

**PART 1 GENERAL**

## 1.1 SCOPE:

- A. This Section consists of requirements for furnishing and installing valves and meters for sanitary sewer lines.

## 1.2 CERTIFICATION:

- A. Contractor shall furnish materials certification in accordance with Appendix A "Submittals".

**PART 2 PRODUCTS**

## 2.1 GATE VALVES:

- A. Gate valves 1-inch 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 801BW (Single Body) as manufactured by Val-Matic® Valve Mfg. Corp., Elmhurst, IL. USA or approved equal. Valve shall be equipped with appurtenances for the backwash option, including accessories.

**2.8 PIPE STANDS:**

- A. Adjustable pipe saddle support Grinnell (Figure 264), Super Strut, or equal; 3-inch steel pipe; base plate (min. 3/8-inch x 14-inch x 14-inch for 6-inch pipe, 1/2-inch x 18-inch x 18-inch for 8-inch pipe); associated hardware. Bolt base plate to floor.

**2.9 PRESSURE GAGES:**

- A. Gages shall be sanitary industrial pressure gages with diaphragm seal as manufactured by Ashcroft, or equal, with 2-1/2-inch dial and pressure range 0-100 psig.

**2.10 PIPE SADDLE:**

- A. Weldolet, threadolet, or double strap.

**2.11 QUICK DISCONNECT COUPLING:**

- A. Stainless steel as manufactured by Ryan Herco, or equal.

**2.12 SLUICE GATES:**

- A. Sluice gates shall conform to AWWA C501.

**PART 3 EXECUTION****3.1 GENERAL:**

- A. Install in accordance with the manufacturer's recommendations and as shown on the Plans.

**3.2 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.

**3.3 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 FUNCTIONAL TEST:**

- A. Test gages in accordance with manufacturer's recommendations. Make adjustments as necessary. Accuracy shall be  $\pm 1.5\%$  of the gage reading.

END OF SECTION