

CHAPTER 3 BUILDING BLOCKS

SECTION 301 GENERAL

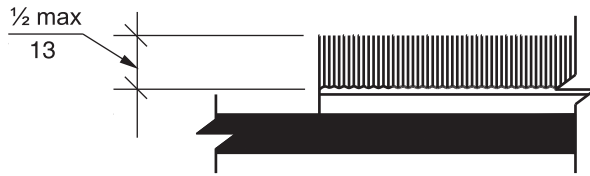
301.1 Scope. The provisions of Chapter 3 shall apply where required by the scoping provisions adopted by the administrative authority or by Chapters 4 through 11.

301.2 Overlap. Unless otherwise specified, clear floor spaces, clearances at fixtures, maneuvering clearances at doors, and turning spaces shall be permitted to overlap.

SECTION 302 FLOOR SURFACES

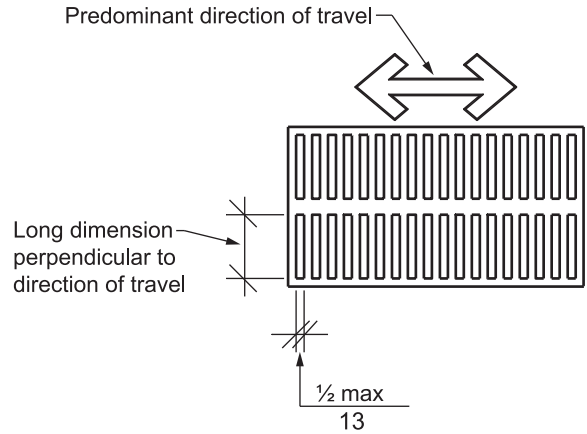
302.1 General. Floor surfaces shall be stable, firm, and slip resistant, and shall comply with Section 302. Changes in level in floor surfaces shall comply with Section 303.

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



**FIGURE 302.2
CARPET ON FLOOR SURFACES**

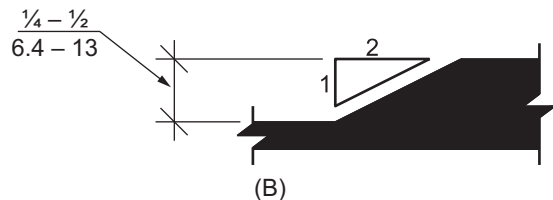
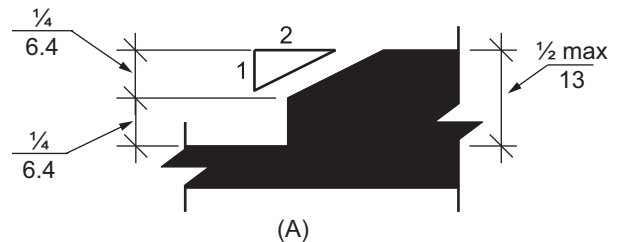
302.3 Openings. Openings in floor surfaces shall be of a size that does not permit the passage of a $\frac{1}{2}$ -inch (13 mm) diameter sphere, except as allowed in Sections 407.4.3, 408.4.3, 409.4.3, 410.4 and 805.10. Elongated openings shall be placed so that the long dimension is perpendicular to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



**FIGURE 302.3
OPENINGS IN FLOOR SURFACES**



**FIGURE 303.2
VERTICAL CHANGE IN LEVEL**



**FIGURE 303.3
BEVELED CHANGES IN LEVEL**

SECTION 303 CHANGES IN LEVEL

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

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

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

303.4 Ramps. Changes in level greater than $\frac{1}{2}$ inch (13 mm) in height shall be by a ramp complying with Section 405 or by a curb ramp complying with Section 406.

SECTION 304 TURNING SPACE

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

304.2 Floor surface. Floor surfaces of a turning space shall comply with Section 302. Changes in level shall not be permitted within the turning space.

Exception: Slopes not steeper than 1:48 shall be permitted.

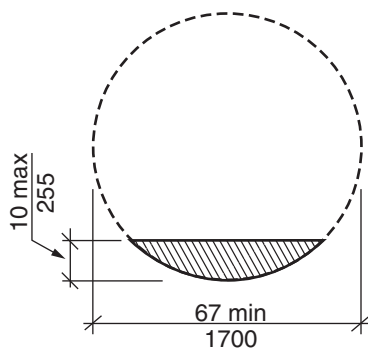
304.3 Size. Turning spaces shall comply with Section 304.3.1 or 304.3.2.

