ITEM 15203.24 M - SHOULDER BACKUP MATERIAL

DESCRIPTION:

This work shall consist of furnishing, placing, grading, compacting, and trimming shoulder backup material of the type indicated adjacent to shoulders to the lines, grades, and locations indicated in the contract documents or to the lines, grades, and locations directed by the Engineer, in accordance with these specifications and details shown in the plans.

MATERIALS:

General. Except as indicated below, §304-2 shall apply. Where the term "subbase course" is used in that subsection, "shoulder backup material" shall replace it.

Material incorporated into the work need not be stockpiled. The State may test for plasticity, soundness, and gradation at its discretion, or may decide not to test for these properties. Materials incorporated into the work shall consist of uncontaminated materials, free of glass, conforming with these specifications, the contract documents, and the directions of the Engineer.

Unless indicated otherwise in the contract documents, the Contractor may choose the type or types of material to use from the list of types given below. Intermixing of the permitted types, however, will be subject to the approval of the Engineer.

Material that proves to be, or that is determined by the Engineer to be impractical to place, grade, trim or compact as shown in the contract documents or as directed by the Engineer shall not be used.

Type A (Crusher-run, crushed gravel, or crushed stone.) Shoulder backup material of this type shall consist of well graded crusher-run material from a stone quarry or gravel source, or crushed Portland cement concrete. The material shall contain no organic, deleterious, hazardous or toxic material. Gradation shall be subject to the approval of the Engineer, but no material larger than 25 mm in greatest dimension will be allowed. Materials shall not show losses greater than 20% after four cycles of the Magnesium Sulfate Soundness test.

Type B (Subbase Course, Type 2.) Shoulder backup material of this type shall meet the material requirements of Subbase Course, Type 2. The Regional Geotechnical Engineer will examine each proposed source of material for compliance with these specification requirements, and submit an evaluation of the material including any limiting conditions to the Engineer.

Type C (Subbase Course, Type 4.) Shoulder backup material of this type shall meet the material requirements of Subbase Course, Type 4 of the Standard Specifications, except the material furnished shall consist of sand and gravel or a blend of sand and gravel and stone. The Regional Geotechnical Engineer will examine each proposed source of material for compliance with these specification requirements, and submit an evaluation of the material including any limiting conditions to the Engineer.

Type D (Recycled Asphalt Concrete.) Material provided under this option shall consist of uncontaminated recycled asphalt concrete pavement produced on the contract or from other sources as approved by the Engineer. Recycled asphalt concrete pavement shall be broken down into sizes no larger than 40 mm.

Type E (Select Structural or Granular Fill.) Material provided under this option shall consist of material conforming to the soundness, gradation, and pH requirements for Select Structural Fill or Select Granular Fill, except top size shall not exceed that for Type C.

CONSTRUCTION DETAILS:

The material shall be placed on the grade in a manner to minimize segregation using equipment and procedures approved by the Engineer. Uncontrolled spreading from piles dumped on the grade resulting

in segregation will not be permitted. Maximum loose lift thickness prior to compaction shall be 150 mm. The contractor's compaction methods and equipment shall be approved by the Engineer. After compaction, the finished surface of the compacted material at the shoulder edge shall not extend above the edge of the shoulder nor be more than 10 mm below the shoulder. Tolerance elsewhere shall be 40 mm, except the surface shall be graded to drain at every location.

If the final grade of the material is not in reasonable close conformity to the lines and grades indicated in the contract documents, or to those directed by the Engineer, the material shall be trimmed to achieve reasonably close conformance. Additional material shall be brought in to fill deficiencies, and excess material (trimmings) shall be removed. Trimmings may be incorporated into the shoulder backup work at other locations along the project if such opportunities exist and provided gradation of the resulting material remains in conformance with the gradation requirement for the selected option. When it is not possible to incorporate the trimmings in the shoulder backup work the trimmings shall be disposed of or used elsewhere in the contract in a manner approved by the Engineer.

METHOD OF MEASUREMENT:

Shoulder Backup Material will be measured for payment as the number of metric tons evidenced by delivery tickets, properly placed, graded, compacted, and trimmed along the edge of shoulder in accordance with these specifications and the directions of the Engineer.

When truck scales are not available within reasonable distance of the source of the material, as determined by the Engineer, the quantity paid for will be determined using conversion factors and the loose volume of shoulder backup material determined by measuring the dump truck bodies. The Contractor shall select the trucks to be used for delivery of the material with the approval of the Engineer. Once the trucks are selected and approved by the Engineer, no other trucks shall be used for delivery of this material. The trucks shall be uniformly loaded to the satisfaction of the Engineer.

Additional material brought in as part of the trimming operation to fill deficiencies will be measured for payment. The quantity of trimmings removed from the shoulder backup operation and not incorporated into the shoulder backup work elsewhere, however, will not be measured for payment under this pay item, and the Engineer will make an appropriate adjustment to the measured quantity.

Unless other conversion factors are indicated in the Contract Documents, the conversion factor shall be 1.68 metric tons per cubic meter, loose measure.

BASIS OF PAYMENT:

The unit price bid per metric ton for Shoulder Backup Material shall include the cost of all labor, materials, and equipment necessary to satisfactorily furnish, place, grade, compact, and trim Shoulder Backup Material.