



Public Input No. 360-NFPA 101-2024 [New Section after 3.3]

Unobstructed Way of Travel

a clear pathway with direct line of sight without blind corners and obstacles or unexpected protrusions ...

Statement of Problem and Substantiation for Public Input

Helps to justify the meaning of a clear means of egress.

Related Public Inputs for This Document

Related Input

[Public Input No. 361-NFPA 101-2024 \[New Section after A.3.3.177.1\]](#)

Relationship

Annex or Definition

Submitter Information Verification

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Organization: [Not Specified]

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Submittal Date: Tue Jun 04 16:08:34 EDT 2024

Committee: SAF-MEA

Committee Statement

Resolution: The proposed definition does not clarify the concept of unobstructed way of travel. Requirements for means of egress do not mandate direct line of sight and they address projections into the egress path.



Public Input No. 288-NFPA 101-2024 [Section No. 3.3.25 [Excluding any Sub-Sections]]

An area that is either (1) a story in a building where the building is protected throughout by an approved, supervised automatic sprinkler system and has not less than two accessible rooms or spaces separated from each other by smoke-resisting partitions and each such room or space has direct access to an accessible exit ; or (2) a space located in a path of travel leading to a public way that is protected from the effects of fire, either by means of separation from other spaces in the same building or by virtue of location, thereby permitting a delay in egress travel from any level. (SAF-MEA)

Statement of Problem and Substantiation for Public Input

The current definition could be interpreted as allowing a room or space distant from an elevator or stair by which emergency responders would arrive thus delaying rescue. This is evident in Exhibit 7.178(d) of the Handbook. The code only requires two-way communication systems at elevator landings. The proposed change requires the area of refuge to connect with an accessible exit such as an exit stairway or elevator in accordance with 7.5.4.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 296-NFPA 101-2024 [New Section after 7.5]	

Submitter Information Verification

Submitter Full Name: Ajay Prasad
Organization: Jensen Hughes
Street Address:
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Submittal Date: Mon Jun 03 20:43:06 EDT 2024
Committee: SAF-MEA

Committee Statement

Resolution: The related PI-296 was resolved with the appointment of a task group for further study to be addressed at the Second Draft stage.



Public Input No. 81-NFPA 101-2024 [Section No. 3.3.88]

3.3.88* Exit.

That portion of a means of egress that is separated from all other spaces of the building or structure by construction, location, or equipment as required to provide a protected way of travel to the exit discharge, or a designated door to provide egress directly to the exit discharge of the building. (SAF-MEA)

3.3.88.1* Horizontal Exit.

A way of passage from one building to an area of refuge in another building on approximately the same level, or a way of passage through or around a fire barrier to an area of refuge on approximately the same level in the same building that affords safety from fire and smoke originating from the area of incidence and areas communicating therewith. (SAF-MEA)

Statement of Problem and Substantiation for Public Input

The existing definition of an "exit" is generally referring to an exit enclosure such as a stair or exit passageway but does not include basic exterior doors at grade level that are also exits. This causes confusion because there is not a definition for those types of exit doors. For example, a door to an exterior covered walkway that is not separated from the building could have been considered an exit door for the purposes of travel distance measurement, but that covered walkway should be included in the measurement. This revised definition clarifies that those exterior doors only count as exit doors to stop travel distance measurement when they are at grade. When they are not at grade, the travel distance measurement requirements from 7.6 would apply leading to measurement along the egress path and down exterior stairs (if necessary) until the exit discharge at grade to the public way is reached.

Submitter Information Verification

Submitter Full Name: Adam Graybeal

Organization: Koffel Compliance, LLC

Street Address:

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Submittal Date: Tue Apr 30 12:16:31 EDT 2024

Committee: SAF-MEA

Committee Statement

Resolution: The term 'designated door' is unclear. The submitter's substantiation is incorrect re. exterior stairs and travel distance measurement (protected outside stairs can be considered exits). If issues exist with travel distance and exit discharge, they should be included in the code requirements. The submitter might consider proposing an annex note via a Public Comment at the Second Draft stage to provide additional clarification if needed.

**Public Input No. 297-NFPA 101-2024 [New Section after 3.3.165]****Interlocked-Door Vestibule.**

A room, space, or compartment provided with egress doors in series where only one of the doors in series is openable at a time.

Statement of Problem and Substantiation for Public Input

This proposed definition along with complementary proposals in 7.2.1.6.5 and Chapters 18, 19, 20, 21, 36, 37, 38, 39, 40, and 42, offer the opportunity for interlocked-door vestibules in these occupancies.

Interlocked-door vestibules are utilized for environmental contamination control (health care; manufacturing clean rooms), controlled substance dispensing (prescription drugs and cannabis), occupant protection (health care), security reasons (money handling rooms), and other uses and applications.

Sally ports (security vestibule) are defined in NFPA 101 (3.3.256) and permitted in detention and correctional occupancies, sally ports are typically used as security vestibules and control egress (obviously).

Unfortunately, the term "sally port", and its definition, is predominately reserved for uses where occupants are restrained against their will in buildings or spaces.

This proposal seeks to include requirements in NFPA 101 for interlocked-door vestibules.

Related Public Inputs for This Document**Related Input****Relationship**

Public Input No. 298-NFPA 101-2024 [New Section after 7.2.1.6.4]

Public Input No. 298-NFPA 101-2024 [New Section after 7.2.1.6.4]

Public Input No. 299-NFPA 101-2024 [New Section after A.7.2.1.6.4.1(1)]

Submitter Information Verification

Submitter Full Name: John Woestman

Organization: Kellen Company

Affiliation: Builders Hardware Manufacturers Association

Street Address:

City:

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Submittal Date: Mon Jun 03 21:22:45 EDT 2024

Committee: SAF-MEA

Committee Statement

Resolution: The proposed revision in the related Public Input was not incorporated (see PI-298).

**Public Input No. 279-NFPA 101-2024 [Section No. 7.2.1.2.1.1]****7.2.1.2.1.1 Swinging Door Assemblies.**

For swinging door assemblies, clear width shall be measured as follows:

- (1) The measurement shall be taken at the narrowest point in the door opening.
- (2) The measurement shall be taken between the face of the door leaf and the stop of the frame.
- (3) For new swinging door assemblies, the measurement shall be taken with the door leaf open 90 degrees.
- (4) For any existing door assembly, the measurement shall be taken with the door leaf in the fully open position.
- (5) Projections of not more than 4 in. (100 mm) into the door opening ~~width on the hinge side shall~~ width shall not be considered reductions in clear width, provided that such projections ~~are for purposes of accommodating panic hardware or fire exit hardware and are located~~ are located not less than 34 in. (865 mm), ~~and not more than 48 in. (1220 mm), above~~ above the floor.
- (6) Projections exceeding 6 ft 8 in. (2030 mm) above the floor shall not be considered reductions in clear width.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
NFPA_101-2027_Projections_into_Clear_Width_of_Door_Openings_20240604.pdf	PDF illustrating the proposed revisions, and providing additional information.	

Statement of Problem and Substantiation for Public Input

Currently, this section of NFPA 101 permits projections on not more than 4 in. into the door opening on the hinge side of the door – but permits no projections into the door opening on the latch side of the door. It is common that latch strikes are surface mounted, especially for panic hardware, and these latch strikes protrude into the door opening.

The proposed revisions are consistent with ADA requirements as we have not identified a need for 101 to be more restrictive than the ADA. Below is an illustration from the U.S. Access Board Technical Guide: Entrances, Doors, and Gates. Source: <https://www.access-board.gov/ada/guides/chapter-4-entrances-doors-and-gates/>

A pdf with the text of PI 279 along with an illustration from the ADA guidelines for doors is attached, and additional information.

Submitter Information Verification

Submitter Full Name: John Woestman
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Affiliation: Builders Hardware Manufacturers Association
Street Address:
City:
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Submission Date: Mon Jun 03 20:01:13 EDT 2024
Committee: SAF-MEA

Committee Statement

Resolution: The proposed revision allowing a 4-in. projection on the latch side of the door in addition to the permitted 4-in. projection on the hinge side might adversely impact crowd flow through the door. The current requirements were written to accommodate means of egress, which might not directly correlate with ADA or federal facility requirements for accessibility.

**Public Input No. 218-NFPA 101-2024 [Section No. 7.2.1.2.2.1]****7.2.1.2.2.1 Swinging Door Assemblies.**

For swinging door assemblies, egress capacity width shall be measured as follows:

- (1) The measurement shall be taken at the narrowest point in the door opening.
- (2) The measurement shall be taken between the face of the door leaf and the stop of the frame.
- (3) For new swinging doors assemblies, the measurement shall be taken with the door leaf open 90 degrees.
- (4) For any existing door assembly, the measurement shall be taken with the door leaf in the fully open position.
- (5) * Projections not more than 3½ in. (90 mm) at each side of the door openings at a height of not more than 38 in. (965 mm) shall not be considered reductions in egress capacity width.
- (6) Projections exceeding 6 ft 8 in. (2030 mm) above the floor shall not be considered reductions in egress capacity width.

A.7.2.1.2.2.1(5)

Unlike the 4-inch projection for fire exit hardware and panic hardware devices, the 3-1/2-inch encroachments at both sides of the door opening are not for tangible door hardware or other materials. Instead, they apply the effective-width concept of building elements such as corridors, ramps, stairs, and doors referred to as the boundary/edge effect described in A.7.3.3.2. Essentially, the boundary/edge effect accounts for the human body's shape; we're narrower at our feet and wider at our shoulders. Consider how we walk through doorways; we tend to walk through the center area of the openings. Our feet create a natural clearance between the side jambs of the door frames as we step through the openings; otherwise, we would kick the frames with our feet and our shoulders would rub against them. The boundary/edge effect accounts for this naturally occurring clearance.

Statement of Problem and Substantiation for Public Input

The unspecified 3-1/2-inch projections create confusion in the field as they seem to be physical obstructions into the clear width of swinging egress doors, which are not allowed. This section addresses where the egress capacity widths of swinging doors is taken due to the effective-width concept described in A.7.3.3.2. The first paragraph in A.7.3.3.2 includes the following statement: "In essence, the effective width phenomenon recognizes that there is an edge or boundary effect at the sides of a circulation path..." The boundary/edge effect applies epecially to door openings.

This proposal clarifies that the projections allowed in 7.2.1.2.2.1(5) account for the boundary/edge effect as it applies to swinging egress doors.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 219-NFPA 101-2024 [Section No. A.7.2.1.2.2]</u>	Proposed new Figure

Submitter Information Verification

Submitter Full Name: Keith Pardoe
Organization: Pardoe Consulting LLC
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Zip:
Submission Date: Mon Jun 03 10:59:29 EDT 2024
Committee: SAF-MEA

Committee Statement

Resolution: The related base paragraph refers to 3-1/2 in. projections, which can be physical projections into the door opening on both sides for the purpose of determining egress capacity. The concept of boundary/edge effect does not directly correlate with that described in the current annex figure. The proposed figure might create

more confusion.



Public Input No. 277-NFPA 101-2024 [New Section after 7.2.1.2.3.2]

7.2.1.2.3.3 Door Leaves that Swing in Opposite Directions

For a pair of doors that swing in opposite directions, each door required to swing in the direction of egress travel shall provide the required minimum clear width _ and egress capacity width _

Statement of Problem and Substantiation for Public Input

This proposal adds provisions for where a pair of opposite-swinging doors are in the means of egress in proposed new section 7.2.1.2.3.3.

Where the occupant load is such that doors are required to swing in the direction of egress travel, the code currently does not make it clear that each door which is required to swing in the direction of egress travel (of the pair of opposite-swinging doors) is required to meet the required minimum clear width and egress capacity width.

Submitter Information Verification

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Submittal Date: Mon Jun 03 19:58:12 EDT 2024

Committee: SAF-MEA

Committee Statement

Resolution: The proposed revision is located under requirements for minimum door width but introduces criteria for egress capacity, which is addressed in Section 7.3. Current code language addressing required direction of door swing adequately addresses the submitter's concerns.

**Public Input No. 353-NFPA 101-2024 [New Section after 7.2.1.2.3.2]****7.2.1.2.4 Door Leaf Height.**

Doors in the means of egress shall be not less than 80 in. (2030 mm) in clear opening height.

7.2.1.2.4.1 Minimum Clear Height.

Projections into the required clear opening height by door closers, overhead door stops, door frame stops, power door operators, and electromagnetic door locks shall be permitted a minimum of 78 in. (1980 mm) above the floor.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
NFPA_101-2027_Door_Leaf_Height_20240604.pdf	PDF illustrating proposed revisions, and additional information.	

Statement of Problem and Substantiation for Public Input

A minimum clear height for door openings, and typical door hardware which projects or encroaches into the top of the door opening is not directly addressed in NFPA 101. The last item in each section: 7.2.1.2.1.1, 7.2.1.2.1.2, 7.2.1.2.2.1, and 7.2.1.2.2.2 implies that door openings are required to have a minimum height of 6 ft. 8 in. It is common for the identified door hardware items to be installed at the top of door openings which are 6 ft. 8 in. (80 in) tall.

This proposal is consistent with ADA requirements, as illustrated in the attached pdf, from the U.S. Access Board Technical Guide: Entrances, Doors, and Gates. Source: <https://www.access-board.gov/ada/guides/chapter-4-entrances-doors-and-gates/>

Submitter Information Verification

Submitter Full Name: John Woestman
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Submission Date: Tue Jun 04 12:03:53 EDT 2024
Committee: SAF-MEA

Committee Statement

Resolution: FR-6569-NFPA 101-2024

Statement: A minimum clear height for door openings, and typical door hardware which projects or encroaches into the top of the door opening is not directly addressed in NFPA 101. The last item in each section: 7.2.1.2.1.1, 7.2.1.2.1.2, 7.2.1.2.2.1, and 7.2.1.2.2.2 implies that door openings are required to have a minimum height of 6 ft. 8 in. It is common for the identified door hardware items to be installed at the top

of door openings which are 6 ft. 8 in. (80 in) tall. This revision is consistent with ADA requirements.



Public Input No. 313-NFPA 101-2024 [Section No. 7.2.1.4.5.2]

7.2.1.4.5.2

The forces required to fully open any door leaf manually in a means of egress shall not exceed 30 lbf (133 N) to set the leaf in motion, and 15 lbf (67 N) to open the leaf to the minimum required width, unless otherwise specified as follows:

- (1) The door opening forces for interior ~~side-hinged or pivoted swinging~~ door leaves ~~without closers~~ other than required fire door assemblies shall not exceed 5 lbf (22 N).
- (2) The door opening forces for existing door leaves in existing buildings shall not exceed 50 lbf (222 N) applied to the latch stile.
- (3) The door opening forces for horizontal-sliding door leaves in detention and correctional occupancies shall be as provided in Chapters 22 and 23.
- (4) The opening forces for power-operated door leaves shall be as provided in 7.2.1.9.

Statement of Problem and Substantiation for Public Input

NFPA 101 currently excludes doors with closers from the 5 lbf maximum door opening force requirement. This provision conflicts with ADA requirements which does not exempt interior doors with closers from the 5 lb door opening forces requirement (other than doors required to be fire rated). Also, ADA requires interior sliding doors to comply with the 5 lb force requirement.

This proposal is intended to align NFPA 101 more closely with ADA requirements.

Submitter Information Verification

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Submittal Date: Mon Jun 03 22:04:59 EDT 2024

Committee: SAF-MEA

Committee Statement

Resolution: The proposed revision might be overly restrictive as many doors with closers that are not fire doors will not be able to meet the proposed 5 lbf limit.

**Public Input No. 271-NFPA 101-2024 [Section No. 7.2.1.5.3.4]****7.2.1.5.3.4***

Egress door assemblies from individual living units and guest rooms of residential occupancies, and from individual bedrooms within dwelling units of an apartment building serving as a dormitory, shall be permitted to be provided with devices, including automatic latching devices, that require not more than one additional releasing motion provided that releasing does not require simultaneous operations motions, and provided that such devices are operable from the inside without the use of a key or tool and are mounted at a height not exceeding less than 34 in. (865 mm) and not more than 48 in. (1220 mm) above the finished floor.

Statement of Problem and Substantiation for Public Input

Colleges and universities are increasingly constructing dormitories with suite-style living arrangements with a shared space and individual bedrooms. This proposal is about permitting locking of doors to individual bedrooms within dwelling units of an apartment building serving as a dormitory. And, a few editorial suggestions in the latter part of the paragraph.

Some college and university dormitories and residence halls are designed and constructed with suite-style layouts. The residence halls at Upstate University of South Carolina are one example: www.uscupstate.edu/campus-life/housing-and-dining/housing-floor-plans/.

Another example is Clarkson College residence hall: www.clarksoncollege.edu/student-life/residence-life/floor-plan-layout/index.

NFPA 101 considers suite-style dormitories as apartment buildings, per 28.1.1.4: Any dormitory divided into suites of rooms, with one or more bedrooms opening into a living room or study that has a door opening into a common corridor serving a number of suites, shall be classified as an apartment building.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 272-NFPA 101-2024 [Section No. A.7.2.1.5.3.4]	

Submitter Information Verification

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Submittal Date: Mon Jun 03 19:29:22 EDT 2024
Committee: SAF-MEA

Committee Statement

Resolution: Doors within individual bedrooms within dwelling units of an apartment building serving as a dormitory are components of means of escape, which is regulated by Ch. 24, rather than means of egress, which is regulated by Ch. 7. The code currently does not regulate the number of releasing motions for means of escape doors. The submitter might consider submitting a proposed revision to Ch. 24 to address means of escape doors if needed.



Public Input No. 251-NFPA 101-2024 [Section No. 7.2.1.5.3.8]

7.2.1.5.3.8 –

Two releasing motions shall be permitted in existing educational occupancies in accordance with 15.2.2.2.4 and in existing day care occupancies in accordance with 17.2.2.2.6 .

Statement of Problem and Substantiation for Public Input

Correlation with proposed revisions in 15.2.2.2.4.1, Item 3, and 17.2.2.2.6, Item 3

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 247-NFPA 101-2024 [Section No. 15.2.2.2.4]	
Public Input No. 249-NFPA 101-2024 [Section No. 17.2.2.2.6]	
Public Input No. 247-NFPA 101-2024 [Section No. 15.2.2.2.4]	
Public Input No. 249-NFPA 101-2024 [Section No. 17.2.2.2.6]	

Submitter Information Verification

Submitter Full Name: John Woestman
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Submittal Date: Mon Jun 03 17:50:24 EDT 2024
Committee: SAF-MEA

Committee Statement

Resolution: The provision is needed to avoid a conflict with Chs. 15 and 17. If the Ch. 15 and/or 17 exemptions are removed, 7.2.1.5.3.8 can be revised by the correlating committee as needed.

**Public Input No. 280-NFPA 101-2024 [New Section after 7.2.1.5.5]****7.2.1.5.6**

Where a door has an access control system affecting ingress, or where an electrical system monitors or records egress activity, the locking system on the egress side of the door shall comply with one of the following:

- (1) Be readily openable from the egress side without the use of a key, tool, special knowledge or effort.
- (2) A special locking arrangement of 7.2.1.6.
- (3) 18.2.2.2.5 for new health care occupancies.
- (4) 19.2.2.2.5 for existing health care occupancies.
- (5) 32.2.2.5.5.3 or 32.3.2.2.2(6) for new residential board and care occupancies.
- (6) 33.2.2.5.5.3 or 33.3.2.2.2(6) for existing residential board and care occupancies.
- (7) Lockups in accordance with 22.4.6 or 23.4.6.

Statement of Problem and Substantiation for Public Input

Many doors have access control systems (ingress control systems) which are used to restrict access to a building, space, or room. Most access control systems have no effect on egress, but our members are finding that some code officials are attempting to enforce something in the code regarding access control systems. Additionally, on the egress side of the door, building owners frequently want to electronically monitor egress activity.

This proposal requires access control systems and requires electrical systems which monitor or record egress activity to “play nice” with the egress functions of the door.

The locking systems in proposed items 3 through 6 are permitted for the clinical needs of patients or residents, or where patients or residents pose a security threat.

Submitter Information Verification

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Submittal Date: Mon Jun 03 20:08:57 EDT 2024

Committee: SAF-MEA

Committee Statement

Resolution: The proposed revision does not add clarity to the code. The list of compliance options appears to omit locking arrangements in detention and correctional occupancies (independent of lockups). The submitter might consider proposing an annex note to explain the code's intent where access control systems do not adversely affect egress. The proposed list might not address all occupancies and door locking arrangements in the code.

