

2010 ADA Standards for Accessible Design for Public Accommodations and Commercial Facilities: Title III

CHAPTER 3: BUILDING BLOCKS

301.1 Scope. The provisions of Chapter 3 shall apply where required by Chapter 2 or where referenced by a requirement in this document.

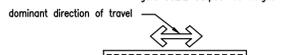
302 Floor or Ground Surfaces

302.1 General. Floor and ground surfaces shall be stable, firm, and slip resistant and shall comply with 302. EXCEPTIONS: 1. Within animal containment areas, floor and ground surfaces shall not be required to be stable, firm, and slip resistant. 2. Areas of sport activity shall not be required to comply with 302.

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. Pile height shall be 1/2 inch (13 mm) maximum. Exposed edges of carpet shall be fastened to floor surfaces and shall have trim on the entire length of the exposed edge. Carpet edge trim shall comply with 303.3.

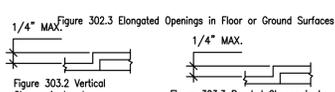


302.3 Openings. Openings in floor or ground surfaces shall not allow passage of a sphere more than 1/2 inch (13 mm) diameter except as allowed in 407.4.3, 408.4.3, 410.4, 810.5.3 and 810.10. Elongated openings shall be placed so that the long dimension is perpendicular to the dominant direction of travel.



302.4 Ramps. Changes in level greater than 1/2 inch (13 mm) high shall be ramped, and shall comply with 405 or 406.

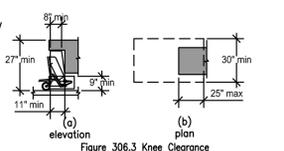
302.5 Beveled. Changes in level between 1/4 inch (6.4 mm) high minimum and 1/2 inch (13 mm) high maximum shall be beveled with a slope not steeper than 1:2.



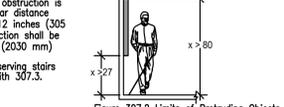
302.6 Forward Reach. Where a forward reach is unobstructed, the high forward reach shall be 48 inches (1220 mm) maximum and the low forward reach shall be 15 inches (380 mm) minimum above the finish floor or ground.

307.1 General. Protruding objects shall comply with 307.

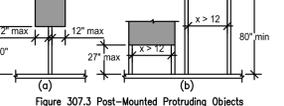
307.2 Protrusion Limits. Objects with leading edges more than 27 inches (685 mm) and not more than 80 inches (2030 mm) above the finish floor or ground shall protrude 4 inches (100 mm) maximum horizontally into the circulation path. EXCEPTION: Handrails shall be permitted to protrude 4 1/2 inches (115 mm) maximum.



307.3 Post-Mounted Objects. Free-standing objects mounted on posts or pylons shall overhang circulation paths 12 inches (305 mm) maximum when located 27 inches (685 mm) minimum and 80 inches (2030 mm) maximum above the finish floor or ground. Where a sign or other obstruction is mounted between posts or pylons and the clear distance between the posts or pylons is greater than 12 inches (305 mm), the lowest edge of each sign or obstruction shall be 27 inches (685 mm) maximum or ground. EXCEPTION: The sloping portions of handrails serving stairs and ramps shall not be required to comply with 307.3.



307.4 Vertical Clearance. Vertical clearance shall be 80 inches (2030 mm) high minimum. Guards or other barriers shall be provided where the vertical clearance is less than 80 inches (2030 mm) high. The leading edge of such guard or barrier shall be located 27 inches (685 mm) maximum above the finish floor or ground. EXCEPTION: Door closers and door stops shall be permitted to be 78 inches (1980 mm) minimum above the finish floor or ground.



307.5 Required Clear Width. Protruding objects shall not reduce the clear width required for accessible routes.

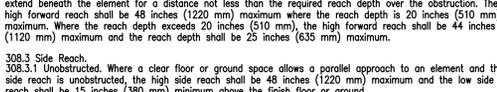
308 Reach Ranges. 308.1 General. Reach ranges shall comply with 308. 308.2 Forward Reach. 308.2.1 Unobstructed. Where a forward reach is unobstructed, the high forward reach shall be 48 inches (1220 mm) maximum and the low forward reach shall be 15 inches (380 mm) minimum above the finish floor or ground.



