One set of plans must be submitted for review. **Plans must be drawn to scale (¼" = 1'-0" minimum)** and be clear and legible enough to indicate the location, nature, and extent of work proposed. Detailing must be adequate to ensure that the proposed project will conform to all applicable laws, codes, ordinances, rules, and regulations.

Plan size requirements: Use a minimum of 11"x17" sheet size for projects 600 square feet or less. A minimum sheet size of 18"x24" is to be used for projects larger than 600 square feet.

**Foundation plans shall include:**
- Length, width, and location of foundation footing and wall, piers, or location of holes and posts for pole buildings.
- Location and size of footings and slabs.
- Size and location of vents (1 vent required within 3 feet of each corner) and underfloor access.
- Location and specific model numbers of required holddowns.
- Reinforcing steel and anchor bolts (size, spacing, and embedment depth).
- Foundation plates.
- Ground cover (6 mil black poly).

**Floor framing plans shall include:**
- Location, size, grade, and species of posts, beams, headers, and bearing walls.
- Size, grade, species, and spacing of floor joists. **For manufactured I-joists**, provide all required details for the use of I-joists and label the plans as to where a specific detail is required. This would include any nailing patterns, filler material, squash blocks, rim material, blocking including pressure blocks, and any other design component required by the joist manufacturer. The beams and joists called out on the I-joist plan must match the floor plans.
- Blocking, beams, cross-bracing, flooring, insulation, etc.
- Floor truss design specifications per R 502.11.1 (by WA state licensed engineer)

First floor framing may be shown on the foundation plan if clarity is not compromised.

**Framing for other floors may be shown on the floor plans if clarity is not compromised.**

**Floor plans shall include:**
- Length, width, and location of all walls.
- Size and locations of all windows and doors.
- Location and type of all required bracing panels, and/or shear walls.
- All appropriate engineering requirements.
- Location of all plumbing fixtures, appliances used for heating and cooking, cabinets, smoke detectors, exhaust fans, stairways, attic access, underfloor access, fireplaces, etc.
- Identify the use of each room.
- **For additions**, please provide a floor plan of the existing areas adjoining the addition. Show the use of the existing rooms and all doors and windows. Provide sufficient structural information about the existing building in order that loads for new framing can be calculated.

**Wall section plans to include:**
- Side view from bottom of footing or post to roofing.
- Size of foundation, location of finished grade, size and location of rebar, sill plate, and anchor bolt size and spacing, holddowns, etc.
- Size, grade, and species of headers, beams, studs, insulation, wallboard, etc.
- Rafters, ceiling joists, trusses, sheetrock, insulation, venting, roof sheathing, roof felt, roof covering, roof pitch, vaulted ceilings, etc.
- Show size, grade, species, and spacing of materials as appropriate.
Roof framing plans to include:

- Size, grade, species, and spacing of all roof beams, headers, posts, rafters, purlins, and ceiling joists. **For manufactured I-joists** used for rafters, please provide details as required for floor framing.
- Location of bearing walls and any details that may be required.
- Roof truss layout including specific location of girder and hipmaster trusses, ridges, valleys, and hips.
- Roof truss design specifications per R 802.10.1 (by WA state licensed engineer)

Roof framing plan may be included on the floor plan if clarity is not compromised.

Cross-Section plans to include:

- Complete section views - front-to-back, side-to-side, bearing soil to roof peaks.
- Side view from bottom of footing or post to roofing.

Elevation plans shall include:

- Minimum of four (4) elevation views.
- Side view of structure from tallest side.
- Show finished earth grade, windows, doors, decks, landings, chimneys, roof pitch, and overhangs.

2018 Washington State Energy Code Compliance:

**Prescriptive path to include:**
- Prescriptive Credit Selection Form
- Glazing Schedule
- Simple Heat System Sizing
  OR
- Provide WSEC accepted analysis

**Other:** Some structures may require additional plans, details, or information - for example:

- Connection details for additions.
- Manufacturer’s specifications for any non-standard or prefabricated building materials.
- Any/all unusual framing details.
- Stair details.
- Deck details, including method of attachment, ledger flashing.
- Any/all engineering details.
- Wall bracing schedule.
- Shear wall schedule.
- Holdown schedule.
- Details for slab insulation, below grade insulation, thermal break, etc.
- Designate heated and unheated areas.

**Engineering will be required when:**

- Plans submitted for review do not meet all prescriptive code provisions found in 2018 IRC
- Proposed structures (by definition) are of unusual shape and design.
- Site conditions exist that could undermine or jeopardize the proposed construction.

**Several examples where engineering requirements have been waived are:**

**One-Story Pole Buildings having:**

- Clear span not more than 24 feet (trusses), or 12 feet (rafters).
- Eave height not more than 12 feet.
- Bay spacing not more than 12 feet.

