

Table 1: Standard Installation Soils and Minimum Compaction Requirements			
Installation Type	Bedding Thickness	Haunch and Outer Bedding	Lower Side
Type 1	D _o /24 minimum, not less than 3" (75 mm) If rock foundation, use D _o /12 minimum, not less than 6" (150 mm)	95% Category I	90% Category I, 95% Category II, or 100% Category III
Type 2	D _o /24 minimum, not less than 3" (75 mm) If rock foundation, use D _o /12 minimum, not less than 6" (150 mm)	90% Category I or 95% Category II	85% Category I, 90% Category II, or 95% Category III
Type 3	D _o /24 minimum, not less than 3" (75 mm) If rock foundation, use D _o /12 minimum, not less than 6" (150 mm)	85% Category I, 90% Category II, or 95% Category III	85% Category I, 90% Category II, or 95% Category III
Type 4	No bedding required except if rock foundation, use D _o /12 minimum, not less than 6" (150 mm)	No compaction required, except if Category III, use 85%	No compaction required, except if Category III, use 85%

Reference: ASCE 15-98, "Standard Practice for Direct Design of Buried Precast Concrete Pipe Using Standard Installations (SIDD)", 1998.

Table 3: Reinforced Pipe Classes for 0.01 inch Crack Per ASTM C 76 (lbs/ft/ft)	
Class I	≤ 800
Class II	≤ 1000
Class III	≤ 1350
Class IV	≤ 2000
Class V	≤ 3000
Special Design	> 3000

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Table 2: Equivalent USCS and AASHTO Soil Classifications for Standard Installation Soil Designations				
Representative Soil Types			Percent Compaction	
SIDD	USCS	AASHTO	Standard Proctor	Modified Proctor
Gravelly Sand (Category I)	SW, SP, GW, GP	A1, A3	100	95
			95	90
			90	85
			85	80
			80	75
Sandy Silt (Category II)	GM, SM, ML, Also GC, SC with less than 20% passing #200 sieve	A2, A4	100	95
			95	90
			90	85
			85	80
			80	75
Silty Clay (Category III)	CL, MH, GC, SC	A5, A6	100	90
			95	85
			90	80
			85	75
			80	70
CH	A7	A7	100	90
			95	85
			90	80
			85	75
			80	70

Reference: ASCE 15-98, "Standard Practice for Direct Design of Buried Precast Concrete Pipe Using Standard Installations (SIDD)", 1998.

NOTES:

1. Compaction and soil symbols – i.e. "95% Category I" refers to Category I soil material with a minimum Standard Proctor compaction of 95%. See Table 2 for equivalent Modified Proctor values.
2. Soil in the outer bedding, haunch, and lower side zones shall be compacted to at least the same compaction as the majority of soil in the overfill zone.