Sections 6.06, 6.15, and 6.65 revised Jan 2026

A cooperative effort between the North Carolina Sedimentation Control Commission, the North Carolina Department of Environmental Quality, and the North Carolina Agricultural Extension Service.

Erosion and Sediment Control Planning and Design Manual

Disclaimer

The contents of this publication were prepared by the authors and should not be interpreted as necessarily representing the policies or recommendations of other referenced agencies or organizations. Additional information from professionals, agencies, organizations and institutions with expertise in a particular area may be useful in selecting, designing, and installing certain practices.

The mention of trade names, products or companies does not constitute an endorsement.

This manual is intended for periodic update. Therefore sections of the manual may be changed as practices for erosion and sedimentation control evolve.

Preface

Thousands of acres of land are exposed each year in North Carolina for the construction of subdivisions, shopping centers, office centers, highways and other developments. Without protective measures these exposed areas are vulnerable to accelerated erosion and sedimentation that damages adjoining properties, streams and other water resources of the state.

The North Carolina Sedimentation Pollution Control Act of 1973 established a statewide program to control soil erosion and sedimentation. The law covers all land-disturbing activities in North Carolina, except those involving agriculture, forestry and mining.

The Act sets basic performance standards backed by rules and regulations. The law and the rules do not specify a rigid set of practices. Rather, they require the land developer to prepare an erosion and sedimentation control plan and employ appropriate measures to meet the performance standards. As part of the educational requirements of the Act, the Commission is pleased to have sponsored the development of this manual. The manual is a basic reference for the preparation of a comprehensive erosion and sedimentation control plan and for the design construction and maintenance of individual practices. It is intended to help land developers comply with the Act.

This manual is the "state of the art" and provides useful information for the implementation of a sound erosion control program that can be tailored to specific site conditions. The Commission will continue to support education and training to ensure sound and economical sedimentation control procedures to protect the streams, lakes, and estuaries of the state.

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1988

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Table of Contents

List of Tables

Runoff Control Measures

Sediment Basin Design

List of Figures

Surface Stabilization

Runoff Control Measures

Runoff Conveyance Measures

Outlet Protection

Inlet Protection

Sediment Traps and Barriers

Stream Protection

Other Related Practices

Soils Information

Estimating Runoff

Design of Stable Channels and Diversions

Design of Riprap Outlet Protection

Sediment Basin Design

6

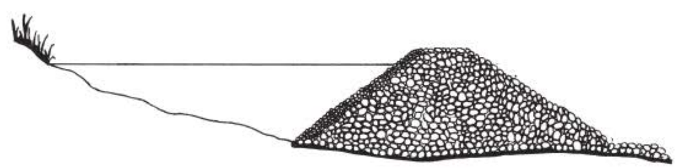
Practice Standards and Specifications

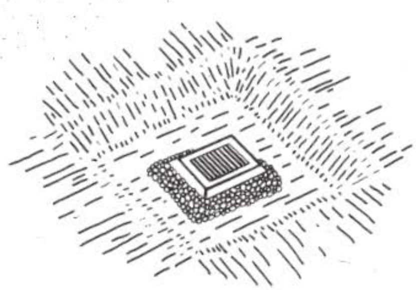
6

Practice Standards and Specifications

Chapter 6 contains Standards and Specifications for structural and vegetative erosion and sediment control practices. **Specifications given in this section are guidelines, and are intended to minimize the time required to design practices for use under typical site conditions. Unusual conditions may dictate that specifications be modified and practices specially designed. Exceptions to these guidelines may be made based on best professional judgement.** Additional guidelines on the design and use of practices are contained in the appendices.

The vegetative and structural measures described in this chapter are not intended to stand alone. Rather, they should be employed as a system, sequenced and sited to control erosion and sedimentation during development, and to stabilize disturbed land as development is completed. On most sites successful erosion and sedimentation control requires combining structural and vegetative practices into a comprehensive plan. Design professionals should consider the changing requirements of their site when determining the sequence in which practices are to be implemented and should recognize the importance of vegetative and other groundcover for stabilizing disturbed areas.





6

Practice Standards and Specifications

Index

Outlet Protection

Inlet Protection

Sediment Traps and Barriers

Stream Protection

Other Related Practices

Index

Site Preparation

6.06 Temporary Construction Entrance/Exit

Definition

An area or pad located at points where vehicles enter and leave a construction site typically surfaced with stone, riprap, coarse ground wood mulch, wooden logging mats, synthetic/composite products, or other ground stabilizing materials.

Purpose

To provide an area where mud, soil, and debris can be removed from equipment and vehicle tires to avoid deposition on the public road, where it can be a safety hazard and create muddy runoff and dust. Except for wheel washes, the removal of mud, soil, and debris occurs as a result of abrasion and wheel shaking as the vehicles drive over the right surfaces.

Conditions Where Practice Applies

Wherever vehicles and equipment will be entering and leaving a construction site and moving directly onto a public road or other paved off-site area. Construction plans should limit traffic to properly constructed entrances and exits.

Design Criteria

Construction entrances should be 12-ft minimum per lane of traffic. Non-synthetic construction entrance/exits should have geotextile underlayment.

Aggregate or mulch thickness should be a minimum of 6-in. A dedicated stockpile of clean material should be available on-site for immediate use to maintain the measure.

