

Pavement Technical Working Group

AASHTO Standing Committee on Highways, Subcommittee on Maintenance

Monday, July 18, 2016 - 1:00 pm to 3:00 pm

Clark County, Nevada



Anita Bush, Nevada DOT – Chair

Scott Capps, North Carolina DOT – Vice Chair

Bart Sweeney, Connecticut DOT – Vice Chair

Marc Hoelscher - FHWA Liaison

Today's Agenda

Welcome and Opening Remarks

- Overview of the PTWG
- Vision, Mission and Strategic Goals
- Focus Areas
- 2016 Work Plan Goals and Accomplishments
- Past Research Overview

PTWG Annual Business Meeting

- 2017 Work Plan
- 2017 Research Problem Statements
- AASHTO Liaisons to other Committees

Technical Presentations

- Rod Birdsall, FP2
- Indefinite Delivery/Indefinite Quantity Contracting for Preservation Projects
Jeff Lewis, Construction and Contract Administration Engineer, FHWA
- Indefinite Delivery/Indefinite Quantity Contracting for Bridge and Pavement Preservation
Jeremy Hunter, Bridge Design Manager, Indiana Department of Transportation

Adjourn at 3:00 pm

Welcome and Opening Remarks

Anita Bush, NDOT, PTWG Chair

Please Sign Attendance Sheet

Self-Introductions

Overview of Pavement TWG

Each State is allowed 3 delegates to AASHTO SCOM

- One delegate per state (minimum) is recommended for PTWG membership.

Pavements account for approximately 50% of every State DOT budget.

SCOM Vision

Support members with guidance for the maintenance operations of the evolving transportation system, and addresses new challenges through leadership and innovation.

SCOM Mission

Provides technical and policy guidance to members and supports the AASHTO organization in preserving and maintaining a safe and reliable highway infrastructure that meets the expectations of its customers.

SCOM Strategic Goals

The products and actions of SCOM will support members in their efforts to promote:

- A safe, reliable highway system in a state of good repair
- Accountability and transparency through performance management
- Environmental stewardship and compliance
- A well-qualified and competent workforce
- The communication of the value and role of maintenance
- Research, innovation and emerging technology

Focus Areas

	Strategic Focus Areas*					
	Safety	Asset Management	Environment	Workforce Development	Communication	Research
Technical Working Groups	Goal: Promote a safe, reliable highway system in a state of good repair.	Goal: Promote a safe, reliable highway system in a state of good repair; Promote accountability and transparency through performance management	Goal: Promote environmental stewardship and compliance	Goal: Promote a well-qualified and competent workforce.	Goal: Promote the communication of the value and role of maintenance.	Goal: Promote research, innovation and technology.
Pavements	Workforce Work zone Equipment operations Public	Performance measures for maintenance including MAP21 Asset management systems Performance management System preservation Accountability and transparency	Regulation and compliance Climate change mitigation and adaptation strategies Life cycle assessment Sustainability Ecosystems (invasive species and endangered species)	Innovative training Knowledge management Succession planning Safety training Implementation of retention strategies Training for technology Support maintenance academies and NHI maintenance courses	Marketing -value of maintenance -successful strategies Outreach to and education of stakeholders including: -elected officials -general public -executives Research products and implementation	Research needs Research findings Adaptation of technology to maintenance Adaptation of maintenance to technology Innovations
Bridges						
Roadway/Roadside						
Equipment						
Maintenance Operations						

Primary Activities of each Technical Working Group

Writing Guidelines and Standards, Updating Manuals, Identifying and Communicating Emerging Practices, Project/Program Delivery, Website maintenance, Newsletters, Basic Governance, Technical Service Program (TSP) Coordination

2016 Work Plan Goals – Top 5

- Support efforts to quantify the contributions of pavement preservation to safety programs.
- Support efforts to quantify the contributions of pavement preservation to risk-based asset management programs.
- Assist in identifying and promoting Performance Measures to support AASHTO members' pavement preservation program decisions.
- Support the development of Contractor and Agency Pavement Preservation Treatments Certificate Programs.
- Enhance internal communications of the PTWG: expand membership and e-mail list; and conduct conference calls and/or webinars involving roundtable discussions for members and industry.



