National Updates & Discussion: MAP-21

Andy Mergenmeier, Pavement and Materials Engineer
Federal Highway Administration
Office of Technical Services – Resource Center
Our Visit Today...

- History of Highway Bills
- MAP-21
- Rulemaking
- ADA

Photo source: http://www.gonavis.com/region/annapolis_maryland
History of Highway Bills

1956 to Tomorow...
Q. "What year was the Interstate Highway System completed?"

A. 1981
B. 1987
C. 1991
D. 1996
E. Still working on it

Photo source: MoDOT http://www.modot.org/interstate/
History of Highway Bills

1956
• Federal-Aid Highway Act

1982
• Highway Only Bills

1987
• Surface Transportation Assistance Act

1991
• Surface Transportation & Uniform Relocation Assistance Act

1998
• Intermodal Surface Transportation Efficiency Act (ISTEA)

1998
• Transportation Equity Act for the 21st Century (TEA-21)

2005
• Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-Lu)

2012
• Moving Ahead for Progress in the 21st Century Act (MAP-21)
## History of Highway Bills

<table>
<thead>
<tr>
<th>Year</th>
<th>Act</th>
<th>FAQ</th>
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</thead>
<tbody>
<tr>
<td>1956</td>
<td>Federal-Aid Highway Act &amp; Highway Revenue Act (Trust Fund)</td>
<td>Popularly known as the National Interstate and Defense Highways Act</td>
</tr>
<tr>
<td>1982</td>
<td>Surface Transportation Assistance Act</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; to include Mass Transit, 10% DBE</td>
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<tr>
<td>1987</td>
<td>Surface Transportation &amp; Uniform Relocation Assistance Act</td>
<td>Provisions for homes &amp; business displaced by highway projects</td>
</tr>
<tr>
<td>1991</td>
<td>Intermodal Surface Transportation Efficiency Act (ISTEA)</td>
<td>Completion of the Interstate (1996)... focus on Intermodal/efficiency</td>
</tr>
<tr>
<td>1998</td>
<td>Transportation Equity Act fro the 21&lt;sup&gt;st&lt;/sup&gt; Century (TEA-21)</td>
<td>Post Interstate era... greater flexibility, equity in Trust Fund, focus on safety &amp; economic growth</td>
</tr>
<tr>
<td>2005</td>
<td>Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-Lu)</td>
<td>Built on TEA-21... flexibility, safety, simplified federal-aid program</td>
</tr>
<tr>
<td>2009</td>
<td><em>The American Recovery &amp; Reinvestment Act (ARRA)</em></td>
<td>“Shovel Ready”</td>
</tr>
<tr>
<td>2012</td>
<td>Moving Ahead for Progress in the 21st Century Act (MAP-21) FY13-14</td>
<td>Beyond the TEA’s... TPM, Asset Management...</td>
</tr>
<tr>
<td>2014</td>
<td>MAP-21 expires September 31, 2014</td>
<td>?</td>
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</table>
US Highway Trust Fund, 2013
Pay-as-You-Go Fund

• Revenue from the Federal Fuel (Highway-User) Tax
  • 18.4¢ per gallon of gasoline
  • 24.4¢ per gallon of diesel fuel

• FY2013 - Three Accounts in HTF:
  1. Highway Account, (15.44¢ per gallon of gasoline)
  2. Mass Transit, (2.86¢ per gallon of motor fuel)
  3. Leaking Underground Storage Tank (LUST), (0.1¢ per gallon of motor fuel)
     • 1986 Act amend - Solid Waste Disposal Act under EPA
Revenue from State Fuel Tax
Not always dedicated to Roadways

<table>
<thead>
<tr>
<th>2013 Taxes/Fees</th>
<th>Gas (cpg)</th>
<th>Diesel (cpg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ave. US</td>
<td>27.6</td>
<td>33.8</td>
</tr>
<tr>
<td>High</td>
<td>51.2</td>
<td>61.1</td>
</tr>
<tr>
<td>Low</td>
<td>8</td>
<td>14</td>
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</tbody>
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Gas Tax State Trend

Photo source: [http://www.oldgas.com/roster/la.html](http://www.oldgas.com/roster/la.html)
# Average Individual Gas Tax (Fee)

