

ACCESSIBILITY REQUIREMENTS FOR RAMPS AND STAIRWAYS

**Information and reference drawings are from the American National Standard ICC/ANSI A117.1-2003
Additional requirements are contained in Chapter 10, 11, 34 and Appendix E of the 2006 International Building Code.**

Where there is a conflict between the International Building Code and ANSI A 117.1-2003 The most restrictive requirements shall apply.

This is for information only. It is up to the individual, designer, builder etc. to determine which situations apply on a particular job and apply the requirements as applicable.

NOTE

The City of Canon City does not enforce the Americans with Disabilities Act requirements. This act is enforced by the United States Department of Justice.

For more information please contact:

Greg Hutchison
Building Official
City of Canon City, Colorado
(719) 276-5292

405 Ramps

405.1 General. Ramps along accessible routes shall comply with Section 405.

405.2 Slope. Ramp runs shall have a running slope not steeper than 1:12.

EXCEPTION: In existing buildings or facilities, ramps shall be permitted to have slopes steeper than 1:12 complying with Table 405.2 where such slopes are necessary due to space limitations.

405.3 Cross Slope. Cross slope of ramp runs shall not be steeper than 1:48.

405.4 Floor Surfaces. Floor surfaces of ramp runs shall comply with Section 302.

405.5 Clear Width. The clear width of a ramp run shall be 36 inches (915 mm) minimum. Where handrails are provided on the ramp run, the clear width shall be measured between the handrails.

Table 405.2—Allowable Ramp Dimensions for Construction in Existing Sites, Buildings, and Facilities

Slope ¹	Maximum Rise
Steeper than 1:10 but not steeper than 1:8	3 inches (75 mm)
Steeper than 1:12 but not steeper than 1:10	6 inches (150 mm)

¹A slope steeper than 1:8 shall not be permitted.

405.6 Rise. The rise for any ramp run shall be 30 inches (760 mm) maximum.

405.7 Landings. Ramps shall have landings at bottom and top of each ramp run. Landings shall comply with Section 405.7.

405.7.1 Slope. Landings shall have a slope not steeper than 1:48 and shall comply with Section 302.

405.7.2 Width. Clear width of landings shall be at least as wide as the widest ramp run leading to the landing.

405.7.3 Length. Landings shall have a clear length of 60 inches (1525 mm) minimum.

405.7.4 Change in Direction. Ramps that change direction at ramp landings shall be sized to provide a turning space complying with Section 304.3.

405.7.5 Doorways. Where doorways are adjacent to a ramp landing, maneuvering clearances required by Sections 404.2.3 and 404.3.2 shall be permitted to overlap the landing area. Where doors that are subject to locking are adjacent to a ramp landing, landings

shall be sized to provide a turning space complying with Section 304.3.

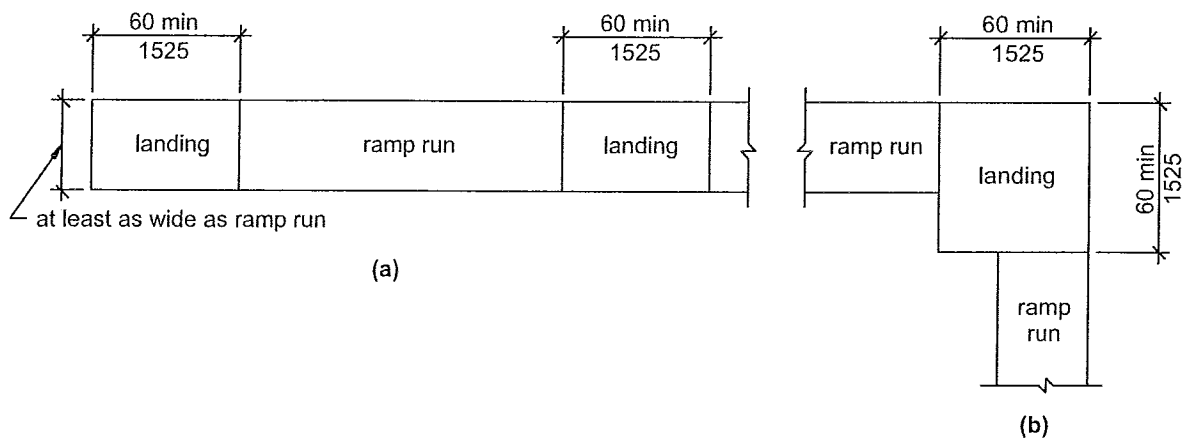
405.8 Handrails. Ramp runs with a rise greater than 6 inches (150 mm) shall have handrails complying with Section 505.

405.9 Edge Protection. Edge protection complying with Section 405.9.1 or 405.9.2 shall be provided on each side of ramp runs and at each side of ramp landings.

EXCEPTIONS:

1. Ramps not required to have handrails where curb ramp flares complying with Section 406.3 are provided.
2. Sides of ramp landings serving an adjoining ramp run or stairway.
3. Sides of ramp landings having a vertical drop-off of 1/2 inch (13 mm) maximum within 10 inches (255 mm) horizontally of the minimum landing area.

405.9.1 Extended Floor Surface. The floor surface of the ramp run or ramp landing shall extend 12 inches (305 mm) minimum beyond the inside face of a railing complying with Section 505.



**Fig. 405.7
Ramp Landings**

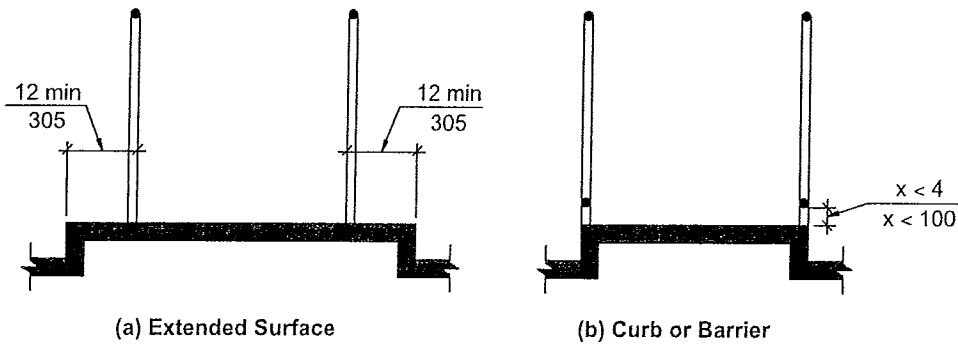


Fig. 405.9
Ramp Edge Protection

405.9.2 Curb or Barrier. A curb or barrier shall be provided that prevents the passage of a 4-inch (100 mm) diameter sphere where any portion of the sphere is within 4 inches (100 mm) of the floor.

405.10 Wet Conditions. Landings subject to wet conditions shall be designed to prevent the accumulation of water.

406.2 Counter Slope. Counter slopes of adjoining gutters and road surfaces immediately adjacent to the curb ramp shall not be steeper than 1:20. The adjacent surfaces at transitions at curb ramps to walks, gutters and streets shall be at the same level.

