

**KANSAS DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION TO THE
STANDARD SPECIFICATIONS, EDITION 2007**

SECTION 605

SURFACE RECYCLED ASPHALT CONSTRUCTION

Page 600-35, delete subsections 605.3b. and c. replace with the following:

b. Heating and Scarifying Operations. Use a series of heaters, milling units and/or scarifiers to uniformly heat and recycle the existing pavement to the specified depth. Flames on the pavement can be prevented by heating the roadway more slowly using additional heaters. Intermittent or occasional flaming on the roadway or in the windrow that extinguishes on its own within 10 seconds is permissible, but if in the opinion of the Engineer it is detrimental to the final product, production will cease. In addition, production will cease when smoke is being produced continuously. (Smoke caused when the heaters pass over a maintenance patch is excluded from this clause.) The Contractor and Engineer will agree to a course of action to prevent this overheating before production is resumed. If flames or excessive smoke persist, then production is ceased until the Contractor modifies the operation and can demonstrate acceptable results without excessive smoke or flames on the pavement or in the windrows. When the depth of the HIR is more than 1 inch, heat the material in lifts not more than $\frac{3}{4}$ inches. When heating in multiple lifts, remove each lift at a uniform depth across the full width of the recycled pavement. This material may be windrowed when heating the next lift. Use equipment complying with **SECTION 155**. Provide adequate provisions for equipment calibration. Remove from the roadway milled or scarified material that can not be placed with a paving unit due to equipment breakdown or malfunction. Bring these removed areas to grade using a HMA approved by the Engineer.

c. Process Control.

(1) Depth Check. The Engineer will determine the depth per KT-47. The moving average of 3 consecutive tests shall equal or exceed the contract depth. If the 3-point moving average is less than the contract depth, KDOT will assess a price reduction using Equation 1. The price reduction will correspond to those segments within the 3-point moving average that were deficient in depth. If both KDOT and the Contractor agree that recycling to the contract depth would be detrimental to the project, the unit price will be negotiated for the reduced depth before proceeding with the project.

$$\text{Equation 1: } P = 400 (S) \left(1 - \frac{M}{T} \right)$$

Where: P is the Penalty, (\$0.00)

S is the number of stations (single lane) in penalty, (0.00)

M is the Measured Depth, (0.000 feet or 0.00 inches)

T is the Plan Depth, (0.000 feet or 0.00 inches). T and M shall be the same unit of measure.

If 4 consecutive 3-point moving average values are less than the contract depth, stop production and evaluate the process with the Engineer. Change the process to the satisfaction of the Engineer before production is resumed. If the next 2 tests are deficient in thickness, Equation 2 will be used for the remainder of the project. The Engineer reserves the option to terminate production until a satisfactory agreement is reached anytime the 3-point moving average value is less than the contract depth for more than 2 consecutive tests.

$$\text{Equation 2: } P = 900 (S) \left(1 - \frac{M}{T} \right)$$

(2) Temperature Requirements: Maintain the temperature of the HIR, directly behind the paver, between 190°F and 300°F. HIR temperatures taken within 2 feet of each other, transverse to the roadway, shall not vary by more than 30°F. If temperature requirements are not within the 30°F required within 1 hour after the discrepancy is discovered, the HIR train will be stopped and the Engineer and Contractor will determine a course of action to correct the deficiency before the HIR train proceeds.

Page 600-36, delete subsection 605.3e.(1)(b) and (c) and replace with the following:

(b) Provide density using an approved rolling procedure. Use a minimum of 2 Self-Propelled Smooth-Faced Steel Rollers complying with Section 151. The Engineer will determine the initial approved rolling procedure from densities obtained with various roller combinations. Density will be determined by using a nuclear gauge. Use the approved rolling procedure. Achieve the maximum density before the temperature of the HIR falls below 160°F. Do not crush the aggregate. When the mat temperature falls below 160°F, roller marks may be removed from the mat with a self-propelled Smooth-Faced Steel Roller operated in the static mode. If there is a significant change in factors affecting density, such as weather or compaction equipment, the Engineer will reevaluate and modify the rolling procedure as required. Stop the HIR operation whenever rolling is not being performed according to the approved rolling procedure.

(c) Maintain the rejuvenated pavement surface until the surface treatment shown in the Contract Documents is completed. When required, apply a tack coat before placing the surface treatment. If a seal coat, asphalt seal, micro-surfacing or ultra-thin bonded asphalt surface is included in the Contract Documents, allow the HIR surface to cure 1 week before sealing.

Page 600-36, delete subsection 605.3f. and replace with the following:

f. Weather and Seasonal Limitations. Construct surface recycling when the surface is dry, and the weather is not foggy or rainy. Only construct surface recycling between May 1 and September 30, when either the minimum ambient air temperature or the road surface temperature shown in **TABLE 605-2** is met.

TABLE 605-2: MINIMUM HIR TEMPERATURE REQUIREMENTS		
Existing Surface Type	Ambient Air Temperature (°F)	Road Surface Temperature (°F)
On HMA Surface	50	55
On Asphalt Seal Surface	55	60