308.2.2 Obstructed High Forward Reach. Where a high forward reach is over an obstruction, the clear floor space shall extend beneath the element for a distance not less than the required reach depth over the obstruction. The high forward reach shall be 48 inches (1220 mm) maximum where the reach depth is 20 inches (510 mm) maximum. Where the reach depth exceeds 20 inches (510 mm), the high forward reach shall be 44 inches (1120 mm) maximum and the reach depth shall be 25 inches (635 mm) maximum.



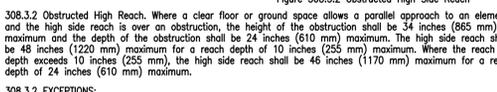
308.3 Side Reach. 308.3.1 Unobstructed. Where a clear floor or ground space allows a parallel approach to an element and the side reach is unobstructed, the high side reach shall be 48 inches (1220 mm) maximum and the low side reach shall be 15 inches (380 mm) minimum above the finish floor or ground. EXCEPTIONS: 1. An obstruction shall be permitted between the clear floor or ground space and the element where the depth of the obstruction is 10 inches (255 mm) maximum. 2. Operable parts of fuel dispensers shall be permitted to be 54 inches (1370 mm) maximum measured from the surface of the vehicular way where fuel dispensers are installed on existing curbs.



308.3.2 Obstructed High Side Reach. Where a clear floor or ground space allows a parallel approach to an element and the high side reach is over an obstruction, the height of the obstruction shall be 34 inches (865 mm) maximum and the depth of the obstruction shall be 24 inches (610 mm) maximum. The high side reach shall be 48 inches (1220 mm) maximum where the reach depth is 10 inches (255 mm) maximum. Where the reach depth exceeds 10 inches (255 mm), the high side reach shall be 46 inches (1170 mm) maximum for a reach depth of 24 inches (610 mm) maximum.



308.3.3 Obstructed Low Side Reach. Where a clear floor or ground space allows a parallel approach to an element and the low side reach is over an obstruction, the height of the obstruction shall be 34 inches (865 mm) maximum and the depth of the obstruction shall be 24 inches (610 mm) maximum. The low side reach shall be 15 inches (380 mm) maximum where the reach depth is 10 inches (255 mm) maximum. Where the reach depth exceeds 10 inches (255 mm), the low side reach shall be 13 inches (330 mm) maximum for a reach depth of 24 inches (610 mm) maximum.



309 Operable Parts. 309.1 General. Operable parts shall comply with 309. 309.2 Clear Floor Space. A clear floor or ground space complying with 305 shall be provided. 309.3 Height. Operable parts shall be placed within one or more of the reach ranges specified in 308.

309.4 Operation. Operable parts shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate operable parts shall be 5 pounds (22.2 N) maximum. EXCEPTION: Gas pump nozzles shall not be required to provide operable parts that have an activating force of 5 pounds (22.2 N) maximum.

309.5 Fuel Dispensers. Fuel dispensers shall be permitted to be 54 inches (1370 mm) maximum measured from the surface of the vehicular way where fuel dispensers are installed on existing curbs.

CHAPTER 4: ACCESSIBLE ROUTES

401 General. 401.1 Scope. The provisions of Chapter 4 shall apply where required by Chapter 2 or where referenced by a requirement in this document. 402 Accessible Routes 402.1 General. Accessible routes shall comply with 402.

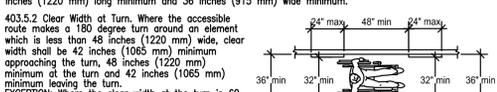
402.2 Components. Accessible routes shall consist of one or more of the following components: walking surfaces with a running slope not steeper than 1:20, doorways, ramps, curbs, ramps excluding the flared sides, elevators, and platform lifts. All components of an accessible route shall comply with the applicable requirements of Chapter 4.

