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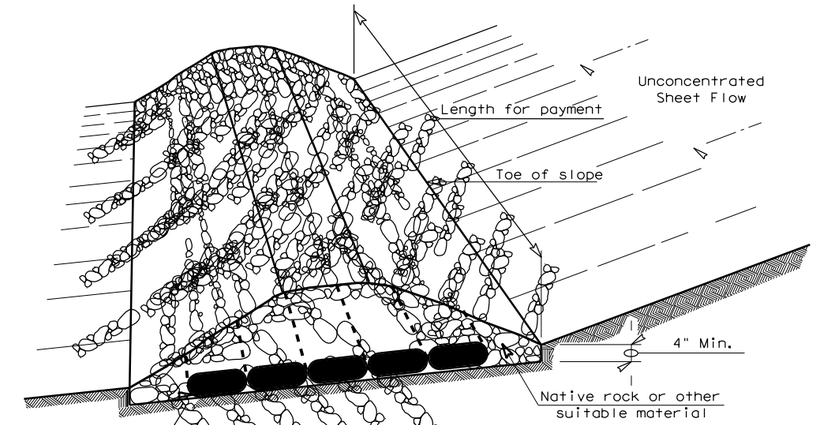
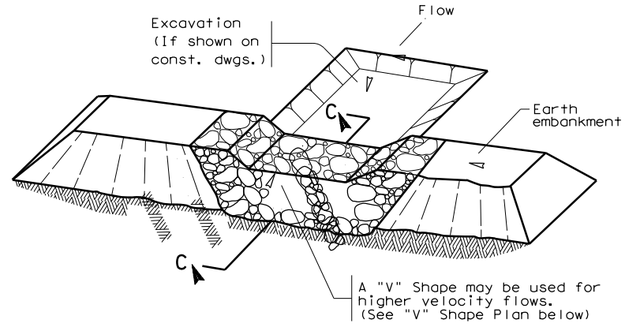


