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## **APPENDIX C – DURING CONSTRUCTION BMP TABLES**

**Table C.1 Erosion Prevention BMPs**

**Table C.2 Sediment Control BMPs**

**Table C.3 Stormwater Runoff and Ground Control Measures**

**TABLE C.1: EROSION PREVENTION BMPs**

BMP	General Description	Appropriate Application	General Design, Site, and Additional Considerations	Detail Drawing	SCDOT Specification
Temporary Cover by Seeding	Temporary cover by seeding reduces erosion and sedimentation by stabilizing disturbed areas that would otherwise lay bare for long periods of time before they are worked or stabilized. Temporary cover by seeding is also used where permanent vegetation growth is not necessary or appropriate. Temporary cover by seeding reduces erosion until permanent vegetation or additional erosion control measures can be established.	<p>Temporary cover by seeding can be used on exposed soil surfaces such as denuded areas, soil stockpiles, dikes, dams, banks of sediment basins, banks of sediment dams, and temporary road banks.</p> <p>Where land disturbing activities have temporarily or permanently ceased on the Project and will not resume for a period exceeding 14 calendar days, appropriate soil stabilization measures on all disturbed areas must be initiated within 7 calendar days. If the Project will not be worked for a period longer than 60 days, then stabilization by seeding is required.</p>	Finish grading before preparing seedbeds and construct or install required erosion control practices such as dikes, channels, and detention basins. Reduce steep slopes, which make seedbed preparation difficult and increase the potential for erosion. Temporary cover by seeding has the potential to prevent or limit costly maintenance operations on other sediment control structures. Sediment clean-out requirements for sediment basins, sediment dams, and silt fence can be reduced if the drainage area is seeded where grading and construction operations are not taking place.	No	<i>Supplemental Technical Specification for Seeding (SC-M-810-2)</i> , or latest revision.
Temporary Cover by Mulch	Temporary cover by mulching is an erosion control method where materials such as wood chips, wood fibers, HECs, compost or straw are placed on exposed or recently planted soil surfaces. In addition to stabilizing soils, mulching can enhance the absorption of water by the soil, reduce evaporation losses, regulate soil temperatures and reduce the speed of stormwater runoff over an area. Mulch is an effective ground cover when the establishment of vegetation is improbable due to severe weather conditions (winter conditions), poor soil, or steep slopes.	<p>Where land disturbing activities have temporarily ceased on the Project and will not resume for a period exceeding 14 calendar days, appropriate soil stabilization measures on all disturbed areas must be initiated within 7 calendar days. For areas where the initiation of stabilization measures is infeasible (e.g., where snow cover, frozen ground, or drought conditions preclude stabilization), stabilization measures will be initiated as soon as practicable.</p> <p>Mulch is required for all seeding applications except for permanent seeding for shoulder work and resurfacing projects that have a disturbed width of less than six (6) feet. Mulching may also be used for temporary stabilization applications.</p>	<p>Acceptable materials and quantities for use as mulch are specified in the</p> <p><i>Supplemental Technical Specification for Seeding (SC-M-810-2)</i>, or latest revision</p> <p><i>Supplemental Technical Specification for Hydraulic Erosion Control Products (HECPs) (SC-M-815-11)</i>, or latest revision.</p> <p><i>Supplemental Technical Specification for Compost (SC-M-815-3)</i>, or latest revision</p>	No	<i>Supplemental Technical Specification for Seeding (SC-M-810-2)</i> , or latest revision.

