



# **Construction Inspection Overview**

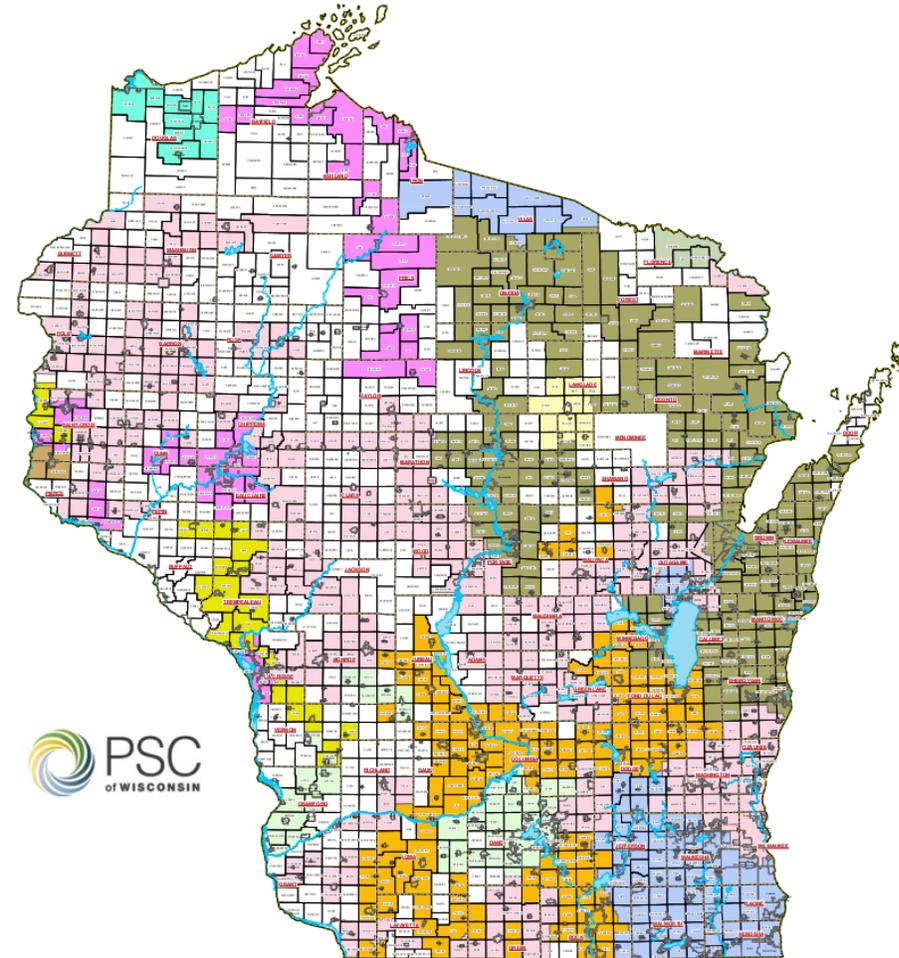
**Public Service Commission of Wisconsin**

- Overview of natural gas in Wisconsin
- Construction Inspections
- Codes, Standards, and Procedures
- General Overview
- Detailed Look
- Field Findings (2023 – 2025)
- Expectations of the Commission
- Questions

# Natural Gas in Wisconsin

- 24 Natural Gas operators within the state, from small landfill lines to large utility corporations.
- 11 of these 24 are utilities, with one municipal.
- 1,759,890 services, 42,598 miles of main, 918 transmission miles, and 5 LNG facilities in the state as of 2024.

