



First Revision No. 6770-NFPA 101-2021 [Detail]

NEW SECTION

A.24.2.8.1.3

The Code does not require water closet grab bars and stanchions to be installed to improve the usability and safety of water closets. "Where provided," water closet grab bars and stanchions might be in close proximity to bathtubs or showers and could be used to comply with the bathtub or shower grab bar requirements. Preferences for two vertical points of control for water closets include one installed on each side and one in front of the water closet. One of these could be installed in accordance with the requirements for a bathtub or shower. The requirements for grab bars in showers and bathtubs was added to the scope of the Code in 2018. Insights on best practices can be found in the study by Kenny et al. "Toilet Grab-Bar Preference and Center of Pressure Deviation During Toilet Transfers in Healthy Seniors, Seniors With Hip Replacements, and Seniors Having Suffered a Stroke." ICC-A117.1, *Accessible and Usable Buildings and Facilities*, is an additional reference for ambulatory accessible water closets.

Submitter Information Verification

Committee: SAF-RES

Submittal Date: Mon Aug 16 08:18:45 EDT 2021

Committee Statement

Committee Statement: The appendix note provides some context about the value of noting that bathtubs and showers are not the only facilities in a bathroom that can benefit from stanchions (especially) and, less often, grab bars. Water closet use can also be enhanced, in terms of both usability and safety at little of no additional cost, with dual purposes for a point of control device that is scoped for bathtubs and showers. The more compact the arrangement of bathrooms, the more likely that such dual usage is feasible; thus it is something to be considered in the context of "affordable housing" and, to a lesser extent, with affordable hotel guest rooms.

Response Message: FR-6770-NFPA 101-2021

Public Input No. 319-NFPA 101-2021 [New Section after A.24.2.8.1.2]



First Revision No. 6636-NFPA 101-2021 [Section No. 24.2.8]

24.2.8* Grab Bars and Stanchions for Bathtubs, Bathtub-Shower Combinations, and Showers and, if Provided, for Water Closets .

24.2.8.1 General.

24.2.8.1.1

New bathtubs, bathtub-shower combinations, and showers shall be provided with grab bars or stanchions unless otherwise permitted by 24.2.8.1.2.

24.2.8.1.2*

Grab bars or stanchions shall not be required in showers where the transition from the room floor to the shower floor does not exceed 0.5 in. (13 mm) in height and all shower surfaces are slip resistant when wet.

24.2.8.1.3*

Where provided for bathing and showering , grab bars or stanchions shall comply with 24.2.8.2 through 24.2.8.4.

24.2.8.1.4

Where grab bars and stanchions are provided for increased safety or usability of water closets, grab bars or stanchions shall comply with the requirements of ICC A117.1, *Accessible and Usable Buildings and Facilities* , for either ambulatory accessible use or other accessibility-based uses.

24.2.8.1.5

All dimensions shall be measured to the centerline of the grab bar or stanchion unless otherwise stated.

24.2.8.2* Vertical Grab Bar or Stanchion.

24.2.8.2.1 Bathtubs and Bathtub-Shower Combinations.

~~A vertical grab bar shall be provided on the control end wall or the end wall opposite the control end wall of the bathtub or bathtub-shower combination in accordance with 24.2.8.2.1 ; or shall be provided as a vertical stanchion in accordance with 24.2.8.2.3 . For showers, either a vertical grab bar that is usable by a person stepping into and out of the shower enclosure in accordance with 24.2.8.2.2 , or a vertical stanchion in accordance with 24.2.8.2.3 , shall be provided. For bathtubs, including bathtub-shower combinations, either of the following shall be provided:~~

- ~~(1) A vertical grab bar shall be provided on the control end wall or the end wall opposite the control end wall of the bathtub or bathtub-shower combination in accordance with 24.2.8.2.3, or~~
- ~~(2) A vertical stanchion in accordance with 24.2.8.2.3~~

24.2.8.2.2 Showers.

For showers, either of the following shall be provided:

- (1) A vertical grab bar in accordance with 24.2.8.2.4 , or a vertical stanchion in accordance with 24.2.8.2.5
- (2) A vertical grab bar in accordance with 24.2.8.2.5

24.2.8.2.3* Bathtub End Wall Vertical Grab Bars.

End wall vertical grab bars for bathtubs shall comply with all of the following:

- (1) Vertical grab bars shall have a length of not less than 36 in. (914 mm).
- (2) Vertical grab bars shall be located between 24 in. (610 mm) minimum and 27 60 in. (686 mm) maximum above the finished floor, ~~measured to the lower end~~.
- (3) Vertical grab bars shall be installed at the end that is least obstructed for entry and egress.
- (4) ~~Vertical~~ The horizontal position, relative to the exterior plane of the bathtub or bathtub-shower combination, of vertical grab bars shall be located ~~between 9 in. (228 mm) and 12 in. (305 mm) from the access side of the bathtub or bathtub-shower combination, measured horizontally from the exterior plane of the bathtub or bathtub-shower combination, in accordance with either of the following:~~
 - (a) ~~between~~ Between 9 in. (228 mm) and 12 in. (305 mm) from the access side of the bathtub or bathtub-shower combination, measured horizontally inward
 - (b) Between 2 in. (51 mm) inward from the exterior plane of the bathtub or bathtub-shower combination to 6 in. (152 mm) outside the exterior plane

24.2.8.2.4 Shower Grab Bars.

Vertical grab bars for showers shall comply with all of the following:

- (1) Vertical grab bars shall have a length of not less than ~~24~~ 36 in. (~~610~~ 914 mm).
- (2) Vertical grab bars shall be located ~~between 36 24 in. (914 610 mm) minimum and 39 60 in. (994 1524 mm) maximum~~ above the finished floor, ~~measured to the lower end~~.
- (3) Vertical grab bars shall be located within ~~30~~ 28 in. (~~760~~ 711 mm), measured horizontally, of the vertical plane center of the control end wall of entrance opening to the shower at the sill, threshold, or other boundary between wet interior and dry exterior underfoot conditions.

24.2.8.2.5* Vertical Stanchions for Bathtubs and Showers .

Vertical stanchions shall be fixed to the floor or the bathtub rim, if of steel construction, and either the room ceiling or an adjacent wall and shall comply with all of the following:

- (1) Stanchions shall be located within 6 in. (150 mm), measured horizontally, of the outside or outer edge of the bathtub, bathtub-shower combination, or shower.
- (2) Stanchions shall be located within 30 in. (760 mm), measured horizontally, of the vertical plane of the control end wall of a bathtub or bathtub-shower combination.
- (3) Stanchions shall be located within 28 in. (711 mm), measured horizontally, of the center of the entrance opening to the shower at the sill, threshold, or other boundary between wet interior and dry exterior underfoot conditions.

24.2.8.3 Bathtub Non-Access Nonaccess Side Grab Bar or Horizontal Stanchion.

For bathtubs and bathtub-shower combinations, a diagonal grab bar in accordance with 24.2.8.3.1, a horizontal grab bar in accordance with 24.2.8.3.2, or a horizontal stanchion in accordance with 24.2.8.3.3 shall be provided at the nonaccess side of the bathtub.

24.2.8.3.1* Non-Access ~~Nonaccess~~ Side Diagonal Grab Bars.

Diagonal grab bars shall comply with all of the following:

- (1) Diagonal grab bars shall have a length of not less than 24 36 in. (600 914 mm).
- (2) Diagonal grab bars shall be located so the higher end is ~~closest~~ closer to the control end wall.
- (3) Higher ends of diagonal grab bars shall be located a maximum of 12 in. (305 mm) from the control end wall.
- (4) ~~Higher ends of diagonal grab bars~~ Diagonal grab bar slope, relative to level, shall be 30 degrees ~~minimum shall be located 25 in. (635 mm) minimum and 27 in. (685 mm) to 60 degrees~~ maximum above the rim of the bathtub .
- (5) Lower ends of diagonal grab bars shall be located ~~8 in. (203 mm)~~ 32 in. (813 mm) minimum and 40 35 in. (254 889 mm) maximum above the ~~rim of the bathtub~~ finished floor level .

24.2.8.3.2 Non-Access ~~Nonaccess~~ Side Horizontal Grab Bars.

Horizontal grab bars shall comply with all of the following:

- (1) Horizontal grab bars shall be located ~~8 32 in. (205 813 mm) minimum and 40 35 in. (255 889 mm) maximum above the bathtub rim finished floor level~~ .
- (2) Horizontal grab bars shall ~~be located so one end is 12 in. (305 mm) maximum from have a minimum length of 36 in. (914 mm) centered within the control end wall and the other end is located 24 in. (610 mm) maximum from the opposite, or head, end length of the bathtub.~~

24.2.8.3.3 Non-Access ~~Nonaccess~~ Side Horizontal Stanchions.

~~Nonaccess side horizontal stanchions, extending full length and fixed between end walls of the bathtub, shall be located 8 32 in. (205 813 mm) minimum and 40 35 in. (255 889 mm) maximum above the bathtub rim finished floor level .~~

24.2.8.4* Grab Bar and Stanchion Details.**24.2.8.4.1**

Grab bars and stanchions shall be circular in cross section with a minimum diameter of 1¼ in. (32 mm) and a maximum diameter of 2 in. (51 mm).

