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2012 IFC Code & Commentary

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Chapter 10:

Means of Egress

General Comments

The general criteria set forth in Chapter 10 regulating the design of the means of egress are established as the primary method for protection of people in buildings.

Chapter 10 provides the minimum requirements for means of egress in all buildings and structures. Both prescriptive and performance language is utilized in this chapter to provide for a basic approach in the determination of a safe exiting system for all occupancies. It addresses all portions of the egress system and includes design requirements as well as provisions regulating individual components. The requirements detail the size, arrangement,

number and protection of means of egress components. Functional and operational characteristics also are specified for the components that will permit their safe use without special knowledge or effort.

A zonal approach to egress provides a general basis for the chapter's format through regulation of the exit access, exit and exit discharge portions of the means of egress. Section 1001 includes the administrative provisions.

Section 1002 shows a list of defined terms that are primarily associated with Chapter 10. Sections 1003 through 1013 include general provisions that apply to all three components of a means of egress system: exit access, exit and exit discharge. The exit access

requirements are in Sections 1014 through 1019, the exit requirements are in Sections 1020 through 1026 and the exit discharge requirements are in Section 1027.

Section 1028 includes those means of egress requirements that are unique to an assembly occupancy.

Emergency escape and rescue opening requirements are in Section 1029. Section 1002 through 1029 are duplicated text from Chapter 10 of the International Building Code® (IBC®) and are fully applicable to new buildings constructed after adoption of the code. The code has one additional section at the end of the chapter dealing with maintenance of the means of egress (see commentary, Section



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1001.3). For means of egress requirements in existing buildings, refer to Chapter 46 of the code or Chapter 34 of the IBC.

The evolution of means of egress requirements has been influenced by lessons learned from real fire incidents.

While contemporary fires may reinforce some of these lessons, one must view each incident as an opportunity to assess critically the safety and reasonability of current regulations.

Cooperation among the developers of model codes and standards has resulted in agreement on many basic terms and concepts. The text of the code, including this chapter, is consistent with these national uniformity efforts.

National uniformity in an area such as means of

egress has many benefits for the fire code official and other code users. At the top of the list are the lessons to be learned from experiences throughout the nation and the world, which can be reported in commonly used terminology and conditions that we can all relate to and clearly understand.

Purpose

A principal purpose of codes in general, and building and fire codes in particular, is to safeguard life in the presence of a fire. Integral to this purpose is the path of egress travel for occupants to escape and avoid a fire.

Means of egress can be considered the lifeline of a building. The principles on which means of egress are based and that form the fundamental criteria for requirements are to

provide a means of egress system:

1. That will give occupants alternative paths of travel to a place of safety to avoid fire.
2. That will shelter occupants from fire and the products of combustion.
3. That will accommodate all occupants of a structure.
4. That is clear, unobstructed, well marked and illuminated and in which all components are under control of the user without requiring any tools, keys or special knowledge or effort.

History is marked with the loss of life from fire. Early as well as contemporary multiple fire fatalities can be traced to a compromise of one or more of the above principles.



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Life safety from fire is a matter of successfully evacuating or relocating the occupants of a building to a place of safety. As a result, life safety is a function of time: time for detection, time for notification and time for safe egress. The fire growth rate over a period of time is also a critical factor in addressing life safety. Other sections of the code, such as protection of vertical openings (Chapter 7), interior finish (Chapter 8), fire suppression and detection systems (Chapter 9) and numerous others, also have an impact on life safety. Chapter 10 addresses the issues related to the means available to relocate or evacuate building occupants.

SECTION 1001

ADMINISTRATION

1001.1 General. Buildings or portions thereof shall be provided with a means of egress system as required by this chapter.

The provisions of this chapter shall control the design, construction and arrangement of means of egress components required to provide an approved means of egress from structures and portions thereof. Sections 1003 through 1029 shall apply to new construction. Section 1030 shall apply to existing buildings.

Exception: Detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories above grade plane in height with a separate means of egress and their accessory structures shall comply with the International Residential Code.

◆The minimum requirements for means of egress are to be incorporated in all structures as specified in this chapter. Application would be effective on the date the code is adopted and placed into effect.

The means of egress in an existing building that experiences a change of occupancy, such as from Group S-2 (storage) to A-3 (assembly), would require reevaluation for code compliance based on the new occupancy as stated in Chapter 34 of the IBC. Similarly, the means of egress in an existing occupancy of Group A-3 in which additional seating is to be provided, thereby increasing the occupant load, would require reevaluation for code compliance based on the increased occupant load.

Fundamental to the level of life safety in any



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building, whether it is new or many years old, is the provision for an adequate egress system, and it is for that reason that Section 1104 is retroactively applicable to existing buildings that are not undergoing changes as regulated by Chapter 34 of the IBC. The means of egress in existing buildings must also be properly maintained in accordance with Section 1030 if the intended level of safety is to remain for the life of the building.

Reflecting the correlation and compatibility that is a hallmark of the International Codes® (I-Codes®), the exception makes it clear that the means of egress in buildings that are within the scope of the International Residential Code® (IRC®) are to comply with those requirements instead of Chapter 10.

