

NCAAT



RPF Feedback
9 May 2018

CONFERENCE



Joanne Muller

Overview

- Conference Focus;
- NCAT Projects Background;
- Main Highlights;
- Conclusion.



Conference Focus



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TRACK & PARTNERSHIPS BACKGROUND



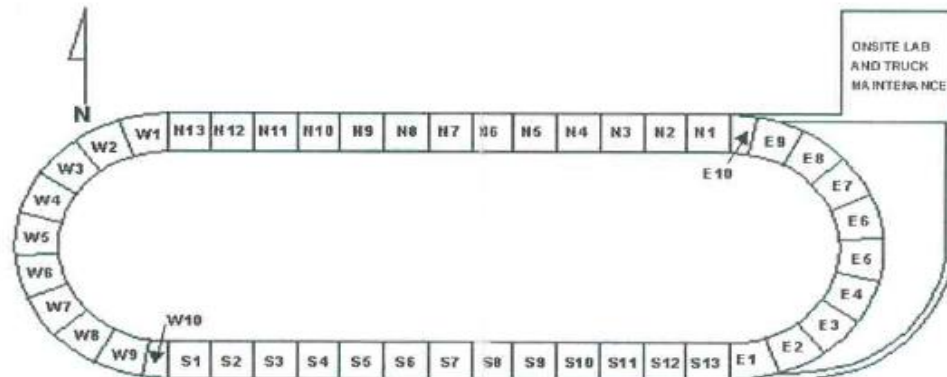
THE NCAT TEST TRACK OVAL



Situated on Lee Road 151, Opelika, Alabama, USA

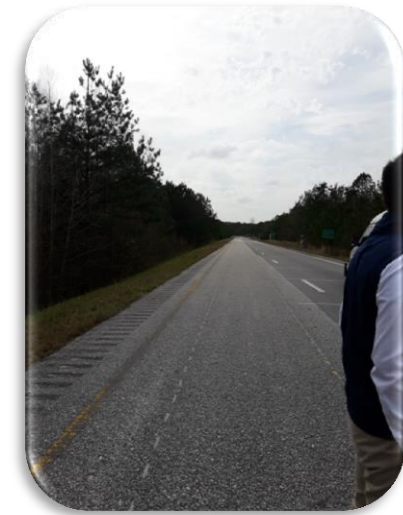
NCAT Test Track Background

- 1.7mile oval track;
- Two lane + Shoulders;
- 46 x 200ft test sections;
 - Material hauled from sponsorship state according to required design
 - Constructed using sponsor state specified practices



NCAT Test Track...

- Currently on 6th cycle;
- Test cycles – 3 year length
 - Includes :
 - Sponsorship, Planning, Design and Construction
 - Trafficking and continual performance evaluation – **10 M ESALs**
 - Final review and end-of-life– plan going forward



THE NCAT PRESERVATION STUDY SECTIONS



Lee Road 159

US 280



NCAT Preservation Sections



- Lee Road 159:
 - Under study for the past 6 years
 - Quarry and hot mix plant access road;
 - Actual load records and counts from incoming and out going vehicles;
 - ESAL Count to date:
 - 850K ESALs**
 - 60K ESALs**
 - 25 preservation sections with crack monitoring, etc.;
- US-280:
 - More ESALs than 159 in half the time;
 - 46 Preservation sections.

