SCOPING

1. Any elevator provided for passengers shall be located on an accessible route and comply with items 3 through 33.

   Exception: In buildings or facilities meeting one of the elevator exceptions of CBC 11B-206.2.3 or allowed by item 34 to use a platform lift, a limited-use/limited-application elevator meeting CBC 11B-408 shall be allowed

   CBC 11B-206.2.4 and CBC 11B-206.6

2. When the only elevators provided for use by the public and employees are combination passenger and freight elevators, such elevators shall comply with items 3 through 33.

   CBC 11B-407.1.1

3. Note on plans: "All elevators shall comply with ASME A17.1, Safety Code for Elevators and Escalators."

   CBC 11B-407.1

ELEVATOR CARS

4. Elevator interior dimensions and door clear width shall comply with CBC Table 11B-407.4.1.

   Exception: In existing buildings with shaft configuration or technical infeasibility prohibiting strict compliance with CBC Table 11B-407.4.1 dimensions, existing elevator car configurations with minimum 18 square feet of floor area, minimum inside clear depth of 54 inches, and minimum clear width of 48 inches shall be allowed.

   Table 11B-407.4.1

   ELEVATOR CAR DIMENSIONS

<table>
<thead>
<tr>
<th>DOOR LOCATION</th>
<th>MINIMUM DIMENSIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Door clear width</td>
</tr>
<tr>
<td>Centered</td>
<td>42 inches (1.067 mm)</td>
</tr>
<tr>
<td>Side (off-centered)</td>
<td>6 inches (1.524 mm)</td>
</tr>
<tr>
<td>Any</td>
<td>6 inches (1.524 mm)</td>
</tr>
<tr>
<td>Any</td>
<td>6 inches (1.524 mm)</td>
</tr>
</tbody>
</table>

   1. A tolerance of minus 3/8 inch (1.59 mm) is permitted.

   2. Other car configurations that provide a turning space complying with Section 11B-304 with the door closed shall be permitted.

   CBC 11B-407.4.1

5. Provide support rail complying with the following on at least one wall of elevator car:

   - Minimum 31 inches and maximum 33 inches above platform surface
   - Ends maximum 6 inches from adjacent walls
   - Minimum 1-1/2-inch clearance between rail and adjacent surfaces
   - Smooth gripping surface
   - Structural adequacy of support rail, fastener, and mounting device to accommodate 250-pound point load applied at any point on the support rail, fastener, mounting device, or supporting structure

   CBC 11B-407.4.10
6. Specify level elevator car platform surface with no vertical changes in elevation exceeding 1/4 inch. 
   CBC 11B-302, CBC 11B-303, and CBC 11B-407.4.2

7. Specify elevator car and hoistway doors complying with the following:
   - Horizontally sliding
   - Opening and closing automatically
   CBC 11B-407.3

8. Specify self-leveling feature automatically positioning elevator car platform flush with floor landings within +/- 1/2-inch tolerance under rated loading to zero loading conditions.
   CBC 11B-407.4.4

9. Specify maximum 1-1/4-inch clearance between elevator car platform sill and hoistway landing edge.
   CBC 11B-407.4.3

10. Specify door reopening devices complying with the following:
    - Function to stop and reopen car and hoistway doors if door becomes obstructed by object or person
    - Capable of sensing an object or person in path of closing door at nominal 5 inches and 29 inches above finished floor
    - Do not require physical contact for activation, although contact may occur before door reverses
    - Remain effective for minimum 20 seconds
    CBC 11B-407.3.3

11. Specify minimum 5-foot-candle illumination at threshold between elevator car platform and lobby landing.
    CBC 11B-407.4.5

12. Detail floor designation signage on both jambs of elevator hoistway entrances per CBC Figure 11B-407.2.3.1:
    - Indicating respective floor number
    - Floor numbers designated by raised characters 2 inches (absolute) in height and otherwise complying with item 32
    - Main entry level designated by raised five-pointed star with 2-inch (absolute) outside diameter placed to left of floor-designation number and otherwise complying with item 32
    - Raised characters and star in white on black background
    - Corresponding Braille per item 33 beneath raised characters and symbols with “MAIN” as Braille translation for star
    - Mounted per the following:
      o Minimum 48 inches from finish floor or ground surface to baseline of lowest line of Braille
      o Maximum 60 inches from finish floor or ground surface to baseline of highest line of raised characters

   ![Figure 11B-407.2.3.1](image)

   **FIGURE 11B-407.2.3.1**
   FLOOR DESIGNATIONS ON JAMBS OF ELEVATOR HOISTWAY ENTRANCE
   CBC 11B-407.2.3.1, CBC 11B-703.2, and CBC 11B-703.4.1

**CAR CONTROLS AND INDICATORS**

13. Dimension elevator car controls at minimum 15 inches and maximum 48 inches above platform surface.
    CBC 11B-309 and CBC 11B-407.4.6
14. Detail car control buttons complying with following:
   - Minimum 3/4-inch-diameter control buttons raised 1/8 inch +/- 1/32 inch above surrounding surface
   - Arranged with numbers in ascending order, reading from left to right where two or more columns of buttons provided
   - Illuminated control buttons with square shoulders and activated by detectable mechanical motion
   - Buttons with floor designations shall be provided with visible indicators showing a call has been registered and extinguishing when the car arrives at the designated floor
   - Minimum 3/8-inch clear space or separation between rows of control buttons
   - Raised characters per the following:
     - Located immediately to left of control buttons
     - White on black background
   - Raised symbols per the following:
     - Provided for emergency stop, alarm, door open, door close, main entry floor, and phone per CBC Table 11B-407.4.7.1.3
     - Located immediately to left of control buttons
     - White on black background
   - Corresponding Braille per item 33 beneath raised characters and symbols

CBC 11B-407.4.6.2 and CBC 11B-407.4.7

15. Detail emergency control buttons complying with the following:
   - Centerlines minimum 35 inches above finished floor
   - Emergency controls, including the emergency alarm, grouped at the bottom of the control panel

CBC 11B-407.4.6.4

16. Specify and dimension elevator emergency two-way communication system complying with following:
   - Positioned minimum 15 inches and maximum 48 inches above platform surface
   - Designated by raised symbols or characters adjacent to device, white on black background, per item 32
   - Corresponding Braille per item 33 adjacent to device

CBC 11B-407.4.9

17. Specify visible and audible car position indicators within elevator car per the following:
   - Visible indicators located above car control panel or above car door
   - Visible characters minimum 1/2-inch high
   - Numerals corresponding to floors illuminating as car passes or stops at floor served by elevator
   - Audible signal shall be automatic verbal annunciator announcing the floor at which the car is about to stop
   - Verbal annunciator shall be 10 dB minimum above ambient, maximum 80 dB, measured at the annunciator
   - Verbal annunciator frequency minimum 300 Hz and maximum 3000 Hz

CBC 11B-407.4.8

ELEVATOR LANDING SIGNAGE, CONTROLS, AND INDICATORS

18. Provide directional signage complying with item 31 at each elevator landing indicating location of accessible means of egress and including International Symbol of Accessibility.

CBC 1007.9 and CBC 1007.10

19. Detail elevator call buttons complying with the following:
   - Centerline positioned minimum 15 inches and maximum 48 inches above finished floor
   - Minimum 30-inch-by-48-inch clear floor space provided at all call controls
   - Minimum 3/4-inch-diameter buttons raised 1/8 inch +/- 1/32 inch above surrounding surface
   - Activated by a detectable mechanical motion
   - Button designating up direction located above button designating down direction
   - Include visible signals activated when each call registered and extinguished when answered
   - Internally illuminated with white light over entire button surface
   - Any keypads provided shall be standard telephone keypad arrangement

CBC 11B-407.2.1

20. Specify visual and audible signals at each hoistway entrance complying with the following per CBC Figure 11B-407.2.2.2:
   - Visible signal fixtures centered minimum 72 inches above finished floor or ground
   - Visible signal elements minimum 2-1/2-inches high by 2-1/2-inches wide
   - Audible signal sounding once for up direction and twice for down direction or verbal annunciators indicating direction of car travel
   - Audible signal frequency of maximum 1500 Hz
   - Verbal annunciator frequency of minimum 300 Hz and maximum 3000 Hz
   - Audible signal and verbal annunciator minimum 10dB above ambient, maximum 80 dB, measured at hall call button

CBC 11B-407.2.1
21. Specify the minimum time from notification an elevator car is answering a call until the doors of that car start to close shall meet the following provisions:
   - Time (in seconds) = Distance (in feet) / 1.5, minimum 5 seconds
   - D = Distance from point in lobby or corridor 60 inches directly in front of farthest call button controlling that car to centerline of its hoistway door

ELEVATOR LANDING TWO-WAY COMMUNICATION

22. Specify two-way communication system at elevator landings on each accessible floor one or more stories above or below story of exit discharge.
   Exception: Elevator landing served by area of refuge with two-way communication
   Exception: Floor provided with exit ramp
   Exception: Service elevators not designated as part of accessible means of egress or serving as part of accessible route
   Exception: Freight elevators
   Exception: Private residence elevators

23. Specify two-way communication system complying with the following between required location and central control point approved by fire department:
   - If central control point not constantly attended, system shall have timed automatic telephone dial-out capability to an approved monitoring location
   - Communication system shall include both audible and visible signals

24. Specify posting of the following information adjacent to two-way communication system:
   - Directions for use of system
   - Instructions for summoning assistance via system
   - Written identification of location

