



Fire Suppression Contracting:

Worker and Apprentice Requirements and 10 Common Installation Errors




Will Fernandez

Director of Audits and Investigations

AIU@phila.gov



Intro- Fire Suppression Contracting

- Philadelphia regulates Fire Suppression Contracting largely through two sections of the Philadelphia Code: §9-1005 (Fire Suppression System Contractors) and §9-2500 (Fire Suppression System Workers)
 - 9-1005 establishes requirements and responsibilities related to Fire Suppression System Contractor licenses— that is, the license that a person or business must hold in order to obtain fire suppression permits.
 - 9-2500 establishes requirements and responsibilities related to what individuals may perform fire suppression work—that is, who can actually do the work authorized by a fire suppression permit.
 - These two code sections overlap. Both set important standards that must be met at every site in the City where fire suppression work is happening.
- 



§9-1005- Fire Suppression Contracting

- Requires that any person working as a “fire suppression system contractor” have a fire suppression systems contractor license
- What does it mean to work as a “fire suppression system contractor”?
 - A person who performs or offers to perform the installation, alteration, repair, testing, servicing, maintenance, inspection and/or certification of fire suppression systems, or any part of such systems.
- This is an annual license and must be renewed each year.






§9-1005- Fire Suppression Contracting

- License Requirements:
 - One full time employee who is a holder of NICET certificate at Level II or higher AND one full time employee who holds a §9-2500 Fire Suppression System Worker Certificate must be always kept on staff
 - Instead of a NICET Cert level II holder, a licensee can employ a Professional Engineer registered in PA that provides the Department with a signed and sealed statement of qualifications in the field of fire suppression systems






§9-1005- Fire Suppression Contracting

- If a contractor no longer employs a Fire Suppression Systems Worker certificate holder, it must immediately stop performing all fire suppression work.
 - If a contractor no longer employs a NICET Level II (or higher) certificate holder, it may continue working on existing work in progress for 6 months but cannot apply for more permits
 - The best practice is to keep your Fire Suppression Contractor license on eCLIPSE up-to-date with all your employed NICET holders and Fire Suppression Systems Workers. Log in to eCLIPSE and navigate to your fire suppression contractor license page to do this.
 - You must be current on all City of Philadelphia taxes and carry sufficient insurance: workers' compensation (\$100,000 per accident/employee, \$500,000 policy limit), general liability (\$500,000 per occurrence), motor vehicle (\$300,000)
- 



§9-2500- Fire Suppression Workers and Apprentices

- This section of the Code sets forth requirements on what individuals can perform “work on a fire suppression system”
 - Definition of “work on a fire suppression system”: the layout, on-site fabrication, testing, inspection, certification, work and practice concerning the construction, installation, alteration, extension, removal, repair, servicing, maintenance or renovation of fire suppression systems. (*§9-2501(6)*)
 - The requirements are simple. Fire Suppression Work may only be performed by:
 - Individuals that hold a Fire Suppression System Certification (aka an individual that is a certified Fire Suppression System Worker)
 - Individuals that hold a Fire Suppression System Apprentice Permit AND are being supervised on-site by a Fire Suppression System Worker
- 




§9-2504- Fire Suppression Workers

- Fire Suppression System Certification Requirements
 - Take and pass an examination pursuant to the Fire Prevention Code;
 - Successfully complete a registered fire suppression system apprenticeship program
 - **Alternative:** § 9-2508 allows for reciprocity– that is, applicants are not required to pass an examination or complete a registered apprenticeship program if that applicant already holds the worker certification or apprentice permit they are applying for in a different jurisdiction. However, that jurisdiction must have established qualification requirements equal to, or greater than, those established under the Philadelphia Code





