



Residential Alteration (No additional square footage)

Any altered portions of the structure must comply with the requirements of the 2015 International Residential Code (IRC) or 2015 Uniform Plumbing Code; and the 2015 Washington State Energy Code (International Energy Conservation Code as adopted and amended by the State of Washington and the City of Kent).

Minimum Requirements for Construction Drawings

- 2 copies of construction plans
- 2 copies of Energy Code calculations, if applicable.

If Converting Garage to Residential Space:

- 4 copies of site plan
- 3 copies of construction plans
- 2 copies of Energy Code calculations

Plans must be of sufficient clarity to indicate the location, nature, and extent of the work proposed and show that it will conform to the provisions of the adopted Codes and ordinances.

Acceptable drawings sizes are those that are 24" x 36" and drawn to an appropriate scale as listed below. Plans shall be drawn in indelible ink. Plan sheets that are cut and pasted, taped, or that have been altered by any means (pen, pencil, marking pens, etc.) will not be acceptable for plan review.

Washington State law requires that any registered professional who prepares or supervises the preparation of drawings and construction documents stamp and sign such documents. Where multiple copies of stamped submittal documents are submitted, at least one set must bear an original wet seal

Floor Plan

(1/4" or 1/8" scale)

- 1. Submit a fully dimensioned floor plan for each floor, including basements. Label each room or area with intended use.
- 2. Specify project square footage on floor

plans. Provide complete breakdown.

- 3. Show window and door locations, sizes and types.
- 4. Specify header size and type over each opening.
- 5. Show locations of plumbing/heating fixtures and equipment.
- 6. Show smoke detectors (alarms) installed in each sleeping room, at a point centrally located in the corridor giving access to each separate sleeping area, and on each floor including basements. *IRC Sec. R314.3.* When more than one smoke alarm is required, they shall be interconnected.
- 7. Additions, alterations, and repairs require smoke alarms located as required for new dwellings. For exceptions in existing dwellings, see *IRC Sec R314.2.2.*
- 8. Identify on the drawings all locations of safety glazing as required by IRC Sec. R308 and R308.4, such as windows, adjacent doors, glazing in walls and surrounds for bathtubs and showers, and glazing within 5 feet of stairs.
- 9. Show hallway minimum width of 36". *IRC Sec. R311.6*
- 10. Bathroom fixtures must be spaced as per IRC Figure R307
- 11. *Construction, projections, openings, and penetrations of exterior walls must comply with IRC Sec. R302 as amended by Washington State.*

Framing Plans

(1/4" or 1/8" scale)

- 1. Identify on the drawings all interior and exterior braced wall lines and braced wall sections as required by IRC Sections R602.10, and *R602.11.*

- 2. Braced wall lines shall not exceed 25 feet on center in both the longitudinal and transverse directions in each story, unless excepted in *IRC Sec. R602.10.1.3*.
- 3. All braced wall panels shall be clearly indicated on the plans. Braced wall panels shall start at not more than 10 feet from each end of a braced wall line. *IRC Sec. R602.10.2.2.1*
- 4. Each braced wall panel length shall comply with *IRC Sec. R602.10.3*.
- 5. Buildings that are not provided with braced wall lines in accordance with *IRC Sec. R602.10*. or that are of unusual shape as described in *IRC Sec. R301.2.2.2.5* shall have a lateral-force-resisting system designed to resist the forces specified in *IRC Sec. R301*. A Washington State licensed professional engineer shall stamp structural calculations. Plans shall be consistent with engineer's calculations and a complete shear wall schedule shall be shown on the plans.
- 6. Drawings must clearly show the sizes, species, grades, spacing and spans of all framing members.
- 7. Show floor joists sizes, directions of run, spans and spacing.
- 8. If I-joists, also submit the manufacturer's proprietary floor system design layout with all requirements.
- 9. Show ceiling joists, trusses, and roof rafter sizes, directions of run, spans and spacing. If trusses, also submit engineered truss sheets and cross-referenced lay-out plan.
- 10. Show on the drawings the numbers and sizes of nails connecting wood members, or include on the drawings *IRC Tables 602.3.(1) & 602.3.(2)*
- 11. Connections that resist seismic forces shall be completely and clearly detailed on the drawings. All of the engineer's requirements must be shown on the drawings. Show the locations and specify the brand names and model numbers of all framing connectors.
- 12. Specify on the drawings the panel identification indexes for plywood and particle board floor and roof sheathing. *IRC Sec. R503.2, R604, & R605* respectively.
- 13. Clearly show bearing and shear walls. Provide nailing schedules.
- 14. Show posts under all beams. Specify sizes, grades, species and heights. Show connections top/bottom.
- 15. Each dwelling unit shall have one egress door that is side-hinged with an unobstructed opening not less than 32 inches wide and 78 inches high from the top of the threshold. *IRC Sec. R311.2*.
- 16. Show landings at doors. The width of each landing shall not be less than the door served. Exterior door shall have a landing not more than 1½" lower than the top of the threshold. *IRC Sec R311.3*.
- 17. Show dimensions of stair treads & risers. Maximum riser height shall be 7¾" per *IRC Sec R311.7.5.1*, and minimum tread depth shall be 10" per *IRC Sec R311.7.5.2*
- 18. Show 6'8" minimum headroom in stairway. *IRC Sec. R311.7.2*.
- 19. Show landings for stairways. *IRC Sec. R311.7.6*.
- 20. Show handrails for stairways. *IRC Sec.R311.7.8*.
- 21. Show maximum slope of one unit vertical in twelve units horizontal for all ramps. *IRC Sec. R311.8*.
- 22. Show exterior windows and glass doors comply with *IRC Sec. R308*.
- 23. Wall construction, fire blocking (*R602.8*), notching and drilling (*R602.6*) shall comply with *IRC Chapter 6*.
- 24. Wall covering shall comply with *IRC Chapter 7*.
- 25. Roof-Ceiling construction shall comply with *IRC Chapter 8*.
- 26. Roof Assemblies shall comply with *IRC Chapter 9*.
- 27. Chimneys and Fireplaces shall comply with *IRC Chapter 10*.