BMP	General Description	Appropriate Application	General Design, Site, and Additional Considerations	Detail Drawing	SCDOT Specification												
Final Stabilization	Final stabilization is an erosion control method where permanent seeding and planting of grasses, permanent planting of ground cover plants, and sodding are used.	<p>Final stabilization should occur once final grading is complete.</p> <p>Where land disturbing activities have permanently ceased, initiate appropriate soil stabilization measures on all disturbed areas within 7 calendar days. For areas where the initiation of stabilization measures is infeasible (e.g., where snow cover, frozen ground, or drought conditions preclude stabilization), stabilization measures will be initiated as soon as practicable.</p> <p>“Final Stabilization” means that all soil-disturbing activities at the Project have been completed and either of the two following criteria is met:</p> <ol style="list-style-type: none"> <li>1. A uniform (e.g., evenly distributed, without large bare areas) vegetative cover with a density of 70 percent of the vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures; or</li> <li>2. Equivalent permanent stabilization measures (such as the use of riprap, pavement, and gravel) have been employed.</li> </ol>	<p>Permanent Seeding and Planting of Grasses - Acceptable materials, quantities, and planting rates for use in permanent seeding and planting of grasses on SCDOT disturbed areas are specified in the <i>Supplemental Technical Specification for Seeding</i>, (SC-M-810-2), or latest revision.</p> <ul style="list-style-type: none"> <li>• Planting of Ground Cover Plants - Acceptable materials, quantities, and planting rates for use in planting of ground cover plants are specified in <i>Section 811 for Furnish and Plant Trees, Shrubs, Vines and Ground Cover in the SCDOT Specifications for Highway Construction, 2007 Edition</i>, or latest revision.</li> <li>• Sodding - Acceptable materials and quantities for use in sodding are specified in <i>Section 813 for Sodding in SCDOT's Specifications for Highway Construction, 2007 Edition</i>, or latest revision.</li> </ul>	No	<p><i>Supplemental Technical Specification for Seeding (SC-M-810-2)</i>, or latest revision.</p> <p><i>Section 811 for Furnish and Plant Trees, Shrubs, Vines and Ground Cover in the SCDOT Specifications for Highway Construction, 2007 Edition</i>, or latest revision;</p> <p><i>Section 813 for Sodding in the SCDOT Specifications for Highway Construction, 2007 Edition</i>, or latest revision</p>												
Hydraulic Erosion Control Products (HECPs)	<p>Use Hydraulic Erosion Control Product (HECPs) as an allowable mulch for temporary cover by mulch, temporary cover by seeding or permanent cover by seeding applications as outlined in SCDOT Supplemental Specification for Seeding SCDOT (SC-M-810-2) or latest revision.</p> <p>Provide HECPs listed on the most recent edition of the SCDOT Qualified Product List 65.</p>	<p>Do not use HECPs as a channel liner or for areas receiving concentrated flow.</p> <p>Apply HECP Type 1, 2, 3, and 4 at the appropriate rate on the appropriate maximum slope gradient.</p> <table border="0"> <tr> <td>Type 1</td> <td>Slope ≤ 4H:1V</td> <td>@ 2,000 lbs/acre</td> </tr> <tr> <td>Type 2</td> <td>4:1 &lt; Slope ≤ 3:1</td> <td>@ 2,500 lbs/acre</td> </tr> <tr> <td>Type 3</td> <td>3:1 &lt; Slope ≤ 2:1</td> <td>@ 3,000 lbs/acre</td> </tr> <tr> <td>Type 4</td> <td>2:1 &lt; Slope ≤ 1:1</td> <td>@ 3,500 lbs/acre</td> </tr> </table>	Type 1	Slope ≤ 4H:1V	@ 2,000 lbs/acre	Type 2	4:1 < Slope ≤ 3:1	@ 2,500 lbs/acre	Type 3	3:1 < Slope ≤ 2:1	@ 3,000 lbs/acre	Type 4	2:1 < Slope ≤ 1:1	@ 3,500 lbs/acre	<p>Use HECP where all components are pre-packaged by the manufacturer to assure material performance. Under no circumstances will field mixing of HECP additives or HECP components be accepted.</p> <p>The maximum allowable continuous slope length for HECP applications is 50 feet. Provide slope interruption devices for continuous slope length longer than 50 feet. Refer to SCDOT Supplemental Specification for Inlet Structure Filters Type F – Non Weighted (SC-M-815-8) or latest revision for slope interruption device description, materials, and construction requirements.</p>	No	<p><i>Supplemental Technical Specification for HECPs (SC-M-815-11)</i>, or latest revision.</p>
Type 1	Slope ≤ 4H:1V	@ 2,000 lbs/acre															
Type 2	4:1 < Slope ≤ 3:1	@ 2,500 lbs/acre															
Type 3	3:1 < Slope ≤ 2:1	@ 3,000 lbs/acre															
Type 4	2:1 < Slope ≤ 1:1	@ 3,500 lbs/acre															

BMP	General Description	Appropriate Application	General Design, Site, and Additional Considerations	Detail Drawing	SCDOT Specification
<p>Rolled Erosion Control Products (RECPs)</p>	<p>Erosion Control Blankets (ECBs) are applicable for temporary soil stabilization immediately following seeding. ECBs provide temporary protection as they degrade over time and are effective for a few months up to a few years.</p> <p>Turf Reinforcement Mats (TRMs) are permanent non-degradable products that enhance the ability of grass to stabilize soils by binding with roots to reinforce the soil matrix. TRMs are used in situations where vegetation alone will not hold a slope or stream bank.</p>	<p>Install temporary erosion control blankets on slopes <b>2.0H:1V</b> or flatter only. For slopes greater than <b>2.0H:1V</b>, use turf reinforcement matting (TRM).</p> <p>Install temporary erosion control blankets in channels or concentrated flow areas with a maximum calculated design shear stress less than or equal to <b>1.75 lb/ft<sup>2</sup></b>.</p> <p>For channels and concentrated flow areas with design shear stresses greater than <b>1.75 lb/ft<sup>2</sup></b>, use turf reinforcement matting (TRM).</p>	<p>All fabrics used for erosion prevention and sediment control on SCDOT construction projects are designated as Rolled Erosion Control Products (RECP). These RECPs are classified into two categories:</p> <ul style="list-style-type: none"> <li>• Temporary ECBs, and</li> <li>• Permanent TRMs.</li> </ul> <p>ECBs and TRMs are preferred alternatives to traditional hard channel protection such as concrete, riprap, gabions, and revetment mattresses. These products improve the quality of stormwater discharges by creating a stronger, vegetated armor that withstand the forces from the flow and provides wildlife habitat.</p>	<p>No</p>	<p><i>Supplemental Technical Specification for RECPs (SC-M-815-9), or latest revision.</i></p>
<p>Riprap for Channel Stabilization</p>	<p>Riprap is a permanent, erosion-resistant channel lining aggregate consisting of large, loose, angular stone with a filter fabric or granular underlining. The purpose of riprap is to protect the soil from the erosive force of concentrated runoff and to slow runoff velocities while enhancing the potential for infiltration.</p> <p>The purpose of the filter fabric or granular underlining is to prevent undermining of the riprap layer by the migration of soil particles under seepage forces through the riprap.</p>	<p>The preferred method of slope and channel protection is the use of vegetation. If vegetation cannot withstand the design flows, RECPs are the preferred and suggested method of protection.</p> <p>When conditions are too severe for vegetation and RECPs, riprap may be used for erosion control and protection. Riprap may be used, as appropriate, at storm drain outlets, on channel banks (may require U.S. Army Corps of Engineers permitting), drop structures, at the toe of slopes, and in transitions from concrete channels to vegetated channels.</p>	<p>Acceptable materials and quantities when using rip-rap or aggregate for channel stabilization are specified in <i>Section 804 for Riprap and Slope Protection in the SCDOT Specifications for Highway Construction, 2007 Edition</i>, or latest revision.</p> <p>Design criteria, calculation procedures, and example design calculations for sizing the stone and determining the dimensions of riprap pads used for channels stabilization are provided in Appendix B.</p>	<p>No</p>	<p><i>Section 804 for Riprap and Slope Protection in the SCDOT Specifications for Highway Construction, 2007 Edition, or latest revision.</i></p>