§9-2507- Fire Suppression Apprentices

- Fire Suppression System Apprentice Permit Requirements
 - Must be actively enrolled in a “registered fire suppression system apprenticeship program.”
 - **Registered Fire Suppression System Apprenticeship Program-** A program of apprenticeship training registered with the United States Department of Labor or a State Apprenticeship Council involving at least 8,000 hours of documented practical experience in the installation or maintenance of fire suppression systems and at least 800 hours of classroom, shop or related instruction in the fire suppression system trade. (§9-2501(5))
 - Fire Suppression System Apprentice Permit Holders may perform any type of fire suppression work, so long as they are being supervised by an on-site Fire Suppression System Certification holder (aka a Fire Suppression System Worker)
 - Fire Suppression System Apprentice Permit Application- Applicants must submit a Program Registration and Apprenticeship Agreement form (aka Form 671) executed by their registration agency as proof of enrollment. It must reflect the appropriate number of field and classroom hours. Apprenticeship sponsors can download this form for each of their enrolled apprentices through the RAPIDS portal.
- 




Fire Suppression Contracting- Enforcement

- Audits and Investigations Unit- AIU is responsible for enforcing licensing requirements for contractors and other trade licensees, like fire suppression system contractors, workers, and apprentices.
- AIU increased enforcement of Fire Suppression System Contractor, Worker, and Apprentice requirements in 2021, and will continue to do so through 2022.
- AIU uses two tools to enforce the Code
 - Site Investigations and the issuance of violations
 - License discipline such as suspension or revocation






Enforcement- Site Investigations

- An AIU Site Investigation is when AIU inspectors go out to an active jobsite and investigate whether the contractors and other trade licensees at that site comply with the Philadelphia Code
 - Site Investigations are typically scheduled in response to 311 complaints or based on referral from construction inspectors
 - If you are alleging a license compliance violation, your best bet is to submit a 311 complaint and then supplement that complaint with an email to addinfoli@phila.gov.
 - You can expand on your complaint and provide additional information– pictures, video, etc.
 - It will ensure timely review and the quickest possible investigation of the complaint
 - We understand that many complaints are time sensitive and do our best to investigate these as quickly as possible.
 - Emails submitted to addinfoli@phila.gov MUST include the 311-complaint number, or they will be discarded
- 



Enforcement- Site Investigations

- What does an AIU site investigation look like?
 - AIU will check the contractor's license status and ensure that they are in good standing
 - AIU will check each worker on site to verify that they are either a Fire Suppression System Worker or a Fire Suppression System Apprentice supervised by an onsite Fire Suppression System Worker
 - Any observed violations will result in the issuance of a "Licensing Violation Notice". Each violation of §9-1005 or §9-2500 will result in a fine of at least \$300. Multiple violations will result in a deeper investigation into the cited contractor's practices. Those investigations can turn into license suspensions or revocations.
 - The Fire Suppression System Contractor will be cited when violations are observed. So will any individuals violating the requirements set forth in §9-2500 (doing Fire Suppression Work without a certificate or doing Fire Suppression Work as an apprentice without the on-site supervision of a Fire Suppression Worker).
- 



Department of Licenses and Inspections Building Safety Division

Building a safer city by enforcing building-related codes through inspections, licensing, permitting, and demolitions.





Brett J. Martin MCP

Director of the
Technical Training & Development Unit






The department documents new construction fire suppression deficiencies through:

- Plans Examinations
- Inspections
- Investigations

Through these processes the department seeks to gain code compliance by:

- Citing corrective measures in the permit record application (Plan Review Process)
 - Citing corrective measures in the permit record (Inspections Process)
 - Citing Notices of Violation (NOV's) (Investigation Process)
 - Corrections to be made within 35 Days; No Fines and Penalties
 - Corrections not completed within 35 Days; Fines and Penalties Accrue
 - Corrections not made in 70 Days: The Court process begins
- 



Types of Common Errors:

- Not installed according to the Approved Plans
 - Not installed According to the Governing Code(s) or Standards
 - Philadelphia Fire Code 2018
 - Philadelphia/ ICC Building Code 2018
 - NFPA applicable standards (Most Common 13, 13R- 13-D)
 - Not installed according to Manufactures Specifications
- 

Types of Common Errors: Number 10

- Spare Heads are required for each type of Head used in the system
- Sprinkler Head / Spare wrench



2016 Edition of NFPA 13

6.2.9.5 The stock of spare sprinklers shall include all types and ratings installed and shall be as follows:

- (1) For protected facilities having under 300 sprinklers – no fewer than six sprinklers
- (2) For protected facilities having 300 to 1000 sprinklers – no fewer than 12 sprinklers
- (3) For protected facilities having over 1000 sprinklers – no fewer than 24 sprinklers

