

# Legislating Geotechnical Asset Management: Lessons Learned

Geotechnical Asset Management TRB Subcommittee

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# Topics

- Game Changing Policy Reminders
- Proposed Legislation
- Lessons Learned

# Game Changing Policy Reminders

- MAP-21 and FAST are federal laws that require transportation investments to be based on measured outcomes “performance-based.”
  - Moving Ahead for Progress in the 21<sup>st</sup> Century (2012)
  - Fixing America’s Surface Transportation (2015)
  - FHWA Performance Based Asset Preservation
  - ASTM and AASHTO Professional Standards
  - NCHRP Geotechnical Asset Management Manual
  - Encouragement from the Office of Legislative Auditor

# Customer Priorities 2009

## THE FUTURE OF TRANSPORTATION

received 4/29/09  
D.C. Oberstar Staff

### ○ CRITICAL ASSET PRESERVATION

I-Maint	Hwy - BRIDGE
NHS	

Asset Preservation

### ○ HIGHWAY SAFETY IMPROVEMENT

RFD safety	Motorcycle safety
R.R. Crossing	etc.

Safety Improvement

### ○ SURFACE TRANSPORTATION PROG

Enhancements - 10% set-aside
MPO Sub-Allocations - based on Population

Enhancements

### ○ CONGESTION MITIGATION + AIR QUALITY IMPROVEMENT

15% of HWY miles - in urban
50% of VMT

Reduce Congestion and Air Quality Improvement

# Bipartisan Investment and Reform 2009

## COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE

THE SURFACE TRANSPORTATION AUTHORIZATION ACT OF 2009

*A BLUEPRINT FOR INVESTMENT AND REFORM*

*Presented by*

*Chairman James L. Oberstar, Ranking Member John L. Mica,  
Chairman Peter A. DeFazio, and Ranking Member John J. Duncan, Jr.*

*June 18, 2009*

# Bipartisan Investment and Reform 2009

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CONGESTION MITIGATION AND AIR QUALITY IMPROVEMENT	
HIGHWAY SAFETY IMPROVEMENT PROGRAM	
METROPOLITAN AND STATEWIDE TRANSPORTATION PLANNING	
SURFACE TRANSPORTATION PROGRAM	
FREIGHT IMPROVEMENT PROGRAM	
OFFICE OF PUBLIC BENEFIT, TOLLING REQUIREMENTS, AND	
EXPEDITING PROJECT DELIVERY	
OFFICE OF LIVABILITY	
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30%  
of the  
pages

“FHWA will shine light on the transportation system so that the states are accountable to the people.”

“Build trust and confidence at the state level so that the people support greater investments.”

# Geotechnical Asset Manual 2019

- **Geotechnical asset:** embankment, retaining wall, slope, or constructed subgrade that contributes to the performance of the transportation system.
- **Geotechnical component:** ground reinforcements (such as geogrids and geotextiles), groundwater drainage, rock bolts, and concrete materials that help the asset perform as expected.

# Geotechnical Asset Manual

- Geotechnical assets contribute to the ability of a transportation agency to perform the strategic mission.
- Transportation agencies will therefore need to look beyond the two legacy asset categories named in Federal authorization and better understand the impact of all assets, including geotechnical assets, on the system that they must manage responsibly and cost effectively.



# Proposed Legislation Minnesota

- Minnesota Statutes 2017, section 174.03, is amended by adding a subdivision to read:
- Trunk highway performance measurement and annual targets.  
(a) The commissioner must implement performance measurement and annual targets for the trunk highway system in order to improve the condition of existing infrastructure, enhance the effectiveness of all transportation modes within trunk highway rights-of-way, and achieve the state transportation goals established in section 174.01.

**Note: Very important to be aware of the goals.**

# Minnesota Transportation Goals (174.01)

- Minimize fatalities and injuries
- Increase multimodal access for all
- Ensure economic well-being and quality of life
- Provide reasonable travel time for commuters
- Enhance economic development
- Encourage tourism
- Provide transit services to all counties
- ➔ • Promote accountability through performance management
- ➔ • Utilize technological advancements
- ➔ • Maximize long term benefits
- ➔ • Prioritize funding to maintain a state of good repair

# Proposed Legislation (continued)

- (b) At a minimum, transportation planning processes must include:
- (1) an inventory of assets, including but not limited to bridge, pavement, **geotechnical**, pedestrian, bicycle, and transit asset categories;

**Note: Build a coalition of minority interests to create a majority. Stand together. Stick together.**

**Note: All these asset categories are developing performance measures.**

# Proposed Legislation (continued)

- (2) lead (predictive) and lag (resulting) performance measures and annual performance targets for assets in each category, identified in collaboration with the public, to be achieved by each district of the department;
- (3) gap identification and an explanation of the difference between performance targets and current status;

# Proposed Legislation (continued)

- (4) life cycle assessment and corridor risk assessment as part of asset management programs in each district of the department; and
- (5) an annual investment plan for each district of the department based on funding expected during the next ten years.

# Proposed Legislation (continued)

- (c) Annually by December 15, the commissioner must report trunk highway performance measurement, annual targets, and identify gaps including information detailing the department's progress on achieving the state transportation goals, to the chairs and ranking minority members of the legislative committees having jurisdiction over transportation policy and finance. The report must be signed by a professional engineer licensed in Minnesota.

# 2018 Results and Current Status

- Spring 2018

- Bipartisan Bill Authorship
- Bipartisan Support to Enhance Asset Performance Measures
- Unanimous Vote by House Transportation Policy Committee

- January 2019

- New Governor
- New Transportation Commissioner
- New Legislature
- Legislative Auditor Evaluation of DOT Financial Effectiveness

# Lessons Learned

- Listen to Leaders Who Encourage Action
  - “Tell me something I don’t know that I’m not going to like.”
  - “Keep pushing and asking questions.”
- Provide Examples that Demonstrate Innovation (TRB publications)
  - Geotechnical Research: How Organizations Encourage Innovation 2014
  - Transportation Asset Management Annual Conference 2016
  - Guide to Sustaining a Culture of Innovation in DOTs 2018
- Evaluate Performance (Office of the Legislative Auditor)
  - State Highways and Bridges 2008
  - Pavement Surface Selection 2014
  - Highway Project Selection 2016
  - Measuring Financial Effectiveness 2018



# Thank You. Questions?

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# Possible Topics for Discussion

- Challenge: We don't have lobbyists.
  - Never doubt what a small group can accomplish.
  - Remember that we are all pedestrians.
  - Listen and learn.
- Choice: Do Nothing or Desire a Better Future.
  - Collaborate to define the issue.
  - Engage professional associations and the public.
  - Develop standards and manuals.
- Call to action:
  - Members of professional associations.
  - Elected decision makers and DOT leadership.
  - The people. Grassroots action.