304.3.1 Circular space.

304.3.1.1 New buildings and facilities. In new buildings and facilities, the turning space shall be a circular space with a 67-inch (1700 mm) minimum diameter.

304.3.1.1.1 Overlap. Turning spaces shall be permitted to include knee and toe clearance complying with Section 306. Where the turning space includes knee and toe clearances under an obstruction, the overlap shall comply with all of the following:

1. The depth of the overlap shall not be more than 10 inches (255 mm), and
2. The depth shall not exceed the depth of the knee and toe clearances provided, and
3. The overlap shall be permitted only within the turning circle area shown shaded in Figure 304.3.1.1.

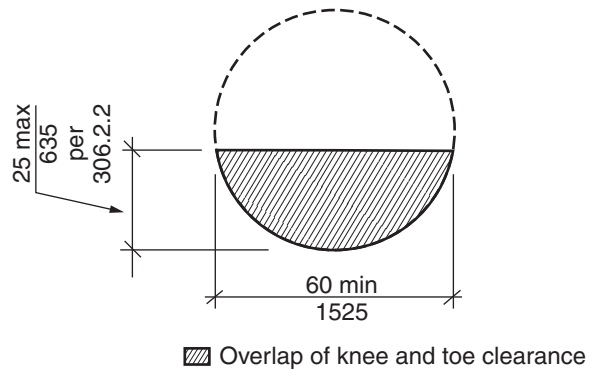


Overlap of knee and toe clearance

**FIGURE 304.3.1.1
CIRCULAR TURNING SPACE - NEW BUILDINGS
SIZE AND OVERLAP**

304.3.1.2 Existing buildings and facilities. In existing buildings and facilities, the turning space shall be a circular space with a 60-inch (1525 mm) minimum diameter.

304.3.1.2.1 Overlap. Turning spaces shall be permitted to include knee and toe clearance complying with Section 306.



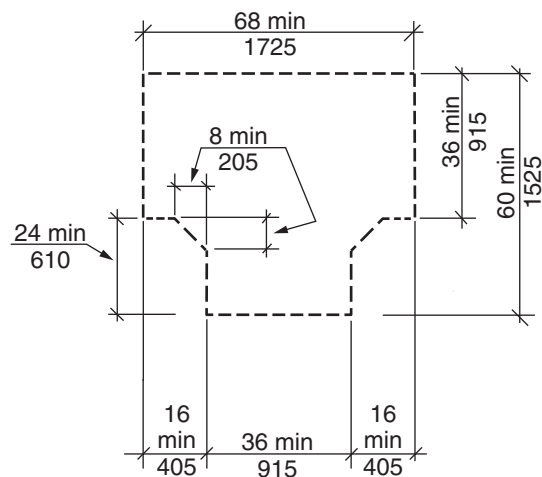
Overlap of knee and toe clearance

**FIGURE 304.3.1.2
CIRCULAR TURNING SPACE - EXISTING BUILDINGS - SIZE
AND OVERLAP**

304.3.2 T-Shaped space.

304.3.2.1 New buildings and facilities. In new buildings and facilities, the turning space shall be a T-shaped space complying with one of the following:

1. A T-shaped space, clear of obstruction, that fits within an area 68 inches (1725 mm) wide and 60 inches (1525 mm) deep, with two arms and one base that are all 36 inches (915 mm) minimum in width. Each arm shall extend 16 inches (405 mm) minimum from each side of the base located opposite the other, and the base shall extend 24 inches (610 mm) minimum from the arms. At the intersection of each arm and the base, the interior corners shall be chamfered for 8 inches (205 mm) minimum along both the arm and along the base.



**FIGURE 304.3.2.1(A)
T-SHAPED TURNING SPACE
NEW BUILDINGS - OPTION 1**

2. A T-shaped space, clear of obstruction, that fits within an area 64 inches (1625 mm) wide and 60 inches (1525 mm) deep, with two arms 38 inches (965 mm) minimum in width and a base 42 inches (1065 mm) minimum in width. Each arm shall extend 11 inches (280 mm) minimum from each side of the base, located opposite the other, and the base shall extend 22 inches (560 mm) minimum from each arm.