403 Walking Surfaces 403.1 General. Walking surfaces that are a part of an accessible route shall comply with 403. 403.2 Floor or Ground Surface. Floor or ground surfaces shall comply with 302. 403.3 Slope. The running slope of walking surfaces shall not be steeper than 1:20. The cross slope of walking surfaces shall not be steeper than 1:48.

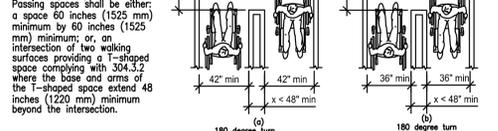
403.4 Changes in Level. Changes in level shall comply with 303. 403.5 Clearances. Walking surfaces shall provide clearances complying with 403.5. EXCEPTION: Within employee work areas, clearances on common use circulation paths shall be permitted to be decreased by work area equipment provided that the decrease is essential to the function of the work being performed.

403.5.1 Clear Width. Except as provided in 403.5.2 and 403.5.3, the clear width of walking surfaces shall be 36 inches (915 mm) minimum. EXCEPTION: The clear width shall be permitted to be reduced to 32 inches (815 mm) minimum for a length of 24 inches (610 mm) long minimum provided that reduced width segments are separated by segments that are 48 inches (1220 mm) long minimum and 36 inches (915 mm) wide minimum.

403.5.2 Clear Width at Turn. Where the accessible route makes a 180 degree turn around an element which is less than 48 inches (1220 mm) wide, the clear width shall be 42 inches (1065 mm) minimum approaching the turn, 48 inches (1220 mm) minimum at the turn, and 42 inches (1065 mm) minimum leaving the turn. EXCEPTION: Where the clear width at the turn is 60 inches (1520 mm) minimum compliance with 403.5.2 shall not be required.



403.5.3 Passing Spaces. An accessible route with a clear width less than 60 inches (1520 mm) shall provide passing spaces of intervals of 200 feet (61 m) maximum. Passing spaces shall be either: a space 60 inches (1525 mm) minimum by 80 inches (2030 mm) minimum; or, a T-shaped space extending 48 inches (1220 mm) minimum beyond the intersection.

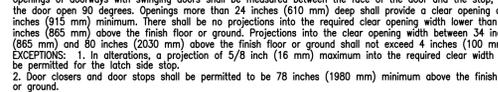


403.6 Handrails. Where handrails are provided along walking surfaces with running slopes not steeper than 1:20 they shall comply with 505.

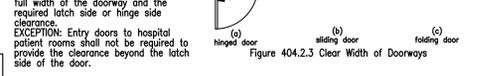
404 Doors, Doorways, and Gates 404.1 General. Doors, doorways, and gates that are part of an accessible route shall comply with 404. EXCEPTION: Doors, doorways, and gates designed to be operated only by security personnel shall not be required to comply with 404.2.1, 404.2.8, 404.2.9, 404.3.2 and 404.3.4 through 404.3.7.

404.2 Manual Doors, Doorways, and Manual Gates. Manual doors and doorways and manual gates intended for open position shall comply with 404.2. 404.2.1 Revolving Doors, Gates, and Turnstiles. Revolving doors, revolving gates, and turnstiles shall be part of an accessible route. 404.2.2 Double-Leaf Doors and Gates. At least one of the active leaves of doorways with two leaves shall comply with 404.2.3 and 404.2.4.

404.2.3 Clear Width. Door openings shall provide a clear width of 32 inches (815 mm) minimum. Clear openings of doorways with swinging doors shall be measured between the face of the door and the stop, with the door open 90 degrees. Openings more than 24 inches (610 mm) deep shall provide a clear opening of 36 inches (915 mm) minimum. There shall be no projections into the required clear opening width lower than 34 inches (865 mm) above the finish floor or ground. Projections into the clear opening width between 34 inches (865 mm) and 80 inches (2030 mm) above the finish floor or ground shall not exceed 4 inches (100 mm). EXCEPTIONS: 1. In alterations, a projection of 5/8 inch (16 mm) maximum into the required clear width shall be permitted for the latch side stop. 2. Door closers and door stops shall be permitted to be 78 inches (1980 mm) minimum above the finish floor or ground.

