

SUGGESTED SPECIFICATION PVC - STORM DRAINAGE PIPE

POLYVINYL CHLORIDE (PVC) STORM DRAINAGE PIPE AND FITTINGS

SCOPE: This specification covers the furnishing of PVC storm drainage pipe in nominal diameters 3 inches through 60 inches for use in storm drainage projects as designated on project drawings.

PIPE AND FITTINGS: All PVC pipe and fittings shall be manufactured in accordance with one of the following Standard Specifications:

- a. AASHTO M278, “Class PS 46 Polyvinyl Chloride (PVC) Piping Systems for Subsurface Drainage of Transportation Facilities”
- b. AASHTO M304, “Polyvinyl Chloride (PVC) Profile Wall Drain Pipe & Fittings Based On Controlled Inside Diameter”
- c. ASTM D2241, “Standard Specification for Poly (Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR Series)”
- d. ASTM D3034, “Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings”
- e. ASTM F679, “Standard Specification for Poly (Vinyl Chloride) (PVC) Large-Diameter Plastic Gravity Sewer Pipe and Fittings”
- f. ASTM F794, “Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Gravity Sewer Pipe and Fittings Based on Controlled Inside Diameter”
- g. ASTM F949, “Standard Specification for Poly (Vinyl Chloride) (PVC) Corrugated Sewer Pipe With a Smooth Interior and Fittings”
- h. ASTM F1336, “Standard Specification for Poly(Vinyl Chloride) (PVC) Gasketed Sewer Fittings”
- i. ASTM F1760, “Standard Specification for Coextruded Poly(Vinyl Chloride) (PVC) Non-Pressure Plastic Pipe Having Reprocessed-Recycled Content”
- j. ASTM F1803, “Standard Specification for Poly (Vinyl Chloride) (PVC) Closed Profile Gravity Sewer Pipe and Fittings Based on Controlled Inside Diameter”
- k. AWWA C905, “Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 14 in.

through 48 in. (350 mm through 1,200 mm), for Water Transmission and Distribution”

All fittings shall be compatible with the pipe to which they are attached.

JOINTS: All PVC pipe joints shall be gasketed, bell-and-spigot, push-on type conforming to ASTM D3212, “Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals.” Since each pipe manufacturer has a different design for push-on joints, gaskets shall be part of a complete pipe section and purchased as such. Gaskets may be factory installed or field installed as recommended by the pipe manufacturer. Lubricant shall be as recommended by the pipe manufacturer.

ACCEPTANCE: Pipe or fittings may be rejected for failure to comply with any requirement of this specification.

POLYVINYL CHLORIDE (PVC) STORM DRAINAGE PIPE DESIGN AND INSTALLATION

INSTALLATION: Pipe and fittings should be installed in accordance with ASTM D2321, “Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications,” or Section 30 of AASHTO, “Standard Specifications for Highway Bridges.”

EMBEDMENT REQUIREMENTS: The method for calculating loads and determining embedment requirements for PVC sewer pipe shall be in accordance with the latest published edition of one of the following:

- a. Section 12 of AASHTO, “LRFD Bridge Design Specifications”
- b. ASCE Manual No. 60 / WPCF Manual FD-5, “Gravity Sanitary Sewer Pipe Design and Construction.”
- c. The Handbook of PVC Pipe, Design and Installation available from the Uni-Bell PVC Pipe Association.
- d. UNI-TR-1, “Deflection: The Pipe/Soil Mechanism” available from the Uni-Bell PVC Pipe Association.

POST INSTALLATION REQUIREMENTS: Post installation testing shall be in accordance with Section 30 of AASHTO, “Standard Specifications for Highway Bridges.”