BMP	General Description	Appropriate Application	General Design, Site, and Additional Considerations	Detail Drawing	SCDOT Specification
Compost	Compost is the product resulting from the controlled biological decomposition of organic material occurring under aerobic conditions that has been sanitized through the generation of heat and stabilized to the point that it is appropriate for its particular application.	<p>Compost can be used as an infill for sediment tubes and perimeter control.</p> <p>Use compost mulch on slopes up to a 2H:1V grade and a maximum continuous slope length of 50 feet. Use compost on areas that only have sheet flow drainage patterns. Do not use compost as mulch on areas that receive concentrated flows. Apply compost mulch at a rate of 200 CY/acre.</p> <p>Use compost as a soil amendment on slopes up to a 2H:1V grade. Use compost on areas that only have sheet flow drainage patterns. Do not use compost on areas that receive concentrated flows.</p>	Provide compost only from a compost producer that participates in the United States Composting Council's (USCC) Seal of Testing Assurance (STA) program. The Department will accept only STA approved compost.	No	Supplemental Technical Specification for Compost (SC-M-815-3), or latest revision.
Outlet Protection	<p>Outlet protection dissipates the energy of concentrated storm water flows thereby reducing erosion or scouring at storm water outlets and paved channel sections. In addition, outlet protection lowers the potential for downstream erosion.</p> <p>This type of protection can be achieved through a variety of techniques, including permanent TRMs, riprap, concrete aprons, paved sections and other structural measures. However, SCDOT most typically uses riprap for outlet protection.</p>	Outlet protection should be placed at the outlets of all pipes, channels, and other stormwater conveyance structures in order to reduce the potential of erosion.	Design criteria, calculation procedures and example design calculations for sizing riprap and determining the dimensions of riprap pads used at the outlet of drainage structures are provided in Appendix B.	<p>SCDOT Standard Drawing 804-205-00 Riprap Box Culvert, or latest revision.</p> <p>SCDOT Standard Drawings 804-305-01 and 804-305-02 Riprap Pipe or latest revision.</p> <p>SCDOT Standard Drawing 804-310-00 Riprap Pipe &amp; Ditch Lining, or latest revision.</p>	No

**TABLE C.2: SEDIMENT CONTROL BMPs**

BMP	General Description	Appropriate Application	General Design, Site, and Additional Considerations	Detail Drawing	SCDOT Specification
Temporary Sediment Basin (Surface Outlet and Baffle Sediment Basin)	<p>A sediment basin is a structure designed to capture sediment from stormwater runoff before it leaves a construction site.</p> <p>Surface Outlet and Baffle Sediment Basins do not use perforated risers. These basins require dewatering from the water surface where the density of total suspended solids is at a minimum in the water column. They also include baffles across the width of the basin to spread flow across the entire width of the basin, reducing the potential for turbid flow and short circuiting.</p> <p>Temporary sediment basins shall be designed to have an 80% design removal efficiency goal of the TSS in the inflow.</p>	<p>Temporary sediment basins shall be used on sites where 10 or more acres are disturbed and drain to a single point.</p> <p>A temporary sediment basin shall not be built in wetlands, any active or live streams, or in waters of the state (defined to be all annual or perennial water bodies designated by a solid or dashed blue-line on USGS 7.5-minute quadrangle maps).</p> <p>Temporary sediment basins shall be utilized until the contributing flow areas to the basin have undergone final stabilization.</p>	<p>Design requirements and standards for Surface Outlet and Baffle Sediment Basins are provided in Appendix A.</p>	<p><i>SCDOT Standard Drawings 815-305-01 through 815-305-07 Sediment Control Structures and Basin, or latest revision.</i></p>	<p>No</p>
Multi-Purpose Basin	<p>Multipurpose basins are permanent detention basins that are designed for use as temporary sediment basins during the construction phase of a project and for post construction water quality or quantity control.</p>		<p>Design requirements and standards for multi-purpose basins are presented in Appendix A and Appendix E (dry and wet detention ponds).</p>	<p><i>SCDOT Standard Drawings 815-305-01 through 815-305-07 Sediment Control Structures and Basin, or latest revision.</i></p>	<p>No</p>
Temporary Sediment Dam	<p>The main components of a sediment dam are the riprap rock dam, rock spillway, Aggregate No. 5 filter stone, sediment storage volume and runoff storage volume. Sediment dams are typically located inside the right-of-way in a cut ditch or along the toe-of-fill. Temporary sediment dams shall be designed to have an 80% design removal efficiency goal of the TSS in the inflow.</p>	<p>Temporary sediment dams should typically be used in a location with a drainage area of 5 acres or less (but can be used up to 10 acres) and where it will be used for two years or less.</p>	<p>Design criteria and design aids for sediment dams are included in Appendix B and Appendix I.</p>	<p><i>SCDOT Standard Drawing 815-405-01, 815-405-02 Sediment Dams, or latest revision.</i></p>	<p>No</p>

