

UPDATE ON THE DEVELOPMENT OF MAP-21 PERFORMANCE MEASURES

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TPB Regional Public Transportation Subcommittee
February 23, 2016

Presentation Items

- Performance Provisions Rulemaking Schedule
  - The “Fixing America’s Surface Transportation” (FAST) Act retains the MAP-21 performance-based planning requirements with no changes
- Performance Provisions and Regional Coordination

Performance Provisions Rulemaking Schedule

	Planning Rules *USDOT Significant Rulemaking Report, as of February 12, 2016*	Proposed Rulemaking	Final Rulemaking
Planning	• Statewide and Metropolitan Planning Rule	June 2014	*July 2016*
Highway Safety	• Safety Performance Measure Rule • Highway Safety Improvement Program (HSIP)	March 2014	*February 19, 2016 (Safety Perf Rule)* *February 29, 2016 (HSIP)*
Highway Conditions	• Pavement and Bridges Performance Measurement • Asset Management Plan	January/February 2015	*August 2016*
Congestion / System performance	• System Performance Measures Rule (Congestion, Air Quality, and Freight)	*March 14, 2016*	*?*
Transit	• Transit Asset Management • National Public Transportation Safety Plan • Public Transportation Agency Safety Plan	September 2015 (Transit Asset) February 5, 2016 (Transit Safety)	*?*

FAST Act – New FTA Requirements

- New FTA parts of the transportation act
http://www.fta.dot.gov/FAST_16653.html

- METROPOLITAN & STATEWIDE AND NONMETROPOLITAN TRANSPORTATION PLANNING
  - Provides new emphasis on intercity transportation, including intercity buses and intermodal facilities, as well as tourism and the reduction of risk from natural disasters
  - Highlights the need for States and MPOs to provide public ports, intercity bus operators and employer-based commuting programs with a reasonable opportunity to comment on transportation plans

Performance Provisions Regional Coordination

- TPB staff are continuing to refine data for the performance measures for the TPB metropolitan planning area in:
  - Highway Safety: Number and Rate of Fatalities and of Serious Injuries
  - Highway Condition: Percentage of Pavement and of Bridges in Good condition and in Poor condition

- Preliminary analysis shared with State DOTs and Technical Committee in December

- Next step is to discuss forecasting and target setting methodology.
  - Technical consistency desired across different methodologies.

Transit Safety Rulemaking

- National Public Transportation Safety Plan (*Proposed Rulemaking* 2/5/16)
  - Guide the national effort in managing the safety risks of public transportation systems.
  - Institute agency practice of the Safety Management System (SMS).
  - Establishes the safety performance criteria of fatalities, injuries, safety events, and system reliability for all modes of public transportation.
- Public Transportation Agency Safety Plan (*Proposed Rulemaking* 2/5/16)
  - Require adoption of the SMS process for safety.
  - Set safety performance targets.
    - Coordinate targets with MPOs to aid in the planning process
  - Develop safety plan for approval by the Board of Directors (or equivalent) and perform an annual review and update of the plan.
    - States may draft plans for small and 5310 providers.

Other Transit Safety Rulemaking

- Public Transportation Safety Program (*Proposed Rulemaking* 8/14/15)
  - Adopt Safety Management Systems (SMS) as the basis for FTA's safety program
  - Establish authority and enforcement for US DOT and FTA
- Public Transportation Safety Certification Training Program *(Interim provisions published 2/27/15)*
  - Training for employees and contractors.
- State Safety Oversight (SSO) Program (*Proposed Rulemaking* 2/27/15)
  - Strengthen existing safety programs for rail transit systems.
  - Include an emergency preparedness and response plan.