Location – Locate construction entrances and exits to limit sediment from leaving the site and to provide for maximum utility by all construction vehicles. Avoid steep grades and entrances at curves in public roads.

Dimensions of Entrance/Exit Pad -

Width – A 12ft-minimum or full width at all points of the vehicular entrance and exit area, whichever is greater.

Length – Apply stabilization techniques at lengths necessary to keep mud and debris from entering the paved roadway (Figure 6.06a). Lengths of stabilized roadway entrances and exits may vary by size of the construction site, percent cover applied to the site access roadway, stabilization material selected, weight and frequency of traffic, and soil types.

Riprap and Stone Pads, Wood Fiber, Wooden Mats, and Synthetic Mats - Each option should achieve the purpose of this standard. Some standard starting points include:

Riprap Pads:

Aggregate Size – Use 2 - 3 inch stone. NCDOT Class A may be suitable for finer textured soils
Length – 50-ft minimum. More stone may be required to minimize trackout on paved surfaces.

Stone Pads:

Aggregate Size – Use NCDOT #5 or #57 stone.

Length – 25-ft minimum for residential or small linear utility sites.

Wood chips:

Material sizes may vary, but 3-inches or larger is preferred.

Wood Mats:

A minimum of ¼ inch construction, but various thicknesses may be appropriate.

Synthetic Mats:

Various thicknesses may be appropriate.

Wash Racks and Wheel Washes - If two instances of debris deposited onto the roadway are cited as a safety concern, a wash rack or wheel wash may be required. Otherwise, if conditions at the site are such that soil and other debris are not removed from exiting vehicles, the vehicles should be washed prior to accessing the public roadway. Soil and debris removal by washing should be conducted in a stabilized area that drains into a sediment trap or other suitable collection area or self-contained to filter water for reuse. A pressure washer and wash rack may be used to make washing more convenient and effective. A manufactured wheel wash installed and operated according to manufacturer's specifications is also an acceptable alternative. The roadway leading to and from wash racks or wheel washes shall be stabilized with appropriate materials. Drain space under wash rack shall be kept open. Damage to wash racks or wheel washes shall be repaired prior to further use.

Prefabricated Pad - Prefabricated pads may be used instead of or in conjunction with stone construction entrances provided they are installed according to manufacturer's recommendations and a sufficient number of pads or stone are installed to provide for a minimum of four tire revolutions while on the pad. More pads may be needed depending on site conditions. Accumulated materials should be cleaned from the pads daily (more often if necessary) and disposed in the manner specified by the erosion and sediment control plan.

