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CALL NO. 320
CONTRACT ID NO. 262256
ADDENDUM # 1

Subject: MONTGOMERY COUNTY
FD05 087 0011 010-014
Letting December 10, 2026

1. Revised Special Notes p. 10-15 of 51.

Proposal revisions are available at
http://transportation.ky.gov/Construction-Procurement/.

If you have any questions, please contact us at 502-564-3500.

Sincerely,



Rachel Mills, P.E.
Director
Division of Construction Procurement

RM:mb
Enclosures

SPECIAL NOTE FOR THERMOPLASTIC PAVEMENT MARKINGS REMOVAL

If needed remove existing Thermoplastic Pavement Markings just prior to placement of the overlay as directed by the Engineer. The Department will not measure removal of the Thermoplastic Pavement Markings, but shall be incidental to the other items of work. Lane Striping thermo removal will be paid for as indicated by the Bid Item 06531 PAVE STRIPING REMOVAL-6 IN

SPECIAL NOTE FOR THERMO STRIPING

Thermoplastic application will be required to be by ribbon gun at all locations that are to be applied over milled rumble strips in lieu of an extrusion application. See Section 714.03.01 of the current edition of the Standards and Specifications for Road and Bridge Construction.

SPECIAL NOTE FOR POLISH-RESISTANT AGGREGATE IN NO 4 THINLAY ASPHALT MIXTURES

Contrary to Section 409.03.03 of the *Standard Specifications for Road and Bridge Construction*, for 4.75mm asphalt mixtures requiring Class D aggregate, recycled asphalt pavement (RAP) shall not exceed 15% of cold feed percentage, and the use of recycled asphalt shingles (RAS) is prohibited.

Contrary to Section 402 of the *Standard Specifications for Road and Bridge Construction*, Warm Mix Asphalt (WMA) will not be permitted for all 4.75mm asphalt mixtures.

Contrary to Section 403.03.01 of the *Standard Specifications for Road and Bridge Construction*, the NO 4 surface mixtures, do not place the mixture between September 30 and May 1 unless requested in writing and approved by the engineer.

SPECIAL NOTE FOR CAPE SEAL

A cape seal treatment shall consist of one or more layers of chip/scrub seal application(s) followed by a surface treatment. Prior to placement of the surface treatment, the chip/scrub seal application shall have a curing time of no less than 72 hours and placement shall start before 10 days after the chip/scrub seal application.

A tack coat shall be applied on top of chip/scrub seal aggregate before placing the asphalt surface. **Contrary to section 406.03.03 B** of the *Standard Specifications for Road and Bridge Construction*, tack coat application rate for 4.75mm thinlay asphalt surface shall for be 0.40lbs – 0.65lbs (0.05 gal – 0.08 gal) per sqyd. The tack coat application rate for emulsified microsurface asphalt surface shall be 0.25lbs – 0.50lbs (0.03 gal – 0.06 gal) per sqyd.

SPECIAL NOTE FOR ASPHALT CHIP SEAL

1. DESCRIPTION. Construct an asphalt chip seal consisting of one or more applications each of asphalt material and cover aggregate.

2. MATERIAL AND EQUIPMENT.

Asphalt Material. Furnish undiluted CRS-2P or CMS-1P or CMS-1PC polymer modified emulsion that conforms to **AASHTO M 316** and the requirements **Section 806.05.**