1001.2 Minimum requirements. It shall be unlawful to alter a building or structure in a manner that will reduce the number of exits or the capacity of the means of egress to less than required by this code.

◆ A fundamental concept in life safety design is that the means of egress system is to be constantly available throughout the life of a building. Any change in the building or its contents, either by physical reconstruction or alteration or by a change of occupancy, is cause to review the resulting egress system. As a minimum, a building's means of egress is to be continued as initially approved. If a building or portion thereof has a change of occupancy, the complete egress system is to be evaluated and approved for compliance with the current code

requirements for new occupancies (see IBC Chapter 34).

The means of egress in an existing building that experiences a change of occupancy, such as from Group S-2 (storage) to A-3 (assembly), would require reevaluation for code compliance based on the new occupancy. Similarly, the means of egress in an existing occupancy of Group A-3 in which additional seating is to be provided, thereby increasing the occupant load, would require reevaluation for code compliance based on the increased load. The temptation is to temporarily remove egress components or other fire protection or life safety features from service during an alteration or repair to or temporary occupancy of a building. During such times, a building is frequently



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more vulnerable to fire and the rapid spread of products of combustion. Either the occupants should not occupy those spaces where the means of egress has been compromised by the construction or the compensating fire safety features should be considered, which will provide equivalent safety for the occupants.

It should be noted that occupants in adjacent areas may also require access to the egress facilities in the area under construction.

SECTION 1002

DEFINITIONS

1002.1 Definitions. The following terms are defined in Chapter 2:

ACCESSIBLE MEANS OF EGRESS.

AISLE.

AISLE ACCESSWAY.

ALTERNATING TREAD DEVICE.

AREA OF REFUGE.

BLEACHERS.

COMMON PATH OF EGRESS TRAVEL.

CORRIDOR.

DOOR, BALANCED.

EGRESS COURT.

EMERGENCY ESCAPE AND RESCUE OPENING.

EXIT.

EXIT ACCESS.

EXIT ACCESS DOORWAY.

EXIT ACCESS RAMP.

EXIT ACCESS STAIRWAY.

EXIT DISCHARGE.

EXIT DISCHARGE, LEVEL OF.

EXIT, HORIZONTAL.

EXIT PASSAGEWAY.

FIRE EXIT HARDWARE.

FIXED SEATING.

FLIGHT.

FLOOR AREA, GROSS.

FLOOR AREA, NET.

FOLDING AND TELESCOPIC SEATING.

GRANDSTAND.

GUARD.

HANDRAIL.

INTERIOR EXIT RAMP.

INTERIOR EXIT STAIRWAY.

MEANS OF EGRESS.

MERCHANDISE PAD.

NOSING.

OCCUPANT LOAD.

PANIC HARDWARE.

PHOTOLUMINESCENT.

PUBLIC WAY.

RAMP.

SCISSOR STAIR.

SELF-LUMINOUS.



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SMOKE-PROTECTED
ASSEMBLY SEATING.

STAIR.

STAIRWAY.

STAIRWAY, EXTERIOR.

STAIRWAY, INTERIOR.

STAIRWAY, SPIRAL.

WINDER.

◆ This section lists terms that are specifically associated with the subject matter of this chapter. It is important to emphasize that these terms are not exclusively related to this chapter, but may or may not also be applicable where the term is used elsewhere in the code.

Definitions of terms can help in the understanding and application of the code requirements. The purpose for including a list within this chapter is to provide more convenient access to

terms that may have a specific or limited application within this chapter.

For the complete definition and associated commentary, refer back to Chapter 2. Terms that are italicized provide a visual identification throughout the code that a definition exists for that term. The use and application of all defined terms are set forth in Section 201.

SECTION 1003

GENERAL MEANS OF EGRESS

[B] 1003.1 Applicability. The general requirements specified in Sections 1003 through 1013 shall apply to all three elements of the means of egress system, in addition to those specific requirements for the exit access, the exit and the exit discharge detailed

elsewhere in this chapter.

◆ The requirements in the chapter address the three parts of a means of egress system: the exit access, the exit and the exit discharge. This section specifies that the requirements of Sections 1003 through 1013 apply to the components of all three parts of the system.

For example, the stair tread and riser dimensions in Section 1009 apply to interior exit access stairways, such as those leading from a mezzanine, and also apply to enclosed exit stairways per Section 1022, exterior exit stairways per Section 1026 and steps in the exit discharge per Section 1027.

The following sections are applicable for all parts of the means of egress:

- Section 1003 deals with the path for means of



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egress to remain free of obstructions and tripping hazards.

- Section 1004 provides criteria for determining occupant loads for a space. These numbers are used for determining means of egress, as a threshold for some suppression requirements and to determine the required plumbing fixture count.

- Section 1005 deals with the required size (i.e., width) of the path of travel for emergency evacuation.

It is important not to create a “bottleneck” that could increase the amount of time necessary for occupants to exit the buildings.

- Section 1006 deals with illumination for the path of travel for the means of egress. Both general lighting and emergency

backup lighting are addressed.

