

## Summary of Significant Code Changes

The 2021 Construction Codes will be effective on March 15, 2023. The following list highlights some of the significant changes to the various construction codes. Washington State amendments have been prefaced with “WS” to clarify the source of the change.

### 2021 International Building Code (IBC)

- Nonstructural components. Construction documents shall indicate if structural support and anchoring documentation for nonstructural components is part of the design submittal or a deferred submittal. WS IBC 107.2.9.
- Types IV-A, IV-B and IV- C connection protection inspection: Special inspection requirements were added to address the anchorage and connection of mass timber structural elements. IBC 110.4.9.2.
- Change of Occupancy definition revised to include a change in the level of activity within a building or structure. IBC 202.
- State amendment to the high-rise definition to include an occupied roof with an occupant load of 50 or more persons, which is located more than 75 feet above the lowest level of fire department vehicle access. WS202. Note - the definition was previously amended in MICC 17.01.020 to be measured to the occupied floor or rooftop, regardless of occupant load.
- Uses not classified as Group H: Distilling, brewing, and storing beer, wine, and spirits is not necessarily in Group H as long as it complies with the International Fire Code. IBC 307.1.1.
- Alcoholic beverage storage: Beverages over 16% alcohol are in the S-1 moderate-hazard storage group; beverages at or below 16% are in the S-2 low-hazard storage group. IBC 311.2 & 311.3.
- Puzzle rooms (escape rooms) are now defined and regulated as special amusement areas, requiring compliance with Section 411 and special means of egress requirements. IBC 202, 411.5.
- For the purpose of determining the allowable number of control areas in a building, each portion separated by one or more fire walls is now considered as a separate building. IBC 414.2.3. Play structure requirements increased when exceeding 600 sf in area or 10 feet in height, including special investigation and structural design. IBC 424.
- Domestic cooking in ambulatory care facilities: New rules for domestic cooking appliances in care facilities include fire safety measures, gas shutoffs with supervisory staff access, and timed shutoffs for appliances. IBC 422.7.
- The state requires electric vehicle charging infrastructure within new buildings and accessory structures for most occupancy groups, including dwelling units with private garages. WS IBC 429, WS IBC Table 429.2.
- Occupied roof allowances: Occupied roofs are not included in the height or number of stories as long as the penthouse and other roof structures comply with section 1511. IBC 503.1.4. Enclosure of occupied roof areas. With limited exceptions, elements or structures enclosing the occupied roof areas shall not extend more than 48 inches (1220 mm) above the surface of the occupied roof. WS IBC 503.1.4.1.
- Guards. Occupied roofs shall have guards in accordance with Section 1015.2. WS IBC 503.1.4.2
- Podium buildings: Now allows combustibile stair construction below the 3-hour horizontal separation if several conditions are met. WS IBC 510.2.
- Previous construction types in the state code (Types IV-A, IV-B, and IV-C) have been moved to the model code with some state amendments. Three construction types allow mass timber buildings of taller heights, more stories above grade, and greater allowable areas compared to existing provisions for heavy timber buildings. IBC 602.4, IBC Table 601, WS 602.4.

- Structural fire Protection: Now requires any attachments to fire rated steel members to be rated for at least 12" away from structural member. IBC & WS 704.6.1.
- Separation of Energy Storage Systems requiring fire barriers and restricting fire-protection rated glazing to address thermal runaway concerns. Provided glazing must be fire-resistance rated. Wall & opening requirements as established by IFC 1207. IBC 707.4, 716
- Exit Access Travel Distance: This language change from "Common path of Egress Travel Distance" to "Exit Access Travel Distance" will change the end point of the measurement of the distance traveled. For single-exit stories, the travel distance limits are now based on the exit access travel distance as opposed to the common path of egress travel. IBC 1006.3.4.
- Egress illumination: Increases amount of lighting along stairs & landings from 1 foot-candle to 10 f-c while stairs are in use (occupant sensors). IBC 1008.2.1.
- Accessible egress: Now requires elevator to occupied roofs if 4 stories or more. IBC 1009.2.1.
- Min. door width: Door width revisions to certain small spaces such as fitting rooms, shower compartments, toilet stalls, etc. IBC 1010.1.1.
- Max. door width: Door width no longer limited to 4 ft. max. (if all other requirements met). IBC 1010.1.1. Areas of refuge: Increased size of areas of refuge from 30"x 40" to 30"x 52". IBC 1009.6.3.
- The 2017 edition of ICC A117.1 *Accessible and Usable Buildings and Facilities* was adopted. IBC 1102.1.
- ICC A117.1 – 2017 contains substantial changes to account for the standard, larger electronic wheelchairs. For example, increased sizes of turning spaces, clear floor spaces, toilet rooms, width along accessible route of travel, ramps, curb ramps, sidewalks, etc. and other spaces in new construction.
- ICC A117.1 – 2017 provides technical requirements for wheelchair charging stations.
- Unvented attics: Expands alternatives for unvented attic spaces if air permeable insulation and 'vapor diffusion ports' (new definition) are used. IBC 1202.3.
- In Group E occupancies, enhanced classroom acoustics in compliance with ICC A117.1 are to be provided in all classrooms having of volume of 20,000 cubic feet or less. IBC 1207.
- Restroom privacy: new requirement to provide privacy screening at entrance to public restrooms designed for more than one occupant. IBC 1210.3.
- Parapets of a minimum height are now required for aggregate-surfaced roofs to prevent blow-off. IBC 1504.9.
- Mixed occupancy buildings with assembly spaces are placed in Risk Category III when the total public assembly occupant load is greater than 2500 people. IBC Table 1604.5.
- Installation of firestop, fire-resistant joint systems, and perimeter fire containment systems in residential-use buildings now requires special inspection in Group R fire areas having an occupant load exceeding 250 people. IBC 1705.1.8.
- Structural Concrete Tolerances - ACI standards ACI 117 and ITG 7 were added by reference to provide acceptable tolerances for concrete construction. IBC 1901.7.
- The use of intermodal shipping containers as buildings is now specifically addressed through provisions intended to supplement existing applicable IBC requirements. IBC 3115.
- All-gender terminology replaces gender neutral. Separate facilities not required rooms are designed for use by both sexes and privacy is provided. WS Chapter 29.
- Fire protection: Expands requirements to provide fire protection water on construction sites before and during vertical construction. IBC 3313.
- Appendix P Construction & Demolition Material Management: if specifically adopted by a jurisdiction, provides requirements for salvage assessment and waste diversion.

## 2021 International Residential Code for One- and Two-Family Dwellings (IRC)

- The state added Ch. 45 – Existing buildings and structures. The scoping provisions state that repairs, alterations, additions, and relocation of existing buildings and structures must comply with the requirements of new construction except as modified in this chapter. Users are directed to the IEBC only when there is a change in occupancy or change of height or egress that pushes the scope out of the IRC. WS IRC R102.7.1 and WS IRC Chapter 45.
- The definition of Townhouse changed and a new definition for Townhouse Unit was added and modified by the state. IRC R202 & WS IRC R202.
- The state added a definition of Enclosed Kitchen and Loft (to replace Sleeping Loft) and modified Landing Platform. WS IRC R202.
- The use of Intermodal Shipping Containers is now recognized in the IRC and criteria for minimum structural requirements is referenced to Section 3115 of the IBC. IRC R301.1.4.
- Wind speeds have been updated and reduced in many areas. Design criteria can be verified using <https://asce7hazardtool.online/>. IRC R301.2.1.
- Irregular building provisions for hillside light-frame constructed buildings may require engineered design per IBC. R301.2.2.6 (Item 8).
- Scope added for anchorage of water heaters to include thermal storage units. WS IRC R301.2.2.10.
- The live load requirement for guards and handrails are separated and the requirements for guards have been lessened. Now only handrails must apply a single concentrated load applied in any direction at any point along the top. For guards not required to serve as a handrail, the load need not be applied to the top element of the guard in a direction parallel to such element thus reducing the amount of connection hardware needed to construct a guard along a deck or other elevated walking surface. Guards must still be designed with the concentrated load in the downward direction and in the horizontal direction away from the walking surface. IRC Table R301.5.
- While the model code was amended to clarify that the separation of dwelling units in two-family dwellings to be not less than 1-hour regardless of whether a lot line existed between the units, the state did not adopt that language and added an exception to not require separation of an ADU added to an existing single-family residence to create a two-family dwelling when smoke alarms are interconnected. WS IRC R302.3.1.
- The state made several modifications to the fire-resistance requirements in two-family dwellings regarding protection at the wall separating units, separation from shared accessory rooms, and penetrations. WS IRC R302.3.4 – R302.3.5.3.
- Doors at the dwelling-to-garage opening now must be self-latching in addition to being equipped with a self-closing or automatic-closing device. IRC R302.5.1.
- A new section added regarding electric vehicle charging to require a dedicated 40-ampere circuit terminating at a junction box, receptacle outlet or charging equipment. WS IRC R309.6.
- The provisions for window wells and area wells serving emergency escape and rescue openings have been merged into one section for area wells. IRC R310.4.
- The state relocated requirements for replacement windows from R310.5 to R4502.5. WS IRC R4502.5.
- The state exception to allow access to areas of 200 s.f. or less utilizing alternating tread devices, ship's ladders or ladders has been limited to areas located not more than 10 feet above finished floor of the space below. WS IRC R311.4.
- The state removed the limitation of 12'-7" as the maximum vertical rise of stair flights. WS IRC R311.7.3.
- The state did not adopt the exception for alternating tread devices or ship's ladders. WS IRC R311.7.11 & WS IRC R311.7.12.

