

UNDERGROUND OUTLET CONSTRUCTION SPECIFICATION

1. SCOPE

The specification covers the fabrication, installation, and construction of underground outlets.

2. MATERIALS

The materials required for the underground outlet shall be as shown on the drawings or as otherwise required in Section 4.

All materials shall be carefully inspected prior to installation. Clay and concrete tile shall be checked for damage by freezing. Plastic pipe and tubing shall be protected from hazards causing deformation. Any damaged or imperfect pipe or tubing shall not be installed. Any pipe or tubing which is damaged during installation shall be removed and replaced.

3. INSTALLATION

- A. Excavation. Unless otherwise specified, excavation for each underground outlet shall begin at the outlet end and progress upstream. The trench shall be excavated to the grades and cross sections shown on the drawings. The trench width above the conduit may increase as necessary for safe installation or for the convenience of the Contractor. Trench shields, shoring or bracing are required whenever workers will be in a trench deeper than four feet, or as otherwise required by OSHA Regulations.
- B. Bedding. In stable soils, the conduit shall be firmly and uniformly bedded throughout its entire length as required on the drawings or Section 4. Where the underground outlet foundations is in unstable soils, the bedding shall be shown on the drawings or as otherwise required by the Engineer. Where the conduit is to be laid in rock, or rock is exposed at the trench bottom, the rock shall be removed at least two inches below the invert grade to allow for compacted bedding under the conduit.

- C. Placement. Debris inside of pipes and tubing shall be removed prior to installation. The conduit end shall be protected during placement. Similarly, all appurtenances, including trash guards and animal guards, shall be protected during installation to avoid damage. All underground outlets shall be laid to line and grade, and immediately covered with an approved blinding, envelope, or the required depth of filter material. No reversals in grade of the conduit are permitted, no more than five percent stretch is allowed. Special precautions must be taken in hot weather to observe this stretch limit.
- D. Backfill. Earth backfill shall be placed in the trench in such a manner that the conduit is not displaced, and that the filter and bedding materials are not contaminated or displaced. Unless otherwise specified, where the underground outlet is laid under roads or at other designated locations, the backfill shall be placed in successive layers of not more than six inches, and each lift compacted before the subsequent layer. Backfill shall extend above the adjacent ground to allow for settlement, and be well rounded over the trench.
- E. Erosion and pollution control. Construction operations shall be done in such a manner that soil and water pollution are a minimum and all state and local erosion regulations are followed. Work areas shall be restored to their pre-construction condition or as otherwise required in the plans or Section 4.

4. ADDITIONAL CONDITIONS WHICH APPLY TO THIS PROJECT ARE: