

Fire and Life-Safety Group (FLS)

This document was prepared to list some but not all of the requirements based on the latest edition of adopted codes in 2009. Please ensure that all the requirements of applicable codes at the time of new installations or changes to existing installations are verified and implemented.

If you have any questions concerning Accessible Means of Egress please contact the Campus Fire Marshal.

Accessible Means of Egress

Introduction:

According to the March/April 2005 National Fire Protection Association Journal, "Roughly 20% of the U.S. population is disabled, including those who have mobility impairments, who are deaf or hard of hearing, who are blind or partially sighted, people of size, the elderly, those who have cognitive or emotional impairments and those who are vertically challenged." As a result, it is of the highest importance that measures be taken to ensure their safety in the event of an emergency. This includes providing adequate refuge space and means of communication, where required, alternative means and routes of evacuation other than elevators and clearly illustrating available accessible evacuation routes on emergency evacuation plans. In addition to this, it is critical that building staff be trained in general evacuation procedures. The American Disabilities Act (ADA), signed in 1990, requires that that all newly constructed buildings be accessible to people with disabilities. The act also requires that barriers be removed when readily achievable in buildings constructed prior to the enactment of the ADA . This document has been prepared in order to list some but not all of the requirements based on the latest edition of adopted codes in 2009. Please ensure that all the requirements of applicable codes are verified and implemented at the time of new installations or changes to existing installations.

General Code Requirements:

Section 1007.1 of the 2006 *International Fire Code* (IFC) states that accessible means of egress are to comply with this section. Accessible spaces are to be provided with not less than one accessible means of egress. Where more than one means of egress is required each portion of the space is to be served by not less than two accessible means of egress.

Exceptions:

- Accessible means of egress are not required in alterations to existing buildings.
- One accessible means of egress is required from an accessible mezzanine level.
- In assembly spaces with sloped floors, one accessible means of egress is required.

Section 1007.2 of the IFC states that each required accessible means of egress is to be continuous to a public way and is to consist of one or more of the following components:

- Accessible routes complying with Section 1104 of the *International Building Code*.
- Stairways within vertical exit enclosures complying with Sections 1007.3 and 1020.
- Exterior exit stairways complying with Sections 1007.3 and 1023.
- Elevators complying with Section 1007.4, below.
- Platform lifts complying with Section 1007.5, below.
- Horizontal exits complying with Section 1022.
- Ramps complying with Section 1010.
- Areas of refuge complying with Section 1007.6

Exceptions:

- Where the exit discharge is not accessible, an exterior area for assisted rescue must be provided.
- Where the exit stairway is open to the exterior, the accessible means of egress is to include either an area of refuge or an exterior area for assisted rescue.

Section 1007.2.1 of the IFC states that in buildings where a required accessible floor is four or more stories above or below a level of exit discharge, at least one required accessible means of egress is to be an elevator.

Exceptions:

- In buildings equipped throughout with an automatic sprinkler system the elevator is not required on floors provided with a horizontal exit and located at or above the level of exit discharge.
- In buildings equipped throughout with an automatic sprinkler system installed, the elevator is not required on floors provided with a ramp.

Enclosed Exit Stairways

Section 1007.3 of the IFC states that for an enclosed exit stairway to be considered part of an accessible means of egress, it is to have a clear width of 48 inches minimum between handrails and is to either incorporate an area of refuge within a landing or is accessed from either an area of refuge or a horizontal exit.

Exceptions:

- Open exit stairways can be considered part of an accessible means of egress.
- The area of refuge is not required at open stairways in buildings or facilities that are equipped throughout with an automatic sprinkler.
- The clear width of 48 inches between handrails and the area of refuge is not required at exit stairways in buildings or equipped throughout with an automatic sprinkler system.
- The clear width of 48 inches between handrails is not required for enclosed exit stairways accessed from a horizontal exit.
- Areas of refuge are not required at exit stairways serving open parking garages.

Elevators

Section 1007.4 of the IFC states that an elevator considered to be part of an accessible means of egress is to comply with the emergency operation and signaling device requirements. Standby power is to be provided in accordance with *International Building Code*. The elevator is to be accessed from either an area of refuge or a horizontal exit.

Exceptions:

- Elevators are not required to be accessed from an area of refuge or horizontal exit in open parking garages.
- Elevators are not required to be accessed from an area of refuge or horizontal exit in buildings and facilities equipped throughout with an automatic sprinkler system.