- A new location requirement for smoke alarms was added to address high ceilings adjacent to hallways serving bedrooms and the state clarified that a smoke alarm is required within the room to which a loft is open. IRC R314.3 & WS IRC R314.3.
- The provisions for protection of wood against decay have been reorganized and clarified. IRC R317.1.
- The accessibility provisions for live/work units and owner-occupied lodging houses constructed under the IRC are clarified. IRC R320.
- Habitable attics are now limited to one-third the floor area of the story below except if the dwelling unit is equipped with a fire sprinkler system, it can be not greater than one-half the floor area. IRC R326.
- The state requirement that pools and spas comply with the ISPSA has been relocated from R328 to R327 with the same revisions as previously adopted. WS IRC R327.1.
- The state amended section for Energy Storage Systems has been relocated from R329 to R328 and modified. WS IRC R328.
- The state added a new section for Lofts including a definition in R202. Other code sections modified to include loft requirements where applicable. WS IRC R333.
- The state added a new section for Stationary Fuel Cell Power Systems and refers to the IFC for compliance requirements. WS IRC R334.
- 6 mil waterproofing no longer allowed at concrete foundations. IRC R406.2.
- A minimum 10 mil vapor retarder conforming to ASTM E1745 Class A requirements is now required below slabs-on-grade. IRC R506.2.3.
- New section added specific to exterior deck guards. IRC R507.10.
- The fastening schedule Table R602.3(1) now requires both 6-inch on center edge nailing and 6-inch on center field nailing for roof plywood thicknesses less than 7/8" thick.
- The fastening schedule Table R602.3(1) now specifies minimum nailing of adjacent full-height studs to the end to headers (3-16-d common, 4-16d box, etc.).
- Continuous sheathing requirements for foundation cripple walls limited to exterior cripple walls only allowing for simplified crawl space ventilation. IRC R602.9.
- The location of braced wall lines and permitted offsets are more limited. IRC R602.10.1.2.
- Clarifications added for use of brick veneer in prescriptive designs by adjusting seismic factors. IRC Table R602.10.3(4).
- Limitations added for stone and masonry veneer in prescriptive designs. IRC R602.10.6.5.
- Garage door labeling required to identify wind pressure rating among other information. IRC R609.4.1.
- Requirements for vapor retarders have been reorganized and clarified. Several new tables have been provided to assist designers in determining what vapor retarders are required, and where these vapor retarders should be located in the wall assembly. IRC R702.7.
- Some previous state amendments for exterior coverings regarding water-resistive barriers and flashing have been removed to rely on the model code language. IRC R703.
- Larger air gaps are allowed behind veneer to accommodate thicker continuous insulation. IRC Table R703.8.4(1).
- A new section added to provide prescriptive guidance on materials, design, and installation of soffits. IRC R704.
- Revised wood roof framing language to clarify where a ridge beam is required when ceiling joists or rafter ties do not provide continuous ties across the structure. IRC R802.3.
- Additional specifications are provided to clarify and limit where ridge boards can be used. IRC R802.6.

