

Clear Width of Exit Stair Doors

Technical opinion | 14 September 2026 |



EXIT STAIR DOORS
Clear width and wheelchair access

*Safe People.
Functional Buildings.
A Healthier Tomorrow.*

NFPA 101 (2024)
810 mm
Exit stair enclosure door
Section 18.2.3.7(2)

SBC 201 (2024)
800 mm
General egress door minimum
Section 1010.1.1

*Design
for Real People.
In Real Life.*

Illustrative adult wheelchair width: 660 mm overall
Required width also depends on occupant capacity, door use and accessibility.
Plan for assisted evacuation beyond the door.

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1. Technical conclusion

For a door in an exit stair enclosure serving a new health care occupancy, NFPA 101 expressly permits a minimum clear width of 32 in. (810 mm). This is the specific provision in section 18.2.3.7(2), which disappplies the larger patient area door minimum in section 18.2.3.6 for this door location.¹

SBC 201 requires a general minimum clear opening of 800 mm, sufficient also for the occupant load. Its commentary expressly explains that the 800 mm opening is intended to accommodate wheelchair passage. Where both codes form the project design basis, 810 mm is the controlling basic metric minimum for the stair enclosure door, before checking capacity and any other applicable requirement.²

¹ National Fire Protection Association, *NFPA 101 Life Safety Code* (2024 edn) ss 18.2.3.6 and 18.2.3.7(2), 101-223 (hereafter NFPA 101).

² Saudi Building Code National Committee, *The Saudi General Building Code* (SBC 201-CC-2024, Code and Commentaries) s 1010.1.1, 1043, and commentary to s 1010.1.1, 1044 (hereafter SBC 201).

Door application	Minimum clear width	Exact provision
Exit stair enclosure door under NFPA Chapter 18	32 in. (810 mm)	NFPA 101, s 18.2.3.7(2)
General egress door under SBC 201	800 mm, plus capacity check	SBC 201, s 1010.1.1
Specified patient area egress doors in hospitals and nursing homes	41½ in. (1055 mm), subject to s 18.2.3.7	NFPA 101, s 18.2.3.6(1)
Group I-2 egress door used for movement of beds	1000 mm, plus capacity check	SBC 201, s 1010.1.1

Note only door that is required for movement of beds would require 1000 mm wide. This is not applicable for exit stair door.

An illustrative adult wheelchair is approximately 660 mm wide overall. Examples:



Width is 630 mm.

NFPA 101

A.7.2.12.3.1

Figure A.7.2.12.3.1 illustrates the application of the minimum space required to allow the parking of a standard wheelchair. Preferably, such spaces should be immediately apparent to rescue personnel and other evacuees.

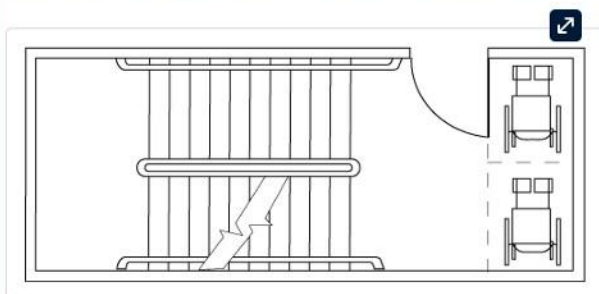


Figure A.7.2.12.3.1 Exit Stair Used as an Area of Refuge.

The exit stair door remains 815 mm wide. No requirement to be wider.



718
Speci

Width is 24.5 inches = 622 mm.

It can therefore pass straight through an unobstructed 810 mm clear opening with a nominal 150 mm total geometric margin.

2. Applying the health care provisions

The stair enclosure exception is explicit

Section 18.2.3.6 addresses egress doors from sleeping rooms, diagnostic and treatment areas, and nursery rooms. Section 18.2.3.7(2) specifically permits doors in exit stair enclosures to be 810 mm clear. A stair enclosure door does not automatically require 1055 mm simply because patients use the building.³

3. Occupant capacity can require a wider opening

The 810 mm allowance is a dimensional minimum, not an unlimited occupant capacity. Chapter 18 refers capacity to section 7.3. For sprinklered health care occupancies, NFPA Table 7.3.3.1 gives 5 mm per person for level components and ramps. SBC 201 section 1005.3.2 uses 5.08 mm per person for doors. Its reduced 3.8 mm factor expressly excludes Group I-2.⁴

Persons assigned to the exit stair door	SBC calculation at 5.08 mm per person	Basic dual code result
Let say, 150 persons	$150 \times 5.08 = 762 \text{ mm}$	810 mm minimum governs
Let say, 160 persons	$160 \times 5.08 = 812.8 \text{ mm}$	At least 812.8 mm; specify 815 mm or more
Let say, 180 persons	$180 \times 5.08 = 914.4 \text{ mm}$	At least 914.4 mm; specify 915 mm or more

These examples assume a sprinklered Group I-2 stair entry door, no bed movement through that door and no additional controlling condition. The load is the number assigned to the particular opening, not automatically the whole building population.

