



**COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
BUILDING AND SAFETY DIVISION**

**MULTI-FAMILY
RESIDENTIAL
ACCESSIBILITY
PLAN REVIEW LIST**

GENERAL PROJECT INFORMATION

PLAN CHECK NO. _____ DISTRICT NO _____
JOB ADDRESS _____ CITY _____ ZIP _____

NOTE: Numbers in the parenthesis () refer to sections of the 2011 edition of the Los Angeles County Building Code, Table (T) & Building Code Manual (BCM).

INSTRUCTIONS

- Corrections with circled item numbers apply to this plan check.
- In the left-hand margin of the circled corrections, please indicate the sheet number and detail or note number on the plans where the corrections are made. Resubmit marked original plans and two corrected sets of plans, calculations and this plan review list.
- Incomplete, unclear, or faded drawings or calculations will not be accepted.
- Incorporate all comments as marked on checked set of plans and calculations and these correction sheets.

DIVISION I – APPLICATION

APPLICATION

Housing accessibility shall apply to the following: (1101A.1)

1. All newly-constructed covered multifamily dwellings. See all covered units under section 1102A.1.
2. New common use spaces serving existing covered multifamily dwelling.
3. Additions to existing buildings, where the addition alone meets the definition of a covered multifamily dwelling.
4. Common-use areas serving covered multifamily dwellings.
5. Covered multifamily dwellings shall be maintained in compliance with the accessibility standards in effect at the time of construction.
6. Apartments constructed prior to March 13, 1991 shall be maintained in compliance with the accessibility standards in effect at the time of construction. (1102A.2)
7. New publicly funded multifamily dwellings are subject to the provisions of chapter 11A.

8. Existing publicly funded multifamily dwellings are subject to provisions of section 1134B.
9. Where any portion of a building’s exterior is preserved, but the interior of the building is removed, including all structural portions of floors and ceilings, the building is considered a new building for determining the application of this chapter.

MULTISTORY DWELLINGS WITH NO ELEVATOR

Note: This section applies to multistory dwelling units on the ground floor of buildings without elevator submitted on or after July 1, 2005.

At least 10 percent, any fraction thereof rounding to next highest whole number, but not less than one of the multistory dwellings shall comply with the following:

(1102A.3.1)

Exception: Carriage units as defined in Section 1107A.3-C.

CARRIAGE UNIT (1107A.3-C)

A dwelling unit with living space on one or more floors immediately above a Group U, Division 1, private garage or garages. The footprint of the garage or garages is used as the footprint for the remaining floor or floors of the units above, and the garage level contains no habitable space.

Note: Dwelling units located over a common garage shall not be considered carriage units. Also, no overhangs allowed.

10. The primary entry to the dwelling unit shall be on an accessible route.
11. At least one accessible powder room or bathroom shall be located on the primary entry level, served by an accessible route.
12. All rooms or spaces located on the primary entry level shall be served by an accessible route.
13. Common use areas covered by this section shall be accessible.

The minimum number of multifamily dwelling units which must comply with this section shall be calculated using the total number of multistory dwelling units in buildings on a site which are subject to this section. Any fraction thereof shall be rounded to the next highest whole number.

MULTISTORY DWELLINGS WITH ONE OR MORE ELEVATORS

For multistory dwelling units in buildings with elevators, the story of the unit that served by the building elevator is considered a ground floor and the primary entry floor to the unit and shall comply with the following: (1102A.3.2)

14. At least one powder room or bathroom shall be located on the primary entry level.
15. All rooms or spaces located on the primary entry level shall be served by an accessible route and shall comply with Division IV.

DIVISION II – EXTERIOR FACILITIES

SITE DEVELOPMENT AND ROUTE OF TRAVEL

Note: Accessible Route of Travel is defined as “a continuous and unobstructed path connecting all accessible elements and spaces in a accessible building or facility that can be negotiated by a person with a severe disability using a wheelchair and that is also safe for and usable by persons with other disabilities. (1107A.1-A)

Note: Except within individual dwelling units, an accessible route of travel shall not pass through kitchens, storage rooms, restrooms, closets or other spaces used for similar spaces. (1119A.1)

16. 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. (1110A.1)
17. When a building or portion of a building is required to be accessible or adaptable, an accessible route of travel shall be provided to all portions of the building, to accessible building entrances, and between the building and the public way. (1110A.1)
18. 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. (1110A.1)
19. Where more than one route of travel is provided, all routes shall be accessible. (1110A.1.1)
20. 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. (1110A.1.2)
21. When more than one building or facility is located on a site, accessible routes of travel shall be provided between buildings and accessible site facilities. (1110A.1.3)
22. At least one accessible route shall connect to the following: (1110A.1.3 & 1110A.1.4)
 - a. Accessible buildings, facilities, elements and spaces that are on the same site.
 - b. Accessible building or facility entrances with all accessible spaces and elements and with all accessible dwelling units within the building or facility.
23. 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. (1110A.1.5)
24. At every primary public entrance and at every major junction along or leading to an accessible route of travel, there shall be a sign displaying the International Symbol of Accessibility. Signs shall indicate the direction to accessible building entrances and facilities. (1110A.2)
25. All covered ground floor units in non-elevator buildings must be adaptable and on an accessible route.

(1104A.1)

26. Garages, carports and other parking facilities, which are accessory to covered multifamily dwelling units, shall be accessible as required by 1109A. (1105A.1)

27. 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. (1102A.6)

ACCESSIBLE PARKING

Each parking facility provided for covered multifamily dwellings and facilities (e.g., swimming pools, club houses, recreation areas and laundry rooms) that serve covered multifamily dwellings shall provide accessible parking as required by this section. (1109A.1)

28. Parking facilities shall include, but not be limited to, the following: (1109A.2)

- a. Garages.
- b. Private garages (see Section 1105A for the application of building standards for accessibility).
- c. Carports.
- d. Off-street parking (parking lots / spaces).

29. Private garages accessory to covered multifamily dwelling units shall be accessible as required in Section 1109A. Private garages include individual garages and multiple individual garages grouped together. (1109A.2.1)

Exception: An attached private garage directly serving a single covered multifamily dwelling unit providing at least one of the following options:

- a. A door leading directly from the covered dwelling unit which immediately enters the garage. The door shall comply on both sides with Sections 1132A.3 through 1132A.9.
- b. An accessible route of travel from the covered dwelling unit to an exterior door entering the garage. See Section 1132A.1 for requirements at both exit doors.
- c. An accessible route of travel from the dwelling unit's primary entry door to the vehicular entrance at the garage. See Section 1132A.1 for requirements at the primary entry door.

30. Accessible parking spaces shall be provided at a minimum rate of 2 percent of the covered multifamily dwelling units. At least one space of each type of parking facility shall be made accessible even if the total number exceeds 2 percent. When assigned parking is provided, signage as required by Section 1109A.8.8 shall not be required. (1109A.3)

31. When assigned parking spaces are provided for a resident or a group of residents, at least 2 percent of the assigned parking spaces serving covered multifamily dwelling units shall be accessible in each type of parking facility. At least one space of each type of parking facility shall be made accessible even if the total number exceeds 2 percent. When assigned parking is provided, signage as required by Section 1109A.8.8 shall not be required. (1109A.4)

32. When parking is provided for covered multifamily dwellings and is not assigned to a resident or a group of residents, at least 5 percent of the parking spaces shall be accessible and provide access to grade-level entrances of covered multifamily dwellings and facilities (e.g., swimming pools, club houses, recreation areas and laundry rooms) that serve covered multifamily dwellings. Accessible parking spaces shall be provided with signage as required by Section 1109A.8.8. Such signage shall not be blocked from view by a vehicle parked in the space. (1109A.5)

33. When assigned parking is provided, designated accessible parking for the dwelling unit shall be provided on request of residents with disabilities on the same terms and with the full range of choices (e.g., off-street parking, carport or garage) that are available for other residents. (1109A.6)

34. The location of accessible parking spaces shall comply with the following:

- a. Accessible parking spaces shall be located on the shortest accessible route to an accessible building, or covered multifamily dwelling unit entrance. All van accessible spaces may be grouped on one level of a parking facility.
- b. When parking facilities are located adjacent to a building with multiple accessible entrances, accessible parking spaces shall be dispersed and located near the accessible building entrances.
- c. When practical, the accessible route shall not cross lanes for vehicular traffic. When crossing vehicle traffic lanes is necessary, the accessible route shall be designated and marked as a crosswalk.
- d. Parking facilities that do not serve a particular building shall have accessible parking spaces located on the shortest accessible route to an accessible pedestrian entrance of the parking facility.
- e. Accessible parking spaces shall be located so that persons with physical disabilities are not compelled to wheel or walk behind parked cars other than their own. (1109A.7)

Exception: When the enforcement agency determines that compliance with this section or providing equivalent facilitation would create an unreasonable hardship, parking spaces may be provided which would require a person with physical disabilities to wheel or walk behind other than accessible parking spaces.

35. Required accessible parking shall be designed and constructed in accordance with Section 1109A.

(1109A.8)

- a. All entrances, exits and vehicular passageways to and from required accessible parking spaces within parking facilities, shall have a minimum vertical clearance of 8 feet 2 inches from the floor to the lowest projection of the ceiling. Reflective warning signs complying with Section 1117B.5.4 for character height shall be installed at transitions from the 8 feet 2 inch ceiling to lower ceiling heights in vehicular passageways in the same parking level.
- b. Parking spaces shall be arranged to comply with the following: (1109A.8.2)
 - i. In each parking area, a bumper or curb shall be provided and located to prevent encroachment of cars over the required width of walkways.
 - ii. Ramps, including curb ramps, shall not encroach into any accessible parking space or the adjacent loading and unloading access aisle.
- c. Surface slopes of accessible parking spaces and access aisles shall be the minimum possible and shall not exceed 1/4 inch per foot (2.083% gradient) in any direction. (1109A.8.3)
- d. Accessible parking spaces shall comply with Sections 1109A.8.5 and 1109A.8.6. (1109A.8.4)

Where accessible single spaces are provided, they shall be constructed in accordance with the following: (1109A.8.5)

 - i. Single spaces shall be 14 feet wide and lined to provide a 9-foot wide parking area and a 5-foot wide loading and unloading access aisle on the passenger side of the vehicle (See Figure 11A-2B) with the vehicle parked in the forward position.
 - ii. When more than one space is provided. Two 9-foot wide parking spaces may be lined on each side of a 5-foot wide loading and unloading access aisle. See Figures 11A-2A and 11A-2C.
 - iii. The minimum length of each parking space shall be 18 feet.

- iv. The loading and unloading access aisle shall be marked by a border painted blue. Within the blue border, hatched lines a maximum of 36 inches on center shall be painted a color contrasting with the parking surface, preferably blue or white. The words "NO PARKING" shall be painted on the ground within each 5 foot wide loading and unloading access aisle. This notice shall be painted in white letters no less than 12 inches high and located so that it is visible to traffic enforcement officials. See Figures 11A-2A, 11A-2B and 11A-2C.

