



STANDARD DETAILS

**CITY OF SHERWOOD
ARKANSAS**

TITLE

**POLYETHYLENE PIPE
TRENCH INSTALLATION**

SHEET 2 OF 2

STD-70

**Issue Date
JUNE, 2007**

Revision Date

GENERAL NOTES:

- ① MATERIALS: UNLESS OTHERWISE SPECIFIED ON THE PLANS OR HEREIN, CORRUGATED POLYETHYLENE PIPE SHALL CONFORM TO AASHTO M-294, LATEST EDITION, STANDARD SPECIFICATION FOR CORRUGATED POLYETHYLENE PIPE.
- ② RESINS: CORRUGATED POLYETHYLENE PIPE SHALL BE MANUFACTURED FROM HIGH DENSITY POLYETHYLENE VIRGIN COMPOUNDS, AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM D-3350 FOR THE CELL CLASSIFICATION 335400C.
- ③ COUPLING BANDS: EXCEPT AS OTHERWISE REQUIRED HEREIN, COUPLING BANDS AND OTHER HARDWARE FOR CORRUGATED POLYETHYLENE PIPE SHALL DEMONSTRATE THAT THEY MEET THE SOIL TIGHTNESS REQUIREMENTS OF AASHTO SECTION 26 "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES."

COUPLING BANDS SHALL LAP EQUALLY ON EACH OF THE PIPES BEING CONNECTED TO FORM A TIGHTLY CLOSED JOINT AFTER INSTALLATION.

THE CORRUGATIONS IN THE BAND SHALL INDEX THE CORRUGATIONS IN THE PIPE ENDS TO ENGAGE AT LEAST TWO FULL CORRUGATIONS FROM THE END OF EACH PIPE.

WHEN INFILTRATION OR EXFILTRATION IS A CONCERN, THE COUPLING BANDS MAY BE REQUIRED TO HAVE GASKETS. THE GASKET MATERIAL SHALL BE CLOSED-CELL EXPANDED RUBBER OR NEOPRENE.

OTHER COUPLINGS MAY BE BELL & SPIGOT AND CONFORM TO THE REQUIRMENTS OF AASHTO M294

- ④ DESIGNATION OF TYPE: THE PIPE MAY BE ONE OR BOTH OF THE FOLLOWING TYPE

TYPE S: THIS PIPE WILL HAVE A FULL CIRCULAR CROSS-SECTION, WITH AN OUTER CORRUGATED PIPE WALL AND A SMOOTH INNER LINER.

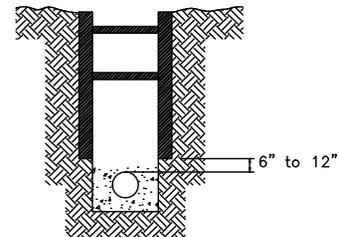
TYPE D: THIS PIPE SHALL CONSIST OF AN ESSENTIALLY SMOOTH WATERWAY BRACED CIRCUMFERENTIALLY WITH CIRCULAR RIBS WHICH ARE FORMED SIMULTANEOUSLY WITH A SMOOTH OUTER WALL.

- ⑤ INSTALLATION: CORRUGATED POLYETHYLENE PIPE SHALL BE INSTALLED IN ACCORDANCE WITH TABLE 1 AND ASTM D-2321, LATEST EDITION, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS."

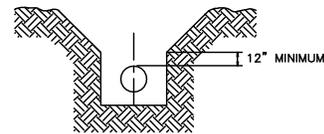
RECOMMENDED TRENCH WIDTH

DIAMETER	O.D.	TRENCH WIDTH
12"	14.45"	31"
15"	17.65"	34"
18"	21.10"	39"
24"	28.30"	48"
30"	36.10"	66"
36"	42.25"	78"
42"	47.00"	83"
48"	53.00"	89"
60"	66.30"	102"

The trench width must be wide enough to accomodate compaction equipment.



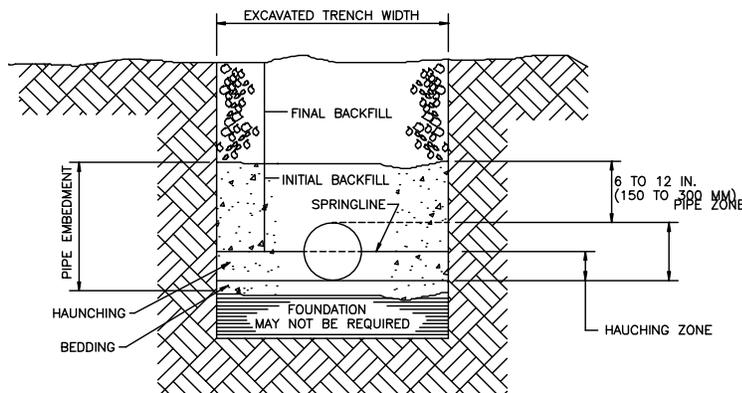
TRENCH CROSS SECTION SHOWING TRENCH BOX DETAIL



TRENCH EXCAVATION PER OSHA REQUIREMENTS

MULTIPLE INSTALLATION OF POLYETHYLENE PIPES

DIAMETER OF PIPE	CLEAR DISTANCES BETWEEN PIPES
IN. (MM)	FT. (M)
18 (450)	1' 2" (0.36)
24 (600)	1' 5" (0.44)
30 (750)	1' 8" (0.52)
36 (900)	1' 11" (0.60)
42 (1050)	2' 2" (0.68)
48 (1200)	2' 5" (0.76)
60 (1500)	2' 8" (0.81)



TRENCH CROSS SECTION SHOWING TERMINOLOGY

HIGH DENSITY CORRUGATED POLYETHYLENE PIPE HEIGHT OF COVER H-20 AND E-80 LIVE LOADS

NOMINAL DIAMETER	MINIMUM COVER	
	IN.	(MM)
12 (300)	12 (300)	24 (600)
15 (375)	12 (300)	24 (600)
18 (450)	12 (300)	24 (600)
24 (600)	12 (300)	24 (600)
30 (750)	12 (300)	24 (600)
36 (900)	12 (300)	24 (600)
42 (1050)	12 (300)	24 (600)
48 (1200)	12 (300)	24 (600)
60 (1500)	24 (600)	24 (600)