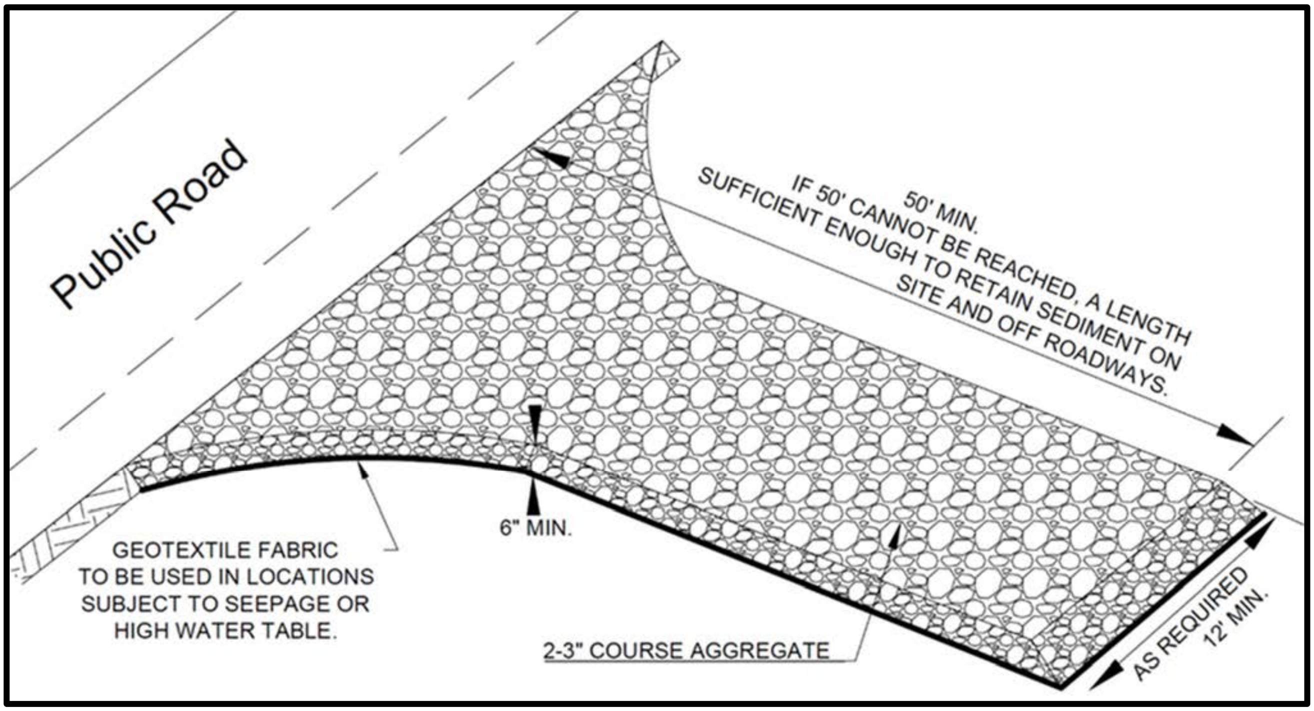


***Figure 6.06a**, Typical stone entrance/exit pad (modified from VA SWCC)*

***Figure 6.06b**, Stone Entrance/Exit keeps sediment from leaving the construction site*

Construction Specifications

1. Clear the entrance and exit area of all vegetation, roots, and other objectionable material and properly grade it.

2. Place the stone or other stabilizing material to the specific grade and dimensions shown on the plans, and smooth it.
3. Provide drainage from construction entrance area to carry runoff to a sediment trap or other suitable collection area.
4. Divert construction site runoff away from the construction entrance area to nearby erosion and sediment control measures. Do not allow construction sites to outlet runoff through entrances/exits.
5. When appropriate to do so, use geotextile fabrics underneath construction entrance material to improve stability of the foundation, especially in locations subject to seepage or a high-water table.

Maintenance

Maintain the pad or entrance in a condition to prevent mud or sediment from leaving the construction site. If any objectionable material—including sediment—is deposited onto paved roadways from the construction site, remove by manual or mechanical means and return the deposits back to the construction site immediately. Periodic topdressing with stone or coarse ground wood mulch may be needed to prevent debris deposits onto the road, a stockpile shall be maintained on site to quickly address compromised entrances/exits. After each rainfall, inspect any structure used to trap sediment and clean it out as necessary. In circumstances of high-traffic and/or wet conditions, routinely inspect the entrance/exit for sediment and debris removal effectiveness as needed.

References

Runoff Conveyance Measures
6.30, Grass-lined Channels

Sediment Traps and Barriers
6.60, Temporary Sediment Trap

Pennsylvania Erosion and Sediment Pollution Control Program Manual. March 2012. Technical Guidance Number 363-2134-008. pp.13-18

6.15 Riprap

Definition

A permanently placed layer of large irregular-shaped stone with an underlining geotextile or granular filter blanket.

Purpose

To protect the soil surface from erosive forces and/or improve stability of soil slopes that are subject to seepage or have poor soil structure.

Conditions Where Practice Applies

Riprap is used for the following applications:

- cut-and-fill slopes subject to seepage or weathering, particularly where conditions prohibit establishment of vegetation,
- channel side slopes and bottoms,
- inlets and outlets for culverts, bridges, slope drains, grade stabilization structures, and storm drains
- streambanks and streambeds,
- shorelines subject to wave action.

Planning Considerations

Riprap is a versatile, highly erosion-resistant material that can be used effectively in many locations and in a variety of ways to control erosion on construction sites.

Graded Versus Uniform Riprap

Riprap is classed as either graded or uniform. Graded riprap includes a wide mixture of stone sizes. Uniform riprap consists of stones nearly all the same size.

Graded riprap is preferred to uniform riprap in most applications because the variation in size allows for settling and forms a dense, flexible cover. Uniform riprap creates more open voids, and cannot adjust as effectively to movement of the stones. Graded riprap is also cheaper to install requiring less hand work for installation than uniform riprap, which must be placed in a uniform pattern. Uniform riprap may give a more pleasing appearance.

Riprap sizes are designated by either the mean diameter or the weight of the stones. The diameter specification is often misleading since the stones are usually angular. However, common practice is to specify stone size by the diameter of an equivalent size of spherical stone.

A method commonly used for specifying the range of stone sizes in graded riprap is to designate a diameter for which some percentage, by weight, will be smaller. For example, "d85" specifies a mixture of stones in which 85% of the stone by weight would be smaller than the diameter specified. Most designs are based on "d50", or median size stones. Table 6.15a lists some commonly referenced mean diameter stone sizes available within North Carolina.

Table 6.15a Sizes for Riprap *(Source: NCDOT)*

Acceptance Criteria for Rip Rap and Stone for Erosion Control

Class	Minimum Required Stone Sizes, inches	Midrange Required Stone Sizes, inches	Maximum Required Stone Sizes, inches
A	2	4	6
B	5	8	12
1	5	10	17
2	9	14	23

No more than 5.0% of the material furnished can be less than the minimum size specified nor more than 10.0% of the material can exceed the maximum size specified.

When considering riprap for surface stabilization, it is important to anticipate visual impacts, including weed control, hazards from snakes and other animals, danger of slides and hazards to areas below steep riprap slopes, damage and possible slides from children moving stones, and general safety.

Proper stone size selection and surface preparation are essential for successful long-term functioning of riprap. Adequate compaction of fill areas and proper use of filter blankets are necessary.

Sequence of construction—Schedule disturbance of areas that require riprap protection so that the placement of riprap can follow immediately after grading. When riprap is used for outlet protection, place the riprap before or in conjunction with the installation of the structure so that it is in place before the first runoff event.

Design Criteria

Gradation—Riprap should be a well-graded mixture with 50% by weight larger than the specified design size. The diameter of the largest stone size in such a mixture should be 1.5 times the d50 size with smaller sizes grading down to 1 inch.

