

June 1, 2016

SUBJECT: FAP Route 344 (US 45/Lake St.) Section (45&45X)RS-1 Lake County Contract No. 62A07 Item No. 22, June 10, 2016 Letting Addendum A

NOTICE TO PROSPECTIVE BIDDERS:

Attached is an addendum to the plans or proposal. This addendum involves revised and/or added material.

1. Revised pages 36-39 of the Special Provisions

Prime contractors must utilize the enclosed material when preparing their bid and must include any Schedule of Prices changes in their bidding proposal.

Bidders using computer-generated bids are cautioned to reflect any and all Schedule of Prices changes, if involved, into their computer programs.

Very truly yours,

Maureen M. Addis, P.E. Acting Engineer of Design and Environment

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By: Ted B. Walschleger, P. E. Engineer of Project Management

cc: John Fortmann, Region 1, District 1; Tim Kell; Estimates

MS/ck

In addition, no visible pavement distresses shall be present such as, but not limited to, segregation, excessive coarse aggregate fracturing or flushing.

<u>Basis of Payment:</u> Payment will be based on the calculation of the Composite Pay Factor using QA results for each mix according to the "QCP Payment Calculation" document.

<u>Dust / AC Ratio</u>. A monetary deduction will be made using the pay adjustment table below for dust/AC ratios that deviate from the 0.6 to 1.2 range. If the tested sublot is outside of this range, the Department will test the remaining sublots for Dust / AC pay adjustment.

Range	Deduct / sublot	
0.6 ≤ X ≤ 1.2	\$0	
$0.5 \le X < 0.6$ or $1.2 < X \le 1.4$	\$1000	
$0.4 \le X < 0.5$ or $1.4 < X \le 1.6$	\$3000	
X < 0.4 or X > 1.6	Shall be removed and replaced	
1/ Deservet exclusion OMA		

Dust / AC Pay Adjustment Table^{1/}

1/ Does not apply to SMA.

HOT-MIX ASPHALT – LONGITUDINAL JOINT SEALANT

Effective: March 1, 2016

Revised: May 26, 2016

Add the following to Article 406.02 of the Standard Specifications.

"(d) Longitudinal Joint Sealant (LJS) (Note 2.)

Note 2. The bituminous material used for the LJS shall be according to the following table. Elastomers shall be added to a base asphalt and shall be either a styrene-butadiene diblock or triblock copolymer without oil extension, or a styrene-butadiene rubber. Air blown asphalt, acid modification, or other modifiers will not be allowed. LJS in the form of pre-formed rollout banding may also be used.

Test	Test Requirement	Test Method
Dynamic shear @ 82°C (unaged),	1.00 min.	AASHTO T 315
G*/sin δ, kPa		
Creep stiffness @ -18°C (unaged),	300 max.	AASHTO T 313
Stiffness (S), MPa	0.300 min.	
m-value		
Ash, %	6.0 max.	AASHTO T 111
Elastic Recovery,		ASTM D 6084
100 mm elongation, cut immediately,	58 min.	(Procedure A)
25°C, %		
Separation of Polymer,		ITP Separation of
Difference in °C of the softening point	3 max.	Polymer from
(ring and ball)		Asphalt Binder"

Add the following to Article 406.03 of the Standard Specifications.

"(j) Longitudinal Joint Sealant (LJS) Pressure Distributor (Note 2.)

(k) Longitudinal Joint Sealant (LJS) Melter Kettle (Note 3.)

Note 2. When a pressure distributor is used to apply the LJS, the distributor shall be equipped with a heating and recirculating system along with a functioning auger agitating system or vertical shaft mixer in the hauling tank to prevent localized overheating.

Note 3. When a melter kettle is used to transport and apply the LJS longitudinal joint sealant, the melter kettle shall be an oil jacketed double-boiler with agitating and recirculating systems. Material from the kettle may be dispensed through a pressure feed wand with an applicator shoe or through a pressure feed wand into a hand-operated thermal push cart."

Revise Article 406.06(g)(2) of the Standard Specifications to read:

"(2) Longitudinal Joints. Unless prohibited by stage construction, any HMA lift shall be complete before construction of the subsequent lift. The longitudinal joint in all lifts shall be at the centerline of the pavement if the roadway comprises two lanes in width, or at lane width if the roadway is more than two lanes in width.

When stage construction prohibits the total completion of a particular lift, the longitudinal joint in one lift shall be offset from the longitudinal joint in the preceding lift by not less than 3 in. (75 mm). The longitudinal joint in the surface course shall be at the centerline of the pavement if the roadway comprises two lanes in width, or at lane width if the roadway is more than two lanes in width.

A notched wedge longitudinal joint shall be used between successive passes of HMA binder course that has a difference in elevation of greater than 2 in. (50 mm) between lanes on pavement that is open to traffic.

The notched wedge longitudinal joint shall consist of a 1 to 1 1/2 in. (25 to 38 mm) vertical notch at the lane line, a 9 to 12 in. (230 to 300 mm) wide uniform taper sloped toward and extending into the open lane, and a second 1 to 1 1/2 in. (25 to 38 mm) vertical notch at the outside edge.

The notched wedge longitudinal joint shall be formed by the strike off device on the paver. The wedge shall then be compacted by the joint roller.

