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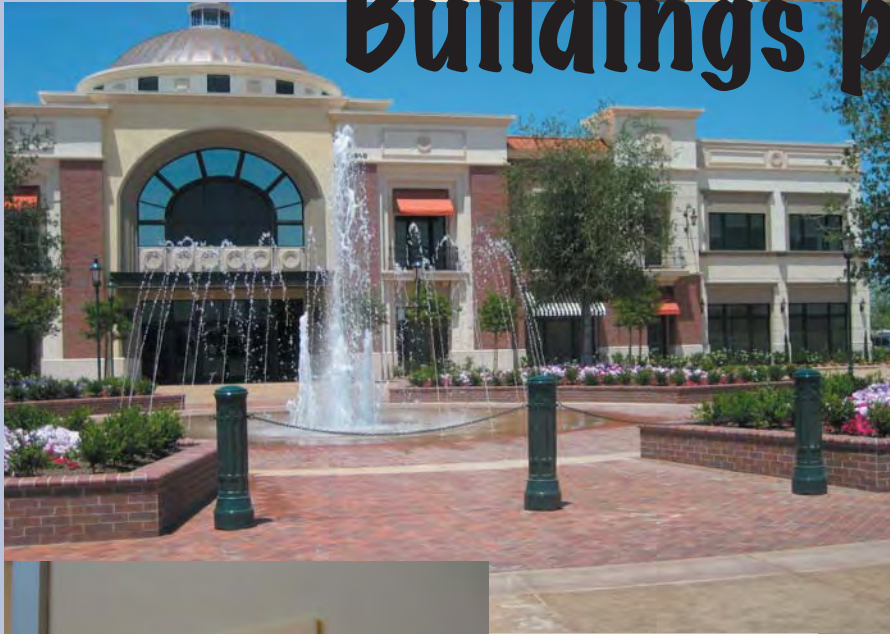
Learning Objectives

- 1) Understand accessible routes & items that can trip you up into non-compliance
- 2) Understand the new proposed ADA standards & its impact on CBC
- 3) Understand new & existing project site considerations & the impact on project planning
- 4) Gain tools to proactively implement new standards

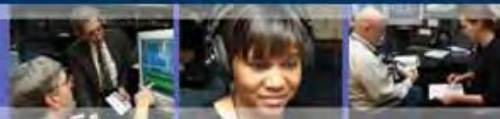
Stepping Thru Accessibility

seminar series

New Public & Private Commercial Buildings per CBC & ADA



Janis Kent AIA CASp
6/25/09



U.S. Census Bureau News

U.S. Department of Commerce · Washington, D.C. 20233

FOR IMMEDIATE RELEASE THURSDAY, DECEMBER 18, 2008

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Public Information Office
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CB08-185
[Detailed Tables](#)

Number of Americans With a Disability Reaches 54.4 Million

About one in five U.S. residents - 19 percent - reported some level of disability in 2005, according to a U.S. Census Bureau report released today. These 54.4 million Americans are roughly equal to the combined total populations of California and Florida.

Both the number and percentage of people with disabilities were higher than in 2002, the last time the Census Bureau collected such information. At that time, 51.2 million, or 18 percent, reported a disability.

Among those with a disability, 35 million, or 12 percent of the population, were classified as having a severe disability, according to [Americans With Disabilities: 2005](#) [PDF].

Nearly half (46 percent) of people age 21 to 64 with a disability were employed, compared with 84 percent of people in this age group without a disability. Among those with disabilities, 31 percent with severe disabilities and 75 percent with nonsevere disabilities were employed. People with difficulty hearing were more likely to be employed than those with difficulty seeing (59 percent compared with 41 percent).

A portion of people with disabilities — 11 million age 6 and older — needed personal assistance with everyday activities. These activities include such tasks as getting around inside the home, taking a bath or shower, preparing meals and performing light housework.

Other important findings:

- Among people 15 and older, 7.8 million (3 percent) had difficulty hearing a normal conversation, including 1 million being unable to hear at all. Although not part of the definition of disability used in the report, 4.3 million people reported using a hearing aid.
- Roughly 3.3 million people, or 1 percent, age 15 and older used a wheelchair or similar device, with 10.2 million, or 4 percent, using a cane, crutches or walker.
- Nearly 7.8 million people age 15 and older had difficulty seeing words or letters in ordinary newspaper print, including 1.8 million being completely unable to see.

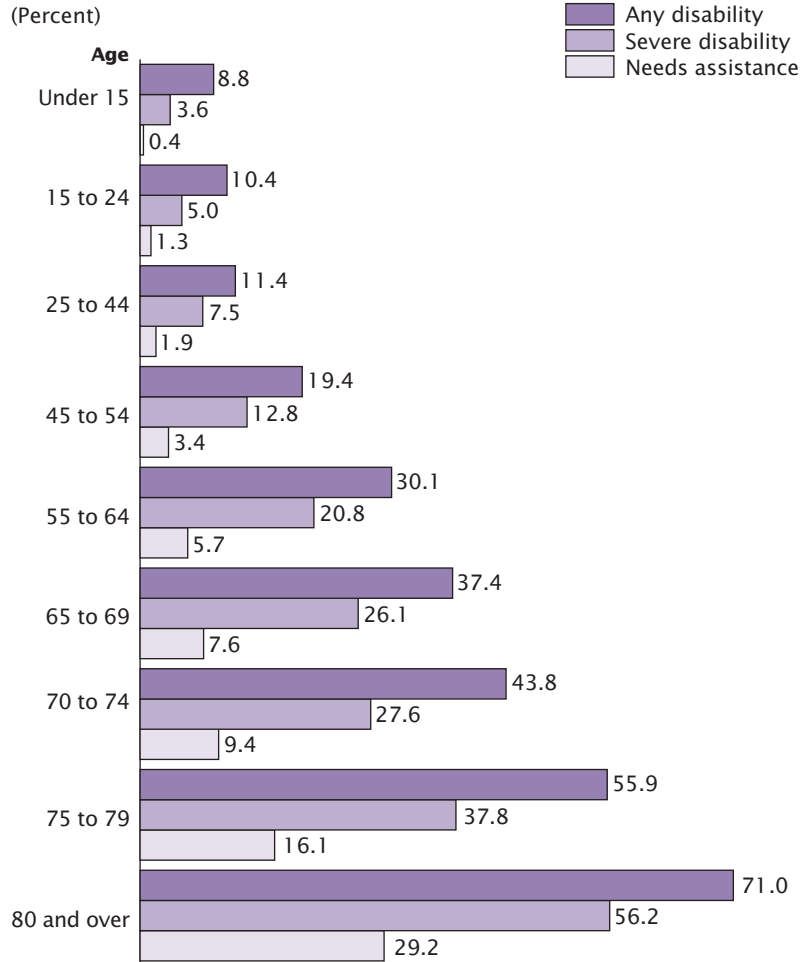
- More than 16 million people had difficulty with cognitive, mental or emotional functioning. This included 8.4 million with one or more problems that interfere with daily activities, such as frequently being depressed or anxious, trouble getting along with others, trouble concentrating and trouble coping with stress.
- The chances of having a disability increase with age: 18.1 million people 65 and older, or 52 percent, had a disability. Of this number, 12.9 million, or 37 percent, had a severe disability. For people 80 and older, the disability rate was 71 percent, with 56 percent having a severe disability.
- Among people 16 to 64, 13.3 million, or 7 percent, reported difficulty finding a job or remaining employed because of a health-related condition.
- Among people 25 to 64 with a severe disability, 27 percent were in poverty, compared with 12 percent for people with a nonsevere disability and 9 percent for those without a disability.
- Median monthly earnings were \$1,458 for people with a severe disability, \$2,250 for people with a nonsevere disability and \$2,539 for those with no disability.
- Parents reported that 228,000 children under age 3, or 2 percent, had a disability. Specifically, they either had a developmental delay or difficulty moving their arms or legs. In addition, there were 475,000 children 3 to 5 years, or 4 percent, with a disability, which meant they had either a developmental delay or difficulty walking, running or playing.
- There were 4.7 million children 6 to 14, or 13 percent, with a disability. The most prevalent type was difficulty doing regular schoolwork (2.5 million, or 7 percent).

The Survey of Income and Program Participation produces national-level estimates for the U.S. resident population and subgroups, and allows for the observation of trends over time, particularly of selected characteristics such as income, eligibility for and participation in transfer programs, household and family composition, labor force behavior and other associated events.

- X -

Figure 2.
**Disability Prevalence and the Need for Assistance
 by Age: 2005**

(Percent)



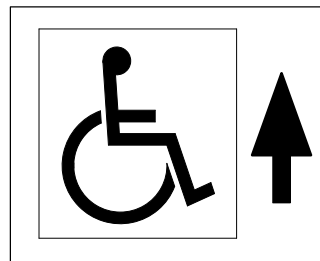
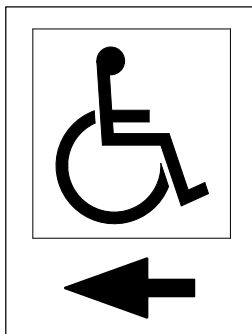
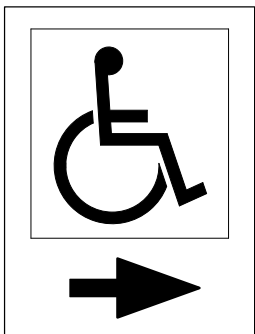
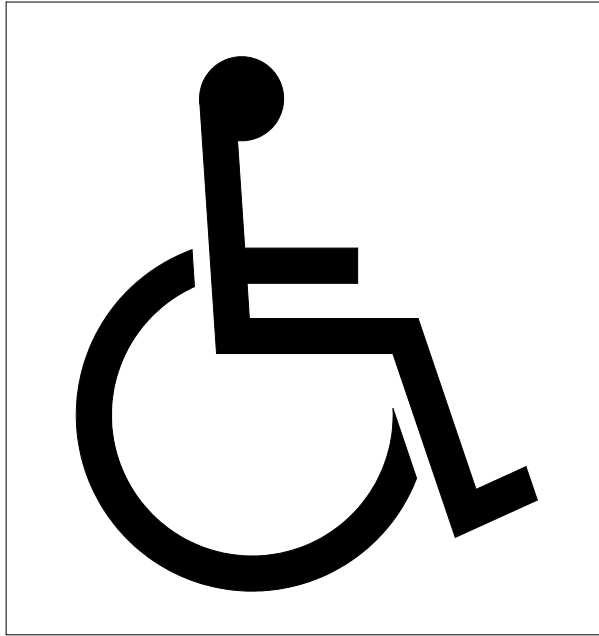
Note: The need for assistance with activities of daily living was not asked of children under 6 years.

Source: U.S. Census Bureau, Survey of Income and Program Participation, June–September 2005.

ISA

NOTES:

- Where not all entrances are accessible all accessible entrances shall have an International Symbol of Accessibility (ISA)
- Inaccessible entries shall have directional signage indicating nearest accessible entry
- Major junctions along an accessible route leading to an entry shall have an ISA with a directional arrow per CBC
- All accessible building entries & facilities are to be identified with an ISA by CBC
- The ISA is to be a white figure on a blue background matching color #15090 in Federal Standard 595B or other colors that provide contrast and are approved by the enforcement agency per CBC
- ISA located at parking can not vary in color
- Powered doors at Assembly occupancies of 300 or more to have a 6" x 6" ISA above the door on both the interior and exterior sides if not all of the leafs are accessible



Division II—SITE ACCESSIBILITY

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 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 one unit vertical in 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 one unit vertical in 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 one unit vertical in 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 one unit vertical in 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 $\frac{3}{4}$ 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 Sections 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, Chapters 12-11A and B, for building and facility access

Platform (Wheelchair) Lifts—[for HCD 1-AC] Section 1124A; [for DSA-AC] Section 1116B.2

Alarms—Chapter 9, Sections 907.9.1 and 907.9.2

Bathing and Toilet Facilities—Section 1115B

Signs and Identification—Section 1117B.5

Detectable Warnings—[for DSA-AC] Sections 1121B.3.1 Item 8(a), 1127B.5.7, 1133B.8.5, Part 12—Chapters 12-11A and 12-11B

See also Part 3, California Electrical Code.