FILTER DAM AT TOE OF SLOPE

RFD1

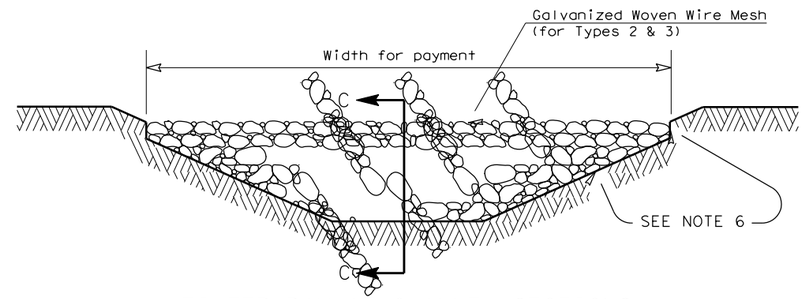
TYPE 1



FILTER DAM AT SEDIMENT TRAP

RFD1 OR RFD2

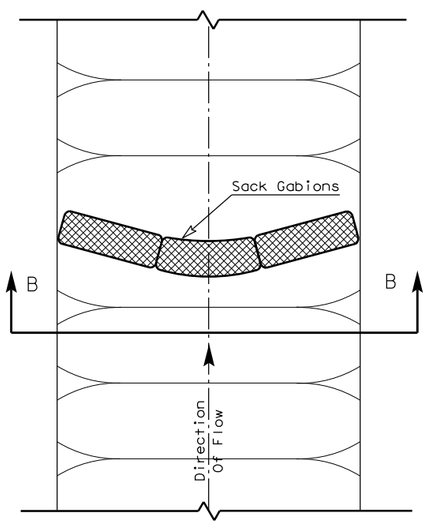
TYPE 1 OR TYPE 2



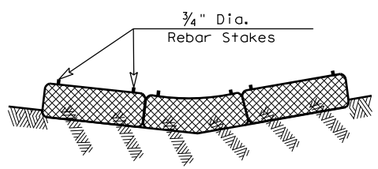
FILTER DAM AT CHANNEL SECTIONS

RFD1 OR RFD2 OR RFD3

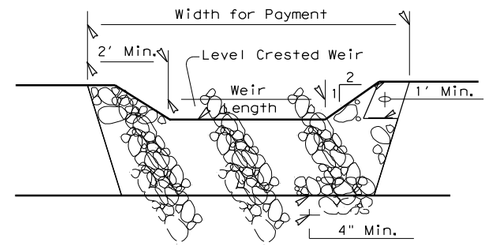
TYPE 1 OR TYPE 2



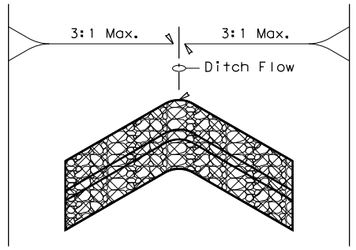
PLAN VIEW



SECTION B-B

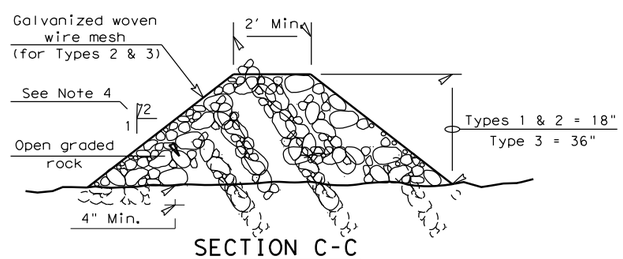


PROFILE



"V" SHAPE

(Plan View)



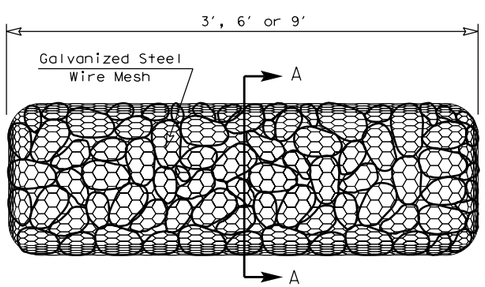
SECTION C-C

PLANS SHEET LEGEND

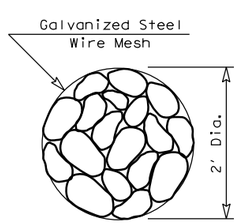
Type 1 Rock Filter Dam — RFD1

Type 2 Rock Filter Dam — RFD2

Type 3 Rock Filter Dam — RFD3



TYPE 4 (SACK GABIONS)



SECTION A-A

ROCK FILTER DAM USAGE GUIDELINES

Rock Filter Dams should be constructed downstream from disturbed areas to intercept sediment from overland runoff and/or concentrated flow. The dams should be sized to filter a maximum flow through rate of 60 GPM/FT^2 of cross sectional area. A 2 year storm frequency may be used to calculate the flow rate.

Type 1 (18" high with no wire mesh): Type 1 may be used at the toe of slopes, around inlets, in small ditches, and at dike or swale outlets. This type of dam is recommended to control erosion from a drainage area of 5 acres or less. Type 1 may not be used in concentrated high velocity flows (approx. 8 Ft/Sec or more) in which aggregate wash out may occur. Sandbags may be used at the embedded foundation (4" deep min.) for better filtering efficiency of low flows if called for on the plans or directed by the Engineer.

Type 2 (18" high with wire mesh): Type 2 may be used in ditches and at dike or swale outlets.

Type 3 (36" high with wire mesh): Type 3 may be used in stream flow and should be secured to the stream bed.

Type 4 (Sack gabions): Type 4 May be used in ditches and smaller channels to form an erosion control dam.

GENERAL NOTES

1. If shown on the plans or directed by the Engineer, filter dams should be placed near the toe of slopes where erosion is anticipated, upstream and/or downstream at drainage structures, and in roadway ditches and channels to collect sediment.
2. Materials (aggregate, wire mesh, sandbags, etc.) shall be as indicated by the specification for "Rock Filter Dams for Erosion and Sedimentation Control".
3. The rock filter dam dimensions shall be as indicated on the SW3P plans.
4. Side slopes should be 2:1 or flatter. Dams within the safety zone shall have sideslopes of 6:1 or flatter.
5. Maintain a minimum of 1' between top of rock filter dam weir and top of embankment for filter dams at sediment traps.
6. Filter dams should be embedded a minimum of 4" into existing ground.
7. The sediment trap for ponding of sediment laden runoff shall be of the dimensions shown on the plans.
8. Rock filter dam types 2 & 3 shall be secured with 20 gauge galvanized woven wire mesh with 1" diameter hexagonal openings. The aggregate shall be placed on the mesh to the height & slopes specified. The mesh shall be folded at the upstream side over the aggregate and tightly secured to itself on the downstream side using wire ties or hog rings. In stream use the mesh should be secured or staked to the stream bed prior to aggregate placement.
9. Sack Gabions should be staked down with ¾" dia. rebar stakes.
10. Flow outlet should be onto a stabilized area (vegetation, rock, etc.).
11. The guidelines shown hereon are suggestions only and may be modified by the Engineer.

Texas Department of Transportation — Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

ROCK FILTER DAMS

EC(2)-93

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