Wisconsin Natural Gas Service Territories



**Wisconsin Natural Gas Utilities**

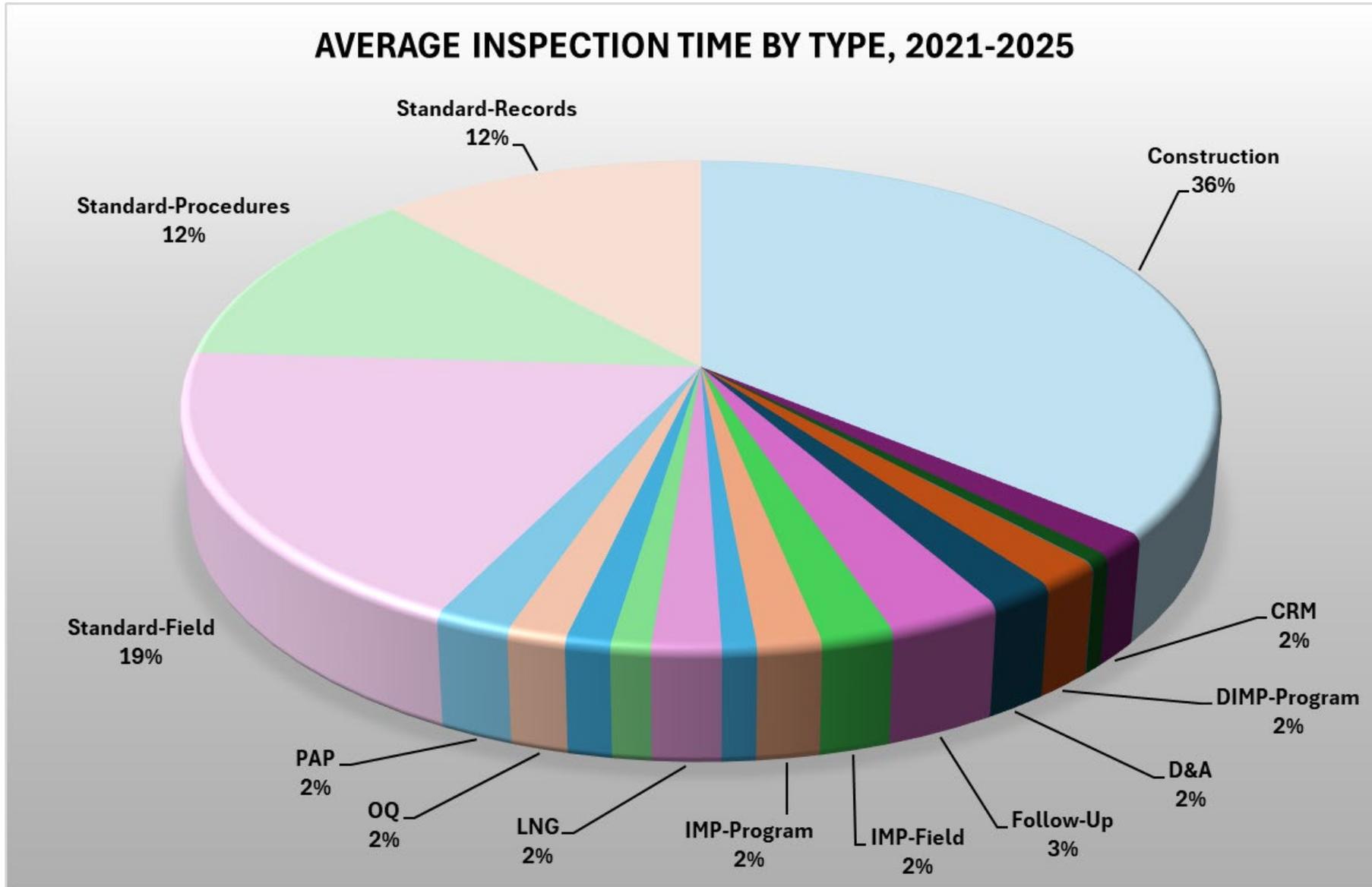
 City Gas Company	 St. Croix Valley Natural Gas Company
 Florence Utility Commission	 Superior Water, Light, & Power Company
 Madison Gas and Electric Company	 Wisconsin Electric Power Company
 Midwest Natural Gas Incorporated	 Wisconsin Gas
 Northern States Power Company - Wisconsin	 Wisconsin Power and Light Company
	 Wisconsin Public Service Corporation