Transit Safety Performance Measures (1)

FATALITIES (total number of reportable fatalities and rate per total unlinked passenger trips by mode)

INJURIES (total number of reportable injuries and rate per total unlinked passenger trips by mode)

For 1) customer, 2) employee, and 3) public

- Paratransit – measured relative to total unlinked passenger trips
- Bus – measured relative to total unlinked passenger trips
- Rail – measured relative to total unlinked passenger trips
- Other modes – measured relative to total unlinked passenger trips

Transit Safety Performance Measures (2)

SAFETY EVENTS (total number of reportable events and rate per total vehicle miles, by mode)

- Derailments
- Collisions
- Fires
- Evacuations for life safety

SYSTEM RELIABILITY (mean distance between failures by mode – NTD definitions)

1. Major Mechanical System Failures: Prevent a vehicle from completing or starting a scheduled revenue trip because actual movement is limited or because of safety concerns. Examples include breakdowns of brakes, doors, engine cooling systems, steering, axles, and suspension.
2. Other Mechanical System Failures: Prevent a vehicle from completing or starting a scheduled revenue trip even though the vehicle is physically able to continue in revenue service without creating a safety concern. Examples include breakdowns of fare boxes, wheelchair lifts, heating, ventilation, and air conditioning (HVAC) systems.

Transit Asset Management

What is TAM?

- A transit asset management (TAM) system is ‘‘a strategic and systematic process of operating, maintaining, and improving public transportation capital assets effectively through the life cycle of such assets.’’

Applicability

- Applies to all recipients or subrecipients of Federal transit funds (e.g., Section 53XX funds) that own, operate, or manage capital assets used in the provision of public transportation.
- “TAM plans would be required to account for all assets used in the provision of public transportation service for the recipient or subrecipient, regardless of funding source, and whether used by the recipient or subrecipient directly, or leased by a third party.”

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Who Does Transit Asset Management?

Agency Size – Tier 1 or Tier II

- Tier I provider is a recipient with 101+ vehicles in revenue service during peak regular operations, across all modes, or that operates a rail system.
  - Each Tier 1 provider has to prepare and submit a Transit Asset Management Plan
- Tier II provider is a recipient or with 100 or fewer vehicles in revenue service during peak regular operations, across all modes, and no rail system.
  - Tier II providers are grouped and reported collectively by State or other recipient, with option to report individually.

Annual Reporting Requirements - “Each designated recipient must submit two annual reports:

- On the condition of their public transportation systems, including a description of any change in condition since the last report;
- Describing progress towards meeting performance targets established during that fiscal year and a description of the performance targets for the subsequent fiscal year.”

Elements of Transit Asset Management Plan

TAM Plan has nine elements (only 1-4 are required of Tier II recipients)

1. An inventory of capital assets
2. A condition assessment of the capital assets (with level of detail sufficient to monitor and predict the performance of each capital asset)
3. A list of the transit provider's analytical processes or decision-support tools that:
   (i) Estimate capital investment needs over time;
   (ii) Assist capital asset investment prioritization;
4. A project-based prioritization of investments.

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5. A transit asset management and State of Good Repair (SGR) policy;
6. A strategy for the implementation of the TAM plan;
7. A description of annual key transit asset management activities spanning the time horizon of the TAM plan;
8. A specification of the resources, including personnel, needed to develop and implement the TAM Plan; and
9. An outline of how the TAM plan and related business practices will be monitored, evaluated and updated, as needed, to ensure continuous improvement.

Transit Asset Performance Measures

(a) Equipment - (non-revenue) service vehicles (Age)

Percentage of vehicles that have met or exceeded their useful life benchmark (ULB).

- Cranes, prime movers, vehicle lifts, tow trucks

(b) Rolling stock (Age)

Percentage of revenue vehicles within a particular asset class that have meet or exceed ULB.

- 40 foot bus, 60 foot bus, vans, cutaways, locomotives, rail vehicles

(c) Infrastructure-rail fixed-guideway track, signals, and systems (Condition)

The percentage of track segments, signal, and systems with performance restrictions.

- Signal or relay house, interlockings, catenary, mechanical, electrical and IT systems

(d) Stations/Facilities (Condition)

The percentage of facilities within an asset class, rated below condition 3 on the TERM scale.

- Maintenance, Administration, Depots, Terminals, Parking Garages

TAM Plan Investment Prioritization

Investment prioritization required

a) A TAM plan must include an investment prioritization that identifies projects to improve or maintain the state of good repair of capital assets over the horizon period of the TAM plan.

Projects ranked by priority, based on policy and safety

b) Projects to improve or maintain the state of good repair of capital assets must be ranked in order of priority and the year in which they are anticipated to be carried out.

