

808 NON METALLIC PIPE

808.01 PCC PIPE

- (A) **NONREINFORCED PCC PIPE.** Non-reinforced PCC pipe shall meet the requirements of AASHTO M 86 for the Class of pipe as specified in the contract documents.
- (B) **REINFORCED PCC PIPE.** Reinforced PCC pipe shall be of Class B PCC, Class III minimum, Wall B minimum for the diameter(s) specified in the contract documents and per AASHTO M 170 modified as follows:

PCC mix proportions shall be determined per [817.01\(B\)](#) prior to production. PCC shall contain a minimum of 564 lbs. cement per cubic yard.

PCC pipe shall be furnished with rubber gasket joints per [808.04](#).

PCC pipe and joints for sanitary and combined sewers shall pass 13 psi hydrostatic test performed by pipe manufacturer per AASHTO M 315, Section 10, and ASTM C 497.

PCC pipe for building sewer connections and cleanouts shall be furnished with bell and spigot, rubber gasket joints as per AASHTO M 315. Joints shall pass 13 psi hydrostatic test.

The bevel or drop on bevel pipe shall not exceed the pipe wall thickness.

Except for closure sections and as otherwise specified, PCC pipe shall be furnished in minimum eight (8) foot lengths in sizes 12-inch through 72-inch diameter and minimum six (6) foot lengths in sizes larger than 72-inch diameter.

Branches and specials shall have standard reinforcement deflected to facilitate opening for the branch or special and shall be formed at time of pipe manufacture. Additional reinforcement shall be welded to longitudinal and circumferential steel where deflection or opening results in bar spacing in excess of one and one half times the wall thickness. The design and fabrication plan for branches and specials shall be submitted for approval prior to manufacture.

Pipe 12-inch through 72-inch diameter will be accepted from a manufacturer's existing stock provided crushing strength tests meet AASHTO M 170 requirements and, for sanitary and combined sewer, the pipe meets hydrostatic test requirements. Crushing tests shall be performed under the supervision of a District inspector on the manufacturer's testing machine.

Pipe 78-inch diameter and larger will be accepted based on tests of quality of the PCC as placed in the pipe and by examination of the quality, amount, and accuracy of placement of the steel reinforcement per AASHTO M 170 requirements and, for sanitary and combined sewer, the pipe meets hydrostatic test requirements.

808.02 POLYVINYL CHLORIDE (PVC) PIPE

- (A) **PVC PIPE.** Polyvinyl chloride (PVC) pipe and fittings for Pipe Sewer shall be per ASTM D 3034 SDR 35 for pipe up to 15-inches diameter, and ASTM F 679 and wall thickness T-1 for pipe 18 thru 27-inches diameter. Unless otherwise approved, lengths of

pipe sections shall not exceed 13 feet and lengths of Y-branches shall not exceed three (3) feet. Saddle Y-branches shall not be used.

Joints for both the pipe and fittings shall be of the integral bell type with integral wall section per ASTM D 3212. PVC pipe shall be furnished with elastomeric gasket seals per [808.04](#).

All pipe and fittings furnished shall be accompanied by a certification, per ASTM D 3034, which will be the basis of acceptance of the material. Pipe and fittings will be inspected upon delivery. Rejected pipe and fitting shall be removed by the Contractor.

- (B) **PVC PERFORATED PIPE.** Perforated PVC pipe and fittings shall meet the requirements of ASTM D 2729 with a dimension ratio (DR) of 35. Unless otherwise approved, lengths of pipe sections shall not exceed 13 feet and lengths of Y-branches shall not exceed three (3) feet. Saddle Y-branches shall not be used.
- (C) **PVC BUILDING CONNECTION PIPE.** Polyvinyl Chloride (PVC) pipe shall meet the requirements of ASTM D 2665. Unless otherwise approved, 20 foot lengths of pipe shall be used wherever practicable and lengths of wye-branches shall not exceed 3 feet. Saddle wye-branches shall not be used. Pipe and fittings will be inspected upon delivery. Rejected pipe and fittings shall be removed by the Contractor.

Pipe fittings and joints shall meet the requirements of ASTM D 3311. Joints shall be solvent welded with solvent cement meeting the requirements of ASTM D 2564.

- (D) **JOINT MORTAR.** Joint mortar for sewer pipe shall be per [806.05\(B\) \(4\)](#).
- (E) **PIPE BEDDING.** Pipe bedding for sewer pipe shall be per AASHTO M 43, Size No. 57.

808.03 CLAY PIPE

Vitrified clay pipe and fittings for sanitary sewer shall be used only as directed and shall meet requirements of ASTM C 700, extra strength.

808.04 GASKETS

- (A) **GASKET, REINFORCED PCC PIPE.** Rubber gaskets for PCC pipe joints shall be per AASHTO M 315. Joints shall pass 13 psi hydrostatic test performed by pipe manufacturer. The bevel or drop on bevel pipe shall not exceed the pipe wall thickness.
- (B) **GASKET, POLYVINYL CHLORIDE TYPE.** Solid cross section elastomeric gasket seal shall be per ASTM F 477, factory assembled and securely locked or cemented in the socket.