**Public Input No. 282-NFPA 101-2024 [Section No. 7.2.1.5.7]****7.2.1.5.7* Stair Enclosure Re-entry.**

Every door assembly in a stair enclosure serving more than four stories, unless permitted by 7.2.1.5.7.2, shall meet one of the following conditions:

- (1) Re-entry from the stair enclosure to the interior of the building shall be provided.
- (2) An automatic release shall be provided that meets all of the following:
 - (a) The automatic release shall unlock all stair enclosure door assemblies to allow re-entry from the stair enclosure to the interior of the building.
 - (b) The automatic release shall be actuated with the initiation of the building fire alarm system.
 - (c) The automatic release shall unlock the stair enclosure door to allow re-entry upon loss of power to the automatic release or to the electrical system controlling the automatic release.
 - (d) The automatic release, for new installations, shall unlock stair enclosure door assemblies upon a signal from the fire command center, central control point, or other approved location.
 - (e)* Door electromechanical or electromagnetic locking hardware for new installations shall be listed in accordance with UL 294, *Access Control System Units*, or UL 1034, *Burglary-Resistant Electric Locking Mechanisms*.
- (3) Selected re-entry shall be provided in accordance with 7.2.1.5.7.1.

7.2.1.5.7.1

Door assemblies on stair enclosures shall be permitted to be equipped with hardware that prevents re-entry into the interior of the building, provided that all of the following criteria are met:

- (1) There shall be not less than two levels where it is possible to leave the stair enclosure to access another exit.
- (2) There shall be not more than four stories intervening between stories where it is possible to leave the stair enclosure to access another exit.
- (3) Re-entry shall be possible on the top story or next-to-top story served by the stair enclosure, and such story shall allow access to another exit.
- (4) Door assemblies allowing re-entry shall be identified as such on the stair side of the door leaf.
- (5) Door assemblies not allowing re-entry shall be provided with a sign on the stair side indicating the location of the nearest door opening, in each direction of travel, that allows re-entry or exit.

7.2.1.5.7.2

The requirements of 7.2.1.5.7, except as provided in 7.2.1.5.7.3, shall not apply to the following:

- (1) Existing installations in buildings that are not high-rise buildings as permitted in Chapters 11 through 43
- (2) Existing installations in high-rise buildings as permitted in Chapters 11 through 43 where the occupancy is within a building protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7
- (3) Existing approved stairwell re-entry installations as permitted by Chapters 11 through 43
- (4) Stair enclosures serving a building permitted to have a single exit in accordance with Chapters 11 through 43
- (5) Stair enclosures in health care occupancies where otherwise provided in Chapter 18
- (6) Stair enclosures in detention and correctional occupancies where otherwise provided in Chapter 22
- (7) Stair enclosure discharge doors.

7.2.1.5.7.3

When the provisions of 7.2.1.5.7.2 are used, signage on the stair door leaves shall be required as follows:

- (1) Door assemblies allowing re-entry shall be identified as such on the stair side of the door leaf.
- (2) Door assemblies not allowing re-entry shall be provided with a sign on the stair side indicating the location of the nearest door opening, in each direction of travel, that allows re-entry or exit.

Statement of Problem and Substantiation for Public Input

In 7.2.1.5.7, the revisions in (2)(a) are intended to more clearly communicate the intent.

Added (2)(c) is to require the door locking hardware to be “fail safe” by unlocking to permit re-entry upon power loss to the automatic release or to the electrical system controlling the release.

Added (2)(d), for new installations, requires the ability to trigger the automatic release from a central location – the fire command center, and central control point, or other approved location.

In 7.2.1.5.7.2, we suggest inserting new Item 7 to clearly communicate in this section that requirements of 7.2.1.5.7 are not applicable to stair enclosure discharge doors.

Submitter Information Verification

Submitter Full Name: John Woestman

Organization: Kellen Company

Affiliation: Builders Hardware Manufacturers Association

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City:

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Zip:

Submittal Date: Mon Jun 03 20:17:48 EDT 2024

Committee: SAF-MEA

Committee Statement

Resolution: [FR-6553-NFPA 101-2024](#)

Statement: In 7.2.1.5.7, the revisions in (2)(a) are intended to more clearly communicate the intent.

Added (2)(c) is to require the door locking hardware to be “fail safe” by unlocking to permit re-entry upon power loss to the automatic release or to the electrical system controlling the release.

Added (2)(d), for new installations, requires the ability to trigger the automatic release from a central location – the fire command center, and central control point, or other approved location.

In 7.2.1.5.7.2, new Item 7 clearly communicates in this section that requirements of 7.2.1.5.7 are not applicable to stair enclosure discharge doors.

**Public Input No. 286-NFPA 101-2024 [Sections 7.2.1.5.9, 7.2.1.5.10]****Sections 7.2.1.5.9, 7.2.1.5.10****7.2.1.5.9**

Where pairs of door leaves are required in a means of egress, one of the following criteria shall be met:

- (1) Each leaf of the pair shall be provided with a releasing device that does not depend on the release of one leaf before the other.
- (2) Approved automatic flush bolts shall be used and arranged such that both of the following criteria are met:
 - (3) The door leaf equipped with the automatic flush bolts shall have no doorknob or surface-mounted hardware on the egress side of the door.
 - (4) Unlatching of any leaf shall not require more than one

operation

- (a) motion

7.2.1.5.10*

On doors required to release all latching and all locking devices of the door leaf with not more than one releasing motion in accordance with 7.2.1.5.3.2, devices shall not be installed in connection with any door assembly where such devices prevent or are intended to prevent the free use of the leaf for purposes of egress, unless otherwise provided in 7.2.1.6.1 and 7.2.1.6.4, or in lockups in accordance with 22.4.6 or 23.4.6, or provided for in 18.2.2.2.5 for new health care occupancies, 19.2.2.2.5 for existing health care occupancies, 32.2.2.5.3 or 32.3.2.2.2(6) for new residential board and care occupancies, or 33.2.2.5.3 or 33.3.2.2.2(6) for existing residential board and care occupancies.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u> <u>Approved</u>
NFPA_101-2027_Editorial_One_Motion_in_7.2.1.5.9_and_Leaf_Not_Provide_Free_Egress_20240603.pdf	PDF of PI 286 illustrating proposed revisions.

Statement of Problem and Substantiation for Public Input

The revision in 7.2.1.5.9.(2)(b) is editorial, and consistent with similar language in 101.

The revisions in 7.2.1.5.10, and the related Annex note, are intended to clarify the requirements in this section. Section 7.2.1.6 has four special locking arrangements. Only two of those locking arrangements permit preventing the free use of a door leaf for egress: 7.2.1.6.1 delayed egress, and 7.2.1.6.4 elevator lobby exit access door locking. In lockups in accordance with either of the two identified sections are permitted to prevent the free use of a door leaf for egress. The locking system in 18.2.2.2.5, and the locking systems in the subsequent identified sections, control egress and are variants of controlled egress locking systems.

The attached pdf clearly illustrates the proposed revisions.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 287-NFPA 101-2024 [Section No. A.7.2.1.5.10]	
Public Input No. 287-NFPA 101-2024 [Section No. A.7.2.1.5.10]	

Submitter Information Verification

Submitter Full Name: John Woestman
Organization: Kellen Company
Affiliation: Builders Hardware Manufacturers Association

Street Address:

City:

State:

Zip:

Submittal Date: Mon Jun 03 20:35:01 EDT 2024

Committee: SAF-MEA

Committee Statement

Resolution: The proposed revision might not capture all instances of modifications to locking/latching requirements throughout the code (e.g., detention and correctional occupancies independent of lockups).

**Public Input No. 274-NFPA 101-2024 [New Section after 7.2.1.5.10]****7.2.1.5.11 Self or positive latching**

Door leaves required to be self-latching or positive latching shall comply with one of the following:

- (1) Are self-latching or positive latching.
- (2) Are self-closing or automatic-closing and become self-latching or positive latching upon operation of approved smoke detectors installed in such a way as to detect smoke on either side of the door opening in accordance with the provisions of NFPA 72.
- (3) Comply with 7.2.1.9.2 for powered door leaves.

Statement of Problem and Substantiation for Public Input

NFPA 101 requires many doors to be self-latching or positive latching. Most of these doors are required to comply with NFPA 80, but not all.

In health care facilities, electric latch retraction hardware is often used on fire door assemblies to allow the doors to function as push/pull operation under normal conditions and latch automatically if there is a fire. When a door in a hospital or nursing home is considered a “corridor door” as addressed in the health care chapters, the door is not required to be fire rated but is required to have positive-latching hardware. A common example of this application is a pair of non-fire-rated doors serving as the entrance to a suite. These doors are typically self-closing or automatic-closing (although this is not technically required by NFPA 101 for corridor doors), and the code requires the doors to have positive-latching hardware.

NFPA 80, in Section 6.4.4.4.3, permits latching arrangements on fire doors that do not latch in the normal mode, if the door automatically becomes positively latched during a fire by means of a fail safe device activated by an automatic fire detector. This code change proposal explicitly recognizes in NFPA 101 this option in NFPA 80, and permits this hardware to be used on non-fire-rated doors that are required to have positive-latching hardware.

The proposed language is adopted, in part, from the current language in Section 7.2.1.9.2 Items 4 and 5, and further modified to require the doors to be self-closing or automatic closing when equipped with hardware that becomes positive latching upon smoke detection. This last requirement helps to ensure that the door will be, or go, to the closed position and latch.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 275-NFPA 101-2024 [New Section after A.7.2.1.5.10]	

Submitter Information Verification

Submitter Full Name: John Woestman
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Submittal Date: Mon Jun 03 19:42:12 EDT 2024
Committee: SAF-MEA

Committee Statement

Resolution: The proposed revision appears to be more closely related to opening protection, which is not within the scope of Ch. 7, rather than door performance for purposes of means of egress.

**Public Input No. 281-NFPA 101-2024 [Section No. 7.2.1.6.1]****7.2.1.6.1* Delayed-Egress Electrical Locking Systems.****7.2.1.6.1.1**

Approved, delayed-egress electrical locking systems shall be permitted to be installed on door assemblies serving low- and ordinary-hazard contents in buildings protected throughout by an approved, supervised automatic fire detection system in accordance with Section 9.6 or an approved, supervised automatic sprinkler system in accordance with Section 9.7, and where permitted in Chapters 11 through 43, provided that all of the following criteria are met:

- (1) The delay of the delayed-egress electrical locking system shall deactivate allowing unobstructed egress upon actuation of one of the following:
 - (2) Approved, supervised automatic sprinkler system in accordance with Section 9.7
 - (3) Not more than one heat detector of an approved, supervised automatic fire detection system in accordance with Section 9.6
 - (4) Not more than two smoke detectors of an approved, supervised automatic fire detection system in accordance with Section 9.6
- (5) The delay of the delayed-egress electrical locking system shall deactivate allowing unobstructed egress upon loss of power controlling the lock or locking mechanism.
- (6)* An irreversible process shall release the electrical lock in the direction of egress within 15 seconds, or 30 seconds where approved by the authority having jurisdiction, upon application of a force to the release device required in 7.2.1.5.3 under all of the following conditions:
 - (7) The force shall not be required to exceed 15 lbf (67 N).
 - (8) The force shall not be required to be continuously applied for more than 3 seconds.
 - (9) The initiation of the release process shall activate an audible signal in the vicinity of the door opening.

Once

- (a) Resetting and rearming the
electrical lock has been released by the application of force to the releasing device, rearming the
 - (a) lock and the delay electronics shall be by manual means only.
- (10)* A readily visible, durable sign that conforms to the visual characters requirements of ICC A117.1, *Accessible and Usable Buildings and Facilities*, shall be located on the door leaf adjacent to the release device in the direction of egress, and shall read as follows:
 - (11) PUSH UNTIL ALARM SOUNDS, DOOR CAN BE OPENED IN 15 SECONDS, for doors that swing in the direction of egress travel
 - (12) PULL UNTIL ALARM SOUNDS, DOOR CAN BE OPENED IN 15 SECONDS, for doors that swing against the direction of egress travel
- (13) The egress side of doors equipped with delayed-egress electrical locking systems shall be provided with emergency lighting in accordance with Section 7.9.
- (14)* Door electromechanical or electromagnetic locking hardware for new installations shall be listed in accordance with UL 294, *Access Control System Units*, or UL 1034, *Burglary-Resistant Electric Locking Mechanisms*.

7.2.1.6.1.2

The provisions of 7.2.1.6.2 for sensor-release of electrical locking systems and 7.2.1.6.3 for door hardware release of electrically locked egress door assemblies shall not apply to door assemblies with delayed-egress electrical locking systems.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
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NFPA_101-2027_Delayed_Egress_Locking_Systems_Rearming_20240603.pdf

PDF of PI 281
illustrating proposed
revisions are only in
7.2.1.6.1.1(3)(d)

Statement of Problem and Substantiation for Public Input

The last sentence of Item 3 is typically interpreted to require the delay electronics to be rearmed after the delay of the delayed egress locking system has completed.

Examining the current language, it has explicit requirements for rearming the locking system once the delay has completed, but, this sentence doesn't explicitly permit, or prohibit, rearming the delay electronics while the delay is underway. From a code perspective, if it's not prohibited, it's permitted. If this last sentence of Item 4 is interpreted that the delay electronics are not prohibited from being rearmed while the delay is underway, then it could be further interpreted the rearming could be executed by other than manual means only.

Rearming the delayed egress locking system, after the delay has deactivated, by manual means only communicates the intent that an authorized person, typically an employee or staff person, is required to physically be at the door to investigate what triggered the activation of the delayed egress locking system and to ensure that it is safe to re-set the delay.

With these thoughts in mind, the perspective from which the revisions to the last sentence of Item 3 are written: With a person at the delayed egress door to reset and rearm the locking system manually, and to ensure it's safe to do so, there's little, if any, difference if the delayed egress locking system is reset and rearmed while the delay is underway, or the locking system is reset and rearmed after the delay has completed. In other words, there's little, if any, benefit to be gained if the locking system may be rearmed only after the delay has completed, compared to permitting rearming the locking system at any time after the delay has been initiated, assuming the rearming is required to be by manual means only (a person physically is at the door).

Submitter Information Verification

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Submittal Date: Mon Jun 03 20:12:34 EDT 2024

Committee: SAF-MEA

Committee Statement

Resolution: Removing the qualifier for resetting the lock when it is released by manual means creates unintended consequences for when the door is unlocked by other means such as badge swipe, loss of power, etc.



Public Input No. 343-NFPA 101-2024 [Section No. 7.2.1.6.1.1]

7.2.1.6.1.1

Approved, delayed-egress electrical locking systems shall be permitted to be installed on door assemblies serving low- and ordinary-hazard contents in buildings protected throughout by an approved, supervised automatic fire detection system in accordance with Section 9.6 or an approved, supervised automatic sprinkler system in accordance with Section 9.7, and where permitted in Chapters 11 through 43, provided that all of the following criteria are met:

- (1) The delay of the delayed-egress electrical locking system shall deactivate allowing unobstructed egress upon actuation of one of the following:
 - (2) Approved, supervised automatic sprinkler system in accordance with Section 9.7

Not

 - (a) One or more
~~than one~~
 - (a) heat
~~detector~~
 - (a) detectors of an approved, supervised automatic fire detection system in accordance with Section 9.6

Not

 - (a) Two or more
~~than two~~
 - (a) smoke detectors of an approved, supervised automatic fire detection system in accordance with Section 9.6
- (3) The delay of the delayed-egress electrical locking system shall deactivate allowing unobstructed egress upon loss of power controlling the lock or locking mechanism.
- (4)* An irreversible process shall release the electrical lock in the direction of egress within 15 seconds, or 30 seconds where approved by the authority having jurisdiction, upon application of a force to the release device required in 7.2.1.5.3 under all of the following conditions:
 - (5) The force shall not be required to exceed 15 lbf (67 N).
 - (6) The force shall not be required to be continuously applied for more than 3 seconds.
 - (7) The initiation of the release process shall activate an audible signal in the vicinity of the door opening.
 - (8) Once the electrical lock has been released by the application of force to the releasing device, rearming the delay electronics shall be by manual means only.
- (9)* A readily visible, durable sign that conforms to the visual characters requirements of ICC A117.1, *Accessible and Usable Buildings and Facilities*, shall be located on the door leaf adjacent to the release device in the direction of egress, and shall read as follows:
 - (10) PUSH UNTIL ALARM SOUNDS, DOOR CAN BE OPENED IN 15 SECONDS, for doors that swing in the direction of egress travel
 - (11) PULL UNTIL ALARM SOUNDS, DOOR CAN BE OPENED IN 15 SECONDS, for doors that swing against the direction of egress travel
- (12) The egress side of doors equipped with delayed-egress electrical locking systems shall be provided with emergency lighting in accordance with Section 7.9.
- (13)* Door electromechanical or electromagnetic locking hardware for new installations shall be listed in accordance with UL 294, *Access Control System Units*, or UL 1034, *Burglary-Resistant Electric Locking Mechanisms*.

Statement of Problem and Substantiation for Public Input

7.2.1.6.1.1 (1)(b) says "Not more than one" and 7.2.1.6.1.1 (1)(c) says "Not more than two" taken literally this means that if

two or more heat detectors or 3 or more smoke detectors are activated the delayed egress would not deactivate. I believe the intent was that the delayed-egress system would deactivate if one or more heat detectors or if two or more smoke detectors have activated,

Submitter Information Verification

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Organization: Lee Heath

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Submittal Date: Tue Jun 04 08:31:41 EDT 2024

Committee: SAF-MEA

Committee Statement

Resolution: The proposed revision does not clarify the requirement. "One or more" heat detectors could be interpreted to mean 10 detectors must activate to release the lock.



Public Input No. 5-NFPA 101-2024 [Section No. 7.2.1.6.2.1]

7.2.1.6.2.1

* Where permitted in Chapters 11 through 43, door assemblies in the means of egress

shall be permitted to be equipped with sensor-release electrical locking system

hardware provided that all of the following following criteria are met:

(1) A sensor shall be provided on the

egress

(1) egress side,

arranged to electrically

(1) arranged to electrically unlock the door leaf in the direction of egress

(1) egress upon detection of an approaching

(1) approaching occupant.

(2) Door leaves shall automatically

(1) automatically electrically unlock in the direction of egress

(1) egress upon loss of power to the sensor or to the part of the locking system that electrically

(1) locking system that electrically locks the door leaves.

(2) Door locks shall be arranged to electrically

(1) arranged to electrically unlock in the direction of egress

(1) egress from a manual release device complying

(1) or contactless sensor complying with all of the following

(1) following criteria:

(2) The manual release device or contactless sensor shall be located on the

egress

(1)

(a) egress side,

40 in

(1)

(a) 40 in to

48 in

(1)

(a) 48 in . (

1015 mm

(1)

(a) 1015 mm to

1220 mm

(1)

(a) 1220 mm)

vertically

(1)

(a) vertically above the floor, and within

60 in

(1)

(a) 60 in . (

1525 mm

(1)

(a)

1525 mm

1525 mm) of the secured door

openings

openings , except as otherwise permitted

by

by 7.2.1.6.2.1 (3)(

b

c)

(1)

(a) The requirement of 7.2.1.6.2.1 (3)(a) to locate the manual release device or contactless sensor
within

60 in

(1)

(a) 60 in . (

1525 mm

(1)

(a) 1525 mm) of the secured door

opening

(1)

(a) opening shall not

apply

(1)

(a) apply to previously approved existing installations.

(b) The manual release device , where provided , shall be

readily

(1)

- (a) readily accessible and clearly identified by a
sign
- (1)
 - (a) sign that reads as follows: PUSH TO EXIT.
 - (b) * The contactless sensor, where provided, shall be readily accessible and clearly identified by a sign that reads as follows: WAVE TO EXIT
 - (c) When operated, the manual release device or contactless sensor shall result in direct interruption of
power
- (1)
 - (a) power to the electrical lock — independent of the
locking system
- (1)
 - (a) locking system electronics — and the lock shall remain unlocked for not less than
30 seconds. Activation of the building fire-protective signaling system
- (1)
 - (a) 30 seconds.
 - (b) * The contactless sensor referenced in 7.2.1.6.2.1(3) that is used to automatically unlock the doors in the direction of egress shall be independent of the sensor referenced in 7.2.1.6.2.1(1) and 7.2.1.6.1.(2).
- (2) Activation of the building fire-protective signaling system, if provided, shall
automatically
- (1) automatically electrically unlock the door leaves in the direction of
egress
- (1) egress, and the door leaves shall remain
electrically
- (1) electrically unlocked until the fire-protective
signaling system
- (1) signaling system has been
manually
- (1) manually reset.
- (2) The activation of manual fire alarm boxes that activate the
building
- (1) building fire-protective
signaling system
- (1) signaling system specified in 7.2.1.6.2.1(4) shall not be required to unlock the door leaves.
- (2) Activation of the
building
- (1) building automatic sprinkler or fire detection
system
- (1) system, if provided, shall
automatically electrically
- (1) automatically electrically unlock the door leaves in the direction of
egress

(1) egress, and the door leaves shall remain

electrically

(1) electrically, unlocked until the fire-protective

signaling system

(1) signaling system has been

manually

(1) manually reset.

