

CONSTRUCTION SPECIFICATION

27. DIVERSIONS AND WATERWAYS

1. SCOPE

The work shall consist of all excavations, shaping, grading, and earthfills required to construct the diversions and waterways as shown on the drawings or as staked in the field.

2. MATERIAL

The earth materials used in constructing the earthfill portions of the diversions and/or waterways shall be suitable materials obtained from required excavations or earth materials obtained from designated borrow areas. Material for earthfills shall be free from frozen material, brush, roots, sod, stones over six (6) inches in diameter or other objectionable material(s).

3. FOUNDATION PREPARATION

Foundations for earthfill shall be stripped to remove vegetation and other unsuitable materials or shall be excavated as specified.

Except as otherwise specified, earth foundation surfaces shall be graded to remove surface irregularities and shall be scarified parallel to the axis of the earthfill or otherwise acceptably scored and loosened to a minimum depth of two (2) inches. The moisture content of the loosened material shall be controlled as specified for the earthfill, and the surface materials of the foundation shall be compacted and bonded with the first layer of earthfill as specified for subsequent layers of earthfill.

Earth abutment surfaces shall be free of loose, uncompacted earth in excess of two inches in depth normal to the slope and shall be at such a moisture content that the earthfill can be compacted against them to produce a good bond between the earthfill and the abutments.

4. PLACEMENT

Earthfill material shall not be placed until the required foundation preparation is complete, inspected, and approved for placement. Earthfill shall not be placed upon frozen surfaces. Earthfill shall be placed in horizontal layers not exceeding nine (9) inches in thickness. The moisture content of the earthfill materials shall be sufficient to obtain firm and suitable compaction. Compaction shall be obtained by routing the hauling and spreading equipment over the earthfill material in such a manner that the entire surface of each layer will be traversed by not less than one track tread of the loaded equipment, or equivalent methods approved by the Engineer.

5. EXCAVATION

Excavation shall be to the lines and grades shown on the drawings and/or as staked in the field. All surplus and/or unsuitable material will be designated as waste and

shall be disposed of at locations shown on the drawings or at a location approved by the Engineer.

6. MEASUREMENT AND PAYMENT

Method 1 For items of work for which specific unit prices are established in the contract, the length of waterway and/or diversion will be determined to the nearest linear foot by measurement along the centerline of the waterway and/or diversion. Such payment will constitute full compensation for all labor, materials, equipment, and all other items necessary and incidental to the performance of the work.

Method 2 For items of work for which specific lump sum prices are established in the contract, the quantity of waterway and/or diversion will not be measured for payment. Payment for waterways and/or diversions will be made at the contract lump sum price and shall constitute full compensation for all labor, materials, equipment, and all other items necessary and incidental to the performance of the work.

Method 3 The pay limits for excavation and earthfill shall be as designated on the drawings. Payment for excavation and earthfill to construct the waterways and/or diversions will be separately measured and computed to the nearest cubic yard by the method of average cross-sectional end areas. Payment for excavation and/or earthfill will be made at the unit price bid and shall constitute full compensation for all labor, materials, equipment, and all other items necessary and incidental to the performance of the work.

All Methods The following provisions apply to all methods of measurement and payment. Compensation for any item of work described in the contract but not listed in the bid schedule will be included in the payment for the item of work to which it is made subsidiary. Such items and the items to which they are made subsidiary are identified in Section 7 of this specification.