PROPOSED RULE MAKING

CR-102 (July 2022)
(Implements RCW 34.05.320)
Do **NOT** use for expedited rule making

CODE REVISER USE ONLY

OFFICE OF THE CODE REVISER
STATE OF WASHINGTON
FILED

DATE: August 23, 2022
TIME: 4:06 PM

WSR 22-17-151

Agency: State Building Code Council

☒ **Original Notice**

☐ **Supplemental Notice to WSR _____**

☐ **Continuance of WSR _____**

☒ **Preproposal Statement of Inquiry was filed as WSR** 22-03-032 and 22-03-033 **; or**

☐ **Expedited Rule Making--Proposed notice was filed as WSR _____; or**

☐ **Proposal is exempt under RCW 34.05.310(4) or 34.05.330(1); or**

☐ **Proposal is exempt under RCW _____.**

Title of rule and other identifying information: (describe subject) WAC 51-50; Adoption and Amendment of the 2021 International Building Code (Structural Provisions) and 2021 International Existing Building Code.

Hearing location(s):

Date:	**Time:**	**Location:** (be specific)	**Comment:**
September 30, 2022 October 14, 2022	10:00 am 10:00 am	129 N 2nd St; Yakima, WA 98901 1500 Jefferson St SE; Olympia, WA 98504	Please access the meetings in-person, or via Zoom or Conference call. The Zoom link and phone are provided in the agenda at sbcc.wa.gov

Date of intended adoption: November 4, 2022 (Note: This is **NOT** the **effective** date)

Submit written comments to:
Name: State Building Code Council
Address: PO Box 41449; Olympia, WA 98504-1449
Email: sbcc@des.wa.gov
Fax:
Other:
By (date) October 14, 2022

Assistance for persons with disabilities:
Contact Annette Haworth
Phone: 360-407-9255
Fax:
TTY:
Email: sbcc@des.wa.gov
Other:
By (date) September 16, 2022

Purpose of the proposal and its anticipated effects, including any changes in existing rules: The proposed rule adopts the 2021 edition of the International Building Code (structural provisions) and the 2021 edition of the International Existing Building Code, published by the International Code Council, with state amendments to incorporate proposed changes as adopted by the Washington State Building Code Council. The rules will provide increased clarity and life safety measures for building construction in Washington State

SUMMARY OF PROPOSED CHANGES
2021 IBC /2021 IEBC Amendments to WAC 51-50

WAC	Section	Changes in 2021	Rationale/Discussion
WAC 51-50-107	107.2	New section; replaces Section 107.2.8 with 107.2.9.	Provides the necessary reference to the newly proposed Section 107.2.9.
	107.2.9	New section in WAC; adds language to the model code related to non-structural components.	Clarifies non-structural components that require an importance factor of 1.5 and require designated seismic restraint systems per ASCE 7 need to be identified on permit drawing sets. These may be mechanical and electrical components as such as smoke control systems, stairways, emergency generators, etc.
WAC 51-50-1604	Table 1604.5	Removes the state amendment and reserves WAC 51-50-1604.	The existing amendment is no longer needed; it is addressed in the model code.
WAC 51-50-1613	1613.4	Replaces the reference to Section 1613.4.2 with a reference to Section 1613.4.6.	Provides the necessary references to the newly proposed Sections 1613.4.3 through 1613.4.6.

	1613.4.1	Deletes Item 5 of Section 12.2.5.4.	The 2021 IBC includes changes in a reference standard that duplicate changes made by an amendment to the Washington State Building Code. These changes relate to the construction of concrete special structural walls which are seismic force resisting elements of a building structural system and are common in commercial and multi-family residential construction. The amendment to the Washington State Building Code Section 1613.4.1 part 5 was previously needed in the building code as similar requirements weren't included in the reference standards. The 2018 IBC reference standard ACI 318-19 has added similar requirements to those of the amendment. The amendment to the Washington State Building Code should be removed for clarity. By removing Amendment Section 1613.4.1 part 5, an engineer will be clear that the provisions and ACI 318-19 should be used directly. Without the removal of Item 5, it is unclear if the factors referenced by the amendment and the factor of the reference standards should be used together, which could result in an overestimation of design forces by a factor of 2.5. This would result in an increase in the size of special concrete walls used in new construction. See detailed rationale here: 21-GP2-028.
	1613.4.3 through 1613.4.6	New sections in WAC; intended to provide a simplified method to develop seismic design parameters for seismic design of buildings.	The current method in ASCE 7-16 for developing seismic design response spectra is very complex, and it requires additional ground motion hazard analyses for many more building sites than required in previous versions of the code. The same amendment was adopted as an emergency rule (WSR 22-11-010) and it is effective until July 1, 2023. If adopted, this proposal will adopt the rule permanently. (See WSR 22-11-010 and detailed rational for adopting it)
WAC 51-50-1615	1615.1 1615.2.4 1615.2.5 1615.2.6 1615.2.7 1615.2.8 1615.2.9 1615.2.10 1615.2.12 1615.2.13 1615.2.14 1615.2.15		The proposed amendment in Section 1615 adopts the latest Washington Department of Natural Resources tsunami design zone maps into the 2021 International Building Code. In addition, it brings forward the latest published tsunami design zone requirements contained in American Society of Civil Engineers Standard 7-22, which would otherwise be adopted as part of the 2024 IBC. Some editorial modifications are also proposed.
WAC 51-50-1702	1702	Remove the state amendment and save WAC 51-50-1702 as reserved.	The defined terms are deleted to match the model code format.
WAC 51-50-1705	1705.5.3 1705.11.1 1705.12. 1705.19	Remove the state amendment and save WAC 51-50-1705 as reserved.	The existing amendments are no longer needed; all are addressed in the model code.
	1705.12.6	Renumber to 1705.13.6; modify item 6.2.	Incorporates renumbering in the model code.
WAC 51-50-17090	1709.5	Incorporates model code language.	This existing amendment was adopted in 2006. The amendment provides an exception to the load testing requirement for small business manufacturers (Exception 2). The exception was readopted in 2009, 2012, 2015, and 2018 IBC, but the model code language was not updated. The proposed amendment contains Exception 2 and incorporates the model code language.