406.3 Sides of Curb Ramps. Where provided, curb ramp flares shall not be steeper than 1:10.

406 Curb Ramps

406.1 General. Curb ramps on accessible routes shall comply with Sections 406, 405.2, 405.3, and 405.10.

406.4 Width. Curb ramps shall be 36 inches (915 mm) minimum in width, exclusive of flared sides.

406.5 Floor Surface. Floor surfaces of curb ramps shall comply with Section 302.

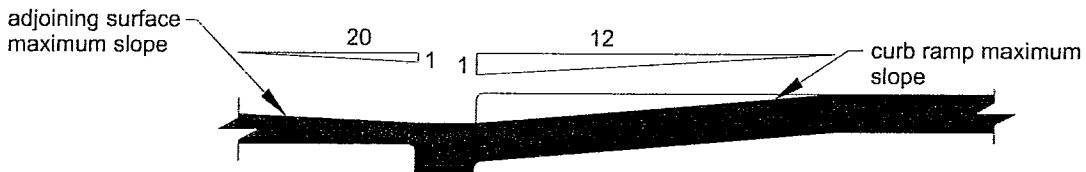


Fig. 406.2
Counter Slope of Surfaces Adjacent to Curb Ramps

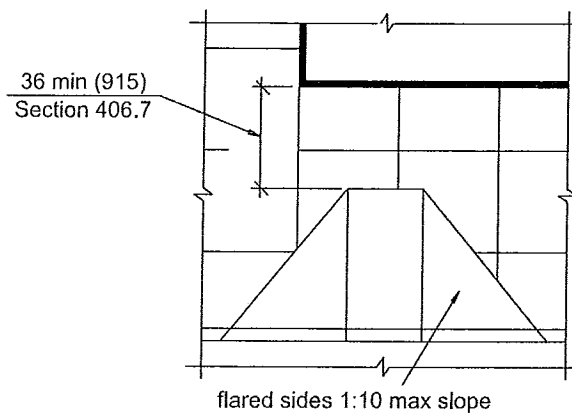


Fig. 406.3
Sides of Curb Ramps

406.6 Location. Curb ramps and the flared sides of curb ramps shall be located so they do not project into vehicular traffic lanes, parking spaces, or parking access aisles. Curb ramps at marked crossings shall be wholly contained within the markings, excluding any flared sides.

406.7 Landings. Landings shall be provided at the tops of curb ramps. The clear length of the landing shall be 36 inches (915 mm) minimum. The clear width of the landing shall be at least as wide as the curb ramp, excluding flared sides, leading to the landing.

EXCEPTION: In alterations, where there is no landing at the top of curb ramps, curb ramp flares shall be provided and shall not be steeper than 1:12.

406.8 Obstructions. Curb ramps shall be located or protected to prevent their obstruction by parked vehicles.

406.9 Handrails. Handrails are not required on curb ramps.

406.10 Diagonal Curb Ramps. Diagonal or corner-type curb ramps with returned curbs or other well-defined edges shall have the edges parallel to the direction of pedestrian flow. The bottoms of diagonal curb ramps shall have 48 inches (1220 mm) minimum clear space outside active traffic lanes of the roadway. Diagonal curb ramps provided at marked crossings shall provide the 48 inches (1220 mm) minimum clear space within the markings. Diagonal curb ramps with flared sides shall have a segment of curb 24 inches (610 mm) mini-

imum in length on each side of the curb ramp and within the marked crossing.

406.11 Islands. Raised islands in crossings shall be a cut-through level with the street or have curb ramps at both sides. Each curb ramp shall have a level area 48 inches (1220 mm) minimum in length and 36 inches (915 mm) minimum in width at the top of the curb ramp in the part of the island intersected by the crossings. Each 48-inch (1220 mm) by 36-inch (915 mm) area shall be oriented so the 48-inch (1220 mm) length is in the direction of the running slope of the curb ramp it serves. The 48-inch (1220 mm) by 36-inch (915 mm) areas and the accessible route shall be permitted to overlap.

406.12 Detectable Warnings at Raised Marked Crossings. Marked crossings that are raised to the same level as the adjoining sidewalk shall be preceded by a 24-inch (610 mm) deep detectable warning complying with Section 705, extending the full width of the marked crossing.

406.13 Detectable Warnings at Curb Ramps. Where detectable warnings are provided on curb ramps, they shall comply with Sections 406.13 and 705.

406.13.1 Area Covered. Detectable warnings shall be 24 inches (610 mm) minimum in the direction of travel and extend the full width of the curb ramp or flush surface.

406.13.2 Location. The detectable warning shall be located so the edge nearest the curb line is 6 inches (150 mm) to 8 inches (205 mm) from the curb line.

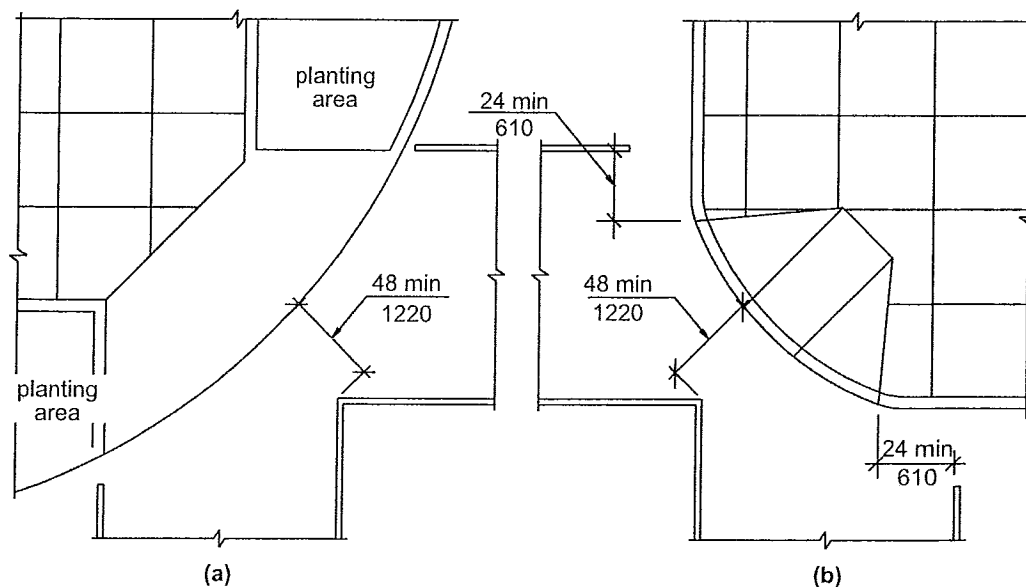


Fig. 406.10
Diagonal Curb Ramps

504 Stairways

504.1 General. Accessible stairs shall comply with Section 504.

504.2 Treads and Risers. All steps on a flight of stairs shall have uniform riser height and uniform tread depth. Risers shall be 4 inches (100 mm) minimum and 7 inches (180 mm) maximum in height. Treads shall be 11 inches (280 mm) minimum in depth.

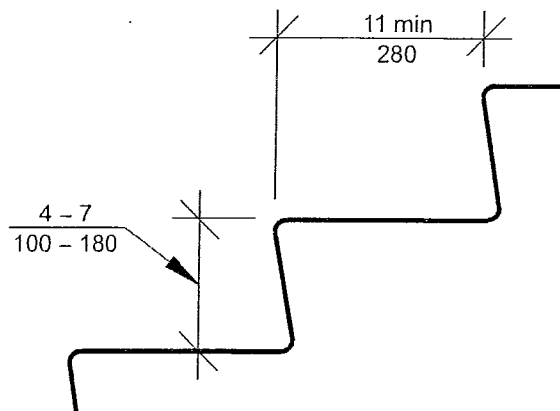


Fig. 504.2
Treads and Risers for Accessible Stairways

504.3 Open Risers. Open risers shall not be permitted.

504.4 Tread Surface. Stair treads shall comply with Section 302 and shall have a slope not steeper than 1:48.

504.5 Nosings. The radius of curvature at the leading edge of the tread shall be $\frac{1}{2}$ inch (13 mm) maximum. Nosings that project beyond risers shall have the underside of the leading edge curved or beveled. Risers shall be permitted to slope under the

tread at an angle of 30 degrees maximum from vertical. The permitted projection of the nosing shall be $1\frac{1}{2}$ inches (38 mm) maximum over the tread or floor below. The leading 2 inches (51 mm) of the tread shall have visual contrast of dark-on-light or light-on-dark from the remainder of the tread.

