

# SPECIAL PROVISION

NOTE: This special provision is generally written in the imperative mood. The subject, "the Contractor" is implied. Also implied in this language are "shall", "shall be", or similar words and phrases. The word "will" generally pertains to decisions or actions of Sedgwick County Public Works.

## PLANT MIX ASPHALT CONSTRUCTION-COMMERCIAL GRADE

### 1. DESCRIPTION

Construct the Plant Mix Asphalt Mixture-Commercial Grade asphalt pavement and patching, as shown in the Contract Documents. Use the material designated for patching in the repair and patching of the base and/or subgrade, including the existing surface course. The Contractor is permitted to use WMA unless otherwise shown on the plans.

<u>BID ITEMS</u>	<u>UNITS</u>
Plant Mix Asphalt Mixture-Commercial Grade (*) (**)	Ton
Plant Mix Asphalt Mixture-Commercial Grade (*) (**)	Sq. Yd.
Plant Mix Asphalt Mixture-Commercial Grade (Patching)	Ton

\*Type: Base or Surface

\*\*Thickness in inches

### 2. MATERIALS

**a. Requirements.** The asphalt mixture must be approved by the Engineer. This approval will generally be based upon the following conditions:

- (1) Furnish all materials by recognized producers.
- (2) Provide a recognized type of HMA plant.
- (3) ***Produce the mixture to meet the SM-12.5A and SR-12.5A mix design requirements in Section 611 of the KDOT Standard Specifications for State Road and Bridge Construction (latest revision). The base course mixture may utilize the SR-12.5A mix with up to twenty-five (25%) Reclaimed Asphalt Pavement (RAP). The surface course (top 2") shall utilize the SM-12.5A mix without RAP.***

**b. Following approval of the mix, the Contractor may commence delivery of mix to the project.**

- (1) Provide a workable mixture capable of being spread without tearing or flushing under compaction.
- (2) Asphalt for tack may be any asphalt approved by the Engineer.
- (3) Certify the mixture produced for use meets the requirements of the approved mix design.

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### 3. PROCESS CONTROL

- a. **General.** During construction, the Engineer may conduct tests for gradation to verify compliance of the approved mix design. Non-compliance will be subject to the price adjustment as outlined in **TABLE 611-5: SCHEDULE OF ADJUSTED PAYMENT FOR ASPHALT MIXES** in Section 611 of the KDOT Standard Specifications for State Road and Bridge Construction (latest revision).

For projects having less than 500 tons, the Engineer may conduct tests for gradation to verify compliance of the approved mix design.

For projects having greater than 500 tons, the testing frequency shall be 1 test for each 500 ton Lot or fraction thereof. However, should Sedgwick County fail to sample a Lot, that Lot will not be subject to price adjustment.

The combined cold feed sample shall be taken at times designated by the Engineer and analyzed as time allows at locations provided by the Engineer.

- b. **Basis of Acceptance and Payment.** The Engineer will accept the mixture based on test results of samples taken from each 500 tons produced.

Calculated values for acceptance test results for gradations will be shown to the nearest hundredth percent.

The absolute value of the deviation between the acceptance test results and the design job-mix single point will be determined for the #4, #8, #30 and #200 sieve, whichever results in the greatest price reduction.

### 4. EQUIPMENT

Use laydown, compacting, hauling and truck weighing equipment specified in **DIVISION 150 of the KDOT Standard Specifications for State Road and Bridge Construction**, except that approval by the Kansas Department of Agriculture, Division of Weights and Measures will satisfy all accuracy requirements of truck weighing equipment.

### 5. CONSTRUCTION REQUIREMENTS

Accomplish rolling of the mixture using a minimum of 2 rollers. On incidental and miscellaneous work and on patching, the Engineer may waive the minimum roller requirements if conditions warrant. Perform all compaction using standard and recognized techniques. Except for variations approved by the Engineer, complete final rolling while the temperature of the mixture is approximately 175°F or above (165°F for WMA). Tack between lifts as directed by the Engineer.