- e. One in every eight accessible spaces, but not less than one, shall be van accessible and shall be constructed in accordance with the following:

(1109A.8.6)

- i. Each space shall be served by a loading and unloading access aisle at least 8 feet wide, placed on the passenger side with the vehicle parked in the forward position.
 - ii. The minimum length of each space shall be 18 feet.
 - iii. Each space shall be designated "van accessible" as required by 1109A.8.8.
 - iv. All van accessible spaces may be grouped on one level of a parking facility.
 - v. The loading and unloading access aisle shall be marked by a border painted blue. Within the blue border, hatched lines a maximum of 36 inches on center shall be painted a color contrasting with the parking surface, preferably blue or white. The words "NO PARKING" shall be painted on the ground within each 8-foot wide loading and unloading access aisle. This notice shall be painted in white letters no less than 12 inches high and located so that it is visible to traffic enforcement officials. Note: See Figures 11A-2A, 11A-2B and 11A-2C.
- f. Parking spaces adjacent to accessible parking spaces shall not be considered as loading and unloading access aisles. (1109A.8.7)
 - g. Each accessible parking space reserved for persons with disabilities shall be identified by a reflective sign permanently posted immediately adjacent to and visible from each stall or space, consisting of the "International Symbol of Accessibility" in white on a dark blue background. The sign shall not be smaller than 70 square inches in area and, when in a path of travel, shall be posted at a minimum height of 80 inches 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 at a minimum height of 36 inches from the parking space finished grade, ground or sidewalk. Van accessible spaces complying with Section 1109A.8.6 and shall have an additional language stating "Van-Accessible" below the symbol of accessibility. (1109A.8.8)

Note: When assigned resident parking is provided, signage is not required except for unassigned or visitor parking spaces.

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 in size with lettering not less than 1 inch in height, and shall clearly and conspicuously state 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 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 shall have a surface identification duplicating either of the following schemes: (1109A.8.8)

- i. 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 the "International Symbol of Accessibility"; or,
- ii. By outlining the "International Symbol of Accessibility" in white on blue background. The "International Symbol of Accessibility" 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. Note: See Figures 11A-2A, 11A-2B, and 11A-2C.

WALKS AND SIDEWALKS

36. Walks and sidewalks shall have a continuous common surface, not interrupted by steps or by abrupt changes in level exceeding ½". (1113A.1)
37. Sidewalks serving individual dwelling units in covered multifamily building shall be 36" minimum in clear width. All other sidewalks shall be 48" minimum in clear width. (1113A.1.1)
38. Walk and sidewalk surface cross slopes shall not exceed 1/4" per foot (2.083-percent slope). Where due to local conditions create unreasonable hardship, the cross slope may be increased to a maximum of ½" per foot (4.2-percent slope) for distances not to exceed 20 feet. (1113A.1.3)
39. Walk and sidewalk surfaces shall be slip-resistant as follows: (1113A.1.2)
 - a. Surfaces with a slope of less than 6 percent gradient shall be at least as slip-resistant as that described as a medium salted finish.
 - b. Surfaces with a slope of 6 percent or greater gradient shall be slip-resistant.

40. Walks, sidewalks, and pedestrian ways shall be free of gratings whenever possible. For gratings located in the surface of any of these areas, grid openings in gratings shall be limited to ½" in the direction of traffic flow. (1113A.6)

41. When the slope in the direction of travel of any walk exceeds 1 unit vertical to 20 units horizontal (5-percent slope), it shall comply with the provisions of Section 1122A.1 as a pedestrian ramp. (1113A.3)

42. Walks shall be provided with a level area not less than 60"x 60" at a door or gate that swings toward the walk, and not less than 48" wide by 44" deep at a door or gate that swings away from the walk. Such walks shall extend 24" to the side of the strike edge of a door or gate that swings toward the walk. (1113A.4)

CURB RAMPS

Note: Curb Ramp is defined as a sloping pedestrian way, intended for pedestrian traffic which provides access between a walk or sidewalk and a surface located above or below an adjacent curb face. (1107A.3)

Note: Curb Ramps shall be constructed where a pedestrian way crosses a curb. The preferred and recommended location for a curb ramps is in the center of the crosswalk or 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. (1112A.1)

43. Curb ramps shall be a minimum of 4' in width. (1112A.3)
44. The slope of curb ramps shall not exceed 1 unit vertical to 12 units horizontal (8.33-percent slope). (1112.5)
45. Transitions from ramps to walks, gutters, or streets shall be flush and free of abrupt changes. (1112A.5)
46. Curb ramp located where the pedestrians must walk across the ramp, shall have flared sides; the maximum slope of the flare shall be one unit vertical in 10 units horizontal (10-percent slope). Curb ramp with returned curbs can be used where pedestrians would not normally walk across the ramp. (1112A.5)
47. A level landing 4' 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 flared or flared sides of the curb ramp shall not exceed 1 unit vertical to 12 units horizontal (8.33-percent slope).

(1112A.6)

48. The surface of each curb ramp and its flared sides shall be stable, firm, and slip-resistant and shall be of contrasting finish from that of the adjacent sidewalk.

(1112A.7)

49. Curb ramps shall be located to prevent their obstruction by parked cars. Built-up-curb ramps shall be that they do not project into vehicular traffic lanes. (1112A.2)

50. All curb ramps shall have a grooved border 12 inches wide at the level surface of the sidewalk along the top and each side approximately 3/4 inch 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 11A-3A through 11A-3K. (1112A.8)

51. For detectable warning requirements, see chapter 11B, Section 1127B.5, Item 7. (1112A.9)

RAMPS (EXTERIOR OR INTERIOR)

Note: Any path of travel shall be considered a ramp if its slope is greater than 1 unit vertical in 20 units horizontal (5-percent slope).

52. The width of ramps shall be consistent with the requirements for exits in Chapter 10 of this Code, but in no case shall the ramp width be less than the following:

(1114A.1, 1122A.1)

- a. Ramps serving accessible entrances to covered multifamily buildings where the ramp is the only exit discharge path and serves an occupant load of 300 or more shall have a minimum clear width of 60 inches.
- b. Ramps serving accessible entrances of covered multifamily dwellings with an occupant load of 10 or less may be 36 inches in clear width.
- c. All other ramps shall have a minimum clear width of 48 inches.
- d. Handrails, curbs, wheel guides and or appurtenances shall not project into the required clear width of a ramp.

53. The maximum slope of ramps on an accessible route shall be no greater than 1 unit vertical in 12 units horizontal (8.33-percent slope). (1114A.2, 1122A.2)

Exception: Ramps serving decks, patios or balconies as specified in Section 1132A.4.

54. The cross slope of ramp surfaces shall not exceed 1/4 inch per foot (2.083-percent slope).

(1114A.2.1, 1122A.2.1)

55. Ramp landings shall be level and comply with this section. (1114A.4, 1122A.3)

- a. Landings shall be provided at the top and bottom of each ramp. Intermediate landings shall be provided at intervals not exceeding 30 inches of vertical rise and at each change of direction. Landings are not considered in determining the maximum horizontal distance of each ramp.

(1114A.4.1, 1122A.3.1)

- b. Top landings shall not be less than 60 inches wide. Top landings shall have a minimum length of not less than 60 inches in the direction of the ramp run. See Section 1126A.3 for maneuvering clearances at doors. (See Figure 11A-6C).

(1114A.4.2, 1122A.3.2)

- c. The minimum width of bottom and intermediate landings shall not be less than the width of the ramp. (1114A.4.3, 1122A.3.3)

- d. Doors in any position shall not reduce the minimum dimension of the landing to less than 42 inches and shall not reduce the required width by more than 3 inches when fully open. See Figure 11A-6D. (1114A.4.4, 1122A.3.4)

- e. The width of the landing shall comply with Section 1126A.3 for strike edge extension and maneuvering space at doors.

(1114A.4.5, 1122A.3.5)

- f. Intermediate and bottom landings at a change of direction in excess of 30 degrees shall have a length in the direction of ramp run of not less than 72 inches. (See Figures 11A-6C and 11A6D).

(1114A.4.6, 1122A.3.6)

- g. Other intermediate landings shall have a dimension in the direction of ramp run of not less than 60 inches. See Figure 11A-6C.

(1114A.4.7, 1122A.3.7)

56. Ramps more than 30 inches above the adjacent floor or ground and open on one or both sides shall be provided with guardrails as required by Section 1013. Guardrails shall be continuous from the top of the ramp to the bottom of the ramp. (1114A.5, 1122A.4)

57. Ramp handrails shall comply with the following:

(1114A.6, 1122A.5)

- a. Handrails shall be provided at each side of ramps when the slope exceeds 1 unit vertical in 20 units horizontal (5-percent slope). Handrails on all ramps shall be continuous.

(1114A.6.1, 1122A.5.1)

Exceptions:

- i. Curb ramps.

- ii. Ramps that serve an individual dwelling unit may have one handrail, except that ramps open on one or both sides shall have handrails provided on the open side or sides.
 - iii. Ramps at exterior door landings with less than 6 inches rise or less than 72 inches in length.
- b. Handrail configuration. (1114A.6.2, 1122A.5.2, 1114A.6.2.1, 1122A.5.2.1)
- i. The top of handrails shall be 34 to 38 inches above the ramp surface. (1114A.6.2.1, 1122A.5.2.2)
 - ii. Handrail ends shall be returned. (1114A.6.2.2, 1122A.5.2.3)
 - iii. Handrails shall extend a minimum of 12 inches beyond the top and bottom of the ramp. Where the extension creates a hazard, the termination of the extension shall be rounded or returned smoothly to floor, wall or post. See Figure 11A-5A. (1114A.6.2.3, 1122A.5.2.4)
 - iv. Handrails projecting from a wall shall have a space of 1½ inches between the wall and the handrail. Handrails may be located in a recess if the recess is a maximum of 3 inches deep and extends at least 18 inches above the top of the rail. Any wall or other surface adjacent to the handrail shall be free of sharp or abrasive elements. See Figure 11A-6B. (1114A.6.2.4, 1122A.5.2.5)
 - v. The handgrip portion of handrails shall not be less than 1¼ inches nor more than 2 inches in cross-sectional dimension or the shape shall provide an equivalent gripping surface. The handgrip portion of handrails shall have a smooth surface with no sharp corners. Edges shall have a minimum radius of 1/8 inch. Handrails shall not rotate within their fittings. See Figure 11A-6B. (1114A.6.2.5)
58. Ramps exceeding 10 feet in length, and ramp landings having a vertical drop exceeding 4 inches, shall be provided with one of the following: (1114A.7, 1122A.6)
- a. Guide curbs a minimum of 2 inches in height at each side; or
 - b. Wheel guide rails at each side, centered 2 to 4 inches to above the surface of the ramp or ramp landing. Exception: Ramps or ramp landings bounded by a wall or fence. Note: See Figure 11A-5A.