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 Sections 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 routes 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.

TABLE 1115B-1
SUGGESTED DIMENSIONS FOR CHILDREN'S USE

The Division of the State Architect—Access Compliance recommends the following dimensions as adequately serving the needs of children in projects under our jurisdiction. These recommendations are based on the federal "Recommendations for Accessibility for Children in Elementary School" and other recognized publications on access for children:

A = Adult Dimensions (age 12 and over)

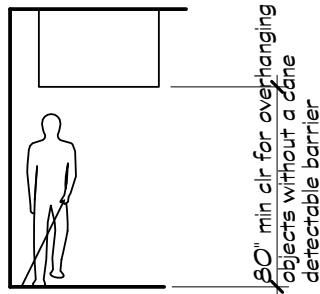
E = Elementary Dimensions

K = Kindergarten and Preschool Dimensions

DIMENSION	SUGGESTED		
	A (inches)	E (inches)	K (inches)
Toilet centering from wall	18	15	12
Toilet seat height/Dimensions to top of seat	17-19	15	10-12
Grab bar height (side)	33	27	20-22
Toilet paper in front of toilet	12 max	6 max	6 max
Napkin disposal in front of toilet	12 max	12 max	N/A
Dispenser or mirror height	40 max	36 max	32 max
Lavatory/sink top height	34 max	29 max	24 max
Lavatory/sink knee clearance	27 min	24 min	19 min
Urinal lip height	17 max	15 max	13 min
Urinal flush handle height	44 max	37 max	32 max
Drinking fountain bubbler height	36 max	32 max	30 max
Drinking fountain knee clearance	27 min	24 min	22 min
Ramp/stair handrail height	34-38	27	22

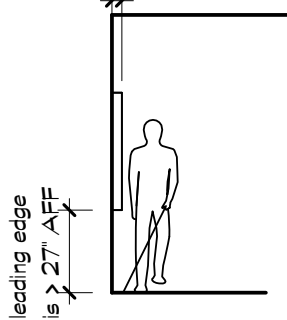
For SI: 1 inch = 25.4 mm.

OVERHANGING OBJECTS



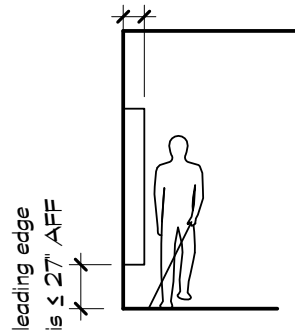
PROJECTING OBJECTS

4" max projection without a cane detectable barrier



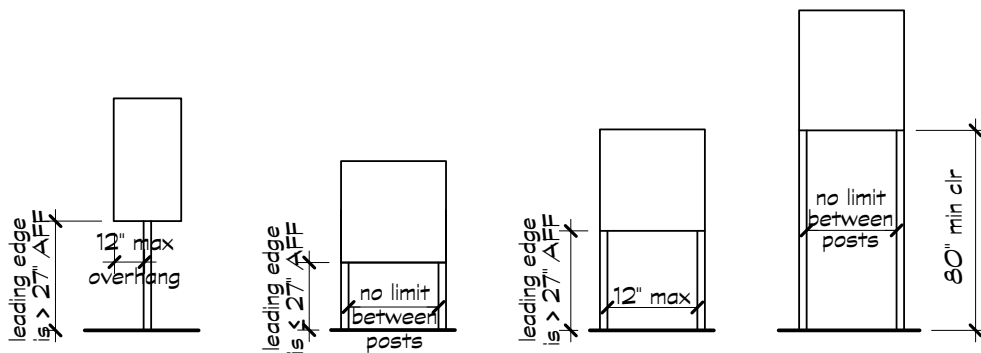
LEADING EDGE > 27" AFF

any projection



LEADING EDGE ≤ 27" AFF

POST MOUNTED OBJECTS



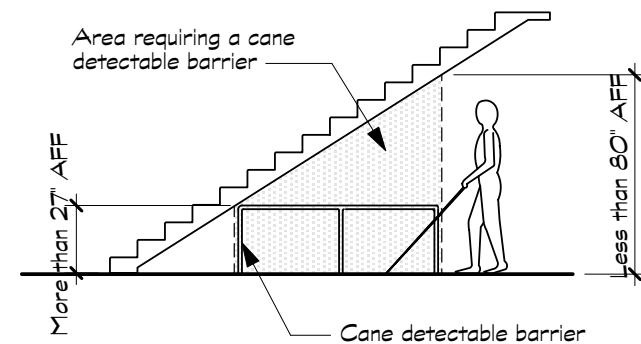
No limits if leading edge is ≥ 80" or ≤ 27"

PROTRUDING OBJECTS

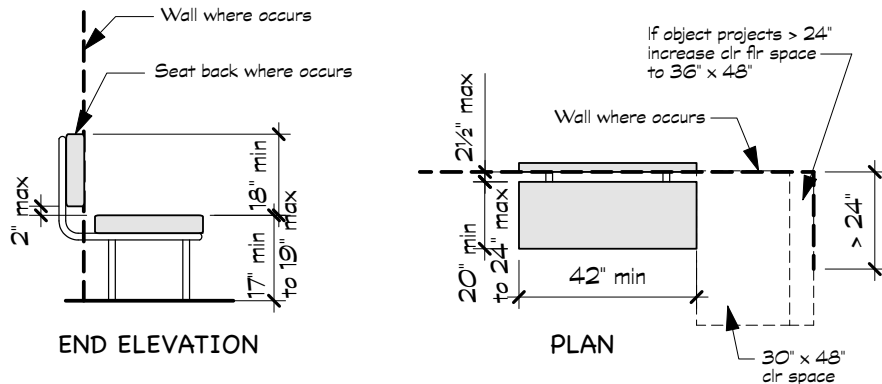
NOTES:

- Objects can project from a vertical surface 4" max when the leading edge is above 27" AFF unless there is a cane detectable barrier
- Post-mounted objects can project 12" max when the leading edge is above 27" AFF unless there is a cane detectable barrier
- Objects can project or overhang any amount if the leading edge is either 80" or more AFF or 27" or less AFF
- Double post-mounted objects can have 12" max clear between posts if the leading edge is greater than 27" AFF and less than 80" AFF
- Door stops and closers can be 78" min AFF without a cane detectable barrier
- Van accessible parking stalls, their access aisle, and the full vehicular route from the entry, to the space, and to the exit is 98" min clr ht
- Passenger loading zones and the full vehicular route from the entry to the area, and to the exit is 114" min clr ht
- Edges of post-mounted objects have a 1/8" min radius if less than 80" above grade per CBC

CANE DETECTABLE BARRIER



FIXED BENCHES

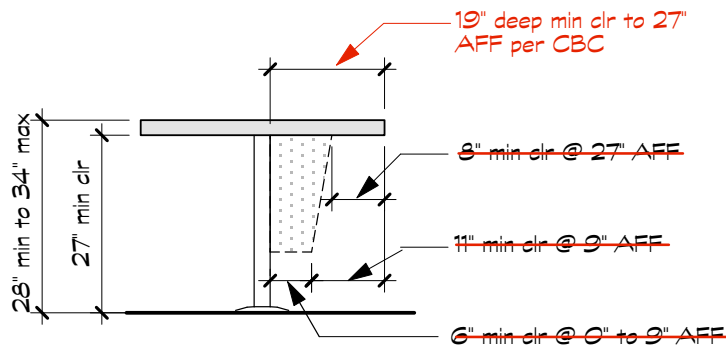


FURNITURE

FIXED BENCHES:

- Seat is 20" min to 24" max deep, 42" min width, & 17" min to 19" max ht
- Bench has integral back support or is adjacent to a wall, 42" min width starting 2" max above the seat surface and goes to 18" min above the seat surface to the top
- There is a 2 1/2" max space horizontally between the seat surface and the face of the wall/back support
- The seat & supporting structure allows for a vertical & horizontal bending stress, shear & tensile force of 250 lbs min
- In exterior locations the seat should be slip resistant & not allow for accumulation of water
- The bench has a clear floor space with 2% or less slope of 30" x 48" to allow for side transfer; if the clr flr space is confined on the third side by more than 24" provide for 36" x 48" clr flr space

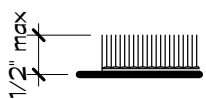
TABLES, BARS, DINING COUNTERS, WORK SURFACES



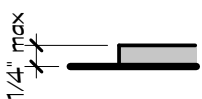
TABLES, BARS, DINING COUNTERS, WORK SURFACES:

- Surface ht is 28" min to 34" max AFF with 27" min clr below
- Clear flr space is 30" x 48" for forward approach with 17" min deep for a 19" min depth to a 27" min ht per CBC
- ~~Provide toe clearance from 0" to 9" AFF 6" beyond the knee clearance~~
- ~~Provide knee clearance from 9" AFF at 11" min deep to 27" AFF tapering down to 8" min deep~~
- 5% of dining/drinking surfaces to be accessible based upon seating and/or standing spaces - these spaces are dispersed thru-out the facility by functional type and area with a minimum of one for each functional type and area
- 5% of work surfaces not including employee use to be accessible with a minimum of one
- Table & work surfaces for children are 26" min to 30" max AFF to top surface with 24" min clr below; a parallel approach may be used for children 5 & under with a 30" x 48" clr flr space with no knee clearance
- If dining/drinking counters are >34" AFF lower a 60" wide portion at the main counter at an accesible ht and clearance below per CBC

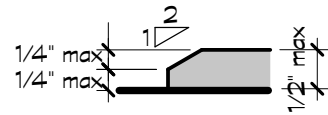
LEVEL CHANGES



CARPET PILE HEIGHT



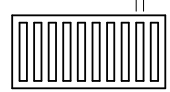
MAX VERTICAL LEVEL CHANGE



MAX LEVEL CHANGE without ramp typ @ threshold

OPENINGS IN FLOOR SURFACES

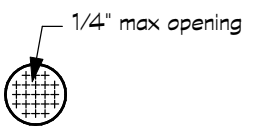
1/2" max opening in direction of travel



long dimension of openings perpendicular to direction of travel

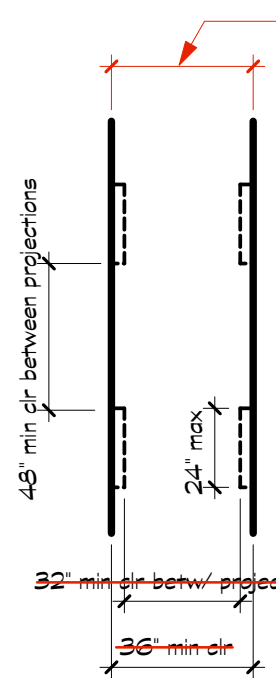
Direction of travel

GRATES



FLOOR DRAINS

ACCESSIBLE ROUTE CLEAR WIDTHS



- Sidewalk - 48" min clr - provide 60" x 60" passing space every 200 LF min per CBC
- Corridors - 44" min if serving ≥ 10 people & 36" min clr if serving < 10 people per CBC
- Corridors - 60" min clr if over 200 LF or provide 60" x 60" min passing space every 200 LF max per CBC
- Aisle serving accessible WC - 44" min clr per CBC
- Aisles serving 2 sides - 44" min clr per CBC
- Aisles serving 1 side - 36" min clr (ie checkstand, employee work area, food service, fixed seating, tables, or counters) per CBC
- Shopping cart barriers - 32" min clr if for a distance of 44" on each side the clr width is 48" min wide per CBC
- Work station entries & doors - 32" min clr per CBC
- Projections of 24" max in length can reduce the route to 32" min wide if separated by a distance of 48" min in between
- Projections or openings more than 24" in length can reduce the route to 36" min clr
- ~~Aisle serving accessible WC - 42" min clr~~