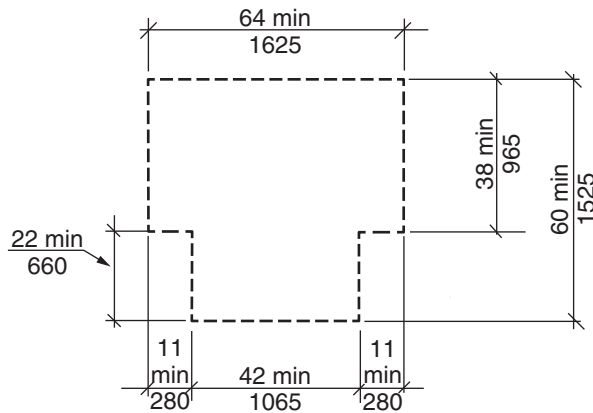


FIGURE 304.3.2.1(B)
T-SHAPED TURNING SPACE
NEW BUILDINGS - OPTION 2

3. A T-shaped space, clear of obstruction, 64 inches (1625 mm) wide and 60 inches (1525 mm) deep, with two arms and one base 40 inches (1015 mm) minimum in width. Each

arm shall extend 12 inches (305 mm) minimum from each side of the base and the base shall extend 20 inches (510 mm) minimum from each arm.

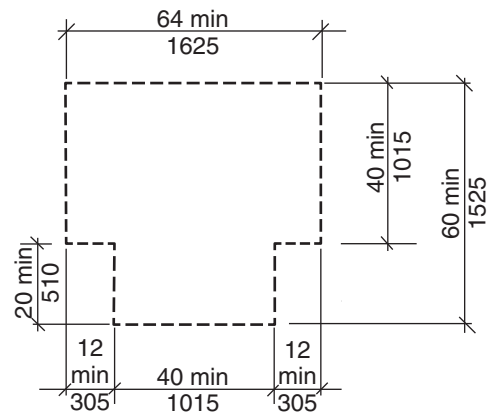


FIGURE 304.3.2.1(C)
T-SHAPED TURNING SPACE
NEW BUILDINGS - OPTION 3

304.3.2.1.1 Overlap. Turning spaces shall be permitted to include knee and toe clearance complying with Section 306 of either the base or one arm. For Option 1, the base or arm is the portion beyond the chamfer.

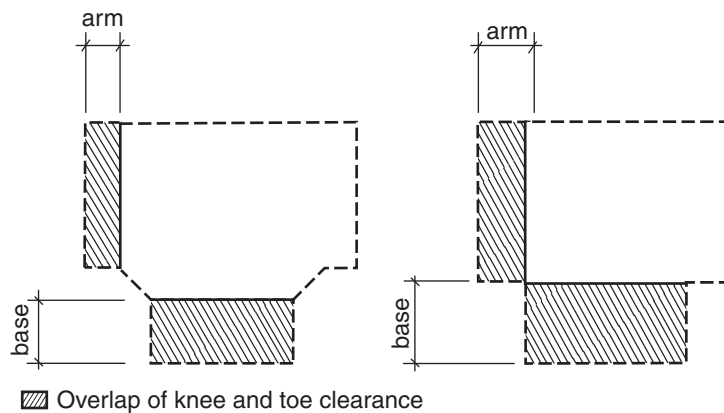
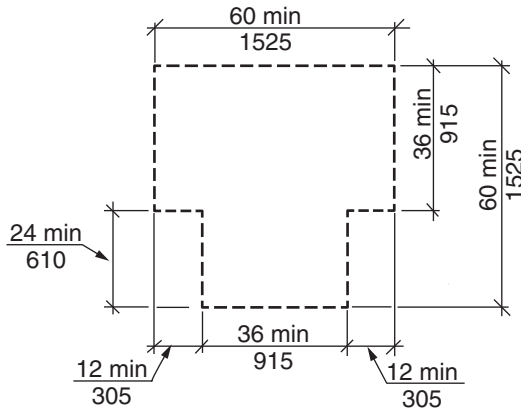


