



## Inspection Checklist Residential Plumbing Final

This Inspection Checklist reflects code requirements of the 2015 International Residential Code (IRC), 2015 Uniform Plumbing Code (UPC), 2014 National Electrical Code (NEC) and the 2015 International Fire Code (IFC)

**Please verify the following before calling for a building final inspection**

### Permits and Plans

- Job Address is posted in a visible location (R319.1)
- Permit and approved plans are on site and accessible to the inspector. (R106.3/R105.7)
- Permit information is correct (address, permit number, scope of work, etc.)
- When a separate sewer or septic permit is required, confirm that it has been signed off by the authority or jurisdiction.
- Water service and storm drainage system has been inspected and signed off
- Review the notes from the previous plumbing inspections. Common notes might be that an air admittance valve has been installed which will require a grill to be installed at the location, or that shock arresters need to be installed at the final.
- When an irrigation system is installed check to see that a backflow prevention device has been properly installed and signed off by the AHJ.
- It is required to have adequate backflow prevention when the building has a fire sprinkler system unless an approved combination system is used per standards. (UPC 603.5.14) A Reduced pressure backflow preventer (RPBP) or an air-gap is required when there is a water supply to a hydronic heat boiler (UPC 603.5.10). If a backflow device such as an RPBP or DCVA is within the job site, verify that it has been tested and signed off (UPC603.2).

### Plumbing Vents

- Plumbing vents shall extend at least 6" above the roof and to be 10' away or 3' above windows that open. When doing a walk through, look down on the roof below and check for test plugs left in vent pipes. (UPC 906)

### Hose bibs

- All hose bibs shall have non-removable vacuum breakers of a self-draining type. Exterior hose bibs to have integral vacuum breakers and to be frost proof and caulked and secured at exterior walls. (UPC 312.8 & 603.5.7)
- Check water pressure at any hose bib to verify that it is 80 psi or less. If it is greater than 80 psi, a pressure-reducing valve is required. (UPC 608.2)

## Electric Water Heaters

- If a gas water heater has been installed which doesn't include any plumbing pipe modifications, it is a mechanical inspection and will be covered on the Residential Mechanical Final Checklist. If an electric water heater has been installed or a gas water heater including pipe modifications it will require a plumbing inspection.
- Temperature and pressure relief valve to be installed per manufacturer's instructions or listing. (UPC 505.2)
- The drain from the relief valve must be able to drain by gravity. No part of drain to be trapped. (UPC 608.5)
- The pipe for the drain to be hard and full sized, no flex connections or pex piping. (UPC 608.5)
- The drain needs to terminate outside the building 6" to 24" above grade and shall have a soldered/glued elbow as needed to direct the flow toward the ground or terminated at an approved drain. It may not be directly connected to a sanitary sewer. Retrofit water heaters may discharge 6"-24" off of floor when a relief drain is not available. (UPC 608.5)
- Vacuum Relief valves (UPC 608.7) Where a hot water storage tank or an indirect water heater is located at an elevation above the fixture outlets in the hot-water system, a vacuum relief valve shall be installed.
- Seismic strapping will be installed per two straps, 1 in lower 1/3 and 1 in upper 1/3 and 3/4" wide. Straps to be 22-gauge metal with strap ends lag bolted onto two different studs. (UPC 507.5)
- A water heater when installed in the normal path of a vehicle requires protection in the form of a wheel stop, bollard or by elevating. (UPC 507.13)
- Water heaters in attics, attic-ceiling assembly, floor-ceiling assembly, or floor subfloor assembly where damage may result from a leaking water heater, a watertight pan of corrosion resistant material shall be installed with a 3/4" drain that is piped to an approved location.
- Expansion tanks and combination temperature and relief valves. (UPC 608.3) A water system provided with a check valve, backflow preventer or other normally closed device that prevents dissipation of building pressure back into the water main, independent of the type of water heater used, shall be provided with an approved, listed, and adequately sized expansion tank.
- When a mechanical room has a floor drain or a standpipe to receive discharge from a condensate drain or water heater relief, a trap primer is required. The trap primer valve is accessible. Check to see that it is working by verifying water is in the trap. (UPC 1007)

## Plumbing Fixtures, Caulking & Drains

- Run water at all fixtures and check for leaks (UPC 105.2). The water temperature shall not exceed 120 degrees F on (UPC 408.3 Showers), (UPC 409.4 Bathtubs) & 110 degrees F on (UPC 410.3 Bidets)
- Fixture hot water control located on the left-hand side of the fixture or per manufacturer's installation instructions. On soaking tubs, the hot water control is required on the left side as seen from the inside of the tub. (UPC 417.5)
- Hand held sprayers at soaking tub valves shall default to the spout or be protected by another approved backflow device. (UPC 602.1 & 602.3)
- Motors on jetted tubs require access (UPC 409.6)
- All fixtures caulked watertight. (UPC 402.2)
- Water closets require a minimum 21" clear space in front and 15" measured from the centerline of toilets to the finished wall on either side. (UPC 402.5)
- Shower door openings require a minimum of 22" clear opening. (UPC 408.5)
- No underfloor cleanout to be located more than 20 feet from a crawl access door or trap door. (UPC 707.9)

### **Dishwashers**

- Dishwashers require an air gap. An air gap can be a deck mount or a Johnson tee type with required trim vent. (UPC 807.3) (With exceptions per manufacturer)
- Dishwashers are to be anchored to the countertop, typically with (2) screws. (UPC 313.5 & Manufacturer's installation instructions)

### **Insulation**

- Insulate all hot and cold water piping in unheated spaces to protect from freezing. (UPC 312.6) Installation in unheated areas to be minimum R-3. Water pipes in attics or exterior locations are required to have adequate provisions to protect from freezing, such as heat traced and insulated. (UPC 312.6)
- Insulation for hot water pipe, both within and outside the conditioned space, shall have a minimum thermal resistance (R-Value) of R-3.