Rail Infrastructure Maintenance Summit

Transit Asset Management

February 7, 2017
John Giorgis
Director
America’s public transit infrastructure plays a vital role in our economy, connecting millions of people with jobs, medical facilities, schools, shopping, and recreation, and it is critical to the one-third of Americans who do not drive cars. Unlike many U.S. infrastructure systems, the transit system is not comprehensive, as 45% of American households lack any access to transit, and millions more have inadequate service levels. Americans who do have access have increased their ridership 9.1% in the past decade, and that trend is expected to continue. Although investment in transit has also increased, deficient and deteriorating transit systems cost the U.S. economy $90 billion in 2010, as many transit agencies are struggling to maintain aging and obsolete fleets and facilities amid an economic downturn that has reduced their funding, forcing service cuts and fare increases.
FTA Backlog Estimates Since 2010

State of Good Repair Backlog Estimates

Billions of Nominal Dollars

Conditions & Performance Report Year

- 2010: $78.0
- 2013: $85.9
- 2015: $89.8
SGR Backlog: Funding Gap

Impact of Preservation Investment on 2032 Transit SGR Backlog in All Areas

- Current Annual Capital Investment: ($9.8 B)
- SGR Annual Capital Investment: ($17.0 B)
- Maintain Current Backlog: ($11.4 B)
- $7.2 Billion Gap

Annual Expenditures for Preservation (Billions of 2012 Dollars)
Total Spending on SGR Is Flat Since 2003

Billions of Current Dollars

<table>
<thead>
<tr>
<th>Year</th>
<th>CAPITAL - EXISTING SERVICE</th>
<th>CAPITAL EXPANDED SERVICE</th>
<th>OPERATING EXPENSES</th>
<th>TOTAL (CONSTANT DOLLARS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>$9.7</td>
<td>$3.1</td>
<td>$25.4</td>
<td>$36.2</td>
</tr>
<tr>
<td>2004</td>
<td>$9.4</td>
<td>$3.2</td>
<td>$26.9</td>
<td>$36.5</td>
</tr>
<tr>
<td>2005</td>
<td>$9.0</td>
<td>$2.9</td>
<td>$28.8</td>
<td>$36.7</td>
</tr>
<tr>
<td>2006</td>
<td>$9.3</td>
<td>$3.5</td>
<td>$30.6</td>
<td>$38.4</td>
</tr>
<tr>
<td>2007</td>
<td>$9.6</td>
<td>$4.0</td>
<td>$33.7</td>
<td>$38.3</td>
</tr>
<tr>
<td>2008</td>
<td>$11.0</td>
<td>$5.1</td>
<td>$36.4</td>
<td>$43.5</td>
</tr>
<tr>
<td>2009</td>
<td>$11.3</td>
<td>$5.5</td>
<td>$37.4</td>
<td>$43.2</td>
</tr>
<tr>
<td>2010</td>
<td>$10.3</td>
<td>$6.2</td>
<td>$37.8</td>
<td>$43.7</td>
</tr>
<tr>
<td>2011</td>
<td>$9.9</td>
<td>$5.7</td>
<td>$39.6</td>
<td>$46.4</td>
</tr>
<tr>
<td>2012</td>
<td>$9.7</td>
<td>$7.1</td>
<td>$41.4</td>
<td>$48.9</td>
</tr>
</tbody>
</table>

Constant 2012 Dollars

TAM and State of Good Repair

• The purpose of the National TAM System is to keep our Nation’s assets in a State of Good Repair (SGR)

• Consequences of not being in a SGR include:
  • Increased Safety risks
  • Decreased system reliability
  • Higher maintenance costs, and
  • Lower system performance
What Process Did We Take to Get Here?

