to seating and to permit crossing from one side of the *aisle* to the other. These gaps or breaks shall have a clear width of not less than 22 inches (559 mm) and not greater than 36 inches (914 mm), measured horizontally, and the mid-aisle *handrail* shall have rounded terminations or bends.

1029.16.2 Handrail termination. *Handrails* located on the side of stepped *aisles* shall return to a wall, *guard* or the walking surface or shall be continuous to the *handrail* of an adjacent stepped *aisle flight*.

1029.16.3 Mid-aisle termination. Mid-aisle *handrails* shall not extend beyond the lowest riser and shall terminate within 18 inches (381 mm), measured horizontally, from the lowest riser. *Handrail* extensions are not required.

Exception: Mid-aisle *handrails* shall be permitted to extend beyond the lowest riser where the *handrail* extensions do not obstruct the width of the cross *aisle*.

Reason: The social stairway is a new style being used in common areas of schools and multi-assembly buildings. It appears to fall somewhere between stairways and assembly seating. If this is considered a stairway next to platforms, the general requirement for handrails on both sides of the stairway prevents access to the platforms (Example 4). Considering this configuration as assembly seating would require one handrail with current text.
This proposal considers this arrangement as a type of assembly seating. The width would have to be determined using both the general circulation number from the upper/lower floor and the seating in accordance with Section 1029.6.1, which requires extra width if a handrail is not with 30”. By considering this assembly seating, accessible wheelchairs spaces would already be addressed. Drop offs along the top would have to meet guard provisions.

To address occupant safety, this proposal will require a mid-aisle handrail on wide stepped aisles in addition to the handrail on the wall. The reasoning for 74” was that we did not want either side of the handrails to create a width that was not readily useable (30” + 44” = 74”). The second handrail being within 30” of the edge of the platform allows flexibility in handrail placement, but still keeps the handrail within reach of persons moving off the platforms. Where there is not a cross aisle, the handrail would still have to have handrail extensions at the top and bottom, as well as meet all the other handrail provisions in Section 1014 and 1029.6. This 2nd handrails would typically not show up in stadium seating where aisles are typically less wide than specified here.

As you can see in the examples provided: Example 1 has two handrails, but with one on the far side of the platform. Example 4 a 2nd handrail blocks access to the platforms, so people either climb up the platforms, or go under the handrail. In example 2 and 3 a handrail is only provided on one side of the stairway, regardless of width. None of these

configuration would address stairway safety and access to the platforms. Example 3 has an example handrail drawn in red of what these requirements would add.

This proposal is submitted by the ICC Building Code Action Committee (BCAC). BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2017 the BCAC has held 3 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as w ell as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: https://www.iccsafe.org/codes-tech-support/codes/codedevelopment-process/building-code-action-committee-bcac.

Figure 1

Figure 2

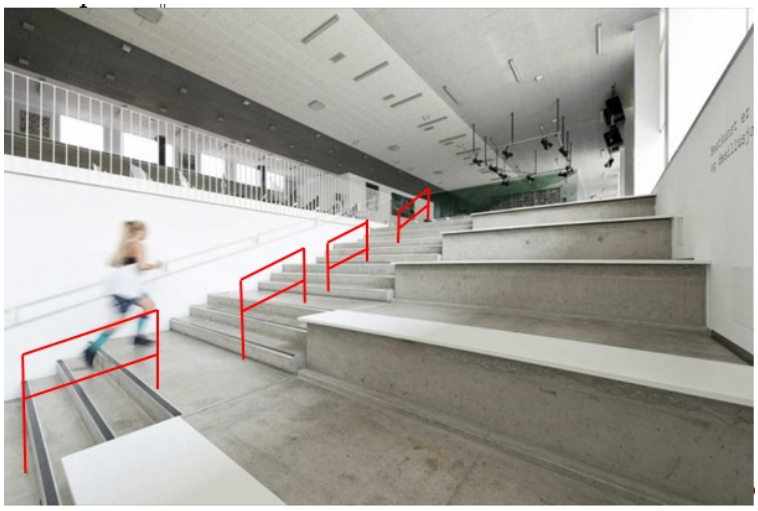


Figure 3

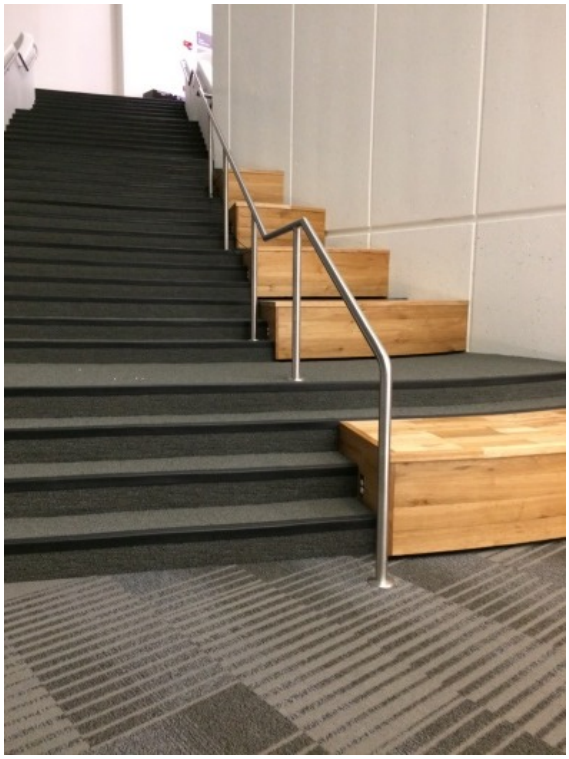


Figure 4

Cost Impact: The code change proposal will increase the cost of construction
In some situations, this could require a 2nd handrail for occupant safe egress on the stairways.

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: This is used in a variety of school environments so addressing this issue is needed. The handrail adjacent to this stairway seating arrangement should be the same as required for stepped aisles. Where the 2nd handrail is located needs to be clarified. There was a question on what was meant by the "handrail not located on a guard". Perhaps a definition of "stepped aisle" is needed. There were a couple of grammar errors that need to be fixed. (Vote 9-5)

Assembly Action: **None**

E106-18

Individual Consideration Agenda

Public Comment 1:

Proponent: Gene Boecker, representing Code Consultants, Inc. (geneb@codeconsultants.com)requests As Modified by This Public Comment.

Modify as follows:

2018 International Building Code

1029.16 Handrails. Ramped *aisles* having a slope exceeding one unit vertical in 15 units horizontal (6.7-percent slope) and stepped *aisles* shall be provided with *handrails* in compliance with Section 1014 located either at one or both sides of the *aisle* or within the *aisle* width. Where the stepped aisle have seating on one side and the aisle width is 74 inches (1880 mm) or greater, two handrails are required. Where two handrails are required, one of the handrails shall be within 30 inches horizontally of the ~~end of the~~ stepped aisle ~~accessways~~.

Exceptions:

1. *Handrails* are not required for ramped *aisles* with seating on both sides.
2. *Handrails* are not required where, at the side of the aisle, there is a *guard* with a top surface that complies with the graspability requirements of *handrails* in accordance with Section 1014.3.
3. *Handrail* extensions are not required at the top and bottom of stepped *aisles* and ramped *aisles* to permit crossovers within the *aisles*.

Commenter's Reason: The committee expressed a concern that guard and stepped aisle may not be understood. That is unlikely. A guard at the side of a stair is certainly something that has been provided as a part of the code for a long time. The only real concern was the language about how the location of the second handrail should be measured. That has been modified to address that concern.
This is a coe change that needs to be addressed. The current provisions of the code do not address what to do fro these types of stairways that are located all over the country; with more popping up everyday.

Cost Impact: The net effect of the public comment and code change proposal will increase the cost of construction
As noted in the original proposal the cost will be increased where a second handrail is required.

E106-18

E106-18

IBC: 1029.16, 1029.16.1, (IFC[BE] 1029.16. 1029.16.1)

Proposed Change as Submitted

Proponent: Ed Kulik, Chair, representing ICC Building Code Action Committee (bcac@iccsafe.org)

2018 International Building Code

Revise as follows

1029.16 Handrails. Ramped *aisles* having a slope exceeding one unit vertical in 15 units horizontal (6.7-percent slope) and stepped *aisles* shall be provided with *handrails* in compliance with Section 1014 located either at one or both sides of the *aisle* or within the *aisle* width. Where the stepped aisle have seating on one side and the aisle width is 74 inches (1880 mm) or greater, two handrails are required. Where two handrails are required, one of the handrails shall be within 30 inches horizontally of the end of the aisle accessways.

Exceptions:

1. *Handrails* are not required for ramped *aisles* with seating on both sides.
2. *Handrails* are not required where, at the side of the aisle, there is a *guard* with a top surface that complies with the graspability requirements of *handrails* in accordance with Section 1014.3.
3. *Handrail* extensions are not required at the top and bottom of stepped *aisles* and ramped *aisles* to permit crossovers within the *aisles*.

1029.16.1 Discontinuous handrails. Where there is seating on both sides of the aisle, the mid-aisle *handrails* shall be ~~discontinuous with~~ discontinuous. Where the stepped aisle is required to have two handrails, handrails not located on a guard or wall shall be discontinuous. The gaps or breaks at intervals shall not ~~exceeding~~ exceed five rows to facilitate access to seating and to permit crossing from one side of the *aisle* to the other. These gaps or breaks shall have a clear width of not less than 22 inches (559 mm) and not greater than 36 inches (914 mm), measured horizontally, and the mid-aisle *handrail* shall have rounded terminations or bends.

1029.16.2 Handrail termination. *Handrails* located on the side of stepped *aisles* shall return to a wall, *guard* or the walking surface or shall be continuous to the *handrail* of an adjacent stepped *aisle flight*.

1029.16.3 Mid-aisle termination. Mid-aisle *handrails* shall not extend beyond the lowest riser and shall terminate within 18 inches (381 mm), measured horizontally, from the lowest riser. *Handrail* extensions are not required.

Exception: Mid-aisle *handrails* shall be permitted to extend beyond the lowest riser where the *handrail* extensions do not obstruct the width of the cross *aisle*.

Reason: The social stairway is a new style being used in common areas of schools and multi-assembly buildings. It appears to fall somewhere between stairways and assembly seating. If this is considered a stairway next to platforms, the general requirement for handrails on both sides of the stairway prevents access to the platforms (Example 4). Considering this configuration as assembly seating would require one handrail with current text.
This proposal considers this arrangement as a type of assembly seating. The width would have to be determined using both the general circulation number from the upper/lower floor and the seating in accordance with Section 1029.6.1, which requires extra width if a handrail is not with 30”. By considering this assembly seating, accessible wheelchairs spaces would already be addressed. Drop offs along the top would have to meet guard provisions.

To address occupant safety, this proposal will require a mid-aisle handrail on wide stepped aisles in addition to the handrail on the wall. The reasoning for 74” was that we did not want either side of the handrails to create a width that was not readily useable (30” + 44” = 74”). The second handrail being within 30” of the edge of the platform allows flexibility in handrail placement, but still keeps the handrail within reach of persons moving off the platforms. Where there is not a cross aisle, the handrail would still have to have handrail extensions at the top and bottom, as well as meet all the other handrail provisions in Section 1014 and 1029.6. This 2nd handrails would typically not show up in stadium seating where aisles are typically less wide than specified here.

As you can see in the examples provided: Example 1 has two handrails, but with one on the far side of the platform. Example 4 a 2nd handrail blocks access to the platforms, so people either climb up the platforms, or go under the handrail. In example 2 and 3 a handrail is only provided on one side of the stairway, regardless of width. None of these

configuration would address stairway safety and access to the platforms. Example 3 has an example handrail drawn in red of what these requirements would add.

This proposal is submitted by the ICC Building Code Action Committee (BCAC). BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2017 the BCAC has held 3 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as w ell as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: https://www.iccsafe.org/codes-tech-support/codes/codedevelopment-process/building-code-action-committee-bcac.

