



STATE OF WASHINGTON
STATE BUILDING CODE COUNCIL

May 2018
Log No. _____

1. State Building Code to be Amended:

- | | |
|---|---|
| <input checked="" type="checkbox"/> International Building Code | <input type="checkbox"/> International Mechanical Code |
| <input type="checkbox"/> ICC ANSI A117.1 Accessibility Code | <input type="checkbox"/> International Fuel Gas Code |
| <input type="checkbox"/> International Existing Building Code | <input type="checkbox"/> NFPA 54 National Fuel Gas Code |
| <input type="checkbox"/> International Residential Code | <input type="checkbox"/> NFPA 58 Liquefied Petroleum Gas Code |
| <input type="checkbox"/> International Fire Code | <input type="checkbox"/> Wildland Urban Interface Code |
| <input type="checkbox"/> Uniform Plumbing Code | |
- For the Washington State Energy Code, please see specialized [energy code forms](#)

Section(s): New Appendix Q
(e.g.: Section: R403.2)

Title: Appendix Q: Single Exit Provisions for Multifamily up to 6 stories
(e.g: Footings for wood foundations)

2. Proponent Name (Specific local government, organization or individual):

Proponent: Washington Association of Building Officials,
Title: Technical Codes Development Committee
Date: August 28, 2024

3. Designated Contact Person:

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4. **Proposed Code Amendment.** Reproduce the section to be amended by underlining all added language, striking through all deleted language. Insert new sections in the appropriate place in the code in order to continue the established numbering system of the code. If more than one section is proposed for amendment or more than one page is needed for reproducing the affected section of the code, additional pages may be attached.

Clearly state if the proposal modifies an existing amendment or if a new amendment is needed. If the proposal modifies an **existing amendment**, show the modifications to the existing amendment by underlining all added language and striking through all deleted language. If a new amendment is needed, show the modifications to the **model code** by underlining all added language and striking through all deleted language.

Code(s) IBC Section(s) new Appendix Q

Enforceable code language must be used.
Amend section to read as follows:

APPENDIX Q - Single Exit Provisions for Multifamily up to 6 stories

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.

User note: About this appendix: Appendix Q provides provisions that allow a single exit stairway in a multifamily residential structure up to six stories above grade plane. The purpose of this appendix is to allow a single exit in residential buildings taller than three stories under the stated conditions. This appendix provides an alternative single exit design option to those listed in Section 1006.3.3.

The capabilities of and resources available to the responding fire and emergency service agency should be considered prior to adopting this appendix. Not all agencies will have the appropriate aerial apparatus, personnel, or water supply to adequately respond to a structure designed using this appendix. Using NFPA 1300: Standard on Community Risk Assessment and Community Risk Reduction Plan Development, Center for Public Safety Excellence Commission on Fire Accreditation International (CPSE CFAI) Community Risk Assessment: Standard of Cover guide, and/or the Washington Surveying and Rating Bureau Public Protection Class grading score could be appropriate ways to measure a fire and emergency service agency's ability to adequately respond to these types of buildings and their occupants during emergent conditions.

**SECTION Q101
GENERAL**

Q101.1 General. In addition to the *means of egress* requirements of Chapter 10, not more than 5 stories of Group R-2 Apartment Houses are permitted to be served by a single exit under the following conditions:

1. The building has not more than six stories above grade plane.
2. Other occupancies are permitted in the same building provided they comply with all the requirements of this code. Other occupancies shall not directly communicate with the Group R-2 occupancy portion of the building or with the single-exit stairway.

Exception: Parking garages and occupied roofs accessory to the Group R-2 occupancy are permitted to communicate with the exit stairway.

3. The single exit stairway shall not serve as the required means of egress for an occupied roof including occupied roofs accessory to the Group R-2 occupancy. Exception: Private roof decks up to 750 square feet are permitted above the sixth story above grade plane. The private roof deck must be accessed by a stair serving only that unit.