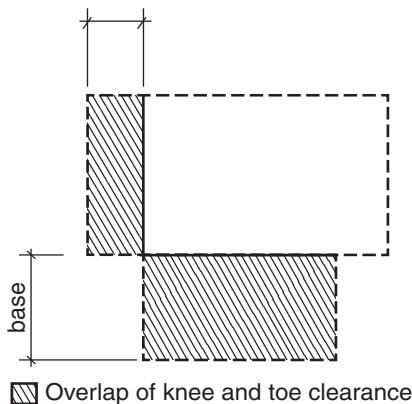
FIGURE 304.3.2.1.1
T-SHAPED TURNING SPACE
NEW BUILDINGS - OVERLAP

304.3.2.2 Existing buildings and facilities. In existing buildings and facilities, the turning space shall be a T-shaped space within a 60-inch (1525 mm) minimum square, with arms and base 36 inches (915 mm) minimum in width. Each arm of the T shall be clear of obstructions 12 inches (305 mm) minimum in each direction, and the base shall be clear of obstructions 24 inches (610 mm) minimum.



**FIGURE 304.3.2.2
T-SHAPED TURNING SPACE
EXISTING BUILDINGS - SIZE**

304.3.2.2.1 Overlap. Turning spaces shall be permitted to include knee and toe clearance complying with Section 306 only at the end of either the base or one arm.



**FIGURE 304.3.2.2.1
T-SHAPED TURNING SPACE - EXISTING BUILDINGS
OVERLAP**

SECTION 305 CLEAR FLOOR SPACE

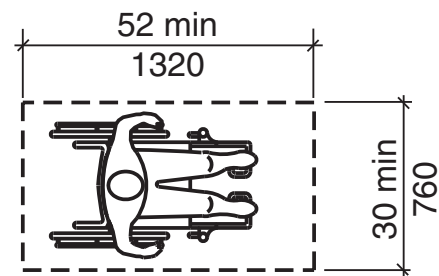
305.1 General. A clear floor space shall comply with Section 305.

305.2 Floor surfaces. Floor surfaces of a clear floor space shall comply with Section 302. Changes in level shall not be permitted within the clear floor space.

Exception: Slopes not steeper than 1:48 shall be permitted.

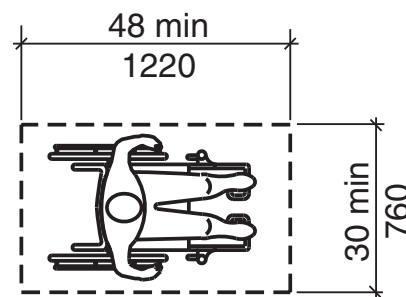
305.3 Size.

305.3.1 New buildings and facilities. In new buildings and facilities, the clear floor space shall be 52 inches (1320 mm) minimum in length and 30 inches (760 mm) minimum in width.



**FIGURE 305.3.1
SIZE OF CLEAR FLOOR SPACE - NEW BUILDINGS**

305.3.2 Existing buildings and facilities. In existing buildings and facilities, the clear floor space shall be 48 inches (1220 mm) minimum in length and 30 inches (760 mm) minimum in width.



**FIGURE 305.3.2
SIZE OF CLEAR FLOOR SPACE - EXISTING BUILDINGS**

305.4 Knee and toe clearance. Unless otherwise specified, clear floor space shall be permitted to include knee and toe clearance complying with Section 306.

305.5 Position. Unless otherwise specified, clear floor spaces shall be positioned for either forward or parallel approach to an element.

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

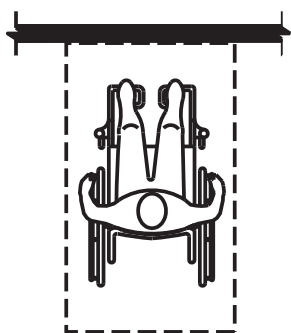


FIGURE 305.5(A)
POSITION OF CLEAR FLOOR SPACE - FORWARD

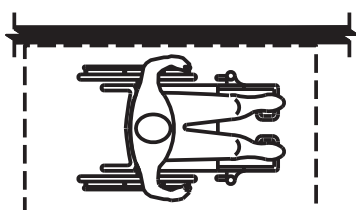


FIGURE 305.5(B)
POSITION OF CLEAR FLOOR SPACE - PARALLEL

305.6 Approach. One full, unobstructed side of a clear floor space shall adjoin or overlap an accessible route or adjoin another clear floor space.