Figure 1

Figure 2

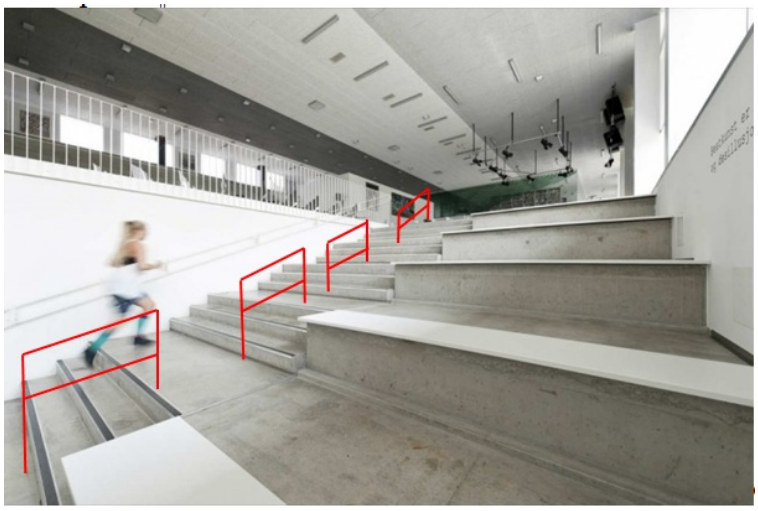


Figure 3

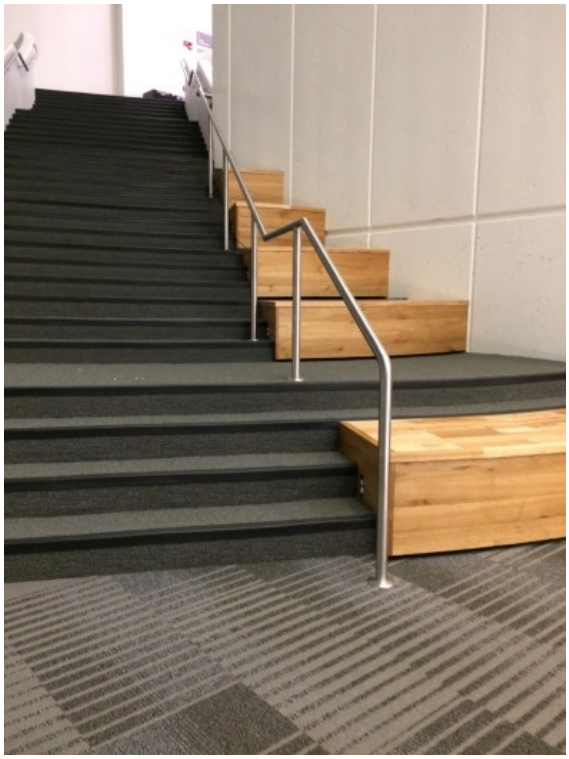


Figure 4

Cost Impact: The code change proposal will increase the cost of construction
In some situations, this could require a 2nd handrail for occupant safe egress on the stairways.

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: This is used in a variety of school environments so addressing this issue is needed. The handrail adjacent to this stairway seating arrangement should be the same as required for stepped aisles. Where the 2nd handrail is located needs to be clarified. There was a question on what was meant by the "handrail not located on a guard". Perhaps a definition of "stepped aisle" is needed. There were a couple of grammar errors that need to be fixed. (Vote 9-5)

Assembly Action: **None**

E106-18

Individual Consideration Agenda

Public Comment 2:

Proponent: Ed Kulik, representing ICC Building Code Action Committee (bcac@iccsafe.org)requests As Modified by This Public Comment.

Modify as follows:

2018 International Building Code

1029.16 Handrails. Ramped *aisles* having a slope exceeding one unit vertical in 15 units horizontal (6.7-percent slope) and stepped *aisles* shall be provided with *handrails* in compliance with Section 1014 located either at one or both sides of the *aisle* or within the *aisle* width. Where the stepped aisle ~~have~~ has seating on one side and the aisle width is 74 inches (1880 mm) or greater, two handrails are required. Where two handrails are required, one of the handrails shall be within 30 inches horizontally of the ~~end~~ side of the tiered floor adjacent to the stepped aisle ~~accessways~~.

Exceptions:

1. *Handrails* are not required for ramped *aisles* with seating on both sides.
2. *Handrails* are not required where, at the side of the aisle, there is a *guard* with a top surface that complies with the graspability requirements of *handrails* in accordance with Section 1014.3.
3. *Handrail* extensions are not required at the top and bottom of stepped *aisles* and ramped *aisles* to permit crossovers within the *aisles*.

1029.16.1 Discontinuous handrails. Where there is seating on both sides of the aisle, the mid-aisle *handrails* shall be discontinuous. Where the stepped aisle is required to have two handrails, ~~handrails not located on a guard or wall~~ the mid-aisle handrails shall be discontinuous. The gaps or breaks at intervals shall not ~~exceed five~~ exceed five rows to facilitate access to seating and to permit crossing from one side of the *aisle* to the other. These gaps or breaks shall have a clear width of not less than 22 inches (559 mm) and not greater than 36 inches (914 mm), measured horizontally, and the mid-aisle *handrail* shall have rounded terminations or bends.

1029.16.2 Handrail termination. *Handrails* located on the side of stepped *aisles* shall return to a wall, *guard* or the walking surface or shall be continuous to the *handrail* of an adjacent stepped *aisle flight*.

1029.16.3 Mid-aisle termination. Mid-aisle *handrails* shall not extend beyond the lowest riser and shall terminate within 18 inches (381 mm), measured horizontally, from the lowest riser. *Handrail* extensions are not required.

Exception: Mid-aisle *handrails* shall be permitted to extend beyond the lowest riser where the *handrail* extensions do not obstruct the width of the cross *aisle*.

Commenter's Reason: This new style of assembly seating is very common in schools and libraries. It is an important safety issue that needs to be addressed. It is hoped that these tweaks with clarify the requirements so this can be added to the code.
To address the committee's concerns:

The new text in Section 1029.16 and 1029.16.1 will allow for the mid aisle handrail to be the same as for stepped aisles. The term tiered floors will be understood because it is already used in Section 1029.5. The 74 was chosen as the point where a 2nd handrail in the width of the stepped aisle would still allow for movement up and down on each side of the handrail.

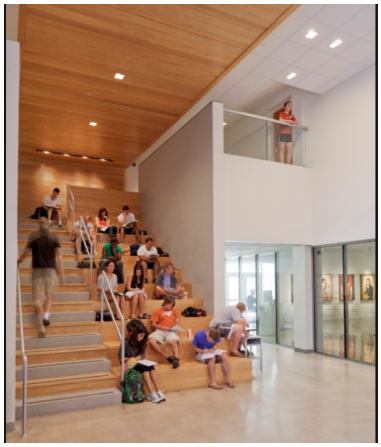
The end of the aisle accessways was chosen because the tiered platforms do not always contain seats to measure from. Since the seating areas at stepped aisles are tiered platforms (with or without seats), this may be clearer.

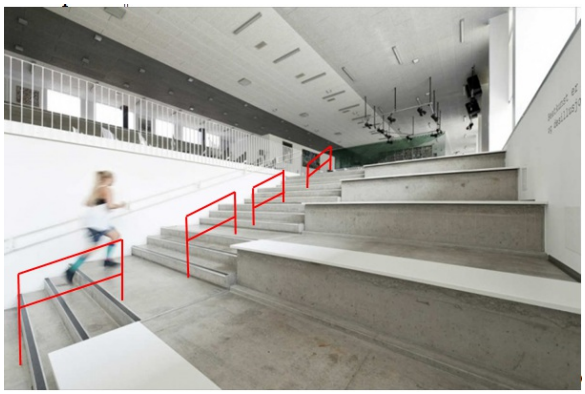
Handrails are permitted on the wall or as the top rail of a guard in Section 1029.16. Since the discontinuous handrail could be either at the edge of the seating platforms or in the stepped aisle, mid-aisle handrail is current language that is easier to understand.

Stepped aisles is not defined for assembly seating, but is clearly understood in the context of Section 1029. Aisle is a defined term.

The grammatical error mentioned by the committee of exceeding to exceed in Section 1029.16.1 was addressed as an editorial correction to the original proposal by ICC staff.

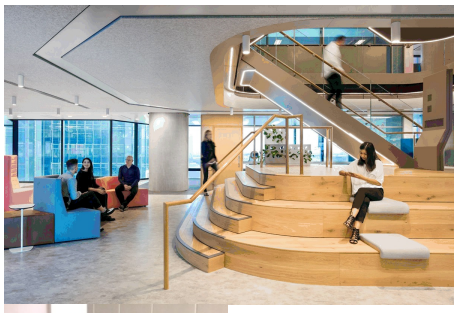
What we want to see:

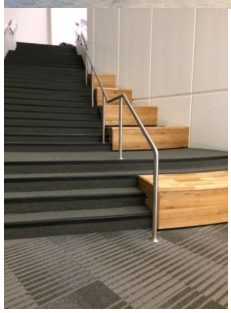




This is why we do not want continuous handrails where you want someone to access seating. This is a safety issue for when someone tries to climb up or down the tiers or goes over or under the handrail to access the seating areas. Discontinuous handrails already have requirements for maximum number of rows and maximum breaks that have worked with typical assembly seating for many decades.

This is what we do not want to see when you want access to seating.





Cost Impact: The net effect of the public comment and code change proposal will increase the cost of construction In some situations, this could require a 2nd handrail for occupant safe egress on the stairways.

E106-18

E58-18

IBC: 1010.1.9.8, 1010.1.10, (IFC[BE] 1010.1.9.8, 1010.1.10)

Proposed Change as Submitted

Proponent: Ed Kulik, Chair, representing ICC Building Code Action Committee (bcac@iccsafe.org)

2018 International Building Code

Revise as follows

1010.1.9.8 Delayed egress. Delayed egress locking systems shall be permitted to be installed on doors serving the following 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.

1. Group B, F, I, M, R, S and U occupancies.
2. Group E classrooms with an *occupant load* of less than 50.

   ~~**Exception:** Delayed~~

3. In a courthouse, delayed egress locking systems shall be permitted to be installed on exit or *exit access* doors, other than the main exit or *exit access* door, serving a Group A-3 courtroom in buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1.

1010.1.10 Panic and fire exit hardware. Swinging doors serving a Group H occupancy and swinging doors serving rooms or spaces with an *occupant load* of 50 or more in a Group A or E occupancy shall not be provided with a latch or lock other than *panic hardware* or *fire exit hardware*.

Exceptions:

1. A main exit of a Group A occupancy shall be permitted to have locking devices in accordance with Section 1010.1.9.4, Item 2.
2. Doors provided with *panic hardware* or *fire exit hardware* and serving a Group A or E occupancy shall be permitted to be electrically locked in accordance with Section 1010.1.9.9 or 1010.1.9.10.
3. Courtrooms shall be permitted to be locked in accordance with Section 1010.1.9.8, Item 3.

Electrical rooms with equipment rated 1,200 amperes or more and over 6 feet (1829 mm) wide, and that contain overcurrent devices, switching devices or control devices with exit or *exit access* doors, shall be equipped with *panic hardware* or *fire exit hardware*. The doors shall swing in the direction of egress travel.

Reason: This is only a format issue resulting from the multiple changes last cycle to the delayed egress locks - E66-15 AMPC1, E68-15 AM/AMPC1, E69-15 AS. The allowance for courtrooms, while logical, is out of place as an exception to Items 1 and 2 in Section 1010.1.9.8.
Correlation with Section 1010.1.9.8 in Section 1010.1.10 is needed because this is Group A where panic hardware is otherwise required.

This proposal is submitted by the ICC Building Code Action Committee (BCAC). BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2017 the BCAC has held 3 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as w ell as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: https://www.iccsafe.org/codes-tech-support/codes/codedevelopment-process/building-code-action-committee-bcac.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This is a format revision with no change to technical criteria.

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: While it is appropriate to make the exception a third item, courtrooms are found in both office buildings (Group B) and courthouses (Group A-3). The proposal should be brought back with a public comment to address this issue. (Vote 13-1)

Assembly Action: **None**

E58-18

Individual Consideration Agenda

Public Comment 1:

Proponent: Ed Kulik, representing ICC Building Code Action Committee (bcac@iccsafe.org)requests As Modified by This Public Comment.

Modify as follows:

2018 International Building Code

1010.1.9.8 Delayed egress. Delayed egress locking systems shall be permitted to be installed on doors serving the following 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.

1. Group B, F, I, M, R, S and U occupancies.
2. Group E classrooms with an *occupant load* of less than 50.

3. In ~~a courthouse~~ courtrooms in Group A-3 and B occupancies, delayed egress locking systems shall be permitted to be installed on exit or *exit access* doors, other than the main exit or *exit access* door, ~~serving a Group A-3 courtroom~~ in buildings that are equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1.

Commenter's Reason: This allowance is already permitted with the current text. The original proposal was editorial only.
The modification is because courtrooms can occur in government office buildings, such as traffic court. The same security concerns exist in all courtrooms, so it appropriate to include these facilities in the proposal. Unlike Section 1010.1.9.8, the new language in 1010.1.10 is a reference only, so no further revisions are needed.

Cost Impact: The net effect of the public comment and code change proposal will not increase or decrease the cost of construction
This is a format revision with no change to technical criteria.

E58-18

E58-18

IBC: 1010.1.9.8, 1010.1.10, (IFC[BE] 1010.1.9.8, 1010.1.10)

Proposed Change as Submitted

Proponent: Ed Kulik, Chair, representing ICC Building Code Action Committee (bcac@iccsafe.org)

2018 International Building Code

Revise as follows

1010.1.9.8 Delayed egress. Delayed egress locking systems shall be permitted to be installed on doors serving the following 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.

1. Group B, F, I, M, R, S and U occupancies.
2. Group E classrooms with an *occupant load* of less than 50.

   ~~**Exception:** Delayed~~

3. In a courthouse, delayed egress locking systems shall be permitted to be installed on exit or *exit access* doors, other than the main exit or *exit access* door, serving a Group A-3 courtroom in buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1.