- Section 1007 - Chapter 11 indicated how to get people with mobility impairments into a building.

Section 1007 explains the options to allow people with mobility impairments to self-evacuate or how to arrange for assisted rescue. The accessible means of egress is an important part of the fire and safety evacuation plans (see Section 1001.4).

- Section 1008 includes requirements for doors, gates and turnstiles that are part of the path of travel from any occupied spaces. For example, doors that lead to a walk-in closet must comply with this section, but doors for reach-in closets are exempted.

- Section 1009 provides

information on all types of stairways: both interior and exterior; and from one riser to stairways with multiple flights and landings. Aisle steps for areas within assembly seating are specifically addressed in Section 1028.

- Section 1010 deals with ramps. Aisle ramps serving assembly seating areas are specifically addressed in Section 1028. The ramp provisions are coordinated with ICC A117.1 and the 2010 Standard for Accessible Design [formally the Americans with Disabilities Act Accessibility Guidelines (ADAAG), now referred to as the 2010 Standard].

- Section 1011 described where exit signs are required and what criteria they need to meet to be readily visible.

- Section 1012 describes handrail requirements for stairways and ramps.



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Handrails are important for guidance and to arrest a possible fall.

- Section 1013 provides criteria for the vertical portions of barriers that serve to protect people from possible falls at dropoffs greater than 30 inches (762 mm).

[B] 1003.2 Ceiling height. The means of egress shall have a ceiling height of not less than 7 feet 6 inches (2286 mm).

Exceptions:

1. Sloped ceilings in accordance with Section 1208.2 of the International Building Code.
2. Ceilings of dwelling units and sleeping units within residential occupancies in accordance with Section 1208.2 of the International Building Code.
3. Allowable projections

in accordance with Section 1003.3.

4. Stair headroom in accordance with Section 1009.5.
 5. Door height in accordance with Section 1008.1.1.
 6. Ramp headroom in accordance with Section 1010.6.2.
 7. The clear height of floor levels in vehicular and pedestrian traffic areas in parking garages in accordance with Section 406.4.1 of the International Building Code.
 8. Areas above and below mezzanine floors in accordance with Section 505.2 of the International Building Code.
- ◆ Generally, the specified ceiling height is the minimum allowed in any part of the egress path. The exceptions are

intended to address conditions where the code allows the ceiling height to be lower than specified in this section.

This section is consistent with the minimum ceiling height for other areas as specified in Section 1208 of the IBC. The exceptions are pointers to the lower headroom areas permitted in the code. For example, the headroom above and below a mezzanine is 7 feet (2134 mm) minimum.

[B] 1003.3 Protruding objects. Protruding objects shall comply with the requirements of Sections 1003.3.1 through 1003.3.4.

◆ This section begins the provisions that apply to protruding objects and helps to improve awareness of these safety and accessibility-related provisions.

[B] 1003.3.1 Headroom.



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Protruding objects are permitted to extend below the minimum ceiling height required by Section 1003.2 provided a minimum headroom of 80 inches (2032 mm) shall be provided for any walking surface, including walks, corridors, aisles and passageways. Not more than 50 percent of the ceiling area of a means of egress shall be reduced in height by protruding objects.

Exception: Door closers and stops shall not reduce headroom to less than 78 inches (1981 mm).

A barrier shall be provided where the vertical clearance is less than 80 inches (2032 mm) high. The leading edge of such a barrier shall be located 27 inches (686 mm) maximum above the floor.

◆ This provision is applicable to all components of the means

of egress. Specifically, the limitations in this section and those in Sections 1003.3.2 and 1003.3.3 provide a reasonable level of safety for people with vision impairments as well as during emergency events when vision may be obscured by smoke or low lighting.

Minimum dimensions for headroom clearance are specified in this section. The minimum headroom clearance over all walking surfaces is required to be maintained at 80 inches (2032 mm). This minimum headroom clearance is consistent with the requirements in Section 1009.5 for stairs and Section 1010.6.2 for ramps. Allowance must be made for door closers and stops, since their design and function necessitates placement within the door opening.

The minimum headroom

clearance for door closers and stops is allowed to be 78 inches (1981 mm) [see Figure 1003.3.1(1)]. The 2-inch (51 mm) projection into the doorway height is reasonable since these devices are normally mounted away from the center of the door opening, thus minimizing the potential for contact with a person moving through the opening.

This is consistent with the exception in Section 1008.1.1.1.

