

**KYTC Supplemental Specifications to the
Standard Specifications for Road and Bridge Construction, 2019 Edition
Effective with the March 21, 2024 Letting**

Section:	103.06 EXECUTION OF CONTRACT
Revision:	Replace the first sentence with the following: Within 30 calendar days after receiving the Contract, execute and return to the Department along with the following items:
Section:	103.06 EXECUTION OF CONTRACT
Revision:	Remove the requirement to print documents, by replacing the second sentence in the second paragraph with the following: Execute these documents.
Section:	103.08 FAILURE TO EXECUTE CONTRACT
Revision:	Change the allowable time before possible nullification of award from 15 to 30 calendar days, by replacing the first sentence with the following: The bidder's failure to execute the Contract or to comply with all requirements of Subsection 103.06 within 30 calendar days after receipt of the Contract will be just cause for the Department to nullify the award.
Section:	105.03 Record Plans
Revision:	Replace the last sentence in this subsection with the following: The Department will furnish the Contractor with an electronic file copy of the Record Plans at the Pre-Construction conference.
Section:	103.06.01 (incorrect in book) Commercial General Liability
Page:	107-9
Revision:	Re-number section as 107.18.01
Section:	103.06.02 (incorrect in book) Business Automobile Liability
Page:	107-9
Revision:	Re-number section as 107.18.02
Section:	103.06.03 (incorrect in book) Workers' Compensation Insurance and Employer's Liability Insurance
Page:	107-9
Revision:	Re-number section as 107.18.03
Section:	108.01 SUBCONTRACTING OF CONTRACT
Revision:	Replace the second sentence in the fifth paragraph with the following: All payments to subcontractors must be entered into AASHTOWare Project Civil Rights and Labor as proof that payment has been made to the subcontractor within the 7 calendar days.
Section:	108.01 SUBCONTRACTING OF CONTRACT
Revision:	Change the last word in the fifth paragraph from 'request' to 'requirement'
Section:	109.07.01 Liquid Asphalt
Revision:	Remove the following items from the list of 'Adjustable Contract Items':

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	Asphalt Curing Seal Asphalt Prime Coat Asphalt Material for Tack Asphalt Materials for Preventive Maintenance applications Asphalt Seal Coat									
Section:	109.07.02 Fuel									
Revision:	Change the Fuel/Work ratio for the items listed below:									
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>Item</u></th> <th style="text-align: center;"><u>Threshold Quantity</u></th> <th style="text-align: center;"><u>Fuel/Work</u></th> </tr> </thead> <tbody> <tr> <td>Drainage Blanket, Asphalt Treated</td> <td style="text-align: center;">5,000 tons</td> <td style="text-align: center;">0.75</td> </tr> <tr> <td>Asphalt Mixtures for Pavements or Shoulders</td> <td style="text-align: center;">3,000 tons</td> <td style="text-align: center;">0.75</td> </tr> </tbody> </table>	<u>Item</u>	<u>Threshold Quantity</u>	<u>Fuel/Work</u>	Drainage Blanket, Asphalt Treated	5,000 tons	0.75	Asphalt Mixtures for Pavements or Shoulders	3,000 tons	0.75
<u>Item</u>	<u>Threshold Quantity</u>	<u>Fuel/Work</u>								
Drainage Blanket, Asphalt Treated	5,000 tons	0.75								
Asphalt Mixtures for Pavements or Shoulders	3,000 tons	0.75								
Section:	214.03 CONSTRUCTION									
Revision:	Add the following as the final paragraph in the section: Demonstrate to the Engineer that the placement technique prevents damage to the fabric.									
Section:	214.03 CONSTRUCTION									
Subsection:	214.03.03 Slope Protection and Channel Lining									
Revision:	Replace the first paragraph with the following: Place geotextile fabric for slope protection / geotextile fabric for channel lining with the long dimension parallel to the channel or toe of slope.									
Section:	214.03 CONSTRUCTION									
Subsection:	214.03.04 Underdrains									
Revision:	Replace the first sentence in the subsection with the following: Place and shape geotextile fabric for subsurface drainage to the sides and bottom of the trench without stretching the fabric.									
Section:	214.03 CONSTRUCTION									
Subsection:	214.03.05 Subgrade or Embankment Foundation Stabilization									
Revision:	Rename the subsection as follows: Subgrade Stabilization / Rock Roadbed									
Section:	214.03 CONSTRUCTION									
Subsection:	214.03.05 Subgrade Stabilization / Rock Roadbed									
Revision:	Replace the first (1st) paragraph of the subsection with the following: Place geotextile fabric for stabilization, unless otherwise noted. Install with the long dimension parallel to the long dimension of the area to be covered.									