1010.1.10 Panic and fire exit hardware. Swinging doors serving a Group H occupancy and swinging doors serving rooms or spaces with an *occupant load* of 50 or more in a Group A or E occupancy shall not be provided with a latch or lock other than *panic hardware* or *fire exit hardware*.

Exceptions:

1. A main exit of a Group A occupancy shall be permitted to have locking devices in accordance with Section 1010.1.9.4, Item 2.
2. Doors provided with *panic hardware* or *fire exit hardware* and serving a Group A or E occupancy shall be permitted to be electrically locked in accordance with Section 1010.1.9.9 or 1010.1.9.10.
3. Courtrooms shall be permitted to be locked in accordance with Section 1010.1.9.8, Item 3.

Electrical rooms with equipment rated 1,200 amperes or more and over 6 feet (1829 mm) wide, and that contain overcurrent devices, switching devices or control devices with exit or *exit access* doors, shall be equipped with *panic hardware* or *fire exit hardware*. The doors shall swing in the direction of egress travel.

Reason: This is only a format issue resulting from the multiple changes last cycle to the delayed egress locks - E66-15 AMPC1, E68-15 AM/AMPC1, E69-15 AS. The allowance for courtrooms, while logical, is out of place as an exception to Items 1 and 2 in Section 1010.1.9.8.
Correlation with Section 1010.1.9.8 in Section 1010.1.10 is needed because this is Group A where panic hardware is otherwise required.

This proposal is submitted by the ICC Building Code Action Committee (BCAC). BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2017 the BCAC has held 3 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as w ell as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: https://www.iccsafe.org/codes-tech-support/codes/codedevelopment-process/building-code-action-committee-bcac.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This is a format revision with no change to technical criteria.

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: While it is appropriate to make the exception a third item, courtrooms are found in both office buildings (Group B) and courthouses (Group A-3). The proposal should be brought back with a public comment to address this issue. (Vote 13-1)

Assembly Action: **None**

E58-18

Individual Consideration Agenda

Public Comment 2:

Proponent: Crystal Sujeski, representing Crystal Sujeski (crystal.sujeski@fire.ca.gov)requests As Modified by This Public Comment.

Modify as follows:

2018 International Building Code

1010.1.9.8 Delayed egress. Delayed egress locking systems shall be permitted to be installed on doors serving the following 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.

1. Group B, F, I, M, R, S and U occupancies..
2. Group E classrooms with an occupant load of less than 50.
3. In ~~a courthouse~~ Group A courthouses and court services within a Group B occupancy, delayed egress locking systems shall be permitted to be installed on exit or *exit access* doors, other than the main exit or exit access door~~, serving a Group A-3 courtroom in buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1~~.

Commenter's Reason: The following modification has been proposed to E58-18 to clarify that courtrooms are not a B occupancy but there can be court services within a B occupancy building and shall be permitted to have delayed egress.

Cost Impact: The net effect of the public comment and code change proposal will not increase or decrease the cost of construction
There will no cost effect

E58-18

E22-18

IBC: SECTION TABLE 1006.3.2, TABLE 1006.3.3(1), TABLE 1006.3.3(2), (IFC[BE] TABLE 1006.3.2, TABLE 1006.3.3(1), TABLE 1006.3.3(2))

Proposed Change as Submitted

Proponent: Ed Kulik, Chair, representing ICC Building Code Action Committee (bcac@iccsafe.org)

2018 International Building Code

Revise as follows

~~SECTION~~ 1006 NUMBER OF EXITS AND EXIT ACCESS DOORWAYS

1006.3 Egress from stories or occupied roofs. The *means of egress* system serving any *story* or occupied roof shall be provided with the number of separate and distinct *exits* or access to *exits* based on the aggregate *occupant load* served in accordance with this section. Where *stairways* serve more than one *story*, only the *occupant load* of each *story* considered individually shall be used in calculating the required number of *exits* or access to *exits* serving that *story*.

1006.3.2 Egress based on occupant load. Each *story* and occupied roof shall have the minimum number of separate and distinct *exits*, or access to *exits*, as specified in Table 1006.3.2. 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 or occupied roof shall be maintained until arrival at the *exit discharge* or a *public way*.

TABLE 1006.3.2
MINIMUM NUMBER OF EXITS OR ACCESS TO EXITS PER STORY OR OCCUPIED ROOF

OCCUPIED LOAD PER STORY	MINIMUM NUMBER OF EXITS OR ACCESS TO EXITS ~~FROM~~ PER STORY OR OCCUPIED ROOF
1-500	2
501-1,000	3
More than 1,000	4

1006.3.3 Single exits. 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*, number of *dwelling units* and common path of egress travel distance do not exceed the values in Table 1006.3.3(1) or 1006.3.3(2).
2. Rooms, areas and spaces complying with Section 1006.2.1 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*.
3. Parking garages where vehicles are mechanically parked shall be permitted to have one *exit* or access to a single *exit*.
4. Group R-3 and R-4 occupancies shall be permitted to have one *exit* or access to a single *exit*.
5. Individual single-story or multistory *dwelling units* shall be permitted to have a single *exit* or access to a single *exit* from the *dwelling unit* provided that both of the following criteria are met:

    5.1. The *dwelling unit* complies with Section 1006.2.1 as a space with one *means of egress*.
    5.2. 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 1006.3.3(1)
STORIES AND OCCUPIED ROOFS WITH ONE EXIT OR ACCESS TO ONE EXIT FOR R-2 OCCUPANCIES

STORY AND OCCUPIED ROOF	**OCCUPANCY**	**MAXIMUM NUMBER OF DWELLING UNITS**	**MAXIMUM COMMON PATH OF EGRESS TRAVEL DISTANCE**
Basement, first, second or third story above grade plane	R-2[a, b]	4 dwelling units	125 feet
Occupied roof over the first, second or third story above grade plane	R-2 [a, b]	NA	125 feet
Fourth story above grade plane and higher	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 1030.
b. This table is used for R-2 occupancies consisting of *dwelling units.* For R-2 occupancies consisting of *sleeping units*, use Table 1006.3.3(2).

TABLE 1006.3.3(2)
STORIES AND OCCUPIED ROOFS WITH ONE EXIT OR ACCESS TO ONE EXIT FOR OTHER OCCUPANCIES

STORY AND OCCUPIED ROOF	**OCCUPANCY**	**MAXIMUM OCCUPANT LOAD PER STORY AND OCCUPIED ROOF**	**MAXIMUM COMMON PATH OF EGRESS TRAVEL DISTANCE (feet)**
First story above or below grade plane and occupied roofs over the first story above grade plane	A, B[b], E F[b], M, U	49	75
	H-2, H-3	3	25
	H-4, H-5, I, R-1, R-2[a, c]	10	75
	S[b, d]	29	75
Second story above grade plane and occupied roof over the second story above grade plane	B, F, M, S[d]	29	75
Third story above grade plane and higher	NP	NA	NA

For SI: 1 foot = 304.8 mm.

NP = Not Permitted.

NA = Not Applicable.

a. Buildings classified as Group R-2 equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2 and provided with *emergency escape and rescue openings* in accordance with Section 1030.
b. Group B, F and S occupancies in buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or on the roof of such buildings shall have a maximum *exit access* travel distance of 100 feet.
c. This table is used for R-2 occupancies consisting of *sleeping units.* For R-2 occupancies consisting of *dwelling units*, use Table 1006.3.3(1).
d. The length of *exit access* travel distance in a Group S-2 *open parking garage* shall be not more than 100 feet.

Reason: This is part of a series of 3 proposals dealing with occupied roofs. See BCAC proposals to the definition of penthouse and Section 1009.
The change to the title and heading in Table 1006.3.2 is for consistency with the text.

The proposed modifications to Section 1006 includes adding 'occupied roofs' to Table 1006.3.3(1) to clarify the conditions in which one exit or access to one exit is allowed for Group R-2 occupancies. The tables are modified to clarify that the occupied roofs are allowed 'over the allowable stories.'

Similarly this proposal adds 'occupied roofs' to Table 1006.3.3(2) to clarify the conditions in which one exit or access to one exit is allowed for the other occupancies. The table was also modified to clarify that the occupied roofs are allowed 'over the allowable stories.' A proposed modification to footnote b or the table clarifies that the allowable increase in exit access travel distance from 75 feet to 100 feet for properly sprinklered Group B, F and S occupancies also includes the roof area for these uses.

This proposal is submitted by the ICC Building Code Action Committee (BCAC). BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2017 the BCAC has held 3 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as w ell as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: https://www.iccsafe.org/codes-tech-support/codes/codedevelopment-process/building-code-action-committee-bcac.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This proposal provides clarification to a subject that was not previously addressed. The changes to the single occupant tables could allow for one exit stairway from an occupied roof instead of two.

E22-18

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: Where an occupied roof can have a single exit is an issue that needs to be addressed, however, in Table 1006.3.3(1) and 1006.3.3(2) the proposal would allow a single exit roof over what was previously allowed as a single exit story. The roof should be treated as a story and limited as such for a single exit – match the current allowed height rather than exceed the current height limits. (Vote: 9-5)

Assembly Action: **None**

E22-18

Individual Consideration Agenda

Public Comment 1:

Proponent: Ed Kulik, representing ICC Building Code Action Committee (bcac@iccsafe.org)requests As Modified by This Public Comment.

Modify as follows:

2018 International Building Code

TABLE 1006.3.3(1)
STORIES AND OCCUPIED ROOFS WITH ONE EXIT OR ACCESS TO ONE EXIT FOR R-2 OCCUPANCIES

STORY AND OCCUPIED ROOF	**OCCUPANCY**	**MAXIMUM NUMBER OF DWELLING UNITS**	**MAXIMUM COMMON PATH OF EGRESS TRAVEL DISTANCE**
Basement, first~~,~~ or second ~~or third~~ story above grade plane	R-2[a, b]	4 dwelling units	125 feet
Occupied roof over the first, second or third story above grade plane	R-2 [a, b]	NA	125 feet
Fourth story above grade plane and higher	NP	NA	NA
Occupied roof over third story above grade plane and higher	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 1030.
b.This table is used for R-2 occupancies consisting of *dwelling units.* For R-2 occupancies consisting of *sleeping units*, use Table 1006.3.3(2).

TABLE 1006.3.3(2)
STORIES AND OCCUPIED ROOFS WITH ONE EXIT OR ACCESS TO ONE EXIT FOR OTHER OCCUPANCIES

STORY AND OCCUPIED ROOF	**OCCUPANCY**	MAXIMUM OCCUPANT	LOAD PER STORY AND OCCUPIED ROOF
First story above or below grade plane and occupied roofs over the first story above grade plane	A, B[b], E F[b], M, U	49	75
	H-2, H-3	3	25
	H-4, H-5, I, R-1, R-2[a, c]	10	75
	S[b, d]	29	75
Second story above grade plane ~~and occupied roof over the second story above grade plane~~	B, F, M, S[d]	29	75
Third story above grade plane and higher	NP	NA	NA

For SI:
1 foot = 304.8 mm.

NP = Not Permitted.

NA = Not Applicable.

a.Buildings classified as Group R-2 equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2 and provided with *emergency escape and rescue openings* in accordance with Section 1030.
b.Group B, F and S occupancies in buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or on the occupied roof of such buildings shall have a maximum *exit access* travel distance of 100 feet.
c.This table is used for R-2 occupancies consisting of *sleeping units.* For R-2 occupancies consisting of *dwelling units*, use Table 1006.3.3(1).
d.The length of *exit access* travel distance in a Group S-2 *open parking garage* shall be not more than 100 feet.

Commenter's Reason: Per Section 1006.3, and occupied roof is treated as a story for purposes of means of egress. The change to Table 1006.3.2 is needed for consistency with that text.
The revisions for the single exit tables is to clarify where a single exit is permitted from an occupied roof. The original proposal allowed for a single exit roof over any single exit story. The modification would allow for a single exit roof above a single story building since that is the same vertical travel distance as permitted for a basement. The upper limit for two and three story buildings has been revised to only allow for a single exit roof at the same height as currently permitted for a single exit story.

The revisions to the footnotes under Table 1006.3.3(2) is for consistent language.

Cost Impact: The net effect of the public comment and code change proposal will decrease the cost of construction
This proposal provides clarification to a subject that was not previously addressed. The changes to the single occupant tables could allow for one exit stairway from an occupied roof instead of two.

E22-18

G136-18

IBC: 202, 503.1.4, 1510.2.2

Proposed Change as Submitted

Proponent: Ed Kulik, Chair, representing ICC Building Code Action Committee (bcac@iccsafe.org)

2018 International Building Code

SECTION 202 DEFINITIONS

Revise as follows

~~**[BG]**~~ **PENTHOUSE.** An enclosed, unoccupied rooftop structure used for sheltering mechanical and electrical equipment, tanks, elevators and related machinery, stairways and vertical shaft openings.

