

**THE CONSOLIDATED MUTUAL WATER COMPANY
12700 WEST 27TH AVENUE
LAKEWOOD, COLORADO 80215
(303) 238-0451**

ONLY A STOCKHOLDER IS ELIGIBLE FOR AND MAY APPLY FOR A FIRE LINE CONNECTION!

ALL FIRE LINE CONNECTIONS SHALL BE A SEPARATE TAP ON THE WATER MAIN!

INSPECTION MUST BE ARRANGED AT LEAST 48 HOURS IN ADVANCE AND PRIOR TO BACKFILLING ANY EXCAVATION!

DEDICATED FIRE LINE SPECIFICATIONS

THE CONSOLIDATED MUTUAL WATER COMPANY, hereinafter referred to as "Consolidated",

1. GENERAL INFORMATION:

An application for a fire line can only be made if the requesting party is (or will be) a Consolidated Stockholder. Dedicated fire lines shall be a separate tap (connection) on Consolidated's water main. Under no circumstances shall a dedicated fire line be connected to the Stockholder's domestic water service. Fire lines are considered private mains owned by the Stockholder, not Consolidated.

2. FIRE LINE CONNECTION TO THE MAIN:

Fire line connections will be installed as a tee to the existing or proposed water main including installation of an auxiliary valve. Design and installation are the responsibility of the Stockholder with review and inspection by Consolidated. The Stockholder and their consultants must meet with Consolidated's staff to obtain the process and requirements for the review and submittal.

3. FIRE LINE SERVICE REVIEW PROCESS:

The stockholder shall submit a construction drawing to CMWC from which the Stockholders contactor will install said fire line service from the auxiliary valve at the main, property line valve, and backflow prevention assembly. This drawing (sample attached) shall be prepared and stamped by a Registered Professional Engineer licensed in the State of Colorado. Consolidated's review of said drawing is to determine compliance with Company specifications and details only. The review and approval of said drawing in no way relieves the engineer, or Stockholder of the responsibility or liability for the design. The Stockholder will submit a copy of the drawing, once approved, to the governing Fire District for review. Final approval of this project will be determined by an inspection of the completed construction.

4. FIRE LINE INSTALLATION:

The design and construction by the Stockholder or their consultant shall meet these specifications and details as well as the engineering standards of the Denver Water Department.

- All pipe shall be Ductile Iron Class 50 from the water main to the building for fire lines larger than 2 inches.
- Type K copper is allowed for two (2) inch fire lines, which is the minimum diameter approved by CMWC.
- All pipe shall be polyethylene wrapped and bedded at a minimum with 6-inches of bedding material over and under the pipe.
- All fire lines must be fully restrained with adequate rodding or the equivalent.

5. BACKFLOW PREVENTION:

Title 25 of the Colorado Revised Statutes Articles 1-114 & 1-114.1 does not allow anyone to install, maintain, or permit an uncontrolled cross-connection that is connected to a drinking water system that supplies water to the public. Per Colorado Primary Drinking Water Regulations, 5 CCR 1002-11 (Regulation 11), Section 11.39 and Consolidated's Backflow Prevention Policy a lead-free USC approved backflow prevention assembly must be installed.

The backflow prevention assembly is required to be installed within 5 feet of the line entry into the structure to be served. UNDER NO CIRCUMSTANCES will any connection be allowed on the Fire Line prior to the backflow prevention assembly. All piping inside the structure between the backflow prevention assembly and the exterior wall shall be visible for inspection. The backflow prevention assembly may either be installed inside the structure or outside in a protective heated enclosure. Backflow prevention assemblies installed inside the structure require an adequately sized floor drain and shall have at least 3 feet of clearance around the assembly for inspection and maintenance. The area surrounding the backflow prevention assembly shall maintain a minimum temperature of 40 degrees Fahrenheit and have adequate lighting. Backflow prevention assemblies installed outside shall have a protective heated enclosure that meets ASSE standard 1060 class I installed to protect against vandalism and freezing. The enclosure shall have a rust resistant exterior, structural internal insulation, and thermostatically controlled heat. The heat source shall protect against freezing to -30 degrees Fahrenheit. The power source to the enclosure shall be equipped with a protective "Ground Fault" circuit. Access to the backflow prevention assembly shall be provided through doors and/or hinged lid for testing, and the enclosure shall be totally removable for maintenance purposes. The enclosure shall contain drain openings at each end, sized to accommodate a full flow discharge.

