STATE OF WASHINGTON

STATE BUILDING CODE COUNCIL

May 2018

Log No. _____

1. **State Building Code to be Amended:'**
2.

- ☐ International Building Code
- ☐ ICC ANSI A117.1 Accessibility Code
- ☐ International Existing Building Code
- ☒ International Residential Code
- ☐ International Fire Code
- ☐ Uniform Plumbing Code
- ☐ International Mechanical Code
- ☐ International Fuel Gas Code
- ☐ NFPA 54 National Fuel Gas Code
- ☐ NFPA 58 Liquefied Petroleum Gas Code
- ☐ Wildland Urban Interface Code

For the Washington State Energy Code, please see specialized energy code forms

Section(s): R102.7, R102.7.1, R310.5, NEW Chapter 44 Existing Buildings and Structures

Title: New Existing Building Chapter 44 for IRC

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

Proponent: Washington Association of Building Officials (WABO) Technical Code Development Committee

Title: N/A

Date: 04/1/2022

3. Designated Contact Person:

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4. Proposed Code Amendment.

Code(s) IRC **Section(s) R102.7.1, 202, R310.5, NEW Chapter 44 Existing Buildings and Structures**

R102.7.1 ***Additions, alterations*, ~~or~~ *repairs* or relocations.** *Additions*, *alterations*, ~~or~~ *repairs* or relocations shall be permitted to conform to the requirements of the provisions of Chapter 44 or shall conform to the requirements for new structures without requiring the existing structure to comply with the requirements of this code, unless otherwise stated**.** ~~Additions, alterations or repairs to any structure shall conform to the requirements for a new structure without requiring the existing structure to comply with the requirements of this code, unless otherwise stated.~~ *Additions, alterations*,~~-repairs~~ and relocations shall not cause an existing structure to become less compliant with the provisions of this code than the existing building or structure was prior to the *addition, alteration, repair* or relocation. An existing building together with its *additions* shall comply with the height limits of this code. Where the *alteration* or *addition* causes the use or occupancy to be changed to one not within the scope of this code, the provisions of the *International Existing Building Code* shall apply.

Revise and add new definitions as follows:

Strike from Chapter 3 and relocate to R4402.4.45:

~~R310.5 Replacement windows for emergency escape and rescue openings. Replacement windows installed in buildings meeting the scope of this code shall be exempt from Sections R310.2 and R310.4.4, provided that the replacement window meets the following conditions:~~

~~1. The replacement window is the manufacturer's largest standard size window that will fit within the existing frame or existing rough opening. The replacement window is of the same operating style as the existing window or a style that provides for an equal or greater window opening area than the existing window.~~

~~2. The replacement window is not part of a change of occupancy.~~

Add new chapter as follows:

CHAPTER 44

EXISTING BUILDING AND STRUCTURES

SECTION 4401
SCOPE AND PURPOSE

4401.1 General. The specific provisions in this code shall apply to the *repair*~~,~~ *alteration*, *addition* and relocation of existing buildings and structures. These standards shall apply where construction does not fully comply with construction standards in this code for new construction.

Section R4402
COMPLIANCE

R4402.1 General. The work shall not cause the building ~~structure~~ to become unsafe or adversely affect the performance of the building; shall not cause an existing mechanical or plumbing system to become unsafe, hazardous, insanitary or overloaded; and unless expressly permitted by these provisions, shall not make the building any less compliant with this code or to any previously approved alternative arrangements than it was before the work was undertaken.

R4402.2 Structural. Structural elements and systems that are altered, repaired, or replaced shall comply with the structural provisions of this chapter and of Chapter 3 through Chapter 10 of the International Residential Code unless noted otherwise. ~~The work performed shall not cause the structure to become less compliant with the International Residential Code than it was before the work was undertaken.~~

R4402.2.2 Minimum design loads. The minimum design loads for the structure shall be the loads applicable at the time the building was constructed. The minimum design loads for the structural components shall comply with the International Residential Code. Structural elements that are uncovered during the course of the alteration and that are found to be unsafe shall be repaired in accordance with Section R102.7.1.