503.1.4 Occupied roofs. A roof level or portion thereof shall be permitted to be used as an occupied roof provided the occupancy of the roof is an occupancy that is permitted by Table 504.4 for the story immediately below the roof. The area of the occupied roofs shall not be included in the *building area* as regulated by Section 506. An occupied roof shall not be included in the building height or number of stories as regulated by Section 504 provided the penthouses and other enclosed roof structures comply with Section 1510.

Exceptions:

1. The occupancy located on an occupied roof shall not be limited to the occupancies allowed on the *story* immediately below the roof where the building is equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2 and occupant notification in accordance with Section 907.5 is provided in the area of the occupied roof.
2. Assembly occupancies shall be permitted on roofs of open parking spaces of Type I or Type II construction, in accordance with the exception to Section 903.2.1.6.

SECTION 1510 ROOFTOP STRUCTURES

[BG] 1510.1 General. The provisions of this section shall govern the construction of rooftop structures.

1510.1.1 Area limitation. The aggregate area of penthouses and other enclosed rooftop structures shall not exceed one-third the area of the supporting roof deck. Such penthouses and other enclosed rooftop structures shall not be required to be included in determining the building area or number of stories as regulated by Section 503.1. The area of such penthouses shall not be included in determining the fire area specified in Section 901.7.

[BG] 1510.2 Penthouses. Penthouses in compliance with Sections 1510.2.1 through 1510.2.5 shall be considered as a portion of the story directly below the roof deck on which such penthouses are located. Other penthouses shall be considered as an additional story of the building.

[BG] 1510.2.1 Height above roof deck. Penthouses constructed on buildings of other than Type I construction shall not exceed 18 feet (5486 mm) in height above the roof deck as measured to the average height of the roof of the penthouse. Penthouses located on the roof of buildings of Type I construction shall not be limited in height.

Exception: Where used to enclose tanks or elevators that travel to the roof level, penthouses shall be permitted to have a maximum height of 28 feet (8534 mm) above the roof deck.

~~**[BG]**~~ **1510.2.2 Use limitations.** Penthouses shall not be used for purposes other than the shelter of mechanical or electrical equipment, tanks, elevators and related machinery, stairways or vertical shaft openings in the roof ~~assembly.~~assembly, including ancillary spaces used to access elevators and stairways.

Reason: This is part of a series of 3 proposals dealing with occupied roofs. See BCAC proposals to Section 1006 and 1009.
Although it was felt the original intent of the egress associated with occupied roofs was clear, we felt there were a few remaining provisions that left doubt as to what was intended. It had been reported that some code officials had interpreted the existing code provision to treat an unoccupied roof as an additional story so as to decrease the actual

allowable stories in Chapter 5. To clarify that occupied roofs are not considered stories and are permitted to be used provide that egress is provided in accordance with all applicable sections of the IBC and IFC purposes in a manner “as if they were a story” without applying other “story” requirements like those associated with height and area limitations in Chapter 5 or fire area provisions of Chapter 9, we propose the above modifications as summarized below:

In Section 202, the definition of “PENTHOUSE” is proposed to be modified by adding the word “stairway”. This reinforces the existing and proposed language in Section 1510 that excludes certain allowable rooftop structures from being considered additional stories. The definition was not modified to include vestibule type areas as this is addressed in the proposed change to Section 1510.2.2.

The proposal in Section 503.1.4 Occupied roofs, adds a clarifying statement to support the concept that occupied roofs and other enclosed structures in Section 1510 are not an additional story.

Proposed modifications to Section 1510 Rooftop Structures include the additions of the word “Stairways” and the term, including ancillary spaces used to access elevators and stairways.” to Section 1510.2.2. Use Limitations.

As flat/ low-slope rooftops are increasingly, and intentionally, being designed and utilized for occupancies similar to those on occupied floor levels below, modifications to the current code are necessary to define *rooftop structures* that are occupied and ancillary to approved occupied roof uses and to clarify that these structures must comply with means of egress requirements, but are not a story for height and area limitations. In addition, the proposed modifications described above align the limitations for *Occupied roof ancillary structures* with those for penthouses as a reasonable approach based upon the shared characteristics of the two structure types.

This proposal is submitted by the ICC Building Code Action Committee (BCAC). BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2017 the BCAC has held 3 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as w ell as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: https://www.iccsafe.org/codes-tech-support/codes/codedevelopment-process/building-code-action-committee-bcac.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This proposal is a clarification reminder of the scope of requirements included in the identified sections.

G136-18

Public Hearing Results

Committee Action: **As Submitted**

Committee Reason: This is an excellent clarification of the code and is coordinated with what was done in the last cycle. (Vote: 14-0)

Assembly Action: **None**

G136-18

Individual Consideration Agenda

Public Comment 1:

Proponent: John Woestman, Kellen Company, representing Extruded Polystyrene Foam Association (XPSA) (jwoestman@kellencompany.com)requests As Modified by This Public Comment.

Modify as follows:

2018 International Building Code

Occupied Roof An unenclosed roof or area of a roof designed for human occupancy in which individuals congregate for amusement, educational or similar purposes or in which occupants are engaged at labor, and which is equipped with means of egress meeting the requirements of this code.

Commenter's Reason: There needs to be a clear definition of an occupied roof to help alleviate confusion with the definition of occupiable space. A roof is not an enclosed space, therefore the thermal barrier requirements, smoke development index, etc., used with interior finishes in an enclosed space does not apply. Rather, the occupied roof is constructed as a roof meeting the Occupancy Classification and Use in Section 302.1, height and area limitations in Section 503.1, as well as structural and egress requirements as specified by the code. The existing roof fire requirements in IBC Sections 1505.1, 1508.1, 2603.3 Exception 3, 2603.4.1.5 and 2603.6 also apply to occupied roofs.

Cost Impact: The net effect of the public comment and code change proposal will not increase or decrease the cost of construction
Adding a definition should not increase or decrease the cost of construction.

G136-18

E30-18

IBC: 1009.2.1, (IFC[BE] 1009.2.1)

Proposed Change as Submitted

Proponent: Micah Chappell, representing City of Seattle (micah.chappell@seattle.gov)

2018 International Building Code

Revise as follows

1009.2.1 Elevators required. In buildings where a required *accessible* floor or occupied roof is four or more stories above or below a *level of exit discharge*, not less than one required *accessible means of egress* shall be an elevator complying with Section 1009.4.

Exceptions:

1. In buildings equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2, the elevator shall not be required on floors provided with a *horizontal exit* and located at or above the *levels of exit discharge*.
2. In buildings equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2, the elevator shall not be required on floors provided with a *ramp* conforming to the provisions of Section 1012.

Reason: The code recognizes that there are practical limits to complete reliance on assisted evacuation of building occupants by fire personnel because of the limited availability of trained personnel or special devices. As a result, current ICC language requires an elevator be part of the accessible means of egress starting with the 4th story above the level of exit discharge (See 1009.2.1). Occupied roofs at the same level do not currently have this same requirement. The vertical travel distance encountered by a fire fighter performing an assisted rescue is the same whether the occupants are on an occupied roof on the 4th floor above the level of exit discharge or whether they are on the floor of the 4th story above the level of exit discharge within the building. As occupied roofs become more popular this becomes more of an issue for building departments around the country.
Occupied roofs at four or more stories above the level of exit discharge should be treated like occupied floors at the same level in the building. The occupant loads and hazards are similar between occupied roofs and occupied floors, the benefits to occupants and fire personnel from an elevator with emergency back-up power are similar, and a similar approach has been taken in other sections of the building code (see IBC Chapter 10 1006.3, 1006.3.2, and 1006.3.3). The 2018 IBC 1104.4 also requires at least one accessible route to each accessible story, mezzanine and occupied roof in multilevel buildings and facilities. If the requirements for an accessible route to the accessible level treat the occupied roof and accessible floor in the same manner, it is logical to conclude that the same level of protection for the accessible means of egress from an occupied roof should be required.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This proposal clarifies the current intent of the accessible means of egress provisions of IBC 1009.2.1. The added language clarifies that an area of refuge and emergency power/legally required standby power must be provided per IBC 1009.4 for an occupied roof that is four or more stories above the level of exit discharge.

No fiscal impact.

E30-18

Public Hearing Results

Committee Action: **As Submitted**

Committee Reason: This tells you when standby power is required for an elevator for building with an occupied roof. Occupied roofs are not currently addressed. The vertical distance for assisted rescue for a roof on the top of a 4 story building is the same as a 5th floor, so standby power should be required. Separate provisions for the occupied roof, to avoid confusion over if the occupied roof is a story, floor or level, would make this cleaner. There is an question with the current exception for horizontal exits as an alternative for standby power being permitted on lower floors, which would not be buildable on the roof. Occupied roofs, by being open to the outside air, may be safer than the floor with horizontal exits. See E29-18. (Vote: 8-7)

Assembly Action: **None**

E30-18

Individual Consideration Agenda

Public Comment 1:

Proponent: Micah Chappell, representing Seattle Department of Construction and Inspection (micah.chappell@seattle.gov)requests As Modified by This Public Comment.

Modify as follows:

2018 International Building Code

1009.2.1 Elevators required. In buildings where a required *accessible* floor or occupied roof is four or more stories above or below a *level of exit discharge*, not less than one required *accessible means of egress* shall be an elevator complying with Section 1009.4.

Exceptions:

1. In buildings equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2, the elevator shall not be required on floors or occupied roof provided with a *horizontal exit* and located at or above the *levels of exit discharge*.
2. In buildings equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2, the elevator shall not be required on floors provided with a *ramp* conforming to the provisions of Section 1012.

Commenter's Reason: Original proposal was approved by Committee. See 2018 Committee Action Hearing for original reason statement.
This modification coordinates the charging language change approved at the CAH with Exception 1.

Exception 1 acknowledges that a building that is fully sprinklered and a horizontal exit provides an acceptable level of protection. That level of protection is also achieved with an occupied roof meeting these criteria thus the exception should apply.

Cost Impact: The net effect of the public comment and code change proposal will not increase or decrease the cost of construction
No fiscal impact.

E30-18

E30-18

IBC: 1009.2.1, (IFC[BE] 1009.2.1)

Proposed Change as Submitted

Proponent: Micah Chappell, representing City of Seattle (micah.chappell@seattle.gov)

2018 International Building Code

Revise as follows

1009.2.1 Elevators required. In buildings where a required *accessible* floor or occupied roof is four or more stories above or below a *level of exit discharge*, not less than one required *accessible means of egress* shall be an elevator complying with Section 1009.4.

Exceptions:

1. In buildings equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2, the elevator shall not be required on floors provided with a *horizontal exit* and located at or above the *levels of exit discharge*.
2. In buildings equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2, the elevator shall not be required on floors provided with a *ramp* conforming to the provisions of Section 1012.

Reason: The code recognizes that there are practical limits to complete reliance on assisted evacuation of building occupants by fire personnel because of the limited availability of trained personnel or special devices. As a result, current ICC language requires an elevator be part of the accessible means of egress starting with the 4th story above the level of exit discharge (See 1009.2.1). Occupied roofs at the same level do not currently have this same requirement. The vertical travel distance encountered by a fire fighter performing an assisted rescue is the same whether the occupants are on an occupied roof on the 4th floor above the level of exit discharge or whether they are on the floor of the 4th story above the level of exit discharge within the building. As occupied roofs become more popular this becomes more of an issue for building departments around the country.
Occupied roofs at four or more stories above the level of exit discharge should be treated like occupied floors at the same level in the building. The occupant loads and hazards are similar between occupied roofs and occupied floors, the benefits to occupants and fire personnel from an elevator with emergency back-up power are similar, and a similar approach has been taken in other sections of the building code (see IBC Chapter 10 1006.3, 1006.3.2, and 1006.3.3). The 2018 IBC 1104.4 also requires at least one accessible route to each accessible story, mezzanine and occupied roof in multilevel buildings and facilities. If the requirements for an accessible route to the accessible level treat the occupied roof and accessible floor in the same manner, it is logical to conclude that the same level of protection for the accessible means of egress from an occupied roof should be required.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This proposal clarifies the current intent of the accessible means of egress provisions of IBC 1009.2.1. The added language clarifies that an area of refuge and emergency power/legally required standby power must be provided per IBC 1009.4 for an occupied roof that is four or more stories above the level of exit discharge.

No fiscal impact.

E30-18

Public Hearing Results

Committee Action: **As Submitted**

Committee Reason: This tells you when standby power is required for an elevator for building with an occupied roof. Occupied roofs are not currently addressed. The vertical distance for assisted rescue for a roof on the top of a 4 story building is the same as a 5th floor, so standby power should be required. Separate provisions for the occupied roof, to avoid confusion over if the occupied roof is a story, floor or level, would make this cleaner. There is an question with the current exception for horizontal exits as an alternative for standby power being permitted on lower floors, which would not be buildable on the roof. Occupied roofs, by being open to the outside air, may be safer than the floor with horizontal exits. See E29-18. (Vote: 8-7)

Assembly Action: **None**

E30-18

Individual Consideration Agenda

Public Comment 2:

Proponent: Micah Chappell, representing Seattle Department of Construction and Inspection (micah.chappell@seattle.gov)requests As Modified by This Public Comment.