WAC 51-50-2103	2103.2.4	New section added to WAC.	A common mode of failure of adhered veneer is the debonding of the units from the wall. Requiring a modified dry-set bond coat mortar capable of developing higher bond strength is warranted. ANSI A118.15, for example, requires a 28-day shear bond strength near 400 psi for an improved-modified dry-set mortar, which is significantly higher than the current TMS 402 requirement of 50 psi. The latest draft for the next TMS reference code edition contains a similar amendment. This new amendment is an early adoption of this beneficial code provision in Washington state. Additionally, the method of installation prescribed in the TMS specification was developed in the 1950s but is not used today for the installation of adhered veneer. (See detailed rationale here: 21-GP1-65 (MOD))
WAC 51-50-21070	2107.1	Delete existing amendment.	The existing amendment is no longer needed; it is addressed in the model code.
WAC 51-50-2111	2111.8	Reference sections renumbering.	Section 2111.8 is an existing amendment, modified to incorporate section renumbering in the model code.
WAC 51-50-2303	2303.1.1.3	New section in WAC addressing Used solid-sawn lumber.	Similar proposal was approved by the State Building Code Council and published as a 2018 amendment in the IRC (Section R602.1.1). This amendment will put the IBC and the IRC in alignment with respect to the reuse of salvaged dimensional sawn lumber. When constructing to the requirements of the IBC, quality, salvaged solid-sawn lumber that is ungraded or does not have a certificate of inspection cannot currently be reused in a structural capacity unless allowed by the Building Official. The intent of this proposal is to assume conservative material base values that reflect past construction methods which will expand the use of salvaged lumber without compromising safety. This proposal provides clear directive to the engineer/designer, removes potential liability from the building official while maintaining safety, and will result in the increased and economical use of salvaged lumber for those wishing to reuse quality material. (See detailed rationale here: 21-GP1-62 (MOD)
	2303.1.4	Delete Section 2303.1.4.	The existing amendment is no longer needed; it is addressed in the model code.
WAC 51-50-2304	2304.10	Delete existing amendment.	The existing amendment is no longer needed; it is addressed in the model code.
	2304.10.8	Delete existing amendment.	The existing amendment is no longer needed; it is addressed in the model code Section 2304.10.1.
	2304.11.2.1 2304.11.2.2 2304.11.3.1 2304.11.4.1	New sections in WAC.	The proposed amendments address prescriptive thickness requirements of cross-laminated timber in Chapter 23, originally added in the 2018 IBC model code. With the addition of Type IV-A/B/C construction types in Section 6 of the 2021 IBC model code, Section 602.4 combines the new performance-based requirements of Type IV-A/B/C with the existing prescriptive requirements of Type IV-HT in Chapter 2304.11. The proposed amendments to 2304.11.2.1, 2304.11.2.2, and 2304.11.4.1, simply add consistency and specificity in language (actual thicknesses rather than mix of actual, nominal, or not defined) without modification of prescribed CLT thickness. Nominal dimensions are not used by CLT manufacturers, architects, engineers, or contractors. The proposed amendment to 2304.11.3.1 proposes a change from 4" actual thickness to 3.5" actual thickness with proposed justification of equivalency to or exceedance of allowable prescriptive nominal thicknesses in 2304.11.3.2. The benefit of the proposed prescriptive thickness change to CLT floors adds consistency and flexibility in specification between CLT, GLT, NLT, DLT and is inclusive of standardized metric CLT sizes of 90mm and 100mm. The additional performance requirements in Section 602.4 Type IV remain unchanged. 21-GP1-63 (MOD)
WAC 51-50-2400	2405.3	Remove existing amendment	The existing amendment is relocated to WAC 51-50-2405.