STAIRWAYS (INTERIOR AND EXTERIOR)

Note: Interior and exterior stairways along accessible route are required to be accessible. (1123A, 1115A.1)

59. Stairways shall have handrails on each side. Intermediate handrails shall be located equi-distant from the sides of the stairway and comply with section 1012.9. (1123A.6.1, 1115A.6.1)

Exception: Stairways within individual dwelling unit. (1123A.6.2.3)

60. Handrails shall be 34" to 38" above the nosing of the treads. (1123A.6.2.1, 1115A.6.2.1)
61. Handrails shall extend a minimum of 12" beyond the top nosing and 12" plus the tread width beyond the bottom nosing and ends shall be returned or terminate in newel posts or safety terminals. (1123A.6.2.3, 1115A.6.2.3, 1123A.6.2.2, 1115A.6.2.2)
62. Where the extension of the handrail in the direction of the stair run would create a hazard, the termination of the extension shall be made either rounded or returned smoothly to the floor, wall, or post. Where the stairs are continuous from landing to landing, the inner rail shall be continuous and need not extend out into the landing. (1123A.6.2.3, 1115A.6.2.3)
63. The handgrip portion of handrails shall be not less than 1 1/4" nor more than 2" in cross-sectional dimension or the shape shall provide an equivalent gripping surface. The handgrip portion of handrails shall have a smooth surface with no sharp corners. Any wall or other surface adjacent to the handrail shall be free of sharp or abrasive elements. Edges shall have a minimum radius of 1/8". (1123A.6.2.5, 1115A.6.2.5, 1123A.6.2.4, 1115A.6.2.4, Fig.11A-6B)
64. Handrails projecting from a wall shall have a space of 1 1/2" between the wall and the handrail. Handrails may be located in a recess if the recess is a maximum of 3" deep and extends at least 18" above the top of the rail. Handrails shall not rotate within their fitting. (1115A.6.2.4, 1123A.6.2.4, 1115A.6.2.5, 1123A.6.2.5, Fig.11A-6B)
65. All tread surfaces shall be slip-resistant. Treads shall have smooth, rounded, or chamfered exposed edges, and no abrupt edges at the nosing (lower front edge). (1123A.3, 1115A.3)
66. The nosing shall not project more than 1-1/4" past the face of the riser below. Risers shall be sloped or the underside of the nosing shall have an angle not more than 30 degrees from the horizontal. See Figure 11A-6A. (1123A.4, 1115A.4)
67. Exterior stairs serving buildings on a site containing multifamily dwelling units shall have the upper approach and all treads marked by a stripe providing clear visual contrast.

The stripe shall be a minimum of 2 inches wide to a maximum of 4 inches wide placed parallel to, and not more than 1 inch from, the nose of the step or upper approach. The stripe shall extend the full width of the step or upper approach and shall be of material that is at least as slip resistant as the other treads of the stair. A painted stripe shall be acceptable. (1115A.5)

68. Interior stairs shall have the upper approach and lower tread marked by a stripe providing clear visual contrast. Exception: Stairways within an individual dwelling unit.

The stripe shall be a minimum of 2 inches wide to a maximum of 4 inches wide placed parallel to, and not more than 1 inch from, the nose of the step or upper approach. The stripe shall extend the full width of the step or upper approach and shall be of material that is at least as slip resistant as the other treads of the stair. A painted stripe shall be acceptable. (1123A.5)

69. Open risers are not permitted on exterior stairways.

Exceptions:

- a. An opening of not more than ½ inch may be permitted between the base of the riser and the tread.
- b. Risers constructed of grating containing openings of not more than ½ inch may be permitted.

(1115A.2)

70. Open risers are not permitted on interior stairways.

Exception: Stairways within an individual dwelling unit (1123A.2)

HAZARDS ON ACCESSIBLE ROUTES

71. Abrupt changes in level exceeding 4 inches in vertical dimension, such as changes in level at planters or fountains located in or adjacent to walks, sidewalks, or other pedestrian ways, shall be identified by curbs other approved barriers projecting at least 6 inches in height above the walk or sidewalk surface to warn the blind of a potential drop-off. (1116A.1)

Exceptions:

- a. Between a walk or sidewalk and an adjacent street or driveway.
- b. When a guardrail or handrail is provided with a wheel guide centered 2 to 4 inches above the surface of the walk or sidewalk.

72. Walks, pedestrian ways, and other circulation spaces which are part of the required egress system shall have minimum clear headroom of 84 inches. Other walks, pedestrian ways, and circulation spaces shall have minimum clear headroom of 80 inches. If the vertical clearance of an area adjoining an accessible route is reduced to less than 80 inches nominal dimension, a guardrail or other barrier having its leading edge at or below 27 inches above the finished floor shall be provided. See Figure 11A-1B. (1116A.2).

Exception: Doorways and archways less than 24 inches in depth may have minimum clear headroom of 80 inches nominal. See Section 1126A.

73. Any obstruction that overhangs a pedestrian way shall be a minimum of 80 inches 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 (see Section 1116A.2 for required headroom clearance). (1116A.3)

74. Wherever signs mounted on posts or pylons protrude from the post or pylons and the bottom edge of the sign is less than 80 inches 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 (see Section 1116A.2 for required headroom clearance). (1116A.4)

DIVISION III – BUILDING FEATURES, COMMON USE AREAS

AREAS OF REFUGE

See supplemental plan review checklist number 5.

STAIRWAYS

See Division II, Section F.

ELEVATORS AND PLATFORM (WHEELCHAIR) LIFTS (ALSO SEE SUPPLEMENTAL PLAN REVIEW CHECKLIST NO. 5)

Elevators provided in covered multifamily buildings shall be accessible. Elevators required to be accessible shall comply with this chapter, ASME A17.1, Safety Code for Elevators and Escalators, Title 8, of the California Code of Regulations, under “Elevator Safety Orders,” and any other applicable safety regulations of other administrative authorities having jurisdiction.

Exception: Private elevators serving only one dwelling unit. (1124A.1)

HAZARDS ON ACCESSIBLE ROUTES

See Division II, Section G.

DOORS

75. Every primary entrance to a dwelling unit required to be accessible shall be provided with a door buzzer, bell, chime or equivalent installations mounted a maximum of 48 inches above the floor connected to permanent wiring. (1132A.10)
76. Recessed doormats shall be adequately anchored to prevent interference with wheelchair traffic. (1119A.2.1)
77. Doorways which provide access to common use areas or covered multifamily dwellings shall comply with the following: (1126A.1)
- Permit the installation of a door not less than 36 inches in width, not less than 80 inches in height and provide a clear width of not less than 32 inches, measured with the door positioned at an angle of 90 degrees from its closed position.
 - Be capable of opening at least 90 degrees.
 - A pair of doors, manual or automatic, must have at least one leaf which provides a clear width of not less than 32 inches, measured with the door positioned at an angle of 90 degrees from its closed position.
 - The width of any component in the egress system shall not be less than the minimum width required by Section 1005.
78. Revolving doors shall not be used as a required entrance for persons with disabilities. (1126A.1)
79. The floor or landing shall not be more than ½" lower than the threshold of the doorway. (1126A.2.1, Fig.11A-8I)
80. The floor or landing at each side of an exit door shall be level and having a length in the direction of the door swing of at least 60 inches and the length opposite the direction of the door swing of 44 inches as measured at right angles to the plane of the door in its closed position. (1126A.3.1)
81. The width of the level area on the side to which the door swings shall extend 24" past the strike edge of the door for exterior doors and 18" past the strike edge for interior doors. (1126A.3.2, Fig.11A-8D, 8E, 8F for maneuvering at sliding doors)

82. Maximum effort to operate doors shall not exceed 8-1/2 pounds for exterior doors and 5 pounds for interior doors, such pull or push effort being applied at right angles to hinged doors and at the center plane of sliding or folding doors. Compensating devices or automatic door operators may be utilized to meet the above standards. When fire doors are required, the maximum effort to operate the door may be increased to the minimum allowable by the appropriate administrative authority, not to exceed 15 pounds. (1126A.4)
83. 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 from the latch, measured to the landing edge of the door. (1126A.4.1)
84. The bottom 10" 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" 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. (1126A.7)

Exception: Automatic and sliding doors or gates.

COMMON USE FACILITIES

When provided, common use areas and facilities in covered multifamily housing developments shall be accessible to persons with disabilities. Common use facilities include, but are not limited to, lobbies, toilet and bathing facilities, laundry facilities, community rooms, club-houses, health and fitness facilities, game rooms, and portions of common use tenant storage. All entrances, doors, fixtures and controls shall be on an accessible route. (1127A.1)

TOILET FACILITIES.

When common use toilet facilities are provided for residents or guests, at least one percent of the total number of fixtures but not less than one of each type shall comply with this section. (1127A.2)

Multiple-accommodation toilet facilities shall have the following: (1127A.2.1)

Note: See definition in Chapter 2 and Figure 11A-9A.

85. A clear space measured from the floor to a height of 27 inches above the floor, within the sanitary facility room, of sufficient size to inscribe a circle with a diameter not less than 60 inches, or a clear space 56 inches by 63 inches in size. Other than the door to the accessible water closet compartment, a door, in any position, may encroach into this space by not more than 12 inches.
86. Doors shall not swing into the floor space required for any fixture.

87. A water closet fixture located in a compartment shall provide a minimum 28 inch wide clear space from a fixture, or a minimum 32 inch wide clear space from a wall at one side of the water closet. The other side of the water closet shall provide 18 inches from the centerline of the water closet to the wall. The stall shall be a minimum of 60 inches wide. A minimum 48 inch long clear space shall be provided in front of the water closet if the compartment has an end-opening door (facing the water closet). A minimum 60 inch long clear space shall be provided in a compartment with the door located at the side.
88. Grab bars shall be installed in accordance with Section 1127A.4 and shall not project more than 3 inches (76.2 mm) into the clear spaces.
89. Compartment doors shall comply with the following:
- The water closet compartment shall be equipped with a door that has an automatic-closing device, and shall have a clear, unobstructed opening width of 32 inches when located at the end and 34 inches when located at the side with the door positioned at an angle of 90 degrees from its closed position.
 - When standard compartment doors are used, with a minimum 9 inch clearance for footrests underneath and a self-closing device, clearance at the strike edge as specified in Section 1126A.3.2 is not required.
 - The inside and outside of the compartment door shall be equipped with a loop or U-shaped handle immediately below the latch. The latch shall be flip-over style, sliding, or other hardware not requiring the user to grasp or twist.
 - Except for door-opening widths and door swings, a clear, unobstructed access of not less than 44 inches shall be provided to water closet compartments designed for use by persons with disabilities and the space immediately in front of a water closet compartment shall not be less than 48 inches as measured at right angles to compartment door in its closed position.
90. Where six or more stalls are provided within a multiple-accommodation toilet room, at least one stall shall comply with Section 1127A.2.1, Items 2 and 3. At least one additional stall shall be 36 inches wide with an outward swinging self-closing door and grab bars complying with Sections 1127A.4.3, 1127A.4.4 and 1127A.4.5 installed on each compartment side wall.
91. There shall be sufficient space in the toilet room for a wheelchair measuring 30 inches wide by 48 inches long to enter the room and permit the door to close. There shall be in the room a clear floor space of at least 60 inches in diameter, or a T-shaped space complying with Figure 11A-1D.
92. Doors shall not encroach into the clear floor space specified in item 1 of this section by more than 12 inches, except for the panel door to any water closet compartment. See Figure 11A-9B.
93. The water closet shall be located in a space which provides a minimum 28 inch wide clear space from a fixture or a minimum 32 inch wide clear space from a wall at one side. The other side shall provide 18 inches from the centerline of the water closet to the wall. A minimum 48 inches of clear space shall be provided in front of the water closet.
94. Grab bars shall be installed in accordance with Section 1127A.4.
95. All doors, fixtures and controls shall be on an accessible route. The minimum clear width of an accessible route shall be 36 inches except at doors see Section 1126A. If a person in a wheelchair must make a turn around an obstruction, the minimum clear width of the accessible route shall be as shown in Figure 11A-1C. See also Figure 11A-9B.
96. Water Closets required to be accessible shall comply with the following: (1127A.2.3)
- The height of accessible water closets shall be a minimum of 17 inches to a maximum of 19 inches measured to the top of a maximum 2-inch high toilet seat.
 - Controls shall be operable with one hand and shall not require tight grasping, pinching or twisting. Controls for the flush valves shall be mounted on the wide side of toilet areas, no more than 44 inches above the floor. The force required to activate controls shall be no greater than 5 pound force (lbf).
 - Toilet seats shall not be sprung to return to a lifted position.
97. Accessible Urinals required to be accessible shall comply with the following: (1127A.2.4)
- Urinals shall be floor mounted or wall hung. Where one or more wall hung urinals are provided, at least one with a rim projecting a minimum of 14 inches to a maximum of 17 inches from the wall and a maximum of 17 inches above the floor shall be provided.
 - Flush controls shall be operable with one hand, shall not require tight grasping, pinching or twisting of the wrist, and shall be mounted no more than 44 inches above the floor. The force required to activate controls shall be no greater than 5 pound force (lbf). Electronic automatic flushing controls are acceptable and preferable.

