



# NYC Licensed Master Plumber (LMP) Interior Gas Piping Safety Inspection & Connections Operator Qualification



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# Reacting vs Learning

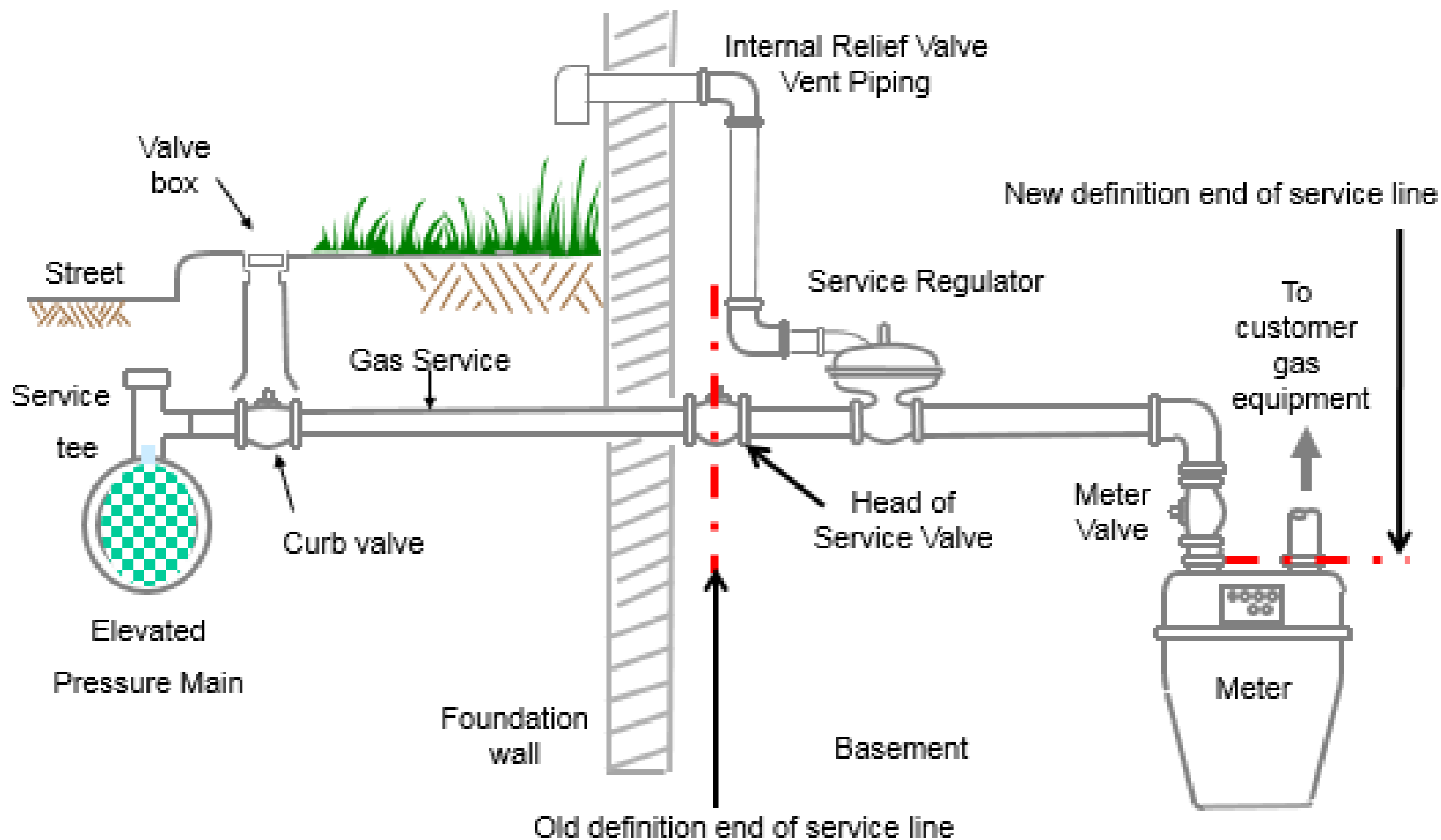


# NYC Local Law 2016-152



- All exposed gas lines from point of entry of gas piping into a building, including building service meters, up to individual tenant spaces shall be inspected for evidence of excessive atmospheric corrosion or piping deterioration, illegal connections, and non-code compliant installations. The inspection entity shall also test public spaces, hallways, corridors, and mechanical and boiler rooms with a portable combustible gas detector to determine if there is any gas leakage in excess of industry standards.
- Inspections of gas piping systems shall be conducted on behalf of the building owner by or under the direct supervision of a licensed and qualified master plumber.
- Building Gas Piping Systems to be periodically inspected at least every 5 years, effective January 1, 2019