The designer should determine the riprap size that will be stable for design conditions. Having determined the design stone size, the designer should select the size or sizes that equal or exceed that minimum size based on riprap gradations commercially available in the area.

Thickness—Construction techniques, dimensions of the area to be protected, size and gradation of the riprap, the frequency and duration of flow, difficulty and cost of maintenance, and consequences of failure should be considered when determining the thickness of riprap linings. The minimum thickness should be 1.5 times the maximum stone diameter, but in no case less than 6 inches.

Quality of stone—Stone for riprap may consist of field stone or quarry stone. The stone should be hard, angular, of such quality that it will not break down on exposure to water or weathering, and suitable in all other respects for the purpose intended. The specific gravity of the individual stones should be at least 2.5.

Size of stone—The sizes of stones used for riprap protection are determined by purpose and specific site conditions.

- **Slope stabilization—**Riprap stone for slope stabilization, not subject to flowing water or wave action, should be sized for stability for the proposed grade. The gradient of the slope to be stabilized should be less than the natural angle of repose of the stone selected. Angle of repose of riprap stones may be estimated from Figure 6.15a

  Riprap used for surface stabilization of slopes does not add significant resistance to sliding or slope failure and should not be considered a retaining wall. The inherent stability of the soil must be satisfactory before riprap is used for surface stabilization. Slopes approaching 1.5:1 may require special stability analysis.

- **Outlet protection—**Design criteria for sizing stone and determining the dimensions of riprap pads at channel or conduit outlets are presented in Practice 6.41, Outlet Stabilization Structure.

- **Channel stabilization and streambank protection—**Design criteria for sizing stone for stability of channels are contained in *Appendix 8.05*.

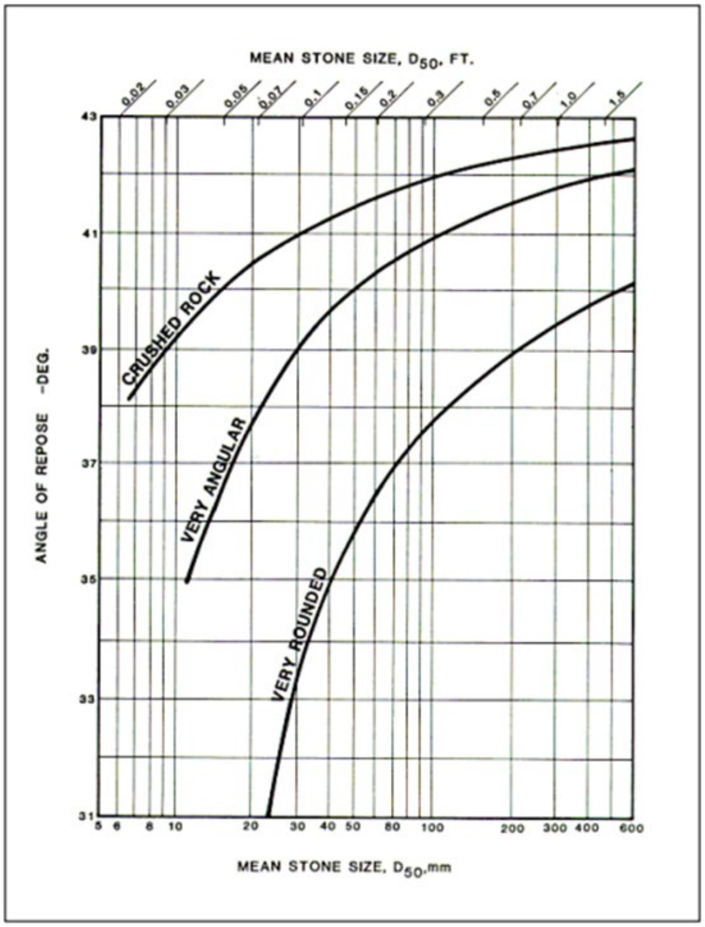


***Figure 6.15a** Angle of repose of riprap in terms of mean size and shape of stone (Adapted from FHWA HEC-15, 2005)*

Filter blanket—A filter blanket is a layer of material placed between the riprap and the underlying soil to prevent soil movement into or through the riprap.

A suitable filter may consist of a well-graded gravel or sand-gravel layer or a synthetic geotextile manufactured for this express purpose. The design of a gravel filter blanket is based on the ratio of particle size in the overlying filter material to that of the base material in accordance with the criteria below. The designed gravel filter blanket may consist of several layers of increasingly large particles from sand to erosion control stone.

A gravel filter blanket should have the following filter-to-base or filter-to-rip-rap relationship for a stable design:

$$\frac{d_{15}upper}{d_{85}lower} \leq 5$$

$$5 \leq \frac{d_{15}upper}{d_{15}lower} \leq 40$$

$$\frac{d_{50}upper}{d_{50}lower} \leq 40$$

In the above relationships, "upper" refers to the overlying material and "lower" refers to the underlying material. The relationships must hold between the filter blanket and base material and between the riprap and filter blanket. More than one layer of filter material may be needed. Each layer of filter material should be at least 6 inches thick.

A geotextile may be used with or in place of gravel filters. Selection of geotextile should consider factors such as soil retention, permeability, clogging and survivability. With the exception of problematic soils or high velocity conditions associated with steep channels, geotextile filters may usually be selected based on the apparent opening size (AOS) of the geotextile and the soil type as shown in Table 6.15b.

