2021 Code Change Guide

Building Division
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The Building Codes Division (BCD) recently completed the rule making process to create the 2021 Oregon Residential Specialty Code (ORSC), the 2021 Oregon Plumbing Specialty Code (OPSC), and the 2021 Oregon Electrical Specialty Code (OESC). These codes will be adopted on April 1, 2021. On April 1, any new plumbing or electrical permit applications will need to comply with the 2021 code. BCD is providing a six-month phase-in period for the ORSC. Between April 1 and September 30, projects can be submitted to either the 2017 ORSC or the 2021 ORSC. Where a code is not noted on the application or construction documents, we will be reviewing projects as the 2017 ORSC through September.

In preparation for the 2021 codes, we have created the following inspection checklists as part of our quality assurance program.

2021 Oregon Residential Specialty Code – New Home Inspection Checklist

2021 Oregon Electrical Specialty Code- Electrical Inspection Checklist

2021 Oregon Plumbing Specialty Code- Plumbing Inspection Checklist

These checklists, while covering most general requirements, are primarily focused on residential units.

We have reviewed the changes from the 2017 versions of these codes. To assist in this code change, we have highlighted those changes staff feel will likely impact most projects and separated them by specialty code. Please let us know if you have any questions of if we can be of any assistance.

2021 Oregon Residential Specialty Code

The 2021 Oregon Residential Specialty Code (ORSC) is based on the 2018 International Residential Code with Oregon amendments. At this time, BCD does not have a printed code book, but has provided the linked Adoption Committee Matrix in the October 7, Residential and Manufactured Structures Board packet. In addition to technical changes of the code, BCD is also making some changes to Chapter 1, the administrative chapter.

The 2021 ORSC will become effective on April 1, 2021. BCD is providing for a prolonged six-month implementation phase-in period where projects can choose to use the 2017 ORSC or the 2021 ORSC. Unless otherwise noted on the application and construction documents, we will be reviewing all new projects under the 2017 ORSC through September. On October 1, 2021, all new applications will need to be designed to the 2021 ORSC. As mentioned above, there are some significant changes to Chapter 1 and those changes will be effective on April 1, with no phase-in period.

If you have any questions about these new code requirements or on the new checklist, please contact us at cd.customerservice@cityofalbany.net.

Highlighted Changes:

Administrative Changes: *(Chapter 1, required April 1, 2021)*

- **ORSC Scope**:
    - The 2021 ORSC will introduce a new subsection, R101.2.1. Application. This section is intended to direct projects to the applicable code.
        - The ORSC will still be the applicable code for one- & two-family homes, townhouses, and their accessory structures. Accessory structure was added to clarify that the ORSC can only be used for non-dwellings that are accessory to a dwelling and limited in size.

        - Aside from a five-guest room owner occupied lodging home and detached live/work units, all other uses are being directed to the 2019 Oregon Structural Specialty (OSSC). Primarily these were congregate living and small care facilities.
    - The 2021 ORSC will also impact elements that may require permits. Section R101.2.2 clarifies elements that a local municipality can regulate, when adopted locally. The City of Albany adopted some under Albany Municipal Code (AMC) 18.04.040 in 2019, when similar occurred during the adoption of the 2019 OSSC.
    - The 2021 ORSC also introduced R101.2.3 that includes elements that are not available to be regulated under the state code system but may have local authority.

- **Repairs Due to Loss** – R102.7.2 was added to provide for an alternative code path for a structure damaged by a natural disaster to be repaired without being required to meet the full requirements of the current code. BCD provided eight bullet items that would need to meet current code requirements.
- **Accessory Structures; exempt from permits** – R105.2 was revised to return the height limitation of the accessory structures exempt from permitting requirements to 15 feet from grade plane to the average height of the highest roof surface.
- **Reroofing**- R105.2 was revised to clarify reroofing permits are required for townhouses, integrated solar roof coverings, and homes in wildfire hazard areas. R908.3.1 reduced the allowable layers down to two.

Structure Design Changes: (Adopted April 1, required October 1, 2021)

- **2008 Wall Bracing –** The statewide alternate method allowing the use of the 2008 ORSC's wall bracing provisions will sunset on October 1. At that time, all new applications will need to meet the prescriptive requirements of the 2021 ORSC or an engineered design.
- **Irregular Buildings –** R301.2.2.6 has seen some adjustments that could impact your wall bracing design, requiring engineering if the design meets one of the criteria.
- **One-Family Attached –** One gap that existed in the ORSC was application for two-attached one-family homes separated by a real property line. The code has been updated to clarify how to deal with the fire separation requirements. **(R302.3)**
- **Egress Windows –** The section provides for replacement windows, like the previous interpretation. **(R310)**
- **Window Sills –** This section was amended to clarify a minimum 36-inch flat surface in width is required below an opening to not require fall restraints when the window is more than 72-inches above grade. **(R312.2.1)**
- **Habitable Attics –** A new code section was created related to habitable attics. **(R326)**
- **Decks –** The deck provisions of R507 have been expanded to provide more details on deck requirements within that section.

