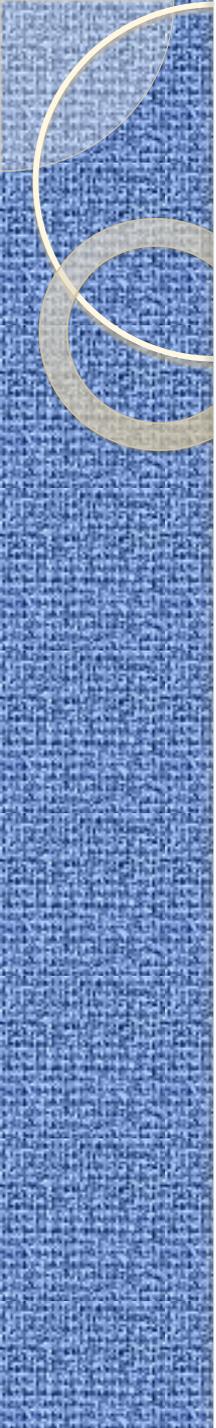


# Federal Highway Administration



Dave Kopacz, P.E.  
Programs Team Leader  
FHWA Wisconsin Division



# FHWA Update

- Innovation Initiatives
- MAP-21 Performance Measurement
- Quality Assurance Program

# Innovation

Every Day Counts (EDC) initiative



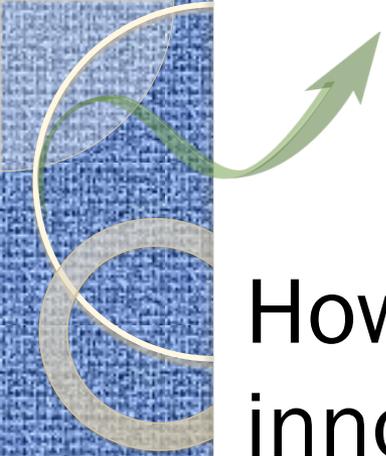
# Every Day Counts



What is Every Day Counts?  
Accelerating Innovation

Goals of the EDC:

- Implementing Market Ready Technologies
- Shorten Project Delivery Time



# Why the EDC Initiative?

How long does it take to deploy innovation in the transportation industry?

- Change a business practice
- Replace a design system
- Replace a construction process...

**2 YEARS?**

**10 YEARS?**

**5 YEARS?**

**20+ YEARS?**



# Rumble Strip Deployment

- Rumble strips used since the 1950's
  - New Jersey's Garden State Parkway in 1952
- In 2001, FHWA included rumble strips on the list of market-ready technologies
- In 2008, FHWA removed rumble strips from list because they were sufficiently adopted as general practice.





# Innovation

How can we accelerate innovation?

- A desire to improve upon status quo
- Leadership
- Willingness to try new ideas
- Encourage and reward ingenuity
- Provide resources

# Innovation



Other Examples....



# Innovation

- EDC initiatives
  - Intelligent Compaction
  - E-Construction
  
- SHRP2 initiatives
  - Infrared Thermography
  - Ground Penetrating Radar



# Innovation

## New Technologies & More Efficient Processes

- Project Development
- Shorten Project Delivery
- Federal Regulations
- State Laws





# Innovation



EDC & SHRP2 promote an Innovation Culture within Wisconsin  
“Innovation Review Committee”



# FHWA Update

- Innovation Initiatives
- **MAP-21 Performance Measurement**
- Quality Assurance Program



# MAP-21 Performance Measures

MAP-21 performance measure provisions required in several areas:

Planning

Metropolitan & Statewide Planning

Highway Safety

Safety Performance

Highway Safety Improvement Program

Highway Safety Program Grants

Highway Conditions

Pavement & Bridge Performance Measure

Asset Management Plan

Congestion/System Performance

System Performance Measure

Transit Performance

# MAP-21 Performance Measures

- Infrastructure Condition:  
“To maintain the highway infrastructure asset system in a state of good repair.”
- Highway Conditions  
Pavement & Bridge Performance Measure  
Asset Management Plan
- Rulemaking Process  
Develop implementing regulations