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Section:	214.03 CONSTRUCTION
Subsection:	214.03.05 Subgrade Stabilization / Rock Roadbed
Revision:	Add the following as the final paragraph in the section: Place, spread, and compact rock or backfill in such a manner that minimizes the development of wrinkles and movement in the fabric. In curves and intersections, cut the fabric and overlay appropriately. Keep the turning of tracked vehicles to a minimum to prevent displacement of the fill and damage to the fabric. Repair any damage caused during placement or by vehicles.
Section:	214.03 CONSTRUCTION
Subsection:	214.03.06 Drainage Blanket
Revision:	Replace the first sentence in the subsection with the following: Place geotextile fabric for subsurface drainage with the long dimension parallel to the long dimension of the area to be covered.
Section:	214.03 CONSTRUCTION
Subsection:	214.03.07 Embankment Foundation Working Platform
Revision:	Add the following as new subsection 214.03.07: 214.03.07 Embankment Foundation Working Platform. To facilitate embankment construction over soft ground, place geotextile fabric for separation unless otherwise specified. Place as directed in the plans or by the Engineer. Install with the long dimension parallel to the long dimension of the area to be covered. Leave surface vegetation in place. During back dumping and spreading, do not allow the wheels of trucks, dozer blades, and other equipment to come into direct contact with the fabric. Spread the material in the direction of the fabric overlap. To avoid damage to the geotextile fabric, dump rock fill behind the leading edge of the rock layer, then blade into place. Repair any damage caused during placement or by vehicles. If large fabric wrinkles develop during spreading operations, fold and flatten the wrinkles in the direction of spreading. Avoid large folds which reduce the fabric overlap width.
Section:	214.05 PAYMENT
Revision:	Remove the following from list of pay items: 02596-02599 Fabric-Geotextile, Type Square Yard
Section:	214.05 PAYMENT
Revision:	Add the following to the list of pay items: 02602 Fabric-Geotextile Class 1 Square Yard 02603 Fabric-Geotextile Class 2 Square Yard
Section:	215.02 MATERIALS
Subsection:	215.02.01 Geotextile Fabric
Revision:	Replace the text in this subsection with the following: Conform to Section 843.

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Section:	215.03 CONSTRUCTION																							
Revision:	Replace the second sentence in the final paragraph with the following: Place a protective ring using geotextile fabric for subsurface drainage and separation; clean No. 2 aggregate or shot rock of similar size, quality, and gradation approved by the Engineer; and crushed aggregate.																							
Section:	215.05 PAYMENT																							
Revision:	Remove the following from list of pay items: 02596-02599 Fabric-Geotextile, Type Square Yard																							
Section:	215.05 PAYMENT																							
Revision:	Add the following to the list of pay items: 02602 Fabric-Geotextile Class 1 Square Yard 02603 Fabric-Geotextile Class 2 Square Yard																							
Section:	402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures with Reclaimed Material																							
Revision:	Replace the last sentence in this section with the following: Each lot pay value will be averaged to determine the final overall bid item pay.																							
Section:	402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures with Reclaimed Material																							
Part:																								
Table:	LOT PAY ADJUSTMENT SCHEDULE COMPACTION OPTION A BASE AND BINDER MIXES																							
Revision:	AV Replace the table with the following:																							
	<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="3" style="text-align: center;">AV</th> </tr> <tr> <th rowspan="2" style="text-align: center;">Pay Value</th> <th colspan="2" style="text-align: center;">Test Result (%)</th> </tr> <tr> <th style="text-align: center;">AADTT Class 2</th> <th style="text-align: center;">AADTT Class 3 or 4</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1.05</td> <td style="text-align: center;">3.2-3.8</td> <td style="text-align: center;">3.2-3.8</td> </tr> <tr> <td style="text-align: center;">1.00 + 0.1 (AV-3.0)</td> <td style="text-align: center;">1.5-3.1</td> <td style="text-align: center;">2.0-3.1</td> </tr> <tr> <td style="text-align: center;">1.00 + 0.1 (4.5-AV)</td> <td style="text-align: center;">3.9-6.0</td> <td style="text-align: center;">3.9-6.0</td> </tr> <tr> <td style="text-align: center;">0.75</td> <td style="text-align: center;">6.1-6.5</td> <td style="text-align: center;">----</td> </tr> <tr> <td style="text-align: center;">(1)</td> <td style="text-align: center;">< 1.5 or > 6.5</td> <td style="text-align: center;">< 2.0 or > 6.0</td> </tr> </tbody> </table>	AV			Pay Value	Test Result (%)		AADTT Class 2	AADTT Class 3 or 4	1.05	3.2-3.8	3.2-3.8	1.00 + 0.1 (AV-3.0)	1.5-3.1	2.0-3.1	1.00 + 0.1 (4.5-AV)	3.9-6.0	3.9-6.0	0.75	6.1-6.5	----	(1)	< 1.5 or > 6.5	< 2.0 or > 6.0
AV																								
Pay Value	Test Result (%)																							
	AADTT Class 2	AADTT Class 3 or 4																						
1.05	3.2-3.8	3.2-3.8																						
1.00 + 0.1 (AV-3.0)	1.5-3.1	2.0-3.1																						
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Section:	402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures with Reclaimed Material
Part:	LOT PAY ADJUSTMENT SCHEDULE COMPACTION OPTION A SURFACE MIXES
Table:	AV
Revision:	Replace the table with the following:

