

Appendix C

California Building Codes

SECTION 1114B ACCESSIBLE ROUTE OF TRAVEL

1114B.1.2 Accessible route of travel. When a building, or portion of a building, is required to be accessible or adaptable, an accessible route of travel complying with 1102B, 1114B, 1124B, 1133B.3, 1133B.5, 1133B.7, and 1133B.8.6 shall be provided to all portions of the building, to accessible building entrances and between the building and the public way. Except within an individual dwelling unit, an accessible route of travel shall not pass through kitchens, storage rooms, restrooms, closets or other spaces used for similar purposes. At least one accessible route within the boundary of the site shall be provided from public transportation stops, accessible parking and accessible passenger loading zones, and public streets or sidewalks, to the accessible building entrance they serve. The accessible route shall, to the maximum extent feasible, coincide with the route for the general public. At least one accessible route shall connect accessible buildings, facilities, elements and spaces that are on the same site. At least one accessible route shall connect accessible building or facility entrances with all accessible spaces and elements and with all accessible dwelling units within the building or facility. An accessible route shall connect at least one accessible entrance of each accessible dwelling unit with those exterior and interior spaces and facilities that serve the accessible dwelling unit.

Where more than one route of travel is provided, all routes shall be accessible.

Exception: Where an elevator is provided for vertical access, only one elevator is required. Where more than one elevator is provided, all elevators shall be accessible. See Section 1114B.1.1 for a list of code sections applicable to accessible route of travel.

1114B.1.3 Primary entry access. All entrances and all exterior ground-level exits shall be accessible in compliance with Section 1133B.1.1.

1114B.1.4 Signs. See Section 1117B.5.

1114B.1.5 Adaptable dwelling units. See Section 1111B.

1114B.2 Egress and areas of refuge.

1114B.2.1 General. In buildings or facilities or portions of buildings or facilities required to be accessible, accessible means of egress shall be provided as required by Chapter 10, Section 1007.

SECTION 1115B TOILET FACILITIES (SANITARY FACILITIES)

1115B.1 General. Bathing and toilet facilities that serve buildings, facilities or portions of buildings or facilities that are required by these standards to be accessible to persons with disabilities, shall be on an accessible route and shall conform to the following requirements. The accessible fixtures and controls required in this section shall be on an accessible route. An unobstructed turning space complying with Section 1115B.3.1, Item 1 or 1115B.3.2, Item 1, as applicable, shall be provided within an accessible toilet facility. The clear floor spaces at fixtures and controls, the accessible route, and the turning space may overlap. See Section 1111B.4.6 and Chapter 11A for bathrooms in residential occupancies.

Exception: In existing buildings or facilities, when the enforcing agency determines that compliance with any building standard under this section would create an unreasonable hardship, an exception to such standard may be granted when equivalent facilitation is provided. When equivalent facilitation is used, the following criteria shall apply:

1. All sanitary facilities are not required to comply with these building standards when the enforcing agency determines that sanitary facilities are accessible to and usable by persons with disabilities within a reasonable distance of accessible areas.
2. When existing sanitary facilities are not being altered to provide accessibility, signage complying with Sections 1117B.5.1, Items 2 and 3, and 1117B.5.8.1 shall be provided at such inaccessible facilities indicating the location of the

nearest accessible sanitary facility.

1115B.3 Toilet facilities.

1115B.3.1 Multiple-accommodation toilet facilities. Multiple-accommodation toilet facilities shall have the following:

1. **Wheelchair clearance.** A clear space measured from the floor to a height of 27 inches (686 mm) above the floor, within the sanitary facility room, of sufficient size to inscribe a circle with a diameter not less than 60 inches (1524 mm) in size. Other than the door to the accessible water closet compartment, a door, in any position, may encroach into this space by not more than 12 inches (305 mm).

2. **Clear floor space at fixtures.** Doors shall not swing into the clear floor space required for any fixture.

3. **Accessible water closet.** Provide a minimum of one accessible water closet in compliance with Section 1115B.4.1.

4. **Accessible water closet compartment.** Accessible water closet compartments shall comply with the following:

4.1. The compartment shall be a minimum of 60 inches (1524 mm) wide.

4.2. If the compartment has a side-opening door, a minimum 60 inches wide (1524 mm) and 60 inches deep (1524 mm) clear floor space shall be provided in front of the water closet.

4.3. If the compartment has an end-opening door (facing the water closet), a minimum 60 inches wide (1524 mm) and 48 inches deep (1219 mm) clear floor space shall be provided in front of the water closet. The door shall be located in front of the clear floor space and diagonal to the water closet, with a maximum stile width of 4 inches (102 mm).

4.4. The water closet compartment shall be equipped with a door that has an automatic closing device, and shall have a clear, unobstructed opening width of 32 inches (813 mm) when located at the end and 34 inches (864 mm) when located at the

side with the door positioned at an angle of 90 degrees from its closed position.

4.5. The inside and outside of the compartment door shall be equipped with a loop or U shaped handle immediately below the latch. The latch shall be flip-over style, sliding or other hardware not requiring the user to grasp or twist. Except for door-opening widths and door swings, a clear, unobstructed access of not less than 44 inches (1118 mm) shall be provided to water closet compartments designed for use by persons with disabilities. Maneuvering space at the compartment door shall comply with Sections 1133B.2.4.2 and 1133B.2.4.3, except that the space immediately in front of a water closet compartment shall not be less than 48 inches (1219 mm) as measured at right angles to compartment door in its closed position.

5. Large toilet rooms. Where six or more compartments are provided within a multiple accommodation toilet room, at least one compartment shall comply with Items 3 and 4 above, and at least one additional ambulatory accessible compartment shall be 36 inches (914 mm) wide with an outward swinging self-closing door and parallel grab bars complying with Section 1115B.4.1 Item 3.

6. Interior surfaces. In other than dwelling units, toilet room floors shall have a smooth, hard, nonabsorbent surface such as Portland cement, concrete, ceramic tile or other approved material which extends upward onto the walls at least 5 inches (127 mm). Walls within water closet compartments and walls within 24 inches (610 mm) of the front and sides of urinals shall be similarly finished to a height of 48 inches (1219 mm) and, except for structural elements, the materials used in such walls shall be a type which is not adversely affected by moisture.

1115B.3.2 Single-accommodation toilet facilities. Single-accommodation toilet facilities shall have the following:

1. Wheelchair clearance. There shall be sufficient space in the toilet room for a wheelchair measuring 30 inches (762 mm) wide by 48 inches (1219 mm) long to enter the room and permit the door to close. There shall be in the room a clear floor space of at least 60

inches (1524 mm) in diameter, or a T-shaped space complying with Figure 11B-12 (a) and (b). No door shall encroach into this space for more than 12 inches (305 mm). See Figure 11B-1A.

2. Clear floor space at fixtures. Doors shall not swing into the clear floor space required for any fixture.

3. Accessible water closet. Provide one accessible water closet in compliance with Section 1115B.4.1.

4. Accessible route. All doors, fixtures and controls shall be on an accessible route. The minimum clear width of an accessible route shall be 36 inches (914 mm) except at doors (see Section 1133B.2). If a person in a wheelchair must make a turn around an obstruction, the minimum clear width of the accessible route shall be as shown in Figure 11B-5E. See also Figure 11B-1A.

5. Interior surfaces. In other than dwelling units, toilet room floors shall have a smooth, hard, nonabsorbent surface such as Portland cement, concrete, ceramic tile or other approved material which extends upward onto the walls at least 5 inches (127 mm). Walls within water closet compartments and walls within 24 inches (610 mm) of the front and sides of urinals shall be similarly finished to a height of 48 inches (1219 mm) and, except for structural elements, the materials used in such walls shall be a type which is not adversely affected by moisture.

6. Accessible lavatory. Provide one accessible lavatory in compliance with Section 1115B.4.3.

7. Privacy latch. The entrance door shall contain a privacy latch which complies with Section 1117B.6 – Controls and Operating Mechanisms. For bathrooms serving residential occupancies, see Section 1111B.4.6 and Chapter 11A.

Exception: In an existing building, a single-accommodation toilet facility may have the water closet fixture located in an area which provides a clear space of not less than 36 inches (914 mm) wide by 48 inches (1219 mm) long in front of the water closet.

1115B.4 Accessible fixtures.

1115B.4.1 Accessible water closets. Water closets required to be accessible shall comply with this subsection:

1. The centerline of the water closet fixture shall be 18 inches (457 mm) from the side wall or partition. On the other side of the water closet, provide a minimum of 28 inches (711 mm) wide clear floor space if the water closet is adjacent to a fixture or a minimum of 32 inches (813 mm) wide clear floor space if the water closet is adjacent to a wall or partition. This clear floor space shall extend from the rear wall to the front of the water closet.

2. A minimum 60 inches (1524 mm) wide and 48 inches (1219 mm) deep clear floor space shall be provided in front of the water closet.

3. Grab bars for water closets not located within a compartment shall comply with Section 1115B.7 and shall be provided on the side wall closest to the water closet and on the rear wall. Grab bars for water closets located within an accessible compartment shall comply with Section 1115B.7 and shall be provided on the side wall closest to the water closet and on the rear wall. Grab bars for water closets located within ambulatory accessible compartments shall comply with Section 1115B.7 and shall be provided on both sides of the compartment. Grab bars shall not project more than 3 inches (76 mm) into the required clear floor space.

3.1. Side wall. The side grab bar shall be 42 inches (1067 mm) long minimum, located 12 inches (305 mm) maximum from the rear wall and extending 54 inches (1372 mm) minimum from the rear wall with the front end positioned 24 inches (610 mm) minimum in front of the water closet. The side grab bar shall be securely attached and centered 33 inches (838 mm) above and parallel to the floor.

3.2. Rear wall. The rear grab bar shall be 36 inches (914 mm) long minimum and extend from the centerline of the water closet 12 inches (305 mm) minimum on one side and 24 inches (610 mm) minimum on the other side. The rear grab bar shall be securely attached and centered 33 inches (838 mm) above

and parallel to the floor, except that where a tank-type toilet is used which obstructs placement at 33 inches (838 mm), the grab bar may be as high as 36 inches (914 mm) and the space between the grab bar and the top of the tank shall be 1-1/2 inches (38 mm) minimum.

