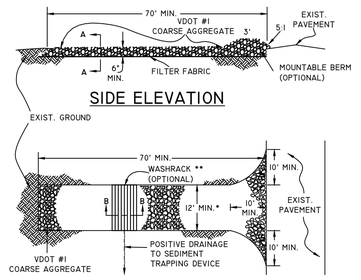
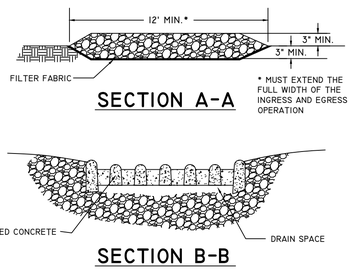
# STONE CONSTRUCTION ENTRANCE

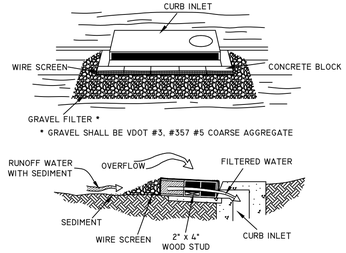
C-SCM-03 - VA. STORMWATER MANAGEMENT HANDBOOK (2024)




# BLOCK AND GRAVEL CURB INLET SEDIMENT FILTER

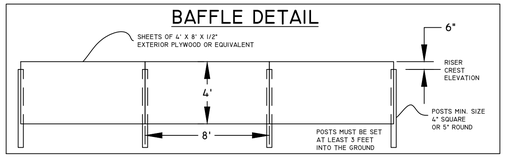
C-SCM-04 - VA. STORMWATER MANAGEMENT HANDBOOK (2024)




SPECIFIC APPLICATION

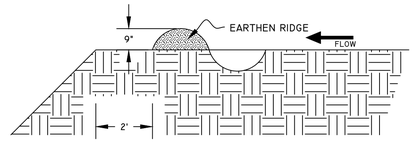
THIS METHOD OF INLET PROTECTION IS APPLICABLE AT CURB INLETS WHERE AN OVERFLOW CAPABILITY IS NECESSARY TO PREVENT EXCESSIVE PONDING IN FRONT OF THE STRUCTURE.

# BAFFLE DETAIL




# TEMPORARY FILL DIVERSION

C-ECM-06 - VA. STORMWATER MANAGEMENT HANDBOOK (2024)

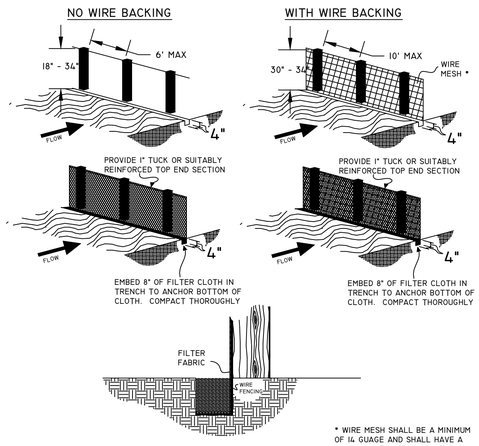



THE DIVERSION SHALL BE AT LEAST 2' INSIDE OF THE TOP EDGE OF FILL

THE SUPPORTING RIDGE SHALL BE CONSTRUCTED WITH A UNIFORM HEIGHT ALONG ITS ENTIRE LENGTH TO PREVENT BREACHING.

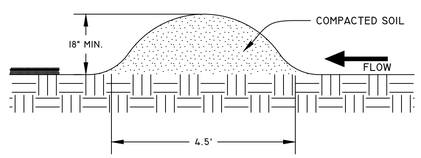
# SILT FENCE

C-PCM-04 - VA. STORMWATER MANAGEMENT HANDBOOK (2024)




# TEMPORARY DIVERSION DIKE

C-ECM-04 - VA. STORMWATER MANAGEMENT HANDBOOK (2024)

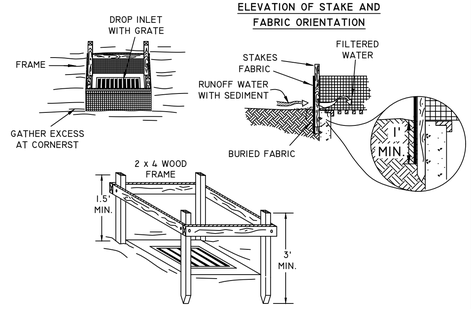



SIDE SLOPES MUST BE 2:1 OR FLATTER

TEMPORARY OR PERMANENT SEEDING AND MULCH MUST BE APPLIED IMMEDIATELY UPON CONSTRUCTION

# SILT FENCE DROP INLET PROTECTION

C-SCM-04 - VA. STORMWATER MANAGEMENT HANDBOOK (2024)

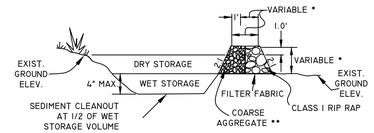


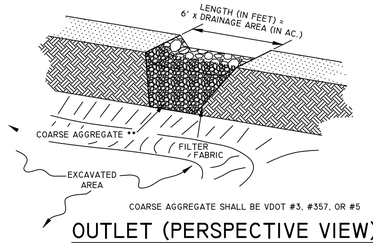

SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPES NO GREATER THAN 5%) WHERE INLET SHEET OR OVERLAND FLOWS (NOT EXCEEDING 1 CFS ARE TYPICAL. THE METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS, SUCH AS IN STREET OR HIGHWAY MEDIANS.