(2) The

egress

(1) egress, side of sensor-release

electrically

(1) electrically, locked

egress

(1) egress doors, other than

existing

(1) existing sensor-release

electrically

(1) electrically, locked

egress

(1) egress doors, shall be provided with

emergency lighting

(1) emergency lighting in accordance with

Section-

(1)

Section - Section

7.9 -

* ~~Door electromechanical or electromagnetic locking hardware~~

(1) Hardware for new installations shall be listed in accordance with

UL 294,

(1) ANSI/UL 294, Standard for Access Control

System Units, or UL 1034, Burglary-Resistant Electric Locking Mechanisms

(1) System Units

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
PC70-101_SAF-MEA.pdf	101_PC#70	

Statement of Problem and Substantiation for Public Input

NOTE: This Public Input appeared as "Reject but Hold" in Public Comment No. 70 of the (A2023) Second Draft Report for NFPA 101 and per the Regs. at 4.4.8.3.1 and needs to be reconsidered by the TC for the next edition of the document.

The use of contactless sensors to open doors is becoming more prevalent due to Covid and other concerns about the spread of infection, especially in health care settings. Contactless sensors (e.g., "wave to open" devices) can perform similarly to manual "push to exit" devices and should therefore be permitted as a substitute for "push to exit" devices, but only if they are listed to UL 294 and only if they are configured to be independent of the (overhead motion) sensors used to unlock the door

upon occupant approach such that a single failure can't result in both types of sensors failing simultaneously.

To avoid confusion, annex material is added to discuss the differences between the existing (overhead motion) sensors used to unlock doors upon occupant approach and the proposed contactless sensors to unlock doors in the event the (overhead motion) sensors fail. Text is also included that clarifies that contactless sensors can currently be used, but only as a supplement to "push to exit" devices.

Submitter Information Verification

Submitter Full Name:

Organization: Holds

Street Address:

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Submittal Date: Mon Jan 15 14:50:44 EST 2024

Committee: SAF-MEA

Committee Statement

Resolution: [FR-6556-NFPA 101-2024](#)

Statement: The use of contactless sensors (contactless release devices) to open doors is becoming more prevalent due to Covid and other concerns about the spread of infection, especially in health care settings. Contactless sensors (e.g., "wave to open" devices) can perform similarly to manual "push to exit" devices and should therefore be permitted as a substitute for "push to exit" devices, but only if they are listed to UL 294 and only if they are configured to be independent of the (overhead motion) sensors used to unlock the door upon occupant approach such that a single failure will not result in both types of sensors failing simultaneously.

Note that the term 'contactless sensor' has been revised to 'contactless release device' to avoid confusion with the required sensor located above the door and to be consistent with the term 'manual release device'.

**Public Input No. 75-NFPA 101-2024 [Section No. 7.2.1.6.2.1]****7.2.1.6.2.1***

Where permitted in Chapters 11 through 43, door assemblies in the means of egress shall be permitted to be equipped with sensor-release electrical locking system hardware provided that all of the following criteria are met:

- (1) A sensor shall be provided on the egress side, arranged to electrically unlock the door leaf in the direction of egress upon detection of an approaching occupant.
- (2) Door leaves shall automatically electrically unlock in the direction of egress upon loss of power to the sensor or to the part of the locking system that electrically locks the door leaves.
- (3) Door locks shall be arranged to electrically unlock in the direction of egress from a manual release device or contactless sensor complying with all of the following criteria:
 - (4) The manual release device or contactless sensor shall be located on the egress side, 40 in. to 48 in. (1015 mm to 1220 mm) vertically above the floor, and within 60 in. (1525 mm) of the secured door openings, except as otherwise permitted by 7.2.1.6.2.1 (3)(b).
 - (5) The requirement of 7.2.1.6.2.1(3)(a) to locate the manual release device within 60 in. (1525 mm) of the secured door opening shall not apply to previously approved existing installations.
 - (6) The manual release device, where provided, shall be readily accessible and clearly identified by a sign that reads as follows: PUSH TO EXIT.
 - (7) * The contactless sensor, where provided, shall be readily accessible and clearly identified by a sign that reads as follows WAVE TO EXIT
 - (8) When operated, the manual release device or contactless sensor shall result in direct interruption of power to the electrical lock — independent of the locking system electronics — and the lock shall remain unlocked for not less than 30 seconds.
 - (9) * The contactless sensor referenced in 7.2.1.6.2.1(3) that is used to automatically unlock the doors in the direction of egress shall be independent of the sensor referenced in 7.2.1.6.2.1(1) and 7.2.1.6.1.(2).
- (10) Activation of the building fire-protective signaling system, if provided, shall automatically electrically unlock the door leaves in the direction of egress, and the door leaves shall remain electrically unlocked until the fire-protective signaling system has been manually reset.
- (11) The activation of manual fire alarm boxes that activate the building fire-protective signaling system specified in 7.2.1.6.2.1(4) shall not be required to unlock the door leaves.
- (12) Activation of the building automatic sprinkler or fire detection system, if provided, shall automatically electrically unlock the door leaves in the direction of egress, and the door leaves shall remain electrically unlocked until the fire-protective signaling system has been manually reset.
- (13) The egress side of sensor-release electrically locked egress doors, other than existing sensor-release electrically locked egress doors, shall be provided with emergency lighting in accordance with Section 7.9.
- (14*) Door electromechanical or electromagnetic locking hardware for new installations shall be listed in accordance with UL 294, *Access Control System Units*, or UL 1034, *Burglary-Resistant Electric Locking Mechanisms*.

Statement of Problem and Substantiation for Public Input

The use of contactless sensors to open doors is becoming more prevalent due to Covid and other concerns about the spread of infection, especially in health care settings. Contactless sensors (e.g., “wave to open” devices) can perform similarly to manual “push to exit” devices and should therefore be permitted as a substitute for “push to exit” devices, but only if they are listed to UL 294 and only if they are configured to be independent of the (overhead motion) sensors used to unlock the door upon occupant approach such that a single failure can’t result in both types of sensors failing simultaneously.

To avoid confusion, annex material is added to discuss the differences between the existing (overhead motion) sensors used to unlock doors upon occupant approach and the proposed contactless sensors to unlock doors in the event the (overhead motion) sensors fail. Text is also included that clarifies that contactless sensors can currently be used, but only as a supplement to “push to exit” devices

Related Public Inputs for This Document

Related Input	Relationship
<u>Public Input No. 76-NFPA 101-2024 [New Section after A.7.2.1.6.2]</u>	

[Public Input No. 77-NFPA 101-2024 \[New Section after A.7.2.1.6.2\]](#)

Submitter Information Verification

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Submittal Date: Mon Apr 22 21:23:46 EDT 2024

Committee: SAF-MEA

Committee Statement

Resolution: [FR-6556-NFPA 101-2024](#)

Statement: The use of contactless sensors (contactless release devices) to open doors is becoming more prevalent due to Covid and other concerns about the spread of infection, especially in health care settings. Contactless sensors (e.g., “wave to open” devices) can perform similarly to manual “push to exit” devices and should therefore be permitted as a substitute for “push to exit” devices, but only if they are listed to UL 294 and only if they are configured to be independent of the (overhead motion) sensors used to unlock the door upon occupant approach such that a single failure will not result in both types of sensors failing simultaneously.

Note that the term 'contactless sensor' has been revised to 'contactless release device' to avoid confusion with the required sensor located above the door and to be consistent with the term 'manual release device'.



Public Input No. 298-NFPA 101-2024 [New Section after 7.2.1.6.4]

7.2.1.6.5 Interlocked-Door Vestibule

Where permitted in chapters 11 through 43 with low- and ordinary-hazard contents, an interlocked-door vestibule shall be permitted in the means of egress where there are provisions for continuous and unobstructed travel through the interlocked-door vestibule during an emergency egress condition. Interlocked-door vestibules shall comply with all of the following:

- (1) The building is protected throughout by an approved automatic sprinkler system in accordance with 9.7, or the area served by the interlocked-door vestibule is protected by an approved automatic smoke detection system in accordance with Section 9.6.
- (2) Interlock override switches, which disable the interlocks of the doors of the interlocked-door vestibule for not less than 30 seconds, shall be provided on the egress side of each door of the interlocked-door vestibule. Where the interlocked-door vestibule is installed to impede egress for security reasons, the override switches shall be permitted to be moved to an alternative location by approval of the Authority Having Jurisdiction.
- (3) The interlock override switches shall be within 48 in. (1220 mm) of door and between 34 in. (865 mm) and 48 in. (1220 mm) above the floor.
- (4) The operation of each interlock override switch shall result in direct interruption of power to the interlock.
- (5) Signage shall be provided at each override switch describing its operation.
- (6) Upon loss of power to the interlock function of the doors of the interlocked-door vestibule, the interlock function shall be disabled.
- (7) The interlocks of the doors of the interlocked-door vestibule shall deactivate upon activation of the automatic sprinkler system or the automatic smoke detection system required by Item 2.
- (8) Doors of an interlocked-door vestibule shall be self-closing.
- (9) Doors of an interlocked-door vestibule shall swing in the direction of egress travel except for powered doors in accordance with Section 7.2.1.9.
- (10) The egress path shall not pass through more than one interlocked-door vestibule.
- (11) Door electrical locking hardware for new installations shall be listed in accordance with UL 294, Access Control System Units, or UL 1034, Burglary-Resistant Locking Mechanisms.
- (12) The fire department with responsibility for responding to a building that contains an interlocked-door vestibule shall be notified of the presence of the interlocked-door vestibule.

Additional Proposed Changes

File Name	Description	Approved
NFPA_101-2027_Special_Locking_Arrangements_Interlocked_Door_Vestibule_Def_and_Ch._7_20240603.pdf	PDF of definition, requirements, and explanation of proposed interlocked-door vestibule.	

Statement of Problem and Substantiation for Public Input

This proposal, along with complementary proposals in Chapters 18, 19, 20, 21, 36, 37, 38, 39, 40, and 42 offer the opportunity for interlocked-door vestibules in these occupancies. Interlocked-door vestibules are utilized for environmental contamination control (health care; manufacturing clean rooms), controlled substance dispensing (prescription drugs and cannabis), occupant protection (health care), security reasons (money handling rooms), and other uses and applications. This proposal addresses the egress aspects of interlocked-door vestibules. Ingress and controlling access into a building or space is not addressed by these proposed provisions. An occupant egressing through an interlocked-door vestibule would not be delayed at the second door in series if the first door in series is in a closed position. Conversely, if the first door is not closed, the second door would not be able to be

opened. The proposed requirements for interlock override switches, for “fail-safe” interlocks in the event of power failure, and to deactivate the interlock upon activation of the sprinkler system or smoke detection system are all intended to ensure unencumbered egress when and if needed.

An interlocked-door vestibule, which may also be known as an airlock, interlock, or man-trap, can help limit the passage of contaminants by allowing only one door to be open at a time, or controls access to and egress from an area for security reasons (such as in a data center or prescription drug dispensary). This image illustrates one of the common applications, an interlocked-door vestibule serving a clean room in a laboratory environment. Air-flow in or out is limited with normal operation as only one door may be opened at a time. In an emergency, both doors may be opened simultaneously, via the override switch beside each door.

Please see the attached pdf for illustrations of interlocked-door vestibules and additional description of their operation.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 297-NFPA 101-2024 [New Section after 3.3.165]	
Public Input No. 299-NFPA 101-2024 [New Section after A.7.2.1.6.4.1(1)]	
Public Input No. 297-NFPA 101-2024 [New Section after 3.3.165]	
Public Input No. 299-NFPA 101-2024 [New Section after A.7.2.1.6.4.1(1)]	
Public Input No. 300-NFPA 101-2024 [New Section after 18.2.5.7.4]	
Public Input No. 301-NFPA 101-2024 [New Section after 19.2.5.7.4]	
Public Input No. 303-NFPA 101-2024 [New Section after 20.2.5.3.2]	
Public Input No. 304-NFPA 101-2024 [New Section after 21.2.5.3]	
Public Input No. 305-NFPA 101-2024 [New Section after 36.2.5.11]	
Public Input No. 306-NFPA 101-2024 [New Section after 37.2.5.11]	
Public Input No. 307-NFPA 101-2024 [New Section after 38.2.5.3.2]	
Public Input No. 308-NFPA 101-2024 [New Section after 39.2.5.3]	
Public Input No. 309-NFPA 101-2024 [New Section after 40.2.5.3.2]	
Public Input No. 310-NFPA 101-2024 [New Section after 42.2.5]	

Submitter Information Verification

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Committee: SAF-MEA

Committee Statement

Resolution: The proposed revision has merit, however, several issues were identified: it is not clear how the locking would reset as identified in item 2 and its impact on the egress flow for different groups that approach at different times or large groups of occupants; the base paragraph is confusing with respect to "Chapters 11 through 43 with low- and ordinary-hazard contents"; the extent of smoke detection coverage in item 1 is unclear; the requirements might be too generic and not adequately address all potential scenarios; the requirements should address existing installations.

**Public Input No. 283-NFPA 101-2024 [Section No. 7.2.1.6.4]****7.2.1.6.4* Elevator Lobby Exit Access Door Assemblies Locking.****7.2.1.6.4.1**

Where permitted in Chapters 11 through 43, door assemblies separating the elevator lobby from the exit access required by 7.4.1.6.1 shall be permitted to be electrically locked, provided that all the following criteria are met:

- (1)* Door electromechanical or electromagnetic locking hardware is listed in accordance with UL 294, *Access Control System Units*, or UL 1034, *Burglary-Resistant Electric Locking Mechanisms*.
- (2) The building is protected throughout by a fire alarm system in accordance with Section 9.6.
- (3) The building is protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7.
- (4) Waterflow in the sprinkler system required by 7.2.1.6.4.1 is arranged to initiate the building fire alarm system.
- (5) The elevator lobby is protected by an approved, supervised smoke detection system in accordance with Section 9.6.
- (6) Detection of smoke by the detection system required by 7.2.1.6.4.1 is arranged to initiate the building fire alarm system and notify building occupants.
- (7) Initiation of the building fire alarm system by other than manual fire alarm boxes unlocks the electrical locks on the elevator lobby door assembly.
- (8) Loss of power to the elevator lobby electrical lock system unlocks the electrical locks on the elevator lobby door assemblies.
- (9) Once unlocked, the elevator lobby door assemblies remain electrically unlocked until the building fire alarm system has been manually reset.
- (10) Where the elevator lobby door assemblies remain mechanically latched after being electrically unlocked, latch-releasing hardware in accordance with 7.2.1.5.3 is affixed to the door leaves.
- (11) A two-way communication system is provided for communication between the elevator lobby and a central control point that is constantly staffed.
- (12) For new installations, the electrical locks on the elevator lobby door assemblies shall be capable of being unlocked from the central control point.
- (13) The central control point staff required by 7.2.1.6.4.1(11) is capable, trained, and authorized to provide emergency assistance.

7.2.1.6.4.2

Elevator lobby exit access doors equipped with electrical locking systems shall not be required to comply with 7.2.1.6.1, 7.2.1.6.2, or 7.2.1.6.3.

Statement of Problem and Substantiation for Public Input

If the central control point staff are required to be capable, trained, and authorized to provide emergency assistance (item 13) and there's a two-way communication system provided between the central control point and the elevator lobbies, it makes sense to have the capability of unlocking locked elevator lobby exit access doors from the central control point.

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Committee Statement

Resolution: The proposed revision would require the central control point, which might be remotely located, to have the ability to release the locks, which might be technically challenging. There was also concern expressed over unauthorized use of the release device in buildings having a need for secure areas.

**Public Input No. 10-NFPA 101-2024 [Section No. 7.2.1.7.1]****7.2.1.7.1**

~~Where a side-hinged door assembly, a pivoted-swinging door assembly, or a balanced door assembly is required to be equipped with panic or~~ Panic hardware and fire exit hardware ~~, such hardware shall meet~~ comply with all of the following criteria :

- (1) It shall consist of a ~~cross-bar~~ crossbar or a push pad, with the length of the actuating portion of the ~~cross-bar~~ crossbar or push pad extending not less than one-half of the width of the door leaf ~~measured from the latch stile~~ unless otherwise required by 7.2.1.7.2.
- (2) It shall be mounted as follows:
 - (3) New installations shall be not less than 34 in. (865 mm) and not more than 48 in. (1220 mm) above the floor.
 - (4) Existing installations shall be not less than 30 in. (760 mm) and not more than 48 in. (1220 mm) above the floor.
- (5) It shall be constructed so that a horizontal force not ~~to exceed~~ exceeding 15 lbf (66 N) ~~actuates~~ applied to the ~~cross-bar~~ crossbar or push pad ~~and latches~~ , in the direction of egress, releases the latch(es).
- (6) Installation of fire exit hardware complies with NFPA 80, the listing of the door, its listing, and manufacturer's installation instructions.

Statement of Problem and Substantiation for Public Input

The proposed modifications improve the charging statement by focusing on installing and operating panic and fire exit hardware regardless of occupancy, creating consistency throughout the Code without making any technical changes.

Panic hardware and fire exit hardware devices are only installed on side-swinging doors; differentiating between the types of side-swinging (e.g., side-hinged, pivoted-swinging, and balanced) doors on which these devices are used is unnecessary. More importantly, as the charging statement is currently written, the provisions and requirements of 7.2.1.7 only apply to REQUIRED panic hardware and fire exit hardware devices. Which is to say that section 7.2.1.7 doesn't apply to panic hardware and fire exit hardware used in occupancies other than Assembly, Educational, and Day-Care occupancies and doors in certain hazardous locations. Deleting the word "required" is consistent with the phrasing used in 7.2.1.14.1 (1) under Inspection of Door Openings.

For example, fire exit hardware is commonly installed on stair tower doors in business, apartment, and hotel (and other) occupancies that don't require its use. Additionally, most doors with delayed egress locking systems are equipped with electrified panic hardware and fire exit hardware devices containing the electronic locking system's components; most of these doors are in occupancies that don't require panic hardware or fire exit hardware. These panic hardware and fire exit hardware devices should comply with sections 7.2.1.7 and 7.2.1.6.1.

Healthcare occupancies are perhaps the best example where large numbers of doors are equipped with panic hardware and fire exit hardware even though the Code doesn't REQUIRE its use. Like fire exit hardware, panic hardware devices are often installed on non-fire-rated doors in occupancies other than assembly, educational, and day-care occupancies that don't require its use. Further, while the Code only requires panic hardware and fire exit hardware to be used in assembly, educational, and day-care occupancies, it does not restrict its use to only those occupancies; these devices can be used in most other occupancies in the Code. Similarly, 7.2.1.7.4 prohibiting the installation of "...any locking device, set screw, or other arrangement that prevents the release of the latch..." on "required panic hardware and fire exit hardware" doesn't apply to panic hardware and fire exit hardware devices installed on doors in occupancies where the Code doesn't REQUIRE it.

In these scenarios, the provisions and requirements of 7.2.1.7.1 and 7.2.1.7.4 don't apply since the occupancies involved don't REQUIRE panic hardware or fire exit hardware to be used.

The proposed changes are consistent with how the Code addresses other door hardware components (e.g., locks and latches) by focusing on their installation and operation, not the doors on which they are used.

In the interest of public safety, it makes sense that all installations of panic hardware and fire exit hardware in the Code comply with the provisions and requirements of Section 7.2.1.7 Panic Hardware and Fire Exit Hardware in its entirety, regardless of whether the Code requires it or merely permits its use.

Item (1) the phrase "...measured from the latch stile..." has been used in the Code since at least the late 1980s as it applied to the installation of panic hardware on balanced doors. Recently, it was added to this section during the NFPA 101 (2021) revision cycle (see FR No. 6547-NFPA 101-2018), making it apply to all applications of panic hardware and fire exit hardware devices. The reason this phrase was used for balanced doors was to ensure the active push pad did not extend beyond the

offset pivot point of the doors, creating a fulcrum, thereby potentially impairing or prohibiting the opening of the doors in the direction of egress; that condition does not exist on side-hinged and pivoted-swinging doors. More importantly, as it is currently written, Item (1) requires the measurement to be taken across the door's width from the latch stile of the door—the outermost vertical edge of the door. Depending on the design of panic hardware and fire exit hardware devices, active crossbars or push pads are inset from the latch stile of the doors approximately 3 to 6 inches, extending therefrom laterally toward the hinge side of the door, for at least one-half the width of the doors. No installations of panic hardware or fire exit hardware that can comply with this requirement.