# Construction Inspection's



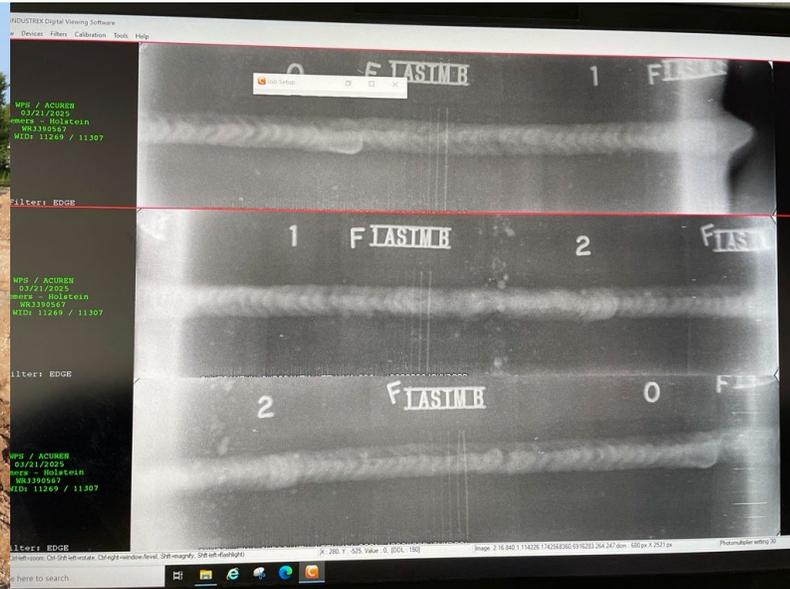
- Required by PHMSA to have at least 20% of inspection days be construction.
- ~30-40% of our inspection days are construction.
- Internally developed construction inspection forms.
- PSC receives construction project schedules from the operators every Thursday for the upcoming week.

# Construction Inspection's



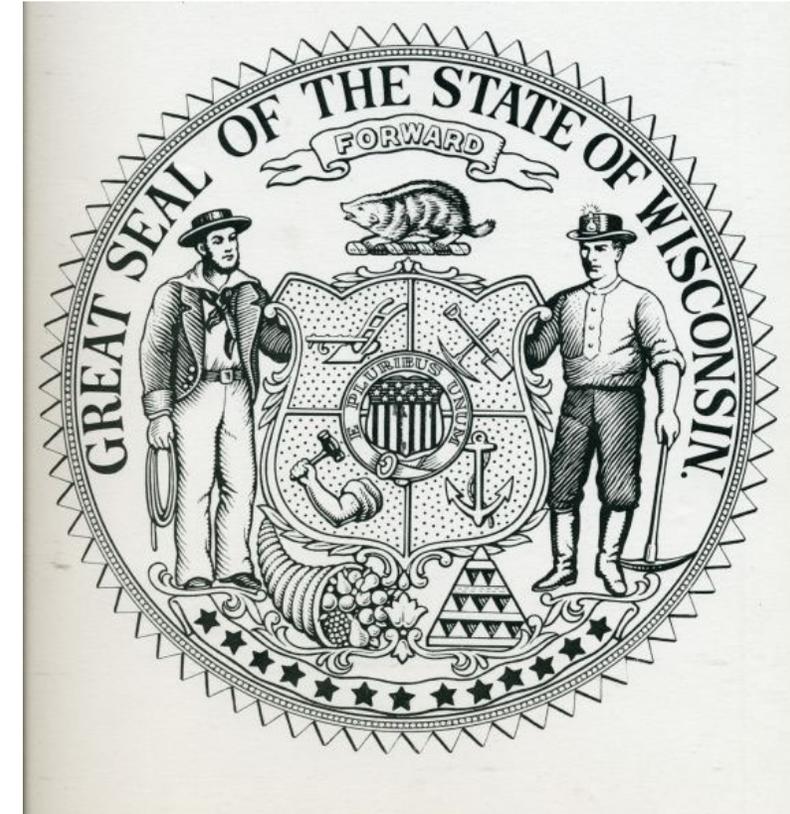
# Planning Construction Inspection's

- Typically done on a no-notice basis.
- Best efforts are made to see *most* working crews in a year.
- Will give focus to larger projects or new contractors.
- Observe construction for operators who do not typically perform it.
- Familiarize with appropriate operator procedures.