WAC 51-50-2405	2405.3	Relocation.	The existing amendment, currently in WAC-2400, is renumbered to WAC-51-50-2405 to align with the WAC format. The existing amendment is in exception 5, deleting R-2, R-3, and R-4 occupancies from the text. The text in 2405.3 is modified to incorporated changes to the model code. The proposed modifications have no intended change in regulatory effect.
WAC 51-50-3500	Chapter 35	Add new referenced standards.	Adds new standards referenced in the body of the code. The purpose of amending ASCE 7 is to adopt the Supplements to 2016 edition of ASCE 7, Minimum Design Loads and Associated Criteria for Buildings and Other Structures (ASCE 7-16), developed by the ASCE 7 Standard Committee to address important issues in between cycles of development. Some of the noted deficiencies in the ASCE 7-16 standard affect high seismic hazard locations such as Washington state and could potentially result in unconservative structural design. Hence, we request that this be adopted under the 2021 IBC reference standards. The ASCE 7-16 standard now has three published supplements- Supplement No.1 was published on December 11, 2018, Supplement No.2 was published on October 19, 2021, and Supplement No. 3 was published on November 3, 2021. Supplement No.1 was adopted into the 2021 International Building Code, but Supplement No.2 and Supplement No.3 were not included as they have just been recently published.
International Existing Building Code			
WAC 51-50-480200	Chapter 2	Add new definitions: SUBSTANTIAL DAMAGE SUBSTANTIAL IMPROVEMENT	When a flood occurs that damages a building, there are oftentimes many structures that are damaged. Securing a real estate professional to determine market value can take up valuable time that would be better served getting the building repaired quickly. International Code Council publishes building valuation data that should represent the cost to rebuild the building as if it was new. While this may potentially over-value an existing building, it offers a way for Building Officials to quickly determine a building value that does not include the land value. As the ICC valuation data is maintained and updated regularly by ICC, there is no need for Building Officials to maintain another way of determining market value. In addition, it is a table available to both public and building departments, so the ability to quickly calculate a value and know if you exceed the substantial threshold is easily determined without the input from a real estate professional.
WAC 51-50-480302	302.2	Renumbering	Incorporates model code renumbering.
WAC 51-50-480306	306.6 306.7.8	Add new sections pertaining to LULA elevators.	The code change proposals in Sections 306.6 and 306.7.8 will allow use of a LULA as part of the accessible route in additions. This is a new provision and provides greater flexibility to designers to provide a level of accessibility to a mezzanine, story or occupied roof. A separate code change proposal will allow a LULA in both a change of occupancy and in alterations. This code change would allow a LULA, and would not allow a platform lift permitted in additions to existing buildings. See the detailed rationale here: 21-GP2-054R
	306.7.1	New section	The current language in Section 306.7.1 related to the need to provide an accessible route of travel, accessible toilet facilities and drinking fountains for primary function areas being altered has been the source of confusion for many. The current language, which attempts to combine a mandate to improve the accessible route to primary function areas, which is already addressed in the first sentence of this section, with improvements to existing restrooms and drinking fountains, is the source of this confusion. This proposal replaces the last sentence and and slightly modifies Exception 1. This helps the code users to understand the intent of this provision: 1) provide an accessible route to the primary function area.

			2) make accessibility improvements to existing restrooms and drinking fountains serving the area of primary function. Replacing the current with a separate and distinct sentence addressing the need to update restrooms and drinking fountains is eliminating the ambiguity of the current code. Exception 1 has also been modified to make it clear that the cumulative cost of these improvements are not required to exceed 20% of the construction budget.
	306.7.1	New section	This is another proposal addressing the same issue. It adds a new sentence clarifying that priority shall be given to the improvements affecting the accessible route to the primary function area.
	306.7.8	New section addressing lifts.	The ASME A18.1 Standard, referenced in IEBC Section 305.8.3, recognizes two types of platform lifts: vertical and inclined. The proposed language adds clarity for the reader as to what types of conveyances are allowed by ASME A18.1. It also reduces potential confusion resulting from a conflict that the current provision has with IBC Section 1003.3.3 related to horizontal projections into the circulation path. Stating that this provision applies to both vertical and inclined conveyances will eliminate any confusion that it may only apply to vertical conveyances.
WAC 51-50-480401	401.2 401.4	New sections	The proposal does three things: • Clarifies that the work needed to facilitate repairs should not be considered an alteration (401.2) The sentence being added to the end of 401.2 was dropped during the 2018 code cycle when the repair provisions were consolidated in Chapter 4 in the IEBC. This allowance was originally in the 2015 IEBC Prescriptive and Work Area methods sections. It provides clarity to the code official about how to deal with existing undamaged components when repairs on a structure are needed. It is a common situation that should be addressed by the code. • Ensures that when a building has been effectively demolished it must be replaced with a new building subject to new code requirements (401.4). The IEBC allows the use of “like materials” for repairs, but these provisions should not apply where the building has been destroyed and the repair needed is a total replacement of the building. The same rules should apply whether the damage is caused directly by the destructive event or if the demolition and subsequent replacement of the building is the owner’s choice for correcting the damage. In both cases, owners would have to rebuild using currently adopted codes. • Allows for reuse of the existing foundation with approval by the code official. This proposal is being heard at the ICC Hearings for the 2024 code cycle in March/April 2022. Further correlation may be needed in the future if the ICC proposal is approved “as is” or with changes.
WAC 51-50-480405	405.1, 405.1.1	New sections	The proposed amendment adds ACI 562 (Code Requirements for Assessment, Repair, and Rehabilitation of Existing Concrete Structures) to establish minimum requirements for the evaluation, design, construction, repair, and rehabilitation of concrete structural elements in buildings for various levels of desired performance as deemed appropriate for the project. This proposal is intended as a modification where the code is based on the 2021 edition of the ICC International Existing Building Code. (See the detailed rationale here: 21-GP2-002R
WAC 51-50-480503	503.19 503.19.1 503.19.2 503.19.3 503.19.4	New sections	The proposals in Sections 503.19 and 805.4 (adding an exception to Item 2) will make it clear that new lateral systems are permitted to be of any type, even of a type that normally would not be allowed in new construction, based on the seismic design category and height, as long as all the other conditions of

