



Illinois Department of Transportation

Memorandum

To: Regional Engineers
From: Jack A. Elston 
Subject: Special Provision for Hot-Mix Asphalt – Longitudinal Joint Sealant
Date: August 5, 2022

This special provision was developed by the Central Bureau of Materials to provide longitudinal joint sealant (LJS) in half-widths for applications, like inlays (mill and fill) or narrow stage construction, where the full width of LJS is not possible in a single application operation. It also requires a fine aggregate cover when the forecast calls for rain and traffic is to be on the LJS or when pickup/tracking is likely.

This special provision should be inserted into contracts with longitudinal joint sealant.

Designer Note: Ideally, LJS should be applied in one single 18 inch wide (full width) application centered on the joint of the HMA lift to be placed above it. LJS half-width should only be used when new HMA is only being placed on one side of the joint (e.g. inlays) or in the case of narrow stage construction requiring two half-width applications for each side of the joint. LJS is recommended on lane to lane joints and not edge joints. If both LONGITUDINAL JOINT SEALANT and LONGITUDINAL JOINT SEALANT, HALF-WIDTH are used, plans should clearly indicate the locations of each via a schedule, typical sections, and/or stage construction details.

The districts should include the BDE Check Sheet marked with the applicable special provisions for the November 18, 2022 and subsequent lettings. The Project Coordination and Implementation Section will include a copy in the contract.

80446m

HOT-MIX ASPHALT – LONGITUDINAL JOINT SEALANT (BDE)

Effective: November 1, 2022

Add the following after the second sentence in the eighth paragraph of Article 406.06(h)(2) of the Standard Specifications:

“If rain is forecasted and traffic is to be on the LJS or if pickup/tracking of the LJS material is likely, the LJS shall be covered immediately following its application with FA 20 fine aggregate mechanically spread uniformly at a rate of 1.5 ± 0.5 lb/sq yd (0.75 ± 0.25 kg/sq m). Fine aggregate landing outside of the LJS shall be removed prior to application of tack coat.”

Add the following after the first sentence in the ninth paragraph of Article 406.06(h)(2) of the Standard Specifications:

“LJS half-width shall be applied at a width of 9 ± 1 in. (225 ± 25 mm) in the immediate lane to be placed with the outside edge flush with the joint of the next HMA lift. The vertical face of any longitudinal joint remaining in place shall also be coated.”

Add the following after the eleventh paragraph of Article 406.06(h)(2):

“LJS Half-Width Application Rate, lb/ft (kg/m) ^{1/}			
Lift Thickness, in. (mm)	Coarse Graded Mixture (IL-19.0, IL-19.0L, IL-9.5, IL-9.5L, IL-4.75)	Fine Graded Mixture (IL-9.5FG)	SMA Mixture (SMA-9.5, SMA-12.5)
3/4 (19)	0.44 (0.66)		
1 (25)	0.58 (0.86)		
1 1/4 (32)	0.66 (0.98)	0.44 (0.66)	
1 1/2 (38)	0.74 (1.10)	0.48 (0.71)	0.63 (0.94)
1 3/4 (44)	0.82 (1.22)	0.52 (0.77)	0.69 (1.03)
2 (50)	0.90 (1.34)	0.56 (0.83)	0.76 (1.13)
≥ 2 1/4 (60)	0.98 (1.46)		

1/ The application rate includes a surface demand for liquid. The thickness of the LJS may taper from the center of the application to a lesser thickness on the edge of the application, provided the correct width and application rate are maintained.”

Add the following to the end of the second paragraph of Article 406.14 of the Standard Specifications:

“Longitudinal joint sealant (LJS) half-width will be paid for at the contract unit price per foot (meter) for LONGITUDINAL JOINT SEALANT, HALF-WIDTH.”