

NYC GAS WORK: *Safety & Legislation*

presented by

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2010

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COURSE DESCRIPTION

- This course will provide an overview of local legislation (NYC Local Laws 150, 151, 152, 153, 154, 157, 158, and 159 of 2016) and qualification requirements for those doing gas work, final inspections of gas work, leak detection and hazard procedures. The discussion will include reference to upcoming Departmental requirements necessitated by these new laws and how these requirements correlate with the state's Public Service Commission, and local distribution companies specifically ConEd and National Grid.

LEARNING OBJECTIVES

At the end of the this course, participants will be able to:

1. Participants will discuss how contractors, plumbers, and building owners will be impacted by (NYC Local Laws 150, 151, 152, 154, and 159 of 2016) pertaining to gas piping systems.
2. Participants will review and interpret the upcoming legal qualification requirements to perform gas work.
3. Participants will discuss the development of natural gas alarm system standards and requirements of Local Law 157 of 2016.
4. Participants will review how the city, state, and local utility companies unite to respond to fuel gas emergencies in order to mitigate safety concerns and potential hazards..

NYC GAS LEGISLATION

"Gas safety is important for all New Yorkers, and this legislative package will resolve numerous regulatory oversights. These bills will help protect tenants in the event of an outage, and require greater information sharing between City agencies and gas utilities to enhance safety. Most importantly, these reforms will ensure both property owners and utility companies are accountable for keeping buildings safe." - **Mayor Bill de Blasio**

- 10 pieces of legislation signed into law 12/6/16
- New requirements for plumbers, building owners, and the Department

NYC LOCAL LAW 150 of 2016



On and after January 1, 2020
all work on gas piping systems
must be done by:

1. Licensed Master Plumber; or
2. Person with a gas work qualification; or
3. Person with a limited gas work qualification

***"Gas work" shall not include
periodic inspections***

NYC LOCAL LAW

150 of 2016 *(continued)*



Limited Gas Work Qualification (5 yrs)

Before 1/1/2019

- Individual submits satisfactory proof of at least six (6) months experience performing plumbing work under direct and continuing supervision of a licensed Master Plumber

After 1/1/2019

- Six (6) months experience, as above; and
- Completes 16 hour gas work training program; **or**
- Is an apprentice in plumbing, registered in an apprenticeship program approved by NYS Department of Labor; **or**
- Satisfies other requirement for demonstrating competence as established by rule.

NYC LOCAL LAW

150 of 2016 *(continued)*



Limited Gas Work Qualification (5 years)

16 Hour Gas Work Training Program

- To be established by DOB Rule
- Estimated promulgation
- Approved Course Providers
- Content Outline
 - Intro to gas piping
 - OSHA 1926 Overview
 - NYC Construction Codes
 - NYC Fire Code, Chapter 6 (Building Services and Systems)
 - Gas Testing
 - Gas Leak Detection
 - FDNY Emergency Response
 - Common Utility Processes & Procedures
 - Gas Work Hazards
 - Gas Work Violations

NYC LOCAL LAW

150 of 2016 *(continued)*

Gas Work Qualification *(no expiration)*

Before 1/1/2019

- Individual submits satisfactory proof as a registered Journeyman Plumber

Journeyman Plumber (§28-409)

- Minimum of five (5) years experience, with one year in NYC
- Working familiarity with Plumbing Code and technical standards
- Application of basic plumbing theory and trade skills
- Working knowledge of the tools of the trade
- Ability to draft diagrams and interpret drawings
- Completion of NYS recognized training program; **or**
- Affirmation of qualifications by employer/supervisor licensed Master Plumber

NYC LOCAL LAW

150 of 2016 *(continued)*



Gas Work Qualification *(no expiration)*

On or after 1/1/2019

- Demonstrated understanding, proficiency, & competency with gas work
 - Working familiarity and ability to apply Code requirements correctly
 - Application of skills relating to gas work on the job site
 - Working knowledge of the tools for gas work & ability to utilize tools properly
 - Ability to draft diagrams and interpret drawings

NYC LOCAL LAW

150 of 2016 *(continued)*



Gas Work Qualification *(no expiration)*

On or after **1/1/2019** (continued)

- Satisfies one or more of the following:
 - Is a registered journeyman plumber;
or
 - Has completed a plumbing apprenticeship program approved by NYS Department of Labor **and** at least one year of full-time plumbing experience; **or**
 - Has at least five years of full-time plumbing experience, with at least one year in NYC

NYC LOCAL LAW

150 of 2016 *(continued)*



Gas Work Qualification *(no expiration)*

Fees

- Registered Journeyman – **NO FEE**
- Applying concurrently for Journeyman & Gas – **NO FEE**
- Application for standalone Gas Work Qualification – ***fee may be established by rule***

Processing

- DOB NOW: *Licensing*

NYC LOCAL LAW

151 of 2016

Requires all* gas pipe final inspections to be performed by Buildings Department inspectors in the presence of the permit holder, Registered Design Professional, or Construction Superintendent.

- Effective **1/1/2018**
- Inspection performed after all permit work is completed
- Any defects are to be noted and corrected
- Final inspection report will confirm corrections

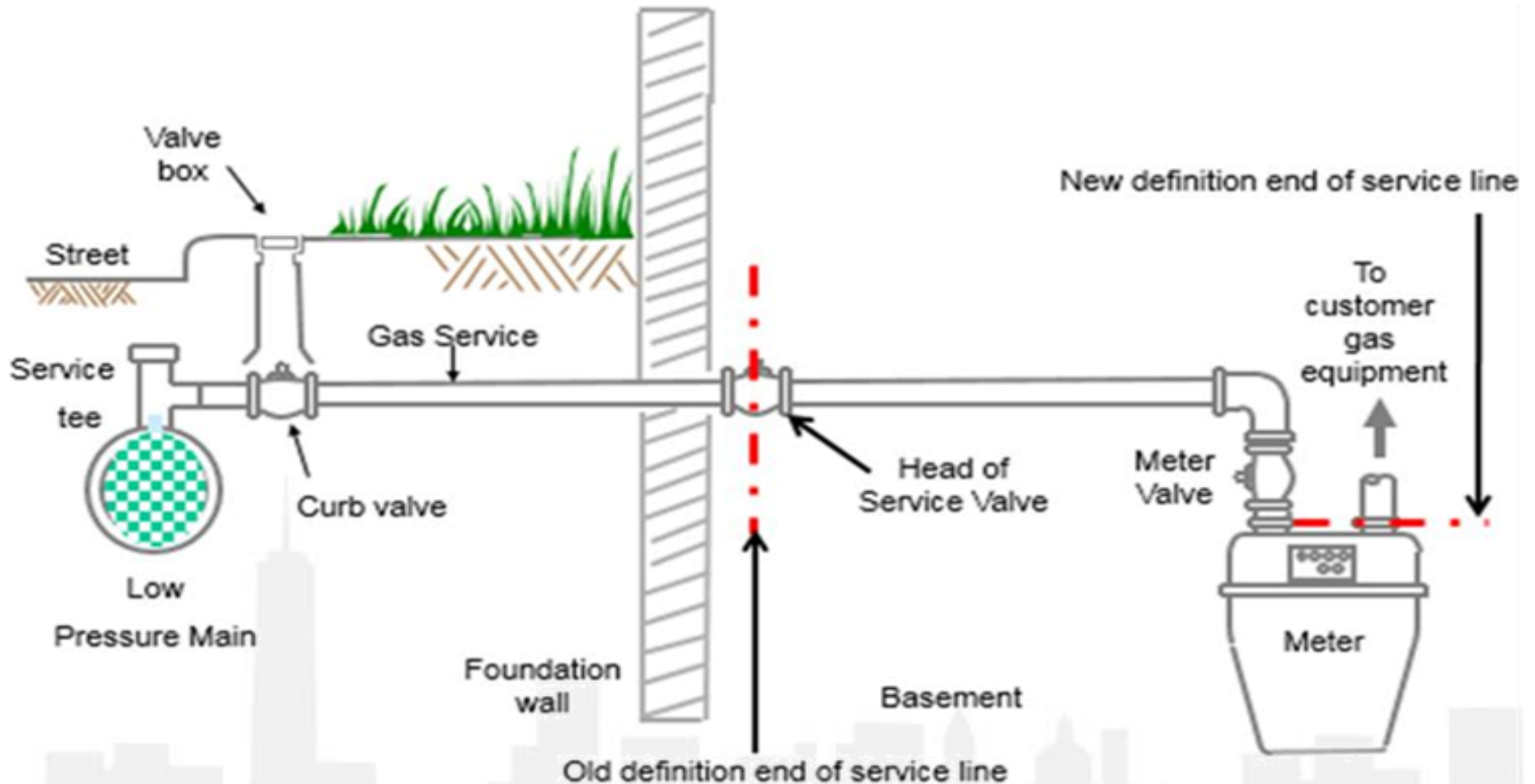
NYC LOCAL LAW

152 of 2016

Requires all gas piping systems in all buildings* - other than R3 - to be inspected at least once every five years

- Federal regulations have changed the definition of **Service Piping**
 - As newly defined, includes piping up to the gas meter
- NYS Public Service Commission may establish a new requirement related to the inspection of service piping
- Inspections **must** be performed by:
 - Licensed Master Plumber (LMP)
 - Individual under direct and continuing supervision of a LMP
 - Individual with qualifications established by Rule

NYC LOCAL LAW 152 of 2016



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JURISDICTIONAL PIPING REQUIREMENTS



nationalgrid

- The PSC order passed on **4/2017** makes the requirements for the data on the jurisdictional piping stricter than the **Local Law 152**
- All services **must** be verified as in National Grid's system and location
- All meters **must** be verified to be lawfully installed by the Utility
- Any remediation shall be tracked by the Utility
- **Must** be compliant with the cycle time set by New York State
- DIMP revision to match up with LL152

DATA CAPTURE AND RISK SOLUTION



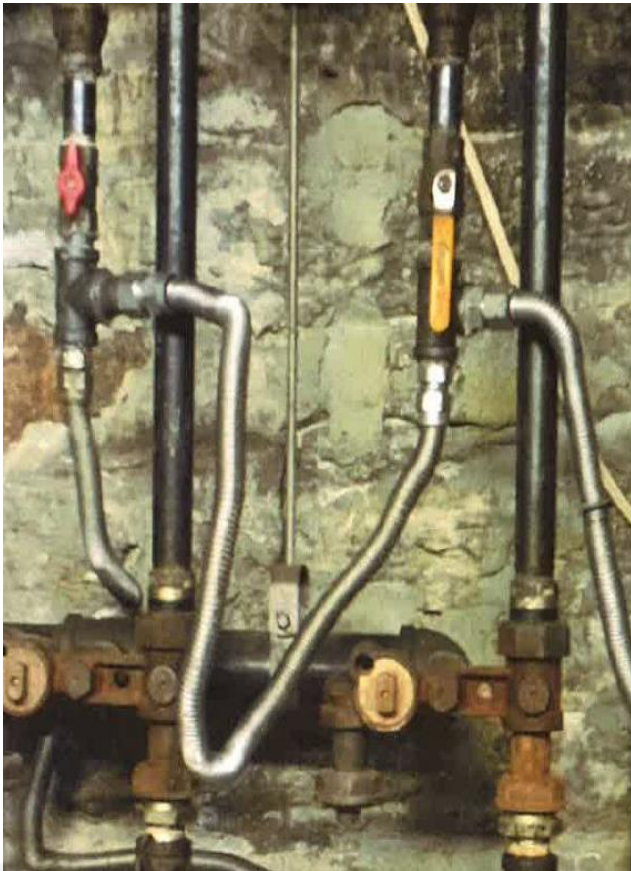
nationalgrid

- Bin number vs Premises
- Real-time data management
- Customer communications
- Drug and alcohol program check
- Link between CGI and application
- Required reports