Number 10: Correct Installation

- Spare Heads are required for each type of Head used in the system
- Sprinkler Head / Spare wrench



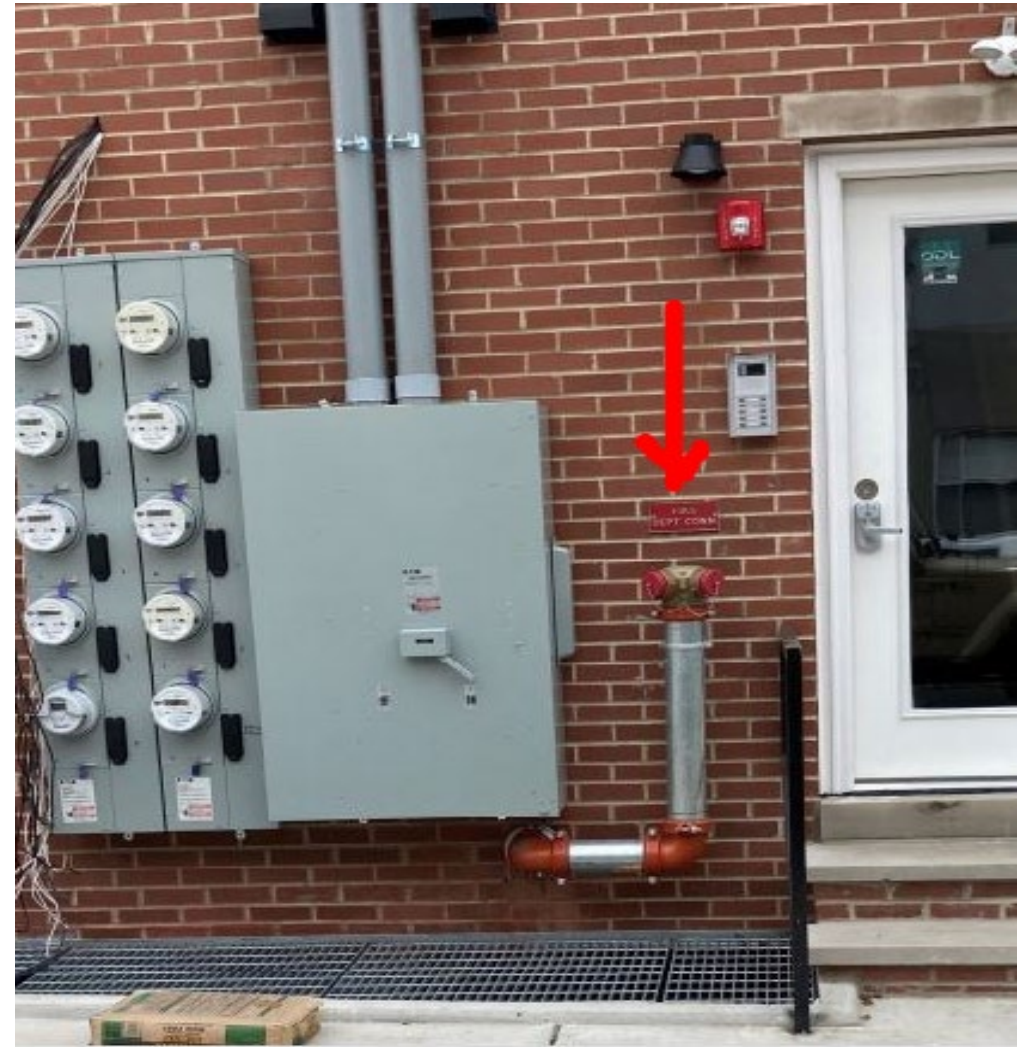
Types of Common Errors: **Number 9**

- Fire Department Connection
 - Inaccessible location / access



Number 9: Corrected Installation

- Fire Department Connection

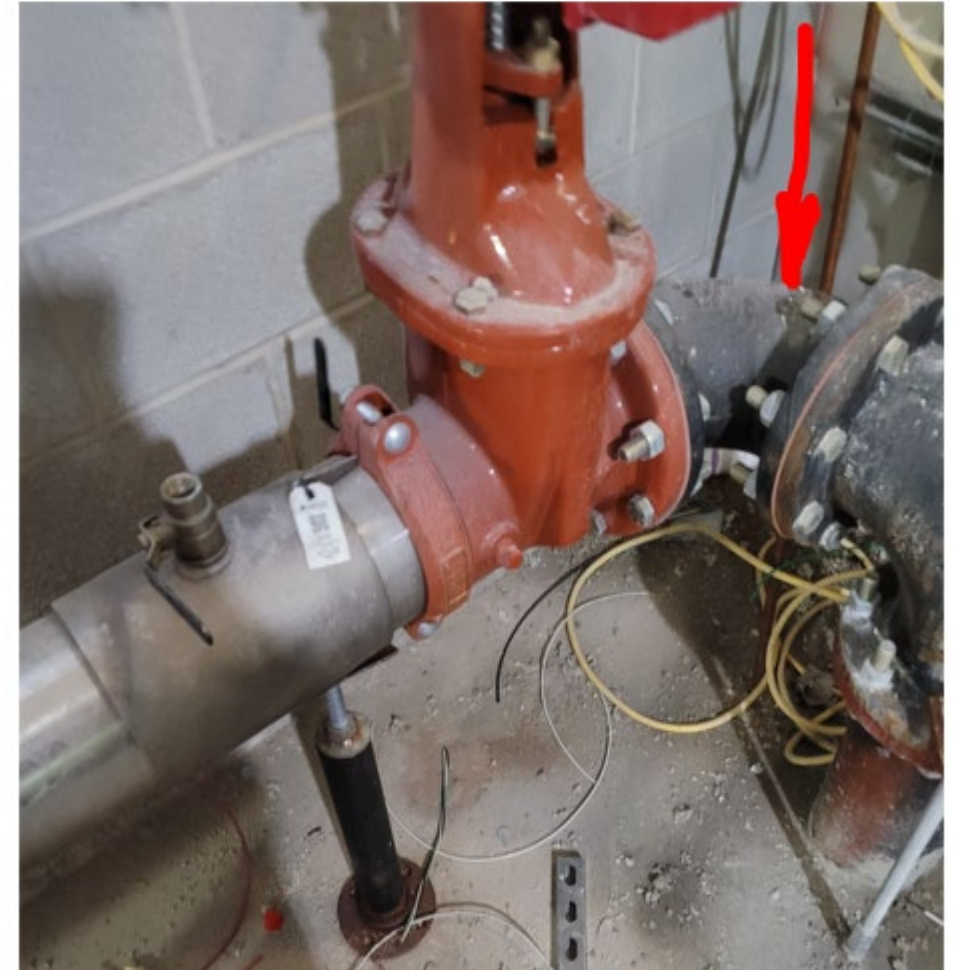


Types of Common Errors: Number 8

Not According to Plan

- Size of Service
- Plan Calls for 8" DIP
- Installation is 6" DIP

PROPOSED UTILITY CONNECTIONS				
		SIZE	TYPE	COMMENT
S-1	STORM SEWER CONNECTION	15"	CIP	CONNECT 15"CIP TO 48" BI
S-2	SANITARY SEWER CONNECTION	10"	CIP	CONNECT 10"CIP TO 36" R
S-4	SANITARY SEWER CONNECTION	10"	CIP	CONNECT 10"CIP TO 48" BI
W-1	FIRE SERVICE	8"	DIP	CONNECTION TO 8" MAIN
W-2	DOMESTIC WATER	6"	DIP	CONNECTION TO 8" MAIN



Number 8: Installation Correction

Amended Approved Plan

- Size of Service
- Plan Calls for 6" DIP
- Installation is 6" DIP

PROPOSED UTILITY CONNECTIONS				
		SIZE	TYPE	COMMENT
S-1	STORM SEWER CONNECTION	15"	CIP	CONNECT 15"CIP TO 48" E
S-2	SANITARY SEWER CONNECTION	10"	CIP	CONNECT 10"CIP TO 36" F
S-4	SANITARY SEWER CONNECTION	10"	CIP	CONNECT 10"CIP TO 48" E
W-1	FIRE SERVICE	6"	<u>DIP</u>	<u>CONNECTION TO 8" MAIN</u>
W-2	DOMESTIC WATER	6"	DIP	CONNECTION TO 8" MAIN