Mechanical Changes: (Adopted April 1, required October 1, 2021)

- **Dryer Ducts –** M1502 contains some minor changes including M1502.4.2, which requires ducts installed in a cavity to be sized such that the duct can be installed without deformation. With this clarification, the required 4-inch duct will need to be located in a 2x6 or greater cavity.
- **Whole House Mechanical Ventilation –** R303.4 now requires a balanced whole house mechanical ventilation system be installed in conformance with M1505.4
- **Bathroom Ventilation –** M1505.6 was revised to require the fans with automatic controls in all bathrooms, regardless of if the space has a tub or shower.
- **HVAC Duct Location –** All HVAC supply and return ductwork is required to be located inside the heated space, as required in N1105.3. **(M1601.4.11)**
- **Duct Sealing –** M1601.4.1 requires all ductwork be sealed with non-tape products such as mastic. Tape can still be used at the appliance connection.

Energy Code Changes: (Adopted April 1, required October 1, 2021)

- **Envelope Requirements –** The window U-value changed from U-0.30 to U-0.27. As the HVAC ducts will be required to be inside the home, the duct insulation requirement was removed, and there were some footnote changes. **(Table N1101.1(1))**
- **Additional Measures Table –** Table N1101.1(2) has been revised to require only one additional measure. The measure table has also been reworked in what options are available. This change is partially due to the requirement of moving the HVAC ducts within the heated space, as discussed above.
- **Addition Additional Measures –** The thresholds for additions needing additional measures have changed and are now based on the size of the addition, regardless of the existing home size.
- **Air Leakage Requirements –** N1104.8 was extensively reworked.
    - **Air Barriers –** An air barrier will now be required on all vertical portions of air-permeable insulation and on the warm side of horizontal portions.
    - **Top Plate Sealing –** N1104.8.2.1 was added to require all walls in contact with a vented attic to have the wall covering sealed to the top plate.
    - **Sealing Required –** Table N1104.8 was added to the code to provide clarification to N1104.8.2's requirement for air sealing and provides the prescriptive minimum areas that need to be sealed.
- **HVAC and Ducts in Heated Space –** N 1105.3 now requires all HVAC ducts and appliance to be located within the heated space. There is an exception for ventilation intake and exhaust ducts and for 5 percent of the system to be located outside the heated space. The code provides a potential path to leave the ducts in the attic and have them "deeply buried in insulation".
- **Fan Efficiency –** N1105.5.1 was altered to require outdoor ventilation air supply fans to now be Energy Star certified like the bath fans.
- **Hot Water Pipe Insulation –** N1106.2 was revised to require R-3 pipe insulation on hot water piping at locations that are outside the heated space, the 8-feet in or out of the water heater or recirculating hot water piping.
- **Solar Ready –** This was adopted in October of 2020, but N1107.4 contains requirements for having new homes be ready for future solar installs. Please see the attached code language now in effect.

2021 Oregon Electrical Specialty Code

The 2021 Oregon Electrical Specialty Code (OESC) is based on the 2020 NEC with Oregon amendments captured in the draft Table 1-E. All electrical permit applications submitted on or after April 1, will need to comply with the 2021 OESC. If you have any questions about the new electrical code requirements or on the new checklist, please contact Philip Godsey, Building Inspector, at philip.godsey@cityofalbany.net.

Highlighted Changes:

- Section 210.8, specifically sections:
    - (B)(2) Expanded applicability to other areas in addition to "kitchens."
    - (D) Updated requirements and reference back to Art. 422 for vending machines.
    - (E) Tie back to 210.63 receptacles for servicing equipment, with GFCI exception
    - (G) *Not adopted at this time* New OESC amendment requiring GFCI protection for 125 thru 250 volt receptacles supplied by single-phase branch circuits rated 150 volts or less to ground intended to supply mobile concession stand.
- New article 210.15 not allowing reconditioned equipment supplying GFCI, AFCI, or GFP power.
- Section 210.52, specifically sections:
    - (D) Draft indicates receptacle allowed "unless prohibited in 406.9(C)" within 3 feet of outside edge of basin in bathroom. Synopsis of change from electrical board indicated 406.9 was not adopted; waiting on clarification.
    - (E)(1) Reminder: For a single-family dwelling and each unit of a two-family dwelling that is at grade level, at least one receptacle outlet readily accessible from grade and not more than 6-1/2 feet above grade level shall be installed at the front and back of the dwelling (the sides do not count toward this requirement).
    - (E)(3) Balconies, Decks, and Porches required to have at least one accessible, unless (Ex. 1) located at grade level and less than 20 sq. ft., or (Ex. 2) above grade with a depth 1 ft. or less.
- Reminder of 230.40 Exception No. 3 OESC amendment:
    - "When there are continuous metallic paths bonded to the grounding system in the buildings involved, a disconnect, a grounded conductor, and an equipment grounding conductor shall be installed to meet the provisions of Article 225, 230, and 250.
- Sections 230.95, 240.67, and 240.87 sections (C), as they relate to initial startup performance testing of Ground-Fault Protection and Arc Energy Reduction systems and require the record be available to the Authority Having Jurisdiction.
- Update to section 250.32(B) in the NEC that now coincides with previous OESC amendment.
- Reminder of 250.52(B):