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NYC LOCAL LAW 152 of 2016

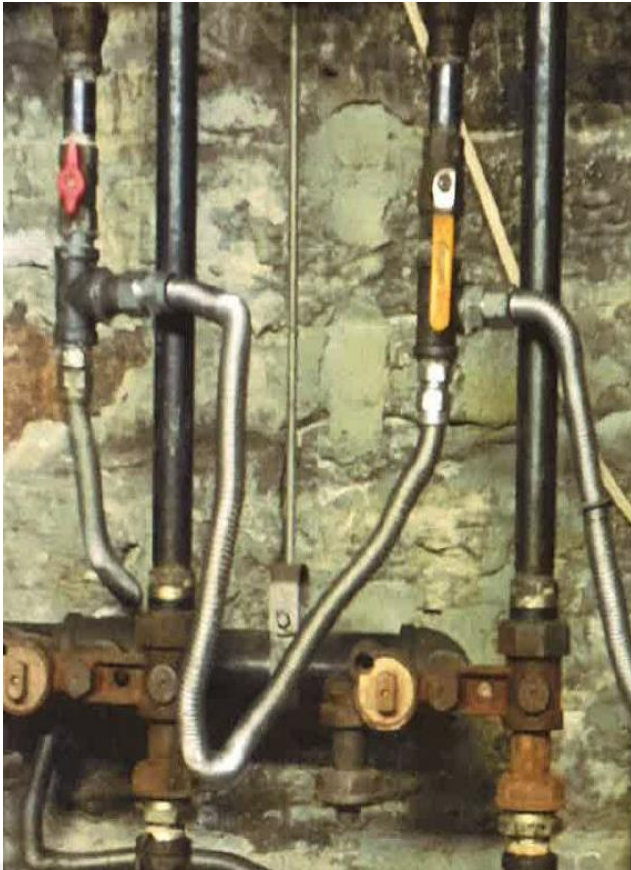


Inspection scope **must** include:

- All exposed gas lines from point of entry of gas piping into a building, up to individual tenant spaces
 - Includes the gas meter
- Inspectors should identify:
 - Atmospheric corrosion
 - Piping deterioration
 - Illegal connections
 - Non Code-compliant installations

NYC LOCAL LAW

152 of 2016 *(continued)*

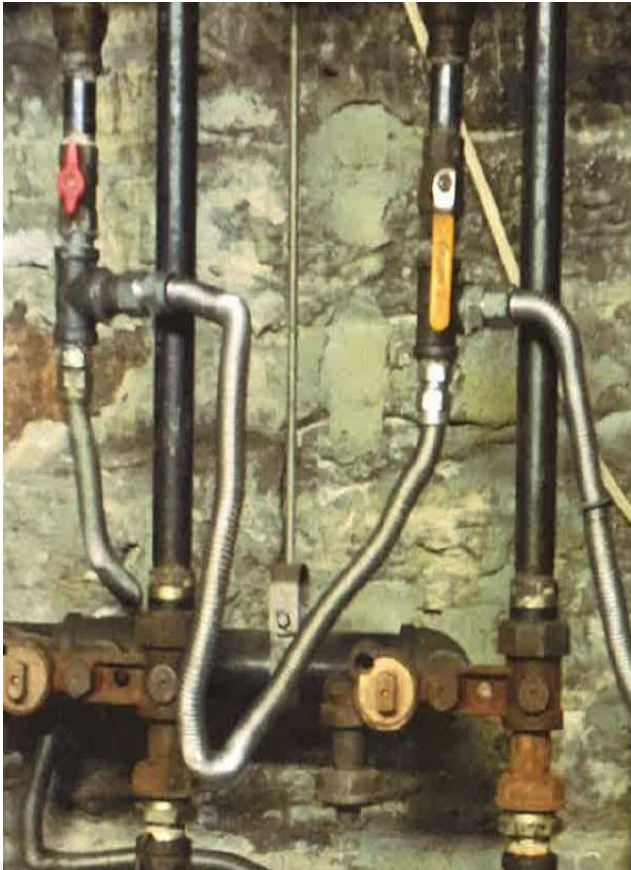


Inspection scope **must** include:

- In addition to exposed piping, the following must be tested with a portable gas detector:
 - Public spaces
 - Hallways
 - Corridors
 - Mechanical rooms
 - Boiler rooms

NYC LOCAL LAW

152 of 2016 *(continued)*



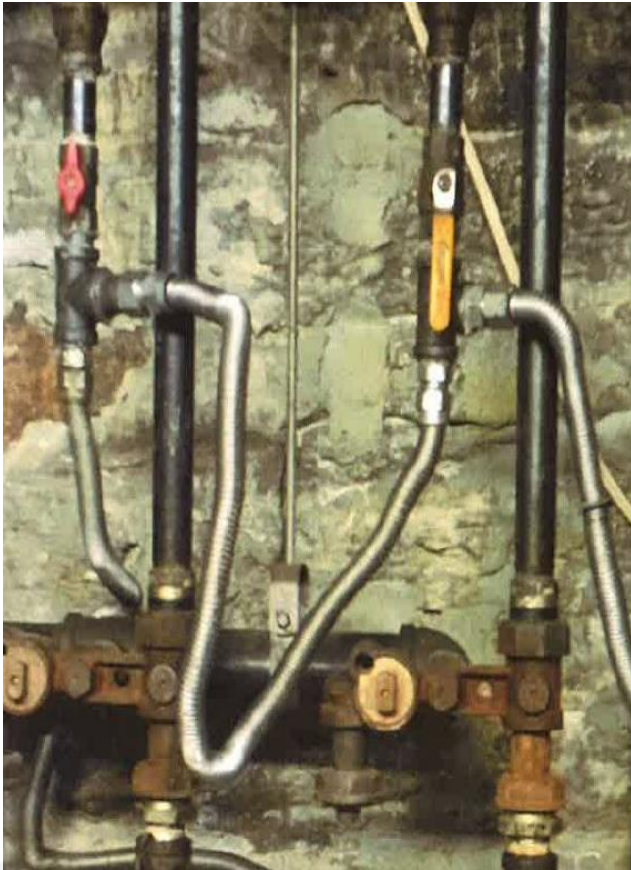
Reporting Requirement

Submitted to the Owner within 30 day

- Inspection Report
 - Includes a list of unsafe conditions, leaks, non-compliant conditions, and illegal connection
- Certification of Licensed Master Plumber (LMP) and any individual who performed inspection under LMP's supervision

