

# STANDARD AND SPECIFICATIONS FOR WATER BAR



## **Definition**

A ridge or ridge and channel constructed diagonally across a sloping road or utility right-of-way that is subject to erosion.

## **Purpose**

To limit the accumulation of erosive velocity of water by diverting surface runoff at pre-designed intervals.

## **Conditions Where Practice Applies**

Where runoff protection is needed to prevent erosion on sloping access right-of-ways or either long, narrow sloping areas generally less than 100 feet in width.

## **Design Criteria**

Design computations are not required.

1. The design height shall be minimum of 12 inches measured from channel bottom to ridge top.
2. The side slopes shall be 2:1 or flatter, a minimum of 4:1 where vehicles cross.
3. The base width of the ridge shall be six feet minimum.
4. The spacing of the water bars shall be as follows:

| <u>Slope (%)</u> | <u>Spacing (ft)</u> |
|------------------|---------------------|
| <5               | 125                 |
| 5 TO 10          | 100                 |
| 10 TO 20         | 75                  |
| 20 TO 35         | 50                  |
| >35              | 25                  |

5. The positive grade of the water bar shall not exceed 2%. A crossing angle of approximately 60 degrees is preferred.
6. Once diverted, water must be conveyed to a stable system (i.e. vegetated swale or storm sewer system). Water bars should have stable outlets, either natural or constructed. Site spacing may need to be adjusted for field conditions to use the most suitable areas for water disposal.

See Figure 5A.4 for details.

**Figure 5A.4  
Water Bar**