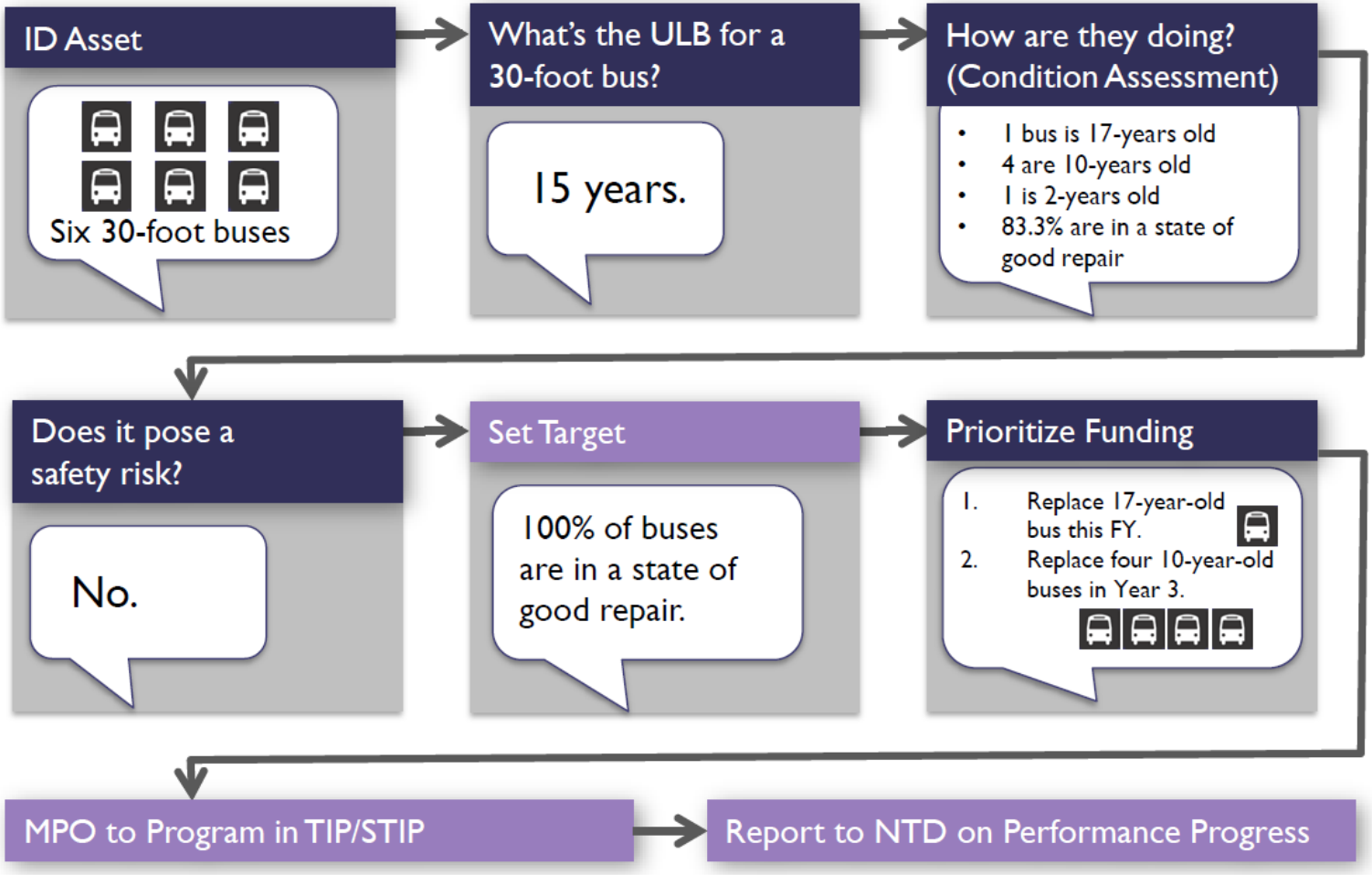
c) Ranking of projects in the investment prioritization must be established on the basis of the transit asset management policy and strategies identified in the TAM plan.

d) The investment prioritization must give due consideration to those projects for state of good repair that pose an identified unacceptable safety risk.

