

# E24-24

IBC: 1006.3.4, 1006.3.5 (New), 1006.3.5.1 (New), 1006.3.5.2 (New), 1006.3.5.3 (New), 1006.3.5.4 (New), 1006.3.5.5 (New), 1006.3.5.6 (New), 1023.12, 1031.2; IFC: [BE] 1006.3.4, 1006.3.5 (New), 1006.3.5.1 (New), 1006.3.5.2 (New), 1006.3.5.3 (New), 1006.3.5.4 (New), 1006.3.5.5 (New), 1006.3.5.6 (New), [BE] 1023.12, [BE] 1031.2

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## 2024 International Building Code

**TABLE 1006.3.4(1) STORIES AND OCCUPIABLE ROOFS WITH ONE EXIT OR ACCESS TO ONE EXIT FOR R-2 OCCUPANCIES**

STORY	OCCUPANCY	MAXIMUM NUMBER OF DWELLING UNITS	MAXIMUM EXIT ACCESS TRAVEL DISTANCE
Basement, first, second, or third or fourth story above grade plane and occupiable roofs over the first, or second, or third story above grade plane	R-2 <sup>a, b, c</sup>	4 dwelling units	125 feet
Fourth-Fifth story above grade plane and higher	NP	NA	NA

For SI: 1 foot = 304.8 mm.

NP = Not Permitted.

NA = Not Applicable.

- Buildings classified as Group R-2 equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 and provided with emergency escape and rescue openings in accordance with Section 1031.
- This table is used for Group R-2 occupancies consisting of dwelling units. For Group R-2 occupancies consisting of sleeping units, use Table 1006.3.4(2).
- This table is for occupiable roofs accessed through and serving individual dwelling units in Group R-2 occupancies. For Group R-2 occupancies with occupiable roofs that are not accessed through and serving individual units, use Table 1006.3.4(2).
- 4-story buildings and 3-story buildings with an occupiable roof above the third story shall also comply with Section 1006.3.4.2.

**Add new text as follows:**

**1006.3.4.2 Single exit four-story buildings with Group R-2 dwelling units.** Four-story buildings with a single exit for Group R-2 dwelling units shall comply with Table 1006.3.4(1) and all of the following:

- The *net floor area* of each floor shall not exceed 4,000 square feet (418.5 m<sup>2</sup>).
- Openings to the *interior exit stairway* enclosure shall be limited to those required for exit access into the enclosure from normally occupied spaces, those required for egress from the enclosure, and openings to the exterior. Elevators shall not open into the *interior exit stairway* enclosure.
- A *manual fire alarm system* and *automatic smoke detection system* that activates the *occupant notification system* in accordance with Section 907.5 shall be provided. Smoke detectors shall be located in common spaces outside of *dwelling units*, including but not limited to gathering areas, laundry rooms, mechanical equipment rooms, storage rooms, interior corridors, interior exit stairways, and exit passageways.
- Regardless of the stairway construction type, *automatic sprinkler* locations in *interior exit stairways* shall comply with the requirements of NFPA 13 for combustibles stairways.
- Electrical receptacles shall be prohibited in an *interior exit stairway*.

## 2024 International Fire Code

[BE] TABLE 1006.3.4(1) STORIES AND OCCUPIABLE ROOFS WITH ONE EXIT OR ACCESS TO ONE EXIT FOR R-2 OCCUPANCIES

STORY	OCCUPANCY	MAXIMUM NUMBER OF DWELLING UNITS	MAXIMUM EXIT ACCESS TRAVEL DISTANCE
Basement, first, second, or third or fourth story above grade plane and occupiable roofs over the first, or second, or third, story above grade plane	R-2 <sup>a, b, c</sup>	4 dwelling units	125 feet
Fourth-Fifth story above grade plane and higher	NP	NA	NA

For SI: 1 foot = 304.8 mm.

NP = Not Permitted.

NA = Not Applicable.

- a. Buildings classified as Group R-2 equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 and provided with emergency escape and rescue openings in accordance with Section 1031.
- b. This table is used for Group R-2 occupancies consisting of dwelling units. For Group R-2 occupancies consisting of sleeping units, use Table 1006.3.4(2).
- c. This table is for occupiable roofs accessed through and serving individual dwelling units in Group R-2 occupancies. For Group R-2 occupancies with occupiable roofs that are not accessed through and serving individual units, use Table 1006.3.4(2).
- d. 4-story buildings and 3-story buildings with an occupiable roof above the third story shall also comply with Section 1006.3.4.2.

**Add new text as follows:**

**[BE] 1006.3.4.2 Single exit four-story buildings with Group R-2 dwelling units.** Four-story buildings with a single exit for Group R-2 dwelling units shall comply with Table 1006.3.4(1) and all of the following:

1. The net floor area of each floor shall not exceed 4,000 square feet (418.5 m<sup>2</sup>).
2. Openings to the interior exit stairway enclosure shall be limited to those required for exit access into the enclosure from normally occupied spaces, those required for egress from the enclosure, and openings to the exterior. Elevators shall not open into the interior exit stairway enclosure.
3. A manual fire alarm system and automatic smoke detection system that activates the occupant notification system in accordance with Section 907.5 shall be provided. Smoke detectors shall be located in common spaces outside of dwelling units, including but not limited to gathering areas, laundry rooms, mechanical equipment rooms, storage rooms, interior corridors, interior exit stairways, and exit passageways.
4. Regardless of the stairway construction type, automatic sprinkler locations in interior exit stairways shall comply with the requirements of NFPA 13 for combustibles stairways.
5. Electrical receptacles shall be prohibited in an interior exit stairway.

**Reason:**

Please refer to our attachment for an in-depth discussion of life safety and other issues.

The 2024 International Building Code allows buildings up to three stories of R-2 occupancy to have up to four dwelling units at each story served by a single exit. Our proposal acknowledges the rising demand for infill multifamily development and a growing movement across the United States to modify local building codes for this purpose. We recommend enabling a single exit to serve up to six stories of R-2 occupancy above the grade plane, or up to six units per floor in cases of at most three stories.

In return for the increased height or dwelling unit allowance, buildings would adhere to more stringent conditions than a traditional building. The building would be of Type IA, IB, IIA, or IV 1-hour fire resistant construction, dwelling units could not directly access the exit, active or passive smoke control systems would be required in the single exit, and there would be strict limits on travel distances and the number of dwelling units per floor. The whole suite of ordinary fire safety measures contained in the IBC – access to the building by fire apparatus, fire sprinklers, etc. – would also still apply.

Our language is adapted from codes in Seattle, Honolulu, New York City, and Western European countries, collectively forming the most rigorous set of conditions for six-story buildings in the developed world. The limitations and requirements in our proposal match or exceed those in cities, suburbs, and rural areas around the developed world, where fire death rates are at or below the United States median.

Within the U.S., Seattle, Honolulu, and New York City have allowed buildings with generally fewer restrictions, to no ill effect or local controversy, and no major fires that we are aware of.

Our proposal is intentionally cautious and may be subject to adjustment in future code cycles based on additional research and experience, expanding possibilities for such construction.

**Bibliography:**

See attached.

**Cost Impact:** Decrease

**Estimated Immediate Cost Impact:** We believe the cost of constructing multifamily buildings on small lots will decrease by roughly 7 percent, in line with the reduction in circulation area required.

**Estimated Immediate Cost Impact Justification (methodology and variables):** See attachment for details.

**Attached Files**

- **Single-stair proposal attachment.pdf**

<https://www.cdpassess.com/proposal/10412/33653/files/download/4800/>