Additional 2016 Work Plan Goals (1/2)

- Sustain high level of maintenance interest and involvement in Transportation System Preservation (TSP)
- Expand Regional Pavement Preservation Partnerships to include more LPA's, LTAP Centers, and MPOs
- Review TRB/NCHRP Completed Research for possible publication as AASHTO Manuals or presentations in a series of "Pavement Preservation Book Club" webinars
- Implement SHRP-2 products (R-26 and R-23) that are useful to pavement preservation and maintenance

Additional 2016 Work Plan Goals (2/2)

- Prepare research implementation recommendations associated with 2011 14-24 Communicating the Value of Preservation: A Playbook – NCHRP 742

2016 Work Plan Accomplishments

- Webinar thru TRB on “Current Practices in Conducting Field Inspections for Maintenance Quality Assurance (MQA), NCHRP Synthesis 470: Maintenance Quality Assurance Field Inspection Practices”
- PTWG hosted a webinar on “Safety Benefits of Friction – Current Pavement Treatments for Preservation and Safety”
- PTWG hosted a webinar on “INVEST 1.2 – Self-Evaluation Tool Supporting Roadway Sustainability”
- Promoted the development of Contractor and Agency Pavement Preservation Treatments Certificate Programs.
- Promoted a webinar on Keyhole Coring and Reinstatement thru the Transportation Learning Network



2016 Work Plan Accomplishments

- New Approaches to Utility Cut Pavement Repair Tech Brief, Review and Comment
- Use of Thin-Lift Asphalt Surfaces for Pavement Preservation, Tech Brief Review and Comment
- Microsurfacing, Slurry Seals and Chip Seal Quality Assurance Best Practices Tech Brief

SCOM 2014 PTWG Research Problem Statements

- Review and Update of the AASHTO Maintenance Manual for Roadways and Bridges (All) – NCHRP 20-07/Task 380, Approved in 2015, extended in 2016
- Guide of Timing of Asphalt-Surfaced Pavements Preservation – NCHRP 14-38 (Pending)
- Benefit Cost Analysis of Chip Seal Binder Alternatives – To be considered by SCOM, SCOM Priority 6
- Review of Recent Trends in Portland Cement Concrete Pavement (PCCP) Joint-Sealing Practices and Performance – May be re-submitted at another time as a synthesis statement, SCOM Priority 9

SCOM 2015 PTWG Research Problem Statements

- Evaluation and Use of Alternative Aggregates in Chip Seals
- Guidelines for Incorporating Maintenance Costs into a Transportation Asset Management Plan
- Microsurfacing, Slurry Seals and Chip Seal Quality Assurance Best Practices Tech Brief
- Proposed AASHTO Manual for the Maintenance of Roadways and Bridges (All) – Proposal has been selected for award, NCHRP 20-07/Task 380, Extension of 2015 to 2016

Ongoing and New Research

- **2014 NCHRP 14-33** - Pavement Performance Measures that Consider the Contributions of Preservation Treatments.
 - Research in progress
 - Completion date of 11/30/2016
- **2015 NDOT/FHWA** – Microsurfacing, Slurry Seals and Chip Seal Quality Assurance Best Practices Tech Brief
 - ETG Task Group No. 2: Sustainable Infrastructure and Maintenance
 - Review of Tech Brief is complete, awaiting publication
- **2015 20-07/380** - Review and Update of the AASHTO Maintenance Manual for Roadways and Bridges.
 - A proposal has been selected for award.
- **2016 NCHRP 14-38 (Pending)** – Guide of Timing of Asphalt-Surfaced Pavements Preservation
 - Proposals have been received in response to the RFP; agency selection and contract processing are underway.

Completed Research (1/7)

NCHRP Projects

- **2005 9-40** – Optimization of Tack Coat for HMA Placement – NCHRP Report 712.
- **2005 9-41** – Performance and Maintenance of Permeable Friction Courses – NCHRP Report 640.
- **2005 10-68** - Guidelines for the Use of Pavement Warranties on Highway Construction Projects – NCHRP Report 699.
Needs PTWG review
- **2006 14-17** - Manual for Emulsion-Based Chip Seals for Pavement Preservation – NCHRP Report 680. **Need PTWG and SOM Review**

Completed Research (2/7)

- **2008 14-18** - Determining Highway Maintenance Costs – NCHRP Report 688. **Standing Committee on Highways Recommends as AASHTO Publication Need PTWG Concurrence.**
- **2008 20-74A** – Development of Service Levels for the Interstate Highway System – NCRHP Report 677.
- **2009 08-71** – Methodology for Estimated Life Expectancies of Highway Assets – NCHRP Report 713 Vol. 1 & 2.
- **2009 20-81** – Strategies to Attract and Retain a Capable Transportation Workforce – NCHRP Report 685. **Discuss with TCCC Representative**

Completed Research (3/7)

- **2010 10-82** - Performance-Related Specifications for Pavement Preservation Treatments. **Interim Reports – Related work will be conducted under 10-82A, completion date 2/3/16, research in progress**
- **2010 14-20** - Consequences of Delayed Maintenance – Phase 1. **Interim Reports – Related work will be conducted under 14-20A, Consequences of Delayed Maintenance of Highway Assets, completion date 9/30/16, research in progress**
- **2010 14-21** - Resource Allocation Logic Framework to Meet Highway Asset Preservation – NCHRP Report 736. **Needs PTWG review**
- **2010 14-22** - Effective Removal of Pavement Markings – NCHRP Report 759. **Needs PTWG review**

