### 7511.1027 SECTION 1027, MEANS OF EGRESS FOR EXISTING BUILDINGS.

IFC Section 1027 is deleted in its entirety and replaced with the following:

## SECTION 1027

## MEANS OF EGRESS FOR EXISTING BUILDINGS

1027.1 General. Means of egress in existing buildings shall comply with Sections 1027.1 through 1027.23.4.
1027.1.1 Compliance option. Means of egress in existing buildings conforming to NFPA 101 (Life Safety Code) shall be deemed as evidence of compliance with this section.
1027.1.2 Previous codes. Means of egress in existing buildings conforming to the requirements of the Fire Code or Building Code under which they were constructed shall be considered as complying means of egress if, in the opinion of the fire code official, they do not constitute a distinct hazard to life.
1027.1.3 Occupant loads. The number of occupants shall be determined in accordance with Section 1004.
1027.1.4 Egress width. The minimum required egress width shall be determined in accordance with Section 1005.1.
1027.1.5 Ceiling height. The ceiling height in corridors and stairs shall be not less than 78 inches ( 1981 mm ).
1027.2 Elevators, escalators and moving walks. Elevators, escalators and moving walks can only be used as a component of a required means of egress where previously approved.
1027.3 Exit signs - general. Exit signs shall comply with Sections 1027.3.1 through 1027.3.5.
1027.3.1 Where required. Exits and exit access doors shall be marked by an approved exit sign readily visible from any direction of egress travel.
1027.3.2 Number of exits. Exit signs shall be provided where two or more exits are required from a room, area or story.
1027.3.3 Main exits. Exit signs need not be provided for main exterior exit doors that are obviously and clearly identifiable as exits.
1027.3.4 Certain occupancies exempt. Exit signs are not required in housing areas of Group I-3 occupancies; in sleeping rooms or dwelling units in Group R-1, R-2 or R-3 occupancies; and in Group U occupancies.
1027.3.5 Exit sign illumination. Exit signs shall be internally illuminated, externally illuminated or self-luminous. The face of an exit sign illuminated from an external source
shall have an intensity of not less than 5 foot-candles ( 54 lux). Internally illuminated signs shall provide equivalent luminance and be listed for the purpose. Approved self-luminous signs that provide evenly illuminated letters shall have a minimum luminance of 0.06 foot-lamberts $\left(0.21 \mathrm{~cd} / \mathrm{m}^{2}\right)$.
1027.4 Power source. Where emergency illumination is required in Section 1027.5, exit signs shall be visible under emergency illumination conditions. Approved signs that provide continuous illumination independent of external power sources are not required to be connected to an emergency electrical system.
1027.5 Illumination - general. Normal and emergency illumination of the means of egress shall comply with Sections 1027.5.1 through 1027.5.3.
1027.5.1 Illumination required. The means of egress shall be illuminated at all times the building space served by the means of egress is occupied. Natural lighting in the interior rooms or spaces can be used to satisfy this requirement during periods of daylight.
1027.5.1.1 Group $U$ occupancies. Illumination is not required in Group $U$ occupancies.
1027.5.1.2 Aisle accessways. Illumination is not required for aisle accessways.
1027.5.1.3 Dwelling units and sleeping rooms. Illumination is not required for dwelling units and sleeping rooms of Group I, R-1, R-2, and R-3 occupancies.
1027.5.2 Illumination level. Floors and other walking surfaces within the means of egress shall be illuminated as follows:
1027.5.2.1 General. The means of egress illumination level shall not be less than one foot-candle (11 lux) at the floor level.
1027.5.2.2 Assembly performances. In assembly occupancies, the illumination of the floors of exit access shall be at least 0.2 foot-candle ( 2.2 lux) during periods of performances or projections involving directed light.
1027.5.3 Illumination emergency power. The power supply for means of egress illumination shall normally be provided by the premises' electrical supply. In the event of power supply failure, illumination shall be automatically provided from an emergency system for the following occupancies where such occupancies require two or more means of egress:

1. Group A having more than 50 occupants. Assembly occupancies used exclusively as a place of worship and having an occupant load of less than 300 are not required to have emergency illumination.
2. Group B buildings three or more stories in height, buildings with 100 or more occupants above or below the level of exit discharge, or buildings with 1,000 or more total occupants.
3. Group E in interior stairs, corridors, windowless areas with student occupancy, shops, and laboratories.
4. Group F having more than 100 occupants. Buildings used only during daylight hours that are provided with windows for natural light are not required to have emergency illumination.
5. Group I.
6. Group $M$ buildings greater than 3,000 square feet $\left(2879 \mathrm{~m}^{2}\right)$ in gross sales area or exceeding one story in height.
7. Group R-1. Where each guest room has direct access to the outside of the building at grade, emergency illumination is not required.
8. Group R-2. Where each living unit has direct access to the outside of the building at grade, emergency illumination is not required.
9. Group R-4. Where each sleeping room has direct access to the outside of the building at ground level, emergency illumination is not required.

The emergency power system shall provide power for not less than 30 minutes and consist of storage batteries, unit equipment or an onsite generator. The installation of the emergency power system shall be in accordance with Section 604.
1027.6 Guards. Guards complying with this section shall be provided at the open sides of means of egress that are more than 30 inches $(762 \mathrm{~mm})$ above the floor or grade below.
1027.6.1 Height of guards. Guards shall form a protective barrier not less than 42 inches ( 1067 mm ) high except for the following existing guards:

1. Existing guards on the open side of stairs, which are permitted to be not less than 30 inches ( 760 mm ) high.
2. Existing guards within dwelling units, which are permitted to be not less than 36 inches ( 910 mm ) high.
3. Existing guards in assembly areas.
4. Existing guards on stairs and balconies of buildings designated as historic structures, which are permitted to be not less than 24 inches ( 610 mm ) high.
1027.6.2 Opening limitations. Open guards shall have balusters or ornamental patterns such that a 6 -inch ( 152 mm ) diameter sphere cannot pass through any opening up to a height of 34 inches ( 864 mm ) except when one of the following conditions exist:
5. At elevated walking surfaces for access to and use of electrical, mechanical or plumbing systems or equipment, guards shall have balusters or be of solid materials such that a sphere with a diameter of 21 inches ( 533 mm ) cannot pass through any opening.
6. In occupancies in Group I-3, F, H, or S, the clear distance between intermediate rails measured at right angles to the rails shall not exceed 21 inches ( 533 mm ).
7. Approved existing open guards.
1027.7 Doors - general. Except where modified by Section 1008.1.2, doors shall be of the side-hinged swing type. Doors shall swing in the direction of egress travel where serving an occupant load of 50 or more persons. The minimum width of each door opening shall be sufficient for the occupant load thereof. Locks and latches shall comply with Sections 1008.1.8 and 1008.1.9.
1027.7.1 Size of doors. Except where modified by this section, each required means of egress door shall comply with the minimum dimensions specified herein. Doors shall provide a clear width of not less than 28 inches ( 711 mm ). Where this section requires a minimum clear width of 28 inches $(711 \mathrm{~mm})$ and a door opening includes two door leaves without a mullion, one leaf shall provide a clear opening width of 28 inches ( 711 mm ). The maximum width of a swinging door leaf shall be 48 inches ( 1219 mm ) nominal. The height of doors shall not be less than 80 inches ( 2032 mm ).
1027.7.1.1 Closets. Door openings to storage closets less than 10 square feet ( 0.93 $\mathrm{m}^{2}$ ) in area shall not be limited by the minimum width.
1027.7.1.2 Revolving doors. Width of door leafs in revolving doors shall not be limited.
1027.7.1.3 Dwelling units. Door openings within a dwelling unit are permitted to be 78 inches $(1981 \mathrm{~mm})$ in height.
1027.7.1.4 Small rooms. Exit access doors serving a room not larger than 70 square feet $\left(6.5 \mathrm{~m}^{2}\right)$ are permitted to be 24 inches $(610 \mathrm{~mm})$ in door width.
1027.7.1.5 Health care facilities. The minimum clear width for doors in the means of egress from hospitals; nursing homes; limited care facilities; psychiatric hospital sleeping rooms; and diagnostic and treatment areas, such as x-ray, surgery, or physical therapy, shall be not less than 32 inches ( 810 mm ) wide. Existing 34-inch ( 865 mm ) doors shall be permitted. Existing 28 -inch ( 710 mm ) corridor doors in facilities where the fire plans do not require evacuation by bed, gurney, or wheelchair shall be permitted.
1027.8 Opening force for doors. The opening force for interior side swinging doors without closers shall not exceed a 5-pound ( 22 N ) force. For other side swinging, sliding and folding doors, the door latch shall release when subjected to a force of not more than