Single-accommodation toilet facilities shall comply with the following: (1127A.2.2)

91. There shall be sufficient space in the toilet room for a wheelchair measuring 30 inches wide by 48 inches long to enter the room and permit the door to close. There shall be in the room a clear floor space of at least 60 inches in diameter, or a T-shaped space complying with Figure 11A-1D.

- c. Where urinals are provided, at least one shall have a clear floor space 30 inches by 48 inches in front of the urinal to allow forward approach. This clear space shall comply with Sections 1127A.9.4 and 1127A.5.

ACCESSIBLE LAVATORIES

When common use lavatories are provided for residents or guests, at least one, and not less than 1 percent of all lavatories, shall comply with the following: (1127A.3)

- 98. Lavatories shall be installed with the centerline of the fixture a minimum of 18 inches horizontally from an adjoining wall or fixture. The top of the fixture rim shall be a maximum of 34 inches above the finished floor.
- 99. A clear maneuvering space at least 30 inches by 48 inches shall be provided in front of accessible lavatories to allow forward approach. Such clear floor space shall adjoin or overlap an accessible route and shall not extend into the knee and toe space underneath the lavatory more than 19 inches. This clear space shall comply with Section 1127A.9.5 for allowable reach ranges.
- 100. Knee and toe space (see Figure 11A-9D) shall be provided as follows:
 - a. The knee space shall be at least 30 inches wide and 8 inches deep.
 - b. The knee space shall be at least 29 inches high at the front face and reducing to not less than 27 inches at a point 8 inches back from the front edge.
 - c. Knee space required by this section shall be clear and unobstructed.
 - d. The toe space required in this section shall be provided as follows:
 - i. Shall be at least 30 inches wide and centered on the lavatory.
 - ii. Shall be at least 17 inches deep, measured from the front edge.
 - iii. Shall be at least 9 inches high from the floor.
- 101. The finished floor beneath the lavatory shall be extended to the wall.
- 102. Hot water and drain pipes accessible under lavatories shall be insulated or otherwise covered. There shall be no sharp or abrasive surfaces under lavatories.

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

GRAB BARS, TUB AND SHOWER SEATS, FASTENERS, AND MOUNTING DEVICES.

Grab bars, tub and shower seats, fasteners and mounting devices required by this chapter shall comply with this section. (1127A.4.1)

- 104. Grab bars which are located on each side, or on one side and the back, of the accessible toilet stall or compartment shall be securely attached and centered 33 inches above and parallel to the floor, except that, where a tank-type toilet obstructs placement at 33 inches, the grab bar may be centered as high as 36 inches. The space between the grab bar and objects below shall be a minimum of 1 1/2 inches. Grab bars shall be at least 42 inches in length with the front end positioned 24 inches in front of the water closet stool. Grab bars at the back shall not be less than 36 inches in length. (1127A.4.2) See Figures 11A-9A and 11A-9B.
- 105. The diameter or width of the gripping surfaces of a grab bar shall be 1 1/4 inches to 1 1/2 inches or of a shape that provides an equivalent gripping surface. If grab bars are mounted adjacent to a wall, the space between the wall and the grab bars shall be 1 1/2 inches. See Figure 11A-9C. (1127A.4.3)
- 106. The structural strength of grab bars, tub and shower seats, fasteners, and mounting devices shall meet the following specifications: (1127A.4.4)
 - a. Bending stress in a grab bar or seat induced by the maximum bending moment from the application of a 250-pound point load shall be less than the allowable stress for the material of the grab bar or seat.
 - b. Shear stress induced in a grab bar or seat by the application of a 250-pound point load shall be less than the allowable shear stress for the material of the grab bar or seat, and if its mounting bracket or other support is considered to be fully restrained, then direct and torsional shear stresses shall not exceed the allowable shear stress.
 - c. Shear force induced in a fastener or mounting device from the application of a 250-pound point load shall be less than the allowable lateral load of either the fastener or mounting device or the supporting structure, whichever is the smaller allowable load.

- d. Tensile force induced in a fastener by a direct tension force of a 250 pound point load, plus the maximum moment from the application of a 250-pound point load, shall be less than the allowable withdrawal load between the fastener and supporting structure.
 - e. Grab bars shall not rotate within their fittings.
107. A grab bar and any wall or other surface adjacent to it shall be free of any sharp or abrasive elements. Edges shall have a minimum radius of 1/8 inch. (1127A.4.5)

BATHING FACILITIES

When common use bathing facilities are provided for residents or guests, including showers, bathtubs or lockers, at least one of each type of fixture in each facility, and not less than 1 percent of all fixtures, shall comply with this section. (1127A.5.1)

Bathtubs required to be accessible shall comply with the following: (1127A.5.2)

108. Clear floor space at bathtubs shall be as shown in Figure 11A-9E.

109. An in-tub seat or a seat at the head end of the tub shall be provided as shown in Figures 11A-9E and 11A-9F. The structural strength of seats and their attachments shall comply with Section 1127A.4.4. Seats shall be mounted securely and shall not slip during use.

110. Grab bars complying with Sections 1127A.4.3, 1127A.4.4 and 1127A.4.5 shall be provided as shown in Figures 11A-9F and 11A-9G.

111. Faucets and other controls shall be located as shown in Figure 11A-9F. They shall be operable with one hand and shall not require tight grasping, pinching or twisting of the wrist. The force required to activate controls shall be no greater than a 5 pound force (lbf).

112. A shower spray unit with a hose at least 60 inches long that can be used both as a fixed shower head and as a hand-held shower shall be provided.

113. If provided, enclosures for bathtubs shall not obstruct controls or transfer from wheelchairs onto bathtub seats or into tubs. Enclosures on bathtubs shall not have tracks mounted on their rims.

Showers required to be accessible shall comply with the following: (1127A.5.3)

114. Showers shall be consistent with one of the following:

- a. 60 inches minimum in width between wall surfaces and 30 inches minimum in depth with a full opening width on the long side; or
- b. 42 inches in width between wall surfaces and 48 inches minimum in depth with an entrance opening of 42 inches; or
- c. showers 60 inches minimum in width may be 36 inches minimum in depth as long as the entrance opening width is a minimum 36 inches.

115. When a threshold or recessed drop is permitted, it shall be a maximum of ½ inch in height and shall be beveled or sloped at an angle not exceeding 45 degrees (100 percent gradient) from the horizontal.

116. Where, within the same functional area, two or more accessible showers are provided, there shall be at least one shower constructed opposite hand from the other or others (i.e., one left-hand control versus right-hand controls).

117. Shower accessories shall include:

- a. Water controls of a single-lever design shall be located on the side wall of the compartment adjacent to the seat and operable with a maximum force of 5 lb, mounted at 40 inches [plus or minus 1 inch tolerance] above the shower floor. The centerline of the controls shall be within a reach range of no less than 18 inches and no more than 24 inches from the rear edge of the seat.
- b. A flexible handheld sprayer unit with a hose at least 60 inches long shall be provided within reach range of the seat at a distance not to exceed 27 inches horizontally measured from the rear seat edge to the centerline of the mounting bracket. This unit shall be mounted at a maximum height of 48 inches [plus or minus 1 inch tolerance] above the shower floor.
- c. Where accessible shower facilities are provided in areas subject to excessive vandalism, in lieu of providing the fixed flexible hose, two wall-mounted shower heads shall be installed. Each shower head shall be installed so that it can be operated independently of the other and shall have swivel angle adjustments, both vertically and horizontally. One shower head shall be located at a height of 48 inches [plus or minus 1 inch tolerance] above the floor.
- d. The maximum slope of the floor shall be 2 percent per foot in any direction. Where drains are provided, grate openings shall be a maximum of 1/4 inch and located flush with the floor surface.

118. Shower fixtures shall include:

- a. A folding seat located within 27 inches of the controls, mounted 18 inches above the floor, and with a minimum space of 1 inch and maximum space of 1½ inches allowed between the edge of the seat and any wall. When folded, the seat shall not extend more than 6 inches from the mounting wall. See Figures 11A-9H, 11A-9I, 11A-9J, and 11A-9K.
- b. Grab bars located on walls adjacent to and opposite the seat. Grab bars shall comply with the diameter, loading and projection requirements of Sections 1127A.4.3, 1127A.4.4 and 1127A.4.5. Grab bars shall be mounted between a minimum of 33 inches and a maximum of 36 inches above the shower floor with an L-shaped grab bar mounted on walls opposite and adjacent to the front edge of the seat, but not extended to include that portion of wall over the seat. See Figure 11A-9H or 11A-9I.

119. When a soap dish is provided, it shall be located on the control wall at a maximum height of 40 inches above the shower floor, and within reach limits from the seat.

120. Enclosures, when provided for shower stalls, shall not obstruct transfer from wheelchairs onto shower seats.

Note: See Figures 11A-9H, 11A-9I, 11A-9J, and 11A-9K.

121. Where no separate shower compartments are provided, the shower for persons with disabilities shall be located in a corner with L-shaped grab bars extending along two adjacent walls with a folding seat adjacent to the shower controls. See Figures 11A-9H, 11A-9I, 11A-9J, and 11A-9K. (1127A.5.3.1)

LOCKERS

Where lockers are provided for residents or guests, at least one locker and not less than 1 percent of all lockers shall be accessible to persons with disabilities. A path of travel not less than 36 inches in clear width shall be provided to these lockers. See Section 1127A.9 for required clear space, allowable reach ranges, and requirements for control and operating mechanisms. (1127A.6.1)

SIGNS

122. 1. All accessible toilet and bathing facilities shall be identified by the "International Symbol of Accessibility." Signs need not be provided for facilities within a dwelling unit or guestroom.