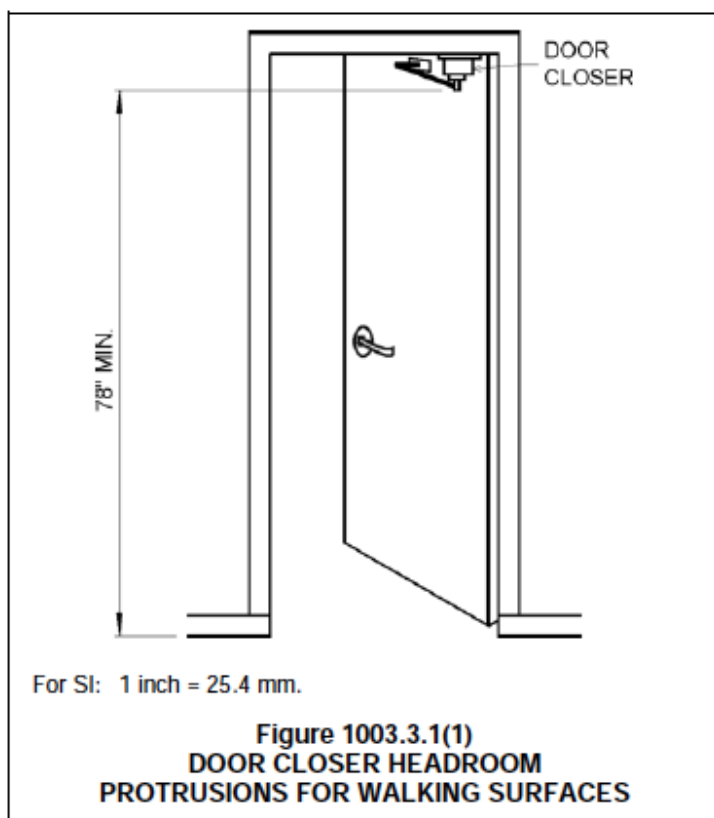
The limitation on overhangs is of primary importance to those individuals with visual impairments.

When vertical clearance along a walking surface is less than 80 inches (2032 mm), such as underneath the stairway on the ground floor, some sort of barrier that is detectable by a person using a cane must be provided. This



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can be a full-height wall, a rail at or below 27 inches (686 mm), a planter, fixed seating, etc. A low curb is not effective as a barrier. A person with visual impairments might mistake it for a stair tread, step up onto it and

strike their head. A rail at handrail height would not be detectable by a person using a cane, and he or she could possibly walk into the rail before detecting it. Also, when making decisions on the choice of type of barrier, keep in mind that persons

of shorter stature and children have a detectable range that may be below 27 inches (686 mm) [see Figure 1003.3.1(2)].

[B] 1003.3.2 Post-mounted objects. A free-standing object mounted on a post or pylon shall not overhang that post or pylon more than 4 inches (102 mm) where the lowest point of the leading edge is more than 27 inches (686 mm) and less than 80 inches (2032 mm) above the walking surface. Where a sign or other obstruction is mounted between posts or pylons and the clear distance between the posts or pylons is greater than 12 inches (305 mm), the lowest edge of such sign or obstruction shall be 27 inches (686 mm) maximum or 80 inches (2032 mm) minimum above the finished floor or ground.



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Exception: These requirements shall not apply to sloping portions of handrails between the top and bottom riser of stairs and above the ramp run.

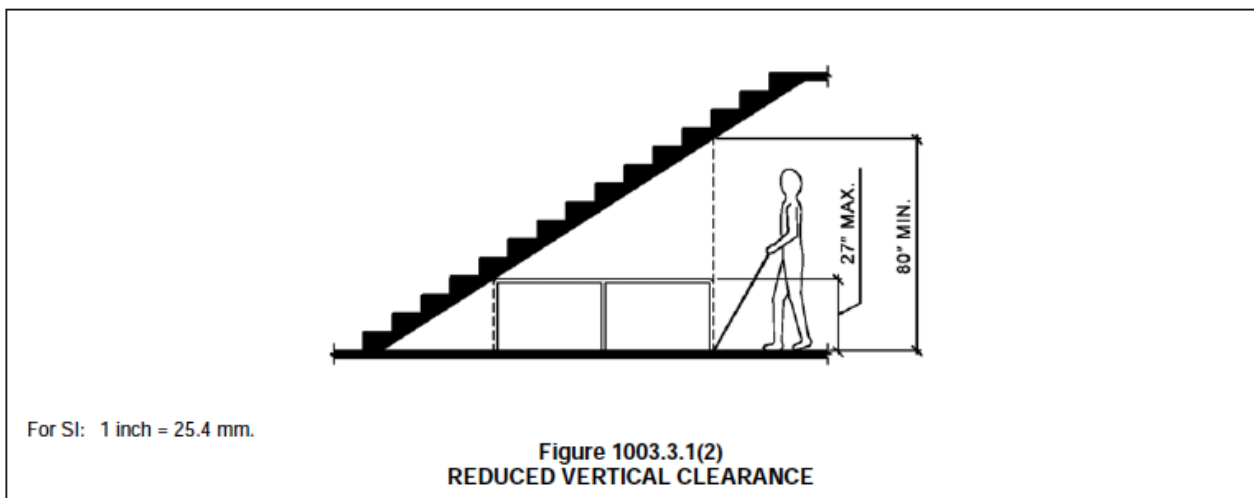
Post-mounted objects, such as signs or some types of drinking fountains or phone boxes, are not permitted to overhang more than 4 inches (102 mm) past the post where the bottom edge is located higher than 27 inches (686 mm) above

the walking surface [see Figure 1003.3.2(1)].