Modify as follows:

2018 International Building Code

1009.2.1 Elevators required. In buildings where a required *accessible* floor or occupied roof is four or more stories above or below a *level of exit discharge*, not less than one required *accessible means of egress* shall be an elevator complying with Section 1009.4.

Exceptions:

1. In buildings equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2, the elevator shall not be required on floors provided with a *horizontal exit* and located at or above the *levels of exit discharge*.
2. In buildings equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2, the elevator shall not be required on floors <u>or occupied roof</u> provided with a *ramp* conforming to the provisions of Section 1012.

Commenter's Reason: Original proposal was approved by Committee. See 2018 Committee Action Hearing for original reason statement.
This modification coordinates the charging language change approved at the CAH with Exception 2.

Exception 2 applies where sprinklers are provided, and the ramp provides an adequate route down for assisted rescue. That level of protection is also achieved with an occupied roof meeting these criteria thus the exception should apply.

Cost Impact: The net effect of the public comment and code change proposal will not increase or decrease the cost of construction
No fiscal impact.

E30-18

E30-18

IBC: 1009.2.1, (IFC[BE] 1009.2.1)

Proposed Change as Submitted

Proponent: Micah Chappell, representing City of Seattle (micah.chappell@seattle.gov)

2018 International Building Code

Revise as follows

1009.2.1 Elevators required. In buildings where a required *accessible* floor or occupied roof is four or more stories above or below a *level of exit discharge*, not less than one required *accessible means of egress* shall be an elevator complying with Section 1009.4.

Exceptions:

1. In buildings equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2, the elevator shall not be required on floors provided with a *horizontal exit* and located at or above the *levels of exit discharge*.
2. In buildings equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2, the elevator shall not be required on floors provided with a *ramp* conforming to the provisions of Section 1012.

Reason: The code recognizes that there are practical limits to complete reliance on assisted evacuation of building occupants by fire personnel because of the limited availability of trained personnel or special devices. As a result, current ICC language requires an elevator be part of the accessible means of egress starting with the 4th story above the level of exit discharge (See 1009.2.1). Occupied roofs at the same level do not currently have this same requirement. The vertical travel distance encountered by a fire fighter performing an assisted rescue is the same whether the occupants are on an occupied roof on the 4th floor above the level of exit discharge or whether they are on the floor of the 4th story above the level of exit discharge within the building. As occupied roofs become more popular this becomes more of an issue for building departments around the country.
Occupied roofs at four or more stories above the level of exit discharge should be treated like occupied floors at the same level in the building. The occupant loads and hazards are similar between occupied roofs and occupied floors, the benefits to occupants and fire personnel from an elevator with emergency back-up power are similar, and a similar approach has been taken in other sections of the building code (see IBC Chapter 10 1006.3, 1006.3.2, and 1006.3.3). The 2018 IBC 1104.4 also requires at least one accessible route to each accessible story, mezzanine and occupied roof in multilevel buildings and facilities. If the requirements for an accessible route to the accessible level treat the occupied roof and accessible floor in the same manner, it is logical to conclude that the same level of protection for the accessible means of egress from an occupied roof should be required.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This proposal clarifies the current intent of the accessible means of egress provisions of IBC 1009.2.1. The added language clarifies that an area of refuge and emergency power/legally required standby power must be provided per IBC 1009.4 for an occupied roof that is four or more stories above the level of exit discharge.

No fiscal impact.

E30-18

Public Hearing Results

Committee Action: **As Submitted**

Committee Reason: This tells you when standby power is required for an elevator for building with an occupied roof. Occupied roofs are not currently addressed. The vertical distance for assisted rescue for a roof on the top of a 4 story building is the same as a 5th floor, so standby power should be required. Separate provisions for the occupied roof, to avoid confusion over if the occupied roof is a story, floor or level, would make this cleaner. There is an question with the current exception for horizontal exits as an alternative for standby power being permitted on lower floors, which would not be buildable on the roof. Occupied roofs, by being open to the outside air, may be safer than the floor with horizontal exits. See E29-18. (Vote: 8-7)

Assembly Action: **None**

E30-18

Individual Consideration Agenda

Public Comment 3:

Proponent: Ed Kulik, representing ICC Building Code Action Committee (bcac@iccsafe.org)requests As Modified by This Public Comment.

Modify as follows:

2018 International Building Code

1009.2.1 Elevators required. In buildings where a required *accessible* floor ~~or occupied roof~~ is four or more stories above or below a *level of exit discharge or where an accessible occupied roof is above a story that is three or more stories above the level of exit discharge*, not less than one required *accessible means of egress* shall be an elevator complying with Section 1009.4.

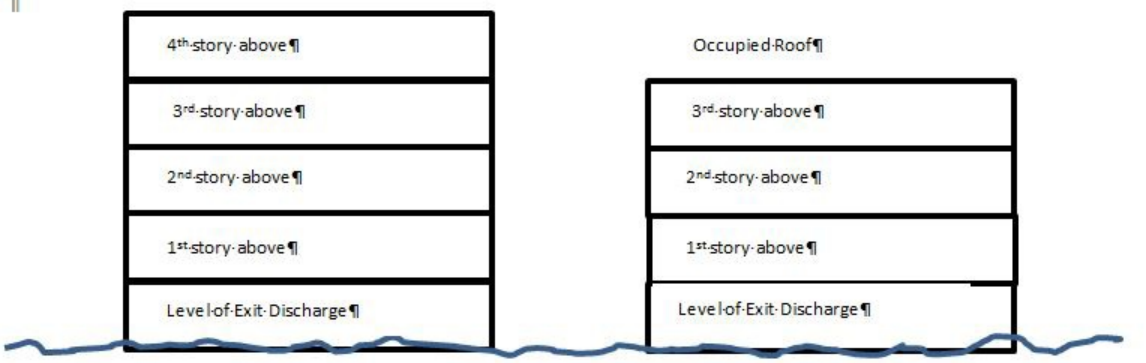
Exceptions:

1. In buildings equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2, the elevator shall not be required on floors provided with a *horizontal exit* and located at or above the *levels of exit discharge*.
2. In buildings equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2, the elevator shall not be required on floors provided with a *ramp* conforming to the provisions of Section 1012.

Commenter's Reason: The new language is confusing. An occupied roof is not a story. Therefore, to be clear, the requirement for an occupied roof should be dealt with separately. It is not the intent of this public comment to change to result of what was voted approved by the MOE Code Development Committee.

It is important to point out that the original change said that there was no fiscal impact. Since the occupied roof is not considered a story, with the 2018 text, it could have been interpreted that standby power was not required to an occupied roof on a 5 story building. Therefore, this does have a significant cost for a 4 story building that decides to have an occupied roof.

The result will be as follows:



Height at which standby power would be required on the elevator for accessible MOE

This public comment is submitted by the ICC BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions there of. In 2017 and 2018 the BCAC has held 5 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as well as any interested party to discuss and debate the proposed changes and public comments. Related documentation and reports are posted on the BCAC website at: https://www.iccsafe.org/codes-tech-support/codes/codedevelopment-process/building-code-action-committee-bcac

Cost Impact: The net effect of the public comment and code change proposal will increase the cost of construction This modification is a clarification of requirements, and will not change the requirement of the approved change. However, the original proposal claimed that there was no fiscal impact. Depending on how an occupied roof was interpreted, this could have significant fiscal impact by requiring standby power to the elevator in a 4 story building with an occupied roof.

E30-18

E30-18

IBC: 1009.2.1, (IFC[BE] 1009.2.1)

Proposed Change as Submitted

Proponent: Micah Chappell, representing City of Seattle (micah.chappell@seattle.gov)

2018 International Building Code

Revise as follows

1009.2.1 Elevators required. In buildings where a required *accessible* floor or occupied roof is four or more stories above or below a *level of exit discharge*, not less than one required *accessible means of egress* shall be an elevator complying with Section 1009.4.

Exceptions:

1. In buildings equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2, the elevator shall not be required on floors provided with a *horizontal exit* and located at or above the *levels of exit discharge*.
2. In buildings equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2, the elevator shall not be required on floors provided with a *ramp* conforming to the provisions of Section 1012.

Reason: The code recognizes that there are practical limits to complete reliance on assisted evacuation of building occupants by fire personnel because of the limited availability of trained personnel or special devices. As a result, current ICC language requires an elevator be part of the accessible means of egress starting with the 4th story above the level of exit discharge (See 1009.2.1). Occupied roofs at the same level do not currently have this same requirement. The vertical travel distance encountered by a fire fighter performing an assisted rescue is the same whether the occupants are on an occupied roof on the 4th floor above the level of exit discharge or whether they are on the floor of the 4th story above the level of exit discharge within the building. As occupied roofs become more popular this becomes more of an issue for building departments around the country.
Occupied roofs at four or more stories above the level of exit discharge should be treated like occupied floors at the same level in the building. The occupant loads and hazards are similar between occupied roofs and occupied floors, the benefits to occupants and fire personnel from an elevator with emergency back-up power are similar, and a similar approach has been taken in other sections of the building code (see IBC Chapter 10 1006.3, 1006.3.2, and 1006.3.3). The 2018 IBC 1104.4 also requires at least one accessible route to each accessible story, mezzanine and occupied roof in multilevel buildings and facilities. If the requirements for an accessible route to the accessible level treat the occupied roof and accessible floor in the same manner, it is logical to conclude that the same level of protection for the accessible means of egress from an occupied roof should be required.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This proposal clarifies the current intent of the accessible means of egress provisions of IBC 1009.2.1. The added language clarifies that an area of refuge and emergency power/legally required standby power must be provided per IBC 1009.4 for an occupied roof that is four or more stories above the level of exit discharge.

No fiscal impact.

E30-18

Public Hearing Results

Committee Action: **As Submitted**

Committee Reason: This tells you when standby power is required for an elevator for building with an occupied roof. Occupied roofs are not currently addressed. The vertical distance for assisted rescue for a roof on the top of a 4 story building is the same as a 5th floor, so standby power should be required. Separate provisions for the occupied roof, to avoid confusion over if the occupied roof is a story, floor or level, would make this cleaner. There is an question with the current exception for horizontal exits as an alternative for standby power being permitted on lower floors, which would not be buildable on the roof. Occupied roofs, by being open to the outside air, may be safer than the floor with horizontal exits. See E29-18. (Vote: 8-7)

Assembly Action: **None**

E30-18

Individual Consideration Agenda

Public Comment 4:

Proponent: Ed Kulik, representing ICC Building Code Action Committee (bcac@iccsafe.org)requests As Modified by This Public Comment.

Modify as follows:

2018 International Building Code

1009.2.1 Elevators required. In buildings where a required *accessible* floor or occupied roof is four or more stories above or below a *level of exit discharge*, not less than one required *accessible means of egress* shall be an elevator complying with Section 1009.4.

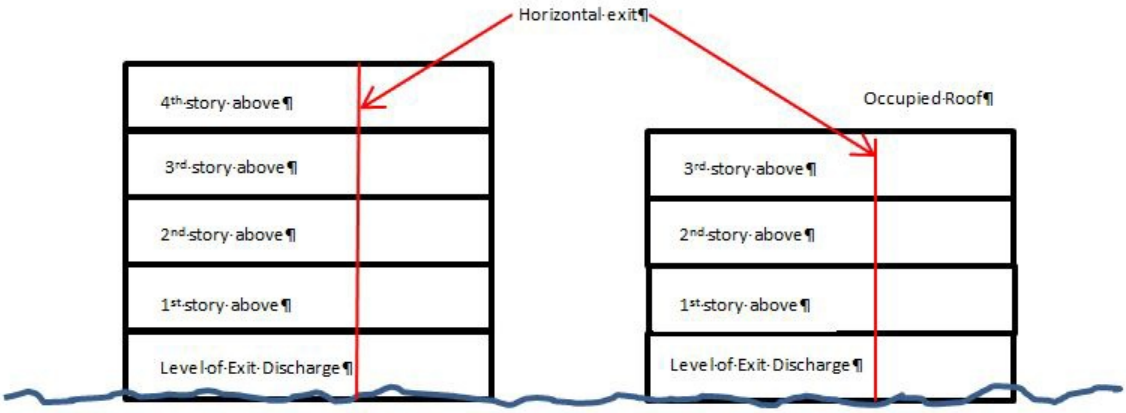
Exceptions:

1. In buildings equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2, the elevator shall not be required on floors provided with a *horizontal exit* and located at or above the *levels of exit discharge*.
2. In buildings equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2, the elevator shall not be required on floors provided with a *ramp* conforming to the provisions of Section 1012.
3. In buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, the elevator shall not be required for an occupied roof where the floors below are provided with a horizontal exit and located at or above the level of exit discharge.