# NYS Service Line Definition Change





# DOT Jurisdictional Piping

- ✓ Includes all piping and piping components, meter(s), pressure regulator(s), regulator vent piping, valves etc through the outlet of the meter
- ✓ De-energized new construction customer owned piping work *does not* require additional OQ (AHJ (NYCDOB) construction rules still apply!)
- ✓ Connections to de-energized customer owned jurisdictional piping **MUST** be made by an OQ Technician
- ✓ Repairs to de-energized customer owned jurisdictional piping (Warning Tag repairs) requires an OQ Technician
- ✓ Requirements for jurisdictional piping safety inspections (leak surveys and atmospheric corrosion inspections 255.723, 255.)

# Maximizing Public Safety Value Resulting from Confluence of Change



- NYC Local Law requires interior piping safety inspections
- NYS DPS service line definition change requires interior jurisdictional piping inspections
- Collaborative approach bring together Utilities, Plumbing Foundation, Master Plumbers Council, NYSDPS, NYCDOB to find a solution

***A common purpose & goal - Optimize public safety value by meeting both inspection goals using LMP's trained (enhanced gas safety training), OQ technicians including D&A Program participation.***



# This is NOT Exclusively a NYC Issue – It's Pipeline Safety Public Awareness !!!!



- Plumbers working on jurisdiction piping ARE Required to have OQ's – See Recent PHMSA OQ FAQ !!
- Plumbers and Allied Trades ARE STAKEHOLDERS in Pipeline Safety and viewing pipeline safety through the lens of a Utility Technician can significantly reduce safety risk
- Consider Adopting Elements of this program in your Pipeline Safety Public Awareness Program .

*A common purpose & goal - Optimize public safety value*



# The Plan

- Build a cross functional Team of Stakeholders
- Develop “gap filling” LMP supplemental training program with a strong AOC focus
  - Goal: Utility Technicians and Plumbing Technicians viewing AOC’s through the same lens
- Develop a cost effective “fit for purpose” portable gas indicator for the plumbing trades (leak surveys, personal safety, purging, CO monitoring, etc.)
- Establish OQ Program & D&A Participation Pool
- Establish MOU’s for OQ and Training Services
- Administer OQ Programs





# Interior Piping Inspections Core Skills Training Program

***Ten comprehensive and interactive instructor led modules designed to engage participants in the “what, why, how” approach to conducting interior jurisdictional gas piping safety inspections:***