When using a notched wedge joint, the bituminous material specified for the mainline tack coat shall be applied to the entire face of the longitudinal joint immediately prior to placing the adjacent lift of binder. The material shall be uniformly applied at a rate of 0.05 to 0.1 gal/sq yd (0.2 to 0.5 L/sq m).

When the use of longitudinal joint sealant (LJS) is specified, it shall be applied for all lifts of paving excluding lifts of IL-4.75 mm mixtures. The surface to which the LJS is applied shall be dry and cleaned of all dust, debris, and any substances that will prevent the LJS from adhering. Cleaning shall be accomplished by means of a sweeper/vacuum truck, power broom, air compressor or by hand. The LJS may be placed before or after the tack or prime coat. When placed after the tack or prime coat, the tack or prime shall be fully cured prior to placement of the LJS.

The LJS application shall be centered under the joint of the HMA lift being constructed within 2 in. (50 mm) of the joint.



The width and minimum application rate shall be according to the following table:

LJS Application Rate Table			
Overlay Thickness in. (mm)	LJS Width "W" in. (mm)	Application Rate ^{1/} Ib/ft (kg/m)	
HMA Mixtures ^{2/}			
3/4 (19) 1 (25) 1 1/4 (32) 1 1/2 (38)	18 (450) 18 (450) 18 (450) 18 (450)	0.88 (1.31) 1.15 (1.71) 1.31 (1.95) 1.47 (2.19)	
1 3/4 (44) 2 (50) 2 1/4 (60)	18 (450) 18 (450) 18 (450) 18 (450)	1.63 (2.43) 1.80 (2.68) 1.96 (2.92)	
2 1/2 (63) 2 3/4 (70) 3 (75)	18 (450) 18 (450) 18 (450) 18 (450)	2.12 (3.16) 2.29 (3.41) 2.45 (3.65)	
3 1/4 (83) 3 1/2 (90) 3 3/4 (95)	18 (450) 18 (450) 18 (450) 18 (450)	2.61 (3.89) 2.78 (4.14) 2.94 (4.38)	
4 (100) 18 (450) 3.10 (4.62) SMA Mixtures ^{2/}			
1 1/2 (38) 1 3/4 (44) 2 (50)	12 (300) 12 (300) 12 (300)	0.83 (1.24) 0.92 (1.37) 1.00 (1.49)	

- 1/ The application rate has a surface demand for liquid included within it. The nominal thickness of the LJS may taper from the center of the application to a lesser thickness on the edge of the application. The width and weight/foot (mass/meter) shall be maintained.
- 2/ In the event of a joint between an SMA and HMA mixture, the SMA application rate will be used.

The Contractor shall furnish to the Engineer a bill of lading for each tanker supplying material to the project. The application rate of LJS will be verified within the first 1000 ft (300 m) of the day's scheduled application length and every 6000 ft (1800 m) the remainder of the day. For projects less than 3000 ft (900 m), the rate will be verified

once. A suitable paper or pan shall be placed at a random location in the path of the placement for the LJS. After application of the LJS, the paper or pan shall be picked up and weighed. The weight per foot will be calculated. The tolerance from the plan target weight/foot (mass/meter) from the LJS Application Rate Table shall be \pm 15 percent. The Contractor shall replace the LJS in the area where the sample was taken.

The LJS shall be applied in a single pass with a pressure distributor, melter kettle, or hand applied from a roll for HMA lifts up to 2 in. (50 mm) in thickness. The LJS shall be applied in two passes for HMA lifts between 2 and 4 in. (50 and 100 mm) in thickness. At the time of installation the pavement surface temperature and the ambient temperature shall be a minimum of 40 °F (4 °C) and rising.

The LJS shall be applied at a width of not less than or greater than 1 ½ in. (38 mm) of the width specified. If the LJS flows more than 2 in. (50 mm) from the initial placement width, LJS placement shall stop and remedial action shall be taken.

When starting another run of LJS placement, suitable release paper shall be placed over the previous application of LJS to prevent doubling up of thickness of LJS.

The LJS shall be suitable for construction traffic to drive on without pickup or tracking of the LJS within 30 minutes of placement. If pickup or tracking occurs, LJS placement shall stop and damaged areas shall be repaired.

Prior to start of paving of pavement course, ensure the paver end plate and grade control device is adequately raised above the finished height of the LJS.

If The LJS shall not flush to the final surface of the HMA pavement."

Add the following paragraph after the second paragraph of Article 406.13(b) of the Standard Specifications.

"Bituminous material for longitudinal joint sealant will be measured for payment in place in feet (meters)."

Add the following paragraph after the first paragraph of Article 406.14 of the Standard Specifications.

"Longitudinal joint sealant will be paid for at the contract unit price per foot (meter) for LONGITUDINAL JOINT SEALANT."

When the LJS is specified, the longitudinal joint density testing for QC/QA, QCP, or PFP will not be required on the joint(s) with the LJS and the pay adjustments will not be applied.

RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES (D-1)

Effective: November 1, 2012

Revise: April 2, 2016

Revise Section 1031 of the Standard Specifications to read:

"SECTION 1031. RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES

Revised 6/1/16