

# NCAT UPDATE: Eventful First Year for NCAT Preservation Group Study

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This fall marks the first anniversary for the Preservation Group (PG) experiment of the National Center for Asphalt Technology (NCAT) Pavement Test Track 2012 study. The last year has been an eventful one, as a full cycle of seasons and nearly 20,000 truck passes have led to exciting observations and visitors from around the region.

Just over a year ago, 25 sections were placed with over 20 different preservation treatments or combinations of treatments. These sections delineate a half-mile-long section of roadway that leads to a quarry and asphalt plant located at the end of Lee Road 159 in Auburn, Ala., near the NCAT Test Track.

The intent of this study is to develop life-extending benefit curves for each section. The half-mile section of the two-lane roadway was split into 25, 100-ft. test sections to study various preservation treatments. Each section was further subdivided into 40, 5 by 10-ft. subsections with a diverse range of pretreatment conditions to enable the completion of life-extending benefit curves, quantified by the time or traffic until recurrence of pretreatment condition.

Furthermore, changing conditions in each section are being compared with untreated control sections to document the relative improvement in condition due to the various preservation treatments. Early observations are beginning to illustrate the life-extending benefits that we have long known were



In June 2013, representatives from eight sponsoring organizations tour Lee Road 159, part of NCAT Preservation Group Study

possible with preservation treatments, but unable to quantify.

## CRACK SEALING MITIGATES MOISTURE


For instance, it has been observed that the stand-alone crack sealing treatment in section "L5" inhibited the development of much of the interconnected cracking that is evident in the adjacent untreated control section ("L4").

The cracking at the surface may not be the only thing that is being affected by the crack sealing. Each section has been equipped with a port to enable neutron probe readings of the subgrade moisture. The plot shows the moisture readings relative to the average moisture readings in the control sections over time. The subgrade moisture in the crack sealed section has consistently been lower than that of the two control sections as the placement of the treatments a year

ago, indicating that crack sealing may also play a role in mitigating moisture infiltration of the unbound materials.

The bi-annual sponsor meeting for the 2012 NCAT Pavement Test Track was held in June, bringing representatives from the eight sponsoring entities, as well as the agencies and organizations supporting research on the track to Lee Road 159 for a walking tour.

In addition to hosting the sponsor meeting, NCAT also hosted the Alabama DOT division maintenance engineers, as well as the Alabama County Engineers Association meetings. Culminating in a tour of Lee Road 159, these meetings highlight the growing interest at both the state and county levels for implementation of pavement preservation treatments.

Progress of the experiment can be tracked at [www.pavetrack.com](http://www.pavetrack.com). 

*The authors are affiliated with NCAT*