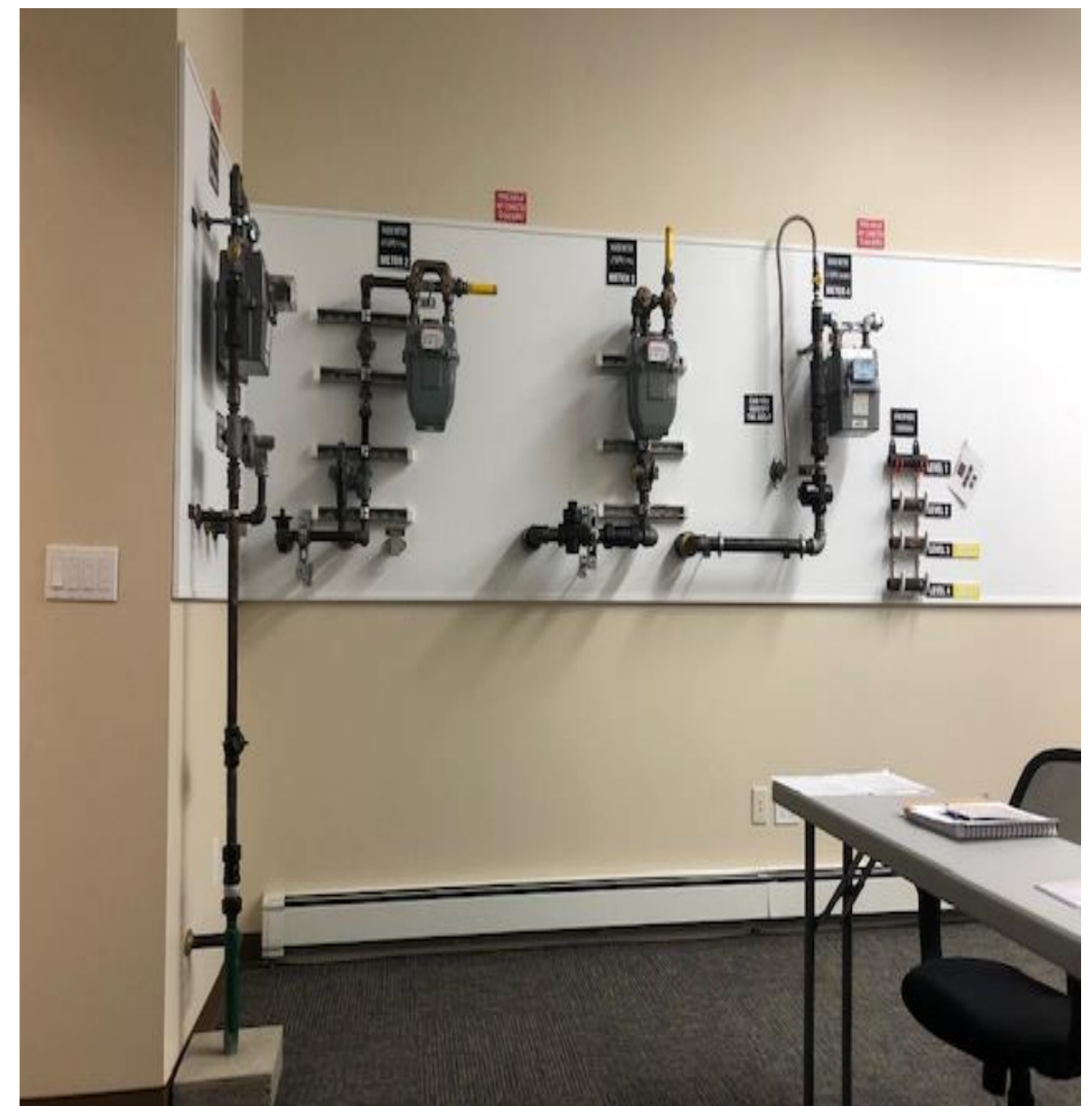
- ✓ Introduction to Regulations for Interior Piping Inspections
- ✓ Properties of Natural Gas & AOC's
- ✓ General Discussion of CGI's & Leak Measure
- ✓ Atmospheric Corrosion Inspections
- ✓ Leak Survey Inspections
- ✓ Making Jurisdictional & Non-Jurisdictional Piping Connections
- ✓ Purging Interior Gas Piping Into / Out of Service
- ✓ Recognizing Illegal Connections & Substandard Conditions
- ✓ Reporting & Documenting Inspections
- ✓ Company Specific Procedure Review

# Training Program Cont'd

- 7-hour program, formal lesson plan with prescribed delivery timeframes
- 3 Knowledge Checks ensures effectiveness of program
- Final knowledge check to ensure core skill knowledge retention
- Practical examples of AOC's (substandard conditions), use of visual comparator for atmospheric corrosion assessments and hands-on demonstration / exercise for use of CGI's in leak surveys.
- Comprehensive review of *Company Specific Procedures* & inspection protocols
- Instructor options: Use of skilled Local 1 Trainers, use of skilled NGA Trainers (Working with the UA to explore expanding use training content)

***Program / NGA is approved as an ICC Preferred Education Provider and is Approved by NYCDOB (GTI Course Provider Approval)***

# Comprehensive, Engaging “Hands On” Learning Experience



# Interior Piping Safety Inspections Development of a “Fit for Purpose” Combustible Gas Indicator (CGI)



**Alarms / Alarmes gaz**

**Alarm Acknowledge / Acquiescement**

**Calibration Overdue / Date de calibrage dépassée**

**Switch Off / Mise à l'arrêt**

**Flow Fault / Défaute débit**

**Charging / Mise en charge**

**Zero Fault / Défaute de la mise à zéro**

**GMI**

**IST COMPANY**



# Data Acquisition – Utility Apps

Both Con Edison and National Grid have developed applications that will run on smart devices to harvest the Leak Survey mode data from the PS200-LMP for reporting and compliance auditing





