

SECTION 15430  
PLUMBING SPECIALTIES

PART 1 GENERAL

1.1 SCOPE:

- A. Work consists of all plumbing work indicated on drawings and specified herein. Also included are all fees and permits for installation and inspection of all plumbing work. Attention is directed to “Instructions to Bidders”, “General Conditions”, “Supplementary General Conditions”, “Special Conditions”, and “General Requirements for Mechanical and Electrical Work” which are hereby made part of this section and shall govern in the event there is a conflict with this section.

1.2 SECTION INCLUDES:

- A. Roof and floor drains.
- B. Cleanouts.
- C. Backflow preventers.
- D. Water hammer arrestors.
- E. Hose bibs hydrants.
- F. Trap Primers.
- G. Mixing valve.
- H. Clothes washer hook-up.

1.3 REFERENCES

- A. ASSE 1012 - Backflow Preventors with Immediate Atmospheric Vent.
- B. ASSE 1011 - Hose Connection Vacuum Breakers.
- C. ASSE 1013 - Backflow Preventors, Reduced Pressure Principle.
- D. ANSI A112.21.1 - Floor Drains.
- E. ANSI A112.21.2 - Roof Drains.
- F. ANSI A112.26.1 - Water Hammer Arrestors.
- G. PDI WH-201 - Water Hammer Arrestors.

1.4 QUALITY ASSURANCE

- A. Manufacturer: For each product specified, provide components by same manufacturer throughout.

1.5 SUBMITTALS FOR REVIEW

- A. Submit shop drawings and product data under provisions of Section 01300.
- B. Include component sizes, rough-in requirements, service sizes, and finishes.

PART 2 PRODUCTS

2.1 ROOF DRAINS

- A. Only if shown on plans, require prior approval of Florida Tech.

- B. Roof Drains shall have cast iron body with sump, removable cast aluminum dome strainer, membrane flange and membrane clamp with integral gravel stop, with adjustable under deck clamp roof sump receiver waterproofing flange. See schedule on drawings for manufacturer and model.

## 2.2 FLOOR DRAINS

- A. See schedule on drawings for manufacturer and model.

## 2.3 CLOTHES WASHER HOOK-UP

- A. Provide connections for hot and cold water hook-ups for clothes washer, as well as sanitary line connection in areas as indicated on the plans.

## 2.4 CLEANOUTS

- A. Exterior Surfaced Areas: Round cast nickel bronze access frame and non-skid cover; based on Model 4240-NB-U manufactured by JR Smith.
- B. Exterior Unsurfaced Areas: Line type with lacquered cast iron body and round epoxy coated gasketed cover with 24" x 24" x 4" concrete surround; based on Model 4231 manufactured by JR Smith.
- C. Interior Finished Floor Areas: Galvanized cast iron, two piece body with double drainage flange, weep holes, reversible clamping collar, and adjustable nickel-bronze strainer, round with scoriated cover in service areas and square with depressed cover to accept floor finish in finished floor areas; based on Model 4020-4160 manufactured by JR Smith.
- D. Interior Finished Wall Areas: Line type with lacquered cast iron body and round gasketed cover, and round stainless steel access cover secured with machine screw; based on Model 4452-U manufactured by JR Smith.
- E. Interior Unfinished Accessible Areas: Threaded type. Provide bolted stack cleanouts on vertical rainwater leaders.

## 2.5 BACKFLOW PREVENTERS

- A. Reduced pressure backflow preventers, size to service and two gate valves. SPC 606.5 - ball valves 2" and smaller ball or gate 22 or larger. Reduced Pressure Backflow Preventors: ANSI/ASSE 1013; bronze body with bronze and plastic internal parts and stainless steel springs; two independently operating, spring loaded check valves; diaphragm type differential pressure relief valve located between check valves; third check valve which opens under back pressure in case of diaphragm failure; non-threaded vent outlet; assembled with two gate valves, strainer, and four test cocks; based on Series 900 manufactured by Watts.
- B. Pipe drains to the exterior. Provide backflow device on all make up water lines for mechanical equipment.

## 2.6 WATER HAMMER ARRESTORS

- A. ANSI A112.26.1; size in accordance with PDI WH-201, precharged suitable for operation in temperature range -100 to 300°F and max. 250 psi working pressure.
- B. Acceptable Manufacturers
  1. J. R. Smith Series 5000
  2. Josam Series 75000
  3. Zurn "Shoktrol"

## 2.7 WALL HYDRANTS

- A. ANSI/ASSE 1011; vandal-proof cast bronze, mild-climate recessed wall hydrant with satin face, self-opening locking cover removable key, 3/4" HPT outlet, integral vacuum breaker; recessed stainless steel box.
- B. Acceptable Manufacturers
  - 1. J. R. Smith #5509QT-SAP
  - 2. Josam #71010
  - 3. Zurn #Z-1320

## 2.8 HOSE BIBS

- A. ANSI/ASSE 1011; cast bronze hose bib with laceable hexagonal disc, 3/4" HPT outlet, vacuum breaker.
- B. Acceptable Manufacturers
  - 1. J. R. Smith #5609QT-SAP
  - 2. Josam #71070
  - 3. Zurn #Z1310

## 2.9 THERMOSTATIC MIXING VALVE

- A. Mixing valve rated at 8-10 GPM at 45-PSI differential pressure with check valve, volume control shutoff on outlet and strainer stop check on inlet.
- B. Acceptable Manufacturers
  - 1. Leonard #TM-554-15
  - 2. Powers
  - 3. Symmons

## 2.10 TRAP PRIMER

- A. Automatic 1/2" trap primer systems for all interior floor drains.
- B. Acceptable Manufacturers
  - 1. J. R. smith Series 2699
  - 2. Josam #88250
  - 3. Zurn #Z-1022
  - 4. PP1
- C. Trap primers connected to sink or lavatory wastes shall not be permitted.

## 2.11 VENT CAP

- A. Painted cast iron dome secured with recessed allen socket head set screw.
- B. Acceptable Manufacturers
  - 1. J. R. Smith #1748
  - 2. Josam #26700
  - 3. Zurn #Z-193

## 2.12 VALVE BOX

- A. Underground valve box with traffic cover.

- B. Acceptable Manufacturer
  - 1. Brooks Products, Inc.

## PART 3 EXECUTION

### 3.1 PREPARATION

- A. Coordinate cutting and forming of roof and floor construction to receive drains to required invert elevations.

### 3.2 INSTALLATION AND APPLICATION

- A. Install specialties in accordance with manufacturer's instructions to permit intended performance.
- B. Install a trap primer on each floor drain.
- C. Install traffic type round covers on all grease interceptors serving food service areas.
- D. Extend cleanouts to finished floor or wall surface. Lubricate threaded cleanout plugs with mixture of graphite and linseed oil. Ensure clearance at cleanout for rodding of drainage system.
- E. Encase exterior cleanouts in 24 x 24 x 4 inches concrete flush with grade.
- F. Install cleanouts at the base of each vertical stack.
- G. Install cleanouts at each change of direction of horizontal run.
- H. Install cleanouts at 50-foot intervals of horizontal runs.
- I. Install cleanouts on all garbage disposals.
- J. Install water hammer arrestors complete with accessible isolation valve.
- K. Install ¾" hose bibs/hydrants with vacuum breaker and gate valve on the exterior of all buildings with a maximum spacing of 150 feet.
- L. Install one ¾" hose bib/hydrant with vacuum breaker in each group restroom.

END OF SECTION