4. The height of accessible water closets shall be a minimum of 17 inches (432 mm) and a maximum of 19 inches (483 mm) measured to the top of a maximum 2-inch (51 mm) high toilet seat.

Exception: A 3-inch (76 mm) high seat shall be permitted only in alterations where the existing fixture is less than 15 inches (381 mm) high.

5. Controls shall be operable with one hand and shall not require tight grasping, pinching or twisting. Controls for the flush valves shall be mounted on the wide side of toilet areas, no more than 44 inches (1118 mm) above the floor. The force required to activate controls shall be no greater than 5-pound-force (lbf) (22.2 N).

6. See the Section 1134A.7 for additional requirements for water closets in publicly funded housing and all nonresidential occupancies.

7. Automatic "spring to lifted position" seats are not allowed.

1115B.4.3 Accessible lavatories. Lavatories required to be accessible shall comply with this subsection. The requirements of this subsection shall apply to lavatory fixtures, vanities and built-in lavatories.

1. Faucet controls and operating mechanisms shall be operable with one hand in accordance with this chapter and shall not require tight grasping, pinching or twisting of the wrist. The force required to activate controls shall be no greater than 5 lbf (22.2 N). Lever-operated, push-type and electronically controlled mechanisms (preferable) are examples of acceptable designs. Self-closing valves are allowed if the faucet remains open for at least 10 seconds.

2. Lavatories, when located adjacent to a side wall or partition, shall be a minimum of 18 inches (457 mm) to the centerline of the fixture. All lavatories that are designated to be accessible shall be a minimum 17 inches (432 mm) in horizontal depth and mounted with the rim or counter edge no higher than 34 inches (864 mm) above the finished floor and with vertical clearance measured from the bottom of the apron or the outside bottom edge of the lavatory of 29 inches (737 mm) reducing to 27 inches (686 mm) at a point located 8 inches (203 mm) back from the front edge. In addition, a minimum 9 inch (230 mm) high toe clearance must be provided extending back toward the wall to a distance no more than 6 inches (150 mm) from the back wall. The toe clearance space must be free of equipment or obstructions.

3. A clear floor space 30 inches by 48 inches (762 mm by 1219 mm) complying with Section 1118B.4 shall be provided in front of a lavatory to allow forward approach. Such clear floor space shall adjoin or overlap an accessible route and shall extend a maximum of 19 inches (483 mm) into knee and toe space underneath the lavatory. See Figure 11B-1D--Knee Clearance.

4. Hot water and drainpipes accessible under lavatories shall be insulated or otherwise covered. There shall be no sharp or abrasive surfaces under lavatories.

1115B.6 Identification symbols. Doorways leading to men's sanitary facilities shall be identified by an equilateral triangle, 1/4 inch (6.4 mm) thick with edges 12 inches (305 mm) long and a vertex pointing upward. Women's sanitary facilities shall be identified by a circle, 1/4 inch (6.4 mm) thick and 12 inches (305 mm) in diameter. Unisex sanitary facilities shall be identified by a circle, 1/4 inch (6.4 mm) thick, 12 inches (305 mm) in diameter with a 1/4-inch (6.4 mm) thick triangle superimposed on the circle and within the 12-inch (305 mm) diameter. These geometric symbols shall be centered on the door at a height of 60 inches (1524 mm) and their color and contrast shall be distinctly different from the color and contrast of the door. See also Section 1117B.5.1 item 1 for additional signage requirements applicable to sanitary facilities.

1115B.7 Grab bars, tub and shower seats. All grab bars, tub and shower seats shall comply with this section.

1115B.7.1 Diameter or width. The diameter or width of the gripping surfaces of a grab bar shall be 1-¼ inches to 1-½ inches (32 mm to 38 mm) or the shape shall provide an equivalent gripping surface. If grab bars are mounted adjacent to a wall, the space between the wall and the grab bars shall be 1-½ inches (38 mm). See Figure 11B-1C.

1115B.7.2 Structural strength. The structural strength of grab bars, tub and shower seats, fasteners, and mounting devices shall meet the following specifications:

1. Bending stress in a grab bar or seat induced by the maximum bending moment from the application of a 250-pound (1112 N) point load shall be less than the allowable stress for the material of the grab bar or seat.
2. Shear stress induced in a grab bar or seat by the application of a 250-pound (1112 N) point load shall be less than the allowable shear stress for the material of the grab bar or seat, and its mounting bracket or other support is considered to be fully restrained, then direct and torsional shear stresses shall not exceed the allowable shear stress.
3. Shear force induced in fastener or mounting device from the application of a 250-pound (1112 N) point load shall be less than the allowable lateral load of either the fastener or mounting device or the supporting structure, whichever is the smaller allowable load.
4. Tensile force induced in a fastener by a direct tension force of a 250-pound (1112 N) point load, plus the maximum moment from the application of a 250-pound (1112 N) point load, shall be less than the allowable withdrawal load between the fastener and supporting structure.
5. Grab bars shall not rotate within their fittings.

1115B.7.3 Surface. A grab bar and any wall or other surface adjacent to it shall be free of any sharp or abrasive elements. Edges shall have a minimum radius of 1/8 inch (3.2 mm).

1115B.8 Accessories.

1115B.8.1 Mirrors. Mirrors shall be mounted with the bottom edge of the reflecting surface no higher than 40 inches (1016 mm) from the floor.

1115B.8.3 Towel, sanitary napkins, waste receptacles, dispensers and controls. Where towel, sanitary napkins, waste receptacles, dispensers, other equipment, and controls are provided, at least one of each type shall be located on an accessible route, with all operable parts, including coin slots, within 40 inches (1016 mm) from the finished floor and shall comply with Section 1117B.6, Controls and Operating Mechanisms.

1115B.8.4 Toilet tissue dispensers. Toilet tissue dispensers shall be located on the wall within 12 inches (305 mm) of the front edge of the toilet seat, mounted below the grab bar, at a minimum height of 19 inches (485 mm), and 36 inches (914 mm) maximum to the far edge from the rear wall. Dispensers that control delivery or that do not permit continuous paper flow shall not be used. See Figure 11B-1A.

SECTION 1116B ELEVATORS AND SPECIAL ACCESS (WHEELCHAIR) LIFTS

1116B.1 Elevators. Passenger elevators shall be accessible. Elevators required to be accessible shall be designed and constructed to comply with this section and with the ASME A17.1, Safety Code for Elevators and Escalators.

1116B.1.1 General. Size of cab and control locations and requirements for accommodation of persons with disabilities. In buildings two or more stories in height, served by an elevator, or a building served by an elevator required by Chapter 11B, or a building served by an elevator required for accessibility by Section 109.1, if

more than one passenger elevator is provided, each full passenger elevator shall comply with this chapter.

Exceptions:

1. In existing buildings, when the enforcing agency determines that compliance with any regulation under this section would create an unreasonable hardship, an exception to such regulation shall be granted when equivalent facilitation is provided.
2. In existing buildings, where existing shaft configuration or technical infeasibility prohibits strict compliance with Section 1116B.1.8, the minimum car plan dimensions may be reduced by the minimum amount necessary, but in no case shall the inside car area be smaller than 48 inches (1219 mm) by 48 inches (1219 mm).
3. In existing buildings, equivalent facilitation may be provided with an elevator car of different dimensions where it can be demonstrated that a person using a wheelchair can enter and operate the elevator and when all other elements required to be accessible comply with the applicable provisions of Section 1116B.
4. These provisions shall not apply to existing buildings when legal or physical constraints will not allow compliance with these regulations or equivalent facilitation without creating an unreasonable hardship. See Section 109.1.

1116B.1.2 Operation and leveling. The elevator shall be automatic and provided with a self-leveling feature that will automatically bring the car to the floor landings within a tolerance of plus or minus 1/2 inch (12.7 mm) under normal loading and unloading conditions. This self-leveling shall, within its zone, be entirely automatic and independent of the operating device and shall correct the over travel or under travel. The car shall also be maintained approximately level with the landing, irrespective of load. The clearance between the car platform sill and the edge of the hoistway landing shall be no greater than 1-¼ inches (32 mm).

1116B.1.3 Door operation. Power-operated horizontally sliding car and hoistway doors opened and closed by automatic means shall be provided.

1116B.1.4 Door size. Minimum clear width for elevator doors shall be 36 inches (914 mm).

1116B.1.5 Door protective and reopening device. Doors closed by automatic means shall be provided with a door-reopening device that will function to stop and reopen a car door and adjacent hoistway door in case the car door is obstructed while closing. This reopening device shall also be capable of sensing an object or person in the path of a closing door without requiring contact for activation at a nominal 5 inches and 29 inches (127 mm and 737 mm) above the floor. Door-reopening devices shall remain effective for a period of not less than 20 seconds. After such an interval, the doors may close in accordance with the requirements of ASME A17.1.

1116B.1.6 Hall call. The minimum acceptable time from notification that a car is answering a call (lantern and audible signal) until the doors of the car start to close shall be calculated by the following equation:

$$T = D / (1.5 \text{ ft/s}) \text{ or } T = D / (455 \text{ mm/s})$$

Where T is the total time in seconds and D is the distance from a point in the lobby or landing area 60 inches (1524 mm) directly in front of the farthest call button controlling that car to the centerline of its hoistway door (see Figure 11B-40D). For cars with in-car lanterns, T begins when the lantern is visible from the vicinity of hall call buttons and an audible signal is sounded. The minimum acceptable notification time shall be 5 seconds.

1116B.1.7 Car call. The minimum acceptable time for doors to remain fully open shall not be less than 5 seconds.

1116B.1.8 Car inside. The car inside shall allow for the turning of a wheelchair. The minimum clear distance between walls or between wall and door, excluding return panels, shall not be less than 80 inches by 54 inches (2032 mm by 1372 mm) for center opening doors, and 68 inches by 54 inches (1727 mm by 1372 mm) for side-

slide opening doors. See Figure 11B-40A. Minimum distance from wall to return panel shall not be less than 51 inches (1295 mm). The centerline of elevator floor buttons shall be no higher than 54 inches (1372 mm) above the finish floor for side approach and 48 inches (1219 mm) for front approach. Emergency controls, including the emergency stop and alarm, shall be grouped in or adjacent to the bottom of the panel and shall be no lower than 2 feet 11 inches (889 mm) from the floor. For multiple controls only, one set must comply with these height requirements. Floor buttons shall be provided with visual indicators to show when each call is registered. The visual indicators shall be extinguished when each call is answered.

