

HORIZONTAL DIRECTIONAL DRILLING IN EARTH

**\*\*From Hartford-Sharon FITS(503)**

xx. DESCRIPTION. This work shall consist of the use of directional boring or drilling equipment to drill between two points indicated on the Plans and the pulling back of an 8" diameter black steel casing pipe (Schedule 40) or an 8" diameter High Density Polyethylene (HDPE) casing pipe (Schedule 40); installing six (6) 1.25" HDPE innerducts in the casing and electrofusion welding HDPE duct ends; tying in or connecting the innerducts in the casing to the contiguous innerducts at the approach; and leaving of the casing pipe by the fusion method so that the ducts are continuous in both directions from the bore locations. This work does not include directional drilling through rock that requires the use of a down-hole motor.

xx. MATERIALS. The Contractor is required to submit material specification sheets for all materials used, for approval by the Engineer.

Unless otherwise specified, materials include either 8" diameter Schedule 40 steel casing pipe or 8" diameter Schedule 80 HDPE casing pipe. The six (6) 1.25" SDR 9 innerducts will be placed in the 8" casing. Unless otherwise specified, the material shall be six (6) 1.25" SDR-9 High Density Polyethylene (HDPE), UL listed, plastic innerducts with a smooth interior and exterior wall. The SDR-9 HDPE innerducts shall have a minimum inner diameter of 1.270" and a nominal outer diameter of 1.660". The six (6) 1.25" SDR-9 innerducts shall all be individual colors, consistent throughout the entire project.

xx. CONSTRUCTION REQUIREMENTS. Preparation of the HDPE innerducts for the electrofusion weld procedure includes the following:

- (a) The preparation of the HDPE innerducts for the electrofusion weld procedure in accordance with the fusion machine manufacturer's instructions, and the proper execution of the fusion process.
- (b) Perform a right angle cut using a fixture and suitable cutter for the plastic.
- (c) Use a hand scrapper to remove oxidation from the areas of the plastic pipe that will be fused.
- (d) De-burr the edges of both sides of the plastic pipes.
- (e) Protect the prepared ends of the plastic pipes from atmospheric conditions.
- (f) Use a re-rounding clamp if required to take out any ovality of the plastic pipes.
- (g) Prepare the coupler and the plastic pipes for the fusion process with appropriate solvents and cleaners.
- (h) Set up the plastic pipe ends in the alignment fixture and connect the fusion heat element contacts.

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(i) Fuse the plastic pipe according to the instructions provided by the manufacturer of the fusion equipment.

(j) Contractor shall use the proper cleaning solutions and expendables, such as cleaning cloths, during the electrofusion welding of HDPE ducts.

xx. METHOD OF MEASUREMENT. The quantity of Special Provision (Horizontal Directional Drilling in Earth) to be measured for payment will be the number of meters (linear feet) installed in the complete and accepted work.

xx. BASIS OF PAYMENT. The accepted quantity of Special Provision (Horizontal Directional Drilling in Earth) will be paid for at the Contract unit price per meter (linear foot). Payment will be full compensation for performing the work specified and for furnishing all materials, labor, tools, equipment, and incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.640 Special Provision (Horizontal Directional Drilling in Earth)( <input checked="" type="checkbox"/> MM ( <input checked="" type="checkbox"/> ") Casing Pipe)	Meter (Linear Foot)