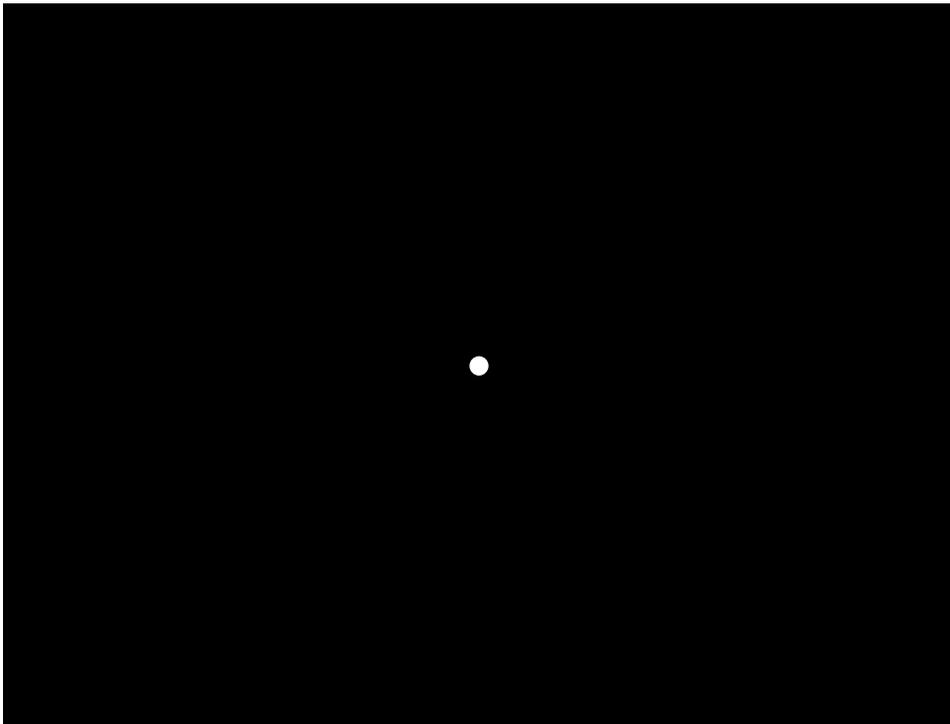
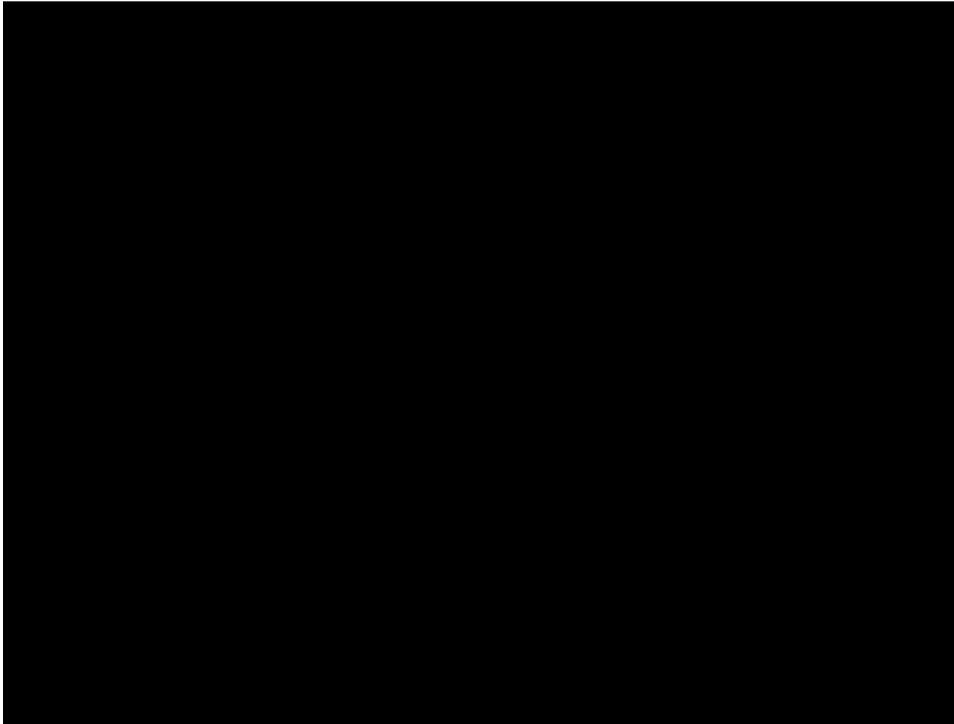




