

Pipe and Manhole Materials

Table 3D-1.01: Sanitary Sewer Pipe Materials

Typical Application	Pipe Material	Size Range	Standard	Thickness Class (min.)	Pipe Stiffness (min.)	Joints
Gravity Flow	Solid Wall PVC	8" to 15"	ASTM D 3034	SDR 26	115 psi	Bell and Spigot
Gravity Flow	Solid Wall PVC	8" to 15"	ASTM D 3034	SDR 35	46 psi	Bell and Spigot
Gravity Flow	Solid Wall PVC	18" to 27"	ASTM F 679	N/A	46 psi	Bell and Spigot
Gravity Flow	Corrugated PVC	8" to 10"	ASTM F 949	N/A	115 psi	Bell and Spigot
Gravity Flow	Corrugated PVC	12" to 36"	ASTM F 949	N/A	46 psi	Bell and Spigot
Gravity Flow	Closed Profile PVC	21" to 36"	ASTM F 1803	N/A	46 psi	Bell and Spigot
Gravity Flow	Truss Type PVC	8" to 15"	ASTM D 2680	N/A	200 psi	Bell and Spigot
Gravity Flow	RCP	18" to 144"	ASTM C 76	Class IV Wall B	4,000 psi	Tongue and Groove
Gravity Flow	Ductile Iron	8" to 54"	AWWA C151	Class 52	300 psi	MJ or Push on
Gravity Flow	VCP	8" to 42"	ASTM C 700	N/A	N/A	Bell and Spigot
Gravity Flow	Double Walled Polypropylene	12" to 30"	ASTM F 2736	N/A	46 psi	Bell and Spigot
Gravity Flow	Triple Walled Polypropylene	30" to 36"	ASTM F 2764	N/A	46 psi	Bell and Spigot
Force Main	Ductile Iron	4" to 64"	AWWA C151	Class 52	300 psi	MJ or Push on
Force Main	PVC	4" to 12"	AWWA C 900	DR 18	150 psi	Bell and Spigot
Force Main	PVC	14" to 30"	AWWA C 905	DR 18	150 psi	Bell and Spigot

Gravity mains greater than 42 inches in diameter will be lined reinforced concrete pipe or ductile iron.
Force mains greater than 30 inches in diameter will be ductile iron.

Table 3D-1.02: Manhole Types

Figure No.¹	Type	Description	Depth Restrictions
6010.301	SW-301	Circular Sanitary Sewer Manhole	N/A
6010.302	SW-302	Rectangular Sanitary Sewer Manhole	12' max.
6010.303	SW-303	Sanitary Sewer Manhole Over Existing Sewer	N/A
6010.304	SW-304	Rectangular Base/Circular Top Sanitary Sewer Manhole	12' min. to 22' max.
6010.305	SW-305	Tee-section Sanitary Sewer Manhole	N/A

¹ The figure numbers listed in this table refer to figures from the SUDAS Specifications.

Table 3D-1.03: Manhole Casting Types

Figure No.¹	Casting Type	Number of Pieces	Ring/Cover	Bolted Frame	Bolted Cover (Floodable)	Gasket
6010.601	SW-601, A	2	Fixed ³	Yes	No	Yes ²
6010.601	SW-601, B	3	Adjustable ⁴	No	No	Yes ²
6010.601	SW-601, C	2	Fixed ³	Yes	Yes	Yes ²
6010.601	SW-601, D	3	Adjustable ⁴	No	Yes	Yes ²

¹ The figure numbers listed in this table refer to figures from the SUDAS Specifications.

² Machine bearing surfaces required.

³ Typically used with non-paved or flexible surfaces, including HMA, seal coat, gravel, and brick.

⁴ Typically used with PCC surfaces, including castings in concrete boxouts.