- MAP-21 Passed (7/2012)
- Informal Outreach (2012-2013)
- ANPRM Open for Comment (10/2013)
- NPRM Open for Comment (9/2015)
- FAST Act (12/2015)
- Final Rule Issued (7/26/16)
National Transit Asset Management System

- Define state of good repair
- Require TAM Plans for all recipients and sub-recipients
- Establish SGR performance measures
- Report data to the NTD
- Receive Technical assistance from FTA
State of Good Repair

The condition in which a capital asset is able to operate at a **full level of performance**. This means the asset:

1. Is able to perform its designed function,
2. Does not pose a known unacceptable safety risk, and
3. Its **lifecycle investments** have been met or recovered.
Relationship to Maintenance Priorities

• Life Cycle Management includes maintenance
• An Asset policy/plan should address maintenance and repair
• Maintenance impacts performance
• Fewer “road calls” free up personnel to do “preventive maintenance”
• Maintenance folks may be best at doing condition assessments
# TAM Plan Elements

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
<th>Tier/All Providers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Inventory of Capital Assets</td>
<td>All Providers (Tier I &amp; II)</td>
</tr>
<tr>
<td>2.</td>
<td>Condition Assessment</td>
<td>Tier I only</td>
</tr>
<tr>
<td>3.</td>
<td>Decision Support Tools</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Investment Prioritization</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>TAM and SGR Policy</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Implementation Strategy</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>List of Key Annual Activities</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Identification of Resources</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Evaluation Plan</td>
<td></td>
</tr>
</tbody>
</table>

* FTA estimates that fewer than 20% of transit providers will do a Tier I Plan
Two types of Deliverables

Process
1. Compliant TAM Plan
   • Group
   • Individual Tier I
   • Individual Tier II
2. Initial Target-Setting
3. Recordkeeping & Coordination with Planning
4. Certification

Reports
1. Data Report
   • Performance Targets
   • Assets & Condition
2. Narrative report
Data Reporting Requirements

- Optional in 2017, Mandatory in 2018
- Projected performance targets for next fiscal year
  - Equipment: Percentage of non-revenue service vehicles that have met or exceeded their Useful Life Benchmark (ULB)
  - Rolling Stock: Percentage of revenue vehicles within a particular asset class that have met or exceeded their ULB
  - Infrastructure: Percentage of track segments with performance restrictions by class
  - Facilities: Percentage of facilities with a condition rating below 3.0 on the FTA Transit Economic Requirements Model (TERM) scale (1=Poor to 5=Excellent)
- Asset inventory and condition assessments
  - ULBs for Rolling Stock & Equipment (service vehicles)
  - Age is calculated automatically from year of manufacture
  - Condition assessments for facilities
  - Slow zones for infrastructure (rail fixed guideway only)
Narrative Report Requirements

- Mandatory beginning in 2019 – year after TAM Plan is in place
- Also submitted to NTD
- Change in condition since last report
- Progress toward targets
- Your chance to provide context for your numerical results
Final Rule Requirements - Initial Deadlines

- Initial Targets: January 1, 2017
- Coordinate with Planning: July 1, 2017
- Compliant TAM Plan: October 1, 2018
- Annual data report: Report year ’18
  - Asset Inventory
  - Condition Assessments
  - SGR performance targets
- Annual narrative report: Report year ’19
Available Technical Assistance

- TERM-Lite
- Transit Asset Management Guide
  *Updated 2016*
- Roundtable Reports & Presentations
- TAM News since 2015
- TAM Plan Template
  For Small Providers
- FAQs
- 2016 Webinar Series
- Checklists & Cheat sheets

[www.transit.dot.gov/TAM](http://www.transit.dot.gov/TAM)
New TAM Training Courses

• Transportation Safety Institute (TSI)
  ▪ Performance Measures Training course to teach guidebook methodologies

• National Transit Institute (NTI)
  ▪ TAM 101 update (pilot March/April 2017)
  ▪ Small Systems TAM course
    * will be offered in coordination with 2017 PBPP roundtables

• In Development
  ▪ TAM 201 Implementation Course (Fall 2018)
  ▪ Executive level TAM Overview Briefing (TBD)
Two Guidebooks On the Way

- Infrastructure (Slow-Zone) Guidebook
- Facility Condition Assessment Guidebook
- FTA currently reviewing comments
7th Transit Asset Management Roundtable

• Save the Date
  ▪ August 28-30
  ▪ Cambridge, MA
  ▪ 2 ½ day

• Invitation Only, Public Agency only
TRANSIT ASSET MANAGEMENT

www.transit.dot.gov/TAM