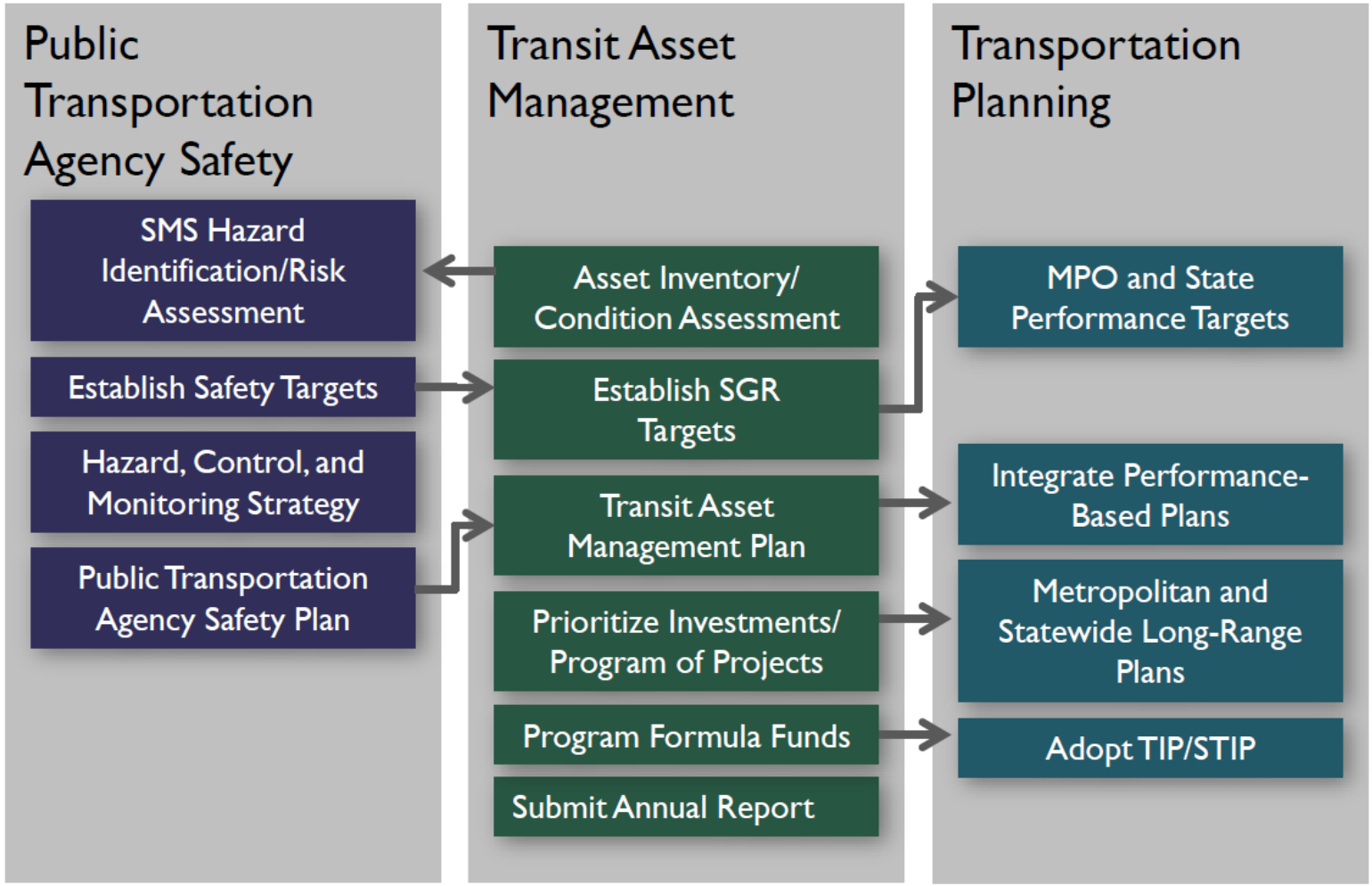
Projects fiscally constrained

e) The investment prioritization must take into consideration an estimate of funding levels and funding sources that are reasonably expected to be available in each fiscal year during the TAM plan horizon period.

TAM Workflow (Example – 30-ft bus)



Linking Proposed Regulations



Coordination of Transit Agency Targets with Metropolitan Planning

- MPOs are required to establish performance targets for transit that are based on the measures for state of good repair and safety established by FTA and to coordinate the selection of those performance targets, to the maximum extent practicable, with performance targets set by transit providers to ensure consistency.

