

Make the following section a part of the Standard Specifications:

## **"SECTION 611 – DUMPED RIPRAP**

**611.01 Description.** This section describes constructing dumped riprap in accordance with the contract documents.

**611.02 Materials.** Stones used for the dumped riprap shall be hard, durable, angular in shape; resistant to weathering, water action, and free from organic material. Neither breadth nor thickness of a single stone should be less than one-third its length. The Engineer shall not accept rounded stones. The minimum unit weight of the stones shall be 155 pounds per cubic foot.

Geotextile used as a permeable separator shall be according to Subsection 716.02 - Geotextiles for Permeable Separator Applications.

**611.03 Construction Requirements.** The area where stones are to be placed shall be free of brush, trees, stumps and other objectionable materials, dress the area to a smooth surface.

The stones shall conform to the gradation specified in Table 611-I - Dumped Riprap Gradation.

Place stones that will produce a reasonably well-graded mass with minimum practicable percentage of voids. Distribute all stones placed so that there will be no large accumulations of either the larger or smaller sizes. Hand placing or rearranging of individual stones by mechanical equipment may be required to match the dimensions shown in the contract plans.

Maintain the dumped riprap until accepted. Replace stones displaced by any cause to the grades shown on the plans at no cost to the State.

Excavating work shall conform to Section 206C - Excavation and Backfill for Drainage Structures.

Installation of geotextile used as a permeable separator shall be according to Section 648.03(c) - Installation.

STONE SIZE (Lbs.)		% OF STONE SMALLER THAN	
100		100	
30		50	
10		10	

**611.04 Method of Measurement.** Dumped riprap will be paid on a lump sum basis. Measurement for payment will not apply.

**611.05 Basis of Payment.** The Engineer will pay for the accepted hand-laid riprap on a contract lump sum basis. Payment will be full compensation for the work prescribed in this section and the contract documents.

The Engineer will make payment under:

Pay Item	Pay Unit
Dumped Riprap at Outlet Structure	Lump Sum"

**END OF SECTION**