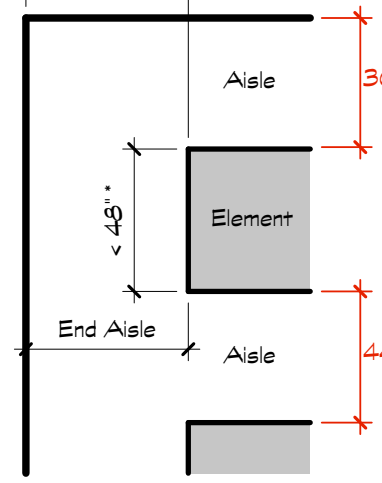
WALKING SURFACES

NOTES:

- Walking surfaces have a slope of 5% or less in the direction of travel with a ~~1:48 max~~ cross slope of **2% max per CBC**
- Floor and ground surfaces are stable, firm, & slip resistant **with slopes < 6% to have a medium salted finish slip resistance per CBC**
- Carpet has 1/2" max ht pile and is securely attached to the floor with firm or no pad, and all exposed edges trimmed
- Changes in level can be vertical up to 1/4", and between 1/4" to 1/2" should have a bevel with a 1:2 slope max; changes in level > than 1/2" should be ramped
- Provide detectable warning surfaces where accessible route crosses vehicular traffic
- **Sloped walkways have a 60" level landing at 400 LF max per CBC**
- **If an accessible route not adjacent to a street or driveway, or raised/sunken seating or dining areas have a drop > 4", provide a 6" ht curb or a guard/handrail with an intermediary rail at 2" to 4" above grade to centerline per CBC**
- **Edges of reflecting pools shall have curbs, railings, walls, or truncated domes per CBC**

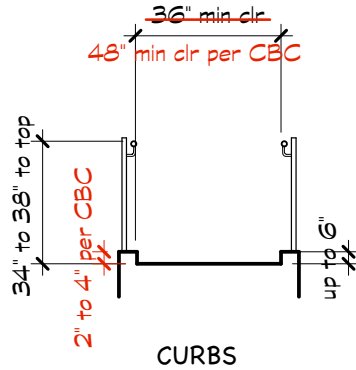
180° TURNING AISLES AROUND AN ELEMENT

If Aisle < 42" then End Aisle is 60" min clr
 If Aisle ≥ 42" then End Aisle is 48" min clr

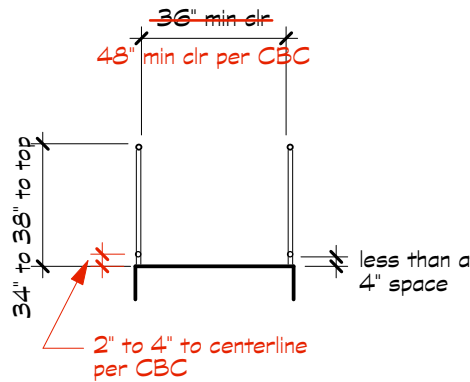


* If Element is ≥ 48" then End Aisle complies with required accessible route clr width

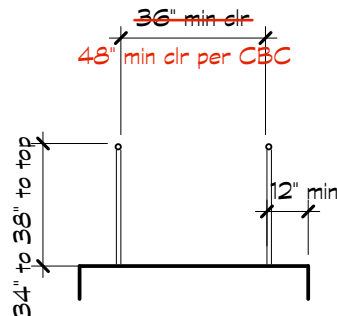
EDGE PROTECTION



CURBS



WHEEL GUIDE RAIL



* Allowed at ramp landings only if vertical drop is $\leq 4"$ per CBC

EXTENSION

EDGE PROTECTION

NOTES:

- Ramp runs require edge protection on each side unless bounded by a wall or fence
- Edge protection is not required on a ramp run with a rise of 6" or less
- Landings do not require edge protection if the vertical drop is 1/2" max within 10" of the required landing edges
 - Landings with a vertical drop of more than 4" at the required landing edges require edge protection if not bounded by a wall or fence per CBC
- Edge protection can consist of a curb, a wheel guide rail, or ramp/landing extension beyond the handrails
- A curb is up to 4" ht & 2" min per CBC
- A wheel guide rail has less than a 4" space below & is 2" to 4" to the centerline from the ramp/landing surface per CBC
- An extension of the ramp run or landing surfaces is 12" min beyond the inner face of the handrail
- If the ramp run or landing is greater than 30" above the adjacent grade provide a continuous guard rail at 42" for the full length of the ramp with opening spaces less than 4" per CBC

MISC EDGE PROTECTION AREAS:

- Abrupt changes in level $> 4"$ at planters or fountains, etc adjacent to accessible routes should have a 6" ht curb unless there is a guide rail at 2" to 4" along with a handrail - not applicable to walkways adjacent to streets or driveways
- If a pedestrian route crosses or adjoins a vehicular way and it is not separated by a curb, railing, or other element a continuous 36" strip of truncated domes should be placed between the pedestrian & vehicular area
- Edges at reflecting pools should have railings, walls, warning curbs, or detectable warnings 24" to 36" deep (truncated domes)

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 one unit vertical in 20 units horizontal (5-percent slope), it shall comply with the provisions of Section 1133B.5.

1133B.7.4 Changes in level. Changes in level shall comply with Section 1124B.2.

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 400 feet (121 920 mm) maximum.

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 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 walkways 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, Chapters 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 (3.2 mm).

1133B.8.7 Detectable warnings at reflecting pools. The edges of reflecting pools shall be protected by railings, walls, warning curbs or detectable warnings complying with Section 1121B.3.1, Item 8(a).

208 Parking Spaces

208.1 General. Where parking spaces are provided, parking spaces shall be provided in accordance with 208.

EXCEPTION: Parking spaces used exclusively for buses, trucks, other delivery vehicles, law enforcement vehicles, or vehicular impound shall not be required to comply with 208 provided that lots accessed by the public are provided with a passenger loading zone complying with 503.

208.2 Minimum Number. Parking spaces complying with 502 shall be provided in accordance with Table 208.2 except as required by 208.2.1, 208.2.2, and 208.2.3. Where more than one parking facility is provided on a site, the number of accessible spaces provided on the site shall be calculated according to the number of spaces required for each parking facility.

Table 208.2 Parking Spaces

Total Number of Parking Spaces Provided in Parking Facility	Minimum Number of Required Accessible Parking Spaces
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 to 300	7
301 to 400	8
401 to 500	9
501 to 1000	2 percent of total
1001 and over	20, plus 1 for each 100, or fraction thereof, over 1000

Advisory 208.2 Minimum Number. The term “parking facility” is used Section 208.2 instead of the term “parking lot” so that it is clear that both parking lots and parking structures are required to comply with this section. The number of parking spaces required to be accessible is to be calculated separately for each parking facility; the required number is not to be based on the total number of parking spaces provided in all of the parking facilities provided on the site.

208.2.1 Hospital Outpatient Facilities. Ten percent of patient and visitor parking *spaces* provided to serve hospital outpatient *facilities* shall comply with 502.

Advisory 208.2.1 Hospital Outpatient Facilities. The term “outpatient facility” is not defined in this document but is intended to cover facilities or units that are located in hospitals and that provide regular and continuing medical treatment without an overnight stay. Doctors' offices, independent clinics, or other facilities not located in hospitals are not considered hospital outpatient facilities for purposes of this document.

208.2.2 Rehabilitation Facilities and Outpatient Physical Therapy Facilities. Twenty percent of patient and visitor parking *spaces* provided to serve rehabilitation *facilities* specializing in treating conditions that affect mobility and outpatient physical therapy *facilities* shall comply with 502.

Advisory 208.2.2 Rehabilitation Facilities and Outpatient Physical Therapy Facilities. Conditions that affect mobility include conditions requiring the use or assistance of a brace, cane, crutch, prosthetic device, wheelchair, or powered mobility aid; arthritic, neurological, or orthopedic conditions that severely limit one's ability to walk; respiratory diseases and other conditions which may require the use of portable oxygen; and cardiac conditions that impose significant functional limitations.

208.2.3 Residential Facilities. Parking *spaces* provided to serve residential *facilities* shall comply with 208.2.3.

208.2.3.1 Parking for Residents. Where at least one parking *space* is provided for each *residential dwelling unit*, at least one parking *space* complying with 502 shall be provided for each *residential dwelling unit* required to provide mobility features complying with 809.2 through 809.4.

208.2.3.2 Additional Parking Spaces for Residents. Where the total number of parking *spaces* provided for each *residential dwelling unit* exceeds one parking *space* per *residential dwelling unit*, 2 percent, but no fewer than one *space*, of all the parking *spaces* not covered by 208.2.3.1 shall comply with 502.

208.2.3.3 Parking for Guests, Employees, and Other Non-Residents. Where parking spaces are provided for persons other than residents, parking shall be provided in accordance with Table 208.2.

208.2.4 Van Parking Spaces. For every six or fraction of six parking *spaces* required by 208.2 to comply with 502, at least one shall be a van parking *space* complying with 502.

208.3 Location. Parking *facilities* shall comply with 208.3

208.3.1 General. Parking *spaces* complying with 502 that serve a particular *building* or *facility* shall be located on the shortest *accessible* route from parking to an *entrance* complying with 206.4. Where parking serves more than one *accessible entrance*, parking *spaces* complying with 502 shall be dispersed and located on the shortest *accessible* route to the *accessible entrances*. In parking

facilities that do not serve a particular *building* or *facility*, parking *spaces* complying with 502 shall be located on the shortest *accessible* route to an *accessible* pedestrian *entrance* of the parking *facility*.

EXCEPTIONS: 1. All van parking *spaces* shall be permitted to be grouped on one level within a multi-story parking *facility*.

2. Parking *spaces* shall be permitted to be located in different parking *facilities* if substantially equivalent or greater *accessibility* is provided in terms of distance from an *accessible entrance* or *entrances*, parking fee, and user convenience.

Advisory 208.3.1 General Exception 2. Factors that could affect “user convenience” include, but are not limited to, protection from the weather, security, lighting, and comparative maintenance of the alternative parking site.

208.3.2 Residential Facilities. In residential *facilities* containing *residential dwelling units* required to provide mobility features complying with 809.2 through 809.4, parking *spaces* provided in accordance with 208.2.3.1 shall be located on the shortest *accessible* route to the *residential dwelling unit entrance* they serve. *Spaces* provided in accordance with 208.2.3.2 shall be dispersed throughout all types of parking provided for the *residential dwelling units*.

EXCEPTION: Parking *spaces* provided in accordance with 208.2.3.2 shall not be required to be dispersed throughout all types of parking if substantially equivalent or greater *accessibility* is provided in terms of distance from an *accessible entrance*, parking fee, and user convenience.

Advisory 208.3.2 Residential Facilities Exception. Factors that could affect “user convenience” include, but are not limited to, protection from the weather, security, lighting, and comparative maintenance of the alternative parking site.