Emergency two-way communication systems between the elevator and a point outside the hoistway shall comply with ASME A17.1. The emergency telephone handset shall be positioned no higher than 4 feet (1219 mm) above the floor, and the handset cord shall be a minimum of 2 feet 5 inches (737 mm) in length. It shall be identified by a raised telephone symbol and corresponding Braille lettering complying with Section 1117B.5.1 Item 1 and located adjacent to the device. If the telephone system is located in a closed compartment, the compartment door hardware shall be lever type conforming to the provisions of Section 1008.1.8, Type of Lock or Latch. Emergency intercommunication shall not require voice communication. Where possible, a 48-inch (1219 mm) maximum height for elevator floor buttons is preferred. Controls shall be located on a front wall if cars have center opening doors, and at the side wall or at the front wall next to the door if cars have side opening doors. See Figure 11B-40A.

1116B.1.9 Car controls. Identification for the visually impaired shall be as follows:

Passenger elevator car controls shall have a minimum dimension of 3/4 inch (19.1 mm) and shall be raised 1/8 inch (3.2 mm) plus or minus 1/32 inch (0.8 mm) above the surrounding surface. Control buttons shall be illuminated, shall have square shoulders and shall be activated by a mechanical motion that is detectable. All control buttons shall be designated by 5/8 inch (15.9 mm) minimum raised characters and standard raised symbols that conform to Sections 1117B.5.2, 1117B.5.3, 1117B.5.5 and 1117B.5.7 immediately to the left of the control button. Grade 2 Braille that conforms to Section

1117B.5.6 shall be located immediately below the character or symbol. A minimum clear space of 3/8 inch (9.5 mm) or other suitable means of separation shall be provided between rows of control buttons. See Figure 11B-40B. The raised characters and symbols shall be white on a black background. Controls and emergency equipment identified by raised symbols shall include, but not be limited to, door open, door close, alarm bell, emergency stop and telephone. The call button for the main entry floor shall be designated by a raised star at the left of the floor designation. In elevator cars, a visual car position indicator shall be provided above the car control panel or over the door to show the position of the elevator in the hoistway, As the car passes or stops at a floor served by the elevators, the corresponding numerals shall illuminate, and an audible signal shall sound. Numerals shall be a minimum of 1/2 inch (13 mm) high. The audible signal shall be no less than 20 decibels with a frequency no higher than 1500 Hz. An automatic verbal announcement of the floor number at which a car stops or which a car passes may be substituted for the audible signal.

1116B.1.10 Hall call buttons. The centerline of the hall call buttons shall be 42 inches (1067 mm) above the floor. Buttons shall be a minimum of 3/4 inch (19.1 mm) in size and shall be raised 1/8 inch (3.2 mm) [plus or minus 1/32 inch (0.8 mm)] above the surrounding surface. The button designating the up direction shall be on top. Visual indication shall be provided to show each call registered and extinguished when answered. Objects adjacent to, and below, hall call buttons shall not project more than 4 inches (102 mm) from the wall. Hall call buttons shall be internally illuminated with a white light over the entire surface of the button.

1116B.1.11 Handrails. A handrail shall be provided on one wall of the car, preferably the rear. The rails shall be smooth, and the inside surface at least 1-1/2 inches (38 mm) clear of the walls at a nominal height of 32 inches (813 mm) from the floor. Nominal equals \pm 1 inch (25 mm). Thirty-two inches (813 mm) required to reduce interference with car controls where lowest button is centered at 35 inches (889 mm) above floor.

1116B.1.12 Minimum illumination. The minimum illumination at the car controls threshold and the landing when the car and landing doors are open shall not be less than 5 foot-candles (54 lx).

1116B.1.13 Hall lantern. A visual and audible signal shall be provided at each hoistway entrance indicating to the prospective passenger the car answering the call and its direction of travel as follows:

The visual signal for each direction shall be a minimum of 2-½ inches (64 mm) high by 2-½ inches (64 mm) wide and visible from the proximity of the hall call button.

The audible signal shall sound once for the up direction and twice for the down direction or shall have verbal annunciators that say “up” or “down”.

The centerline of the fixture shall be located a minimum of 6 feet (1829 mm) in height from the lobby floor.

The use of in-car lanterns, located in or on the car doorjamb, visible from the proximity of the hall call buttons and conforming to the above requirements, shall or will be acceptable. The use of arrow shapes is preferred for visible signals.

1116B.1.14 Doorjamb marking. Passenger elevator landing jambs on all elevator floors shall have the number of the floor on which the jamb is located designated by raised characters that are a minimum of 2 inches (51 mm) in height and conform to Section 1117B.5.5 and Grade 2 Braille that conforms to Section 1117B.5.6 located 60 inches (1524 mm) on center above the floor on the jamb panels on both sides of the door so that they are visible from within the elevator. On the grade level, a raised five pointed star shall be placed to the left of the raised character. The outside diameter of the star shall be 2 inches (51 mm). Braille shall be placed below the corresponding raised characters. The raised characters shall otherwise comply with Sections 1117B.5.3, 1117B.5.4 and 1117B.5.2. See Figure 11B-40C. Permanently applied plates are acceptable if they are permanently fixed to the jambs.

1116B.1.15 Location. Passenger elevators shall be on an accessible route, located near a major path of travel, and provisions shall be made to ensure that they remain accessible and usable at all times the building is occupied.

1116B.2 Special access (wheelchair) lifts. Special access (wheelchair) lifts may be provided between levels in lieu of passenger elevators when the vertical distance between landings, as well as the structural design and safeguards are as allowed by ASME A18.1 Safety Standard for Platform Lifts and Stairway Chair Lifts; the State of California, Division of the State Architect—Access Compliance; the Department of Industrial Relations, Division of Occupational Safety and Health and any applicable safety regulations of other administrative authorities having jurisdiction. If lifts are provided, they shall be designed and constructed to facilitate unassisted entry, operation and exit from the lift and shall comply with the restrictions and enhancements of this section in conjunction with Title 8, of the California Code of Regulations. Additionally, lifts may be provided as part of an accessible route only for the following conditions:

1116B.2.1 To provide an accessible route to a performing area in an assembly occupancy, or to a speaking area or similar place (such as a dais or “head table”) in an assembly or Group B Occupancy.

1116B.2.2 To comply with the wheelchair viewing position line-of-sight and dispersion requirements of Section 1104B.3.5.

1116B.2.3 To provide access to incidental occupiable spaces and rooms which are not open to the general public and which house no more than five persons, including, but not limited to, equipment control rooms and projection booths.

1116B.2.4 To provide access where existing site constraints or other constraints make use of a ramp or an elevator infeasible.

1116B.2.4.1 Landing size. In new construction, the minimum size of landings specified in this section shall be 60 inches by 60 inches (1524 mm by 1524 mm). Other dimensions may be substituted where it can be demonstrated that a person using a wheelchair measuring

30 inches by 48 inches (762 mm by 1219 mm) can enter and operate the lift safely.

1116B.2.4.2 Relationship to the path of travel. Level and clear floor areas or landings as specified in this section shall be part of “path of travel” requirements.

Exceptions:

1. The provisions of this section shall not apply to existing buildings when physical constraints will not allow compliance with these regulations or equivalent facilitation without creating an unreasonable hardship. See Section 109.1.

2. When the enforcing agency determines that compliance with any regulation under this section would create an unreasonable hardship, an exception to such regulation shall be granted when equivalent facilitation is provided.

3. The installation of lifts as part of an accessible route for additions or alterations is not limited to the four conditions required by Section 1116B.2.

1116B.3 When provided as a means of egress. Special access (wheelchair) lifts, when provided as a component in an accessible means of egress, shall conform to the requirements of Section 1116B.3.

1116B.3.1 Standby power. To ensure continued operation in case of primary power loss, special access (wheelchair) lifts shall be provided with standby power or with self-rechargeable battery power that provides sufficient power to operate all platform lift functions for a minimum of five (5) upward and downward trips.

1116.B.3.2 Special access (wheelchair) lifts, when provided per Section 1116B.2.2, are permitted to be a component of an accessible means of egress when the area served by the special access lift does not serve more than four wheelchair viewing positions and where any one of the following conditions exist:

1. The building has a supervised automatic sprinkler system.
2. The maximum distance from the point where the wheelchair occupant is seated to a point where the occupant has a choice of two directions of travel to an exit shall not exceed 30 feet (9144 mm). The length of the path of travel shall include the vertical travel distance of the lift.

1116B.4 Doors and gates. Lifts shall have low energy power-operated doors or gates. Doors and gates shall remain open for 20 seconds minimum. End doors shall be 32 inches (813 mm) minimum clear width. Side doors shall be 42 inches (1067 mm) minimum clear width.

Exception: Lifts having doors or gates on opposite sides shall be permitted to have manual doors or gates.

SECTION 1117B OTHER BUILDING COMPONENTS

1117B.5.1 General. When new or additional signs and/or identification devices are provided, or when existing signs and/or identification devices are replaced or altered, the new or altered signs and/or identification devices shall comply with Section 1117B.5. The addition of or replacement of signs and/or identification devices shall not trigger any additional path of travel requirements.

1. Identification signs. When signs identify permanent rooms and spaces of a building or site, they shall comply with Sections 1117B.5.2, 1117B.5.3, 1117B.5.5, 1117B.5.6 and 1117B.5.7. For other means of egress signs and identification provisions adopted by SFM and DSA-AC see Chapter 10, Sections 1011.3 for Tactile Exit Signs, 1020.1.6.2 for Tactile Floor Designation Signs in Stairways, 1008.1.8.6(5) for Delayed Egress Locks, 1007.6.5 for Areas of Refuge, and 1007.7 for Exits and Elevators. See also section 1116B for additional signage requirements applicable to elevators and section 1115B.6 for sanitary facilities.