# Risk Management

Life Cycle of a Project





# RISK MANAGEMENT ZONE

## Risk Management

Life Cycle of a Project

### SESSION OVERVIEW



# Session Overview

## Risk Management

- Scene 1: Talking with the new PM
- Scene 2: Day of Risk Workshop
- Scene 3: Progress Meeting / Work Program Update



## Scene 1

### Talking Risk with the New PM



## Risk Based Graded Approach Worksheet

- PM Handbook – Chapter 19
- Initial risk assessment (15 minutes)
- Supports consultant selection decision

Risk Based Graded Approach Worksheet

ITEM	RISK ELEMENT	RISK ASSESSMENT	PRIORITY	TOTAL
1	Utility Involvement	1	3	3
2	Project Schedule	5	5	25
3	Interfaces	3	1	3
4	Experience/Capability	3	3	9
5	Right-of-Way Involvement	5	5	25
6	Environmental Impacts/Contamination	1	1	1
7	Regulatory Involvement	3	3	9
8	Contractor Issues	5	3	15
9	Resource and Material Availability	3	3	9
10	Project Funding	1	1	1
11	Political Visibility	3	5	15
12	Public Involvement	3	3	9
13	Safety	3	3	9
14	Construction Complexity	1	1	1
15	Weather Sensitivity	3	1	3
<b>Risk Score</b>				<b>137</b>

Legend: Low Risk (0-90), Medium Risk (90-150), High Risk (150-210)



## Risk Based Graded Approach Worksheet

ITEM	RISK ELEMENT	RISK ASSESSMENT	PRIORITY	TOTAL
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<b>Risk Score</b>				<b>137</b>

Legend: Low Risk (0-90), Medium Risk (90-150), High Risk (150-210)

## Risk Management & Analysis Tools

- PM Handbook (CH. 19)
- Standard Scope of Services Staff Hour Guidelines
- Self Modeling Worksheet
- Risk Workshops
- Program Management Sharepoint

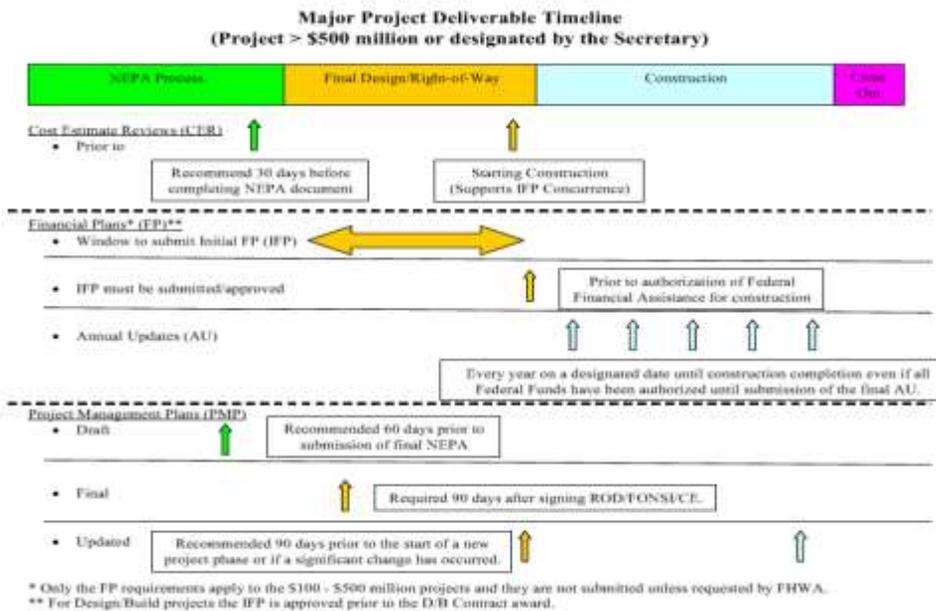


## Risk Teams and Sharepoint

- District Risk Team
- Risk Regional Teams
- State Cost Risk Team
- Sharepoint
  - [http://cosharepoint.dot.state.fl.us/Sites/stateengineer/ProgMgmt/cra\\_regional\\_teams/](http://cosharepoint.dot.state.fl.us/Sites/stateengineer/ProgMgmt/cra_regional_teams/)