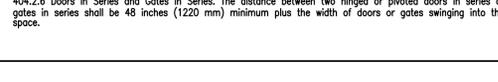
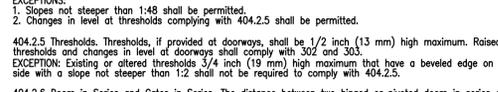
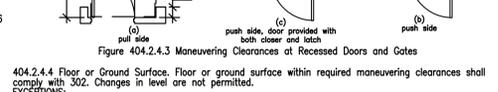
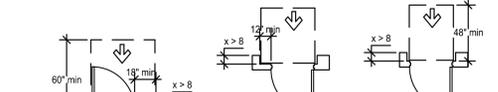
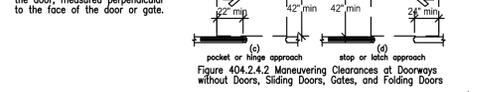
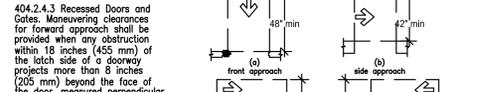
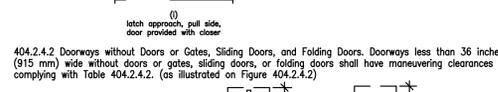
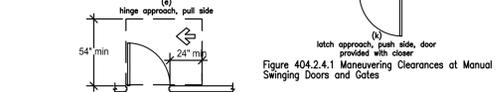
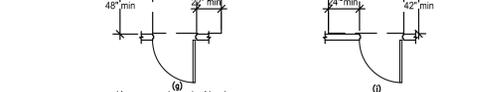
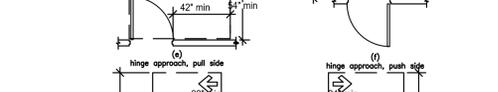
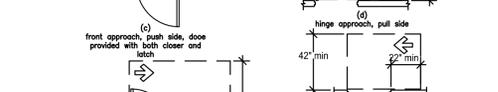


404.2.4 Maneuvering Clearances. Minimum maneuvering clearances at doors and gates shall comply with 404.2.4.1. Maneuvering clearances shall extend the full width of the doorway and the required latch side or hinge side clearance. EXCEPTION: Entry doors to hospital patient rooms shall not be required to provide the clearance beyond the latch side of the door.

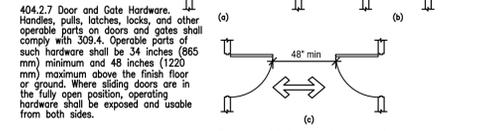


404.2.4.1 Swinging Doors and Gates. Swinging doors and gates shall have maneuvering clearances complying with Table 404.2.4.1. (as illustrated on Figures 404.2.4.1)

Forward or Side Reach	High (maximum)	Low (minimum)
Ages 3 and 4	36 in (915 mm)	20 in (510 mm)
Ages 5 through 8	40 in (1015 mm)	18 in (455 mm)
Ages 9 through 12	44 in (1120 mm)	16 in (405 mm)



404.2.7 Door and Gate Hardware. Handles, pull handles, latches, and other operable parts on doors and gates shall comply with 308.4. Operable parts of such hardware shall be 34 inches (865 mm) minimum and 48 inches (1220 mm) maximum above the finish floor or ground. Where sliding doors are in the fully open position, operable hardware shall be exposed and usable from both sides.



404.2.8 Closing Speed. Door and gate closing speed shall comply with 404.2.8. 404.2.8.1 Door Closers and Gate Closers. Door closers and gate closers shall be adjusted so that from an open position of 90 degrees, the time required to move the door to a position of 12 degrees from the latch is 5 seconds minimum. 404.2.8.2 Spring Hinges. Door and gate spring hinges shall be adjusted so that from the open position of 70 degrees, the door or gate shall move to the closed position in 1.5 seconds minimum.

