



Building Code Clarifications - 10. Exiting

10.1 (13-160-120) Definition of travel distance

Per Section (13-160-120), travel distance is defined as the distance from a point in a floor of a building to a vertical exit, a horizontal exit or an outside exit measured along the line of travel.

Travel distance is measured to the nearest exit. The travel distance numbers, as established in Section (13-160-140), are applied to the nearest exit and not to all required exits.

The code does not set limits for travel distance to a secondary exit. This interpretation is consistent with the Life Safety Code NFPA 101.

10.2 (13-160-150) Maximum travel distance - Permitted increase

The last sentence of the code Section (13-160-150) states that 'If travel distance is increased pursuant to this Section, an increase in exit capacity under Section (13-160-210)(d) shall not be permitted'. This restriction applies only to part 'b' of the section.

10.3 (13-160-090) Direction in line of travel

Section (13-160-090) requires that vertical exits in institutional and assembly units to be arranged as to discharge occupants at grade level in direction of travel to the outside. The code does not define direction of travel. So it was determined many years ago that a single 90 degree turn from the stair enclosure would be acceptable. This single turn has been acceptable for many years and many buildings have been built in this manner.

10.4 (13-160-250) Power-operated sliding doors

Per code section (13-160-250), exit doors must swing in the direction of exit travel unless it is one of the listed exceptions. Power operated sliding doors that break away into swing doors comply with this code section.

Power operated sliding doors shall break away to the full open position to provide instant egress at any point in the door's movement.

For exterior power operated sliding doors which are required to swing out to the exterior, the operating slider is not required to be on the exterior face of the assembly. Code section (13-160-250) does not make this requirement.

If the operating slider is on the exterior face of the door assembly, the operation track could have a build up of snow, ice and dirt. This would prevent the doors from sliding properly and thus, affect its break-away capability.

Power operated sliding doors which break away at any point in the door's movement shall be acceptable. The operating slider is not required to be on the exterior face of the assembly.

10.5 (13-160-250) Sliding exit doors

Sliding doors are permitted within a dwelling unit such as for the bedroom, bathroom, closet, etc. The required exit for a dwelling unit can also be of sliding type when the unit entry door is an exterior door or where fire rating is not required for the unit entry door.

The primary entrance to a tenant space within a multi-tenant office or mercantile occupancy building that is used as a showroom or for sales, is permitted to be a sliding door when the clear entrance opening is at least 44 inches wide. A note shall be added on plans that are submitted for approval that the "sliding doors shall remain open during occupancy".

A sliding door is permitted from a room or space used as an individual office with an occupancy load of 10 persons or less or a maximum of 300 sf.

10.6 (13-160-269) Electro-magnetic locks on egress doors

Section (13-160-269) of the Municipal Code of Chicago allows the use of electro-magnetic locking devices on the egress doors of certain types of occupancies. This code section is addressing the delayed egress type of electromagnetic lock.

Access control on egress doors via a non-delay type electro-magnetic lock, also known as "Mag-Lock", can be installed in buildings of the occupancies listed in Section (13-160-269). Plans must be submitted to the Department of Construction Permits for the installation of Electro-Magnetic Locks and obtain all the required permits before any installation begins.

All installations of Electro-Magnetic Locks without delayed egress must meet the following requirements:

- 1) All Electro-Magnetic Locking Devices within a building shall unlock immediately upon the actuation of the building Fire Detection System or the building Automatic Sprinkler System.
- 2) All Electro-Magnetic Locking Devices within a building shall unlock immediately upon a trouble signal or abnormal condition in any supervisory circuit of the building, Fire Detection System or Automatic Sprinkler System rendering the system partially or completely inoperative. All Electro-Magnetic

Locking Devices shall remain unlocked until the Fire Detection System or the Automatic Sprinkler System is restored to normal operation.