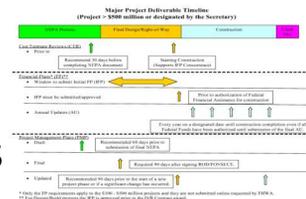


# Major Project Timeline



# Major Project Timeline

- Major Projects (FHWA)
  - Project Delivery Timetable
  - Programming requirements
    - 70% confidence level
- FHWA requires Cost Estimate Review
  - Need before NEPA approval
  - Need before Federal Authorization



## Scene 1 Summary

- PM Handbook (CH. 19)
- Standard Scope of Services
- Staff Hour Guidelines
  - Sharepoint
  - [http://cosharepoint.dot.state.fl.us/Sites/stateengineer/ProgMgmt/cra\\_regional\\_teams/](http://cosharepoint.dot.state.fl.us/Sites/stateengineer/ProgMgmt/cra_regional_teams/)
- Self Modeling Worksheet



## Scene 1 Summary (Continued)

- District Risk Team
- Risk Regional Teams
- State Cost Risk Team
- Major Project Requirements
- Risk Workshops



# Getting Ready for the Workshop

- Present the Risk Management Process to Project Team
- Present the Project Scope, Base cost & Base schedule
- Discuss Logistics for workshop:
  - Schedule sessions (number of days)
  - Reserve room(s)
  - Set up Video/GoTo Meetings (if necessary)
  - Coordinate project info with Risk and Schedule leads



## Scene 2

### The Day of the Workshop



# Workshop Rules of Engagement

- Initial Risk List
- Threats & Opportunities
- Probability Assessment
- Cost and/or Schedule Impacts



## Project Scenario

- Base cost estimate:
  - Interstate to Interstate connection
  - 5 miles Major reconstruction
  - 10 miles of 22' noise wall
  - 14 Bridges (3 over water)
  - Managed lanes
  - Reworking 6 interchanges
- Recent developments identify half of project industrial area – Land Use Change
- Risk – based on recent developments, need less wall



# Workshop

- Requires 2-3 days
- Recommended for projects >\$100 million
- Required for FHWA major projects (>\$500 million or complex projects)



## Risk Register

Risk Register for I-4														
Item #	Risk Name	Priority	Risk Status	Description	Initial Risk Quantification									
					Initial Low Cost	Initial Most Likely Cost	Initial High Cost	Initial Low Schedule	Initial Most Likely Schedule	Initial High Schedule	Initial P[L] Schedule	Initial P[M] Schedule	Initial P[H] Schedule	
					Cost Risk Information (Millions \$)			Schedule Risk Information (Months)						
Initial Probability of Occurrence (%)	Initial Low Cost	Initial Most Likely Cost	Initial High Cost	Initial P[L] Cost	Initial P[M] Cost	Initial P[H] Cost	Initial Low Schedule	Initial Most Likely Schedule	Initial High Schedule	Initial P[L] Schedule	Initial P[M] Schedule	Initial P[H] Schedule		
1	Bridge Structure	CR	Not Started	...	100%	\$93.40	\$93.40	\$93.40	0	0	0			
14	Bridge Structure	CR	Not Started	...	100%	\$93.40	\$93.40	\$93.40	0	0	0			