EMULSIFIED ASPHALT SPECIFICATION			
PROPERTY	**METHOD**	**SPECIFICATION**	
		CMS-1P	**CMS-1PC**
TEST ON EMULSION			
Viscosity @ 122 ˚F (SFS)	AASHTO T 59	100 – 400	100-400
Residue, w%, minimum. (1)	AASHTO T 59	67	60
pH	ASTM E 70	2.0-5.0	2.0-5.0
Sieve, w%, max.	AASHTO T 59	0.1	0.1
Oil distillate, w%, max.	AASHTO T 59	0.5	0.5
TEST ON RESIDUE			
Viscosity @ 140 °F, P, maximum.	AASHTO T 201	3000	-
Penetration @ 39.2 °F, minimum.	AASHTO T 49	40	30
Elastic Recovery on residue by distillation, %, minimum (2)	AASHTO T 301	50	50
Test on Polymer:			
Tensile strength, die C dumbbell, psi, minimum	ASTM D 412 (3)	500	800
Swelling in rejuvenating agent, % maximum; 48 hours exposure @ 104 °F	ASTM D 471 (4) Modified	40% intact film	40%
Latex Density @ 73 °F	ASTM D 6937 (5,6)	-	1.00-1.05
TEST ON REJUVENATING AGENT:			
Flash point, COC, °F	AASHTO T 48	380 Min	
Viscosity, 140 °F, CST	AASHTO T 201	50-175	
Saturate, % by wt.	ASTM D 2007	30 Max	
Asphaltenes	ASTM D 2007	1.0 Max.	
Test on Residue from RTFO	AASHTO T 240		
Weight Change, %		6.5 Max.	
Viscosity Ratio		3 Max	

When surface cracks have been previously crack sealed, CRS-2P may be required. Otherwise, application shall require undiluted CMS-1P or CMS-1PC polymer modified emulsion that meets requirements below:

(1) Exception to AASHTO T59: Bring the temperature on the lower thermometer slowly to 350 ± 10 ˚F. Maintain at this temperature for 20 minutes. Complete total distillation in 60 ± 5 min from first application of heat.

(2) Elastic Recovery @ 10 ˚C (50 ˚F): Hour glass sides, pull 20 cm, hold 5 minutes then cut, let sit 1 hour.

(3) Tensile Strength Determination: Samples for testing for tensile strength in accordance with ASTM D412 shall be tested with the following test procedure modifications:

(4) Prepare the polymer film, dilute the waterborne polymer to 40% Total Solids Content and pour 57 g into a Teflon or silicone release mold of dimensions 7" X 7" X ¼". Allow to dry at 23°C (73 °F) and 50% RH (controlled conditions) for 7 – 10 days total time, during which time the film should be flipped around once, preferably after 3 or 4 days. The film should be transparent in the end. To drive out any residual water, place the film in an oven at 50 °C for 30 min. Dried film thickness should be 25 ± 5 mils. Discard films <20 mil. Cut out dumbbell-shaped test specimens of dimension 75 mm total length, 25 mm mid-section (L) and 4 mm width of mid-section. Grip in Instron machine with gap size 1 inch, use 8 in/min cross-head speed.

(5) Polymer testing shall be prepared from polymer as follows: Resistance to Swelling: Using a syringe, place 0.8 g of latex into an 18 mm diameter DSR mold. Allow the sample to dry at ambient lab conditions (air conditioned) on the bench for 72 hours. Sample should be easily removable from the mold. Take the "button" out of the mold and place the sample into a forced air oven at 40 °C (104 °F) for 48 h (on release paper). If at the end of the ambient dry, the sample sticks to the mold, place it into the oven and check it after 1-2 h. After 48 h, cool and weigh the sample to the nearest 0.0001 g and record the weight. Put ½ in of Rejuvenating Agent into a 3 oz penetration tin. Place the "button" on the rejuvenating agent, and add another ½ in of rejuvenating agent, so that the "button" is covered. Put the cap on the penetration tin and place it into the 40 °C oven for 48 h. Remove the "button from the Rejuvenating Agent, blot surface of the "button" to remove excess Rejuvenating Agent, cool the "button" to room temperature and weigh it. Calculate weight gain of the "button", express as a percent.

(6) Replace "Emulsified Asphalt" with "Latex" in text of test method. The testing temperature used should be 25 ± 3 ˚C. The calculation in Section 7 should be as follows:

$$D = (W_f - W_t) * 0.1$$
$$S.G. = D / 8.337$$

Where: W_f = Weight of filled cup (g)
W_t = Weight of empty cup (g)

The Department will require a sample of the polymerized emulsion to be taken from the distributor spray bar at a lot frequency of one sample per 5,000 gallons of emulsion. Take two 1 gallon samples of the heated material and forward the sample to the Division of Materials for testing. Ensure the product temperature is between 160° and 180° F at the time of sampling.