Since the minimum required height of doorways, stairways and ramps in the means of egress is 80 inches (2032 mm), protruding objects located higher than 80 inches (2032 mm) above the walking surface are not regulated. Protrusions that are located lower than 27 inches (686 mm) above the walking surface are also permitted since they are more readily

detected by a person using a long cane, provided that the minimum required width of the egress element is maintained. This is consistent with the post-mounted objects requirements in Section 307.3 of ICC A117.1. The intent is to reduce the potential for accidental impact for a person who is visually impaired.

When signs are provided on multiple posts, the posts must be located

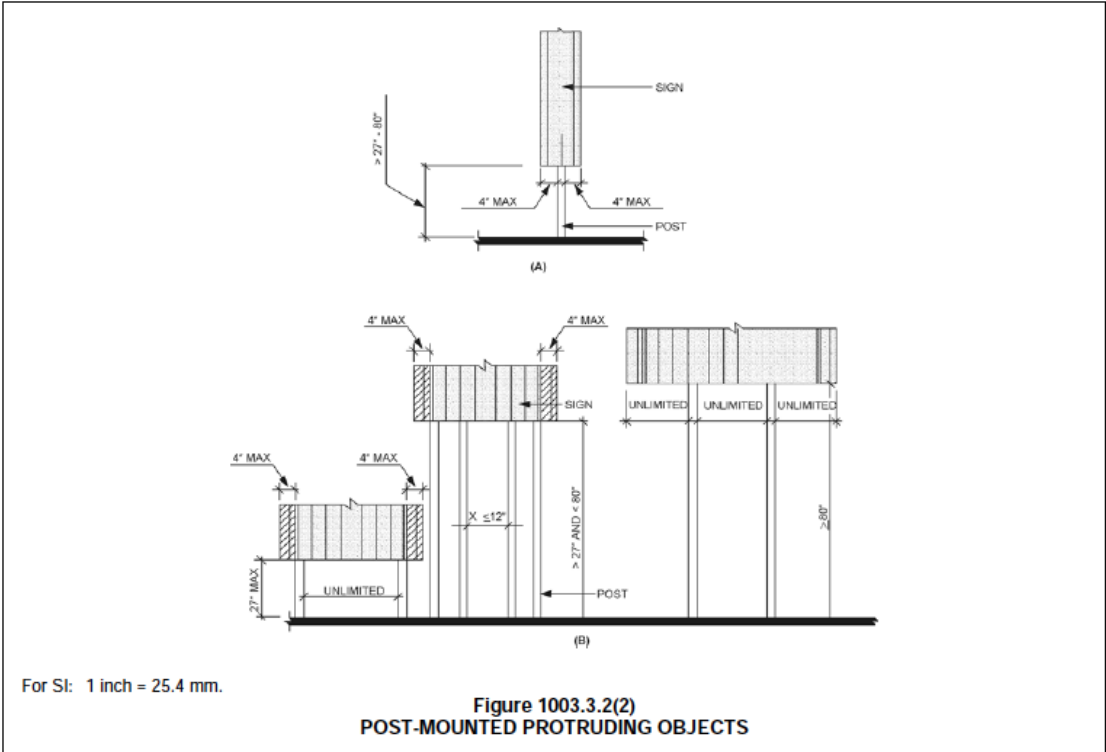
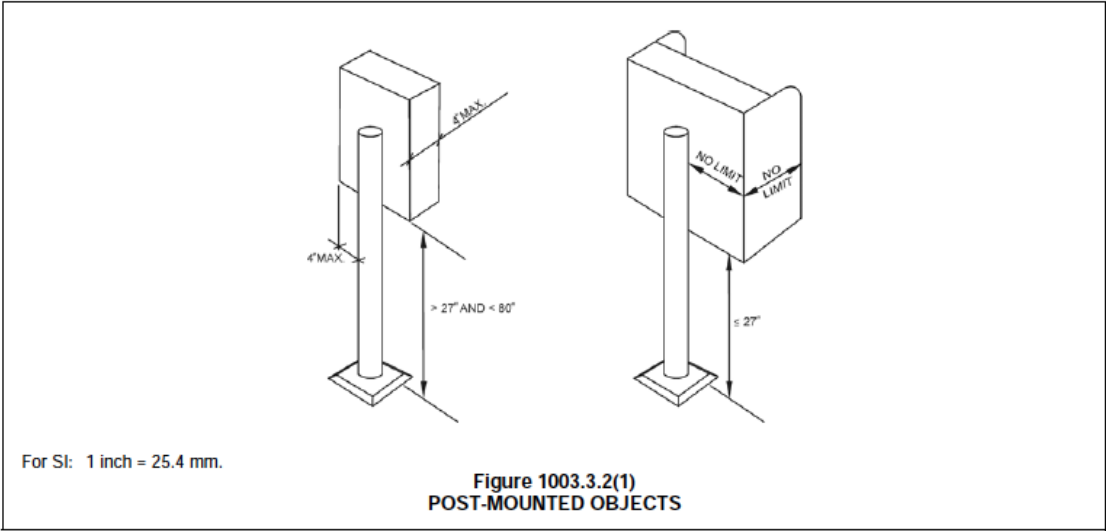




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mm) apart, or the bottom edge of the sign must be lower than 27 inches (686 mm) so it is within detectable cane range or above 80 inches (2032 mm) so that it is above headroom clearances [see Figure 1003.3.2(2)].