404.2.9 Door and Gate Opening Force. Fire doors shall have a minimum opening force allowable by the appropriate administrative authority. The force for pushing or pulling open a door or gate other than fire doors shall be as follows: 1. Interior hinged doors and gates: 5 pounds (22.2 N) maximum. 2. Sliding or folding doors: 5 pounds (22.2 N) maximum. EXCEPTIONS: 1. In alterations, a force required to retract latch bolts or disengage other devices that hold the door or gate in a closed position. 2. Doors and gates that do not extend to within 10 inches (255 mm) of the finish floor or ground shall not be required to comply with 404.2.10. 3. Existing doors and gates without smooth surfaces within 10 inches (255 mm) of the finish floor or ground shall not be required to provide smooth surfaces complying with 404.2.10 provided that if added kick plates are installed, cavities created by such kick plates are capped.

404.2.11 Vision Lights. Doors, gates, and side lights adjacent to doors or gates, containing one or more glazing panels that permit viewing through the panels shall have the bottom of at least one glazed panel located 43 inches (1090 mm) maximum above the finish floor. EXCEPTION: Vision lights shall have the lowest part more than 66 inches (1675 mm) from the finish floor or ground shall not be required to comply with 404.2.11.

404.3 Automatic and Power-Assisted Doors and Gates. Automatic doors and automatic gates shall comply with 404.3. Full-powered automatic doors shall comply with ANSI/BHMA A156.10 (incorporated by reference, see "Referenced Standards" in Chapter 1). Low-energy and power-assisted doors shall comply with ANSI/BHMA A156.19 (1997 or 2002 edition) (incorporated by reference, see "Referenced Standards" in Chapter 1).

404.3.1 Clear Width. Doorways shall provide a clear opening of 32 inches (815 mm) minimum in power-on and power-off mode. With automatic door systems in a doorway shall be based on the clear opening provided by all leaves in the open position. 404.3.2 Maneuvering Clearances. Clearances at power-assisted doors and gates shall comply with 404.2.4. Clearances at automatic doors and gates without standby power and serving an accessible means of egress shall comply with 404.2.4.

404.3.3 Thresholds. Thresholds and changes in level at doorways shall comply with 404.2.5. 404.3.4 Doors in Series and Gates in Series. Doors in series and gates in series shall comply with 404.2.6. 404.3.5 Controls. Manually operated controls shall comply with 309. The clear floor space adjacent to the control shall be located beyond the arc of the door swing.

404.3.6 Break Out Opening. Where doors and gates without standby power are a part of a means of egress, the clear break out opening at swinging or sliding doors and gates shall be 32 inches (815 mm) minimum when operated in emergency mode. EXCEPTION: Where manual swinging doors and gates comply with 404.2 and serve the same means of egress compliance with 404.3.6 shall not be required.

404.3.7 Revolving Doors, Revolving Gates, and Turnstiles. Revolving doors, revolving gates, and turnstiles shall be part of an accessible route. 405 Ramps 405.1 General. Ramps on accessible routes shall comply with 405. EXCEPTION: In assembly areas, aisle ramps adjacent to seating and not serving elements required to be on an accessible route shall not be required to comply with 405.

405.2 Slope. Ramps shall have a running slope not steeper than 1:12. EXCEPTION: In existing sites, buildings, and facilities, ramps shall be permitted to have running slopes steeper than 1:12 complying with Table 405.2 where such slopes are necessary due to space limitations.

405.3 Landings. Ramps shall have landings at the top and the bottom of each ramp run. Landings shall comply with 405.7. 405.3.1 Slope. Landings shall comply with 302. Changes in level are not permitted. EXCEPTION: Slopes not steeper than 1:48 shall be permitted. 405.3.2 Length. The landing clear width shall be at least as wide as the widest ramp run leading to the landing. 405.3.3 Width. The landing clear length shall be 60 inches (1525 mm) long minimum. 405.3.4 Change in Direction. Ramps that change direction on between runs at landings shall have a clear landing 60 inches (1525 mm) minimum by 60 inches (1525 mm) minimum. 405.3.5 Doorways. Where doorways are located adjacent to a ramp landing, maneuvering clearances required by 404.2.4 and 404.3.2 shall be permitted to overlap the required landing area.