2. Directional and informational signs. When signs direct to or give information about permanent rooms and functional spaces of a building or site, they shall comply with Sections 1117B.5.2, 1117B.5.3 and 1117B.5.4.

3. Accessibility signs. When signs identify, direct to or give information about accessible elements and features of a building or site, they shall include the appropriate symbol of accessibility and shall comply with Sections 1117B.5.2 and 1117B.5.8.

4. Plan review and inspection. Signs and identification as specified in Section 1117B.5.1, when included in the construction of new buildings or facilities, or when included, altered or replaced due to additions, alterations or renovations to existing buildings or facilities, and when a permit is required, shall comply with the following plan review and inspection requirements:

4.1. **Plan review.** Plans, specifications or other information indicating compliance with these regulations shall be submitted to the enforcing agency for review and approval.

4.2. **Inspection.** Signs and identification shall be field inspected after installation and approved by the enforcing agency prior to the issuance of a final certificate of occupancy per Appendix Chapter 1, Section 110.2, or final approval where no certificate of occupancy is issued. The inspection shall include, but not be limited to, verification that Braille dots and cells are properly spaced and the size, proportion, and type of raised characters are in compliance with these regulations.

4.3. **Other signs and identification.** Tactile exit signage in Sections 1011.3 and 1011.3.2, tactile floor designation signs in stairways in Section 1020.1.6.2, tactile special egress control device signs in Section 1008.1.8.6(5), elevator car control identification required in Section 1116B.1.9, elevator doorjamb marking required in Section 1116B.1.14, and sanitary facilities signage required in Section 1115B.6 shall also comply with this section.

1117B.5.2 Finish and contrast. Characters, symbols and their background shall have a non-glare finish. Characters and symbols

shall contrast with their background, either light on a dark background or dark on a light background.

1117B.5.3 Proportions. Characters on signs shall have a width-to-height ratio of between 3:5 and 1:1 and a stroke width-to-height ratio of between 1:5 and 1:10.

1117B.5.4 Character height. Characters and numbers on signs shall be sized according to the viewing distance from which they are to be read. The minimum height is measured using an uppercase X. Lowercase characters are permitted. For signs suspended or projected above the finish floor in compliance with Section 1133B.8.6, the minimum character height shall be 3 inches (76 mm).

1117B.5.5 Raised characters and pictorial symbol signs. When raised characters are required or when pictorial symbols (pictograms) are used on such signs, they shall conform to the following requirements: (0.794 mm) minimum and shall be sans serif uppercase characters accompanied by Grade 2 Braille complying with Section 1117B.5.6.

1. **Character type.** Characters on signs shall be raised 1/32-inch (0.794 mm) minimum and shall be sans serif uppercase characters accompanied by Grade 2 Braille complying with Section 1117B.5.6.

2. **Character size.** Raised characters shall be a minimum of 5/8 inch (15.9 mm) and a maximum of 2 inches (51 mm) high.

3. **Pictorial symbol signs (pictograms).** Pictorial symbol signs (pictograms) shall be accompanied by the verbal description placed directly below the pictogram. The outside dimension of the pictogram field shall be a minimum of 6 inches (152 mm) in height.

4. **Character placement.** Characters and Braille shall be in a horizontal format. Braille shall be placed a minimum of 3/8 inch (9.5 mm) and a maximum of 1/2 inch (12.7 mm) directly below the tactile characters; flush left or centered. When tactile text is multi-lined, all Braille shall be placed together below all lines of tactile text.

1117B.5.6 Braille. Contracted Grade 2 Braille shall be used wherever Braille is required in other portions of these standards. Dots shall be 1/10 inch (2.54 mm) on centers in each cell with 2/10-inch (5.08 mm) space between cells, measured from the second column of dots in the first cell to the first column of dots in the second cell. Dots shall be raised a minimum of 1/40 inch (0.635 mm) above the background. Braille dots shall be domed or rounded.

1117B.5.7 Mounting location and height. Where permanent identification signs are provided for rooms and spaces, signs shall be installed on the wall adjacent to the latch side of the door.

Where there is no wall space on the latch side, including at double leaf doors, signs shall be placed on the nearest adjacent wall, preferably on the right. Where permanent identification signage is provided for rooms and spaces they shall be located on the approach side of the door as one enters the room or space. Signs that identify exits shall be located on the approach side of the door as one exits the room or space.

Mounting height shall be 60 inches (1524 mm) above the finish floor to the center line of the sign. Mounting location shall be determined so that a person may approach within 3 inches (76 mm) of signage without encountering protruding objects or standing within the swing of a door. See also Section 1115B.6 for additional signage requirements applicable to sanitary facilities.

1117B.5.8 Symbols of accessibility.

1117B.5.8.1 International Symbol of Accessibility. The International Symbol of Accessibility shall be the standard used to identify facilities that are accessible to and usable by physically disabled persons as set forth in these building standards and as specifically required in this section. See Figure 11B-6.

Exception: Signs need not be provided for facilities within an adaptable dwelling unit, or within an accessible patient or guest room.

1117B.5.8.1.1 Color of symbol. The symbol specified above shall consist of a white figure on a blue background. The blue shall be equal to Color No. 15090 in Federal Standard 595B.

Exception: The appropriate enforcement agency may approve other colors to complement decor or unique design. The symbol contrast shall be light on dark or dark on light.

1117B.5.8.1.2 Entrance signs. All building and facility entrances that are accessible to and usable by persons with disabilities shall be identified with a minimum of one International Symbol of Accessibility and with additional directional signs, utilizing the symbol, at junctions where the accessible route of travel diverges from the regular circulation path, to be visible to persons along approaching circulation paths. Entrances which are not accessible shall have directional signage complying with Section 1117B.5.1, Items 2 and 3, which indicates the location of and route to the nearest accessible entrance.

1117B.5.8.1.3 Information posted. Buildings that provide specific sanitary facilities and/or elevators for public use that conform to these building standards shall have this information posted in the building lobby, preferably as part of the building directory. The information shall be accompanied by the International Symbol of Accessibility. Inaccessible sanitary facilities shall have directional signage complying with 1117B.5.1 Items 2 and 3 to indicate the location of the nearest accessible sanitary facility.

1117B.5.8.2 International TTY symbol. Where the International TTY Symbol is required, it shall comply with Figure 11B-14A.

1117B.5.8.3 Volume control telephones. Where telephones with volume controls are required to be identified, the identification symbol shall be a telephone handset with radiating sound waves, such as shown in Figure 11B-14B.

SECTION 1118B SPACE ALLOWANCE AND REACH RANGES

1118B.1 Wheelchair passage width. The minimum clear width for single wheelchair passage shall be 32 inches (813 mm) at a point and 36 inches (914 mm) continuously. See Figure 11B-10.

1118B.2 Width for wheelchair passing. The minimum width for two wheelchairs to pass is 60 inches (1524 mm). See Figure 11B-11.

1118B.3 Wheelchair turning space. The space required for a wheelchair to make a 180 degree turn is a clear space of 60 inches (1524 mm) diameter [see Figure 11B-12 (a)] or a T-shaped space. See Figure 11B-12 (b).

1118B.4 Clear floor or ground space for wheelchairs.

1. **Size and approach.** The minimum clear floor or ground space required to accommodate a single, stationary wheelchair and occupant is 30 inches by 48 inches (762 mm by 1219 mm). The minimum clear floor or ground space for wheelchairs may be positioned for forward or parallel approach to an object. Clear floor or ground space for wheelchairs may be part of the knee space required under some objects. See Figure 11B-5A.

2. **Relationship of maneuvering clearances to wheelchair spaces.** One full unobstructed side of the clear floor or ground space for a wheelchair shall adjoin or overlap an accessible route or adjoin another wheelchair clear floor space. If a clear floor space is located in an alcove or otherwise confined on all or a part of three sides, additional maneuvering clearances shall be provided as shown in Figure 11B-5A (b).

1118B.5 Forward reach. If the clear floor space allows only forward approach to an object, the maximum high forward reach allowed shall be 48 inches (1219 mm) [see Figure 11B-5C (a)]. The minimum low forward reach is 15 inches (381 mm). If the high forward reach is over an obstruction, reach and clearances shall be as shown in Figure 11B-5C (b).

1118B.6 Side reach. If the clear floor space allows parallel approach by a person in a wheelchair, the maximum high side reach allowed shall be 54 inches (1372 mm) and the low side reach shall be no less than 9 inches (229 mm) above the floor [see Figure 11B-5D (a) and (b)]. If the side reach is over an obstruction, the reach and clearances shall be as shown in Figure 11B-5D (c).

SECTION 1124B GROUND AND FLOOR SURFACES

1124B.1 General. Ground and floor surfaces along accessible routes and in accessible rooms and spaces, including floors, walks, ramps, stairs and curb ramps, shall be stable, firm, slip resistant, and shall comply with this section.

1124B.2 Changes in level. Changes in level up to 1/4 inch (6.4 mm) may be vertical and without edge treatment [see Figure 11B-5E (c)]. Changes in level between 1/4 inch (6.4 mm) and 1/2 inch (12.7 mm) shall be beveled with a slope no greater than 1:2 [see Figure 11B-5E (d)]. Changes in level greater than 1/2 inch (12.7 mm) shall be accomplished by means of a curb ramp, ramp, elevator or platform lift that complies with Sections 1127B.5, 1133B.5, 1116B.1 or 1116B.2, respectively.

1124B.3 Carpet. If carpet or carpet tile is used on a ground or floor surface, then it shall be securely attached; have a firm cushion, pad or backing or no cushion or pad; and have a level loop, textured loop; level-cut pile or level-cut/uncut pile texture. The maximum pile height shall be 1/2 inch (12.7 mm). See Figure 11B-7E (b). Exposed edges of carpet shall be fastened to floor surfaces and have trim along the entire length of the exposed edge. Carpet edge trim shall comply with Section 1124B.2.

1124B.4 Gratings. If gratings are located in walking surfaces, then they shall have spaces no greater than 1/2 inch (12.7 mm) wide in one direction (see Figure 11B-7E). If gratings have elongated openings, then they shall be placed so that the long dimension is perpendicular to the dominant direction of travel (see Figure 11B-7E).

