

DIVISION 12**BITUMINOUS PAVEMENTS**12.01 Hot Mix Bituminous Base:

This shall be the work of placing two or more courses of a hot-mix bituminous base of the thickness specified on a prepared subgrade or subbase.

12.01.01 Materials:

Materials shall meet the MDOT specifications for base mixtures as identified on the typical cross section on the plans or called out in the specifications.

12.01.02 Construction:

The equipment and construction methods shall conform to the requirements of the current MDOT Specification. The use of a bulldozer and grader to place the first layer of asphalt base may be used with prior approval of the Engineer.

Bond coat shall be applied at the rate of 0.10 gallons per square yard unless otherwise specified. The surface shall be finished to the specified cross-section within a tolerance of plus or minus one-half (1/2") inch in ten (10') feet.

12.02 Bituminous Leveling Course:

This shall be the work of placing a bituminous leveling course on prepared base.

12.02.01 Materials –

Materials shall meet the MDOT specifications for leveling mixtures as identified on the typical cross section on the plans or called out in the specifications.

12.02.02 Construction –

The equipment and construction methods shall conform to the requirements of the MDOT Specifications.

The surface shall be finished to the required cross-section within a tolerance of plus or minus one-quarter (1/4") inch in ten (10') feet.

12.03 Bituminous Wearing Course:

This shall be the work of placing a bituminous wearing course on a leveling course.

12.03.01 Materials –

Materials shall meet the MDOT specifications for wearing mixtures as identified on the typical cross section on the plans or called out in the specifications.

12.03.02 Construction:

The equipment and construction methods shall conform to the requirements of the MDOT Specifications.

The surface shall be finished to the required cross-section within a tolerance of plus or minus one-quarter (1/4") inch in ten (10') feet.

12.04 Method of Measurement:

Hot-mix bituminous base course, Bituminous leveling course, and Bituminous wearing course shall be measured in square yards for the specified thickness.

12.05 Basis of Payment:

Square Yard contract:

The contract unit price per square yard shall be payment in full for all material, equipment, and labor required to furnish and place hot-mix bituminous base course, bituminous leveling course, or bituminous wearing course as specified.

Tonnage contract:

The contract unit price per ton shall be payment in full for all material, equipment, and labor required to furnish and place hot-mix bituminous base course, bituminous leveling course, or bituminous wearing course as specified.

12.06 General Requirements:

No bituminous mix shall be delivered to the job site at a temperature of less than two hundred seventy (270°) degrees Fahrenheit, nor more than three hundred fifty (350°) degrees Fahrenheit.

Joints shall be staggered between adjacent courses of asphalt a minimum of six (6") inches. Joints between existing asphalt pavement and the newly placed pavement shall

be hot sand sealed using an application of SS-1H emulsified asphalt and hot 5NS sand. The sand shall have a temperature of two hundred fifty (250°) degrees Fahrenheit. when delivered to the job site. This work shall be included in the major paving items; no separate payment will be made.

Unless otherwise permitted, two individual eight (8) ton rollers shall be required during paving operations. Vibratory rollers may be used on base courses if approved by the Engineer in advance.

When the tonnage yield of asphalt placed differs by more than one percent of the theoretical yield, as calculated using a density of ninety eight (98%) percent of the maximum unit weight (determined by the Marshall Method), a credit or an adjustment in the unit price will be made for all tonnage below the specified yield. No extra payment will be made for overages. If more than one Marshall Test is performed, the average of all satisfactory tests will be used.

All asphalt pavements shall be compacted to a minimum density of ninety eight (98%) percent of the maximum unit weight as determined by the Marshall Method.

Bituminous Bond Coat shall be used between all courses of bituminous pavement and shall be incidental to the bituminous pavement items.

Paving Dates – allowable paving dates are as follows:

Base-	May 15 -	December 1
Leveling -	May 15 -	November 15 *
Wearing -	June 1 -	November 1 *

*(or as approved by the Engineer)

Prior to starting any paving operations, the Contractor shall have submitted a mix design formula prepared by a qualified materials testing firm for each of the bituminous paving materials to be used. Ongoing acceptability of the various bituminous materials furnished for paving will then be determined by comparing extractions to the appropriate mix design formulas as submitted and approved by the Engineer.

During placement of the wearing course, operations shall be scheduled to ensure no cold longitudinal joint is left overnight without prior written approval of the Engineer.