The proposed changes to Item (3) improve readability and clarify that the specified horizontal force is "applied" to the crossbars and push pads "in the direction of egress"—no technical changes were made. The phrase "in the direction of egress" is consistent with door hardware terminology used elsewhere in Chapter 7.

While Chapter 8 requires the installation of all fire-rated doors to comply with NFPA 80, new Item (4) explicitly requires fire exit hardware devices to comply with NFPA 80, as well as the listings of the doors to which they are attached, their own listings, and manufacturer's installation instructions.

Lastly, in the context of Section 7.2.1.7, the term "crossbar" should be one word.

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Committee: SAF-MEA

Committee Statement

Resolution: In (1), "measured from the latch stile" is intended to preclude the cross bar or push pad from extending across the door from the hinge stile to the door leaf midpoint. The proposed revision does not clarify whether the requirement would apply to required panic/fire exit hardware or all panic/fire exit hardware. Item (6) is unclear with regard to "its listing" and the manufacturer's installation instructions are part of the product's listing.



Public Input No. 12-NFPA 101-2024 [New Section after 7.2.1.7.3]

7.2.1.7.3.1* Where required by the listing of fire-rated doors equipped with fire exit hardware, auxiliary latches shall be located and installed in accordance with all the following conditions:

- (1) The quantity, orientation, and placement of auxiliary latches comply with the listings of the fire-rated doors.
- (2) The listing of the auxiliary latches.
- (3) The manufacturer's installation instructions.

A.7.2.1.7.3.1 Pairs of doors equipped with fire exit hardware applications such as top-rod-only might require auxiliary latches (aka fire or thermal pins) to maintain positive latching under fire conditions. Auxiliary latches can be subcomponents of fire exit hardware devices or standalone components like other latching door hardware. Commonly, such applications include a single auxiliary latch installed in the vertical edge of one door leaf—about 12 inches (309 mm) to 16 inches (406 mm) above the floor—projecting horizontally into the vertical edge of the opposing door. However, some pairs of fire-rated doors require two (2) and as many as five (5) auxiliary latches, depending on the internal construction and listings of the fire-rated doors; the listings of the doors determines the number of auxiliary latches required. Some applications require up to two (2) auxiliary latches projecting from the top rails of doors into the rabbets of the door frames. In other applications, up to two (2) auxiliary latches are oriented to project into the floor directly below the doors. Certain applications place horizontal auxiliary latches up to 40 inches (1016 mm) above the floor. (See A.7.2.1.5.5 for more information.)

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
Pages_from_151201_VT_Indsutries_LBR_and_Fire_Pin_P322-1.pdf	This file contains illustrations from one fire-rated wood door manufacturer showing the quantity, orientation, and placement of auxiliary latches for one of its door constructions. Other door constructions from this manufacturer, and fire-rated doors from other manufacturers require one or more auxiliary latches.	
190725_VT_Industries_Double_Egress_LBR_Fire_Pins_P472.pdf	This file contains one fire-rated wood door manufacturer's technical bulletin regarding the number of auxiliary latches required for their double egress doors. Other fire-rated wood door manufacturers have similar requirements for certain of their door constructions.	

Statement of Problem and Substantiation for Public Input

Section 7.2.1.5.5 exempts fire-rated doors exposed to elevated temperatures of fire from being operable when the building is occupied. A.7.2.1.5.5 explains that auxiliary latches (aka fire and thermal pins) render doors inoperable after exposure to fire. Auxiliary latches have been in use since at least the early 1990s, and their use is ubiquitous today. However, the Code does not currently contain provisions and requirements for using auxiliary latches. Accordingly, this proposed new section addresses the installation and use of auxiliary latches when used on certain fire-rated doors equipped with fire exit hardware. The quantity, orientation, and placement of auxiliary latches on pairs of doors vary based on the internal construction of the doors and how the manufacturers tested the doors by a nationally recognized testing laboratory (NRTL). While many pairs of fire-rated doors require a single auxiliary latch, other pairs of fire-rated doors require two or more, even up to five auxiliary latches on certain assemblies (see the attached files for examples from one door manufacturer). Pairs of wood and wood-composite fire-rated doors generally require more auxiliary latches than hollow metal (aka steel) fire-rated doors.

Unlike other types of positive latching hardware components, in their normal state (i.e., the captured pins are held retracted by fusible coverings), auxiliary latches are not operable by occupants; they only project after their fusible coverings melt when exposed to temperatures of approximately 400°F or greater, releasing the pins and causing them project under spring power. Once projected, they cannot be retracted; fixing the door panels closed to maintain the integrity of the fire barriers and walls in which they are installed. Consequently, auxiliary latches are not subject to the Code's range of mounting heights for operable latching hardware components.

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Committee: SAF-MEA

Committee Statement

Resolution: The proposed requirement does not relate to egress door performance requirements and is not within the scope of Ch. 7. NFPA 80 might be the more appropriate standard for such a requirement.

**Public Input No. 11-NFPA 101-2024 [Section No. 7.2.1.7.3]****7.2.1.7.3***

Only approved fire exit hardware shall be used on fire-protection-rated door assemblies. New panic hardware and new fire exit hardware shall comply with UL 305, *Panic Hardware*, and ANSI/BHMA A156.3, *Exit Devices*.

Statement of Problem and Substantiation for Public Input

Fire exit hardware devices can be (and are) used on both fire protection-rated and fire resistance-rated side-hinged and pivoted swinging doors. As currently written, 7.2.1.7.3 seems to exclude using fire exit hardware on fire resistance-rated doors. The proposed change removes "protection" thereby including both fire protection-rated and fire resistance-rated doors. Alternatively, this section could be modified to insert "... and fire resistance-rated..." immediately following "protection-rated" in the current statement.

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Committee: SAF-MEA

Committee Statement

Resolution: [FR-6558-NFPA 101-2024](#)

Statement: Fire exit hardware devices can be (and are) used on both fire protection-rated and fire resistance-rated side-hinged and pivoted swinging doors. As currently written, 7.2.1.7.3 seems to exclude using fire exit hardware on fire resistance-rated doors.



Public Input No. 26-NFPA 101-2024 [New Section after 7.2.1.8.1]

7.2.1.8.1.1*

Self-closing doors shall swing easily and freely and comply with all the following conditions:

- (1) Closing devices shall be adjusted to ensure the doors close from the full-open and any partially-open positions.
- (2) Manually-operated hold-open features of closing devices shall not be permitted.
- (3) The movement of the doors shall not be impaired or prohibited by binding against floors, door frames, and doors.
- (4) Closing devices shall be adjusted to overcome resistance of latching hardware and building stack pressure.
- (5) Tampering with self-closing devices and otherwise impairing or preventing doors from closing shall not be permitted.
- (6) Blocking self-closing doors in the full-open or any partially-open position shall not be permitted.

A.7.2.1.8.1.1 Many self-closing doors are susceptible to seasonal changes affecting HVAC systems, requiring periodic adjustments to ensure they close reliably. Stack pressures in stair towers can affect doors at landings, preventing closing and latching, and might cause doors to close too quickly, potentially injuring occupants. Depending on the adjacent construction, self-closing doors might be able to open from 90 to 140 (or more) degrees nominally, and certain hardware applications might limit their travel to between 85 to 110 degrees nominally. Closing devices and other hardware should not have manually-operated hold-open features or functions that prevent doors from closing every time they are opened. Frequently, due to irregularities in floor construction, doors opening beyond 110 degrees bind against floor covering materials (e.g., carpet), preventing the doors from closing. Care should be taken to correct floor conditions impairing or interfering with the movement of self-closing doors. In the case of fire-rated self-closing doors, NFPA 80 requires these doors to reliably close and latch every time they are open, regardless of how far they are opened.

Statement of Problem and Substantiation for Public Input

Since the Code requires certain doors to be kept closed, closing devices on doors with self-closing operation must be adjusted to ensure the doors close from the full-open, as well as any partially-open positions. 7.2.1.8.1 applies to both fire-rated and non-fire-rated doors. The closing devices cannot have manual hold-open functions, and the doors cannot have any other manually-operated hold-open devices (e.g., kick-down and overhead door holders, etc.). Binding of doors against door frames, opposing leaves of paired doors, and floors impair and prevent reliable closing of self-closing doors. NFPA 80's inspection and testing requirements verifies the free movement of self-closing fire-rated doors. However, NFPA 101 does not specify the movement of non-fire-rated self-closing doors to be free from binding or other impairments.

The proposed new section clarifies that where doors are required to have self-closing operation, the doors need to move easily (and freely) and close reliably.

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Committee: SAF-MEA

Committee Statement

Resolution: The proposed revisions are outside the scope of NFPA 101. Item 1 appears to be inconsistent with NFPA 80. The terms 'freely' and 'easily' are unenforceable. Item 4 would be an ongoing maintenance issue.

**Public Input No. 28-NFPA 101-2024 [New Section after 7.2.1.8.1]****7.2.1.8.1.2* Closing Speed**

Closing speeds of self-closing doors shall comply with ICC/ANSI A117.1 as follows:

1. Adjust closing devices, other than spring hinges, such that the time it takes to move the doors from an open position of ninety (90) degrees to twelve (12) degrees from the closed position, shall not be faster than five (5) seconds.
2. Adjust spring hinges such that the time it takes the doors to close completely from an open position of seventy (70) degrees shall not be faster than one and one-half (1.5) seconds.

A.7.2.1.8.1.2 ICC/ANSI A117.1, Accessible Buildings and Facilities, specifies closing speeds of self-closing doors, fire-rated and non-fire-rated. Most hydraulic self-closing devices have a two-stage closing cycle, sweep, and latch, controlling the speed of the door's movement. The sweep speed of these closing devices should be adjusted to keep the doors from closing too quickly (e.g., not faster than five (5) seconds from 90 to 12 degrees). Additionally, the latch speeds of these closing devices should be adjusted to overcome resistance of latching hardware and building stack pressures, ensuring the doors reliably close and, where required, latch. Typically, the latch-speed-stage of the closing cycle quickly close doors from 12 degrees to overcome resistance of latching hardware; there is no minimum time for the latch-speed-stage of closing cycles. Spring hinges cannot control the closing speed of doors, often causing doors to slam or not close reliably. Consequently, care should be taken when adjusting spring hinges. (See Fig. A.7.2.1.8.2.)

<<INSERT ONE OF THE ATTACHED ILLUSTRATIONS>>

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
NFPA_101_First_Draft_Fig_A.7.2.1.8.2.docx	Proposed fig for closing speed of self-closing doors.	

Statement of Problem and Substantiation for Public Input

The proposed new section clarifies the Code's closing speed requirement for self-closing doors. Many self-closing doors are required to comply with the conditions of A117.1, but certain conditions such as the closing speed of doors are unspecified in the Code. The door inspection requirements of 7.2.1.14.6, specifically item (6), requires the closing speed of doors to comply with accessibility requirements. However, NFPA 101 does not contain provisions and requirements regarding the closing speeds of self-closing doors.

This proposal seeks to add A117.1's closing speed limitations for self-closing doors to complement the inspection and testing requirement of 7.2.1.14.6(6).

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Committee: SAF-MEA

Committee Statement

Resolution: The proposed revision is outside the scope of NFPA 101. Doors in accessible means of egress must already comply with the referenced accessibility standard. Adjustment of door closing devices is an ongoing maintenance issue.

**Public Input No. 273-NFPA 101-2024 [New Section after 7.2.1.8.4]****7 .2.1.8.5 Door _ closing _**

Swinging doors with closers utilizing cables, chains or ropes, and pulleys and counterweights shall automatically close and latch from any open position.

7.2.1.8.5.1

All other automatic _closing swinging _ doors shall close and latch from the _ hold _open position and from any position _ between 30 degrees open _ and the hold _open position _ , and all _ other _ self _closing swinging _ doors shall close and latch from any position _ greater than _ 30 degrees open.

Statement of Problem and Substantiation for Public Input

For doors that are required to be automatic-closing or self-closing, NFPA 101 requires these doors to comply with NFPA 80. NFPA 80 has differing, and a bit confusing, requirements for closing and latching of swinging door opening protectives (see the summary, below). This proposal is an attempt to simplify the requirements for testing the operation of automatic-closing and self-closing doors, and to include these requirements in NFPA 101. BHMA recommends that swinging automatic-closing and self-closing doors be required to close and latch when released from a door-open position of 30 degrees and greater, which is consistent with NFPA 80 requirements for swinging fire doors with spring hinges.

Summary of NFPA 80 provisions regarding testing the operation of automatic-closing and self-closing doors.

- The requirements for inspection and testing of swinging doors with builders hardware or fire door hardware (the vast majority of fire doors currently being installed), in Item 7 of 5.2.3.5.2 (NFPA 80-2022) requires the door to completely close when operated from the full open position.
- The requirements for inspection and testing of swinging doors with fire door hardware (the old-style metal clad fire doors typically closed with pulleys, chains, cables, ropes, counterweights, and / or fusible links) in Item 13 of 5.2.3.6.2, requires these doors to close completely from any open position.
- The requirements for installation of swinging doors with builders hardware or fire door hardware in Chapter 6 of NFPA 80, in 6.4.1.4, state the closing mechanism is to be adjusted . . . so that positive latching is achieved on each door operation. And, specifically, 6.4.1.5 requires doors with spring hinges are to achieve positive latching with the door is allowed to close freely from an open position of no more than 30 degrees.

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Committee: SAF-MEA

Committee Statement

Resolution: The proposed revision does not appear to be in the scope of Ch. 7 of NFPA 101. The submitter might consider submitting the revisions to Ch. 8, NFPA 80 and/or NFPA 105.



Public Input No. 276-NFPA 101-2024 [Section No. 7.2.1.10]

7.2.1.10 Revolving Door Assemblies.**7.2.1.10.1**

Revolving door assemblies, whether used or not used in the means of egress, shall comply with all of the following:

- (1) New revolving doors shall comply with ANSI/BHMA A156.27, *Power and Manual Operated Revolving Pedestrian Doors*, and shall be installed in accordance with the manufacturer's installation instructions.
- (2) Revolving door wings shall be capable of book-fold or breakout for egress in accordance with ANSI/BHMA A156.27, unless they are existing revolving doors approved by the authority having jurisdiction.
- (3) When revolving door wings are collapsed into the book-fold position, the parallel egress paths formed shall provide an aggregate width of 36 in. (915 mm), unless they are approved existing revolving door assemblies.
- (4) Revolving door assemblies shall not be used within 10 ft (3050 mm) of the foot or the top of stairs or escalators.
- (5) A dispersal area acceptable to the authority having jurisdiction shall be located between stairs or escalators and the revolving door assembly.
- (6) The revolutions per minute (rpm) of door wings shall not exceed the following:
 - (7) The values in Table 7.2.1.10.1 for existing revolving doors.
 - (8) The values in ANSI/BHMA A156.27 for new revolving doors.
- (9) Each revolving door assembly shall have a conforming ~~side-hinged swinging~~ door assembly other than a revolving door in the same wall as the revolving door within 10 ft (3050 mm) of the revolving door, unless one of the following conditions applies:
 - (10) Revolving door assemblies shall be permitted without adjacent swinging
 - (a) conforming door assemblies, as required by 7.2.1.10.1(6
 - (a) 7) , in street floor elevator lobbies, provided that no stairways or door openings from other parts of the building discharge through the lobby and the lobby has no occupancy other than as a means of travel between the elevators and street.
 - (b) The requirement of 7.2.1.10.1(6
 - (a) 7) shall not apply to existing revolving door assemblies where the number of revolving door assemblies does not exceed the number of swinging door assemblies within 20 ft (6100 mm) of the revolving door assembly.

Table 7.2.1.10.1 Existing Revolving Door Assembly Maximum Speed

<u>Inside Diameter</u>		<u>Manual Speed Control</u>	
<u>ft/in.</u>	<u>mm</u>	<u>Power-Driven Speed Control (rpm)</u>	<u>(rpm)</u>
6 ft 6 in.	1980	11	12
7 ft	2135	10	11
7 ft 6 in.	2285	9	11
8 ft	2440	9	10
8 ft 6 in.	2590	8	9
9 ft	2745	8	9
9 ft 6 in.	2895	7	8
10 ft	3050	7	8

7.2.1.10.2

Where permitted in Chapters 11 through 43, revolving door assemblies shall be permitted as a component in a means of egress, provided that all of the following criteria are met:

- (1) Revolving door openings shall not be given credit for more than 50 percent of the required egress capacity.
- (2) Each revolving door opening shall not be credited with more than a 50-person capacity or, if of not less than a 9 ft (2745 mm) diameter, a revolving door assembly shall be permitted egress capacity based on the clear opening width provided when collapsed into a book-fold position.
- (3) Revolving door wings shall be capable of being collapsed into a book-fold position when a force not exceeding 130 lbf (580 N) is applied to the wings within 3 in. (75 mm) of the outer edge.

7.2.1.10.3

Revolving door assemblies not used as a component of a means of egress shall have a collapsing force not exceeding 180 lbf (800 N) applied at a point 3 in. (75 mm) from the outer edge of the outer wing stile and 40 in. (1015 mm) above the floor.

7.2.1.10.4

The requirement of 7.2.1.10.3 shall not apply to revolving door assemblies, provided that the collapsing force is reduced to a force not to exceed 130 lbf (580 N) under all of the following conditions:

- (1) Power failure, or removal of power to the device holding the wings in position
- (2) Actuation of the automatic sprinkler system, where such a system is provided
- (3) Actuation of a smoke detection system that is installed to provide coverage in all areas within the building that are within 75 ft (23 m) of the revolving door assemblies
- (4) Actuation of a clearly identified manual control switch in an approved location that reduces the holding force to a force not to exceed 130 lbf (580 N)

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
NFPA_101-2027_Door_Beside_Revolving_Door_Proposal_20240603.pdf	PDF of proposed revisions of PI 276.	

Statement of Problem and Substantiation for Public Input

The text in Item 7 is proposed to be revised as the current requirements are unnecessarily restrictive by requiring specifically a side-hinged swinging door where other types of doors could also be used.

The proposed revisions reflect what we believe is the intent of Item 7: For normal ingress and egress, and for emergency egress, revolving doors must be complemented with a minimum of one nearby door that is not a revolving door, and which meets all the requirements for egress.

It is not uncommon for the door beside a revolving door to be a low-energy power-operated hinged door. The current code language doesn't specifically permit a power-operated hinged door beside a revolving door. This could result in the interpretation that a low-energy power-operated hinged door is not permitted in that application.

A pdf is attached to more clearly illustrate the proposed revisions.

Submitter Information Verification

Submitter Full Name: John Woestman
Organization: Kellen Company
Affiliation: Builders Hardware Manufacturers Association
Street Address:
City:
State:
Zip:
Submission Date: Mon Jun 03 19:50:31 EDT 2024
Committee: SAF-MEA

Committee Statement

Resolution: FR-6564-NFPA 101-2024

Statement: Any door that complies with Ch. 7 should be able to be used next to a revolving door.



Public Input No. 108-NFPA 101-2024 [Section No. 7.2.2.2.1.2(B)]

(B)*

Where stairs serve occupant loads exceeding that permitted by 7.2.2.2.1.2(A), the minimum width clear of all obstructions, except projections not more than 4½ in. (114 mm) at or below handrail height on each side, shall be in accordance with Table 7.2.2.2.1.2(B) and the requirements of 7.2.2.2.1.2(C), 7.2.2.2.1.2(D), 7.2.2.2.1.2(E), and 7.2.2.2.1.2(F).

Table 7.2.2.2.1.2(B) New Stair Width

<u>Total Cumulative Occupant Load Assigned to the Stair</u>	=	<u>Width</u>	
		<u>in.</u>	<u>mm</u>
<2000 persons	-	44	1120
≥2000 persons	-	56	1420

The current requirement of the stair width of 56 in. (1420 mm) becomes impractical sometimes. The stair width to be provided based on the occupant load of the floor, not to be based on the cumulative load assigned to stair.

Statement of Problem and Substantiation for Public Input

The current requirement of the stair width of 56 in. (1420 mm) becomes impractical sometimes.

Submitter Information Verification

Submitter Full Name: Zainul Abedeen

Organization: WSP Middle East

Street Address:

City:

State:

Zip:

Submittal Date: Fri May 17 12:39:14 EDT 2024

Committee: SAF-MEA

Committee Statement

Resolution: No technical substantiation has been provided for the proposed revision. The current 56 in. stair requirement, which is intended to allow for counter-flow, was based on technical evidence and research dating back to 1970 and in response to the NIST World Trade Center collapse investigation.

