

What's New in Preservation



Reclaimed Asphalt Pavement in Preservation





Why ???

- Lower Cost
- Sustainability
- Funding
- Use of Our Commodity
- Improve Road System



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How ???

- Research
- Study
- Collaboration
- Implementation

REYNOLDS
SEALING & STRIPING



New Mexico DEPARTMENT OF
TRANSPORTATION
MOBILITY FOR EVERYONE



Equipment Training by Etnyre



Rap Processing



Master Agreement for Processing Millings

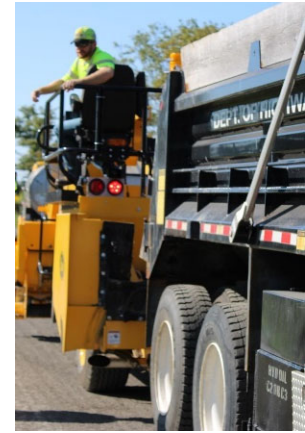
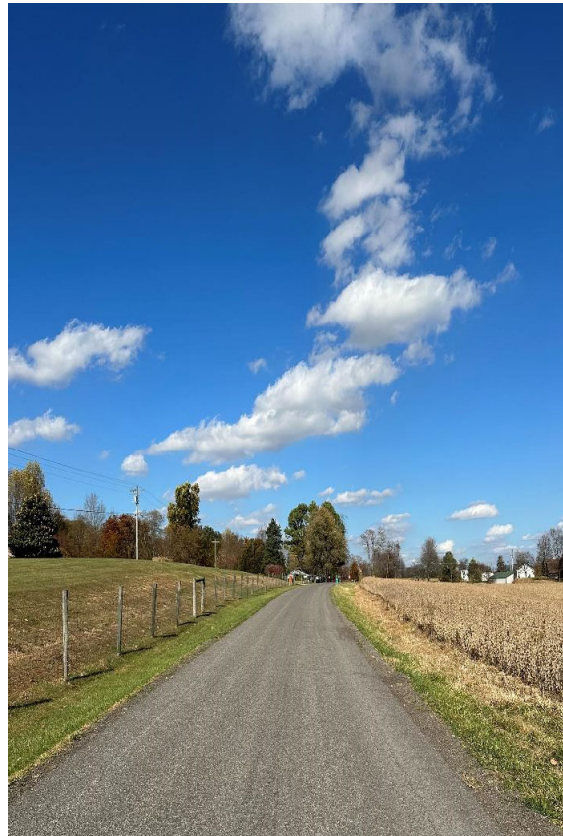






**KENTUCKY
TRANSPORTATION
CABINET**









From: [FirmenL Andrew](#)
To: [Noble-Navarro, Paris E \(KYTC\)](#)
Cc: [Young, Steven E; FirmenL Andrew](#)
Subject: KYTC / PENNDOT Partnership
Date: Wednesday, December 6, 2023 8:30:47 AM

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Paris... See below the blurb I pulled together. You can use as you see fit. I hope this helps!!!

A critical part of continuous improvement is collaboration. Over this last year, PennDOT is ecstatic about the relationship created between our Department and the Kentucky Transportation Cabinet. Our relationship has allowed us to collectively expand our system preservation programs in an innovative cost effective manner. Collectively, we (in both states) have completed pilot projects utilizing asphalt millings in lieu of virgin aggregate in a microsurfacing project. As environmental stewards, this was the 1st of its kind for both of us to more effectively utilize asphalt millings while driving efficient and cost effective preservation treatments. Our partnership continued to blossom beyond the microsurfacing pilot projects and provided us the opportunity to support your quest to produce #8 AASHTO sized aggregate from asphalt millings to be used in your Department Force seal coat program. Having completed many projects of this nature in the past, PennDOT was ecstatic to share our lessons learned and most of all work hand in hand with your wonderful Kentucky Department Force Crew to provide a quality, efficient, and cost effective seal coat project. For us, this was monumental to have our Department employees travel to another state to support and work alongside your Department employees to provide a quality service for our customers. Most importantly we greatly appreciated the opportunity to learn about your cape seal program and how the treatment has extended pavement life, reduced reflective cracking, and provided an overall quality roadway for your traveling public. We will be looking to add this treatment to our preservation program in the future and will lean on your Transportation Cabinet for support. Overall these projects are just a few examples of how important partnerships are to our industry. This partnership will continue to let us learn from each other in our quest for transportation excellence. We are beyond grateful to the entire Kentucky Transportation Cabinet for the collaboration and we look forward to our continued partnership!

Take care!!