- The state modified local exhaust requirements in kitchens and differentiates between open and enclosed kitchens. Enclosed Kitchen added to definitions. WS IRC R202 & WS IRC M1505.4.4.1.
- The state modified local exhaust fan requirements to limit sound at kitchen fans. WS IRC M1505.4.4.2.
- The state added a new section for local intermittent kitchen exhaust systems including field verification and diagnostic testing requirements. WS IRC M1505.4.4.3.
- A new section added for oil-fired appliances to be equipped with a safety device which will stop burner operation in the event that the venting system is obstructed. IRC M1802.4.
- The provisions for ground source heat pump loop piping systems in Section M2105 have been duplicated in Section M2101 to apply to all hydronic piping systems in this modified section. IRC M2101.11 – M2101.31.
- The exception allowing new exhausts to be run through existing unlined chimneys has been removed. IRC G2427.5.5.1.
- The exception allowing commercial cooking appliances where the installation is designed by a licensed Professional Engineer has been removed. Commercial cooking appliances lack many safeguards that are found in residential appliances and are now fully prohibited by the IRC. IRC G2447.2.
- Requirement added for radon testing in Appendix AF – Radon control methods. This appendix chapter is specifically adopted by the state. WS IRC AF104.
- The state amends provisions in Appendix AT – Solar-ready provisions – detached one- and two-family dwellings. The provisions in this appendix are not mandatory unless specifically referenced in the jurisdiction’s adopting ordinance. WS IRC Appendix AT.
- The state adds Appendix Y – Construction and demolition material management. The provisions in this appendix are not mandatory unless specifically referenced in the jurisdiction’s adopting ordinance. WS IRC Appendix Y.
- The state adds Appendix Z – Building deconstruction. The provisions in this appendix are not mandatory unless specifically referenced in the jurisdiction’s adopting ordinance. WS IRC Appendix Z.

## **2021 International Mechanical Code (IMC)**

- Clothes dryer exhaust terminals are required to be at least 3 feet from any opening into a building. IMC 504.4.1.
- Polyurethane spray-applied foam on the exterior of ducts in attics and crawl spaces required to meet specific smoke and flame index limits. IMC 604.3.
- Fire and smoke dampers must be provided with approved access for inspection and maintenance. IMC 607.4.
- Refrigerant tables updated to include new refrigerants. IMC Table 1103.1.
- Addition of condensate termination identification markings and discharge restrictions. IMC 307.1.1, 307.2.3.3, 307.2.1.1.
- Approved factory-built combination intake/exhaust terminations permitted, relaxing separation requirement. WS IMC 401.4(3); IMC 401.4.
- 30% reduction in minimum mechanical ventilation for whole-house balanced ventilation systems. IMC 403.3.2.1.
- Continuous operation requirement for manicure and pedicure station exhaust systems. IMC 502.20.1.
- Grease duct horizontal cleanout required within 3 feet of a horizontal discharge fan. IMC 506.3.9.

### **2021 International Fuel Gas Code (IFGC)**

- The termination of concealed condensate piping requires marking to indicate if it is the primary drain or the secondary drain. IFGC 307.2.
- Press-connect joints are acceptable for high pressure (over 5 psig) applications indoors. IFGC 202.

### **2021 Uniform Plumbing Code (UPC)**

- 120-degree Fahrenheit maximum shower discharge for single head showers – this previously applied only to gang showers. UPC 408.3.2
- New materials table added for cleanouts, UPC 707.2
- New testing standards for plastic pipes in plenums. Must now be tested for compliance with ASTM E84 or UL 723. UPC 903.1
- Circuit venting language cleaned up and clarified. UPC 911
- New secondary roof drain requirements. Requires doubling the rainfall rate for secondary roof drains unless roof is designed for ponding per ASCE 7-16. WA UPC 1101.12