24.2.8.4.2

Where adjacent to a surface or water control, grab bars and stanchions shall provide a clearance for hand grasp of 1½ in. (38 mm) minimum.

24.2.8.4.3

Clearance or spacing with other surfaces, which shall be free of sharp or abrasive elements, shall comply with ICC A117.1, *Accessible and Usable Buildings and Facilities*.

24.2.8.4.4

Grab bars and stanchions shall not rotate within their fittings.

24.2.8.4.5

Grab bars and stanchions shall be designed and constructed to maintain, throughout their service life and with the effects of water, the structural loading conditions in accordance with the building code.

24.2.8.4.6

Components subject to water intrusion shall be provided with permanent drainage, such as weep holes, to reduce the time during which components, such as voids for fixing plates, with screws, visually concealed behind cover plates, are subject to moisture.

Supplemental Information

<u>File Name</u>	<u>Description</u> <u>Approved</u>
101_RES_FR-6636_24.2.8.docx	For staff use

Submitter Information Verification

Committee: SAF-RES

Submittal Date: Wed Aug 04 14:29:36 EDT 2021

Committee Statement

Committee Statement: Updates the reference location for measurements to maintain uniformity withing the requirement and other codes requirements. Adds requirements for grab bars and stanchions if they are provided. Clarifies locations for vertical stanchions.

Response Message: FR-6636-NFPA 101-2021

[Public Input No. 294-NFPA 101-2021 \[Section No. 24.2.8\]](#)



First Revision No. 6640-NFPA 101-2021 [Section No. 24.3.4.2.1]

24.3.4.2.1

Carbon monoxide alarms or carbon monoxide detectors in accordance with Section 9.12 and 24.3.4.2 shall be provided in new and existing one- and two-family dwellings where either of the following conditions exists:

- (1) Dwelling units with communicating attached garages, unless otherwise exempted by 24.3.4.2.3
- (2) Dwelling units containing fuel-burning appliances or fuel-burning fireplaces

Submitter Information Verification

Committee: SAF-RES

Submittal Date: Wed Aug 04 15:04:15 EDT 2021

Committee Statement

Committee Statement: By requiring existing one and two family dwellings to install carbon monoxide detectors it would help decrease the potential of Carbon Monoxide incidents.

Response Message: FR-6640-NFPA 101-2021

Public Input No. 13-NFPA 101-2020 [Section No. 24.3.4.2.1]



First Revision No. 6641-NFPA 101-2021 [Section No. 26.3.4.3.1]

26.3.4.3.1*

Visible signals for ~~the hearing impaired~~ shall not be required where the proprietor resides in the building and there are five or fewer rooms for rent.

Submitter Information Verification

Committee: SAF-RES

Submittal Date: Wed Aug 04 15:52:58 EDT 2021

Committee Statement

Committee Statement: The NFPA Disability Access Review and Advisory Committee (DARAC) recommends an update to the terminology used to describe individuals with disabilities.

Response Message: FR-6641-NFPA 101-2021

[Public Input No. 109-NFPA 101-2021 \[Section No. 26.3.4.3.1\]](#)

**First Revision No. 6646-NFPA 101-2021 [Section No. 26.3.4.6.1]****26.3.4.6.1**

Carbon monoxide alarms or carbon monoxide detectors in accordance with Section 9.12 and 26.3.4.6 shall be provided in new and existing lodging or rooming houses where either of the following conditions exists:

- (1) Lodging or rooming houses with communicating attached garages, unless otherwise exempted by 26.3.4.6.3
- (2) Lodging or rooming houses containing fuel-burning appliances or fuel-burning fireplaces

Submitter Information Verification

Committee: SAF-RES

Submittal Date: Wed Aug 04 16:12:11 EDT 2021

Committee Statement

Committee Statement: The recently published NFPA Fire Protection Research Foundation report “CO Detection and Alarm Requirements: Literature Review” highlights major deficits in current code requirements to adequately protect occupants from high level CO exposure incidents in buildings that house permanently installed CO hazards. The addition of these proposed requirements will prevent deaths and injuries to occupants of existing lodging and rooming houses by providing a baseline level of protection from high level CO exposure.

Response Message: FR-6646-NFPA 101-2021

[Public Input No. 219-NFPA 101-2021 \[Section No. 26.3.4.6.1\]](#)



First Revision No. 6647-NFPA 101-2021 [Section No. 26.3.6]

26.3.6 Extinguishment Requirements.

26.3.6.1

All new lodging or rooming houses shall be protected throughout by an approved automatic sprinkler system in accordance with 26.3.6.2.

26.3.6.2

Where an automatic sprinkler system is required or is used as an alternative method of protection, either for total or partial building coverage, the system shall be installed in accordance with ~~Section 9.7.1 and 26.3.6.2.1 through 26.3.6.2.6~~ electrically supervised in accordance with 9.7.2.