405.8 Handrails. Ramp runs with a rise greater than 6 inches (150 mm) shall have handrails complying with 505. EXCEPTION: Within employee work areas, handrails shall not be required where ramps that are a part of common use circulation paths are designed to permit the installation of handrails complying with 505. Ramps not subject to the exception in 405.8 shall be designed to maintain a 36 inch (915 mm) minimum clear width when handrails are installed.

405.9 Edge Protection. Edge protection complying with 405.9.1 or 405.9.2 shall be provided on each side of ramp runs and at each side of ramp landings. EXCEPTION: Edge protection shall not be required on ramps that are not required to have handrails and have sides complying with 405.3. 2. Edge protection shall not be required on the sides of ramp landings serving an adjoining ramp run or stairway. EXCEPTION: Edge protection shall not be required on the 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 specified in 405.7.

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

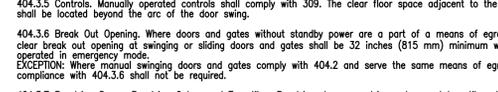


Table 405.2 Maximum Ramp Slope and Rise for Existing Sites, Buildings, and Facilities

Slope (A slope steeper than 1:8 is prohibited.)	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)

405.4 Floor or Ground Surfaces. Floor or ground surfaces of ramp runs shall comply with 302. Changes in level other than the running slope and cross slope are not permitted on ramp runs. 405.5 Clear Width. The clear width of a ramp run and, where handrails are provided, the clear width between handrails shall be 36 inches (915 mm) minimum. EXCEPTION: Within employee work areas, the required clear width of ramps that are a part of common use circulation paths shall be permitted to be decreased by work area equipment provided that the decrease is essential to the function of the work being performed.

405.6 Rise. The rise for any ramp run shall be 30 inches (760 mm) maximum. 405.7 Landings. Ramps shall have landings at the top and the bottom of each ramp run. Landings shall comply with 405.7. 405.7.1 Slope. Landings shall comply with 302. Changes in level are not permitted. EXCEPTION: Slopes not steeper than 1:48 shall be permitted. 405.7.2 Length. The landing clear width shall be at least as wide as the widest ramp run leading to the landing. 405.7.3 Width. The landing clear length shall be 60 inches (1525 mm) long minimum. 405.7.4 Change in Direction. Ramps that change direction on between runs at landings shall have a clear landing 60 inches (1525 mm) minimum by 60 inches (1525 mm) minimum. 405.7.5 Doorways. Where doorways are located adjacent to a ramp landing, maneuvering clearances required by 404.2.4 and 404.3.2 shall be permitted to overlap the required landing area.

405.8 Handrails. Ramp runs with a rise greater than 6 inches (150 mm) shall have handrails complying with 505. EXCEPTION: Within employee work areas, handrails shall not be required where ramps that are a part of common use circulation paths are designed to permit the installation of handrails complying with 505. Ramps not subject to the exception in 405.8 shall be designed to maintain a 36 inch (915 mm) minimum clear width when handrails are installed.

405.9 Edge Protection. Edge protection complying with 405.9.1 or 405.9.2 shall be provided on each side of ramp runs and at each side of ramp landings. EXCEPTION: Edge protection shall not be required on ramps that are not required to have handrails and have sides complying with 405.3. 2. Edge protection shall not be required on the sides of ramp landings serving an adjoining ramp run or stairway. EXCEPTION: Edge protection shall not be required on the 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 specified in 405.7.

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

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 finish floor or ground surface.

405.10 Wet Conditions. Landings subject to wet conditions shall be designed to prevent the accumulation of water. 406 Curbs 406.1 General. Curbs on accessible routes shall comply with 406.2 through 406.5, and 405.10. 406.2 Counter Slope. Counter slopes of adjoining gutters and roof 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 Curbs Ramps. Where provided, curb ramp flares shall not be steeper than 1:10. 406.4 Landings. Landings shall be provided at the tops of curb ramps. The landing clear width shall be at least as wide as the curb ramp, and the landing clear length shall be 60 inches (1525 mm) minimum. The landing clear width shall be at least as wide as the curb ramp, and the landing clear length shall be 60 inches (1525 mm) minimum. EXCEPTION: In alterations, where there is no landing at the top of the curb ramp, curb ramp flares shall be provided and shall not be steeper than 1:12.

