

2009 Codes Update

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Presentation

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1005.1 MINIMUM REQUIRED EGRESS WIDTH

In MI Building Code 2006 edition, sprinklered buildings (other than Group H-1, H-2, H-3, H-4 and I-2 occupancies) were required to have a minimum egress width of 0.2 inches per occupant in stairways and 0.15 inches per occupant in other egress components, while non-sprinklered buildings (other than Group H-1, H-2, H-3, H-4 and I-2 occupancies) were required to have a higher minimum egress width of 0.3 inches per occupant in stairways and 0.2 inches per occupant in other egress components.

IBC 2009 revised Section 1005.1 and eliminated the reduction for the minimum egress width in sprinklered buildings. Now, sprinklered and non-sprinklered buildings are required to have a minimum egress width of 0.3 inches per occupant in stairways and 0.2 inches per occupant in other egress components. This is essentially an increase in minimum egress width for sprinklered buildings. However, these widths should not be less than specified elsewhere in the code.

2009 IBC Text 1005.1 Minimum required egress width. *The means of egress width shall not be less than required by this section. The total width of means of egress in inches (mm) shall not be less than the total occupant load served by the means of egress multiplied by 0.3 inches (7.62 mm) per occupant for stairways and by 0.2 inches (5.08 mm) per occupant for other egress components. The width shall not be less than specified elsewhere in this code. Multiple means of egress shall be sized such that the loss of any one means of egress shall not reduce the available capacity to less than 50 percent of the required capacity. The maximum capacity required from any story of a building shall be maintained to the termination of the means of egress.*

Exception: *Means of egress complying with Section 1028.*

1005.3 DOOR HARDWARE ENCROACHMENT

Section [1005.3](#), was added to the 2009 edition of the IBC to clarify the door hardware encroachment to the means of egress width.

According to the new section, surface-mounted latch release hardware is exempt from the 7 inches maximum projection of a fully opened door. This exemption applies only when the hardware is mounted to the side of the door facing the corridor width when the door is in the open position, and is mounted 34 to 48 inches above the finished floor.

1007.3 EXIT STAIRWAYS

In order for exit stairways to be considered part of an accessible means of egress, MI Building Code requires exit stairways to either incorporate an area of refuge or be accessed from an area of refuge or horizontal exit.

While the 2000 and 2003 editions of the MI building code provided an exception for the area of refuge requirement in sprinklered buildings, that exception was removed in the 2006 edition and required areas of refuge in sprinklered buildings.

IBC 2009 brought back the exception provided to sprinklered buildings by revising section 1007.3. IBC 2009 also added two additional exceptions to the area of refuge requirement. According to the revised section, Group R-2 occupancy and smoke protected seating areas complying with section 1028.6.2 are exempt from the area of refuge requirement.

2009 IBC Text 1007.3 Stairways. *In order to be consider part of an accessible means of egress, an exit access stairway as permitted by Section 1016.1 or exit stairway shall have a clear width of 48 inches (1219 mm) minimum between handrails and shall either incorporate an area of refuge within an enlarged floor-level landing or shall be accessed from either an area of refuge complying with Section 1007.6 or a horizontal exit.*

Exceptions:

1, 2 & 3. Provide that an area of refuge is not required and the clear width of 48" is not required for an exit access stairway or exit stairways where permitted when the building is sprinklered.

1007.8 TWO-WAY COMMUNICATION

IBC 2009 added in section 1007.8 the requirement to provide two-way communication systems at the elevator landing on each accessible floor above and below the story of exit discharge in buildings where areas of refuge are not provided. When areas of refuge are provided they shall be provided within the area of refuge. Floors with exit ramps are exempt from this requirement.

If this system doesn't connect to a central control point that is constantly attended. The two-way communication system shall have a timed automatic telephone dial-out to a monitoring location or 911. Section 1007.8.2 has expanded to include a written identification of the location of a person is calling

from, in addition to the provisions explaining the use of the two-way communication system and instructions on how to summon assistance.

1008.1.2 DOOR SWING

IBC 2009 revised Section 1008.1.2 to permit the use of manually operated horizontal sliding doors in the means of egress from spaces with an occupant load of 10 or less in occupancies other than Group H.

1008.1.4.1 REVOLVING DOORS

IBC 2009 revised Section 1008.1.4.1 to restrict the use of revolving doors as part of an accessible route.