Detailed design guidance for selecting geotextiles as a riprap filter material in situations where problematic soil environments exist, severe environmental conditions are expected, and/or for critical installations may be found in *Federal Highway Administration, 1998. "Geosynthetic Design and Construction Guidelines," FHWA-HI-95-038.*

Table 6.15b Maximum AOS for Geotextile Filters (FHWA, 1998)

Soil Type	Maximum AOS (mm)
Non cohesive, less than 15 percent passing the 0.075 mm (US #200) sieve	0.43
Non cohesive, 15 to 50 percent passing the 0.075 mm (US #200) sieve	0.25
Non cohesive, more than 50 percent passing the 0.075 mm (US #200) sieve	0.22
Cohesive, plasticity index greater than 7	0.30

Filter blankets should always be provided where seepage is significant, or where flow velocity and duration of flow or turbulence may cause the underlying soil particles to move through the riprap.

Construction Specifications

Subgrade preparation—Prepare the subgrade for riprap and filter to the required lines and grades shown on the plans. Compact any fill required in the subgrade to a density approximating that of the surrounding undisturbed material or overfill depressions with riprap. Remove brush, trees, stumps, and other objectionable material. Cut the subgrade sufficiently deep that the finished grade of the riprap will be at the elevation of the surrounding area. Channels should be excavated sufficiently to allow placement of the riprap in a manner such that the finished inside dimensions and grade of the riprap meet design specifications.

Sand and gravel filter blanket—Place the filter blanket immediately after the ground foundation is prepared. For gravel, spread filter stone in a uniform layer to the specified depth. Where more than one layer of filter material is used, spread the layers with minimal mixing.

Geotextile—Place and secure the geotextile directly on the prepared soil foundation in accordance with the manufacturer's installation guidelines. Typically, overlap the edges by at least 12 inches, and space anchors every 3 ft along the overlap. Bury the upstream end of the geotextile a minimum of 12 inches below ground and where necessary, bury the lower end of the geotextile or overlap with the next section as required. See Figure 6.14a, Page 6.14.6.

Take care not to damage the geotextile when placing riprap. If damage occurs remove the riprap and repair the sheet by adding another layer of geotextile with a minimum overlap of 12 inches around the damaged area. If extensive damage is suspected, remove and replace the entire section.

Where large stones are used or machine placement is difficult, a 4-inch layer of fine gravel or sand may be needed to protect the geotextile.

Stone placement—Placement of riprap should follow immediately after placement of the filter. Place riprap so that it forms a dense, well-graded mass of stone with a minimum of voids. The desired distribution of stones throughout the mass may be obtained by selective loading at the quarry, and controlled dumping during final placement. Place riprap to its full thickness in one operation. Do not place riprap by dumping through chutes or other methods that cause segregation of stone sizes. Take care not to dislodge the underlying base or filter when placing the stones.

The toe of the riprap slope should be keyed to a stable foundation at its base as shown in Figure 6.15b. The toe should be excavated to a depth about 1.5 times the design thickness of the riprap and should extend horizontally from the slope.

The finished slope should be free of pockets of small stone or clusters of large stones. Hand placing may be necessary to achieve the proper distribution of stone sizes to produce a relatively smooth, uniform surface. Excavate embankment or channel to accommodate the depth of stone such that the riprap is uniform and level with the finished grade.

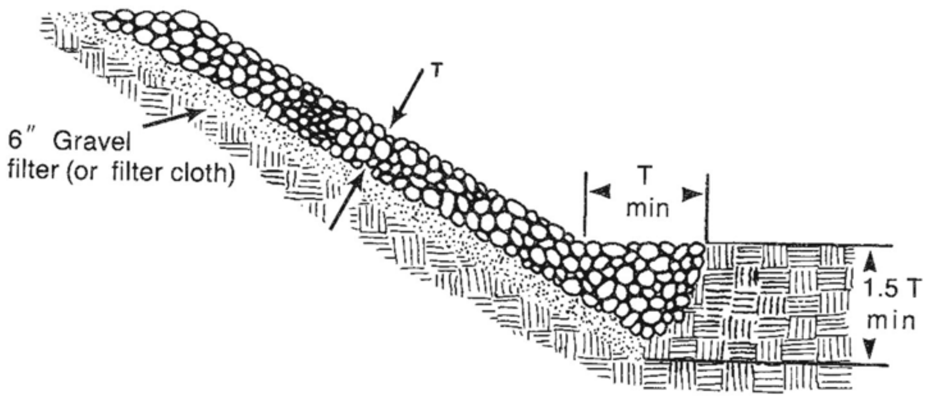


Figure 6.15b *Riprap slope protection (modified from VDH&T)*

Maintenance

In general, once a riprap installation has been properly designed and installed it requires very little maintenance. Riprap should be inspected periodically for scour or dislodged stones. Control of weed and brush growth may be needed in some locations.

References

Runoff Conveyance Measures
6.31, Riprap-lined and Paved Channels

Outlet Protection
6.41, Outlet Stabilization Structure

Appendices
8.05, Design of Stable Channels and Diversions
8.06, Design of Riprap Outlet Protection

6.65 Porous Baffles

Definition

Porous barrier constructed of coir fiber material or equal installed within a temporary sediment trap, skimmer basin, or sediment basin to distribute flow of construction runoff across the full cross section so the velocity and energy of construction runoff can be dissipated to enhance the settling of sediment prior to discharge.

