



# **Policy Directive 14 and Asset Management STAC**

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# Agenda

- Update on Policy Directive 14
  - What is PD 14
  - Asset Management and PD 14
- Input of STAC on Safety and Infrastructure Condition (Asset Management)
  - Goal Areas
  - Performance Measures and Objectives
- Next Steps

# What is PD 14

- Provides framework for statewide planning process
- Guides development of multimodal Statewide Plan
- Affects distribution of resources in support of performance objectives

# PD 14 (Adopted in 2008)

- Contained aspirational goals for programs
- Goals related to budgetary “investment categories”

# Emphasis of Draft PD 14

- Multimodal Planning
- Asset Management
- Performance Measures and Objectives
- Optimize transportation system by balancing:
  - Preservation and maintenance (Maintain)
  - Efficient operations and management practices (Maximize)
  - Capacity improvements (Expand)

# MAP-21

- Asset Management
- National Goal Areas
- Performance Measures

# MAP-21 and Draft Policy Directive 14

MAP-21 National Goal Areas	Safety	Infrastructure Condition	Congestion Reduction	Freight Movement and Economic Vitality	System Reliability	Environmental Sustainability	Reduced Project Delivery Delays
MAP-21 Perform. Measures	<ul style="list-style-type: none"> <li>• Serious injuries per VMT</li> <li>• Fatalities per VMT</li> <li>• Number of serious injuries</li> <li>• Number of fatalities</li> </ul>	<ul style="list-style-type: none"> <li>• Pavement condition of the Interstate system</li> <li>• Pavement condition of the NHS (excluding Interstates)</li> <li>• Bridge condition on the NHS</li> <li>• Transit State of Good Repair</li> </ul>	<ul style="list-style-type: none"> <li>• Traffic congestion</li> </ul>	<ul style="list-style-type: none"> <li>• Freight movement on the Interstate system</li> </ul>	<ul style="list-style-type: none"> <li>• Performance of Interstate system</li> <li>• Performance of the NHS (excluding Interstate system)</li> </ul>	<ul style="list-style-type: none"> <li>• On-road mobile source emissions</li> </ul>	None

# Asset Management Areas

- Bridges
- Highways (Pavement)
- Other Roadway Assets – Culverts, tunnels, walls, rock fall mitigation, others
- Transit fleet and facilities
- Maintenance
- Roadway Fleet
- ITS
- Buildings



