

# Temporary Swale

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## What it is

A temporary swale is an earth channel used to convey runoff. A temporary swale can be excavated or formed upslope from an earthen berm, and may be lined or unlined.



## When and Where to use it

- At the top of a slope to divert upland runoff away from the slope face.
- At the bottom of a slope to convey sediment-laden runoff to a sediment-trapping device such as a sediment basin.
- Along the perimeter of the construction site to keep runoff from leaving the site.

Figure TSW-1 illustrates cases where temporary swales are most effective.

## When and Where NOT to use it

- Where longitudinal slope exceeds 10 percent (lining is required where longitudinal slope exceeds 2 percent).
- In areas where concentrated flow will overtop the swale transversely.

## Construction Detail and Maintenance Requirements

Figure TSW-2 provides a construction detail and maintenance requirements for a temporary swale. Figure TSW-3 provides a construction detail and maintenance requirements for swale linings.

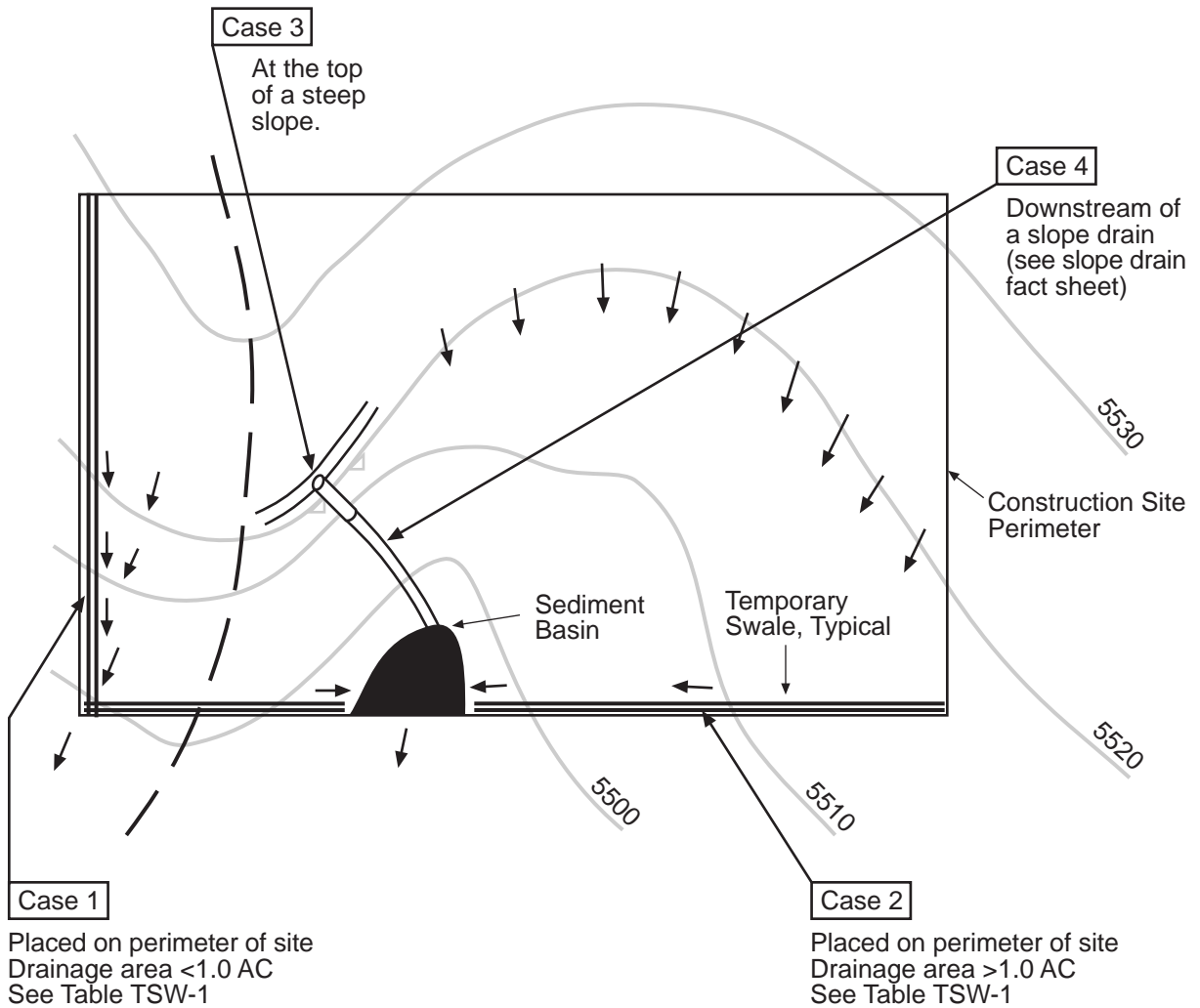


Table TSW-1

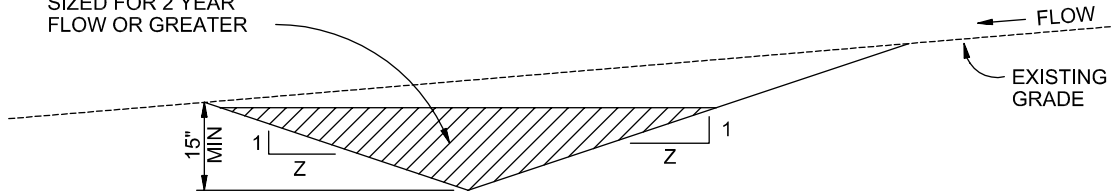
Temporary Swale Used as Perimeter Control	Case 1 DA < 1.0 AC	Case 2 DA > 1.0 AC
Continuous Grade	OK <sup>(1)</sup>	OK <sup>(1)</sup>
Area of Concentrated Flow	NO <sup>(3)</sup>	NO <sup>(2)</sup>

(1) Silt Fence or Straw Bale Barrier may be used as alternative to a Temporary Swale.

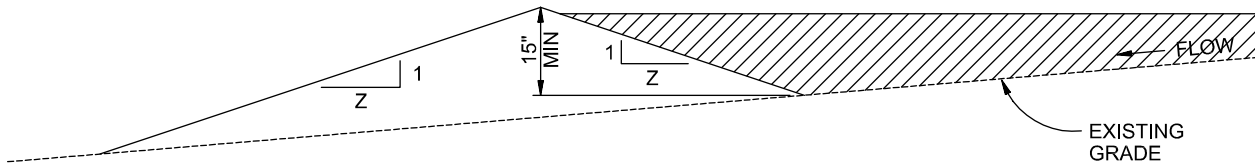
(2) With Temporary Swales Sediment Basin is required for concentrated flow from drainage areas > 1.0 AC.

(3) Check Dam is required at concentrated flow for drainage areas > 1.0 acres.

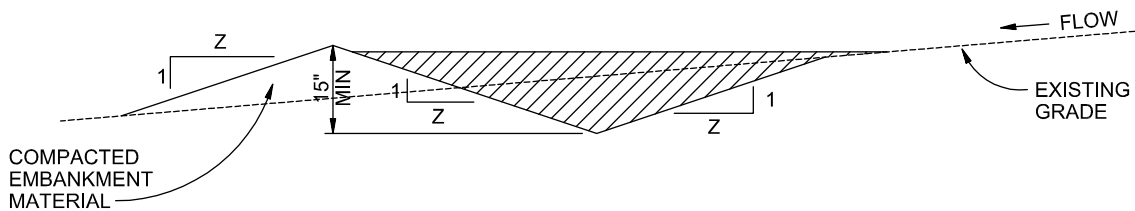
CONVEYANCE  
SIZED FOR 2 YEAR  
FLOW OR GREATER