R4402.2.3 Unreinforced Masonry Parapet Bracing. Unreinforced masonry buildings located in Seismic Design Category D or E shall have parapet bracing and wall anchors installed at the roofline whenever a reroofing permit is issued. Such parapet bracing and wall anchors shall be of an approved design.

R4402.~~2~~3 Smoke alarms. ~~Regardless of the category of work, s~~Smoke alarms ~~detectors~~ shall be provided where required by Section R314.2.2.

R4402.~~4~~3 Carbon monoxide alarms. ~~Regardless of the category of work, c~~Carbon monoxide alarms shall be provided where required by Section R315.2.2.

R4402.~~5~~4 Replacement windows. Where an existing window, including the sash and glazed portion, or safety glazing is replaced, the replacement window or safety glazing shall comply with the requirements of Sections 4402.4.1 through 4402.4.4 as applicable.

R4402.4.1 Energy Efficiency. Replacement windows shall comply with the requirements of Chapter 11.

R4402.4.2 Safety glazing. Replacement glazing in hazardous locations shall comply with the safety glazing requirements of Section R308.

R4402.4.~~3~~4 Window fall protection. Window fall protection shall be installed per R312.2.

Exception: where window replacement is of glazing only~~.~~

R4402.4.~~4~~5 Replacement windows for emergency escape and rescue openings. Replacement windows installed in buildings meeting the scope of this code shall be exempt from Sections R310.2 and R310.4.4, provided that the replacement window meets the following conditions:

1. The replacement window is the manufacturer's largest standard size window that will fit within the existing frame or existing rough opening. The replacement window is of the same operating style as the existing window or a style that provides for an equal or greater window opening area than the existing window.

2. The replacement window is not part of a change of occupancy.

R4402.4.~~5~~4.1 Window opening control device and fall protection device height. Window opening control devices or fall protection device shall be located at a height per R310.1.1 or at as low a height as can be installed within the existing clear opening.

R4402.~~5~~6 Flood hazard areas. Work performed in existing buildings located in a flood hazard area as established by Table R301.2(1) shall be subject to the provisions of Section R105.3.1.1.

~~**R4402.67 Features exceeding code requirements.** Elements, components and systems of existing buildings with features that exceed the requirements of this code for new construction, and are not otherwise required as part of *approved* alternative arrangements or deemed by the *building official* to be required to balance other building elements not complying with this code for new construction, shall not be prevented by these provisions from being modified as long as they remain in compliance with the applicable requirements for new construction.~~

SECTION R4403
REPAIRS

R4403.1 Materials. Except as otherwise required herein, *repairs* shall be done using like materials or materials permitted by this code for new construction.

R4403.1. 1 Hazardous materials. Hazardous materials no longer permitted, such as asbestos and lead-based paint, shall not be used.

R4403.1.2 Plumbing materials and supplies. The following plumbing materials and supplies shall not be used:

1. All-purpose solvent cement, unless *listed* for the specific application.
2. Flexible traps and tailpieces, unless *listed* for the specific application.
3. Solder having more than 0.2-percent lead in the repair of potable water systems.

R4403.2 Water closets. Where any water closet is replaced with a newly manufactured water closet, the replacement water closet shall comply with the requirements of Section P2903.2.

R4403.3 Electrical. *Repair* or replacement of existing electrical wiring and equipment shall comply with Chapters 34 through 43.

R4403.4 Structural. Repaired structural elements and systems shall comply with Section R102.7.1 and the structural provisions of this chapter.

SECTION R4404
ALTERATIONS

R4404.1 *Alterations* to an existing building. Where an existing building is undergoing an *alteration* that is within the scope of the International Residential Code, *alterations* to the existing building shall comply with this section and other applicable provisions of this code. New elements shall meet all of the requirements of this code for new construction. Engineered design in accordance with Section R301.1.3 shall be permitted to meet the requirements of this section. ~~*Alterations* shall not cause the existing building to become less compliant with the provisions of this code for new construction than the existing building was prior to the work.~~

R4404.2 Newly constructed elements. Newly constructed elements, components and systems shall comply with the requirements of this code.