Elevations

- 1. Specify the height above finish grade to a) finished floor; b) top plate/ceiling; c) highest point of structure.
- 2. Specify all finished materials to be used.
- 3. Show all doors and windows (distinguish between openable and fixed).
- 4. Show finish grade elevations in relation to structure.

Building Cross Sections

- 1. Blocking, bridging, straps, approved framing anchors or mechanical fasteners shall be installed to provide continuous ties from the roof to the foundation system.
- 2. Where post and beam or girder construction is used, the design shall be in accordance with the provisions of this code. Detail positive connections to ensure against uplift and lateral displacement. IRC Sec. R502.9.
- 3. Wood joists closer than 18 inches, or wood girders closer than 12 inches to grade shall be shown as an approved wood of natural resistance to decay or treated wood. *IRC Sec. R317.1.*
- 4. Show components of wall construction including exterior and interior wall finishes and insulation R-value. Show double top plates at top of stud walls. IRC Sec. R602.3.2.
- 5. Habitable rooms above a garage need minimum 5/8" Type X gypsum board or equivalent applied to garage side of ceiling. IRC Sec. R302.5 and R302.6. and Table R302.6. See nailing schedule in IRC Table R702.3.5.
- 6. Show ceiling construction (sizes and spacing of joists) and R-value of insulation.
- 7. Show roof structure (sizes and spacing of joists, rafters, or pre-manufactured trusses) and R-value of insulation. Show insulation baffles.
- 8. Enclosed accessible space under stairs shall have walls, under stair surface and any soffits protected on the enclosed side with 1/2" gypsum wallboard. IRC Sec. R302.7.

- 9. Provide full height section through stairways. Show riser and tread framing materials; riser height, tread width; handrail/guard height above tread nosing; and clearance to ceiling above the stairs measured from a line drawn at and parallel to tread nosings. IRC Sec. R311.7.2.
- 10. Stairways shall be 36" wide above the handrail which may project no more than 4 1/2" into the stairway. IRC R311.7.1.
- 11. *Illumination required for all stairways IRC R303.7.*
- 12. Balconies, porches or raised floor surfaces more than 30" above the floor or grade below shall have guards no less than 36" in height. The open sides of stairs with a total rise of more than 30" above the floor or grade below shall have guards not less than 34" in height measured vertically from the nosing of the treads. IRC Sec. R312.1. The guards shall have intermediate rails or an ornamental pattern such that a sphere 4 inches in diameter cannot pass through per IRC Sec. R312.1.3. See exception for guard on stairs IRC Sec. R312.1.3.
- 10. Provide Window fall protection in accordance with IRC Sec R312.2.

Roof Plan, as applicable

(1/4" or 1/8" scale)

IRC Chapter 8 – Roof-Ceiling Construction

- 1. Show roof drainage per IRC Sec R801.3 where required.
- 2. Show sizes, directions of run, spans, and spacing of framing members of all framing members.
- 3. Cutting and notching shall comply with IRC Sec R802.7.
- 4. If using trusses, provide engineer stamped truss drawings and cross-referenced lay-out sheet.
- 5. Show truss to truss connections on plans.
- 6. Show truss to beam connections on plans.
- 7. Show truss to wall connections on plans.

- 8. Show truss to top plate connection on plan.
- 9. Show compliance with ventilation requirements for attic space per IRC Sec R806.
- 10. Detail roof construction including sheathing, underlayment, and roofing material.
- 11. Indicate roof pitches.
- 12. Show attic access opening in attic areas that exceed 30 square feet and have a vertical height of 30 inches in buildings with combustible ceiling or roof construction. IRC Sec R807.

Energy/Ventilation

- 1. The plans shall show in sufficient detail all pertinent data and features of the building and the equipment and systems including, but not limited to: design criteria, exterior envelope component materials, U-factors of the envelope systems, R-values of insulating materials, size and type of apparatus and equipment, and equipment controls. Energy code forms should be incorporated into the construction drawings.

You can obtain proper forms and detailed instructions at <http://www.energy.wsu.edu/BuildingEfficiency/EnergyCode/2015EnergyCode.aspx#EnergyCodeWorksheets>

- 2. Show compliance with the ventilation requirements of IRC Sec M1507.

Any structures within designated flood areas as determined by City of Kent Public Works must comply with IRC Sec. R322.

Other Permits

Other permits such as water meter and sewer connection may be required. Fees for these permits may change and are not determined until application is made for that specific permit.