

Vegetated Buffers

Design Manual
Chapter 10
Roadside Development
and Erosion Control

Originally Issued: 02-23-17
Revised: xx-xx-xx

This section provides guidance for using vegetated buffers in place of temporary sediment control devices used for storm water detention (see Section [10C-2](#)). Vegetated buffers are areas of undisturbed vegetation, typically consisting of grasses. They can be very effective for removing sediment from storm water runoff. Typically, the use of vegetated buffers will be limited to projects involving small disturbed areas, such as [3R](#) or emergency repair projects. When vegetated buffers are used, two rows of temporary sediment control devices are placed where storm water leaves the right-of-way. Storage volume calculations are not required. Contact the [Agronomist](#) or [Earthwork Engineer](#) when considering use of vegetated buffers in situations other than shown in this section.



Clearly mark vegetated buffers in the [R Sheets](#) of the plans. Add a note in the plans that the contractor is not to disturb vegetated areas used as buffers.

Using a Vegetated Buffer for a Disturbed Area

When a vegetated buffer exists between a disturbed area and the outlet for the drainage area containing the disturbed area, it may be possible to use the buffer in place of the temporary sediment control devices discussed in Section [10C-2](#). When vegetated buffers are used as the only means of sediment removal, two rows of temporary sediment control devices, such as silt fence ditch checks or 20 inch perimeter and slope sediment control devices, should be placed in the ditch where the flow leaves the drainage basin, see Figure 1. These temporary sediment control devices provide an extra measure of sediment removal.

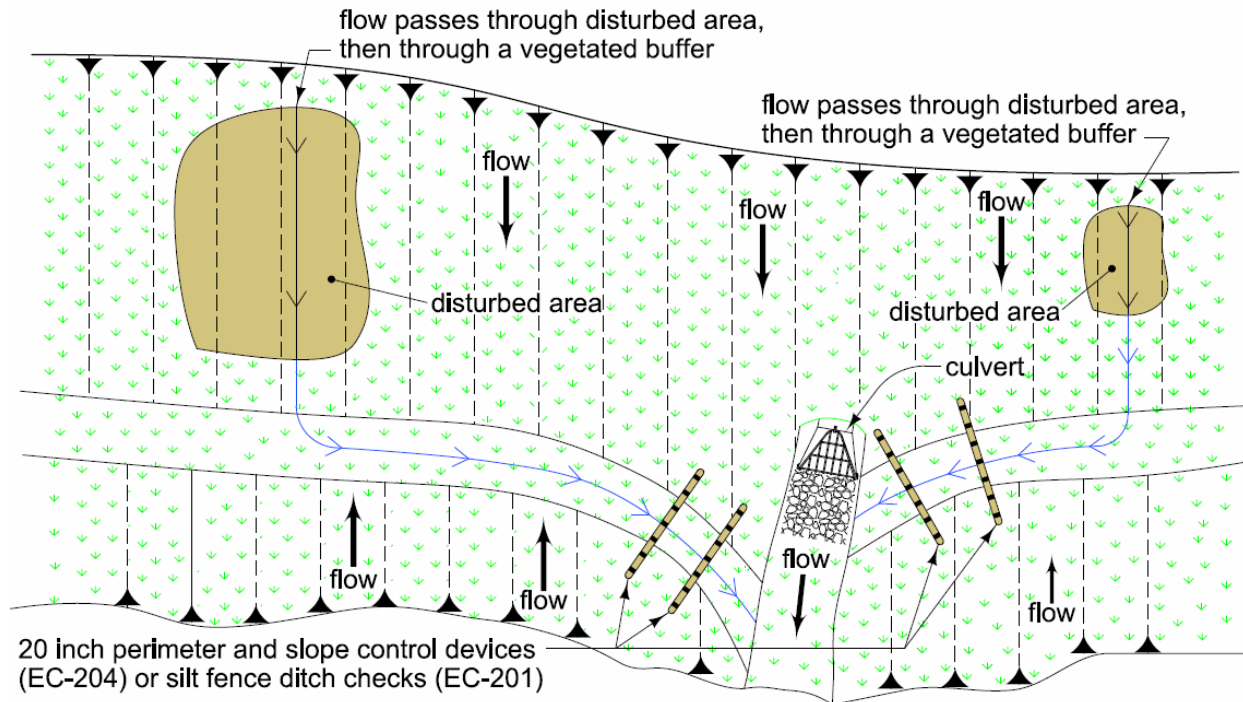


Figure 1: Flow through disturbed area and vegetated buffer.

Using Design Details 570-11 and 570-12

For **3R** projects that involve paved shoulders or pavement widening and culvert extensions, Design Details [570-11](#) and [570-12](#) should be used. These details include two rows of temporary sediment control devices and vegetated buffers, so storage volume calculations are not required.

Filling out Tabulation 100-34

For projects using vegetated buffers with temporary sediment controls, the basins filtered are still tabulated in Tabulation [100-34](#), see example below.

STORMWATER DRAINAGE BASIN AND STORAGE													100-34 10-17-17
Drainage Basin Location													
Basin No.	Station to Station		Side	Discharge Point		Total Disturbed Area		Disturbed Area without Storage provided	Best Management Practice	Total Storage Volume		Storage Volume Met?	Remarks
	Station	Station		Station	Side	Acres	Acres			CF	CF		
1	133+45.00	156+95.00	Right	156+89.00	Right	0.4	0.0	0.4	Vegetated buffer. Silt fence placed where flow leaves ROW.	0.0	0.0		
2	156+96.00	200+57.00	Right	200+45.00	Right	0.4	0.0	0.4	Vegetated buffer. Silt fence placed where flow leaves ROW.	0.0	0.0		
3	133+57.00	156+93.00	Left	156+88.00	Left	0.4	0.0	0.4	Vegetated buffer. Silt fence placed where flow leaves ROW.	0.0	0.0		
4	156+94.00	200+63.00	Left	200+57.00	Left	0.4	0.0	0.4	Vegetated buffer. Silt fence placed where flow leaves ROW.	0.0	0.0		

Include a Modified Standard Note 281-3 filled out similar to the example below indicating vegetated buffers and temporary sediment control devices are used in place of storm water detention.

**281-3
MODIFIED**

**STORM WATER
BEST MANAGEMENT PRACTICES**

Storm water storage volumes were not calculated for this project. The following best management practices are used in place of storm water detention:
 Undisturbed foreslopes and ditches will act as vegetated buffers. Temporary sediment control devices such as silt fence or perimeter and slope sediment control devices are placed downstream of disturbed areas in ditches where drainage leaves the ROW and at roadway culverts.

Chronology of Changes to Design Manual Section: 010C-003 Vegetated Buffers

4/29/2019	Revised Rewrote to clarify use of vegetated buffers.
8/30/2018	Revised Add in information related to projects using vegetated buffers only.
5/9/2017	Revised Revised to reflect changes to Tabulation 100-34. Tabulation 100-35 has been deleted.
2/23/2017	NEW New.