



## INSPECTION CHECKLIST Residential Fuel Gas Piping

July 2005

### 2003 Codes

**Please verify the following before calling for a gas pipe inspection.** These are some of the most common inspection items. This is only a general list and does not represent the full body of the 2003 International Residential Code (R = Residential, M = Mechanical, G = Gas) or the 2003 International Fuel Gas Code as referenced and modified by the 2003 IRC. IRC references are in parentheses ( ) and IFGC references are in brackets [ ].

#### Permits and Plans

- Job address is posted in a visible location. (R321.1)
- Permit and approved plans are on site and accessible to the inspector. (R106.3.1)
- Permit information is correct (address, permit number, scope of work, etc). (R106.1)
- Manufacturer's installation information is available if needed. (R106.2)
- Confirm that all new gas appliances are included on the permit. (R106.1)

#### General

- Permit information is correct (address, permit number, scope of work, etc). (R106.1)
- Main shutoff is accessible and ahead of the meter. (G2420.2), [409.2]
- Pipe is supported per Table G2421.1. (G2418.1, G2421.1), [407.1]
- Gas piping is sized per methods in Tables G2413.4 (1)-(6). (G2413.3), [402.3]
- Pipe must be new or previously used for gas piping only. (G2414.2), [403.2]
- Bends in plastic are per manufacturer's instructions. (G2416.3), [405.3]
- Radius of bends in PE pipe are not less than 25 pipe diameters. (G2416.3), [405.3]
- Gas pipe does not run through air ducts, chimneys, vents or plenums. (G2415.1), [404.1]
- Under floor or outdoor piping is a minimum 3 ½ inches above ground or roof. (G2415.7), [404.7]
- CSST (Corrugated Stainless Steel Tubing) piping requires shielding devices per manufacturer. (G2414.5.3), [403.5.4]
- Copper pipe requires nail plate protection if less than 1 inch from stud face. (G2415.5), [403.5]
- Ferrous metal piping exposed in external locations is protected from corrosion in a manner satisfactory to the code official. (G2415.8), [404.8]

#### Materials and Installation

- Steel (galvanized) or black pipe is okay. (G2414.4.2), [403.2]
- Ends of pipe are deburred. (G2414.7), [403.7]
- Cast-iron pipe not used for gas. (G2414.4.1), [4.3.4.1]
- Corrugated stainless steel tubing (CSST) is okay when installed per manufacturer's instructions. (G2414.5.3), [403.5.4]
- Except for black steel pipe, exposed piping is identified by a yellow label marked "Gas" in black letters. (G2412.5), [401.5]

#### Joints in Pipe or Tubing

- Ferrous pipe is threaded or welded. (G2414.10.1), [403.10.1]

- Connections for copper tubing can be done by brazing or by approved gas tubing fittings. (G2414.10.2), [403.10.2]
- Flared joints okay in nonferrous pipe & tubing only. (G2414.10.3), [403.10.3]
- PE or PB plastic piping are heat fused or mechanically connected per the manufacturer's instructions. Heat fused fittings are marked "ASTM D2513". (G2414.11), [403.11]
- No unions or bushings at concealed locations. (G2415.3), [404.3]
- Right/left couplings are okay only in accessible locations. (G2415.3), [404.3]

### Inspections & Tests

- Test gauge has a high reading not more than 5 times the test pressure. (G2417.4), [406.4]
- LP Gas tested at least 1 ½ times operating pressure but not less than 3 psi for 10 minutes minimum. (G2417.4.1) 406.4.1]
- Test with air, nitrogen, carbon dioxide or an inert gas. (oxygen not allowed) (G2417.2) [406.2]
- Turn off or cap all outlets before first turning on gas. (G2417.6.2) [406.6.2]
- Detect leaks with an approved type detector or soap suds. (G2417.5.1) [406.5.1]
- Defective piping shall be replaced and not repaired. (G2414.7) [403.7]
- Testing is required only for new pipe added to an existing system. (G2417.1.3) [406.1.3]
- Equipment that is not to be included in the test is to be disconnected or isolated by blanks, blind flanges or caps. (G2417.3.2) [406.3.2]

### Underground

- Ferrous pipe must be protected from corrosion. (G2415.8) [404.8]
- Pipe protective wrapping must be factory (machine) applied. (G2415.8.2) [404.8.2]  
Exception: Field wrapping okay at joints. (G2415.8.2, Exception) [408.8.2, Exception]
- Above grade metallic gas piping requires bonding. (G2411.1) [310.1]
- Gas piping not used as a grounding electrode. Ferrous underground pipe connected to ferrous above ground requires a dielectric fitting. (G2410.1) [309.1]
- Minimum burial depth is 12 inches. (G2415.9) [404.9]
- Individual gas lines to lights, BBQ's, etc. may have 8 inches of cover if not susceptible to damage and approved by authority having jurisdiction (AHJ). (G2415.9.1) [404.9.1]
- 18 AWG yellow insulated copper tracer wire run with PE or PB piping. (G2415.14.3) [404.14.3]
- PE or PB require ferrous riser before going vertical. (G2415.14.1) [404.14.1]  
Exception: May terminate outside above ground in accordance with manufacturer's instructions or above ground in a sleeved wall head adapter. (G2415.14.1, Exceptions) [404.14.1, Exceptions]

### Gas piping Under Building or Slab

- Gas piping is not buried under or in a slab within the building. Exception: Okay below grade under a building if sleeved in schedule 40 steel, iron, or plastic pipe conduit extending at least 4 inches to outside of building. (G2415.11) [404.11]
- The interior end of the conduit enclosing the gas pipe is sealed. (G2415.11) [404.11]
- The exterior end of the conduit is a minimum 4 inches outside of the building, vented above grade and installed so as to prevent the entrance of water and insects. (G2415.11) [404.11]
- Conduit is protected from corrosion if not plastic. (G2415.11) [404.11]

### Shutoff Valves

- All shutoff valves are accessible. (G2420.1.3) [409.1.3]
- Outdoor shutoff is required for all buildings. (G2420.3) [409.3.2]
- All meters have a shutoff on the supply side. (G2420.2) [409.2]
- Accessible shutoff required within 6 feet of an appliance. (G2420.5) [409.5]

- Shutoff valves installed inside firebox of fireplace are installed per manufacturer's instructions. (G2420.5.1) [409.5]

### **Appliance Fuel Connectors**

- Minimum diameter is not less than the inlet of the appliance. (G2422.1.2) [411.1.2]
- Connector is not concealed within or pass through walls, floors, partitions, ceilings or appliance housings. (G2422.1.2) [411.1.2]
- Maximum length is 3 feet except for range or domestic clothes dryers, which may be 6 feet. (G2422.1.2) [411.1.2]
- Connectors are sized for the total demand of the appliance. (G2422.1.2) [411.1.2]
- Connectors for external use are listed, labeled and installed in accordance with the manufacturer's installation instructions. (2422.1) [411.1]