Transportation Commission of Colorado
Transportation Asset Management Committee
Meeting Agenda
Thursday, January 16, 2014
4201 East Arkansas Avenue

William Johnson, Branch Manager
Transportation Performance Branch

Les Gruen, Chair
District 9, Colorado Springs

Kathy Connell
District 6, Steamboat Springs

Heather Barry
District 4, Westminster

Sidny Zink
District 8, Durango

Steven Hofmeister
District 11, Haxtun

Scott McDaniel
Acting Chief Engineer

Debra Perkins-Smith, Director
Division of Transportation Development

All commissioners are invited to attend this Committee meeting.

1. **Report Out from Commissioner Gruen – 5 minutes**
2. **Risk-Based Asset Management Plan – 20 minutes**
3. **Discussion on Future of Committee – 20 minutes**

<u>THE AGENDA MAY BE ALTERED AT THE CHAIR'S DISCRETION</u>

DATE: January 3, 2014
TO: Transportation Commission
FROM: Debra Perkins-Smith, Division of Transportation Development
William Johnson, Transportation Performance Branch, DTD
SUBJECT: Transportation Asset Management Committee

Purpose
During the January meeting of the Transportation Asset Management Committee, staff will provide an overview of the Risk-Based Asset Management Plan and request guidance from the Committee on the future of the Asset Management Committee.

Action Requested
Staff requests that the Committee determine the role going forward for the Asset Management Committee.

Background
In September 2013 the Colorado Transportation Commission formed the Asset Management Committee to facilitate a more detailed discussion on asset management with a smaller group. The initial priorities of the group according to the September Committee minutes were to seek an alternative surface treatment analysis, improved fleet equipment management and a budget tradeoff tool. Commissioners emphasized that asset management must be incorporated into the FY14 budget discussion.

Details
Since the Asset Management Committee was formed, CDOT has incorporated asset management principles into the annual budget discussions and shifted from a formula approach for distributing funds to the regions to an asset management approach based on the condition and need for the various assets statewide. This shift is reflected in the Risk-Based Asset Management Plan (RB AMP), the initial version of which was recently completed by a team of staff working with consultants.

Based on direction from the Asset Management Committee and Senior Management CDOT was ahead of the game in developing the asset management plan, and is one of the first states in the nation to complete the initial version. CDOT will be submitting the plan to FHWA in the February/March timeframe, who will review the process under which the plan was developed and determine whether or not to certify the process in accordance with the MAP-21 legislation. The plan must then be updated and submitted to FHWA for recertification at least once in the next four years (CDOT intends to update the plan every two years).

At this juncture staff requests that the Asset Management Committee review the progress made since September, 2013 and determine the future purpose/role of the Committee.

DATE: January 3, 2014
TO: Transportation Commission
FROM: Debra Perkins-Smith, Division of Transportation Development
William Johnson, Transportation Performance Branch, DTD
SUBJECT: Transportation Asset Management Committee

Purpose
Per the January 2, 2014 discussion with Commissioner Gruen and staff, this is an informational memorandum detailing updates on changes to the FY14 tunnels and rockfall project lists.

Action Requested
No action requested; informational only.

Background
The FY14 budget was determined in January of 2013. CDOT is currently in the middle of FY14, and has additional information that was not available at the time of budget setting, when the project lists were set for tunnels and rockfall. In the interest of making the best decisions staff requests the changes discussed in the Details section below.

Details
Tunnels: There were 6 projects approved for FY14 for tunnels, four of which are proceeding as expected. Of the two remaining projects, both at Wolf Creek Tunnel, staff requests the shifting of funds from one project to another. These two projects call for the replacement of the UPS system and the replacement of the deicing system with newer and more reliable technology. Since the project list was created, staff have had the tunnel UPS inspected and learned that it does not need replacement at this time. At the same time, staff has learned that the estimate for the deicing system is higher than anticipated so the $100k approved for the UPS project will be shifted to the deicing system project.

