



**Materials Division Updates**  
**Andy Babish, P.E. – State Materials Engineer**  
**April 1, 2011**

## Overview

- Materials Certification School program
- Quiet Pavement Technology
- Trackless Tack Implementation
- 4.75 Surface mixes
- Pavement Safety Edge

Advisory Board established in 2010 as a partnership with industry:

- 1) Serve to improve communications between VDOT and industry
- 2) Strive to ensure the MCS program meets the training and development needs of all partners
- 3) Strive to ensure the MCS program builds quality in our transportation infrastructure through an educated workforce

Status –

Conducted and completed an independent assessment of the program focusing on;

- Personnel (internal and external) are capable of assessing correct application and quality of materials used on VDOT projects
- Personnel certified able to consistently perform tasks in the field they have been certified to perform through the MCS program for compliance with Federal requirements

Assessment Recommendations are categorized in 5 areas;

- Workplace
- Instructional Materials & Delivery
- Instructors
- Participants in Workshops
- Technology

## Instructional Materials & Delivery

- Beginning a process to redesign and redevelop the classes focusing on results based training
- Asphalt Certification classes will be first
  - Asphalt Field
  - Asphalt Plant
  - Asphalt Mix Design

- Many different roles/individuals have an impact on quality beginning with material production to finish rolling then acceptance density testing on the road
  - Only a select few are performing material sampling and testing
  - Material sampling and testing is only a component of a quality program

Background – Legislative influence; HB 2001 essentially mandates VDOT construct/evaluate quiet pavement technologies and surfaces over the next 2 years beginning in 2011 with final report due in July 2013.

Objective – Reduce traffic noise through utilization of alternate pavement surfaces; reduction in height or elimination of sound walls ????

VDOT Divisions – VCTIR, Mtnce, Sch & Contract, Mat, Env



Research study -

5 test locations with quiet pavement surfaces built in 2011

3 sites with Asphalt Porous Friction Course including “rubberized” surface

2 sites with various grinding/grooving techniques on concrete pavements

NCAT test section at Auburn University

## Asphalt Mixes being evaluated

- Porous Friction Course (PFC)

  - PFC 9.5 (1")

  - PFC 12.5 (2")

  - ARFC (1")

  - SMA 9.5 (control)

Evaluation consists of:

- mix production
- mix placement
- any constructability issues
- durability in Virginia's conditions  
(climatic)
- noise abatement characteristics  
(tire noise, wayside, deterioration over time)
- Effect of VDOT winter maintenance activities on PFC's effectiveness

Future - 2013 and beyond

Establish most appropriate quiet pavement surface mix and application guidelines for use

Potential policy development for noise abatement practices in applicable corridors/routes

Must address Federal regulatory barriers to utilize quiet pavement surfaces in lieu of sound walls

## Background –

- Began initiative in 2006 through VDOT Asphalt Coop
- Conventional tack tracking beyond areas to be paved including intersections
- Tracking reduced tack coat effectiveness where we are paving
- New tacking materials developed by industry (set quicker, equivalent bonding characteristics, no tracking)
- Special Provision developed for select use and piloted on various projects throughout 2007 through 2010

VDOT Divisions – VCTIR, Sch & Contract, Mat

## Status –

- Mandatory requirement in 2011
- Date limitations on usage; mandatory between May 1 and Oct 1 due to temperature effects



Status –

Special Provision for select use developed

Field Acceptance Method needs to be finalized

Future -

Develop Application Guidelines for field decision makers on where to use

Finalize Field Acceptance Method

Target 2012 for Statewide Implementation



## Pavement Safety Edge (FHWA Every Day Counts Initiative)

### Objective –

Improve driver safety; safety edge promotes a safer recovery back onto the highway in instances of “running off the road”.

VDOT Divisions – Traffic Eng, Mtnce, Sch & Contract, Mat





Photo courtesy of FHWA



Photo courtesy of FHWA

Status of VDOT implementation –

Currently under development;

- Standard
- Application guidelines
- Specification

Future –

Pilot on selected projects/routes in 2011;

Finalize standard, application, and specifications for potential statewide program implementation in 2012 or 2013.

Our strong partnership is  
paramount to continuing our  
successful achievements.

Thank you