- 3) All Electro-Magnetic Locking Devices shall unlock immediately upon loss of electrical power to any devices that controls the lock/unlock status of the Electro-Magnetic Lock.
- 4) The Mag-Lock shall unlock immediately upon the loss of normal electrical power to the building and shall remain unlocked until normal building power is restored. Mag-Locks are not permitted to have a secondary power supply or to have battery backup. The controlling devices for the Mag-locks are permitted to have backup power. (for example the Fire Detection System)
- 5) The following devices are required on the egress side of the door:
 - 5.1 A UL listed motion detector, or a UL listed Lock, or a UL listed Panic Device with a built in switch to allow egress at any time.
 - 5.2 And, an emergency pneumatic bypass push button switch located within 5 feet of the door opening, and in plain view, 42" above the finished floor. This switch should be clearly marked "Push to Exit" and must interrupt power to the Mag-Lock bypassing all other releasing or controlling devices for a minimum of 30 seconds, allowing a person enough time to push the button and proceed through the door.

Electrified dead bolts or magnetic shear locks are not permitted and are not addressed in this section. The installation of Electro-Magnetic Locks shall also be subject to a final inspection and field test.

10.7 (13-160-050) Residential duplex units - exits

In a corridor type residential building, except from the basement, 1st and 2nd floor units complying with the Section (13-160-050)(d), access to the common exit corridor must be provided from both levels of the duplex unit.

When two exits are required from each level of a duplex unit, the private interior stairs shall be considered as one of the required exits from the upper level of the duplex provided access to two building stairs are provided from the lower level of the duplex unit. Therefore, access to only one building/common stairs will be required from the upper level of the duplex unit.

In multiple Dwellings, when only one exit stair is provided for the basement, 1st or 2nd floor space in accordance with the Section (13-160-050)(d), this one exit stair shall be dedicated for one residential unit and shall not be shared by other residential units, unless the shared stairway is open to the outside atmosphere.

Unless otherwise listed as one of the exceptions, traveling up the stairs from any floor that is above the grade level shall not be permitted for exiting.

10.8 (13-160-050) Basement level - One exit (part I)

One exit shall be permitted from any basement level having an area not exceeding 2,000 square feet and used either for storage purposes or to house equipment used in the operation of a building such as pumps, boilers or furnaces, with only incidental human occupancy.

10.9 (13-160-050) Basement level - One exit (part II)

A basement area of less than 800 sf within a duplex dwelling unit or as a self-contained dwelling unit may have a single exit of a private interior stair to the upper level of a duplex or to an exit at grade level.

10.10 (13-160-050) Roof Deck - Exits

Except for the roof deck no higher than the roof of a single story building (including a private garage), all roof decks must have access to two exit stairs. Private roof decks shall be identified on plans as private for a residential unit and can utilize the private stairs from the residential unit below as one of the required exit stairs. The second exit can be the common building stairs that extends to the roof deck level.

When private roof deck (used exclusively by one residential unit) is located at the same level or story as the enclosed residential unit, only the enclosed portion of the residential unit, excluding the roof deck, is required to comply with the exiting requirements of the Section (13-160-050). In other words, a roof deck directly off of an enclosed space is not required to have 2 exits, but the enclosed space may require 2 exits per section (13-160-050).

**10.11 (13-160-040)(d) Stairway serving the roof deck
& (13-160-330)(a)(4)**

Given that a roof deck is not enclosed space, the requirement of an enclosed stair to such a roof level per section (13-160-040)(d) is not applicable. Section (13-160-330)(a)(4) requiring non-combustible stairs for buildings of four stories or more is not applicable either. Only the height of the enclosed floor space or the number of stories shall be the factor for the enforcement of the above mentioned sections.

However, the vertical distance from grade to the roof deck level served by an exterior stairway shall not exceed 45 feet.

The roof deck level shall not be considered as enclosed space even when it is served by the enclosed stairways or elevators and the enclosed stair/ elevator lobby does not exceed 5 feet in width. This ruling is consistent with the meaning of Section (13-48-020)(d).

