

STATE OF TENNESSEE

(Rev. 1-14-05)

August 10, 2009

SPECIAL PROVISION

REGARDING

FULL DEPTH RECLAMATION OF FLEXIBLE PAVEMENT

DESCRIPTION OF WORK: Reclaim existing flexible pavement by pulverizing the bituminous concrete layers, mixing the pulverized material with the existing base and subgrade layers and adding a specified amount of cement and water to achieve a homogeneous mixture of reclaimed base material. The reclaimed base shall be constructed to the lines and grades as specified in the plans and as directed by the Engineer.

Materials: See Section 304.02 of the Tennessee Standard Specifications for Road and Bridge Construction and add the term “or reclaimed base material” after “soil cement base”.

Equipment: All equipment necessary for the satisfactory performance of this work shall be on the project and approved before work will be permitted to begin.

Such equipment shall include a mechanical cement spreader of a type that has an adjustable rate of flow and will distribute the cement uniformly at the required rate in one pass. A mechanical mixer capable of mixing the existing pavement, base and sub-grade, to the specified depth and capable of pulverizing the material to a point that 100% passes a 2 inch sieve, and incorporates necessary moisture into the mixing chamber. Equipment that requires the application of water separate of the mixing operation in not acceptable. Rollers capable of compacting the mixed material to 97% dry density using AASHTO T134 will be required.

Length of pavement to be processed: The length and width of pavement to be pulverized will not exceed the length and width that can be completely pulverized, mixed, compacted and covered with curing material in the same working day. In lieu of placing curing material on a daily basis the contractor may elect to keep the section wet by the use of water trucks, until the entire project has been reclaimed.

Initial Pulverizing & Mixing: Pulverize the existing pavement structure and uniformly mix with existing base, and subgrade to the depth and width specified in the plans, such that 100% passes a 2-inch sieve. Maintain moisture content at a point that is at or below the optimum moisture.

Spreading and Mixing: The percentage of cement to be used will be established by the contractor, based on tests of the existing flexible surface, base and subgrade layers for use on the project. The minimum required amount of cement shall produce a compressive strength of 300-400psi, in accordance with ASTM-1633.

Uniformly spread the required quantity of cement on the pulverized base and immediately blend the cement until evenly distributed. Maintain the moisture content at or below the optimum moisture during application of cement.

Immediately after blending the required cement, incorporate the required amount of water into the mixture, ensuring that no excessive concentration of water is on or near the surface of the mixture. Thoroughly mix water, cement, and the pulverized materials until water and cement are uniformly distributed throughout the base mixture. Maintain the moisture content within a range of minus 1.0 percent of optimum moisture to plus 1.5 percent of optimum moisture during final mixing and compaction.

Compaction: Begin compaction immediately after cement and water has been incorporated in the reclaimed base mixture.

Compact the reclaimed base materials using approved self propelled rollers to a minimum density of 97% dry density using AASHTO T 134.

Complete final compaction, and finishing of the reclaimed base mixture within two hours after water has been added to the mixture. Do not leave any cement treated reclaimed base mixture undisturbed for more than 30 minutes if it has not been compacted and finished to grade. When the uncompacted reclaimed base mixture is wetted by rain so that the average moisture content exceeds the specified tolerance, the entire section shall be reconstructed with the provisions of **Subsection 304.13**.

Finishing: In **Subsection 304.09** add the term “or reclaimed base material” after “soil cement base”.

Construction Joints: See **Subsection 304.10**

Thickness and Surface Tolerances: After final finishing and compaction of the reclaimed base, the Engineer will check the surface of the reclaimed base for conformance to grade and typical section and verify that the constructed thickness is within a tolerance of plus or minus ½ inch of the thickness required by the plans.

The finished reclaimed base shall meet the requirements of **Subsection 303.11**.

Curing: In **Subsection 304.12**, add the term “or reclaimed base material” after “soil cement base”.

Traffic: Completed sections of the reclaimed base may be opened when necessary to lightweight local traffic, provided the base has hardened sufficiently to prevent marring or distortion of the surface, and provided the curing is not impaired. Do not operate construction equipment on the new reclaimed base except as necessary to discharge into the spreader during pavement operations. Ingress and egress shall be provided for property owners and public crossroads during the seven day curing period.

Reconstruction and Replacement: In **Subsection 304.13**, add the term “or reclaimed base material” after “soil cement base”.

Maintenance: In **Subsection 304.15**, add the term “or reclaimed base material” after “soil cement base”.

Method of Measurement: In **Subsection 304.16**, last paragraph, add the term “or reclaimed base material” after “soil cement base”.

Basis of Payment: In **Subsection 304.17**, add the term “or reclaimed base material” after “soil cement base”.