504.6 Handrails. Stairs shall have handrails complying with Section 505.

504.7 Wet Conditions. Stair treads and landings subject to wet conditions shall be designed to prevent the accumulation of water.

504.8 Lighting. Lighting for interior stairways shall comply with Section 504.8.

504.8.1. Luminance Level. Lighting facilities shall be capable of providing 10 foot-candles (108 lux) of luminance measured at the center of tread surfaces and on landing surfaces within 24 inches (610 mm) of step nosings.

504.8.2. Lighting Controls. If provided, occupancy-sensing automatic controls shall activate the stairway lighting so the luminance level required by Section 504.8.1 is provided on the entrance landing, each stair flight adjacent to the entrance landing, and on the landings above and below the entrance landing prior to any step being used.

504.9 Stair Level Identification. Stair level identification signs in tactile characters complying with Section 703.3 shall be located at each floor level landing in all enclosed stairways adjacent to the door leading from the stairwell into the corridor to identify the floor level. The exit door discharging to the outside or to the level of exit discharge shall have a tactile sign stating "EXIT."

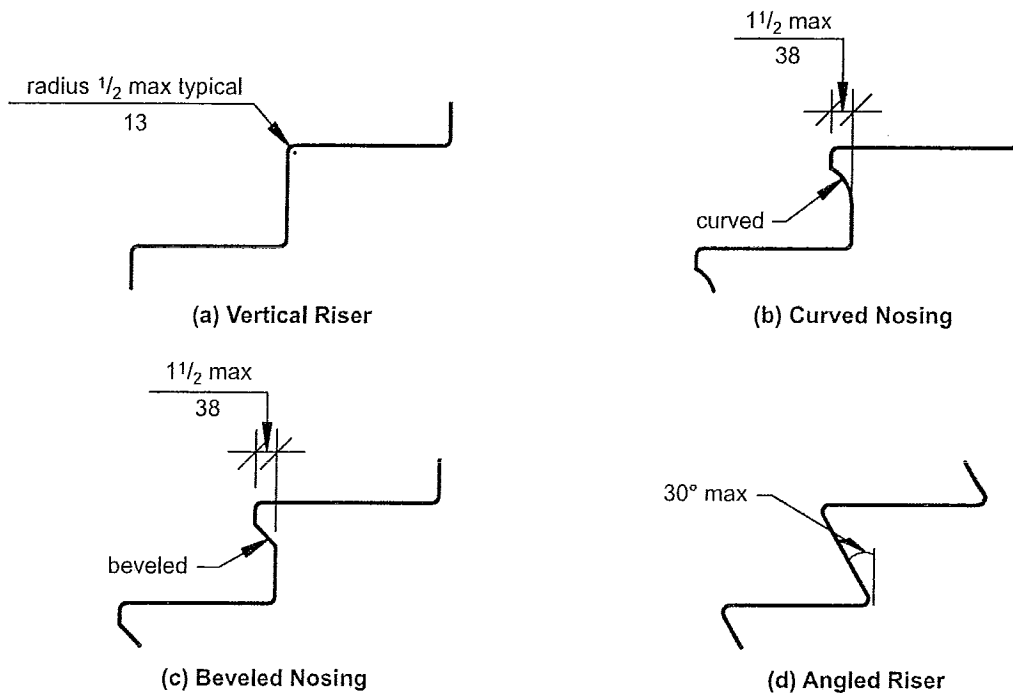


Fig. 504.5
Stair Nosings

505 Handrails

505.1 General. Handrails required by Section 405.8 for ramps, or Section 504.6 for stairs, shall comply with Section 505.

505.2 Location. Handrails shall be provided on both sides of stairs and ramps.

EXCEPTION: Aisle stairs and aisle ramps provided with a handrail either at the side or within the aisle width.

505.3 Continuity. Handrails shall be continuous within the full length of each stair flight or ramp run. Inside handrails on switchback or dogleg stairs or ramps shall be continuous between flights or runs. Other handrails shall comply with Sections 505.10 and 307.

EXCEPTION: Handrails in aisles serving seating.

505.4 Height. Top of gripping surfaces of handrails shall be 34 inches (865 mm) minimum and 38 inches (965 mm) maximum vertically above stair nosings, ramp surfaces and walking surfaces. Handrails shall be at a consistent height above stair nosings, ramp surfaces and walking surfaces.

505.5 Clearance. Clearance between handrail gripping surface and adjacent surfaces shall be 1½ inches (38 mm) minimum.

505.6 Gripping Surface. Gripping surfaces shall be continuous, without interruption by newel posts, other construction elements, or obstructions.

EXCEPTIONS:

1. Handrail brackets or balusters attached to the bottom surface of the handrail shall not be considered obstructions, provided they comply with the following criteria:
 - a) not more than 20 percent of the handrail length is obstructed,
 - b) horizontal projections beyond the sides of the handrail occur 1½ inches (38 mm) minimum below the bottom of the handrail, and provided that for each ½ inch (13 mm) of additional handrail perimeter dimension above 4 inches (100 mm), the vertical clearance dimension of 1½ inch (38 mm) can be reduced by ⅛ inch (3.2 mm), and
 - c) edges shall be rounded.
2. Where handrails are provided along walking surfaces with slopes not steeper than 1:20, the bottoms of handrail gripping surfaces shall be permitted to be obstructed along their entire length where they are integral to crash rails or bumper guards.

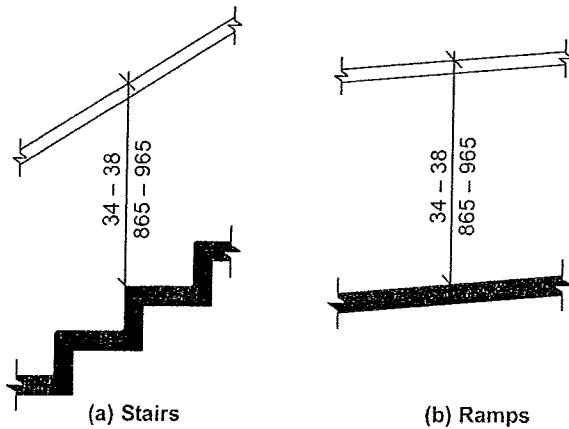


Fig. 505.4
Handrail Height

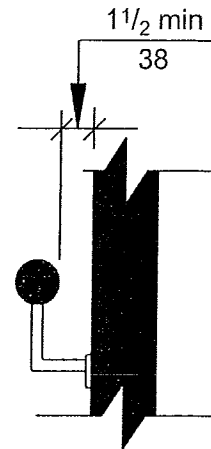


Fig. 505.5
Handrail Clearance

505.7 Cross Section. Handrails shall have a cross section complying with Section 505.7.1 or 505.7.2.

505.7.1 Circular Cross Section. Handrails with a circular cross section shall have an outside diameter of $1\frac{1}{4}$ inches (32 mm) minimum and 2 inches (51 mm) maximum.