# MAP-21 Performance Measures

USDOT Implementation of MAP-21 Performance Provisions: Ten Interrelated Rules		2014				2015			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<b>Planning</b>									
<b>Metropolitan and Statewide Planning Rule</b>	<ul style="list-style-type: none"> <li>Establish a performance-based planning process at metropolitan and state level.</li> <li>Define coordination in the selection of targets, linking planning and programming to performance targets.</li> </ul>								
<b>Highway Safety</b>									
<b>Safety Performance Measure Rule</b>	<ul style="list-style-type: none"> <li>Propose and define fatalities and serious injuries measures, along with target establishment, progress assessment and reporting requirements.</li> <li>Discuss the implementation of MAP-21 performance requirements.</li> </ul>								
<b>Highway Safety Improvement Program (HSIP) Rule</b>	<ul style="list-style-type: none"> <li>Integration of performance measures, targets, and reporting requirements into the HSIP.</li> <li>Strategic Highway Safety Plan updates.</li> </ul>								
<b>Highway Safety Program Grants Rule *</b> <small>* Interim Final Rule issued by NHTSA in January 2013.</small>	<ul style="list-style-type: none"> <li>State target establishment and reporting requirements.</li> <li>Highway safety plan content, reporting requirements, and approval.</li> </ul>								
<b>Highway Conditions</b>									
<b>Pavement and Bridge Performance Measure Rule</b>	<ul style="list-style-type: none"> <li>Propose and define pavement and bridge condition measures, along with minimum condition standards, target establishment, progress assessment and reporting requirements.</li> </ul>								
<b>Asset Management Plan Rule</b>	<ul style="list-style-type: none"> <li>Contents and development process for asset management plan.</li> <li>Minimum standards for pavement and bridge management systems.</li> </ul>								
<b>Congestion/System Performance</b>									
<b>System Performance Measure Rule</b>	<ul style="list-style-type: none"> <li>Define performance of the interstate system, non-interstate national highway system, and freight movement on the interstate system.</li> <li>Finalize interpretation of scope of CMAQ performance requirements, including congestion and on-road mobile source emissions.</li> <li>Summarize MAP-21 highway performance measure rules</li> </ul>								
<b>Transit Performance</b>									
<b>Transit Asset Management Rule</b>	<ul style="list-style-type: none"> <li>Define state of good repair and establish state of good repair performance measures</li> <li>Require transit providers to set targets and report on progress</li> <li>Transit asset management plans</li> </ul>								
<b>National Transit Safety Program Rule</b>	<ul style="list-style-type: none"> <li>Define transit safety criteria and standards</li> <li>Include definition of state of good repair</li> </ul>								
<b>Transit Agency Safety Plan Rule</b>	<ul style="list-style-type: none"> <li>Transit safety plan content and reporting requirements</li> <li>Target setting requirements for transit agencies and States</li> </ul>								

Anticipated 2015  
Final Rule Publication

 Indicates the comment period



# MAP-21 Performance Measures

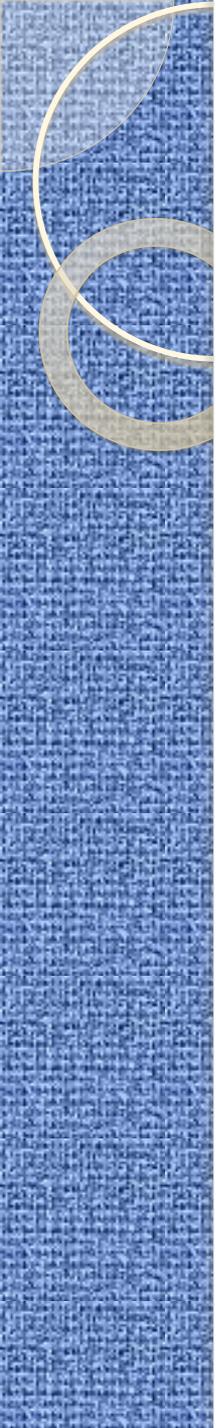
## Notice of Proposed Rulemaking (NPRM) - Highway Conditions

- 1) Pavement & Bridge Performance Measure - December 2014
- 2) Asset Management Plan – January 2015

[www.fhwa.dot.gov/tpm/rule.cfm](http://www.fhwa.dot.gov/tpm/rule.cfm)

# MAP-21 Performance Measures

- Infrastructure Condition:  
“To maintain the highway infrastructure asset system in a state of good repair.”
- Pavement Performance will be measured
- Results in transparency and accountability



# FHWA Update

- Innovation Initiatives
- MAP-21 Performance Measurement
- **Quality Assurance Program**



# Quality Assurance Program

## Definition:

- 1) All those planned and systematic actions necessary to provide confidence that a product or facility will perform satisfactorily in service
  
- 2) Making sure the quality of a product is what it should be



# Quality Assurance Program





# Quality Assurance Program

Regulatory requirement, but why is materials testing important?

Assures that materials meet specifications

Approximately 50% of the construction dollar is spent for the PURCHASE of materials

Reduces risk of fraud



# Quality Assurance Program

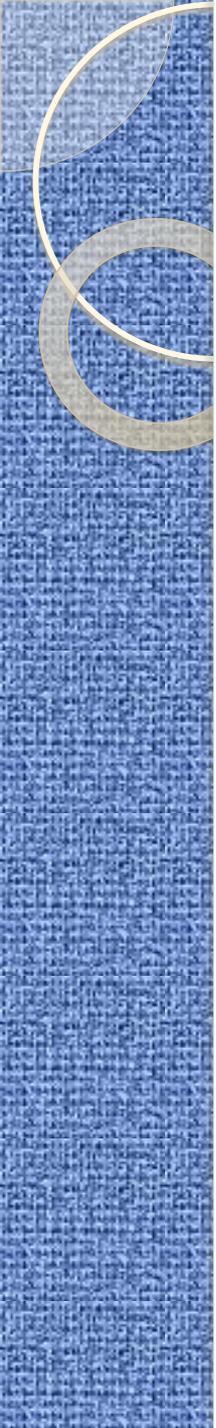
## Acceptance Procedures

- Once the material is in place it stays in place
  - Price adjustments
  - Rejection removal and replacement is difficult
  
- Performance risk when we accept and pay for marginally acceptable material



# Quality Assurance Program

- FHWA regularly reviews QA Program
- Continual improvement
  - QV sampling frequency
  - Validation of QC test results
  - PWL specifications
- Adequate, qualified staff required to administer



# Summary

- Innovation Initiatives
- MAP-21 Performance Measurement
- Quality Assurance Program



# FHWA

[www.fhwa.dot.gov](http://www.fhwa.dot.gov)

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