ESTIMATES BULLETIN 09-02

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TO: District Estimates Coordinators, District Design Engineers

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SUBJECT: Erosion Control

ISSUE BACKGROUND: Section 104 of the Specifications, Prevention, Control, and Abatement of Erosion and Water Pollution, has been updated to refer to the State Of Florida Erosion and Sediment Control Designer and Reviewer Manual “E&SC Manual”. This manual is available online at http://www.dot.state.fl.us/specificationsoffice/Implemented/URLinSpecs/Files/FLErosionSedimentManual.pdf. With this manual, additional materials and methods are available to the contractor for controlling erosion. Design Standards have been updated to work with the available options from the E&SC manual. Pay Items have been updated to include the new nomenclature, as well as changes to measurement and payment for various activities.

Expansion of the temporary erosion prevention and sediment control Best Management Practices (BMPs) available to designers and contractors allows greater product selection, promotes competition within the erosion and sediment control industry, and affords the Department greater resource protection with the most up to date technology. These are the driving factors behind this Specification change.

IMPLEMENTATION: The updated pay items and/or descriptions will be available, effective with the January 2010 letting. Additional notes and recommendations for each item are included below.

Update Pay Items: All dates shown below are for the project’s effective letting date.

Rolled Erosion Control Products: The description for Artificial Coverings was expanded to include Rolled Erosion Control Products (RECPs). They are commonly used to protect disturbed slopes or channels against erosion due to rainfall or flowing water. These products will continue to be used when shown in the plans, or as called for by the Engineer. When used on a slope, use the E&SC manual Selection Guide to determine the correct product type. When used in a drainage channel, shear stress and velocity calculations must be completed, as shown in the E&SC manual.

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The pay item description will be updated on or before January 1, 2010.

104- 1- Artificial Coverings/Rolled Erosion Control Products, per square yard.

**Mowing:** When not paid for under Sections 570 or 580, mowing may be paid in accordance with Section 104. No changes were made to this pay item.

104- 4- Mowing, per acre.

**Sandbagging:** No separate payment will be made for sandbagging. When used in accordance with the E&SC Manual, sandbags will be paid according to the function they perform, i.e. inlet protection systems or runoff control structures.

104- 5- Sandbagging, per cubic yard, valid through December 31, 2009.

**Slope Drains, Temporary:** The E&SC manual covers temporary slope drains and check dams as Runoff Control Structures. Slope drains consist of pipe or other conduit used to convey water across (and usually down) erodible lands in a manner that prevents erosion. Check dams are placed in drainage channels and are used to slow water velocity and control sediment. The pay item description will be updated on or before January 1, 2010.

104- 6- Slope Drains, Temporary / Runoff Control Structures, per foot.

**Sediment Basins:** The E&SC manual description is now Sediment Containment Systems. These systems work to retain sediment, as well as to slow water velocities. Designers should continue to estimate one “cleaning/sediment removal” or cleanout per system on the project. The pay item description for both the system and the cleanout will be updated on or before January 1, 2010.

104- 7- Sediment Basins/Containment Systems, per each
104- 9- Sediment Basins/Containment System Cleanout, per each.

**Sediment Barriers, Synthetic Bales & Silt Fence:** The current use of synthetic bales, in accordance with the Design Standards, with products listed on the QPL, will be discontinued with the implementation of the new specification. The E&SC manual will allow for sediment barriers to protect against downstream accumulation of sediment. They will include synthetic bales, silt fence, and other similar materials. Measurement will continue to be for each new location on the project, regardless of whether the materials are new or reinstalled from another location. Examples of appropriate and inappropriate use are described in Section V of the E&SC manual.

Synthetic Bales and Staked Silt Fence will now be included for payment as Sediment Barrier.

- 104- 10- 2 Synthetic Bales, per foot, valid through December 31, 2009.
- 104- 10- 3 Sediment Barrier, per foot, effective January 1, 2010.
- 104- 13- Staked Silt Fence, per foot, valid through December 31, 2009.

**Floating and Staked Turbidity Barrier:** No changes were made to the Turbidity Barrier pay items. Per the specifications, these barriers are to be installed in accordance with details shown in the E&SC Manual.

- 104- 11- Floating Turbidity Barrier, per foot.
- 104- 12- Staked Turbidity Barrier (Nylon reinforced PVC fabric), per foot.

**Rock Bags & Inlet Protection:** Rock bags were previously the only approved device for inlet protection. The E&SC Manual allows for additional materials for protecting an inlet. Payment will now be made for a “system” of materials, per each inlet. Remember to adjust the quantity from multiple rock
bags per inlet, to one complete system per inlet. Curb inlet filters (GutterBuddy, GutterGator, etc.) are included in this pay item.

104-16  Rock Bags, per each, valid through December 31, 2009.
104-18  Inlet Protection System, per each, effective January 1, 2010.

**Chemical Treatment:** Polyacrylamides and Aluminum Sulfate are now available to “clarify turbid or sediment laden water that does not yet meet surface water quality standards... or as an amendment to other erosion prevention and sediment control products, to aid in their performance.” Since the 104-19 pay item is typically used for soil stabilization in conjunction with Rolled Erosion Control Products (RECP), designers should estimate the same amount of area used for RECPs combined with the chemical manufacturer’s suggested application rate.

The 104-20 pay item is considered a Contractor’s option for sediment control on the project site. It is typically used in conjunction with water treatment systems constructed by the contractor to control sediment that results from project specific issues. Do not use in design without contacting Larry Ritchie, Environmental Specialist, in the State Construction Office.

104-19  Chemical Treatment, per square yard, effective January 1, 2010.
104-20  Chemical Treatment, per each, effective January 1, 2010.

Designers are reminded that maintenance and removal of the above items is included in payment price. Construction Engineers are encouraged to work with Contractors to incorporate permanent erosion control features “to ensure economical, effective, and continuous control of erosion and water pollution throughout the life of the Contract.”

**Update Plans and Pay Item Notes:** Effective with the January 2010 letting, update plans and pay items, including the Proposal Summary of Quantities (Transport report) in the plans.

**Specifications:** Specifications will be available for the January 2010 letting.

If you have any questions regarding the use of the above items, please contact Larry Ritchie, State Construction Office, at 850-414-4168.