



BUILDINGS BULLETIN 2017-001

Technical

Supersedes: None

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First Deputy Commissioner

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Purpose: This document clarifies the extent of testing required for alterations to existing fuel gas piping systems. Such alterations may be limited to a single branch, or may affect the entire system. This document shall not override requirements of the New York City Fuel Gas Code.

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|--------------------|-----------|-------------|-------------|-------------|
| Related | FGC 107.2 | FGC 406 | FGC 406.1.4 | FGC 406.4 |
| Code/Zoning | FGC 107.3 | FGC 406.1.2 | FGC 406.2 | FGC 409.3 |
| Section(s): | FGC 404.5 | FGC 406.1.3 | FGC 406.3 | FGC 406.6.3 |

Subject(s): Fuel gas; Limited gas alteration; Gas piping system, replacement; Gas piping system, enlargement; Gas piping system, addition; Existing building, gas piping system.

I. Effective Date

Effective Immediately

II. Applicability

This document shall apply only to existing buildings that have lawfully installed gas piping systems with distribution pressures no higher than ½ psig. The examples and scenarios included in this document are only meant to be representative of, but are not intended to be all-inclusive of actual building conditions.

III. Background

The New York City Fuel Gas Code (FGC), in Sections 107.2 and 107.3, describes the required inspections and, testing which must be successfully completed prior to placing gas piping into service. Section FGC 406.1 requires gas piping systems be tested as a complete unit. Additionally, when a new branch is added to an existing gas piping system, which was previously tested and placed into service, a complete unit test must be performed. However, such a complete test unit may be less than the entire gas piping system, given that the altered and affected portions can be isolated from the unaltered existing piping. Lastly, after an addition, alteration, or repair, the affected piping must be tested.

In multi-tenant buildings provided with a single gas meter, Section FGC 409.3 requires separate shutoff valves to be provided for each tenant space. Subsequent to an alteration to the gas piping system within a single tenant space and downstream of the shutoff valve, testing may be isolated to the individual tenant space, as described in this bulletin. For buildings in which individual shutoff valves are not present, pursuant to Section FGC 409.3, more extensive gas pressure testing shall be required.