AREAS OF REFUGE

25. Identify on plans an area of refuge at each elevator provided as an accessible means of egress per CBC 1009.
   Exception: Elevators in buildings and facilities equipped with automatic sprinkler system
   Exception: Elevators without protected shaft enclosures per CBC 713
   Exception: Elevators in smoke-protected seating areas
   Exception: Elevators in open parking garages
   Exception: Elevators accessed from horizontal exits

26. Locate and dimension each area of refuge to comply with the following:
   - Location on accessible route from space served
   - Maximum travel distance from space served per CBC 1016
   - Accommodates one wheelchair space for every 200 occupants served, but not fewer than two wheelchair spaces
     Exception: On floors where occupant load is less than 200, building official may allow refuge area accommodating one wheelchair space
   - Each wheelchair space minimum 30-inches by 48-inches
Access to any wheelchair space not obstructed by more than one adjoining wheelchair space
Wheelchair spaces do not reduce required egress width

CBC 1009.6

27. Detail smoke barrier per CBC 709 or horizontal exit per CBC 1026 between each area of refuge and remainder of story.
CBC 1009.6.4

28. Specify two-way communication system provided per items 23 and 24 within each area of refuge and also including the following:
- Accessible button provided within area of refuge activating lights in both area of rescue and control point indicating rescue requested
- Button provided at control point activating lights in both area of rescue and control point indicating request received
CBC 1009.6.5 and CBC 1009.8.1.1

29. Provide sign per the following at door accessing area of refuge:
- Visual characters contrasting with background, each with non-glare finish, indicating "AREA OF REFUGE"
- Including International Symbol of Accessibility
- Illuminated where exit sign illumination required
- Raised characters per item 32
- Corresponding Braille per item 33
CBC 1009.9

30. Specify instructions displayed within area of refuge per the following for use under emergency conditions:
- Visual characters per item 31
- Including directions to locate other accessible means of egress
- Including directions for persons able to use exit stairway to do so as soon as possible, unless assisting others
- Include information on planned availability of assistance in supervised operation of elevators and how to summon such assistance
- Include directions for use of two-way communications system
CBC 1009.10 and CBC 1009.11

SIGNAGE

31. Visual characters on signage shall comply with the following:
   Exception: Visual characters complying with CBC 11B-703.2 raised character requirements and accompanied by Braille per CBC 11B-703.3 need not comply with case, style, font proportion, height, or spacing provisions
- Characters and background with non-glare finish
- Characters contrasting with background, either light characters on dark background or dark characters on light background
- Text shall be in a horizontal format
- Line spacing between baselines of separate character lines at minimum 135 percent and maximum 170 percent of character height
- Characters shall be uppercase or lowercase or a combination of both
- Characters shall be conventional in form – i.e., not italic, oblique, script, highly decorate, or of other unusual form
- Character font with uppercase letter "O" width minimum 60 percent and maximum 110 percent uppercase letter "I" height
- Characters with stroke thickness of uppercase letter "I" minimum 10 percent and maximum 20 percent character height
- Characters spaced with closest points of adjacent character minimum 10 percent and maximum 35 percent of character height
- Character height sized according CBC Table 11B-703.5.5 and based on uppercase letter "I"

### TABLE 11B-703.5.5
VISUAL CHARACTER HEIGHT

<table>
<thead>
<tr>
<th>HEIGHT TO FINISH FLOOR OR GROUND FROM BASELINE OF CHARACTER</th>
<th>HORIZONTAL VIEWING DISTANCE</th>
<th>MINIMUM CHARACTER HEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 inches (1016 mm)</td>
<td>less than 72 inches (1829 mm)</td>
<td>$\frac{3}{8}$ inch (15.9 mm)</td>
</tr>
<tr>
<td></td>
<td>72 inches (1829 mm) and greater</td>
<td>$\frac{3}{8}$ inch (15.9 mm), plus $\frac{1}{4}$ inch (3.2 mm) per foot (305 mm) of viewing distance above 72 inches (1829 mm)</td>
</tr>
<tr>
<td>Greater than 70 inches (1778 mm)</td>
<td>less than 180 inches (4572 mm)</td>
<td>2 inches (51 mm)</td>
</tr>
<tr>
<td></td>
<td>180 inches (4572 mm) and greater</td>
<td>2 inches (51 mm), plus $\frac{1}{8}$ inch (3.2 mm) per foot (305 mm) of viewing distance above 180 inches (4572 mm)</td>
</tr>
<tr>
<td></td>
<td>less than 21 feet (6401 mm)</td>
<td>3 inches (76 mm)</td>
</tr>
<tr>
<td></td>
<td>21 feet (6401 mm) and greater</td>
<td>3 inches (76 mm), plus $\frac{1}{8}$ inch (3.2 mm) per foot (305 mm) of viewing distance above 21 feet (6401 mm)</td>
</tr>
</tbody>
</table>