### 6. WEATHER LIMITATIONS

Do not place HMA/WMA on any wet or frozen surface or when weather conditions otherwise prevent the proper handling and finishing of the mixture.

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Only place HMA/WMA when either the minimum ambient air temperature or the road surface temperature shown in **TABLE 602-13** is met. The Engineer may waive the temperature and weather condition requirements if warranted.

<b>TABLE 602-13: MINIMUM HMA/WMA PLACEMENT TEMPERATURES</b>			
<b>Paving Course (inches)</b>	<b>Thickness (inches)</b>	<b>Air Temperature (°F)</b>	<b>Road Surface Temperature (°F)</b>
Surface	All	50	55
Subsurface	<1.5	50	55
Subsurface	≥1.5 and < 3	40	45
Subsurface	≥ 3	30	35

**7. WARM MIX ASPHALT**

- a. **Additives.** Provide Warm Mix Asphalt (WMA) additives or processes that comply with **SECTION 1207** of the KDOT Standard Specifications for State Road and Bridge Construction (latest revision). The Contractor is permitted to use WMA unless otherwise shown on the plans.

For mixes containing WMA additives, submit for the Engineer’s review and approval, the additive or process used, the recommended rate of application, and the temperature ranges for mixing and compaction.

Mixing temperature range is provided by the Asphalt Binder Supplier. When using WMA, the mixing temperature may be reduced no more than 30°F from WMA water foaming processes, and no more that 70°F for WMA chemical and organic additives. The minimum mixing temperature for WMA is 220°F.

If WMA additives are added at the Contractor’s plant, install a “totalizer” to monitor the quantity of WMA additive being added. Provide a method for the Engineer to monitor the percent of additive being added.

- b. **Anti-Strip Additives.** If liquid anti-strip additives are added at the Contractor’s plant, install a “totalizer” to monitor the quantity of anti-strip additive being added. The Engineer may approve alternative methods for including anti-strip additives in a batch plant. If added at the plant, the anti-strip will be added in line with the asphalt binder as it is being transferred from the transit unit to the asphalt binder storage tank. Provide a method for the Engineer to monitor the percent of additive being added.

If hydrated lime is added, mix it in an approved pug mill to coat the combined aggregates. Moisten the combined virgin aggregate to a minimum of 3% above the saturated surface dry condition prior to, or during, the addition of the hydrated lime.

- c. **End of Day Quantities.** At the end of each day of production provide the Engineer with a document signed by the Plant Foreman or the Project Manager listing the dry weight of each aggregate, mineral filler, RAP, and WMA chemical or organic additive; the tons of asphalt binder, the tons of anti-strip agent used for the project during the day, and

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the tons of water used in the WMA foaming process. The dry weight is the tons of the material less the water content.

### 8. MEASUREMENT AND PAYMENT

The Engineer will measure Plant Mix Asphalt Mixture-Commercial Grade by either the ton of material at the time of delivery to the road or by the square yard of in-place material, whichever is denoted in the project documents. The Engineer will measure Plant Mix Asphalt Mixture-Commercial Grade (Patching) by the ton of material at the time of delivery to the road. No deduction will be made for the weight of the asphalt material in the HMA/WMA.

Commercial scale tickets completed by the producer will be acceptable.

Payment for "Plant Mix Asphalt-Commercial Grade" and "Plant Mix Asphalt Mixture-Commercial Grade (Patching)" at the contract unit prices, or at the adjusted price for those tons where a deficiency exists which require adjustments, is full compensation for the specified work.

When a deficiency of the mixture is determined to exist, the Contractor will adjust the mix proportions to comply with the approved mix design. The applicable payment shown in **TABLE 611-5: SCHEDULE OF ADJUSTED PAYMENT FOR ASPHALT MIXES** in Section 611 of the KDOT Standard Specifications for State Road and Bridge Construction (latest edition) will be applied to the tonnage of plant mix produced until such time that the Contractor adjusts the mix proportions to comply with the approved mix design.

Price adjustment will be computed and shown as a lump sum dollar value on the Contractor's payment voucher.

Revised 3/29/2017 LTP