123. 2. Doorways leading to sanitary facilities shall be identified by a geometric symbol in compliance with this section. Geometric symbols shall be centered horizontally on the door at a height of 60 inches above the finish floor or ground surface measured to the center of the symbol. Edges of accessibility signage shall be rounded, chamfered or eased. Corners shall have a minimum radius of 1/8 inch. See Section 1143A.10, Item 1, for additional signage requirements applicable to sanitary facilities. (1127A.7.2)

124. 3. Men's sanitary facilities shall be identified by an equilateral triangle, ¼ inch thick with edges 12 inches long and a vertex pointing upward. The triangle symbol shall contrast with the door, either light on a dark background or dark on a light background. (1127A.7.2.1)

125. Women's sanitary facilities shall be identified by a circle, 1/4 inch thick and 12 inches in diameter. The circle symbol shall contrast with the door, either light on a dark background or dark on a light background. (1127A.7.2.2)

126. Unisex sanitary facilities shall be identified by a circle, 1/4 inch thick and 12 inches in diameter with a 1/4 inch thick triangle superimposed on the circle and within the 12-inch diameter. The triangle symbol shall contrast with the circle symbol, either light on a dark background or dark on a light background. The circle symbol shall contrast with the door, either light on a dark background or dark on a light background. (1127A.7.2.3)

TOILET ROOM FIXTURES AND ACCESSORIES

127. Where towel, sanitary napkins, waste receptacles, and other similar dispensing and disposal fixtures are provided, at least one of each type shall be located with all operable parts, including coin slots, within 40 inches from the finished floor. Controls and operating mechanisms shall comply with Section 1127A.9.6.4. (1127A.8.1)

128. Toilet tissue dispensers shall be located on the wall within 12 inches of the front edge of the toilet seat. Dispensers that control delivery or that do not permit continuous paper flow shall not be used. See Figure 11A-9B. (1127A.8.2)

129. Where mirrors are provided, at least one shall be accessible. Mirrors shall be mounted with the bottom edge no higher than 40 inches from the floor. (1127A.8.3)

SPACE ALLOWANCES AND REACH RANGES IN COMMON USE AREAS

130. The minimum clear width for single wheelchair passage shall be 36 inches continuously. See Figure 11A-1E. (1127A.9.1) Exception: 32 inches in width is acceptable at a point not to exceed 24 inches in length.
131. The minimum width for two wheelchairs to pass is 60 inches. See Figure 11A-1F. (1127A.9.2)
132. The space required for a wheelchair to make a 180 degree turn is a clear space of 60 inches diameter [see Figure 11A-1D(a)] or a T-shaped space [see Figure 11A-1D(b)]. (1127A.9.3)
133. Clear floor or ground space for wheelchairs shall comply with the following: (1127A.9.4)
- a. The minimum clear floor or ground space required to accommodate a single, stationary wheelchair and occupant is 30 inches by 48 inches (see Fig. 11A-1G). The minimum clear floor or ground space for wheelchairs may be positioned for forward or parallel approach to an object (see Figure 11A-1G). Clear floor or ground space for wheelchairs may be part of the knee space required under some objects. (1127A.9.4.1)
 - b. One full unobstructed side of the clear floor or ground space for a wheelchair shall adjoin or overlap an accessible route or adjoin another wheelchair clear floor space. If a clear floor space is located in an alcove or otherwise confined on all or a part of three sides, additional maneuvering clearances shall be provided as shown in Figure 11A-1H. (1127A.9.4.2)
 - c. Clear floor or ground spaces for wheelchairs shall comply with Sections 1119A.2, 1120A.3 and 1121A. (1127A.9.4.3)
 - d. Gratings located in ground and floor surfaces along accessible routes shall be limited to spaces no greater than ½-inch wide in one direction. If gratings have elongated openings, they shall be placed so that the long dimension is perpendicular to the dominate direction of traffic. (1127A.9.4.3.1)
134. Reach ranges shall comply with the following: (1127A.9.5)
- a. If the clear floor space allows only forward approach to an object, the maximum high forward reach allowed shall be 48 inches and the minimum low forward reach shall be unobstructed and no less than 15 inches above the floor [see Figure. 11A-1I(a)]. If the high forward reach is over an obstruction, reach and clearances shall be as shown in Figure 11A-1I(b). (1127A.9.5.1)
 - b. If the clear floor space allows parallel approach by a person in a wheelchair, the maximum high side reach allowed shall be 54 inches and the low side reach shall be no less than 9 inches above the floor [see Figure 11A-1J(a) and 11A-1J(b)]. If the side reach is over an obstruction, the reach and clearances shall be as shown in Figure 11A-1J(c). (1127A.9.5.2)
135. Controls and operating mechanisms shall comply with the following: (1127A.9.6)
- Note: See also Section 1142A, for electrical installation.
- a. Controls and operating mechanisms in accessible spaces, along accessible routes, or as part of accessible elements (e.g., light switches and dispenser controls) shall comply with this section. (1127A.9.6.1)
 - b. Clear floor space complying with Section 1127A.9.4 that allows a forward or parallel approach by a person using a wheelchair shall be provided at controls, dispensers, receptacles and other operable equipment. (1127A.9.6.2)
 - c. Controls shall be located no higher than 48 inches, and no lower than 15 inches, above the finished floor measured to the center of the grip. If the reach is over an obstruction (for example, washer or dryer) between 20 and 25 inches in depth, the maximum height is reduced to 44 inches for forward approach, or 46 inches for side approach, provided the obstruction is no more than 24 inches in depth. Controls that do not satisfy these specifications are acceptable provided that comparable controls or outlets, that perform the same functions, are provided within the same area and are accessible. (1127A.9.6.3)
 - d. Controls and operating mechanisms shall be operable with one hand and shall not require tight grasping, pinching or twisting of the wrist. The force required to activate controls shall be no greater than 5 pounds of force. (1127A.9.6.4)

COMMON ACCESSIBLE LAUNDRY ROOMS

136. Where common use laundry rooms are provided, at least one of each type of appliance provided in each laundry area shall be accessible, shall be on an accessible route, and shall comply with this section. Such appliances include clothes washing machines, dryers, soap dispensers, and any related features such as wash sinks, tables, and storage areas. Where laundry rooms are provided on floors of an elevator building, each laundry room shall be accessible. Where there is one laundry room on a ground floor in each building, each laundry room shall be accessible. Where there is a laundry room on the ground floor of a building and another located in the basement, it is acceptable to have only the ground floor laundry room accessible. (1127A.10.1)

137. There shall be a minimum clear space 30 inches perpendicular by 48 inches parallel in front of clothes washers and dryers required to be accessible. There shall be a minimum clear space 30 inches by 48 inches provided for at least one of each type of fixture or appliance provided in the laundry room (e.g. soap dispensers, wash sinks, tables, storage areas). (1127A.10.2)

138. Clothes washers and dryers including stacked clothes washers and dryers required to be accessible shall have controls (including coin slots) within the reach range of a seated user. Controls shall be located no higher than 48 inches, and no lower than 15 inches, above the finished floor measured to the center of the grip. If the reach is over an obstruction (for example, washer or dryer) between 20 and 25 inches in depth, the maximum height is reduced to 44 inches for forward approach, or 46 inches for side approach. Controls that do not satisfy these specifications are acceptable provided that comparable controls or outlets, that perform the same functions, are provided within the same area and are accessible. Controls shall be operable with one hand and not require tight grasping, pinching, or twisting of the wrist. (1127A.10.3)

139. Washing machines and clothes dryers. Washing machines and clothes dryers in accessible common-use laundry rooms shall be front loading. (1127A.10.4)

STORAGE

140. If fixed storage facilities such as cabinets, shelves, closets or drawers are provided where access is required by Sections 108.2.1.2 and 1102A, at least one of each type of facility provided shall comply with this section. Additional storage may be provided outside of the reach ranges shown in Figure 11A-1J. (1127A.11.1)

141. A clear floor space at least 30 inches by 48 inches complying with Section 1127A.9.4 that allows either a forward or parallel approach by a person using a wheelchair shall be provided at accessible storage facilities. (1127A.11.2)

142. Accessible storage spaces shall be within at least one of the reach ranges specified in Section 1127A.9.5. Clothes rods shall be a maximum of 54 inches from the floor for a side approach (see Figure 11A-1J). Where the distance from the wheelchair to the clothes rod or shelf exceeds 10 inches, as in closets without accessible doors, the height and depth to the rod or shelf shall comply with Figure 11A-1J. (1127A.11.3)

143. Hardware for accessible storage facilities shall comply with Section 1127A.9.6. Touch latches and U-shaped pulls are acceptable. (1127A.11.4)

FIXED OR BUILT-IN SEATING, TABLES, AND COUNTERS

144. Where fixed or built-in seating, tables, or counters are provided for residents or guests, 5 percent, but not less than one, shall be accessible as provided in this section. (1127A.12.1)

145. When seating spaces for persons in wheelchairs are provided at fixed tables or counters, clear floor space complying with Section 1127A.9.4 shall be provided. Such clear floor space shall not overlap knee space by more than 19 inches. See Figure 11A-1K. (1127A.12.2)

146. When seating for persons in wheelchairs is provided at fixed tables or counters, knee spaces at least 27 inches high, 30 inches wide and 19 inches deep shall be provided. See Figure 11A-1K. (1127A.12.3)

147. The tops of tables and counters shall be 28 inches to 34 inches from the floor or ground. (1127A.12.4)

DIVISION IV – DWELLING UNIT FEATURES

An accessible route shall be provided through all rooms and spaces of the dwelling unit. The accessible route shall pass through the primary entry door, and shall connect with all additional exterior doors, required clear floor spaces at kitchen appliances, and bathroom fixtures. For the purpose of this section, “accessible routes” may include hallways, corridors, and ramps. (1130A.1)

Exception: An accessible route is not required from the interior of the unit into a basement or garage, except as provided in Section 1105A.1.

The accessible route into and throughout covered multifamily dwelling units shall be at least 36 inches wide. (1130A.2)

CHANGES IN LEVEL ON ACCESSIBLE ROUTES

148. Abrupt changes in level along any accessible route shall not exceed ½ inch. When changes in level do occur, they shall be beveled with a slope no greater than 1 unit vertical in 2 units horizontal (50% slope). Changes in level not exceeding ¼ inch may be vertical. (1131A.1)

149. Changes in level greater than ½ inch shall be made by means of a ramp, elevator or platform (wheelchair) lift. See Section 1122A for ramps and Section 1124A.11 for special access lifts. (1131A.2)

DOORS

150. The primary entry door and all required exit doors shall comply with the requirements of this section. The requirements of Sections 1126A.3 shall apply to maneuvering clearances at the side of the door exposed to common or public use spaces (e.g. entry or exit doors which open from the covered multifamily dwelling unit into a corridor, hallway, or lobby, or directly to the outside). (1132A.1)

151. Except as allowed by Section 1109A.2, doors intended for user passage and secondary exterior doors shall comply with this section. The provisions of this section shall apply to the dwelling unit side of doors leading from the interior of the dwelling unit to an unfinished basement or an attached garage. (1132A.2)

152. Doors shall comply with the following: (1132A.3)

- a. Doors shall not be less than 6 feet 8 inches in height.
- b. Swinging doors shall provide a net clear opening width of not less than 32 inches, measured with the door or doors positioned at an angle of 90 degrees from the closed position. A 34-inch door is acceptable. The primary entry door and all required exit doors shall comply with the requirements of Section 1126A.1.
- c. Swinging doors shall be capable of opening at least 90 degrees.
- d. A nominal 32-inch clear opening provided by a standard 6-foot wide sliding patio door assembly is acceptable.
- e. A pair of doors, manual or automatic, must have at least one leaf which provides a clear width of not less than 32 inches (813 mm), measured with the door positioned at an angle of 90 degrees from its closed position.
- f. The width of any component in the means of egress system shall not be less than the minimum width required by Section 1005.