Purpose

Sediment traps and basins are designed to temporarily impound construction stormwater runoff and allow sediment to settle before the stormwater is discharged. Unfortunately, they are not very efficient due to high turbulence and “short-circuiting” flows which allows stormwater to flow to the outlet with little interaction or obstruction. Porous baffles improve the rate of sediment retention within the basin or trap by distributing the flow and reducing energy.

Conditions Where Practice Applies

The practice of using porous baffles should be used in any temporary sediment trap, skimmer basin, or temporary sediment basin.

Planning Considerations

Porous baffles effectively spread the flow across the entire width of a sediment basin or trap. Water flows through the porous baffle material, but energy is dissipated sufficiently to reduce velocity, as it spreads across the entire width of the basin. (Figure 6.65a). This reduction in energy allows for an increase in sediment deposition and retention.

The baffle material should be 700 g/m^2 coir erosion mat (Figure 6.65d) or a material with similar porosity. Attaching the material to a 9-gauge high tension wire connecting the steel support posts prevents sagging of the material.

Porous Baffles need to be installed correctly to ensure reduction in stormwater energy flowing through the basin. Refer to Figure 6.65b and the following key points:

- The Porous Baffle material does not require trenching or burying but does need to be secured at the bottom and sides using wire staples.
- Most of the sediment will accumulate in the first bay, so this should be readily accessible for maintenance.

- The ends of the Porous Baffle should extend to the basin interior side slopes in a level or slightly elevated manner to avoid allowing pooled or impounded water to flow around.

Design Criteria

The *Temporary Sediment Trap* or *Temporary Sediment Basin* should be sized using the appropriate design criteria. Three Porous Baffles should be placed in Sediment Basins or Skimmer Basins that are 20 feet or greater in length. Basins less than 20 feet in length should utilize two Porous Baffles.

When three Porous Baffles are utilized, the percent of surface area for each section of the baffles is as follows:

- Inlet Zone: ¼ length of basin or trap
- First Cell: ¼ length of basin or trap
- Second Cell: ¼ length of basin or trap
- Outlet Zone: ¼ length of basin or trap

Construct Porous Baffles up the sides of the trap or basin interior side slopes so water does not flow around the baffle. Most of the sediment will be captured in the first section. Smaller particle size sediment are often captured in the latter sections. Be sure to maintain access to the trap or basin for maintenance and sediment removal. The orientation of the Porous Baffles can be adjusted to meet the shape of the basin or trap. The intent is for construction stormwater runoff to enter the basin or trap as far away from the spillway or weir section as possible and flow through three porous baffles prior to discharge through the spillway or skimmer apparatus (unless basin length is 20 feet or less). Placing porous baffles in a chevron or arc pattern is allowable as long as proper spacing between each baffle is maintained. The top of the baffles should be higher than the outlet to ensure that flow passes through the baffles as intended.

The design life of porous baffle material is typically 6-12 months but may be limited if material becomes damaged or clogged.