# Code, Standards, and Procedures

- Multiple subparts of Part 192 directly govern the construction of new pipelines.
  - Subparts E, F, G, H, and J
- PSC Chapter 135
- Different standards are Incorporated By Reference within code giving more specification on a subpart/code item.
  - ASTM D2513 and ASTM F2620 for plastic
  - API 5L and API 1104 for steel
- Procedures owned by the operator must be followed.
  - 192.303 and 192.605(a)



# General Inspection Overview

- Introduce ourselves to inspector and foreman.
- Ask for onsite safety concerns (anything unique).
- Get a sense of the day's activities.
- Check Operator Qualifications (OQ's).
- Ensure foreman and inspector has access to standards.
- Check material specs for pipe and components.
- Observe the days activities.
- Exit interview with company representative or foreman.

# Detailed Inspection Overview - 1

- 1) Contractor crew is installing new 6in main.
- 2) Drill is shot-out and a reamer was ready to be pulled back, crossing below the sewer line in the process.
- 3) Commission inspector had discussion with drill locator, foreman, and company inspector drill about re-exposing the sewer line.
- 4) Drill locator and foreman stated that the clearance was initially okay, and the crossing would not be re-exposed.
- 5) Company procedure state:
  - During Construction, the drill path must be sufficiently accessible and continuously monitored.
  - When crossing existing underground facilities, regardless of clearance above or below, a test hole(s) shall be made to verify a vertical clearance of at least 12" between the existing underground facility and bore path is maintained. This will allow observation and monitoring of the drill head and reamer before reaching the facility.



