BASIC SPECIFICATIONS
SECTION D

SEWER PIPELINE MATERIALS SPECIFICATIONS

1. GENERAL

Where alternate pipeline materials are allowed by the District, the Contractor shall select such materials and construction methods as will result in a satisfactory completed project. All pipe materials shall be new and unused unless otherwise specified. Materials and strength of pipe shall be as shown on the plans or as specified herein.

2. GRAVITY MAINS

A. Vitrified Clay Pipe (VCP)

(1) General

Vitrified clay pipe and fittings shall not be used for proposed pipelines. However, VCP pipe exists the District's sewer system.

(2) Joints

Existing joints in vitrified clay pipe shall be repaired using a factory-made mechanical compression joint, consisting of a plastic material (Polyurethane), or a factory applied rubber coupling, and shall be produced by a District Approved Manufacturer and shall conform with the requirements of Section 208.2.3 Type "G" Joints of the "Standard Specifications for Public Works Construction", Latest Edition. Note the requirements in Section II.G.2.

B. Polyvinyl Chlorine (PVC) Plastic Pipe (4" to 15" Dia.)

PVC solid wall pipe shall meet the requirements of ASTM Designation D-3034, SDR 26 or 35. Whenever portions of the proposed sewer construction are to be installed on the radius of a curve, the minimum radius and installation of the pipe shall be in accordance with the manufacturer's recommendations.

C. Acrylonitrile-Butadiene-Styrene (ABS) (4" & 6" Dia.)

Acrylonitrile-Butadiene-Styrene (ABS) solid wall pipe shall meet the requirements of ASTM designation D-2751, SDR 23.5 or 35.

D. High-Density Polyethylene (HDPE).

HDPE pipe shall meet the minimum requirements of AWWA C906 and have a minimum thickness of DR 11 and shall be color green. Pipe sizing shall be based on outer diameter (O.D.).

E. Alternate Material for Repair

- CIPP for Lining Gravity Sewer Main (Appendix O)
- Folded and Formed PVC Lining System (Appendix Q)
- Fusible PVC (Appendix R)

3. FORCEMAINS

A. Polyvinyl Chloride Plastic Pipe (PVC), (4" to 12" Dia.)

The pipe to be used shall be rubber gasket joint polyvinyl chloride pressure pipe, Class 235 or 305, conforming to AWWA C909 -(latest), outside dimensions of cast-iron pipe, plain end x gasket bell ends.

Fittings shall be ductile iron ANSI/AWWA C153(latest), 250 psi rated working pressure, interior lining with 3M Scotchkote 134, fusion-bonded epoxy, 2 coats at 8 mils each coat for a total of 16 mils, mechanical joint ends (MT) to fit Class 235 and 305 PVC - C909 pipe.

When flanged fittings are specified or required, the fittings shall be ductile iron conforming to AWWA C110/ANSI A21.10, Latest.

Locator wire shall be installed over all PVC force mains. Locator wire shall be 14-1 solid insulated copper wire (UF), in a continuous strand, placed on top of pipe and secured with tape. Locator wire shall be brought to the surface at all appurtenances (i.e. sewer air valves, sewer cleanouts, etc.), thus providing continuous “looping” between the appurtenances and the water main. All splices to locator wire shall be made with direct bury connectors.

B. High-Density Polyethylene (HDPE)

See previous specification under Gravity Mains.