Reduced Pressure Detector Assemblies (RPDAs) are required on all Fire Line installations. The RPDA assemblies must be lead-free, approved by the University of Southern California Foundation for Cross Connection Control and Hydraulic Research

(USC), and conform to ASSE standard 1013. The RPDA shall be installed in the USC approved orientation and be easily accessible for testing, maintenance, and replacement. The assembly shall not be installed in any areas with hazardous gases, fixtures, or extreme temperatures. The assembly shall not be installed underground or in any pits. The RPDA shall not be modified in any way after it leaves the manufacturer's factory that would void USC approval. The installation shall maintain an air gap between the relief valve at the bottom of the assembly and the flood level rim of any drainage that is at least 2X the connection size but no less than 1-inch. The Backflow Prevention Department can provide complete lists of approved RPDA assembly models upon request when given the correct connection size.

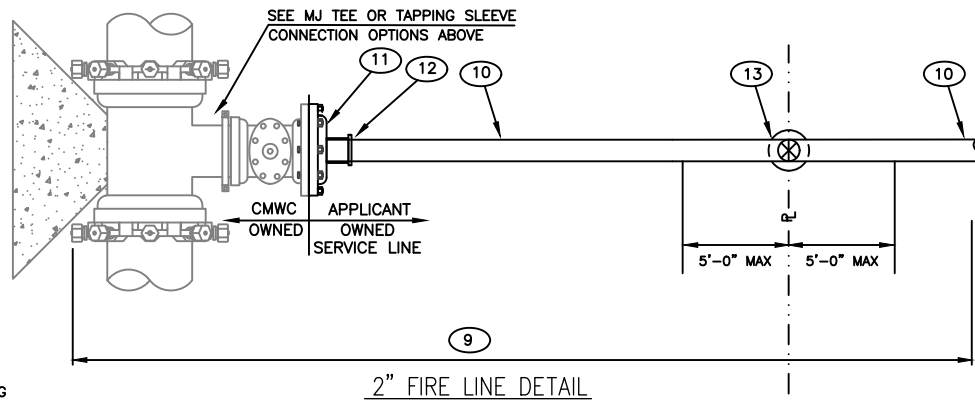
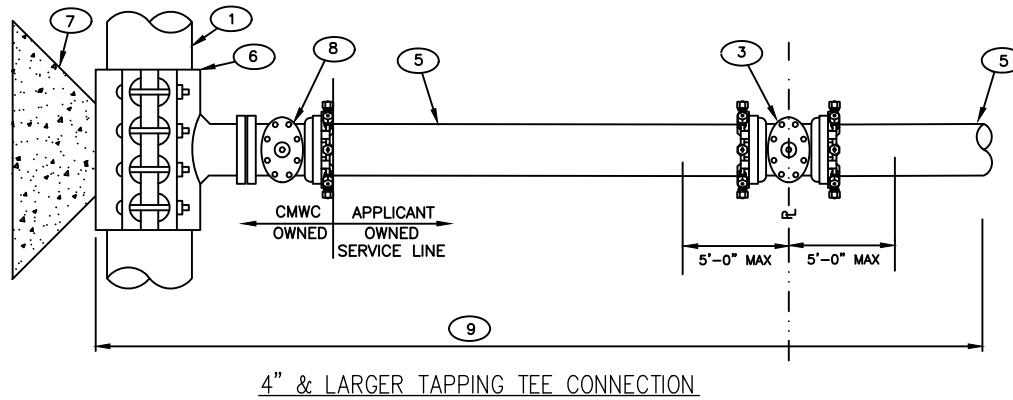
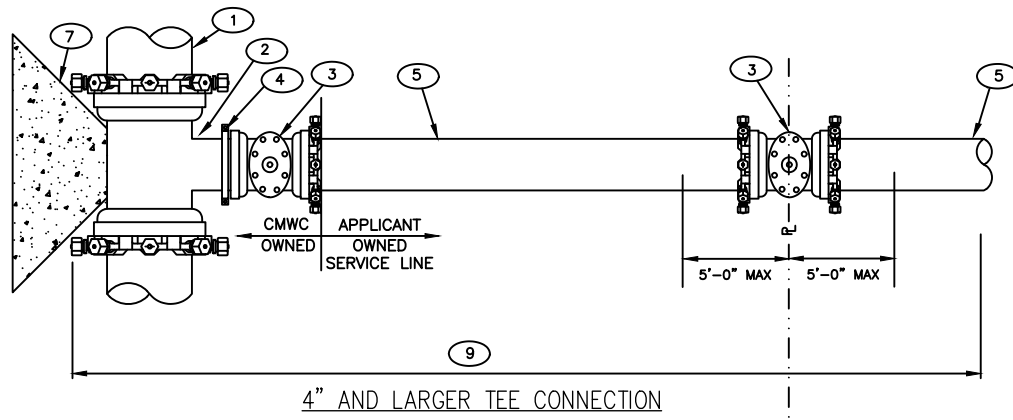
The RPDA assembly shall be tested by an American Society of Sanitary Engineering (ASSE) or American Backflow Prevention Association (ABPA) certified backflow tester upon installation and at least annually thereafter. A Consolidated Backflow Prevention Technician must be present to witness the initial backflow test. Testing results must be properly submitted by the tester or testing company through Consolidated's online portal (cmwc.tokaytest.com). The stockholder shall retain the test reports for a period of at least three (3) years. If the RPDA assembly fails the initial or annual test, the stockholder shall have it repaired and retested within the compliancy period or the domestic water service would be discontinued until compliance is met.