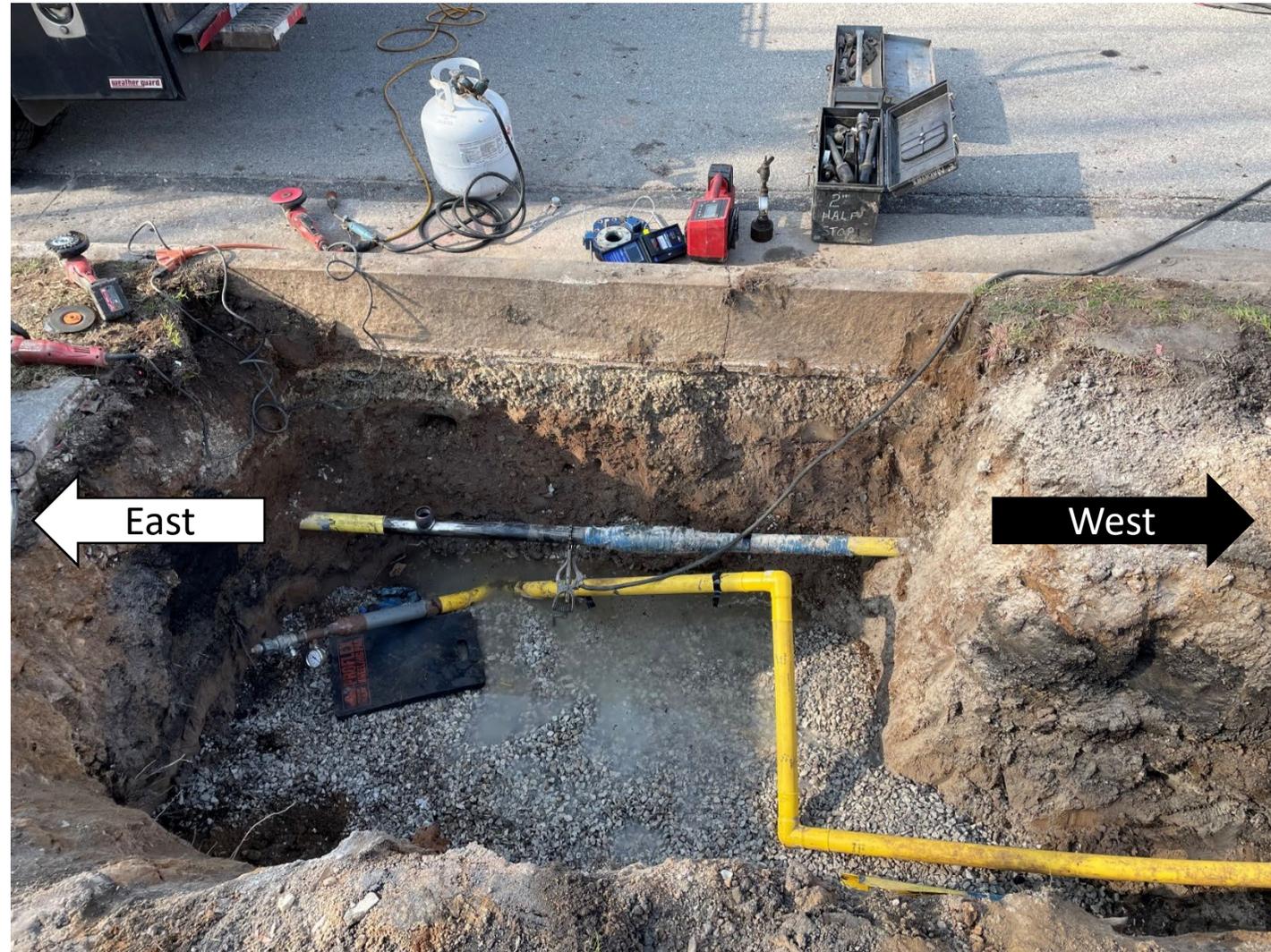
# Detailed Inspection Overview - 1

- 6) Same job site.
- 7) 2in main previously installed on the project next to other underground facilities.
- 8) This main installation did not meet the minimum standard to other underground facilities per procedure. (1ft)
- 9) Additionally, the crew was unsure if the facility was live or abandoned as it had not been claimed.
- 10) Procedure state:
  - When the possibility of abandoned facilities exists, investigation shall be extensive enough to determine if facilities being crossed are 'live' or 'dead'.
- 10) Both items were brought up to the inspector in the onsite exit interview and shared with company representatives in compliance.



