

South Carolina Department of Transportation

Engineering Directive

Directive Number: ED-23 **Effective:** April 10, 2015

Subject: Standards for Stormwater Management and Sediment Reduction

References: S.C. Code of Laws, Sections 48-18-10, *et seq.*
S.C. Code of Regulations, Regulations 72-400, *et seq.*

Purpose: Ensure Compliance with Stormwater Regulations

This Directive Applies to: Preconstruction, Construction and Maintenance

The following procedures should be followed in order to ensure compliance with S.C. Code of Regulations, Regulation 72-400:

1. All land-disturbing activities under the jurisdiction of the South Carolina Department of Transportation, herein after called the Department, must be performed in such a manner that erosion is controlled and sediment is retained to the maximum extent feasible on the site concerned, and stormwater is managed in such a manner that no significant offsite damage and/or problem is caused or increased.
2. All construction plans prepared by or for the Department must include plans to manage stormwater runoff and control erosion and sedimentation using state-of-the-art practices. All plans must be sealed by a qualified design professional and prepared in accordance with all regulations, standards, and specifications. All plans must include details and descriptions of temporary and permanent erosion and sediment control measures and other protective measures shown on the Stormwater Pollution Prevention Plan (SWPPP).
3. After the contract has been awarded and prior to the start of construction, the contractor must submit in writing to the Director of Construction Office or district construction engineer, for approval, their Contractor Erosion Control Plan (CECP). The CECP is for the accomplishment of temporary and interim erosion and sediment control and stormwater management for areas where the work is to be performed, based on phasing of the project.
4. Stormwater management and stormwater drainage computations used in the design of temporary and permanent structural controls such as pipe culverts, channels, inlets, ditches, and other components of the stormwater management and erosion and sediment control systems are part of the SWPPP.
5. Water quantity control is an integral component of overall stormwater management. The following design criteria for flow control are established for water quantity control purposes, unless a waiver is granted based on a case-by-case basis.
 - a. Evaluate the capacity of the outfall for 2-year and 10-year peak discharges based on prior and post-construction conditions. The evaluation should take into account the condition and capacity of existing structures downstream from the outfall point.

- b. The velocity for the design peak discharge at the outlet of hydraulic structures will be reduced to non-erosive velocities. Ditches and channels must be protected from erosion from the design discharge by the appropriate channel lining.
- 6. Water quality control is an integral component of stormwater management. The following design criteria are established for water quality protection, unless a waiver or variance is granted on a case-by-case basis.
 - a. Stormwater runoff that drains to a single outlet from land-disturbing activities that disturb ten acres or more shall be controlled during the land-disturbing activity by a sediment basin where sufficient space and other factors allow these controls to be used until the final inspection. The sediment basin shall be designed and constructed to accommodate anticipated sediment loading from the land-disturbing activity and meet a removal efficiency of 80 percent suspended solids or 0.5 ML/L peak settleable solids concentration for the 10-year, 24-hour design event.
 - b. Other sediment control practices may be utilized if they achieve an equivalent removal efficiency of 80 percent for suspended solids or 0.5 ML/L peak settleable solids concentration for the 10-year, 24-hour design event.
 - c. Permanent water quality ponds having permanent pools shall be designed to store and release the first ½-inch of runoff from the site over a 24-hour period. The storage volume shall be designed to accommodate at least ½-inch of runoff from the entire site.
 - d. Permanent water quality ponds not having permanent pools shall be designed to release the first inch of runoff from the site over a 24-hour period.
 - e. Permanent infiltration practices, when used, shall be designed to accept, at a minimum, the first inch of runoff from all impervious areas.
 - f. For activities in the eight coastal counties of Beaufort, Berkeley, Charleston, Colleton, Dorchester, Georgetown, Jasper, and Horry, additional water quality requirements may be imposed to comply with South Carolina Ocean and Coastal Resource Management (OCRM) guidelines. If conflicting requirements exist for activities in the eight coastal counties, OCRM guidelines will apply.
- 7. The Director of Construction Office shall file with the South Carolina Department of Health and Environmental Control (DHEC) a copy of the SWPPP, in accordance with S.C. Code of Regulations, Regulation 72-420(A), for each construction and maintenance activity as required by the regulations.
- 8. The Department's certified sediment and erosion control inspector and the contractor's certified inspector shall inspect all stormwater management and erosion and sediment control practices at least once every seven calendar days until the notice of termination (NOT) has been filed with DHEC. Where sites have been finally stabilized, such inspection shall be conducted at least once every month until the NOT has been filed. The Department's certified inspector and resident construction engineer (RCE) shall require that additional practices be implemented in the event that the practices included in the SWPPP are not sufficient to adequately control erosion, sedimentation, and

stormwater runoff. Once final vegetation has been accepted, the RCE in charge shall submit a NOT to DHEC to remove the project from permit coverage.

9. DHEC may periodically inspect land-disturbing activities performed pursuant to the plan required by this regulation. In the event that DHEC finds the measures in the plan are not adequate to control erosion, retain sediment on the site, and manage stormwater in a manner that neither any offsite damage or problem is caused or increased, it shall require that necessary additional measures be implemented. Upon completion, the RCE shall notify DHEC of the completion and acceptance of the project. In the event that DHEC finds a land-disturbing activity is not being performed in accordance with the submitted SWPPP, DHEC may issue a written order either directing conformance with the plan, suspending additional work until conformance is achieved, or directing other measures that it deems necessary to control erosion, retain sediment on the site, and manage stormwater in a manner that neither any offsite damage or problem is caused or increased. Complaints from any party shall be investigated by DHEC.
10. After a project has been completed and accepted in its entirety, the Department's maintenance forces must maintain the areas with the top priority being to take necessary steps to ensure the continuance of proper erosion and sediment control and stormwater management measures as may be needed to prevent offsite damages or contamination of watercourses or impoundments. Each resident maintenance engineer (RME) must prepare an inventory of existing erosion, sedimentation, and stormwater problem areas. This list must be kept current and updated as conditions change. The RME, in conjunction with district office personnel, must set priorities on the inventory and make necessary corrections as time and funds permit.

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