15 pounds $(66 \mathrm{~N})$. The door shall be set in motion when subjected to a force not exceeding a 30 -pound $(133 \mathrm{~N})$ force. The door shall swing to a full-open position when subjected to a force of not more than 50 pounds $(222 \mathrm{~N})$. Forces shall be applied to the latch side.
1027.9 Revolving doors. Revolving doors shall comply with Sections 1027.9.1 through 1027.9.6.
1027.9.1 Location. A revolving door shall not be located within 10 feet ( 3048 mm ) of the foot or top of stairs or escalators. A dispersal area shall be provided between the stairs or escalators and the revolving doors.
1027.9.2 Speed. The revolutions per minute for a revolving door shall not exceed those shown in Table 1027.9.
1027.9.3 Side-hinged door required. Each revolving door shall have a conforming side-hinged swinging door in the same wall as the revolving door and within 10 feet (3048 mm ).
1027.9.4 Elevator lobbies. A revolving door is permitted to be used without an adjacent swinging door for street floor elevator lobbies provided a stairway, escalator or door from other parts of the building does not discharge through the lobby and the lobby does not have any occupancy or use other than as a means of travel between elevators and a street.
1027.9.5 Side-hinged door option. The requirement for a side-hinged swinging door shall not apply where the number of revolving doors does not exceed the number of swinging doors within 20 feet ( 6096 mm ).
1027.9.6 Egress component. A revolving door used as a component of a means of egress shall comply with Section 1027.9 and all of the following conditions:

1. Revolving doors shall not be given credit for more than 50 percent of the required egress capacity.
2. Each revolving door shall be credited with not more than a 50-person capacity.
3. Revolving doors shall be capable of being collapsed when a force of not more than 130 pounds $(578 \mathrm{~N})$ is applied within 3 inches $(76 \mathrm{~mm})$ of the outer edge of a wing.

TABLE 1027.9

## REVOLVING DOOR SPEEDS

Inside Diameter

$$
\begin{array}{cc}
\text { Power-Driven-Type Speed } & \text { Manual-Type Speed Control } \\
\text { Control (RPM) } & \text { (RPM) }
\end{array}
$$

| $7^{\prime} 0^{\prime \prime}$ | 10 | 11 |
| :--- | :--- | :--- |
| $7^{\prime} 6^{\prime \prime}$ | 9 | 11 |
| $8^{\prime} 0^{\prime \prime}$ | 9 | 10 |
| $8^{\prime} 6^{\prime \prime}$ | 8 | 9 |
| $90^{\prime \prime}$ | 8 | 9 |
| $9^{\prime} 6 \prime$ | 7 | 8 |
| $10^{\prime \prime} 0 \prime$ | 7 | 8 |