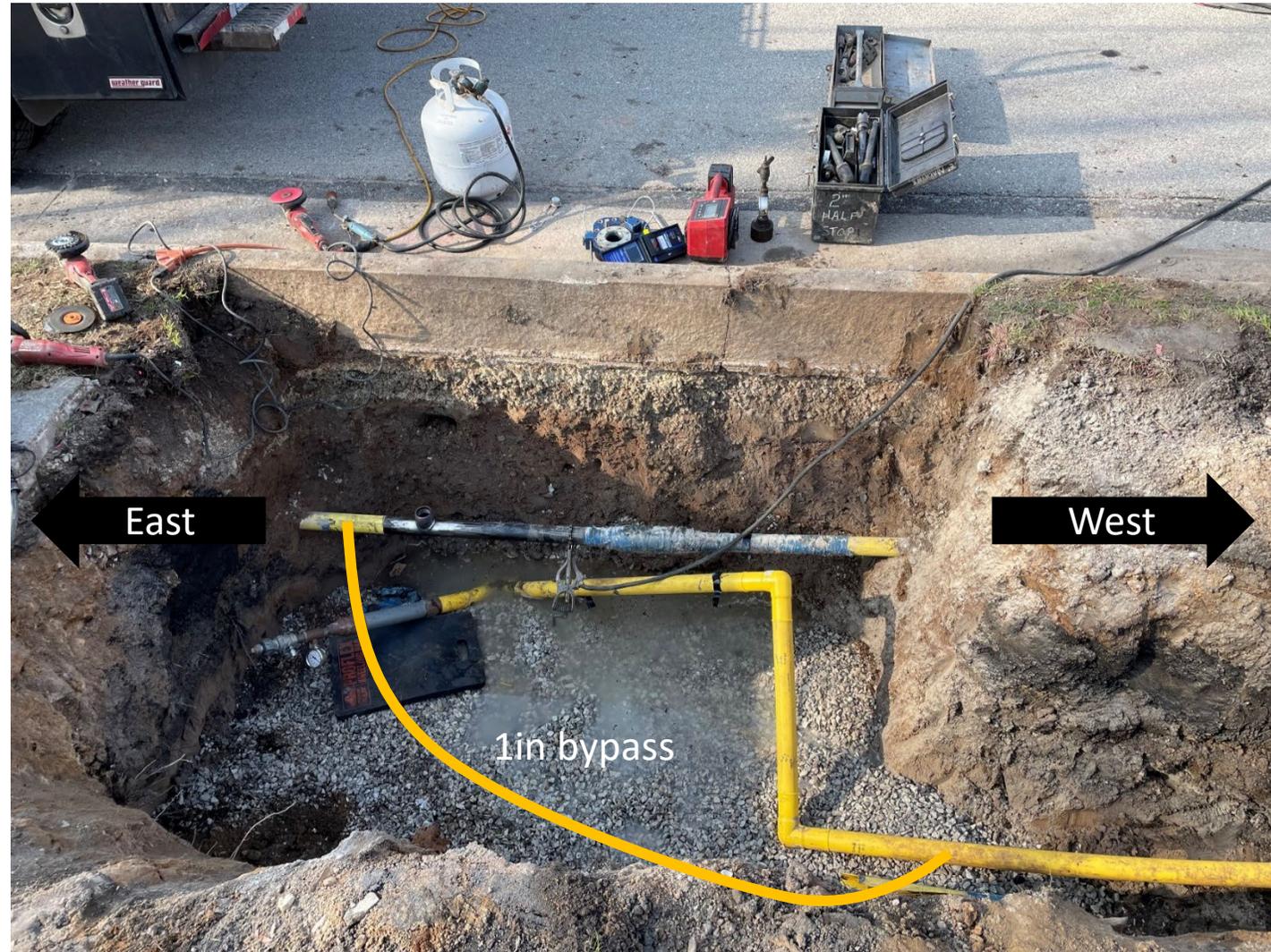
# Detailed Inspection Overview - 2

- 1) Company and contractor crews working to retire old 2in stl main.
- 2) Threaded tap and stop performed.
- 3) Stopper ran down and gauges are watched.
- 4) Pressure on main drops to around 35psig (60psig MAOP).
- 5) Crew runs stopper back up and begins to investigate.
- 6) Another contractor crew is working down the street to the East.
- 7) 2<sup>nd</sup> crew has already abandoned part of this main, now a one-way fed system.



# Detailed Inspection Overview - 2

- 8) Crew stops all work and calls the projects engineer.
- 9) Engineer makes determination that 1in bypass can maintain system feed.
- 10) Stopper is run back down.
- 11) Gauges are monitored, main is flared.
- 12) Old section of main is retired and new is placed into service.