AV		
Pay Value	Test Result (%)	
	AADTT Class 2	AADTT Class 3 or 4
1.05	3.2-3.8	3.2-3.8
1.00 + 0.1 (AV-3.0)	1.5-3.1	2.0-3.1
1.00 + 0.1 (4.5-AV)	3.9-6.0	3.9-6.0
0.75	6.1-6.5	----
<i>d)</i>	< 1.5 or > 6.5	< 2.0 or > 6.0

Section:	403.03.03 Preparation of Mixture
Part:	C)
Subpart:	5)
Revision:	Add new subpart 5 and Table. 5) Mix Performance Verification. FOR ALL 0.5-inch and 0.38-inch nominal surface mixtures with PG 64-22, ensure that the following limits are met or exceeded to obtain approval:

Mix Design Performance Limits		
Class	Hamburg Passes¹ (min)	KYCT Index² (min)
2	7,500	95
3	10,000	95
4	10,000	125

¹ Mixture rutting resistance shall meet the above number of passes for a critical rut depth of ½” (12.5 mm). The “Hamburg Passes” value is determined by averaging the results from both sides of the test.

² Test in accordance with KM 64-450.

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Section:	501.03.019 Surface Tolerances and Testing Surface
Part:	B) Ride Quality
Subpart:	2) Category A Requirements
Revision:	Replace the last sentence in the first paragraph with the following: At the Department's discretion, a pay deduction of \$1200 per 0.1-lane-mile section may be applied in lieu of corrective work.
Section:	501.03.19
Part:	B)
Subpart:	3) Category B Requirements
Revision:	Replace the last sentence in the first paragraph with the following: At the Department's discretion, a pay deduction of \$750 per 0.1-lane-mile section may be applied in lieu of corrective work.
Section:	508.03 CONSTRUCTION
Revision:	Replace the second sentence with the following: Use Class AA concrete according to Subsection 601.03.
Section:	508.05 Payment
Revision:	Add the following codes to available Concrete Median Barrier, Type: 01968-01977

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Section:	601.03.03 Proportioning and Requirements																
Part:	B) Mortar, Grout, Flowable Fill, and Self-Consolidating Concrete																
Subpart:	5) Flowable Fill																
Revision:	Replace subpart 5) with the following:																
	<p>5) Flowable Fill. Use flowable fill consisting of a mixture of cement, sand, fly ash, water, and other materials the Engineer approves. Contrary to Section 844, do not allow the loss on ignition for Class F fly ash to exceed 12 percent. Ensure that the concrete producer certifies mix proportions for flowable fill as follows:</p> <p>a) Flowable Fill for Pipe Backfill (<u>excavatable</u>). Proportion as follows, per cubic yard batch:</p> <table border="0"> <tr> <td>Cement</td> <td>30 pounds</td> </tr> <tr> <td>Fly Ash, Class F</td> <td>300 pounds</td> </tr> <tr> <td>Natural Sand (S.S.D.)</td> <td>3,000 pounds</td> </tr> <tr> <td>Water (Maximum)</td> <td>550 pounds</td> </tr> </table> <p>b) Flowable Fill for Bridge End Bent Backfill. Proportion as follows, per cubic yard batch:</p> <table border="0"> <tr> <td>Cement</td> <td>100 pounds</td> </tr> <tr> <td>Fly Ash, Class F or Class C</td> <td>300 pounds</td> </tr> <tr> <td>Natural or Crushed Sand (S.S.D.)</td> <td>2,950 pounds</td> </tr> <tr> <td>Water (Maximum)</td> <td>550 pounds</td> </tr> </table> <p>Alternate Mixtures for Flowable Fill. The Department may approve other mixtures. The mixtures may include other proportions of the above materials, Class C fly ash, chemical admixtures, <u>air entrainment, air entraining admixture designed for use in flowable fill, foaming agents</u>, or aggregate not conforming to the Standard Specifications. <u>The contractor shall submit a mix design that will produce a non-segregating mixture meeting the following properties and verified by trial batch.</u></p> <ul style="list-style-type: none"> • <u>Flow Consistency (min)</u> <u>ASTM D6103</u> 8" • <u>Compressive – Pipe Backfill (min 28 day)</u> <u>ASTM D4832</u> 50psi • <u>Compressive – End Bent Backfill (min 28 day)</u> <u>ASTM D4832</u> 250psi • <u>Compressive – Pipe Backfill (max 90 day)</u> <u>ASTM D4832</u> 120psi • <u>Air Content (max)</u> <u>ASTM D6023</u> 30% • <u>Early Opening</u> <u>Support min 170 lb individual</u> <u>Visual Determination</u> Within 3 hours <p><u>When proposing an alternate mix</u>, make and test a trial batch of at least 4 cubic yards to ensure that the mix will have flow and density characteristics suited for the intended use. Use the ingredients, proportions, and equipment intended for the project, including batching, mixing, and delivery.</p> <p>The Department will observe all phases of the trial batching for approval. Ensure the proposed mixture is proportioned to obtain a minimum flow of 8 inches when tested with a 3 by 6 inch open ended cylinder modified flow test and meets applicable strength requirements. Ensure additional requirements, as stated <u>above</u>, for time of bleeding and time to achieve firmness are met when appropriate for application. Submit the proposed mixture proportions and appropriate test results to the Engineer for review and approval. When the mixture is proprietary, comply with Subsection 107.05.</p> <p>The Department will cast, cure, and break test cylinders from the flowable fill trial batch according to ASTM D 4832 using 4x8 cylinders. Prior to completion of the 28 day curing period, transport the test cylinders to the MCL for compressive strength testing. Obtain an average compressive strength of 50 to 100 psi at 28 days for application as pipe backfill or minimum compressive strength of 250 psi at 28 days for application as bridge end bent backfill. For applications requiring early opening to traffic or placement of pavement as soon as possible, provide a mixture that conforms to the following general guidelines:</p> <p><u>The Engineer will approve flowable fill, delivered to the project, based on certifications indicating proper proportions for the intended use.</u></p>	Cement	30 pounds	Fly Ash, Class F	300 pounds	Natural Sand (S.S.D.)	3,000 pounds	Water (Maximum)	550 pounds	Cement	100 pounds	Fly Ash, Class F or Class C	300 pounds	Natural or Crushed Sand (S.S.D.)	2,950 pounds	Water (Maximum)	550 pounds
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Fly Ash, Class F or Class C	300 pounds																
Natural or Crushed Sand (S.S.D.)	2,950 pounds																
Water (Maximum)	550 pounds																