406.5 Location. Curb ramps and the flared sides of curb ramps shall be located so that they do not project into vehicular traffic lanes, parking spaces, or parking access aisles. Curb ramps on marked crossings shall be contained within the markings, excluding dry flared sides. 406.6 Diagonal or Corner Type Curb Ramps. Diagonal or corner type curb ramps with flared sides or other well-defined edges shall have the edges parallel to the direction of pedestrian flow. The bottom of diagonal curb ramps shall have a clear space 48 inches (1220 mm) wide minimum 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) long minimum located on each side of the curb ramp and within the marked crossing. 406.7 Islands. Raised islands in crossings shall be cut through level with the street and have curb ramps at both sides. Each curb ramp shall have a level area 48 inches (1220 mm) long minimum by 36 inches (915 mm) wide minimum at the top of the curb ramp in the part of the island intersected by the crossings. Each 48 inch (1220 mm) minimum by 36 inch (915 mm) minimum area shall be oriented so that the 48 inch (1220 mm) minimum length is in the direction of the running slope of the curb ramp. The 36 inch (915 mm) minimum area shall be 36 inch (915 mm) minimum areas and the accessible route shall be permitted to overlap.

CHAPTER 5: GENERAL SITE AND BUILDING ELEMENTS 501 General 501.1 Scope. The provisions of Chapter 5 shall apply where required by Chapter 2 or where referenced by a requirement in this document. 502 Parking Spaces 502.1 General. Car and van parking spaces shall comply with 502. Where parking spaces are marked with lines, width measurements of parking spaces and access aisles shall be made from the centerline of the marking. EXCEPTION: Where parking spaces or access aisles are not adjacent to another parking space or access aisle, measurements shall be permitted to include the full width of the line defining the parking space or access aisle. 502.2 Vehicle Spaces. Car parking spaces shall be 96 inches (2440 mm) wide minimum and van parking spaces shall be 132 inches (3350 mm) wide minimum, shall be marked to define the width, and shall have an adjacent access aisle complying with 502.3. EXCEPTION: Van parking spaces shall be permitted to be 96 inches (2440 mm) wide minimum where the access aisle is 96 inches (2440 mm) wide minimum. 502.3 Access Aisle. Access aisles serving parking spaces shall comply with 502.3. Access aisles shall adjoin an accessible route. Access aisles shall be permitted to share a common access aisle. 502.3.1 Width. Access aisles serving car and van parking spaces shall be 60 inches (1525 mm) wide minimum. 502.3.2 Length. Access aisles shall extend the full length of the parking spaces they serve. 502.3.3 Marking. Access aisles shall be marked so as to discourage parking in them. 502.3.4 Location. Access aisles shall not overlap the vehicular way. Access aisles shall be permitted to be placed on either side of the parking space except for angled van parking spaces which shall have access aisles located on the passenger side of the parking spaces. 502.4 Floor or Ground Surfaces. Parking spaces and access aisles serving them shall comply with 302. Access aisles shall be at the same level as the parking spaces they serve. Changes in level are not permitted. EXCEPTION: Slopes not steeper than 1:48 shall be permitted. 502.5 Vertical Clearance. Parking spaces for vans and access aisles and vehicular routes serving them shall provide a vertical clearance of 98 inches (2490 mm) minimum. 502.6 Identification. Parking space identification signs shall include the International Symbol of Accessibility complying with 703.7.2.1. Signs identifying van parking spaces shall contain the designation "van accessible." Signs shall be 60 inches (1525 mm) minimum above the finish floor or ground surface measured to the bottom of the sign. 502.7 Relationship to Accessible Routes. Parking spaces and access aisles shall be designed so that cars and vans, when parked, cannot obstruct the required clear width of adjacent accessible routes. 503 Passenger Loading Zones 503.1 General. Passenger loading zones shall comply with 503. 503.2 Vehicle Pull-Up Space. Passenger loading zones shall provide a vehicular pull-up space 96 inches (2440 mm) wide minimum and 20 feet (6100 mm) long minimum. 503.3 Access Aisle. Passenger loading zones shall provide access