305.7 Alcoves. If a clear floor space is in an alcove or otherwise confined on all or part of three sides, additional maneuvering clearances complying with Sections 305.7.1 and 305.7.2 shall be provided, as applicable.

305.7.1 Parallel approach. Where a clear floor space is positioned for a parallel approach, the alcove shall be 60 inches (1525 mm) minimum in width where the depth exceeds 15 inches (380 mm).

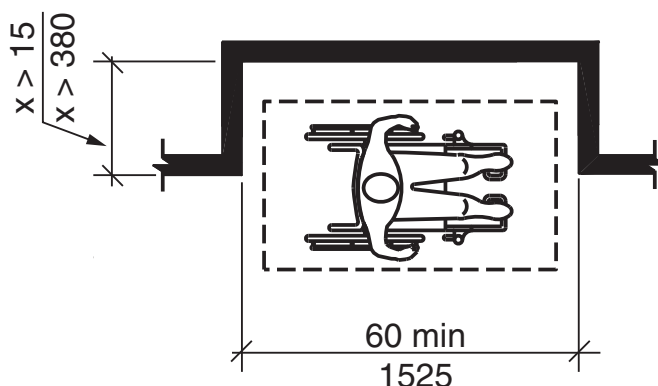


FIGURE 305.7.1
MANEUVERING CLEARANCE IN AN ALCOVE
PARALLEL APPROACH

305.7.2 Forward approach. Where a clear floor space is positioned for a forward approach, the alcove shall be 36 inches (915 mm) minimum in width where the depth exceeds 24 inches (610 mm).

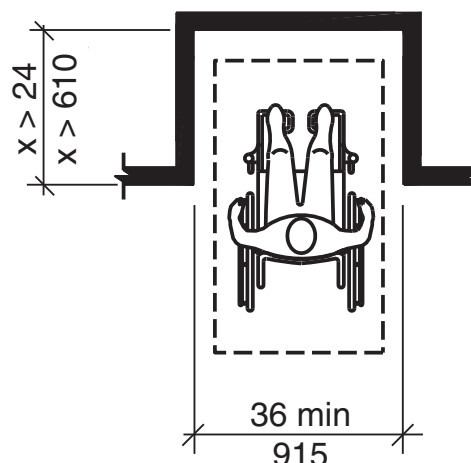


FIGURE 305.7.2
MANEUVERING CLEARANCE IN AN ALCOVE
FORWARD APPROACH

SECTION 306 KNEE AND TOE CLEARANCE

306.1 General. Where space beneath an element is included as part of the clear floor space at an element, clearance at an element, or a turning space, the space shall comply with Section 306. Additional space shall not be prohibited beneath an element, but shall not be considered as part of the clear floor space or turning space.

306.2 Toe clearance.

306.2.1 General. Space beneath an element between the floor and 9 inches (230 mm) above the floor shall be considered toe clearance and shall comply with Section 306.2.

306.2.2 Maximum depth. Toe clearance shall be permitted to extend 25 inches (635 mm) maximum under an element.

306.2.3 Minimum depth. Where toe clearance is required at an element as part of a clear floor space complying with Section 305, the toe clearance shall extend 17 inches (430 mm) minimum beneath the element.

306.2.4 Additional clearance. Space extending greater than 6 inches (150 mm) beyond the available knee clearance at 9 inches (230 mm) above the floor shall not be considered toe clearance.