Exception~~s~~:

1. Added openable windows are not required to comply with the light and ventilation requirements of Section R303.
2. ~~Newly installed electrical equipment shall comply with the requirements of Section 4508.5.~~

R4404.3 Nonconformities. The work shall not increase the extent of noncompliance or create nonconformity to those requirements that did not previously exist.

R4404.4 Structural. Altered structural elements and systems shall comply with Section R102.7.1 and the structural provisions of this Chapter.

R4404.4.1 *Alterations* that decrease structural capacity. Where an *alteration* causes a decrease in capacity in any structural component, that structural component shall be shown to comply or shall be altered to comply with the applicable provisions of Chapters 3, 4, 5, 6, and 8.

R4404.4.2 *Alterations* that increase structural loads. Where an *alteration* causes an increase in loads as described in this section, the existing structural components that support the increased load, including the foundation, shall be shown to comply or shall be altered to comply with the applicable provisions of Chapters 3, 4, 5, 6, and 8. Existing structural components that do not provide support for the increased loads shall not be required to comply with this section.

R4404.4.2.1 Dead load increase. Dead load shall be considered to be increased for purposes of this section when the weight of materials used for the *alteration* exceeds the weight of the materials replaced, or when new materials or elements are added.

Exceptions:
1. Buildings in which the increase in dead load is due entirely to the addition of a second layer of roof covering weighing 3 pounds per square foot (0.1437 kN/m2) or less over an existing single layer of roof covering.
2. Installation of rooftop-mounted photovoltaic (PV) panel systems weighing 4 pounds per square foot or less over an existing single layer of roof covering.

~~**Exception:**~~
~~Buildings in which the increase in dead load is due entirely to the addition of a second layer of roof covering weighing 3 pounds per square foot (0.1437 kN/m2) or less over an existing single layer of roof covering.~~

R4404.4.2.2 Live load increase. An increase in live load shall be determined based on Table R301.5.

R4404.4.2.3 Snow load increase. Snow load shall be considered to be increased for purposes of this section when alteration of the roof configuration creates new areas that accumulate drifted snow.

R4404.4.2.4 Wind load increase. Wind load shall be considered to be increased for purposes of this section when the surface area of any exterior elevation subject to wind pressure is increased by more than 5%.

R4404.4.2.5 Seismic load increase. Seismic load shall be considered to be increased for purposes of this section in existing buildings assigned to Seismic Design Category C, D , D , or D where new materials replace lighter weight materials in one of the following conditions:

1. Concrete tile or tile roof covering of similar weight is installed on more than 50% of the total roof area.
2. Brick veneer or cladding of similar weight is installed on walls above the second story.

R4404.5 Electrical equipment and wiring.

R4404.5.1 Materials and methods. Newly installed electrical equipment and wiring relating to work done in any work area shall comply with the materials and methods requirements of Chapters 34 through 43.

Exception: Electrical equipment and wiring in newly installed partitions and ceilings shall comply with the applicable requirements of Chapter 34 through 43.

R4404.5.2 Electrical service. Service to the dwelling unit shall not be less than 100 ampere, three-wire capacity and service equipment shall be dead front having no live parts exposed that could allow accidental contact. Type "S" fuses shall be installed where fused equipment is used.

Exception: Existing service of 60 ampere, three-wire capacity, and feeders of 30 ampere or larger two- or three-wire capacity shall be accepted if adequate for the electrical load being served.

R4404.5.3 Additional electrical requirements. Where the work area includes any of the following areas within a dwelling unit, the requirements of Sections R4408.5.3.1 through R4408.5.3.5 shall apply.

R4404.5.3.1 Enclosed areas. Enclosed areas other than closets, kitchens, basements, garages, hallways, laundry areas and bathrooms shall have not less than two duplex receptacle outlets, or one duplex receptacle outlet and one ceiling- or wall-type lighting outlet.