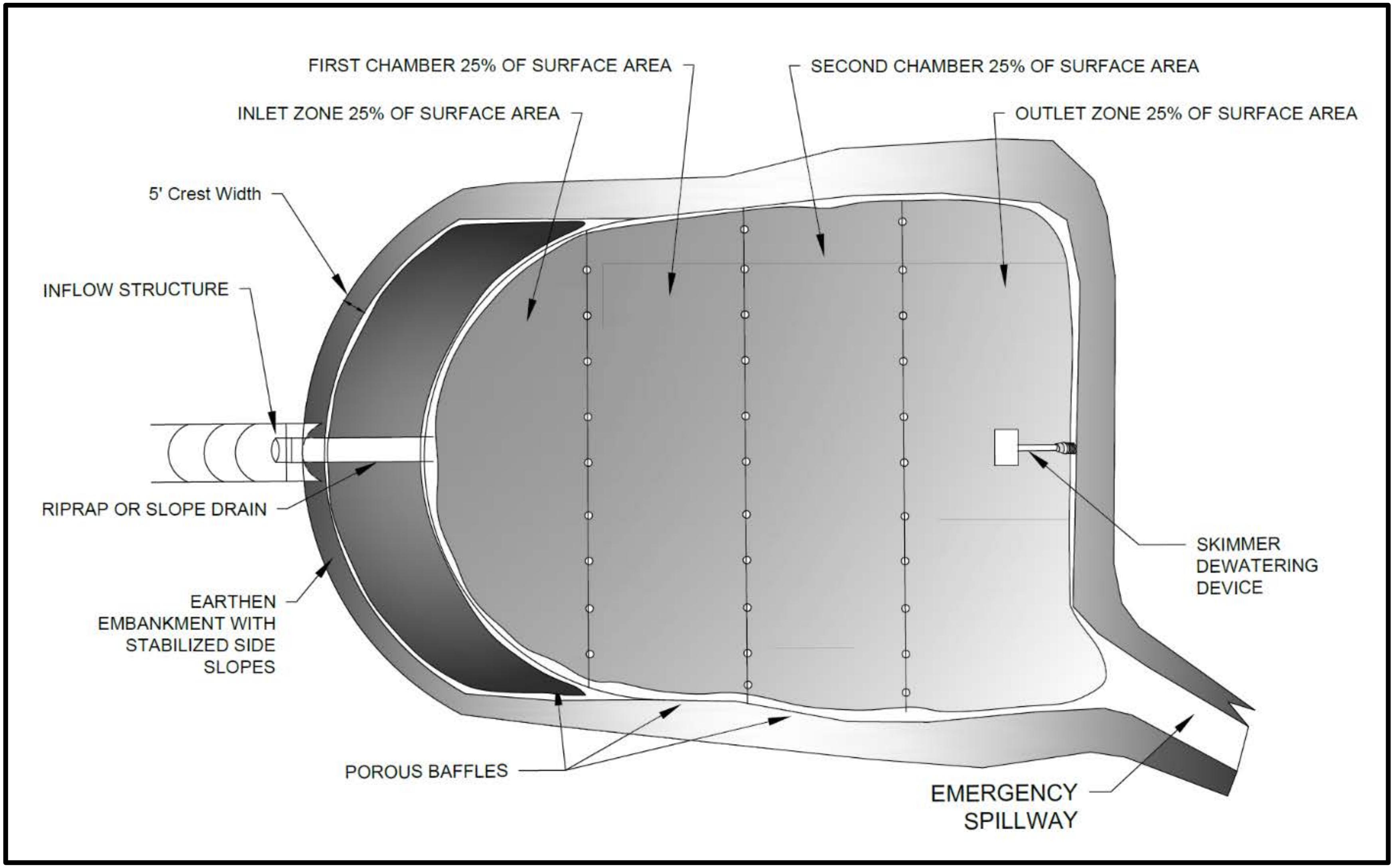
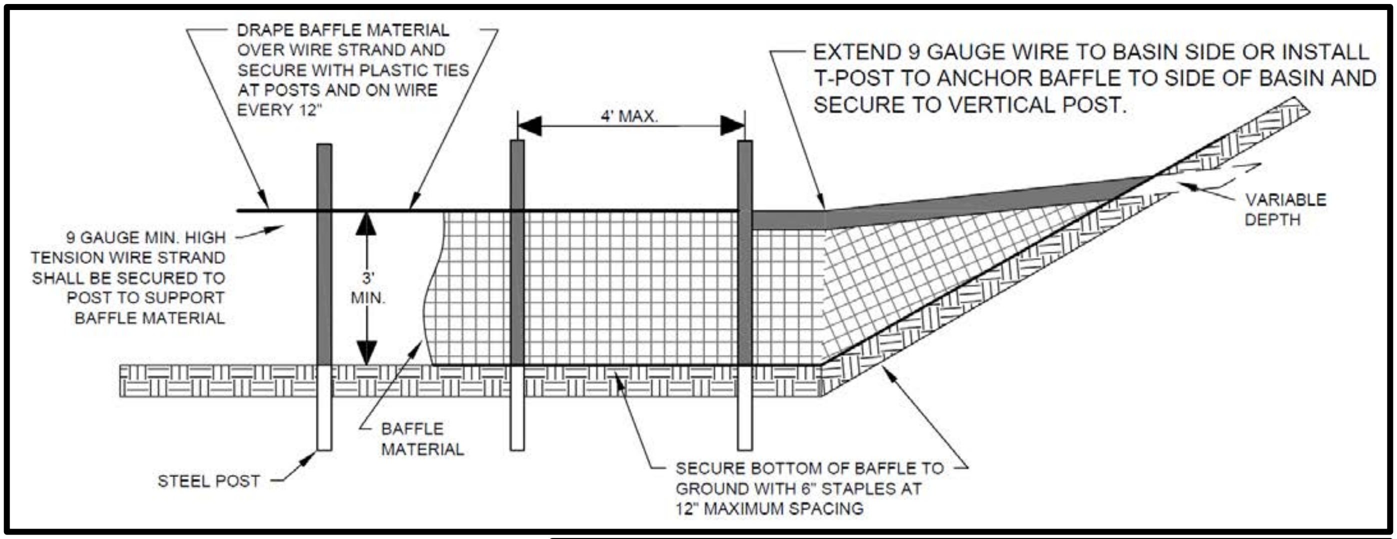


Figure 6.65a, *Porous baffles in a sediment basin. The flow is distributed evenly across the basin to reduce flow rates and energy, resulting in greater sediment retention*



*If the temporary sediment basin will be converted to a permanent stormwater basin of greater depth, the baffle heigh should be based on the pool depth during use as a temporary sediment basin.

Note: Install all three (3) coir fiber baffles in basins at drainage outlets with a spacing of 1/4 the basin length. Two (2) coir fiber baffles can be installed in the basins less than 20 ft. in length with a spacing of 1/3 the basin length.