1.5M ESALs

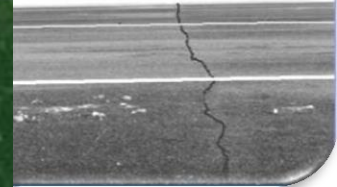


THE MnRoad PARTNERSHIP



I-94 Near Albertville, Minnesota, USA

Jan. 4, 2018 -44F in Embarras, MN



-REALLY REALLY REALLY COLD-

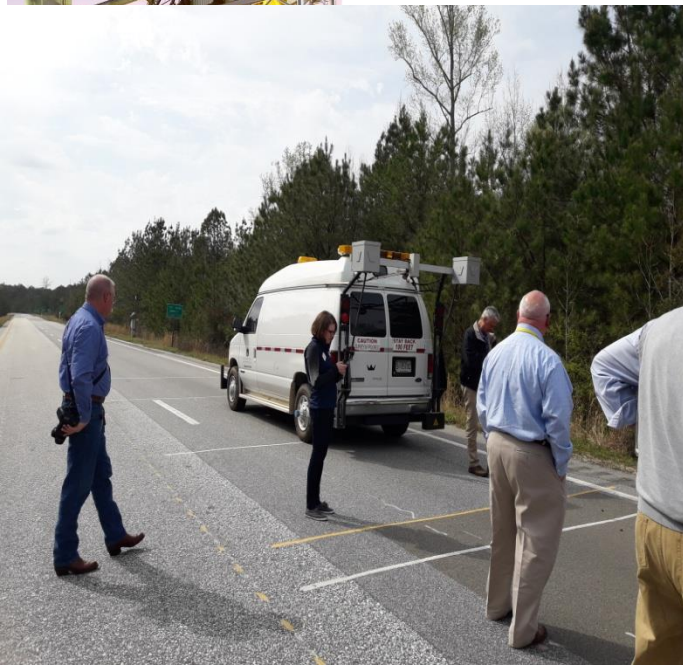
CONFERENCE HIGHLIGHTS



- Objective:
 - Relate standard Kentucky mix S7A to S7B finer graded, lower design gyration mix and evaluate performance of mix and longitudinal joint.
 - Joint constructed as per normal industry practices.

Kentucky Longitudinal Joints And Mix Durability

Carolina Rodezno



S7A-Coarse Mix

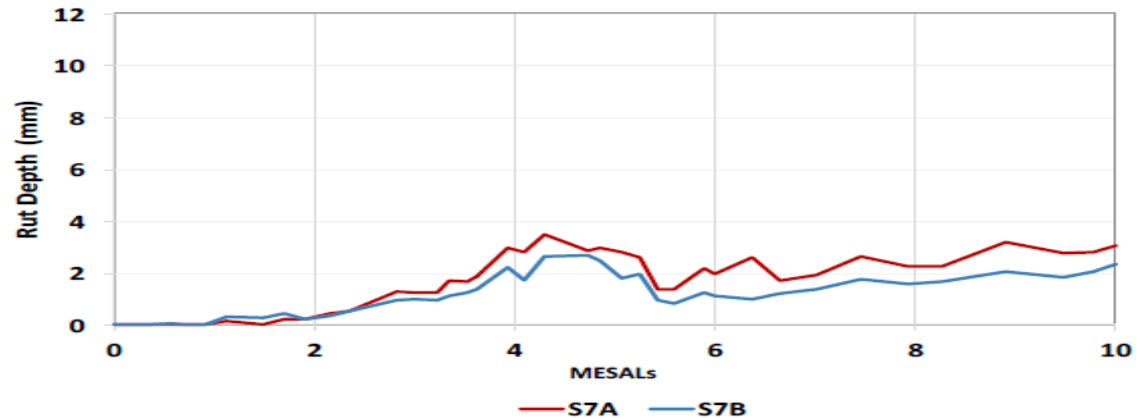


S7B-Fine Mix

- Wide scope of review, but...

Kentucky Longitudinal Joints And Mix Durability

Carolina Rodezno



NCAT field permeameter at
the joint:

S7A: $1,294 \times 10^{-5}$ cm/s

S7B : 243×10^{-5} cm/s



MYTH BUSTED

- It is recommended that KYTC consider allowing fine-graded mixtures designed with lower gyrations and not be limited to coarse-graded mixes.

