

## SECTION 221310

### PLUMBING SPECIALTIES

#### PART 1 GENERAL

##### 1.1 STIPULATIONS

- A. The General Conditions, drawings and all other attached documents form a part of this Section and all other Sections by reference thereto and have the same force and effect as if printed herewith in full. The Contractor shall be strictly accountable for the cognizance of carrying out the provisions thereof.

##### 1.2 SECTION INCLUDES

- A. Work in this Section includes the following:

1. Cleanouts
2. Floor Drains
3. Hose Bibbs
4. Freeze Proof Hose Bibb
5. Balancing valves.
6. Temperature-actuated, water mixing valves.
7. Backflow Preventors
8. Water Hammer Arrestors
9. Water Meters
10. Gas Pressure Regulators

#### PART 2 PRODUCTS

##### 2.1 CLEANOUTS

- A. Cleanouts shall be of coated cast iron construction with scoriated nickel bronze tops, (unless noted), vandal proof screws. Floor cleanouts shall be adjustable to finished floor after concrete is set. Cleanouts on exposed piping shall consist of threaded ferrules with threaded bronze plugs.

- B. Cleanout types shall be as follows:

1. Finished Floor Cleanouts

- |                        |           |
|------------------------|-----------|
| a. Wade                | W -6000-5 |
| b. Zurn                | ZN-1400-2 |
| c. "Or Approved Equal" |           |

2. Wall Cleanouts

- |                        |           |
|------------------------|-----------|
| a. Wade                |           |
| b. Zurn                | ZANB-1468 |
| c. "Or Approved Equal" |           |

## 2.2 FLOOR DRAINS

- A. Dura-coated cast-iron light duty floor drain with Type "B" 5-inch round nickel-bronze strainer, adjustable to finished floor.

- 1. FD-1

- a. Zurn ZN-415-5B
  - b. Wade 1100-TY-STDS-1
  - c. "Or Approved Equal"

## 2.3 HOSE BIBBS

- A. Concealed type, automatic draining wall hydrant consisting of a brass casting wall box and door with chrome finish, vacuum breaker-backflow preventor with 3/4-inch male hose thread nozzle, stainless steel operating stem and 3/4-inch copper water tube inlet. A loose tee key shall be furnished with each wall hydrant.

- 1. FPHB-1 Frost Proof Hose Bibb

- a. Woodford Manufacturing, Co.
  - b. Zurn
  - c. "Or Approved Equal"

## 2.4 BALANCING VALVES

- A. Thermostatic Balancing Valves

- 1. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings
    - a. ThermOmedaTech: Circuit Solver
    - b. "Or Approved Equal"

## 2.5 TEMPERATURE-ACTUATED, WATER MIXING VALVES

- A. Primary, Thermostatic, Water Mixing Valves:

- 1. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings
    - a. Powers; a division of Watts Water Technologies, Inc
    - b. Symmons Industries, Inc.
    - c. Lawler Manufacturing Company, Inc.
    - d. "Or Approved Equal"
  - 2. Standard: ASSE 1017.
  - 3. Pressure Rating: 125 psig minimum unless otherwise indicated.
  - 4. Type: Cabinet-type, thermostatically controlled, water mixing valve.
  - 5. Material: Bronze body with corrosion-resistant interior components.
  - 6. Connections: union inlets and outlet.

7. Accessories: Manual temperature control, check stops on hot- and cold-water supplies, and adjustable, temperature-control handle.
8. Tempered-Water Setting: 110 deg F.
9. Tempered-Water Design Flow Rate: 28 gpm.
10. Selected Valve Flow Rate at 45-psig Pressure Drop: 42 gpm.
11. Pressure Drop at Design Flow Rate: 20 psig.
12. Valve Finish: Rough bronze.
13. Piping Finish: Copper.
14. Cabinet: Factory fabricated, painted surface, mounting and with hinged, painted door.

## 2.6 WATER HAMMER ARRESTORS

- A. Water Hammer Arrestors shall be of Type "L", Type "K" copper or stainless-steel bellows or plunger type construction conforming to PDI WH-201. Sioux Chief Series 650, PPP, Inc., Series SWA or SC, JR Smith, Josam, or Zurn.

## 2.7 GAS PRESSURE REGULATORS

- A. Gas pressure regulators shall be diaphragm actuated with cast iron body, aluminum diaphragm chamber, and all internal parts designed for use with natural gas. Regulators shall be adjustable, with automatic loading, automatic low-pressure cut-off, and full internal relief. The regulator shall be adjusted for outlet pressure indicated on the drawings. The outlet pressure shall not vary more than 1-inch w.c. from the set point at specified capacity. The regulator shall be capable of complete shut-off in the event the supply pressure is interrupted, or the gas demand exceeds the regulator capacity and shall remain off until the regulator is manually reset. The regulator shall have a weatherproof, bug proof, screened vent cap installed in the vent tapping. Regulators shall be:

|                  |               |             |
|------------------|---------------|-------------|
| Regular          | 3/4" - 1-1/4" | 1-1/2" - 2" |
| Rockwell         | 143-4         | 243-12-4    |
| Fisher           | 1823B         | -----       |
| Singer           | S-104         | S-204       |
| With Full Relief | 3/4" - 1-1/4" | 1-1/2" - 2" |
| Rockwell         | 143-6         | 143-12-6    |
| Fisher           | 1883B         | -----       |
| Singer           | S-106         | S-206       |

## PART 3 EXECUTION

### 3.1 INSTALLATION

- A. All materials, equipment and accessories shall be installed in strict accordance with manufacturer's recommendations.
- B. Provide isolation valves for all fixtures, equipment, and accessories.
- C. All floor drains shall be flush with floor and per manufacturers recommendations.

### 3.2 CONNECTIONS

- A. Comply with requirements for ground equipment in Section 260526 "Grounding and Bonding for Electrical Systems."
- B. Fire-retardant-treated-wood blocking is specified in Section 260519 "Low-Voltage Electrical Power Conductors and Cables" for electrical connections.

### 3.3 FIELD QUALITY CONTROL

- A. Perform the following tests and inspections:
- B. Domestic water piping specialties will be considered defective if they do not pass tests and inspections.
- C. Prepare test and inspection reports.

### 3.4 ADJUSTING

- A. Set field-adjustable pressure set points of water pressure-reducing valves.
- B. Set field-adjustable flow set points of balancing valves.
- C. Set field-adjustable temperature set points of temperature-actuated, water mixing valves.

END OF SECTION