Track Research Sponsors

Private Sector Sponsors:
- Cargill Deicing Technology
- FP2
- Kraton Polymers
- Modified Asphalt Solutions
- Oldcastle Materials
- Polycon Manufacturing
- Seneca Petroleum
- Shell Sulfur Solutions
- Trinidad Lake Asphalt

Content

• Status of the 2012 research cycle
• Focus on VDOT’s FDR and CCPR sections
• Planning process for 2015 research cycle
Status of 2012 Research Cycle

- >9.8 million ESALs applied (complete ≈10/18)
- Terminal 10M ESAL performance measurements
- Forensic trenching/coring immediately thereafter
- Limitations in “traffic continuation” sections (+)
- Track Conference March 3rd through 5th, 2015.
VDOT Research Background

- 3.66 miles on I-81 in Augusta County, VA in 2011
- Post-mill FDR in right lane due to deterioration
- CCPR base mix placed with 4 inch asphalt overlay
- Need to quantify CCPR structural contribution.
VDOT Track Sections

- 6” HMA on CCPR base on Track foundation (N3)
- 4” HMA on CCPR base on Track foundation (N4)
- 4” HMA on CCPR base on FDR foundation (S12).
Full Depth Reclamation
Full Depth Reclamation
Processed Virginia RAP
Onsite CCPR Plant
Rutting Performance

**N3**

**N4**

**S12**

Equivalent Single Axle Loadings in 2012 Research Cycle
Roughness and Macrotexture

- N3
- N4
- S12

Equivalent Single Axle Loadings in 2012 Research Cycle

- IRI
- MTD
High-Speed Response

Approximately 40% and 70% of the data falls within certain ranges.

[Diagram showing comparisons between VA-6" AC N3, VA-4" AC N4, and VA-FDR S12 with average and standard deviation values.

- VA-6" AC N3: Average 256.09, Standard Deviation 61.43
- VA-4" AC N4: Average 429.11, Standard Deviation 123.15
- VA-FDR S12: Average 137.06, Standard Deviation 20.83]
Lee Road 159
L20 – Thin HMA Overlay on 100% RAP Mix Base
Rutting on Lee Road 159
Subgrade Moisture Contents

Gravimetric Moisture Content (%)

Date of Measurement


- Controls
- Thinlay
- Thinlay with CCPR Base
NCAT’s CCPR Research Efforts

• Mix design methodologies
• Structural contribution (E, M-E)
• QC/QA practices for DOTs
• Training and implementation.
NCAT Expectations for 2015 Track

- Durability of innovative OGFC surfaces
- Surface crack prevention
- 100% RAP foamed CCPR base mix
- Expanded study of thin overlay mixes
- Asphalt based high friction surfaces
- Crack prediction test for ALL mix types (CG)
- Continuation/expansion of preservation (PG15).
Preservation Group (PG15) Study

- Continue monitoring ‘12 sections (Track & 159)
- Capture entire life extending benefit curve(s)
- Partnership with MnROAD for nationwide scope
- Build new sections on higher ADT roadway.
Higher ADT Off-Track Preservation

- US-280 3 miles to east
- 17,000 ADT, >10 years old
- Westbound outside lane
- Tenth mile sections
- Duplicate Lee Road 159
- $CCPR_{F,E}$, $CIR_{F,E}$, and HIR
- High BR thin overlays.
2015 Pavement Test Track Conference

March 3-5, 2015
The Hotel at Auburn University and Dixon Conference Center
Auburn, Alabama

- WMA & High RAP/RAS/GTR Mixes
- Optimized Structural Design
- Pavement Preservation
- Implementation

Official registration information will soon be available at www.ncat.us
Dr. R. Buzz Powell, PE
Assistant Director & Test Track Manager

277 Technology Parkway
Auburn, AL  36830

Phone: (334) 844-6857
Cell: (334) 750-6293

Email: buzz@auburn.edu
Web: www.pavetrack.com
Twitter: www.twitter.com/pavetrack