SECTION R329
DWELLING UNITS CONTAINING A LOFT

R329.1 Scope. The provisions of this section apply to all dwelling units that contain a loft. Where this section does not provide a specific requirement or allowance, the provisions in the remainder of the code shall govern.

R329.1.1 Limitations. Dwelling units shall not contain more than one loft, or loft space. Dwelling units that contain a loft may not be used for any purpose other than as a detached one-family dwelling.

R329.2 Definitions. The following words and terms shall, for the purposes of this section, have the meanings shown herein. Refer to Chapter 2 of this code for general definitions.

EGRESS ROOF ACCESS WINDOW. A skylight or roof window designed and installed to satisfy the emergency escape and rescue opening requirements of Section R310.

LANDING PLATFORM. A landing provided as the top step of a stairway accessing a loft.

LOFT. Any floor level located above the main floor and open to the main floor on at least one side, with a ceiling height less than 6 feet 8 inches (2032 mm), complying with the area, access, and guard requirements of R329, and used as a living or sleeping space.

R329.3 Exterior walls of dwelling units with a loft. Construction, projections, openings and penetrations of exterior walls of dwelling units containing a loft shall comply with Table R329.3.

Exceptions:
1. Walls, projections, openings or penetrations in walls perpendicular to the line used to determine the fire separation distance.
2. Foundation vents installed in compliance with this code are permitted.

<table>
<thead>
<tr>
<th>EXTERIOR WALL ELEMENT</th>
<th>FIRE-RESISTANCE RATING AND SAFEGUARDS REQUIRED</th>
<th>FIRE SEPARATION DISTANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walls</td>
<td>2 hour-tested in accordance with ASTM E 119 or UL 263 with exposure from both sides, and: Automatic sprinkler system provided throughout in accordance with Appendix T or NFPA 13D, including dry sidewall pendant sprinklers on the exterior, spaced to ensure that the entire surface of the exterior wall is covered.</td>
<td>&lt; 3 feet</td>
</tr>
<tr>
<td></td>
<td>1 hour-tested in accordance with ASTM E 119 or UL 263 with exposure from both sides, and: Automatic sprinkler system provided throughout in accordance with Appendix T or NFPA 13D</td>
<td>≥ 3 &lt; 5 feet</td>
</tr>
<tr>
<td></td>
<td>(Not fire-resistance rated)</td>
<td>0 hours</td>
</tr>
<tr>
<td></td>
<td>Not allowed</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>(Fire-resistance rated)</td>
<td>1 hour on the underside</td>
</tr>
<tr>
<td></td>
<td>(Not fire-resistance rated)</td>
<td>0 hours</td>
</tr>
<tr>
<td>Openings in walls</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>15% maximum of wall area</td>
<td>0 hours</td>
</tr>
<tr>
<td></td>
<td>Unlimited</td>
<td>0 hours</td>
</tr>
<tr>
<td>Penetrations</td>
<td>All Comply with Section R302.4</td>
<td>&lt; 5 feet</td>
</tr>
<tr>
<td></td>
<td>None required</td>
<td>≥ 5 Feet</td>
</tr>
</tbody>
</table>

R329.4 Minimum loft areas. Lofts used as a sleeping or living space shall meet the minimum area and dimension requirements of Sections R329.4.1 through R329.4.5.

R329.4.1 Minimum area. Lofts shall have a floor area of not less than 35 square feet (3.25 m²).

R329.4.2 Minimum dimensions. Lofts shall be not less than 5 feet (1524 mm) in any horizontal dimension.

R329.4.3 Height effect on loft area. Portions of a loft with a sloping ceiling measuring less than 3 feet (914 mm) from the finished floor to the finished ceiling shall not be considered as contributing to the minimum required area for the loft.

Exception: Under gable roofs with a minimum slope of 6 units vertical in 12 units horizontal, portions of a loft with a sloping ceiling measuring less than 16 inches (406 mm) from the finished floor to the finished ceiling shall not be considered as contributing to the minimum required area for the loft.

R329.4.4 Minimum ceiling height. Lofts shall have a ceiling height of not less than 3 feet (914.4 mm).

R329.4.4.1 Undersized lofts. Lofts having a ceiling height of less than 6 feet (1828.8 mm) for more than 50 percent of the required minimum area shall comply with both of the following:

1. All interior wall and ceiling of the dwelling unit shall be a minimum ½” gypsum board or other approved Class A finish, throughout the entire dwelling unit.
2. In addition to the loft smoke alarm required by R329.8, all other required smoke alarms within the dwelling unit shall be a photoelectric-type complying with Section R314.