This interpretation does not apply to Wrigley Field Rooftop Clubs as specified by the Section (13-48-020)(e).

10.12 (13-160-310)(b) Stairway landings

The width of landings shall not be less than the width of stairways they serve. Every landing shall have a minimum dimension measured in the direction of travel equal to the width of the stairway in accordance with the Section (13-160-210)(e).

The application of Section (13-160-310)(b) that permits the length of a landing in the direction of travel to be 48 inches maximum shall be applied only to a stairway that has a straight run. This ruling shall apply to new construction only and not to stairways in existing buildings.

10.13 (13-160-000) Exits in existing buildings

Every existing building shall have not less than the minimum number of required exits, as prescribed in Section (13-160-050).

In existing buildings, the required interior or exterior stairways (except fire escapes) that are minimum 36 inches wide shall be permitted under the following conditions:

1. The occupancy served by the stairway is not an Institution Use.
2. The space or floor served by the stairway has an occupancy count that does not necessitate the stairway to be wider than 36 inches. The occupancy count shall be based on actual space provided and determined by dividing by the numbers which are provided in Sections (13-56-310) and (13-56-320).
3. If the stairway is the original building stairway or the stairway was built with approved building permit drawings.
4. When the change of occupancy of an existing building or building floor served by stairway did not result in two or more hazard index numbers higher than its present occupancy class, as defined in Section (13-200-170).

Existing stairways must be reconstructed to provide a minimum 44 inches in width when the stairways do not meet any one of the above listed conditions.

10.14 (13-160-050)(c) Minimum number of exits from the 2nd floor of a single-family residence

In single-family dwelling and townhouse units two exits are required from the second floor if the area of that floor is over 1500 square feet. Given that sprinklers are allowed to be substituted for the second exit from the third floor of single family and townhouse units per section (13-160-050)(m), sprinklers can also be substituted for the second exit from the second floor. This will be limited to floors with area up to 2000 s.f.

10.15 (13-160-100) Continuous means of exit – Stairs from a dwelling unit connecting to a common exit stair

In residential buildings exiting may transfer from an interior exit stair serving only one dwelling unit to an enclosed common stair serving multiple floors and units which exits at grade subject to the following requirements:

1. Both stairs must conform to the requirements of Chapter 13-160.
2. The main exit stair is enclosed and protected in conformance with section 15-8-120 thru 15-8-180.
3. The stair serving the single dwelling unit is enclosed and protected with the same rated enclosure and doors as the main exit stair it connects to or, if the single unit stair is located within the dwelling unit, it is separated from the main stair by the rated stair enclosure and a self-closing and self-latching, labeled stairwell door with the rating required for stairwell doors serving the main stair.
4. The swing of any doors between the two stairs shall not obstruct the egress path for either stair.
5. The joining of the two stairs does not obstruct or remove a required area of rescue assistance or access to a standpipe and meets the requirements of chapter 13-160.

10.16 (13-160-070) Exits through storage areas in Mercantile buildings

Exiting through the storage area of a Class F mercantile Building to reach an exterior exit door or exit stair using an open exit path is permitted subject to the following requirements:

1. The egress path is correctly sized for the occupant load in conformance with chapter 13-160 (Exit Requirements) and section 13-56-320 (Other occupancies). However, in no case, shall the egress path be less than required by section 13-160-220(b).
2. The pathway shall be permanently marked and striped on the floor surface and shall connect directly to the exterior exit door or exit stairway door. Permanent exit directional signage in conformance with section 13-160-740 shall be provided for the exit path and shall state – REQUIRED EXIT PATH – DO NOT BLOCK OR OBSTRUCT!
3. The exit path will not be blocked with locked doors as required by section 13-160-260.
4. Where emergency lighting is required by this Code it shall be provided for the exit path.
5. The exit path shall be maintained free of blockage or obstruction.