Platform Lifts

Section 1007.5 of the IFC states that platform (wheelchair lifts) must not serve as part of an accessible means of egress, except where allowed as part of a required accessible route in the *International Building Code*. Standby power is to be provided in accordance with the IBC.

Section 1007.5.1 states that platform lifts on an accessible means of egress are not to be installed in a fully enclosed or fire-rated shaft.

Areas of Refuge

Section 1007.6 of the IFC states that every required area of refuge is to be accessible from the space it serves by an accessible means of egress. The maximum travel distance from any accessible space to an area of refuge must not exceed the travel distance permitted for the occupancy. Every required area of refuge must have direct access to an enclosed stairway.

- 1007.6.1 **Size.** Each area of refuge is to be sized to accommodate one wheelchair space of 30 inches by 48 inches for each 200 occupants or portion thereof, based on the occupant load of the area of refuge and areas served by the area of refuge. Such wheelchair spaces are not to reduce the required means of egress width. Access to any of the required wheelchair spaces in an area of refuge must not be obstructed by more than one adjoining wheelchair space.
- 1007.6.2 **Separation.** Each area of refuge must be separated from the remainder of the story by a smoke barrier. Each area of refuge is to be designed to minimize the intrusion of smoke.

Exceptions:

- Areas of refuge located within a vertical exit enclosure.

Two-way Communication

Section 1007.6.3 of the IFC states that areas of refuge are to have a two-way communication system between the area of refuge and a central control point. If the control point is not constantly manned, then the area of refuge is to also have access to a public telephone system. This system is to include both audible and visible signals.

Instructions

Section 1007.6.4 of the IFC states that in areas of refuge that have a two-way communication system, instructions on the use of the area are to be posted. The instructions are to include the following:

- Directions to find other means of egress.
- Persons able to use the exit stairway do so as soon as possible, unless they are assisting others.
- Information on planned availability of assistance in the use of stairs or supervised operation of elevators, and how to summon such assistance.
- Directions for the use of the communication system.

Identification

Section 1007.6.5 of the IFC states that doors providing access to an area of refuge from an adjacent area must be marked with a sign stating: AREA OF REFUGE.

Signage

Section 1007.7 of the IFC states that at exits and elevators serving a required accessible space but not providing an approved accessible means of egress, signage is to be installed indicating the location of accessible means of egress.

Exterior Area for Assisted Rescue

Section 1007.8 of the IFC states that an exterior area for assisted rescue must be open to outside air. Separation walls are to comply with the requirements for exterior walls.

Section 1007.8.1 of the IFC states that an exterior area for assisted rescue must be at least 50 percent open. The area above the guards must be distributed to minimize the accumulation of smoke or toxic gas.

Section 1007.8.2 of the IFC states that exterior exit stairways that are part of the means of egress for the rescue area shall provide a clear width of 48 inches between handrails.

Section 1007.8.3 of the IFC requires areas for assisted rescue to be identified in a manner consistent with section 1007.6.5.

Fire Alarm Systems

Section 12.15.2 of NFPA-5000 *Building Construction and Safety Code* (BCSC) states that alarms in public use areas and common use areas are to comply with NFPA 72, *National Fire Alarm Code*.

Signs for Exit Doors

Section 12.16.4.1 of the BCSC states that exit doors are to be identified by tactile signs.

Accessible Means of Egress

Section 11.5.4.1 of the BCSC states that areas accessible to people with severe mobility impairment are to have not less than two accessible means of egress. Access is to be provided to not less than one area of refuge or one accessible exit providing a route to an exit discharge and is to remain within the allowable travel distance

Exceptions:

- Exit access travel along the accessible means of egress is to be permitted to be common for the distances permitted as common paths of travel.
- A single accessible means of egress is to be permitted from buildings or areas of buildings permitted to have a single exit.
- The requirement of 11.5.4.1 does not apply to health care occupancies protected throughout by an approved supervised automatic sprinkler system.

Section 11.5.4.2 of the BCSC states that if two accessible means of egress are required, the exits serving these paths are to be located at a distance from one another not less than one-half the length of the maximum overall diagonal dimension of the building or area to be served. Where exit enclosures are provided as the required exits and are interconnected by not less than a 1-hour fire resistance-rated corridor, exit separation is to be permitted to be measured along the line of travel within the corridor.

Exceptions:

- The requirement of 11.5.4.2 does not apply to buildings protected throughout by an approved, supervised automatic sprinkler system.
- Where approved by the authority having jurisdiction the requirement of 11.5.4.2 does not apply where the physical arrangement of means of egress prevents the possibility that access to both accessible means of egress will be blocked by any one fire or other emergency condition.