Life Safety NFPA 101

Definitions

Means of Egress
A means of egress is a continuous and unobstructed way of exit travel from any point in a building or structure to a public way and consists of three separate and distinct parts: (a) the exit access, (b) the exit, and (c) the exit discharge.

Exit Access
Exit access is that portion of a means of egress that leads to an entrance to an exit.

Exit
Exit is that portion of a means of egress that is separated from all other spaces of the building or structure by construction or equipment to provide a protected way of travel to the exit discharge.

Exit Discharge
Exit discharge is that portion of a means of egress between the termination of an exit and a public way.

Doors
Every door and every principal entrance that is required to serve as an exit shall be so designed and constructed that the way of exit travel is obvious and direct.

Units of Exit Width
In determining the units of exit width for a doorway, only the clear width of the doorway when the door is in the full open position shall be measured. Clear width shall be the net, unobstructed width of the door opening without projections into such width.

Exception: In existing buildings, projections into the door opening by stops or by the hinge stile shall be permitted. Where mullions divide a doorway, the allowable units of exit width for the entire doorway shall be the sum of the units of exit width calculated separately for each individual door in the opening.

Width
No door opening in the means of egress shall be less than 32 in. (81 cm) in clear width.

Exception No. 1: In existing buildings no single door in a doorway shall be less than 28 in. (71 cm).

Exception No. 2: In detention and correctional occupancies see Chapters 14 & 15 of NFPA 101.

Exception No. 3: Interior doors within dwelling units as provided in Chapter 22 of NFPA 101.

No single door in a doorway shall exceed 48 in. (122 cm) in width.
Force to Open

The forces required to fully open any door manually in a means of egress shall not exceed a 15 lbf (67 N) to release the latch, a 30 lbf (133 N) to set the door in motion and a 15 lbf (67 N) to open the door to the minimum required width. These forces shall be applied at the latch stile.

Exception No. 1: The opening force for doors in existing buildings shall not exceed 50 lbf (222 N) applied to the latch stile.

Exception No. 2: In detention and correctional occupancies see Chapters 14 & 15 of NFPA 101.

Locks, Latches, Alarm Devices

A door shall be so arranged as to be readily opened from the side from which egress is to be made at all times when the building served thereby is occupied. Locks, if provided, shall not require the use of a key, tool, special knowledge or effort for operation from the inside of the building.

Exception No. 1: In health care occupancies see Chapters 12 & 13 and in detention and correctional occupancies see Chapters 14 & 15 of NFPA 101.

Exception No. 2: Exterior doors may have key operated locks from the egress side provided:
1. There is a readily visible, durable sign on the egress side on or adjacent to the door stating THIS DOOR TO REMAIN UNLOCKED WHEN THE BUILDING IS OCCUPIED. The sign shall be in letters not less than 1 in. (2.5 cm) high on a contrasting background, and
2. The locking device is of a type that is readily distinguishable as locked, and
3. This Exception is specifically permitted by Chapters 8 through 30 for the specific occupancy.
4. A key shall be immediately available to any occupant inside the building when it is locked.
5. This Exception may be revoked by the authority having jurisdiction for cause

Exception No. 3: When permitted by Chapters 8 through 30, key operation is allowed provided the key cannot be removed when the door is locked from the side from which egress is to be made.

Every stairwell door shall allow reentry from the stairwell to the interior of the building or an automatic release shall be provided to unlock all stairwell doors to allow reentry. Such automatic release shall be actuated with the initiation of the building fire alarm system.

Exception No. 1: Selected doors on stairwells may be equipped with hardware that prevents reentry into the interior of the building provided that:
1. Such arrangement is specifically permitted by Chapters 8 through 30, and
2. There are at least two levels where it is possible to leave the stairwell, and
3. There shall be not more than four floors intervening between floors where it is possible to leave the stairwell, and
4. Reentry is possible on the top or next to top floor permitting access to another exit, and
5. Doors permitting reentry are identified as such on the stairwell side of the door.

Exception No. 2: In new health care occupancies as provided in Chapter 12, and in new detention and correctional occupancies as provided in Chapter 14 of NFPA 101.
A latch or other fastening device on a door shall be provided with a knob, handle, panic bar, or other simple type of releasing device, the method of operation of which is obvious, even in darkness.

Where pairs of doors are required in a means of egress, each leaf of the pair shall be provided with its own releasing device. Devices that depend upon the releasing of one door before the other shall not be used.