The exception is intended for handrails that are located along the run of a stairway flight or ramp run.

The extensions at the top and bottom of stairways and ramps must meet the requirements for protruding objects where people walk perpendicular to the stair or ramp.

[B] 1003.3.3 Horizontal projections. Structural elements, fixtures or furnishings shall not project horizontally from either side more than 4 inches (102 mm) over any walking surface between the heights of 27 inches (686 mm) and 80 inches

(2032 mm) above the walking surface.

Exception: Handrails are permitted to protrude 4 1/2 inches (114 mm) from the wall.

Protruding objects could slow down the egress flow through a corridor or passageway and injure someone hurriedly passing by or someone with a visual impairment.

Persons with a visual impairment, who use a long cane for guidance, must have sufficient warning of a protruding object. Where protrusions are located higher than 27 inches (686 mm) above the walking surface, the cane will most likely not encounter the protrusion before the person collides with the object.

Additionally, people with poor visual acuity or poor depth perception may have difficulty identifying protruding objects higher

than 27 inches (686 mm).

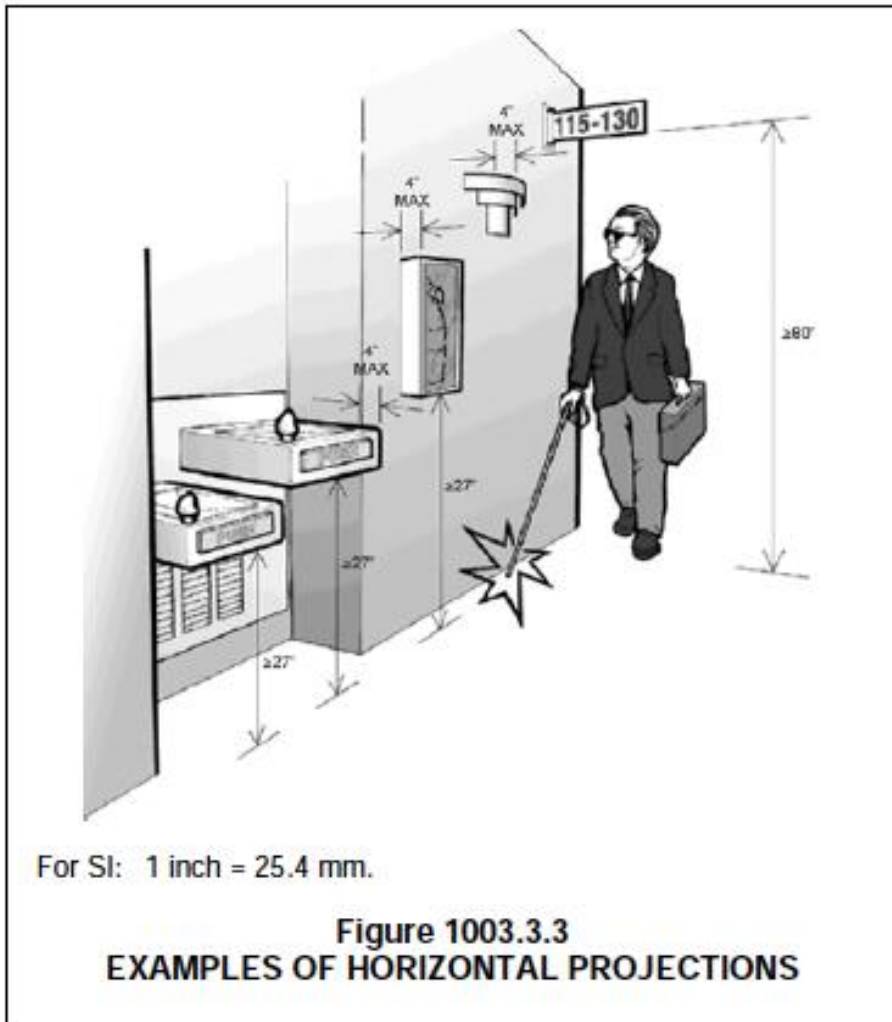
Therefore, objects such as lights, signs and door hardware, located between 27 inches (686 mm) and 80 inches (2032 mm) above the walking surface, are not permitted to extend more than 4 inches (102 mm) from each wall (see Figure 1003.3.3). The requirement for protrusions into the door clear width in Section 1008.1.1.1 is different because it deals with allowances for panic hardware on a door. It is not the intent of this section to prohibit column, pilasters or wing walls to project into a corridor as long as adequate egress width is maintained. These types of structural elements are detectable by persons using a long cane.

The exception is an allowance for handrails



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when they are provided along a wall, such as in some hospitals or nursing homes. The 41 1/2 inches

(114 mm) is intended to be consistent with projections by handrails into the required width of

stairways and ramps in Section 1012.8. There are additional requirements when talking about the required width (see Section 1005.2).