505.7.2 Noncircular Cross Sections. Handrails with a noncircular cross section shall have a perimeter dimension of 4 inches (100 mm) minimum and $6\frac{1}{4}$ inches (160 mm) maximum, and a cross-section dimension of $2\frac{1}{4}$ inches (57 mm) maximum.

505.8 Surfaces. Handrails, and any wall or other surfaces adjacent to them, shall be free of any sharp or abrasive elements. Edges shall be rounded.

505.9 Fittings. Handrails shall not rotate within their fittings.

505.10 Handrail Extensions. Handrails shall extend beyond and in the same direction of stair flights and ramp runs in accordance with Section 505.10.

EXCEPTIONS:

1. Continuous handrails at the inside turn of stairs and ramps.
2. Extensions are not required for handrails in aisles serving seating where the handrails are discontinuous to provide access to seating and to permit crossovers within the aisle.

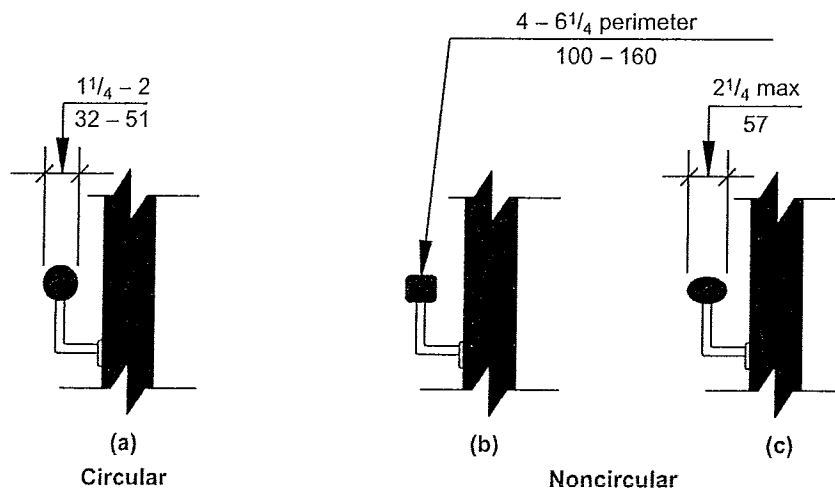


Fig. 505.7
Handrail Cross Section

3. In alterations, full extensions of handrails shall not be required where such extensions would be hazardous due to plan configuration.

505.10.1 Top and Bottom Extension at Ramps.

Ramp handrails shall extend horizontally above the landing 12 inches (305 mm) minimum beyond the top and bottom of ramp runs. Extensions shall return to a wall, guard, or floor, or shall be continuous to the handrail of an adjacent ramp run.

505.10.2 Top Extension at Stairs. At the top of a stair flight, handrails shall extend horizontally above the landing for 12 inches (305 mm) minimum beginning directly above the landing nosing. Extensions

shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent stair flight.

505.10.3 Bottom Extension at Stairs. At the bottom of a stair flight, handrails shall extend at the slope of the stair flight for a horizontal distance equal to one tread depth beyond the bottom tread nosing. Extensions shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent stair flight.

506 Windows

Accessible windows shall have operable parts complying with Section 309.

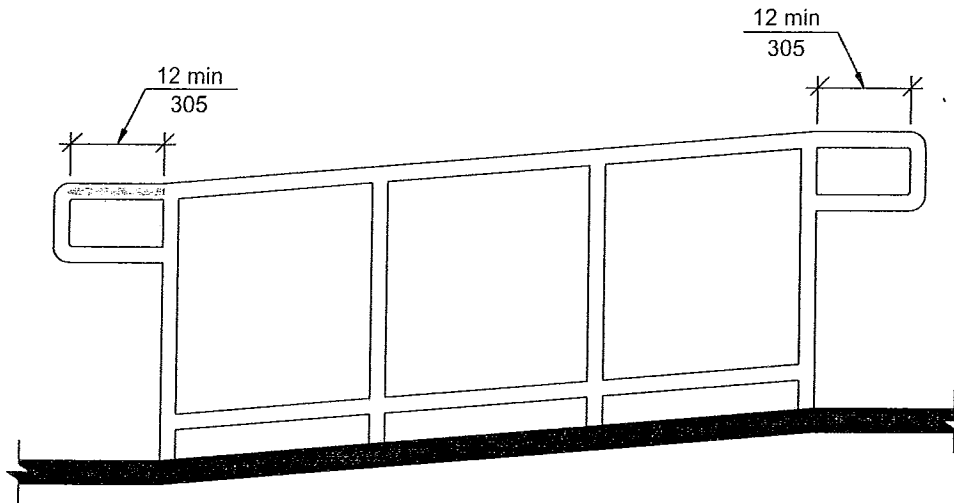


Fig. 505.10.1
Top and Bottom Handrail Extensions at Ramps

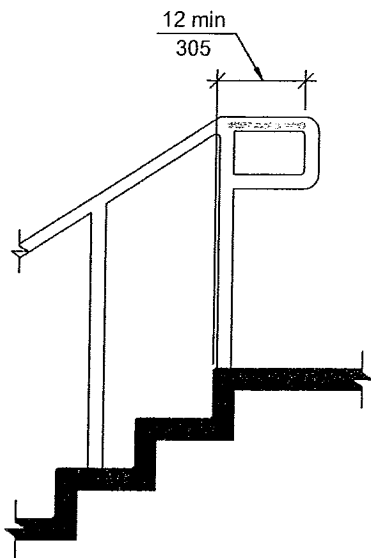


Fig. 505.10.2
Top Handrail Extensions at Stairs

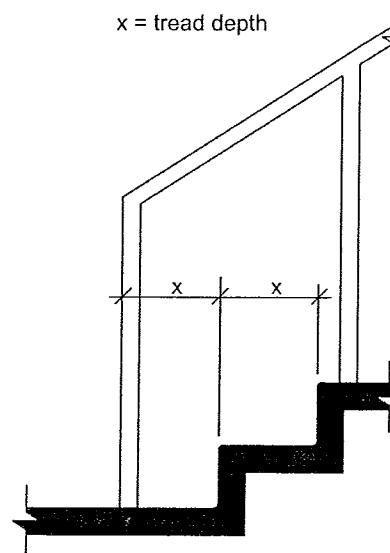


Fig. 505.10.3
Bottom Handrail Extensions at Stairs

404 Doors and Doorways

404.1 General. Doors and doorways that are part of an accessible route shall comply with Section 404.

404.2 Manual Doors. Manual doors and doorways, and manual gates, including ticket gates, shall comply with the requirements of Section 404.2.

EXCEPTION: Doors, doorways, and gates designed to be operated only by security personnel shall not be required to comply with Sections 404.2.6, 404.2.7, and 404.2.8.

404.2.1 Double-Leaf Doors and Gates. At least one of the active leaves of doorways with two leaves shall comply with Sections 404.2.2 and 404.2.3.

404.2.2 Clear Width. Doorways shall have a clear opening width of 32 inches (815 mm) minimum. Clear opening width of doorways with swinging doors shall be measured between the face of door and stop, with the door open 90 degrees. Openings, doors and doorways without doors more than 24 inches (610 mm) in depth shall provide a clear opening width of 36 inches (915 mm) minimum. There shall be no

projections into the clear opening width lower than 34 inches (865 mm) above the floor. Projections into the clear opening width between 34 inches (865 mm) and 80 inches (2030 mm) above the floor shall not exceed 4 inches (100 mm).