26.3.6.2.1

~~Activation of the automatic~~ Automatic sprinkler system waterflow shall actuate the fire alarm system in accordance with Section 9.6.

26.3.6.2.2

In buildings four or fewer stories in height and not exceeding 60 ft (18.3 m) in height above grade plane, systems in accordance with NFPA 13R shall be permitted.

26.3.6.2.3*

Systems in accordance with NFPA 13D shall be permitted where all of the following requirements are met:

- (1) The lodging or rooming house shall not be part of a mixed occupancy.
- (2) Entrance foyers shall be sprinklered.
- (3) Lodging or rooming houses with sleeping accommodations for more than eight occupants shall be treated as two-family dwellings with regard to the water supply.

26.3.6.2.4

In buildings sprinklered in accordance with NFPA 13, closets less than 12 ft² (1.1 m²) in area in individual dwelling units shall not be required to be sprinklered.

26.3.6.2.5

In buildings sprinklered in accordance with NFPA 13, closets that contain equipment such as washers, dryers, furnaces, or water heaters shall be sprinklered, regardless of size.

26.3.6.2.6

In existing lodging or rooming houses, sprinkler installations shall not be required in closets not exceeding 24 ft² (2.2 m²) and in bathrooms not exceeding 55 ft² (5.1 m²).

Supplemental Information

<u>File Name</u>	<u>Description</u> <u>Approved</u>
101_RES_FR-6647_26.3.6.docx	For staff use

Submitter Information Verification

Committee: SAF-RES

Submittal Date: Wed Aug 04 16:14:43 EDT 2021

Committee Statement

Committee Statement: The SAF-AAC and BLD-AAC formed a task group to review fire sprinkler supervision requirements in NFPA 101 and 5000. The task group recommended occupancy chapters to consider replacing text that points to Section 9.7.1.1 for supervision, as this can be interpreted the installation standard, i.e. NFPA 13, drives the method of supervision which allows chains and locks on new installations. This is not the intent of NFPA 101 as codes that allow construction tradeoffs and exceptions based on electrical supervision of valves, waterflow, etc.

Response Message: FR-6647-NFPA 101-2021

[Public Input No. 406-NFPA 101-2021 \[Section No. 26.3.6\]](#)



First Revision No. 6581-NFPA 101-2021 [Section No. 26.4]

26.4 Special Structures.

~~Board and care facilities~~ Lodging or rooming houses shall comply with Chapter 11 where located in a special structure.

Submitter Information Verification

Committee: SAF-RES

Submittal Date: Sun Jul 25 12:06:46 EDT 2021

Committee Statement

Committee Statement: Editorial correction.

Response Message: FR-6581-NFPA 101-2021



First Revision No. 6642-NFPA 101-2021 [Section No. 28.3.4.3.4]

28.3.4.3.4*

Guest rooms and guest suites ~~specifically- required and equipped to accommodate hearing-impaired individuals to be equipped with accessible communication features~~ shall be provided with a visible notification appliance.

Submitter Information Verification

Committee: SAF-RES

Submittal Date: Wed Aug 04 16:05:19 EDT 2021

Committee Statement

Committee Statement: The NFPA Disability Access Review and Advisory Committee (DARAC) recommended an update to the terminology used to describe individuals with disabilities.

Response Message: FR-6642-NFPA 101-2021

[Public Input No. 110-NFPA 101-2021 \[Section No. 28.3.4.3.4\]](#)



First Revision No. 6651-NFPA 101-2021 [Section No. 28.3.5.1]

28.3.5.1

All buildings shall be protected throughout by an approved, ~~supervised~~ automatic sprinkler system in accordance with 28.3.5.3 and electrically supervised in accordance with 9.7.2 .

Submitter Information Verification

Committee: SAF-RES

Submittal Date: Thu Aug 05 12:04:25 EDT 2021

Committee Statement

Committee Statement: The SAF-AAC and BLD-AAC formed a task group to review fire sprinkler supervision requirements in NFPA 101 and 5000. The task group recommended occupancy chapters to consider replacing text that points to Section 9.7.1.1 for supervision, as this can be interpreted the installation standard, i.e. NFPA 13, drives the method of supervision which allows chains and locks on new installations. This is not the intent of NFPA 101 as codes that allow construction tradeoffs and exceptions based on electrical supervision of valves, waterflow, etc.

