Culvert Size CMP ID	Flow GPM	Snap-Tite ID Size	RSC	Maximum OD	Slope %	Open Area Sq. Inches	Open Area Sq. Feet	Flow GPM	Flow CFS	% of Flow
60	20019	48	100	51.88	0.1	1809.56	12.57	28990.58	64.59	144.81%
60	20019	48	160	52.8	0.1	1809.56	12.57	28990.58	64.59	144.81%
66	25813	54	100	58.8	0.1	2290.22	15.90	39689.96	88.43	153.76%
72	32556	54	160	59.28	0.1	2290.22	15.90	39689.96	88.43	121.91%
78	40303	60	100	65.38	0.1	2827.43	19.63	52567.33	117.12	130.43%
78	40303	60	160	65.38	0.1	2827.43	19.63	52567.33	117.12	130.43%
84	49110	66	100	71.81	0.1	3421.19	23.76	67781.34	151.02	138.02%
84	49110	66	160	71.86	0.1	3421.19	23.76	67781.34	151.02	138.02%
90	59032	72	100	77.83	0.1	4071.50	28.27	85485.46	190.46	144.81%
90	59032	72	160	77.95	0.1	4071.50	28.27	85485.46	190.46	144.81%
96	70120	78	100	83.68	0.1	4778.36	33.18	105828.54	235.79	150.93%
96	70120	78	160	85	0.1	4778.36	33.18	105828.54	235.79	150.93%
102	82425	84	100	89.86	0.1	5541.77	38.48	128955.35	287.31	156.45%
102	82425	84	160	90.6	0.1	5541.77	38.48	128955.35	287.31	156.45%
120	127145	96	100	102.6	0.1	7238.23	50.27	184121.23	410.22	144.81%
120	127145	96	160	104.32	0.1	7238.23	50.27	184121.23	410.22	144.81%
150	230546	120	100	129.36	0.1	11309.73	78.54	333858.84	743.84	144.81%
150	230546	120	160	129.36	0.1	11309.73	78.54	333858.84	743.84	144.81%

SnapTite®

Hancor

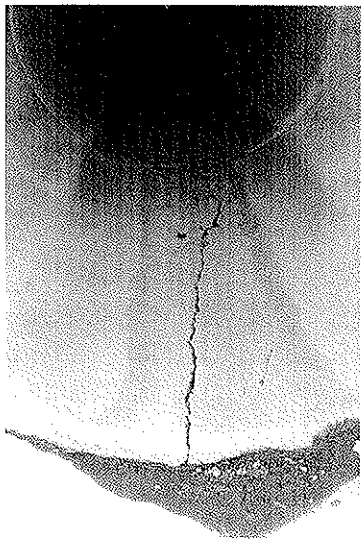
TECHNICAL NOTE

Culvert Sliplining with HDPE Pipe

TN 5.06
May 2008

Introduction

An abrasive or corrosive environment can cause premature deterioration of some types of pipe. In lieu of a total replacement, sliplining the existing pipe with a durable material may be an economical method to significantly extend the service life. Polyethylene pipe, because of its resistance to aggressive environments, is often the product of choice to slipline deteriorated pipes. This technical bulletin describes the site and installation considerations that must be evaluated before using HDPE pipe in these applications.



Access to the Host Pipe

The "host" pipe may be open on both ends, as in a culvert application, or it may be accessible only through a manhole opening, as in a storm sewer application. Open-ended applications are more appropriate for HDPE pipe products, provided they do not require the pipe to be bent in order to enter the host pipe. If access can only be made through a manhole, HDPE pipe products may not be acceptable because they cannot be bent sufficiently.

Diameter of the Host Pipe

The greater of either the outside diameter of the HDPE pipe or coupler should be compared to the inside diameter of the host pipe. This may be accomplished by attempting to pull a short section (~2 feet in length) through the host pipe as a trial run. The host pipe should be clean; free from sediment and debris so as to not interfere with the installation of the liner pipe. Sliplining installations may be subject to thermal length changes and should be designed with a minimum of 10% clearance between the HDPE pipe's outside diameter and the host pipe's inside diameter. The maximum outside diameters of Hancor products are shown in Table 1.

Table 1

Nominal Inside Diam. in (mm)	Max Outside Diam. in (mm)	Nominal Inside Diam. in (mm)	Max Outside Diam. in (mm)
4 (100)	4.8 (122)	24 (600)	28.4 (721)
6 (150)	7.0 (178)	30 (750)	35.6 (904)
8 (200)	9.5 (241)	36 (900)	41.4 (1052)
10 (250)	12.0 (305)	42 (1050)	48.0 (1219)
12 (300)	14.5 (367)	48 (1200)	55.0 (1397)
15 (375)	17.8 (452)	54 (1350)	61.0 (1549)
18 (450)	21.5 (546)	60 (1500)	67.3 (1709)