4. The building shall not have an occupied floor, including mezzanines or occupiable roof, located more than 75' above the lowest level of fire department access.
5. ~~There shall be no more than four dwelling units on any story~~ There shall be no more than 20 units served by the single exit.
6. The building shall be of IA, IB, IIA, IIIA, IV-A, IV-B, IV-C, IV-HT or VA construction.
7. The building shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.
8. An automatic smoke and fire detection system that activates the occupant notification system in accordance with Section 907.5 shall be installed in buildings utilizing this appendix in all of the following locations:
 - a. Common spaces outside of *dwelling units*.
 - b. Laundry rooms, mechanical equipment rooms and storage rooms.
 - c. All interior *corridors* serving *dwelling units*.
 - d. All main floor landings of interior and exterior exit stairways.
9. A minimum ½ hr fire-resistance rated *corridor* shall separate each dwelling unit entry/exit door from the door to an *interior exit stairway*, including any related exit passageway, on each floor. Dwelling unit doors shall not open directly into an interior exit stairway. Dwelling unit doors are permitted to open directly into an exterior exit stairway.
10. There shall be no more than 20 feet (6096 mm) of travel to the exit stairway from the entry/exit door of any dwelling unit.
11. Travel distance measured in accordance with Section 1017 shall not exceed 125 feet.
12. An exterior exit stairway or interior exit stairway shall be provided. The interior exit stairway, including any related exit passageway, shall be pressurized in accordance with Section 909.6.3 and Section 909.20. Doors in the stairway shall swing into the interior exit stairway regardless of the occupant load served. Doors from the interior exit stairway to the building exterior shall swing in the direction of exit travel. Stairway shaft pressurization equipment shall be connected to legally required standby power per Section 909.21.5. For the purposes of this section, legally required standby power shall comply with 2023 NEC Section 701.12, options (D), (E), (F) or (H) or subsequent revised section number(s).
13. Elevator hoistway openings shall be protected in accordance with Section 3006.3. Where approved by the building official, natural ventilation is permitted to be substituted for pressurization where the ventilation would prevent the accumulation of smoke or toxic gases. Hoistway shaft pressurization equipment shall be connected to legally required standby power per Section 909.21.5. For the purposes of this section, legally required standby power shall comply with 2023 NEC Section 701.12, options (D), (E), (F), or (H) or subsequent revised section number(s).
14. The exit serving the Group R occupancy shall not discharge through any other occupancy, including an accessory parking garage.
15. The exit shall not terminate in an egress court where the court depth exceeds the court width unless it is possible to exit in either direction to the public way.
16. Openings within 10 feet (3048 mm) of an exterior exit stairway or nonrated exterior walls of the interior exit stairway enclosure shall be protected by opening protectives having a fire protection rating of not less than ¾ hour.
17. Emergency escape and rescue openings complying with Section 1030 shall be provided in all sleeping rooms on all floors served by the single exit.
18. ~~There shall be a maximum of two buildings on a single lot utilizing the single exit stairway provisions of this appendix.~~

5. Briefly explain your proposed amendment, including the purpose, benefits and problems addressed. Specifically note any impacts or benefits to business, and specify construction types, industries and services that would be affected. Finally, please note any potential impact on enforcement such as special reporting requirements or additional inspections required.

The 2021 Washington State Building Code Table 1006.3.4(1) permits a single exit R-2 occupancy building up to 3 stories in height. In April 2023, the Washington State Legislature passed substitute senate bill SSB 5491-S which directs the state building code council to adopt provisions in the 2024 code cycle that permit a single exit stairway to serve multifamily residential structures up to six stories above grade plane. The legislation further states “The recommendations must include considerations for adequate and available water supply, the presence and response time of a professional fire department and any other provisions necessary to ensure public health, safety, and general welfare.”