209 Passenger Loading Zones and Bus Stops

209.1 General. Passenger loading zones shall be provided in accordance with 209.

209.2 Type. Where provided, passenger loading zones shall comply with 209.2.

209.2.1 Passenger Loading Zones. Passenger loading zones, except those required to comply with 209.2.2 and 209.2.3, shall provide at least one passenger loading zone complying with 503 in every continuous 100 linear feet (30 m) of loading zone *space*, or fraction thereof.

209.2.2 Bus Loading Zones. In bus loading zones restricted to use by designated or specified public transportation vehicles, each bus bay, bus stop, or other area designated for lift or *ramp* deployment shall comply with 810.2.

Advisory 209.2.2 Bus Loading Zones. The terms “designated public transportation” and “specified public transportation” are defined by the Department of Transportation at 49 CFR 37.3 in regulations implementing the Americans with Disabilities Act. These terms refer to public transportation services provided by public or private entities, respectively. For example, designated public transportation vehicles include buses and vans operated by public transit agencies, while specified public transportation vehicles include tour and charter buses, taxis and limousines, and hotel shuttles operated by private entities.

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."

Van accessible spaces complying with Section 1129B.3, Item 2 shall have an additional sign or additional language stating "Van Accessible" 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 accessible stall or space. The sign shall not be less than 17 inches by 22 inches (432 mm by 559 mm) in size with 1 inch (25 mm) high minimum lettering which clearly and conspicuously states the following:

"Unauthorized vehicles parked in designated accessible spaces not displaying distinguishing placards or special license plates issued for persons with disabilities will be towed away at the 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 one unit vertical in 50 units horizontal (2-percent slope) 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 Section 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 a 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.

1131B.4 Bus stop pads and shelters. See Section 1121B.2.1.

SECTION 1132B OUTDOOR OCCUPANCIES

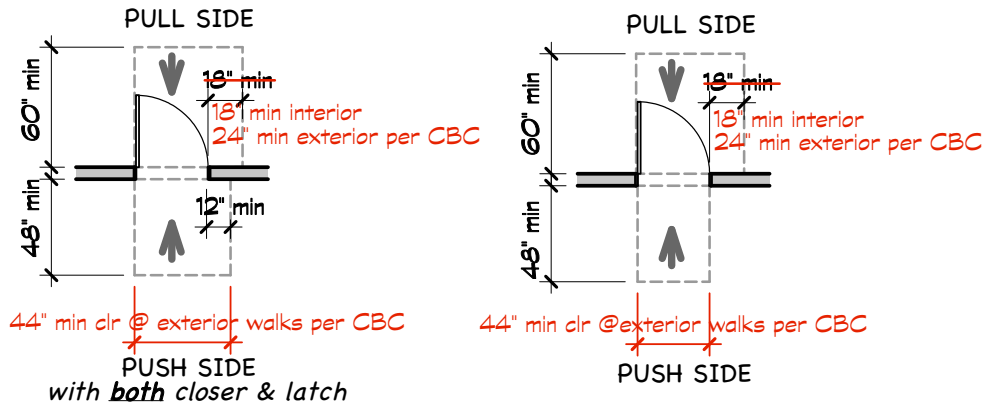
1132B.1 General. Outdoor occupancies shall be accessible as required in this chapter. See also the general requirements in Section 1114B.1.1.

1132B.2 Parks and recreational areas. The following parks and recreational areas shall comply with these regulations.

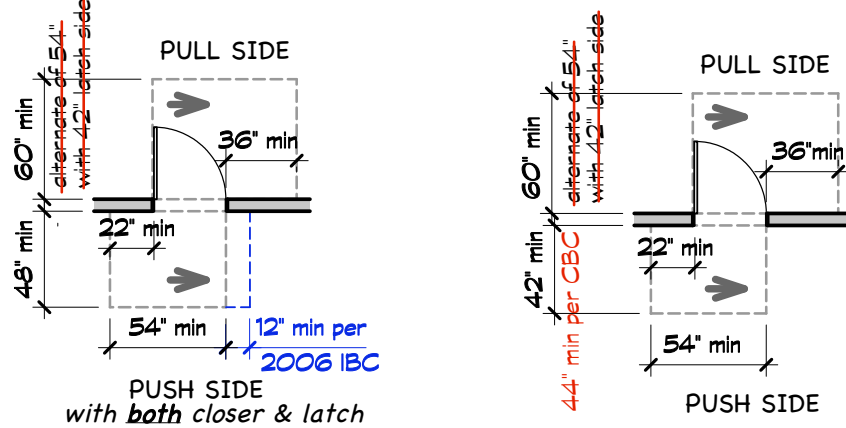
Exceptions:

1. In existing buildings, when the enforcing agency determines that compliance would create an unreasonable hardship, a variance shall be granted when equivalent facilitation is provided.
2. Where the enforcing agency finds that, in specific areas, the natural environment would be materially damaged by compliance with these regulations, such areas shall be subject to these regulations only to the extent that such material damage would not occur.
3. Automobile access shall not be provided or paths of travel shall not be made accessible when the enforce-

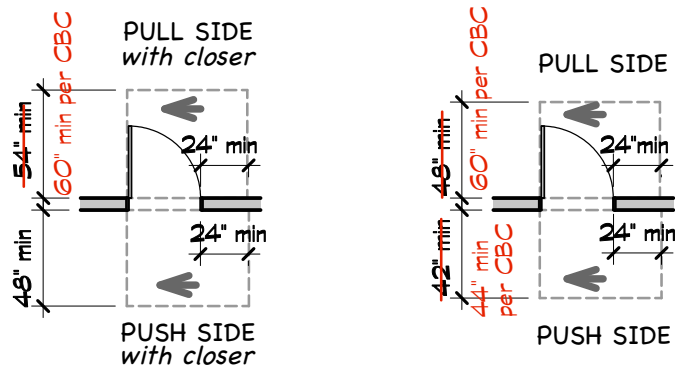
FRONT APPROACH



HINGE APPROACH



LATCH APPROACH

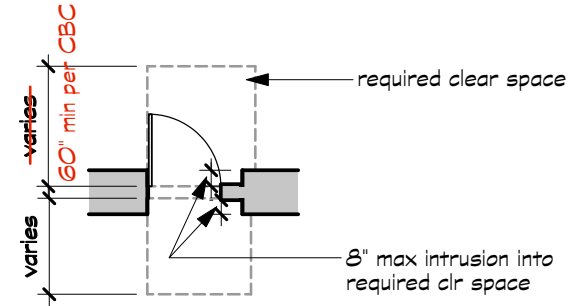


DOOR CLEARANCES

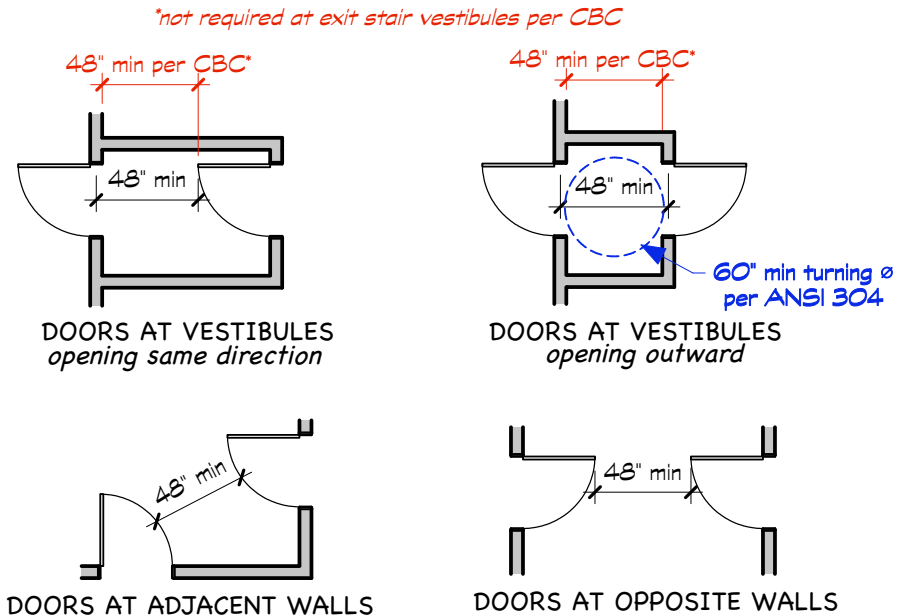
NOTES:

- All required clear floor spaces to have ~~1:48 slope~~ max 2% max per CBC
- Automatic sliding doors - use clearances designated for Front approach Push side for both directions of travel
- Gates for shopping carts provide 60" x 60" on pull side & 48" wide x 42" deep on push side min clr per CBC
- Openings without gates provide 48" wide x 44" deep min clr on both sides per CBC

RECESSED DOOR/GATE



DOORS IN SERIES



Exceptions:

1. Exterior doors to machinery spaces including, but not limited to, elevator pits or elevator pent-houses; mechanical, electrical or communications equipment rooms; piping or equipment catwalks; electric substations and transformer vaults; and highway and tunnel utility facilities.
2. When, at a single location, one of every 8 exterior door leaves, or fraction of 8, is a powered door, other exterior doors at the same location, serving the same interior space, may have a maximum opening force of 8.5 lbf (37.8 N). The powered leaf(s) shall be located closest to the accessible route.
 - a. Powered doors shall comply with Section 1133B.2.3.2. Powered doors shall be fully automatic doors complying with Builders Hardware Manufacturers' Association (BHMA) A156.10 or low energy operated doors complying with BHMA A156.19.
 - b. Powered doors serving a building or facility with an occupancy of 150 or more shall be provided with a back-up battery or back-up generator. The back-up power source shall be able to cycle the door a minimum of 100 cycles.
 - c. Powered doors shall be controlled on both the interior and exterior sides of the doors by sensing devices, push plates, vertical actuation bars or other similar operating devices complying with Section 1117B.6.

At each location where push plates are provided there shall be two push plates; the centerline of one push plate shall be 7 inches (178 mm) minimum and 8 inches (203 mm) maximum above the floor or ground surface and the centerline of the second push plate shall be 30 inches (762 mm) minimum and 44 inches (1219 mm) maximum above the floor or ground surface. Each push plate shall be a minimum of 4 inches (102 mm) diameter or a minimum of 4 inches by 4 inches (102 mm by 102 mm) square and shall display the International Symbol of Accessibility complying with Section 1117B.5.8.1.

At each location where vertical actuation bars are provided the operable portion shall be located so the bottom is 5 inches (127 mm) maximum above the floor or ground surface and the top is 35 inches (889 mm) minimum above the floor or ground surface. The operable portion of each vertical actuation bar shall be a minimum of 2 inches (51 mm) wide and shall display the International Symbol of Accessibility complying with Section 1117B.5.8.1.

Where push plates, vertical actuation bars or other similar operating devices are provided, they shall be placed in a conspicu-

ous location. A level and clear floor or ground space for forward or parallel approach complying with Sections 1118B.4 and 1124B.1 shall be provided, centered on the operating device. Doors shall not swing into the required clear floor or ground space.

- d. Signage identifying the accessible entrance required by Section 1127B.3 shall be placed on, or immediately adjacent to, each powered door. Signage shall be provided in compliance with BHMA A156.10 or BHMA 156.19, as applicable.
- e. In addition to the requirements of Item d, where a powered door is provided in buildings or facilities containing assembly occupancies of 300 or more, a sign displaying the International Symbol of Accessibility measuring 6 inches by 6 inches (152 mm by 152 mm), complying with Section 1117B.5.8.1, shall be provided above the door on both the interior and exterior sides of each powered door.

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.