BMP	General Description	Appropriate Application	General Design, Site, and Additional Considerations	Detail Drawing	SCDOT Specification
Silt Fence	Silt fencing is used as a temporary sediment control measure around the perimeter of a site where there will be soil disturbance due to construction activities. A silt fence acts as a filter. Silt fence shall be designed to have an 80% design removal efficiency goal of the TSS in the inflow.	Its use is limited to areas of sheet flow and areas of concentrated flow. Primarily, silt fencing is used around the perimeter of a construction project where the run-off flow is in the form of sheet flow. It can also be used around roadway catch basins during construction.	Design criteria and design aids for silt fencing systems are included in Appendix B and Appendix I.	<i>SCDOT Standard Drawing 815-605-00 Temporary Erosion &amp; Sedimentation Control, or latest revision.</i>	<i>Supplemental Technical Specification for Silt Fence (SC-M-815-2), or latest revision.</i>
Rock Ditch Check	A rock ditch check is a small, temporary or permanent rock fill dam constructed across a drainage ditch, swale, or channel to lower the speed of concentrated flows.	On steep slopes, the recommended method of controlling erosion in a ditch before it is stabilized is to effectively flatten the slope of the water surface by the use of ditch checks or check dams. These are small riprap dams in the ditch, constructed so that the water will flow over the top during storm events. The ditch checks are placed in the ditch so that the downstream toe of one ditch check is level with the top of the next one downstream. This, in effect, flattens the flow line of the ditch.	Rock ditch checks should be used only in small open channels, steep sloped swales, or in swales where adequate vegetation cannot be established. The checks should not be placed in waters of the state or USGS blue-line streams (unless approved by local, State, or Federal authorities). Rock ditch checks shall be designed to have an 80% design removal efficiency goal of the TSS in the inflow.  Design criteria and design aids for rock ditch checks are provided in and Appendix B and Appendix I.	<i>SCDOT Standard Drawing 815-105-00 Ditch Check, or latest revision.</i>	<i>No</i>
Sediment Tubes for Ditch Checks	Sediment tubes are elongated tubes of compacted geotextiles, curled excelsior wood, natural coconut fiber, or hardwood mulch. Acceptable sediment tube ditch checks shall be designed to have an 80% design removal efficiency goal of the TSS in the inflow.	Sediment tubes are temporary erosion control devices for use along contours, in drainage conveyance swales, and as Type A Inlet Filters to help reduce the effects of soil erosion and to retain sediment.	Performance criteria and construction and installation requirements for sediment tubes for ditch checks are specified in the <i>Supplemental Technical Specification for Sediment Tube for Ditch Checks (SC-M-815-12)</i> , or latest revision	<i>SCDOT Standard Drawing 815-205-00 Sediment Tube Ditch Application, or latest revision.</i>	<i>Supplemental Technical Specification for Sediment Tubes for Ditch Checks (SC-M-815-12), or latest revision.</i>