SECTION 1127B EXTERIOR ROUTES OF TRAVEL

1127B.1 General. Site development and grading shall be designed to provide access to all entrances and exterior ground floor exits, and access to normal paths of travel, and where necessary to provide access, shall incorporate pedestrian ramps, curb ramps, etc. Access shall be provided within the boundary of the site from public transportation stops, accessible parking spaces, passenger loading zones if provided, and public streets or sidewalks. When more than one building or facility is located on a site, accessible routes of travel complying with Section 1114B.1.2 shall be provided between buildings and accessible site facilities, accessible elements, and accessible spaces that are on the same site. The accessible route of travel shall be the most practical direct route between accessible building entrances, accessible site facilities and the accessible entrance to the site. If access is provided for pedestrians from a pedestrian tunnel or elevated walkway, entrances to the building from each tunnel or walkway must be accessible.

Exceptions:

1. Where the enforcing agency determines that compliance with these regulations would create an unreasonable hardship because of topography, natural barriers, etc., an exception may be granted when equivalent facilitation is provided through the use of other methods and materials.

2. In existing buildings, this section shall not apply in those conditions where, due to legal or physical constraints, the site of the project would not allow compliance with these regulations or equivalent facilitation without creating an unreasonable hardship. See Section 109.1.5.

1127B.2 Design and construction. When accessibility is required by this section, it shall be designed and constructed in accordance with this Building Code. See Section 1114B.1 for a list of applicable sections.

1127B.3 Signs. At every primary public entrance and at every major junction where the accessible route of travel diverges from the regular circulation path along or leading to an accessible route of travel, entrance or facility, there shall be a sign displaying the International Symbol of Accessibility. Signs shall indicate the direction to accessible building entrances and facilities and shall comply with the requirements found in Sections 1117B.5.1 Item 2 and 1117B.5.8.1.

1127B.4 Outside stairways. See Section 1133B.4.

1127B.5 Curb ramps.

1. **General.** Curb ramps shall be constructed at each corner of street intersections and where a pedestrian way crosses a curb. Built-up curb ramps shall be located so that they do not project into vehicular traffic lanes. The preferred and recommended location for curb ramps is in the center of the crosswalk of each street corner. Where it is necessary to locate a curb ramp in the center of the curb return and the street surfaces are marked to identify pedestrian crosswalks, the lower end of the curb ramp shall terminate within such crosswalk areas. See Figure 11B-20C, Case E and Figure 11B-22.

2. **Width of curb ramps.** Curb ramps shall be a minimum of 4 feet (1219 mm) in width and shall lie, generally, in a single sloped plane, with a minimum of surface warping and cross slope.

3. **Slope of curb ramps.** The slope of curb ramps shall not exceed 1 unit vertical to 12 units horizontal (8.33-percent slope). The slope shall be measured as shown in Figure 11B-20E. Transitions from ramps to walks, gutters or streets shall be flush and free of abrupt change. Maximum slopes of adjoining gutters, road surface immediately adjacent to the curb ramp, or accessible route shall not exceed 1 unit vertical to 20 units horizontal (5-percent slope) within 4 feet (1219 mm) of the top and bottom of the curb ramp. The slope of the fanned or flared sides of curb ramps shall not exceed 1 unit vertical to 10 units horizontal (10-percent slope).

4. **Level landing.** A level landing 4 feet (1219 mm) deep shall be provided at the upper end of each curb ramp over its full width to permit safe egress from the ramp surface, or the slope of the fanned

or flared sides of the curb ramp shall not exceed 1 unit vertical to 12 units horizontal (8.33-percent slope).

5. Finish. The surface of each curb ramp and its flared sides shall comply with Section 1124B, Ground and Floor Surfaces, and shall be of contrasting finish from that of the adjacent sidewalk.

6. Border. All curb ramps shall have a grooved border 12 inches (305 mm) wide at the level surface of the sidewalk along the top and each side approximately 3/4 inch (19 mm) on center. All curb ramps constructed between the face of the curb and the street shall have a grooved border at the level surface of the sidewalk. See Figures 11B-19A and 11B-19B.

7. Detectable warnings. Curb ramps shall have a detectable warning that extends the full width and depth of the curb ramp, excluding the flared sides, inside the grooved border. Detectable warnings shall consist of raised truncated domes with a diameter of nominal 0.9 inch (22.9 mm) at the base tapering to 0.45 inch (11.4 mm) at the top, a height of nominal 0.2 inch (5.08 mm) and a center-to-center spacing of nominal 2.35 inches (59.7 mm) in compliance with Figure 11B-23A. "Nominal" here shall be in accordance with Section 12-11A and B-102, State Referenced Standards Code. The detectable warning shall contrast visually with adjoining surfaces, either light-on-dark or dark-on-light. The material used to provide contrast shall be an integral part of the walking surface. The domes may be constructed in a variety of methods, including cast in place or stamped, or may be part of a prefabricated surface treatment.

Only approved DSA-AC detectable warning products and directional surfaces shall be installed as provided in the California Code of Regulations (CCR), Title 24, Part 1, Articles 2, 3 and 4. Refer to CCR Title 24, Part 12, Chapter 12-11A and B, for building and facility access specifications for product approval for detectable warning products and directional surfaces.

Detectable warning products and directional surfaces installed after January 1, 2001, shall be evaluated by an independent entity, selected by the Department of General Services, Division of the State Architect-Access Compliance for all occupancies, including

transportation and other outdoor environments, except that when products and surfaces are for use in residential housing evaluation shall be in consultation with the Department of Housing and Community Development. See Government Code Section 4460.

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

9. Diagonal curb ramps. If diagonal (or corner-type) curb ramps have returned curbs or other well-defined edges, such edges shall be parallel to the direction of pedestrian flow. The bottom of diagonal curb ramps shall have 48 inches (1219 mm) minimum clear space as shown in Figure 11B-22 (c) and (d). If diagonal curb ramps are provided at marked crossings, the 48-inch (1219 mm) clear space shall be within the markings (see Figure 11B-22 (c) and (d)). If diagonal curb ramps have flared sides, they shall also have at least a 24 inch long (610 mm) segment of straight curb located on each side of the curb ramp and within the marked crossing [see Figure 11B-22 (c)].

Notes:

1. For additional curb details, see Figures 11B-19A and 11B-19B.
2. If distance from curb to back of sidewalk is too short to accommodate ramp and a 4-foot (1219 mm) platform as in Figure 11B-20A, Case A, the side walk may be depressed longitudinally as in Figure 11B-20A, Case B, or Figure 11B-20B, Case C, or may be widened as in Figure 11B-20B, Case D.
3. If sidewalk is less than 5 feet (1524 mm) wide, the full width of the sidewalk shall be depressed as shown in Figure 11B-20B, Case C.
4. As an alternate to Figure 11B-20A, Case A, one ramp may be placed in the center of the curb return as in Figure 11B-20C, Case E.
5. When ramp is located in center of curb return, crosswalk configuration must be similar to that shown on the plan to accommodate wheelchairs. See Figure 11B-22.

6. If planting area width is equal to or greater than ramp length, ramp side slope distance equals 3 feet (914 mm). See Figure 11B-20D, Case G.
7. For Figure 11B-20C, Case F and Figure 11B-20D, Case G, the longitudinal portion of the sidewalk may need to be depressed as shown in Figure 11B-20A, Case B.
8. If located on a curve, the sides of the ramp need not be parallel, but the minimum width of the ramp shall be 4 feet (1219 mm).
9. The ramp shall have a 12 inch wide (305 mm) border with 1/4 inch (6 mm) grooves approximately 3/4 inch (19 mm) on center. See grooving detail, Figure 11B-20 D, Case H.

SECTION 1129B ACCESSIBLE PARKING REQUIRED

1129B.1 General. Each lot or parking structure where parking is provided for the public as clients, guests or employees, shall provide accessible parking as required by this section. Accessible parking spaces serving a particular building shall be located on the shortest accessible route of travel (complying with Section 1114B.1.2) from adjacent parking to an accessible entrance. In parking facilities that do not serve a particular building, accessible parking shall be located on the shortest accessible route of travel to an accessible pedestrian entrance of the parking facility. In buildings with multiple accessible entrances with adjacent parking, accessible parking spaces shall be dispersed and located closest to the accessible entrances. Table 11B-6 establishes the number of accessible parking spaces required.

TABLE 11B-6 SPACES REQUIRED

Establishes the number of accessible parking spaces required.

Table 1
Establishes the number of accessible spaces required.

TOTAL NUMBER OF PARKING SPACES IN LOT OR GARAGE	MINIMUM REQUIRED NUMBER OF SPACES
1-25	1
26-50	2
51-75	3
76-100	4
101-150	5
151-200	6
201-300	7
301-400	8
401-500	9
501-1,000	*
1,001 AND OVER	**
* Two Percent of Total	
** Twenty plus one for each 100, or fraction over 1,001.	

1129B.3 Parking space size. Accessible parking spaces shall be located as near as practical to a primary entrance and shall be sized as follows:

1. **Dimensions.** Where single spaces are provided, they shall be 14 feet (4267 mm) wide and lined to provide a 9-foot (2743 mm) parking area and a 5-foot (1524 mm) loading and unloading access aisle on the passenger side of the vehicle. When more than one space is provided in lieu of providing a 14-footwide (4267 mm) space for each parking space, two spaces can be provided within a 23-foot-wide (7010 mm) area lined to provide a 9-foot (2743 mm) parking area on each side of a 5-foot (1524 mm) loading and unloading access aisle in the center. The loading and unloading access aisle shall be marked by a border painted blue. Within the blue border, hatched lines a maximum of 36 inches (914 mm) on center shall be painted a color contrasting with the parking surface, preferably blue or white. See Figure 11B-18A. Parking access aisles shall be part of an accessible route of travel (complying with Section 1114B.1.2) to the building or facility entrance. Parked vehicle overhangs shall not reduce the clear width of an accessible route. The minimum length of

each parking space shall be 18 feet (5486 mm). The words NO PARKING shall be painted on the ground within each five-foot (1524 mm) loading and unloading access aisle. This notice shall be painted in white letters no less than 12 inches (305 mm) high and located so that it is visible to traffic enforcement officials. See Figures 11B-18A, 11B-18B and 11B-18C.