ANSI/BHMA A156.19-2002

American National Standard for Power Assist And Low Energy Power Operated Doors

Standard ANSI/BHMA A156.19-2002 establishes requirements that apply to power assist doors and low energy power operated/open doors for pedestrian and small vehicular use. Included are provisions intended to reduce the chance of user injury or entrapment.

The following are sample requirements. Please see the complete standard for additional requirements:

Signage	Doors shall be equipped with (a) sign(s) visible from either side, instructing the user as to the operation and function of the door. The signs shall be mounted 50" +/- 12" (1270mm +/- 305mm) from the floor to the center line of the sign. The letters shall be 5/8 inch (16 mm) high minimum.
Force to Prevent Closing	The force required to prevent a swinging door from closing shall not exceed a 15 lbf (67 N) applied 1 in (25 mm) from the latch edge of the door at any point in the closing cycle.
Power Failure	In the event of power failure to the operator, doors shall open with a manual force not to exceed a 15 lbf (67 N) to release a latch, if equipped with a latch, a 30 lbf (133 N) to set the door in motion, and a 15 lbf (67 N) to fully open the door. The forces shall be applied at 1" (25 mm) from the latch edge of the door.

Sample Illustration:



To purchase a copy of any
 BRMA Standard log on to
www.buildershardware.com
 or call 800.699.9277.

Note: This document is not to be used as a substitute for the standard. Users should refer to the entire standard for complete requirements and details. For further information go to www.buildershardware.com.

ANSI/BHMA A156.10-1999
American National Standard for Power Operated Pedestrian Doors

Standard ANSI/BHMA A156.10-1999 establishes requirements for power operated pedestrian doors, which open automatically when approached by pedestrians, some small vehicular traffic or by a knowing act. It includes general information, definitions, required dimensions and provisions to reduce the chance of user injury or entrapment.

Note: This standard does not apply to power assist and low energy power operated doors. For those, refer to ANSI/BHMA A156.19.

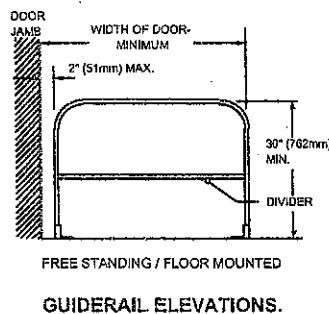
Tests and required performance levels in this standard include:

- Control Mat Performance
- Break Away Egress
- Salt Spray

The following are partial descriptions of test values. Please see the complete standard for additional tests:

Entrapment Protection	The force required to prevent a stopped power operated swinging door from moving in the direction of closing shall not exceed a 40 lbf (180 N) applied 1 inch (25 mm) from the lock edge of the door at any point in the closing cycle.
Sensors	Motion sensors shall detect a 28 inch (710 mm) minimum high person or equivalent and moving at a rate of 6 inches (150 mm) per second minimum toward the center of the door within the detection areas described. Presence sensors shall detect a stationary 28 inch (710 mm) minimum high person or equivalent within the detection areas described.
Signage	All swinging, sliding and folding doors shall be equipped with signage visible from both sides reading, "AUTOMATIC DOOR" with letters 1/2 inch (12.7 mm) high minimum. The sign described in 11.2.3 shall be permitted to be used to satisfy this requirement.

Sample Illustration:



To purchase a copy of any
 BHMA Standard log on to
www.buildershardware.com
 or call 800.699.9277.

Note: This document is not to be used as a substitute for the standard. Users should refer to the entire standard for complete requirements and details. For further information go to www.buildershardware.com.

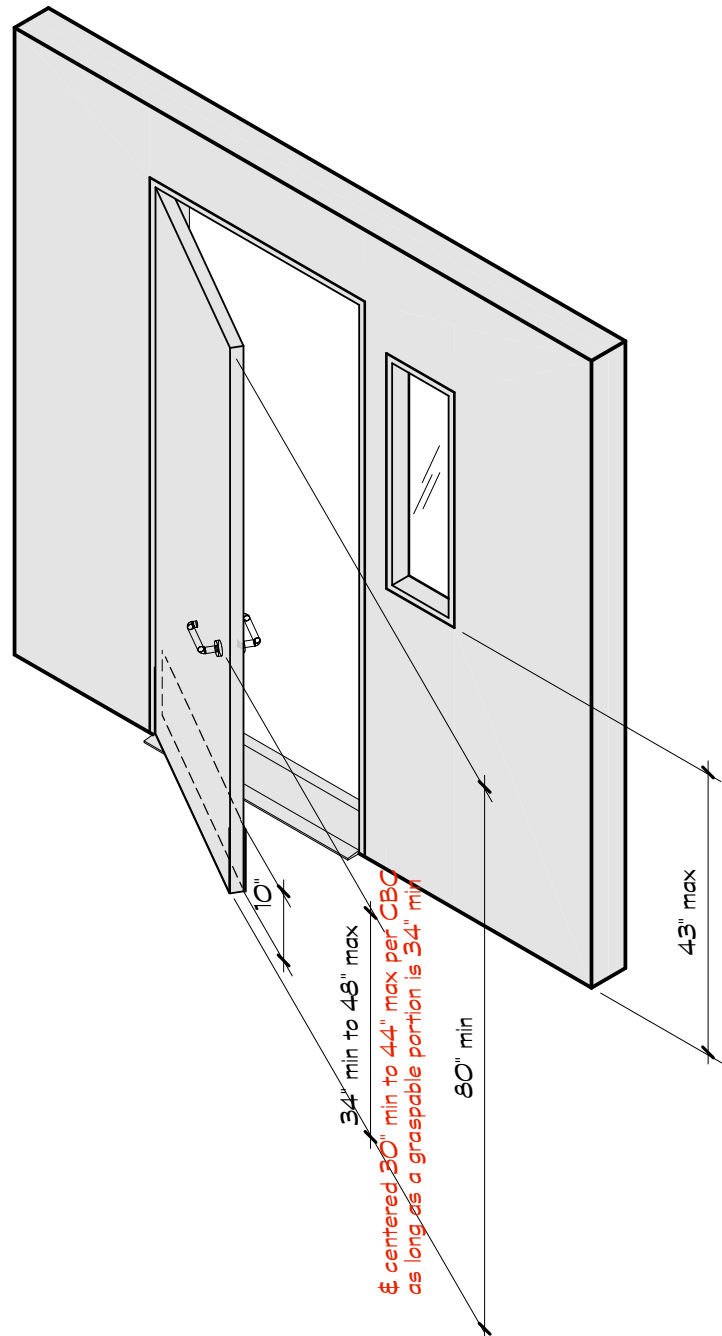
DOOR & GATES

NOTES:

- Width of door or the active leaf in a pair of doors is 32" min clr measured from face of door in the 90° open position to the door stop & 48" max for single leaf per CBC
- No other projections in the clr width below 34" AFF
- If opening is deeper than 24" provide clear width of 36"
- Door height is 80" min
- Force for push & pull side of door is 5 lbs max including power assisted doors; the Authority Having Jurisdiction can increase the maximum effort to operate fire doors to achieve positive latching but not to exceed 15 lbs; 15 lbs max for required fire doors per CBC
- Powered doors to comply with BHMA A156.10 or A156.19 including signage requirements; if one leaf out of every 8 leaves closest to the accessible route is powered in the same area, then the remaining 7 leaves can have 8.5 lbs max; powered doors to comply with CBC 1133B.2.5 Exception 2 per CBC
- Kick plates are not required on automatic or sliding doors; swinging doors to have a smooth surface extending 10" AFF for the full width on push side; joints have a 1/16" max differential; ~~tempered glass doors without stiles and bottom rail having a 60° min taper at top edge do not need an additional kick plate~~ narrow frame doors to have a 10" ht smooth surface on push side per CBC
- If vision lights are present in or adjacent to a door, one panel minimum is 43" max AFF; if lowest panel is greater than 66" AFF it is not required
- Revolving doors, gates, and turnstiles are not part of an accessible route
- Shopping cart gates have the bottom of the gate at 3" max AFF and the surface should be smooth per CBC
- All direct entrances from parking structures to a building are accessible
- One entrance min from a tunnel or elevated walkway to a building and one entrance minimum to a tenant space or room are accessible; ~~in addition, 60% of all public entrances are accessible and on an accessible route~~
- 100% of exterior ground floor entrances are accessible and on an accessible route with the exception of powered doors per CBC

HARDWARE NOTES:

- All operable door hardware is 34" min to 48" max AFF & centered 30" to 44" max AFF per CBC - as long as a graspable portion is 34" min AFF
- Hardware does not require tight grasping, pinching or twisting of the wrist
- Closers if present have a closing time of 5 seconds min from 90° to 12° & 3 seconds min from 70° to 3" to latch per CBC
- Spring hinges have a closing time of 1½ second min from 70°
- Door closers and stops to be 78" min AFF
- Floor mounted door stops are within 4" from face of wall per CBC



Exceptions:

1. Exterior doors to machinery spaces including, but not limited to, elevator pits or elevator pent-houses; mechanical, electrical or communications equipment rooms; piping or equipment catwalks; electric substations and transformer vaults; and highway and tunnel utility facilities.
2. When, at a single location, one of every 8 exterior door leafs, or fraction of 8, is a powered door, other exterior doors at the same location, serving the same interior space, may have a maximum opening force of 8.5 lbf (37.8 N). The powered leaf(s) shall be located closest to the accessible route.
 - a. Powered doors shall comply with Section 1133B.2.3.2. Powered doors shall be fully automatic doors complying with Builders Hardware Manufacturers' Association (BHMA) A156.10 or low energy operated doors complying with BHMA A156.19.
 - b. Powered doors serving a building or facility with an occupancy of 150 or more shall be provided with a back-up battery or back-up generator. The back-up power source shall be able to cycle the door a minimum of 100 cycles.
 - c. Powered doors shall be controlled on both the interior and exterior sides of the doors by sensing devices, push plates, vertical actuation bars or other similar operating devices complying with Section 1117B.6.

At each location where push plates are provided there shall be two push plates; the centerline of one push plate shall be 7 inches (178 mm) minimum and 8 inches (203 mm) maximum above the floor or ground surface and the centerline of the second push plate shall be 30 inches (762 mm) minimum and 44 inches (1219 mm) maximum above the floor or ground surface. Each push plate shall be a minimum of 4 inches (102 mm) diameter or a minimum of 4 inches by 4 inches (102 mm by 102 mm) square and shall display the International Symbol of Accessibility complying with Section 1117B.5.8.1.

At each location where vertical actuation bars are provided the operable portion shall be located so the bottom is 5 inches (127 mm) maximum above the floor or ground surface and the top is 35 inches (889 mm) minimum above the floor or ground surface. The operable portion of each vertical actuation bar shall be a minimum of 2 inches (51 mm) wide and shall display the International Symbol of Accessibility complying with Section 1117B.5.8.1.

Where push plates, vertical actuation bars or other similar operating devices are provided, they shall be placed in a conspicu-

ous location. A level and clear floor or ground space for forward or parallel approach complying with Sections 1118B.4 and 1124B.1 shall be provided, centered on the operating device. Doors shall not swing into the required clear floor or ground space.

- d. Signage identifying the accessible entrance required by Section 1127B.3 shall be placed on, or immediately adjacent to, each powered door. Signage shall be provided in compliance with BHMA A156.10 or BHMA 156.19, as applicable.
- e. In addition to the requirements of Item d, where a powered door is provided in buildings or facilities containing assembly occupancies of 300 or more, a sign displaying the International Symbol of Accessibility measuring 6 inches by 6 inches (152 mm by 152 mm), complying with Section 1117B.5.8.1, shall be provided above the door on both the interior and exterior sides of each powered door.

