PVC

Service Pipe:

PVC SDR-26, Class 160, bell and spigot, gasket joint pipe per ASTM D-2241 and D-1784 supplied in nominal 20 Ft. lengths. Pipe is rated for 160 psi @73°F.

Alternate Service Pipe #1: PVC SDR-21, Class 200, bell and spigot, gasket joint pipe per ASTM D-2241 and D-1784 supplied in nominal 20 Ft. lengths. The pipe is rated for 200 psi @73°F.
Alternate Service Pipe #2: PVC SDR-35, Sanitary Sewer & Storm Drainage, bell and spigot, gasket joint pipe per ASTM D-3034 and D-1784 supplied in nominal 13/14 Ft lengths. The pipe is not rated for pressure.
Alternate Service Pipe #3: SCH. 40, / Sch. 80 solvent weld joint. Supplied in nominal 20 Ft lengths.

Insulation:

The insulation shall be a foamed-in-place closed-cell polyurethane that completely fills the annular space between the carrier pipe and the exterior casing. The insulation shall have the following physical properties:

- Minimum Density (lb./cu. ft.) 2.0 ASTM D-1621
- 90-95 % Closed Cell ASTM D-2856
- “K” Factor BTU/Hr. sq. ft. °F/in. 147 ASTM C-177

Exterior Casing: *

The exterior casing shall be
(1) Seamless, extruded white PVC Type 1, Grade 1 Class 12454-B per ASTM D-1784
or
(2) High Density Polyethylene (H.D.P.E.) ASTM D-1248 with the following physical properties:

- ASTM D-3350…Resin Type III, Grade P34
- ASTM D-638…Ultimate Elongation 850%
- ASTM D-638…Tensile Yield Strength 3300 psi
- ASTM D-790…Tangent Flexural Modules 175,000 psi

No polyethylene tape casings will be allowed.

Fittings:

All fittings below 10” shall be PVC with a gasket joint. Fittings 10” and greater may be Ductile Iron. Fittings are to remain un-insulated and poured in a concrete thrust block. Concrete thrust block design is dependent upon soil conditions, size of pipe, and force due to thermal stress. Design and sizing of anchor blocks remain the responsibility of the design engineer.

Field Joints:

Field Joints for underground applications of gasketed joint pipe are to remain un-insulated to allow for expansion and contraction. Joints may be covered to keep out debris or moisture with an oversized sleeve and sealed with tape or heat heat-shrink sleeve. Insulation at ends of pipe to be sealed with mastic or heat-shrinkable end seal.

Installation:

No Piping shall be installed in standing water. Trenches shall be maintained dry until final field closure is complete. The installation contractor shall handle the piping system in accordance with the directions furnished by the manufacturer and as approved by the architect and engineer. The carrier piping shall be hydrostatically tested as specified in the contract documents. Each unit length must be partially backfilled prior to hydro testing. EXERCISE DUE CARE WHEN INSTALLING AND TESTING THE PIPING SYSTEM. DO NOT TEST WITH AIR OR GAS.

Backfill:

A 4-inch layer of sand or fine gravel shall be placed and tamped in the trench to provide stable and uniform bedding for the piping system. Once the system is in place, the trenches shall be carefully backfilled, and hand tamped in 6” layers until a cover of at least 24” from the top of the pipe has been achieved. The first 12” of backfill shall be sand or fine gravel less than ½” in diameter. The remainder of the backfill shall be void of rocks, frozen earth, and foreign material over 6” in diameter. The trench shall be compacted to comply with H-20 Highway loading.

Accessories:

- Heat Tracing