**Public Input No. 78-NFPA 101-2024 [Section No. 7.2.2.4.5.5]****7.2.2.4.5.5**

New handrails shall be installed to provide a clearance of not less than 2¼ in. (57 mm) between the handrail and the wall, guard, or other surface to which it is fastened.

Statement of Problem and Substantiation for Public Input

The current code language only requires the 2.25 inch clearance from a wall, but handrails are typically only mounted to walls on the outer side of the stair treads. The inside handrails are typically mounted to guards, top railings, newel posts, or other non-wall surfaces which would not require this clearance. The updated language clarifies that the 2.25 inch clearance requirement applies to all handrail mount locations, not just on walls.

Submitter Information Verification

Submitter Full Name: Adam Graybeal

Organization: Koffel Compliance, LLC

Street Address:

City:

State:

Zip:

Submittal Date: Tue Apr 30 11:23:52 EDT 2024

Committee: SAF-MEA

Committee Statement

Resolution: [FR-6560-NFPA 101-2024](#)

Statement: The current code language only requires the 2.25 inch clearance from a wall, but handrails are typically only mounted to walls on the outer side of the stair treads. The inside handrails are typically mounted to guards, top railings, newel posts, or other non-wall surfaces which would not require this clearance. The updated language clarifies that the 2.25 inch clearance requirement applies to all handrail mount locations, not just on walls.

**Public Input No. 102-NFPA 101-2024 [Section No. 7.2.2.4.6.3]****7.2.2.4.6.3***

Open guards, other than approved existing open guards, shall have intermediate rails or an ornamental pattern such that a sphere 4 in. (100 mm) in diameter is not able to pass through any opening up to a height of 34 in. (865 mm) ; ~~and the following also shall apply: The and t he triangular openings formed by the riser, tread, and bottom element of a guardrail at the open side of a stair shall be of such size that a sphere 6 in. (150 mm) in diameter is not able to pass through the triangular opening.~~

Exception: In detention and correctional occupancies, in industrial occupancies, and in storage occupancies, the clear distance between intermediate rails, measured at right angles to the rails, shall not exceed 21 in. (535 mm).

Statement of Problem and Substantiation for Public Input

Per Section 7.2.2.4.6.3, open guards are required to have intermediate rails with a maximum space of 4 inches between. Item 2 of this section appears to provide an exception to the rule that allows 3 occupancies to increase the 4 inch limitation to 21 inch maximum. However, a simple reading of the last line of the section ("and the following also shall apply:") indicates that the 4-inch rule is applicable and the 21-inch rule is required. This simple reading basically negates the 21 inch rule. Item 1 of the section appears to be complementary to the 4-inch sphere rule, while Item 2 of the section appears to be negated by the 4 inch sphere rule. Many industrial buildings with elevated walking surfaces are provided with a two rail guard system (one at 42 inches and one at 21 inches).

If Item 2 of the section is negated by the base rule, then it should be removed. However, if Item 2 is an exception to the 4 inch sphere rule, then the language in the section ("and the following also shall apply:") should be modified.

Submitter Information Verification

Submitter Full Name: Jeffrey Demaine

Organization: Fisher Engineering

Street Address:

City:

State:

Zip:

Submission Date: Wed May 15 02:34:09 EDT 2024

Committee: SAF-MEA

Committee Statement

Resolution: [FR-6561-NFPA 101-2024](#)

Statement: The term "and the following shall apply" contained at the end of 7.2.2.4.6.3 has caused some AHJs to interpret that the 4-inch sphere rule must be applied regardless of the 21-inch allowance permitted in 7.2.2.4.6.3(2).

**Public Input No. 60-NFPA 101-2024 [Section No. 7.2.2.4.6.3]****7.2.2.4.6.3***

Open guards, other than approved existing open guards, shall have intermediate rails or an ornamental pattern such that a sphere 4 in. (100 mm) in diameter is not able to pass through any opening up to a height of 34 in. (865 mm), ~~and the following also shall apply except as permitted by following :~~

- (1) The triangular openings formed by the riser, tread, and bottom element of a guardrail at the open side of a stair shall be of such size that a sphere 6 in. (150 mm) in diameter is not able to pass through the triangular opening.
- (2) In detention and correctional occupancies, in industrial occupancies, and in storage occupancies, ~~the clear distance between intermediate rails, measured at right angles to the rails, shall not exceed~~ guards shall not have openings that allow passage of a sphere 21 in. (535 mm) in diameter .

Statement of Problem and Substantiation for Public Input

The term “and the following shall apply” contained at the end of 7.2.2.4.6.3 has caused some AHJs to interpret that the 4-inch sphere rule must be applied regardless of the 21-inch allowance permitted in 7.2.2.4.6.3(2).

Submitter Information Verification

Submitter Full Name: Samuel Dannaway
Organization: Coffman Engineers, Inc
Street Address:
City:
State:
Zip:
Submission Date: Tue Apr 02 14:09:11 EDT 2024
Committee: SAF-MEA

Committee Statement

Resolution: [FR-6561-NFPA 101-2024](#)

Statement: The term “and the following shall apply” contained at the end of 7.2.2.4.6.3 has caused some AHJs to interpret that the 4-inch sphere rule must be applied regardless of the 21-inch allowance permitted in 7.2.2.4.6.3(2).



Public Input No. 38-NFPA 101-2024 [Section No. 7.2.2.5.1.3]

7.2.2.5.1.3

In ~~existing~~ buildings, where ~~a- an existing~~ two-story exit enclosure ~~connects- stair connects~~ the story of exit discharge with an adjacent story, the ~~exit shall- stair shall~~ be permitted to be enclosed with 1-hour fire resistance rated fire barrier only on the story of exit discharge, provided that not less than 50 percent of the number and capacity of exits on the story of exit discharge are independent of such enclosures.

Statement of Problem and Substantiation for Public Input

The current language provides some confusion as it refers to an enclosure that is not enclosed.

The language also refers to the permitted stair arrangement as an "exit enclosure"; exit enclosures have special protections (see 7.1.3.2.1)- it is unclear whether the exit enclosure protections of 7.1.3.2.1 are intended to be applied on the discharge floor or not. As written, the only relieves the stair from compliance with enclosure requirement on the non-discharge floor; as an exit enclosure, the discharge level level needs to be protected in accordance with 7.1.3.2.1 even though it is permitted to be completely exposed to the non-discharge floor.

Additionally, the language of the code text speaks to a stair in an "existing building", not an "existing" stair (the commentary indicates that this provision is applicable to existing stairs) - this permits a new stair to comply with this provision in an existing building, and this appears to run counter to the intent of the code (per the commentary).

Submitter Information Verification

Submitter Full Name: Matthew Shanks

Organization: Montgomery County

Street Address:

City:

State:

Zip:

Submittal Date: Tue Mar 12 13:57:10 EDT 2024

Committee: SAF-MEA

Committee Statement

Resolution: The proposed revision does not improve the language. The required fire resistance rating is covered by 7.1.3.2. Chapter 43 covers the construction of new exits in existing buildings and would require such new exits to comply with the requirements for new construction.

**Public Input No. 34-NFPA 101-2024 [Section No. 7.2.3.12]****7.2.3.12 Emergency Power Supply System (EPSS).**

Power shall be provided as follows:

- (1) In other than Health Care Occupancies, A Type 60, Class 2, Level 2 EPSS for new mechanical ventilation equipment and enclosure pressurization systems shall be provided in accordance with NFPA 110.
- (2) A previously approved existing standby power generator installation with a fuel supply adequate to operate the equipment for 2 hours shall be permitted in lieu of 7.2.3.12.
- (3) The generator shall be located in a room separated from the remainder of the building by fire barriers having a minimum 1-hour fire resistance rating.
- (4) In Health Care Occupancies, emergency power shall be provided as required by 18.5.1 or 19.5.1

Statement of Problem and Substantiation for Public Input

Since each of these items are in the list are enforced as an "and" the first bullet conflicts with the requirements of NFPA 99: 6.7.1.2.1 that requires Type 10, Class X, Level 1 sources. Some AHJs are pointing out this conflict sometimes requiring a separate generator to cover these loads and not allowing them on the Hospital Essential Electrical System. Health care facilities don't have EPSS's. They have Essential Electrical Systems (EES) that may cover the functions of the EPSS, but also divide the loads into multiple branches. This revision makes it clear that item (1) does not apply to health care, but does apply to all other facilities that have mechanical ventilation equipment and enclosure pressurization systems

Submitter Information Verification

Submitter Full Name: Chad Beebe

Organization: ASHE - AHA

Street Address:

City:

State:

Zip:

Submittal Date: Sun Mar 10 17:12:20 EDT 2024

Committee: SAF-MEA

Committee Statement

Resolution: The proposed revision is specific to health care occupancies and will be addressed by the TC on Health Care Occupancies. Any needed exemptions in 7.2.3.12 will be made by the correlating committee.



Public Input No. 188-NFPA 101-2024 [Section No. 7.3.1.2]

7.3.1.2* Occupant Load Factor.

The occupant load in any building or portion thereof shall be not less than the number of persons determined by dividing the floor area assigned to that use by the occupant load factor for that use as specified in Table 7.3.1.2, Figure 7.3.1.2(a), and Figure 7.3.1.2(b). Where both gross and net area figures are given for the same occupancy, calculations shall be made by applying the gross area figure to the gross area of the portion of the building devoted to the use for which the gross area figure is specified and by applying the net area figure to the net area of the portion of the building devoted to the use for which the net area figure is specified.

Table 7.3.1.2 Occupant Load Factor

Use	ft² per person^a	m² per person^a
Assembly Use	-	-
Concentrated use, without fixed seating	7 net	0.65 net
Less concentrated use, without fixed seating	15 net	1.4 net
Bench-type seating	1 person/18 linear in.	1 person/455 linear mm
Fixed seating	Use number of fixed seats <u>plus one</u> for each empty space intended for a wheelchair	Use number of fixed seats <u>plus one</u> for each empty space intended for a wheelchair
Waiting spaces	See 12.1.7.2 and 13.1.7.2.	See 12.1.7.2 and 13.1.7.2.
Kitchens	100	9.3
Library stack areas	100	9.3
Library reading rooms	50 net	4.6 net
Swimming pools	50 (water surface)	4.6 (water surface)
Swimming pool decks	30	2.8
Exercise rooms with equipment	50	4.6
Exercise rooms without equipment	15	1.4
Stages	15 net	1.4 net
Lighting and access catwalks, galleries, gridirons	100 net	9.3 net
Casinos and similar gaming areas	11	1
Skating rinks	50	4.6
-	-	-
Business Use (other than below)	150	14
Concentrated business use ^b	50	4.6
Airport traffic control tower observation levels	40	3.7
Collaboration rooms/spaces ≤450 ft ² (41.8 m ²) in area ^b	30	2.8
Collaboration rooms/spaces >450 ft ² (41.8 m ²) in area ^b	15	1.4
Day-Care Use	35 net	3.3 net
Detention and Correctional Use	120	11.1
Educational Use	-	-
Classrooms	20 net	1.9 net
Shops, laboratories, vocational rooms	50 net	4.6 net
Health Care Use	-	-
Inpatient treatment departments	240	22.3
Sleeping departments	120	11.1
Ambulatory health care	150	14
Industrial Use	-	-
General- and high-hazard industrial	100	9.3
Special-purpose industrial	MP	MP
Mercantile Use	-	-
Sales area on street floor ^{c,d}	30	2.8
Sales area on two or more street floors ^d	40	3.7
Sales area on floor below street floor ^d	30	2.8

<u>Use</u>	<u>ft² per person^a</u>	<u>m² per person^a</u>
Sales area on floors above street floor ^d	60	5.6
Floors or portions of floors used only for offices	See business use.	See business use.
Floors or portions of floors used only for storage, receiving, and shipping, and not open to general public	300	27.9
Mall structures ^e	Per factors applicable to use of space ^f	-
Residential Use	-	-
Hotels and dormitories	200	18.6
Apartment buildings	200	18.6
Board and care, large	200	18.6
Storage Use	-	-
In storage occupancies	MP	MP
In mercantile occupancies	300	27.9
In other than storage and mercantile occupancies	500	46.5

MP: The occupant load is the maximum probable number of occupants present at any time.

^aAll factors are expressed in gross area unless marked "net."

^bSee A.7.3.1.2.

^cFor determining occupant load in mercantile occupancies where, due to differences in the finished ground level of streets on different sides, two or more floors directly accessible from streets (not including alleys or similar back streets) exist, each such floor is permitted to be considered a street floor. The occupant load factor is one person for each 40 ft² (3.7 m²) of gross floor area of sales space.

^dFor determining occupant load in mercantile occupancies with no street floor, as defined in 3.3.292, but with access directly from the street by stairs or escalators, the floor at the point of entrance to the mercantile occupancy is considered the street floor.

^eFor any food court or other assembly use areas located in the mall concourse that are not included as a portion of the gross leasable area of the mall structure, the occupant load is calculated based on the occupant load factor for that use as specified in Table 7.3.1.2. The remaining mall concourse area is not required to be assigned an occupant load.

^fThe portions of the mall concourse not used as gross leasable area are not required to be assessed an occupant load based on Table 7.3.1.2. However, means of egress from a mall concourse are required to be provided for an occupant load determined by dividing the gross leasable area of the mall building (not including anchor buildings) by the appropriate lowest whole number occupant load factor from Figure 7.3.1.2(a) or Figure 7.3.1.2(b).

Each individual tenant space is required to have means of egress to the outside or to the mall concourse based on occupant loads calculated by using the appropriate occupant load factor from Table 7.3.1.2.

Each individual anchor store is required to have means of egress independent of the mall concourse.

Figure 7.3.1.2(a) Mall Structure Occupant Load Factors (US Customary Units).

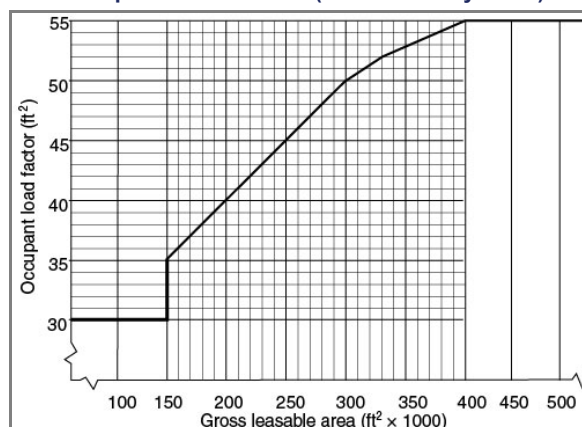
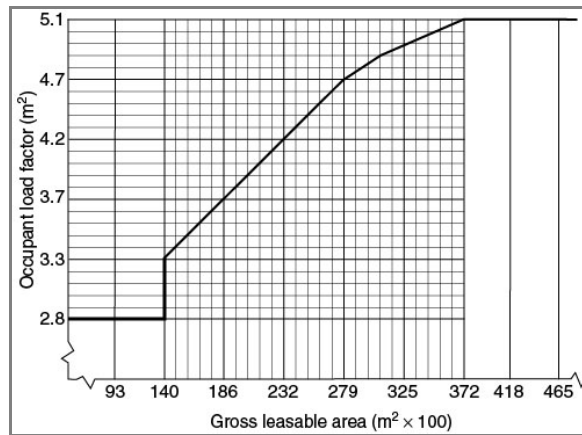


Figure 7.3.1.2(b) Mall Structure Occupant Load Factors (SI Units).



Statement of Problem and Substantiation for Public Input

The Life Safety Code has been out of step with the American's With Disabilities Act (ADA) in under-predicting the occupant load of a fixed seating assembly area. I have tried to fix the problem in a number of ways over the last few cycles and have not had success, probably because I tried to solve other issues simultaneously and caused confusion. So, this cycle, I am only addressing the ADA issues, which is a serious concern.

Prior to 1990 and the passing of the ADA, when a bunch of chairs were in an assembly space, we used the number of chairs as a reasonable start for determining the Occupant Load. Since the ADA has been enforced, we now design fixed seating assembly spaces by not installing all of the fixed seats that we can and leaving open spaces that are intended to be used for individuals in wheelchairs. These individuals need to be included in the Occupant Load count. If, instead of an empty space, a fixed seat was installed, it would be counted. We need to assume that the empty space can be filled with a person in a wheelchair when we consider the Occupant Load.

In the past, I have been told that section 12.1.7.1 handles the problem because it required the user to consider the "maximum probable population of the space" if it is greater than the value in Table 7.3.1.2, but there are two problems with this approach:

1) Many people who use the Life Safety Code go to Chapter 7 to determine Occupant Load, not Chapter 12. I have personally witnessed many movie theaters, lecture halls, and auditoriums with Occupant Load signs that clearly indicate that the Occupant Load has been based on the number of fixed seats, ignoring the spaces specifically left open for wheelchairs. When I have asked the AHJ why they approved that Occupant Load number, the response that I have received is, "Because Table 7.3.1.2 just says to count the seats."

2) Table 7.3.1.2 is supposed to be a reasonable place to start in determining the Occupant Load. If it is never reasonable to ignore the space open for wheelchairs (and I believe that the ADA says that it is not), then just counting the number of fixed seats is never a reasonable option and it should not remain in the Code.

Submitter Information Verification

Submitter Full Name: Kenneth Isman

Organization: University of Maryland

Street Address:

City:

State:

Zip:

Submission Date: Fri May 31 13:04:48 EDT 2024

Committee: SAF-MEA

Committee Statement

Resolution: The proposed revision will be reviewed by the applicable technical committee and any needed changes to Table 7.3.1.2 will be made by the correlating committee.



Public Input No. 31-NFPA 101-2024 [Section No. 7.3.1.2]

7.3.1.2* Occupant Load Factor.

The occupant load in any building or portion thereof shall be not less than the number of persons determined by dividing the floor area assigned to that use by the occupant load factor for that use as specified in Table 7.3.1.2, Figure 7.3.1.2(a), and Figure 7.3.1.2(b). Where both gross and net area figures are given for the same occupancy, calculations shall be made by applying the gross area figure to the gross area of the portion of the building devoted to the use for which the gross area figure is specified and by applying the net area figure to the net area of the portion of the building devoted to the use for which the net area figure is specified.

Table 7.3.1.2 Occupant Load Factor

<u>Use</u>	<u>ft² per person^a</u>	<u>m² per person^a</u>
Assembly Use	-	-
Concentrated use, without fixed seating	7 net	0.65 net
Less concentrated use, without fixed seating	15 net	1.4 net
Bench-type seating	1 person/18 linear in.	1 person/455 linear mm
Fixed seating	Use number of fixed seats	Use number of fixed seats
Waiting spaces	See 12.1.7.2 and 13.1.7.2.	See 12.1.7.2 and 13.1.7.2.
Kitchens	100	9.3
Library stack areas	100	9.3
Library reading rooms	50 net	4.6 net
Swimming pools	50 (water surface)	4.6 (water surface)
Swimming pool decks	30	2.8
Exercise rooms with equipment	50	4.6
Exercise rooms without equipment	15	1.4
Stages	15 net	1.4 net
Lighting and access catwalks, galleries, gridirons	100 net	9.3 net
Casinos and similar gaming areas	11	1
Skating rinks	50	4.6
-	-	-
Business Use (other than below)	150	14
Concentrated business use ^b	50	4.6
Airport traffic control tower observation levels	40	3.7
Collaboration rooms/spaces ≤450 ft ² (41.8 m ²) in area ^b	30	2.8
Collaboration rooms/spaces >450 ft ² (41.8 m ²) in area ^b	15	1.4
Day-Care Use	35 net	3.3 net
Detention and Correctional Use	120	11.1
Educational Use	-	-
Classrooms	20 net	1.9 net
Shops, laboratories, vocational rooms	50 net	4.6 net
Health Care Use	-	-
Inpatient treatment departments	240	22.3
Sleeping departments	120	11.1
Ambulatory health care	150	14
Industrial Use	-	-
General- and high-hazard industrial	100	9.3
Special-purpose industrial	MP	MP
Mercantile Use	-	-
Sales area on street floor ^{c,d}	30	2.8
Sales area on two or more street floors ^d	40	3.7
Sales area on floor below street floor ^d	30	2.8
Sales area on floors above street floor ^d - <u>and sales areas for Class A mercantile occupancies on or below street floor</u>	60	5.6
Floors or portions of floors used only for offices	See business use.	See business use.

Use	ft² per person^a	m² per person^a
Floors or portions of floors used only for storage, receiving, and shipping, and not open to general public	300	27.9
Mall structures ^e	Per factors applicable to use of space ^f	-
Residential Use	-	-
Hotels and dormitories	200	18.6
Apartment buildings	200	18.6
Board and care, large	200	18.6
Storage Use	-	-
In storage occupancies	MP	MP
In mercantile occupancies	300	27.9
In other than storage and mercantile occupancies	500	46.5

MP: The occupant load is the maximum probable number of occupants present at any time.