This code change proposal is submitted for SBCC TAG review as a package of provisions that meets the legislative intent. This proposal was developed by a workgroup of the Washington Association of Building Officials Technical Code Development Committee (WABO TCD). We worked in close collaboration with and have the support of the Washington State Association of Fire Marshalls (WSAFM). This proposal is drafted as an Appendix which permits a jurisdiction to choose whether to adopt these provisions. WSAFM provided the preamble which describes what a jurisdiction should take into account when deciding whether to adopt these provisions.

The City of Seattle currently amends the Washington State Building Code to permit a single exit to serve up to 5 stories of a residential R-2 occupancy (4 units maximum per story) in a building that is a maximum of 6 stories in height. These provisions can be found in the 2018 Seattle Building Code (SBC) Section 1006.3.3, item 7. A version of these provisions has been in the Seattle codes for quite some time dating back to the 1977 Seattle Building code, driven by the development happening at the time. There were many small lots being developed in the city and two exits took up a significant portion of the floor plate. The ‘Seattle Special’ as it came to be known, was developed with a reliance on the Seattle fire department’s quick response times and the reliability of the municipal water supply.

The City of Seattle’s existing amendments to the Washington State Building Code serve as a foundation for this proposal. The changes are designed to balance housing development needs with safety concerns. Since there is no redundancy with the single stair, these provisions offset this by limiting the amount of time it takes to get out of the building, and by providing a well-protected egress environment from the point you leave your unit to the street.

As stated previously, the single exit building allowed per this proposal is limited to 5 stories of R-2 apartment houses and 6 stories maximum in height. No other R-2 occupancy types are permitted to use this single exit provision. Rooftop decks are not permitted above the sixth story unless they are less than 750 square feet and are accessed only by individual dwelling units. The building is not permitted to be a high-rise. It is permitted to be of combustible construction that has a minimum one-hour fire resistive or Type IV-HT construction. The construction types prohibited for use are IIB, IIIB and VB. An NFPA 13 sprinkler system in accordance with Section 903.3.1.1 and an automatic fire alarm system in accordance with Section 907.5 are also required. There shall be no more than two single exit buildings on the same lot using the provisions of this appendix.

The maximum travel distance permitted from any dwelling unit to the exit is 125 feet, and corridors that connect all units to an interior exit stairway are required to be rated. Both of these requirements are consistent with model code provisions. This proposal prohibits dwelling units from opening directly into the interior exit stairway, and instead requires them to communicate via the rated corridor (dwelling units are permitted to open directly into an

exterior exit stairway). There is also a 20-foot travel distance limitation measured from each dwelling unit entry door to the exit stairway.

Other occupancies are prohibited from connecting to or opening directly into the stairway serving the residential occupancy spaces. This is to limit communication via the stairway between those occupancies and the residential occupancy. Where an elevator is provided for the building, the hoistway is prohibited from providing atmospheric communication between the interior exit stair and other occupancies. A protected elevator lobby or other means of hoistway protection at the level with the non-residential occupancy or occupancies can be used to prevent direct communication and comply with this provision. It should be noted that the exception to Section 3006.2 that eliminates the requirement for elevator lobbies at the level of exit discharge does not apply in this situation.

Model code provisions for exit components are retained in this proposal. This includes shafts, exit enclosures and elevator shafts that are required to be two-hour rated when connecting four stories or more, and accessible means of egress elevators to serve accessible floors that are four or more stories above the level of exit discharge. Interior exit stairways are required to discharge directly to the outside and are not permitted to discharge through any other occupancy.

