

SECTION 221319 - SANITARY WASTE PIPING SPECIALTIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:

- 1. Cleanouts.
 - 2. Miscellaneous sanitary drainage piping specialties.

- B. Related Requirements:

- 1. Section 221423 "Storm Drainage Piping Specialties" for trench drains for storm water, channel drainage systems for storm water, roof drains, and catch basins.

1.3 DEFINITIONS

- A. ABS: Acrylonitrile butadiene styrene.
- B. PVC: Polyvinyl chloride.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings:
 - 1. Show fabrication and installation details for frost-resistant vent terminals.

1.5 INFORMATIONAL SUBMITTALS

- A. Field quality-control reports.

1.6 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For sanitary waste piping specialties to include in emergency, operation, and maintenance manuals.

PART 2 - PRODUCTS

2.1 ASSEMBLY DESCRIPTIONS

- A. Sanitary waste piping specialties shall bear label, stamp, or other markings of specified testing agency.
- B. Comply with NSF 14 for plastic sanitary waste piping specialty components.

2.2 CLEANOUTS

A. Plastic Exposed Cleanouts:

- 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Charlotte Pipe.
 - b. Oatey.
 - c. Nibco.
 - d. Zurn Industries, LLC.
- 2. Standard: ASME A112.36.2M.
- 3. Size: Same as connected drainage piping
- 4. Body Material: PVC as required to match connected piping.
- 5. Closure: Raised-head, threaded plastic plug.
- 6. Closure Plug Size: Same as or not more than one size smaller than cleanout size.

B. Plastic Wall Cleanouts:

- 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Charlotte Pipe.
 - b. Oatey.
 - c. Nibco.
 - d. Zurn Industries, LLC.
- 2. Standard: ASME A112.36.2M. Include wall access.
- 3. Size: Same as connected drainage piping.
- 4. Body: PVC pipe tee as required to match connected piping.
- 5. Closure Plug:
 - a. PVC
 - b. Raised head, threaded to match ferrule.
 - c. Drilled and threaded for cover attachment screw.
 - d. Size: Same as or not more than one size smaller than cleanout size.
- 6. Wall Access, Cover Plate: Round, flat, chrome-plated brass or stainless steel cover plate with screw.
- 7. Wall Access, Frame and Cover: Round, nickel-bronze, copper-alloy, or stainless steel wall-installation frame and cover.

C. Plastic Floor Cleanouts:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Endura; a brand of IPEX.
 - b. IPS Corporation.
 - c. NDS Inc.
 - d. Plastic Oddities.
 - e. Sioux Chief Manufacturing Company, Inc.
 - f. Zurn Industries, LLC.
2. Size: Same as connected branch.
3. Body: PVC.
4. Closure Plug: PVC.
5. Riser: Drainage pipe fitting and riser to cleanout of same material as drainage piping.

2.3 MISCELLANEOUS SANITARY DRAINAGE PIPING SPECIALTIES

A. Open (Hub) Drains:

1. Description: Shop or field fabricate from ASTM D2665 solid wall PVC Piping, ASTM D3311 PVC DWV-pipe fittings. Include deep seal trap, PVC riser section; and where required, increaser fitting. All joints prepared with ASTM F656 primer and adhesive.
2. Size: Same as connected waste piping with increaser fitting of size indicated.

B. Open (Hub) Drains:

1. Description: Shop or field fabricate from, schedule 40, PVC or ABS. Include P-trap, riser section; and where required, increaser fitting.
2. Size: Same as connected waste piping with increaser fitting of size indicated.

