

Addressing Driveway Runoff



Why address driveway runoff?

Like roads, rainwater needs to be removed from paved and gravel roads quickly to prevent driveway damage and flooding. Diverting and/or infiltrating runoff can help protect your driveway and nearby waterways.



Rubber Razor Bar

A rubber razor bar, also called a rubber razor blade or rubber water bar, is primarily used on **gravel** seasonal sloping roads or driveways to divert water towards a stable vegetated area. The rubber ridge is typically from used conveyors belts available at local manufacturers.

Materials List

- Two pressure treated 2" x 6" lumber cut to length
- 3" galvanized nails or decking screws
- Rubber blade 3/8" thick, 12" high, and the same length as the lumber
- Nonwoven geotextile fabric sized for outlet
- 4"-6" angular stone riprap for outlet

Installation

1. Dig 9" deep by 5" wide trench at 30° angle from high side of the road to low side. Stabilize the low side outlet with nonwoven geotextile fabric and riprap before vegetation.
2. Nail the bottom half of the rubber blade between the two boards with 2 rows of nails spaced 6" apart down the length and insert into the trench.
3. Backfill and pack to cover the boards with 3" of road material, leaving 3" of rubber blade above the road bed.

Maintenance

- Periodically remove accumulated debris from behind the razor.

Broad-based Dip

A broad-based dip is an angled dip in front of an earthen berm used on long sloping **gravel** roads or driveways to divert water to the side. Broad-based dips are similar to gravel water bars and speed bump diverters. Gravel water bars can be created similarly to broad-based dips just with smaller cuts and fills. These cuts or dips can be backfilled with stone for smoother surfaces to travel over. For paved driveways, temporary speed bumps or asphalt speed bumps can be used to divert stormwater to stable vegetation on the side of the driveway.

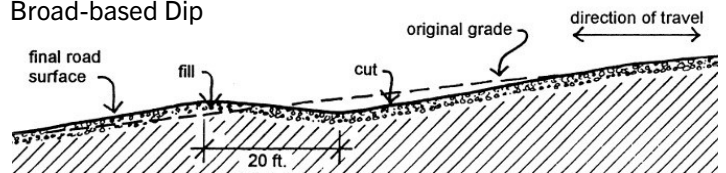
Installation

1. Cut into the road to make a gradual depression at 30° angle from high side of the road to low side.
2. Pile the removed road material into a berm on the downslope side of the cut. The deepest part of the cut to the highest point of the berm should be 20' apart.

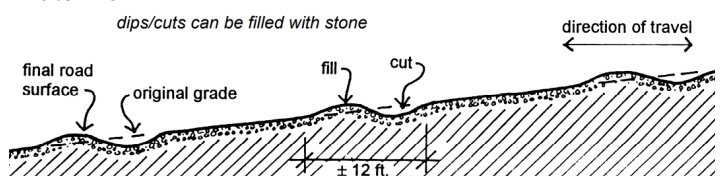
Maintenance

- Re-establish structure when needed (grading and compacting).

Broad-based Dip



Water Bar



Maine Gravel Road Maintenance Manual

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Open Top Culvert

Also called a box culvert, primarily used on **gravel** seasonal level roads or driveways to divert water towards a stable vegetated area.

Materials List

- Two pressure treated 2" x 6" lumber cut to length for sides
- One pressure treated 2" x 8" lumber cut to length for base
- 3" galvanized nails for every 12" to 18" of length
- 1" diameter pipe 3-4" long every 12" to 18" with bolts, nuts, and washers
- Nonwoven geotextile fabric sized for outlet
- 4"-6" angular stone riprap for outlet

Installation

1. Dig 8" deep by 9" wide trench at 30° angle from high side of the road to low side. Stabilize the low side outlet with nonwoven geotextile fabric and riprap before vegetation.
2. Attach pipe with bolts, nuts, and washers between 2" x 6" sides about 1" from top every 12" to 18".
3. Nail sides to base on center every 12" to 18".
4. Insert into trench so the top is flush with surface of road, then backfill and pack with road material.

Maintenance

- Inspect and remove any accumulated debris (sediment, gravel, leaves, etc.) each spring and after storms.



Open Top Culvert



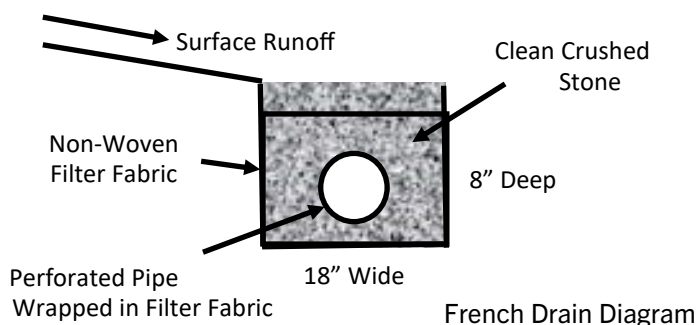
Grated Trench



Infiltration Trenches

Infiltration Trenches

Used on **paved driveways**, infiltration trenches collect and infiltrate driveway runoff in well-drained soils like sands and gravels. Infiltration trenches are best used in areas that don't receive a lot of sediment washing into the trench. A French drain is an infiltration trench containing a perforated drain pipe made to transport more of the runoff rather than infiltrate and are more suitable for poorly draining soils.



Materials List

- ½" to 1½" washed crushed stone
- Non-woven geotextile fabric

Installation

1. Dig a trench 18" wide and at least 8" deep along the downhill side of the driveway. Dispose of the soil in a flat area where it will not wash away.
2. Line the sides of the trench with non-woven geotextile fabric and fill to within 3" of the ground level with crushed stone.
3. Fold a flap of the fabric over the stone, then fill the trench with the remaining stone.

Maintenance

- Periodically remove accumulated debris and weeds from the stone.
- Every few years, or when the trench is draining slowly, remove the stone to clean and dispose of accumulated debris and sediment.