Response Message: FR-6651-NFPA 101-2021

[Public Input No. 407-NFPA 101-2021 \[Section No. 28.3.5.1\]](#)



First Revision No. 6657-NFPA 101-2021 [Section No. 28.3.5.6]

28.3.5.6

~~Open parking structures that comply with NFPA 88A and are contiguous with hotels or dormitories shall be exempt from the sprinkler requirements of 28.3.5.1 .~~

Submitter Information Verification

Committee: SAF-RES

Submittal Date: Thu Aug 05 13:23:23 EDT 2021

Committee Statement

Committee Statement: The first draft of 2022 edition of NFPA 88A is taking the position that all parking structures, open and enclosed, are to be sprinklered. The NFPA FPRF report “Modern Vehicle Hazards in Parking Structures and Vehicle Carriers” has shown evidence that fires in parking structures not protected by sprinklers can lead to catastrophic losses.

Response Message: FR-6657-NFPA 101-2021

[Public Input No. 391-NFPA 101-2021 \[Section No. 28.3.5.6\]](#)



First Revision No. 6643-NFPA 101-2021 [Section No. 30.3.4.3.1]

30.3.4.3.1

Occupant notification shall be provided automatically in accordance with Section 9.6, and both of the following shall also apply:

- (1) Visible signals shall be installed in units ~~designed for the hearing-impaired~~ required to be equipped with accessible communication features.
- (2) Positive alarm sequence in accordance with 9.6.3.5 shall be permitted.

Submitter Information Verification

Committee: SAF-RES

Submittal Date: Wed Aug 04 16:06:29 EDT 2021

Committee Statement

Committee Statement: The NFPA Disability Access Review and Advisory Committee (DARAC) recommends an update to the terminology used to describe individuals with disabilities.

Response Message: FR-6643-NFPA 101-2021

[Public Input No. 111-NFPA 101-2021 \[Section No. 30.3.4.3.1\]](#)



First Revision No. 6652-NFPA 101-2021 [Section No. 30.3.5.1.1]

30.3.5.1.1

Where an automatic sprinkler system is installed, the system shall be installed in accordance with ~~Section 9.7.1~~ and electrically supervised in accordance with 9.7.2 , as modified by 30.3.5.5.

Submitter Information Verification

Committee: SAF-RES

Submittal Date: Thu Aug 05 12:09:17 EDT 2021

Committee Statement

Committee Statement: The SAF-AAC and BLD-AAC formed a task group to review fire sprinkler supervision requirements in NFPA 101 and 5000. The task group recommended occupancy chapters to consider replacing text that points to Section 9.7.1.1 (likewise in NFPA 5000, Section 55.3.1.) for supervision, as this can be interpreted the installation standard, i.e. NFPA 13, drives the method of supervision which allows chains and locks on new installations. This is not the intent of NFPA 101 or NFPA 5000 as codes that allow construction tradeoffs and exceptions based on electrical supervision of valves, waterflow, etc.

Response Message: FR-6652-NFPA 101-2021

[Public Input No. 408-NFPA 101-2021 \[Section No. 30.3.5.1.1\]](#)



First Revision No. 6655-NFPA 101-2021 [Section No. 30.3.5.5]

30.3.5.5 ~~Open Parking Structures.~~

~~Open parking structures complying with NFPA 88A that are contiguous with apartment buildings shall be exempt from the sprinkler requirements of 30.3.5.1 .~~

Submitter Information Verification

Committee: SAF-RES

Submittal Date: Thu Aug 05 13:17:33 EDT 2021

Committee Statement

Committee Statement: The first draft of 2022 edition of NFPA 88A is taking the position that all parking structures, open and enclosed, are to be sprinklered. The NFPA FPRF report “Modern Vehicle Hazards in Parking Structures and Vehicle Carriers” has shown evidence that fires in parking structures not protected by sprinklers can lead to catastrophic losses.

Response Message: FR-6655-NFPA 101-2021

[Public Input No. 392-NFPA 101-2021 \[Section No. 30.3.5.5\]](#)



First Revision No. 6666-NFPA 101-2021 [New Section after 30.7.4]

30.7.5 Valet Trash Collection Services.

30.7.5.1

Combustible trash or recycling materials in corridors or on egress balconies awaiting scheduled collection shall be placed completely inside a container that does not exceed a capacity of 15 gal (60 L) in corridors and 22 gal (95 L) on egress balconies.

30.7.5.2

Valet trash and recycling containers shall meet all of the following requirements:

- (1) The containers shall be of liquidtight construction.
- (2) The containers shall be equipped with lids.
- (3) The lids shall be in the fully closed position.

30.7.5.3

Containers and lids shall be constructed entirely of noncombustible materials or materials that meet a peak rate of heat release not exceeding 300 kW/m^2 when tested in accordance with ASTM E1354, *Standard Test Method for Heat and Visible Smoke Release Rates for Materials and Products Using an Oxygen Consumption Calorimeter*, at an incident heat flux of 50 kW/m^2 in the horizontal orientation.