C. Deep-Seal Traps:

1. Description: PVC, with inlet and outlet matching connected piping and cleanout trap-seal primer valve connection.
2. Size: Same as connected waste piping.
 - a. NPS 2: 4-inch- minimum water seal.
 - b. NPS 2-1/2 and Larger: 5-inch- minimum water seal

D. Floor-Drain, Inline Trap Seal:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Green Drain, Inc.
 - b. Jay R. Smith Mfg Co; a division of Morris Group International.
 - c. Josam Company.
 - d. MIFAB, Inc.
 - e. RectorSeal Plumbing; A CSW Industrials Company.
 - f. Zurn Industries, LLC.
2. Description: Inline floor drain trap seal, forming a physical barrier to slow trap evaporation while not impeding flow from drain.
3. Material: Polymer.

4. Standard: Tested and certified in accordance with ASSE 1072.
5. Listing: ICC-ES or IAPMO listed.
6. Size: Same as floor drain outlet or strainer throat.

E. Air-Gap Fittings

1. Standard: ASME A112.1.2, for fitting designed to ensure fixed, positive air gap between installed inlet and outlet piping.
2. Body: Bronze or cast iron.
3. Inlet: Opening in top of body.
4. Outlet: Larger than inlet.
5. Size: Same as connected waste piping and with inlet large enough for associated indirect waste piping.

F. Sleeve Flashing Device:

1. Description: Manufactured, cast-iron fitting, with clamping device that forms sleeve for pipe floor penetrations of floor membrane. Include galvanized-steel pipe extension in top of fitting that will extend **2 inches** above finished floor and galvanized-steel pipe extension in bottom of fitting that will extend through floor slab.
2. Size: As required for close fit to riser or stack piping.

G. Stack Flashing Fittings:

1. Description: Counterflashing-type, cast-iron fitting, with bottom recess for terminating roof membrane, and with threaded or hub top for extending vent pipe.
2. Size: Same as connected stack vent or vent stack.

H. Vent Caps:

1. Description: Cast-iron body with threaded or hub inlet and vandal-proof design. Include vented hood and setscrews to secure to vent pipe.
2. Size: Same as connected stack vent or vent stack.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install cleanouts in aboveground piping and building drain piping according to the following, unless otherwise indicated:
1. Size same as drainage piping up to NPS 4. Use NPS 4 for larger drainage piping unless larger cleanout is indicated.
 2. Locate at each change in direction of piping greater than 45 degrees.
 3. Locate at minimum intervals of 50 feet for piping NPS 4 and smaller and 100 feet for larger piping.
 4. Locate at base of each vertical soil and waste stack.

- B. For floor cleanouts for piping below floors, install cleanout deck plates with top flush with finished floor.
- C. For cleanouts located in concealed piping, install cleanout wall access covers, of types indicated, with frame and cover flush with finished wall.
- D. Assemble open drain fittings and install with top of hub **2 inches** above floor.
- E. Install deep-seal traps on floor drains and other waste outlets, if indicated.
- F. Install air-gap fittings on draining-type backflow preventers and on indirect-waste piping discharge into sanitary drainage system.
- G. Install sleeve and sleeve seals with each riser and stack passing through floors with waterproof membrane.
- H. Install vent caps on each vent pipe passing through roof.
- I. Install wood-blocking reinforcement for wall-mounting-type specialties.
- J. Install traps on plumbing specialty drain outlets. Omit traps on indirect wastes unless trap is indicated.

3.2 PIPING CONNECTIONS

- A. Comply with requirements in Section 221316 "Sanitary Waste and Vent Piping" for piping installation requirements. Drawings indicate general arrangement of piping, fittings, and specialties.
- B. Install piping adjacent to equipment, to allow service and maintenance.

3.3 LABELING AND IDENTIFYING

- A. Distinguish among multiple units, inform operator of operational requirements, indicate safety and emergency precautions, and warn of hazards and improper operations, in addition to identifying unit.
 - 1. Nameplates and signs are specified in Section 220553 "Identification for Plumbing Piping and Equipment."

3.4 PROTECTION

- A. Protect drains during remainder of construction period to avoid clogging with dirt or debris and to prevent damage from traffic or construction work.
- B. Place plugs in ends of uncompleted piping at end of each day or when work stops.

END OF SECTION 221319