			sections 503.13 and 805.4 are met. The original intent of this code section remains the same, the proposed design shall not weaken the existing lateral resistance of the building or affect the behavior of the building in a severe way. In addition, this proposal will help with cost reduction and most importantly performance since less ductile "Ordinary" or "Intermediate" systems may be closer to matching an existing building's deformation limits. See the detailed rationale here: 21-GP2-056
WAC 51-50-480603	603.1	New section	It is oftentimes difficult to determine if 50 percent of the building area is exceeded for a substantial remodel and using ICC valuation could be an easier way to determine if the amount of work in a building is substantial. ICC building valuations can be easily calculated and compared to the proposed value of the remodel; whereas, it can be very difficult to determine if an alteration is exceeding the 50% threshold when only portions of rooms are altered. This offers an alternative method to determine if an alteration is Level 3 using ICC building valuation and comparing the valuation to the contract value of the proposed work.
WAC 51-50-480604	604.1		See WAC 51-50-480603
WAC 51-50-480702	702.7	Renumbering	The existing amendment is modified to align with the model code section renumbering.
WAC 51-50-480805	805.4		See WAC 51-50-480503
	805.5 through 805.5.4		Buildings with unreinforced masonry and hollow clay in Seismic Design Category C, D, E or F represent an increased risk to life safety, and jurisdictions need to be able to require seismic upgrades where occupant loads are increased during alterations. Currently the seismic retrofits for URM or hollow clay tile buildings are triggered for the following alteration scenarios: 1. Level 3 remodel triggers parapet bracing, installation of floor/wall anchors, and wall/partition bracing within alteration area. 2. Roof replacement more than 25% triggers parapet bracing. 3. Substantial structural alteration triggering upgrading the lateral load resisting system with reduced seismic forces. 4. Change in risk category per IBC Table 1604.5. This proposal captures the situations where the alteration is using either the prescriptive requirements of the code or is falling under the Level 2 remodel that is not triggering any roof replacement requirements. Level 3 alterations require compliance with all Level 2 requirements, and thus must meet the large building provisions as required in that section. See detailed rationale here: 21-GP2-018R
WAC 51-50-480809	809.1	Delete existing amendment; add a new section with the same number.	The existing amendment is no longer needed because Section 809.1 Minimum fixtures is no longer in the model code. The existing amendment in Section 810.1 is relocated to WAC 51-50-480809 to align with the model code renumbering.
WAC 51-50-480810	810.1	Relocation	The existing amendment in Section 810.1 is relocated to WAC 51-50-480809 to align with the model code renumbering.
WAC 51-50-481002	1002.1, 1002.3	Delete 1002.1; modify the model code section 1002.3 by incorporating language from the existing amendment in Section 1002.1.	Merging the existing amendment into the new model code language.
WAC 51-50-481201	1201.1	Incorporates model code changes.	The existing amendment adds the second sentence to the model code language. The proposed modification incorporate changes to the model code, not related to the existing amendment.
WAC 51-50-481301	1301.1 1301.2	Delete existing amendments.	The existing amendment in Section 1301.1 is no longer needed; it repeats the model code language in Section 1401.1. The existing amendment in Section 1301.2 is renumbered and relocated to WAC 51-50-481401 to match the model code numbering.

WAC 51-50-481302			The existing amendment is relocated to WAC 51-50-481402 to match the model code numbering.
WAC 51-50-481401	1401.2	New section.	The existing amendment currently in Section 1301.2 is renumbered and relocated to match the model code numbering.
WAC 51-50-481402			This is an existing amendment, currently in Section 1302. It is relocated to match the model code numbering.
WAC 51-50-481500	1501.7		The existing amendment replaces the International Plumbing Code with the Uniform Plumbing Code. The proposed renumbering aligns the existing amendment with the model code renumbering.
WAC 51-50-490000	Appendix N	Delete existing amendment.	The existing amendment is proposed to be deleted due to a conflict with Section C411 of the Washington State Energy Code-Commercial.

