GENERAL REQUIREMENTS

1. Provide dimensions and coordinated detailing for each stairway.  
   
   CBC 1115A and CBC 1123A

TREADS AND RISERS

2. Detail stair treads and risers complying with the following:
   - Minimum 11-inch tread width
     - Exception: Minimum 10-inch width within dwelling units
   - Minimum 4-inch and maximum 7-inch riser height
     - Exception: Maximum 7-3/4-inch height within dwelling units
   - Uniform tread width and riser height on each stairway flight
   - Open risers prohibited
     - Exception: Stairways within an individual dwelling unit
     - Exception: On exterior stairways, maximum 1/2-inch opening allowed between base of riser and tread
     - Exception: On exterior stairways, risers constructed of grating allowed with maximum 1/2-inch openings

   CBC 1011.5.2, CBC 1011.5.4, CBC 1115A.2, and CBC 1123A.2

3. Detail risers and treads complying with the following:
   - Treads with smooth, rounded, or chamfered exposed edges
   - Maximum 9/16-inch radius and beveling at tread edges
   - Nosings projecting maximum 1-1/4 inches past face of riser below
   - Risers sloped or underside of nosings at angle not more than 30 degrees from vertical
   - Uniform nosings on each stairway flight

   CBC 1011.5.5, CBC 1009.4.5, and CBC 1133B.4.5

4. Detail contrasting stair striping complying with the following:
   - Painted stripe acceptable, grooves not acceptable
   - At upper approach and lowest tread of interior stairs
   - At upper approach and all treads of exterior stairs
   - Extending full width of approaches and treads
   - Minimum 2-inches and maximum 4-inches wide
   - Placed parallel to and within 1 inch of nosing edges of approaches and treads

   CBC 1115A.5 and CBC 1123A.5

5. Specify slip-resistant tread surface and striping material.

   CBC 1115A.3, CBC 1115A.5, CBC 1123A.3, and CBC 1123A.5

HAZARDS

6. At stairway flights or landings with an adjacent vertical drop exceeding 30 inches, detail continuous guard minimum 42-inches high with openings not allowing passage of 4-inch-diameter sphere.
   - Exception: Minimum 34-inches high at open side of stairs within individual dwelling units
   - Exception: Openings not allowing passage of 4-3/8-inch-diameter sphere allowed in portions of guard 36 inches to 42 inches high
   - Exception: Triangular openings not allowing passage of 6-inch-diameter sphere allowed between riser, tread, and bottom rail

   CBC 1015.2 and CBC 1015.3
7. Where pedestrian ways adjoin areas beneath stairs with less than 80-inch vertical clearance, detail cane-detectable barrier maximum 27 inches above walking surface.  

 **CBC 1116A.2** 

**HANDRAILS AND EXTENSIONS**

8. Provide handrail at each side of each stairway flight.  
 **Exception:** Handrail acceptable on only one side of stairs serving an individual dwelling unit provided stairs open on any side include handrail on that side  

 **CBC 1115A.6.1 and CBC 1123A.6.1**

9. Position any intermediate handrails equidistant from each side of stairway and with required egress width within 30 inches of handrail.  

 **CBC 1014.9, CBC 1115A.6.1, and CBC 1123A.6.1**

10. Detail handrails complying with the following:

- Top of gripping surface minimum 34 inches and maximum 38 inches above tread nosings
- Continuous full length of each stairway flight and without interruption by newel posts or other obstructions  
 **Exception:** Handrails within dwelling units may be interrupted by a newel post at a turn or landing  

 **CBC 1115A.6.2**

11. Detail extensions for each handrail complying with the following per CBC Figure 11A-6E:  
 **Exception:** Stairways within an individual dwelling unit  

- Horizontal extension at top of stairway minimum 12 inches beyond top nosing  
- Stair-slope extension at bottom of stairway for width of one tread beyond bottom riser plus horizontal extension minimum 12 inches  
 **Exception:** Inner handrails at dogleg or switchback stairways shall be continuous and shall not extend into landings  
- Extending in same direction as stair flight  
- Returning smoothly to newel post or safety terminal  