<table>
<thead>
<tr>
<th>US Average</th>
<th>Value</th>
<th>Source</th>
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</thead>
<tbody>
<tr>
<td>Fleet-wide mpg for passenger cars</td>
<td>21.5 mpg (highway) ~15 mpg (average)</td>
<td>EPA (2011)</td>
</tr>
<tr>
<td>Federal Fuel Tax</td>
<td>18.4¢/gallon of gasoline</td>
<td>USDOT</td>
</tr>
<tr>
<td></td>
<td>15.44¢/gg highways HTF</td>
<td></td>
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<tr>
<td>State Fuel Tax</td>
<td>27.6¢/gg</td>
<td>USDOT/FHWA</td>
</tr>
<tr>
<td>Total Fuel Tax</td>
<td>43¢/gg</td>
<td></td>
</tr>
<tr>
<td>Miles Driven</td>
<td>13,476 miles/year</td>
<td>USDOT/FHWA</td>
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<tr>
<td>- Man</td>
<td>16,550 miles/year</td>
<td></td>
</tr>
<tr>
<td>- Woman</td>
<td>10,142 miles/year</td>
<td></td>
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<tr>
<td>Average Individual Tax</td>
<td></td>
<td>$386 per year</td>
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<tr>
<td></td>
<td></td>
<td>$138 /yr HTF</td>
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</table>
In contrast...

Americans spend $1,092 per year on coffee
Highway Trust Fund

Q. “Under which US President was the gas tax last increased?”

A. Jimmy Carter
B. Ronald Reagan
C. George H. W. Bush
D. Bill Clinton
E. George W. Bush
History of Federal Highway-User Fee Fee per Gallon of Gasoline

$0.25

$0.20

$0.15

$0.10

$0.05

$0.00


Deficit
L.U.S.T.
Transit
Highway
Highway Trust Fund

![Highway Trust Fund Chart]

- **Obligations**
- **Receipts**
- **Trust Fund Balance**

Dollars, (Billions)

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<tr>
<td>TEA-21</td>
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<td>SAFETEA-Lu</td>
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Rural Average Daily Load has increased almost 700% since 1970...

From **1998 to 2011**, Rural Interstate traffic volume is about the same, HOWEVER Interstate loading has increased 2 ½ % annually, **TOTAL of 31%**
MAP-21

"Preservation" & Pavements

Photo source: http://www.utexas.edu/research/tppc/index.html
Re-Authorization of Highway Legislation

- MAP-21 – Moving Ahead for Progress in the 21st Century Act

MAP-21
Four “Core” Programs

- National Highway Performance Program: 58%
- Surface Transportation Program: 27%
- Highway Safety Improvement Program: 6%
- Congestion Mitigation and Air Quality Program: 6%
$37.7 Billion/Year in formula funding

- National Highway Performance Program ($21.8)
- Surface Transportation Program ($10.0)
- HSIP ($2.4)
- CMAQ ($2.4)
- Transportation Alternatives ($0.8)
- Metro Planning ($0.3)
- Ferry ($0.07)

Note: Amounts in $ billions
MAP-21
Preservation FAQ’s

• The word “Preservation” appears 35 times in the Law:
  • 3 Contexts: **System (24)**, Historic (8), & Policy (3)

• § 1103. DEFINITIONS
  • (a)(3)”(2) **Asset management.** – the term includes **preservation**...
  • (a)(4)(B)”(C)(ii) (ii) by striking “and rehabilitation” and inserting “rehabilitation, and preservation”
MAP-21

“SECRETARY SHALL ESTABLISH...” (37 TIMES)
RULEMAKING

Photo source: http://www.dot.gov/regulations/special-programs
Administrative Procedure Act (APA)


MAP-21 Requirement: 18 months

1. • Provides for public notice and opportunity for comment on proposed rules,

2. • Requires an agency to explain the basis and purpose for its rule, and

3. • Provides for judicial review of the agency’s actions.
Asset Management Requirements in MAP-21

POC: Stephen Gaj
Leader, Asset Management Team
FHWA Office of Asset Management, Pavements, and Construction
INFRASTRUCTURE CONDITION

• Maintain the highway infrastructure asset system in a **state of good repair**.
What is asset management?

Asset management is a strategic and systematic process of operating, maintaining, and improving physical assets, with a focus on engineering and economic analysis based upon quality information, to identify a structured sequence of maintenance, preservation, repair, rehabilitation, and replacement actions that will achieve and sustain a good repair over assets at minimum cost.

