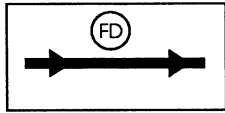


STD & SPEC 3.10



TEMPORARY FILL DIVERSION

Definition

A channel with a supporting ridge of soil on the lower side, constructed along the top of an active earth fill.

Purpose

To divert storm runoff away from the unprotected slope of the fill to a stabilized outlet or sediment-trapping facility.

Conditions Where Practice Applies

Where the drainage area at the top of an active earth fill slopes toward the exposed slope and where continuous fill operations make the use of a DIVERSION (Std. & Spec. 3.12) unfeasible. This temporary structure should remain in place for less than one week.



Planning Considerations

One important principle of erosion and sediment control is to keep stormwater runoff away from exposed slopes. This is often accomplished by installing a dike, diversion, temporary slope drain or paved ditch at the top of a slope to carry the runoff away from the slope to a stabilized outlet. In general, these measures are installed after the final grade has been reached. On cuts, the measures may be installed at the beginning since the work proceeds from the top to the bottom of the slope, and the measures have little chance of being covered or damaged. On fills, the work proceeds from the bottom to the top and the elevation changes daily. It is therefore not feasible to construct a compacted dike or permanent diversion which may be covered by the next day's activity.

The temporary fill diversion is intended to provide some slope protection on a daily basis until final elevations are reached and a more permanent measure can be constructed. This practice can be constructed by the use of a motor grader or a small dozer. To shape the diversion, the piece of machinery used may run near the top edge of the fill with its blade tilted to form the channel as depicted in Plate 3.10-1. This work would be done at the end of the working day and provide a channel with a berm to protect the slope. Wherever possible, the temporary diversion should be sloped to direct water to a stabilized outlet. If the runoff is diverted over the fill itself, the practice may cause erosion by concentrating water at a single point.

Good timing is essential to fill construction. The filling operation should be completed as quickly as possible and the permanent slope protection measures and slope stabilization measures installed as soon after completion as possible. With prompt and proper construction, the landowner or contractor will save both time and money in building, repairing and stabilizing the fill area. The longer the time period for construction and stabilization extends, the more prone the fill operation is to be damaged by erosion. Repairing the damages adds additional time and expense to the project.

Design Criteria

No formal design is required. The following criteria shall be met:

Drainage Area

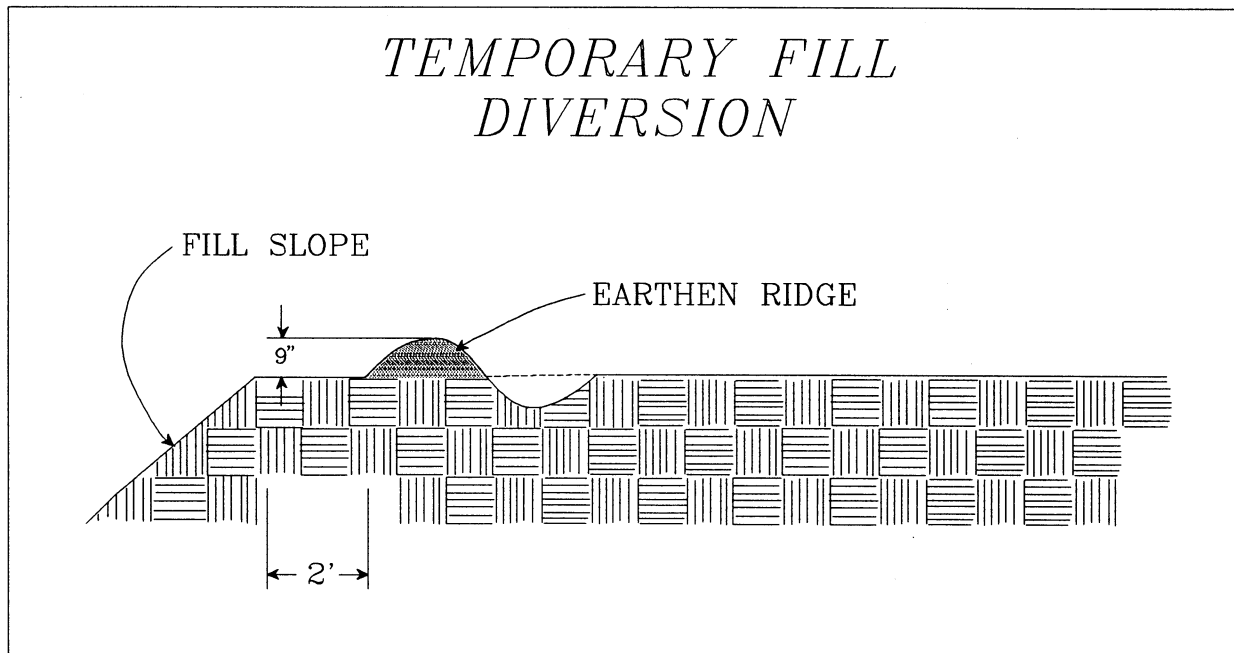
The maximum allowable drainage area is 5 acres.

Height

The minimum height of the supporting ridge shall be 9 inches (see Plate 3.10-1).

Grade

The channel shall have a positive grade to a stabilized outlet.



Source: Va. DSWC

Plate 3.10-1

Outlet

The diverted runoff should be released through a stabilized outlet, slope drain or sediment trapping measure.

Construction Specifications

1. The diversion shall be constructed at the top of the fill at the end of each work day as needed.
2. The diversion shall be located at least 2 feet inside the top edge of the fill (see Plate 3.10-1).
3. The supporting ridge shall be constructed with a uniform height along its entire length. Without uniform height, the fill diversion may be susceptible to breaching.

Maintenance

Since the practice is temporary and under most situations will be covered the next work day, the maintenance required should be low. If the practice is to remain in use for more than

one day, an inspection will be made at the end of each work day and repairs made to the measure if needed. The contractor should avoid the placement of any material over the structure while it is in use. Construction traffic should not be permitted to cross the diversion.