



STATE OF WASHINGTON
STATE BUILDING CODE COUNCIL

May 2018
Log No. _____

1. State Building Code to be Amended:

- 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): R101, R202, R301, R302
(e.g.: Section: R403.2)

Title: Scope, Definitions, Design Criteria, Fire-resistant construction
(e.g: Footings for wood foundations)

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

Proponent: Sheri Newbold

Title: Residential Architect/ Owner @ live-work-play/ Co-Chair Housing Task Force at AIA Seattle

Date: 02-17-2022

Additional Proponents from AIA Seattle Housing Task Force: Karen DeLucas, David Neiman, Matt Hutchins, Ace Houston, Carrie Anderson. Kirsten Smith, AIA Washington Council.

3. Designated Contact Person:

Name: Sheri Newbold

Title:

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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) _____ Section(s) _____

Enforceable code language must be used.

Amend section to read as follows:

Amend Section “R101.2 Scope” by adding the following sentences at the end of the section after the word “height” and before the exception:

R101.2 Scope

The provisions  his code shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, removal and demolition of detached one- and two-family dwellings and townhouses not more than three stories above the grade plane in height with a separate means of egress and their accessory structures not more than three stories above the grade plane in height.

This code is also applicable to multi-family homes with 3 to 6 dwelling units meeting the definition of a “large home” and subject to the scope limitations specified within this code. Existing buildings undergoing repair, alteration or additions, and change of occupancy shall be permitted to comply with the International Existing Building Code as locally amended.

Add the following definitions to Section R202 in the appropriate alphabetical location:

Large Home. A building with three (3) to six (6) attached dwelling units consolidated into a single structure with common walls. The building includes a functional street facing primary entrance. Dwelling units within the building may be situated either wholly or partially over or under other dwelling units.

Amend Section R301.2.2 Seismic provisions to read as follows:

R301.2.2 Seismic provisions. The seismic provisions of this code shall apply as follows:

1. Townhouses in Seismic Design Categories C, D₀, D₁ and D₂.
2. Detached one- and two-family dwellings **and large homes** in Seismic Design Categories D₀, D₁, and D₂

3. Large homes in Seismic Design Categories C, D₀, D₁, and D₂.

R302.3 and R302.3.1 shall be amended to delete the entire sections and replace with the following:

R302.3 Two-family dwellings and large homes.

R302.3.1 Two Family Dwellings Dwelling units in two-family dwellings shall be separated from each other by wall and floor assemblies having not less than a 1-hour fire-resistance rating where tested in accordance with ASTM E199, UL 263, or Section 703.2.2 of the International Building Code. Such separation shall be provided regardless of whether a lot line exists between the dwelling units or not. Fire-resistance-rated floor/ceiling and wall assemblies shall extend to and be tight against the exterior wall, and wall assemblies shall extend from the foundation to the underside of the roof sheathing.

Exceptions:

1. A fire-resistance rating of ½ hour shall be permitted in buildings equipped throughout with an automatic sprinkler system installed in accordance with NFPA 13D.
2. Wall assemblies need not extend through attic spaces where the ceiling is protected by not less than 5/8-inch (15.9 mm) Type X gypsum board, an attic draft stop constructed as specified in Section R302.12.1 is provided above and along the wall assembly separating the dwellings and the structural framing 6 supporting the ceiling is protected by not less than ½-inch (12.7 mm) gypsum board or equivalent.

R302.3.2 Large Homes Under 5000 Square Feet and 3 Stories or less in Height

R302.3.2.1 Dwelling units in large homes under 5,000 square feet in area and three (3) stories or less in height above the ground plane shall be separated from each other by wall and floor assemblies having not less than a 2-hour fire-resistance rating where tested in accordance with ASTM E199, UL 263, or Section 703.2.2 of the International Building Code. Such separation shall be provided regardless of whether a lot line exists between the dwelling units or not. Fire-resistance-rated floor/ceiling and wall assemblies shall extend to and be tight against the backside of sheathing of the exterior wall, and wall assemblies shall extend from the foundation to the underside of the roof sheathing or rated floor/ceiling assembly.

Exception:

1. A fire-resistance rating of 1-hour shall be permitted in buildings equipped throughout with an automatic sprinkler system installed in accordance with NFPA 13D.
2. A fire-resistance rating of ½-hour shall be permitted in buildings equipped throughout with an automatic sprinkler system installed in accordance with NFPA 13R.

R302.3.2.2 Up to four units above the ground floor may utilize a shared path of egress.

R302.3.3 Large Homes 5000 Square Feet to a maximum of 8,000 sq. ft. and Up to Three Stories in Height

R302.3.3.1 Large homes 5,000 square feet to a maximum of 8,000 sq. ft. in area or greater and up to three (3) stories in height above the ground plane shall be equipped throughout with an automatic sprinkler system installed in accordance with NFPA 13R.