NYC LOCAL LAW

152 of 2016 *(continued)*



Reporting Requirement

Submitted to DOB on due date or up to 60 days prior to due date

- LMP's certification that the inspection has been completed

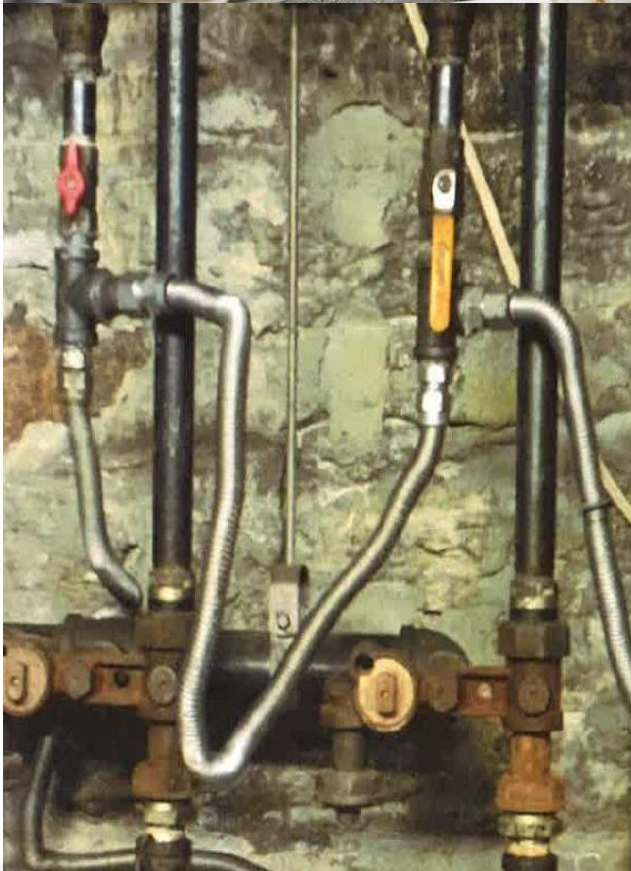
Submitted to the utility company within 90 days of inspection

- Inspection Report

NOTE: This requirement is subject to DOB Rule requiring utility to accept report at no cost

NYC LOCAL LAW

152 of 2016 *(continued)*



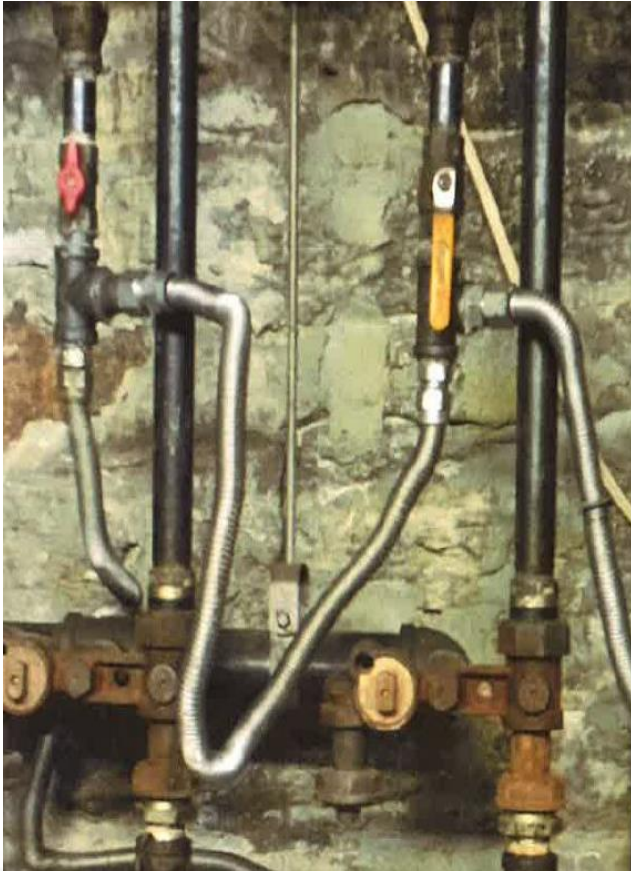
Reporting Requirement

Submitted to DOB within 120 days of inspection

- Licensed Master Plumber's certification that all conditions previously identified were corrected, **or** will take additional time to correct
- Building Owner's certification report submitted to the utility company

NYC LOCAL LAW

152 of 2016 *(continued)*

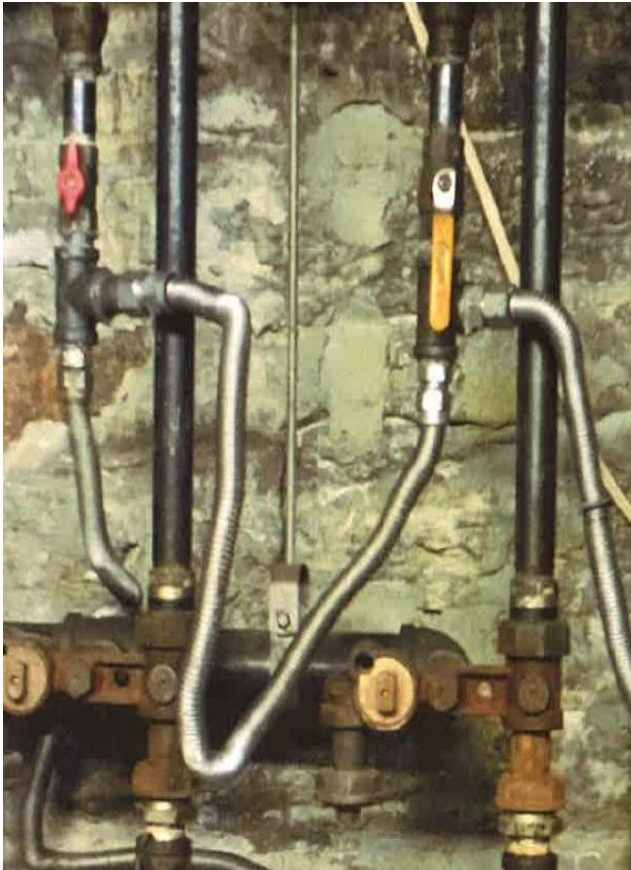


Inspection Due Dates

- To be established by DOB
 - 5 Year cycle
 - 5 Boroughs
- Further broken down by block
- Alternative timeline for new buildings
 - 10th year after letter of completion, certificate of occupancy, or completion date as determined by DOB Rule

NYC LOCAL LAW

152 of 2016 *(continued)*



Inspector Qualifications

- Local distribution company service piping
- Distribution piping
- Training Program
 - Northeast Gas Association
 - Plumbing Foundation
 - Training Sites
 - Testing Sites
 - Drug and alcohol testing

NYC LOCAL LAW 153 of 2016



Requires residential building owners to provide tenants with a notice of procedures to be followed during suspected gas leaks.

