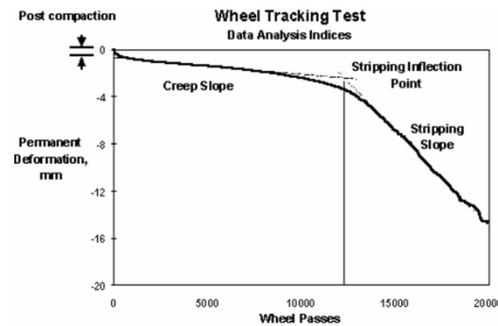
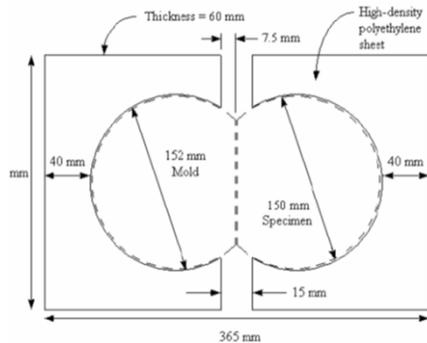


Long Life Asphalt Pavement, 6.3 mm Thinlay Asphalt, and Tack Status

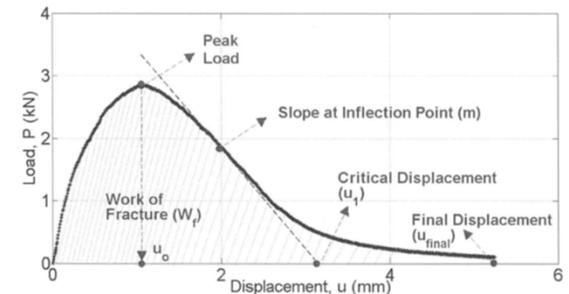
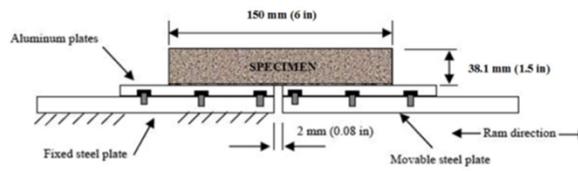
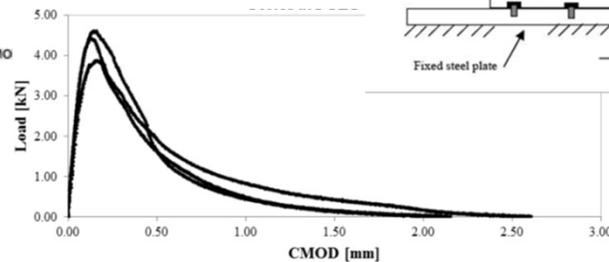
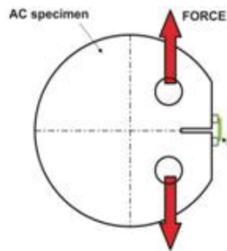
Neal Fannin
Pavement Materials
CMD

LLAP Construction Specifications

- **Pilot Specification Only Included SMA projects**
- **Rutting Test. (Hamburg Wheel tracking)**



- **CRACKING TESTS (DCT, IFIT, SCB, OT,**



Current Pilot Projects

- District 2-0 – SR 0080 Sect. B34 (ECMS 82105)
 - Mill and overlay
 - Projected let – 7/2017
- District 10-0 – SR 0079 Sect. 247 (ECMS 91919)
 - Structural overlay
 - Projected Letting 11/2017
- District 11-0 – SR 0279 Sect. A83 (ECMS 87772)
 - Binder & Wearing Performance Related Testing only.
 - Projected Letting 1/2017
- District 2-0 – SR 322 Section B06 (ECMS 96820)
 - LLAP or LLCP alternate bid.

Research Needed

- Research project will be proposed in order to:
 - Better define the cracking and rutting behavior of current asphalt mixtures in PA.
 - Define testing protocols and limits needed to establish a reasonable specification.
- Not a quick process.



6.3mm Thin Asphalt Overlay (Thin Hot Mix Asphalt Overlay or Thinlay)

Specification features

- **New Section 412 in Pub. 408**
 - **SUPERPAVE MIXTURE DESIGN,
CONSTRUCTION OF PLANT-MIXED
HMA/WMA 6.3MM THIN ASPHALT
OVERLAY COURSES**
- **Pub 242 changes**
 - Usage guidance in chapter 5.
 - Changes to add this new material to chapters 9, 10, 11, & 12.

Specification features

- **Aggregates: Changes to Section 703**
 - **SRL**
 - **Coarse Aggregate – SRL** as listed in Bulletin 14.
 - **AASHTO #89 and #9** Being added to Section 703.
 - **AASHTO #9** Need to be sampled and pass **quality** and **SRL** testing to be used in 6.3mm asphalt.
 - **AASHTO #89** Will be approved based on the AASHTO # 8 quality and SRL test results.
 - **Fine aggregate –**
 - **Manufactured fine aggregate** must be manufactured from the same parent rock as SRL rated coarse aggregate.
 - **Natural Fine Aggregate** – Must be sent for SRL determination.

