

**OKLAHOMA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISIONS FOR
PLANT MIX BITUMINOUS BASES AND SURFACES**

These Special Provisions revise, amend and where in conflict, supersede applicable sections of the 1999 Standard Specifications for Highway Construction, English and Metric, as applicable. Units of measurement are provided in the subsections in both English and Metric equivalents. The units applicable for this project will be those specified in the project plans.

SECTION 409

(Delete the entire section and replace with the following:)

PERMEABLE FRICTION COURSE

409.01. DESCRIPTION.

This work shall consist of mixing, in a central plant, aggregate and bituminous materials, and then spreading and compacting the mixed material on a prepared roadbed, all in substantial compliance with the Specifications and dimensions shown on the Plans.

409.02. MATERIALS.

Materials shall meet the requirements of Section 708.

409.03. EQUIPMENT.

Equipment shall conform to the requirements of Subsection 411.03.

A system for feeding cellulose fibers shall be used to proportion the correct amount of fibers into the mixture so that a uniform distribution is obtained. The fiber supply system shall include low level and no-flow indicators and a printout or data file tracking the status of the feed rate. The fiber supply line shall include a section of transparent pipe for observing consistency of flow or feed. All mineral filler feeder systems shall be approved by the engineer.

409.04. CONSTRUCTION METHODS.

- (a) **Stockpiling Materials.** Aggregate stockpiles shall meet the requirements of Subsection 106.09.
- (b) **Preparation of Materials.** The discharge temperature of the PFC shall not exceed 350°F. Dust collected from this operation may be either wasted or returned to the mixture as deemed necessary.
- (c) **Mixing.** Mix the aggregate and bituminous material as specified in Subsection 411.04.
- (d) **Loading and Hauling.** Coordinate the loading and hauling of the mixture with the laydown operations so that the mixture shall be placed within the temperature range established in Subsection 406.04(g) and so that there will not be separation of the asphalt and aggregate.
- (e) **Tack Coat.** Apply a tack coat in accordance with Section 407, except that the rate of application shall be approximately 0.1 gallon per square yard of the surface area unless otherwise shown on the Plans or directed by the Engineer.
- (f) **Weather and Seasonal Limitations.** Construction of PFC will be permitted only under the following conditions:

When the surface is dry; when the mat surface on which it is to be placed is 60°F or above when measured away from artificial heat; when the weather is not foggy, rainy or stormy; and when the wind or other conditions permit proper leveling and consolidation. Aggregate stockpiles must be reasonably dry so that drum mixing will drive out all remaining moisture.

- (g) **Spreading and Finishing.** Prior to placing PFC, clean all foreign matter from the surface of the existing roadbed. The temperature of the mixture for placement on the road shall be 300 ± 25°F.

The PFC shall not be windrowed prior to spreading and finishing. A Materials Transfer Device or Materials Transfer Vehicle (MTD/MTV) shall be used for placement of the PFC. At the Engineer's discretion, isolated portions of a project may be exempted from use of the MTD/MTV.

The material shall be continuously remixed or rebled either internally in the transfer device, in a paver hopper insert, or in the paver's hopper. Remixing/reblending shall be accomplished by using remixing augers or paddles capable of continuously blending the PFC.

The MTD/MTV, haul units, and the paver shall work together to provide a continuous, uniform, segregation-free flow of material. The number of haul units, speed of the paver, plant production rate, and speed of the MTD/MTV shall be coordinated to avoid stop and go operations. The wings of the paver/receiving hopper shall not be raised (dumped) at any time during the paving operation.

If a MTD/MTV unit malfunctions during laydown operations, the Contractor may continue until any PFC in transit or stored in a silo has been laid and until such time as there is sufficient PFC placed to maintain traffic in a safe manner. Laydown operations shall cease afterward, until the equipment is operational.

Any MTD/MTV unit which exceeds 20,000 pounds per axle will be allowed to cross bridges in good condition, provided the unit's hopper is substantially empty, the vehicle travels at crawl speed, and the wheels on the vehicle travel as close as possible to the underlying beam lines. For bridges in poor condition or posted for load limits, the Engineer will consult Bridge Division to determine if any additional limitations are necessary, such as transporting the unit on a vehicle with more axles to distribute the load.

The mat shall be free from segregation, non-uniform texture, bleeding or fat spats, and cracking.

- (h) **Joints.** The location of the longitudinal joint shall be on the lane lines, and offset from the underlying joint a minimum of 3 inches. All construction joints shall be tight, smooth, butt-type joints.

- (i) **Compaction.** Immediately following placement of the PFC material, roll the surface with 2-3 passes of a static (non-vibratory) steel-wheeled, self-propelled roller of such weight as approved by the Engineer.

Finish the surface so that it is smooth and true to the dimensions shown on the Plans. Immediately correct any low or defective areas by removing them, replacing them with new material, and compacting them to conform to the remainder of the pavement. Such corrective work shall be done at the expense of the Contractor.

Trucks and all other traffic shall not be permitted on the finished PFC pavement until the surface temperature is within 10°F of ambient temperature or two hours time has elapsed from final rolling.

409.05. METHOD OF MEASUREMENT.

Permeable Friction Course, including aggregate, liquid asphalt, cellulose fiber, and other ingredients as specified in the job-mix formula - will be measured by the ton of combined mixture.

Tack Coat will be measured and paid for in accordance with Section 407.

409.06. BASIS OF PAYMENT.

Accepted quantities of Permeable Friction Course measured, as provided above, will be paid for at the contract unit price as follows:

(SP) PERMEABLE FRICTION COURSE.....TON

Such payment shall be full compensation for furnishing all materials, equipment, labor and incidentals to complete the work as specified.