EXCEPTIONS:

1. Door closers and door stops shall be permitted to be 78 inches (1980 mm) minimum above the floor.

2. In alterations, a projection of $\frac{5}{8}$ inch (16 mm) maximum into the required clear opening width shall be permitted for the latch side stop.

404.2.3 Maneuvering Clearances at Doors. Minimum maneuvering clearances at doors shall comply with Section 404.2.3 and shall include the full clear opening width of the doorway.

404.2.3.1 Swinging Doors. Swinging doors shall have maneuvering clearances complying with Table 404.2.3.1.

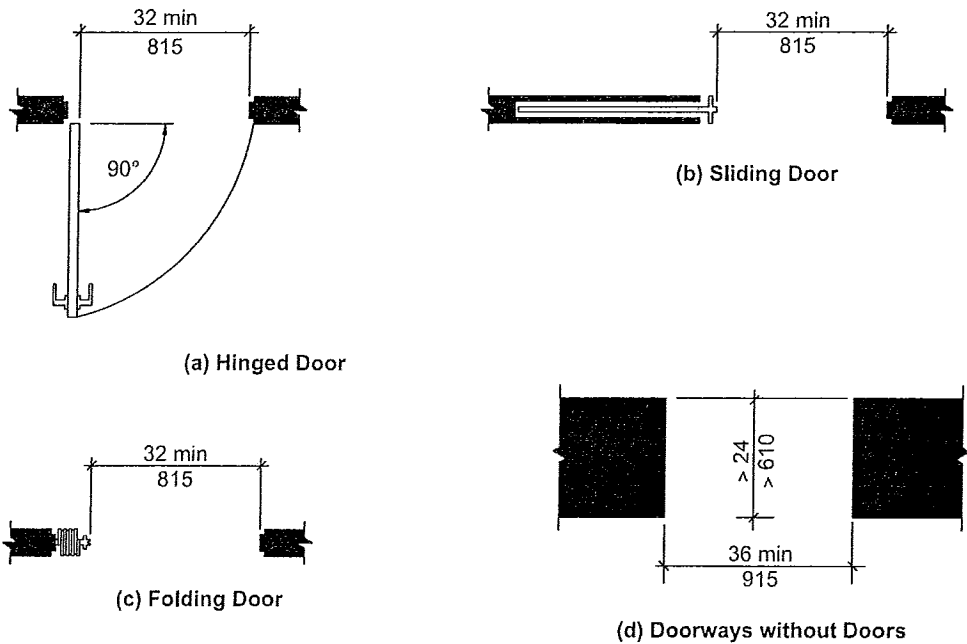


Fig. 404.2.2
Clear Width of Doorways

Table 404.2.3.1—Maneuvering Clearances at Manual Swinging Doors

TYPE OF USE		MINIMUM MANEUVERING CLEARANCES	
Approach Direction	Door Side	Perpendicular to Doorway	Parallel to Doorway (beyond latch unless noted)
From front	Pull	60 inches (1525 mm)	18 inches (455 mm)
From front	Push	48 inches (1220 mm)	0 inches (0 mm) ³
From hinge side	Pull	60 inches (1525 mm)	36 inches (915 mm)
From hinge side	Push	42 inches (1065 mm) ¹	22 inches (560 mm) ^{3&4}
From latch side	Pull	48 inches (1220 mm) ²	24 inches (610 mm)
From latch side	Push	42 inches (1065 mm) ²	24 inches (610 mm)

¹Add 6 inches (150 mm) if closer and latch provided.

²Add 6 inches (150 mm) if closer provided.

³Add 12 inches (305 mm) beyond latch if closer and latch provided.

⁴Beyond hinge side.

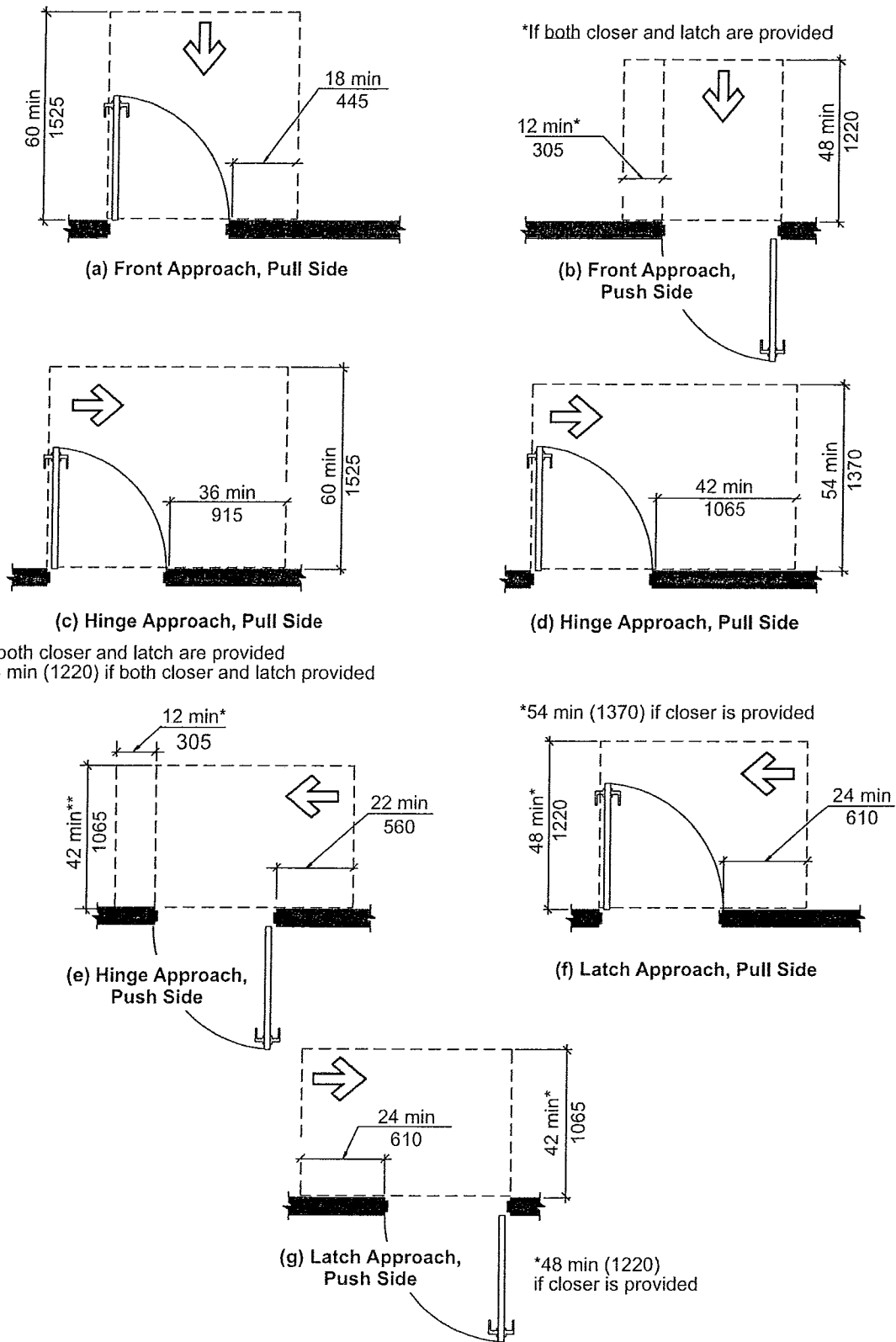


Fig. 404.2.3.1
Maneuvering Clearance at Manual Swinging Doors

404.2.3.2 Sliding and Folding Doors. Sliding doors and folding doors shall have maneuvering clearances complying with Table 404.2.3.2.