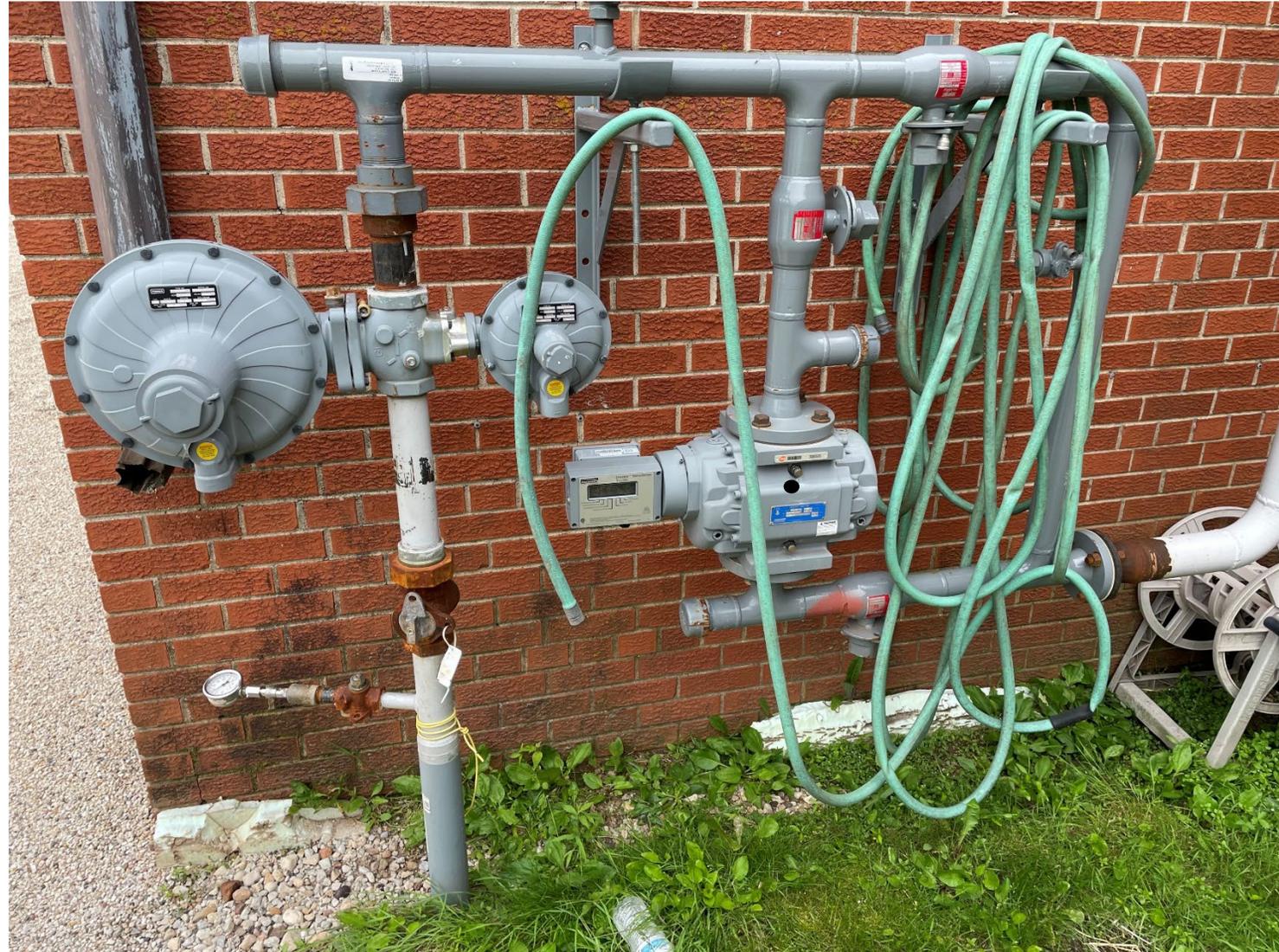




Common Trenches - 192.325(b)



Pipe Handling - 192.159



Corrosion – 192.479



DIMP materials – 192.1007(b)



Bore shot damage – 192.461



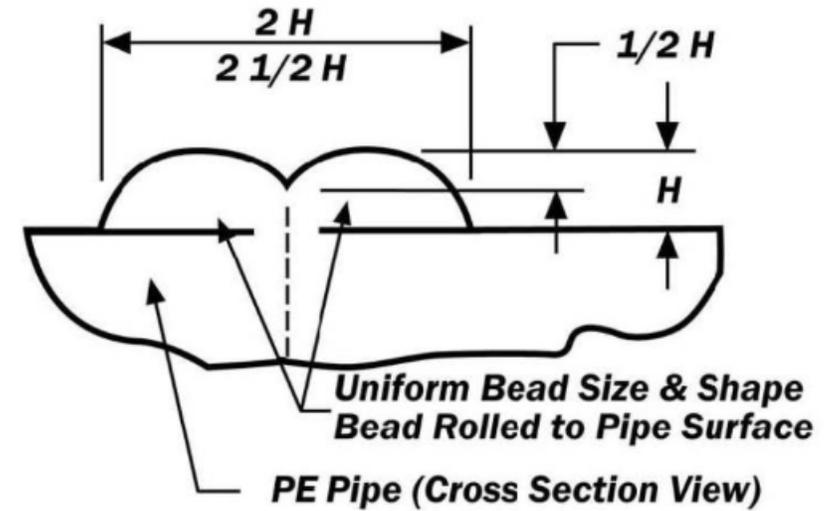
Meter Clearances – 192.355(b)(2)



Equipment Calibration –  
192.756



ILLUSTRATION OF A PROPERLY MADE BUTT FUSION JOINT



Poor Plastic Fusion – 192.281



Visual miter



Excessive high-low



## Other PSC Field Findings:

- Rough handling of pipe.
- Fusion procedure incorrectly performed, bad fuses, or fusions not certified by fuser.
- Weld procedure performed incorrectly.
- Plastic pipe not squeezed properly or squeeze incorrectly released.
- Steel pipe not inspected for holidays.
- Tracer wire wrapped around main during installation.



- Gas Pipeline Safety staff communicate our findings to operators about any potential violation or watchlist items we find in the field.
- Exit interview must be performed with operators within 30 days of an inspection. This typically occurs when we leave a construction site.
- Commission inspectors should have state issued identification badges on their person.