Note: those not listed on the table above remain as adopted in 2018 IBC.

Reasons supporting proposal: RCW 19.27.031; RCW 19.27.074 and RCW 19.27.540

Statutory authority for adoption: RCW 19.27.031; RCW 19.27.074 and RCW 19.27.540

Statute being implemented: RCW 19.27.031; RCW 19.27.074 and RCW 19.27.540

Is rule necessary because of a:

Federal Law? ☐ Yes ☒ No

Federal Court Decision? ☐ Yes ☒ No

State Court Decision? ☐ Yes ☒ No

If yes, CITATION:

Agency comments or recommendations, if any, as to statutory language, implementation, enforcement, and fiscal matters: NONE

Type of proponent: ☐ Private ☐ Public ☒ Governmental

Name of proponent: (person or organization) State Building Code Council

Name of agency personnel responsible for:

	Name	Office Location	Phone
Drafting:	Stoyan Bumbalov	1500 Jefferson St. SE, Olympia, WA 98504	360-407-9277
Implementation:	Stoyan Bumbalov	1500 Jefferson St. SE, Olympia, WA 98504	360-407-9277
Enforcement:	Local Jurisdictions		

Is a school district fiscal impact statement required under RCW 28A.305.135? ☐ Yes ☒ No

If yes, insert statement here:

The public may obtain a copy of the school district fiscal impact statement by contacting:

Name:
Address:
Phone:
Fax:
TTY:
Email:
Other:

Is a cost-benefit analysis required under RCW 34.05.328?

☒ Yes: A preliminary cost-benefit analysis may be obtained by contacting:

Name: Stoyan Bumbalov
Address: 1500 Jefferson St. SE, Olympia, WA 98504
Phone: 360-407-9277
Fax:
TTY:
Email: sbcc@des.wa.gov
Other:

☐ No: Please explain:

Regulatory Fairness Act and Small Business Economic Impact Statement
Note: The Governor's Office for Regulatory Innovation and Assistance (ORIA) provides support in completing this part.

(1) Identification of exemptions:
This rule proposal, or portions of the proposal, **may be exempt** from requirements of the Regulatory Fairness Act (see chapter 19.85 RCW). For additional information on exemptions, consult the exemption guide published by ORIA. Please check the box for any applicable exemption(s):

☐ This rule proposal, or portions of the proposal, is exempt under RCW 19.85.061 because this rule making is being adopted solely to conform and/or comply with federal statute or regulations. Please cite the specific federal statute or regulation this rule is being adopted to conform or comply with, and describe the consequences to the state if the rule is not adopted.
Citation and description:

☐ This rule proposal, or portions of the proposal, is exempt because the agency has completed the pilot rule process defined by RCW 34.05.313 before filing the notice of this proposed rule.

☐ This rule proposal, or portions of the proposal, is exempt under the provisions of RCW 15.65.570(2) because it was adopted by a referendum.

☒ This rule proposal, or portions of the proposal, is exempt under RCW 19.85.025(3). Check all that apply:

- ☐ RCW 34.05.310 (4)(b) (Internal government operations)
- ☒ RCW 34.05.310 (4)(c) (Incorporation by reference)
- ☒ RCW 34.05.310 (4)(d) (Correct or clarify language)
- ☒ RCW 34.05.310 (4)(e) (Dictated by statute)
- ☐ RCW 34.05.310 (4)(f) (Set or adjust fees)
- ☐ RCW 34.05.310 (4)(g) ((i) Relating to agency hearings; or (ii) process requirements for applying to an agency for a license or permit)

☐ This rule proposal, or portions of the proposal, is exempt under RCW 19.85.025(4) (does not affect small businesses).

☐ This rule proposal, or portions of the proposal, is exempt under RCW _____.

Explanation of how the above exemption(s) applies to the proposed rule: The proposed rule adopts by reference the 2021 IBC and 2021 IEBC with new and existing amendments. Many of the existing amendments are modified to incorporate changes to the model codes or to clarify language. There are 23 significant changes to the model code with economic impact. However, the model code changes are exempt under RCW 19.85.025(3) and RCW 34.05.310 (4)(c), and are not part of this report.

(2) Scope of exemptions: *Check one.*

☐ The rule proposal is fully exempt *(skip section 3)*. Exemptions identified above apply to all portions of the rule proposal.

☒ The rule proposal is partially exempt *(complete section 3)*. The exemptions identified above apply to portions of the rule proposal, but less than the entire rule proposal. Provide details here (consider using this template from ORIA): The proposed rule adopts by reference the 2021 IBC and 2021 IEBC with new and existing amendments. Many of the existing amendments are modified to incorporate changes to the model codes or to clarify language. There are 23 significant changes to the model code with economic impact. However, the model code changes are exempt under RCW 19.85.025(3) and RCW 34.05.310 (4)(c), and are not part of this report.

☐ The rule proposal is not exempt *(complete section 3)*. No exemptions were identified above.