Procedure notice **must**:

1. Be provided with lease and lease renewals
2. Be posted in building common areas
 - Effective **6/4/2017**
 - First contact – 911
 - Second contact – Gas service provider

NYC LOCAL LAW

153 of 2016 *(continued)*

PROCEDURE FOR TENANTS REGARDING SUSPECTED GAS LEAKS

The law requires the owner of the premises to advise tenants that when they suspect that a gas leak has occurred, they should take the following actions:

1. Quickly open nearby doors and windows and then leave the building immediately; do not attempt to locate the leak. Do not turn on or off any electrical appliances, do not smoke or light matches or lighters, and do not use a house-phone or cell-phone within the building;
2. After leaving the building, from a safe distance away from the building, call 911 immediately to report the suspected gas leak;
3. After calling 911, call the gas service provider for this building as follows:

Provider

Number

PROCEDIMIENTO PARA LOS INQUILINOS CUANDO HAY SOSPECHA DE FUGA DE GAS

La ley requiere que el propietario de la casa o edificio informe a los inquilinos que

NYC LOCAL LAW 154 of 2016



Requires gas service providers and building Owners to notify DOB:

Procedure notice must.

Procedure notice **must**:

1. Within 24 hours of gas service shut-off due to class A or class B condition.
2. Within 24 hours from gas not being restored due to safety
 - Effective 90 days after becoming law on **12/6/16 = 3/6/2017**

NYC LOCAL LAW

154 of 2016 *(continued)*



Procedure notice **must**:

2. Within 24 hours from gas not being restored due to safety *(continued)*
 - **Class A Conditions (Immediate Hazard)** gas leak which cannot be stopped by repair; heating appliance discharging carbon monoxide; defect, obstruction, or inoperability of flue gas venting system; heat exchangers beyond repair, causing combustion products to enter warm air distribution system
 - **Class B Conditions (Immediate Hazard)** leaking gas appliance which cannot be stopped by repair; gas appliance missing/inoperable safety device; defective/improper appliance wiring; visual indications of improper combustion

NYC LOCAL LAW 157 of 2016



Requires Owners to install and maintain natural gas alarms according to standards established or adopted by DOB:

Procedure notice **must**:

- Alarm locations as per standard
- Requirements mimic those of smoke detectors for
 1. Power source
 2. Interconnection
 3. Acceptance testing
- **Effective May 1st** of the year following DOB promulgated rule

NYC LOCAL LAW 158 of 2016



Requires DOB to establish a penalty waiver program. The program is intended to encourage Owners to bring systems and appliances up to Code when:

Procedure notice **must**:

1. Gas piping systems or appliances were designed, installed, modified or maintained in violation of NYC Construction Codes
2. Owner, within 6 months after the effective date of the law, begins work to bring systems and appliances up to Code
 - Effective 120 days after becoming law on **12/6/16 = 4/5/2017**

NYC LOCAL LAW 159 of 2016



Requires the following violations to be classified as Immediately Hazardous:

1. Supplying/installing gas without a permit
2. Operating an altered or newly installed gas system without notifying the utility
3. Operating an altered or newly installed gas system without a required compliance inspection

Effective 4/5/2017

NYC LOCAL LAW

159 of 2016 *(continued)*



1. Supplying/installing gas without a permit

105.2 Required. Any owner or authorized agent who intends to construct, add to, alter, repair, move, demolish, or change the occupancy of a building or structure, or to erect, install, add to, alter, repair, remove, convert or replace any gas, mechanical or plumbing system, the installation of which is regulated by this code, or to cause any such work to be done, shall first make application for construction document approval in accordance with Chapter 1 of Title 28 of the Administrative Code and this chapter and obtain the required permit.

NYC LOCAL LAW

159 of 2016 *(continued)*



2. Operating an altered or newly installed gas system without notifying the utility

§28-119.1 Connection of service utilities. **It shall be unlawful for any utility company or utility corporation to supply gas to a building, place or premises in which new meters other than replacement are required until a certificate of approval of gas installation from the department is filed with such utility company or utility corporation.** When new gas service piping has been installed it shall be locked-off by the utility company ... The lock shall not be removed until the gas meter piping ...and gas distribution piping have been inspected and certified as required by the department of buildings...

NYC LOCAL LAW

159 of 2016 *(continued)*



2. Operating an altered or newly installed gas system without notifying the utility

§28-119.1.1 Gas shut-off for alterations to gas piping systems. When alterations, extensions or repairs to existing gas meter piping or gas distribution piping require the shut-off of gas flow to a building, the utility company shall be notified by the owner or his or her authorized representative.

NYC LOCAL LAW

159 of 2016 *(continued)*



2. Operating an altered or newly installed gas system without notifying the utility

§28-119.1.1 Gas shut-off for alterations to gas piping systems.

When alterations, extensions or repairs to existing gas meter piping or gas distribution piping require the shut-off of gas flow to a building, the utility company shall be notified by the owner or his or her authorized representative.

NYC LOCAL LAW

159 of 2016 *(continued)*



3. Operating an altered or newly installed gas system without a required compliance inspection

406.6.2 Before turning gas on. During the process of turning gas on... **the entire system shall be inspected** to determine that there are no open fittings or ends and that all valves at unused outlets are closed and plugged or capped.

406.6.2.1 Establishing gas supply. It shall be unlawful for any utility...to supply gas to a building, place or premises in which new meters...are required **until a certificate of approval ...from the department** is filed with such utility...

