

PART 309A – HIGH DENSITY POLYETHYLENE (HDPE) PIPE, WATER SERVICE

- 309A.1 ANSI/AWWA 906 HDPE pipe shall be installed in accordance with the current edition of AWWA Manual M55.
- 309A.2 When HDPE pipe is delivered to the jobsite it shall not be exposed to sunlight for more than three weeks. HDPE pipe exposed to sunlight for more than three weeks shall be covered with an opaque protective covering. The pipe shall be left stacked and no more pipe than can be installed in one day shall be strung along the jobsite.
- 309A.3 Pipe and fittings shall be joined by one of the following types of thermal fusion per the Manufacturer's recommended procedures: butt fusion, saddle fusion or socket fusion. Butt fusions performed between pipe ends or pipe ends and fitting outlets shall be within the following allowable wall mismatches:
- 309A.3.1 Two DR difference between pipe and fitting diameters 6 inches and smaller.
- 309A.3.2 One DR difference between 6 inches and 18 inches.
- 309A.3.3 No difference for diameters above 18 inches.
- The difference in DR is determined from the following DR values: 7.3, 9, and 11.
- 309A.4 Polyethylene pipe and fittings may be joined together or to other materials through the use of electrofusion fittings, flange adapters with back-up rings, mechanical couplings designed for connecting polyethylene pipe and fittings to itself or to another material, or MJ adapters. The Manufacturer of the joining device shall be consulted for proper installation procedures.
- 309A.5 Polyethylene pipe and fittings joined together through the use of a hydraulically operated heat butt fusion machine, shall utilize a data recording device per the current edition of ASTM F3124 STANDARD PRACTICE FOR DATA RECORDING THE PROCEDURE USED TO PRODUCE HEAT BUTT FUSION JOINTS IN PLASTIC PIPING SYSTEMS OR FITTINGS. Each HDPE joint shall be traceable to the fusion operator and equipment. Electrofusion reports of each weld shall be appropriately identified and provided to City of Tulsa Inspector. The reports shall include, as a minimum, the fusion date, time, ambient temperature, fitting type and size, user ID, and the manufacturer of the part.
- 309A.6 The contractor shall be responsible for ensuring all personnel operating heat fusion equipment are qualified Heat Fusion Equipment Operators in accordance with the current edition of ASTM F3190, STANDARD PRACTICE FOR HEAT FUSION EQUIPMENT (HFE) OPERATOR QUALIFICATION ON POLYETHYLENE (PE) AND POLYAMIDE (PA) PIPE AND FITTINGS. All polyethylene joints shall be thermally butt fused by an HFE Operator. The HFE Operators Card shall be submitted at the Pre-Construction Conference and provided at the request of the Engineer. Certification by a distributor shall not be an acceptable substitute.

309A.7 Payment: Payment for this item shall be made at the unit price bid per linear foot of pipe of the type specified in the Proposal and placed as shown on the Drawings. Total footage shall be the actual horizontal measurement along the centerline of the pipe. No additional payment shall be made for vertical pipe or fittings or specials included as pipe, or for concrete blocking. Payment for any HDPE pipe designated "restrained joint" shall include cost of all components to restrain joints of pipe.