

VERMONT CONSTRUCTION SPECIFICATION

21 – DIVERSIONS AND WATERWAYS

1. Scope

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

3. Foundation Preparation

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

Earth foundation surfaces shall be graded to remove surface irregularities and shall be scarified to a minimum depth of 2 inches parallel to the axis of the earthfill. The surface material of the foundation shall be compacted and bonded with the first layer of earthfill as specified for subsequent layers of earthfill.

4. Placement

Earthfill material shall not be placed until the required foundation preparation is complete and inspected by an NRCS representative. Earthfill shall be installed to the dimensions and grades shown on the drawings. An additional 10 percent shall be added to the depth of earthfill to allow for settlement. Earthfill shall not be placed upon a frozen surface. Earthfill shall be placed in horizontal layers not exceeding 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 so that the entire surface of each layer is traversed by not less than one wheel or track tread of the loaded equipment.

When specified on the drawings, topsoil shall be removed stockpiled and replaced over the diversion/waterway after construction.

In some cases a berm shall be constructed around the waterway to divert runoff away until the vegetation is established. The berm can be constructed of excess topsoil or earthfill. After the vegetation is established the berm will be removed.

5. Excavation

Excavation shall be to the lines and grades shown on the drawings or as staked in the field. All surplus and unsuitable material is designated as waste and shall be disposed of at locations shown on the drawings or at a location approved by the NRCS representative.

6. Vegetation

Immediately upon completion of construction, all grassed waterways and diversions shall be seeded and mulched in accordance to Vermont construction specification 52 – Seeding or as specified on the drawings. The waterway/diversion shall be stabilized with an erosion control matting such as jute netting, straw mats, plastic netting, or other type of matting or blanket. Erosion control matting must be biodegradable and photodegradable. Before the start of construction, the contractor shall provide to NRCS for approval the manufacturer's specifications of the brand of erosion control matting that is proposed to be installed. The erosion control matting shall be installed according to the manufacturer's specifications.