Commenter's Reason: It is important to note that Section 1009.2.1 is for where an elevator is required for exiting, it is not the requirement for an accessible route to the roof (Section 1104.4). This requirement results in standby power to the elevator for fire department assisted rescue.
A building 5 stories or taller can use a horizontal exit so that the floors do not have to have standby power to the elevator. Protection for occupants is by moving from one smoke compartment to another. An occupied roof cannot provide a horizontal exit, but it is open to the outside air – which offers an equivalent or safer level of protection for occupants. The intent of the new exception 3 is that if someone has horizontal exits and a sprinkler system in the floors below the occupied roof, having an occupied roof would not then also trigger standby power. Very often the occupied roof area is smaller than the area of the floor below. Requiring standby power is a significant cost impact on a building. An example of application might be a 4 story or taller hospital that has a helicopter landing pad on the roof.

This will not change the original proposal, which will require standby power in a 4 story building with an occupied roof where the building does not have both sprinklers and horizontal exits.

The following is a diagram for illustration of this exception.



Exception for occupied roof on a building with a horizontal exit.

This public comment is submitted by the ICC BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions there of. In 2017 and 2018 the BCAC has held 5 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as well as any interested party to discuss and debate the proposed changes and public comments. Related documentation and reports are posted on the BCAC website at: https://www.iccsafe.org/codes-tech-support/codes/codedevelopment-process/building-code-action-committee-bcac

Cost Impact: The net effect of the public comment and code change proposal will decrease the cost of construction With the currently approved original proposal in place, this would be a cost savings for building with horizontal exits by not also requiring standby power to the elevator for just the occupied roof.

E30-18

E51-18

IBC: 1010.1.9 (New), (IFC[BE] 1010.1.9 (New))

Proposed Change as Submitted

Proponent: Ed Kulik, representing ICC Building Code Action Committee (bcac@iccsafe.org)

2018 International Building Code

Add new text as follows

1010.1.9 Vestibules. Where required by a compliance path of the International Energy Conservation Code, building entrances shall be provided with vestibules.

Reason: The IECC requires vestibules to be provided at building entrances in all climate zones other than 1 and 2. In the design of buildings this can be a significant feature of entrances. The requirement can be overlooked by designers if they focus on the IBC during initial design and then are perhaps surprised by the requirement when adding the IECC to their construction documents. This proposal provides a direct reference to the compliance paths in the IECC for vestibules.
The proposal puts the reference for vestibules in Chapter 10 after the section for door arrangements (Section 1010.1.8). Since Section 1010.1.8 addresses doors in a series, this is the most logical place for designers to understand that a vestibule may be required by the IECC.

The BCAC developed this proposal with the SEHPCAC. This proposal is submitted by the ICC Building Code Action Committee (BCAC). BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2017 the BCAC has held 3 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as w ell as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: https://www.iccsafe.org/codes-tech-support/codes/codedevelopment-process/building-code-action-committee-bcac.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This requirement already exists in the IECC. Inclusions in the IBC doesn't result in any construction not already anticipated.

E51-18

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: This pointer for vestibules is not needed in IBC in areas where the Energy codes are adopted because it is already covered in the Energy Code. The term 'vestibule' could be confused with stairway vestibules. (Vote: 12-2)

Assembly Action: **None**

E51-18

Individual Consideration Agenda

Public Comment 1:

Proponent: Ed Kulik, representing ICC Building Code Action Committee (bcac@iccsafe.org)requests As Modified by This Public Comment.

Modify as follows:

2018 International Building Code

1010.1.9 Vestibules. ~~Where~~ In jurisdictions that have adopted the International Energy Conservation Code, where required by a compliance path ~~of the International Energy Conservation Code~~, building entrances shall be provided with vestibules.

Commenter's Reason: Unlike the IBC, the requirement in the IECC is a mandate for a building to have vestibules at most entrance doors. If a designer is unaware of this requirement, adding a vestibule, or in some cases several vestibules, into the design of a building after it has been through plan review can be a cause some major revisions to the building configuration.
The language being proposed is not in any way intended to mandate that a community must use the *International Energy Conservation Code* (IECC), but rather it is intended to give designers in those communities where the IECC is adopted, that vestibules may be required. The text below indicates the extent of the requirement.

C402.5.7 Vestibules. *Building entrances shall be protected with an enclosed vestibule, with all doors opening into and out of the vestibule equipped with self-closing devices. Vestibules shall be designed so that in passing through the vestibule it is not necessary for the interior and exterior doors to open at the same time. The installation of one or more revolving doors in the building entrance shall not eliminate the requirement that a vestibule be provided on any doors adjacent to revolving doors.*

Exceptions: *Vestibules are not required for the following:*

1. Buildings in Climate Zones 1 and 2.

2. Doors not intended to be used by the public, such as doors to mechanical or electrical equipment rooms, or intended solely for employee use.

3. Doors opening directly from a sleeping unit or dwelling unit.

4. Doors that open directly from a space less than 3,000 square feet (298 m2) in area.

5. Revolving doors.

6. Doors used primarily to facilitate vehicular movement or material handling and adjacent personnel doors.

7. Doors that have an air curtain with a velocity of not less than 6.56 feet per second (2 m/s) at the floor that have been tested in accordance with ANSI/AMCA 220 and installed in accordance with the manufacturer's instructions. Manual or automatic controls shall be provided that will operate the air curtain with the opening and closing of the door. Air curtains and their controls shall comply with Section C408.2.3

In addition, the requirement in the IECC for vestibules is mirrored in ANSI/ASHRAE/IESNA 90.1, which is one of the compliance means the IECC allows for a commercial building (IECC – Commercial Provisions, Section C401.2)

With regard to the comment made by the IBC General Code Development Committee that “The term ‘vestibule’ could be confused with stairway vestibules.” As the term is not defined in any of the I-Codes, we must refer to the generally accepted term. The Merriam Webster dictionary defines a vestibule as “An antechamber, hall, or lobby next to the outer door of a building.” The term “vestibule,” while used in IBC Section 1028.1 is not always and only associated with a space into which an exit stair discharges, there are many architectural spaces in a building that are generically called vestibules.

This change will provide one additional aspect of coordination of the ICC model codes package for use by all designers and building officials where appropriate. We urge your overturning the Code Committee’s recommendation and approve this change.

Cost Impact: The net effect of the public comment and code change proposal will not increase or decrease the cost of construction
This requirement already exists in the IECC. Inclusions in the IBC doesn t result in any construction not already anticipated.

E51-18

E51-18

IBC: 1010.1.9 (New), (IFC[BE] 1010.1.9 (New))

Proposed Change as Submitted

Proponent: Ed Kulik, representing ICC Building Code Action Committee (bcac@iccsafe.org)

2018 International Building Code

Add new text as follows

1010.1.9 Vestibules. Where required by a compliance path of the International Energy Conservation Code, building entrances shall be provided with vestibules.

Reason: The IECC requires vestibules to be provided at building entrances in all climate zones other than 1 and 2. In the design of buildings this can be a significant feature of entrances. The requirement can be overlooked by designers if they focus on the IBC during initial design and then are perhaps surprised by the requirement when adding the IECC to their construction documents. This proposal provides a direct reference to the compliance paths in the IECC for vestibules.
The proposal puts the reference for vestibules in Chapter 10 after the section for door arrangements (Section 1010.1.8). Since Section 1010.1.8 addresses doors in a series, this is the most logical place for designers to understand that a vestibule may be required by the IECC.

The BCAC developed this proposal with the SEHPCAC. This proposal is submitted by the ICC Building Code Action Committee (BCAC). BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2017 the BCAC has held 3 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as w ell as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: https://www.iccsafe.org/codes-tech-support/codes/codedevelopment-process/building-code-action-committee-bcac.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This requirement already exists in the IECC. Inclusions in the IBC doesn't result in any construction not already anticipated.

E51-18

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: This pointer for vestibules is not needed in IBC in areas where the Energy codes are adopted because it is already covered in the Energy Code. The term ‘vestibule’ could be confused with stairway vestibules. (Vote: 12-2)

Assembly Action: **None**

E51-18

Individual Consideration Agenda

Public Comment 2:

Proponent: Gene Boecker, representing Code Consultants, Inc. (geneb@codeconsultants.com)requests As Submitted.

Commenter's Reason: This is a necessary correlation between two codes. The vestibule is a building requirement based on specific conditions cited within the IEEC. It is a necessary building component. Referring to another code for this is no different that referring to the IPC for plumbing fixture requirements. Given the choice between copying the requirements from the IEEC or referencing the code, this is the superior option.
There should be no confusion regarding what type of vestibule this is because it is clearly described in the IEEC.

Cost Impact: The net effect of the public comment and code change proposal will not increase or decrease the cost of construction
This is a pointer to a code requirement that is often missed by designers and does not change any existing requirement.

E51-18

E51-18

IBC: 1010.1.9 (New), (IFC[BE] 1010.1.9 (New))

Proposed Change as Submitted

Proponent: Ed Kulik, representing ICC Building Code Action Committee (bcac@iccsafe.org)

2018 International Building Code

Add new text as follows

1010.1.9 Vestibules. Where required by a compliance path of the International Energy Conservation Code, building entrances shall be provided with vestibules.

Reason: The IECC requires vestibules to be provided at building entrances in all climate zones other than 1 and 2. In the design of buildings this can be a significant feature of entrances. The requirement can be overlooked by designers if they focus on the IBC during initial design and then are perhaps surprised by the requirement when adding the IECC to their construction documents. This proposal provides a direct reference to the compliance paths in the IECC for vestibules.
The proposal puts the reference for vestibules in Chapter 10 after the section for door arrangements (Section 1010.1.8). Since Section 1010.1.8 addresses doors in a series, this is the most logical place for designers to understand that a vestibule may be required by the IECC.

The BCAC developed this proposal with the SEHPCAC. This proposal is submitted by the ICC Building Code Action Committee (BCAC). BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2017 the BCAC has held 3 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as w ell as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: https://www.iccsafe.org/codes-tech-support/codes/codedevelopment-process/building-code-action-committee-bcac.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This requirement already exists in the IECC. Inclusions in the IBC doesn't result in any construction not already anticipated.

E51-18

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: This pointer for vestibules is not needed in IBC in areas where the Energy codes are adopted because it is already covered in the Energy Code. The term 'vestibule' could be confused with stairway vestibules. (Vote: 12-2)

Assembly Action: **None**

E51-18

Individual Consideration Agenda

Public Comment 3:

Proponent: David Collins, representing The American Institute of Architects (dcollins@preview-group.com)requests As Submitted.

Commenter's Reason: There really should not be any confusion on this topic as there are no requirements in the 2018 IBC that mandate the installation of vestibules - of any kind. The incorporation of vestibules is solely a designer's choice. But WHEN a designer chooses to incorporate vestibules into a building, there are regulations, but only two; one that has its basis in the accessibility of doors in series and one for exit stairways that discharge into a vestibule which then leads to the exterior:

- 1010.1.8 Door arrangement; which mandates a there be minimum distance between doors when located in series – an enclosure often called out on plans as a "vestibule."
- Section 1028.1, Exception 2 Exit discharge; which mandates the construction and size of a vestibule when an exit stair discharges into it.

Unlike the IBC, the requirement in the IECC is a mandate for a building to have vestibules at all entrance doors. Sadly in many cases, it is only after a set of plans has been submitted to the community for review (and who has adopted the IECC) does a designer find out that their building is required have vestibules at the entrance doors. Adding a vestibule, or in some cases several vestibules, into the design of a building after it has been through plan review can be a considerable chore on the part of designer, often forcing them to make some major revisions to the building configuration. Even worse is when the plan review fails to catch the need for a vestibule and the error it attempted to be corrected in the field.

The language being proposed is not in any way intended to mandate that a community must use the *International Energy Conservation Code* (IECC), but rather it is intended to give designers in those communities where the IECC is adopted, and in some cases the AHJ, a reminder that if the IECC has been adopted, then vestibules may be required. The need for this "pointer" to the IECC may not be so important if the IECC only required a single vestibule at the main entry door to a building, but for those of you who may not be familiar with the requirements of the 2018 IECC, the requirement is for a vestibule at **all** "building entrances," not just for the "main" entry door (IECC – Commercial Provisions, Section C402.5.7). Simply put - the requirement for a vestibule is applicable to any door in a building that is an "entrance," including those doors that are used as a delivery entrance, the staff/employee entrance, and even to those that are just convenience entry points into a building.

C402.5.7 Vestibules. *Building entrances shall be protected with an enclosed vestibule, with all doors opening into and out of the vestibule equipped with self-closing devices. Vestibules shall be designed so that in passing through the vestibule it is not necessary for the interior and exterior doors to open at the same time. The installation of one or more revolving doors in the building entrance shall not eliminate the requirement that a vestibule be provided on any doors adjacent to revolving doors.*

Exceptions: *Vestibules are not required for the following:*

1. Buildings in Climate Zones 1 and 2.

2. Doors not intended to be used by the public, such as doors to mechanical or electrical equipment rooms, or intended solely for employee use.