Rockfall: The approved rockfall work for FY14 was within the framework of Rockfall Risk Reduction, Emergency Response and Rockfall Device Maintenance. The locations for the Risk Reduction work were the Clear Creek Canyon Corridor, the I-70 Mountain Corridor, and an individual site on US36 near Estes Park. The amount estimated to be spent at these locations in FY14 was $7M. Funding for statewide Emergency Response and Rockfall Device Maintenance was $2M.

At the time the work was approved the Rockfall Management Plan (RMP) was under development. The RMP is still being developed to incorporate other geological and geotechnical hazards in addition to Rockfall; however, the rockfall prioritization method has been updated and is being used to identify FY14 and FY15 work. This combined with the need to avoid duplicating efforts for planned work on the I-70 Mountain Corridor and the

effects to US36 from the September floods, which have reshaped the rockfall efforts on this corridor, have resulted in changes to the Risk Reduction work locations. Using the methods outlined in the RMP, the work locations for Risk Reduction will be the Clear Creek Canyon Corridor and individual sites on SH3 in Durango, SH145 near Telluride and US550 near Ridgeway. The funding for these locations is earmarked at $5.5M. $1.5M will be used to supplement Emergency Response, Rockfall Device Maintenance, and to perform the design and project clearances for FY15 work.

Transportation Asset Management

TC Asset Management Committee
January 16, 2014
CDOT

Agenda

- CDOT's Risk-Based Asset Management Plan
- Discussion on Future of AM Committee

2

Agenda

CDOT's Risk-Based Asset Management Plan

Discussion on Future of AM Committee

3

What is Asset Management?

Transportation Asset Management is defined as "a strategic and systematic process of operating, maintaining, upgrading and expanding physical assets effectively throughout their life cycle. 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."

Source: NCHRP Report 632

4

MAP-21

Risk-based Asset Management Plan:

- As part of the NHPP, states are required to develop "risk-based asset management plans" for the National Highway System. The purpose of the plan is to improve or preserve the condition of the assets and the performance of the highway system. The plan must, at a minimum, include:
  - a summary **listing of the pavement and bridge assets** on the National Highway System within the state, including a description of the **condition of those assets**;
  - asset management **objectives and measures**;
  - performance **gap identification**;
  - **lifecycle cost and risk management analysis**;
  - a **financial plan**; and
  - **investment strategies**.

If a state fails to develop and implement a state asset management plan, that state's federal transportation **funding will be reduced by 35 percent**.

5

Risk-Based Asset Management Plan (RB AMP)

RB AMP Deliverable Date: December 15, 2013 (Delivered)

Staff: TAM Oversight Committee and TAM Working Committee

Consultant: Cambridge Systematics with Redd Engineering

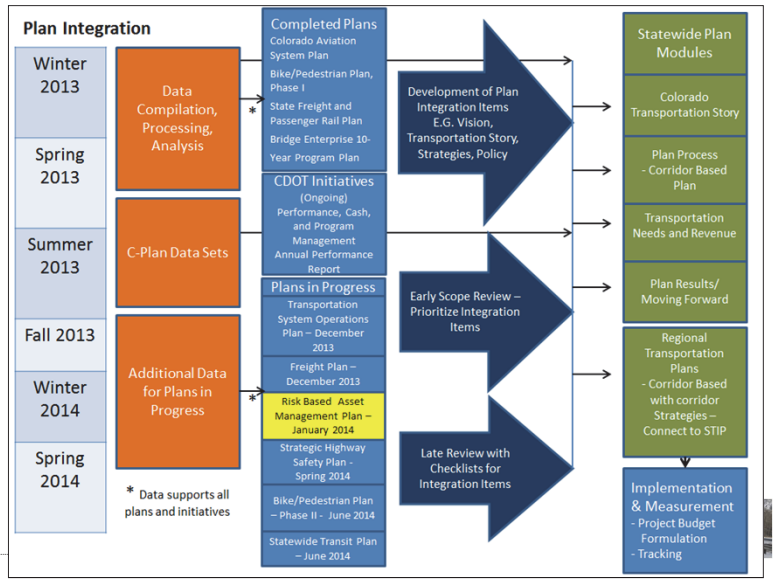
Project Purpose/Goal:

- Develop the Risk-Based Asset Management Plan required by MAP-21
- Pull together asset inventory and condition information along with CDOT's financial outlook and risk approach into one document
- Define gaps in asset management and provide a plan for reducing/eliminating these gaps

6

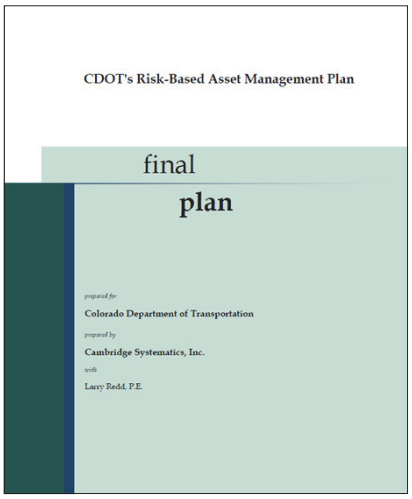
Risk-Based Asset Management Plan (RB AMP)

Integration with the Statewide Plan and other CDOT Plans:



7

Risk-Based Asset Management Plan (RB AMP)


CDOT's Risk-Based Asset Management Plan

final

plan

prepared for

Colorado Department of Transportation

prepared by

Cambridge Systematics, Inc.

with

Larry Redd, P.E.

The RB AMP is a living document.

CDOT will request FHWA certification of the process used to develop the plan.

MAP-21 requires that the process to develop the asset mgmt plan be recertified a minimum of once every four years.

8

Risk-Based Asset Management Plan (RB AMP)

RB AMP Content:

- Executive Summary
- 1: Introduction
- 2: Value to Citizens
- 3: Asset Inventory and Condition
- 4: Asset Management Performance Measures and Targets
- 5: Current Asset Management Processes
- 6: Life-Cycle Cost Considerations
- 7: Incorporating Risk into the Asset Management Program
- 8: Financial Plan
- 9: Investment Strategies
- 10: Asset Management Gap Assessment
- 11: Asset Management Implementation Plan
- 12: RB AMP Governance
- Appendices

9

Risk-Based Asset Management Plan (RB AMP)

Key Highlights:

- MAP-21 requires that states include inventory and condition for pavement and bridges. CDOT meets this requirement and also includes information on seven additional assets: maintenance, ITS, road equipment, buildings, tunnels, culverts and rockfall mitigation sites. (Chp. 3)
- Lays the foundation for incorporating risk in decision-making. This is currently done very well at the project level, however there is more work to do at the program and agency levels. (Chp. 7).
- Identifies the asset management gaps for CDOT to work on, based on surveys and interviews with CDOT staff. (Chp. 10 & 11)

10

Risk-Based Asset Management Plan (RB AMP)

Next Steps:

- Address asset management gaps identified in RB AMP
- Address items from USDOT MAP-21 Rules when available

11

Risk-Based Asset Management Plan (RB AMP)

Top 10 Asset Management Gaps Identified:

1. Develop and Document the Budget Distribution, Project Selection and Project Tracking Process
2. Integrate Risk Analysis into Planning and Programming Processes
3. Develop Strategies to Manage Project and Program Delivery Risks
4. Establish a Risk Framework to Evaluate Alternative Strategies
5. Analyze Budget Tradeoffs Across Programs
6. Improve Project Scoping and Optimization
7. Incorporate Life-Cycle Analysis into Decision-Making
8. Clarify the Role of Target-Setting
9. Implement a Strategic Management Framework to Reflect on Progress
10. Communicate the Benefits of TAM

12

Agenda

CDOT's Risk-Based Asset Management Plan

Discussion on Future of AM Committee

13

TC AM Committee

Purpose/Role

- Elevate the importance of asset management principles at CDOT
- Change business practices
- What is the role going forward for this Committee?

14