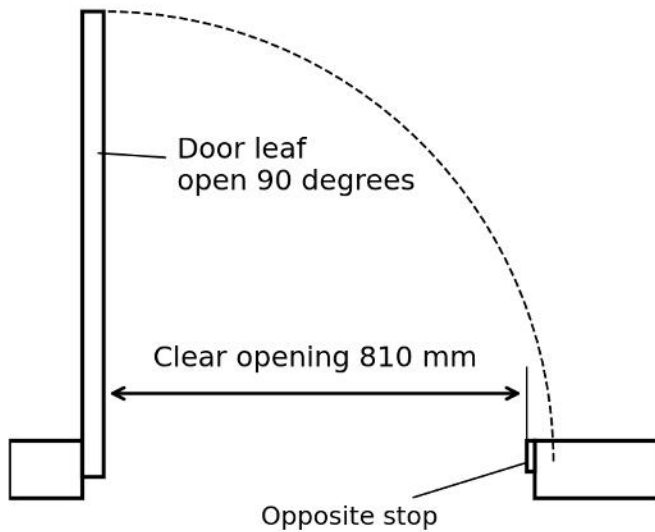
³ NFPA 101 (n 1) ss 18.2.3.6(1) and 18.2.3.7(2).

⁴ NFPA 101 (n 1) ss 18.2.3.1 and 7.3.3.1, table 7.3.3.1; SBC 201 (n 2) s 1005.3.2, including exception 1, 1010.

4. Measuring the clear opening correctly

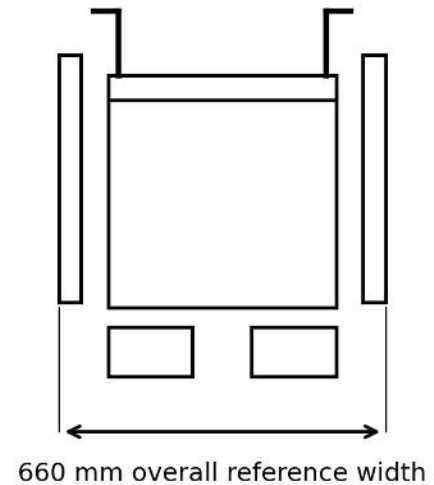
Clear opening width is the usable gap through the installed door assembly. It is not the nominal door leaf width, structural opening or frame outside dimension. For a new swinging door, measure at the narrowest point between the face of the door leaf and the opposite frame stop, with the leaf open 90 degrees.⁵

Measure face to stop



Adult wheelchair reference

Overall width is not seat width



⁵ NFPA 101 (n 1) s 7.2.1.2.1.1(1)–(3), 101-58; SBC 201 (n 2) s 1010.1.1, 1043.

5. Wheelchair width and passage suitability

A representative wheelchair width is 660 mm

The US Department of Justice's adult wheelchair reference illustration gives 26 in. (660 mm) measured across the outside of the rear wheels.

Why the door width supports wheelchair passage

SBC's commentary directly identifies wheelchair passage as a purpose of the 800 mm minimum.

Clear opening of exit stair door	Margin beyond a 660 mm chair	Centred margin each side
800 mm	140 mm	70 mm
810 mm	150 mm	75 mm
900 mm	240 mm	120 mm

6. Technical statement for a design review

NFPA 101 (2024), section 18.2.3.7(2), expressly permits doors in exit stair enclosures serving new health care occupancies to have a minimum clear width of 32 in. (810 mm).

The wheelchair suitability of this minimum is supported by SBC's commentary to section 1010.1.1, which identifies wheelchair passage as a purpose of the 800 mm minimum. Against the illustrative 660 mm adult wheelchair reference, an 810 mm opening provides 150 mm total geometric clearance.

7. Bibliography

Codes and standards

National Fire Protection Association, *NFPA 101 Life Safety Code* (2024 edn).

Saudi Building Code National Committee, *The Saudi General Building Code* (SBC 201-CC-2024, Code and Commentaries).

Supplementary accessibility references

US Access Board, *ADA Accessibility Standards*, chapters 3 and 4 <<https://www.access-board.gov/ada/>> accessed 14 September 2026.

US Department of Justice, *ADA Standards for Accessible Design* (1991), appendix A4.2.4 and figure A3 <<https://www.ada.gov/law-and-regs/design-standards/1991-design-standards/>> accessed 14 September 2026.