3. Doors opening directly from a sleeping unit or dwelling unit.

4. Doors that open directly from a space less than 3,000 square feet (298 m2) in area.

5. Revolving doors.

6. Doors used primarily to facilitate vehicular movement or material handling and adjacent personnel doors.

7. Doors that have an air curtain with a velocity of not less than 6.56 feet per second (2 m/s) at the floor that have been tested in accordance with ANSI/AMCA 220 and installed in accordance with the manufacturer's instructions. Manual or automatic controls shall be provided that will operate the air curtain with the opening and closing of the door. Air curtains and their controls shall comply with Section C408.2.3

In addition, the requirement in the IECC for vestibules is mirrored in ANSI/ASHRAE/IESNA 90.1, which is one of the compliance means the IECC allows for a commercial building (IECC – Commercial Provisions, Section C401.2)

With regard to the comment made by the IBC General Code Development Committee that "The term 'vestibule' could be confused with stairway vestibules." We do not disagree that the term "vestibule" is used in the IBC, but as the term is not defined in any of the I-Codes, we must refer to the generally accepted term, as specified in Chapter 2 of each I-Code. The Merriam Webster dictionary defines a vestibule as "An antechamber, hall, or lobby next to the outer door of a building." The term "vestibule," while used in IBC Section 1028.1 is not always and only associated with a space into which an exit stair discharges, there are many architectural spaces in a building that are generically called vestibules.

The AIA firmly believes that implementation of the criteria in the IECC is paramount to good design. Several of the Institutes' policies call for increased energy efficiencies though the application of "Comprehensive, Coordinated and Contemporary Codes." This change will provide one additional aspect of coordination of the ICC model codes package for use by all designers and building officials where appropriate. We urge your overturning the Code Committee's recommendation and approve this change.

Cost Impact: The net effect of the public comment and code change proposal will decrease the cost of construction
If the design fails to include a vestibule it is a costly matter to add it at plan review. If plan review fails to catch the need for a vestiblue, it is costly to try to resolve it in the field. If neither the design or the review catches the omission, then the loss is even larger to the building owner who now must pay for the energy loss attributed to a feature that should have been integrated into the building.

E51-18

G140-18

IBC: 3002.3, 3002.3.1

Proposed Change as Submitted

Proponent: Ed Kulik, Chair, representing ICC Building Code Action Committee (bcac@iccsafe.org)

2018 International Building Code

Revise as follows

3002.3 Emergency signs for other than occupant evacuation elevators.. Where other than occupant evacuation elevators are provided, an *approved* pictorial sign of a standardized design shall be posted adjacent to each elevator call station on all floors instructing occupants to use the ~~exit stairways~~ exits and not to use the elevators in case of fire. The sign shall read: IN CASE OF FIRE, ELEVATORS ARE OUT OF SERVICE. USE EXIT ~~STAIRS.~~

~~Exceptions~~ Exception:

1. ~~1.~~ The emergency sign shall not be required for elevators that are part of an accessible *means of egress* complying with Section 1009.4.
2. ~~2. The emergency sign shall not be required for elevators that are used for occupant self-evacuation in accordance with Section 3008.~~

Add new text as follows

3002.3.1 Emergency signs for occupant evacuation elevators. Where occupant evacuation elevators are provided, an approved pictorial sign of a standardized design shall be posted adjacent to each elevator call station on all floors instructing occupants to use occupant evacuation elevators in the event of fire. The sign shall read: IN CASE OF FIRE, THIS OCCUPANT EVACUATION ELEVATOR IS AVAILABLE FOR EXITING THE BUILDING.

Analysis: Duplicated text in the International Fire Code not shown for brevity.

Reason: This is one of 17 proposals being submitted as a package relating to technical and organizational changes proposed for Chapter 6 of the Fire Code. While the Code Committees will consider each proposal independently, the intent is for approval of all proposals in this package which have been submitted as a correlated set of companion code change proposals.
This proposal correlates with the series of proposals to the IFC Chapter 6 submitted by the F-CAC for correlation of Elevator requirements and specification of required signage for all elevators.

This proposal addresses the emergency signage for the elevators in the IBC and the IFC. The changes are reflected in the IBC as these are the parent sections for these requirements. If approved this language will be duplicated in Chapter 6 of the IFC. This also correlates with the signage requirements in ASME A17.1. Exit stairways were changed to "exits" because there could be ramps instead of stairways.

Two distinct sections are established between occupant evacuation elevators and other than those elevators.

This proposal also adds standardized language to both the IBC and te IFC for occupant evacuation elevator signage to ensure consistency between codes and to provide clear and concise building occupant instruction for their use.

This proposal is submitted by the ICC Building Code Action Committee (BCAC) in support of the FCAC's efforts. BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2017 the BCAC has held 3 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as w ell as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: https://www.iccsafe.org/codes-tech-support/codes/code-development-process/building-code-action-committee-bcac.

Cost Impact: The code change proposal will decrease the cost of construction
By providing standardized language for the emergency signs for occupant evacuation elevators, and correlating for consistency the standardized language for other elevators.

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: There is confusion regarding cueing at elevator lobbies and whether the elevator is available or not. The proposal doesn't specify clearly. The code official may enforce the requirement at all elevator call stations, not just occupant elevators. The flaw in this proposal is dealing with the typical highrise situations. It is should not be every elevator in every lobby. The use of the term "is" will create a situation where occupants may wait for an elevator that never comes. Tinker with the words "is" and "may" and possibly "pictoral." There may be a way to link the signage to the visual requirement that is going to be part of the A117.1 automated system.....so that when someone goes to an elevator lobby they would know whether the elevator will come or not....or when to go to the stairs. There is a need to identify the elevators, but this is not the way to do it. Maybe simple a sign saying "evacuation elevator, "occupant elevator," "when directed," or "this elevator available...: (Vote: 14-0)

Assembly Action: **None**

G140-18

Individual Consideration Agenda

Public Comment 1:

Proponent: Ed Kulik, representing ICC Building Code Action Committee (bcac@iccsafe.org)requests As Modified by This Public Comment.

Modify as follows:

2018 International Building Code

3002.3 Emergency signs for other than occupant evacuation elevators... Where other than occupant evacuation elevators are provided, an *approved* pictorial sign of a standardized design shall be posted adjacent to each elevator call station on all floors instructing occupants to use the exits and not to use ~~the~~ these elevators in case of fire. The sign shall read: IN CASE OF FIRE, ELEVATORS ARE OUT OF SERVICE. USE AVAILABLE EXIT.

Exception:

The emergency sign shall not be required for elevators that are part of an accessible *means of egress* complying with Section 1009.4.

3002.3.1 Emergency signs for occupant evacuation elevators. Where occupant evacuation elevators are provided in accordance with Section 3008, an approved pictorial sign of a standardized design shall be posted adjacent to each elevator call station ~~on all floors instructing~~ notifying occupants to use occupant evacuation elevators in the event of fire. The sign shall read: ~~IN CASE OF FIRE, THIS~~ THESE OCCUPANT EVACUATION ~~ELEVATOR IS AVAILABLE FOR EXITING THE BUILDING~~ELEVATORS ARE AVAILABLE AS AN EXIT.

Commenter's Reason: IBC Section 3008.1.1 requires that “signage shall be provided to denote which elevators are available for occupant evacuation.” However, the code does not provide standardized language for that signage. Requiring standardized language would reduce confusion for the occupants regarding the use of these elevators, by providing consistency and clarity for the required signage.

As noted in the proposed new text for Section 3002.3.1, the standardized language for these occupant elevators is only applicable to the elevator call stations serving those elevators designated as occupant elevators in accordance with the requirements in IBC Section 3008.

Modifications have been made to the original proposal to address the specific direction from the code development committee.

The proposed standardized language for the sign is in alignment with ASME A17.1.

This text is repeated in IFC Section 606.3.

Cost Impact: The net effect of the public comment and code change proposal will increase the cost of construction

This would require a sign at occupant evacuation elevators. A sign was already required at other elevators.

G140-18

E86-18

IBC: 1017.3, (IFC[BE] 1017.3)

Proposed Change as Submitted

Proponent: John Terry, self, representing self (John.Terry@dca.nj.gov)

2018 International Building Code

Revise as follows

~~SECTION~~ 1017 EXIT ACCESS TRAVEL DISTANCE

1017.3 Measurement. *Exit access* travel distance shall be measured from the most remote point of each room, area or space along the natural and unobstructed path of horizontal and vertical egress travel to the entrance to an exit. Where more than one means of egress is required, exit access travel distance shall be measured to the nearest exit.

Exception: 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.

Reason: The text of this section is too subtle where it is stated that travel distance is measured to “an” exit. The added language makes clear the intent of the requirement.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
The proposed change merely clarifies the intent of the current text and therefore has no impact on cost.

E86-18

Public Hearing Results

Committee Action: **As Modified**

Committee Modification: 1017.3 Measurement. Exit access travel distance shall be measured from the most remote point of each room, area or space along the natural and unobstructed path of horizontal and vertical egress travel to the entrance to an exit. Where more than one ~~means of egress~~ exit is required, exit access travel distance shall be measured to the nearest exit.
Exception: 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.

Committee Reason: The modification is for consistency within the sentence and the rest of Chapter 10.
The code change will clarify that travel distance is to only one exit, not both. (Vote 14-0)

Assembly Action: **None**

E86-18

Individual Consideration Agenda

Public Comment 1:

Proponent: Ed Kulik, representing ICC Building Code Action Committee (bcac@iccsafe.org)requests As Modified by This Public Comment.

Further modify as follows:

2018 International Building Code

1017.3 Measurement. *Exit access* travel distance shall be measured from the most remote point of each room, area or space along the natural and unobstructed path of horizontal and vertical egress travel to the entrance to ~~an exit. Where more than one exit is required, exit access travel distance shall be measured to t~~he nearest exit.

> **Exception:** 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.

Commenter's Reason: The modification to the original proposal would be an issue for 2nd floors with open stairways or mezzanines – this is 'access to an exit' from that level. By combining the new sentence with the existing text, it clears this up in one sentence.
This public comment is submitted by the ICC BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions there of. In 2017 and 2018 the BCAC has held 5 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as well as any interested party to discuss and debate the proposed changes and public comments. Related documentation and reports are posted on the BCAC website at: https://www.iccsafe.org/codes-tech-support/codes/codedevelopment-process/building-code-action-committee-bcac

Cost Impact: The net effect of the public comment and code change proposal will not increase or decrease the cost of construction
The proposed change merely clarifies the intent of the current text and therefore has no impact on cost.

E86-18

E38-18

IBC: 1010.1, 1020.1 (New), 1024.1, 1026.1, 1027.1,1028.4, 1028.4.1, 1028.4.2, 1029(New), (IFC[BE] 1010.1, 1020.1 (New), 1024.1, 1026.1, 1027.1,1028.4, 1028.4.1, 1028.4.2, 1029(New))

Proposed Change as Submitted

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

2018 International Building Code

Revise as follows

1010.1 ~~Doors~~General. ~~*Means of egress* doors shall meet the requirements of this section.~~ Doors, gates and turnstiles serving a *means of egress* system shall meet the applicable requirements of this section and Section 1022.2. Doors provided for egress purposes in numbers greater than required by this code shall meet the requirements of this section. *Means of egress* doors shall be readily distinguishable from the adjacent construction and finishes such that the doors are easily recognizable as doors. Mirrors or similar reflecting materials shall not be used on *means of egress* doors. *Means of egress* doors shall not be concealed by curtains, drapes, decorations or similar materials.

Add new text as follows

1020.1 General. Corridors serving as an exit access component in a means of egress system shall comply with the requirements of this section.

Revise as follows

1024.1 ~~Exit passageways.~~General. Exit passageways serving as an exit component in a *means of egress* system shall comply with the requirements of this section. An *exit passageway* shall not be used for any purpose other than as a *means of egress* and a *circulation path*.

1026.1 ~~Horizontal exits.~~General. Horizontal *exits* serving as an exit in a *means of egress* system shall comply with the requirements of this section. A *horizontal exit* shall not serve as the only exit from a portion of a building, and where two or more *exits* are required, not more than one-half of the total number of *exits* or total exit minimum width or required capacity shall be horizontal *exits*.

Exceptions:

1. Horizontal *exits* are permitted to comprise two-thirds of the required *exits* from any building or floor area for occupancies in Group I-2.
2. Horizontal *exits* are permitted to comprise 100 percent of the *exits* required for occupancies in Group I-3. Not less than 6 square feet (0.6 m2) of *accessible* space per occupant shall be provided on each side of the *horizontal exit* for the total number of people in adjoining compartments.

1027.1 ~~Exterior exit stairways and ramps.~~General. Exterior exit *stairways* and *ramps* serving as an ~~element of~~ exit component in a ~~required~~ *means of egress* system shall comply with the requirements of this section.

Add new text as follows

1029 EGRESS COURTS

Revise as follows

~~1028.4~~1029.1 ~~Egress courts.~~General. *Egress courts* serving as ~~a portion of the~~ an *exit discharge*component in the *means of egress* system shall comply with the requirements ~~of Sections 1028.4.1 and 1028.4.2.~~in this section.