(3) Small business economic impact statement: *Complete this section if any portion is not exempt.*

If any portion of the proposed rule is **not exempt**, does it impose more-than-minor costs (as defined by RCW 19.85.020(2)) on businesses?

☐ No Briefly summarize the agency's minor cost analysis and how the agency determined the proposed rule did not impose more-than-minor costs. _____

☒ Yes Calculations show the rule proposal likely imposes more-than-minor cost to businesses and a small business economic impact statement is required. Insert the required small business economic impact statement here:
There are costs imposed by the proposed rule, but the costs do not fall disproportionately on small businesses. The rule will not affect the distribution of impacted work, whether by small businesses or not, doing the work. The rule does not affect employment, reporting or record keeping.

Description
The Washington State Building Code Council (SBCC) is filing a proposed rule to adopt the 2021 edition of the International Building Code (IBC), structural provisions and the 2021 edition of the International Existing Building Code (WAC 51-50). Since 1985 the state building code council has been responsible to update to new editions of the building code per RCW 19.27.074. The IBC is updated every three years by the International Code Council (ICC). The code development process conducted by the model code organization is open to all interest groups within the design and construction industry and from governmental organizations. See www.iccsafe.org for more information about the model code development process.

The administrative compliance requirements are under the authority of the local governments (RCW19.27.050). Enforcement activities, including permit issuance, plan review/approval, and inspections occur at the local level. Requirements for construction documents submittal and other reporting mandates are determined by the local jurisdiction and are consistent with previously established policies. The proposed amendments to WAC 51-50 include specific technical requirements for building construction to be consistent with national standards.

Professional Services

Washington has had a statewide building code in effect since 1974. The local enforcement authority having jurisdiction administers the codes through the building and/or fire departments. Administrative procedures for state building code compliance are established and will not be changed by the adoption of the 2021 building codes. Small businesses will employ the same types of professional services for the design and construction of buildings and systems to comply with the state building code. The proposed rule updates the state building code and does not require additional equipment, supplies, labor, or other services. Services needed to comply with the building code are existing within the construction industry as required by the local authority having jurisdiction.

Costs of Compliance for Businesses

The Council is required to adopt and maintain the state building code, as provided in chapters 19.27, 19.27A, and 70.92 RCW, and the state legislature. The primary objective of the Council is to encourage consistency in the building code throughout the state of Washington and to maintain the building code consistent with the state's interest as provided in RCW 19.27.020. An objective of statewide adoption is to minimize state amendments to the model codes. The Council accepts statewide code amendment proposal from stakeholders to amend the IBC to meet the legislative goals. The statewide code adoption process is defined in WAC 51-04 and the Council by-laws. All proposals must be submitted in writing on the appropriate form with the indicated supporting documentation. Each proponent must identify where a proposed amendment has an economic impact, and estimate the costs and savings of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance.

The cost of compliance incurred by Washington businesses includes training and educational materials. The new 2021 IBC, 2021 IEBC, 2021 IBC Significant changes and 2021 IBC Study pack cost $215 + tax shipping and handling. The 2021 IBC and 2021 IEBC are also available online at https://shop.iccsafe.org.

For the 2021 code adoption cycle, the Council received 18 proposals. The IBC Technical Advisory Group (TAG) recommended approval of 15 proposals as submitted or as modified, one proposal was withdrawn by the proponent. Three proposals were approved with Group 1 codes. Two proposals were identified by the TAG as having a cost (increase) for compliance on businesses. The Council recommended filing the proposed rule to allow input through the public hearing process.

1. **Section 503.19; 805.5 (**21-GP2-018R**):** The proposals in Sections 503.19 and 805.4 will make it clear that new lateral systems are permitted to be of any type, even of a type that normally would not be allowed in new construction, based on the seismic design category and height, as long as all the other conditions of sections 503.13 and 805.4 are met. The original intent of this code section remains the same, the proposed design shall not weaken the existing lateral resistance of the building or affect the behavior of the building in a severe way. In addition, this proposal will help with cost reduction and most importantly performance since less ductile "Ordinary" or "Intermediate" systems may be closer to matching an existing building's deformation limits. See the detailed rationale here: 21-GP2-056

   This proposal will increase construction cost. For URM or HCT buildings that trigger the occupant load threshold, there will be a cost of installing seismic supports to include parapet bracing, wall/roof ties, and wall/partition bracing for nonstructural walls. These costs are estimated at $40-$90 per square foot. For large buildings triggering the analysis of the lateral force resisting system, there may be much larger costs such as putting in a moment frame or secondary load transfer for seismic loads. There is no reliable information pertaining to cost as it is very dependent on the design of the specific structure.