153. The floor or landing on each side of a door shall be level. Primary entry doors, required exit doors, or secondary exterior doors with changes in height between the interior surface or floor level and the exterior surface or floor level shall comply with the following: (1132A.4)

- a. Exterior landings of impervious construction (e.g., concrete, brick, flagstone) serving primary entry doors and required exit doors are limited to not more than 1/2 inch of change in height between floor surfaces. Changes in level shall comply with Section 1131A.

- b. Exterior landings of pervious construction (e.g., wood decking with spaces) shall be the same level as the interior landing, except that secondary exterior doors may have no more than 1/2 inch of change in height between floor surfaces. Changes in level shall comply with Section 1131A.
- c. Secondary exterior doors onto decks, patios, or balcony surfaces constructed of impervious materials (e.g., concrete, brick, flagstone) may have a maximum change in height from the interior landing of 4 inches. Changes in height greater than 1/2 inch shall be accomplished by means of a ramp complying with Section 1114A or by means of a platform constructed to the level of the floor as illustrated in Figure 11A-8J.
- d. Secondary exterior doors onto decks, patios or balcony surfaces constructed of impervious materials (e.g., concrete, brick, flagstone) may have a maximum change in height from the interior landing of 1 inch, provided a ramp with maximum slope of 1:8 is permanently installed. (See Figure 11A-8K).
- e. In buildings containing covered multifamily dwelling units, the floor or landing immediately outside the entry may be sloped up to 1/4 inch per foot (12 inches), in a direction away from the primary entrance of the dwelling unit for drainage.

Note: See also Chapter 10, Section 1003.3.1.6.2.

154. Thresholds at the primary entry and required exit doors shall be no higher than 1/2 inch. Thresholds at secondary exterior doors, including sliding door tracks, shall be no higher than 3/4 inch. Changes in height at interior door thresholds (e.g. floor material changes at door thresholds) shall not exceed 1/2 inch. Thresholds shall comply with the following: (1132A.4.1)

- a. Thresholds with a change in height of not more than 1/4 inch may be vertical.
- b. Thresholds with a change in height between ¼ inch and 3/4 inch shall be beveled with a slope no greater than 1 unit vertical in 2 units horizontal (50-percent slope).

155. Maneuvering clearances at interior doors shall provide a minimum length on both sides of the door of at least 42 inches measured at a right angle to the plane of the door in its closed position. (1132A.5.1)

Exception:

- i. A 39 inch length is acceptable when a minimum clear opening width of 34 inches is provided.
- ii. The floor or landing on the dwelling unit side of the primary entry door and any required exit door shall have a minimum length of not less than 44 inches. Section 1126A.3 shall apply to maneuvering clearances at the side of the door exposed to common or public use spaces.

156. The width of the level area on the side to which the door swings shall extend 18 inches past the strike edge for all doors. The width of the level area at the exterior side of the primary entry door and any required exit doors shall comply with Section 1126A.

(1132A.5.2)

Note:

- a. See Section 1134A for bathrooms that are required to be accessible.
- b. Twenty four inches is preferred for strike edge clearance.

157. Maximum effort to operate doors shall not exceed 8½ pounds for exterior doors and 5 pounds for interior doors, such pull or push effort being applied at right angles to hinged doors and at the center plane of sliding or folding doors. Compensating devices or automatic door operators may be utilized to meet these standards. When fire doors are required, the maximum effort to operate the door may be increased to the minimum allowable by the appropriate enforcement agency, not to exceed 15 pounds.

(1132A.6)

158. The type of latch and lock required for all doors shall be in accordance with Chapter 10, Section 1008.

(1132A.7)

159. Hand-activated door latching, locking, and opening hardware shall be centered between 30 inches and 44 inches above the floor. Latching and locking doors that are hand-activated and on an accessible route shall be operable with a single effort by lever-type hardware, panic bars, push-pull activating bars, or other hardware designed to provide passage without requiring the ability to grasp the opening hardware. Locked exit doors shall operate consistent with Section 1132A.6, in the direction of egress.

(1132A.8)

160. The lever or lever of actuated latches or locks shall be curved with a return to within 1/2 inch of the door to prevent catching on the clothing of persons during egress in Group R and U Occupancies with an occupant load greater than 10.

(1132A.8.1)

161. The bottom 10 inches of all doors 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 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.

(1132A.9)

Exception: Automatic and sliding doors.

162. Every primary entrance to a covered multifamily dwelling unit shall be provided with a door buzzer, bell, chime or equivalent. The activating mechanism shall be mounted a maximum of 48 inches above the floor and connected to permanent wiring.

(1132A.10)

KITCHENS

163. Kitchens shall be on an accessible route.

(1133A.1)

164. Clear floor space at kitchens shall comply with the following:

(1133A.2)

- a. A clear floor space at least 30 inches by 48 inches that allows a parallel approach by a person in a wheelchair shall be provided at the range or cooktop.
- b. A clear floor space at least 30 inches by 48 inches that allows either a parallel or forward approach shall be provided at the kitchen sink and all other fixtures or appliances including the oven, dishwasher, refrigerator/freezer and trash compactor
- c. The centerline of the 30 inch by 48 inch clear floor space provided for parallel or forward approach shall be aligned with the centerline of the appliance or fixture. See Figure 11A-10A.

165. Kitchens shall have a minimum clear width measured between any cabinet, countertop, or the face of any appliance (excluding handles and controls) that projects into the kitchen and the opposing cabinet, countertop, appliance, or wall as follows:

(1133A.2.1)

- a. U-shaped kitchens, designed with parallel approach at a range or cooktop located at the base of the U, shall have a minimum clear width of at least 60 inches. See Figure 11A-10A.
- b. U-Shaped kitchens, designed with a cooktop or sink located at the base of the U which provides a 30 inch wide knee space to a height of 27 inches above the floor to allow for a forward approach, shall have a clear width of at least 48 inches. See Figure 11A-10A.
- c. All other kitchen designs shall provide a minimum clear width of at least 48 inches. See Figure 11A-10A.

166. Base cabinets directly under the kitchen sink counter area, including toeboard and shelving, shall be removable without the use of specialized tools or specialized knowledge in order to provide clearance for a wheelchair. The finish floor beneath the kitchen sink counter area shall be extended to the wall.

(1133A.3)

167. Kitchen countertops shall be provided with the following:

(1133A.4).

- a. A minimum linear length of 30 inches of countertop shall be provided for the kitchen sink installation.
- b. A minimum linear length of 30 inches of countertop shall be provided for a work surface.
- c. The sink and work surface may be a single integral unit a minimum of 60 inches in length, or be separate components.

Exception: Two 15-inch minimum width breadboards may be provided in lieu of the required 30 inches of countertop work surface.

168. Repositionable countertops shall be provided in a minimum of five percent of the covered multifamily dwelling units. Repositionable countertops shall comply with the following: (1133A.4.1)

- a. The kitchen sink and work surface space required by 1133A.4 shall be designed to enable repositioning to a minimum height of 28 inches.
- b. Base cabinets directly under the kitchen sink and work surface shall be removable to provide clearance for a wheelchair.
- c. The sides of adjacent cabinets and the back wall, which may become exposed to moisture or food handling when a countertop is lowered, shall be constructed of durable, nonabsorbent materials appropriate for such uses.
- d. Finished flooring shall be extended to the wall beneath the sink and work surface.

Exceptions:

- i. Stone, cultured stone and tiled countertops may be used without meeting the repositioning requirements.
- ii. Two 15-inch minimum width breadboards may be provided in lieu of the required 30 inches of countertop work surface.

169. Lower shelving and/or drawer space shall be provided in the kitchen at a height of no more than 48 inches above the floor. (1133A.5)

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

(1133A.6)

BATHING AND TOILET FACILITIES

All bathrooms, bathing and toilet facilities within covered multifamily dwelling units shall comply with Section 1134A.1.

171. Bathrooms shall be designed to comply with one of the following options: (1134A.2)

Option 1. All bathrooms within the dwelling unit shall be designed to comply with the following:

- a. Toilet, bathing and shower facilities shall comply with Section 1134A.4.
- b. Bathtubs shall comply with Section 1134A.5.
- c. Showers shall comply with Section 1134A.6.
- d. Water closets shall comply with Section 1134A.7.
- e. Lavatories, vanities, mirrors and towel fixtures shall comply with 1134A.8.
- f. Bathrooms shall be provided with an accessible route into and through the bathroom.
- g. If a door is provided, it shall comply with the requirements of Section 1132A.5.
- h. A minimum 18-inch clear maneuvering space shall be provided on the swing side of the door at the strike edge of the door.
- i. Switches, outlets, and controls shall comply with Section 1142A.
- j. Reinforced walls to allow for the future installation of grab bars around the toilet, tub, and shower shall comply with Sections 1134A.5 for bathtubs, 1134A.6 for showers and 1134A.7 for water closets. Grab bars shall comply with Section 1127A.4.

Option 2. Only one bathroom within the dwelling unit shall be designed to comply with the following:

- a. Toilet, bathing and shower facilities shall comply with Section 1134A.4.
- b. Bathtubs shall comply with Section 1134A.5.
- c. Showers shall comply with Section 1134A.6.
- d. Water closets shall comply with Section 1134A.7.
- e. Lavatories, vanities, mirrors and towel fixtures shall comply with 1134A.8.
- f. Where both a tub and shower are provided in the bathroom, at least one shall be made accessible. Additional requirements apply to dwelling units containing two or more bathrooms when a bathtub is provided as the accessible bathing fixture.

Where two or more bathrooms are provided within the same dwelling unit and a bathtub is installed to comply with Option 2, Item 6 in one bathroom and a shower stall is provided in a subsequent bathroom, both the bathtub selected to comply with Option 2, Item 6 and at least one shower stall within the dwelling unit shall meet all the applicable accessibility requirements provided in Section 1134A. (See Section 1134A.5 for bathtubs, or Section 1134A.6 for showers.)

- g. When two or more lavatories are provided, at least one shall be made accessible and comply with Section 1134A.8.
- h. Bathrooms shall be provided with an accessible route into and through the bathroom.

- i. If a door is provided, it shall comply with the requirements of Section 1132A.5.
- j. A minimum 18 inch (457 mm) clear maneuvering space shall be provided on the swing side of the door at the strike edge of the door.
- k. Switches, outlets, and controls shall comply with Section 1142A.
- l. Reinforced walls to allow for the future installation of grab bars around the toilet, tub, and shower shall comply with Sections 1134A.5 for bathtubs, 1134A.6 for showers and 1134A.7 for water closets. Grab bars shall comply with Section 1127A.4

Note: When Option 2 is used, all additional bathrooms must comply with items h) through l) above.