# Abnormal Operating Conditions Requiring *Notification To The Gas Company*

**If Conditions Allow, Please Stand-By to Ensure  
Utility Company Access If Requested to Do So**



- ✓ **ANY LEAK INDICATION** Regardless of Odor !! (fitting indication etc..)
- ✓ Inadequate or excess gas pressure
- ✓ Inappropriate or illegal piping connections / theft or diversion of service
- ✓ Damaged interior piping
- ✓ POE wall penetration not sealed
- ✓ Insufficient pipe supports, meter and regulator supports
- ✓ Inappropriate grounding to gas piping
- ✓ Jurisdictional piping not installed to Utility specifications
- ✓ Pressure regulator vent piping not installed properly or maintained
- ✓ Moderate or Severe Atmospheric Corrosion (**Especially at POE !**)
- ✓ Lack of a gassy odor (odor fade / masking)
- ✓ Any condition downstream of the meter which has impact on public safety (improper venting of appliance, improper piping connections, etc)

**Con Ed – 1-800-75-ConEd (26633)**

**National Grid – (718) 643-4050**

# Conditions Presenting An Immediate Safety Risk – Get Out !!!



- ✓ **Gas Leak that Presents Immediate Danger**

  - Blowing gas, Uncontrolled leak, Any Odor or Gas Reading in Free Air When Entering a Building or Performing an Inspection

- ✓ **CO Detection**

- ✓ **Odor of Gas in a Building**

- ✓ **Fire or Explosion**

- ❖ **Immediately Exit The Building, Notify Occupants / Building Owner On Your Way Out**

- ❖ **Once Outside The Building, Notify 911 or the Utility Company**

- ❖ **Document Your Findings, Await Assistance**

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# OQ Task Development

- Task 86 includes a “fit for purpose” strategic combination of domains and elements from existing Tasks including atmospheric corrosion, leak surveys, properties of natural gas, AOC’s.
- Similarly, Task 87 includes a strategic combination of domains and elements from existing Tasks including AOC’s associated with meter installations, valves, threaded & flanged piping connections, coating repairs and purging.
- Exam Structure enables LMP Technician qualification in one Task or both without repeat testing common domains/elements:
  - General Exam covering common domains/elements
  - Task 86 specific domain/elements
  - Task 87 specific domain/elements
- Requires Practical Exam, must demonstrate practical use of CGI for leak surveys and identification of a variety of AOC’s.

# The Plumbing Foundation City of New York Gas Operator Qualification Membership Program



## Brief Timeline of Implementation of Plumbing Foundation's GOQ Program

- Pre-October 2017
  - Gas Working Group formed (Northeast Gas Association, Con Edison, National Grid, Plumbing Foundation, Master Plumbers Council, UA Local #1 Trade Education School)
- October 2017 – December 2017
  - Draft Memorandum of Understanding with Northeast Gas Association
  - Request for Proposals from drug testing providers
  - Work on CT86 and CT87 modules with Gas Working Group
- January 2018 – February 2018
  - Draft Gas Operator Qualification Membership documentation
  - Draft Drug and Alcohol Plan compliant with DOT Regulations
- March 2018 – April 2018
  - Introduced to ITS OnBoard Learning Management System
  - Analyze pricing for membership

# The Plumbing Foundation City of New York Gas Operator Qualification Membership Program

- May 2018 – June 2018
  - Finalize MOU with NGA, drug testing provider contract, and membership application documents
  - First roll out of Gas Operator Qualification Program June 2018
- July 2018 – August 2018
  - Utility companies approve drug plan
  - Train the trainer testing
  - First NYC plumbing industry operator qualification training
- September 2018
  - First NYC plumbing industry operator qualification examinations
- January 2020: NYC Local Law 152/2016 in effect (1 year delayed)
- Now (2022):
  - Requalifications are in progress
  - NYC DOB reviewing AOC Task Sheet
  - PFCNY GOQ Database Development



