

# City of Scott City

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## Residential Fuel Gas Piping Inspection Checklist

This inspection checklist reflects the code requirements of the 2015 International Residential Code (IRC)

Please verify the following before calling for a Fuel Gas Piping inspection.

Before any system of fuel gas piping is covered, concealed or put into use it must be tested, inspected and *approved* by the *building official* to ensure that it is gas tight. (IRC G2415.20)

Inspection, testing and purging per IRC G2417.

### Permits and Plans

- Job address is posted in a visible location. (IRC R319.1)
- Manufacturer's installation information is available on site if needed. (IRC R106.1.2)
- Confirm that all new gas appliances are included on the permit. (IRC R106.1.1)

### General

- Piping is supported per Table G2424.1. (IRC G2418.2)
- Gas piping is sized per methods in IRC Section G2413.3.
- Bends in plastic piping are made according to manufacturer's instructions. (IRC G2416.3)
- The radius of a bend in plastic pipe is not less than 25 times the inside diameter of the pipe. (IRC G2416.3)
- Gas piping is not installed in or through a ducted supply, return or exhaust. It is not installed in a clothes chute, chimney or gas vent, dumbwaiter or elevator shaft. (IRC G2415.3)
- In a multi-family dwelling, gas piping does not extend through a unit other than the one it is serving. (IRC G2415.3)
- Electrical bonding of gas piping is per IRC G2411.1.
- Gas piping is *not* used as a grounding electrode. (IRC G2410.1)

### Materials and Installation

- Steel (galvanized) or black pipe is approved. (IRC G2414.4.2)
- Cast iron pipe is not used. (IRC G2414.4.1)
- Corrugated stainless steel tubing (CSST) may be used as long as it is listed in accordance with ANSI LC 1/CSA 6.26. (IRC G2414.5.3)
- Polyethylene plastic pipe (PE) may be used as long as it conforms to ASTM D 2513 and is marked "Gas" and "ASTM D 2513". (IRC G2414.6)

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- LP gas piping has dielectric fittings separating above ground and underground connections. (IRC G2415.10)
- Piping other than steel pipe that passes through bored holes in framing members less than 1.5” from the face of the framing members are protected by steel nailing plates that extend 4” on either side of the framing member. (IRC G2415.7)
- Above ground gas piping outdoors is elevated at least 3.5” above ground. (IRC G2415.9)

### **Joints in Pipe or Tubing**

- Ferrous pipe is threaded or welded. (IRC G2414.10.1)
- PE or PB plastic piping are heat fused or mechanically connected per the manufacturer’s instructions. Heat fused fittings are marked “ASTM D 2513”. (IRC G2414.11)
- Unions and bushings are not installed in concealed locations. Only threaded elbows, tees, couplings, brazed fittings, or welded fittings are allowed in concealed spaces. (IRC G2415.5)

### **Underground**

- Metal pipes installed underground are protected from corrosion. (IRC G2415.11)
- Pipe protective wrapping must be factory applied. (IRC G2415.11.2) Exception: Field wrapping is okay for joints according to manufacturer instructions.
- Gas piping is *not* used as a grounding electrode. (IRC G2410.1)
- Gas piping is installed at a minimum depth of 12” below grade. (IRC G2415.12)
- A minimum of 18 AWG yellow tracer wire is installed adjacent to underground nonmetallic piping. Wire terminates above ground at each end of the nonmetallic piping. (IRC G2415.17.3)
- Nonmetallic pipe installed outdoors is only underground. (See exceptions). (IRC G2415.15.1)

### **Gas Piping Under Building or Slab**

- Gas piping is not buried under a slab within the building. The exception is that it is allowed below grade under a building if sleeved in steel, iron or plastic pipe conduit designed to withstand the superimposed loads and extends at least 4” to outside of the building. (IRC G2415.14)
- The interior end of the conduit enclosing the gas pipe is sealed to prevent any gas leaks in the pipe from entering the building. (IRC G2415.14.1)
- The exterior end of the conduit is a minimum of 4” outside the building and is vented above grade and installed so as to prevent the entrance of water and insects. (IRC G2415.14.1)
- Conduit is protected from corrosion. (IRC G2415.14)
- Gas piping does not penetrate foundation walls at any point below grade. (IRC G2415.6)

### **Shutoff Valves**

- Main shutoff is accessible and ahead of the meter. (IRC G2420.2)

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- For a common system serving more than one building, shutoff valves are installed outdoors at each building. (IRC G2420.3)
- All shutoffs are accessible. (IRC G2420.1.3)
- Each appliance has a shutoff. Appliance shutoffs are located within the same room as the appliance served and are within 6 feet of the appliance. The shutoff is installed upstream from the union, connector or disconnect device it serves. (IRC G2420.5)
- Shutoff valves located in the firebox of a fireplace are installed according to the appliance manufacturer's instructions. (IRC G2420.5.1)

### **Inspections & Tests**

- Test gauge has a high reading not more than 5 times the test pressure. (IRC G2417.4)
- LP Gas tested at least 1.5 times the operating pressure but not less than 3 psi for 10 minutes minimum. (IRC G2417.4.2)
- Test with air, nitrogen, carbon dioxide or an inert gas. Oxygen is not allowed. (IRC G2417.2)
- Before turning on the gas, the system has been checked to determine that there are no open fittings or ends and that all valves at unused outlets are closed and plugged or capped. (IRC G2417.6.2)
- Detect leaks with an approved type gas detector or soap suds. (IRC G2417.5.1)
- Any defective piping found is replaced, not repaired. (IRC G2414.7)
- Where new branches are installed to serve new appliances, testing is required only for new pipe added to an existing system. (IRC G2417.1.3)
- Appliances and equipment that are not to be included in the test are either disconnected from the piping or isolated by blanks, blind flanges or caps. (IRC G2417.3.2)

### **Appliance Fuel Connections**

- Connector is not concealed within or passes through walls, floors, partitions, ceilings or appliance housings. (IRC G2422.1.2.3)
- The maximum length of the connector does not exceed 6 feet. (IRC G2422.1.2.1)
- Connector is sized for the total demand of the connected appliance. (IRC G2422.1.2.2)
- Connectors for external use are listed, labeled and installed in accordance with the manufacturer's installation instructions. (IRC G2422.1)

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