



at AUBURN UNIVERSITY

277 Technology Parkway
Auburn, Alabama 36830

May 28, 2019

Dr. Jay Bianchini, Chief Operating Officer
Mr. Steve Wallace, Vice President of Sales
Collaborative Aggregates, LLC.
100 Research Drive
Wilmington, MA 01887

Re: Retroreflectivity on the NCAT Pavement Test Track

Dear Dr. Bianchini and Mr. Wallace,

This letter is written to document results from the surface measurements made on the NCAT Pavement Test Track on May 6th, 2019.

Retroreflectivity was measured on Mississippi DOT's (MDOT) surface rejuvenation pavement test section (section S3). This pavement was originally constructed in the 2012 research cycle and, at the time of testing, had over 22 million equivalent single-axle loads (ESALs) applied. The study aims to evaluate the effectiveness of a surface-applied rejuvenator product developed by Collaborative Aggregates known commercially as Delta Mist. An application of Delta Mist was made in Track section S3B in November of 2018.

Method

Each test section is 150 feet in length, however for this study, section S3 was sub-divided into two sub-sections to accommodate two materials, resulting in two 75-foot sub-sections. Due to the shortened nature of the testable area, five measurements were made on each 10-foot centerline stripe. Measurements were recorded using a RoadVista Stripemaster 2 Touch Retroreflectometer. Section S3B contained one partial stripe and one full-length stripe. Two measurements were possible on the partial stripe and five on the full-length stripe.

Results and Discussion

A 2016 Supplemental Notice of Proposed Amendment (SNPA) to the 2009 Manual for Uniform Traffic Control Devices (MUTCD) established new minimum thresholds for retroreflectivity on longitudinal pavement markings. This documents states that retroreflectivity shall be maintained "at or above 50 mcd/m²/lx for roadways with statutory or posted speed limits of 35 mph or greater" and "at or above 100 mcd/m²/lx for "roadways with statutory or posted speed limits of 70 mph or greater." All the measured retroreflectivity values exceeded these minimum thresholds. On average, the test section showed a value of 279 mcd/m²/lx. The results for each test location are shown in Table 1.

Table 1: Retroreflectivity

Section	Stripe	Test Location and Retroreflectivity, mcd/m ² /lx				
		1	2	3	4	5
S03B	Full	275	314	248	304	245
S03B	Partial	289	277			

If additional information is required regarding retroreflectivity measurements on Delta Mist treated Track section S3B, please don't hesitate to let us know.

Sincerely,



Mr. Jason Nelson
NCAT Test Track Manager