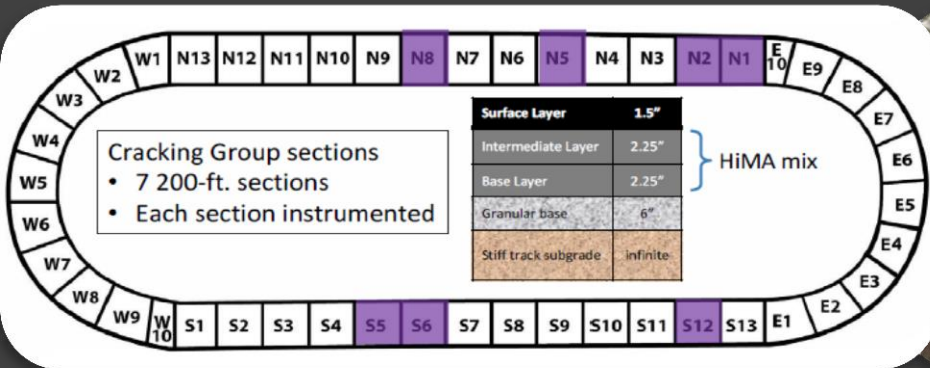


Kentucky Longitudinal
Joints And Mix
Durability

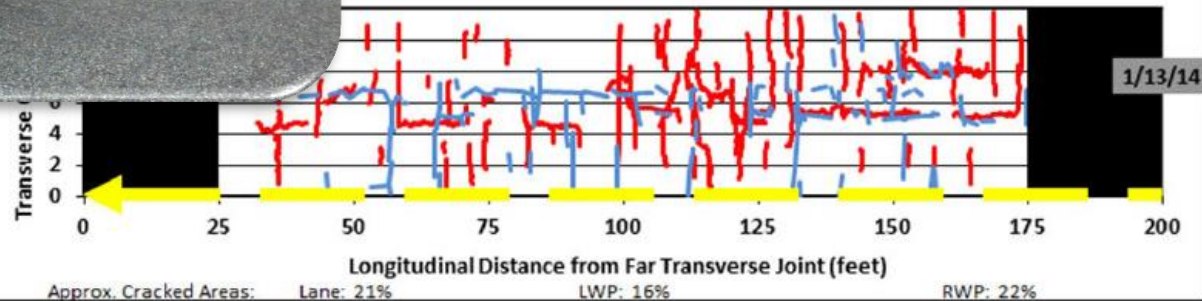
Carolina Rodezno

Cracking & Pavement Preservation

- Main track cracking studies done on this cycle

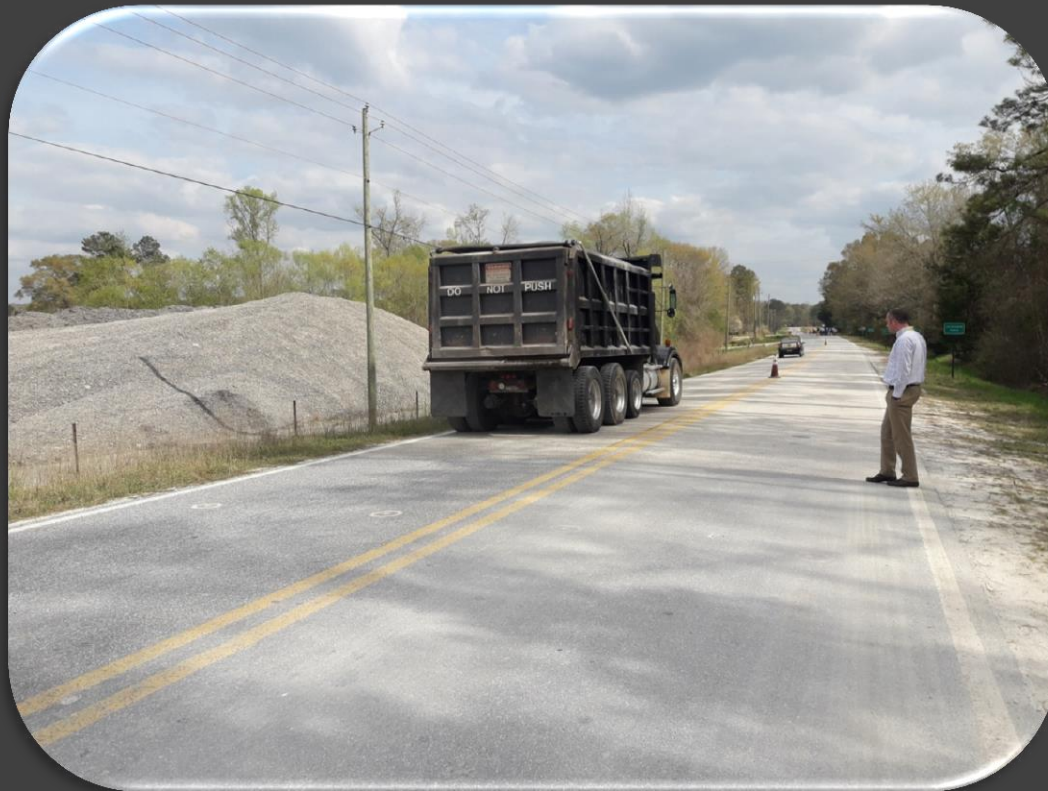


Cracks in Solid Red, Potential Reflective Cracks in Blue, Patches Outlined and Trucking Percent Complete via Height of Gray Map Date Box



Cracking & Pavement Preservation

- Preservation work has related everything from spray seals, fog sprays, microsurfacing, chip seals,



MnRoad Advanced Testing

Safe Automated Vehicle Testing Demonstration

Project Goals

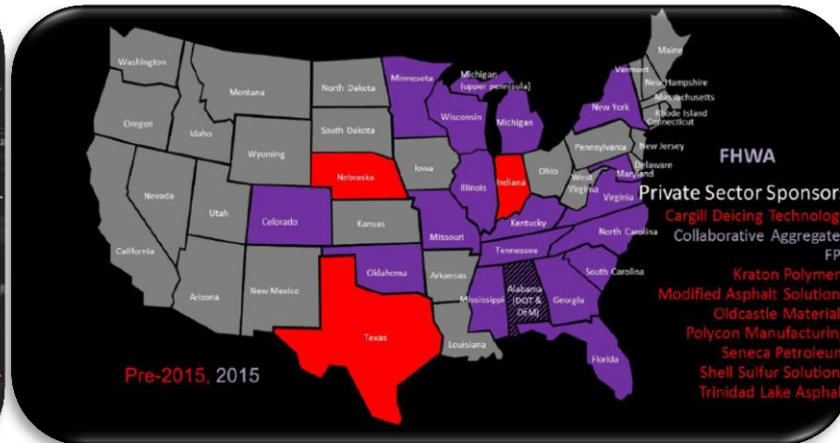