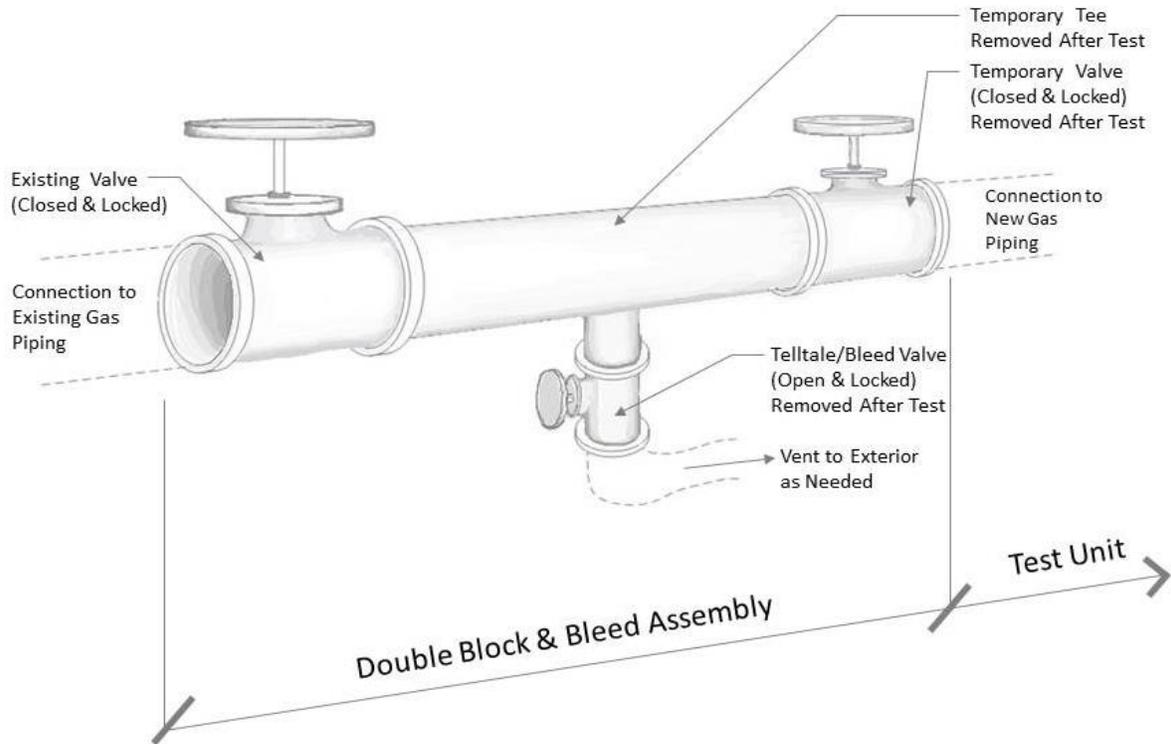
IV. Specifics

- (A) Where used in this bulletin, terms shall be understood to be defined in, or have the same meaning as indicated by their use in the New York City Fuel Gas Code. In addition, the following shall apply:
- a. Branch – a section of gas piping downstream from a riser, leading to appliances or equipment on no more than two consecutive floors; a branch shall be taken off a riser with no less than two (2) elbow swings as indicated in Section FGC 404.5.
- (B) Section 406 of the Fuel Gas Code provides criteria as follows:
- a. FGC 406.2 – Acceptable test media
 - b. FGC 406.3 – Test preparation, including provisions for:
 - i. Examination of pipe joints;
 - ii. Temporary restraint of expansion joints;
 - iii. Isolation of appliances and equipment;
 - iv. Disconnection of appliances and equipment;
 - v. Isolation of valves;
 - vi. Safety, including the purging and flushing of the piping system.
 - c. FGC 406.4 – Test pressure measurement, including:
 - i. Test duration according to pressure;
 - ii. Standards for non-mercury, analog, and digital gauges.
 - d. FGC 406.4.5 – Witnessing of gas-piping tests.
- (C) The New York City Fuel Gas Code uses the term *isolated* within Section 406.3 Test preparation. Consistent with the FGC, this bulletin uses the term *isolated* and its variations to indicate that a portion of the gas piping system is isolated by a double block consisting of two valves installed in series with an intermediate telltale/bleed valve. Refer to *FIGURE 1* of this bulletin. Alternatively, the test unit may be isolated by disconnecting the new and altered piping from the existing piping and installing a temporary nipple/coupling and cap. Refer to *FIGURE 2* of this bulletin. A single valve, regardless of its pressure rating, shall not be used to isolate the test unit.
- Subsequent to the successful pressure testing of the new piping, the isolation fittings shall be removed and the piping reconnected to the existing gas piping system. Such connection between the existing and new piping shall be subjected to a leak check in accordance with Section FGC 406.6.3.
- (D) In addition to the testing requirements described in this bulletin, building Owners may be subject to further requirements of the gas utility which must be fulfilled prior to the gas system being re-energized.

EXAMPLES

- **Connecting a New Branch**
Where a new branch line is directly connected to an existing riser, the testing unit shall be understood to include the new pipe and any section of existing pipe which was compromised, or shut off.
- **Extension of Existing Branch Piping**
Where an existing branch has been extended within a single tenant space and downstream of a shut-off valve for such tenant space, the testing unit shall include both the new and existing piping within the tenant space, up to the shut-off valve.
- **Addition to Existing Piping – Individual Meter**
Where a space in a multi-tenant building has an individual gas meter, and for which an alteration is made to such system, the testing unit shall include the new and existing piping from the tenant space back to the outlet side of the meter.

FIGURE 1: Isolation via Double Block & Bleed



NOTE: In addition to the fabricated assembly shown in FIGURE 1, a single unit manufactured as a double block and bleed may be used for testing. Such unit shall be used in accordance with the manufacturer's specifications and rating.

FIGURE 2: Isolation via Cap