^aAll factors are expressed in gross area unless marked "net."

^bSee A.7.3.1.2.

^cFor determining occupant load in mercantile occupancies where, due to differences in the finished ground level of streets on different sides, two or more floors directly accessible from streets (not including alleys or similar back streets) exist, each such floor is permitted to be considered a street floor. The occupant load factor is one person for each 40 ft² (3.7 m²) of gross floor area of sales space.

^dFor determining occupant load in mercantile occupancies with no street floor, as defined in 3.3.292, but with access directly from the street by stairs or escalators, the floor at the point of entrance to the mercantile occupancy is considered the street floor.

^eFor any food court or other assembly use areas located in the mall concourse that are not included as a portion of the gross leasable area of the mall structure, the occupant load is calculated based on the occupant load factor for that use as specified in Table 7.3.1.2. The remaining mall concourse area is not required to be assigned an occupant load.

^fThe portions of the mall concourse not used as gross leasable area are not required to be assessed an occupant load based on Table 7.3.1.2. However, means of egress from a mall concourse are required to be provided for an occupant load determined by dividing the gross leasable area of the mall building (not including anchor buildings) by the appropriate lowest whole number occupant load factor from Figure 7.3.1.2(a) or Figure 7.3.1.2(b).

Each individual tenant space is required to have means of egress to the outside or to the mall concourse based on occupant loads calculated by using the appropriate occupant load factor from Table 7.3.1.2.

Each individual anchor store is required to have means of egress independent of the mall concourse.

Figure 7.3.1.2(a) Mall Structure Occupant Load Factors (US Customary Units).

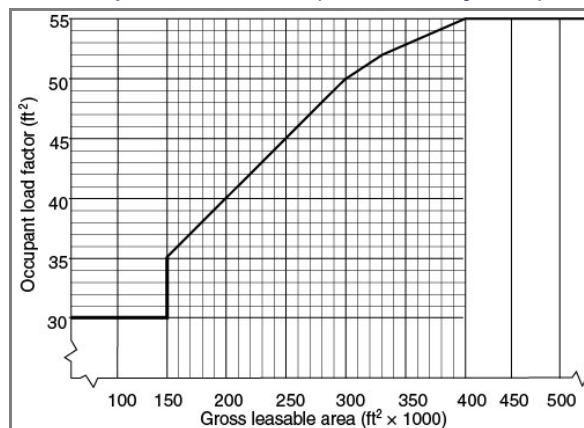
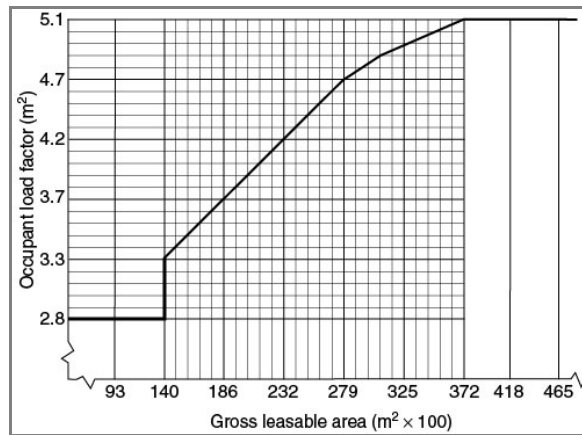


Figure 7.3.1.2(b) Mall Structure Occupant Load Factors (SI Units).



Statement of Problem and Substantiation for Public Input

Big box retail will rarely have the occupant load of 60 square feet per person even on Black Friday. As an example, a Walmart Supercenter of approximately 195,000 square feet has a retail occupant load of approximately 4500 when calculated at 30 square feet per person based on the available area used for the retail sales portion of the building. The likelihood of a store this size having 4500 people in it even on Black Friday is negligible. A more realistic occupant load for a store this size would be half of that, or 60 square feet per person.

Class B and C mercantile occupancies would be excluded from this occupant load factor as the reality of having a larger occupant load in a smaller retail space will happen. The Class A mercantile occupancies would have the area to allow for the larger occupant load factor and not overwhelm the egress system or approach the calculated occupant load with a 30 square foot per person factor.

Submitter Information Verification

Submitter Full Name: Eirene Knott

Organization: BRR Architecture

Affiliation: N/A

Street Address:

City:

State:

Zip:

Submittal Date: Thu Feb 15 10:08:05 EST 2024

Committee: SAF-MEA

Committee Statement

Resolution: The proposed revision will be reviewed by the applicable technical committee and any needed changes to Table 7.3.1.2 will be made by the correlating committee.



Public Input No. 41-NFPA 101-2024 [Section No. 7.3.1.2]

Add "Museums" in Table 7.3.1.2 with load factors of 100 ft^2 net per person.

Table 7.3.1.2 * Occupant Load Factor.

The occupant load in any building or portion thereof shall be not less than the number of persons determined by dividing the floor area assigned to that use by the occupant load factor for that use as specified in Table 7.3.1.2, Figure 7.3.1.2(a), and Figure 7.3.1.2(b). Where both gross and net area figures are given for the same occupancy, calculations shall be made by applying the gross area figure to the gross area of the portion of the building devoted to the use for which the gross area figure is specified and by applying the net area figure to the net area of the portion of the building devoted to the use for which the net area figure is specified.

Table 7.3.1.2 Occupant Load Factor

<u>Use</u>	<u>ft² per person^a</u>	<u>m² per person^a</u>
Assembly Use	-	-
Concentrated use, without fixed seating	7 net	0.65 net
Less concentrated use, without fixed seating	15 net	1.4 net
Bench-type seating	1 person/18 linear in.	1 person/455 linear mm
Fixed seating	Use number of fixed seats	Use number of fixed seats
Waiting spaces	See 12.1.7.2 and 13.1.7.2.	See 12.1.7.2 and 13.1.7.2.
Kitchens	100	9.3
Library stack areas	100	9.3
Library reading rooms	50 net	4.6 net
Swimming pools	50 (water surface)	4.6 (water surface)
Swimming pool decks	30	2.8
Exercise rooms with equipment	50	4.6
Exercise rooms without equipment	15	1.4
Stages	15 net	1.4 net
Lighting and access catwalks, galleries, gridirons	100 net	9.3 net
Casinos and similar gaming areas	11	1
Skating rinks	50	4.6
-	-	-
Business Use (other than below)	150	14
Concentrated business use ^b	50	4.6
Airport traffic control tower observation levels	40	3.7
Collaboration rooms/spaces ≤450 ft ² (41.8 m ²) in area ^b	30	2.8
Collaboration rooms/spaces >450 ft ² (41.8 m ²) in area ^b	15	1.4
Day-Care Use	35 net	3.3 net
Detention and Correctional Use	120	11.1
Educational Use	-	-
Classrooms	20 net	1.9 net
Shops, laboratories, vocational rooms	50 net	4.6 net
Health Care Use	-	-
Inpatient treatment departments	240	22.3
Sleeping departments	120	11.1
Ambulatory health care	150	14
Industrial Use	-	-
General- and high-hazard industrial	100	9.3
Special-purpose industrial	MP	MP
Mercantile Use	-	-
Sales area on street floor ^{c,d}	30	2.8
Sales area on two or more street floors ^d	40	3.7
Sales area on floor below street floor ^d	30	2.8
Sales area on floors above street floor ^d	60	5.6
Floors or portions of floors used only for offices	See business use.	See business use.

Use	ft ² per person ^a	m ² per person ^a
Floors or portions of floors used only for storage, receiving, and shipping, and not open to general public	300	27.9
Mall structures ^e	Per factors applicable to use of space ^f	-
Residential Use	-	-
Hotels and dormitories	200	18.6
Apartment buildings	200	18.6
Board and care, large	200	18.6
Storage Use	-	-
In storage occupancies	MP	MP
In mercantile occupancies	300	27.9
In other than storage and mercantile occupancies	500	46.5

MP: The occupant load is the maximum probable number of occupants present at any time.

^aAll factors are expressed in gross area unless marked "net."

^bSee A.7.3.1.2.

^cFor determining occupant load in mercantile occupancies where, due to differences in the finished ground level of streets on different sides, two or more floors directly accessible from streets (not including alleys or similar back streets) exist, each such floor is permitted to be considered a street floor. The occupant load factor is one person for each 40 ft² (3.7 m²) of gross floor area of sales space.

^dFor determining occupant load in mercantile occupancies with no street floor, as defined in 3.3.292, but with access directly from the street by stairs or escalators, the floor at the point of entrance to the mercantile occupancy is considered the street floor.

^eFor any food court or other assembly use areas located in the mall concourse that are not included as a portion of the gross leasable area of the mall structure, the occupant load is calculated based on the occupant load factor for that use as specified in Table 7.3.1.2. The remaining mall concourse area is not required to be assigned an occupant load.

^fThe portions of the mall concourse not used as gross leasable area are not required to be assessed an occupant load based on Table 7.3.1.2. However, means of egress from a mall concourse are required to be provided for an occupant load determined by dividing the gross leasable area of the mall building (not including anchor buildings) by the appropriate lowest whole number occupant load factor from Figure 7.3.1.2(a) or Figure 7.3.1.2(b).

Each individual tenant space is required to have means of egress to the outside or to the mall concourse based on occupant loads calculated by using the appropriate occupant load factor from Table 7.3.1.2.

Each individual anchor store is required to have means of egress independent of the mall concourse.

Figure 7.3.1.2(a) Mall Structure Occupant Load Factors (US Customary Units).

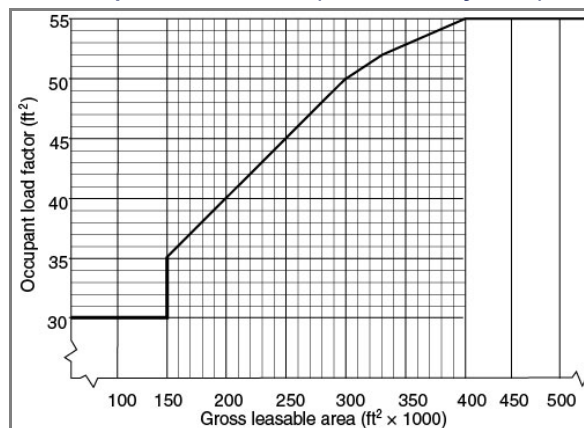
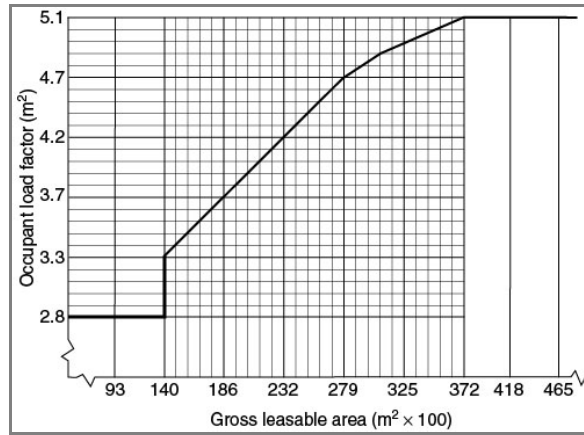


Figure 7.3.1.2(b) Mall Structure Occupant Load Factors (SI Units).



Additional Proposed Changes

File Name	Description	Approved
NFPA_101_Public_Input_2024_XX.docx	Supporting Documentation	

Statement of Problem and Substantiation for Public Input

6.1.2.1 Definition – Assembly Occupancy does not clearly state deferred occupancy classification to Business Occupancy if the Occupancy Load is under 50 persons.

Table 7.3.1.2 does not always portray expected population of facilities accurately, or in some cases, omits listing some occupancies altogether. Such is the case for Museums. Museums are classified as Assembly Occupancies but are not addressed in the Occupancy Load Calculation Table.

Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 32-NFPA 101-2024 [Section No. 6.1.2.1]	Reference each other

Submitter Information Verification

Submitter Full Name:

Jack Green

Organization:

Architectural Cadre'

Street Address:

City:

State:

Zip:

Submission Date:

Wed Mar 20 12:39:14 EDT 2024

Committee:

SAF-MEA

Committee Statement

Resolution: The proposed revision will be reviewed by the applicable technical committee and any needed changes to Table 7.3.1.2 will be made by the correlating committee.



Public Input No. 50-NFPA 101-2024 [Section No. 7.3.1.2]

7.3.1.2* Occupant Load Factor.

The occupant load in any building or portion thereof shall be not less than the number of persons determined by dividing the floor area assigned to that use by the occupant load factor for that use as specified in Table 7.3.1.2, Figure 7.3.1.2(a), and Figure 7.3.1.2(b). Where both gross and net area figures are given for the same occupancy, calculations shall be made by applying the gross area figure to the gross area of the portion of the building devoted to the use for which the gross area figure is specified and by applying the net area figure to the net area of the portion of the building devoted to the use for which the net area figure is specified.

Table 7.3.1.2 Occupant Load Factor

<u>Use</u>	<u>ft² per person^a</u>	<u>m² per person^a</u>
Assembly Use	-	-
Concentrated use, without fixed seating	7 net	0.65 net
Less concentrated use, without fixed seating	15 net	1.4 net
Bench-type seating	1 person/18 linear in.	1 person/455 linear mm
Fixed seating	Use number of fixed seats	Use number of fixed seats
Waiting spaces	See 12.1.7.2 and 13.1.7.2.	See 12.1.7.2 and 13.1.7.2.
Kitchens	100	9.3
Library stack areas	100	9.3
Library reading rooms	50 net	4.6 net
Swimming pools	50 (water surface)	4.6 (water surface)
Swimming pool decks	30	2.8
Exercise rooms with equipment	50	4.6
Exercise rooms without equipment	15	1.4
Stages	15 net	1.4 net
Lighting and access catwalks, galleries, gridirons	100 net	9.3 net
Casinos and similar gaming areas	11	1
Skating rinks	50	4.6
-	-	-
Business Use (other than below)	150	14
Concentrated business use ^b	50	4.6
Airport traffic control tower observation levels	40	3.7
Collaboration rooms/spaces ≤450 ft ² (41.8 m ²) in area ^b	30	2.8
Collaboration rooms/spaces >450 ft ² (41.8 m ²) in area ^b	15	1.4
Day-Care Use	35 net	3.3 net
Detention and Correctional Use	120	11.1
Educational Use	-	-
Classrooms	20 net	1.9 net
Shops, laboratories, vocational rooms	50 net	4.6 net
Health Care Use	-	-
Inpatient treatment departments	240	22.3
Sleeping departments	120	11.1
Ambulatory health care	150	14
Industrial Use	-	-
General- and high-hazard industrial	100	9.3
Special-purpose industrial	MP	MP
Mercantile Use	-	-
Sales area- on street floor ^{c,d}	30	2.8
Sales area on two or more street floors ^d	40	3.7
Sales area on floor below street floor ^d	30	2.8
Sales area on floors above street floor ^d	60	5.6
Floors or portions of floors used only for offices	See business use.	See business use.

Use	ft ² per person ^a	m ² per person ^a
Floors or portions of floors used only for storage, receiving, and shipping, and not open to general public	300	27.9
Mall structures ^e	Per factors applicable to use of space ^f	-
Residential Use	-	-
Hotels and dormitories	200	18.6
Apartment buildings	200	18.6
Board and care, large	200	18.6
Storage Use	-	-
In storage occupancies	MP	MP
In mercantile occupancies	300	27.9
In other than storage and mercantile occupancies	500	46.5

MP: The occupant load is the maximum probable number of occupants present at any time.

^aAll factors are expressed in gross area unless marked "net."

^bSee A.7.3.1.2.

^c For determining occupant load in mercantile occupancies where, due to differences in the finished ground level of streets on different sides, two or more floors directly accessible from streets (not including alleys or similar back streets) exist, each such floor is permitted to be considered a street floor. The occupant load factor is one person for each 40 ft² (3.7 m²) of gross floor area of sales space.

^d For determining occupant load in mercantile occupancies with no street floor, as defined in 3.3.292, but with access directly from the street by stairs or escalators, the floor at the point of entrance to the mercantile occupancy is considered the street floor.

^e For c For any food court or other assembly use areas located in the mall concourse that are not included as a portion of the gross leasable area of the mall structure, the occupant load is calculated based on the occupant load factor for that use as specified in Table 7.3.1.2. The remaining mall concourse area is not required to be assigned an occupant load.

^f d The portions of the mall concourse not used as gross leasable area are not required to be assessed an occupant load based on Table 7.3.1.2. However, means of egress from a mall concourse are required to be provided for an occupant load determined by dividing the gross leasable area of the mall building (not including anchor buildings) by the appropriate lowest whole number occupant load factor from Figure 7.3.1.2(a) or Figure 7.3.1.2(b).

Each individual tenant space is required to have means of egress to the outside or to the mall concourse based on occupant loads calculated by using the appropriate occupant load factor from Table 7.3.1.2.

Each individual anchor store is required to have means of egress independent of the mall concourse.

Figure 7.3.1.2(a) Mall Structure Occupant Load Factors (US Customary Units).

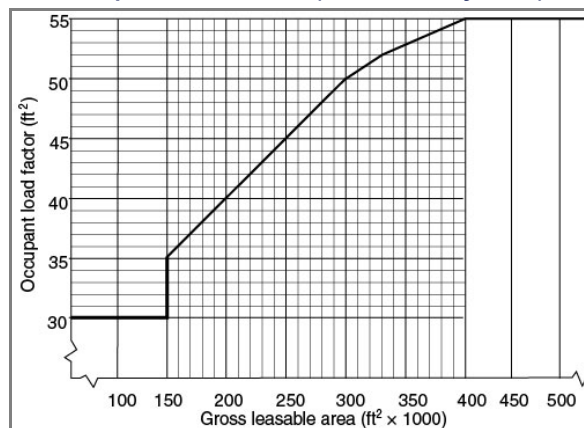
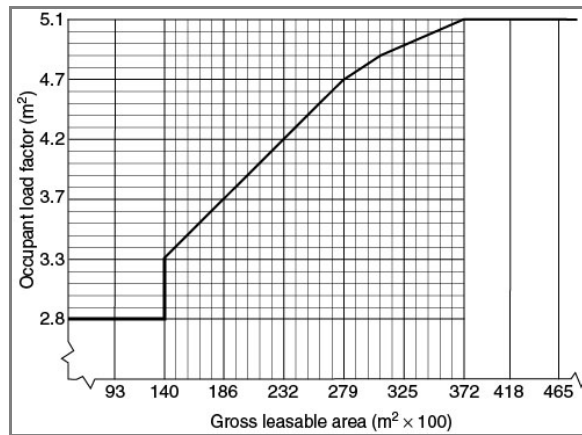


Figure 7.3.1.2(b) Mall Structure Occupant Load Factors (SI Units).



Statement of Problem and Substantiation for Public Input

This is a difference between this table and the International Building Code table 1004.5. These differences between the building and fire codes lead to confusion and ultimately the Building Official is signing off on the Certificate of Occupancy. Understanding the most stringent takes effect but there is debate as to which is more stringent. Many believe that the 60 occupant load factor will decrease the number of people allowed in a building which makes it safer and many believe that the 30 occ load factor makes the engineer/architect of record design the building with more exiting capacity with a higher occ load. This again is leading to two separate occ load calculations and two occ load numbers. As-is, this is a difference between the two codes.

Submitter Information Verification

Submitter Full Name: Tommy Demopoulos
Organization: Tamarac Fire Rescue
Street Address:
City:
State:
Zip:
Submittal Date: Mon Mar 25 12:38:14 EDT 2024
Committee: SAF-MEA

Committee Statement

Resolution: The proposed revision will be reviewed by the applicable technical committee and any needed changes to Table 7.3.1.2 will be made by the correlating committee.



Public Input No. 285-NFPA 101-2024 [Section No. 7.4.2]

7.4.2 Spaces About Electrical Equipment.

7.4.2.1 1000 Volts, Nominal, or Less.

7.4.2.1.1 Number of Means of Egress.

The minimum number of means of egress for working space about electrical equipment, other than existing electrical equipment, shall be in accordance with 110.26(C) of *NFPA 70*.

7.4.2.1.2 Door Unlatching and Direction of Door Swing.

The method of door unlatching and direction of door swing for working space about electrical equipment, other than existing electrical equipment, shall be in accordance with ~~with~~ the following sections of *NFPA 70*.

(1) 110.26(C)(3)

~~of NFPA 70.~~

(1)

(2) 450.43(C)

(3) 480.10(E)

(4) 646.19

7.4.2.2 Over 1000 Volts, Nominal.

7.4.2.2.1 Number of Means of Egress.

The minimum number of means of egress for working space about electrical equipment, other than existing electrical equipment, shall be in accordance with 110.33(A) of *NFPA 70*.

