STD & SPEC 3.11

TEMPORARY RIGHT-OF-WAY DIVERSION

Definition

A ridge of compacted soil or loose rock or gravel constructed across disturbed rights-of-way and similar sloping areas.

Purpose

To shorten the flow length within a sloping right-of-way, thereby reducing the erosion potential by diverting storm runoff to a stabilized outlet.

Conditions Where Practice Applies

Generally, earthen diversions are applicable where there will be little or no construction traffic within the right-of-way. Gravel structures are more applicable to roads and other rights-of-way which accommodate vehicular traffic.

Planning Considerations

Construction of utility lines and roads often requires the clearing of long strips of right-of-way over sloping terrain. The volume and velocity of stormwater runoff tend to increase in these cleared strips and the potential for erosion is much greater since the vegetative cover is diminished or removed. To compensate for the loss of vegetation, it is usually a good practice to break up the flow length within the cleared strip so that runoff does not have a chance to concentrate and cause erosion. At proper intervals, temporary right-of-way diversions can significantly reduce the amount of erosion which will occur until the area is permanently stabilized. Since many right-of-ways are constructed through heavily vegetated areas, runoff can often be diverted into a vegetative buffer strip (if it provides a minimum flow length of 75 feet).

Design Criteria

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

Height

The minimum allowable height of the diversion is 18 inches (see Plate 3.11-1).

Side Slopes

Side slopes should be 2:1 or flatter to allow the passage of construction traffic, along with a minimum base width of 6 feet (see Plate 3.11-1).

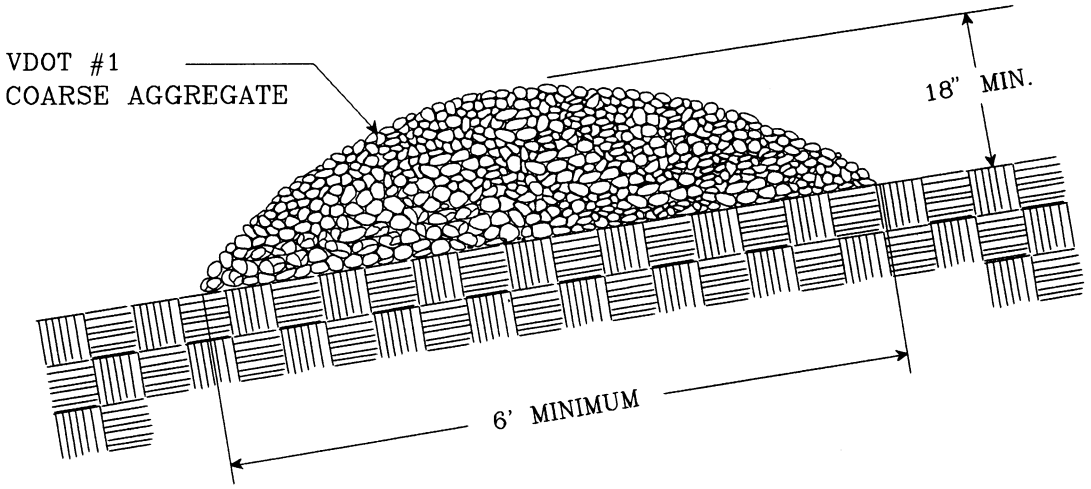
Width

The measure should be constructed completely across the disturbed portion of the right-of-way.

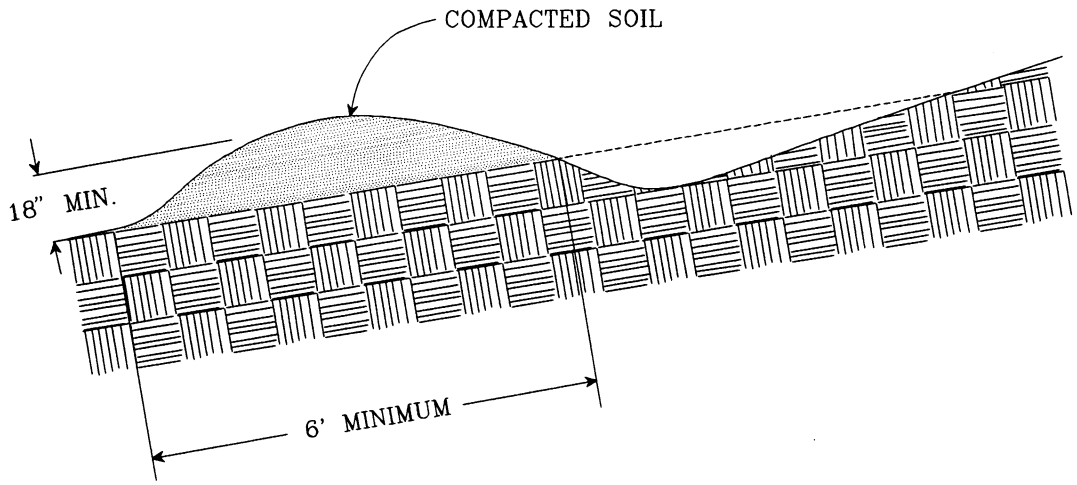
Spacing

Table 3.11-A will be used to determine the spacing of right-of-way diversions.

TEMPORARY RIGHT-OF-WAY DIVERSIONS



TYPICAL GRAVEL STRUCTURE



TYPICAL EARTHEN STRUCTURE

Source: Va. DSWC

Plate 3.11-1

TABLE 3.11-A

SPACING OF RIGHT-OF-WAY DIVERSIONS

% Slope	Spacing (ft.)
Less than 7%	100
Between 7% and 25%	75
Between 25% and 40%	50
Greater than 40%	25

Source: Va. DSWC

Grade

Positive drainage (with less than 2% slope) should be provided to a stabilized outlet, sediment-trapping facility, or a vegetative buffer strip of adequate size.

Outlet

Interceptor dikes must have an outlet which is not subject to erosion.

The on-site location may need to be adjusted to meet field conditions in order to utilize the most suitable outlet. Concentrated flows should spread over the widest possible area after release. Flows with high sediment concentrations should pass through an appropriate sediment-trapping measure.

Construction Specifications

1. The diversion shall be installed as soon as the right-of-way has been cleared and/or graded.

2. All earthen diversions shall be machine- or hand-compacted in 8-inch lifts.

3. The outlet of the diversion shall be located on an undisturbed and stabilized area when at all possible. The field location should be adjusted as needed to utilize a stabilized outlet.

4. Earthen diversions which will not be subject to construction traffic should be stabilized in accordance with TEMPORARY SEEDING (Std. & Spec. 3.31).

Maintenance

The practice shall be inspected after every rainfall and repairs made if necessary. At least once every two weeks, whether a storm has occurred or not, the measure shall be inspected and repairs made if needed. Right-of-way diversions, which are subject to damage by vehicular traffic, should be reshaped at the end of each working day.