

18 October 2022

AMENDMENT 6

CONSTRUCTION SPECIFICATIONS FOR SANITARY SEWER LINE EXTENSIONS

Note the addition of SDR 26 PVC pipe for deep sewer installation of 8-inch pipe.

Polyvinyl Chloride (PVC) pipe:

Standard dimension ratio (SDR) 35 pipe:

Standard dimension ratio (SDR) 35 pipe is required for all sanitary sewer at depths less than 10 feet and shall conform to ASTM D3034, latest revision. Gasket PVC fittings must be compatible with SDR 35 pipe in accordance with the latest ASTM standards. The pipe and fittings shall be homogeneous throughout and free from visible cracks, holes, foreign inclusions, or other injurious defects. All pipe shall have a "home" mark. Joints shall be of the elastomeric gasket push-on type meeting all requirements of ASTM D3212. Minimum sewer main pipe size shall be 8-inches. Minimum service lateral pipe size shall be 6-inches.

Standard dimension ratio (SDR) 26:

Standard dimension ratio (SDR) 26 may be considered for sanitary sewer at depths greater than 10 feet. Prior to approval, the design engineer must determine the pipe deflection using the Modified Iowa Formula considering the surrounding soil conditions and pipe properties and the WMU specification of a maximum pipe deflection of 5%.

$$\text{Deflection \%} = \frac{\Delta Y}{D} = \frac{(DL KP + KW') 100}{0.149PS + 0.061E'}$$

Where DL = Deflection Lag Factor, Dimensionless Factor for long-term deflection.

K = Bedding Constant, Dimensionless, Accommodates the response of the buried flexible pipe to the reaction of the load force derived from the bedding under the pipe.

P = Vertical Soil Pressure due to Prism Load, psi. This is the product of the unit weight of the soil over the pipe multiplied by the depth of cover.

W' = Live Load, psi. This is the load on the buried pipe from sources such as highway or railway traffic.

E' = Modulus of Soil Reaction, psi This is an empirical value, assigned to a pipe bedding condition which considers the soil classification and the degree of compaction of the bedding.

If approved it shall conform to ASTM D3034, latest revision. Gasket PVC fittings must be compatible with SDR 26 pipe in accordance with the latest ASTM standards. The pipe and fittings shall be homogeneous throughout and free from visible cracks, holes, foreign inclusions, or other injurious defects. All pipe shall have a "home" mark. Joints shall be of the elastomeric gasket push-on type meeting all requirements of ASTM D3212. Minimum sewer main pipe size shall be 8-inches. Minimum service lateral pipe size shall be 6-inches.