Deleted: When deviating from the above specified proportions and materials

Deleted: below

Deleted: 1) Mixture bleeds freely within 10 minutes.¶
2) Require the mixture to support a 150-pound person within 3 hours.¶

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Section:	603.03.05 Drainage
Revision:	In the eighth (8th) paragraph, remove "type IV" from the fabric references in the first (1st) and third (3rd) sentences.
Section:	607.03.02
Part:	(a) Prequalification
Revision:	Remove the following item to the list entitled "Fabricators having SBR, IBR, ABR, or CPT certification may fabricate the following": · Armored Edges
Section:	607.03.02
Part:	(a) Prequalification
Revision:	add the following items to the list entitled "AISC certification not required for the following": · Armored Edges or joints with a nominal width of 4 inches or less · Railing System Type II
Section:	609.05 PAYMENT
Revision:	add the following line to the table "Schedule for Adjusted Quantity for Depth of Cover Deficiency" Depth of Cover Deficiency (inches) +0.26 to +0.50 ⁽⁴⁾ Quantity Adjustment Factor 0.06
Section:	609.05 PAYMENT
Part:	Note (4) under "Schedule for Adjusted Quantity for Depth of Cover Deficiency"
Revision:	Replace note (4) with the following: Quantity Adjustment Factor only applies if the Contractor elects to have the bridge deck cored as per KM 64-313. If the Contractor accepts adjustment based on the pachometer readings, this Quantity Adjustment Factor is 0.00.
Section:	615 PRECAST THREE SIDED STRUCTURES
Revision:	Insert complete Section 615
Section:	701.05 PAYMENT
Revision:	Remove the following from the list of pay items: 02600 Fabric-Geotextile Type IV for Pipe Square Yard ⁽²⁾
Section:	701.05 PAYMENT
Revision:	Add the following to the list of pay items: 02600 Fabric-Geotextile Class 2 for Pipe Square Yard ⁽²⁾
Section:	701.05 PAYMENT
Revision:	Replace "Type IV" in the item name in note ⁽²⁾ with "Class 2"