404.2.3.3 Doorways without Doors. Doorways without doors that are less than 36 inches (915 mm) in width shall have maneuvering clearances complying with Table 404.2.3.3

404.2.3.4 Recessed Doors. Where any obstruction within 18 inches (455 mm) of the latch side of a doorway projects more than 8 inches (205 mm) beyond the face of the door, measured perpendicular to the face of the door, maneuvering clearances for a forward approach shall be provided.

404.2.3.5 Floor Surface. Floor surface within the maneuvering clearances shall have a slope not steeper than 1:48 and shall comply with Section 302.

404.2.4 Thresholds at Doorways. If provided, thresholds at doorways shall be 3/8 inch (13 mm) maximum in height. Raised thresholds and changes in level at doorways shall comply with Sections 302 and 303.

EXCEPTION: Section 404.2.4 shall not apply to existing thresholds or altered thresholds 3/8 inch (19 mm) maximum in height that have a beveled edge on each side with a maximum slope of 1:2 for the height exceeding 3/8 inch (6.4 mm).

Table 404.2.3.2—Maneuvering Clearances at Sliding and Folding Doors

Approach Direction	MINIMUM MANEUVERING CLEARANCES	
	Perpendicular to Doorway	Parallel to Doorway (beyond stop or latch side unless noted)
From front	48 inches (1220 mm)	0 inches (0 mm)
From nonlatch side	42 inches (1065 mm)	22 inches (560 mm) ¹
From latch side	42 inches (1065 mm)	24 inches (610 mm)

¹Beyond pocket or hinge side.

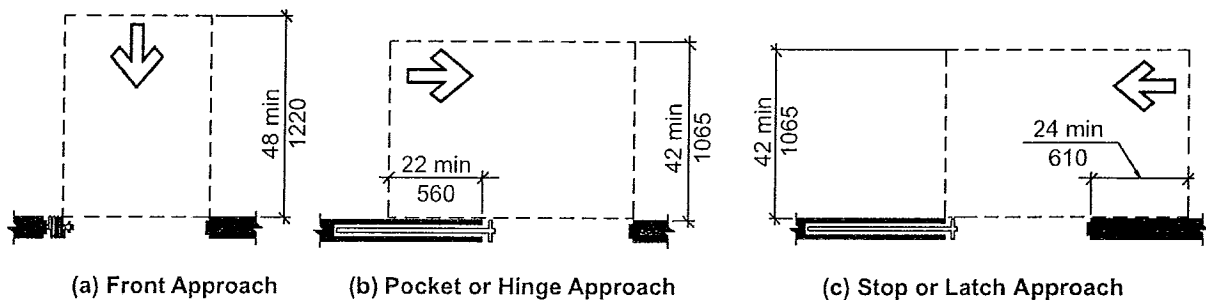


Fig. 404.2.3.2
Maneuvering Clearance at Sliding and Folding Doors

Table 404.2.3.3—Maneuvering Clearances for Doorways without Doors

Approach Direction	MINIMUM MANEUVERING CLEARANCES Perpendicular to Doorway
From front	48 inches (1220 mm)
From side	42 inches (1065 mm)