R329.4.5 Maximum loft size. The aggregate floor area of a loft shall not be greater than one-third of the floor area of the room or space in which they are located.

R329.5 Automatic fire sprinkler systems. Dwelling units containing a loft shall be equipped throughout with an automatic sprinkler system in accordance with Appendix T or NFPA 13D.

R329.5.1 Interior finishes. All interior wall and ceiling finishes of dwelling units containing a loft shall be Class B finishes or other approved materials with a flame spread index of less than 75 and a smoke development index of less than 450, throughout the entire dwelling unit.

Exception: Lofts required to meet Section R329.4.4.1.

R329.6 Loft access. The access to and primary egress from a loft within dwelling units of a maximum 600 square feet (55.7 m²) in floor area shall be of any type described in Sections R329.6.1 through R329.6.4. The access to and primary egress from a loft within dwelling units with a floor area greater than 600 square feet shall be in accordance with Section R311.

R329.6.1 Stairways. Stairways accessing lofts shall comply with this code or with Sections R329.6.1.1 through R329.6.1.6.

R329.6.1.1 Width. Stairways serving a loft shall not be less than 17 inches (432 mm) in clear width at all points at or above the permitted handrail height. The minimum width below the handrail shall not be less than 20 inches (508 mm).

R329.6.1.2 Headroom. The headroom in stairways serving a loft shall not be less than 6 feet 2 inches (1880 mm) measured vertically from the sloped line connecting the tread nosing in the middle of the tread width.

Exception: The headroom for landing platforms shall not be less than 4 feet 4 inches (1321 mm).

R329.6.1.3 Treads and Risers. Risers for stairs serving a loft shall be a minimum of 7 inches (178 mm) and a maximum of 12 inches (305 mm). Tread depth and riser height shall be calculated with the following formulas:

\[
\text{Tread depth} = 20 \text{ inches (508 mm)} \text{ minus } \frac{1}{3} \text{ riser height}
\]

OR

\[
\text{Riser height} = 15 \text{ inches (381 mm)} \text{ minus } \frac{1}{4} \text{ tread depth}
\]

R329.6.1.4 Landing platforms. The top tread and riser of stairways accessing lofts shall be constructed as a landing platform where the loft ceiling height is less than 6 feet 2 inches (1880 mm) where the stairway meets the loft. The landing platform shall be 18 inches to 22 inches (457 to 559 mm) in depth measured from the nosing of the landing platform to the edge of the loft, and 16 to 18 inches (406 to 457 mm) in height measured from the landing platform to the loft floor.

R329.6.1.5 Handrails. Handrails shall comply with Section R311.

R329.6.1.6 Stairway guards. Guards at open sides of stairways shall comply with Section R312.

R329.6.2 Ladders. Ladders serving lofts shall comply with Sections R329.6.2.1 and R329.6.2.2.

R329.6.2.1 Size and capacity. Ladders serving lofts shall have 12 inches (305 mm) minimum rung width and 10 inch (254 mm) to 14 inch (356 mm) spacing between rungs. Ladders shall be capable of supporting a 300 pound (136 kg) load on any rung. Rung spacing shall be uniform within 3/8-inch (9.5 mm). The maximum height of a ladder shall be 8 feet (2438 mm).

R329.6.2.2 Incline. Ladders shall be installed at a minimum 70 to a maximum 80 degrees from horizontal.

R329.6.3 Alternating tread devices. Alternating tread devices serving lofts shall comply with Section R311. The clear width at and below the handrails shall be not less than 20 inches (508 mm).

R329.6.4 Ships ladders. Ships ladders serving lofts shall comply with Section R311. The clear width at and below the handrails shall be not less than 20 inches (508 mm).

R329.7 Loft guards. Loft guards shall be located along the open side(s) of lofts located more than 30 inches (762 mm) above the main floor. Loft guards shall be not less than 36 inches (914 mm) in height, and are not required at the loft accessing means connection to the loft.

R329.8 Loft smoke alarms. Lofts shall be equipped with a minimum of one photoelectric-type smoke alarm complying with Section R314.

R329.9 Loft location. Lofts shall not be located directly above a permanently installed cooking appliance. Permanently installed cooking appliances shall not be located within 12 inches (304.8 mm) horizontally of a loft open edge, measured to the vertical plane of the loft edge.

R329.10 Emergency escape. Dwelling units containing a loft shall meet the requirements of Section R310 for emergency escape and rescue openings.

Exception: Egress roof access windows in a loft used as sleeping rooms shall be deemed to meet the requirements of Section R310 for the loft space where installed with the bottom of their clear opening no more than 44 inches (1118 mm) above the loft floor, provided the egress roof access window complies with the minimum opening area requirements of Section R310.2.1.