[B] 1003.3.4 Clear width. Protruding objects shall not reduce the minimum clear width of accessible routes.

◆ The intent of this section is to limit the projections into an accessible route so that a minimum clear width of 36 inches (914 mm) is maintained along the route.

ICC A117.1 is referenced by Chapter 11 for technical requirements for accessibility. ICC

A117.1, Section 403.5, allows the accessible route to be reduced in width to 32 inches (914



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mm) for segments not to exceed 24 inches (635 mm) in length and spaced a minimum of 48 inches (1219 mm) apart. This allows for movement through a doorway or through a gap in planters or counters.

[B] 1003.4 Floor surface. Walking surfaces of the means of egress shall have a slip-resistant surface and be securely attached.

◆As the pace of exit travel becomes hurried during emergency situations, the probability of slipping on smooth or slick floor surfaces increases. To minimize the hazard, all floor surfaces in the means of egress are required to be slip resistant. The use of hard floor materials with highly polished, glazed, glossy or finely finished surfaces should be avoided.

Field testing and uniform

enforcement of the concept of slip resistance are not practical. One method used to establish slip resistance is that the static coefficient of friction between leather [Type 1 (Vegetable Tanned) of Federal Specification KK-L-165C] and the floor surface is greater than 0.5. Laboratory test procedures, such as ASTM D 2047, can determine the static coefficient of resistance. Bulletin No. 4 titled "Surfaces" issued by the U.S. Architectural and Transportation Barriers Compliance Board (ATBCB or Access Board) contains further information regarding slip resistance.

[B] 1003.5 Elevation change. Where changes in elevation of less than 12 inches (305 mm) exist in the means of egress, sloped surfaces shall be used. Where the slope is greater than one unit

vertical in 20 units horizontal (5-percent slope), ramps complying with Section 1010 shall be used. Where the difference in elevation is 6 inches (152 mm) or less, the ramp shall be equipped with either handrails or floor finish materials that contrast with adjacent floor finish materials.

Exceptions:

1. A single step with a maximum riser height of 7 inches (178 mm) is permitted for buildings with occupancies in Groups F, H, R-2, R-3, S and U at exterior doors not required to be accessible by Chapter 11 of the International Building Code.

2. A stair with a single riser or with two risers and a tread is permitted at locations not required to be accessible by Chapter 11 of the



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International Building Code, provided that the risers and treads comply with Section 1009.7, the minimum depth of the tread is 13 inches (330 mm) and at least one handrail complying with Section 1012 is provided within 30 inches (762 mm) of the centerline of the normal path of egress travel on the stair.

3. A step is permitted in aisles serving seating that has a difference in elevation less than 12 inches (305 mm) at locations not required to be accessible by Chapter 11 of the International Building Code, provided that the risers and treads comply with Section 1028.11 and the aisle is provided with a handrail complying with Section 1028.13.

Throughout a story in a Group I-2 occupancy, any change in elevation in

portions of the means of egress that serve non-ambulatory persons shall be by means of a ramp or sloped walkway.

◆Minor changes in elevation, such as a single step that is located in any portion of the means of egress (i.e., exit access, exit or exit discharge) may not be readily apparent during normal use or emergency egress and are considered to present a potential tripping hazard. Where the elevation change is less than 12 inches (305 mm), a ramp or sloped surface is specified to make the transition from higher to lower levels.

This is intended to reduce accidental falls associated with the tripping hazard of an unseen step. Ramps must be constructed in accordance with Section 1010.1. The presence of the ramp must be readily

apparent from the directions from which it is approached. Handrails are one method of identifying the change in elevation. In lieu of handrails, the surface of the ramp must be finished with materials that visually contrast with the surrounding floor surfaces.

The walking surface of the ramp should contrast both visually and physically.

None of the exceptions are permitted along an accessible route required for either entry or egress from a space or building.