Completed Research (4/7)

- **2010 20-85** - Renewable Energy Guide for Highway Maintenance Facilities – NCHRP Report 751. **Needs PTWG review**
- **2011 14-24** – Communicating the Value of Preservation: A Playbook - NCHRP Report 742.
- **2011 14-25** – Guide for Selecting Level-of-Service Targets for Maintaining and Operating Highway Assets – Part of the Final deliverable as been summarized in NCHRP Research Results Digest 396: Approach to Level-of-Service Target Setting for Highway Assets.
- **2013 NCHRP 14-31** - Developing a Pavement-Maintenance Database System – NCHRP Report 820.

Completed Research (5/7)

NCHRP 20-07 Projects

- **2004 20-07/184** – Development of a Pavement Preservation Synthesis, Research Plans, and Initiatives.
- **2006 20-07/206** – A Model Guide for Condition Assessment Systems – Final Report provided to AASHTO
- **2006 20-07/218** – Performance –Based Maintenance Contracting – Cancelled refer to NCHRP Synthesis 389, Performance-Based Contracting for Maintenance.
- **2008 20-07/251** – Development of a Pavement Preservation Chapter for the AASHTO MEPDG.

Completed Research (6/7)

NCHRP 20-07 Projects (cont.)

- **2008 20-07/260** – Development of Guidelines for Conducting Effective Customer Surveys Related to Highway Maintenance Operations.
- **2012 20-07/339** – Best Practices for Crack Treatments for Asphalt Pavements – NCHRP Report 784.
- **2012 20-07/340** – National Training: Challenges and Opportunities – Report provided to AASHTO
- **2015 20-07/379** – AASHTO Highway Subcommittee on Maintenance Strategic Plan Update.

Completed Research (7/7)

NCHRP 20-05 Projects

- **2012 Synthesis 20-05/Topic 44-04** - Pavement Patching Practices - NCHRP Synthesis 463.
- **2012 Synthesis 20-05/Topic 44-07** – Thin Asphalt Concrete Overlays – NCHRP Synthesis 464.
- **2014 Synthesis 20-05/Topic 46-17** - Training and Certification of Maintenance Workers – NCHRP Synthesis 483.

2017 Work Plan

- Support efforts to quantify the contributions of pavement preservation to safety programs.
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- Support the development of Contractor and Agency Pavement Preservation Treatments Certificate Programs.
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2017 Research Problem Statements

- Highway Network Alternatives to Determining High Stress Pavement Safety Hotspots **or** Developing Pavement Friction Testing Processes for Network Level Analysis **or** Improving Pavement Friction Testing through Use of Macrotexture
- Guide Construction Specifications for Cold In-place Recycling (CIR) and Cold Central Plant Recycling (CCPR)
- Utilization of Customer Input to Develop Maintenance Quality Assurance (MQA) Characteristics and Measures for Flexible Pavements
- Developing a Framework for Cost-Effectiveness Measures for Pavement Preservation
- Temporary Work-zone Safety for Pavement Maintenance Activities
- Synthesis on Pavement Grinding and Milling Maintenance
- Development of Pavement Patching Guidelines

2017 Research Problem Statements

- Use of Ground Penetrating Radar to Determine Pavement Condition and Rehabilitation Strategies
- Development of Improved Patching Materials and Procedures for Partial Depth Repairs and Dowel Bar Retrofit Installation
- Development of Pavement Management Triggers Values for Identifying the Proper Timing and Treatment of Concrete Pavements
- Diamond Grinding and Grooving of Asphalt Concrete for Texture and Safety Improvement
- The Use of Penetrating Sealers for Concrete Joint Preservation
- Others

Proposed Topics – From PTWG Membership

Schedule

- Final Problem Statements Due to NCHRP by October 14, 2016

AASHTO Liaisons to other Committees

- AASHTO Liaisons to other Committees

Technical Presentations

- Indefinite Delivery/Indefinite Quantity Contracting for Preservation Projects
Jeff Lewis, Construction and Contract Administration Engineer
Federal Highway Administration
- Indefinite Delivery/Indefinite Quantity Contracting for Bridge and Pavement Preservation
Jeremy Hunter, Bridge Design Manager
Indiana Department of Transportation

Pavement Technical Working Group

NEXT MEETINGS



Tuesday - 1:00 pm to 2:30 pm

Wednesday - 10:15 am to 12:00 pm

Paramount Room