1008.1.4.4 ACCESS-CONTROLLED EGRESS DOORS

In IBC 2006, the entrance doors used as a required means of egress in Group A, B, E, M, R-1 and R-2 occupancies were permitted to be equipped with an approved entrance and egress access control system.

IBC 2009 Section 1008.1.4.4 added Group I-2 occupancy to the list of occupancies above where entrance doors are permitted to be equipped with an approved entrance and egress access control system.



1008.1.9.4 BOLT LOCKS.

IBC 2009 added new exceptions to the restriction of the use of bolt locks in the means of egress.

According to IBC 2009 Section 1008.1.9.4, manually operated edge or surface mounted bolts are permitted to be used on the inactive leaf where the pair of doors serves an occupant load of less than 50 persons in Group B, F or S occupancies. The inactive leaf shall not have doorknobs, panic bars or similar operating hardware.

Photo: Andrei Malov
IBC 2009 added new conditions where the use of bolt locks is permitted in the means of egress.

If the pair of doors serves an occupant load more than 50 persons in Group B, F or S occupancies, the building must be sprinklered and the inactive leaf must not

be needed to meet egress width requirements in order for the inactive door to receive manually operated edge or surface mounted bolts.

Another exception provided for the use of bolt locks is in Group I-2 occupancy. According to IBC 2009 Section 1008.1.9.4, self latching edge or surface mounted bolts are permitted to be used on the inactive leaf where the pair of doors serves patient care rooms in a Group I-2 occupancy and where the inactive leaf is not needed to meet egress width requirements. The inactive leaf shall not have doorknobs, panic bars or similar operating hardware.

1008.1.9.6 SPECIAL LOCKING ARRANGEMENTS IN GROUP I-2.

IBC 2009 added a new section to address the specialized delayed egress locking requirements of Group I-2 occupancy.

According to the new Section 1009.1.9.6, approved delayed egress locks are permitted in a Group I-2 occupancy where the clinical needs of persons receiving care require such locking. The requirement for the building to have sprinklers or smoke or heat detection systems are the same as the standard delayed egress requirements of Section 1008.1.9.7. However, the unlocking requirements for the delayed egress locking listed in Section 1008.1.9.6 are specific to Group I-2 occupancies.

1008.1.9.8 ELECTROMAGNETICALLY LOCKED EGRESS DOORS

In IBC 2009, electromagnetically locked egress doors have been addressed for the first time in the new section 1008.1.9.8.

In Group A, B, E, M, R-1 and R-2 occupancies, doors without panic hardware requirements (50 or more occupants Group A and E) and tenant doors are permitted to be electromagnetically locked. The door is permitted to be electromagnetically locked if it is equipped with listed hardware incorporating a built-in switch is affixed to the door leaf, has an obvious method of operation, can be operated with one hand, and releases the electromagnetic lock and unlocks the door immediately when operated. The listed hardware shall also automatically unlock the door when there is a loss of power to the hardware.

1008.1.10 PANIC AND FIRE EXIT HARDWARE

IBC 2009 Section 1008.1.10 added the requirement for panic hardware to be listed in accordance with UL 305 and fire exit hardware in accordance with UL 10C and UL 305 where installed.

1009.6.1 STAIRWAY WALKING SURFACE

A newly added exception to IBC 2009 Section 1009.6.1 permits openings in stair walking surfaces that do not permit the passage of a 1/2 inch diameter sphere. Elongated openings shall be placed with the long dimension perpendicular to the direction of travel.

Women will enjoy this change and remember it the first time they find such a stair wearing a new pair of high heeled shoes. So my advice wear an old pair so there is an excuse to get a new pair. Seriously be careful this is a potential danger.

1009.12 HANDRAILS

IBC 2006 did not require handrails within dwelling units and sleeping units in Group R-2 and R-3 occupancies where a change in room elevation was only one riser.

IBC 2009 Section 1009.12 increased the exception for the handrail requirement to three or fewer risers. Handrails are now only required within dwelling units and sleeping units in Group R-2 and R-3 occupancies where a change in room elevation is four risers or more.