**Other:**

- Retaining walls not over 4 feet in height measured from the bottom of the footing to the top of the wall and not supporting a surcharge.
- Conventional wood-frame structures not having an unusual size, shape, or design which complies with all provisions of the 2018 IRC.

Minimum Submittal Requirements for Structural Plans 2018

Page 2 of 4

REV: June 28, 2021
Table R301.2(1)
Climatic and Geographic Design Criteria

<table>
<thead>
<tr>
<th>Minimum Roof Snow Load (PSF)</th>
<th>Wind Design</th>
<th>Subject to Damage From</th>
<th>Seismic Design Category</th>
<th>Weathering</th>
<th>Frost line depth</th>
<th>Termite</th>
<th>Ice Barrier Required</th>
<th>Flooding Hazards</th>
<th>Air Freezing Index</th>
<th>Mean Annual Temp</th>
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<tbody>
<tr>
<td>25 MPH</td>
<td>110 mph</td>
<td>NO</td>
<td>D2 / D2</td>
<td>Moderate</td>
<td>18&quot;</td>
<td>Moderate</td>
<td>26° F</td>
<td>NO</td>
<td>12/23/71</td>
<td>175 50.5° F</td>
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</table>

Footnotes:

a. The roof snow load may be greater than 25 psf depending on site location. Verify the ground snow load with a Plans Examiner prior to design. Ground snow load will vary according to site and shall be applied as the roof snow load when prescriptive structural design under the International Residential Code is used. The roof snow load may be reduced by a Washington State licensed design professional with a structural analysis. The roof snow load used in design is not permitted to be less than 25 psf.

b. A wind speed of 110 mph shall be used for prescriptive structural design based on the International Residential Code (IRC). If the structural design is in accordance with the International Building Code (IBC), the applicable wind map under the currently adopted and implemented International Building Code shall be used. Wind exposure category shall be determined on a site-specific basis either by the designer under the IRC prescriptive structural design or by the Washington State licensed design professional under the IBC.

c. Topographic effects shall be included for buildings structurally designed in accordance with the International Building Code.

d. Seismic Design Category D shall be used for prescriptive structural design based on the International Residential Code. If the structural design is in accordance with the International Building Code, Seismic Design Category D shall be used. The Washington State licensed design professional is responsible in determining if a higher seismic design category is applicable at the site.

e. See Weathering Probability Map for Concrete in International Residential Code for site specific weathering.
Provide the following three worksheets: Prescriptive Compliance form, which includes “credit” requirements from Table 406.3; Glazing schedule; and Simple Heat System Size calculations. These three worksheets may be downloaded for free at [www.energy.wsu.edu/code](http://www.energy.wsu.edu/code) and used to meet the 2018 WSEC requirements. Please provide the energy worksheet forms from the WSEC website, or another code-complying source.

### 2018 WASHINGTON STATE ENERGY CODE (WSEC) - TABLE R402.1.1

**PRESCRIPTIVE REQUIREMENTS FOR GROUP R OCCUPANCY**

**CLIMATE ZONE 5**

<table>
<thead>
<tr>
<th>GLAZING U-FACTOR</th>
<th>DOOR U-FACTOR</th>
<th>CEILING</th>
<th>VAULTED CEILING</th>
<th>WALL ABOVE GRADE</th>
<th>WALL-INT. BELOW GRADE</th>
<th>WALL-EXT. BELOW GRADE</th>
<th>FLOOR</th>
<th>SLAB ON GRADE</th>
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<tr>
<td>VERTICAL</td>
<td>OVERHEAD</td>
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<td>0.50</td>
<td>0.30</td>
<td>R-49 or R-38 adv</td>
<td>R-38</td>
<td>R-21 int.</td>
<td>R-15 c.i.</td>
<td>R-10</td>
<td>R-30</td>
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<td>R-10 2’</td>
</tr>
</tbody>
</table>

The following information should be noted in the plans:

### 2018 WASHINGTON STATE ENERGY CODE REQUIREMENTS

**SEC. 401.3** – Post Energy Code Compliance Certificate within 3 ft. of electrical panel (these are available at [http://www.energy.wsu.edu/BuildingEfficiency/EnergyCode.aspx](http://www.energy.wsu.edu/BuildingEfficiency/EnergyCode.aspx))

**SEC. 402.4.1.2** - Provide door blower test affidavit by final building inspection

**SEC. 403.1.1** – Provide (1) programmable thermostat

**SEC. 403.3.3** – Provide duct sealing affidavit by final inspection

**SEC. 404.1** – A minimum of 90% of all interior lighting shall be of high efficiency