



Pavement Friction Issues on the Test Track

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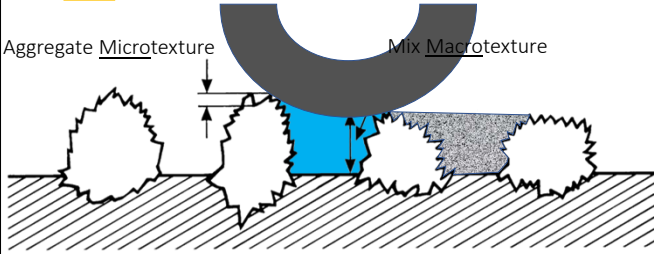
NCAT Friction Database

- Currently monitoring 160+ test sections with monthly LWST testing
 - NCAT Test Track
 - LR 159 (low volume)
 - US-280 (high volume)
- Track database goes back to 2000 (original Test Track)
- Thanks ALDOT!



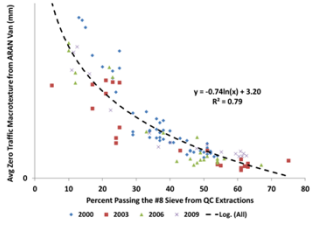
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Pavement Surface Friction Basics



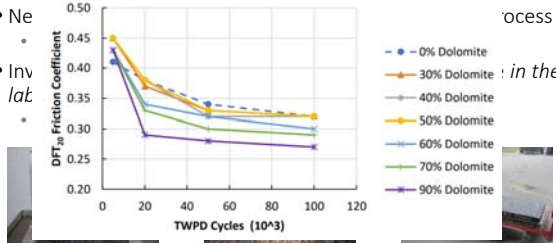
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Macrotexture



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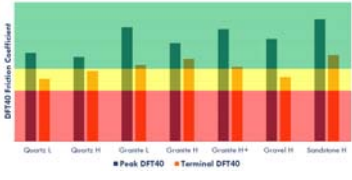

Incorporating Friction into Mix Design



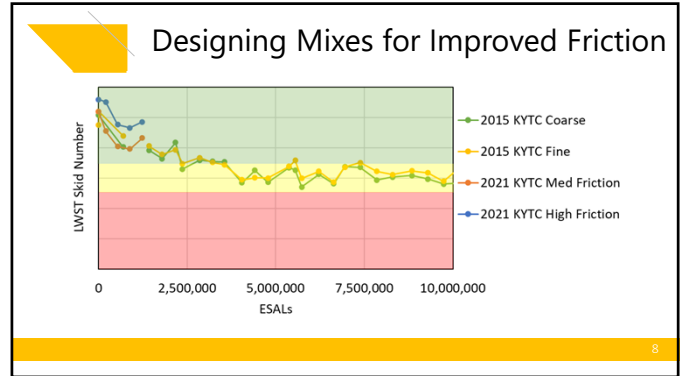
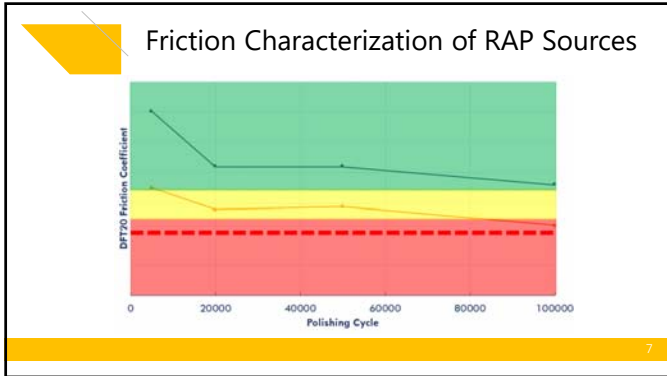
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Mix Design Targets

- Current tools are useful to design mixes to satisfy both minimum and enhanced friction criteria

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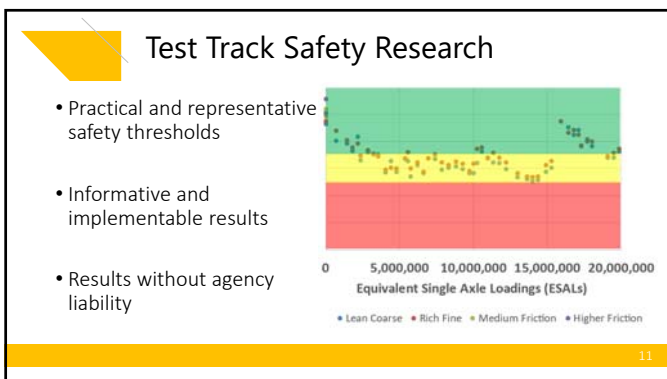
LMLC vs. PMLC Slabs & DFT

- Three examples of using friction in mix design on 2021 Track
- Testing representative mix and not aggregate characteristics
- More representative of what is actually in the field

Mix	LMLC DFT ₆₀	PMLC DFT ₆₀	Difference
#1	0.38	0.34	-0.04
#2	0.43	0.41	-0.02
#3	0.35	0.38	+0.03

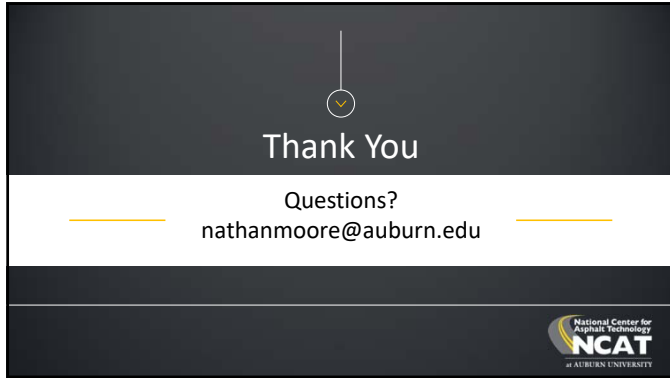
Performance vs. Aggregate Quality

- Specifying performance allows for:
 - Innovation
 - Sustainability
 - Fewer surprises
- More representative of what is actually in the field
- Specify friction performance criteria instead of quarry qualification (one day...)



Moving Forward/Research Needs

- What affects microtexture? How can a mix designer be confident in their mix?
- Link Test Track results to varying levels of traffic on open roads
- Link Test Track results to TWPD cycles to better understand polishing for friction demand



A presentation slide with a dark background. At the top center, there is a small white circle with a checkmark inside, connected to a thin vertical line above it. Below this, the text "Thank You" is centered in a white, sans-serif font. Underneath, the text "Questions?" is centered, followed by the email address "nathanmoore@auburn.edu" also centered. Two short horizontal yellow lines are positioned on either side of the email address. At the bottom right of the slide, there is a logo for the National Center for Asphalt Technology (NCAT) at Auburn University. The logo consists of a stylized yellow and blue graphic to the left of the text "National Center for Asphalt Technology" in a small font, "NCAT" in a large, bold, white font, and "at AUBURN UNIVERSITY" in a smaller font below it.

Thank You

Questions?
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