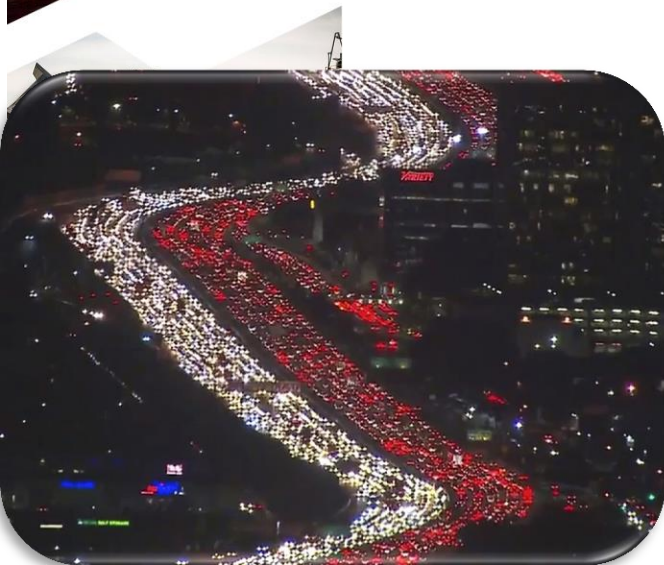
- Snow and Ice Testing
- **Identify Infrastructure Needs**
- Identify Traffic Operations Impacts
- Improve Future Mobility Options
- Develop Partnerships
- Public Feedback/Perception



easy
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Conclusion

- Definitely an experience especially for the research obsessed people;
- Valuable findings that can also be used outside of the US
- Real life accelerated testing taken to a whole new level and a lot of buy-in from all over the country;
- US traffic makes SA traffic look fun...





T H E
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Questions?