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.

during periods that the space is occupied. The grilles shall remain secured in the full-open position during the period of occupancy by the general public. Where two or more means of egress are required, not more than one-half of the exits or exit access doorways shall be equipped with horizontal sliding or vertical security grilles.

1008.1.4 Floor elevation. There shall be a floor or landing on each side of a door. Such floor or landing shall be at the same elevation on each side of the door. Landings shall be level except for exterior landings, which are permitted to have a slope not to exceed 0.25 unit vertical in 12 units horizontal (2-percent slope).

Exceptions:

1. Doors serving individual dwelling units in Groups R-2 and R-3 where the following apply:
 - 1.1. A door is permitted to open at the top step of an interior flight of stairs, provided the door does not swing over the top step.
 - 1.2. Screen doors and storm doors are permitted to swing over stairs or landings.
2. Exterior doors as provided for in Section 1003.5, Exception 1, and Section 1018.2, which are not on an accessible route.
3. In Group R-3 occupancies not required to be *adaptable or accessible*, the landing at an exterior doorway shall not be more than 7.75 inches (197 mm) below the top of the threshold, provided the door, other than an exterior storm or screen door, does not swing over the landing.
4. Variations in elevation due to differences in finish materials, but not more than 0.5 inch (12.7 mm).

1008.1.5 Landings at doors. Landings shall have a width not less than the width of the stairway or the door, whichever is greater. Doors in the fully open position shall not reduce a required dimension by more than 7 inches (178 mm). When a landing serves an occupant load of 50 or more, doors in any position shall not reduce the landing to less than one-half its required width. Landings shall have a length measured in the direction of travel of not less than 44 inches (1118 mm).

Exception: Landing length in the direction of travel in Groups R-3 and U and within individual units of Group R-2 need not exceed 36 inches (914 mm).

1008.1.6 Thresholds. Thresholds at doorways shall not exceed 0.75 inch (19.1 mm) in height for sliding doors serving dwelling units or 0.5 inch (12.7 mm) for other doors. Raised thresholds and floor level changes greater than 0.25 inch (6.4 mm) at doorways shall be beveled with a slope not greater than one unit vertical in two units horizontal (50-percent slope).

Exception: The threshold height shall be limited to 7.75 inches (197 mm) where the occupancy is Group R-2 or R-3; the door is an exterior door that is not a component of the required means of egress; the door, other than an exterior storm or screen door does not swing over the

landing or step; and the doorway is not on an accessible route as required by *Chapter 11A or 11B* and is not part of an *adaptable or accessible dwelling unit*.

1008.1.7 Door arrangement. Space between two doors in a series shall be 48 inches (1219 mm) minimum plus the width of a door swinging into the space. Doors in a series shall swing either in the same direction or away from the space between the doors.

Exceptions:

1. The minimum distance between horizontal sliding power-operated doors in a series shall be 48 inches (1219 mm).
2. Storm and screen doors serving individual dwelling units in Groups R-2 and R-3 need not be spaced 48 inches (1219 mm) from the other door.
3. Doors within individual dwelling units in Groups R-2 and R-3 *occupancies* other than *adaptable or accessible dwelling units*.

1008.1.8 Door operations. Except as specifically permitted by this section egress doors shall be readily openable from the egress side without the use of a key or special knowledge or effort.

1008.1.8.1 Hardware. Door handles, pulls, latches, locks and other operating devices on doors required to be accessible by *Chapter 11A or Chapter 11B* shall not require tight grasping, tight pinching or twisting of the wrist to operate.

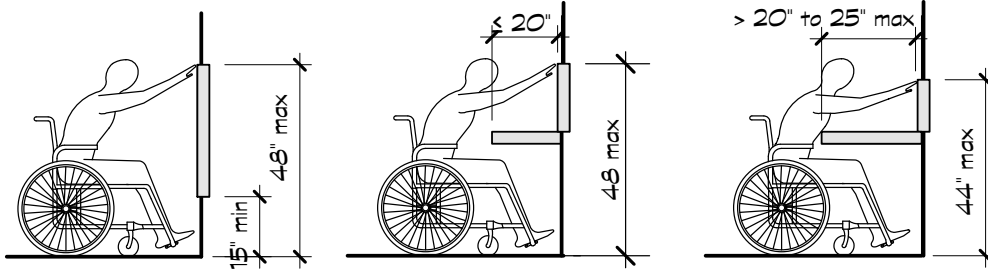
1008.1.8.2 Hardware height. Door handles, pulls, latches, locks and other operating devices shall be installed 34 inches (864 mm) minimum and 48 inches (1219 mm) maximum above the finished floor. Locks used only for security purposes and not used for normal operation are permitted at any height.

Exception: Access doors or gates in barrier walls and fences protecting pools, spas and hot tubs shall be permitted to have operable parts of the release of latch on self-latching devices at 54 inches (1370 mm) maximum above the finished floor or ground, provided the self-latching devices are not also self-locking devices operated by means of a key, electronic opener or integral combination lock.

1008.1.8.3 Locks and latches. Locks and latches shall be permitted to prevent operation of doors where any of the following exists:

1. Places of detention or restraint.
2. In buildings in occupancy Group A having an occupant load of 300 or less, Groups B, F, M and S, and in places of religious worship, the main exterior door or doors are permitted to be equipped with key-operated locking devices from the egress side provided:
 - 2.1. The locking device is readily distinguishable as locked,
 - 2.2. A readily visible durable sign is posted on the egress side on or adjacent to the door

FORWARD REACH RANGE

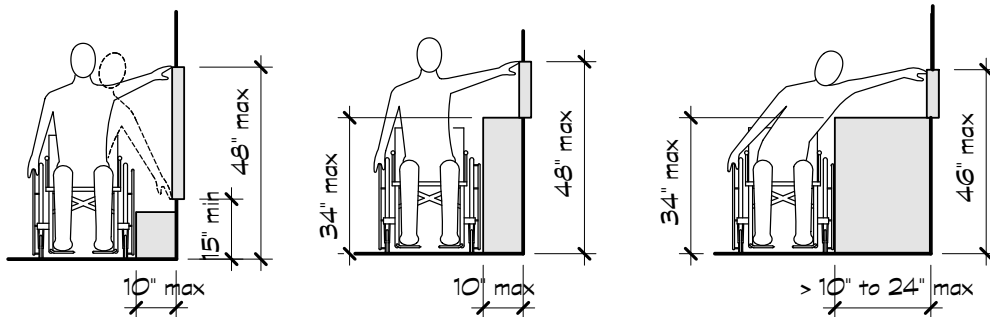


The clear floor space below an object is the same depth as the reach depth above at a minimum

UNOBSTRUCTED

OBSTRUCTED

SIDE REACH RANGE



NARROW OBSTRUCTION

DEEPER OBSTRUCTION

DISPLAY SCREENS:

- Display screens are visible from a point 40" AFF centered on the clear floor space in front of the equipment including POS machines
- Input keyboard devices are arranged in a 12-key ascending or descending telephone keypad layout with the number 5 key tactilely distinct from other keys; Keys not on the active areas are raised; Function keys should contrast visually from background surfaces & characters or symbols should contrast from the key surface
- If the display screen is horizontal up to a slope of 30° the max ht measured to the centerline is 34" AFF; if the display screen is between 30° and 60° the max ht is 44" AFF; if the display screen is 60° to vertical the max ht is 48" per CBC
- Display characters are sans serif and 3/16" min ht based on the upper case "I" per CBC

REACH RANGES & CONTROLS

NOTES:

- All reach ranges are from a 30" x 48" level clear space of 1:48 (2%) slope max
- All operable parts are within compliant reach ranges
- One of each provided type of equipment is accessible in the same general area including bins & waste receptacles
- Doors do not swing into the required clear space
- All controls including coin slots are operable with one hand and do not require tight grasping, pinching, or turning of the wrist
- Force to operate any controls is 5 lbs max

FORWARD REACH RANGE:

- Obstructed forward reach ranges should have the same clear depth below the obstruction as the reach depth above
- Unobstructed forward reach range is 15" min to 48" max
- Obstructed forward reach range over an object of 20" or less deep is 48"
- Obstructed forward reach range over an object greater than 20" deep up to 25" deep is 44" max

SIDE REACH RANGE:

- Side reach range over an object 10" deep max and up to 34" high is 15" min to 48" max AFF
- Side reach range over an object that is over 10" deep up to 24" max deep and 34" max high is 46" max AFF

CHILDREN'S REACH RANGE:

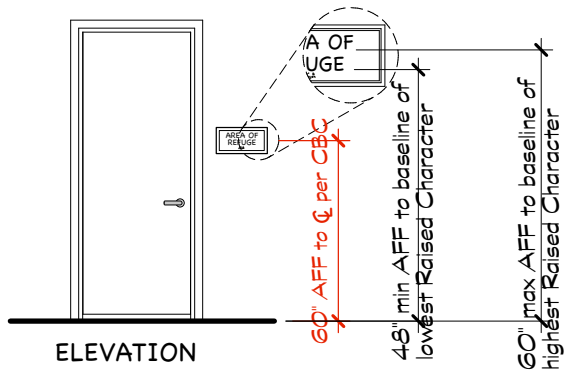
- Children's reach range varies by age group
- Children's reach ranges are the same for forward and side reach with no obstructions below

Ages 3-4	20" min to 36" max high
Ages 5-8	18" min to 40" max high
Ages 9-12	16" min to 44" max high
- Use adult reach ranges for children over 12 years old

CONTROLS:

- Light switches are 48" max AFF measured to the top of the switch per CBC
- Electrical receptacles on circuits of 30 AMP max are 15" to 48" AFF measured 15" to the bottom & 48" to the top of the outlet per CBC

PERMANENT & TACTILE SIGN LOCATION



SIGNAGE LOCATION

PERMANENT AND/OR TACTILE SIGNS

- Provide sign at latch side of door
- Double doors - locate to right side of right door
- Double doors with an inactive leaf - locate sign on inactive leaf
- If there is not enough space on latch side of single door or right side of double doors, locate sign on nearest adjacent wall
- Signs with tactile characters shall be permitted on the push side of doors that have closers without hold open devices
- Minimum of 18" x 18" clear floor space centered on the sign to be provided beyond the arc of the door swing in the closed position and 45 degree open position
- Mounting location allows a person to approach within 3" without encountering protruding objects or being in the door swing per CBC

SIGN TYPES

PERMANENT ROOMS & SPACES

- Permanent rooms have raised characters and braille signage
- Exterior signs not located at doors are visual

EXIT DOOR SIGNS

- Doors at exit passageways, discharge, and stairways have raised characters and braille signage stating 'Exit' (at exit door itself), 'Exit Stair Up/Down' (at stairs), 'Exit Ramp Up/Down' (at ramps), 'Exit Route' (at door leading directly to exit enclosure or exit passageway with no stairs/ramps), 'To Exit' (at door leading from room or to corridor exiting horizontally to exit door with no ramp/stairs) per CBC

ENTRANCES

- Where not all entrances are accessible, provide ISA at accessible entrances & directional signage locating accessible entrances; All accessible entries have an ISA per CBC

INFORMATIONAL SIGNS

- Informational signs (ie occupant load, rules of conduct, etc) have visual characters
- Building directories & building addresses do not need to comply
- Building with specific accessible restrooms or elevators to have information posted in the lobby preferably as part of the building directory along with an ISA per CBC

DIRECTIONAL SIGNS

- Directional signs (ie directions to rooms or spaces including identification of egress routes) have visual characters
- Directional signs to accessible site/building elements or features to include appropriate symbol (ie phone, ISA etc) per CBC

AREAS OF REFUGE & AREAS OF ASSISTED RESCUE

- Instructions in "Areas of Refuge" have visual characters
- Area is identified with a permanent room sign stating "Area Of Refuge" or "Area of Assisted Rescue" in raised characters and braille with an ISA at door

RESTROOM SIGNS

- Restroom signs to have raised characters, braille, pictogram, and 6" min ISA
- Additional restroom ID signs located on doors per CBC
- Inaccessible restrooms have directional sign with ISA locating nearest accessible restroom per CBC

ACCESSIBLE CHECKOUT STANDS

- Provide ISA unless all check out aisles are accessible
- Provide sign stating 'This Checkout Stand To Be Open At All Times For Customers With Disabilities' per CBC

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.1.