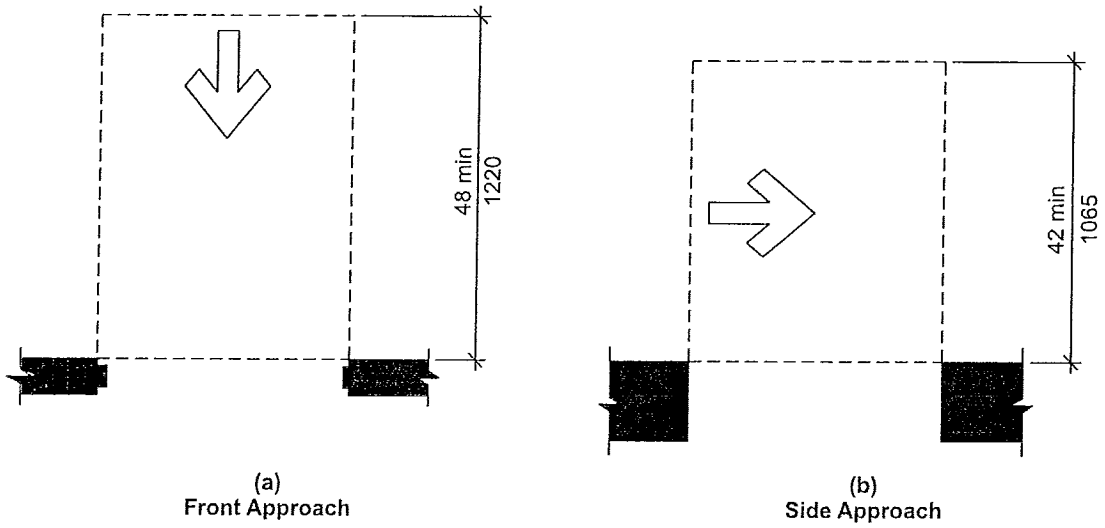


Fig. 404.2.3.3
Maneuvering Clearance at Doorways without Doors

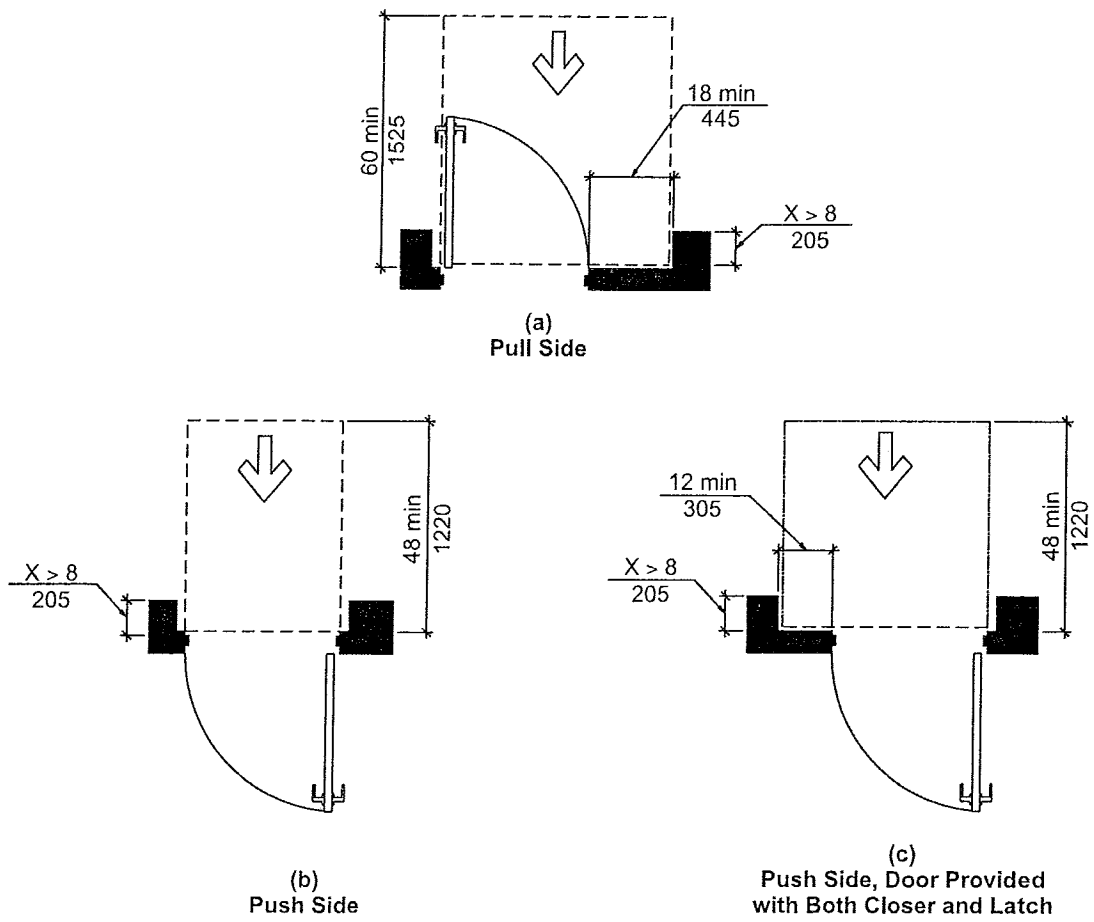


Fig. 404.2.3.4
Maneuvering Clearance at Recessed Doors

404.2.5 Two Doors in Series. Distance between two hinged or pivoted doors in series shall be 48 inches (1220 mm) minimum plus the width of any door swinging into the space. The space between the doors shall provide a turning space complying with Section 304.

404.2.6 Door Hardware. Handles, pulls, latches, locks, and other operable parts on accessible doors shall have a shape that is easy to grasp with one hand and does not

require tight grasping, pinching, or twisting of the wrist to operate. Operable parts of such hardware shall be 34 inches (865 mm) minimum and 48 inches (1220 mm) maximum above the floor. Where sliding doors are in the fully open position, operating hardware shall be exposed and usable from both sides.

EXCEPTION: Locks used only for security purposes and not used for normal operation are permitted in any location.

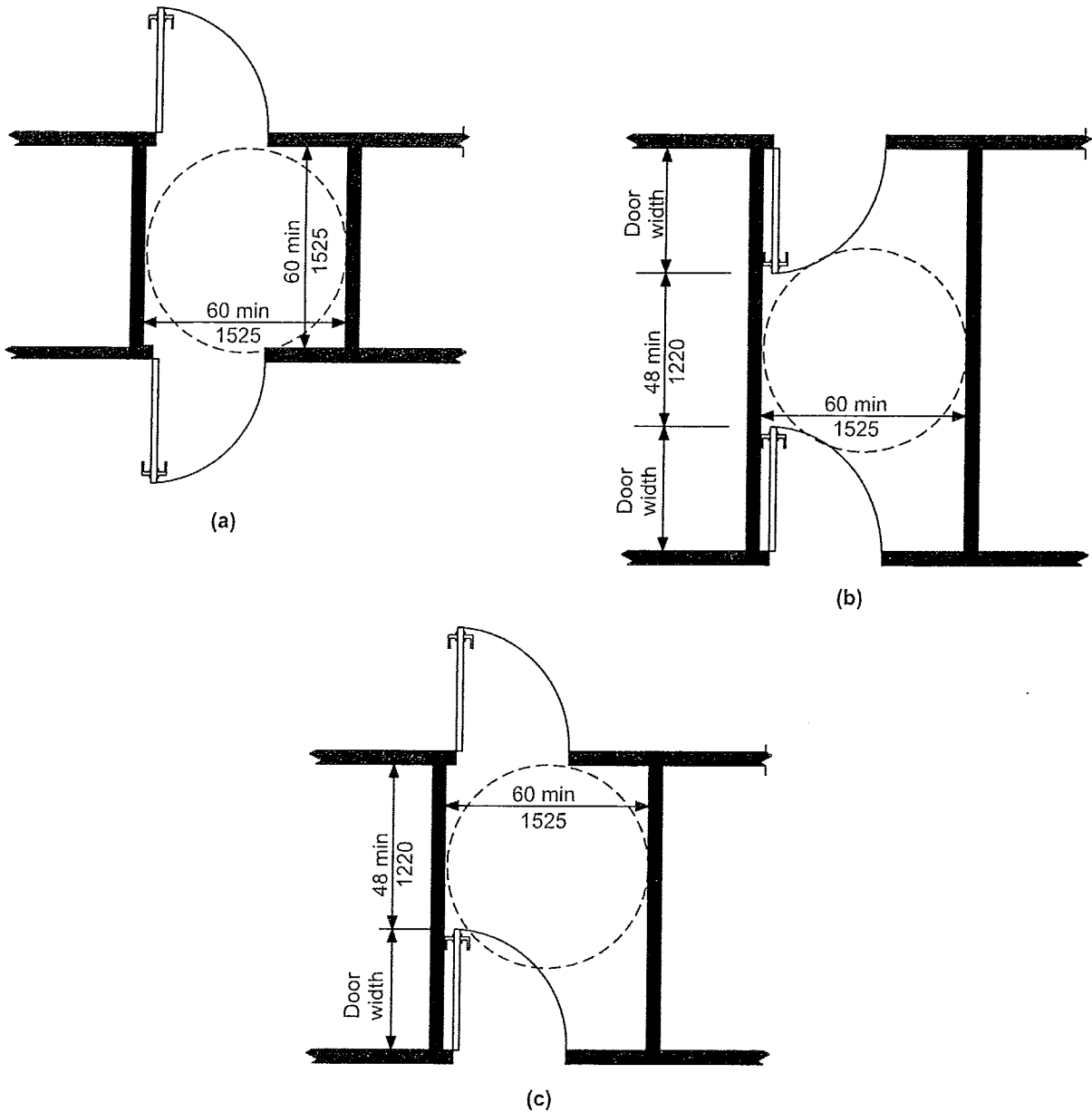


Fig. 404.2.5
Two Doors in a Series

404.2.7 Closing Speed.

404.2.7.1 Door Closers. Door closers shall be adjusted so that from an open position of 90 degrees, the time required to move the door to an open position of 12 degrees shall be 5 seconds minimum.

404.2.7.2 Spring Hinges. Door spring hinges shall be adjusted so that from the open position of 70 degrees, the door shall move to the closed position in 1.5 seconds minimum.

404.2.8 Door-Opening Force. Fire doors shall have the minimum opening force allowable by the appropriate administrative authority. The force for pushing or pulling open doors other than fire doors shall be as follows:

1. Interior hinged door: 5.0 pounds (22.2 N) maximum
2. Sliding or folding door: 5.0 pounds (22.2 N) maximum

These forces do not apply to the force required to retract latch bolts or disengage other devices that hold the door in a closed position.

404.2.9 Door Surface. Door surfaces within 10 inches (255 mm) of the floor, measured vertically, shall be a smooth surface on the push side extending the full width of the door. Parts creating horizontal or vertical joints in such surface shall be within $\frac{1}{16}$ inch (1.6 mm) of the same plane as the other. Cavities created by added kick plates shall be capped.

EXCEPTIONS:

1. Sliding doors.
2. Tempered glass doors without stiles and having a bottom rail or shoe with the top leading edge tapered at no less than 60 degrees from the horizontal shall not be required to meet the 10 inch (255 mm) bottom rail height requirement.
3. Doors that do not extend to within 10 inches (255 mm) of the floor.