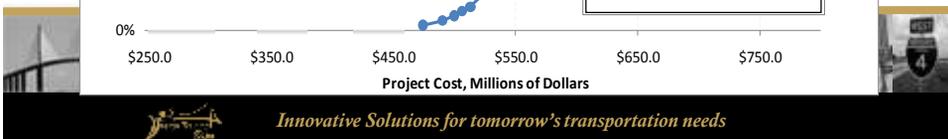
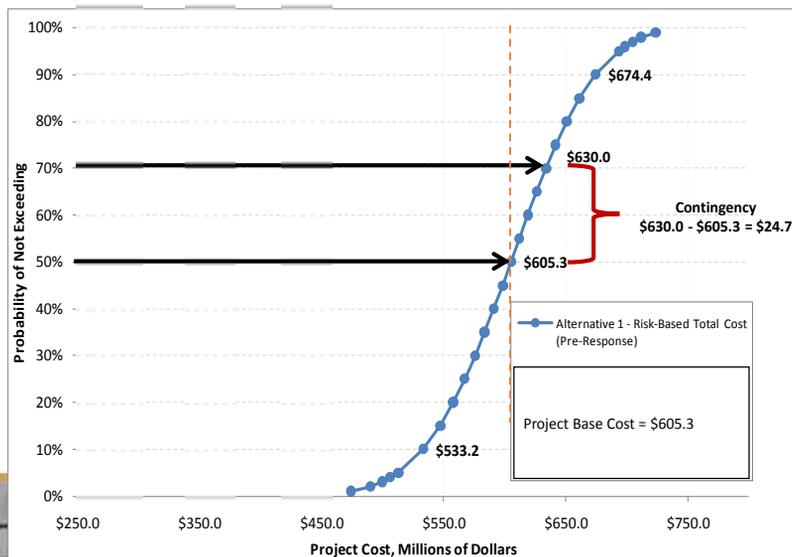


## Scene 2 Summary

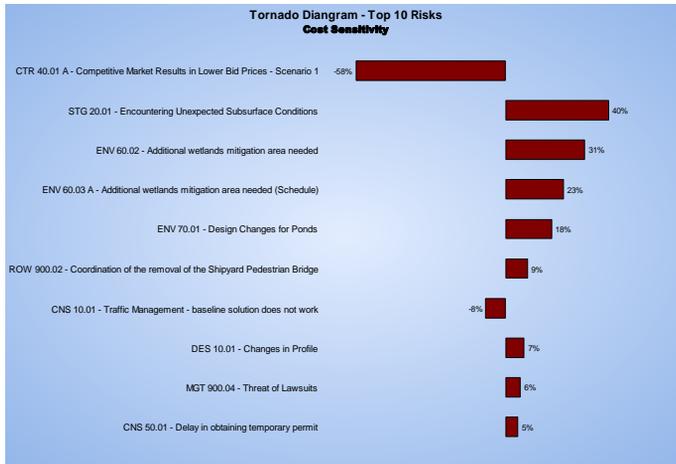
- Prep Session
- Workshop (2 – 3 days)
- Risk Register
- Cost & Schedule Graphs
- Tornado Diagrams
- Risk Management Plan