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.1.1.1.5 Service entrances. In existing buildings and facilities, a service entrance shall not be the sole accessible entrance unless it is the only entrance to a building or facility (for example, in a factory or garage).

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 Section 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.

FLOOR AREA, NET. The actual occupied area not including unoccupied accessory areas such as corridors, stairways, toilet rooms, mechanical rooms and closets.

FOLDING AND TELESCOPIC SEATING. Tiered seating facilities having an overall shape and size that are capable of being reduced for purposes of moving or storing.

GRANDSTAND. Tiered seating facilities.

GUARD [DSA-AC & HCD 1] or GUARDRAIL. A building component or a system of building components located at or near the open sides of elevated walking surfaces that minimizes the possibility of a fall from the walking surface to a lower level.

HANDRAIL. A horizontal or sloping rail intended for grasping by the hand for guidance or support.

MEANS OF EGRESS. A continuous and unobstructed path of vertical and horizontal egress travel from any occupied portion of a building or structure to a public way. A means of egress consists of three separate and distinct parts: the exit access, the exit and the exit discharge.

MERCHANDISE PAD. A merchandise pad is an area for display of merchandise surrounded by aisles, permanent fixtures or walls. Merchandise pads contain elements such as nonfixed and moveable fixtures, cases, racks, counters and partitions as indicated in Section 105.2, *Appendix Chapter 1*, from which customers browse or shop.

NOSING. The leading edge of treads of stairs and of landings at the top of stairway flights.

OCCUPANT LOAD. The number of persons for which the means of egress of a building or portion thereof is designed.

PANIC HARDWARE. A door-latching assembly incorporating a device that releases the latch upon the application of a force in the direction of egress travel.

PHOTOLUMINESCENT. [SFM] The property of emitting light as the result of absorption of visible light, which continues for a length of time after excitation.

PUBLIC WAY. A street, alley or other parcel of land open to the outside air leading to a street, that has been deeded, dedicated or otherwise permanently appropriated to the public for public use and which has a clear width and height of not less than 10 feet (3048 mm).

RAMP. A walking surface that has a running slope steeper than one unit vertical in 20 units horizontal (5-percent slope).

SCISSOR STAIR. Two interlocking stairways providing two separate paths of egress located within one stairwell enclosure.

SELF-LUMINOUS [SFM] means powered continuously by a self-contained power source other than a battery or batteries, such as radioactive tritium gas. A self-luminous sign is independent of external power supplies or other energy for its operation.

SMOKE-PROTECTED ASSEMBLY SEATING. Seating served by means of egress that is not subject to smoke accumulation within or under a structure.

STAIR. A change in elevation, consisting of one or more risers.

STAIRWAY. One or more flights of stairs, either exterior or interior, with the necessary landings and platforms connecting them, to form a continuous and uninterrupted passage from one level to another.

STAIRWAY, EXTERIOR. A stairway that is open on at least one side, except for required structural columns, beams, handrails and guards. The adjoining open areas shall be either yards, courts or public ways. The other sides of the exterior stairway need not be open.

STAIRWAY, INTERIOR. A stairway not meeting the definition of an exterior stairway.

STAIRWAY, SPIRAL. A stairway having a closed circular form in its plan view with uniform section-shaped treads attached to and radiating from a minimum-diameter supporting column.

WINDER. A tread with nonparallel edges.

SECTION 1003 GENERAL MEANS OF EGRESS

1003.1 Applicability. The general requirements specified in Sections 1003 through 1013 shall apply to all three elements of the means of egress system, in addition to those specific requirements for the exit access, the exit and the exit discharge detailed elsewhere in this chapter.

Exception: Exiting requirements for fixed guideway transit systems shall be per Section 433.3 of the California Building Code.

[HCD & DSA-AC] In addition to the requirements of this chapter, means of egress, which provide access to, or egress from, buildings or facilities where accessibility is required for applications listed in Section 108.2.1.2 regulated by the Department of Housing and Community Development, or Section 109.1 regulated by the Division of the State Architect—Access Compliance, shall also comply with Chapter 11A or Chapter 11B, as applicable.

1003.1.1 Means of egress for hospitals, skilled nursing facilities and intermediate care facilities. [OSHPD 1 & 2] In addition to meeting the requirements of this chapter, means of egress for acute care hospitals, skilled nursing facilities and intermediate care facilities shall comply with the requirements of Sections 1003.1.1.1 and 1003.1.1.2.

Exception: The authority having jurisdiction may exempt minor additions, minor alterations and minor remodel projects from these requirements.

1003.1.1.1 Means of egress for hospital buildings. [OSHPD 1] Means of egress for hospital buildings shall comply with the requirements of Sections 1003.1.1.1.1 through 1003.1.1.1.6.

1003.1.1.1.1 New and existing conforming hospital buildings. Means of egress for new hospital buildings and additions to existing conforming hospital buildings shall only pass through buildings that comply with the requirements of SPC-3 or higher and NPC-4 or higher.

CHAPTER 10

MEANS OF EGRESS

SECTION 1001 ADMINISTRATION

1001.1 General. Buildings or portions thereof shall be provided with a means of egress system as required by this chapter. The provisions of this chapter shall control the design, construction and arrangement of means of egress components required to provide an approved means of egress from structures and portions thereof.

1001.2 Minimum requirements. It shall be unlawful to alter a building or structure in a manner that will reduce the number of exits or the capacity of the means of egress to less than required by this code.

[F] 1001.3 Maintenance. Means of egress shall be maintained in accordance with the *California Fire Code*.

SECTION 1002 DEFINITIONS

1002.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

ACCESSIBLE MEANS OF EGRESS. A continuous and unobstructed way of egress travel from any accessible point in a building or facility to a public way.

AISLE. An exit access component that defines and provides a path of egress travel.

AISLE ACCESSWAY. That portion of an exit access that leads to an aisle.

ALTERNATING TREAD DEVICE. A device that has a series of steps between 50 and 70 degrees (0.87 and 1.22 rad) from horizontal, usually attached to a center support rail in an alternating manner so that the user does not have both feet on the same level at the same time.

AREA OF REFUGE. An area where persons unable to use stairways can remain temporarily to await instructions or assistance during emergency evacuation.

BLEACHERS. Tiered seating facilities.

COMMON PATH OF EGRESS TRAVEL. That portion of exit access which the occupants are required to traverse before two separate and distinct paths of egress travel to two exits are available. Paths that merge are common paths of travel. Common paths of egress travel shall be included within the permitted travel distance.

CORRIDOR. An enclosed exit access component that defines and provides a path of egress travel to an exit.

DOOR, BALANCED. A door equipped with double-pivoted hardware so designed as to cause a semicounterbalanced swing action when opening.

EGRESS COURT. A court or yard which provides access to a public way for one or more exits.

EMERGENCY ESCAPE AND RESCUE OPENING. An operable window, door or other similar device that provides for a means of escape and access for rescue in the event of an emergency.

EXIT. That portion of a means of egress system which is separated from other interior spaces of a building or structure by fire-resistance-rated construction and opening protectives as required to provide a protected path of egress travel between the exit access and the exit discharge. Exits include exterior exit doors at ground level, exit enclosures, exit passageways, exterior exit stairs, exterior exit ramps and horizontal exits.

EXIT, HORIZONTAL. A path of egress travel from one building to an area in another building on approximately the same level, or a path of egress travel through or around a wall or partition to an area on approximately the same level in the same building, which affords safety from fire and smoke from the area of incidence and areas communicating therewith.

EXIT ACCESS. That portion of a means of egress system that leads from any occupied portion of a building or structure to an exit.

EXIT DISCHARGE. That portion of a means of egress system between the termination of an exit and a public way.

EXIT DISCHARGE, LEVEL OF. The horizontal plane located at the point at which an exit terminates and an exit discharge begins.

EXIT ENCLOSURE. An exit component that is separated from other interior spaces of a building or structure by fire-resistance-rated construction and opening protectives, and provides for a protected path of egress travel in a vertical or horizontal direction to the exit discharge or the public way.

EXIT PASSAGEWAY. An exit component that is separated from all other interior spaces of a building or structure by fire-resistance-rated construction and opening protectives, and provides for a protected path of egress travel in a horizontal direction to the exit discharge or the public way.

FIRE EXIT HARDWARE. Panic hardware that is listed for use on fire door assemblies.

FLOOR AREA, GROSS. The floor area within the inside perimeter of the exterior walls of the building under consideration, exclusive of vent shafts and courts, without deduction for corridors, stairways, closets, the thickness of interior walls, columns or other features. The floor area of a building, or portion thereof, not provided with surrounding exterior walls shall be the usable area under the horizontal projection of the roof or floor above. The gross floor area shall not include shafts with no openings or interior courts.

1006.4 Performance of system. Emergency lighting facilities shall be arranged to provide initial illumination that is at least an average of 1 foot-candle (11 lux) and a minimum at any point of 0.1 foot-candle (1 lux) measured along the path of egress at floor level. Illumination levels shall be permitted to decline to 0.6 foot-candle (6 lux) average and a minimum at any point of 0.06 foot-candle (0.6 lux) at the end of the emergency lighting time duration. A maximum-to-minimum illumination uniformity ratio of 40 to 1 shall not be exceeded.

SECTION 1007 ACCESSIBLE MEANS OF EGRESS

1007.1 Accessible means of egress required. Accessible means of egress shall comply with this section. Accessible spaces shall be provided with not less than one accessible means of egress. Where more than one means of egress is required by Sections 1015.1 or 1019.1 from any accessible space, each accessible portion of the space shall be served by accessible means of egress in at least the same number as required by Section 1015.1 or 1019.1. In addition to the requirements of this chapter, means of egress, which provide access to, or egress from, buildings for persons with disabilities, shall also comply with the requirements of Chapter 11A or 11B, as applicable.

Exceptions:

1. Accessible means of egress are not required in alterations to existing buildings.
2. One accessible means of egress is required from an accessible mezzanine level in accordance with Section 1007.3, 1007.4 or 1007.5 and Chapter 11A or 11B, as applicable.
3. In assembly spaces with sloped floors, one accessible means of egress is required from a space where the common path of travel of the accessible route for access to the wheelchair spaces meets the requirements in Section 1025.8 and Chapter 11A or 11B, as applicable.

1007.2 Continuity and components. Each required accessible means of egress shall be continuous to a public way and shall consist of one or more of the following components:

1. Accessible routes complying with Chapter 11A, Sections 1110A.1 and 1120A, or Chapter 11B, Section 1114B.1.2, as applicable.
2. Stairways within vertical exit enclosures complying with Sections 1007.3, 1020 and Chapter 11A, Section 1123A, or Chapter 11B, Section 1133B.4, as applicable.
3. Exterior exit stairways complying with Sections 1007.3, 1023 and Chapter 11A, Section 1115A, or Chapter 11B, Section 1133B.4, as applicable.
4. Elevators complying with Section 1007.4 and Chapter 11A, Section 1124A, or Chapter 11B, Section 1116B.1, as applicable.
5. Platform lifts complying with Section 1007.5 and Chapter 11A, Section 1124A, or Chapter 11B, Sections 1116B.2 and 1116B.3, as applicable.
6. Horizontal exits complying with Section 1022.

