

# PERFORMANCE BASED PLANNING & PROGRAMMING

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## An Overview

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# PBPP – Briefing Topics

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- What Is It
- Why This Approach
- What is Involved
- Performance Goals – Overview
- Performance Measures – Overview
- Performance Measures



# What is Performance Based Planning and Programming (PBPP)

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- Application of performance management within the planning and programming process to achieve desired performance outcomes for the multimodal transportation system.
- Includes a range of activities and products.
  - Development of long range transportation plans
  - Federally-required plans and processes -- such as Strategic Highway Safety Plans (SHSPs), Asset Management Plans, the Congestion Management Process (CMP), Transit Agency Asset Management Plans, and Transit Agency Safety Plans
  - Programming documents, including State and metropolitan Transportation Improvement Programs (STIPs and TIPs)
  - Other plans



# Why a PBPP approach

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- **Federally required** for MPOs and DOTs – MAP-21 and FAST Acts
- Improved Outcomes
  - Improved investment decision-making
  - Improved return on investments and resource allocation
  - Improved system performance
  - Increased accountability and transparency
- Demonstrates link between funding and performance
- Common themes within a PBPP Process:
  - Cooperation and coordination
  - Data and tools
  - Linkages across performance-based planning activities
  - Feedback mechanisms
  - Public and stakeholder involvement



# What is Involved in PBPP



# Federally Prescribed Goals

	GOAL AREAS	NATIONAL GOALS
1	SAFETY	Achieve significant reduction in traffic fatalities and serious injuries on all public roads
2	INFRASTRUCTURE CONDITION	Maintain highway system in a state of good repair
3	CONGESTION REDUCTION	Achieve significant reduction in congestion on the National Highway System
4	SYSTEM RELIABILITY	Improve efficiency of surface transportation system
5	FREIGHT MOVEMENT AND ECONOMIC VITALITY	Improve Freight Network; Support regional economic development; Rural communities access to national and international markets
6	ENVIRONMENTAL SUSTAINABILITY	Enhanced transportation system performance while protecting and enhancing natural environment
7	REDUCED PROJECT DELIVERY DELAYS	Elimination of delays on project development and delivery



# Federally Prescribed Performance Measures

	GOAL AREAS	PERFORMANCE MEASURES
1	SAFETY	<ul style="list-style-type: none"> <li>• Highway – Traffic Fatalities and Serious Injuries</li> <li>• Transit – Fatalities and Injuries; Derailments; Collisions; Fires; Evacuations for life safety</li> </ul>
2	INFRASTRUCTURE (ASSET) CONDITION	<ul style="list-style-type: none"> <li>• Highway – Pavement and Bridges</li> <li>• Transit – Revenue vehicles, Non revenue equipment, Track infrastructure, and Facilities/Stations</li> </ul>
3	CONGESTION REDUCTION	<ul style="list-style-type: none"> <li>• Highway – Delay per capita</li> </ul>
4	SYSTEM RELIABILITY	<ul style="list-style-type: none"> <li>• Highway – Reliable Travel Times</li> <li>• Highway – Peak Hour Travel Times Meets Expectations</li> <li>• Transit – Major / Other Mechanical System Failures</li> </ul>
5	FREIGHT MOVEMENT AND ECONOMIC VITALITY	<ul style="list-style-type: none"> <li>• Highway – Reliable Truck Travel Times</li> <li>• Highway – Interstate System Mileage Uncongested</li> </ul>
6	ENVIRONMENTAL SUSTAINABILITY	<ul style="list-style-type: none"> <li>• Highway – Criteria Pollutants Emissions Reduced</li> </ul>

# Highway Safety Performance Measures (Final)

	Performance Measures	Description
1	Number of Fatalities <i>(5 year rolling average)</i>	Total number of fatalities during a calendar year
2	Rate of Fatalities per 100 million VMT <i>(5 year rolling average)</i>	Ratio of total fatalities to VMT
3	Number of Serious Injuries <i>(5 year rolling average)</i>	Total number of serious injuries during a calendar year
4	Rate of Serious Injuries per 100 million VMT <i>(5 year rolling average)</i>	Ratio of total serious injuries to VMT
5	Number of Non-Motorized Fatalities and Serious Injuries <i>(5 year rolling average)</i>	Total number of fatalities and serious injuries during a calendar year