## Scene 2 Summary (continued)



# Scene 2 Summary (continued)



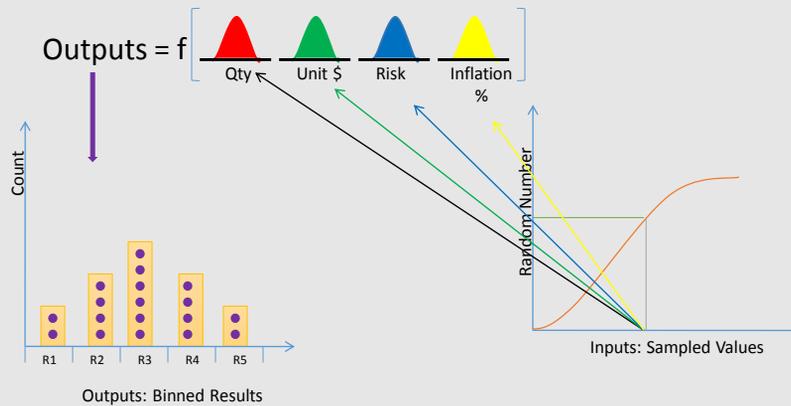
# Scene 3

Progress Meeting / Work Program Update



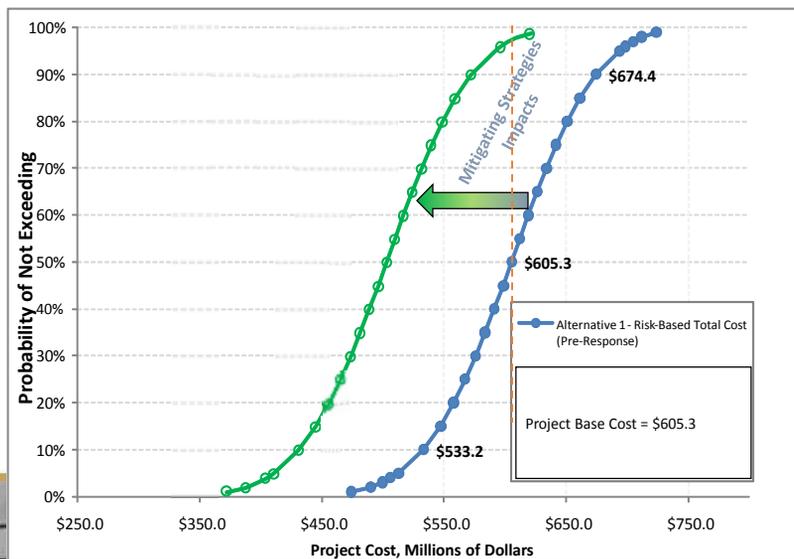
# Risk Management Process - Analysis Monte-Carlo Simulation

$y = f(x)$  or "y" is a function of "x"



Source: FHWA

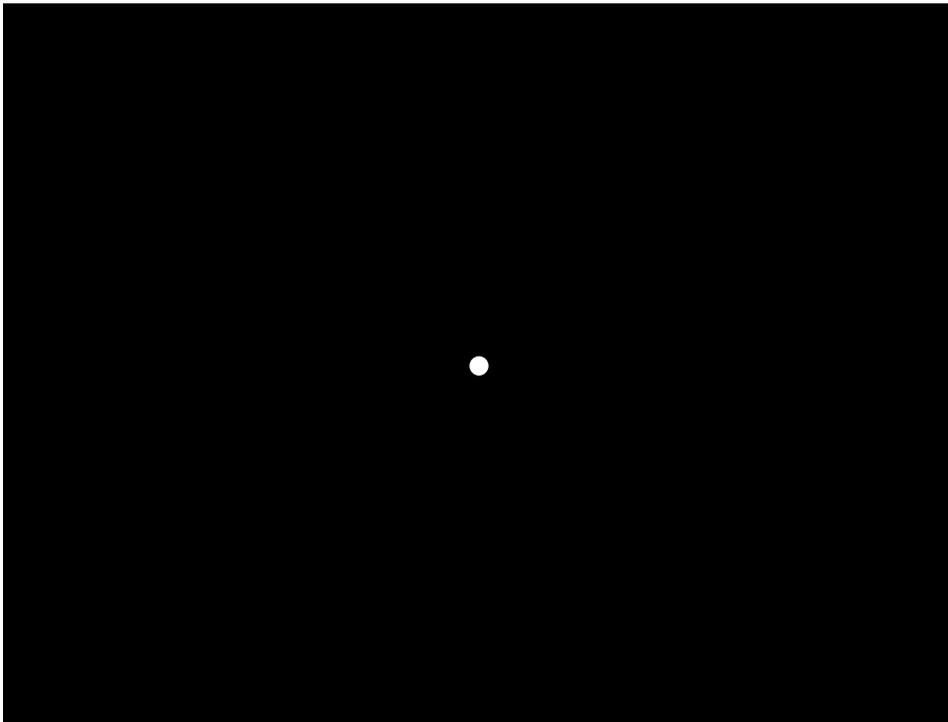
## Risk Analysis – Post-Mitigated Results



*Innovative Solutions for tomorrow's transportation needs*

## Scene 3 Summary

- Use of the Risk Register
- Progress Meetings
  - Regular contact with Team / Risk Owners
  - Monitor & Control Risks
  - Develop Risk Response Strategies
  - Modify Risk Register
  - Update Cost & Schedule Curves
- Provide for Work Program Update Cycle



**RISK  
MANAGEMENT  
ZONE**

# Questions?

State Risk Team:

Greg Davis  
Tim Brock  
Kurt Lieblong  
Rob Quigley