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Section:	715.02.07 "Pop" Fasteners
Revision:	Remove this section in its entirety.
Section:	715.01 DESCRIPTION
Revision:	Replace the second sentence with the following: Panel Signs may be ground mounted, overhead structure mounted, or bridge mounted signs
Section:	715.02.03 Steel Reinforcement
Revision:	Change section reference from 602 to 811.
Section:	
Revision:	715.03 CONSTRUCTION Remove all but the first paragraph from this Section. 715.03 will now read as follows: The Department may inspect fabrication and erection work. The Department will perform a day and night inspection after the installation is complete.
Section:	715.03.01 Location
Revision:	Remove the first and fourth sentences from this Section, and insert 'to the plans' into the final sentence. The Section will now read as follows: Consider sign locations specified in the Plans as approximate only. Determine the exact location for each sign and obtain the Engineer's approval. Center overhead signs over the lane or lanes to which they apply. Allow for differences in elevation across the full shoulder width, as specified in the Plans, in maintaining the required 18-foot minimum vertical clearance to the bottom of the lowest parts of the signs or supports for overhead signs. Submit all proposed revisions to the plans in writing to the Engineer for written approval.
Section:	715.03.02 Messages
Revision:	Delete entire Section
Section:	715.03.03 Attachment
Revision:	Renumber as 715.03.02 Attachment
Section:	715.03.02 Attachment
Revision:	Replace section with the following: Letters, symbols, numbers, and borders are to be attached to the sign face using the 'direct applied' method.
Section:	715.03.04 Shields
Revision:	Delete entire Section
Section:	715.03.05 Covering
Revision:	Renumber as 715.03.03 Covering
Section:	715.03.06 Shop Drawings
Revision:	Renumber as 715.03.04 Shop Drawings
Section:	715.03.07 Fabrication
Revision:	Renumber as 715.03.05 Fabrication
Section:	715.03.08 Footings, Bases, and Pedestals
Revision:	Renumber as 715.03.06 Footings, Bases, and Pedestals

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Section:	715.03.06 Footings, Bases, and Pedestals
Revision:	Add the following as the first sentence in the third paragraph: Use Class A concrete according to Subsection 601.03.
Section:	715.03.09 Sign Beams and Supports
Revision:	Renumber as 715.03.07 Sign Beams and Supports
Section:	715.03.07 Sign Beams and Supports
Revision:	Remove "and Type "B" " from the third sentence in the first paragraph.
Section:	715.03.07 Sign Beams and Supports
Part:	B)
Revision:	Remove part B) Type B Beam
Section:	715.03.07 Sign Beams and Supports
Part:	C) Type C Beam
Revision:	Change part number as follows: B) Type C Beam
Section:	715.03.07 Sign Beams and Supports
Part:	C) Type D Breakaway Supports
Revision:	New part C) after removal of Type B Beam from list with text as follows: Specifications for Type D breakaway supports are listed on the details sheet for Type "D" supports.
Section:	715.03.10 Bridge Mounting for Signs
Revision:	Renumber section as 715.03.08 Bridge Mounting for Signs
Section:	715.03.11 Mounting Signs
Revision:	Renumber section as 715.03.09 Bridge Mounting for Signs
Section:	715.03.10 Logo Signs
Revision:	Insert new section 715.03.10 Logo Signs, with text as follows: Unless directed in the project plans, existing logo panel signs are to be kept in service during construction. Contact the logo contractor if signs are to be out of service for more than one day. Temporary installations shall be on square wood posts (with the holes drilled in the bottom, per the detail sheet, for locations not protected by guardrail, barrier wall, etc.).
Section:	715.04.03 Sign Supports
Revision:	Replace the second paragraph with the following: The Department will not measure clearing and grubbing or excavation for payment and will consider them incidental to this item of work.
Section:	715.04.06 Sign Panels
Revision:	add the following as the second paragraph in this section: The Department will not measure temporary panel signing for payment and will considered them incidental to this item of work.
Subsection:	716.03.10 Electrical Junction Box
Part:	B) Filter Fabric
Revision:	rename part B) to the following: Geotextile Fabric