~~1028.4.1~~1029.2 Width or capacity. The required capacity of *egress courts* shall be determined as specified in Section 1005.1, but the minimum width shall be not less than 44 inches (1118 mm), except as specified herein. *Egress courts* serving Group R-3 and U occupancies shall be not less than 36 inches (914 mm) in width. The required capacity and width of *egress courts* shall be unobstructed to a height of 7 feet (2134 mm).
The width of the *egress court* shall be not less than the required capacity.

Exception: Encroachments complying with Section 1005.7.

~~**1028.4.2**~~**1029.3 Construction and openings.** Where an *egress court* serving a building or portion thereof is less than 10 feet (3048 mm) in width, the *egress court* walls shall have not less than 1-hour *fire-resistance-rated* construction for a distance of 10 feet (3048 mm) above the floor of the *egress court*. Openings within such walls shall be protected by opening protectives having a fire protection rating of not less than $^3/_4$ hour.

Exceptions:

1. *Egress courts* serving an *occupant load* of less than 10.
2. *Egress courts* serving Group R-3.

Reason: This is a series of editorial revisions intended to formalize the charging language of several sections within Chapter 10. The International Building Code is a so-called model code. Once adopted by a given political subdivision it becomes law. Having proper enabling or charging provisions for various technical requirements is legally necessary. Presently, Section 1020 for corridors contains no charging language. A general section has been created using the same format as is currently used in Section 1018 for aisles and Section 1019 for exit access stairways and ramps.

Section 1010.1 has been improved by adding the "General" section title to be consistent with other means of egress component sections. Additionally, the first and second sentences of Section 1010.1 are redundant. The first sentence has been deleted. The second sentence now clarifies that the section is applicable to gates and turnstiles consistent with the Section 1010 heading.

The titles of Sections 1024.1, 1026.1 and 1027.1 have been changed to "General" to be consistent with other means of egress component sections.

Lastly, egress courts are a means of egress component. In the Chapter 10 format, individual means of egress components have their own section. Currently, egress court provisions are located in Section 1028.4 within the exit discharge section. This proposal simply relocates the egress court technical provisions to a new Section 1029 so as to be consistent with other Chapter 10 provisions.

This proposal establishes the proper legal charging language for lacking sections. In doing so, it provides consistency within the various Chapter 10 means of egress component sections. Some practitioners are given to assigning an importance factor between different terms and formats. Approval of this proposal will clarify these important means of egress provisions.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This proposal is essentially editorial.

E38-18

Public Hearing Results

Committee Action: **As Modified**

Committee Modification: 1010.1 Doors ~~General~~. *Means of egress* doors shall meet the requirements of this section. Doors~~, gates and turnstiles~~ serving a *means of egress* system shall meet the ~~applicable~~ requirements of this section and Section 1022.2. Doors provided for egress purposes in numbers greater than required by this code shall meet the requirements of this section.
Means of egress doors shall be readily distinguishable from the adjacent construction and finishes such that the doors are easily recognizable as doors. Mirrors or similar reflecting materials shall not be used on *means of egress* doors. *Means of egress* doors shall not be concealed by curtains, drapes, decorations or similar materials.

Committee Reason: The modification was to remove the change to Section 1010.1 from the proposal. The changes in E37-18 addressed this in a more comprehensive manner.
The revised language is consistent with the remainder of the sections in the code. There was concern about pulling Egress Courts out of the section for exit discharge without a general statement for this means of egress part as indicated in Sections 1003.1, 1014.1 and 1020.1. (Vote: 10-4)

Assembly Action: **None**

E38-18

Individual Consideration Agenda

Public Comment 1:

Proponent: Gregory Keith, representing The Boeing Company (grkeith@mac.com)requests As Modified by This Public Comment.

Further modify as follows:

2018 International Building Code

1028.1 General. The exit discharge shall comply with Sections 1028 and 1029 and the applicable requirements of Sections 1003 through 1015.

Commenter's Reason: A committee comment was, "There was concern about pulling Egress Courts out of the section for exit discharge without a general statement for this means of egress part as indicated in Sections 1003.1, 1014.1 and 1020.1." This public comment creates appropriate charging language and cross references at Section 1028.1 so as to be consistent with other means of egress parts sections.
Approval of this public comment will clarify E38-18 in accordance with committee comments.

Cost Impact: The net effect of the public comment and code change proposal will not increase or decrease the cost of construction
This public comment is editorial in nature.

E38-18

E38-18

IBC: 1010.1, 1020.1 (New), 1024.1, 1026.1, 1027.1,1028.4, 1028.4.1, 1028.4.2, 1029(New), (IFC[BE] 1010.1, 1020.1 (New), 1024.1, 1026.1, 1027.1,1028.4, 1028.4.1, 1028.4.2, 1029(New))

Proposed Change as Submitted

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

2018 International Building Code

Revise as follows

1010.1 ~~Doors~~General. ~~*Means of egress* doors shall meet the requirements of this section.~~ Doors, gates and turnstiles serving a *means of egress* system shall meet the applicable requirements of this section and Section 1022.2. Doors provided for egress purposes in numbers greater than required by this code shall meet the requirements of this section. *Means of egress* doors shall be readily distinguishable from the adjacent construction and finishes such that the doors are easily recognizable as doors. Mirrors or similar reflecting materials shall not be used on *means of egress* doors. *Means of egress* doors shall not be concealed by curtains, drapes, decorations or similar materials.

Add new text as follows

1020.1 General. Corridors serving as an exit access component in a means of egress system shall comply with the requirements of this section.

Revise as follows

1024.1 ~~Exit passageways.~~General. Exit passageways serving as an exit component in a *means of egress* system shall comply with the requirements of this section. An *exit passageway* shall not be used for any purpose other than as a *means of egress* and a *circulation path*.

1026.1 ~~Horizontal exits.~~General. Horizontal *exits* serving as an exit in a *means of egress* system shall comply with the requirements of this section. A *horizontal exit* shall not serve as the only exit from a portion of a building, and where two or more *exits* are required, not more than one-half of the total number of *exits* or total exit minimum width or required capacity shall be horizontal *exits*.

Exceptions:

1. Horizontal *exits* are permitted to comprise two-thirds of the required *exits* from any building or floor area for occupancies in Group I-2.
2. Horizontal *exits* are permitted to comprise 100 percent of the *exits* required for occupancies in Group I-3. Not less than 6 square feet (0.6 m2) of *accessible* space per occupant shall be provided on each side of the *horizontal exit* for the total number of people in adjoining compartments.

1027.1 ~~Exterior exit stairways and ramps.~~General. Exterior exit *stairways* and *ramps* serving as an ~~element of~~ exit component in a ~~required~~ *means of egress* system shall comply with the requirements of this section.

Add new text as follows

1029 EGRESS COURTS

Revise as follows

~~1028.4~~1029.1 ~~Egress courts.~~General. *Egress courts* serving as ~~a portion of the~~ an *exit discharge*component in the *means of egress* system shall comply with the requirements ~~of Sections 1028.4.1 and 1028.4.2.~~in this section.

~~1028.4.1~~1029.2 Width or capacity. The required capacity of *egress courts* shall be determined as specified in Section 1005.1, but the minimum width shall be not less than 44 inches (1118 mm), except as specified herein. *Egress courts* serving Group R-3 and U occupancies shall be not less than 36 inches (914 mm) in width. The required capacity and width of *egress courts* shall be unobstructed to a height of 7 feet (2134 mm).
The width of the *egress court* shall be not less than the required capacity.

Exception: Encroachments complying with Section 1005.7.

~~**1028.4.2**~~**1029.3 Construction and openings.** Where an *egress court* serving a building or portion thereof is less than 10 feet (3048 mm) in width, the *egress court* walls shall have not less than 1-hour *fire-resistance-rated* construction for a distance of 10 feet (3048 mm) above the floor of the *egress court*. Openings within such walls shall be protected by opening protectives having a fire protection rating of not less than $^3/_4$ hour.

Exceptions:

1. *Egress courts* serving an *occupant load* of less than 10.
2. *Egress courts* serving Group R-3.

Reason: This is a series of editorial revisions intended to formalize the charging language of several sections within Chapter 10. The International Building Code is a so-called model code. Once adopted by a given political subdivision it becomes law. Having proper enabling or charging provisions for various technical requirements is legally necessary. Presently, Section 1020 for corridors contains no charging language. A general section has been created using the same format as is currently used in Section 1018 for aisles and Section 1019 for exit access stairways and ramps.

Section 1010.1 has been improved by adding the "General" section title to be consistent with other means of egress component sections. Additionally, the first and second sentences of Section 1010.1 are redundant. The first sentence has been deleted. The second sentence now clarifies that the section is applicable to gates and turnstiles consistent with the Section 1010 heading.

The titles of Sections 1024.1, 1026.1 and 1027.1 have been changed to "General" to be consistent with other means of egress component sections.

Lastly, egress courts are a means of egress component. In the Chapter 10 format, individual means of egress components have their own section. Currently, egress court provisions are located in Section 1028.4 within the exit discharge section. This proposal simply relocates the egress court technical provisions to a new Section 1029 so as to be consistent with other Chapter 10 provisions.

This proposal establishes the proper legal charging language for lacking sections. In doing so, it provides consistency within the various Chapter 10 means of egress component sections. Some practitioners are given to assigning an importance factor between different terms and formats. Approval of this proposal will clarify these important means of egress provisions.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This proposal is essentially editorial.

E38-18

Public Hearing Results

Committee Action: **As Modified**

Committee Modification: 1010.1 Doors ~~General~~. *Means of egress* doors shall meet the requirements of this section. Doors~~, gates and turnstiles~~ serving a *means of egress* system shall meet the ~~applicable~~ requirements of this section and Section 1022.2. Doors provided for egress purposes in numbers greater than required by this code shall meet the requirements of this section.
Means of egress doors shall be readily distinguishable from the adjacent construction and finishes such that the doors are easily recognizable as doors. Mirrors or similar reflecting materials shall not be used on *means of egress* doors. *Means of egress* doors shall not be concealed by curtains, drapes, decorations or similar materials.

Committee Reason: The modification was to remove the change to Section 1010.1 from the proposal. The changes in E37-18 addressed this in a more comprehensive manner.
The revised language is consistent with the remainder of the sections in the code. There was concern about pulling Egress Courts out of the section for exit discharge without a general statement for this means of egress part as indicated in Sections 1003.1, 1014.1 and 1020.1. (Vote: 10-4)

Assembly Action: **None**

E38-18

Individual Consideration Agenda

Public Comment 2:

Proponent: Ed Kulik, representing ICC Building Code Action Committee (bcac@iccsafe.org)requests As Modified by This Public Comment.

Further modify as follows:

2018 International Building Code

~~1029 EGRESS COURTS~~

~~1029.1~~ 1028.4 ~~General~~Egress courts. *Egress courts* serving as ~~an~~ a portion of the *exit discharge* ~~component~~ in the *means of egress* system shall comply with the requirements ~~in this section~~of Sections 1028.4.1 and 1028.4.2.

~~1029.2~~ 1028.4.1 Width or capacity. The required capacity of *egress courts* shall be determined as specified in Section 1005.1, but the minimum width shall be not less than 44 inches (1118 mm), except as specified herein. *Egress courts* serving Group R-3 and U occupancies shall be not less than 36 inches (914 mm) in width. The required capacity and width of *egress courts* shall be unobstructed to a height of 7 feet (2134 mm).
The width of the *egress court* shall be not less than the required capacity.

Exception: Encroachments complying with Section 1005.7.

~~1029.3~~ 1028.4.2 Construction and openings. Where an *egress court* serving a building or portion thereof is less than 10 feet (3048 mm) in width, the *egress court* walls shall have not less than 1-hour *fire-resistance-rated* construction for a distance of 10 feet (3048 mm) above the floor of the *egress court*. Openings within such walls shall be protected by opening protectives having a fire protection rating of not less than $^3/_4$ hour.

Exceptions:

1. *Egress courts* serving an *occupant load* of less than 10.
2. *Egress courts* serving Group R-3.

Commenter's Reason: This proposal is to move the requirements for egress courts back into it's current position as a part of Section 1028. Splitting exit discharge into 2 sections is adding confusion for users. Also, the scoping language for exit discharge in more than one section was not proposed – so this could be a conflict with the format of Chapter 10 in the scoping for general, exit access and exit language in Sections 1003.1, 1016.1 and 1022.1.

This public comment is submitted by the ICC BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions there of. In 2017 and 2018 the BCAC has held 5 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as well as any interested party to discuss and debate the proposed changes and public comments. Related documentation and reports are posted on the BCAC website at: https://www.iccsafe.org/codes-tech-support/codes/codedevelopment-process/building-code-action-committee-bcac

Cost Impact: The net effect of the public comment and code change proposal will not increase or decrease the cost of construction

This modification is returning existing text to it s orginal location. There are no changes in requirements.

E38-18