2. **Chapter 35, Referenced Standards (**21-GP2-017). The purpose of amending ASCE 7 is to adopt the Supplements to 2016 edition of ASCE 7, Minimum Design Loads and Associated Criteria for Buildings and Other Structures (ASCE 7-16), developed by the ASCE 7 Standard Committee to address important issues in between cycles of development. Some of the noted deficiencies in the ASCE 7-16 standard affect high seismic hazard locations such as Washington state and could potentially result in unconservative structural design. Hence, we request that this be adopted under the 2021 IBC reference standards. The ASCE 7-16 standard now has three published supplements- Supplement No.1 was published on December 11, 2018, Supplement No.2 was published on October 19, 2021, and Supplement No. 3 was published on November 3, 2021. Supplement No.1 was adopted into the 2021 International Building Code, but Supplement No.2 and Supplement No.3 were not included as they have just been recently published.

   The adoption of ASCE 7-16 Supplements shouldn't impact the cost of construction for most building structures. However, since some of the changes address the deficiencies for specific structures such as in buildings with extreme torsional irregularities (Supplement No. 2) and seismic design of liquid storage tanks (Supplement 3), the design for these buildings and structures could result in increase in structural design loads than designs proportioned by applying just the originally published standard. It is difficult to quantify the construction cost increase for the noted specific structures because the potential increase in seismic loads depends on several factors and seismic demands is only a fraction of the overall loading. This potential amplification of structural loading for the noted building types is a necessary correction in order to meet the life safety criteria of the structure.

Loss of Sales or Revenue

The proposed rules make the state code for building construction consistent with national standards. Businesses with new products or updated test or design standards are recognized in the updated building code. The update will result in some cost outlay for some small businesses for specific building projects, for a transition period. Other small businesses would see an increase in revenue. The amendments to the building codes affect over 25,000 small businesses in the state, where construction activity occurs. The primary intent of the amendments is to improve the safety features in

buildings and provide consistency and fairness across the state, for a predictable business environment. The amendments should result in enhanced safety and value in buildings.

Cost of Compliance for Small Businesses (Determine whether the proposed rule will have a disproportionate cost impact on small businesses, compare the cost of compliance for small business with the cost of compliance for the ten percent of businesses that are the largest businesses.) Most businesses affected by the updates to the building codes are small businesses; over 95 percent of those listed in the construction and related industries have under 50 employees. The costs per employee are comparable between the largest businesses and the majority of small businesses. The cost to comply with the updated codes is not a disproportionate impact on small business. Where the Council found the cost of compliance for small businesses to be disproportionate, the proposed rule mitigates the cost. The proposed rules include a definition of small business and provide exceptions for compliance with the updated rule.

Reducing the Costs of the Rule on Small Businesses
The SBCC conducted a detailed review process, including participation at the national code development hearings, to document significant economic impacts of the proposed code amendments.

List of Industries
Below is a list of industries required to comply with the building code:

2017 Industry NAICS Code	NAICS Code Title	Minor Cost Estimate	1% of Avg Annual Payroll	0.3% of Avg Annual Gross Business Income
236115	New Single-Family Housing Construction (except For-Sale Builders)	$ 2,508.04	$1,919.03 2020 Dataset pulled from USBLS	$2,508.04 2020 Dataset pulled from DOR
236116	New Multifamily Housing Construction (except For-Sale Builders)	$ 32,067.43	$17,160.94 2020 Dataset pulled from USBLS	$32,067.43 2020 Dataset pulled from DOR
236118	Residential Remodelers	$ 1,457.74	$1,457.74 2020 Dataset pulled from USBLS	$901.20 2020 Dataset pulled from DOR
236210	Industrial Building Construction	$ 59,169.45	$59,169.45 2020 Dataset pulled from ESD	$53,925.71 2020 Dataset pulled from DOR
236220	Commercial and Institutional Building Construction	$ 41,552.81	$18,126.81 2020 Dataset pulled from ESD	$41,552.81 2020 Dataset pulled from DOR
238110	Poured Concrete Foundation and Structure Contractors	$ 3,442.28	$5,027.07 2019 Dataset pulled from CBP	$3,442.28 2020 Dataset pulled from DOR
238120	Structural Steel and Precast Concrete Contractors	$ 15,401.97	$20,212.19 2019 Dataset pulled from CBP	$15,401.97 2020 Dataset pulled from DOR
238130	Framing Contractors	$ 2,234.30	$3,139.71 2019 Dataset pulled from CBP	$2,234.30 2020 Dataset pulled from DOR
238140	Masonry Contractors	$ 1,900.60	$3,582.13 2019 Dataset pulled from CBP	$1,900.60 2020 Dataset pulled from DOR
238150	Glass and Glazing Contractors	5,255.36	$9,574.95 2019 Dataset pulled from CBP	$5,255.36 2020 Dataset pulled from DOR
238160	Roofing Contractors	$ 3,589.99	$5,007.86 2019 Dataset pulled from CBP	$3,589.99 2020 Dataset pulled from DOR
238170	Siding Contractors	$ 1,905.61	$2,485.86 2019 Dataset pulled from CBP	$1,905.61 2020 Dataset pulled from DOR
238190	Other Foundation; Structure; and Building Exterior Contractors	$ 4,622.07	$4,141.38 2019 Dataset pulled from CBP	$4,622.07 2020 Dataset pulled from DOR
238210	Electrical Contractors and Other Wiring Installation Contractors	$ 5,941.60	$9,599.33 2019 Dataset pulled from CBP	$5,941.60 2020 Dataset pulled from DOR
238220	Plumbing; Heating; and Air-Conditioning Contractors	$ 5,353.76	$11,047.00 2019 Dataset pulled from CBP	$5,353.76 2020 Dataset pulled from DOR
238290	Other Building Equipment Contractors	$ 4,335.21	$16,142.07 2019 Dataset pulled from CBP	$4,335.21 2020 Dataset pulled from DOR
238310	Drywall and Insulation Contractors	$ 3,725.66	$9,461.67 2019 Dataset pulled from CBP	$3,725.66 2020 Dataset pulled from DOR
238990	All Other Specialty Trade Contractors	$ 3,585.74	$3,677.28 2019 Dataset pulled from CBP	$3,585.74 2020 Dataset pulled from DOR
321213	Engineered Wood Member (except Truss) Manufacturing	$ 44,480.76	$44,480.76 2020 Dataset pulled from ESD	$41,772.84 2020 Dataset pulled from DOR
321214	Truss Manufacturing	$ 28,620.35	$23,341.04 2020 Dataset pulled from ESD	$28,620.35 2020 Dataset pulled from DOR
321219	Reconstituted Wood Product Manufacturing	$ 30,305.17	$10,139.90 2020 Dataset pulled from USBLS	$30,305.17 2020 Dataset pulled from DOR
321911	Wood Window and Door Manufacturing	$ 45,151.12	$18,811.08 2020 Dataset pulled from ESD	$45,151.12 2020 Dataset pulled from DOR