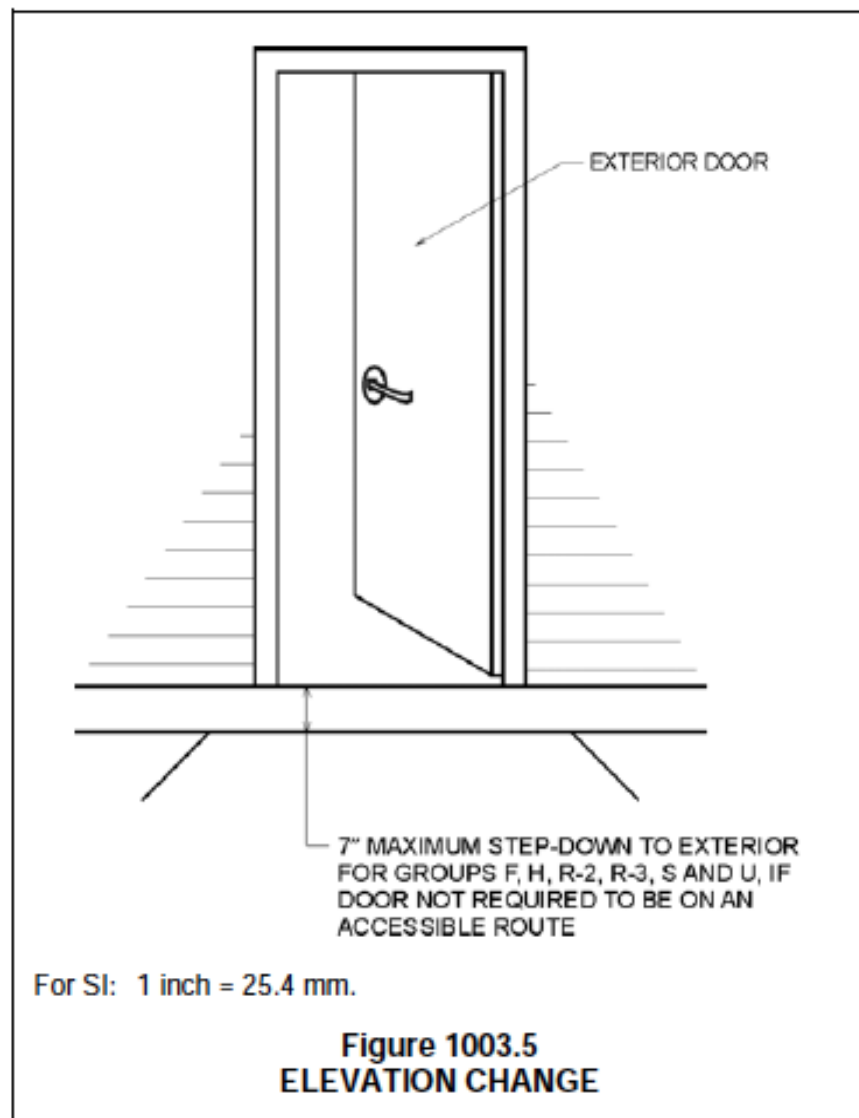
Exception 1 allows up to a 7-inch (178 mm) step at exterior doors to avoid blocking the outward swing of the door by a buildup of snow or ice in locations that are not used by the public on a regular basis (see

Figure 1003.5). This exception is coordinated



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with Exception 2 of Section 1008.1.5, and is only applicable in occupancies that have relatively low occupant densities, such as factory and industrial structures.

This exception is not applicable to exterior doors that are required to serve as an accessible entrance or that are part of a required accessible route. If this exception is utilized at a Group R-2 or R-3 occupancy, the designer may want to consider the issues of potential tripping hazards if this is a common entrance for a large number of occupants.

Exception 2 allows the transition from higher to lower elevations to be accomplished through the construction of stairs with one or two risers. The pitch of the stairway, however, must be shallower than that



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required for typical stairways (see Section 1009.7.2).

Since the total elevation change is limited to 12 inches (305 mm), each riser must be approximately 6 inches (152 mm) in height. The elevation change must be readily apparent from the directions from which it is approached. At least one handrail is required. It must be constructed in accordance with Section 1012 and located so as to provide a graspable surface from the normal walking path.

Exception 3 is basically a cross reference to the assembly provisions for stepped aisles in Section 1025.

None of the exceptions are permitted in a Group I-2 occupancy (e.g., nursing home, hospital) in areas where non-ambulatory persons may

need access.

The mobility impairments of these individuals require additional consideration.

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

◆The purpose of this section requires that the entire means of egress path is clear of obstructions that could reduce the egress capacity at any point. The egress path is also not

allowed to be reduced in width such that the design occupant load would not be served. Note, however, that the egress path could be reduced in width in situations where it is wider than required by the code based on the occupant load. For example, if the required width of a corridor was 52 inches (1321 mm) based on the number of occupants using the corridor and the corridor provided was 96 inches (2438 mm) in width, the corridor would be allowed to be reduced to the minimum required width of 52 inches (1321 mm) since that width would still serve the number of occupants required by the code.

In the context of this section, a “means of egress component” would most likely be a door or doorway.



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[B] 1003.7 Elevators, escalators and moving walks. Elevators, escalators and moving walks shall not be used as a component of a required means of egress from any other part of the building.

Exception: Elevators used as an accessible means of egress in accordance with Section 1007.4.

◆Generally, the code does not allow elevators, escalators and moving sidewalks to be used as a required means of egress. The concern is that due to possible power outages, escalators and moving sidewalks may not provide a safe and reliable means of egress that is available for use at all times.

Elevators are not typically used for unassisted evacuation during fire emergencies. However, in taller buildings fire

fighters use the elevators for both staging to fight the fire and assisted evacuation. They can verify that the shaft is not full of smoke, that the elevators will remain operational and, since they know the fire location, what floors the elevator is safe to access. In accordance with the exception, elevators are allowed to be part of an accessible means of egress (i.e., assisted evacuation), provided they comply with the requirements of Section 1007.4. Where elevators are required to serve as part of the accessible means of egress is addressed in Section 1007.2.1. There are new provisions for fire service elevators and occupant evacuation elevators for high rises in Sections 403, 3007 and 3008. These specific provisions will

provide a level of safety that would meet the intent of the means of egress provisions in Chapter 10.

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