**A. EXCAVATED SWALE**



**B. SWALE FORMED BY BERM**



**C. SWALE FORMED BY CUT AND FILL**

**TEMPORARY SWALE**

NTS

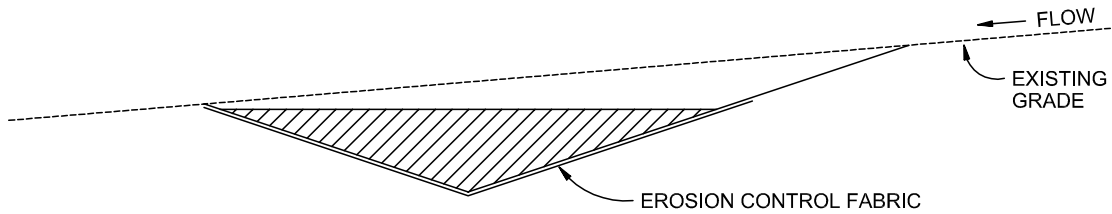
**TEMPORARY SWALE NOTES**

**INSTALLATION REQUIREMENTS**

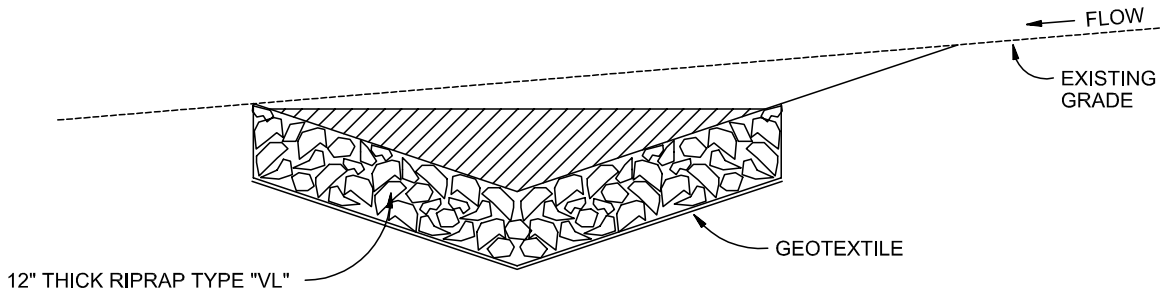
1. TEMPORARY SWALES SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
2. THE AREA UNDER WHICH THE EMBANKMENT IS TO BE INSTALLED SHALL BE CLEARED, GRUBBED, AND STRIPPED OF ALL VEGETATION AND ROOT MAT.
3. EMBANKMENT MATERIAL SHALL CONSIST OF SOIL WITH A MINIMUM OF 15% PASSING A #200 SIEVE. EXCAVATED SOIL CAN BE USED IF IT MEETS THIS REQUIREMENT.
4. EMBANKMENT IS TO BE COMPACTED TO AT LEAST 90% OF MAXIMUM DENSITY AND WITHIN 2% OF OPTIMUM MOISTURE CONTENT ACCORDING TO ASTM D 698.
5. SWALES WITH SLOPE > 2% SHALL BE LINED, SEE FIGURE TSW-3.
6. SWALES ARE TO DRAIN INTO A SEDIMENT BASIN OR OTHER STABILIZED OUTLET.
7. Z SHALL BE 3 OR GREATER.

**MAINTENANCE REQUIREMENTS**

1. CONTRACTOR SHALL INSPECT SWALES AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS OF NO RAINFALL.
2. SWALES SHALL BE ROUTINELY CLEARED OF ANY DEBRIS OR ACCUMULATION OF SEDIMENT.
3. ERODED SLOPES OR DAMAGED LININGS SHALL IMMEDIATELY BE REPAIRED.
4. TEMPORARY SWALES SHALL REMAIN OPERATIONAL AND PROPERLY MAINTAINED UNTIL THE SITE AREA IS PERMANENTLY STABILIZED WITH ADEQUATE VEGETATIVE COVER AND/OR OTHER PERMANENT STRUCTURE AS APPROVED BY THE CITY.



**A. EROSION CONTROL FABRIC**  
 $2\% < \text{SLOPE} < 5\%$  AND VELOCITY  $\leq 8$  FPS



**B. RIPRAP**  
 SLOPE  $> 5\%$  OR VELOCITY  $> 8$  FPS

**SWALE LINING**  
 NTS

**SWALE LINING NOTES**

**INSTALLATION REQUIREMENTS**

1. REFER TO THE EROSION CONTROL BLANKETS FACTSHEET FOR PROPER INSTALLATION OF EROSION CONTROL FABRIC LINING.
2. SWALES WITH EASILY EROSIVE SOILS AND SLOPES LESS THAN 2%, SHALL BE LINED WITH EROSION CONTROL FABRIC.
3. VELOCITIES FOR EROSION CONTROL FABRICS SHALL NOT EXCEED 8 FPS. SWALES WITH VELOCITIES GREATER THAN 8 FPS SHALL BE LINED WITH RIP RAP.

**MAINTENANCE REQUIREMENTS**

1. CONTRACTOR SHALL INSPECT SWALE LININGS AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL AND WEEKLY DURING PERIODS OF NO RAINFALL.
2. DAMAGED LININGS SHALL IMMEDIATELY BE REPAIRED.
3. REFER TO THE EROSION CONTROL BLANKETS FACTSHEET FOR PROPER MAINTENANCE.
4. DISPLACED RIPRAP OR COARSE AGGREGATE IS TO BE REPLACED AS SOON AS POSSIBLE.
5. SWALE LININGS ARE TO REMAIN IN PLACE AND BE PROPERLY MAINTAINED UNTIL THE TEMPORARY SWALE IS REMOVED.