30.7.5.4

Containers shall not be required to comply with 30.7.5.3 for the following:

- (1) Containers in sprinklered corridors or egress balconies in buildings provided with a sprinkler system complying with 30.3.5
- (2) Containers on egress balconies in buildings with noncombustible or limited combustible exteriors.

30.7.5.5

Containers shall not obstruct the minimum egress width required by 30.2.3 .

30.7.5.6

Containers shall not occupy a corridor for a single period exceeding 18 hours.

30.7.5.7

Combustible trash or recycling materials shall not occupy a corridor for a single period exceeding 5 hours.

Submitter Information Verification

Committee: SAF-RES

Submittal Date: Thu Aug 05 14:17:00 EDT 2021

Committee Statement

Committee Statement: The proposed language is consistent with what the Life Safety Technical Committee on Residential Occupancies approved in the previous cycle except for the new 30.7.5.2 (lids). The requirements for the lids is consistent with what as was submitted for

consideration by the International Fire Code Committee which approved the language for lids.

Response FR-6666-NFPA 101-2021
Message:

[Public Input No. 380-NFPA 101-2021 \[New Section after 30.7.4\]](#)



First Revision No. 6644-NFPA 101-2021 [Section No. 31.3.4.3.1]

31.3.4.3.1

Occupant notification shall be provided automatically in accordance with Section 9.6, and all of the following shall also apply:

- (1) Visible signals shall be installed in units ~~designed for the hearing-impaired~~ required to be equipped with accessible communication features.
- (2) Positive alarm sequence in accordance with 9.6.3.5 shall be permitted.
- (3) Existing approved presignal systems shall be permitted in accordance with 9.6.3.4.

Submitter Information Verification

Committee: SAF-RES

Submittal Date: Wed Aug 04 16:08:25 EDT 2021

Committee Statement

Committee Statement: The NFPA Disability Access Review and Advisory Committee (DARAC) recommends an update to the terminology used to describe individuals with disabilities.

Response Message: FR-6644-NFPA 101-2021

[Public Input No. 112-NFPA 101-2021 \[Section No. 31.3.4.3.1\]](#)



First Revision No. 6660-NFPA 101-2021 [New Section after 31.3.4.5.4]

31.3.4.6 Carbon Monoxide Alarms and Carbon Monoxide Detection Systems.

31.3.4.6.1

Carbon monoxide alarms or carbon monoxide detectors in accordance with Section 9.12 and 31.3.4.6 shall be provided in existing apartment buildings where either of the following conditions exists:

- (1) Dwelling units with communicating attached garages, unless otherwise exempted by 31.3.4.6.3
- (2) Dwelling units containing a permanently installed fuel-burning appliance or fuel-burning fireplace

31.3.4.6.2

Where required by 31.3.4.6.1, carbon monoxide alarms or carbon monoxide detectors shall be installed in the following locations:

- (1) Outside of each separate dwelling unit sleeping area in the immediate vicinity of the sleeping rooms
- (2) On every occupiable level of a dwelling unit

31.3.4.6.3

Carbon monoxide alarms and carbon monoxide detectors as specified in 31.3.4.6.1 (1) shall not be required in the following locations:

- (1) In garages
- (2) Within dwelling units with communicating attached garages that are open parking structures as defined by the building code
- (3) Within dwelling units with communicating attached garages that are mechanically ventilated in accordance with the mechanical code

31.3.4.6.4*

Where fuel-burning appliances or fuel-burning fireplaces are installed outside dwelling units, carbon monoxide detectors shall be installed in accordance with the manufacturer's published instructions in the locations specified as follows:

- (1) On the ceilings of rooms containing permanently installed fuel-burning appliances or fuel-burning fireplaces
- (2) Centrally located position within occupiable spaces served by the first supply air register from a permanently installed, fuel-burning HVAC system
- (3) Centrally located position within occupiable spaces adjacent to a communicating attached garage

A.31.3.4.6.4

Where fuel-burning appliances or fuel-burning fireplaces are located outside but attached to the dwelling unit, the area or room containing the fuel-burning appliance or fuel-burning fireplace could be considered part of the attached dwelling unit(s). In this application, either carbon monoxide alarms or carbon monoxide detectors are permitted to be installed in the attached dwelling unit(s) in accordance with 31.3.4.6.

31.3.4.6.5

Where carbon monoxide detectors are installed in accordance with 31.3.4.6.4 , the alarm signal shall be automatically transmitted to an approved on-site location or to an off-premises location in accordance with NFPA 72 .

Submitter Information Verification

Committee: SAF-RES

Submittal Date: Thu Aug 05 13:27:27 EDT 2021

Committee Statement

Committee Statement: The recently published NFPA Fire Protection Research Foundation report “CO Detection and Alarm Requirements: Literature Review” highlights major deficits in current code requirements to adequately protect occupants from high level CO exposure incidents in buildings that house permanently installed CO hazards. The addition of these proposed requirements will prevent deaths and injuries to occupants of existing apartment buildings by providing a baseline level of protection from high level CO exposure.

Response Message: FR-6660-NFPA 101-2021

Public Input No. 220-NFPA 101-2021 [New Section after 31.3.4.5.4]



First Revision No. 6738-NFPA 101-2021 [New Section after 31.7.4.2]

31.7.5 Valet Trash Collection Services.

31.7.5.1

Combustible trash or recycling materials in corridors or on egress balconies awaiting scheduled collection shall be placed completely inside a container that does not exceed a capacity of 15 gal (60 L) in corridors and 22 gal (95 L) on egress balconies.

31.7.5.2

Valet trash and recycling containers shall meet all of the following requirements:

- (1) The containers shall be of liquidtight construction.
- (2) The containers shall be equipped with lids.
- (3) The lids shall be in the fully closed position.

31.7.5.3

Containers and lids shall be constructed entirely of noncombustible materials or materials that meet a peak rate of heat release not exceeding 300 kW/m^2 when tested in accordance with ASTM E1354, *Standard Test Method for Heat and Visible Smoke Release Rates for Materials and Products Using an Oxygen Consumption Calorimeter*, at an incident heat flux of 50 kW/m^2 in the horizontal orientation.

31.7.5.4

Containers shall not be required to comply with 31.7.5.3 for the following:

- (1) Containers in sprinklered corridors or egress balconies in buildings provided with a sprinkler system complying with 31.3.5
- (2) Containers on egress balconies in buildings with noncombustible or limited combustible exteriors.

31.7.5.5

Containers shall not obstruct the minimum egress width required by 31.2.3 .

31.7.5.6

Containers shall not occupy a corridor for a single period exceeding 18 hours.

31.7.5.7

Combustible trash or recycling materials shall not occupy a corridor for a single period exceeding 5 hours.

Submitter Information Verification

Committee: SAF-RES

Submittal Date: Wed Aug 11 08:16:32 EDT 2021

Committee Statement

Committee Statement: The proposed language is consistent with what the Life Safety Technical Committee on Residential Occupancies approved in the previous cycle except for the new 30.7.5.2 (lids). The requirements for the lids is consistent with what as was submitted for

consideration by the International Fire Code Committee which approved the language for lids.

Response FR-6738-NFPA 101-2021
Message:



First Revision No. 6637-NFPA 101-2021 [Section No. A.24.2.8]

A.24.2.8

The grab bars and stanchions required by 24.2.8 are designed to improve safety of showering and bathing by ambulatory users, typically entering and exiting a bath, bathtub-shower combination, or shower facility for showering while standing, or for other forms of bathing that can entail transition to/from a crouching or sitting position.

For grab bar requirements appropriate for other uses and users, especially users with disabilities, refer to the requirements in ICC A117.1, *Accessible and Usable Buildings and Facilities*. Generally, the grab bars specified for this *Code* will not interfere with other grab bars installed in accordance with the requirements of ICC A117.1, and they can contribute to meeting the requirements of ICC A117.1 and vice versa. For example, combination vertical and horizontal grab bars (e.g., in an L configuration), as addressed by ICC A117.1, can meet the requirements of this *Code* for a vertical grab bar. Similarly, requirements for a horizontal grab bar or horizontal stanchion on the nonaccess side or back wall are compatible.

~~Dimensions for the height of grab bars are based on typical, mass-produced bathtubs with a wall height above the finished floor of about 15 in. (380 mm) and the bottom of the bathtub within 1 in. to 2 in. (25 mm to 51 mm) of the finished floor elevation. Adjustments to stipulated grab bar and horizontal stanchion height limits and ranges, referenced to the bath tub rim, should be considered for bathtubs having higher walls and, thus, rim heights, above the bottom of the tub and, possibly, also the wall height above the finished floor. ICC A117.1 references grab bar height dimensions to the bathtub rim and, for consistency with this widely used ANSI standard, that convention is maintained in this *Code* for grab bar and stanchion locations and other requirements are as compatible as possible with the widely used standard, ICC A117.1. This led to a change in the way the height of horizontal and diagonal grab bars is stipulated — for example, as the height above the bathroom's finished floor level rather than the bathtub rim, which is variable depending on the overall form of the tub. It also makes the *Code's* height requirements more consistent — not only is the height of the upper and lower ends of vertical grab bars stipulated relative to the finished floor level, but all other orientations of grab bars are now addressed in the same way .~~

Submitter Information Verification

Committee: SAF-RES

Submittal Date: Wed Aug 04 14:33:17 EDT 2021

Committee Statement

Committee Statement: This, in conjunction with the change proposed for the requirement, establishes a single reference point for grab bar and horizontal stanchion heights.