### **2021 Washington State Energy Code - Commercial (WSEC-C)**

- Sections in Chapter 1 are reordered (and renumbered) for consistency with other I-Code formats.
- Note, definition of a Residential Building is modified in WSEC-R, which changes scope of code. With revisions, Group R-2 buildings with dwelling units accessed from interior corridors (regardless of height) are now subject to commercial provisions of the energy code. WSEC R202.18-R & R401.1.
- Definition of Conditioned Space revised to clarify it includes stair and elevator shafts. WSEC C202.3-C.
- Allowance for insulation certificate to demonstrate R-value when insulating materials are installed without observable markings. WSEC C303.1.2.
- Clarifications made to code applicability to process equipment. WSEC C401.2.2.
- Provides a fossil fuel compliance pathway to allow fossil fuel appliances with requirements for higher energy efficiencies, additional energy credits and providing for electrification readiness. WSEC C401.3.
- A permanent certificate requirement is added to commercial buildings that will record basic information related to the building thermal envelope. This is similar to the requirement for residential buildings. WSEC C401.4
- Clarification to the semi-heated exception to clarify the exception only relates to the allowed heat source and does not allow unlimited heat capacity. WSEC C402.1.1.2 Exc.
- Reduction in allowed U-factor for greenhouse vertical fenestration on north walls to 0.60 (from 0.70). WSEC Table C402.1.1.3.
- Increase in R-value required for metal building roofs. WSEC Table C402.1.3.
- Both the wood frame wall and metal building wall R-values have been modified to require continuous insulation in addition to cavity insulation. WSEC Table C402.1.3.
- Opaque doors moved to WSEC Table C402.1.4 (from C402.1.3).
- Roof insulation requirements are clarified and separated for compliance with either the U-factor or R-value method in WSEC Sections C402.1.4.1 and C402.2.1.
- New section requires heat loss through PTACs, PTHPs, and other through-wall mechanical equipment to be calculated as part of envelope U-factor compliance. WSEC C402.1.4.3.
- The U-factor requirements in WSEC Table C402.1.4 are decreased to improve the efficiency of the building envelope.
- New sections added to reduce heat loss through significant thermal bridges in the building envelope. WSEC C402.2.8 & C402.2.9

- Maximum fenestration U-values and SHGCs decreased to reduce envelope heat loss. WSEC Table C402.4.
- Adjust the fenestration U-value requirements for increased allowable fenestration area. WSEC C402.4.1.1.2.
- Language clarified to require skylights in all spaces under a roof meeting the requirements, not just single-story spaces. WSEC C402.4.2.
- The allowable air leakage rate is reduced to 0.25 cfm/ft<sup>2</sup> and buildings must now meet this requirement. Corrective measures and retesting are needed until air leakage rate is achieved. WSEC C402.5.2 & C405.2.3.
- Increased R-value of ducts for combustion air to R-16 (from R-8) to align with outside air duct requirements. WSEC C402.5.5.
- Add exception to vestibule rule for doors connecting to outdoor dining areas. WSEC C402.5.9 Exc 11.
- Large, operable openings such as roll-up doors and windows must now be interlocked with the heating and cooling system. WSEC C402.5.11.
- Multiple revisions to the Total System Performance Ratio (TSPR) section to provide clarifications based on interpretation request, expand use of TSPR to multifamily buildings, and add functionality to the approach by accounting for additional system parameters. WSEC C403.1.1.
- New section to require heat pump space heating, rather than fossil fuel or electric space heating, for all buildings (except when using the Fossil Fuel Compliance Path, C401.3). Also, exceptions are provided to allow electric resistance heating for small loads and as supplementary heat for very cold weather. WSEC C403.1.4.
- Additional exception to allow greater than 150% of minimum ventilation if a DOAS unit has a very efficient energy recovery device. WSEC C403.2.2.1 Exc 5.
- Fault detection and diagnostics now required for HVAC systems in large buildings (100,000 SF or larger) to ensure ongoing operational efficiency of equipment. WSEC C403.2.3 (ICC CE111-19).
- Decrease size threshold for variable speed drive requirement. WSEC C403.2.4 & C404.13.
- Efficiency tables updated and revised for SEER2. WSEC Tables C403.3.2(1) through C403.3.2(16).
- Increased efficiency requirements for DOAS systems. WSEC C403.3.5.1.
- Specific sizing and control requirements for DOAS heating and cooling systems added. WSEC C403.3.5.5.
- Requirements for demand responsive controls added for most use types. WSEC C403.4.1.7.
- Areas requiring demand control ventilation expanded. WSEC C403.7.1.1.
- Energy recovery required in Group R-2 occupancies. Energy recovery sensible recovery effectiveness requirements increased in other occupancies. WSEC C403.7.6.
- Demand controlled kitchen ventilation required for kitchens with 2000 cfm exhaust or greater. WSEC C403.7.7.1.3.
- Revised the fan power budget and allowances based on system type. WSEC C403.8.
- Added requirements for dehumidification efficiency for indoor growing facilities. WSEC C403.13.
- Service water heating must be heat pump water heater, HPWH (except when using the Fossil Fuel Compliance Path, C401.3, and other limited exceptions). Primary heat pump system sizing criteria added. WSEC C404.2.1.
- Large pool water heaters may not be electric resistance. WSEC C404.11.1.
- Demand responsive control requirements added for certain water heaters. WSEC C404.14.
- Luminaire level lighting controls required in large open offices. WSEC C405.2.8.1.
- Light reduction (dimming) controls required in most spaces that are not provided with occupant sensor lighting controls. WSEC C405.2.4.
- Daylight responsive lighting control trigger now based on lighting wattage regardless of luminaire quantity. WSEC C405.2.5.

