

GENERAL:

The scope of this document is to provide instruction for the cleaning and disinfecting of underground domestic water lines.

DESIGN GUIDELINES:

1. Cleaning

- 1.1. All domestic potable water systems shall be clean and free of foreign matter and shall be disinfected and tested for bacteriological contamination before the system is put into operation, as required by the State Division of Health and in accordance with AWWA C651 or C652.
- 1.2. All domestic potable water systems will be pressure tested in accordance with AWWA M23.
- 1.3. Disinfection shall be performed AFTER leak and pressure tests are completed.
- 1.4. Water line shall be completely separated from water system for pressure test and disinfection purposes.
- 1.5. Contractor shall install number and size of taps based on the water line size in the table below:

Pipe Diameter (in)	2" Taps Needed
4"	1
6"	1
8"	1
10"	2
12"	2

- 1.6. Contractor shall install water line entrance and exit piping which enters and exits above ground as shown in "Taps for Flushing and Disinfection of Water Line drawing referenced below. The purpose of this piping is to provide a means for flushing, pressure testing, and disinfecting the new water line.
- 1.7. MU ONLY: MU will perform pressure testing and disinfection of new water lines. Contractor shall prepare water line for testing and disinfection. Notify Owner's Representative at least 72 hours prior to requesting disinfection of a new water line. Owner will draw and send samples for testing. Allow 24 hours for disinfection of the water line and an additional 48 hours for return of testing prior to connecting to existing system.
- 1.8. Fill the system with a water-chlorine solution containing at least 50 parts per million of chlorine, valve off, and allow to stand for at least twenty-four (24) hours; or fill system with a water-chlorine solution containing at least 200 parts per million of chlorine, valve off, and let stand for three (3) hours.
- 1.9. After allowed standing time, flush the system with clean potable water until no chlorine (in excess of public water supply) remains at any point of outlet.
- 1.10. The system shall be thoroughly and completely flushed at maximum water pressure, and if it is shown by a bacteriological examination made by the Owner that contamination still persists in the system, the above procedure shall be

repeated.

- 1.11. The contractor shall be responsible for taking and sending the sample for testing.
 - 1.12. The system owner will be financially responsible for first bacteriological test on a section of line to be tested. The cleaning procedure shall be repeated if biological examination shows evidence of contamination. Costs incurred due to subsequent testing from an initial positive sample shall be paid for by the installers.
 - 1.13. Allow forty-eight (48) hours for return of testing before making tie-ins to existing system.
2. Commissioning
 - 2.1. System shall be placed in operation only after testing shows the absence of bacteriological contamination and approved by system owner.
 - 2.2. MU Only: Only Campus Facilities - Energy Management Steam and Water personnel will be allowed to operate valves on new water systems.

REFERENCES

Drawing