Response Message: FR-6637-NFPA 101-2021

[Public Input No. 317-NFPA 101-2021 \[Section No. A.24.2.8\]](#)



First Revision No. 6639-NFPA 101-2021 [Section No. A.24.2.8.1.2]

A.24.2.8.1.2

The provision of 24.2.8.1.2 is intended to ensure that grab bars, if provided voluntarily (i.e., as nonrequired) for dedicated showers, meet the requirements of 24.2.8, so that something appearing to be a grab bar can effectively perform as one. However, such grab bars would only be considered nonrequired in the case of dedicated showers not involving misstep and fall dangers addressed by 7.1.6.2 and 7.1.6.4. This means that walking surfaces must be at least as safe, in terms of underfoot conditions, as any other portion of the means of egress (where, for example, handrails are not required) for users not having mobility disabilities. This would require exceptionally careful choice and maintenance of underfoot materials as well as very effective control of water within and adjacent to the dedicated shower facility.

A guide to adequate underfoot slip resistance was reported by Pauls and Johnson in "Applying Ergonomics to Bathing Safety: Including Adoption of Unorthodox Practices for Slip-Resistant Underfoot Surface of Bathtubs Plus Showers and Provision of Effective Points of Control." It was based on a paper by Siegmund et al. and referred to that study as follows:

... a study to "quantify the friction used by barefoot subjects entering and exiting a typical bathtub/shower enclosure under dry and wet conditions" ... involved 60 subjects, equally divided by gender, from three age ranges, younger, middle age and older adults. Force plates with slip-resistant surfaces (with SR [slip resistance coefficient] of 0.55 to 0.90) provided data to derive utilized friction which was lower, by about 0.06, in wet conditions than in dry conditions. Older subjects used less friction than young subjects ($p=0.01$ to $p=0.001$ depending on complexity of the required movement). The range of utilized friction was 0.102 to 0.442, with a median of 0.23.

As an approximate guide to assessing these slip resistance criteria, the slip resistance coefficient is the tangent of the angle between the force being exerted by the leg and a line perpendicular to the underfoot surface. Thus, if the leg is extended straight, with the force of the body exerted at an angle of about 24 degrees to vertical, the tangent of that angle would be 0.445, an acceptable coefficient of friction if the leading foot did not slip on the underfoot surface if it was level.

The Pauls and Johnson paper reported achievable friction coefficients, measured with a tribometer [the Variable Incident Tribometer (VIT)], of 0.27 to 0.31 with a wet test tile covered with a thin damp or wet terry cloth towel (and up to 0.4 wet polished granite covered with a wet terry cloth towel). Thus, the Siegmund et al. study suggests that the leg angle of all the test participants was less than the 24 degrees to vertical assumed in this example calculation (as their utilized friction, again, was in the range of 0.102 to 0.442). Therefore, if slip resistance had not been built into the tub bottom surface (or if the slip resistance treatment had deteriorated with time and use), it could be achieved with a wet terry cloth towel underfoot.

If there is doubt as to the adequacy of slip resistance of underfoot surfaces, it is clearly very prudent to install the grab bars or stanchions stipulated in the requirements of this Code.

Submitter Information Verification

Committee: SAF-RES

Submittal Date: Wed Aug 04 14:44:59 EDT 2021

Committee Statement

Committee Peer-reviewed scientific/technical resources have been added to the annex note to

Statement: include more information regarding slip resistance.

Response FR-6639-NFPA 101-2021

Message:

[Public Input No. 318-NFPA 101-2021 \[Section No. A.24.2.8.1.2\]](#)



First Revision No. 6645-NFPA 101-2021 [Section No. A.28.3.4.3.4]

A.28.3.4.3.4

A quantity of such rooms and suites might be required to be equipped to accommodate hearing-impaired individuals based with accessible communication features based on the total number of rooms in a transient lodging facility. (See 28 CFR 36, Appendix A, "~~Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities.~~" CFR Parts 35 and 36, "2010 ADA Standards for Accessible Design.")

Submitter Information Verification

Committee: SAF-RES

Submittal Date: Wed Aug 04 16:09:41 EDT 2021

Committee Statement

Committee Statement: The NFPA Disability Access Review and Advisory Committee (DARAC) recommends an update to the terminology used to describe individuals with disabilities.

Response Message: FR-6645-NFPA 101-2021

[Public Input No. 117-NFPA 101-2021 \[Section No. A.28.3.4.3.4\]](#)