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Subsection: Part: Revision:	716.03.10 Electrical Junction Box B) Geotextile Fabric Replace the first sentence the part with the following: Before the installation of the #57 aggregate and junction box, the contractor shall install geotextile fabric for subsurface drainage and separation in the bottom of hole.																				
Subsection: Revision:	725.04.06 Concrete, Class AA (for pads) Replace this subsection with the following: The Department will not measure the quantities of Concrete Class AA, excavation, or steel reinforcement for payment, and will consider them incidental to Crash Cushion Type VII, Type VI, or Type VI-T.																				
Subsection: Revision:	725.05 PAYMENT Remove the following from the list of pay items: 08104 Concrete, Class AA Cubic Yard																				
Subsection: Revision:	801.01 REQUIREMENTS Replace the first paragraph with the following: Provide Portland cement or blended hydraulic cement from approved mills listed in the Department's List of Approved Materials. Mills obtain approval by furnishing the Department certified mill test data developed over the previous 6 months along with submittal and approval of verification samples. Approved cement mill laboratories shall be AASHTO accredited in ASTM C150 test methods. Foreign cements are permitted for inclusion on the approved list provided suppliers meet the same requirements and submit an acceptable quality control plan indicating they maintain (or have the services of) a laboratory that is accredited in ASTM C150 test methods. When supplying cement with a SO3 content above the value in table I of ASTM C 150, include supportive ASTM C 1038 14-day expansion test data for the supplied SO3 content on the certification.																				
Subsection: Part: Subpart: Revision:	801.01 REQUIREMENTS 3) a) Replace the second sentence with the following: Ensure that the loss on ignition of the fly ash does not exceed 4.0 percent.																				
Section: Revision:	804.04.04 Requirements for Combined Aggregates Replace the table with the following: <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="4" style="text-align: center;">FINE AGGREGATE CONSENSUS PROPERTY REQUIREMENTS</th> </tr> <tr> <th style="text-align: center;">AADTT Class</th> <th style="text-align: center;">Design AADTT</th> <th style="text-align: center;">Uncompacted Void Content of Fine Aggregate (Percent),⁽¹⁾ Minimum</th> <th style="text-align: center;">Sand Equivalent (Percent), Minimum</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">2</td> <td style="text-align: center;"><600</td> <td style="text-align: center;">40.0</td> <td style="text-align: center;">40</td> </tr> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;">600 to 2999</td> <td style="text-align: center;">43.0</td> <td style="text-align: center;">45</td> </tr> <tr> <td style="text-align: center;">4</td> <td style="text-align: center;">>3000</td> <td style="text-align: center;">45.0</td> <td style="text-align: center;">50</td> </tr> </tbody> </table>	FINE AGGREGATE CONSENSUS PROPERTY REQUIREMENTS				AADTT Class	Design AADTT	Uncompacted Void Content of Fine Aggregate (Percent), ⁽¹⁾ Minimum	Sand Equivalent (Percent), Minimum	2	<600	40.0	40	3	600 to 2999	43.0	45	4	>3000	45.0	50
FINE AGGREGATE CONSENSUS PROPERTY REQUIREMENTS																					
AADTT Class	Design AADTT	Uncompacted Void Content of Fine Aggregate (Percent), ⁽¹⁾ Minimum	Sand Equivalent (Percent), Minimum																		
2	<600	40.0	40																		
3	600 to 2999	43.0	45																		
4	>3000	45.0	50																		

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Section: 804.01 GENERAL.
Revision: Replace the second paragraph with the following:

The Department’s List of Approved Materials includes the Aggregate Source List and the list of Class A and Class B Polish-Resistant Aggregate Sources, the Concrete Aggregate Restriction List, Lightweight Aggregate Source List, and Microsurface Aggregate Source List.

Section: 804.04.05 Microsurface.
Revision: Modify the Table as follows:

Sieve Size	Type II	Type III	Stockpile Tolerance
	% Passing	% Passing	
3/8 inch	100	100	
No. 4	90-100	70-90 70-100	± 5%
No. 8	65-90 65-90-90	45-70	± 5%
No. 16	45-70 40-70	28-50	± 5%
No. 30	30-50 25-50	19-34	± 5%
No. 50	18-30 15-30	12-25	± 4%
No. 100	10-21	7-18	± 3%
No. 200	5-15	5-15	± 2%

Section: 805.01 GENERAL.
Revision: Replace the second paragraph with the following:

The Department’s List of Approved Materials includes the Aggregate Source List, the list of Class A and Class B Polish-Resistant Aggregate Sources, the Concrete Aggregate Restriction List, Lightweight Aggregate Source List, and Microsurface Aggregate Source List.

Section: ASPHALT MIXTURES AND SEALS
Revision: Replace the table with the following:

COARSE AGGREGATE CONSENSUS PROPERTY REQUIREMENTS				
AADTT Class	Design AADTT	Coarse Aggregate Angularity (Percent)		Flat and Elongated ⁽¹⁾ (Percent), maximum
		Crushed Faces		
		≥1	≥2	
2	<600	85	80	10
3	600 to 2999	95	90	10
4	≥ 3000	100	100	10

⁽¹⁾ Criterion based on a 5:1 maximum-to-minimum ratio.

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Section:	806.03.01 General Requirements
Revision:	Revise the table with the following edited Dynamic Shear values:

PG BINDER REQUIREMENTS AND PRICE ADJUSTMENT SCHEDULE						
PG 58-28 (PG 58S-28)						
Test	Specification	100% Pay	90% Pay	80% Pay	70% Pay	50% Pay ⁽¹⁾
Original Binder						
Dynamic Shear, G*/sinδ	1.00 kPa Min.	1.00-0.95	0.94-0.90	0.89-0.85	0.84-0.80	< 0.80
Viscosity	3 Pa·s					
RTFO Residue						
Mass Loss, %	1.00 Max.	1.01-1.10	1.11-1.20	1.21-1.30	1.31-1.40	> 1.40
MSCR						
$J_{nr3.2}$, Max.	4.5 kPa ⁻¹	< 4.7	4.71-4.75	4.76-4.80	4.81-4.85	≥ 4.86
J_{nr_diff} , Max.	75 %					
PAV Aging						
BBR						
Creep Stiffness	300 MPa Max.	300-315	316-330	331-345	346-360	> 360
m-value	0.300 Min.	0.290-0.300	0.285-0.289	0.280-0.284	0.275-0.279	< 0.274
Dynamic Shear, G* sinδ @ 25 °C ⁽²⁾	5,000 kPa Max. 6,000 kPa Max.	0-5,200 0-6,200	5,101-5,300 6,201-6,300	5,301-5,400 6,301-6,400	5,401-5,500 6,401-6,500	> 5,501 > 6,501

