

A HOMEOWNER GUIDELINE

The Colorado State Plumbing Statute section 12-58-113(2) allows the homeowner to perform plumbing work on their residence except if such residence is intended for sale or resale; or is rental property that is occupied or is to be occupied by tenants for lodging, either transient or permanent; or is commercial or industrial property.

General Information

The following information has been prepared to assist homeowners who will be doing their own plumbing installations on their own property (*see above section for further clarification*). Please read all of the information provided in this guideline and carefully consider each step after making a decision to install your own plumbing.

All plumbing or gas piping installations must be inspected prior to covering. All plumbing or gas piping shall be installed according to the requirements of the International Plumbing Code (IPC) currently adopted by the State with Colorado's exceptions and amendments. Copies of the IPC may be purchased through The International Code Council, Inc. Their phone number is 800-214-4321 and their web address is <http://www.iccsafe.org/>. Copies may also be obtained from a library in your area and many book stores.

It is the homeowner's responsibility to obtain the necessary codebooks and to read and understand each section of the code that pertains to the type of plumbing work that is being installed.

Permits shall be obtained PRIOR to commencing work on your plumbing or gas

piping system in compliance with state statute 12-58-114.5. The permit application form can be obtained from the Plumbing website: www.dora.state.co.us/plumbing or by calling the Examining Board of Plumbers office at (303) 894-2985. In addition, permits may be purchased by credit card through the on-line permit system (note the web address above.)

The permits vary in cost depending on the valuation of the work being installed including actual cost of materials and labor (labor must be figured in although you are doing the work yourself).

The cost of the permit provides for two inspection visits (a third if an underground inspection is required). If your home will have plumbing installed under a slab or concrete floor of any type, this will require an **underground inspection**. There is no additional fee for the underground inspection if it is required (see back of this page for specifics on underground inspections).

The **second inspection** is called a rough-in inspection. It consists of all piping of the drain, waste and vents, all water piping, gas piping and any other piping that may be covered *after* approval. **THIS INSPECTION OCCURS PRIOR TO THE DRYWALL INSTALLATION.**

The **third and final inspection** will be performed after the installation of all plumbing fixtures. At this point, the water needs to be turned on and all fixtures operational, including the waterheater and gas (see back of this page for details on rough-in and final inspections).

If an inspection fails to meet the code requirements, a reinspection fee will be charged (the current reinspection fee will be noted on

the inspector's rejection / correction notice). It is the responsibility of the homeowner to make the proper corrections.

State inspections include all plumbing and gas piping located inside the house and up to five feet or the first joint outside of the building. Inspections do not include a mechanical inspection, (i.e., furnaces, boilers, air conditioning, or any duct work or vents for the same - except domestic water heaters and water heater flues, and backflow preventers for boilers).

General Notes From The Inspector

- The plumbing inspector is not authorized to correct, design, layout or install the plumbing system for the homeowner.
- The inspector will need access to all plumbing installations (key, gate combination, ladder if installation requires its use, etc.)
- Written directions to the property are required (on the permit form) a map is optional.
- Only the homeowner issued the permit can request the inspections and is allowed to perform work. Do not allow a contractor to perform work under your permit. If you hire a plumbing contractor, the master plumber will take out the permit and be fully responsibility for all work performed.
- All fixtures must be listed as an approved material in the code. Fixtures without a listing will not be approved.
- Site built shower pans require a separate permit (pulled by the installer), inspections before covering and constructed in accordance with Section 417 of the IPC.

LISTED ON THIS PAGE ARE COMMON GUIDELINES FOR INSTALLING EACH PHASE OF PLUMBING:

IMPORTANT NOTE: All residences (including small or seasonal cabins) must have a minimum number of fixtures per Colorado's current code (See Table 403.1 of the IPC) as follows: One water closet, lavatory, bathtub or shower, one laundry tray or automatic washing machine standpipe and one kitchen sink.

THE UNDERGROUND INSPECTION
The plumbing inspector will check the following:

- All material must be listed as an approved material in the code including glue and primer
- Do not mix ABS and PVC pipe materials
- Proper sizing of all drain waste & vents
- Proper use of fittings - use all long turn fittings - sanitary tees cannot be used on their backs except for dry vents only Table 706.3
- Proper grade of piping - minimum 1/4" per foot of fall up to 3" or 1/8" on 3" or larger
- Protection of piping - where it penetrates concrete, wrap with approximately 1/2" insulation (both water pipe and DWV)
- Proper cleanout location and accessibility
- All pipe & fittings must be exposed and have either a 10' head of water test or a 5 PSI air test at time of inspection

THE ROUGH-IN INSPECTION
The plumbing inspector will check for the following:

- All material must be listed as an approved material including glue and primer
- Do not mix ABS and PVC pipe materials
- Proper sizing of all drain waste & vents (DWV) and water pipe
- Proper use of fittings - use all long turn fittings - sanitary tees cannot be used on their backs except for dry vents only (see table 706.3)
- All pipes & fittings protected with approved nail plates
- Approved hangers and supports with proper spacing
- Proper water pipe material - either PEX, copper or CPVC and approved CPVC orange glue with purple primer
- Proper cleanout location and accessibility
- All DWV pipe and fittings must be exposed and have either a 10' head of water or a 5 PSI air test at time of inspection
- Water pipe test at working pressure or 50 PSI for 15 minutes
- All concealed P traps shall be installed for rough-in.
- All tub and shower units/pans installed
- All tub and shower valves installed

All plumbing or gas piping installations must be inspected prior to covering. All tests shall be performed by the permit holder.

THE GAS PIPE INSPECTION
The plumbing inspector will check for the following:

- Proper material used: Black iron pipe, screw or welded joints
- Proper pipe joint compound
- Properly sized for BTU demand load
- Proper support & hangers
- Approved shut off valves
- Approved appliance connectors
- Water heater flue - type B vent & cap
- A 10 PSI air test for 15 minutes

THE FINAL PLUMBING INSPECTION
The inspector will check the following:

- All fixture traps installed
- All fixtures set with water turned on
- Water shut-off valve on all fixtures
- All fixtures have proper spacing
- Air gap on dishwasher and other fixtures
- Cleanout covers & accessibility
- Approved fixtures
- Water heater temperature and pressure relief valve drain line piped to an approved drain or outside the building indirectly.
- Back flow prevention device on boiler water supply
- Combustion air for water heater
- Water heater pan under water heaters on a wooden floor
- Gas pipe outlets not hooked to an appliance shall be capped