 **CBC 1014.6, CBC 1115A.6.2.3, and CBC 1123A.6.2.3**
12. Detail handrail gripping surfaces complying with the following:
- If cross section is circular, minimum 1-1/4-inch and maximum 2-inch outside diameter per CBC Figure 11A-6B(a)
- If cross section is non-circular, minimum 4-inch and maximum 6-1/4-inch perimeter and maximum 2-1/4-inch cross-section dimension per CBC Figure 11A-6B(b) or CBC Figure 11A-6B(d)
- Continuous along length of handrail
- Unobstructed on tops or sides
- Not obstructed on bottoms more than 20% of handrail length
- Any horizontal projections minimum 1-1/2 inches below handrail gripping surface
- Rounded edges
- No sharp or abrasive elements or adjacent surfaces
- No handrail rotation within fittings

13. Specify surface material of any walls or other surface adjacent to handrails shall be free of sharp or abrasive elements.

CBC 1115A.6.2

CBC 1114A.6.2.4 and CBC 1122A.5.2.4
SIGNAGE

14. Identify on plans location of each stair-related sign and coordinate with signage schedule and/or details indicating the following:
   - Sign dimensions
   - Character and symbol dimensions
   - Character, symbol, and background colors
   - Braille dimensions
   - Dimension of vertical clearance above floor or ground
   - Dimension of any horizontal projection from wall

   CBC 1143A.1

15. Provide floor-designation signs complying with the following in each enclosed stairway:
   - Located at landing at each floor level
   - Placed adjacent to door on latch side
   - Located with clear floor space minimum 18 inches by 18 inches – centered on tactile characters – provided beyond arc of any door swing between closed and 45-degree-open positions
   - Mounted per the following:
     - Minimum 48 inches from finish floor or ground surface to baseline of lowest line of Braille
     - Maximum 60 inches from finish floor or ground surface to baseline of highest line of raised characters
   - At exit discharge level, includes raised five-pointed star located to left of identifying floor level with outside diameter of star at same height as raised characters
   - Visual characters designating floor level per item 16
   - Raised characters designating floor level per item 17
   - Corresponding Braille per item 18 provided beneath pictograms and raised characters

   CBC 1023.9 and CBC 1143A.2

16. Visual characters on signage shall comply with the following:
   - Located minimum 40 inches above finished floor
   - 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% and maximum 170% 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% and maximum 110% uppercase letter "I" height
   - Characters with stroke thickness of uppercase letter "I" minimum 10% and maximum 20% character height
   - Characters spaced with closest points of adjacent character minimum 10% and maximum 35% of character height
   - Character height sized according CBC Table 1143A.5 and based on uppercase letter "I"

   CBC 1143A.5

<table>
<thead>
<tr>
<th>HEIGHT TO FINISH FLOOR FROM BASELINE OF CHARACTER</th>
<th>HORIZONTAL VIEWING DISTANCE</th>
<th>MINIMUM CHARACTER HEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 inches (.016 mm) to less than or equal to 70 inches (1778 mm)</td>
<td>Less than 72 inches (1829 mm)</td>
<td>3/8 inch (15.9 mm)</td>
</tr>
<tr>
<td>72 inches (1829 mm) and greater</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Greater than 70 inches (1778 mm) to less than or equal to 120 inches (3048 mm)</td>
<td>Less than 80 inches (4572 mm)</td>
<td>2 inches (51 mm)</td>
</tr>
<tr>
<td>180 inches (4572 mm) and greater</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Greater than 120 inches (3048 mm)</td>
<td>Less than 21 feet (6401 mm)</td>
<td>3 inches (76 mm)</td>
</tr>
<tr>
<td>21 feet (6401 mm) and greater</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CBC 1143A.5
17. 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”
   - Characters raised minimum 1/32 inch
   - Text in horizontal format
   - Characters sans serif and uppercase
   - Width of uppercase letter “O” minimum 60% and maximum 110% height of uppercase letter “I”
   - Stroke thickness of uppercase letter “I” maximum 15% 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

CBC 1143A.6

18. Braille on signage shall comply with the following:
   - Contracted (Grade 2)
   - Braille flush left or centered and placed minimum 3/8 inch and maximum 1/2 inch below raised characters or symbols
   - 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 1143A.7.1

![Table 1143A.7.1 Braille Dimensions](image)

CBC 1143A.7