Microsurface
Rap Trial
District 9
Chris Tuel



Extraction

January 1999

Kentucky Transportation Cabinet, Department of Highways, Division of Materials
Asphalt Mixtures Testing Section
1227 Wilkinson Boulevard, Frankfort, KY 40601-1226

Extraction/Extracted Gradation Analysis

Mix ID. # & County: 50% R.A.P. 50% Virgin Mix Type: _____
 Project Number: 232080 Site Manager ID#: _____
 Tested By: Billy D. Lab: _____
 Date Sampled: _____ Date Comp.: October 9, 2023
 Test Method(s) Used: Kentucky Method (KM) 405 and KM 433 Field Verification Date: _____

Sieve Size	Grams Retained	Percent Retained	Percent Passing	JMF
2.0 in.	0.0	0.0	100.0	
1.5 in.	0.0	0.0	100.0	
1.0 in.	0.0	0.0	100.0	
0.75 in.	0.0	0.0	100.0	
0.50 in.	0.0	0.0	100.0	
0.38 in.	0.0	0.0	100.0	
# 4	91.8	8.1	91.9	
# 8	261.2	23.1	68.8	
# 16	300.4	26.5	42.3	
# 30	188.8	16.5	25.8	
# 50	117.4	10.4	15.4	
# 100	50.4	4.5	11.0	
# 200	27.0	2.4	8.61	
Pan	12.4	1.1		
Total	1132.5			

Sample Weight (g): 1168.7
 Final Pan Weight (g): 39.9
 Original Pan Weight (g): 39.4
 Pad Gain (g): 0.5
 Weight of Pan & Aggregate (g): 2094.5
 Weight of Pan (g): 965.5
 Weight of Agg. (g): 1129.0

⊙ **Bottle Correction:**
 Weight of Bottles & Dust (g): 994.0
 Weight of Bottles (g): 991.0
 Weight of Dust (g): 3.0

○ **Mineral Matter Correction:**
 Total Volume of Effluent (mL): _____
 Volume After Sampling (mL): _____
 Weight of Ash in Sample (g): _____
 Weight of Mineral Matter (g): N/A

% Loss on Wash: _____
 % AC (Without Correction): 3.19
 % AC (With Bottle Correction): 2.93
 % AC (With Min. Matter Corr.): N/A

Deviations from Test Method: _____

Brain Young, Tate Sallee & Amanda Dees

Fine Angularity & Flat Elongated

Mix Design

RE: Rap

Sallee, Tate (KYTC-WSC)
 To: Noble-Navarro, Paris E (KYTC); Dees, Amanda G (KYTC-WSC)
 Thu 8/3/2023 9:25 AM

You replied to this message on 8/3/2023 9:25 AM.

Paris,

The aggregate section ran a Fine Aggregate Angularity and got a 43. There wasn't enough +4 material to run Flat Elongated but I don't believe that was a concern.

Thank you.

ASPHALT MIXTURES TESTING MATERIALS
 1227 Wilkinson Boulevard
 Frankfort, Kentucky 40601
 (502) 584-3160 OFFICE
 (502) 782-8389 DIRECT LINE
 REALIDKY

Teamwork



MICRO SURFACING / SLURRY SEAL DESIGN

TERRY
 ASPHALT MATERIALS, INC.
 A COLAS COMPANY

Job Identifier: Commonwealth KY-10
 KYTC 232080
 Project No. / Contract ID: T001045.0010.008-013
 Customer: SDrawer Construction

Job Mix Formula

Component	Amount
Aggregate	100%
Emulsion	11.7% ± 0.5%
Residual	7.8% ± 0.3%
Additive	1.0% ± 0.04%

Aggregate data
 Supplier: Hanson Flom Run
 Type: Type III

Sieve	% Passing	Spec.	Quantity of material
No. 4	83%	100	15.84 lb/ton
No. 8	55%	70-200	16.43 lb/ton
No. 16	32%	49-70	16.48 lb/ton
No. 30	20%	29-54	16.51 lb/ton
No. 50	13%	22-25	16.64 lb/ton
No. 100	10%	7-22	16.81 lb/ton
No. 200	7.2%	5-23	

Emulsion data
 Supplier: Terry Asphalt
 Type: G25-04F

Test on emulsion	Result	Spec.
Residual stability, pct	87.0	62.0 min.
Storage stability, pct	0.7	1 min.
Particle charge	Positive	
Penetration, 25°C, sec.	45	20-120
Spindle, pct	0.01	0.10 min.

Test on mixture

Test	Result	Spec.
Penetration, 25°C, 0.1mm	62	40-90
Duration, 25°C, cm	50	40 min.
Block resistance, 14°C, psi	50	40 min.
Stability in 75°C, psi	99.8	37.5
Softening point, °C	82.5	60°C min.