7.4.2.2.2 Door Unlatching and Direction of Door Swing.

The method of door unlatching and direction of door swing for working space about electrical equipment, other than existing electrical equipment, shall be in accordance with ~~110.33(A)~~ the following sections of *NFPA 70*.

(1) 110.31(A)(4)

(2) 110.33(A)(3)

~~of NFPA 70.~~

(1)

(2) 450.43(C)

(3) 480.10(E)

(4) 646.19

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
NFPA_101-2027_Doors_of_Spaces_About_Electrical_Equipment_Proposal_20240603.pdf	PDF of PI 285 illustrating the proposed revisions.	

Statement of Problem and Substantiation for Public Input

This proposal is intended to be editorial and to more closely mesh NFPA 101 with the requirements in NFPA 70 National Electrical Code.

These sections of NFPA 70 have requirements regarding the direction doors are required to swing:

- 110.26(C)(3) – electrical equipment rooms, enclosures, or vaults for 1000 volts or less
- 110.31(A)(4) – electrical equipment vaults for more than 1000 volts
- 110.33(A)(3) – electrical equipment rooms or enclosures for more than 1000 volts
- 450.43(C) – transformer vaults
- 480.10(E) – batteries and energy storage systems

6. 646.19 – modular data centers

Submitter Information Verification

Submitter Full Name: John Woestman

Organization: Kellen Company

Affiliation: Builders Hardware Manufacturers Association

Street Address:

City:

State:

Zip:

Submittal Date: Mon Jun 03 20:27:22 EDT 2024

Committee: SAF-MEA

Committee Statement

Resolution: Best practice is to not reference specific sections of other codes and standards due to the need to maintain them over the life of the standard. It was noted that the NEC is undergoing a reorganization that will likely cause the noted article numbers to change. See also FR-6562.



Public Input No. 296-NFPA 101-2024 [New Section after 7.5]

TITLE OF NEW CONTENT

Type your content here ...Add new section 7.17 Accessible Means of Egress

7.17 Accessible Means of Egress .

7.17.1* Areas required by the building code to be accessible, other than in existing buildings, shall have not less than two accessible means of egress, unless otherwise provided in 7.17.1 through 7.17.1.4.

7.17.1.1 Access within the allowable travel distance shall be provided to not less than one accessible area of refuge or one accessible exit providing an accessible route to an exit discharge.

7.17.1.2 A single accessible means of egress shall be permitted from buildings or areas of buildings permitted to have a single means of egress .

7.17.1.3 Accessible means of egress shall not be required where permitted by Chapters 11 through 43.

7.17.1.4 Exit access travel along the accessible means of egress shall be permitted to be common for the distances permitted as common paths of travel .

7.17.2 Accessible means of egress shall consist of one or more of the following components:

- (1) Accessible routes
- (2) Doors in accordance with 7.2.2 and 7.17.4
- (3) Smokeproof enclosures in accordance with 7.2.3
- (4) Horizontal exits complying with 7.2.4
- (5) Exits in accordance with 7.1.3.
- (6) Elevators complying with 7.17.8.
- (7) Stairs in accordance with 7.17.7
- (8) Ramps in accordance with 7.2.5.
- (9) Areas of refuge in accordance with 7.17.10
- (10) Platform lifts complying with 7.17.11.
- (11) Exterior areas of assisted rescue complying with 7.17.12

7.17.4 Accessible routes, stairs, doors, ramps, elevators, and platform lifts in accordance with 7.17.2 shall conform to ICC A117.1, Accessible and Usable Buildings and Facilities.

7.17.5 Each required accessible means of egress shall be continuous from each accessible occupied area to a public way.

7.17.6 Accessible Exits. Items (a) through (f) of 7.17.2 shall be permitted as accessible exits.

7.17.7 Stairs

7.17.7.1 Stairs connecting two stories or connecting mezzanines shall be permitted as accessible means of egress. Stairs connecting two levels within the same story are not permitted as accessible means of egress.

7.17.7.2 Where an exit stair is used as a component of an accessible means of egress, it shall comply with be accessed from an area of refuge complying with 7.17.10.

7.17.8 Elevators

7.17.8.1 Accessible stories that are four or more stories above or below a story of exit discharge shall have not less than one elevator complying with 7.17.8.

7.17.8.2 To be considered part of an accessible means of egress, an elevator shall be in accordance with 7.2.12.2.4.

7.17.8.3* Where an elevator provides access from an area of refuge to a public way that is in accordance with 7.17.10, all of the following criteria shall be met:

- (1) The elevator shall be approved for fire fighters' emergency operations as provided in ASME A17.1/CSA B44, Safety Code for Elevators and Escalators.
- (2) The power supply shall be protected against interruption from fire occurring within the building but outside the area of refuge.
- (3) The elevator shall be located in a shaft system meeting the requirements for smokeproof enclosures in accordance with 7.2.3, unless otherwise provided in 7.17.8.4.1, 7.17.8.4.2, and 7.17.8.4.3.

7.17.8.4.1 The smokeproof enclosure shall not be required in buildings protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1).

7.17.8.4.2 The smokeproof enclosure shall not be required for areas of refuge that are more than 1000 ft² (93 m²) and that are created by a horizontal exit meeting the requirements of 7.2.4.

7.17.8.4.3 The smokeproof enclosure shall not be required for elevators complying with 7.17.10.3.

7.17.8.4.5 The area of refuge shall be provided with a two-way communication system for communication between the area of refuge and a central control point. The door opening to the stair enclosure or the elevator door and the associated portion of the area of refuge that the stair enclosure door opening or elevator door serves shall be identified by signage. (See 7.17.10.3.5)

7.17.8.4.6* Instructions for summoning assistance, via the two-way communication system, and written identification of the area of refuge location shall be posted adjacent to the two-way communication system.

7.17.9 To be considered part of an accessible means of egress, a smoke barrier in accordance with Section 8.5 with not less than a 1-hour fire resistance rating, or a horizontal exit in accordance with 7.2.4, shall discharge to an area of refuge in accordance with 7.2.12.

7.17.10 Accessible Areas of Refuge.

7.17.10.1 General.

7.17.10.1.1 An area of refuge used as part of a required accessible means of egress; consisting of a story in a building that is protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7; and having an accessible story that is one or more stories above or below a story of exit discharge shall meet the following criteria:

(1) Each elevator landing shall be provided with a two-way communication system for communication between the elevator landing and the fire command center or a central control point approved by the authority having jurisdiction.

(2) Directions for the use of the two-way communication system, instructions for summoning assistance via the two-way communication system, and written identification of the location shall be posted adjacent to the two-way communication system. Directions shall comply with ICC A117.1 Accessible and Usable Buildings and Facilities, for signs.

(3) The two-way communication system shall include both audible and visible signals.

7.17.10.1.2 An area of refuge used as part of a required accessible means of egress in other than a building that is protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7 shall meet both of the following criteria:

(1) The area of refuge shall meet the general requirements of Section 7.1.

(2) The area of refuge shall meet the requirements of 7.17.10.2 and 7.17.10.3.

7.17.10.2 Accessibility.

7.17.10.2.1 Required portions of an area of refuge shall be accessible from the space they serve by an accessible means of egress.

7.17.10.2.2 Required portions of an area of refuge shall have access to a public way via an exit or an elevator without requiring return to the building spaces through which travel to the area of refuge occurred.

7.17.10.2.3* Where the exit providing egress from an area of refuge to a public way that is in accordance with 7.17.10.2.2 includes stairs, the clear width of landings and stair flights, measured between handrails and at all points below handrail height, shall be not less than 48 in. (1220 mm), unless otherwise permitted by the following:

(1) The minimum 48 in. (1220 mm) clear width shall not be required where the area of refuge is separated from the remainder of the story by a horizontal exit meeting the requirements of 7.2.4. (See also 7.2.12.3.4.)

7.17.10.3 Details.

7.17.10.3.1* Each area of refuge shall be sized to accommodate one wheelchair space of 30 in. × 54 in. (760 mm × 1372 mm) for every 200 occupants, or portion thereof, based on the occupant load served by the area of refuge. Such wheelchair spaces shall maintain the width of a means of egress to not less than that required for the occupant load served and to not less than 36 in. (915 mm).

7.17.10.3.2* For any area of refuge that does not exceed 1000 ft² (93 m²), it shall be demonstrated by calculation or test that tenable conditions are maintained within the area of refuge for a period of 15 minutes when the exposing space on the other side of the separation creating the area of refuge is subjected to the maximum expected fire conditions.

7.17.10.3.3 Access to any designated wheelchair space in an area of refuge shall not pass through more than one adjoining wheelchair space.

7.17.10.3.4 New fire door assemblies serving an area of refuge shall be smoke leakage-rated in accordance with 8.2.2.4.

7.17.10.3.5 Signage

7.17.10.3.5.1 Each area of refuge shall be identified by a sign that reads as the follows:

AREA OF REFUGE

7.17.10.3.5.2 The sign required by 7.17.10.3.5.1 shall conform to the requirements of ICC A117.1, Accessible and Usable Buildings and Facilities, for such signage and shall display the international symbol of accessibility.

Signs also shall be located as follows:

- (1) At each door opening providing access to the area of refuge
- (2) At all exits not providing an accessible means of egress, as defined in 3.3.178.1
- (3) Where necessary to indicate clearly the direction to an area of refuge

7.17.10.3.5.3 Signs required by 7.17.10.3.5.1 shall be illuminated as required for special signs in accordance with 7.10.8.1.

7.17.10.3.5.4 Tactile signage complying with ICC A117.1, Accessible and Usable Buildings and Facilities, shall be located at each door opening to an area of refuge.

7.17.11 Platform Lifts. Where platform lifts are permitted in an accessible route by the building code, platform lifts shall be permitted as accessible means of egress. Platform lifts shall be provided with standby power in accordance with 9.1.3.

7.17.12 Exterior Areas of Assisted Rescue. Exterior areas of assisted rescue shall be accessed by an accessible route and .

7.17.12.1 Two-way Communication System. Two-way communication shall be provided at exterior areas of assisted rescue for initiating communication with the fire command center or an alternative location approved by the fire department.

7.17.12.1.1 Design and Installation. A two-way communication system shall be provided at exterior areas of assisted rescue and shall include audible and visible signals. The system shall be designed and installed in accordance with the requirements of ICC A117.1, Accessible and Usable Buildings and Facilities.

7.17.12.2 Instructions. Instructions for summoning assistance, via the two-way communication system, and written identification of the exterior area of assisted rescue location shall be posted adjacent to the two-way communication system.

7.17.12.2.2 Signage for instructions to use the two-way communication shall comply with the requirements of ICC A117.1, Accessible and Usable Buildings and Facilities, for visual characters.

Statement of Problem and Substantiation for Public Input

The current accessible means of egress provisions are difficult to navigate and to apply. The current provisions do not state what elements are permitted as accessible means of egress. Furthermore, the provisions in 7.2.12 and 7.5.4 have duplicate or potentially conflict text. For example, 7.5.4.2 through 7.5.4.2.3 for exit separation of accessible means of egress are redundant to other sections in 7.5.

The proposed revision consolidates accessible means of egress provisions into one section. Although areas of refuge are egress components that have been included in 7.2, they are specifically accessible means of egress and thus belong in the dedicated section. The submitter acknowledges that the occupancy chapters have references to 7.2.12 for areas of refuge. The submitter endeavors for the occupancy chapters to reference 7.17 as amend as needed.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 288-NFPA 101-2024 [Section No. 3.3.25 [Excluding any Sub-Sections]]	Definition of area of refuge

Submitter Information Verification

Submitter Full Name: Ajay Prasad
Organization: Jensen Hughes
Street Address:
City:
State:
Zip:
Submission Date: Mon Jun 03 21:15:30 EDT 2024
Committee: SAF-MEA

Committee Statement

Resolution: Although the proposed revision might have merit, it reorganizes a substantial amount of code language that warrants further study by a task group. A significant technical change was also identified re. the termination of accessible means of egress.

**Public Input No. 136-NFPA 101-2024 [Section No. 7.7.1.1]****7.7.1.1**

Yards, courts, open spaces, or other portions of the exit discharge shall be of the required width and size with easy topography and sufficient ground stability to provide all occupants with a safe access to a public way.

Statement of Problem and Substantiation for Public Input

The problem is that if construction occurs in the exit discharge that makes soft soil or mud, there is not a specific code reference. There should be basic guidance for topography for an exit discharge that does not have excessive incline similar to an obstacle course.

Submitter Information Verification

Submitter Full Name: Brian Codzanski

Organization: [Not Specified]

Street Address:

City:

State:

Zip:

Submittal Date: Fri May 24 14:37:44 EDT 2024

Committee: SAF-MEA

Committee Statement

Resolution: The proposed revision is nonspecific and unenforceable. Walking surfaces in means of egress is addressed by 7.1.6.

**Public Input No. 172-NFPA 101-2024 [Section No. 7.8.1.1]****7.8.1.1***

Illumination of means of egress shall be provided in accordance with Section 7.8 for every building and structure where required in Chapters 11 through 43. For the purposes of this requirement, exit access shall include only designated stairs, aisles, aisle accesways per section 12.2.5.7.10, corridors, ramps, escalators, and passageways leading to an exit. For the purposes of this requirement, exit discharge shall include only designated stairs, aisles, corridors, ramps, escalators, walkways, and passageways leading to a public way.

Statement of Problem and Substantiation for Public Input

This change is for coordination with changes proposed to 12.2.5.7.10 Steps in Aisle Accessways.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 171-NFPA 101-2024 [New Section after 12.2.5.7]	require illumination in some aisle accessways

Submitter Information Verification

Submitter Full Name: William Conner
Organization: Bill Conner Associates LLC
Street Address:
City:
State:
Zip:
Submittal Date: Thu May 30 15:05:53 EDT 2024
Committee: SAF-MEA

Committee Statement

Resolution: The proposed revision is under the scope of the TC on Assembly Occupancies and will be reviewed by that committee for inclusion in its chapters. Any needed revisions to 7.8.1.1 will be made by the correlating committee.



Public Input No. 190-NFPA 101-2024 [Section No. 7.15.1.2]

7.15.1.2

The provisions of Section 7.15 shall not apply where the limited or supervised use of elevators for evacuation is part of a formal or informal evacuation strategy, including the relocation or evacuation of patients in health care occupancies and the relocation or evacuation of occupants ~~with disabilities in~~ that require a high level of supervision in other occupancies.

Statement of Problem and Substantiation for Public Input

Occupant Evacuation Elevators are designed to be used by occupants with disabilities such as people who use wheelchairs who are unable to use the stairs to exit a building during an emergency. The current code is a contradiction to the intent of Occupant Evacuation Operation as it prohibits those who need it most from using it. The proposed revision would only limit use if someone required a high level of supervision (such as a nursing home, memory care facility, penal institution, etc.).

Submitter Information Verification

Submitter Full Name: Kevin Brinkman

Organization: National Elevator Industry, Inc.

Street Address:

City:

State:

Zip:

Submittal Date: Fri May 31 17:38:36 EDT 2024

Committee: SAF-MEA

Committee Statement

Resolution: The current language already specifies that Section 7.15 is not intended to be applied where elevators are used for limited or supervised use of elevators for evacuation. Not all occupants with disabilities necessarily require a high level of supervision. See also FR-6563.

**Public Input No. 191-NFPA 101-2024 [Section No. 7.15.8.3]****7.15.8.3***

Control signaling wiring and cables that do not serve Phase II emergency in-car service or Occupant Evacuation Operation shall not be required to be protected.

Statement of Problem and Substantiation for Public Input

Wiring for Occupant Evacuation Elevators are required to be protected to allow the elevators to run on Occupant Evacuation Operation during a fire emergency.

Submitter Information Verification

Submitter Full Name: Kevin Brinkman

Organization: National Elevator Industry, Inc.

Street Address:

City:

State:

Zip:

Submittal Date: Fri May 31 17:43:27 EDT 2024

Committee: SAF-MEA

Committee Statement

Resolution: The proposed revision does not clarify the requirement and the protection of the noted wiring is covered by 7.15.8.2.



Public Input No. 361-NFPA 101-2024 [New Section after A.3.3.177.1]

A 3.3.180

an unobstructed way of travel should have a clear pathway with direct line of sight without blind corners and obstacles or unexpected protrusions.

Statement of Problem and Substantiation for Public Input

Features that stick out that meet ADA but cause a blind corner in the means of egress.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 360-NFPA 101-2024 [New Section after 3.3]</u>	New Definition or Annex Options.
<u>Public Input No. 360-NFPA 101-2024 [New Section after 3.3]</u>	

Submitter Information Verification

Submitter Full Name: Brian Codzanski
Organization: [Not Specified]
Street Address:
City:
State:
Zip:
Submittal Date: Tue Jun 04 16:24:37 EDT 2024
Committee: SAF-MEA

Committee Statement

Resolution: The proposed revision in the related Public Input was not incorporated (see PI-360).

**Public Input No. 40-NFPA 101-2024 [Section No. A.7.1.3.2.1(9)(d)]****A.7.1.3.2.1(9)(d c)**

This provision will allow security cameras, public address systems, emergency communication systems, telephone repeaters and similar life safety devices in the exit enclosure, and wiring and similar pathways for such devices, to penetrate the fire barrier serving the exit enclosure. It is the intent of this provision to prevent the exit enclosure from being used as a vertical chase for building services.

Statement of Problem and Substantiation for Public Input

I think this annex note was intended to go with it (c) and not (d). The only intended change here is to move the annex note to the correct section.

Submitter Information Verification

Submitter Full Name: Chad Beebe

Organization: ASHE - AHA

Street Address:

City:

State:

Zip:

Submittal Date: Tue Mar 19 02:06:27 EDT 2024

Committee: SAF-MEA

Committee Statement

Resolution: [FR-6565-NFPA 101-2024](#)

Statement: The revision ties the annex note to the correct item.



Public Input No. 284-NFPA 101-2024 [New Section after A.7.1.10.1]

A 7.2.1.1.3.2

When a building is not considered occupied, per the criteria in 7.2.1.1.3.1, the ability of occupants to egress may be of great consequence. Consider the skeleton crew of employees that may be in a business after hours. Also, consider responding emergency personnel, such as firefighters, who may need to egress a building through a door other than the door in which they entered.

Statement of Problem and Substantiation for Public Input

The proposed Annex note for discusses the importance of occupants within a building not considered occupied being able to exit the building, and of responding emergency personnel to be able to egress through doors other than which they entered the building.

Submitter Information Verification

Submitter Full Name: John Woestman
Organization: Kellen Company
Affiliation: Builders Hardware Manufacturers Association
Street Address:
City:
State:
Zip:
Submittal Date: Mon Jun 03 20:25:41 EDT 2024
Committee: SAF-MEA

Committee Statement

Resolution: The requirement of 7.2.1.1.3.2 is clear. The proposed revision might make the requirement more confusing. Emergency responder safety is outside the scope of NFPA 101.



Public Input No. 219-NFPA 101-2024 [Section No. A.7.2.1.2.2]

A.7.2.1.2.2

Figure A.7.2.1.2.2(a) and Figure A.7.2.1.2.2(b) illustrate the method of measuring egress capacity width for purposes of calculating door egress capacity.

Figure A.7.2.1.2.2(a) Door Width — Egress Capacity.

