U.S. Department of Transportation
Federal Highway Administration

Federal Highway Administration
RESOURCE CENTER

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TPF-5(299) 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

- Background
  - Abbreviated history of Network Level AASHTO Pavement Distress Measurement Standards
  - FHWA ETG
- Pooled Fund (PF) study formation
- PF Activities
- PF – Consider Joining

Abbreviated History – AASHTO Standards

- Mid-1990's SHA and FHWA ETG
- Quantifying Roughness – Provisional 1999 (R43)
  - TPF-5(063)
- Faulting – Provisional 1999 (R36)
- Rutting – Provisional 1999 (R48))
- Cracking – Provisional 2001 (R55)

Evolution of Pavement Rating

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

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
  - 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

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

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

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 study due to the success of TPF-5(063) 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

- First Meeting – May 2014
- Research Contract (ongoing completion August 2016): Development of Standard Data Format for 2-Dimensional and 3-Dimensional (2D/3D) Pavement Image Data that is used to determine Pavement Surface Condition and Profiles
- Developing proposed RFP "Calibration and Verification of Transverse Pavement Profile Measurements"
- Pooled Fund Study SharePoint site:
  - https://collaboration.fhwa.dot.gov/default.aspx
  - Register

Budget

- Commitments from 21 agencies through 2019 – over $1.4 million

Thursday Meeting – 8 am

- Chairman: John Andrews, MD SHA

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Questions/Comments