For SI: 1 inch $=25.4 \mathrm{~mm}, 1$ foot $=304.8 \mathrm{~mm}$.
1027.10 Stair dimensions for existing stairs. Existing stairs in buildings shall be permitted to remain if the rise does not exceed 8.25 inches $(210 \mathrm{~mm})$ and the run is not less than nine inches ( 229 mm ). Existing stairs are permitted to have a minimum width of 36 inches ( 914 mm ) but not less than the width required for the number of occupants served as determined by Section 1005.1. Existing stairs can be rebuilt.
1027.10.1 Stair dimensions for replacement stairs. The replacement of an existing stairway in a structure shall not be required to comply with the new stairway requirements of Section 1009 where the existing space and construction will not allow a reduction in pitch or slope.
1027.11 Winders. Existing winders shall be allowed to remain in use if they have a minimum tread depth of 6 inches $(152 \mathrm{~mm})$ and a minimum tread depth of 9 inches (229 $\mathrm{mm})$ at a point 12 inches $(305 \mathrm{~mm})$ from the narrowest edge.
1027.12 Circular stairways. Existing circular stairs shall be allowed to continue in use provided the minimum depth of tread is 10 inches $(254 \mathrm{~mm})$ and the smallest radius shall not be less than twice the width of the stairway.
1027.13 Stairway handrails. Stairways shall have handrails on at least one side. Handrails shall be located so that all portions of the stairway width required for egress capacity are within 44 inches $(1118 \mathrm{~mm})$ of a handrail. Aisle stairs provided with a center handrail are not required to have additional handrails.
1027.13.1 Height. Handrail height, measured above stair tread nosings, shall be uniform, not less than 30 inches ( 762 mm ) and not more than 42 inches ( 1067 mm ).
1027.14 Slope of ramps. Ramp runs utilized as part of a means of egress shall have a running slope not steeper than one unit vertical in ten units horizontal (ten percent slope). The slope of other ramps shall not be steeper than one unit vertical in eight units horizontal (12.5 percent slope).
1027.15 Width of ramps. Existing ramps are permitted to have a minimum width of 30 inches ( 762 mm ) but not less than the width required for the number of occupants served as determined by Section 1005.1.
1027.16 Fire escape stairs. Fire escape stairs shall comply with Sections 1027.16.1 through 1027.16.7.
1027.16.1 Existing means of egress. Fire escape stairs shall be permitted in existing buildings but shall not constitute more than 50 percent of the required exit capacity.
1027.16.2 Protection of openings. Openings within 10 feet ( 3048 mm ) of fire escape stairs shall be protected by fire assemblies having a minimum 3/4-hour fire-resistance rating. In buildings equipped throughout with an approved automatic sprinkler system, opening protection is not required.
1027.16.3 Dimensions. Fire escape stairs shall meet the minimum width, capacity, riser height, and tread depth as specified in Table 1027.16.
1027.16.4 Access. Access to a fire escape from a corridor shall not be through an intervening room. Access to a fire escape stair shall be from a door or window meeting the criteria of Table 1005.1. Access to a fire escape stair shall be directly to a balcony, landing, or platform. These shall be no higher than the floor or windowsill level and no lower than 8 inches ( 203 mm ) below the floor level or 18 inches $(457 \mathrm{~mm}$ ) below the windowsill.
1027.16.5 Materials and strength. Components of fire escape stairs shall be constructed of noncombustible materials.

Fire escape stairs and balconies shall support the dead load plus a live load of not less than 100 pounds per square foot $\left(4.78 \mathrm{kN} / \mathrm{m}^{2}\right)$. Fire escape stairs and balconies shall be provided with a top and intermediate handrail on each side.

The fire code official is authorized to require testing or other satisfactory evidence that an existing fire escape stair meets the requirements of this section.
1027.16.6 Termination. The lowest balcony shall not be more than 18 feet (5486 mm ) from the ground. Fire escape stairs shall extend to the ground or be provided with counter-balanced stairs reaching the ground. For fire escape stairs serving ten or fewer occupants, an approved fire escape ladder is allowed to serve as the termination for fire escape stairs.
1027.16.7 Maintenance. Fire escapes shall be kept clear and unobstructed at all times and shall be maintained in good working order.