BMP	General Description	Appropriate Application	General Design, Site, and Additional Considerations	Detail Drawing	SCDOT Specification								
Stabilized Construction Entrance	A stabilized construction entrance is a temporary stone-stabilized pad with a non-woven geotextile fabric underlining. Ensure that the stabilized construction entrance is a minimum of 24 feet wide by 100 feet long and modify as necessary to accommodate site constraints.	Locate a stabilized construction entrance, at defined points of vehicular ingress and egress on construction sites to reduce the amount of mud, dirt, and rocks transported onto public roads by motor vehicles, equipment, and runoff. Taper the edges of the entrance out towards the road to prevent tracking of mud at the edge of the entrance, and so that long vehicles do not leave the stabilized area when turning onto or off of the paved roadway.	<p>Provide a Class 2 non-woven geotextile fabric that meets the requirements of Section 804.2.11.</p> <p>Aggregate stone with the gradation in the following table.</p> <table border="1" data-bbox="1205 516 1583 618"> <thead> <tr> <th>Nominal Size</th> <th>Percent Passing</th> </tr> </thead> <tbody> <tr> <td>3 in.</td> <td>100</td> </tr> <tr> <td>1-½ in.</td> <td>35 to 100</td> </tr> <tr> <td>¾ in.</td> <td>0 to 15</td> </tr> </tbody> </table> <p>If washing is used, make provisions to intercept the wash water and trap the sediment before it is carried offsite. Require washdown facilities as needed. In general, establish washdown facilities with crushed gravel and drain into a sediment trap or sediment basin.</p>	Nominal Size	Percent Passing	3 in.	100	1-½ in.	35 to 100	¾ in.	0 to 15	<p><i>SCDOT Standard Drawing 815-505-00 Stabilized Construction Entrance, or latest revision.</i></p>	<p><i>Supplemental Technical Specification for Stabilized Construction Entrance (SC-M-815-10), or latest revision.</i></p>
Nominal Size	Percent Passing												
3 in.	100												
1-½ in.	35 to 100												
¾ in.	0 to 15												

BMP	General Description	Appropriate Application	General Design, Site, and Additional Considerations	Detail Drawing	SCDOT Specification
Inlet Structure Filter	<p>Inlet structure filters are temporary filtering devices placed around pipe inlet structures to trap sediment and keep silt, sediment, and construction debris from entering pipe systems through open inlet structures. Additionally, inlet structure filters prevent the silting-in of inlets, storm drainage systems, and receiving channels. Locations for installation are designated on the Plans or by the RCE. Acceptable inlet structure filters are designed to have an 80% design removal efficiency goal of the TSS in the inflow.</p>	<p>Type A Low Flow Inlet Filters peak flow rates &lt; 1 ft<sup>3</sup>/sec</p> <p>Type B Medium Flow, Low Velocity Inlet Filters peak flow rates &lt; 3 ft<sup>3</sup>/sec</p> <p>Type D High Flow, High Velocity Inlet Filters drainage area &lt; 2 acres, peak flow may be &gt; 3 ft<sup>3</sup>/sec</p> <p>Type E- Surface Course Curb Inlet Filters Install after the road surface course is placed</p> <p>Type F -Inlet Tubes Can be weighted and non weighted drainage areas &lt; 1 acre</p> <p>Type G -Suspended Internal Inlet Filters drainage areas &lt; 1 acre and peak flow &lt; 3ft<sup>3</sup>/sec</p>	<p>Design criteria for inlet structure filters and acceptable materials and construction requirements are specified in the Supplemental Technical Specifications for Inlet Structure Filters (SC-M-815-8), or latest revision.</p>	<p><i>Type A Inlet Structure Filter (SCDOT Standard Drawing 815-001-01)</i></p> <p><i>Type B, Type D1, &amp; D2 Inlet Structure Filter (SCDOT Standard Drawing 815-002-00)</i></p> <p><i>Type E Inlet Structure Filter (SCDOT Standard Drawing 815-005-00); and</i></p> <p><i>Type F Inlet Structure Filter (SCDOT Standard Drawing 815-006-00)</i></p>	<p><i>Supplemental Technical Specification for Inlet Structure Filters (SC-M-815-8), or latest revision.</i></p>
Perimeter Control	<p>Perimeter Control is used as a temporary sediment control practice around the perimeter of sites where there will be soil disturbance due to construction activities. Perimeter Control consists of a barrier supported by posts.</p>	<p>Use Perimeter Control as a sediment control practice for sheet flow runoff conditions. Do not use Perimeter Control for areas receiving concentrated flow.</p>	<p>Use perimeter control with a Filtering Efficiency Performance of 80% TSS.</p>	<p>No</p>	<p><i>Supplemental Technical Specification (SC-M-815-17), or latest revision.</i></p>

