



**Design Criteria**

**Heating, Ventilating and Air Conditioning – 23**

Design Criteria Applies to:     Building System                       Building Exteriors                       Building Interiors  
                                           Planning & Development                       Site Improvement                       New Construction

**23 11 23 Gas Piping**

**This section addresses** design requirements for replacement of domestic cooking gas piping in buildings.

**General Criteria**

**Design**

1. Replacement of gas piping inside the building is usually of both mains and risers from the outlet of the gas meter (including replacement of meter outlet shutoff valve) up to the topmost apartment gas range (including range flexible connector). Care must be taken that no existing gas piping that is to remain is shutdown. This may mean that in some cases, the gas main can not be replaced. Where the gas main is not replaced, gas risers should be replaced from a new riser control valve installed downstream of the existing control valve.
2. The direction being taken by the Authority is to install domestic gas piping exposed in apartment kitchens whenever possible. Where existing gas risers are exposed, they are to be removed and replaced in the same location. Where existing gas risers are concealed, they are to be abandoned and new exposed gas risers installed.
3. Where an existing riser serves back-to-back kitchens, it should be replaced with two (2) separate risers.
4. Piping sizing to be as per NFPA 54 – National Fuel Gas Code with the total length to include the length of the riser.

**Construction**

1. Piping material shall be Schedule 40 black steel pipe as per 22.11.00.
2. Meter outlet valves and riser control valves shall be iron body plug valves having lockwing for closed position and be of type approved by the Utility serving the area. Valves shall be:

AY McDonald #10687B  
 Mueller #H-11118-B  
 Jomar #T-175-LW

3. Equipment stopcocks 2 inches and smaller shall be bronze standard port one piece ball valve having stop check with valves 3/4 inch in size having lever handle, and larger sizes having square (or "T") head. Stopcocks 3/4" in size shall be tested as per ANSI Z21.15 at 3 psi for one hour, AGA/CSA certified and MEA approved. Stopcocks to be:

Legend T-3000 for 3/4 inch size,  
 Legend T-3001 for larger sizes.

4. Flexible connectors shall be **48 inch** long stainless steel, with steel (zinc plated) fittings. Ends of connector shall allow approximately 3/8 inch longitudinal movement of fitting. Flexible connector shall

comply with ANSI Z21.24, be approved by the Board of Standards and Appeals (BSA) or MEA, and the AGA or CSA for use as range connectors. Connector shall physically bear permanent identification indicating the manufacturer's name and the BSA/MEA and AGA/CSA approvals. Connectors to be

Brasscraft,  
Dormont  
Robert Mfg  
or equal.

5. Branch take-offs from main to riser, and in apartments from risers, shall be made with two elbow swing.
6. On branch take-offs to risers in cellars, right and left coupling and a "bull tee" is to be installed between riser control valve and riser.
7. Portion of piping passing thru slab opening or sleeve shall be protected against corrosion with wrapped around 2" wide cold applied tape such as Tyco Adhesives No. 826 or equal. Before cold tape is applied provide a coat of primer of same manufacturer as tape.
8. All new connections to gas ranges shall be with new 3/4 inch stopcock installed on rigid pipe as close to the riser as practical.

**Precautions**

1. No shutdown or restoration of gas piping service, or portion thereof, is permitted if Contractor is unable to gain access to each and every apartment or any appliance served by this gas piping.
2. New gas piping shall be put in service the same day as written confirmation is issued that the line has received Building Department "Blue Card" or acceptance or as otherwise authorized by the Housing Authority. Gas piping not charged within two (2) business days of receiving certification, unless authorized by the Authority, may be required to be retested at the Contractor's expense, including Authority expenses, as directed by the Authority.