- Electric receptacles required at dwelling unit gas appliances. WSEC C405.7.1.
- New UPS efficiency requirements for computer rooms in line with ENERGY STAR. WSEC C405.12.
- Significant revisions to C406 Additional Efficiency Credit tables and requirements. Credit requirements and allowances for each option now based on occupancy and applicable credit value weighted energy savings by occupancy type. Additional options added to WSEC Table C406.2.
- New Load Management Measure Credits (Table C406.3) required for new buildings greater than 5,000 SF in area. WSEC C406.3.
- Lower Commissioning exception thresholds. WSEC C408.1.
- Renewable energy generation system required for new buildings greater than 10,000 SF in area. WSEC C411.
- New section regulating compressed air systems (process loads). WSEC C412.
- Reduced threshold for meeting current lighting power allowance from 50% to 20% or more of luminaires altered.
- Change of space conditioning moved to C505 to clarify requirements. WSEC C505.

### **2021 Washington State Energy Code - Residential (WSEC-R)**

- Sections in Chapter 1 are reordered (and renumbered) for consistency with other I-Code formats.
- Definition of Residential Building modified which changes scope of code. With revisions, Group R-2 buildings with dwelling units accessed from interior corridors (regardless of height) are now subject to commercial provisions of the energy code. WSEC R202.18-R & R401.1.
- Allowance for insulation certificate to demonstrate R-value when insulating materials are installed without observable markings. WSEC R303.1.2.
- Certificate requirements numbered for clarity and solar array information and code edition and compliance path requirements added. WSEC R401.3.
- The assembly U-factor is established as the primary insulation metric, with R-value as an alternative. The tables were reordered to reflect this, with U-factor table first. WSEC Tables R402.1.2 and R402.1.3.
- The ceiling U-factor improved to 0.024 (from 0.026). WSEC Table R402.1.2.
- The ceiling R-value has increased to R-60 (from R-49). WSEC Table R402.1.3.
- The wood frame wall R-value has been modified to require continuous insulation in addition to cavity insulation. Two options are 1) R-20 cavity plus R-5 continuous or 2) R-13 cavity plus R-10 continuous. WSEC Table R402.1.3.
- Air leakage rate reduced to
  - 4.0 air changes per hour (ACH) maximum (from 5.0 ACH) for IRC buildings. WSEC R402.4.1.3.1.
  - 0.25 cfm per square foot of the dwelling unit enclosure area maximum for R-2 units. WSEC R402.4.1.3.2.
- New requirement for outlet boxes to be air sealed. WSEC R402.4.6.
- The three possible duct locations (outside conditioned space, in conditioned space and buried) are clarified and the insulation requirements for each are modified. WSEC R403.3.
- Protection of piping insulation from “equipment maintenance” language clarified. WSEC R403.4.1.
- Water heaters must be installed in conditioned space, except for high efficiency water heaters. WSEC R403.5.5.
- New section requiring that the mechanical ventilation be tested and verified to meet the minimum flow rate requirements. WSEC R403.6.2.
- All lighting equipment shall contain only high-efficacy lighting sources) excluding kitchen appliance lighting fixtures). R404.1.
- Exterior lighting must meet the power allowances in the commercial provisions. WSEC R404.1.1.