BMP	General Description	Appropriate Application	General Design, Site, and Additional Considerations	Detail Drawing	SCDOT Specification
Construction De-watering	<p>Construction de-watering involves removing stormwater or groundwater from bore pits, trenches, and other excavations on a construction site.</p> <p>Sediment-laden water from de-watering bore pits and trenches shall be routed to a sediment control structure that provides 80% TSS removal.</p>	<p>Usually, this removal of water involves the pumping of the sediment laden water to an appropriate receiving area such as a sediment basin, temporary sediment dam, a manufactured de-watering bag, geotextile filter bag, or a vegetated buffer area. Direct pumping to lakes, rivers, streams, and drainage structures is illegal and must be avoided.</p> <p>Special care should be taken to ensure that the pumping of this water does not cause the sediment control structure to fail. In addition, care should be taken at the outlet of the hose from the pump to ensure that erosion does not occur due to concentrated flows.</p>	<p>Use the following steps to select an appropriately sized Dewatering Bag. Consult with the RCE to select Dewatering Bag size if insufficient information is known about the site conditions.</p> <ol style="list-style-type: none"> <li>1. Determine the peak flow rate generated from the dewatering pump in gallons per minute.</li> <li>2. Determine the peak flow rate through the Dewatering Bag in gallons per minute based on the Dewatering Bag peak flow rate and the total surface area provided by the manufacturer.</li> <li>3. Select a Dewatering Bag that passes a minimum of two times the peak flow rate generated from the dewatering pump as determined in Step 1 to account for a 50% clogging factor.</li> </ol>	No	<p><i>Supplemental Technical Specification (SC-M-815-15), or latest revision.</i></p>
Temporary Sediment Dam for Pipe Inlet	<p>The main components of a sediment dam for pipe inlets are the Class B riprap rock dam, rock spillway, Aggregate No. 5 filter stone, and Class 2 non-woven geotextile.</p>	<p>Sediment dams for pipe inlets are temporary BMPs used to remove sediment from construction runoff where the total drainage area is less than or equal to 2 acres and drains directly to a pipe inlet. Sediment dams for pipe inlets are typically located inside the right-of-way.</p>	<p>Are applicable for pipe sizes ranging from 18 inches to 48 inches.</p> <p>Design criteria and design aids for sediment dams are included in Appendix B and Appendix I.</p>	<p><i>SCDOT Standard Drawing 815-406-00 Sediment Dam for Pipe Inlet, or latest revision.</i></p>	No