R4404.5.3.2 Kitchen and laundry areas. Kitchen areas shall have not less than two duplex receptacle outlets. Laundry areas shall have not less than one duplex receptacle outlet located near the laundry equipment and installed on an individual branch circuit.

R4404.5.3.3 Ground-fault circuit interruption. Ground-fault circuit interruption shall be provided on newly installed receptacle outlets if required by Chapters 34 through 43.

R4404.5.3.4 Lighting outlets. Not less than one lighting outlet controlled by a listed wall-mounted control device shall be provided in every bathroom, hallway, stairway, attached garage and detached garage with electric power to illuminate outdoor entrances and exits, and in utility rooms and *basements* where these spaces are used for storage or contain equipment requiring service. The wall-mounted control device shall be located near an entrance to the room on a wall.

R4404.5.3.5 Clearance. Clearance for electrical service equipment shall be provided in accordance with Chapters 34 through 43.

R4404.6 Ventilation. Reconfigured spaces intended for occupancy and spaces converted to habitable or occupiable space in any work area shall be provided with *ventilation* in accordance with Section R303.

R4404.7 Ceiling Height. Where a *habitable attic or habitable* space in a basement is created in an existing building, ceiling height shall not be less than 6 foot 8 inches (2032mm). Bathrooms, toilet rooms and laundry rooms shall have a ceiling height of not less than 6 feet 4 inches (1931 mm).

Exceptions:

1. For rooms with sloped ceilings, the required floor area of the room shall have a ceiling height of not less than 5 feet (1524 mm) and not less than 50 percent of the required floor area shall have a ceiling height of not less than 6 feet 8 inches (2134 mm).

2. At beams, girders, ducts or other obstructions, the ceiling height shall be not less than 6 feet 4 inches (1931 mm) from the finished floor.

R4404.8 Stairways, handrails and guards

R4404.8.1 Stairways.

R4404.8.1.1 Stairway Illumination. Stairways within the work area shall be provided with illumination in accordance with Section R303.6.

R4404.8.1.2 Stair width. Existing stairs not otherwise being altered or modified shall be permitted to maintain their current clear width at, above and below existing *handrails*.

R4404.8.1.3 Stair headroom. Headroom height on existing stairs being altered or modified shall not be reduced below the existing *stairway* finished headroom. Existing stairs not otherwise being altered shall be permitted to maintain the current finished headroom.

R4404.8.1.4 Stair landing. Landings serving existing stairs being altered or modified shall not be reduced below the existing *stairway* landing depth and width. Existing stairs not otherwise being altered shall be permitted to maintain the current landing depth and width.

R4404.8.1.5 Stair treads and risers. An existing *stairway* shall not be required to comply with Section R311.7.5 where the existing space and construction does not allow a reduction in pitch or slope. Where risers are added to an existing stair, the tread and riser dimensions of the added risers shall match the existing stair.

R4404.8.2 Handrails and Guards. If a stair or any portion of a stair is reconstructed, a handrail and guard, where required, shall be provided in accordance with Section R311 and R312.

SECTION R4405
ADDITIONS

R4405.1 Additions to an Existing Building. Where existing building with an *addition* is within the scope of the International Residential Code, the *addition* shall comply with this section and other applicable provisions of this code. Engineered design in accordance with Section R301.1.3 shall be permitted to meet the requirements of this section.

R4405.2 Horizontal Attached *Addition*. Where an *addition* involves new construction next to and attached to an existing building and includes *alterations* to the existing building, the new construction shall meet all of the requirements of this code for new construction. *Alterations* to the existing building shall comply with the requirements governing *alterations* within this code. In wood light-frame additions, connection of the structural components shall be permitted to be

provided using wall top plates and addition studs that abut the existing building. Wall top plates shall be lapped and spliced in accordance with Section R602.3.2. Abutting studs shall be fastened in accordance with Table R602.3(1).

