SECTION 15150.CP – SANITARY DRAINAGE PIPING

PART 1 - GENERAL

1.1 SANITARY DRAINAGE PIPING

A. Provide cast iron soil waste and vent piping in all cases except where specifically approved by the Owner. The use of PVC drainage piping is prohibited.

B. Use of mechanical couplings is prohibited.

PART 2 - PRODUCTS

2.1 Acceptable products are those tested to the listed standard(s). Manufacturer’s assertions of compliance shall be in submittals. Materials shall bear manufacturer’s marks as required by standard(s).

2.2 SANITARY SEWER PIPING, BURIED BEYOND 5 FEET OF BUILDING

A. Cast Iron Pipe: ASTM A74 service weight.
   1. Fittings: Cast iron.
   2. Joints: ASTM C564, neoprene gasket system or lead and oakum.

2.3 SANITARY SEWER PIPING, BURIED WITHIN 5 FEET OF BUILDING

A. Cast Iron Pipe: ASTM A74 service weight.
   1. Fittings: Cast iron.
   2. Joints: Hub-and-spigot, CISPI HSN compression type with ASTM C564 neoprene gaskets or lead and oakum.

2.4 SANITARY SEWER PIPING, ABOVE GRADE

A. Cast Iron Pipe: ASTM A74, service weight.
   1. Fittings: Cast iron.
   2. Joints: ASTM C564, neoprene gasket system or lead and oakum.

B. Cast Iron Pipe: CISPI 301, hub-less, service weight.
   1. Fittings: Cast iron.

C. ABS Pipe: ASTM D2751 or ASTM F628.
   1. Fittings: ABS.

D. ABS Pipe: ASTM D2661 or ASTM D2751.
   1. Fittings: ASTM D2662, ABS.

E. Fiberglass Pipe: ASTM D3262.

   1. Fittings: Custom laminated Fiberglass.

2.5 CHEMICAL RESISTANT SEWER PIPING

A. Cast Iron Pipe: CISPI 301, hubless, service weight.
   1. Fittings: Cast iron.

B. ABS Pipe: ASTM D2751 or ASTM F628.
   1. Fittings: ABS.
   2. Joints: ASTM D2235, solvent weld

C. Glass Pipe: ASTM C1053.
   1. Fittings: ASTM C1053.

D. Pipe: Polypropylene or Polypropylene flame retardant.
   1. Fittings: Polypropylene.

2.6 PIPE LABELING

A. Piping:
   1. Labels for piping shall be Seton Setmark or equal. Labels to identify zone number may be self-stick type, but must wrap completely around pipe, and be adhered to itself. All self-stick labels must be plasticized to withstand washing with commercially available cleaning products.
   2. Piping labels shall be placed every 30 linear feet of pipe. Painting or stenciling is not permitted.

2.7 PIPE HANGERS AND SUPPORTS


B. Hangers for pipe sizes 1/2 to 1-1/2 inch: Carbon steel, adjustable swivel, split ring.
C. Hangers for pipe sizes 2 inches and over: Carbon steel, adjustable, clevis.

D. Multiple or Trapeze Hangers: Steel channels with welded supports or spacers and hanger rods.

E. Wall Support for Pipe Sizes to 3 inches: Cast iron hooks.

F. Wall Support for 4 inch and over Pipe Size: Welded steel bracket and wrought steel clamps.

G. Vertical Support: Steel riser clamp.

H. Floor Support: Cast iron adjustable pipe saddle, lock nut, nipple, floor flange, and concrete pier or steel support.

I. Copper Pipe Support: Carbon-steel, copper-plated adjustable ring.

J. Pipe hangers and supports shall be matched to seismic zone for Providence, RI.

2.8 FIRE STOP SYSTEMS

A. General Purpose Fire Stopping Sealant: Water based, non-slumping, premixed sealant with intumescent properties, rated for 3 hours in accordance with ASTM E814 and UL 1479.

B. General Purpose Vibration Resistant Fire Stopping Sealant: Silicone based, non-slumping, premixed sealant with intumescent properties, vibration and moisture resistant, rated for 3 hours in accordance with ASTM E814 and UL 1479.

C. DWV Plastic Pipe Systems Fire Stopping Sealant: Silicone based, premixed sealant with intumescent properties, vibration and moisture resistant, rated for 3 hours in accordance with ASTM E814 and UL 1479 with metal collars.

2.9 CLEANOUTS

A. Exterior Surfaced Areas: Cast nickel bronze access frame and non-skid cover.

B. Exterior Unsurfaced Areas: Line type with lacquered cast iron body and round epoxy coated cover wit gasket.

C. Interior Finished Floor Areas: Lacquered or galvanized cast iron body with anchor flange, reversible clamping collar where required, threaded top assembly, and round scored cover with gasket in service areas and depressed cover (round or square as required) with gasket to accept floor finish in finished floor areas.

D. Interior Finished Wall Areas: Line type with lacquered cast iron body and round epoxy coated cover with gasket, and round stainless steel access cover secured with machine screw.
E. Interior Unfinished Accessible Areas: Caulked or threaded type. Provide bolted stack cleanouts on vertical rainwater leaders.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify excavations are to required grade, dry, and not over-excavated.

3.2 PREPARATION

A. Ream pipe and tube ends. Remove burrs. Bevel plain end ferrous pipe where used.

B. Remove scale and dirt, on inside and outside, before assembly.

C. Prepare piping connections to equipment with flanges or unions.

3.3 INSTALLATION

A. Provide non-conducting dielectric connections wherever jointing dissimilar metals.

B. Require access panels where valves are not exposed.

C. Establish elevations of buried piping outside building to provide not less than 4 ft of cover.

3.4 METAL-PIPE HANGER SPACING

A. Pipe size: 1/2 to 1-1/4 inches:
   1. Maximum hanger spacing: 5 ft

B. Pipe size: 1-1/2 to 2 inches:
   1. Maximum hanger spacing: 10 ft.

C. Pipe size: 2-1/2 to 3 inches:
   1. Maximum hanger spacing: 10 ft.
   2. Hanger rod diameter: 1/2 inch.

D. Pipe size: 4 to 6 inches:
   1. Maximum hanger spacing: 10 ft.

E. Pipe size: 8 to 12 inches:
   1. Maximum hanger spacing: 14 ft.

F. Pipe size: 14 inches and over:
   1. Maximum hanger spacing: 20 ft.
   2. Hanger rod diameter: 1 inch.

3.5 PLASTIC-PIPE HANGER SPACING

A. All Sizes:
   1. Maximum hanger spacing: 6 ft.

END OF SECTION