Aggregate. Provide a cleaned damp aggregate cover material from an approved aggregate producer and shall meet the material requirements that conform to **Section 805**, as applicable. Contrary to section 805.05.04 provide coarse aggregates having no more than 2.0 percent passing the No. 200 sieve.

Equipment. Provide, and keep on the project at all times, an accurate thermometer, hand brooms, and other small tools and equipment essential for completion of the work.

Calibration of equipment application rates shall be completed by the contractor. Calibration shall be done in the presence and verified by engineer prior to application or as directed by the engineer. A test strip shall be required at the beginning of each new project or as directed by the engineer.

The asphalt distributor for the application of the emulsion shall have full circulation spray bar that is adjustable to at least 16 feet wide in 2 feet increments and capable of heating and circulating the emulsion simultaneously, conforming to **Section 406.02.05**. It must have computerized rate control for adjusting and controlling the application from the cab within 0.01 gallons per square yard increments. The distributor shall also be equipped with a volume measuring device and a thermometer for measuring the emulsion temperature in the tank. For each emulsion application, follow manufactures recommendations for proper nozzle type and adjustment.

The aggregate spreader shall be a front discharge, continuous mechanical feed, self-propelled aggregate spreader with a screen capable of removing oversized materials. It must have computerized control for adjusting and regulating application rates, as well as width, from the operating platform. Ensure the spreader can evenly distribute the aggregate from the transporting vehicle directly onto the fresh asphalt material in smooth, uniform layers, independent of the forward speed. The spreader must be capable of being filled and moved without discharging aggregate. The spreader must be equipped with a locking mechanism compatible with the triaxle trucks used to supply aggregate.

Rollers. Pneumatic tire roller shall weigh at least 5 tons. Double steel wheel type roller shall weigh at least 5 tons but no more than 8 tons.

3. CONSTRUCTION.

Weather and Seasonal Limitations. Application of chip seal shall be applied when air temperature is at least 50 degrees F and rising and a minimum surface temperature of 70 degrees F. Do not construct when the ambient temperature within the preceding 24 hours has been 35 degrees F or lower. Do not proceed with construction if rain is expected in a minimum period of 4 hours. If an unexpected shower arises during operations, the asphalt distributor should be shut off immediately and placement of aggregate continued until all asphalt has been covered. Material shall not be placed between September 30 and May 1 without approval of Engineer.

Preparation of Mixture. Submit a complete mix design a minimum of 14 days prior to construction. Mix design shall be prepared by an approved laboratory, to verify the compatibility of the aggregate, asphalt emulsion and other additives. Perform the mix design with the same materials that will be used on the project.

Surface Preparation. Prior to operation, the contractor shall remove all existing thermoplastic striping, thermoplastic legends, and raised markers within application limits. All surfaces intended for application shall be thoroughly cleaned of all vegetation, loose material, dirt, or other objectionable material immediately before application of emulsion using a mechanical sweeper and wire hand brooms, when necessary. Clean the edges of the surface providing a full and uniformly clean width of roadway. Where mud or earth exists, remove it in advance and allow surface to thoroughly dry before applying emulsion. Mowing or removal of shoulder vegetation and or brush may be necessary for proper application.

If cracks cannot be adequately filled by emulsion, fill with proper asphalt material or hot pour joint sealer conforming to **Section 807.03.01.** If applicable, apply cover aggregate before applying chip seal application.

4. APPLICATION.

Application Rates of Materials for Single Layer Chip Seal.

Properties	Minimum	Maximum
Application rate of emulsion, gal/sqyd	0.30	0.38
Emulsion temperature, F	120	180
Application rate of aggregate, lb/sqyd	15	20

Application Rates of Materials for Double Layer Chip Seal.

Properties	Total Rate Minimum	Total Rate Maximum	Minimum For Any Layer	Maximum For Any Layer
Application rate of emulsion, gal/sqyd	0.60	0.76	0.30	0.38

Emulsion temperature, F	120	180	120	180
Application rate of aggregate, lb/sqyd	30	40	15	20

Double chip seal treatment shall consist of two single layers. The first layer of material shall be applied at 40-50% of the total combined material rate. The second layer shall be applied at 50-60% of the total combined material rate. When a double layer of chip application is required the second layer of chip seal shall not be applied until three days after placement of the first layer. Sweep the first layer before starting the construction of the second layer of chip seal.

Application of Emulsion. Heat and maintain emulsion between 120 and 180 degrees F during application. Polymer modified emulsion shall be applied when air temperature is at least 50 degrees F and rising and a minimum surface temperature of 70 degrees F. Emulsion shall be applied using a pressure distributor in a uniform, continuous quantity at specified rates.

Keep the nozzles of the spray bar clean at all times. Immediately make any streaked areas uniform by use of a hand hose equipped with a nozzle.

Do not allow distributor to apply asphalt material ahead of aggregate spreader for more than 150 feet.

When the chip seal treatment is constructed in half-widths, provide complete coverage by overlapping the 2 applications approximately 4 inches along centerline and sweep the centerline before constructing the adjoining lane.

When a double layer of chip application is required the second layer of chip seal shall not be applied until three days after placement of the first layer. Sweep the first layer before starting the construction of the second layer of chip seal.

Prevent spotting or discoloring curbs, headwalls, and other structures. When such discolorations occur, remove them at no expense to KYTC.

Provide and use building paper or other materials approved by the engineer to provide a clean and proper at every construction joint. A straight edge shall be used to ensure a consistent and even joint.

Aggregate. Aggregate cover material shall be cleaned to remove dirt and dust, ensuring appropriate adhesion with emulsion. Aggregate shall be damp during application. Aggregate shall only be stockpiled once per project and must be placed on a pad clean from unwanted materials and debris. The Department will sample and test the aggregate from the stockpile to determine if the aggregate meets the washed gradation and the percent passing the No. 200 sieve requirements before any placement of the aggregate. Reject the stockpile when the aggregate doesn't meet the requirements. Prior to breaking of the emulsion, aggregate shall be continuously and evenly spread with the proper equipment at the specified rates. Spreading equipment shall not contact the asphalt material before it is covered with aggregate. Precautions should be taken not to exceed the designated rate by more than 5 percent. Use hand brooms to correct any irregularities.

Rolling. Two self-propelled pneumatic tire rollers and one double steel wheel roller shall be used for the required rolling of the aggregate. This shall be done no more than 5 minutes after the spreading of aggregate. Operate the rollers parallel to the centerline in a manner preventing the dislodgment of newly applied aggregate. Rolling should proceed from the outer edge to the center, with each pass overlapping the previous by one-half. Rolling shall consist of at least 2 passes or more with pneumatic tire roller, followed by at least 1 pass with the double steel wheel roller when the engineer directs. Roller speeds shall not exceed 5 mph. Additional roller patterns and/or equipment may be required as directed by the engineer depending on speed of application.

Sweeping. Power sweep and/or vacuum the completed application to remove all excess aggregate after each day(s) of production. The curing time shall be determined by the engineer.

Surface shall be swept or vacuumed prior to any striping or other surface applications. If directed by the engineer, water may be applied during sweeping process. A second sweeping may be required following the initial application day. If applying an additional surface treatment over the chip seal, it may be opened to traffic for an amount of time specified in the contract or as directed by the engineer. At the end of each day(s) production, the treated portion of the roadway shall be swept.

Little to no aggregate shall be remaining on the following:

Entrances
Exit aprons
Intersections
Crossroads
Driveways
Lawns
Curbs
Shoulders

5. MEASUREMENT.

Asphalt Material. KYTC will measure the quantity in tons according to **Section 109.**

Aggregate. KYTC will measure the quantity in sqyd according to **Section 109.**

6. PAYMENT.

Contrary to **Section 805.15**, the department will apply a 50 percent reduction on the bid price for asphalt seal aggregate when exceeding 2 percent on the No. 200 sieve. The washed gradation acceptance will follow section 805.15 guidelines for the aggregate size used for the asphalt seal aggregate. KYTC will make payment for the completed and accepted quantities under the following:

Pay Item	**Pay Unit**
Polymer Modified Emulsified Asphalt	Ton
Asphalt Seal Aggregate	Sqyd

KYTC will consider payment as full compensation for all work required under this section.