7. Ramps complying with Section 1010 and Chapter 11A, Sections 1114A and 1122A, or Chapter 11B, Section 1133B.5, as applicable.
8. Areas of refuge complying with Section 1007.6.

Exceptions:

1. Where the exit discharge is not accessible, an exterior area for assisted rescue must be provided in accordance with Section 1007.8.
2. Where the exit stairway is open to the exterior, the accessible means of egress shall include either an area of refuge in accordance with Section 1007.6 or an exterior area for assisted rescue in accordance with Section 1007.8.

1007.2.1 Elevators required. In buildings where a required accessible floor is four or more stories above or below a level of exit discharge, at least one required accessible means of egress shall be an elevator complying with Section 1007.4.

Exceptions:

1. In buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, the elevator shall not be required on floors provided with a horizontal exit and located at or above the level of exit discharge.
2. In buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, the elevator shall not be required on floors provided with a ramp conforming to the provisions of Section 1010.

1007.3 Exit stairways. In order to be considered part of an accessible means of egress, an exit stairway shall have a clear width of 48 inches (1219 mm) minimum between handrails and shall either incorporate an area of refuge within an enlarged floor-level landing or shall be accessed from either an area of refuge complying with Section 1007.6 or a horizontal exit. [DSA-AC & HCD 1-AC] In addition, exit stairways shall comply with Chapter 11A, Sections 1115A and 1123A, or Chapter 11B, Section 1133B.4, as applicable.

Exceptions:

1. Unenclosed exit stairways as permitted by Section 1020.1 are permitted to be considered part of an accessible means of egress.
2. The area of refuge is not required at unenclosed exit stairways as permitted by Section 1020.1 in buildings or facilities that are equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.
3. The clear width of 48 inches (1219 mm) between handrails is not required at exit stairways in buildings or facilities equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2.

4. The clear width of 48 inches (1219 mm) between handrails is not required for exit stairways accessed from a horizontal exit.
5. Areas of refuge are not required at exit stairways serving open parking garages.

1007.4 Elevators. In order to be considered part of an accessible means of egress, an elevator shall comply with the emergency operation and signaling device requirements of Section 2.27 of ASME A17.1. Standby power shall be provided in accordance with Sections 2702 and 3003. The elevator shall be accessed from either an area of refuge complying with Section 1007.6 or a horizontal exit.

Exception: Elevators are not required to be accessed from an area of refuge or horizontal exit in open parking garages.

1007.5 Platform lifts. Platform (wheelchair) lifts shall not serve as part of an accessible means of egress, except where allowed as part of a required accessible route in Chapter 11A, Section 1121A, or Chapter 11B, Sections 1116B.2.1 through 1116B.2.4, as applicable. Standby power shall be provided in accordance with Section 2702.2.6 for platform lifts permitted to serve as part of a means of egress.

[DSA-AC] See Chapter 11B, Section 1116B.3 for additional accessible means of egress requirements at platform (wheelchair) lifts.

1007.5.1 Openness. Platform lifts on an accessible means of egress shall not be installed in a fully enclosed hoistway.

1007.6 Areas of refuge. Every required area of refuge shall be accessible from the space it serves by an accessible means of egress. The maximum travel distance from any accessible space to an area of refuge shall not exceed the travel distance permitted for the occupancy in accordance with Section 1016.1. Every required area of refuge shall have direct access to an enclosed stairway complying with Sections 1007.3 and 1020.1 or an elevator complying with Section 1007.4. Where an elevator lobby is used as an area of refuge, the shaft and lobby shall comply with Section 1020.1.7 for smokeproof enclosures except where the elevators are in an area of refuge formed by a horizontal exit or smoke barrier. [DSA-AC] Areas of refuge shall comply with the requirements of this code and shall adjoin an accessible route of travel complying with Section 1114B.1.2.

1007.6.1 Size. Each area of refuge shall be sized to accommodate two wheelchair spaces that are not less than 30 inches by 48 inches (762 mm by 1219 mm) each. The total number of such 30-inch by 48-inch (762 mm by 1219 mm) spaces per story shall be not less than one for every 200 persons of calculated occupant load served by the area of refuge. Such wheelchair spaces shall not reduce the required means of egress width. Access to any of the required wheelchair spaces in an area of refuge shall not be obstructed by more than one adjoining wheelchair space.

Exception: The enforcing agency may reduce the size of each required area of refuge to accommodate one wheelchair space that is not less than 30 inches by 48 inches (762 mm by 1219 mm) on floors where the occupant load is less than 200.

1007.6.2 Separation. Each area of refuge shall be separated from the remainder of the story by a smoke barrier complying with Section 709 of the California Building Code or a horizontal exit complying with Section 1022. Each area of refuge shall be designed to minimize the intrusion of smoke.

Exception: Areas of refuge located within a vertical exit enclosure.

1007.6.3 Two-way communication. Areas of refuge shall be provided with a two-way communication system between the area of refuge and a central control point. If the central control point is not constantly attended, the area of refuge shall also have controlled access to a public telephone system. Location of the central control point shall be approved by the fire department. The two-way communication system shall include both audible and visible signals.

1007.6.3.1 Visible communication method. [DSA-AC & HCD 1-AC] A button complying with Section 1117B.6 in the area of refuge shall activate both a light in the area of refuge indicating that rescue has been requested and a light at the central control point indicating that rescue is being requested. A button at the central control point shall activate both a light at the central control point and a light in the area of refuge indicating that the request has been received.

1007.6.4 Instructions. In areas of refuge that have a two-way emergency communications system, instructions on the use of the area under emergency conditions shall be posted adjoining the communications system. The instructions shall include all of the following and shall comply with Section 1117B.5.1, Item 2:

1. Directions to find other means of egress.
2. Persons able to use the exit stairway do so as soon as possible, unless they are assisting others.
3. Information on planned availability of assistance in the use of stairs or supervised operation of elevators and how to summon such assistance.
4. Directions for use of the emergency communications system.

1007.6.5 Identification. Each door providing access to an area of refuge from an adjacent floor area shall be identified by a sign complying with Section 1117B.5.1, Item 2, stating: AREA OF REFUGE, and including the International Symbol of Accessibility. Where exit sign illumination is required by Section 1011.2, the area of refuge sign shall be illuminated. Additionally, tactile signage complying with Section 1117B.5.1, Item 1 shall be located at each door to an area of refuge.

1007.7 Signage. At exits and elevators serving a required accessible space but not providing an approved accessible means of egress, signage shall be installed indicating the location of accessible means of egress. [DSA-AC & HCD 1-AC] Signs shall comply with Chapter 11A or Chapter 11B, Section 1117B.5.1, Items 2 and 3, as applicable.

1007.8 Exterior area for assisted rescue. The exterior area for assisted rescue must be open to the outside air and meet the requirements of Section 1007.6.1. Separation walls shall com-

ply with the requirements of Section 704 for exterior walls. Where walls or openings are between the area for assisted rescue and the interior of the building, the building exterior walls within 10 feet (3048 mm) horizontally of a nonrated wall or unprotected opening shall have a fire-resistance rating of not less than 1 hour. Openings within such exterior walls shall be protected by opening protectives having a fire protection rating of not less than $\frac{3}{4}$ hour. This construction shall extend vertically from the ground to a point 10 feet (3048 mm) above the floor level of the area for assisted rescue or to the roof line, whichever is lower.

1007.8.1 Openness. The exterior area for assisted rescue shall be at least 50 percent open, and the open area above the guards shall be so distributed as to minimize the accumulation of smoke or toxic gases.

1007.8.2 Exterior exit stairway. Exterior exit stairways that are part of the means of egress for the exterior area for assisted rescue shall provide a clear width of 48 inches (1219 mm) between handrails.

1007.8.3 Identification. Exterior areas for assisted rescue shall have identification as required for area of refuge that complies with Section 1007.6.5.

1007.9 Alarms/emergency warning systems/accessibility. *If emergency warning systems are required, they shall activate a means of warning the hearing impaired. Emergency warning systems as part of the fire-alarm system shall be designed and installed in accordance with NFPA 72 as amended in Chapter 35.*

SECTION 1008 DOORS, GATES AND TURNSTILES

[DSA-AC] In addition to the requirements of this section, means of egress, which provide access to, or egress from, buildings or facilities where accessibility is required for applications listed in Section 109.1 regulated by the Division of the State Architect—Access Compliance, shall also comply with Chapter 11A or Chapter 11B, Section 1133B.2, as applicable.

1008.1 Doors. Means of egress doors shall meet the requirements of this section. Doors serving a means of egress system shall meet the requirements of this section and Section 1018.2. Doors provided for egress purposes in numbers greater than required by this code shall meet the requirements of this section.

Means of egress doors shall be readily distinguishable from the adjacent construction and finishes such that the doors are easily recognizable as doors. Mirrors or similar reflecting materials shall not be used on means of egress doors. Means of egress doors shall not be concealed by curtains, drapes, decorations or similar materials.

1008.1.1 Size of doors. The minimum width of each door opening shall be sufficient for the occupant load thereof and shall provide a clear width of not less than 32 inches (813 mm). Clear openings of doorways with swinging doors shall be measured between the face of the door and the stop, with the door open 90 degrees (1.57 rad). Where this section requires a minimum clear width of 32 inches (813 mm) and

a door opening includes two door leaves without a mullion, one leaf shall provide a clear opening width of 32 inches (813 mm). The maximum width of a swinging door leaf shall be 48 inches (1219 mm) nominal. Means of egress doors in a Group I-2 occupancy used for the movement of beds and litter patients shall provide a clear width not less than 44 inches (1118 mm). The height of doors shall not be less than 80 inches (2032 mm).

Exceptions:

1. The minimum and maximum width shall not apply to door openings that are not part of the required means of egress in Group R-2 and R-3 occupancies.
2. *Other than those required to be accessible by Chapter 11B*, door openings to resident sleeping units in Group 1-3 occupancies shall have a clear width of not less than 28 inches (711 mm).
3. Door openings to storage closets less than 10 square feet (0.93 m²) in area shall not be limited by the minimum width.
4. Width of door leaves in revolving doors that comply with Section 1008.1.3.1 shall not be limited.
5. Door openings within a dwelling unit or sleeping unit shall not be less than 78 inches (1981 mm) in height.
6. Exterior door openings in dwelling units and sleeping units, other than the required exit door, shall not be less than 76 inches (1930 mm) in height.
7. In other than Group R-1 occupancies, the minimum widths shall not apply to interior egress doors within a dwelling unit or sleeping unit that is not required to be *adaptable or accessible as specified in Chapter 11A or 11B, as applicable.*
8. Door openings required to be accessible within dwelling units shall have a minimum clear width as *specified in Chapter 11A or 11B, as applicable.*

1008.1.1.1 Projections into clear width. There shall not be projections into the required clear width lower than 34 inches (864 mm) above the floor or ground. Projections into the clear opening width between 34 inches (864 mm) and 80 inches (2032 mm) above the floor or ground shall not exceed 4 inches (102 mm).

Exception: In a Group I-2 occupancy, there shall be no projections into the clear width of doors used for the movement of beds and litter patients in the means of egress.

1008.1.2 Door swing. Egress doors shall be side-hinged swinging.

Exceptions:

1. Private garages, office areas, factory and storage areas with an occupant load of 10 or less.
2. Group I-3 occupancies used as a place of detention.

Thank you for your time!

QUESTIONS??

This concludes the American Institute of Architects
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