R302.3.3.2 Dwelling units in large homes shall be separated from each other by wall and floor assemblies having not less than a 1-hour fire-resistance rating where tested in accordance with ASTM E199, UL 263, or Section 703.2.2 of the International Building Code. Such separation shall be provided regardless of whether a lot line exists between the dwelling units or not. Fire-resistance-rated floor/ceiling and wall assemblies shall extend to and be tight against the backside of sheathing of the exterior wall, and wall assemblies shall extend from the foundation to the underside of the roof sheathing or rated floor/ceiling assembly. 7

Exception: A fire-resistance rating of ½-hour shall be permitted in buildings equipped throughout with an automatic sprinkler system installed in accordance with NFPA 13.

R302.3.3.3 Separate mechanical, electrical and plumbing drawings shall not be required.

R302.3.3.4 Dwelling units above the ground floor may utilize a shared path of egress.

R302.3.3.6 Large homes greater than 8,000 sq. ft. shall be designed in accordance with the International Building Code.

R302.3.4 Supporting Construction. Where floor assemblies are required to be fire-resistance rated by Section R302.3, the supporting construction of such assemblies shall have an equal or greater fire-resistance rating.

- 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.

Currently the IRC applies to one and two family dwellings only, however small residential buildings with multiple units, so-called 'missing middle housing' (between detached houses and large multifamily buildings) are of roughly the same size with similar use but currently governed by the more restrictive and expensive IBC code.

Our state is experiencing a housing crisis driven by the scarcity of affordable new residential development. In many jurisdictions and statewide, efforts to allow missing middle housing are gaining traction because of numerous benefits, for affordability, climate change response, and more vital neighborhoods. Our goal would be to align the building code provisions with ongoing zoning code changes and federal financing rules (fourplexes can be financed with Fannie/Freddie residential loans rather than higher barrier commercial loans).

This effort has precedent. Memphis recently amended their IRC to include middle housing by focusing life safety efforts on additional fire separation requirements between units, and sprinklers. Please reference these resources for more information:

<https://www.shelbycountyttn.gov/DocumentCenter/View/39436/2021-IRC-Amendments-Final>
<https://opticosdesign.com/blog/memphis-tn-amends-local-building-code-to-allow-up-to-six-units-under-residential-building-code-irc-to-enable-missing-middle-housing/>
<https://www.strongtowns.org/journal/2022/1/26/a-trailblazing-reform-supports-small-scale-development-in-memphis>

The 2021 IRC, with these additional protections, would adequately protect life safety and open the door for much needed new housing opportunities.

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:

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

- 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.

We estimate savings of \$500/year for maintenance and testing costs for each home by omitting the sprinkler and fire alarm systems.

- 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 **\$25,000 - \$30,000 savings/ dwelling unit, possibly higher**)

Show calculations here, and list sources for costs/savings, or attach backup data pages

By not requiring sprinkler systems we estimate a savings of \$15,000 per dwelling unit in initial construction costs for the system installation and a higher capacity water meter.

Keeping 3-6 unit projects within the IRC will also obviate the requirement for fire alarm, monitoring, and notification systems required for R-2 occupancies within the IBC. We estimate a savings of at least \$10,000 per unit.

There will also be a \$1,000-\$5,000 cost savings per dwelling unit on design and engineering fees.

For a significant number of projects, sprinkler systems can also trigger requirements for water main extensions and/or water pressure booster pumps. A booster pump can add an additional cost of \$10,000 per unit. A water main extension can add \$30,000-\$50,000 per unit. In these cases, we estimate the total savings per unit to be \$55,000 to \$80,000 per unit.

- c. **Code Enforcement.** List any code enforcement time for additional plan review or inspections that your proposal will require, in hours per permit application: **There is the potential to decrease the amount of time spent in plan review for three to six unit structures as the separate plumbing, mechanical, electrical drawings would not be required, and sprinkler systems would not automatically be required.**

- d. ***Small Business Impact.*** Describe economic impacts to small businesses: The potential impact to small businesses is:
Homeowners, small developers, contractors and design firms will be able to more cost effectively deliver missing middle housing in less time. Beyond that, small businesses and other organizations that are adjacent to this new infill housing will benefit from new customers.
- e. ***Housing Affordability.*** Describe economic impacts on housing affordability: **Decreasing the cost and complexity of delivering housing will increase its affordability over time.**
- 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:
This proposal is made with the intent to maintain life safety while decreasing the cost and complexity of delivering missing middle housing. Ultimately, this increases the variety and quality and flexibility of housing available to everyone—owners, occupants, the public, other stakeholders and the environment.

Examples: Homeowners can add units to their property using residential loan products. Homeowners with grandfathered in triplexes can alter their homes without triggering significant 13R sprinkler costs that may stop the project/ reduce the number of dwelling units/ cause the structure to be demolished.

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.