PG 64-22 (PG 64S-22)						
Test	Specification	100% Pay	90% Pay	80% Pay	70% Pay	50% Pay ⁽¹⁾
Original Binder						
Dynamic Shear, G*/sinδ	1.00 kPa Min.	1.00-0.95	0.94-0.90	0.89-0.85	0.84-0.80	< 0.80
Viscosity	3 Pa·s					
RTFO Residue						
Mass Loss, %	1.00 Max.	1.01-1.10	1.11-1.20	1.21-1.30	1.31-1.40	> 1.40
MSCR						
$J_{nr3.2}$, Max.	4.5 kPa ⁻¹	< 4.7	4.71-4.75	4.76-4.80	4.81-4.85	≥ 4.86
J_{nr_diff} , Max.	75 %					
PAV Aging						
BBR						
Creep Stiffness	300 MPa Max.	300-315	316-330	331-345	346-360	> 360
m-value	0.300 Min.	0.290-0.300	0.285-0.289	0.280-0.284	0.275-0.279	< 0.274
Dynamic Shear, G* sinδ ⁽²⁾	5,000 kPa Max. 6,000 kPa Max.	0-5,200 0-6,200	5,201-5,300 6,201-6,300	5,301-5,400 6,301-6,400	5,401-5,500 6,401-6,500	> 5,501 > 6,501

Section:	806.03.01 General Requirements.
Revision:	Revise the Table with the following corrected values:

RTFO Residue						
Mass Loss, %	1.00 Max.	1.01-1.10	1.11-1.20	1.21-1.30	1.31-1.40	> 1.40
MSCR						
$J_{nr3.2}$, Max	0.5 kPa ⁻¹	< 4.7 <u>4.7</u>	4.71 <u>4.75</u>	4.76 <u>4.80</u>	4.81 <u>4.85</u>	≥ 4.86 <u>4.86</u>
J_{nr_diff} , Max	75 %					

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Section:	805.03.02 Physical Properties
Revision:	Replace the first 2 lines in this section with the following: Wear (Except Slag, Granite, and Sandstone) 40% maximum Wear (Granite and Sandstone) 50% maximum
Section:	814.06 MATERIALS FOR END TREATMENTS
Part:	A) Anchorage Systems
Revision:	Revise the minimum breaking strength to be 42,800, and replace reference to AASHTO M 30, Class C with AASHTO M 30, Class A.
Section:	830.02.01 Delineator Sheeting
Part:	A) Barrier Wall Delineator
Revision:	Replace text with the following: Use retroreflective sheeting conforming to ASTM D 4956, Type XI, Class 1.
Section:	830.02.01 Delineator Sheeting
Part:	B) Guardrail Delineator
Revision:	Replace text with the following: Use retroreflective sheeting conforming to ASTM D 4956, Type XI, Class 1.
Section:	830.02.01 Delineator Sheeting
Part:	C) Delineator Post
Revision:	Replace text with the following: Use retroreflective sheeting conforming to ASTM D 4956, Type XI, Class 1.
Section:	830.02.03 Drum Sheeting
Revision:	Replace text with the following: Use retroreflective sheeting conforming to ASTM D 4956. Use approved types for necessary colors on the Department's List of Approved Materials.
Section:	830.02.03 Drum Sheeting
Revision:	Add the following sentence to the end of the section: White and fluorescent orange sheeting, both Type IV or higher, will be required for all drums utilized for Maintenance of Traffic.
Section:	830.02.04 Cone and Tubular Marker Sheeting
Revision:	Rename the Section "830.02.04 Cone, Vertical Panel, and Tubular Marker Sheeting
Section:	830.02.04 Cone and Tubular Marker Sheeting
Revision:	Replace text with the following: Use retroreflective sheeting conforming to ASTM D 4956. Use approved types for necessary colors on the Department's List of Approved Materials.
Section:	830.02.04 Cone, Vertical Panel, and Tubular Marker Sheeting
Revision:	Add the following sentence to the end of the section: White and fluorescent orange sheeting, both Type IV or higher, will be required for all vertical panels, tubular markers, and 42-inch cones utilized for Maintenance of Traffic.
Section:	830.02.06 Permanent Sign Sheeting
Revision:	Replace text with the following: Use retroreflective sheeting conforming to ASTM D 4956, Type XI, Class 1.
Subsection:	834.07.05 Geotextile Filter Fabric Type IV
Revision:	Change the subsection title to the following: Geotextile Fabric
Section:	837.03 APPROVAL
Revision:	In the first sentence, replace 'AASHTO T-250' with 'KM 64-268'
Section:	837.03 APPROVAL
Revision:	Replace this section with the following: Select materials that conform to the composition and physical characteristic requirements below when evaluated in accordance with KM 64-268 or other test methods as cited. The Department will obtain samples of thermoplastic material for compliance testing to the requirements of this sections in accordance with the Department's Materials Field Sampling Manual.