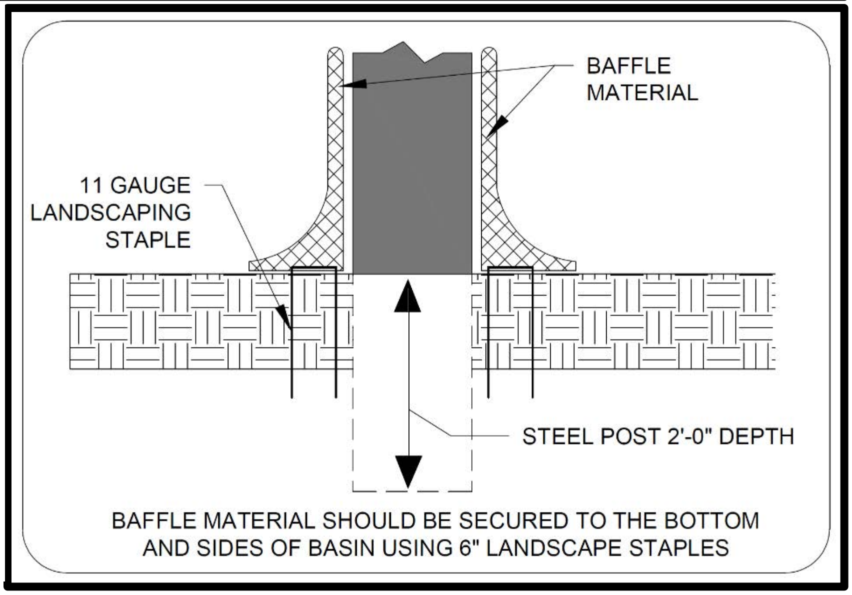


Figure 6.65b, *Porous Baffle detail and cross section of a porous baffle in a sediment basin*

Figure 6.65c, *Example of porous baffles installed in skimmer basins*

Figure 6.65d, *Close-up of a porous baffle made of 700 g/m² coir erosion blanket*

Coir Fiber Baffle Material Property Requirements

Property	Specification
Thickness	0.30 in. minimum
Tensile Strength (Wet)	900 x 680 lb/ft minimum
Elongation (Wet)	69% x 34% maximum
Flow Velocity	10-12 ft/sec
Weight	20 oz/SY (680 g/m^2) minimum
Minimum Width	6.5 feet
Open Area	50% maximum

Table 6.65a, *Specifications for Porous Baffle Material*

Construction Specifications

Materials

1. Use matting made of 100% coconut fiber (coir) twine woven into high strength matrix with the properties shown in Table 6.65a.
2. Staples should be made of 0.125 inch diameter new steel wire formed into a ‘U’ shape not less than 6 inches in length with a throat of 1 inch in width. The staples anchor the porous baffles into the sides and bottom of the trap or basin.
3. Ensure that steel posts for porous baffles are of a sufficient height to support baffles at desired height. Posts should be approximately 1-3/8” wide measured parallel to the fence, and have a minimum weight of 1.25

lb./linear ft. The posts must be equipped with an anchor plate having a minimum area of 14.0 square inches and be of the self-fastener angle steel type to have a means of retaining wire and porous baffle material in the desired position without displacement.

4. Use 9-gauge high tension wire for supporting porous baffle material.
5. Alternative porous baffle material may be allowed if circumstances dictate. The Designer will be required to provide supporting specifications for approval prior to installation.

Construction

1. Install the basin or trap so the bottom is level front to back and side to side.
2. Install the porous baffle immediately upon excavation of the basin or trap.
3. Install steel posts to a depth of 24 inches and spaced a maximum of 4 feet apart.
4. Install three rows of porous baffles between the inlet and outlet discharge point. Basins less than 20 feet in length may use 2 porous baffles.
5. Attach a 9-gauge high tension wire strand to the steel posts at a maximum height of 6 inches above the basin spillway elevation and a minimum of 2 inches below the surrounding embankment with plastic ties or wire fasteners to prevent sagging. If the temporary sediment basin or trap will be converted to a permanent stormwater basin of a greater depth, the baffle height should be based on the pool depth during use as a temporary sediment basin or trap.
6. Extend porous baffle to the side of the basin using steel T-posts or similar to anchor baffle to the side slope of the basin or trap and secure as shown in Figure 6.65b.
7. Drape the porous baffle material over the wire strand and anchor the material to the sides and floor of the basin or trap with 6-inch wire staples, approximately 1 foot apart, along the bottom and side slopes.
8. Do not splice the porous baffle material but use a continuous piece across the basin.
9. Adjustments may be required in the stapling requirements to fit individual site conditions.

Maintenance

Inspect porous baffles at least once a week and after each rainfall. Make any required repairs immediately as efficiency of basin or trap is reduced if porous baffles are not functioning as intended.

Be sure to maintain access to the porous baffles. Should the porous baffle material collapse, tear, decompose, or become ineffective, replace it promptly.

Remove sediment deposits when it reaches half full, to provide adequate storage volume for the next rain and to reduce pressure on the porous baffles.

Take care to avoid damaging the porous baffles during cleanout and replace if damaged during cleanout operations. Sediment depth should never exceed half the designed storage depth. Utilizing an indicator stake within the basin or trap is a good aid in determining when a basin or trap is half full.

After the contributing drainage area has been properly stabilized, remove all porous baffle materials and sediment deposits, bring the area to grade, and stabilize it.

References

Sediment Traps and Barriers
6.60, Temporary Sediment Trap
6.61, Sediment Basins
6.62, Sediment Fence
6.64, Skimmer Sediment Basin

McLaughlin, Richard, "Soil Facts: Baffles to Improve Sediment Basins."
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Hydrodynamic assessment of various types of baffles in a sediment detention pond. Transactions of the ASAE. Vol. 47(3): 741-749, 2004.