- Interior lighting must now be controlled by dimmers, occupant sensor controls, or built-in fixture controls. WSEC R404.2.
- Exterior lighting over 30 watts must be provided with automatic controls to turn off during daylight hours. WSEC R404.3.
- New Energy Equalization Credits Table replaces previous Fuel Normalization Table (credits adjusted). WSEC Table R406.2.
- Required number of additional energy efficiency credits is revised. Additions increased to require 2.0 credits (from 1.5) and exempts additions less than 150 square feet. WSEC R406.3.
- WSEC Table R406.3 extensively revised. One half point is equivalent to a 600 kWh energy savings. Some options were eliminated due to the fact they are now a part of the base code requirements.
- Small additions (less than 150 s.f.) are exempted from the requirement to obtain additional energy efficiency credits in Section R406. WSEC R502.1.1.
- New requirement that when additions over 150 square feet adjoin existing attic spaces, the existing attic space needs to be insulated to current R402 requirements and insulation values. WSEC R502.3.1.1.
- An exception was added to state that replacement water heating equipment is not required to be moved to within the conditioned space. WSEC R503.1.3 Exceptions.
- The threshold for lighting to comply with Section R404.1 was decreased from 50% replacement to 10% replacement. WSEC R503.1.4 Exc.
- Various standards were updated to more recent editions or were added to support new code requirements as noted in the section descriptions. WSEC Chapter 6.

### **2021 International Existing Building Code (IEBC)**

- Application of fire code - Adds pointer to IFC Chapter 11. IEBC 101.2.1.
- Flood hazard documentation is required for lowest floor level in flood hazard areas; refers to IBC or IRC for compliance. IEBC 109.3.10.
- Adds “or other ordinance of the jurisdiction” to reasons why a code official is authorized to revoke a Certificate of occupancy. IEBC 110.4.
- Provides Building Official the authority to allow water and sewer connections, which may ease the construction process, especially for currently occupied buildings. IEBC 111.
- New section specifying that where an emergency exists, the code official is not required to give a written notice prior to stopping the work. IEBC 114.3.
- Changes to reference structures instead of buildings. Section clarifies that vacant structures that are not secured are unsafe. IEBC 115.1.
- Alteration, addition or change of occupancy - New language clarifies that the exception doesn't apply to alterations for accessibility required by Section 306. IEBC 301.3.
- Requirement added to maintain accessible means of egress during construction. IEBC 305.2.
- Section clarifying no alterations can be done that would decrease accessibility. IEBC 306.3.1.
- Requirement stating that exterior elements must be at least 36 inches wide. IEBC 306.7.6.
- Requirement to add smoke alarms for all group R and I-1 for any classification of work. IEBC 307.
- Requirement to add carbon monoxide detection in group I, R, and E under some circumstances. IEBC 308.
- When significant portions of a building's exterior wall coverings or exterior wall envelopes are added or replaced, they must comply with the requirements of Chapters 14 and 26 of the IBC. IEBC 309, 309.1.

