Make the following section a part of the Standard Specifications:

"SECTION 663 – EROSION CONTROL MATTING

663.01 Description. This work includes furnishing and installing an erosion control matting according to the contract.

663.02 Materials.

(A) General. The erosion control matting shall be a multi-layered geosynthetic netting specifically designed for erosion control as a long-term installation. The erosion control matting shall provide erosion protection for at least 36 months. The matting shall allow grass or other natural ground cover to grow and take root through the matting. The internal matrix material color shall be green or brown and the outer net material shall be black.

(B) Physical Properties. The erosion control matting shall have the following minimum physical properties:

(1) Materials shall be manufactured from either polyethylene, polypropylene, polyolefin or nylon.

(2) Thickness of the erosion control matting shall be 0.30 inches minimum according to ASTM D 5199.

(3) Ultraviolet stability – ASTM D 4355 (tensile strength retained after 1000 hours) 80%.

(4) Porosity (calculation based upon weight, thickness and specific gravity) minimum 95%.

(5) Resiliency (thickness retained after 3 cycles of a 100 psi load for 60 seconds followed by 60 seconds without load-thickness measured 30 minutes after load removed by ASTM D 1777) 75% minimum.

(6) Tensile strength – ASTM D 5305, 2-inch Strip Test, 95 x 95 lbs/foot minimum.

(7) Elongation – ASTM D 5305, 2-inch Strip Test, 70% x 70% maximum.

(C) Brochures and Manufacturer's Certification. The manufacturer of the erosion control matting shall submit brochures and certifications stating the quality of the material meet the intended use on the project. The certification shall clearly show the product number or other similar control number, which match the markings on the product delivered to the

site. The manufacturer shall furnish certified test reports with each shipment attesting that the erosion control matting meets the requirements of the specification for material physical properties. Samples of the erosion control matting shall also be submitted to the Engineer.

663.03 Construction Requirements.

(A) General. Protect the exposed soil face of the slope, shown on the Contract Documents, with an erosion control matting.

(B) Installation.

(1) Site Preparation. Remove all materials such as vegetation and loose soil/rock that would interfere with the soil and the erosion control matting.

(2) Anchor Trenches. Anchor trenches shall be as recommended by the manufacturer. The trenches shall be a minimum of eight inches deep and eight inches wide before placing the erosion control matting. The trenches shall be installed a minimum 18 inches away from the top grouted soil/rock anchors located on the top of the slope. Backfill and compact trenches properly to the original requirements of the slope.

(3) Planting. Install the erosion control matting after hydromulching. Retain good seed distribution and avoid disturbance by work crews. The disturbed areas must be corrected by re-hydromulching at no cost to the State.

(4) Placement. Place the erosion control matting according to the manufacturer's recommendations and supervision. Erosion control matting shall be extended a minimum 5 feet beyond top of slope. Provide supervision by the manufacturer at the start up and initial installation. The matting roll ends shall be overlapped a minimum of 18 inches. The adjacent edges of the matting shall be overlapped a minimum of 3 inches.

(5) Anchoring. Anchor the erosion control matting at overlaps with 12-inch x 2-inch x 12-inch 8G metal staples. The distribution of the staples shall be a minimum of two per square yard. The Engineer will not allow wood anchors, such as pegs or stakes of any kind, which extend above the ground surface. Alternate anchoring methods will be allowed if approved by the matting manufacturer and accepted by the Engineer.

For installation in rock area, anchor matting according to the manufacturer's recommendations.

(6) **Repairs.** Correct tears and holes in the erosion control matting with a minimum of 3-foot overlap in each direction of the damage. Re-hydromulch the repaired area if ordered by the Engineer. Repair and/or replace the damaged or defective erosion control matting at no cost to the State.

(7) **Installation Plan.** Submit an installation plan prior to any work on the slope.

663.04 Method of Measurement. The Engineer will not measure erosion control matting for payment.

663.05 Basis of Payment. The Engineer will not pay for erosion control matting separately. The Engineer will consider the cost for erosion control matting as included in the various contract items.

The cost includes full compensation for furnishing and installing accepted erosion control matting, additional area for overlaps, all accessories including staples and the anchor trenches, hydro-mulching, and furnishing all material, equipment, labor and tools required to complete the work."

END OF SECTION 663