Specification features

- **Design Gyration** for all roadways = **75**
- **Design VMA = 16.5% minimum**
- **Drain down test** (AASHTO 305) required for mixes with greater than 7.0% asphalt content.
- **RAP & RAS**
 - No RAP or RAS allowed
- **Binder Grade is PG 76-22 only.** Possible future inclusion of PG 64-22.

Specification features

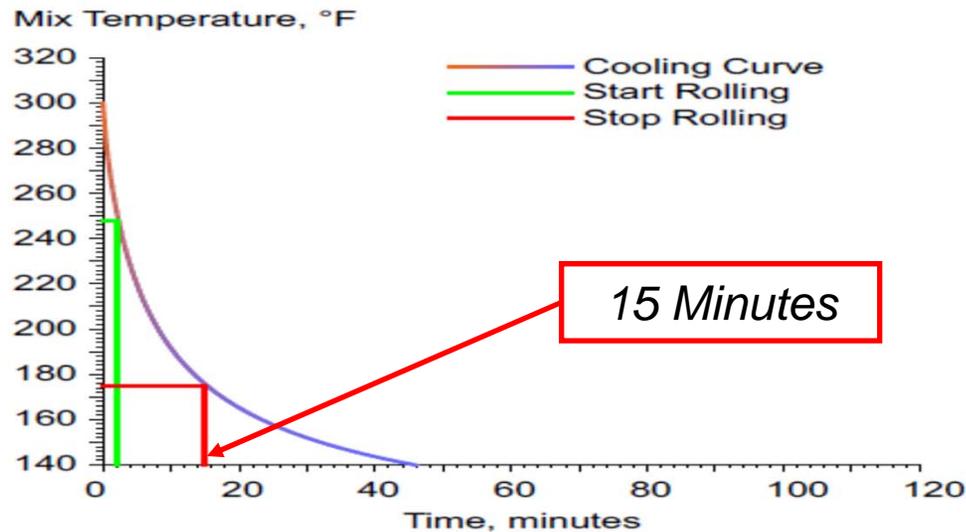
- **Mixture Acceptance:**
 - **Certification or Lot.**
 - Lot acceptance includes
 - Asphalt content.
 - Percent passing 200 sieve.
- **Density Acceptance:**
 - Optimum rolling pattern

Thinlay Compaction

PaveCool 3.0 Report

Project: 6.3mm Thinlay

Date & Time		Start Rolling*	Stop Rolling*
1/3/2017 9:25 AM		2 minutes (248 °F)	15 minutes (175 °F)
Mix Type	Binder Grade	Thickness	Delivery Temp.
Fine/Dense	PG 76-22	1.00 in.	300 °F
Air Temp.	Wind Speed	Sky	Latitude
70 °F	5 mph	Clear & Dry	41 ° North
Existing Surface	Moisture	State	Surface Temp.
Asphalt			110 °F



PaveCool File:
6.3mm Thinlay 40 deg.pc3

New Tack Coat Specification Requirements Section 460

Change to Application Rate

- **Application Rate depends on surface placed on.**

Surface Type	Uniform Asphalt Residue Rate (RR) (Gallons per square yard)
New Bituminous Paving	0.03 to 0.05
Existing Bituminous Paving	0.04 to 0.07
Milled Surface (Bituminous & PCC)	0.04 to 0.08
Portland Cement Concrete	0.04 to 0.07

Strike Off Letter 480-17-01



481-17-01

A standard special provision (SSP) will be included on all projects with asphalt items let after February 16, 2017.

Deputy Secretary for Highway Administration

Districts are encouraged to accept a no cost change to the new specification on existing contracts when proposed by contractors.

Construction - Application of Bituminous Materials.

Changes to Bulletin 25 Specifications include the addition of a material specification for TACK (emulsified asphalts used for a tack coat) and for NTT/CNTT (emulsified asphalts used as a non-tracking tack coat).

The revisions to the construction specifications will be included in Pub. 408/2016, Change No. 2 effective April 7, 2017. A standard special provision (SSP) will be included on all projects with asphalt items let after February 16, 2017. Districts are encouraged to accept a no cost change to the new specification on existing contracts when proposed by contractors.

If you have any questions regarding the contents of this SOL, you may contact Mr. Neal W. Fannin, P.E. at (814) 496-6144 or nfannin@pa.gov.



pennsylvania
DEPARTMENT OF TRANSPORTATION

www.dot.state.pa.us

Attachments

Status

- Meeting held with PAPA, PAMMA, and PADOT on Friday 7/28/17.
 - Districts surveyed, and 6 of 11 Districts responded to date.
 - Of over 300 projects reported 3 major issues were reported.
 - 23 minor issues reported.
 - Although there have been some very notable tracking problems in the state, most projects are having no more difficulty with tracking than with the previous specification.

Status

- PAMMA / PADOT working on several outreach initiatives.
 - One page quick reference for drivers and paving crews being worked on.
 - Working with PADOT to develop training for paving crews and inspectors.
 - Encourage Districts to make this a subject for winter school.
 - Encourage paving contractors to make this part of their winter training.
- May make minor changes to application rates but these need to stay in line with FHWA guidance.

Questions?