There are requirements in this proposal that serve to mitigate the loss of the second exit and are therefore above and beyond the model code. This includes the following:

1. When connecting a dwelling unit to an interior exit stairway, the minimum corridor rating requirement is $\frac{1}{2}$ hour. The model code permits the corridor rating to be reduced to 0 hours when the corridor serves a low occupant load. This reduction is not permitted.
2. Pressurization of interior exit stairways is required. For non-high-rise buildings constructed under the model code, this is an enhancement. However, stair pressurization is already required to allow a fifth story in Type VA buildings with an R-2 occupancy per the Washington State amendment to IBC Section 504.4.1, so for those buildings it would not be an enhancement. The NEC references per IBC Section 504.4.1 included in this proposal have been updated from 2020 NEC to 2023 NEC.
3. Legally required standby power is required for stair pressurization and where provided, hoistway pressurization. An enhancement is to prohibit “tap ahead of the main” which is consistent with the NEC provisions in the existing Washington State amendment to IBC Section 504.4.1. The NEC references per IBC Section 504.4.1 included in this proposal have been updated from 2020 NEC to 2023 NEC.
4. The building must be equipped with an NFPA 13 sprinkler system. For R-2 apartment buildings up to 4 stories and 60 feet, a full 13 system is a more stringent requirement than the model code which permits an NFPA 13R system.
5. The building must be equipped with an automatic fire alarm system that activates an occupant notification system. This enhancement provides detection in common areas which the model code requires in R-2 dormitories but not in an R-2 apartment building. This enhancement provides redundancy to triggering notification if there is an issue with the model-code required water flow notification. Heat or smoke will trigger the fire alarm.
6. Openings within 10 feet in any direction of the exterior stair or nonrated exterior walls of the interior exit stair must be protected with $\frac{3}{4}$ hour opening protectives. This is an enhancement to the model code which only requires opening protectives in walls that are less than 180 degrees to the stair.
7. The exit is prohibited from discharging into an egress court where the court depth exceeds the court width unless it is possible to travel to the public way in more than one direction. This is an enhancement to the model code and provides some level of redundancy to the exit discharge.
8. Emergency escape and rescue openings (EERO) are required in sleeping rooms of all dwelling units, all stories at all building elevations. This is an enhancement over the model code which requires EEROs in sleeping rooms of single exit buildings in stories up to the third story.

6. Specify what criteria this proposal meets. You may select more than one.

- The amendment is needed to address a critical life/safety need.
- The amendment clarifies the intent or application of the code.
- The amendment is needed to address a specific state policy or statute.
- The amendment is needed for consistency with state or federal regulations.
- The amendment is needed to address a unique character of the state.
- The amendment corrects errors and omissions.

7. Is there an economic impact: Yes No

If no, state reason:

There is a project cost for either providing two stairs as per model code or for complying with the single exit provisions of this proposed appendix. However, an economic impact analysis is NOT required as this code change has been mandated through state legislation.

Further, while the requirements of this code change proposal have a cost impact on any single project, adoption of the appendix is up to the jurisdiction and use of the appendix is a design alternative to providing a second stair complying with base code.

If yes, provide economic impact, costs and benefits as noted below in items a – f. N/A

- a. **Life Cycle Cost.** Use the OFM Life Cycle Cost [Analysis tool](#) to estimate the life cycle cost of the proposal using one or more typical examples. Reference these [Instructions](#); use these [Inputs](#). Webinars on the tool can be found [Here](#) and [Here](#)). If the tool is used, submit a copy of the excel file with your proposal submission. If preferred, you may submit an alternate life cycle cost analysis.
- b. **Construction Cost.** Provide your best estimate of the construction cost (or cost savings) of your code change proposal.

\$[Click here to enter text.](#)/square foot

(For residential projects, also provide \$[Click here to enter text.](#)/ dwelling unit)

Show calculations here, and list sources for costs/savings, or attach backup data pages
- c. **Code Enforcement.** List any code enforcement time for additional plan review or inspections that your proposal will require, in hours per permit application:
- d. **Small Business Impact.** Describe economic impacts to small businesses:
- e. **Housing Affordability.** Describe economic impacts on housing affordability:
- f. **Other.** Describe other qualitative cost and benefits to owners, to occupants, to the public, to the environment, and to other stakeholders that have not yet been discussed:

Please send your completed proposal to: sbcc@des.wa.gov

All questions must be answered to be considered complete. Incomplete proposals will not be accepted.

(last edited 8/28/24)