Types of Common Errors: **Number 7**

Not According to Plan

- Size of Service
- Plan Calls for 3" DIP
- Installation is 2" Copper

No Record of Installation compliance





Types of Common Errors: **Number 6**

NFPA 20

Fire Pump Rooms:

Restricted Equipment

- No Storage
- Equipment, Non-related Electrical, Boilers
- No current pictures to share

NFPA 20-2016, Section 4.13.1.1.5, restricts the equipment that can be located inside the fire pump room. Specifically, only equipment essential to the fire pump may be located in the pump room. The room cannot be used for storage, and it cannot contain other systems equipment, such as unrelated electrical panels, boilers, or mechanical HVAC equipment that serves other areas of the building, etc. The only extraneous equipment permitted in the pump room is domestic-water-supply distribution equipment per Section 4.13.1.1.6.

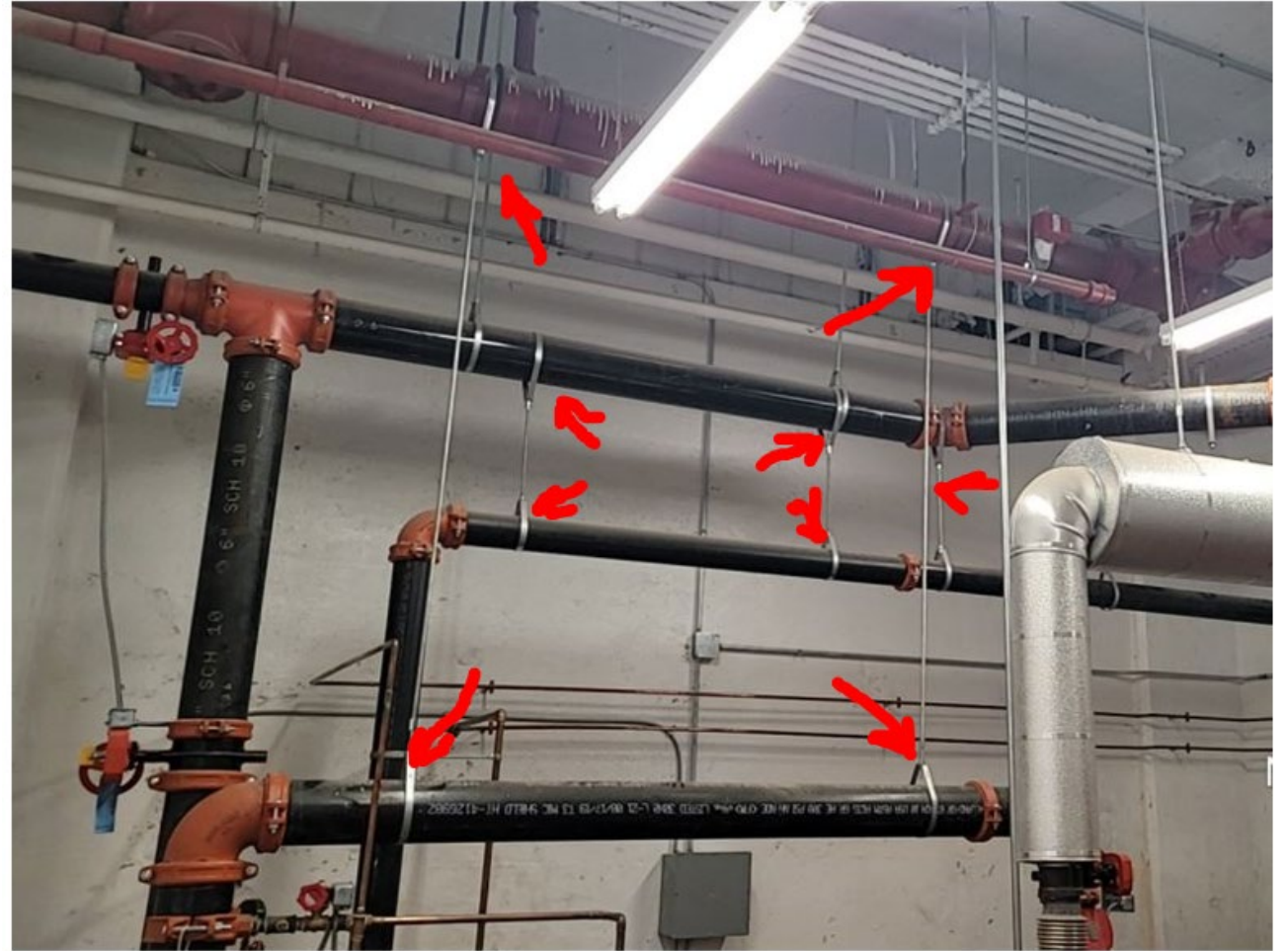


Types of Common Errors: **Number 5**

Not According to NFPA 13

Chapter 9, Section 9.1.1.1

- Fire Suppression Piping Supports
- Engineered to support the 5-times load, plus 250 pounds
- This installation was not engineered as installed



Types of Common Errors: **Number 4**

Not According to Plan

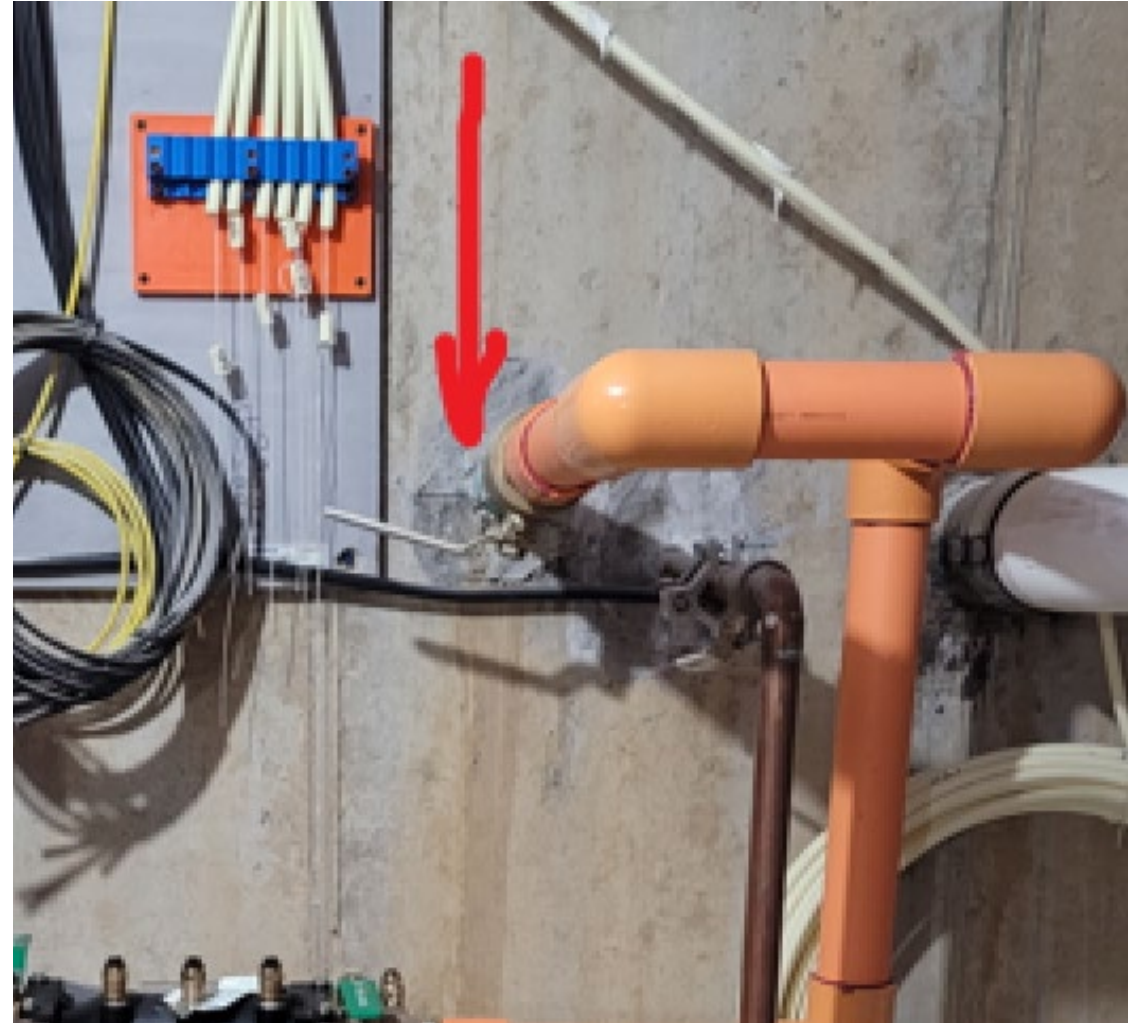
- Installation is Code Complaint
- Until Back Flow Preventer was observed not be to the make or model that was on the approved plans
- Amended permit was applied for with installed make and model to include updated FPE calculations