2. Van space(s). One in every eight accessible spaces, but not less than one, shall be served by a loading and unloading access aisle 96 inches (2438 mm) wide minimum placed on the side opposite the driver's side when the vehicle is going forward into the parking space and shall be designated van accessible as required by Section 1129B.4. All such spaces may be grouped on one level of a parking structure. The loading and unloading access aisle shall be marked by a border painted blue. Within the blue border, hatched lines a maximum of 36 inches (914 mm) on center shall be painted a color contrasting with the parking surface, preferably blue or white. The words NO PARKING shall be painted on the ground within each eight-foot (2438 mm) loading and unloading access aisle. This notice shall be painted in white letters no less than 12 inches (305 mm) high and located so that it is visible to traffic enforcement officials. See Figures 11B-18A, 11B-18B and 11B-18C.

3. Arrangement of parking space. In each parking area, a bumper or curb shall be provided and located to prevent encroachment of cars over the required width of walkways. Also, the space shall be so located that persons with disabilities are not compelled to wheel or walk behind parked cars other than their own. Pedestrian ways which are accessible to persons with disabilities shall be provided from each such parking space to related facilities, including curb cuts or ramps as needed. Ramps shall not encroach into any accessible parking space or the adjacent access aisle. The maximum cross slope in any direction of an accessible parking space and adjacent access aisle shall not exceed 2 percent.

Exceptions: See Figures 11B-18A through 11B-18C.

1. Where the enforcing agency determines that compliance with any regulation of this section would create an unreasonable hardship, a

variance or waiver may be granted when equivalent facilitation is provided.

2. Parking spaces may be provided which would require a person with a disability to wheel or walk behind other than accessible parking spaces when the enforcing agency determines that compliance with these regulations or providing equivalent facilitation would create an unreasonable hardship. See Section 109.1.5.

4. **Slope of parking space.** Surface slopes of accessible parking spaces shall be the minimum possible and shall not exceed one unit vertical to 50 units horizontal (2-percent slope) in any direction.

1129B.4 Identification of parking spaces for off-street parking facilities. Each parking space reserved for persons with disabilities shall be identified by a reflectorized sign permanently posted immediately adjacent to and visible from each stall or space, consisting of the International Symbol of Accessibility in white on dark blue background. The sign shall not be smaller than 70 square inches (4516 mm²) in area and, when in a path of travel, shall be posted at a minimum height of 80 inches (2032 mm) from the bottom of the sign to the parking space finished grade. Signs may also be centered on the wall at the interior end of the parking space. An additional sign or additional language below the symbol of accessibility shall state "Minimum Fine \$250". Spaces complying with Section 1129B.3, Item 2 shall have an additional sign stating "Van-Accessible" mounted below the symbol of accessibility. Signs identifying accessible parking spaces shall be located so they cannot be obscured by a vehicle parked in the space. An additional sign shall also be posted in a conspicuous place at each entrance to off-street parking facilities, or immediately adjacent to and visible from each stall or space. The sign shall not be less than 17 inches by 22 inches (432 mm by 559 mm) in size with lettering not less than 1 inch (25 mm) in height, which clearly and conspicuously states the following:

"Unauthorized vehicles parked in designated accessible spaces not displaying distinguishing placards or license plates issued for persons with disabilities may be towed away at owner's expense. Towed vehicles may be reclaimed at _____ or by telephoning _____.

Blank spaces are to be filled in with appropriate information as a permanent part of the sign. In addition to the above requirements, the surface of each accessible parking space or stall shall have a surface identification duplicating either of the following schemes:

1. By outlining or painting the stall or space in blue and outlining on the ground in the stall or space in white or suitable contrasting color a profile view depicting a wheelchair with occupant; or
2. By outlining a profile view of a wheelchair with occupant in white on blue background. The profile view shall be located so that it is visible to a traffic enforcement officer when a vehicle is properly parked in the space and shall be 36 inches high by 36 inches wide (914 mm by 914 mm). See Figures 11B-18A through 11B-18C.

SECTION 1130B PARKING STRUCTURES

All entrances to and vertical clearances within parking structures shall have a minimum vertical clearance of 8 feet 2 inches (2489 mm) where required for accessibility to accessible parking spaces.

Exceptions:

1. Where the enforcing agency determines that compliance with Section 1130B would create an unreasonable hardship, an exception may be granted when equivalent facilitation is provided.
2. This section shall not apply to existing buildings where the enforcing agency determines that, due to legal or physical constraints, compliance with these regulations or equivalent facilitation would create an unreasonable hardship. See Section 109.1.5.

SECTION 1131B PASSENGER DROP-OFF AND LOADING ZONES

1131B.1 Location. When provided, passenger drop-off and loading zones shall be located on an accessible route of travel (complying with Section 1114B.1.2) and shall comply with 1131B.2.

1131B.2 Passenger loading zones.

1. **General.** Where provided, one passenger drop-off and loading zone shall provide an access aisle at least 60 inches (1524 mm) wide and 20 feet (6096 mm) long adjacent and parallel to the vehicle pull-up space. Vehicle standing spaces and access aisles shall be level with surface slopes not exceeding 1:50 (2 percent) in all directions. If there are curbs between the access aisle and the vehicle pull-up space, a curb ramp shall be provided. Each passenger drop-off and loading zone designed for persons with disabilities shall be identified by a reflectorized sign, complying with 1117B.5.1 Items 2 and 3, permanently posted immediately adjacent to and visible from the passenger drop-off or loading zone stating "Passenger Loading Zone Only" and including the International Symbol of Accessibility, in white on dark blue background.

2. **Vertical clearance.** Provide minimum vertical clearance of 114 inches (2896 mm) at accessible passenger loading zones and along at least one vehicle access route to such areas from site entrances and exits.

1131B.3 Valet parking. Valet parking facilities shall provide a passenger loading zone complying with Section 1131B.2 above and shall be located on an accessible route of travel (complying with Section 1114B.1.2) to the entrance of the facility. The parking space requirements of Sections 1129B through 1130B apply to facilities with valet parking.

Division III – ACCESSIBILITY FOR ENTRANCES, EXITS AND PATHS OF TRAVEL

This division includes additional requirements which supersede less restrictive requirements in Chapter 10 where access is required.

SECTION 1133B GENERAL ACCESSIBILITY FOR ENTRANCES, EXITS AND PATHS OF TRAVEL

1133B.1 Building accessibility. See this chapter.

1133B.1.1 Entrances.

1133B.1.1.1 Entrances and exterior ground floor exit doors.

1133B.1.1.1.1 All entrances and exterior ground-floor exit doors to buildings and facilities shall be made accessible to persons with disabilities. Such entrances shall be connected by an accessible route (complying with Section 1114B.1.2) to public transportation stops, to accessible parking and passenger loading zones, and to public streets or sidewalks if available. Entrances shall be connected by an accessible route to all accessible spaces or elements within the building or facility. Doorways shall have a minimum clear opening of 32 inches (813 mm) with the door open 90 degrees, measured between the face of the door and the opposite stop (see Figure 11B-5B). Openings more than 24 inches (610 mm) in depth shall comply with Section 1118B.

Exceptions:

1. Exterior ground-floor exits serving smoke-proof enclosures, stairwells and exit doors servicing stairs only need not be made accessible.
2. Exits in excess of those required by Chapter 10, and which are more than 24 inches (610 mm) above grade are not required to be

accessible. Such doors shall have signs warning that they are not accessible. Warning signs shall comply with Section 1117B.5.1 Item 2.

3. In existing buildings where the enforcing agency determines that compliance with the building standards of this section would create an unreasonable hardship, an exception shall be granted when equivalent facilitation is provided. Equivalent facilitation would require at least one entrance to be accessible to and usable by persons with disabilities.

4. These building standards shall not apply to existing buildings when legal or physical constraints will not allow compliance with these building standards or equivalent facilitation without creating an unreasonable hardship. See Section 109.1.5, Special Conditions for Persons with Disabilities Requiring Appeals Action Ratification.

1133B.1.1.1.2 Temporary restrictions. During periods of partial or restricted use of a building or facility, the entrances used for primary access shall be accessible to and usable by persons with disabilities.

1133B.1.1.1.3 Recessed doormats. Recessed doormats shall be adequately anchored to prevent interference with wheelchair traffic.

1133B.1.1.1.4 Gates. All gates, including ticket gates, shall meet all applicable specifications for doors.

1133B.2 Doors.

1133B.2.1 Type of lock or latch. See Chapter 10, Section 1008.1.8.

1133B.2.2 Width and height. Every required exit doorway shall be of a size as to permit the installation of a door not less than 3 feet (914 mm) in width and not less than 6 feet 8 inches (2032 mm) in height.

When installed in exit doorways, exit doors shall be capable of opening at least 90 degrees and shall be so mounted that the clear width of the exitway is not less than 32 inches (813 mm) measured between the face of the door and the opposite stop (see Figure 11B-

5B). In computing the exit width the net dimension of the exitway shall be used.

Exception: Doors not requiring full user passage, such as shallow closets, may have the clear opening reduced to 20 inches (510 mm) minimum.

1133B.2.3 Hinged doors. For hinged doors, the opening width shall be measured with the door positioned at an angle of 90 degrees from its closed position.

1133B.2.3.1 Pairs of doors. Where a pair of doors is utilized, at least one of the doors shall provide a clear, unobstructed opening width of 32 inches (813 mm) with the leaf positioned at an angle of 90 degrees from its closed position.

1133B.2.3.2 Automatic and power-assisted doors. If an automatic door is used, then it shall comply with BHMA A156.10. Slowly opening, low-powered, automatic doors shall comply with BHMA A156.19. Such doors shall not open to back check faster than 3 seconds and shall require no more than 15 lbf (66.72 N) to stop door movement. If a power-assisted door is used, its door-opening force shall comply with 1133B.2.5 and its closing shall conform to the requirements in BHMA A156.19. When an automatic door operator is utilized to operate a pair of doors, at least one of the doors shall provide a clear, unobstructed opening width of 32 inches (813 mm) with the door positioned at an angle of 90 degrees from its closed position.

Exceptions:

1. The provisions of Section 1133B.2.3 shall not apply to existing buildings, except when otherwise required under conditions applicable to access for persons with disabilities. In existing buildings, the following shall apply:

Where the occupant load is less than 10, except Group I, Division 1 Occupancies, or where the occupant load is greater than 10 and it is determined that compliance with Section 1133B.2.3 would create an

unreasonable hardship, a projection of 5/8 inch (16 mm) maximum will be permitted for the latch side stop.

2. In existing buildings, the provisions of this section shall not apply when legal or physical constraints will not allow compliance with these building standards or equivalent facilitation without creating an unreasonable hardship. See Section 109.1.5.

1133B.2.3.3 Revolving doors. Revolving doors shall not be used as a required entrance for persons with disabilities.

1133B.2.3.4 Turnstiles, rails and pedestrian controls. Where turnstiles and crowd control barriers are utilized in a facility for the purpose of providing fully controlled access, such as where an admission price is charged, a door or gate that is accessible to persons with disabilities shall be provided adjacent to each turnstile exit or entrance. This alternate passageway shall be maintained in an unlocked condition during business hours and the door or gate shall not activate a publicly audible alarm system. The door or gate may be latched where all gates are restricted and controlled by an attendant and a sign is posted stating, "All gates are restricted and controlled by an attendant". The accessible door or gate shall provide the same use pattern. Where posts, rails or other pedestrian controls are utilized to create crowd control aisles or lanes, a minimum of one lane shall be accessible and shall provide a minimum aisle width no less than indicated in Figure 11B-5E (a) and (b) with 32 inches (813 mm) of clear opening.

Exception: In existing buildings, Section 1133B.2.3 shall not apply when physical constraints or equivalent facilitation will not allow compliance with these building standards without creating an unreasonable hardship. See Section 109.1.5.

1133B.2.4 Floor level at doors. Regardless of the occupant load, there shall be a floor or landing on each side of a door.

1133B.2.4.1 Thresholds. The floor or landing shall not be more than ½ inch (12.7 mm) lower than the threshold of the doorway. Change in level between ¼ inch (6 mm) and ½ inch (12.7 mm) shall be beveled with a slope no greater than 1 unit vertical to 2 units horizontal (50-

percent slope). Change in level greater than ½ inch (12.7 mm) shall be accomplished by means of a ramp. See Section 1133B.5.1.

1133B.2.4.2 Maneuvering clearances at doors. Minimum maneuvering clearances at doors shall be as shown in Figure 11B-26A and 11B-26B. The floor or ground area within the required clearances shall be level and clear. The level area shall have a length in the direction of door swing of at least 60 inches (1524 mm) and the length opposite the direction of door swing of 48 inches (1219 mm) as measured at right angles to the plane of the door in its closed position.

Exception: The length opposite the direction of door swing shall be a minimum of 44 inches (1118 mm) where the door has no closer and approach to the door by a person in a wheelchair can be made from the latch side, or if the door has neither latch nor closer and approach can be made from the hinge side. See Figure 11B-26A and 11B-26B.

1133B.2.4.3 The width of the level area on the side to which the door swings shall extend 24 inches (610 mm) past the strike edge of the door for exterior doors and 18 inches (457 mm) past the strike edge for interior doors. Twenty-four inches (610 mm) is preferred for strike-side clearance.

1133B.2.4.4 The space between two consecutive door openings in a vestibule, serving other than a required exit stairway shall provide a minimum of 48 inches (1219 mm) of clear space from any door opening into such vestibule when the door is positioned at an angle of 90 degrees from its closed position. Doors in a series shall swing either in the same direction or away from the space between the doors. See Figures 11B-30 and 11B-31.

1133B.2.4.5 Where a door required to be accessible by Section 1133B.1.1.1 is located in a recess or alcove where the distance from the face of the wall to the face of the door is greater than 8 inches, strike side clearances as prescribed in Section 1133B.2.4.3 shall be provided. See Figure 11B-33(a).

1133B.2.5 Closer-effort to operate doors. Maximum effort to operate doors shall not exceed 5 pounds (22.2 N) for exterior and interior doors, such pull or push effort being applied at right angles to hinged doors and at the center plane of sliding or folding doors. Compensating devices or automatic door operators may be utilized to meet the above standards. When fire doors are required, the maximum effort to operate the door may be increased to the minimum allowable by the appropriate administrative authority, not to exceed 15 pounds (66.72 N).

1133B.2.5.1 Door closer. If the door has a closer, then the sweep period of the closer shall be adjusted so that from an open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches (75 mm) from the latch, measured to the leading edge of the door.

1133B.2.5.2 Hand-activated door opening hardware, handles, pulls, latches, locks, and other operating devices on accessible doors shall have a shape that is easy to grasp with one hand and does not require tight grasping, tight pinching or twisting of the wrist to operate. Hardware shall be centered between 30 inches (762 mm) and 44 inches (1118 mm) above the floor. Latching and locking doors that are hand-activated and which are in a path of travel shall be operable with a single effort by lever-type hardware, panic bars, push-pull activating bars or other hardware designed to provide passage. Locked exit doors shall operate as above in egress direction.

1133B.2.5.3 Recessed doors. Where the plane of the doorway is offset 8 or more inches (205 mm) from any obstruction within 18 inches (455 mm) measured laterally on the latch side, the door shall be provided with maneuvering clearance for front approach. See Figure 11B-33(a).

1133B.2.6 Smooth surface. The bottom 10 inches (254 mm) of all doors except automatic and sliding shall have a smooth, uninterrupted surface to allow the door to be opened by a wheelchair footrest without creating a trap or hazardous condition. Where narrow frame doors are used, a 10-inch (254 mm) high smooth panel shall be installed on the push side of the door, which will allow the door to

be opened by a wheelchair footrest without creating a trap or hazardous condition.

1133B.3 Corridors, hallways and exterior exit balconies.

1133B.3.1 Corridor and hallway widths. Every corridor and hallway serving an occupant load of 10 or more shall not be less than 44 inches (1118 mm) in width. Corridors and hallways serving an occupant load of less than 10 shall not be less than 36 inches (914 mm) in width.

1133B.3.2 Corridors and hallways over 200 feet (60 960 mm). Corridors and hallways that are located on an accessible route and exceed 200 feet (60 960 mm) in length shall have a minimum clear width of 60 inches (1524 mm), then passing spaces at least 60 inches by 60 inches (1524mm by 1524 mm) shall be located at reasonable intervals not to exceed 200 feet (60 960 mm). A “T” intersection of two corridors or walks is an acceptable passing place.

Exceptions:

1. In existing buildings, when the enforcing agency determines that compliance with any building standard under this section would create an unreasonable hardship, an exception to such building standard shall be granted when equivalent facilitation is provided.
2. In existing buildings, the provisions of this section shall not apply when legal or physical constraints will not allow compliance with these building standards or equivalent facilitation without creating an unreasonable hardship. See Section 109.1.5.

1133B.5 Ramps.

1133B.5.1 General. Ramps used as exits shall conform to the provisions of this section. Any accessible route of travel shall be considered a ramp if its slope is greater than 1 foot (305 mm) rise in 20 feet (6096 mm) of horizontal run (5-percent gradient).

1133B.5.2 Width. Pedestrian ramps shall have a minimum clear width of 48 inches (1219 mm), unless required to be wider by some

other provision of this code. Pedestrian ramps serving entrances to buildings where the ramp is the only exit discharge path and serves an occupant load of 300 or more shall have a minimum clear width of 60 inches (1524 mm). Ramps serving Group R Occupancies may be 36 inches (914 mm) clear width when the occupant load is 50 or less.

1133B.5.3 Slope. The least possible slope shall be used for any ramp. The maximum slope of a ramp that serves any exit way, provides access for persons with physical disabilities or is in the accessible route of travel shall be 1-foot (305 mm) rise in 12 feet (3658 mm) of horizontal run (8.3-percent gradient). The maximum rise for any run shall be 30 inches (762 mm). Examples of ramp dimensions are as follows:

SLOPE	MAXIMUM RISE		MAXIMUM HORIZONTAL PROJECTION	
	inches	mm	Feet	m
1:12 to < 1:16	30	760	30	9
1:16 to < 1:20	30	760	40	12

1133B.5.3.1 The cross slope of ramp surfaces shall be no greater than 1 unit vertical in 50 units horizontal (2-percent slope).

1133B.5.4 Landings. Level ramp landings shall be installed as follows:

1133B.5.4.1 Location of landings. Level ramp landings shall be provided at the top and bottom of each ramp. Intermediate landings shall be provided at intervals not exceeding 30 inches (762 mm) of vertical rise and at each change of direction. Landings are not considered in determining the maximum horizontal distance of each ramp. Landings shall be level as specified in the definition of “level area” in Section 1102B.

1133B.5.4.2 Size of top and bottom landings. Top landings shall be not less than 60 inches (1524 mm) wide and shall have a length of not less than 60 inches (1524 mm) in the direction of ramp run.

Landings at the bottom of ramps shall have a dimension in the direction of ramp run of not less than 72 inches (1829 mm).

1133B.5.4.3 Encroachment of doors. Doors in any position shall not reduce the minimum dimension of the landing to less than 42 inches (1067 mm) and shall not reduce the required width by more than 3 inches (76 mm) when fully open. See Figure 11B-39(b).

1133B.5.4.4 Strike edge extension. The width of the landing shall extend 24 inches (610 mm) past the strike edge of any door or gate for exterior ramps and 18 inches (457 mm) past the strike edge for interior ramps.

1133B.5.4.5 Landing width. At bottom and intermediate landings, the width shall be at least the same as required for the ramps.

1133B.5.4.6 Change of direction. Intermediate and bottom landings at a change of direction in excess of 30 degrees shall have a dimension in the direction of ramp run of not less than 72 inches (1829 mm) to accommodate the handrail extension.

1133B.5.4.7 Other intermediate landings. Other intermediate landings shall have a dimension in the direction of ramp run of not less than 60 inches (1524 mm).

1133B.5.4.8 For existing ramps or ramps not covered by Section 1133B.5.4.1, landings shall be provided as set forth in Section 1133B.5.4.1.

