

**NATURAL RESOURCES CONSERVATION SERVICE**  
**CONSTRUCTION SPECIFICATIONS**  
**DIVERSION**

**1. Scope**

The work shall consist of constructing the diversion channels, ridges, and filling and leveling as required by the construction plans.

**2. Location**

The location of the diversion shall be as shown on the construction plans or as staked in the field.

**3. Site Preparation**

All dead furrows, ditches, and gullies shall be filled prior to or as a part of construction. Old terraces, fence rows, brush, and tall standing vegetation shall be removed from the area occupied by the diversion ridge and the area from which the earthen construction material will be taken.

**4. Material**

Materials for earthfills shall be obtained from excavation in the channel or other designated areas and shall be free of objectionable materials such as brush, roots, and rock particles that endanger the performance of the diversion.

**5. Placement of Earthfill**

**All diversions.** Diversions shall be constructed to the dimensions specified on the drawings or as staked in the field. All fills shall be full-bodied with the cross section conforming to that specified at all stations. Diversion ridges constructed across gullies or depressions shall be placed in lifts and compacted by machinery travel to ensure proper density. The diversion channels, side slopes, ridges, cut areas, and fill areas shall be finished to a smoothness so the surface can be readily traveled upon by farm-type equipment. Topsoil is to be stripped, stockpiled, and spread on disturbed areas to restore soil productivity (when specified in the Construction Details).

Soil moisture shall be adequate for construction and light compaction. Extremely dry conditions shall require delay of construction until rainfall restores the soil moisture conditions.

**Level diversions.** Partial or complete end closures and channel blocks (when specified) must be in place before the diversion is considered complete.

Unless otherwise specified, the maximum difference between high and low points in the channel of all level terraces is 0.8 foot. The minimum ridge elevation shall be the average channel elevation plus the design height. When a block is specified, the minimum block elevation shall be the average channel elevation plus the design block height shown on the field sheet.

Any ditch or channel made at the bottom edge of the backslope while moving earth from the backslope into the diversion ridge will be shaped (as necessary) so that drainage from the backslope of the diversion will not flow parallel to it.

**6. Outlets**

Underground tile outlets are to be installed at locations shown on the construction plans or as staked in the field. Refer to Practice Specification Guide Sheet 620, Underground Outlet, for detailed installation requirements.

## **7. Vegetation**

A protective cover of vegetation shall be established when specified in the Construction Details. Seeding shall comply with Practice Specification Guide Sheet 342, Critical Area Planting.

## **8. Measurement**

Measurement for the volume in cubic yards of diversions completed will be determined by measuring the length of the diversion ridge multiplied by the designed ridge cross section above natural groundline. The diversion ridge measurement shall begin and end wherever the full depth is attained.

## **9. Construction Details**

For level diversions, the volume of fill required for blocks shall be computed and included in the total volume.

***Instructions to the Designer:*** The construction tolerance for level diversions can be adjusted for your situation to account for conditions and equipment used for construction. It is suggested that a difference of 0.8 foot between high and low points in the channel be reduced to a difference of 0.4 foot when construction is with a scraper rather than a belt-type terracing machine.