TABLE 1027.16

## DIMENSIONS FOR EXISTING FIRE ESCAPE STAIRS

Features

Minimum Width
Maximum Height of Risers
Minimum Tread Depth

Serving More Than 10 Serving 10 or Fewer Occupants

22 inches
9 inches
9 inches

Occupants

18 inches
12 inches
6 inches
1027.17 Corridors. Corridors and the openings therein shall provide an effective barrier to resist the movement of smoke. Corridors, common path of travel, and travel distance shall comply with Sections 1027.17.1 through 1027.17.6. Corridors complying with Section 1017.1 need not be fire-resistance rated.
1027.17.1 Construction. Corridors shall be fire-resistance rated in accordance with this section and Table 1027.17.1. Existing walls surfaced with wood lath and plaster in good condition or $1 / 2$-inch gypsum wallboard are acceptable for corridor walls and ceilings. Where Table 1027.17 .1 allows a sprinkler system in lieu of fire-resistance-rated construction, the building shall be protected throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 (where allowed).
1027.17.1.1 Existing churches. In Group A occupancies used as churches, existing corridor walls, ceilings and opening protection not in compliance with Section 1027.17.1 may be continued when such buildings are protected with an approved automatic fire alarm system. The fire alarm system shall include automatic smoke detection throughout the exit system and approved detection in all boiler rooms, furnace rooms, mechanical rooms, and storage rooms.
1027.17.1.2 Existing Group B occupancies. In office areas of Group B occupancies not exceeding 10,000 square feet $\left(929 \mathrm{~m}^{2}\right)$ in size, existing corridor walls, ceilings and opening protection not in compliance with Section 1027.17 .1 may be continued when such buildings are protected with an approved automatic fire alarm system. The fire alarm system shall include automatic smoke detection throughout the exit system and approved detection in all boiler rooms, furnace rooms, mechanical rooms and storage rooms.
1027.17.1.3 Existing Group E occupancies. In Group E occupancies, existing corridor walls, ceilings and opening protection not in compliance with Section 1027.17.1 may be continued when such buildings are protected with an approved automatic fire alarm system that is monitored by a central, proprietary or remote station service. The fire alarm system shall include automatic smoke detection throughout the exit system and approved detection in all rooms and areas other than classrooms and offices.

TABLE 1027.17.1

CORRIDOR FIRE-RESISTANCE RATING

|  | Required Fire-Resistance Rating (hours) |  |  |
| :--- | :--- | :--- | :--- |
| Occupancy | Occupant Load Served <br> by Corridor | Without Sprinkler <br> System | With Sprinkler <br> System <br> M,B,U, F,H, |
| Greater than 30 | 1 | 0 |  |
| I | Greater than 10 | 1 (see Section | 0 |
| R | Greater than 10 | 1027.17 .2 .3 ) |  |

1027.17.2 Corridor openings. Openings into corridors shall comply with Sections 1027.17.2.1 through 1027.17.2.3.
1027.17.2.1 Doors. Doors opening into corridors required by Table 1027.17 .1 to be fire-resistance rated shall be protected by 20-minute fire assemblies or solid wood doors not less than 1-3/4 inches ( 45 mm ) thick. Where the existing frame will not accommodate the 1-3/4 inches ( 45 mm ) thick door, a 1-3/8 inches ( 35 mm ) thick solid bonded wood core door or equivalent insulated steel door shall be permitted. Doors shall be self-closing or automatic-closing by smoke detection.
1027.17.2.2 Other openings. Openings with fixed wired glass set in steel frames are permitted for corridor walls and ceilings. Transoms, louvers and openings other than doors from corridors to rooms shall be automatic-closing by smoke detection or shall be covered with a minimum of three-quarter inch ( 19 mm ) gypsum wallboard or equivalent material on the room side.
1027.17.2.3 Existing Group I-2 and I-3 occupancies. Patient room doors in corridors in Group I-2 occupancies and Group I-3 corridor doors need not be fire-resistance rated or self-closing where smoke barriers are provided in accordance with the Building Code or NFPA 101.
1027.17.3 Corridor width. The minimum corridor width shall be in accordance with Sections 1027.17.3.1 through 1027.17.3.2.
1027.17.3.1 Minimum width. The minimum corridor width shall be as determined by the occupant load calculations in Section 1005.1, but not less than 36 inches.
1027.17.3.2 Minimum width in mechanical areas. The minimum corridor width is allowed to be reduced to 24 inches $(610 \mathrm{~mm})$ for spaces providing access to electrical, mechanical or plumbing systems.
1027.17.4 Dead ends. Where more than one exit or exit access doorway is required, the exit access shall be arranged such that dead ends do not exceed the limits specified in Sections 1027.17.4.1 through 1027.17.4.2 and Table 1027.17.4.
1027.17.4.1 Wide corridors and dead-end provisions. A dead-end passageway or corridor shall not be limited in length where the length of the dead-end passageway or corridor is less and 2.5 times the least width of the dead-end passageway or corridor.
1027.17.4.2 Existing Group E corridors. In Group E occupancies constructed prior to October 3, 1975, dead ends of up to 35 feet ( 10668 mm ) in length are allowed, provided the building is protected with an approved automatic sprinkler system throughout.