1133B.5.4.9 Hazards. Required ramps shall have a curb at least 2 inches (51 mm) high, or a wheel guide rail 2 to 4 inches (51 to 102 mm) high on each side of the ramp landing that has a vertical drop exceeding 4 inches (102 mm) and that is not bounded by a wall or fence.

1133B.5.5 Handrails for ramps.

1133B.5.5.1 Handrails are required on ramps that provide access if slope exceeds 1 foot (305 mm) rise in 20 feet (6096 mm) of horizontal run (5-percent gradient), except that at exterior door landings,

handrails are not required on ramps less than 6 inches (152 mm) rise or 72 inches (1829 mm) in length. Handrails shall be placed on each side of each ramp, shall be continuous the full length of the ramp, shall be 34 to 38 inches (864 to 965 mm) above the ramp surface to the top of the handrails, shall extend a minimum of 1 foot (305 mm) beyond the top and bottom of the ramp and shall be parallel with the floor or ground surface. The inside handrail on switchback or dogleg ramps shall always be continuous. The ends of handrails shall be either rounded or returned smoothly to floor, wall or post. Handrails projecting from a wall shall have a space of 1-½ inches (38 mm) between the wall and the handrail. Handrails may be located in a recess if the recess is a maximum of 3 inches (76 mm) deep and extends at least 18 inches (457 mm) above the top of the rail. The grip portion shall not be less than 1-1/4 inches (32 mm) nor more than 1-1/2 inches (38 mm) in cross-sectional nominal dimension or the shape shall provide an equivalent gripping surface, and all surfaces shall be smooth with no sharp corners. Handrails shall not rotate within their fittings. Any wall or other surface adjacent to the handrail shall be free of sharp or abrasive elements. Edges shall have a minimum radius of 1/8 inch (3 mm).

Exceptions:

1. Handrails at ramps immediately adjacent to fixed seating in assembly areas are not required.
2. Curb ramps do not require handrails.

1133B.5.5.1.1 Ramp handrails. In existing buildings or facilities, where the extension of the handrail in the direction of the ramp run would create a hazard, the extension on the handrail may be turned 90 degrees to the run of the ramp.

1133B.5.6 Wheel guides. Where the ramp surface is not bounded by a wall, the ramp shall comply with Section 1133B.5.6.1 or 1133B.5.6.2.

1133B.5.6.1 A guide curb a minimum of 2 inches (51 mm) in height shall be provided at each side of the ramp; or

1133B.5.6.2 A wheel guide rail shall be provided, centered 3 inches (76 mm) plus or minus 1 inch (25 mm) above the surface of the ramp.

1133B.5.7 Guards. Ramps more than 30 inches (762 mm) above the adjacent ground shall be provided with guards that comply with Section 1013. Such guards shall be continuous from the top of the ramp to the bottom of the ramp.

1133B.5.8 Outdoor ramps. Outdoor ramps and their approaches shall be designed so that water will not accumulate on walking surfaces.

1133B.6 Aisles.

1133B.6.1 General. Every portion of every building in which are installed seats, tables, merchandise, equipment or similar materials shall be provided with aisles leading to an exit.

1133B.6.2 Width. Every aisle shall not be less than 36 inches (914 mm) wide if serving only one side, and not less than 44 inches (1118 mm) wide if serving both sides.

1133B.7 Walks and Sidewalks.

1133B.7.1 Continuous surface. Walks and sidewalks subject to these regulations shall have a continuous common surface, not interrupted by steps or by abrupt changes in level exceeding 1/2 inch (12.7 mm) (see Section 1133B.7.4), and shall be a minimum of 48 inches (1219 mm) in width. If a walk or sidewalk has less than 60 inch (1525 mm) clear width, then passing spaces at least 60 inches by 60 inches (1525 mm by 1525 mm) shall be located at reasonable intervals not to exceed 200 feet (61 m). A T-intersection is an acceptable passing place. Surfaces shall be slip-resistant as follows:

Exception: When, because of right-of-way restrictions, natural barriers or other existing conditions, the enforcing agency determines that compliance with the 48-inch (1219 mm) clear sidewalk width would create an unreasonable hardship, the clear width may be reduced to 36 inches (914 mm).

1133B.7.1.1 Slopes less than 6 percent. Surfaces with a slope of less than 6 percent gradient shall be at least as slip-resistant as that described as a medium salted finish.

1133B.7.1.2 Slopes 6 percent or greater. Surfaces with a slope of 6 percent gradient shall be slip resistant.

1133B.7.1.3 Surface cross slopes. Surface cross slopes shall not exceed 1/4 inch (6 mm) per foot.

1133B.7.2 Gratings. Walks, sidewalks and pedestrian ways shall be free of gratings whenever possible. For gratings located in the surface of any of these areas, grid openings in gratings shall be limited to 1/2 inch (12.7 mm) in the direction of traffic flow.

Exceptions:

1. Where the enforcing agency determines that compliance with this section would create an unreasonable hardship, an exception may be granted when equivalent facilitation is provided.

2. This section shall not apply in those conditions where, due to legal or physical constraints, the site of the project will not allow compliance with these building standards or equivalent facilitation without creating an unreasonable hardship. See Section 109.1.5.

1133B.7.3 Five percent gradient. When the slope in the direction of travel of any walk exceeds 1 unit vertical to 20 units horizontal (5-percent gradient), it shall comply with the provisions of Section 1133B.5.

1133B.7.4 Changes in level. Abrupt changes in level along any accessible route shall not exceed 1/2 inch (12.7 mm). When changes in level do occur, they shall be beveled with a slope no greater than 1 unit vertical to 2 units horizontal (50 percent), except that level changes not exceeding 1/4 inch (6 mm) may be vertical. When changes in levels greater than 1/2 inch (12.7 mm) are necessary, they shall comply with the requirements for curb ramps. See Section 1127B.5.

1133B.7.5 Level areas. Walks shall be provided with a level area not less than 60 inches by 60 inches (1524 mm by 1524 mm) at a door or gate that swings toward the walk, and not less than 48 inches wide by 44 inches (1219 mm by 1118 mm) deep at a door or gate that swings away from the walk. Such walks shall extend 24 inches (610 mm) to the side of the strike edge of a door or gate that swings toward the walk. (For example, see Figure 11B-26B.)

1133B.7.6 Walks with continuous gradients. All walks with continuous gradients shall have level areas at least 5 feet (1524 mm) in length at intervals of at least every 400 feet (121 920 mm).

1133B.8 Hazards.

1133B.8.1 Warning curbs. Abrupt changes in level, except between a walk or sidewalk and an adjacent street or driveway, exceeding 4 inches (102 mm) in a vertical dimension, such as at planters or fountains located in or adjacent to walks, sidewalks or other pedestrian ways, shall be identified by curbs projecting at least 6 inches (152 mm) in height above the walk or sidewalk surface to warn the blind of a potential drop off. When a guard or handrail is provided, no curb is required when a guide rail is provided centered 3 inches (76 mm) plus or minus 1 inch (25 mm) above the surface of the walk or sidewalk, the walk is 5 percent or less gradient or no adjacent hazard exists.

1133B.8.2 Overhanging obstructions. Any obstruction that overhangs a pedestrian's way shall be a minimum of 80 inches (2032 mm) above the walking surface as measured from the bottom of the obstruction. Where a guy support is used parallel to a path of travel, including, but not limited to sidewalks, a guy brace, sidewalk guy or similar device shall be used to prevent an overhanging obstruction as defined (see Figure 11B-28). Hazards such as drop-offs adjacent to walk ways or overhanging obstructions can be dangerous to persons with sight problems. This section addresses these situations.

1133B.8.3 Detectable warnings at transit boarding platforms. See Section 1121B.3.1, Item 8(a).

1133B.8.4 Detectable directional texture at boarding platforms.

See Section 1121B.3.1, Item 8(b).

1133B.8.5 Detectable warnings at hazardous vehicular areas. If a walk crosses or adjoins a vehicular way, and the walking surfaces are not separated by curbs, railings or other elements between the pedestrian areas and vehicular areas, the boundary between the areas shall be defined by a continuous detectable warning which is 36 inches (914 mm) wide, complying with Section 1121B.3.1 Item 8(a).

Only approved DSA-AC detectable warning products and directional surfaces shall be installed as provided in the California Code of Regulations (CCR), Title 24, Part 1, Articles 2, 3 and 4. Refer to CCR Title 24, Part 12, Chapter 12-11A and B, for building and facility access specifications for product approval for detectable warning products and directional surfaces. Detectable warning products and directional surfaces installed after January 1, 2001, shall be evaluated by an independent entity, selected by the Department of General Services, Division of the State Architect-Access Compliance, for all occupancies, including transportation and other outdoor environments, except that when products and surfaces are for use in residential housing evaluation shall be in consultation with the Department of Housing and Community Development. See Government Code Section 4460.

1133B.8.6 Protruding objects.

1133B.8.6.1 General. Objects projecting from walls (for example, telephones) with their leading edges between 27 inches (686 mm) and 80 inches (2032 mm) above the finished floor shall protrude no more than 4 inches (102 mm) into walks, halls, corridors, passageways or aisles. Objects mounted with their leading edges at or below 27 inches (686 mm) above the finished floor may protrude any amount. Free-standing objects mounted on posts or pylons may overhang 12 inches (305 mm) maximum from 27 inches (686 mm) to 80 inches (2032 mm) above the ground or finished floor. Protruding objects shall not reduce the clear width of an accessible route or maneuvering space. See Figure 11B-7A.

1133B.8.6.2 Head room. Walks, halls, corridors, passageways, aisles or other circulation spaces shall have 80 inches (2032 mm) minimum clear head room. If vertical clearance of an area adjoining an accessible route is reduced to less than 80 inches (nominal dimension), a barrier to warn blind or visually-impaired persons shall be provided. See Figures 11B-7A and 11B-7C.

1133B.8.6.3 Free-standing signs. Wherever signs mounted on posts or pylons protrude from the posts or pylons and the bottom edge of the sign is at less than 80 inches (2032 mm) above the finished floor or ground level, the edges of such signs shall be rounded or eased and the corners shall have a minimum radius of 0.125 inches.