

**SECTION 221423
STORM DRAINAGE PIPING SPECIALTIES**

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. General-purpose roof drains.
 - 2. Miscellaneous storm drainage piping specialties.
 - 3. Cleanouts.

1.02 ACTION SUBMITTALS

- A. Product Data:
 - 1. General-purpose roof drains.
 - 2. Miscellaneous storm drainage piping specialties.
 - 3. Cleanouts.

1.03 QUALITY ASSURANCE

- A. Provide drainage piping specialties are to bear label, stamp, or other markings of specified testing agency.

PART 2 PRODUCTS

2.01 GENERAL-PURPOSE ROOF DRAINS

- A. Cast-Iron Roof Drains:
 - 1. Cast-Iron, General-Purpose Roof Drains:
 - a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Eric'sons Dura Trench.
 - 2) Jay R. Smith Mfg Co; a division of Morris Group International.
 - 3) Josam Company.
 - 4) Marathon Roofing Products.
 - 5) MIFAB, Inc.
 - 6) Sioux Chief Manufacturing Company, Inc.
 - 7) Wade; a subsidiary of McWane Inc.
 - 8) WATTS; A Watts Water Technologies Company.
 - 9) Zurn Industries, LLC.
 - b. Standard: ASME A112.6.4.
 - c. Body Material: Cast iron.
 - d. Dimension of Body: Nominal 14-to 16-inch diameter.
 - e. Dome Material: Aluminum.
 - f. Combination flashing ring and gravel stop.
 - g. Outlet: Bottom.
 - h. Outlet Type: No-hub.
- B. Emergency Roof Drains:
 - 1. Cast iron General-Purpose Roof Drains:
 - a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) LSP Products Group.
 - 2) Marathon Roofing Products.

- 3) Plastic Oddities.
- 4) Portals Plus; Duravent Group.
- 5) Sioux Chief Manufacturing Company, Inc.
- 6) Town & Country Plastics, Inc.
- 7) Zurn Industries, LLC.
- b. Standard: ASME A112.6.4.
- c. Body Material: Cast iron
- d. Dome Material: Aluminum.
- e. Outlet: Bottom.
- f. Outlet Type: no hub
- g. Options:
 - 1) Combination flashing ring and gravel stop.
 - 2) Extension collars.
 - 3) Underdeck clamp.
 - 4) Expansion joint.
 - 5) Sump receiver plate.
 - 6) Vandal-proof dome.
 - 7) Internal standpipe or external water dam that is set a minimum 2-inches above the finished roof surface.
 - 8) 2" internal stand pipe or water dam.

2.02 MISCELLANEOUS STORM DRAINAGE PIPING SPECIALTIES

A. Metal Downspout Nozzles:

- 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Jay R. Smith Mfg Co; a division of Morris Group International.
 - b. Josam Company.
 - c. Wade; a subsidiary of McWane Inc.
 - d. WATTS; A Watts Water Technologies Company.
 - e. Zurn Industries, LLC.
- 2. Description: Nozzle with wall flange and mounting holes to cover rough opening and serve as anchor.
- 3. Size: Same as connected downspout.
- 4. Material: Cast bronze or nickel bronze nozzle and flange.
- 5. Piping Connection Type: No-hub.
- 6. Opening Protection: Birdscreen.

2.03 CLEANOUTS

- 1. Cast-Iron Exposed Cleanouts:
 - a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Jay R. Smith Mfg Co; a division of Morris Group International.
 - 2) Josam Company.
 - 3) MIFAB, Inc.
 - 4) Wade; a subsidiary of McWane Inc.
 - 5) WATTS; A Watts Water Technologies Company.
 - 6) Zurn Industries, LLC.
 - b. Standard: ASME A112.36.2M.

- c. Size: Same as connected branch.
 - d. Body Material: Hub-and-spigot, cast-iron soil pipe T-branch (horizontal) or No-hub, cast-iron soil pipe test tee (vertical) as required to match connected piping.
 - e. Closure: Countersunk or raised-head , brass plug.
- 2. Closure Plug Size: Same as, or not more than, one size smaller than cleanout size.
- B. Cast-Iron Wall Cleanouts:
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Jay R. Smith Mfg Co; a division of Morris Group International.
 - b. Josam Company.
 - c. MIFAB, Inc.
 - d. Wade; a subsidiary of McWane Inc.
 - e. WATTS; A Watts Water Technologies Company.
 - f. Zurn Industries, LLC.
 - 2. Standard: ASME A112.36.2M. Include wall access.
 - 3. Size: Same as connected drainage piping.
 - 4. Body: No-hub, cast-iron soil pipe test tee as required to match connected piping.
 - 5. Closure Plug:
 - a. Material: Brass .
 - b. Head: Countersunk or raised.
 - 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 clean out of same material as drainage piping.
 - 6. Frame and Cover Material and Finish: Nickel-bronze, copper alloy

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install roof drains in accordance with roof membrane manufacturer's written installation instructions at low points of roof areas.
 - 1. Install flashing collar or flange of roof drain to maintain integrity of waterproof membranes where penetrated.

2. Install expansion joints, if indicated, in roof drain outlets.
3. Position roof drains for easy access and maintenance.
- B. Install downspout adapters on outlet of back-outlet parapet roof drains and connect to sheet metal downspouts.
- C. Install downspout nozzles at exposed bottom of conductors where they spill onto grade.
- D. Install cleanouts in aboveground piping and building drain piping in accordance with the following instructions unless otherwise indicated:
 1. Use cleanouts the same size as drainage piping up to NPS 4. Use NPS 4 for larger drainage piping unless larger cleanout is indicated.
 2. Locate cleanouts at each change in direction of piping greater than 45 degrees.
 3. Locate cleanouts at minimum intervals of 50 ft. for piping NPS 4 and smaller and 100 ft. for larger piping.
 4. Locate cleanouts at base of each vertical storm piping conductor.
- E. For floor cleanouts for piping below floors, install cleanout deck plates with top flush with finished floor.
- F. For cleanouts located in concealed piping, install cleanout wall access covers, of types indicated, with frame and cover flush with finished wall.
- G. Install test tees in vertical conductors and near floor.
- H. Install wall cleanouts in vertical conductors. Install access door in wall if indicated.
- I. Install through-penetration firestop assemblies for penetrations of fire- and smoke-rated assemblies.
 1. Comply with requirements in "Penetration Firestopping."

3.02 CONNECTIONS

- A. Comply with requirements for piping specified in Section 221414 "Storm Drainage Piping." Drawings indicate general arrangement of piping, fittings, and specialties.

3.03 INSTALLATION OF FLASHING

- A. Fabricate flashing from single piece of metal unless large pans, sumps, or other drainage shapes are required.
- B. Install sheet flashing on pipes, sleeves, and specialties passing through or embedded in floors and roofs with waterproof membrane.
- C. Set flashing on floors and roofs in solid coating of bituminous cement.
- D. Secure flashing into sleeve and specialty clamping ring or device.

3.04 CLEANING

- A. Clean piping specialties during installation and remove dirt and debris as work progresses.

3.05 PROTECTION

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

3.06 FINAL TURN OVER

- A. Prior to final turnover, all floor cleanouts and their cover plates shall be cleaned of any accumulated construction debris. If covers are damaged (gouged, excessively worn or displaying wear) this contractor shall replace the cover at no additional cost to the owner.

- B. Prior to final turnover, all Roof, Area, Deck, Terrace etc drains shall be cleaned of any accumulated construction debris. If dome strainers of inlet grates are damaged (gouged, excessively worn or displaying wear) this contractor shall replace them at no additional cost to the owner
- C. Confirm that all roof drains are set level and flush with the surrounding roof surfaces.
- D. Confirm that all secondary roof drains are set a minimum 2 inches above the surrounding roof surface.
- E. Confirm that all set screws are installed in the dome strainers or inlet grates and that none are missing.
- F. Confirm that all downspout nozzles associated with storm overflow system are secured to the façade and have been provided with bird screens.

END OF SECTION