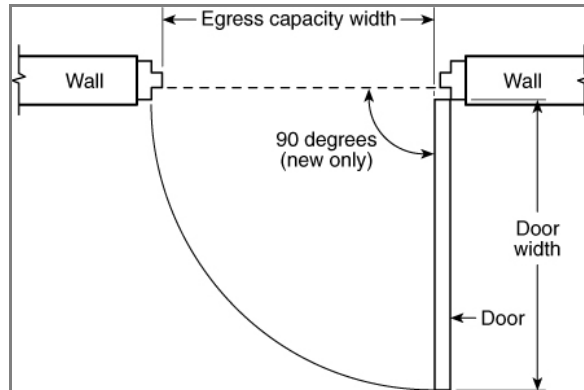
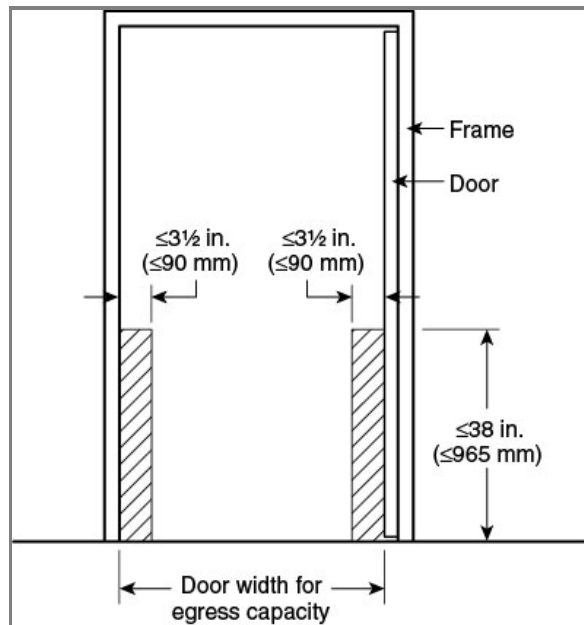


Figure A.7.2.1.2.2(b) Door Width — Egress Capacity with Permitted Obstructions. Egress Capacity Width Measurement with Boundary/Edge Effect Clearances

<<REPLACE FIGURE A.7.2.1.2.2(b) with ONE OF THE ATTACHED FIGURES>>



Additional Proposed Changes

File Name	Description	Approved
NFPA_101_2027_Proposals_ECW_Figures_Boundary_Effect.docx	Proposed new figure for A.7.2.1.2.2(b)	

Statement of Problem and Substantiation for Public Input

Existing Figure A.7.2.1.2.2(b) seems to allow for unspecified physical obstructions when measuring egress capacity widths of door openings, which creates confusion in the field. Unlike the 4-inch projection for fire exit hardware and panic hardware devices, these 3-1/2-inch encroachments at both sides of the door opening are not for tangible door hardware or other materials. Instead, they apply the effective-width concept of building elements such as corridors, ramps, stairs, and doors referred to as the boundary/edge effect described in NFPA 101. (See paragraphs 7.3.2.2, 7.3.3.2, and A.7.3.3.2.)

The first paragraph in A.7.3.3.2 includes the following statement: "In essence, the effective width phenomenon recognizes that there is an edge or boundary effect at the sides of a circulation path..." The unspecified projections shown in Figure A.7.2.1.2.2(b) illustrate the boundary/edge effect as it pertains to door openings.

Essentially, the boundary/edge effect accounts for the human body's shape; we're narrower at our feet and wider at our shoulders. Consider how we walk through doorways; we tend to walk through the center area of the openings. Our feet create a natural clearance between the side jambs of the door frames as we step through the openings; otherwise, we would kick the frames with our feet and our shoulders would rub against them. The boundary/edge effect accounts for this naturally occurring clearance. The boundary/edge effect applies only to where the measurement for the egress-capacity calculation of swinging doors is taken; it does not reduce the clear width dimension requirement for swinging doors. The Code requires swinging egress doors to provide the minimum clear width dimensions for the occupancies they serve. Projections into the required clear width dimensions below thirty-four (34) inches above the finished floor (AFF) are not permitted.

Adopting one of the submitted figures (or a version thereof) to replace the existing figure clarifies the Code's intent.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 218-NFPA 101-2024 [Section No. 7.2.1.2.2.1]	

Submitter Information Verification

Submitter Full Name: Keith Pardoe
Organization: Pardoe Consulting LLC
Affiliation: The Safe Doors Save Lives Foundation, Inc.
Street Address:
City:
State:
Zip:
Submittal Date: Mon Jun 03 11:02:24 EDT 2024
Committee: SAF-MEA

Committee Statement

Resolution: The related base paragraph refers to 3-1/2 in. projections, which can be physical projections into the door opening on both sides for the purpose of determining egress capacity. The concept of boundary/edge effect does not directly correlate with that described in the current annex figure. The proposed figure might create more confusion.

**Public Input No. 272-NFPA 101-2024 [Section No. A.7.2.1.5.3.4]****A.7.2.1.5.3.4**

Examples of devices that, when used with a latch, can be arranged to require not more than one additional releasing ~~operation~~ motion include dead bolts, security chains, swing door locks, and privacy door guards.

A door with a thumb-turn operated dead bolt complying with 7.2.1.5.3.3 in addition to a lever operated latchset would be permitted by 7.2.1.5.3.7 as the dead bolt could be retracted with the first motion of rotating the thumb turn- ~~(one operation)~~ , and then the latch bolt would be retracted by the second motion of rotating the lever handle- ~~(other operation)~~ .

A door with two lever operated latchsets would not be permitted because the first ~~operation~~ motion of rotating the lever to retract one of the latch bolts would also require that lever to be manually maintained, or held, in the turned position while the second ~~operation~~ motion of the rotating the other lever to retract the second latch bolt is performed.

Swing bar door locks and privacy door guards are commonly used in hotel guest rooms and many other applications permitted by this section.

Colleges and universities are increasingly constructing dormitories with suite-style living arrangements with a shared space and individual bedrooms . NFPA 101 considers suite-style dormitories as apartment buildings, per 28.1.1.4: Any dormitory divided into suites of rooms, with one or more bedrooms opening into a living room or study that has a door opening into a common corridor serving a number of suites, shall be classified as an apartment building.

Statement of Problem and Substantiation for Public Input

Revisions to the Annex supporting proposed revisions to the mandatory text.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 271-NFPA 101-2024 [Section No. 7.2.1.5.3.4]	

Submitter Information Verification

Submitter Full Name: John Woestman
Organization: Kellen Company
Affiliation: Builders Hardware Manufacturers Association
Street Address:
City:
State:
Zip:
Submission Date: Mon Jun 03 19:33:51 EDT 2024
Committee: SAF-MEA

Committee Statement

Resolution: The proposed revision to 7.2.1.5.3.4 was not incorporated (see PI-271).

**Public Input No. 275-NFPA 101-2024 [New Section after A.7.2.1.5.10]****A.7.2.1.5.11**

NFPA 101 requires many doors to be self-latching or positive latching. Most of these doors are required to comply with NFPA 80, but not all.

In health care facilities, electric latch retraction hardware is often used on fire door assemblies to allow the doors to function as push/pull operation under normal conditions and latch automatically if there is a fire. When a door in a hospital or nursing home is considered a "corridor door" as addressed in the health care chapters, the door is not required to be fire rated but is required to have positive-latching hardware. A common example of this application is a pair of non-fire-rated doors serving as the entrance to a suite. These doors are typically self-closing or automatic-closing (although this is not technically required by NFPA 101 for corridor doors), and the code requires the doors to have positive-latching hardware.

NFPA 80, in Section 6.4.4.4.3, permits latching arrangements on fire doors that do not latch in the normal mode, if the door automatically becomes positively latched during a fire by means of a fail safe device activated by an automatic fire detector.

This section explicitly recognizes in NFPA 101 this option in NFPA 80, and permits this hardware to be used on non-fire-rated doors that are required to have positive-latching hardware.

Statement of Problem and Substantiation for Public Input

Suggesting an Annex note for the section in the revisions in Public Input No. 274.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 274-NFPA 101-2024 [New Section after 7.2.1.5.10]	

Submitter Information Verification

Submitter Full Name: John Woestman
Organization: Kellen Company
Affiliation: Builders Hardware Manufacturers Association
Street Address:
City:
State:
Zip:
Submission Date: Mon Jun 03 19:45:02 EDT 2024
Committee: SAF-MEA

Committee Statement

Resolution: The proposed revision in the related Public Input was not incorporated (see PI-274).

**Public Input No. 287-NFPA 101-2024 [Section No. A.7.2.1.5.10]****A.7.2.1.5.10**

Examples of devices prohibited by this requirement include locks, padlocks, hasps, bars, chains, or combinations thereof. The electrical locking system in 7.2.1.6.1 is intended to delay free egress. The locking system in 7.2.1.6.4 is intended to control exit access from an elevator lobby through tenant spaces except during an emergency situation. The locking systems identified in health care occupancies and board and care occupancies are permitted because of the clinical needs or special needs of the occupants.

Statement of Problem and Substantiation for Public Input

The revisions in 7.2.1.5.10, and this related Annex revisions, are intended to clarify the requirements in this section. Section 7.2.1.6 has four special locking arrangements. Only two of those locking arrangements permit preventing the free use of a door leaf for egress: 7.2.1.6.1 delayed egress, and 7.2.1.6.4 elevator lobby exit access door locking. In lockups in accordance with either of the two identified sections are permitted to prevent the free use of a door leaf for egress. The locking system in 18.2.2.2.5, and the locking systems in the subsequent identified sections, control egress and are variants of controlled egress locking systems.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 286-NFPA 101-2024 [Sections 7.2.1.5.9, 7.2.1.5.10]	
Public Input No. 286-NFPA 101-2024 [Sections 7.2.1.5.9, 7.2.1.5.10]	

Submitter Information Verification

Submitter Full Name: John Woestman
Organization: Kellen Company
Affiliation: Builders Hardware Manufacturers Association
Street Address:
City:
State:
Zip:
Submittal Date: Mon Jun 03 20:40:34 EDT 2024
Committee: SAF-MEA

Committee Statement

Resolution: The proposed revision in the related Public Input was not incorporated (see PI-286).



Public Input No. 76-NFPA 101-2024 [New Section after A.7.2.1.6.2]

A.7.2.1.6.2.1 The sensor referenced in 7.2.1.6.2.1(1) and 7.2.1.6.2.1(2) used to unlock the door upon occupant approach is typically mounted above the locked door in the direction of egress. The purpose of the contactless sensor referenced in 7.2.1.6.2.1(3) is to provide another option to the “PUSH TO EXIT” button that doesn’t require physical contact and locate it within 60 inches of the door to unlock the doors in the event the sensor referenced in 7.2.1.6.1.2(1) and 7.2.1.6.2.1(2) fails.

A.7.2.1.6.2.1(3)(d). A wave-to-open sensor is considered a contactless sensor.

A.7.2.1.6.2.1(3)(f). The contactless sensor needs to be independent of the sensor referenced in 7.2.1.6.2.1(1) and 7.2.1.6.2.1(2) in order to ensure both sensors can’t fail simultaneously.

Statement of Problem and Substantiation for Public Input

To avoid confusion, annex material is added to discuss the differences between the existing (overhead motion) sensors used to unlock doors upon occupant approach and the proposed contactless sensors to unlock doors in the event the (overhead motion) sensors fail. Text is also included that clarifies that contactless sensors can currently be used, but only as a supplement to “push to exit” devices.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 75-NFPA 101-2024 [Section No. 7.2.1.6.2.1]	annex material to PI 75
Public Input No. 77-NFPA 101-2024 [New Section after A.7.2.1.6.2]	

Submitter Information Verification

Submitter Full Name: Joshua Elvove
Organization: Self
Street Address:
City:
State:
Zip:
Submittal Date: Mon Apr 22 21:29:58 EDT 2024
Committee: SAF-MEA

Committee Statement

Resolution: [FR-6556-NFPA 101-2024](#)

Statement: The use of contactless sensors (contactless release devices) to open doors is becoming more prevalent due to Covid and other concerns about the spread of infection, especially in health care settings. Contactless sensors (e.g., “wave to open” devices) can perform similarly to manual “push to exit” devices and should therefore be permitted as a substitute for “push to exit” devices, but only if they are listed to UL 294 and only if they are configured to be independent of the (overhead motion) sensors used to unlock the door upon occupant approach such that a single failure will not result in both types of sensors failing simultaneously.

Note that the term 'contactless sensor' has been revised to 'contactless release device' to avoid confusion with the required sensor located above the door and to be consistent with the term 'manual release device'.



Public Input No. 77-NFPA 101-2024 [New Section after A.7.2.1.6.2]

A.7.2.1.6.2.1(3). Nothing in the 7.2.1.6.2.1 precludes the use of contactless sensors so long as they are used in concert with the “push to exit” device referenced in by 7.2.1.6.2.1(3)(c).

Statement of Problem and Substantiation for Public Input

Though PI 75 and 76 are preferred, this is a placeholder in the event that PI 75 and 76 are rejected. The purpose of this annex note is to permit contactless sensors to unlock doors so long as they are installed in addition to the manual "push to exit" button that's already required.

Related Public Inputs for This Document

Related Input	Relationship
<u>Public Input No. 75-NFPA 101-2024 [Section No. 7.2.1.6.2.1]</u>	substitute in the event PI 75 and 76 fail
<u>Public Input No. 76-NFPA 101-2024 [New Section after A.7.2.1.6.2]</u>	substitute in the event PI 75 and 76 fail

Submitter Information Verification

Submitter Full Name: Joshua Elvove
Organization: Self
Street Address:
City:
State:
Zip:
Submission Date: Mon Apr 22 21:34:17 EDT 2024
Committee: SAF-MEA

Committee Statement

Resolution: The proposed revision is not needed as the revisions in PI-75 and PI-76 were incorporated into the code.

**Public Input No. 6-NFPA 101-2024 [Section No. A.7.2.1.6.2]****A.7.2.1.6.2**

Doors with a sensor-release electrical locking system are equipped with an electrical locking system that is released by a sensor activated by the normal motions of an occupant egressing through that door. The activation of the sensor to cause the electrical lock to release is usually by passive action by the occupant, such as walking to the door. A manual release device, such as a push-button switch that directly interrupts the power to the electrical lock, is required by item (3) as a backup. With most sensor-release electrical locking systems, the occupant might not notice the door is electrically locked in the direction of egress. Doors equipped with these locking systems provide unobstructed, immediate egress.

These provisions were previously titled "Access-Controlled Egress Door Assemblies" as these doors typically have some type of access control system, such as a key pad, card scanner, or fob scanner controlling access (ingress) into the building or space. Because access control systems can be installed on essentially any door, the previous title resulted in differing interpretations, applications, and enforcement of permitted locking systems, and they were retitled in the 2018 edition of the *Code*.

.1 The sensor referenced in 7.2.1.6.2.1(1) and 7.2.1.6.2.1(2) used to unlock the door upon occupant approach is typically mounted above the locked door in the direction of egress. The purpose of the contactless sensor referenced in 7.2.1.6.2.1(3) is to provide another manual option to the "PUSH TO EXIT" button that doesn't require physical contact and locate it within 60 inches of the door to unlock the doors in the event the sensor referenced in 7.2.1.6.1.2(1) and 7.2.1.6.2.1(2) fails.

A.7.2.1.6.2.1(3)(d). A wave-to-open sensor is an example of a contactless sensor.

A.7.2.1.6.2.1(3)(f). The contactless sensor needs to be independent of the sensor referenced in 7.2.1.6.2.1(1) and 7.2.1.6.2.1(2) in order to ensure both sensors can't fail simultaneously.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
PC71-101_SAF-MEA.pdf	101_PC#71	

Statement of Problem and Substantiation for Public Input

NOTE: This Public Input appeared as "Reject but Hold" in Public Comment No. 71 of the (A2023) Second Draft Report for NFPA 101 and per the Regs. at 4.4.8.3.1 and needs to be reconsidered by the TC for the next edition of the document.

Add the text from the public comment to existing annex text as appropriate (i.e., do not delete any existing text, if that's what Terra View shows)

The use of contactless sensors to open doors is becoming more prevalent due to Covid and other concerns about the spread of infection, especially in health care settings. Contactless sensors (e.g., "wave to open" devices) can perform similarly to manual "push to exit" devices and should therefore be permitted as a substitute for "push to exit" devices, but only if they are listed to UL 294 and only if they are configured to be independent of the (overhead motion) sensors used to unlock the door upon occupant approach such that a single failure can't result in both types of sensors failing simultaneously.

To avoid confusion, annex material is added to discuss the differences between the existing (overhead motion) sensors used to unlock doors upon occupant approach and the proposed contactless sensors to unlock doors in the event the (overhead motion) sensors fail.

Submitter Information Verification

Submitter Full Name:

Organization: Holds

Street Address:

City:

State:

Zip:

Submittal Date: Mon Jan 15 14:58:06 EST 2024

Committee: SAF-MEA

Committee Statement

Resolution: [FR-6556-NFPA 101-2024](#)

Statement: The use of contactless sensors (contactless release devices) to open doors is becoming more prevalent due to Covid and other concerns about the spread of infection, especially in health care settings. Contactless sensors (e.g., “wave to open” devices) can perform similarly to manual “push to exit” devices and should therefore be permitted as a substitute for “push to exit” devices, but only if they are listed to UL 294 and only if they are configured to be independent of the (overhead motion) sensors used to unlock the door upon occupant approach such that a single failure will not result in both types of sensors failing simultaneously.

Note that the term 'contactless sensor' has been revised to 'contactless release device' to avoid confusion with the required sensor located above the door and to be consistent with the term 'manual release device'.



Public Input No. 312-NFPA 101-2024 [New Section after A.7.2.1.6.2.1(8)]

A.7.2.1.6.3

These locking systems cause the electrical lock to be released by the normal operation of the door-mounted unlocking / unlatching hardware. If the door is equipped with a mechanical lock in addition to the electrical lock, the operation of the releasing door hardware would also mechanically unlock the door assembly in the direction of egress.

One example of this type of locking system is panic hardware with an internal switch connected to an electromagnetic lock positioned at the top of the door opening. The normal operation of unlocking / unlatching the door mechanically with the panic hardware also activates the internal switch directly interrupting the power _supplied _to the electromagnetic door lock, allowing the door to be opened for unobstructed and immediate egress.

Statement of Problem and Substantiation for Public Input

Suggestion of an Annex note for door hardware release electrical locking systems.

Submitter Information Verification

Submitter Full Name: John Woestman

Organization: Kellen Company

Affiliation: Builders Hardware Manufacturers Association

Street Address:

City:

State:

Zip:

Submittal Date: Mon Jun 03 22:02:30 EDT 2024

Committee: SAF-MEA

Committee Statement

Resolution: [FR-6566-NFPA 101-2024](#)

Statement: The revision provides explanatory information about door hardware release of electrically locked egress door assemblies.



Public Input No. 299-NFPA 101-2024 [New Section after A.7.2.1.6.4.1(1)]

A 7.2.1.6.5

Interlocked-door vestibules are as the name implies: a vestibule with interlocked-doors. The egress door into the vestibule is interlocked with the door leading out of the vestibule such that only one of the doors can be open at a given time. --

Interlocked -door vestibules may be utilized for environmental contamination control (health care; manufacturing clean rooms), controlled substance dispensing (prescription drugs and cannabis), occupant protection (health care), security reasons (money handling rooms), and other uses and applications.

An occupant egressing through an interlocked-door vestibule would not be delayed at the second door in series if the first door in series is in a closed position. Conversely, if the first door is not closed, the second door would not be able to be opened. The requirements for interlock override switches, for "fail-safe" interlocks in the event of power failure, and to deactivate the interlock upon activation of the sprinkler system or smoke detection system are all intended to ensure unencumbered egress through the interlocked-door vestibule if and when needed.

Statement of Problem and Substantiation for Public Input

Suggesting an Annex note to complement the proposal for interlocked-door vestibules.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 297-NFPA 101-2024 [New Section after 3.3.165]	
Public Input No. 298-NFPA 101-2024 [New Section after 7.2.1.6.4]	
Public Input No. 298-NFPA 101-2024 [New Section after 7.2.1.6.4]	

Submitter Information Verification

Submitter Full Name: John Woestman
Organization: Kellen Company
Affiliation: Builders Hardware Manufacturers Association
Street Address:
City:
State:
Zip:
Submission Date: Mon Jun 03 21:38:00 EDT 2024
Committee: SAF-MEA

Committee Statement

Resolution: The proposed revision in the related Public Input was not incorporated (see PI-298).



Public Input No. 96-NFPA 101-2024 [New Section after A.7.7.1]

A.7.7.2

This section is intended to allow egress from several types of exits through the interior of the building, provided the requirements of this section are met. A common example is egress from exit stair enclosures but this section could also be used at an exit from the building through a vestibule to the exterior. In such as case, the door from the building into the vestibule would be considered the exit. This means, for example, the manual fire alarm pull station (if required) could be located at the door into the vestibule and, in a health care occupancy complying with 18.3.4.5.3, the vestibule would not be considered part of the corridor and would not require smoke detection. Note that this section is not applicable to horizontal exits, as the 2-hour horizontal exit fire barrier allows the area beyond the exit to be treated as a separate building.

Statement of Problem and Substantiation for Public Input

Since this section refers to exits, not exit enclosures, there has been some uncertainty as to whether it could be used at vestibules. Where manual fire alarm pull stations are required, it makes sense for the pull station to be at the door into the vestibule, as this allows for faster activation of the fire alarm system, and smoke detectors in vestibules can be subject to false alarms due to dust from outside. This annex note clarifies that this provision is not limited to exit enclosures while also clarifying that it does not apply to horizontal exits. Horizontal exits have other specific requirements and there is no need to make additional requirements on the way from the horizontal exit to the building exterior.

Submitter Information Verification

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Committee Statement

Resolution: The proposed revision would create confusion. The locations of fire alarm appliances are outside the scope of Ch. 7.