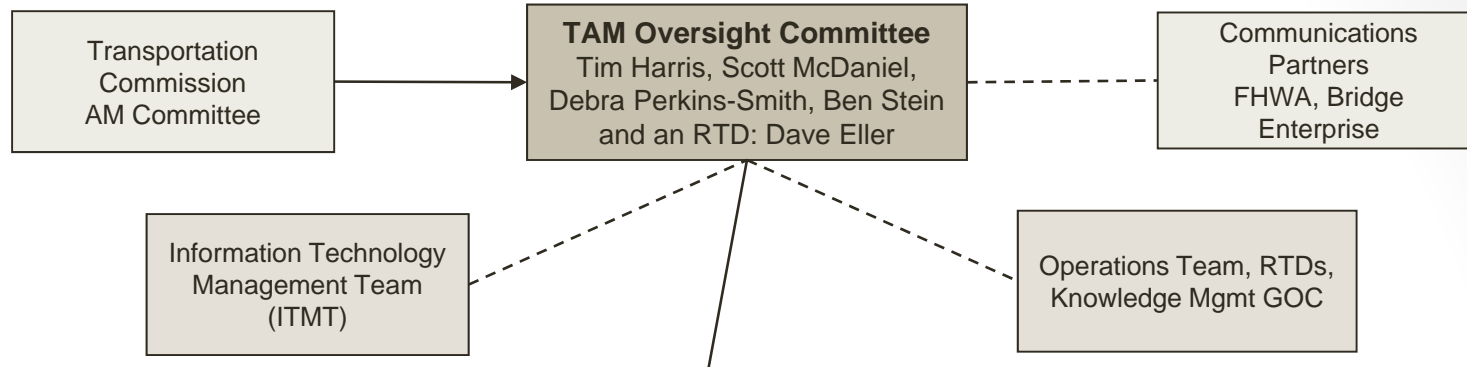
# Asset Management and Draft PD 14

- Definition of Transportation Asset Management (AASHTO)
  - Transportation Asset Management is operating, maintaining, upgrading and expanding physical assets effectively. It focuses on **business and engineering practices** for resource allocation and utilization, with the objective of **better decision making** based upon quality information and well defined objectives.
- Asset Management relates to Infrastructure Condition and Maintenance Areas of PD 14

# MAP-21 - Asset Management Plan

- Purpose: To improve or preserve the condition of assets and performance of the highway system
- Plan elements:
  - Listing and condition of pavement and bridge assets
  - Objectives and measures
  - Performance gap identification
  - Life-cycle cost and risk management analysis
  - Financial plan
  - Investment strategies
- Completed by Oct. 1, 2015
- Failure to develop and implement – state's federal transportation funding will be reduced by 35%

# CDOT Transportation Asset Management (TAM) Structure



## TAM Working Committee

- Scott Richrath, Committee Chair
- JoAnn Mattson, Committee Vice Chair
- Sandi Kohrs, DTD Planning
- Bob Haley, Chief Engineer's Office
- William Johnson, GIS
- Lou Henefeld, GIS
- Josh Laipply, Staff Bridge
- Mark Nord, Staff Bridge
- Cole Richards, Staff Bridge
- Stephen Henry, Pavement
- Bill Schiebel, Materials and Geotech
- Dave Wieder, Maintenance & Operations
- Roy Smith/Karen Neuschwanger, Fleet
- David Fox, Real Property Building Assets
- Rich Sembrat, ITS
- Charles Meyer, Traffic
- Laurie Freedle, OFMB
- Ty Ortiz, Rockfall Mitigation
- John Vetterling, Project Development
- Jay Hendrickson, R1 Resident Engineer
- Doug Lollar, R2 Program Engineer
- Jason Ahrens, R2 Business Manager
- Zane Znamenacek, R3 Traffic Engineer
- Mike Goolsby, R3 Deputy Superintendent
- Myron Hora, R4 PIng and Env. Manager
- Mike McVaugh, R5 Traffic and Safety Engr
- Cambridge Systematics/Redd Engineering

Multi Asset Management Task Force	Asset Management Pilot Selection Task Force	Cross - Asset Integration Task Force	Risk Task Force	Colorado Const. Cost Forecast Task Force
DTD Maintenance Staff Bridge Fleet Pavement ITS	DTD IMB Region 3 DTD TPB Region 4 Region 2 Region 5	Pavement Maintenance DTD TPB	Staff Branches Region 2 Region 4 DTD TPB Region 5 OFMB Risk Mgmt.	Staff Branches Consultant DTD TPB OFMB
Bridge Task Force	Real Estate Task Force	Communicating Value of Preservation Task Force	Tunnels Task Force	Maintenance Operations and Traffic Operations Task Force
Staff Bridge DTD TPB	HQ DTD TPB Property Mgmt	DTD MPB	Staff Branches Region 5 DTD TPB Region 3	MLOS Region 3 HQ Traffic Region 5 Ops DTD IMB DTD TPB

# Safety Goal in Draft PD 14

**SAFETY** – Reduce traffic fatalities and serious injuries and work toward zero deaths for all users.

# Safety

- Past PD 14 goal: Achieve a 1.00 fatality rate per 100M vehicle miles traveled (VMT)
- MAP-21 requires four measures:
  - Number of fatalities
  - Fatalities per VMT
  - Number of serious injuries
  - Serious injuries per VMT

