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# Pooled Fund Project: Improving the Quality of Pavement Surface Distress and Transverse Profile Data Collection and Analysis

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# Improving the Quality of Pavement Surface Distress and Transverse Profile Data Collection and Analysis - Outline

- Abbreviated history of Network Level AASHTO Pavement Distress Measurement Standards
- What has been accomplished
- What needs to be accomplished
- Strategies to accomplish needs – pooled fund project

# Evolution of Pavement Rating

| Methodology | Fast | Safe | Repeatable and Objective |
|---|---|---|---|
| Walking | | | |
| Windshield | ✓ | | |
| Semi-Automated | ✓ | ✓ | |
| Automated | ✓ | ✓ | ✓ |

# Abbreviated History – AASHTO Standards

- Quantifying Roughness – Prov 1999 (R43)
- Faulting – Prov 1999 (R36)
- Rutting – Prov 1999 ( R48))
- Cracking – Prov 2001 (R55)

# What has been Accomplished – Year 2003

- Profiler Equipment Spec – (MP11)
- Profiler System Certification – (PP49)
- Operating Profilers and Evaluating Pvt Profiles – (PP50)
- Pavement Ride Quality Specification – (MP17)

Significant Ongoing Ride Quality Activities – Pooled Fund Project

# Motivation for New/Updated Standards

- Industry changes
  - Service
  - Technology
- State changes
  - Programmatic
  - MEPDG
- National changes
  - MAP-21 (Performance)
  - HPMS
- Need to get data
  - Efficiently
  - Accurately
  - Safely

# Why New Standards?

- AASHTO R 48 (Rutting) and R 55 (Cracking)
- Based on a manual approach and 10+ year old technology; missing key details
- Industry is Evolving…

# ETG Formed in 2006 - Members as of April 2013

- FHWA
  - Thomas Van, HQ Asset Management
  - Jack Springer, TFHRC
  - Andy Mergenmeier, RC
  - Mike Moravec, HQ Pavements
- States
  - Rick Miller, Kansas DOT (Lead)
  - John Andrews, Maryland SHA
  - Magdy Mikhail, Texas DOT
  - Bouzid Choubane, Florida DOT
  - Cole Mullis, Oregon DOT
  - Judith Corley-Lay, North Carolina DOT
- Industry
  - Gary Elkins, MACTEC
  - Frank Holt, Dynatest
  - Jerry Daleiden, Fugro
  - Richard Fox-Ivey, Pavemetrics

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# Improving the Quality of Pavement Surface Distress and Transverse Profile Data Collection and Analysis

- AASHTO PP 67, Quantifying Cracks in Asphalt Pavement Surfaces from Collected Images Utilizing Automated Methods
- AASHTO PP 68, Collecting Images of Pavement Surfaces for Distress Detection
- AASHTO PP 69, Determining Pavement Deformation Parameters and Cross-Slope from Collected Transverse Profiles
- AASHTO PP 70, Collecting the Transverse Pavement Profile

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# Improving the Quality of Pavement Surface Distress and Transverse Profile Data Collection and Analysis

- Rutting/Cracking Expert Task Group active for several years
  - Did not have the mechanism to conduct studies
  - April 2013 ETG recommended pooled fund project due to the success with Pavement Profiling effort.

# Improving the Quality of Pavement Surface Distress and Transverse Profile Data Collection and Analysis – Objectives

Improve the Quality of Pavement Surface Distress and Transverse Profile Data Collection and Analysis by assembling SHAs, the FHWA, and industry representatives to:

- Identify data collection integrity and quality issues
- Identify data analysis needs
- Suggest approaches to addressing identified issues and needs

Based on this information, the SHAs and the FHWA will:

- Initiate and monitor projects intended to address identified issues and needs
- Disseminate results
- Assist in solution deployment

# Improving the Quality of Pavement Surface Distress and Transverse Profile Data Collection and Analysis

- Pooled Fund Project solicitation website:
  - http://www.pooledfund.org/Details/Solicitation/1357

Research Director (or designee) should have direct access to input your agencies commitment

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Questions/Comments

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