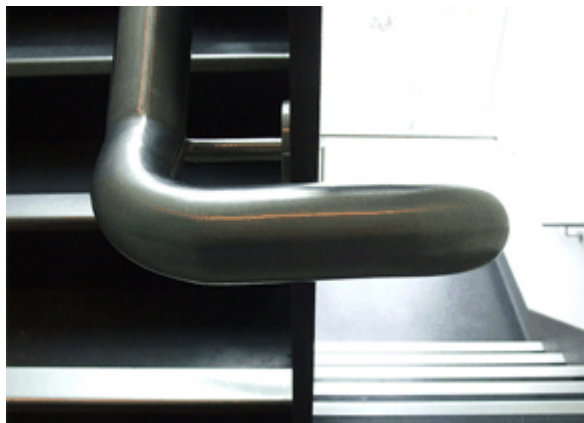


Photo: Anni Franni
Under certain conditions IBC 2009 permits the use of handrails
with a perimeter greater than 6-1/4 inches.

1012.3 HANDRAIL GRASPABILITY

IBC 2009 Section 1012.3 introduced a new Type II handrail classification for handrails with a perimeter greater than the 6-1/4 inches limit that can be used in a Group R-3 occupancy, within dwelling units in a Group R-2 occupancy or in a Group U occupancy accessory to a Group R-3 or to individual dwelling units in a R-2 occupancy. Specific set of requirements are outlined in the section for Type II handrails.

1013.3 OPENING LIMITATIONS

IBC 2006 required that guards not have openings which allow the passage of a 4 inches sphere in diameter up to a height of 34 inches. From the height of 34 inches to 42 inches, an 8 inches sphere in diameter was not allowed to pass through an opening.

IBC 2009 Section 1013.3 revised the previous 8 inches sphere in diameter limitation to 4-3/8 inches sphere in diameter, this time from a height of 36 inches to 42 inches.

This change was based on a study conducted by NOMMA on the ability of toddlers to climb and the physiology of their heads and bodies.

1015.1 EXITS OR EXIT ACCESS DOORWAYS FROM SPACES

IBC 2006 permitted the use of one means of egress in a Group R occupancy if the occupant load of the space was 10 or less.

IBC 2009 Section 1015.1 increased the maximum occupant load limit to 20 for one means of egress within and from individual dwelling units in Group R-2 and R-3 occupancies.

1018.2 CORRIDOR WIDTH

IBC 2006 applied the provisions for 72 inch wide corridor to surgical Group I-2, health care centers for ambulatory patients receiving outpatient medical care, which causes the patient to be not capable of self preservation.

IBC 2009 has modified that by removing the I-2 reference and adding in corridors and areas serving gurney traffic in occupancies where patients receive outpatient medical care that causes the patient to be not capable of self preservation.

1018.4 DEAD ENDS

IBC 2006 permitted the maximum length of dead-end corridors to be 50 feet (the standard maximum is 20 feet) in sprinklered buildings in Group B and F occupancies.

IBC 2009 revised Section 1018.4 to also increased the maximum length of dead-end corridors to 50 feet in sprinklered buildings in Group E, I-1, M, R-1, R-2, R-4, S and U occupancies.

1022.8 FLOOR IDENTIFICATION SIGNS

IBC 2009 section 1022.8 added the requirement to provide floor level identification signs in tactile characters complying with ICC/ANSI A117.1 (2003) at each floor landing next to the door leading from the exit enclosure into the corridor.

The revised section also lists the design requirements for the floor level identification signs.

1024 LUMINOUS EGRESS PATH MARKINGS

IBC 2009 added a new requirement to provide luminous egress path markings in the means of egress.

According to the new IBC 2009 section 1024 approved luminous egress path markings shall be provided in buildings in Group A, B, E, I, M and R-1 having occupied floors more than 75 feet above the lowest level of fire department vehicle access. IBC 2009 also provides exceptions and detailed requirements for the luminous markings in this section.



Photo: Courtesy of Jalite Group
IBC 2009 requires the use of luminous egress path markings in various occupancy groups with special provisions.

1026.2 USE IN A MEANS OF EGRESS

IBC 2006 restricted the use of exterior exit ramps and stairways as an element of

a required means of egress for Group I-2 occupancies.

IBC 2009 revised section 1026.2 to reduce that restriction to only include the use of exterior exit stairways for means of egress in Group I-2 occupancies. Exterior ramps are now a permitted element for means of egress in I-2