172. All powder rooms shall be designed to comply with Section 1134A.2, Option 2, Items h) through l). When the powder room is the only toilet facility located on an accessible level, it shall comply with the Option 2 items listed above, plus all additional requirements located in Sections 1134A.4, 1134A.7 and 1134A.8. (1134A.3)

173. Bathing and toilet facilities required to be adaptable shall provide sufficient maneuvering space for a person using a wheelchair or other mobility aid to enter and close the door, use the fixtures, reopen the door and exit. Where the door swings into the bathroom or powder room, there shall be a clear maneuvering space outside the swing of the door of at least 30 inches by 48 inches within the room. The clear maneuvering space shall allow the user to position a wheelchair or other mobility aid clear of the path of the door as it is closed and to permit use of fixtures. Doors may swing into the required clear space at any fixture when a clear maneuvering space is provided outside the swing arc of the door so it can be closed. Maneuvering spaces may include any knee space or toe space available below bathroom fixtures.

(1134A.4)

174. Bathtubs required to be accessible shall comply with the following: (1134A.5)

- a. There shall be a minimum clear floor space 48 inches parallel by 30 inches perpendicular to the side of a bathtub or bathtub-shower combination (measured from the foot or drain end of the bathtub) to provide for the maneuvering of a wheelchair and transfer to and from the bathing facilities. The area under a lavatory may be included in the clear floor space provided the knee and toe space comply with Section 1134A.8. Cabinets under lavatories and toilets shall not encroach into the clear floor space.

- b. A bathtub installed without surrounding walls shall provide reinforced areas for the installation of floor-mounted grab bars. Where a bathtub is installed with surrounding walls, grab bar reinforcement shall be located on each end of the bathtub, 32 inches to 38 inches above the floor, extending a minimum of 24 inches from the front edge of the bathtub toward the back wall of the bathtub. The grab bar reinforcement shall be a minimum of 6 inches nominal in height. See Figure 11A-9G. Grab bar reinforcement shall be installed on the back wall of the bathtub a maximum of 6 inches above the bathtub rim extending upward to at least 38 inches above the floor. Grab bar backing shall be installed horizontally to permit the installation of a 48-inch grab bar with each end a maximum of 6 inches from the end walls of the bathtub. The grab bar reinforcement shall be a minimum of 6 inches nominal in height.

- c. Faucet controls and operation mechanisms shall be operable with one hand and shall not require tight grasping, pinching or twisting of the wrist. The force required to activate controls shall be no greater than 5 pound-force. Lever operated, push-type and electronically controlled mechanisms are examples of acceptable designs.

- d. A shower spray unit is not required in bathtubs.

- e. Doors and panels of bathtub enclosures shall be substantially constructed from approved, shatter-resistant materials. Hinged doors shall open outward. Glazing used in doors and panels of bathtub enclosures shall be fully tempered, laminated safety glass or approved plastic. When glass is used, it shall have minimum thickness of not less than 1/8 inch when fully tempered, or 1/4 inch when laminated, and shall pass the test requirements of this Part, Chapter 24 Glass and Glazing. Plastics used in doors and panels of bathtub enclosures shall be of a shatter-resistant type.

175. Showers required to be accessible shall comply with the following: (1134A.6)

- a. When one or more shower stalls are provided within the same dwelling units, at least one shower stall shall comply with one of the following requirements:

- i. The shower stall shall measure at least 42 inches wide by 48 inches deep with an entrance opening of at least 36 inches; or
- ii. The shower stall shall measure at least 30 inches deep by 60 inches wide with an entrance opening of at least 60 inches. A water closet may project a maximum of 12 inches into the opening, provided that a minimum of 36 inches clear space is maintained between the water closet and the shower wall as illustrated in Figure 11A-9L; or

- iii. Other shower stall configurations shall measure at least 36 inches deep by 60 inches wide with an entrance opening of at least 36 inches when a wall is installed on the opening side.
 - b. The maximum slope of the shower floor shall be 1/2 inch per foot in any direction and shall slope to a drain. The floor surfaces shall be of Carborundum or grit-faced tile or of material providing equivalent slip resistance.
 - c. A clear maneuvering space at least 30 inches in width by 48 inches in length shall be located outside the shower, flush and parallel to the control wall.
 - d. Grab bar reinforcement shall be installed continuous in the walls of showers 32 inches to 38 inches above the floor. The grab bar reinforcement shall be a minimum of 6 inches nominal in height. Glass-walled shower stalls shall provide reinforcement for installation of floor-mounted or ceiling-mounted grab bars.
 - e. When a threshold is used, it shall be a maximum of 2 inches in height and have a beveled or sloped angle not exceeding 1 unit vertical in 2 units horizontal (26.6 degrees from the horizontal). Thresholds 1/2 inch or less in height may have a beveled or sloped angle not exceeding 1 unit vertical in 1 unit horizontal (45 degrees from horizontal).
 - f. Faucet controls and operation mechanisms shall be operable with one hand and shall not require tight grasping, pinching or twisting of the wrist. The force required to activate controls shall be no greater than 5 pound-force. Lever operated, push-type and electronically controlled mechanisms are examples of acceptable designs.
 - g. Doors and panels of shower enclosures shall be substantially constructed from approved, shatter-resistant materials. Hinged shower doors shall open outward. Glazing used in doors and panels of shower enclosures shall be fully tempered, laminated safety glass or approved plastic. When glass is used, it shall have minimum thickness of not less than 1/8 inch when fully tempered, or 1/4 inch when laminated, and shall pass the test requirements of this Part, Chapter 24 Glass and Glazing. Plastics used in doors and panels of showers enclosures shall be of a shatter-resistant type.
176. Water closets in bathrooms or powder rooms required to be accessible shall comply with the following:
- (1134A.7)
- a. The minimum floor space provided at a water closet shall be 48 inches in clear width. The clear floor space shall extend past the front edge of the water closet at least 36 inches. See Figure 11A-9M.
- Exception: The 48 inches minimum clear width may be reduced to 36 inches for lavatories, cabinets, wing walls or privacy walls located immediately adjacent to a water closet which extend no more than 24 inches in depth.
- b. Water closets shall be located within bathrooms in a manner that permits a grab bar to be installed on one side of the fixture. In locations where water closets are adjacent to walls or bathtubs, the centerline of the fixture shall be a minimum of 18 inches from the obstacle.
 - c. Where the water closet is not placed adjacent to a side wall, the bathroom shall have provisions for installation of floor-mounted, foldaway or similar alternative grab bars. Where the water closet is placed adjacent to a side wall, reinforcement shall be installed on both sides or one side and the back. If reinforcement is installed at the back, it shall be installed between 32 inches and 38 inches above the floor. The grab bar reinforcement shall be a minimum of 6 inches nominal in height. The backing shall be a minimum of 40 inches in length. Reinforcement installed at the side of the water closet shall be installed 32 inches to 38 inches above the floor. The reinforcement shall be installed a maximum of 12 inches from the rear wall and shall extend a minimum of 26 inches in front of the water closet. The grab bar reinforcement shall be a minimum of 6 inches nominal in height.
 - d. The minimum height of water closet seats shall be 15 inches above the floor.
 - e. Water closet controls shall be mounted no more than 44 inches above the floor. The force required to activate controls shall be no greater than 5 pound-force.
177. Bathrooms or powder rooms required to be accessible shall have at least one accessible lavatory. Where mirrors and towel fixtures are provided, at least one of each shall be accessible. (1134A.8)
- a. Vanities and lavatories shall be installed with the centerline of the fixture a minimum of 18 inches horizontally from an adjoining wall or fixture to allow for forward approach. When parallel approach is provided, lavatories shall be installed with the centerline of the fixture a minimum of 24 inches horizontally from an adjoining wall or fixture. The top of the fixture rim shall be a maximum of 34 inches above the finished floor.
 - b. A clear maneuvering space at least 30 inches by 48 inches shall be provided at lavatories and shall be centered on the lavatory.
 - c. Cabinets under lavatories are acceptable provided the bathroom has space to allow a parallel approach by a person in a wheelchair and the lavatory cabinets are designed with adaptable knee and toe space.
 - d. Knee and toe space shall be provided as follows:
 - i. The knee space shall be at least 30 inches wide and 8 inches deep.

- ii. The knee space shall be at least 29 inches high at the front face and reducing to not less than 27 inches at a point 8 inches back from the front edge.
- iii. The knee and toe space required in this section shall be provided by one of the following:
 - (1) The space beneath the lavatory shall be left clear and unobstructed;
 - (2) Any cabinet beneath the lavatory shall be removable without the use of specialized knowledge or specialized tools; or
 - (3) Doors to the cabinet beneath the lavatory shall be removable or openable to provide the required unobstructed knee and toe space.
- iv. The toe space required in this section shall be provided as follows:
 - (1) Shall be at least 30 inches wide and centered on the lavatory.
 - (2) Shall be at least 17 inches deep, measured from the front edge.
 - (3) Shall be at least 9 inches high from the floor.
- e. The finished floor beneath the lavatory shall be extended to the wall.
- f. Hot water and drain pipes exposed under lavatories shall be insulated or otherwise covered. There shall be no sharp or abrasive surfaces under lavatories.
- g. Faucet controls and operation mechanisms shall be operable with one hand and shall not require tight grasping, pinching or twisting of the wrist. The force required to activate controls shall be no greater than 5 pound-force. Lever operated, push-type and electronically controlled mechanisms are examples of acceptable designs. Self-closing valves are allowed if the faucet remains open for at least 10 seconds.
- h. Where mirrors or towel fixtures are provided they shall be mounted with the bottom edge no higher than 40 inches from the floor.

LAUNDRY ROOMS

178. If clothes washing machines and clothes dryers are provided in covered multifamily dwelling units, one of each type of appliance shall be provided. Where front-loading clothes washers are not provided, management shall provide assistive devices, on request of the occupant, to permit the use of top-loading clothes washers. (1135A.1)

ELECTRICAL RECEPTACLE, SWITCH AND CONTROL HEIGHTS

179. Electrical receptacle outlets on branch circuits of 30 amperes or less and communication system receptacles shall be located no more than 48 inches measured from the top of the receptacle outlet box or receptacle housing nor less than 15 inches measured from the bottom of the receptacle outlet box or receptacle housing to the level of the finished floor or working platform. If the reach is over an obstruction (for example, a kitchen base cabinet) between 20 and 25 inches in depth, the maximum height measured at the box is reduced to 44 inches for forward approach, or 46 inches for side approach, provided the obstruction is no more than 24 inches in depth. Obstructions shall not extend more than 25 inches from the wall beneath the receptacle. Outlets that do not satisfy these specifications are acceptable provided that comparable outlets, that perform the same functions, are provided within the same area and are accessible. (1136A.1)

Exceptions:

- a. Receptacle outlets installed as part of permanently installed baseboard heaters are exempt.
- b. Required receptacle outlets shall be permitted in floors when adjacent to sliding panels or walls.
- c. Baseboard electrical outlets used in moveable partitions, window walls or other electrical convenience floor outlets are not subject to the minimum height requirements.
- d. This section shall not apply to existing buildings when the enforcing agency determines that compliance with these standards would create an unreasonable hardship.

Note: The intent of the measurement is to ensure that receptacles fall within the reach range of 15 inches to 48 inches.

