

CONSTRUCTION SPECIFICATION FOR

PIPELINE

(Acre)
Code 516

SCOPE

This item shall consist of the installation of the pipeline as designed to achieve the intended purpose. The construction operation shall be done in a manner that erosion, air, water and noise pollution will be minimized and held within legal limits as specified by state regulations.

MATERIALS

All materials required for installation shall be equal in size and quantity to that specified on the plan.

Steel pipe shall meet the requirements of ASTM Specification A-120 or AWWA Specification C-200. Where local conditions are such as to require a coal-tar enamel protective coating for steel pipe, the coating shall meet the requirements of AWWA Specification C-203.

Plastic pipe shall comply with the applicable ASTM specification for Acrylonitrile-Butadiene-Styrene (ABS) pipe D-1527, D-2282; polyvinyl chloride (PVC) schedule 40, 80 or 120 pipe D-1785, D-2241, D-2672, or D-2740 for plastic tubing; polyethylene (PE) pipe D-2104, D-2239, D-3035, D-2447, or D-2737 for plastic tubing.

Pressure pipe fittings shall conform to the requirements of the following respective ASTM specifications ABS Fittings D-2468, D-2469, or D-2465; PVC fittings D-2466, D-2467, D-2464, D-3036 and PE fittings D-2611, D-2610, D-2609, D-3261 and D-2683 socket type polyethylene fittings for outside diameter. Controlled polyethylene pipe and tubing and D-3139 joints for plastic pressure pipe using flexible elastomeric seals.

PLACEMENT

Pipelines shall be placed so they are protected against hazards imposed by traffic, farm operations, freezing temperatures or soil cracking. Other means of protection must be provided where the depth required for protection

is impracticable due to shallow soils over rock or for other reasons.

Trenches for plastic pipelines shall be free of rocks and other sharp edged materials and the pipe shall be placed in a "snake-like" position.

Plastic pipelines may be placed by "plow-in" equipment where soils are suitable and rocks and boulders will not be detrimental to the pipe.

TESTING

Pipelines shall be pressure tested by one of the following methods:

1. Before backfilling, the pipe shall be filled with water and tested at design working head or a minimum head of 10 feet whichever is greater. All leaks shall be repaired and the test repeated before backfilling starts.
2. Pressure tested at the working pressure for 2 hours. The allowable leakage shall not be greater than one gallon per diameter inch per mile. If leakage exceed this rate, the defect must be repaired until retest show that the leakage is within the allowable limits. All visible leaks must be repaired.

BACKFILLING

All backfilling shall be completed before the line is placed in service. For plastic or copper pipe the initial backfill shall be of selected material, free from rocks or other sharp edged material that would damage the pipe. This initial fill shall be compacted around the pipe to a density at least equal to the natural density of the trench sidewalls. Deformation or displacement of the pipe must not occur during backfilling.

Plastic pipelines installed by the plow-in method require surface compaction and shaping in addition to the normal plow-in-operations.

Backfill the plastic pipe after the pipe reaches the same temperature as the water or soil. This can be done in a number of ways such as filling

CS- 516-2

with water or by leaving the trench open overnight before backfilling.

Installation and backfilling should be done in a workmanlike manner; provisions for stabilization of disturbed areas and control of erosion should be installed as necessary.

VEGETATION

A protective cover of vegetation shall be established on all disturbed areas as specified or as shown on the plans. Vegetation shall be applied as critical area planting and will include seedbed preparation, seeding, liming, fertilizing, and mulching as shown in FOTG Practice Standard 342.