- The Metropolitan Transportation Plan shall include: (1) a description of the performance measures and targets; and (2) a report evaluating the condition of the transit system(s) with respect to the MPO performance measures and targets, including the progress achieved in meeting performance targets compared with system performance recorded in previous years.

- Transportation improvement programs (TIPs) must include, to the maximum extent practicable, a discussion of the anticipated effects of the TIP toward achieving the performance targets in the Metropolitan Transportation Plans by linking investment priorities to those performance targets.



WORK PROGRAM AND STATE OF PUBLIC TRANSPORTATION REPORT UPDATE

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Outline of *"State of Public Transportation"* Report

1. Executive Summary (Introduction)
   - Introduction: overview of transit in the national capital region (pictures)
   - List of fixed route providers and major paratransit
   - Overview of statistics: fixed ridership by mode, bus breakdown
2. "One Page" Provider Highlights / Statistics
   - System highlights – Major accomplishments
   - Data: Ridership and operating expenditures
   - Focus on fixed route – additional paragraphs for jurisdiction and paratransit
3. Past/Upcoming Accomplishments / Major Events:
   - Projects started/completed
   - Major Studies
4. Issues Discussed at RPTS
   - E.g., customer info, maintenance facilities, downtown staging needs (bus and rail), technology integration, etc.

METRO TRANSIT: REGULAR ROUTE BUS

Contact	Brian Lamb
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City State Zip	Minneapolis MN 55411
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E-mail	brian.lamb@metrotransit.org
Website	metrotransit.org

2012 highlights

- Purchased two next-generation hybrid-electric buses
- 33 new hybrid-electric buses began service in St. Paul and communities in the east metro
- Achieved highest maintenance reliability in service history: 7,456 miles between road calls
- Opened 180-space park & ride lot in Little Canada with express service to Minneapolis and St. Paul

System snapshot

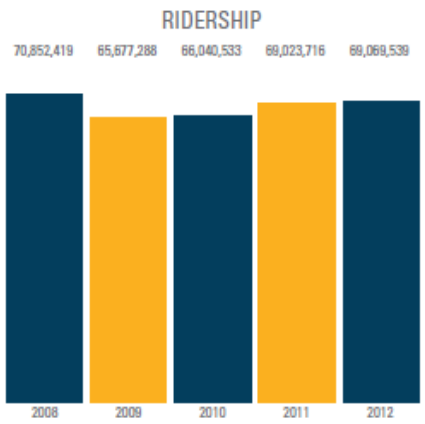
Legal Name	Metro Tranist
Governance	Regional
Area Served	Anoka, Dakota, Hennepin, Ramsey, Washington counties
Legislative District	Metro
Congressional District	2, 3, 4, 5, 6

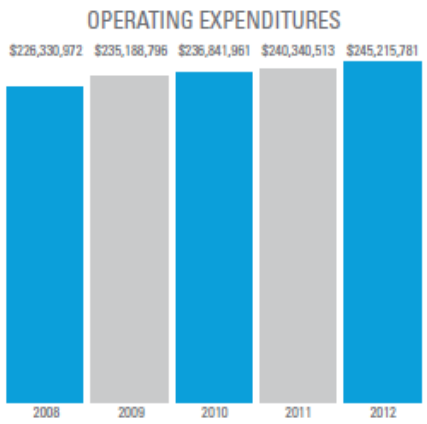
System characteristics

Vehicle fleet	740 buses, 166 articulated buses, 26 motor coaches
Service type	Fixed route

Hours of Operation	
Monday - Friday	12:00 am - 11:59 pm
Saturday	12:00 am - 11:59 pm
Sunday	12:00 am - 11:59 pm
Base fare	$1.75 - $3.00

System performance





"One Page" Provider Highlights / Statistics

One slide per fixed route provider

- Highlights, basic data, ridership and financial statistics.
- *Ensures contribution of each provider recognized. Speaks to range of providers across region*
- *Paragraph for paratransit*
- *Paragraph for jurisdiction*

Agenda Topics for 2016

- RPTS relies on participant contributions: What would you like to present and discuss in upcoming meetings?
  - March 22
    - » One Bus Away Trip Planner?
    - » Big data as an element of improved bus corridor planning?
  - April 26
    - » DASH: no add value to SmarTrip on bus policy
    - » WMATA Night Bus Study?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