# Safety Measures and Objectives

MEASURES*	OBJECTIVES**
Number of fatalities	Achieve a five-year annual average reduction of <b>12</b> in the number of fatalities.**
Fatalities per Vehicle Miles Traveled (VMT)	Achieve a five-year annual average fatality rate of <b>1.00</b> per 100 million VMT.**
Number of serious injuries	Achieve a five-year annual average reduction of <b>100</b> in the number of serious injuries.**
Serious injuries per VMT	Achieve a five-year annual average serious injury rate of <b>25</b> per 100 million VMT.**
Economic impact of crashes	Reduce the economic impact of crashes annually by <b>1%</b> .
* <i>Bold = Required by MAP-21</i>	** <i>Measures tracked in YourCDOTDollar.com</i>

# Maintenance Goal in Draft PD 14

**MAINTENANCE** – Annually maintain CDOT’s roadways and facilities to minimize the need for replacement or rehabilitation.

# Maintenance

- Past goal: Achieve a B maintenance level of service grade for system quality measures
- No MAP-21 performance requirements for maintenance



# Maintenance Measures and Objectives

MEASURES	OBJECTIVES
Level of Service (LOS) for snow and ice removal	Maintain an LOS B grade for snow and ice removal.
Overall Maintenance Level of Service (MLOS) for the state highway system	Maintain an overall MLOS B- grade for the state highway system.

# Infrastructure Goal in Draft PD 14

## **INFRASTRUCTURE CONDITION –**

Preserve the transportation infrastructure condition to ensure safety and mobility at a least life cycle cost.

# Infrastructure Condition (Asset Management)

- Infrastructure Condition
  - Bridges
  - Transit
  - Highways (Pavement)

# Infrastructure Condition - Bridges

- Past goal: Achieve 95% good/fair deck area condition system-wide (based on technical scoring for functional obsolescence and structural deficiency)
- MAP-21 identifies bridge conditions on the National Highway System (NHS) as a National Performance Measure Area
- Transition to objective to meet MAP-21 reporting requirements

# Infrastructure Condition - Bridges Measures and Objectives

MEASURES*	OBJECTIVES
<b>Condition of all NHS bridges (on State Highways and locally owned bridges)</b>	<b>Maintain the percent of NHS bridge total deck area that is not structurally deficient at or above 90%.</b>
Condition of state highway NHS bridges	Maintain the percent of NHS state highway bridge total deck area that is not structurally deficient at or above <b>90%</b> .
Condition of all state highway bridges	Maintain the percent of state highway total bridge deck area that is not structurally deficient at or above <b>90%</b> .
Risk-Based Asset Management Plan goals for bridges	Meet bridge goals in Risk-Based Asset Management Plan
<i>*Bold=Required by MAP-21</i>	

# Infrastructure Condition - Transit

- Transit asset condition not in 2008 PD 14 or in past federal law
- MAP-21 emphasis on state of good repair includes the development and implementation of Transit Asset Management Plans
- FTA Ratings for transit assets:

<b>RATING</b>	<b>CONDITION</b>	<b>DEFINITION</b>
EXCELLENT	5	No visible defects, near new condition.
GOOD	4	Some slightly defective or deteriorated components.
FAIR	3	Moderately defective or deteriorated components.
MARGINAL	2	Defective or deteriorated components in need of replacement.
POOR	1	Seriously damaged components in need of immediate repair.

# Infrastructure Condition – Transit Measures and Objectives

	MEASURES*	OBJECTIVES**
Transit	<b>Transit Asset Condition</b>	Maintain the percentage of vehicles in the rural Colorado transit fleet to no less than 65% operating in Fair, Good, or Excellent condition, per Federal Transit Administration (FTA) definitions.
		By 2017, ensure than all CDOT transit grantees have <b>Asset Management Plans in place</b> for state or federally funded vehicles, buildings & equipment.
	* <b><i>Bold = Required by MAP-21</i></b>	** <b><i>Bold = Required by MAP-21; year plans need to be in place not in law</i></b>

# Next Steps

## Today - More on PD 14 . . .

- Presentation on Pavement Management and Drivability Life concept

## Future

- Review and discussion of
  - Remaining Goal Areas
  - Performance Measures and Objectives