Types of Common Errors: **Number 3**

Not According to NFPA 13 & 13 R Chapter 6

- Supply Valves shall be listed for fire service
- Supply Valves shall be of the slow closing type



Types of Common Errors: **Number 2**

Not According to NFPA 13 & 13R

- Supply Valves shall be Supervised
- Supply Valves shall not be concealed

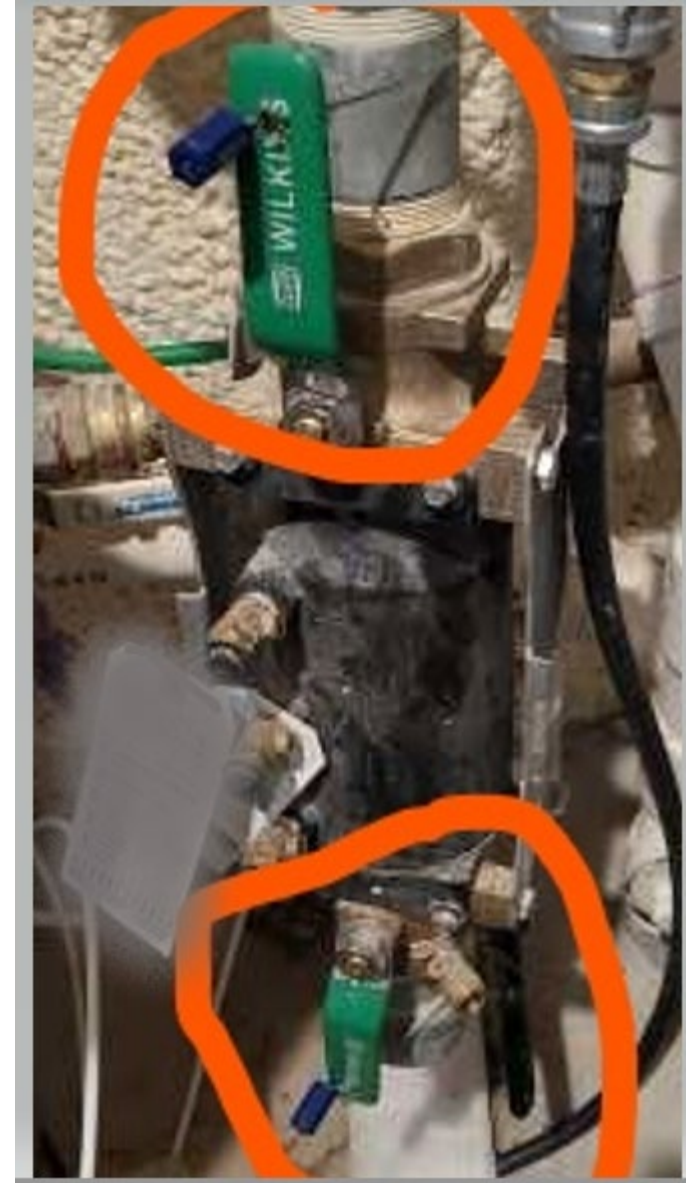


Types of Common Errors: Number 1

Not According to NFPA 13 & 13 R

Back Flow Preventers with non-slow closing valves

- Replacement of the entire BFP assembly is required
- Cannot just replace the valves as it fabricated as an assembly