NYC LOCAL LAW

159 of 2016 *(continued)*



3. Operating an altered or newly installed gas system without a required compliance inspection

406.6.2.2 Alterations to gas piping systems. When alterations, extensions or repairs to...gas distribution piping requires the shutoff of gas flow...the utility shall be notified by the owner or his or her authorized representative.

406.6.3 Leak check. Immediately after the gas is turned on ...the piping system shall be checked for leakage. Where leakage is indicated, the gas supply shall be shut off until the necessary repairs have been made.

BUILDINGS BULLETIN

2017-001



NYC Buildings Department
280 Broadway, New York, NY 10007
Rick D. Chandler, P.E., Commissioner



BUILDINGS BULLETIN 2017-001 Technical

Supersedes: None

Issuer: Thomas Fariello, RA
First Deputy Commissioner

Issuance Date: January 18, 2017

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.

Related Code/Zoning Section(s):	FGC 107.2	FGC 406	FGC 406.1.2	FGC 406.1.4	FGC 406.2	FGC 406.3	FGC 406.4	FGC 409.3
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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 teel/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.

BUILDINGS BULLETIN

2017-001: 2008 NYC FUEL GAS CODE

406.1.2 Repairs and additions. In the event repairs or additions are made after the pressure test, the affected piping shall be tested.

406.1.3 New branches. Where new branches are installed from the point of delivery to new appliances, only the newly installed branches shall be required to be pressure tested. Connections between the new piping and the existing piping shall be tested with a noncorrosive leak-detecting fluid or other approved leak-detecting methods.

406.1.4 Section testing. A piping system shall be permitted to be tested as a complete unit or in sections. Under no circumstances shall a valve in a line be used as a bulkhead between gas in one section of the piping system and test medium in an adjacent section, unless two valves are installed in series with a valved "telltale" located between these valves. A valve shall not be subjected to the test pressure unless it can be determined that the valve, including the valve-closing mechanism, is designed to safely withstand the test pressure.

BUILDINGS BULLETIN

2017-001: 2014 NYC FUEL GAS CODE

406.1.2 Repairs and additions. In the event repairs or additions are made after the pressure test, the affected piping shall be tested.

406.1.3 New branches. A piping system shall be tested as a complete unit.

406.1.4 Section testing. A piping system shall be tested as a complete unit.

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2017-001

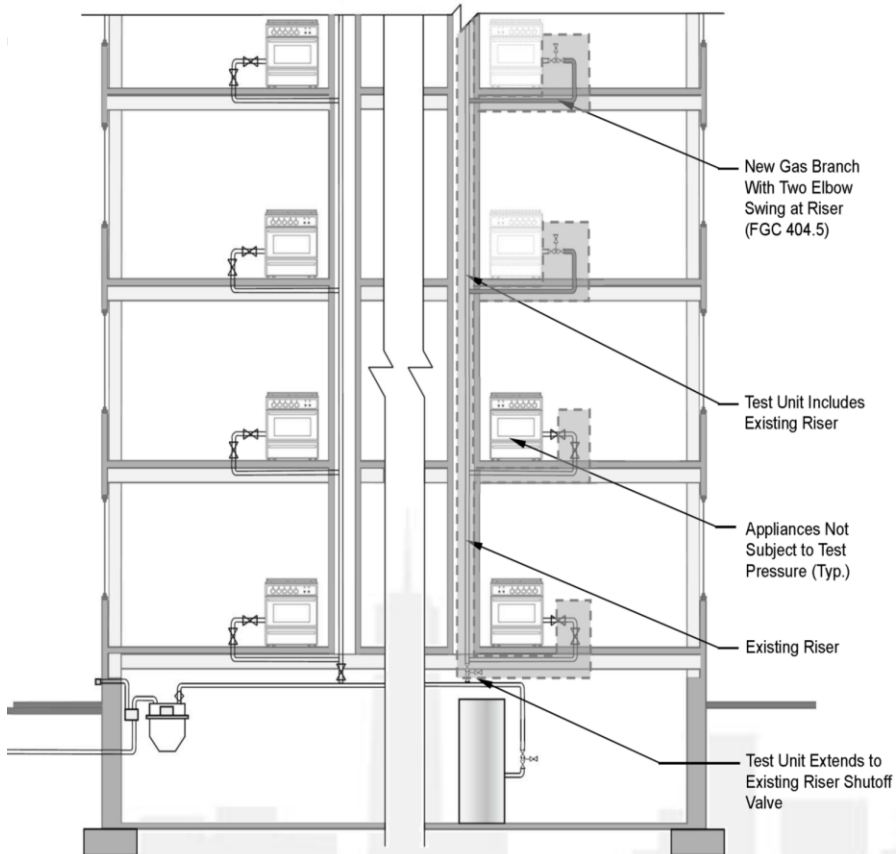
Clarifies the extent of testing required for alterations to existing fuel gas piping systems. Such alterations may be limited to a single branch, or may affect the entire system.

FGC 406.1 requires gas piping systems to be tested as a complete unit. This Bulletin provides an interpretation on test units, but is limited to:

- existing buildings; **and**
- distribution pressures of 1/2 psig or less.
- **Branch** – a section of gas piping downstream from a riser, leading to appliances or equipment on no more than two consecutive floors