- Additions, Level 3 alterations, and changes of occupancy in educational occupancies are now required to meet the enhanced classroom acoustic requirements of Section 808 of ICC A117.1. IEBC 502.6; 503.16; 506.6.
- Requirements in the IBC have been referenced to provide special allowances for educational occupancies with regard to door lock mechanisms. IEBC 503.17.
- New provisions allow the use of existing and smaller replacement windows for emergency escape and rescue openings within a change of occupancy when applying both the prescriptive and work area methods, providing flexibility while still maintaining the level of safety for occupants and emergency responders. IEBC 506.4.
- Locking requirements to keep intruders from entering rooms added for Group E, Group B educational, and Group I-4 to comply with IBC. Alteration level 1. IEBC 704.3.
- New section exempting requirements related to work area where level 2 alterations are limited to mech/elect/fire, windows, increasing accessibility. IEBC 801.3.
- Changed from all I occupancies to just I-1, I-3, and I-4. Section requires sprinklers where exits or corridors are shared by more than 1 tenant or where serving occupant load greater than 30. IEBC 803.2.2.
- New section requiring sprinklers in Group I-2 depending on size of work area. IEBC 803.2.3.
- Sprinkler requirement where occupant load is greater than 30 and exits/corridors are shared by more than 1 tenant. IEBC 803.2.5.
- Section adding requirement for minimum clear width of ramps and corridors to be 48" where corridors are used for movement of care recipients in beds. IEBC 804.3.
- Amendment adding limitation of 35 feet for dead end corridors in and 30 ft in I-2 occupancies. Group I-2 also added to Exceptions 2, 3, 4. IEBC 804.7.
- Section revised significantly. Previously if occupant load increased by >20%, plumbing fixtures for the story were required to be provided in quantities specified in the IPC based on the increased occupant load. 2021 code requires only Group I-2 facilities, ambulatory care facilities and outpatient clinics to meet installation and equipment requirements in NFPA 99 for any added portion of an existing medical gas system. IEBC 808.1.
- New section requiring enhanced classroom acoustics for all Group E classrooms with a volume of 20,000 cf or less. IEBC 903.4.
- New section requiring sprinklers for Level 3 work areas. IEBC 904.1.4.
- New section requiring sprinklers for windowless stories where new construction would require it. IEBC 904.1.6.
- Adds exception – new plumbing required only when occupant load increased by more than 20 percent. IEBC 1009.1.
- Adds section to describe support needed for excavation retention systems. IEBC 1502.2.
- Water supply for fire protection should be made available as soon as combustible building material arrives on site / exception gives fire code official authorization to reduce fire-flow requirements for various reasons. IEBC 1509.1.
- Requires fire flow of 500 gallons per minute and within 500 feet of combustible building materials. IEBC 1509.2.
- Sets minimum fire flow based on the building fire separation parameters for > 30 ft, 30-60 ft and < 30 ft. IEBC 1509.3.

#### **2021 International Swimming Pool and Spa Code (ISPSC)**

- 4-foot-tall fencing now required for pool excavation sites during construction. ISPSC 305.11.
- New requirements for pool access gate latching devices. ISPSC 305.4.
- Means of egress complying with the IBC required for public pool enclosures. ISPSC 305.8.

- Maximum velocity limits are established for suction and return piping in both commercial and residential applications (based on design flow rates). ISPSC 311.3.
- Hot water tanks serving pools as well as pool heaters are now required to be listed and labelled. ISPSC 316.2.
- New section added providing requirements for pool equipment rooms. ISPSC 324.

### **2021 International Wildland Urban Interface Code (IWUIC)**

- Special requirements for properties located within wildland-urban interface or intermix areas, as defined by the [Washington wildland urban interface map](#) (WA-WUI). Contains provisions addressing fire spread, accessibility, defensible space, water supply and more for buildings constructed near wildland areas.
- The state allows the WA-WUI map to be modified upon approval of findings of fact. WS IWUIC 301.1.
- Establishes regulations to safeguard life and property from the intrusion of wildland fire and to prevent structure fires from spreading to wildland fuels.
- Regulates defensible space and provides ignition-resistant construction requirements to protect against fire exposure and resist ignition by embers.
- Provides standards for emergency access, water supply and fire protection.
- Provides requirements for automatic fire suppression and safe storage practices.
- The state added a new definition for Wildland-Urban Interface/Intermix Area to clarify that the state intends for all construction provisions to apply where either an “interface” or “intermix” area is mapped. WS IWUIC 202.
- The state adopted content from appendices in the model code and made them chapters in the state-amended code. Refer to WS Chapter 7 – Vegetation Management Plan (from Appendix B), WS Chapter 8 – Fire Hazard Severity Form (from Appendix C), and WS Chapter 9 – Fire Danger Rating System (from Appendix D).
- The state strikes most of the language in Chapter 4 of the model code to default to locally adopted standards such as access standards contained in the IFC or water supply standards.
- The state amends the special building construction regulations that apply to interface/intermix areas in Chapter 5 to incorporate provisions mandated in the RCW.

### **2021 International Fire Code**

- CO Detectors required in Group I-1, I-2, I-4, R- and E classrooms. IFC 915.2,1103.9
- Electrical Energy Storage System revised along with operational & construction permits. IFC 1207
- Modify Chapter 1 (administrative) to align enforcement, violations, and hearing examiner procedures with current language adopted by MICC and other Construction Codes. IFC Section 111, 112, 113
- Add language to encourage timeliness of confidence test reporting and recover staff time for reports not submitted. IFC 109.3.1