



## How to Manage Risks during Project Development and Design Part 1: Basics

MDT Preconstruction Conference  
February 14, 2018

Lead in story – house construction, highway project in Montana, mega project in another state

What does risk management mean to you>

Nothing new – something that you’ve learned to do in approaching all projects.

Risk management is fundamental to project and program management.

Understanding project risks will better enable project teams to make informed decisions regarding project development and delivery.

Self introduction

Logistics

## Objectives

- ▶ Understand MDT's new Risk Management Policy
- ▶ Become familiar with Risk Management tools
- ▶ Recognize proper documentation
- ▶ Others?



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Project risk comes in many shapes and sizes, can affect costs and schedule, and can impact your projects negatively and positively. This session will introduce MDT's risk management process and show you how to identify, analyze, and manage risks in a manner that can be scaled to fit all types of projects. You will learn about a tool that will help you and your design teams communicate better and smooth the project delivery path.

Part 1 is an Overview of the new Risk Management policy and expectations. Review of available tools and required documentation, with an emphasis on identifying and documenting the project level of risk in planning and early design stages.

## Rationale

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- ▶ Every project has risks, regardless of project size or complexity
- ▶ Risks have negative or positive effects on at least one project objective (scope, cost, time, and quality)
- ▶ Risk Management minimizes surprises that hinder project delivery through effective communication and documentation
- ▶ Actively managing risks will help manage project scope, schedule, and budget



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Why should you care?

## Introduction

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- ▶ Scenario 1: Routine oil change and vehicle inspection
- ▶ Scenario 2: Minor annoyances noted that need attention
- ▶ Scenario 3: Engine light comes on and car quits

Impact to budget? Time? Expected scope of work?

## Risk Management Policy

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- ▶ Apply scaled Risk Management process to all projects
- ▶ Use level of project risk to determine minimum process
- ▶ Actively manage risk for all medium and high risk projects
- ▶ Actively manage risk for all NH and restricted funding projects



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New Risk Management Policy dated Dec 5, 2016

## Risk Management Policy

<u>Project Level of Risk</u> See table in Appendix A	<u>Minimum Process</u> Project managers may use a higher level process as needed
Low Risk Pavement Preservation or minor projects	Risk identification using the Project Risk Documentation worksheet and document in milestone reports
Medium Risk Rehab or Reconstruct	Qualitative risk analysis using the RMP worksheet
High Risk Complex projects	Risk analysis workshop using the RMP worksheet



What's all this mean?

## Low Risk

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- ▶ **Identify potential areas of risk**
- ▶ **Document and communicate**
- ▶ Handle as necessary for meeting project objectives (MANAGE)

## Medium Risk

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- ▶ **Identify potential areas of risk**
- ▶ **Document and communicate**
- ▶ **Actively MANAGE risks through project development**
  - ▶ Identify
  - ▶ Analyze qualitatively
  - ▶ Strategize
  - ▶ Manage



## High Risk

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- ▶ **Identify potential areas of risk**
- ▶ **Document and communicate**
- ▶ **Actively MANAGE risks through project development**
  - ▶ Identify
  - ▶ Analyze quantitatively
  - ▶ Strategize
  - ▶ Manage

# Risk Management Policy

▶ <http://www.mdt.mt.gov/business/contracting/cost.shtml> (MDT Internet link)

## HIGHWAYS BUREAU

Org Chart

### Sections

Cost Estimating  
Design Visualization  
Hydraulics  
Photogrammetry & Survey  
Road Design  
Tort Claims

### Focus

Context Sensitive Solutions  
Work Zone Safety & Mobility  
Toolbox

### Resources

Joint Policies FHWA-MDT  
Standard Report Forms

## Cost Estimating

MDT design staff is responsible for estimating construction costs for proposed projects. Interim guidance on cost estimating should be followed while the Department works on updating its Estimating Procedures and Guidelines.

Please note that in the current MDT Procedures and Guidelines, some of the applications have changed, including: inflation, IDC, report formatting, etc. Cost estimating-related email may contain information that is supplemental to these guidelines. FHWA, AASHTO, and other states have additional information available as referenced below.

Please contact [Chad Richards](#) at 444-6944 or [Lesly Tribelhorn](#) at 444-6242 with any questions or training requests.

## Guidelines

[Risk Management Engineering Memo](#)  
[MDT Procedures and Guidelines](#)  
[MDT Risk Management Guidelines](#)  
[Risk Management Plan \(RMP\) Quick Guide | RMP Workbook](#)  
[Risk Management Process](#)  
[Introduction to Risk Management](#)  
[Plastic Pipe Items Guidance](#)

Resources to assist  
Internal links

Tools

# Risk Management Plan

# RMP



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Run through overview of sheets  
Focus on planning stages

Talk about documentation: RMP and reports

## RMP

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<http://www.mdt.mt.gov/business/contracting/cost.shtml>

Intranet (internal):

Departments > Highways Bureau > Cost Estimating

Internet (external):

[www.mdt.mt.gov](http://www.mdt.mt.gov)

Doing Business > Design Consulting > Tools &  
Resources; Cost Estimating

## Documentation

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- ▶ RMP
- ▶ Milestone Reports

## Documentation – SOW Report

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### **Project and Risk Management**

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Provide a discussion of the overall level of risk to the project costs and schedule. Highlight any significant risks and discuss the active management strategies. If any significant risks have been retired or mitigated, identify those as well.

## Conclusion

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- ▶ Understand MDT's new Risk Management Policy
- ▶ Risk Management tools
- ▶ Documentation

Review goals  
Check audience

Next session is Risk Identification





## Contact Information

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