CBC 11B-703.5
32. Raised characters on signage shall comply with the following:
   - Characters minimum 5/8-inch and maximum 2-inches high based on height of uppercase letter “I” per CBC Figure 11B-703.2.5
   - Characters raised minimum 1/32 inch
   - Text in horizontal format
   - Characters sans serif and uppercase
   - Width of uppercase letter “O” minimum 60 percent and maximum 110 percent height of uppercase letter “I”
   - Stroke thickness of uppercase letter “I” maximum 15 percent height of character
   - Spacing between individual raised characters per the following:
     - Where characters have rectangular cross sections, minimum 1/8 inch and maximum 4 times raised character stroke width
     - Where characters have non-rectangular cross sections, minimum 1/16 inch and maximum 4 times raised character stroke width at base of cross sections and minimum 1/8 inch and maximum 4 times raised character stroke width at top of cross sections
   - Spacing between baselines of separate lines of raised characters of minimum 135% and maximum 170% of raised character height
   - Characters separated minimum 3/8 inch from raised borders and decorative elements

33. Braille on signage shall comply with the following:
   - Contracted (Grade 2)
     - Braille flush left or centered and placed minimum 3/8 inch and maximum ½ inch below raised characters or symbols per CBC Figure 11B-703.3.2
     - Braille in horizontal format
     - When raised characters are multilined text, all Braille placed together below all raised text lines
     - Dots domed or rounded with dimensions per CBC Table 11B-703.3.1 and CBC Figure 11B-703.3.1
TABLE 11B-703.3.1
BRAILLE DIMENSIONS

<table>
<thead>
<tr>
<th>MEASUREMENT RANGE</th>
<th>MINIMUM IN INCHES</th>
<th>MAXIMUM IN INCHES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dot base diameter</td>
<td>0.059 (1.5 mm)</td>
<td>0.063 (1.6 mm)</td>
</tr>
<tr>
<td>Distance between two dots in the same cell¹</td>
<td>0.100 (2.5 mm)</td>
<td></td>
</tr>
<tr>
<td>Distance between corresponding dots in adjacent cells¹</td>
<td>0.300 (7.6 mm)</td>
<td></td>
</tr>
<tr>
<td>Dot height</td>
<td>0.025 (0.6 mm)</td>
<td>0.037 (0.9 mm)</td>
</tr>
<tr>
<td>Distance between corresponding dots from one cell directly below¹</td>
<td>0.395 (10 mm)</td>
<td>0.400 (10.2 mm)</td>
</tr>
</tbody>
</table>

¹. Measured center to center.

FIGURE 11B-703.3.1
BRAILLE MEASUREMENT

CBC 11B-703.3

PLATFORM LIFTS

34. Platform lifts may be provided as part of an accessible route serving the following:
   - Performance areas and speakers’ platforms
   - Wheelchair spaces in assembly areas
   - Incidental spaces not used by the public and occupied by maximum five persons
   - Judicial and courtroom spaces
   - Where existing site constraints make use of a ramp or elevator infeasible
   - Levels within transient lodging guest rooms or residential dwelling units
   - Play area components or soft contained play structures
   - Team or player seating in sports facilities
   - Recreational boating facilities and fishing piers/platforms

CBC 11B-206.7

35. Platform lifts may be used as an accessible means of egress per item 34 only when provided with standby power or self-rechargeable battery power adequate to operate all lift functions for minimum five upward and downward trips

CBC 1007.5

36. If platform lift provided, it shall be designed and constructed to facilitate unassisted entry, operation, and exit from lift.

CBC 11B-410.1

37. Note on plans: "All platform lifts shall comply with ASME A18.1, Safety Standard for Platform Lifts and Stairway Chair Lifts."

CBC 11B-410.1

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

CBC 1007.5.1

39. Specify maximum 1-1/4-inch clearance between platform sill and landing edge.

CBC 11B-410.4

40. Dimension platform lift controls at minimum 15 inches and maximum 48 inches above platform surface.

CBC 11B-309 and CBC 11B-410.5

41. Dimension minimum 60-inch-by-60-inch clear and level landings at all entry/exit doors to platform lifts.

CBC 11B-410.7
42. Specify and dimension platform lift doors or gates complying with the following:
   - Power-operated
     **Exception:** Platform lifts serving maximum two landings and having doors or gates on opposite side may have self-closing manual doors or gates
   - Doors or gates remain open for minimum 20 seconds
   - End doors or gates with minimum 32-inch clear width
   - Side doors or gates with minimum 42-inch clear width

43. Provide signage complying with the following at each platform lift:
   - Located within platform enclosure and at each landing
   - Reading: “No Freight”
   - Lettering complying with item 31
   - Including International Symbol of Accessibility

*CBC 11B-410.6
CBC 11B-410.8*