6. INSPECTION:

All pipe and appurtenances shall be inspected by an authorized Consolidated employee prior to backfill. Once the Stockholder's contractor has completed the fire line installation and is ready to backfill they shall call for an inspection. **INSPECTION MUST BE ARRANGED AT LEAST 48 HOURS IN ADVANCE AND PRIOR TO BACKFILLING ANY EXCAVATION!**

- All fire lines shall be hydrostatically tested after the installation has been completed by the installing contractor or stockholder's representative.
- All fire lines shall be flushed after the hydrostatic test is completed with the governing Fire Protection District representative and a CMWC representative on-site.
- The fire line shall be pressurized to a minimum 200 pounds per square inch (psi) for a period of two hours.
- The test must be done in the water entry room, where the backflow prevention will be located
- All tests shall be witnessed by an authorized representative of Consolidated and the governing Fire Protection District.
- All components of the fire line installation shall meet the engineering standards of the Denver Water Department as a minimum. Consolidated may, in its sole discretion, require a higher standard for any portion of, or all of the installation.

These inspection requirements are in addition to those required by the governing Fire Protection District.



KEY NOTES:

- ① WTR MAIN
- ② MJ TEE
- ③ MJ GV
- ④ ANCHOR COUPLING
- ⑤ DI PIPE FULLY RESTRAINED
- ⑥ TAPPING SLV
- ⑦ CONC KB PER DENVER WATER DETAIL
- ⑧ TAPPING VALVE FLG X MJ
- ⑨ POLYETHYLENE WRAPPED
- ⑩ 2" TYPE K COPPER
- ⑪ 4" x 2" MJ TAPPED PLUG
- ⑫ 2" MIP x COMPRESSION
- ⑬ 2" CURB STOP

REVISED

BY	DATE
HEY	1/9/2024



CMWC FIRE LINE CONNECTION

SCALE

NOT TO SCALE

ISSUE DATE

SEPTEMBER 2023

APPROVED

DRAWING NO.

W-13