# The Plumbing Foundation City of New York Gas Operator Qualification Membership Program



## Components of GOQ Program

- Dedicated Website: <https://www.plumbingfoundation.nyc/gas-operator-qualification>
- GOQ Application
  - Application
  - Attachment A (MOU)
  - Attachment B (Drug & Alcohol Plan)
  - Attachment C (Participant contact information)
  - Attachment D (Clarity Testing DER Form)
  - Attachment E (Clarity Testing Credit Card Form for Post Accident Testing, Reasonable Suspicion Testing, etc.)
  - Attachment F (LL152 5 Years' Experience Verification)
- FAQs on GOQ program: <https://www.plumbingfoundation.nyc/wp-content/uploads/2022/03/Process-and-FAQs-03.01.2022.pdf>



# The Plumbing Foundation City of New York

## Gas Operator Qualification

### Membership Program



#### Steps to become Operator Qualified in CTs 86/87

- Apply to Plumbing Foundation GOQ Program
- Take pre-employment drug test
- After passing drug test, we create ITS profile and send OQ training information
  - Plumbers Union Local #1 members take training with Local #1 Trade Ed School
  - Non-union members take training with NGA instructors at the Master Plumbers Council, another trade association and member of the Gas Working Group
- Once the drug test and OQ training are completed, participants are sent a link to register for the exam at a Prometric location (Manhattan or Queens)
- Every Monday and Wednesday the Plumbing Foundation holds written exams at Prometric and every week we hold practical exams MPC (or once a month at Local No.1 Trade Ed)
- 30 written exam seats/week
- 16 practical exam seats/week for non-union, 16 per month for Local 1
- Upon passing all exams, we order QR cards from ITS
- Upon failure of the exam, participants have up to three chances to pass and are then subject to a 6-month wait and are required to retake training and all exams

# The Plumbing Foundation City of New York Gas Operator Qualification Membership Program



- Drug & Alcohol Testing Program (Serviced by a third party contractor)
  - Pre-employment drug testing
  - Random drug testing
  - Supervisory Reasonable Cause and DER Training
  - Ongoing communication
  - Deactivation in ITS



# The Plumbing Foundation City of New York Gas Operator Qualification Membership Program

- Progress as of 4/18/22:

Total # of Plumbing Companies Participating **768**  
(Sept. 2019: 627)

Total # of Participants **1,838**  
(Sept. 2019: 1,777)

Total # of Participants Actively in D/A Program **1,736**  
(Sept. 2019: 1,566)

Total # of OQ'd Participants To Date **1,632**  
(Sept. 2019: 1,148)



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## Other Plumbing work on Jurisdictional Piping

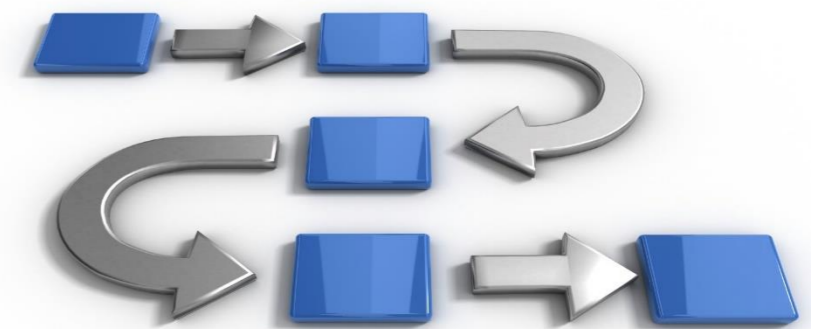
- Per Con Edison's tariff, customers may opt to hire their own contractor to install a service line, including below grade portion
- Con Edison developed a process by which plumbers can receive OQs needed to do unground work.
  - Participation in plumber task 86/87 program is a prerequisite
- Internal forms and processes also developed to check OQs for those working on behalf of customers.
- PHMSA recent OQ FAQ #23: *Must plumbers and independent installers performing covered tasks on customer-owned curb-to-meter service lines be qualified?*
  - Answer: *If the piping under consideration is subject to regulation by part 192, the plumber or anyone else performing the covered task for the operator must be qualified under the operator's OQ program.*



# Path to Success & *Getting to Yes*.....

- ✓ Outstanding collaboration and leadership / coordination by the Plumbing Foundation of New York (THANK YOU!!!)
- ✓ Teamwork ! Listening, Learning, Understanding

Con Ed	Plumbing Foundation of New York
National Grid	Master Plumbers Council
NYS DPS Staff	NYC DOB
Heath Consultants	Gas Technology Institute (GTI)



***Maximizing Public Safety Value***

# Thank You !!!



- Questions / Discussion

