SECTION 100.50

WATER PRESURE TEST

PRESSURE TESTING

1. Pressure and bacteria testing of new water mains shall be successfully preformed prior to placing the new pipeline into service.
2. Pressure test must be performed using the District's water from a hydrant meter with a backflow preventer.
3. Refer to Section 100.00 and 105.00 for backflow prevention information and requirements.
4. The Contractor shall conduct combination hydrostatic pressure and leakage test in accordance with AWWA C-600 on all new water mains, new water services, and temporary water service piping and shall furnish all necessary equipment and material to complete the work, including a hydraulic force pump with a calibrated test gauge. The District Inspector shall monitor the test and shall witness all gauge calibrations.
5. On buried pipelines, the Contractor may, if field conditions permit, partially backfill the trench and leave the joints open for inspection and conduct an initial pressure test to satisfy oneself that the pipeline will pass. However, the acceptance test on buried water mains shall only be conducted once all backfilling has been completed.
6. On exposed water mains, the acceptance test shall be conducted after the piping has been completely installed, including all supports and hangers.
7. Test pressure shall not be less than 150 PSIG at any location.
8. Test pressure shall not be less than 1.25 times the working pressure at the highest point along the test section. Example: If working pressure – 150 psi. Then testing pressure = 180 psi
   Contact the District at 530-246-0680 for working pressures.
9. Contractor shall provide a Pressure Test Plan prior to any testing for review by the District. Contractor shall indicate anticipated pressures throughout area tested.

PROCEDURE FOR HYDROSTATIC TESTING PIPELINES:

1. After the pipeline has been installed, backfilled, and compacted, the contractor shall conduct a combination hydrostatic pressure and leakage test of the pipeline between each valve section or pipe run as determined by the District Inspector. The pipe shall be slowly filled with water so that as much air is removed as possible. The pipe shall be tested hydrostatically at the location. The test pressure is completed using the approved calculations for a minimum of two (2) hours.
2. Leakage for pressure pipe shall not exceed the allowable leakage as calculated in AWWA Standards by the following formula.

$$L = \frac{SD\sqrt{P}}{148{,}000}$$

Where: L = Allowable Leakage, Gallons Per Hour
S = Length of Pipeline Tested, Feet
D = Nominal Diameter of Pipe, Inches
P = Average Test

3. When the pressure test is conducted against closed metal-seated valves, an additional leakage allowance of 0.078 gal/hour/nominal valve diameter (inches) for each closed valve within the section being tested shall be made.

Approved:

District Manager

4. If the pressure test discloses leakage greater than that allowed, the Contractor shall at one's sole expense locate and repair the defective joints until the leakage is within the specified allowance. After the defects are corrected, the pressure test shall be repeated per Step #1 above. This process shall be repeated as necessary until the new water main passes the pressure test.

Approved:

District Manager