Exception:
The addition structural components may be connected to the existing building in accordance with accepted engineering practice.

R4405.3 Vertical Addition. Where an *addition* involves new construction that adds a story to any part of the existing building or vertically increases the height of any part of the existing building, the new construction and the existing building together shall meet all of the requirements of this code for new construction.

R4405.4 Structural. Altered structural elements and systems shall comply with Section R102.7.1 and the structural provisions of this chapter

R4405.6 Exterior Wall Coverings. *Exterior wall coverings* shall comply with the requirements of Chapter 7 of this code. Insulated Vinyl Siding, Polypropylene Siding, and Vinyl Siding shall be attached to a *nailable substrate* or other substrate suitable for mechanical fasteners.

SECTION R4406
RELOCATIONS

4406.2 Relocated Buildings. Residential buildings or structures moved into or within the jurisdiction are not required to comply with the requirements of this code if the original use classification of the building or structure is not changed. ~~Compliance with the requirements of this chapter is required if the moved residential buildings or structures undergo substantial *alteration* as defined in R107.9.1.~~ Work performed on new and existing foundations shall comply with all of the requirements of this code for new construction.

5. Briefly explain your proposed amendment, including the purpose, benefits and problems addressed.

This proposed code change takes Appendix Chapter J of the 2021 IRC and moves it into the body of the IRC code as a new Chapter 44. The Appendix Chapter was used as a base for development of the new body of the code chapter, with the new chapter further expanded to include requirements for additions and relocations.

This new body of the code chapter incorporates the following new provisions for existing IRC buildings to give flexibility for existing building:

1. The provisions for replacement of emergency escape and rescue openings are relocated from Section R310.5 to Chapter 44. The current provisions provide a break on full compliance for replacement windows for emergency escape and rescue openings. This proposal provides

flexibility for the vertical height of the window opening control devices and fall protection devices in existing openings. This proposal also clarifies that window opening control devices and fall protection are not required when window replacement is of the glazing only.

2. Section AJ109.7 permits a ceiling height of not less than 6 feet 8 inches and is relocated to the new Chapter 44. This proposal further extends the relief on ceiling height in existing buildings to include existing attics. Bathrooms, toilet rooms and laundry rooms are allowed to have a ceiling height not less than 6 feet 4 inches, similar to a break these occupiable spaces receive in new construction. The first exception maintains the sloped ceiling height provisions per R305.1 for new construction but lowers the minimum ceiling height requirement for 50% of the room from 7 feet to 6 feet 8 inches. The second exception maintains the allowance for beams, girders, and other obstructions that is permitted in new construction.
3. Section AJ109.8 provides breaks on full compliance for stair width, headroom and landings for alterations to existing stairs and is relocated to the new Chapter 44. This proposal also gives a break for stair treads and risers that is consistent with a more general break for existing stairs in IEBC Section 506.3.

This new code chapter includes code provision that enhance the flexibility for existing construction. Specifically, ceiling heights, windows and stairways are difficult and expensive to modify in existing homes. Code standards for existing buildings are urgently needed in the Residential code because it is unclear how the International Existing Building Code applies to IRC buildings. In addition, more reasonable standards are needed for residential buildings that were built decades ago with noncompliant windows, ceiling heights and stairs. Considering that many of the spaces in these existing IRC buildings are actually being used as habitable spaces, adopting a code standard that incorporates these flexibilities to allow permitted use of the spaces in a safe manner.

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

The main purpose of this proposal is to consolidate all requirements applied to existing residential buildings into a single chapter of the International Residential Code. There may be some cost savings for home and building owners because more reasonable requirements will now be applied for items like non-compliant windows, ceiling heights and stairs.

a. ***Life Cycle Cost.*** N/A
b. ***Construction Cost.*** The cost of putting in a new staircaseN/A
c. ***Code Enforcement.*** N/A
d. ***Small Business Impact. N/A***

e. ***Housing Affordability.*** It will make it easier to maintain existing affordable housing stock.

f. ***Other.***