180. Controls or switches intended to be used by the occupant of the room or area to control lighting and receptacle outlets, appliances, alarms, or cooling, heating and ventilating equipment, shall be located no more than 48 inches measured from the top of the outlet box nor less than 15 inches measured from the bottom of the outlet box to the level of the finished floor or working platform. If the reach is over a physical barrier or an obstruction (for example, a kitchen base cabinet) between 20 and 25 inches in depth, the maximum height is reduced to 44 inches for forward approach, or 46 inches for side approach, provided the obstruction is no more than 24 inches in depth. Physical barriers or obstructions shall not extend more than 25 inches from the wall beneath a control. Controls that do not satisfy these specifications are acceptable provided that comparable controls or outlets, that perform the same functions, are provided within the same area and are accessible. (1136A.2)

Exception: Appliances (e.g. kitchen stoves, dishwashers, range hoods, microwave ovens and similar appliances) which have controls located on the appliance.

DIVISION V – FEATURES COMMON TO THE EXTERIOR AND INTERIOR OF BUILDINGS

ACCESSIBLE DRINKING FOUNTAINS

Drinking fountains and water coolers in common-use areas and/or sites shall comply with the following:

181. A side approach drinking fountain is not acceptable. (1139A.1)
182. Drinking fountains and water coolers shall be on an accessible route. (1139A.2)
183. Wall-mounted and post-mounted cantilevered drinking fountains and water coolers shall be designed and constructed to comply with the following (see Figure 11A-11A): (1139A.3)
- a. A clear floor space shall be provided in conformance with the following:
 - i. A minimum clear floor space 30 inches by 48 inches to allow a person in a wheelchair to approach the unit facing forward.
 - ii. A clear knee space a minimum of 30 inches in width.
 - iii. A clear knee space a minimum of 18 inches in depth.
 - iv. A clear and unobstructed knee space under the drinking fountain not less than 27 inches in height and 8 inches in depth, the depth measurements being taken from the front edge of the fountain.
 - v. A toe clearance of 9 inches in height above the floor and 17 inches in depth from the front edge of the fountain.
 - b. Water flow shall be provided in conformance with the following:
 - i. The spout shall be located within 6 inches of the front edge of the drinking fountain and within 36 inches of the floor.
 - ii. A flow of water at least 4 inches high shall be available to allow the insertion of a cup or glass under the flow of water.
 - iii. The water stream from the bubbler shall be substantially parallel to the front edge of the drinking fountain.
 - iv. The force required to activate controls shall be no greater than 5 pound force.
 - v. Manually operated or electronically operated controls shall be located within 6 inches of the front edge of the fountain.

184. Water fountains shall be located completely within alcoves or otherwise positioned so as not to encroach into pedestrian ways. The alcove in which the water fountain is located shall not be less than 32 inches in width and 18 inches in depth. Protruding objects located in alcoves or otherwise positioned so as to limit encroachment into pedestrian ways are permitted to project 4 inches into walks, halls corridors, passageways or aisles. See Figure 11A-11A.

(1139A.3.1)

ACCESSIBLE TELEPHONES

If public telephones are provided, they shall comply with the following:

185. On floors where public telephones are provided, at least one telephone shall be accessible. On any floor where two or more banks of multiple telephones are provided, at least one telephone in each bank shall be accessible. (1140A.1)
186. A clear floor or ground space at least 30 inches by 48 inches that allows either a forward or parallel approach by a person using a wheelchair shall be provided at telephones. Bases, enclosures and fixed seats shall not impede approaches to telephones by people who use wheelchairs. See Figure 11A-11B. The minimum clear floor or ground space for wheelchairs may be positioned for forward or parallel approach to an object. Clear floor or ground space for wheelchairs may be part of the knee space required under some objects. (1140A.2)
187. One full unobstructed side of the clear floor or ground space for a wheelchair shall adjoin another wheelchair clear floor space. If a clear floor space is located in an alcove or otherwise confined on all or part of three sides, additional maneuvering clearances shall be provided. (1140A.3)
188. The highest operable part of the telephone shall be within the reach ranges specified in the Figure 11A-11B. Telephones mounted diagonally in a corner that require wheelchair users to reach diagonally shall have the highest operable part no higher than 54 inches above the floor. See Figure 11A-11B. (1140A.4)
189. If telephone enclosures are provided, they may overhang the clear floor space required in Sections 1140A.2 and 1140A.3 with the following limits: (1140A.5)
- a. The overhang shall be no greater than 19 inches. The height of the lowest overhanging part shall be equal to or greater than 27 inches above the floor.
 - b. Entrances to full-height enclosures shall be a minimum of 30 inches in width.

- c. If the overhang is greater than 12 inches, then the clear width of the enclosure shall be 30 inches minimum; if the clear width of the enclosure is less than 30 inches, then the height of the lowest overhanging part shall be equal to or greater than 27 inches.

190. Telephones shall be equipped with a receiver that generates a magnetic field in the area of the receiver cap. A reasonable number of the public telephones provided, but always at least one on each floor or in each bank, whichever is more, in a building or facility, shall be equipped with a volume control. Such telephones shall be capable of a minimum of 12 dbA and a maximum of 18 dbA above normal. If an automatic reset is provided, 18 dbA may be exceeded. Public telephones with volume control shall be hearing aid compatible and shall be identified by a sign containing a depiction of a telephone handset with radiating sound waves. See Figure 11A-11D.

(1140A.6)

191. If a total of four or more public pay telephones are provided at the interior and exterior of a site, and if at least one of the total number provided is located in an interior location, at least one interior public text telephone shall be provided. Text telephones shall be identified by the International TTY symbol (see Figure 11A-11C). If a facility has a public text telephone, directional signage indicating the location of the nearest such telephone shall be placed adjacent to all banks of telephones that do not contain a text telephone. Such directional signage shall include the International TTY symbol. If a facility has no banks of telephones, the directional signage shall be provided at the entrance or in a building directory. (1140A.7.1)

192. Telephones shall have push-button controls where service for such equipment is available. (1140A.8)

193. The cord from the telephone to the handset shall be at least 29 inches long. (1140A.9)

194. If telephone books are provided, they shall be located in a position that complies with the reach ranges in Figures 11A-1I, and 11A-1J. (1140A.10)

ACCESSIBLE SWIMMING POOLS

Swimming pools in common-use areas shall comply with the provisions of this section and Chapter 31B. (1141A.1)

195. Swimming pool deck areas must be accessible, and a mechanism to assist persons with disabilities gain entry into the pool and exit from the pool shall be provided. Such a mechanism may consist of a swimming pool lift device as long as the device meets all of the following criteria: (1141A.2)

- a. Has a seat that meets all of the following:
 - i. The seat must be rigid;
 - ii. The seat must be not less than 17 inches and not more than 19 inches, inclusive of any cushioned surface that might be provided, above the pool deck;
 - iii. The seat must have two armrests. The armrest on the side of the seat by which access is gained shall be either removable or fold clear of the seat;
 - iv. The seat must have a back support that is at least 12 inches tall;
 - v. The seat must have an occupant restraint for use by the occupant of the seat and the restraint must meet the standards for operable controls in compliance with Section 1127A.9.6.4.
- b. Be capable of unassisted operation from both the deck and water levels.
- c. Be stable and not permit unintended movement when a person is getting into or out of the seat.
- d. Be designed to have a live-load capacity of not less than 300 pounds.
- e. Be positioned so that, if the pool has water of different depths, it will place the operator into water that is at least 3 feet deep.
- f. Be capable of lowering the operator at least 18 inches below the surface of the water.

ELECTRICAL RECEPTACLE, SWITCH AND CONTROL HEIGHTS

See Division IV, Section F.

SIGNAGE

When signs and/or identification devices are provided they shall comply with the following: (1143A.1)

Exception: Signs need not be provided within dwelling units.

196. When signs identify permanent rooms and spaces of a building or site, they shall comply with 1143A.5, 1143A.6, 1143A.8, 1143A.9 and 1143A.10. 1143A.2. Note: See Section 1124A for additional signage requirements applicable to elevators and Section 1127A.7 for sanitary facilities.

197. When signs direct to or give information about permanent rooms and spaces of a building or site, they shall comply with 1143A.5, 1143A.6 and 1143A.7.

(1143A.3)

198. When signs identify, direct or give information about accessible elements and features of a building or site, they shall include the appropriate symbol of accessibility and shall comply with 1143A.5 and, when applicable, 1143A.10. (1143A.4)
199. Characters, symbols and their background shall have a nonglare finish. Characters and symbols shall contrast with their background, either light on a dark background or dark on a light background. (1143A.5)
200. Characters on signs shall have a width-to-height ratio of between 3:5 and 1:1 and a stroke width to height ratio of between 1:5 and 1:10. (1143A.6)
201. Characters and numbers on signs shall be sized according to the viewing distance from which they are to be read. The minimum height is measured using an uppercase "X". Lowercase characters are permitted. For signs suspended or projected above the finish floor greater than 80 inches, the minimum character height shall be 3 inches. (1143A.7)
202. Raised Characters and Pictorial Symbol Signs. When raised characters are required or when pictorial symbols (pictograms) are used on such signs, they shall conform to the following requirements: (1143A.8)
- Characters on signs shall be raised 1/32-inch minimum and shall be sans serif uppercase characters accompanied by Grade 2 Braille complying with 1143A.9.
 - Raised characters shall be a minimum of 5/8 inch and a maximum of 2 inches high.
 - Pictorial symbol signs (pictograms) shall be accompanied by the verbal description placed directly below the pictogram. The outside dimension of the pictogram field shall be a minimum of 6 inches in height.
 - Characters and Braille shall be in a horizontal format. Braille shall be placed a minimum of 3/8 inch and a maximum of 1/2 inch directly below the tactile characters; flush left or centered. When tactile text is multi-lined, all Braille shall be placed together below all lines of tactile text.
203. Contracted Grade 2 Braille shall be used wherever Braille is required in other portions of these standards. Dots shall be 1/10 inch on centers in each cell with 2/10-inch space between cells, measured from the second column of dots in the first cell to the first column of dots in the second cell. Dots shall be raised a minimum of 1/40 inch above the background. Braille dots shall be domed or rounded. (1143A.9)
204. Where permanent identification signs are provided for rooms and spaces, signs shall be installed on the wall adjacent to the latch side of the door. Where there is no wall space on the latch side, including at double leaf doors, signs shall be placed on the nearest adjacent wall, preferably on the right. (1143A.10)
205. Where permanent identification signages are provided for rooms and spaces they shall be located on the approach side of the door as one enters the room or space. Signs that identify exits shall be located on the same side of the door as the visual exit sign. Mounting height shall be 60 inches above the finish floor to the centerline of the sign. Mounting location shall be determined so that a person may approach within 3 inches of signage without encountering protruding objects or standing within the swing of a door. See also Section 1127A.7 for additional signage requirements applicable to sanitary facilities.

DIVISION VI – SITE IMPRACTICALITY TESTS

GENERAL

Covered multifamily dwellings in buildings without an elevator, located on sites with difficult terrain conditions or unusual characteristics, may employ the site impracticality tests in this Division for determining the accessibility and adaptability provisions required by this Chapter.

Except as provided for in Section 1102A.3.1, the provisions of this section do not apply to multi-story dwelling units in non-elevator buildings, i.e., townhouses. (1150A.1)

ADDITIONAL COMMENTS

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