

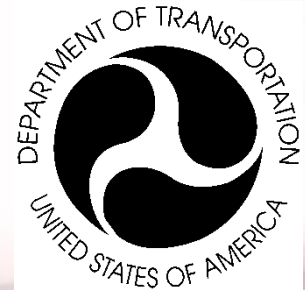


**XXIV<sup>th</sup> World  
Road Congress  
Mexico 2011**  
Mexico City 2011.

# MOVING FORWARD WITH PERFORMANCE- BASED ASSET MANAGEMENT

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# What is Transportation Asset Management?

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A strategic and systematic process of operating, maintaining, upgrading and expanding physical assets effectively throughout their lifecycle. It focuses on business and engineering practices for resource allocation and utilization, with the objective of better decision making based upon quality information and well defined objectives.



# FHWA, AASHTO, and STATE DOTs - Asset Management

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- FHWA (Federal Highway Administration) established the Office of Asset Management in 1999
- AASHTO (American Association of State Highway and Transportation Officials) established an Asset Management Task Force that evolved into an AASHTO Subcommittee
- Some State DOTs established formalized Asset Management Programs
- All States manage their assets; however, the level of comprehensiveness varies. In most cases State DOTs focus on an Asset Management approach/process for their pavements and bridges, not for overall DOT resource allocation



# Moving Forward: AASHTO Subcommittee on Asset Management Strategic Plan 2011 - 2015

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## Vision:

Transportation Asset Management is (will be) the standard of practice for State DOTs and others to manage the nation's physical transportation assets to optimize investment decisions.



# National Call for Accountability and Performance

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- Congress is considering *performance management* for transportation
- The National Revenue Study Commission also called for *accountability*
- The GAO (General Accounting Office) endorsed *performance metrics*
- AASHTO has proposed a *performance measurement process*
- US DOT's 2012 Budget Proposal provides funding to focus investment on safety, state of good repair, and livability and establish a *performance-based* highway program, etc.



# What is Performance Management?

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- In the U.S., Performance Management of the Federal Highway Program is defined as a *systematic approach* to making *investment and strategic decisions* using information about the *condition and performance* of the system and developing an *approach* to achieve a desired set of *national goals*



# FHWA - Performance Management

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- FHWA is establishing a focus on Program Performance Management
- Established new office, Office of Program Performance Management



# Moving Forward – Asset Management and Performance Management – Some Confusion

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The basic principles of asset management and performance management are identical

- Asset management is performance based and has a long term focus
- A Performance-based Program needs to clearly address short and long term performance including value-for-money analysis
- Asset management pertains to physical assets
- Performance Management pertains to physical assets as well as safety, operations, etc.

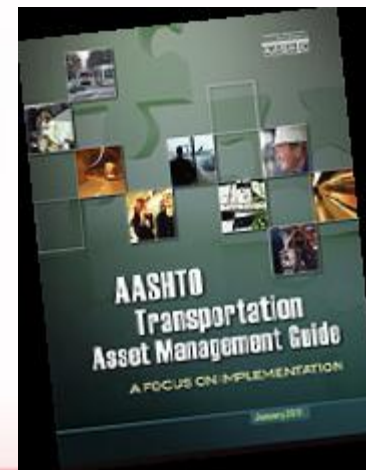




# Moving Forward – Asset Management and Performance Management

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- With the goal that the transportation network be managed comprehensively, an Asset Management Framework is the foundation for DOTs to follow to advance a performance based program for physical assets and to manage their network, including development of transportation asset management plans



# Potential Performance Measures for Pavements and Bridges

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Implementing a performance based program with measures that are good indicators of system performance and needs are important.

- IRI (International Roughness Index) at first, advancing to a pavement composite index of some type.
  - Issues arise with differences in data collection protocols and data quality between states
- Percent deck area on structurally deficient bridges, advancing to more comprehensive element level data.



# Potential Performance Measures for Pavements and Bridges – Key Issues

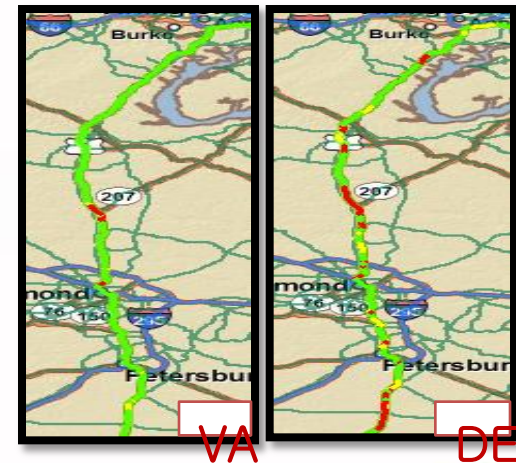
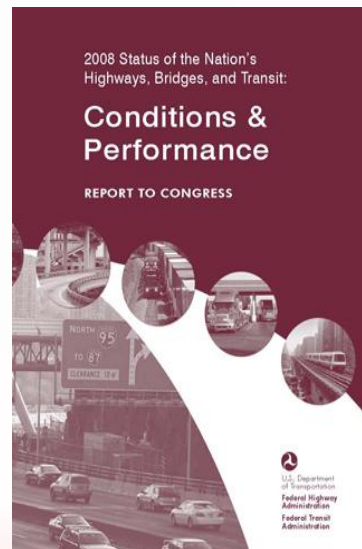
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- How infrastructure be defined in categories of Good, Fair, and Poor
- What metric/s will be used to qualify infrastructure in condition categories
- Who will collect the data
- Who will report the data
- What are the best reports that can be used to represent infrastructure performance and health.



# Other Challenges for Implementing a Performance based Program

Having **short term targets** to accomplish **the long term plan** and **maximize** future performance and condition of infrastructure, as well as value for money.



# Moving Forward - FHWA Efforts

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- Continue to work with AASHTO to advance all elements of performance and asset management
- Promote the use of the new AASHTO Asset Management Guide – A Focus on Implementation, as the Guide for undertaking a performance-based program for physical assets
- Develop training on the new Guide with a focus on development of Asset Management Plans
- Develop methodology to integrate performance management into the planning process, Performance-based Planning



# Key Issues to be Addressed as We Move Ahead:

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- Implementing Performance Management - Measures and Targets (State and National?)
- Quality Data and Actual Use (data collection)
- Relating Policy, Planning, and Asset/Performance Management
- Trade-off Analysis
- Remaining Service Life
- Economic Analysis
- Preservation
- Beyond the Short Term





**Norfolk, VA,  
September, 19-21, 2012**

# 7<sup>th</sup> Symposium on Pavement Surface Characteristics **SURF 2012**

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