Exception No. 1: When exit doors are used in pairs and approved automatic flush bolts are used, the door leaf having the automatic flush bolts shall have no door knob or surface-mounted hardware. The unlocking of any leaf shall not require more than one operation.

No lock, padlock, hasp, bar, chain, or other device, or combination thereof, shall be installed or maintained at any time on or in connection with any door on which panic hardware or fire exit hardware is required by this Code if such device prevents or is intended to prevent the free use of the door for the purposes of egress.

Special Locking Arrangements

In buildings protected throughout by an approved supervised automatic fire detection system or approved supervised automatic sprinkler system and when permitted by Chapters 8 through 30, doors in low or ordinary hazard areas, as defined by 4-2.2, may be equipped with approved, listed, locking devices which shall:

1. Unlock upon actuation of an approved supervised automatic fire detection system or approved supervised automatic sprinkler system installed in accordance with Section 7-6 or 7-7, and

2. Unlock upon loss of power controlling the lock or locking mechanism, and.

3. Initiate an irreversible process that will release the lock within 15 seconds whenever a force of not more that 15 lb (67 N) is continuously applied, for a period of not more than three seconds to the release device required in 5-2.1, 5.3. Relocking of such doors shall be by manual means only. Operation of the release device shall activate a signal in the vicinity of the door for assuring those attempting to exit that the system is functional. Exception to (c): The authority having jurisdiction may approve a delay not to exceed 30 seconds provided that reasonable life safety is assured.

A sign shall be provided on the door adjacent to the release device that reads:

PUSH UNTIL ALARM SOUNDS.

DOOR CAN BE OPENED IN 15 SECONDS.

Sign letters shall be at least 1 in. (2.5 cm) high and 1/8 in. (0.3 cm) wide stroke.

Emergency lighting shall be provided at the door.

Panic Hardware and Fire Exit Hardware

Panic hardware and fire exit hardware consist of a door latching assembly incorporating a device which releases the latch upon the application of a force in the direction of exit travel. Fire exit hardware additionally provides fire protection when used as part of a fire door assembly. When a door is required to be equipped with panic hardware or fire exit hardware by some other provision of this Code, such releasing device shall:

1. Consist of bars or panels, the actuating portion of which shall extend across not less than one-half of the width of the door leaf, not less than 30 in. (76 cm) nor more than 44 in. (112 cm) above the floor, and
2. Cause the door latch to release when a force not to exceed 15 lb (67 N) is applied. Only approved panic hardware shall be used on doors that are not fire doors. Only approved fire exit hardware shall be used on fire doors. Required panic hardware and fire exit hardware shall not be equipped with any locking device, set screw, or other arrangement which can be used to prevent the release of the latch when pressure is applied to the bar. Devices that hold the latch in the retracted position are prohibited on fire exit hardware unless listed and approved for such use. 

**Exception No. 1:** In detention and correctional occupancies as provided in Chapters 14 and 15 of NFPA 101.

### Self Closing Devices

A door designed to be kept normally closed in a means of egress, such as a door to a stair enclosure or horizontal exit, shall be a self-closing door and shall not at any time be secured in the open position. 

**Exception:** In any building of low or ordinary hazard contents, as defined in 4-2.2.2 and 4-2.2.3, where permitted by Chapters 8 through 30, or where the authority having jurisdiction approves the installation and finds that the circumstances are such that reasonable life safety from fire and smoke is not endangered thereby, stairway doors, doors in smoke barriers, and doors in horizontal exits may be automatic closing, where:

1. Upon release, the door becomes self-closing; and
2. An approved release device is provided, so arranged that any interruption of the hold-open feature will cause the door to be released; and
3. The release device is so designed that the door may be instantly released manually and upon release become self-closing or the door may be closed by some simple or readily obvious operation; and
4. The automatic releasing mechanism or medium is activated by (1) the operation of an approved automatic smoke detection system installed to protect the entire building, so designed and installed as to provide for actuation of the system so promptly as to preclude the generation of heat or smoke sufficient to interfere with egress before the system operates, or (2) the operation of approved smoke detectors installed in such a way as to detect smoke on either side of the door opening, as detailed in NFPA 72E, Standard on Automatic Fire Detectors, Section 8-2. In addition, the operation of an approved automatic sprinkler system which protects the entire building, if provided, shall also cause the door to close but does not substitute for smoke actuation. The above systems may be zoned as approved by the authority having jurisdiction.
5. Any sprinkler or fire detection system or smoke detector is provided with such supervision and safeguards as are necessary to assure complete reliability of operation in case of fire.