(23 U.S.C. 101(a)(2), MAP-21 § 1103)

Photo source: http://pmtips.net/project-definition-statement/
What does MAP-21 require Us to do?

• We (USDOT) will issue a regulation (*aka rule*) on the process & requirements of a risk-based, asset management plan for the enhanced National Highway System (NHS) (*) (*Rulemaking*)

• You (State DOT’s) will develop a Plan (*)

*(23 U.S.C. § 119(e)(8), MAP-21 § 1106), Within 18 months of enactment (4/1/14)*


Enhanced NHS ~ 220,000 miles
✓ Interstate
✓ All principal arterials
✓ Intermodal connectors
STRAHNET -- important to U.S. defense
§1104; 23 USC 103
When do you see the draft Rule?

• We (USDOT) issue a draft rule for comment.
  • (within 180 days of enactments, April 1\textsuperscript{st}, 2014)

• You (State DOTs) have 60 days to provide comment.

• We (USDOT) will have the rule in place by October 1, 2015.
What will we do to certify your Plan?

• We will develop a certification process

  1. We (USDOT) have a 90 day review period, and...

  2. You (State DOTs) have 90 days to cure deficiencies - if not certified
What happens if you don’t have a Plan?

• Your (State DOTs) federal share for NHPP will be reduced to 65%

• NHPP is 58% of the Program

• Ex. VA DOT

  • NHPP FY13 = $585,556,568 reduced to $380,611,769
The Plans focuses on National Highway Performance Program

✓ We will recertify your Plan every 4 years

Photo source: http://developmentcrossroads.com/2011/08/i-wouldnt-plan-on-it/
MAP-21 Pavement Performance – NHPP (more Rulemaking)

POC: Thomas Van Asset Management Team FHWA Office of Asset Management, Pavements, and Construction

DRAFT Rule with Office of Chief Counsel
What’s the process for this Rule?

• We (USDOT) have the same process as the Asset Management Plan, but…

• You (State DOTs) will have 90 days to provide comment.
  • “different section of MAP-21”

• We (USDOT) will have the rule in place by October 1, 2015.
Pavement Measures | Metrics

- **Functional** *(GIVEN)*
  1. International Roughness Index (IRI), AASHTO R43

- **Structural** *(DRAFT)*
  2. Cracking
  3. Rutting (Asphalt)
  3. Faulting (Concrete)
TPM Pavement Goal

- We (FHWA) will establish measures for you (State DOTs) to assess condition of the Interstate & the enhanced NHS...

- With minimum Standards for the Interstate ONLY
  - Example Metric ONLY: Max 7 ½ % of Interstate in POOR
  - Current 6 Agencies have > 7 ½ % of their Interstate in POOR condition based on IRI (>170 in/mile) only, based on 2011 HPMS Data
In 2011
Source: USDOT HPMS

• Of the 607,379 Bridges in the US... 66,748 rate as Structurally Deficient (11%)

• Of the 45,334 miles of Interstate... 1,467 rate as Functional Poor (IRI > 170 in/mile) (3.2%)

• Of the 157,426 miles of NHS... 12,897 miles rate as Functional Poor (8.2%)
In 2011
Source: USDOT HPMS

Interstate Highway System

- 74% Good
- 25% Fair
- 1% Poor

656 miles Rural Interstate & 460 miles Urban Interstate – reported.
In 2011
*Source: USDOT HPMS*

1,901 miles Rural NHS & 1,476 miles Urban NHS – reported.
Americans with Disabilities Act of 1990

Senator Tom Harkin (D-IA), authored the bill
New Joint Ruling
DOJ / DOT-FHWA

When is resurfacing considered to be an alteration?
Resurfacing is an alteration that triggers the requirement to add curb ramps if it involves work on a street or roadway spanning from one intersection to another, and includes overlays of additional material to the road surface, with or without milling.

Examples include...
The Balance of the New Rule

painting or striping lanes

crack filling & sealing

surface sealing

chip seals

slurry seals

fog seals

scrub sealing

joint crack seals

joint repairs

dowel bar retrofit

spot high-friction treatments,

diamond grinding

pavement patching

addition of a new layer of asphalt

reconstruction

concrete pavement rehabilitation

and reconstruction

open-graded surface course

micro-surfacing

thin lift overlays

cape seals

in-place asphalt recycling
Thank You

Questions?

Thomas Harman

Tom.Harman@dot.gov

(410) 962-0134