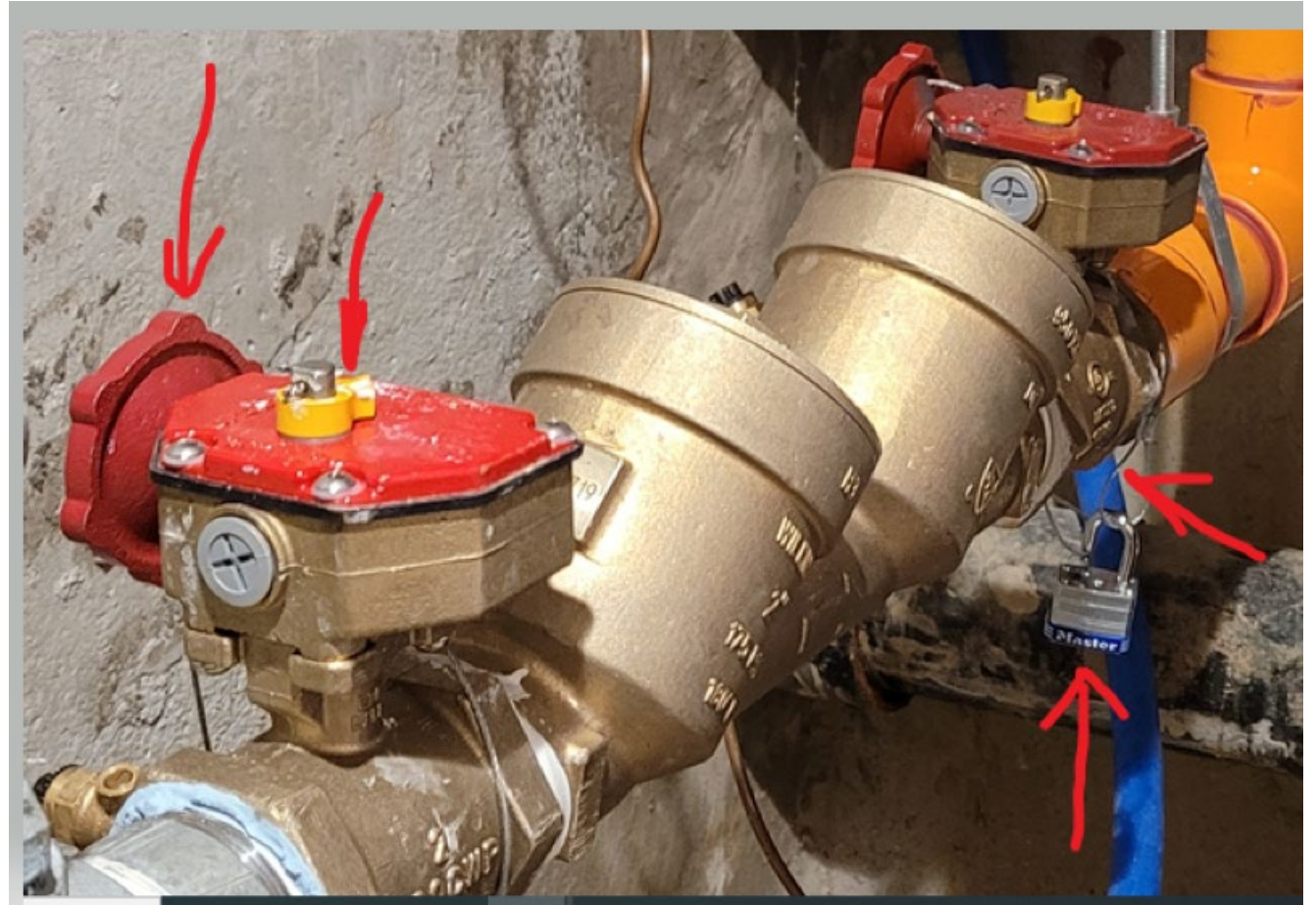


Types of Common Errors: **Number 1**

Not According to NFPA 13 & 13 R

Back Flow Preventers with non-slow closing valves

- Replacement of the entire BFP assembly is required
- Cannot just replace the valves as it fabricated as an assembly and may not be an issue with the manufacture and PWD





Questions ?

Thank you for your participation

**For all Permitting and Inspections information
Phila.gov/li**