306.2.5 Width. Toe clearance shall be 30 inches (760 mm) minimum in width.

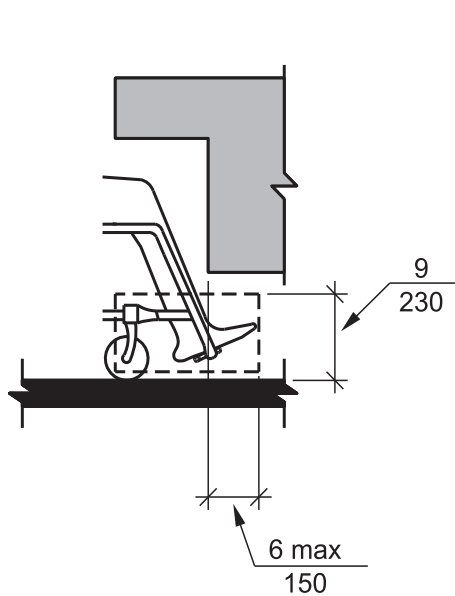


FIGURE 306.2(A)
TOE CLEARANCE - ELEVATION

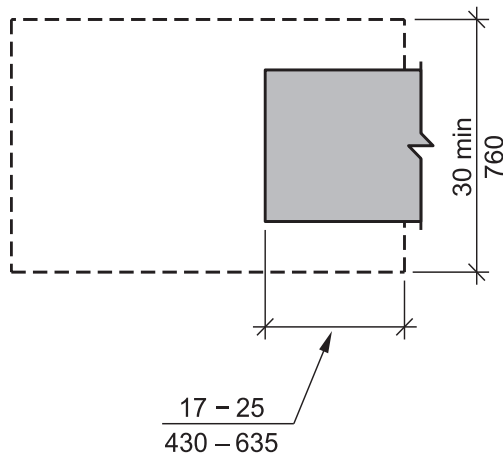


FIGURE 306.2(B)
TOE CLEARANCE - PLAN

306.3 Knee clearance.

306.3.1 General. Space beneath an element between 9 inches (230 mm) and 27 inches (685 mm) above the floor shall be considered knee clearance and shall comply with Section 306.3.

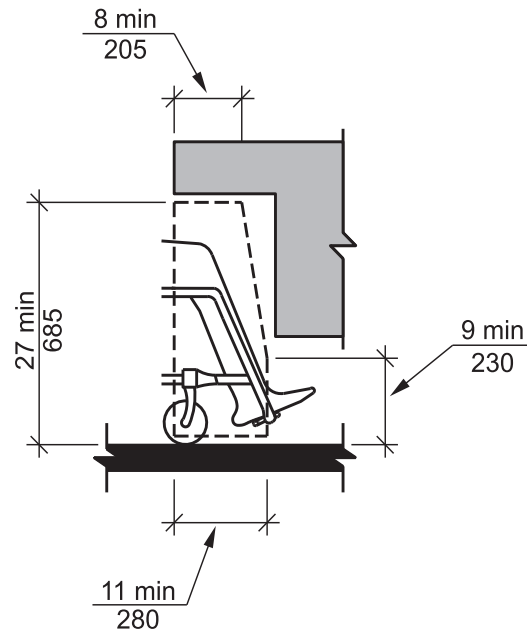


FIGURE 306.3(A)
KNEE CLEARANCE - ELEVATION

306.3.2 Maximum depth. Knee clearance shall be permitted to extend 25 inches (635 mm) maximum under an element at 9 inches (230 mm) above the floor.

306.3.3 Minimum depth. Where knee clearance is required beneath an element as part of a clear floor space complying with Section 305, the knee clearance shall be 11 inches (280 mm) minimum in depth at 9 inches (230 mm) above the floor, and 8 inches (205 mm) minimum in depth at 27 inches (685 mm) above the floor.

306.3.4 Clearance reduction. Between 9 inches (230 mm) and 27 inches (685 mm) above the floor, the knee clearance shall be permitted to be reduced at a rate of 1 inch (25 mm) in depth for each 6 inches (150 mm) in height.

306.3.5 Width. Knee clearance shall be 30 inches (760 mm) minimum in width.

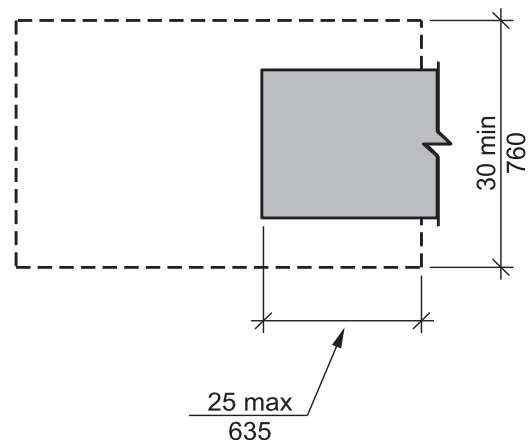


FIGURE 306.3(B)
KNEE CLEARANCE - PLAN