Section 18.0 Knoxville, Tennessee
March 2022

TECHNICAL SPECIFICATIONS FOR MINERAL AGGREGATE TRAIL BASE AND SURFACE WITH 5% PORTLAND CEMENT

1. Description

This work shall consist of furnishing and placing one or more courses of aggregates and additives, if required, on a prepared subgrade in accordance with these Specifications and in reasonably close conformity with the lines, grades, thicknesses and typical cross-section shown on the Plans or established by the Engineer.

2. <u>Materials</u>

All materials used in this construction, in addition to the general requirements of these Specifications, unless otherwise stipulated, shall conform to the following:

(a) Mineral Aggregate Trail Base and Surface (i.e., "CHATT") shall be crushed stone, Class A Aggregate for Micro-Surface, as specified in Subsection 903.05 and Subsection 903.12 of the TDOTSS, January 1, 2021 and all Supplemental Specifications thereto pertaining issued prior to the advertisement for this contract.

	Total Percentage by Weight
Sieve Size	Passing Sieves
3/8 inch	100
No. 4	70 - 98
No. 8	45 - 70
No. 16	30 - 55
No. 30	20 - 35
No. 50	12 - 25
No. 100	7 - 18
No. 200	4 - 12

- (b) Hydraulic Cement shall be Portland Cement as specified in TDOTSS Section 901.01 and shall conform to the specifications of AASHTO M 85.
- (c) Proportioning: The placed material shall contain 5% Portland Cement by weight.

3. Equipment & Construction Requirements

(a) Equipment and Construction Requirements shall conform to Subsections 303.06 to 303.13 of the TDOTSS, January 1, 2021 and all Supplemental Specifications thereto pertaining issued prior to the advertisement for this contract. In addition, the following compaction, will be required: Mineral Aggregate Trail Base and Surface shall be compacted to 100% of the Standard Proctor Density at 2% less than the optimum moisture content as determined by AASHTO T99 Method D.

- (b) The Portland Cement shall be mixed with the Class A aggregate for Micro Surface at such time and in such a way that the Portland Cement will be uniformly spread throughout the material. The Portland Cement shall be mixed with the Class A Aggregate for Micro-Surface and this mixture shall be transported in such a way that the Portland Cement neither settles nor separates from the aggregate. The moisture content of the Aggregate for Micro-Surface shall be controlled and the method and residence time in transport of the Class A Aggregate for Micro Surface once improved with the cementitious additive shall be controlled. Any Class A Aggregate for Micro Surface improved with Portland Cement which for any reason has become partially set or which contains lumps of caked cement at the location and time of placement will be rejected.
- (c) The maximum speed of trucks hauling or traveling over any part of the project under construction shall be 10 mph.

4. Method of Measurement

- (a) Mineral Aggregate Trail Base and Surface will be measured by the ton in place, as by the actual scale weight.
- (b) All moisture in the Aggregate at the time of weighing in excess of eight percent will be deducted from the weight of the Aggregate.
- (c) Any water added on the road will be at the Contractor's expense.

5. Basis of Payment

- (a) The accepted quantities of Mineral Aggregate Trail Base and Surface of the type specified will be paid for at the Contract unit price per ton, complete in place. This price shall be full compensation for all work, materials, including calcium chloride where specified and water; labor and other incidentals required to complete the work in accordance with the Plans and Specifications.
- (b) Payment will be made under the following bid item as set forth in the Bid Schedule:

 Mineral Aggregate Trail Base and Surface