**TABLE C.3: STORMWATER RUNOFF AND GROUND CONTROL MEASURES**

BMP	General Description	Appropriate Application	General Design, Site, and Additional Considerations	Detail Drawing	SCDOT Specification
Pipe Slope Drains	Pipe slope drains reduce the risk of erosion by discharging concentrated runoff from the top to the bottom of slopes. Pipe slope drains can be temporary or permanent depending on installation and material used.	Pipe slope drains are used when it is necessary for water to flow down a slope without causing erosion, especially before a slope has been stabilized or before permanent drainage structures are installed. Temporary pipe slope drains, usually flexible tubing or conduit, may be installed prior to construction of permanent drainage structures.	Pipe slope drains should only be used for small drainage areas. If the structure is designed to be permanent, bury pipe drains and fully compact soil around the pipe to prevent bypassing and undercutting of the structure. Stabilize inlets and outlets to the pipe drain with appropriate erosion control methods. Design criteria for pipe slope drains are provided in Appendix B. Acceptable materials and construction requirements are specified in <i>Section 803 Pipe Slope Drains of the SCDOT Specifications for Highway Construction, 2007 Edition</i> , or latest revision.	No	<i>Section 803 Pipe Slope Drains in the SCDOT Specifications for Highway Construction, 2007 Edition</i> , or latest revision.

BMP	General Description	Appropriate Application	General Design, Site, and Additional Considerations	Detail Drawing	SCDOT Specification
Runoff Diversion Measures	<p>Diversion dikes and berms (ridges of compacted soil) and diversion swales (excavated depressions) are used to divert upslope runoff from crossing areas where there is a high risk of erosion or down slope of disturbed or high risk areas to prevent sediment laden runoff from leaving the site before sediment is properly removed by a sediment control BMP.</p>	<p>Runoff diversion measures are used in areas of overland flow. Diversion measures are generally built around the perimeter of a construction site and should be constructed and fully stabilized using vegetation, sod, and ECBs or TRMs before any major land disturbing activity takes place. Runoff diversion structures may be used as temporary or permanent clean stormwater control structures or temporary sediment laden stormwater control structures.</p>	<p>When constructed along the upslope perimeter of a disturbed or high-risk area (though not necessarily all the way around it), clean water diversions prevent clear water runoff from flowing over unprotected down slope areas. Clean water may be routed directly to a stabilized outlet for release or to a level spreader for discharge over a vegetated buffer zone.</p> <p>For short slopes, runoff control measures at the top of the slope reduce the amount of runoff reaching the disturbed area. For longer slopes, several dikes or swales are placed across the slope at intervals. This practice reduces the amount of runoff that accumulates on the face of the slope and carries the runoff safely down the slope. In either case, runoff collected from the slope is guided to sediment trapping area before release through a stabilized outlet.</p> <p>Runoff channeled by diversion dikes or swales should be directed to an adequate sediment trapping structure or stabilized outfall. Care should be taken to provide enough channel slope for drainage but not too much slope to cause erosion due to high runoff flow velocities. Temporary runoff control measures may remain in place as long as 12 to 18 months (with proper stabilization). Diversion dikes or swales should remain in place until the area they were built to protect is permanently stabilized.</p> <p>Permanent controls should be designed to handle runoff after construction is complete, should be permanently stabilized, and should be inspected and maintained on a regular basis.</p> <p>Design criteria for runoff diversion measures are provided in Appendix B.</p>	<p><i>SCDOT Standard Drawing 815-605-00 Temporary Erosion &amp; Sedimentation Control, or latest revision.</i></p>	<p><i>No</i></p>

BMP	General Description	Appropriate Application	General Design, Site, and Additional Considerations	Detail Drawing	SCDOT Specification
Level Spreader for Pipe Outlets	A level spreader is a permanent outlet for dikes and diversions consisting of an excavated channel constructed at zero grade across a slope that converts concentrated runoff to sheet flow and releases it onto areas stabilized by existing vegetation. Sediment-laden waters should not be directed towards level spreaders.	Level spreaders should be constructed on undisturbed areas that are stabilized by existing vegetation and where concentrated flows are anticipated to occur. If properly constructed, the level spreader will significantly reduce the velocity of concentrated stormwater and spread it uniformly over a stable undisturbed area.	Construction of the lower lip of the level spreader should be completed with caution to ensure the structure is level. Depressions or sinks in the lip of the spreader will result in concentrated flow which increases the potential for erosion. Design criteria for level spreaders are provided in Appendix B.	No	<i>No</i>