Mixture performance data

Test	Result @ 7.8%	Spec.
Mix time @ 77°F (25°C), T8113	170	120 to 320 Sec. Min.
Mix time @ 200°F (93°C), T8113	45 seconds	30 to 55 Sec. Min.
Cohesion @ 30min, T8139	35 N kg/cm	12 kg/cm Min.
Cohesion @ 60min, T8139	20 N5 kg/cm	20 kg/cm or N5 Min.
Wet adhesion, T8114	99%	75% (100% Minimum)
WTAT 1 hour, T8100	173 g/m ²	538 g/m ² Max
WTAT 4 day, T8100	408 g/m ²	807 g/m ² Max
Lateral displacement, T8147	1.5%	5% Maximum
Excess asphalt/sand adhesion, T8109	28 g/ft ²	50 g/ft ² Maximum
Schulze-Brewer and Rock, T8144	1.0 g	2.0 g max.

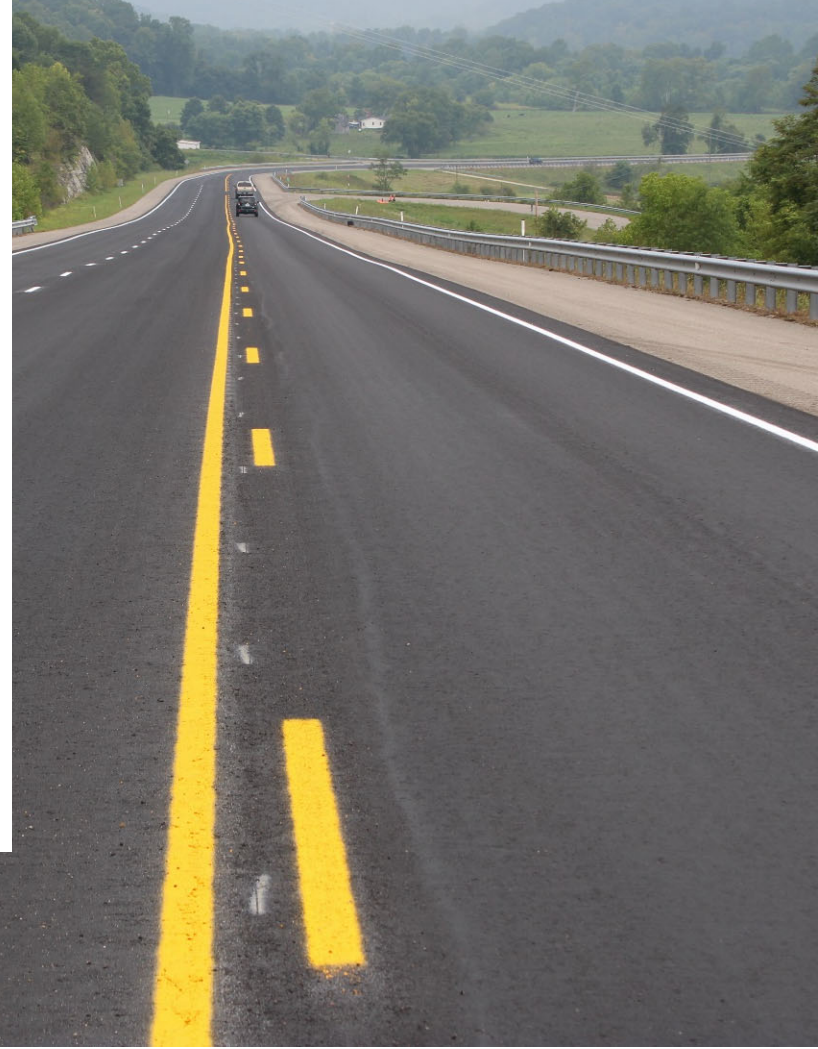
Designed by: B. Behrens
 Quality Engineer
 6/14/2023

KY 10 Rap Trial



Rap Trial in Pennsylvania





FW: Friction on KY 10



Noble-Navarro, Paris E (KYTC)

To Firment, Andrew



Reply



Reply All



Forward



Tue 10/24/2023 10:18 AM

From: Rich, Eric W (KYTC-WSC) <Eric.Rich@ky.gov>

Sent: Monday, October 23, 2023 6:15 PM

To: Dees, Amanda G (KYTC-WSC) <Amanda.Dees@ky.gov>

Subject: RE: Friction on KY 10

Amanda,

Below are the results for skid testing on the two sections of Mircro in Greenup County. I have added these sections to the testing schedule for next year and we will test it early and late if needed. There is not a lot of traffic in these sections as one is around 3K and the other is 4K ADT. Let me know if the individual hits or anything else is needed for these sections. Thanks,

KY 10 Greenup County at mile points 8.32 to 9.28 (Section of Rap M

KY 10 Greenup County at mile points 10.0 to 12.0 (Standard Micro)-

Eric Rich

Transportation Engineering Tech III

Aggregate Liaison District 6, 9, 11 & 12

Skid Data Coordinator

Cell (502) 234-8778



District 6 Training by Reynolds Sealing & Striping





Questions