TABLE 1027.17.4

COMMON PATH, DEAD-END, AND TRAVEL DISTANCE LIMITS
(by occupancy)

| Occupancy | Common Path Limit |  | Dead-end Corridor Limit |  | Travel Distance Limit |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Unspr <br> (feet) | Spr <br> (feet) | Unspr <br> (feet) | Spr <br> (feet) | Unspr <br> (feet) | Spr <br> (feet) |
| Group A | 20/75 ${ }^{\text {a }}$ | 20/75 ${ }^{\text {a }}$ | $20^{\text {b }}$ | $20^{\text {b }}$ | 200 | 250 |
| Group B | 75 | 100 | 50 | 50 | 200 | 300 |
| Group E | 75 | 75 | 20 | 20 | 200 | 250 |
| Groups F-1, S-1 ${ }^{\text {d }}$ | 75 | 100 | 50 | 50 | 200 | 250 |
| Groups F-2, S-2 ${ }^{\text {d }}$ | 75 | 100 | 50 | 50 | 300 | 400 |
| Group H-1 | 25 | 25 | 0 | 0 | 75 | 75 |
| Group H-2 | 50 | 100 | 0 | 0 | 75 | 100 |
| Group H-3 | 50 | 100 | 20 | 20 | 100 | 150 |
| Group H-4 | 75 | 75 | 20 | 20 | 150 | 175 |
| Group H-5 | 75 | 75 | 20 | 50 | 150 | 200 |
| Group I-1 | 75 | 75 | 20 | 20 | 200 | 250 |
| Group I-2 <br> (Health Care) | N/R | N/R | N/R | N/R | 150 | $200^{\text {c }}$ |
| Group I-3 | 100 | 100 | N/R | N/R | $150{ }^{\text {c }}$ | $200^{\text {c }}$ |


| Group I-4 (Day Care) | $\mathrm{N} / \mathrm{R}$ | $\mathrm{N} / \mathrm{R}$ | 20 | 20 | 200 | 250 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Group M |  |  |  |  |  |  |
| (Covered Mall) | 75 | 100 | 50 | 50 | 200 | 400 |
| Group M (Mercantile) | 75 | 100 | 50 | 50 | 200 | 250 |
| Group R-1 (Hotels) | 75 | 75 | 50 | 50 | 200 | 250 |
| Group R-2 |  |  |  |  |  |  |
| (Apartments) | 75 | 75 | 50 | 50 | 200 | 250 |
| Groups R-3, R-4 | $\mathrm{N} / \mathrm{R}$ | $\mathrm{N} / \mathrm{R}$ | $\mathrm{N} / \mathrm{R}$ | $\mathrm{N} / \mathrm{R}$ | $\mathrm{N} / \mathrm{R}$ | $\mathrm{N} / \mathrm{R}$ |
| Group U | 75 | 75 | 20 | 20 | 200 | 400 |