BUILDINGS BULLETIN

2017-001



Example #1

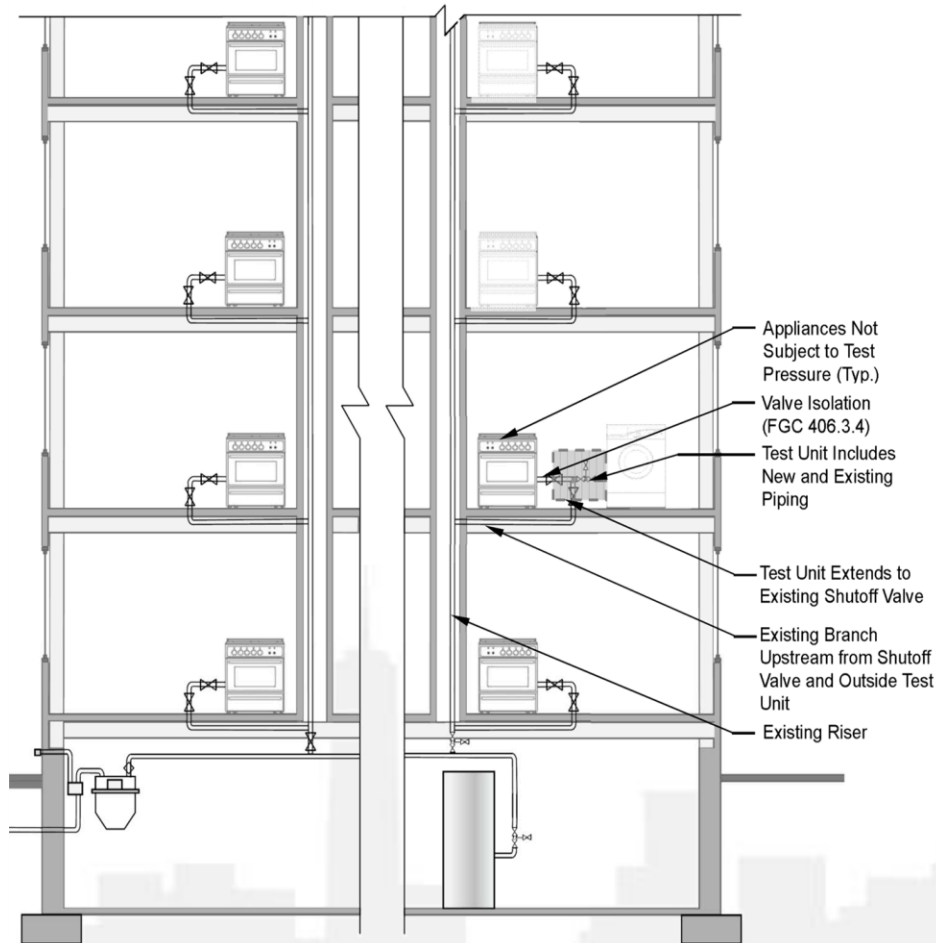
Connecting a New Branch

A new branch line is directly connected to an existing riser:

Test Unit - new pipe and any section of existing pipe which was compromised, or shut off.

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2017-001



Example #2

Extension of Existing Branch Piping

An existing branch has been extended within a single tenant space, downstream of a shut-off valve:

Test Unit - both the new and existing piping within the tenant space, up to the shut-off valve.

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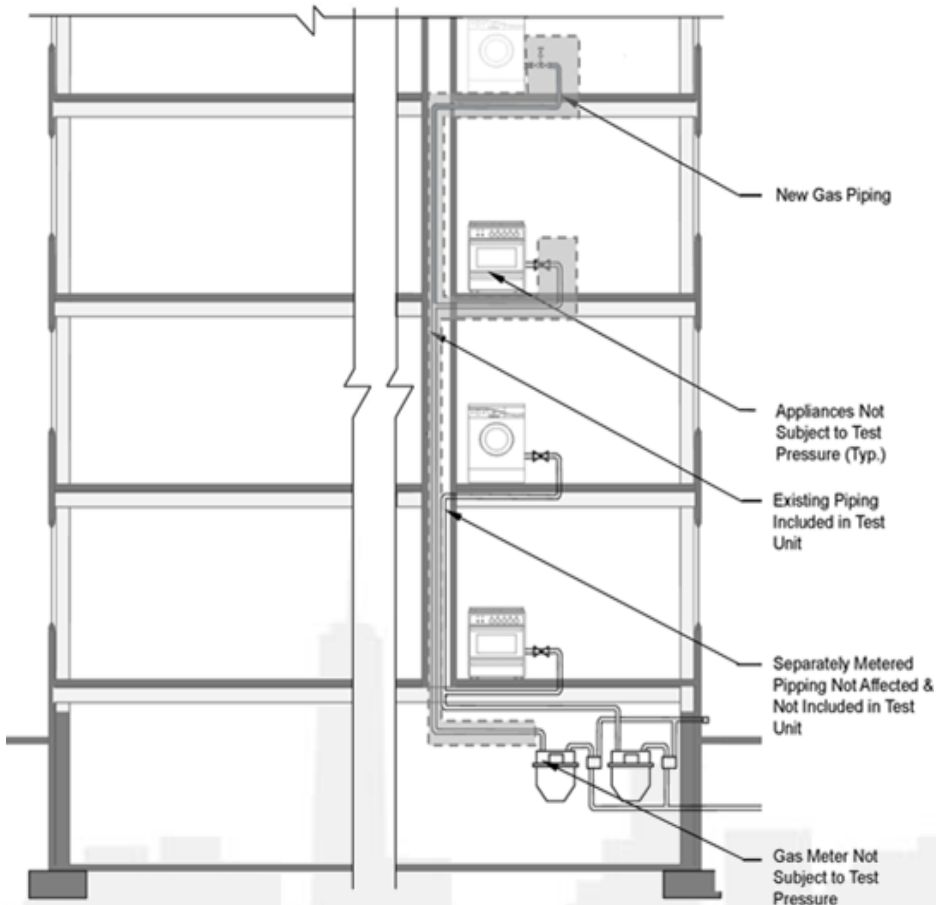
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Example #3

Addition to Existing Piping – Individual Meter

An alteration is made within a tenant space with an individual gas meter:

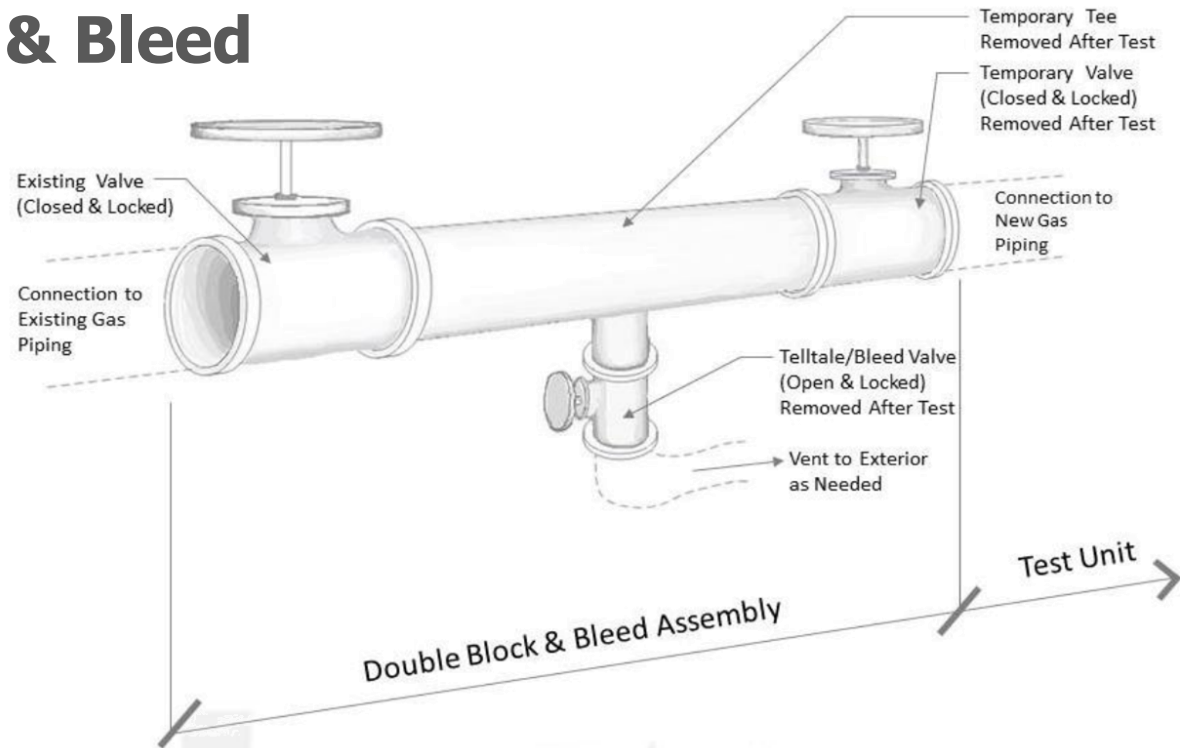
Test Unit - new and existing piping from the tenant space back to the outlet side of the meter.



BUILDINGS BULLETIN

2017-001: ISOLATION METHOD #1

Double Block & Bleed

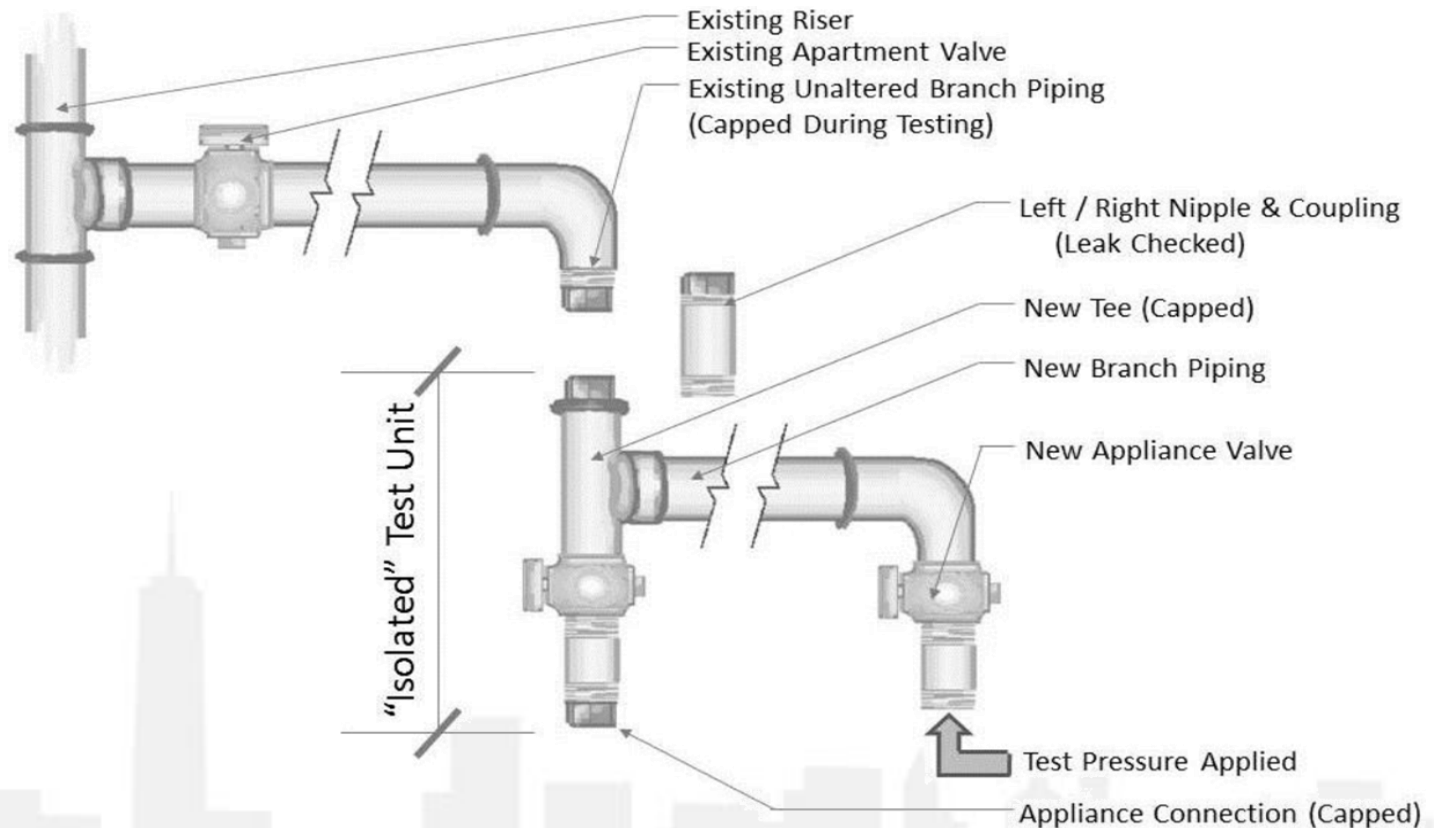


NOTE: Either a fabricated or single manufactured assembly may be used

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2017-001: ISOLATION METHOD #2

Cap



**This concludes the
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