# TEMPORARY SEDIMENT TRAP

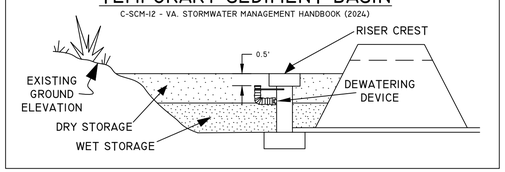
C-SCM-11 - VA. STORMWATER MANAGEMENT HANDBOOK (2024)




# TEMPORARY SEDIMENT BASIN

C-SCM-12 - VA. STORMWATER MANAGEMENT HANDBOOK (2024)




## MS-19 COMPLIANCE

**ADEQUACY:**

In accordance with Minimum Standard 19 of the Erosion and Sediment Control Regulations, adequacy of **off-site** receiving channels or pipes must be verified by addressing one of the following Adequacy Situations:

A. The drainage area from the project at the discharge point is less than or equal to one percent of the total drainage area at the discharge point and the ten-year storm is contained within the channel banks (Project Drainage Area and Total Drainage Area are required) (Virginia Administrative Code 9VAC25-875-560.19.b(1)),

**or**

B. Natural channels must be analyzed to demonstrate that (1) the two-year storm will not overtop the channel banks and (2) the two-year storm will not cause erosion of the channel bed or banks ($Q_{Capacity}$, $Q_2$, $V_{Allowable}$, and $V_2$ are required (Virginia Administrative Code 9VAC25-875-560.19.b(2)(a)),

**or**

C. Man-made channels must be analyzed to demonstrate that (1) the ten-year storm will not overtop the channel banks and (2) the two-year storm will not cause erosion of the channel bed or banks ($Q_{Capacity}$, $Q_{10}$, $V_{Allowable}$, and $V_2$ are required) (Virginia Administrative Code 9VAC25-875-560.19.b(2)(b)),

**or**

D. Pipes and storm sewer systems must be analyzed to demonstrate that the ten-year storm will be contained within the system $Q_{Capacity}$, $Q_{10}$, and hydraulic grade line calculations are required (Virginia Administrative Code 9VAC25-875-560.19.b(2)(c)).

| Discharge Point | Adequacy Situation | Project Drainage Area | Total Drainage Area | Capacity: $Q_2$ /$Q_{10}$ | Post Development: $Q_2$ /$Q_{10}$ | $V_{Allowable}$ | $V_2$ | Cross Section, Profile **and** Calculations Shown on Sheet(s) |
|---|---|---|---|---|---|---|---|---|
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Discharge Point = unique identifier for the discharge point
Project Drainage Area = the drainage area of the project that drains to the discharge point in acres
$Q_2$ = the peak discharge at the discharge point for the two-year storms in cfs
$V_{Allowable}$ = the maximum velocity the channel lining can withstand without eroding in fps

Adequacy Situation = either A, B, C, or D as described above
Total Drainage Area = the total drainage area to the discharge point in acres
$Q_{10}$ = the peak discharge at the discharge point for the ten-year storms in cfs
$V_2$, = the velocity at the discharge point for the two-year storm in fps

Generally, scaled channel cross-sections must be provided every fifty (50) feet and at the most constricted locations of all outfall channels for a minimum of 150 feet of profile.

**INADEQUATE OUTFALLS:**

A. Develop a site design that meets Virginia Administrative Code 9VAC25-875-560.19.c(3):
   For natural channels: $Q_2$ post < $Q_2$ pre;
   For manmade channels: $Q_{10}$ pre < $Q_{10}$ post.

B. See MS-19 for additional requirements (Virginia Administrative Code 9VAC25-875-560.19).

| Discharge Point | Project Drainage Area | Total Drainage Area | Pre Development: $Q_2$/$Q_{10}$ | Post Development: $Q_2$/$Q_{10}$ | Cross Section, Profile, **and** Calculations Shown on Sheet(s) |
|---|---|---|---|---|---|
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## VSMP PART C – FLOODING (9VAC25-875-600)

The 10 year post-developed Q from the development site shall not exceed the 10 year pre-development Q. (See 9VAC25-875-600)

| | $Q_{10}$ Pre-development | $Q_{10}$ Post development | Calculations shown on sheet: |
|---|---|---|---|
| $Q_{10}$ Site Data | | | |

## SEDIMENT TRAPS

| Trap # | Drainage Area (acres) | Wet Storage | | | Dry Storage | | | Outlet Length (Feet) | Bottom Elevation | Top of Berm Elevation | Top of Berm Width | Dimensions (L x W) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Volume Required (Cu. Yd.) | Volume Provided (Cu. Yd.) | Elevation | Volume Required (Cu. Yd.) | Volume Provided (Cu. Yd.) | Elevation | | | | | |
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## SEDIMENT BASINS

| Basin # | Drainage Area (acres) | Wet Storage | | Dry Storage | | Bottom Elevation | Riser Crest Elevation | Riser Diameter | Dewatering Device Elevation | Dewatering Device Diameter | 25-Yr. Storm Elevation | Emergency Spillway Elevation | Anti-Vortex Device Diameter | Top of Dam Elevation | Top of Dam Width | Baffle | | | Barrel | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Volume Required (Cu. Yd.) | Volume Provided (Cu. Yd.) | Volume Required (Cu. Yd.) | Volume Provided (Cu. Yd.) | | | | | | | | | | | Flowlength to Width Ratio | Baffle Length | Top of Baffle | Pipe Length | Pipe Diameter | Invert In | Invert Out |
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