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3.10 ASPHALT SURFACE TREATMENT**3.10.1 GENERAL****3.10.1.1 Description**

Asphalt Surface Treatment shall consist of scarifying and salvaging existing asphalt bound aggregate and/or gravel surfacing, adding and blending additional crushed aggregate when required, adding liquid asphalt, mixing and compacting the asphalt bound aggregate on the roadway in accordance with the specifications and plans herein.

3.10.2 MATERIALS**3.10.2.1 Aggregate**

The Contractor shall produce crushed aggregate in accordance with Specification 3.2, Aggregate Production and Stockpiling for the designation and class specified. The Contractor shall supply aggregate materials in accordance with Specification 5.2, Supply of Aggregate and haul aggregate materials in accordance with Specification 4.5, Hauling.

3.10.2.2 Asphalt

The Contractor shall supply asphalt materials in accordance with Specification 5.7, Supply of Asphalt.

Asphalt binder shall not be fluxed or cut back with oil, or any other fluxing agent.

Asphalt used for asphalt surface treatment shall be SC-250, SC-800 and/or SC-70, unless otherwise specified.

3.10.3 CONSTRUCTION METHODS**3.10.3.1 Preparing Subgrade Surface**

Where specified by the Consultant, the subgrade surface shall be prepared in accordance with the provisions of Specification 3.1, Subgrade Preparation, prior to application of the asphalt surface treatment.

3.10.3.2 General

Unless otherwise specified, asphalt surface treatment materials shall be mixed and processed on the subgrade surface of the roadbed.

Application of asphaltic binder shall be performed only when the air temperature in the shade is 5°C or higher, and when the weather conditions are otherwise acceptable to the Consultant. Application temperature of the asphaltic binder will be as specified by the Consultant.

Placement of asphalt surface treatment materials on a frozen subgrade will not be permitted.

3.10.3.3 Road Mixing Methods

When the roadbed to be treated already has surfacing gravel, with or without asphalt, this material shall be scarified with approved equipment only to the depth of the existing surfacing aggregate, windrowed uniformly upon the subgrade, additional aggregate added as directed by the Consultant, and mixed and dried by blading back and forth. When the material has been dried to a moisture content of 2% or lower, it shall be spread by blades and asphalt shall be uniformly applied by an approved type of pressure distributor at a rate of from 45 litres to 90 litres per cubic metre, as directed by the Consultant. Lesser quantities of asphalt may be required when aggregates being used have been treated previously. Care shall be taken to avoid rich or lean areas at the ends of each distributor run. Mixing shall start immediately, and shall continue until uniform colour is obtained and the cutback has been released by thorough aeration of the material.

Mixing shall be accomplished by approved types of pulvi-mixers, motor graders, gravel mixers, or other approved equipment only, and shall be continued until the resulting mixture is entirely uniform in asphalt content. Mixing shall be carried out between passes of the distributor, as well as subsequent to the completion of addition of asphalt.

Mixing equipment used shall be controlled and operated on each pass to pick up and/or mix all the material to be treated, and to avoid cutting into the subgrade or picking up unmixed material on successive passes of the mixer.

The mixture shall then be brought to a single windrow, and from there bladed out to required cross-section and uniform depth. The surface shall then be rolled with pneumatic-tired rollers, or such other equipment as approved by the Consultant, in conjunction with light blading where necessary to maintain the required cross-section and grade. Rolling shall be continued until all aggregate is firmly embedded and the asphalt surface treatment layer is impervious to moisture penetration.

In lieu of mixing the asphaltic binder as specified above, the Contractor may employ such other procedures as approved by the Consultant.

Spreading equipment shall be constructed and operated to produce a layer of material of uniform thickness and width. The type of spreading equipment used shall be approved by the Consultant.

Where the asphalt surface treatment has been aerated or mixed in a blanket type layer on the subgrade, it shall be windrowed to a uniform windrow prior to spreading and compaction.

Where spreading of the asphalt surface treatment mixture is carried out by motor grader, the material shall be thoroughly compacted by equipment hereinbefore specified immediately upon completion of each portion of the spreading operation. Rolling shall be performed in such a manner as to avoid the formation of irregularities.

3.10.4 MISCELLANEOUS CONSTRUCTION REQUIREMENTS

3.10.4.1 General

Where traffic must travel over the roadway surface during the curing period, the Contractor shall restrict traffic speeds sufficiently to prevent surface damage.

Prior to the final acceptance, the Contractor shall reconstruct, to the satisfaction of the Consultant and at no additional cost to the Department, any portion of the Asphalt Surface Treatment damaged by traffic.

3.10.5 MEASUREMENT AND PAYMENT

3.10.5.1 **Application of Asphalt Surface Treatment**

Payment for Asphalt Surface Treatment will be made at the unit price bid per square metre for "Asphalt Surface Treatment". This payment will be full compensation for applying asphalt binder, mixing, spreading, compacting, maintaining traffic, and all labour, tools, equipment and incidentals necessary to complete the Work.

3.10.5.2 **Crushed Aggregate**

When crushed aggregate is required to complete the Work, payment for "Crushed Aggregate" will be made at the unit price bid per tonne or per cubic metre, whichever is specified in the tender for "Crushed Aggregate". This payment will be full compensation for processing, hauling and placing the material.

3.10.5.3 **Supply of Aggregate**

Aggregate materials incorporated into the Work will be paid for in accordance with Specification 5.2, Supply of Aggregate.

3.10.5.4 **Supply of Asphalt**

Payment for the supply of asphalt binder will be made at the unit price bid per tonne for "Supply of Asphalt for Surface Treatment."