321992	Prefabricated Wood Building Manufacturing	$ 5,391.09	$5,391.09 2020 Dataset pulled from ESD	$4,888.53 2020 Dataset pulled from DOR
327310	Cement Manufacturing	$ 50,878.29	$44,741.20 2020 Dataset pulled from ESD	$50,878.29 2020 Dataset pulled from DOR
327320	Ready-Mix Concrete Manufacturing	$ 64,317.30	$46,126.21 2020 Dataset pulled from ESD	$64,317.30 2020 Dataset pulled from DOR
327331	Concrete Block and Brick Manufacturing	$ 15,030.60	$15,030.60 2020 Dataset pulled from ESD	$10,431.02 2020 Dataset pulled from DOR
332312	Fabricated Structural Metal Manufacturing	$ 22,220.31	$16,337.10 2020 Dataset pulled from USBLS	$22,220.31 2020 Dataset pulled from DOR
332321	Metal Window and Door Manufacturing	$ 26,369.28	$14,505.40 2020 Dataset pulled from ESD	$26,369.28 2020 Dataset pulled from DOR
332322	Sheet Metal Work Manufacturing	$ 23,337.23	$23,337.23 2020 Dataset pulled from ESD	$16,556.52 2020 Dataset pulled from DOR
335121	Residential Electric Lighting Fixture Manufacturing	$ 2,011.37	$2,011.37 2020 Dataset pulled from USBLS	$1,502.01 2020 Dataset pulled from DOR
335122	Commercial; Industrial; and Institutional Electric Lighting Fixture Manufacturing	$ 6,357.34	Redacted 2020 Dataset pulled from USBLS	$6,357.34 2020 Dataset pulled from DOR
335129	Other Lighting Equipment Manufacturing	$ 6,281.32	$6,281.32 2020 Dataset pulled from ESD	$2,494.40 2020 Dataset pulled from DOR
423720	Plumbing and Heating Equipment and Supplies (Hydronics) Merchant Wholesalers	$ 24,486.53	$16,589.10 2020 Dataset pulled from ESD	$24,486.53 2020 Dataset pulled from DOR
541310	Architectural Services	$ 9,221.65	$9,221.65 2020 Dataset pulled from ESD	$3,738.99 2020 Dataset pulled from DOR
541330	Engineering Services	$ 14,801.92	$14,801.92 2020 Dataset pulled from USBLS	$7,177.43 2020 Dataset pulled from DOR
541350	Building Inspection Services	$ 1,868.52	$1,868.52 2020 Dataset pulled from ESD	$475.93 2020 Dataset pulled from DOR
561621	Security Systems Services (except Locksmiths)	$ 9,759.28	$9,759.28 2020 Dataset pulled from ESD	$6,117.04 2020 Dataset pulled from DOR

Estimate of the Number of Jobs That Will Be Created or Lost

The adoption of the latest code edition is not expected to significantly impact the number of jobs in the construction industry. These rules are likely to be job neutral overall, i.e., they will not result in any job gains or losses. The scheduled effective date of the new edition is July 1, 2021. Building permits issued prior to that date will be vested under the 2018 building code. Permits issued for projects under the 2021 code edition will generally start with the 2024 construction season.

The public may obtain a copy of the small business economic impact statement or the detailed cost calculations by contacting:

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Name: Tony Doan	
Title: Council Chair	