

PART 1 GENERAL

1.1 SCOPE:

- A. This Section consists of requirements for furnishing and installing water valves and meters.

1.2 CERTIFICATION:

- A. Contractor shall furnish materials certification in accordance with the Special Provisions.

PART 2 PRODUCTS

2.1 GATE VALVES:

- A. Gate valves 3-inches through 48-inches in diameter shall conform to AWWA C500 or C509. Valves shall open when the stem is rotated counterclockwise. Resilient seated gate valves shall conform to AWWA C509.

2.2 BUTTERFLY VALVES:

- A. Butterfly valves shall conform to AWWA C504. Valves shall be Class 150B.

2.3 BALL VALVES:

- A. Ball valves shall conform to AWWA C507.

2.4 CHECK VALVES

A. SWING CHECK VALVES.

- 1. Swing check valves 2-inches through 24-inches in diameter shall be bronze mounted with cast or ductile iron body with outside lever and spring.

B. SPRING-LOADED PLUG OR DISC VALVES.

- 1. Spring-loaded plug or disc valves shall be bronze mounted with bronze, cast or ductile iron body, bronze plug or disc, stainless steel spring and resilient seating suitable for clear cold water service. The plug or disc of the check valves shall be easily replaceable.

2.5 HYDRAULICALLY OPERATED VALVES:

- A. Hydraulically operated valves shall be pilot controlled and diaphragm operated. Valves shall be suitable for 175-psi operation and shall be globe or angle valves. Closing speed shall be adjustable on all valves. Self-cleaning strainers for pilot water supply and valve position indicators shall be provided.

2.6 HYDRAULIC CUSHION VALVES:

- A. Hydraulic cushion valves shall be of bronze, or ductile iron, with bronze disc and disc faces, seat rings, and pivot pins. The valve shall provide drop-tight sealing. Valve shall be provided with an adjustable-speed integrally -mounted oil dashpot mechanical snubber system.

2.7 COMBINATION AIR VALVES:

- A. Combination air valves shall conform to AWWA Standard C512 and permit accumulated air to escape and reenter the line to break any vacuum. Valves shall have cast iron bodies and stainless steel internal furnishings. Valves shall be designed for operating service to 150 PSI. Combination Air Valves shall be Series 201C (Single Body) as manufactured by Val-Matic® Valve Mfg. Corp., Elmhurst, IL. USA or approved equal.
- B. See Standard Detail No.5050-3.

2.8 BACKFLOW PREVENTION DEVICES:

- A. Backflow prevention devices shall be as specified and defined in the *City of Woodburn Cross Connection Ordinance* and as approved by the Oregon Department of Health pursuant to Chapter 333, Division 61 of the Oregon Administrative Rules and Chapter 10 of the Uniform Plumbing Code.

2.9 METERS:

- A. Water meters shall be supplied and installed by City Water Division personnel. Arrangements for scheduling work shall be done through the Engineer in cooperation with the City Water Superintendent.

2.10 SLUICE GATES:

- A. Sluice gates shall conform to AWWA C501.

2.11 VALVE BOXES:

- A. Valve boxes shall be "East Jordan Iron Works Model No. 3639A1 or approved equal.
- B. The cover shall be lug type and clearly marked "WATER".
- C. See Standard Detail No.5050-2.

2.12 BLOW OFFS:

- A. Blow offs shall consist of a 2-inch galvanized pipe attached to the end of the main by means of a mechanical joint with a 2-inch tap extending toward finished grade and capped with a 2-inch wheel gate valve that conforms to Subsection 2.1 of these specifications.
- B. See Standard Detail No. 5000-5.

2.13 METER AND BLOWOFF BOXES:

- A. Meter and blow-off boxes shall be as manufactured by Utility Vault Co. or approved equal and shall conform to Standard Detail No.5050-1.

PART 3 EXECUTION**3.1 VALVES:**

- A. Valves shall be installed so that the shafts are vertical. Jointing procedures shall conform to applicable AWWA specifications.

3.2 METERS:

- A. Meters shall be installed by City personnel. Contractor shall notify the Engineer one week in advance to schedule installation of meters by the City.

3.3 SLUICE GATES:

- A. Sluice gates shall be installed in conformance to AWWA C501 or the manufacturer's recommendations.

3.4 BACKFLOW PREVENTION DEVICES:

- A. Backflow prevention devices conforming to Oregon State Health Division and UPC requirements shall be installed according to the manufacturer's recommendations.

3.5 VALVE BOXES:

- A. Valve boxes shall be centered on the valve shaft. Construction shall conform to Section 5000.

3.6 METER BOXES:

- A. Contractor shall install meter boxes to finished grade and in accordance with the Standard Details.

3.7 BLOW OFFS:

- A. Blow off(s) shall be installed at location(s) shown on plans and in accordance with the Standard Details.
- B. Blow off(s) shall be installed in an oversized meter box and off centered such that the operating wheel of the gate valve is easily accessible from the box opening.

3.8 COMBINATION AIR VALVES:

- A. Combination air valves shall be installed on the zenith of all pressure lines. Pipes shall be tapped and installed per the manufacturer's recommendations and the Plans.

3.9 MEASUREMENT AND PAYMENT:

- A. Payment will be based upon the unit price in the Bid for each valve constructed within the system and tabulated in the field.

PART 4 TESTING

4.1 GENERAL:

- A. Valves shall be hydrostatically tested and disinfected in new lines as described in the appropriate sections.

END OF SECTION