

INSTRUCTIONAL BULLETIN NO. 94-11

**Superseded by
2003-4**

EFFECTIVE DATE: May 19, 1994

SUBJECT: Instructions for Sediment/Erosion Control Plans for South Carolina Highway
Construction

SUPERSEDES: New

RE: New

There are eight plan sheets that provide sediment/erosion control information for a project. Distinct erosion control items have been designed for use during highway construction on S. C. Highways. Pay items to construct these sediment/erosion control items are described on each drawing. A unique pay item number is available for each item.

One plan sheet is the "Erosion Control Data Sheet" which provides information concerning the variables shown on the "Sediment Dam" standard and the "Temporary Sediment Control Structure and Basin" standard. The location of a "Sediment Dam" should be shown on the plan sheet using an elongated diamond as described in the Department's cell library. Show the location of the "Temporary Sediment Control Structure and Basin" on the plan sheet with a rectangle with the long dimension in the direction of flow. The "Sediment Dam" is suggested to be used to control sediment/silt of drainage areas up to ten acres. The "Temporary Sediment Control Structure and Basin" is recommended to handle drainage areas ten acres and over. These erosion control items are numbered on the plans, and the numbers are transferred to the Data Sheet. The necessary information is to be provided for each individual item. When showing the sediment dam and sediment basins on plans, it will be necessary to show any additional right of way (permanent or temporary) needed to construct these items. This should be done prior to sending the plans to Right of Way. The drawings for both of these basins must be included in the final construction plans with the "Erosion Control Data Sheet", as applicable. If there is a need for a temporary sediment control structure that is not shown on any of the drawings, please contact the Road Design Office for a new pay item number. If a structure is not shown on any of the drawings, then you will need to provide a drawing to include all of the necessary design information. If comments are needed to be recorded on the Data Sheet, use the line or lines directly under the item being referenced. When any erosion control item is set-up in the plans, the soil types shall be provided as described on the "Erosion Control Data Sheet". The receiving body of water should also be given on the Data Sheet for each outfall ditch associated with the project.

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The "Sediment Dam" may or may not have an excavated silt basin in front of the sediment trap riprap. If it does not, then the variable, "depth of silt basin", will be zero and "N/A" placed in the length and width boxes. The silt basin may be drained or not drained at the "Sediment Dam" and must be so noted on the Data Sheet. Side slopes of silt basins may be vertical and should also be noted on the Data Sheet. If the outfall channel of a "Sediment Dam" will not need riprap protection, indicate by placing a zero under "outfall channel length" and "N/A" in the other applicable boxes.

"Sediment Trap for Catch Basin/Drop Inlet" is to be used in medians and at other selected catch basin/drop inlet locations. It is recommended to handle erosion for up to a ten acre drainage area or a median length and width shown on the standard drawing. This item is shown on two plan sheets. One is for the piedmont and the other, the coastal region. Suggested locations for its use should be shown on the plans, if known, and additional quantities may be shown in the inclusions to be used at the discretion of the Engineer. A sediment trap is comprised of two pay items, "Silt Basin" and "Inlet Structure Filter". The "Silt Basin" quantity may vary from sediment trap to sediment trap but the estimated quantity of "Silt Basin" is not to be placed on the plans at each sediment trap. The total quantity of "Silt Basin" will be shown in the inclusions and noted for sediment traps. The quantity of "Silt Basin" will be for the construction and the estimated clean-out of the basin. Estimate the clean-out amount for all silt basins to be one-half of their original construction quantity. It is necessary to know the type of catch basin/drop inlet that is involve and particularly whether or not the catch basin/drop inlet is to be rehabilitated or newly constructed. Sediment traps are not expected to be used at a curb inlet location. The type of "Inlet Structure Filter" used in a sediment trap will be a Type A or Type B only. The total quantity of "Inlet Structure Filters" by type will be placed in the inclusions and noted for use in sediment traps.

"Inlet Structure Filters" that are necessary in the construction of a sediment trap may also be used alone where protection of the inlet structure is required. There are three types of filters shown on the standard drawing. Use of a certain type of filter may be shown on the plan sheet at each structure needing protection or a quantity may be placed in the inclusions for use at the discretion of the Engineer, or both. If "Inlet Structure Filters" are desired to be used separately in addition to use in sediment traps then the two quantities should be placed in the inclusions separately and noted. Cleaning-out the silt in front of an "Inlet Structure Filter" will be paid for as "Silt Basin" and an estimated quantity should be given in the inclusions.

Specific locations of each "Ditch Check" are not to be shown on the plans. Locations (sta to sta) may be given as described below. Where locations are not specified, the quantities will be placed in the inclusions. In most cases it is not recommend that they be used on final ditch grade unless outside of the roadside clear zone and may be left in-place. Use of "Ditch Checks" in

temporary ditches while constructing embankments is recommended. In this case, as the embankment is constructed, the riprap will be scattered and abandoned in the fill as permitted. Design information is found on the standard drawing to assist the Field Engineer with the spacing and height; therefore, only a total quantity should be placed in the inclusions. When used in a roadside or median ditch on the final grade, the "Ditch Check" will normally need to be removed and the area graded and seeded. Cost to remove and dispose of the "Ditch Check" is included in its bid price.

Standard Drawing No. 815-1 has been revised to show "Erosion Control Blanket" instead of an earthen "Temporary Sediment Dam". When "Erosion Control Blankets" are specified, this revised standard drawing will have to be added to the plans. "Erosion Control Blankets" should be used in locations where final grades have been constructed and it is necessary to provide protection against erosion. After permanent seeding is accomplished, then the "Erosion Control Blanket" is put in place. In some cases, "Ditch Checks" are recommended in the same locations, so a quantity of "Erosion Control Blanket" and "Ditch Check" may be given with quantities for each computed using the same locations. When specific locations are not determined, a quantity of each in the inclusions allows the Engineer to decide which method of protection is desirable. The advantage of the "Erosion Control Blanket" is that it can be left in-place, but the "Ditch Check" must be removed and disposed of if determined to be a hazard to the traveling public. The following note should be added to each plan sheet (lower left corner of the plan area, if possible) where "Ditch Checks" or "Erosion Control Blankets" have been determined to be needed. The note may show one or both of the items and may be extended to add more than one location on the sheet. These quantities will be shown in the inclusions. Additional quantities may be given in the inclusions to be used at the discretion of the Engineer.

Note: Place either Ditch Checks or Erosion Control Blankets per Standard Drawings as directed by the Engineer from Sta. _____ to Sta. _____ (Lt., Rt, or Lt & Rt)

"Silt Fence" and "Baled Straw" are found on Standard Drawing No. 815-1. The location of these items will not be shown on the plans. The quantity estimated for both will be placed in the inclusions.

"Temporary Slope Drains" may be used but their locations, also, are not shown on the plans. Place the estimated quantity in the inclusions. There is no standard drawing at this time that details "Temporary Slope Drain".

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All items described above that are specified in the plans must have its respective standard drawing placed in the plans for reference until such time when those drawings become part of the reference book, "Standard Drawings for Road Construction". The "Erosion Control Data Sheet" will not be placed in the "Standard Drawings" but will need to be included in the plans, as needed. The use of these erosion control items shall be in accordance with the guidelines specified in the Department's "Interim Stormwater Control Manual".

APPROVED: _____

E. S. Eargle
Road Engineer-Design

ESE/LOK/NPY/jbs

cc:

Road Design (2)