Converting a Garage to Residential Use

How do I Apply?
Submit a completed application package to the Permit Assistance Center with the applicable fee. Complete package requirements are a master application and a residential permit application.

Review Process and Timing
A permit may be issued over the counter if the building plans can be approved and if the number of bedrooms has not increased beyond the number on the approved septic permit.

What information is required?
Plans and information demonstrating how the new space will meet the International Residential, Plumbing and Mechanical Codes as adopted in Thurston County Ordinance Title 14 as well as the Washington State Energy and Ventilation Code.

The following information should be included:

- Floor framing (where used)
- Garage door in-fill framing.
- Windows
- Insulation – walls, floors, ceiling, slab
- Mechanical Equipment Separation
- Ventilation

The following information may be used in your plans. Projects are unique and not all code information necessary to complete your plans may be included in this handout.

Floor Framing
The slab on grade may be carpeted or a raised floor framing may be used. Insulation must be added or component performance calculations must be provided.

Framed floors shall have a 6 mil plastic laid on the slab. Seams shall be lapped 12” and then extend up the walls 12” or up to the depth of the joist which ever is less.

Untreated wood 2x4 sleepers or beams with posts may be used to support the joist. A positive post to beam connection, and connection of the joist to the sill or ledger is required. Blocking is required at all bearing points.

Filling in the Garage Door Opening
There are several methods used to in-fill the garage door opening.

- Using a 4x or 6x pressure treated sill that is anchored to the existing slab. Most siding cannot be installed within 6” of soil or concrete that is subject to water splash. Metal flashing can be used for the first 6” adjacent to grade.
- Build a 6” stem wall from concrete or concrete masonry units (CMU). Drill and epoxy #2 bar 1” deep at 24” on center to connect the stem wall to the slab. The rebar shall extend 5” into the stem wall and CMU shall have the cells, containing rebar, filled with concrete.

A ½” horizontal rebar shall be installed within 1½” of the top of the wall and at the top of the CMU bond beam or form block. Where a stem wall exists for the return panels, the concrete should be roughed before pouring concrete.

Windows

If the window sizes will change, provide a scaled floor layout, noting the window sizes, the window header sizes, and distance to any doors.

The inspector will verify compliance with egress and window safety requirements on site. Please contact an inspector or plans examiner if you are unsure about the requirements.

Insulation
Prescriptive insulation values or the Thurston County specified alternate must be used unless a Washington State Energy code, component performance calculation is submitted.

- Walls: R-21 Walls that were previously sheet rocked are required to comply unless a component performance calculation is used.
Wood 2x’s may be added to increase the depth of the existing wall(s).
- Ceiling: R49
- Floors: R-30
- Slabs on grade: R10 on the exterior of the slab, R-21 walls on the inside of the stem walls.

**Outside Air Ventilation**
An outdoor air inlet equal to four square inches in each living area shall be provided. The doors to the space shall be undercut ½ inch. Where bathrooms or kitchens are added to the space, a whole house ventilation fan must be provided.

**Equipment Ventilation**
Liquid- and solid-fuel-burning appliances need air for fuel combustion, draft hood air dilution, and ventilation for the appliance room.

The current construction methods create buildings of unusually tight construction requiring combustion air to be obtained from the outside.

The outside dimensions of a vent are not the measure of a vent’s air capacity. Unless marked on the vent, specified by the manufacturer or determined by actual measurement, the free area for metal vents is 75 percent of the opening and 25 percent of the opening for wood louvers.

Each opening shall have a free area of not less than 1 square inch per 4,000 Btu/h of the total input rating of all appliances in the enclosure within 12 inches of the ceiling and within 12 inches from the floor. A 65,000 BTU furnace would require 16.25-inch area of opening total. Roughly, a 4.5-inch square metal louver is required to obtain the roughly 4 inch square of free area required. A metal eight-inch square vent will provide adequate air for an 115,200 BTU furnace.

**Water Heater Pressure Relief**
The pressure and temperature relief piping must be extended to the outside. The pipe must terminate not more than 2 feet or less than 6 inches from finished grade.

**Inspections**
- Under floor framing
- Insulation
- Decking and wall framing - All electrical, plumbing and mechanical equipment that is to be concealed in the walls must be installed and inspected before the wall framing inspection.
- Insulation – Framed floors must be insulated to R-30. Slab on grade and stem walls less than 24” may be uninsulated provided that an equivalent attic area is insulated to R-49
- Final Inspection.

**Hours of Operation**
The Permit Assistance Center is open Monday through Friday from 8 a.m. to 12:30 p.m.

**I Still Have Questions…**
For additional information, speak with a staff member at the Permit Assistance Center. Contact information is listed below.