- Implementing Agency (State DOT) – set Targets in August 2017
- TPB (MPO) – set Targets by February 2018





# Transit Safety Performance Measures (Proposed)

	Performance Measures	Description
<b>Fatalities</b>	a) Customer b) Employee c) Public	total number of reportable fatalities and rate per total unlinked passenger trips by mode
<b>Injuries</b>	a) Customer b) Employee c) Public	total number of reportable injuries and rate per total unlinked passenger trips by mode
<b>Safety Events</b>	a) Derailments b) Collisions c) Fires d) Evacuations for life safety	total number of reportable events and rate per total vehicle miles, by mode
<b>System Reliability</b>	a) Major Mechanical System Failures b) Other Mechanical System Failures	mean distance between failures by mode

- Implementing Agency (Transit Providers) – set Targets TBD
- TPB (MPO) – set Targets within 180 days following



# Infrastructure (Asset) Condition - Pavement and Bridges (Proposed)

	Performance Measures
<b>Pavement Condition</b>	(1) Percentage of pavements on the Interstate System in Good condition
	(2) Percentage of pavements on the Interstate System in Poor condition
	(3) Percentage of pavements on the NHS (excl. Interstate System) in Good condition
	(4) Percentage of pavements on the NHS (excl. Interstate System) in Poor condition.
<b>Bridge Condition</b>	(5) Percentage of NHS Bridges Classified as in Good Condition
	(6) Percentage of NHS Bridges Classified as in Poor Condition

- Implementing Agency (State DOT and NHS owners) – set Targets TBD
- TPB (MPO) – set Targets within 180 days following



# Transit Asset Performance Measures (Final)

	Performance Measure	Assets
<b>Rolling stock (Age)</b>	Percentage of revenue vehicles within a particular asset class that have met or exceeded useful life benchmark (ULB).	40 foot bus, 60 foot bus, vans, cutaways, locomotives, rail vehicles
<b>Equipment - (non-revenue) service vehicles (Age)</b>	Percentage of vehicles that have met or exceeded their ULB.	Cranes, prime movers, vehicle lifts, tow trucks
<b>Infrastructure - rail track, signals, and systems (Condition)</b>	The percentage of track segments, signal, and systems with performance restrictions.	Signals, interlockings, catenary, mechanical, electrical and IT systems
<b>Stations/ Facilities (Condition)</b>	The percentage of facilities, within an asset class, rated below 3 on the TERM scale.	Maintenance, Admin, Depots, Terminals, Parking Garages

- Implementing Agency (Transit Providers) – set Targets TBD
- TPB (MPO) – set Targets within 180 days following



# System Performance Measures: Congestion (Proposed)

	Performance Measures
Performance of the NHS	(1) Percent of the Interstate System providing for Reliable Travel Times
	(2) Percent of the NHS (non-Interstate) providing for Reliable Travel Times
	(3) Percent of the Interstate System where Peak Hour Travel Times meet expectations
	(4) Percent of the NHS (non-Interstate) where Peak Hour Travel Times meet expectations

- Implementing Agency (State DOT) – set Targets TBD
- TPB (MPO) – set Targets within 180 days following



# System Performance Measures: Freight, Air Quality (Proposed)

	Performance Measures
Freight Movement	(5) Percent of the Interstate System Mileage providing for Reliable Truck Travel Times
	(6) Percent of the Interstate System Mileage Uncongested

	Performance Measures
Air Quality: Traffic Congestion	(7) Annual Hours of Excessive Delay Per Capita
Air Quality: On-Road Mobile Source Emissions	(8) 2- and 4-year Total Emission Reductions for each applicable criteria pollutant and precursor

- Implementing Agency (State DOT) – set Targets TBD
- TPB (MPO) – set Targets within 180 days following



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