"Unspr" means unsprinklered and "Spr" means sprinklered.
For SI: 1 foot $=304.8 \mathrm{~mm}$.
a. 20 feet for common path serving more than 50 persons; 75 feet for common path serving 50 or fewer persons.
b. See Section 1024.9.5 for dead-end aisles in Group A occupancies.
c. This dimension is for the total travel distance, assuming incremental portions have fully utilized their allowable maximums. For travel distance within the room, and from the room exit access door to the exit, see the appropriate occupancy chapter.
d. See the International Building Code for special requirements on spacing of doors in aircraft hangers.
$\mathrm{N} / \mathrm{R}=$ No requirements.
1027.18 Exit access travel distance. Exits shall be located so that the maximum length of exit access travel, measured from the most remote point to an approved exterior exit, vertical exit enclosure, horizontal exit, or exit passageway along the natural and unobstructed path of egress travel, does not exceed the distances given in Table 1027.17.4.
1027.19 Common path of egress travel. The common path of egress travel shall not exceed the distances given in Table 1027.17.4.
1027.20 Stairway discharge identification. A stairway in an exit enclosure that continues below the level of exit discharge shall be arranged and marked to make the direction of egress to a public way readily identifiable. Stairs that continue one-half story beyond the level of exit discharge need not be provided with barriers where the exit discharge is obvious.
1027.20.1 Exterior stairway protection. Exterior exit stairs shall be separated from the interior of the building as required in Section 1023.6.
1027.21 Minimum aisle width. The minimum clear width of aisles and aisle accessways shall be in accordance with this section and Table 1027.21.
1027.21.1 Aisle and aisle accessway width. Aisles and aisle accessway widths shall be as determined by the occupant load calculations in Section 1005.1, but not less than the widths shown in Table 1027.21.
1027.21.2 Aisle accessway width for table and chair seating. Aisle accessway width for the table and chair seating (distance between two rows of seats) shall comply with Section 1014.4.1.

TABLE 1027.21

## MINIMUM AISLE AND AISLE ACCESSWAY WIDTHS

Condition
Minimum width (in inches)

Aisle accessways serving seating areas having 50 or fewer seats, tables, or desks

24 inches (610 mm)
Aisle accessways serving seating areas having more than 50 seats, tables, or desks

Aisle accessways serving employee areas only
Level or ramped aisles having seating on each side and serving 50 or fewer seats

Level or ramped aisles having seating on each side and serving more than 50 seats

30 inches ( 760 mm )

24 inches (610 mm)

36 inches ( 914 mm )

Level or ramped aisles having seating on one side and serving 60 or fewer seats

30 inches ( 760 mm )

Level or ramped aisles having seating on one side and serving more than 60 seats

Aisle stairs having seating on each side and serving 50 or fewer seats

Aisle stairs having seating on each side and serving more than 50 seats

36 inches ( 914 mm )

36 inches ( 914 mm )

42 inches (1067 mm)

Aisle stairs having seating on one side and serving 60 or fewer seats

30 inches ( 760 mm )

Aisle stairs having seating on one side and serving more than 60 seats 36 inches ( 914 mm )

Aisle stair - distance between seating and aisle handrail or guard when the aisle is subdivided

20 inches ( 508 mm )
1027.22 Stairway floor number signs. Existing stairs shall be marked in accordance with Section 1020.1.7.
1027.23 Number of means of egress or exits. The number of means of egress doors or exits from a room, area, story or building shall be in accordance with Sections 1027.23.1 through 1027.23.4 and Table 1027.23.
1027.23.1 Number based on capacity. Two means of egress doors or exits are required from rooms, areas, stories or buildings when the number of occupants exceeds the values shown in Table 1027.23.
1027.23.2 Three egress doors on exits required. Three means of egress doors or exits are required from rooms, areas, stories or buildings when the number of occupants exceeds 501 persons.
1027.23.3 Four egress doors or exits required. Four means of egress doors or exits are required from rooms, areas, stories or buildings when the number of occupants is 1001 or more persons.
1027.23.4 Group E laboratories. Group E science laboratories containing hazardous materials shall have two exits when exceeding 1,000 square feet $\left(93 \mathrm{~m}^{2}\right)$ in size.

TABLE 1027.23

## TWO EGRESS DOORS OR EXITS REQUIRED

Occupancy
A,B,E,F,M,S,U
H,I,R

Number of Occupants

50 Occupants
10 Occupants

Statutory Authority: MS s 299F.011
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