  (1) Metal underground gas piping shall not be used as a grounding electrode.

  (4) In existing electrical installations, when a service change or upgrade occurs, an existing metal underground water pipe shall not be used as a grounding electrode unless verified as suitable for continued use. (Also keep in mind bond locations, i.e., at the water heater, and re-pipes of homes with plastic water lines, may render a previously functional grounding system, useless)

- Previous "standard practice" temp. power single ground rod now added to OESC amendments: 250.53(A)(2) Exception No. 2
- Section 250.64, specifically section:

(B)(2) Exposed to Physical Damage. A 6 AWG or larger copper or aluminum GEC exposed to physical damage shall be protected in (RMC), (IMC), ***Schedule 80 (PVC)***, (RTRC-XW), (EMT), or cable armor.

- Section 250.118, specifically item:

  (14) Surface metal raceways listed for grounding. Where metallic conduit is installed on roof tops, an equipment grounding conductor shall be provided within the raceway and sized per 250.122.

- New section 410.170 that relates to Horticultural Lighting Equipment.
- New section 445.18 for shutdown of the prime mover for other than cord and plug connected generators. Section (D) for One- and Two-Family Dwellings was not adopted.
- The solar amendment to the 2017 Oregon Residential Specialty Code as it relates to new dwellings being "solar ready." Take note of the exception. https://www.oregon.gov/bcd/codes-stand/Documents/17orsc-solar-amendments.pdf

2021 Oregon Plumbing Specialty Code

The 2021 Oregon Plumbing Specialty Code (OPSC) is based on the 2020 UPC with Oregon amendments. At this time, BCD does not have a printed code book, but has provided the linked Summary of Changes and Adoption Committee Matrix that can be used until printed books are available. All plumbing permit applications submitted on or after April 1, will need to comply with the 2021 OPSC. If you have any questions about the new plumbing code requirements or on the new checklist, please contact Segundo Sam, Building Inspector, at segundo.sam@cityofalbany.net.

Highlighted Changes:

- **Required Cleanouts**:
    - Kitchen Sinks- 707.4 Exception no. 3 was revised to include kitchens requiring cleanouts on all floor levels. **(See Summary of Changes #30)**
    - Underfloor Cleanouts- 707.9 was revised to require cleanouts to be located within five feet of the access point. All cleanouts will need to be topside or within five feet of a crawl space access.
- **Tracer Wire** - Tracer wire size has changed to require 14 AWG wire in 604.10.1. Please also remember the wire would still need to be rated for direct burial. Please also note the code requires the tracer wire to be adjacent to the plastic pipe. **(See Summary of Change #16)**
- **Storm Drainage** - Oregon had added a new amendment that removed the two-foot demarcation and made clarifications on methods and materials allowed adjacent and inside the building for storm drainage and storm sewers. **(See Summary of Changes #44)**
- **Drainage Fixture Units -** Model code revised Table 702.1, most notably the addition of footnote 9 allowing a shower head to be added to an existing tub or tub shower conversion to retain the 1-1/2-inch trap and trap arm. Oregon added a new footnote 10 allowing a laundry tub to enter into a 2-inch clothes washer trap through a wye. **(See Summary of Changes #27)**
- **Horizontal Drainage Piping-** The Oregon amendment to 708.1 allowing 3-inch horizontal drainpipe to slope at 1/8 inch per foot has been rescinded. With the 2021 OPSC only drainage pipe 4-inch or greater will be able to slope at 1/8 inch per foot. **(See Summary of Change #32)**
- **Temperature Control** - Model code was amended to allow a water heater meeting ASSE 1070 to be used as the means of temperature control. **(See Summary of Change #4)**
- **October 2020 Mid-Term Amendments:**
    - **Water Conservation (See Summary of Changes # 3)**
    - **Table 703.2 Max Unit Loading (See Summary of Changes # 28)**
- **Accessibility -** Section 403.2 was an addition to the 2017 OPSC providing the design requirement of ICC A117.1-2009 for accessible plumbing fixtures required under the building code.