**KYTC Supplemental Specifications to the
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Section:	837.03.01 Composition																																				
Revision:	Add the following sentence to the end of the paragraph: Manufacturers are to produce extruded thermoplastic in compliance with the values listed in Table 1.																																				
Section:	837.03.01 Composition																																				
Revision:	Label Composition table as new subsection '837.03.02 Table 1'.																																				
Section:	837.03.02 Physical Characteristics																																				
Revision:	Renumber subsection as 837.03.03																																				
Section:	837.06 MANUFACTURER'S TESTING																																				
Revision:	In the first sentence, replace 'AASHTO T-250' with 'KM 64-268'																																				
Section:	837.09 ACCEPTANCE OF NON-SPECIFICATION COMPLIANT THERMOPLASTIC																																				
Revision:	Add new subsection with the following text: The Department may accept thermoplastic found to be in non-conformance to the Specification Acceptance Range at a reduction in pay, see Table 2. Thermoplastic with analytical test results not conforming to the Specification Acceptance Range but within the Acceptance Range with Deduction may be accepted for incorporation into the project with applicable reductions in pay. Deductions are cumulative to a maximum of 60% reduction in pay applied to the contract unit bid price for the thermoplastic. Thermoplastic with three (3) or more analytical tests resulting in non-conformance to the Specification Acceptance Range or any analytical test result exceeding the Acceptance Range with Deduction will be rejected and removed from the project. Do not allow transfer of thermoplastic materials between projects that have analytical test results in the Acceptance Range with Deduction.																																				
Section:	837.10 Table 2																																				
Revision:	Add new subsection titled 'Table 2' with the following table: 837.10 Table 2. <table border="1" style="margin-left: 40px;"> <thead> <tr> <th colspan="4" style="text-align: center;">THERMOPLASTIC PRICE ADJUSTMENT SCHEDULE</th> </tr> <tr> <th style="text-align: center;">Analytical Test</th> <th style="text-align: center;">Specification Acceptance Range</th> <th style="text-align: center;">Acceptance Range with Deduction</th> <th style="text-align: center;">Deduction Applied to Unit Cost</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Binder, %</td> <td style="text-align: center;">18.0 min.</td> <td style="text-align: center;">16.0 -17.9</td> <td style="text-align: center;">50%</td> </tr> <tr> <td style="text-align: center;">Glass Beads % (Premixed)</td> <td style="text-align: center;">30-40</td> <td style="text-align: center;">28-30</td> <td style="text-align: center;">20%</td> </tr> <tr> <td style="text-align: center;">Titanium Dioxide, % for white</td> <td style="text-align: center;">10.0 min.</td> <td style="text-align: center;">9.0 -9.9</td> <td style="text-align: center;">20%</td> </tr> <tr> <td style="text-align: center;">Calcium Carbonate and Inert Fillers for white.</td> <td style="text-align: center;">42.0 max.</td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">Calcium Carbonate and Inert Fillers for Yellow.</td> <td style="text-align: center;">50.0 max.</td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">Heavy Metals Content</td> <td style="text-align: center;">Comply with 40 CFR 261</td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">Color</td> <td style="text-align: center;">6.0 ΔE*</td> <td style="text-align: center;">6.0 ΔE*- 8.0 ΔE*</td> <td style="text-align: center;">10%</td> </tr> </tbody> </table>	THERMOPLASTIC PRICE ADJUSTMENT SCHEDULE				Analytical Test	Specification Acceptance Range	Acceptance Range with Deduction	Deduction Applied to Unit Cost	Binder, %	18.0 min.	16.0 -17.9	50%	Glass Beads % (Premixed)	30-40	28-30	20%	Titanium Dioxide, % for white	10.0 min.	9.0 -9.9	20%	Calcium Carbonate and Inert Fillers for white.	42.0 max.			Calcium Carbonate and Inert Fillers for Yellow.	50.0 max.			Heavy Metals Content	Comply with 40 CFR 261			Color	6.0 ΔE*	6.0 ΔE*- 8.0 ΔE*	10%
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Subsection:	844.01 FLY ASH REQUIREMENTS																																				
Revision:	Replace the first paragraph with the following, in order to increase the loss on ignition to 4.0 percent: For fly ash added to concrete mixtures as a separate ingredient, conform to ASTM C 618, Class F or Class C, except ensure that the loss on ignition does not exceed 4.0 percent or 6.0 percent for fly ash receiving an approved chemical treatment.																																				