404.2.10 Vision Lites. Doors and sidelites adjacent to doors containing one or more glazing panels that permit viewing through the panels shall have the bottom of at least one panel on either the door or an adjacent sidelite 43 inches (1090 mm) maximum above the floor.

EXCEPTION: Vision lites with the lowest part more than 66 inches (1675 mm) above the floor are not required to comply with Section 404.2.10.

404.3 Automatic Doors. Automatic doors and automatic gates shall comply with Section 404.3. Full powered automatic doors shall comply with ANSI/BHMA A156.10 listed in Section 105.2.4. Power-assist and low-energy doors shall comply with ANSI/BHMA A156.19 listed in Section 105.2.3.

EXCEPTION: Doors, doorways, and gates designed to be operated only by security personnel shall not be required to comply with Sections 404.3.2, 404.3.4, and 404.3.5.

404.3.1 Clear Opening Width. Doorways shall have a clear opening width of 32 inches (815 mm) in power-on and power-off mode. The minimum clear opening width for automatic door systems shall be based on the clear opening width provided with all leaves in the open position.

404.3.2 Maneuvering Clearances. Maneuvering clearances at power-assisted doors shall comply with Section 404.2.3.

404.3.3 Thresholds. Thresholds and changes in level at doorways shall comply with Section 404.2.4.

404.3.4 Two Doors in Series. Doors in series shall comply with Section 404.2.5.

404.3.5 Control Switches. Manually operated control switches shall comply with Section 309. The clear floor space adjacent to the control switch shall be located beyond the arc of the door swing.

Chapter 3. Building Blocks

301 General

301.1 Scope. The provisions of Chapter 3 shall apply where required by the scoping provisions adopted by the administrative authority or by Chapters 4 through 10.

302 Floor Surfaces

302.1 General. Floor surfaces shall be stable, firm, and slip resistant, and shall comply with Section 302. Changes in level in floor surfaces shall comply with Section 303.

302.2 Carpet. Carpet or carpet tile shall be securely attached and shall have a firm cushion, pad, or backing or no cushion or pad. Carpet or carpet tile shall have a level loop, textured loop, level cut pile, or level cut/uncut pile texture. The pile shall be $\frac{1}{2}$ inch (13 mm) maximum in height. Exposed edges of carpet shall be fastened to the floor and shall have trim along the entire length of the exposed edge. Carpet edge trim shall comply with Section 303.

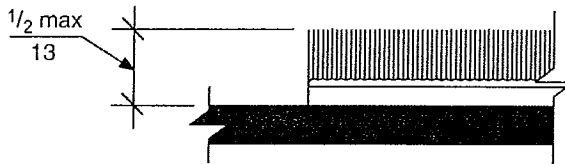


Fig. 302.2
Carpet on Floor Surfaces

302.3 Openings. Openings in floor surfaces shall be of a size that does not permit the passage of a $\frac{1}{2}$ inch (13 mm) diameter sphere, except as allowed in Sections 407.4.3, 408.4.3, 409.4.3, 410.4, and 805.10. Elongated openings shall be placed so that the long dimension is perpendicular to the dominant direction of travel.

303 Changes in Level

303.1 General. Changes in level in floor surfaces shall comply with Section 303.

303.2 Vertical. Changes in level of $\frac{1}{4}$ inch (6.4 mm) maximum in height shall be permitted to be vertical.

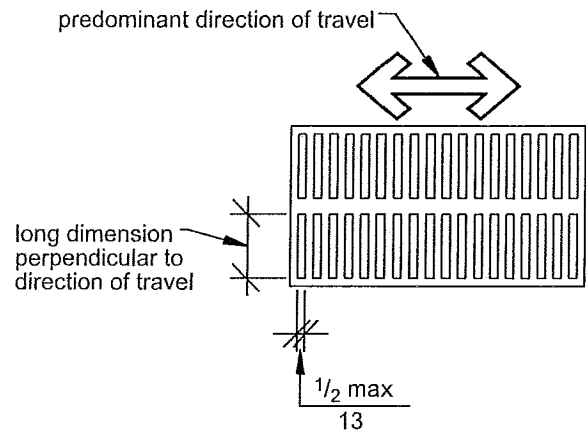


Fig. 302.3
Openings in Floor Surfaces



Fig. 303.2
Carpet on Floor Surfaces

303.3 Beveled. Changes in level greater than $\frac{1}{4}$ inch (6.4 mm) in height and not more than $\frac{1}{2}$ inch (13 mm) maximum in height shall be beveled with a slope not steeper than 1:2.

Changes in level greater than $\frac{1}{2}$ inch (13 mm) in height shall be ramped and shall comply with Section 405 or 406.

304 Turning Space

304.1 General. A turning space shall comply with Section 304.

304.2 Floor Surface. Floor surfaces of a turning space shall have a slope not steeper than 1:48 and shall comply with Section 302.

304.3 Size. Turning spaces shall comply with Section 304.3.1 or 304.3.2.

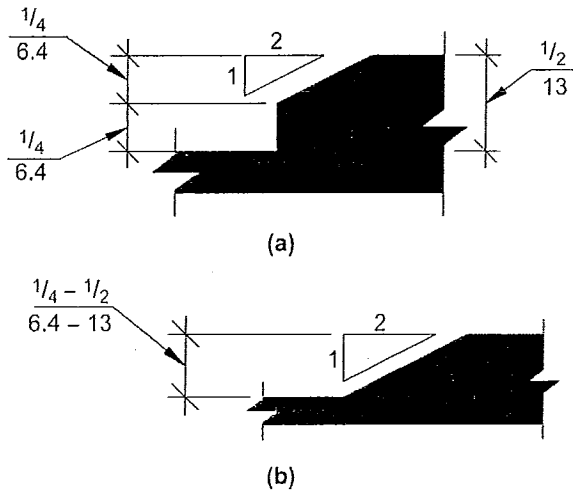
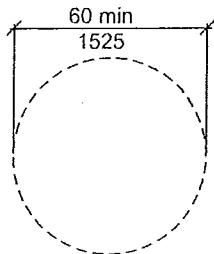
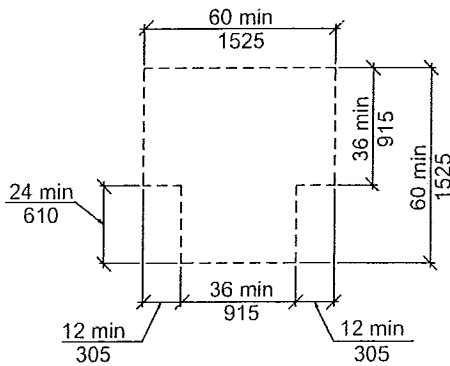


Fig. 303.3
Beveled Changes in Level



(a) Circular



(b) T-shaped

Fig. 304.3
Size of Turning Space

304.3.2 T-Shaped Space. The turning space shall be a T-shaped space within a 60-inch (1525 mm) minimum square, with arms and base 36 inches (915 mm) minimum in width. Each arm of the T shall be clear of obstructions 12 inches (305 mm) minimum in each direction, and the base shall be clear of obstructions 24 inches (610 mm) minimum. The turning space shall be permitted to include knee and toe clearance complying with Section 306 only at the end of either the base or one arm.

304.4 Door Swing. Unless otherwise specified, doors shall be permitted to swing into turning spaces.

304.3.1 Circular Space. The turning space shall be a circular space with a 60-inch (1525 mm) minimum diameter. The turning space shall be permitted to include knee and toe clearance complying with Section 306.