

New Jersey Department of Transportation

**RISK MANAGEMENT  
AND  
PARAMETER EXPANSION to the  
LIMITED SCOPE PROJECT  
DELIVERY APPROACH  
INFORMATION SESSION**

**October, 2013**

# RISK MANAGEMENT

## Implemented in a Pilot Program to:

- Test the process and tools
- Determine the effectiveness
- Gain support from users
- Keep what works and revise what doesn't

# RISK MANAGEMENT

## Pilot Program Projects

- Route 38, Mile Post (MP) 0.0-6.1
- Route 1&9 Local and Express, Newark, Pavement
- Route 21 Ramp B over Delaware, Lackawanna and Western Railroad
- Route 1&9 and Route 46 over Jones Road
- Route 10 eastbound and westbound from Route 46 to Mt. Pleasant Turnpike
- Route 94 Black Creek Tributary, Culvert Replacement
- Route 130 Brooklawn Circles
- Route 73/Fellowship Road and Route 73/Church Road Study
- Route 9 Resurfacing, MP 116.75-135.65

# RISK MANAGEMENT PROCESS

## OBJECTIVES

- Ensure project risks are proactively managed over the life of the project
- Enable project sponsors and project team members to make informed decisions on project-related risks
- Eliminate re-work, minimize design changes and ultimately minimize the cost

# RISK MANAGEMENT PROCESS

- **Customizable based on size and complexity of the project**

- Simple project = simple risk management

- More complex project = more robust risk management

- \* Details outlined in “Risk Management Guideline” on CPD Website

- **Implementation on existing projects**

- Phased in and varies on a project-by-project basis

- \* Details outlined in “Risk Management Implementation Plan” on CPD Website

# RISK MANAGEMENT PROCESS

## Five Key Stages

- Risk Planning
  - Risk Identification
  - Risk Analysis
  - Risk Response Planning
  - Risk Monitoring and Control
- \* Description of each stage on CPD website

# RISK MANAGEMENT PROCESS BY CPD PHASE

## Problem Screening

- Document known risks, if any

## Concept Development

- Document major risks to help select the PPA

## Preliminary Engineering

- Document and analyze new risks, select risk strategies and develop action plans

## Final Design

- Implement action plans to mitigate, avoid or transfer the risks in the contract documents

## Construction

- Monitor and control risks

# RISK MANAGEMENT PROCESS DETAILS BY CPD PHASE

- Details outlined in “Top Down Flow Charts”
  - One Flow Chart for each CPD Phase
- Each Flow Chart
  - Affected activity name and number
  - Description of risk-related work

\* Flow Charts on CPD website



# RISK MANAGEMENT ADDITIONAL INFORMATION AND QUESTIONS

- Risk Management Pilot Program
  - Tom Kondash, Project Manager 530-4947
- Risk Management Process
  - Visit CPD Web site
    - Overview page
      - Process Summaries
        - Risk Management

*<http://www.state.nj.us/transportation/capital/pd/>*



|                               |                                |                                   |  |                                     |
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**Process Summaries**

- Constructability
- Construction Engineering
- Construction Scheduling
- Contract Administration
- Contract Management
- Errors and Omissions
- Municipal Police Agreement
- Performance Evaluation
- Cost Management
- Quality Management
- Risk Management**
- Schedule Management
- Scope Management
- Stewardship Agreement

- Flow Charts
- Diagrams
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All information on this Web site

## Capital Project Delivery

### Risk Management (Pilot Program Use Only)

**Summary**

Risk Management is a process that enables project sponsors and project team members to make informed decisions on project-related risks. The New Jersey Department of Transportation (NJDOT) has developed a series of guidance documents that help to proactively manage risks over the life of the project.

NJDOT Senior Management has authorized several capital projects to begin a "pilot program" to determine the effectiveness of a formal Risk Management Process. These projects shall utilize the guidance provided on this web page to implement the proposed NJDOT Risk Management Process. The following 10 projects shall implement the NJDOT Risk Management Process:

- Route 38, Mile Post (MP) 0.0-6.1 (Route 130 to County Route 608)
- Route 1&9 Local and Express, Newark, Pavement
- Route 21 Ramp B over Delaware, Lackawanna and Western Railroad (DL&WRR)
- Route 1&9 and Route 46 over Jones Road
- Route 10 eastbound and westbound from Route 46 to Mt. Pleasant Turnpike
- Route 94 Black Creek Tributary, Culvert Replacement
- Route 202 and First Avenue Intersection Improvements
- Route 130 Brooklawn Circles
- Route 73/Fellowship Road and Route 73/Church Road Study
- Route 9 Resurfacing, MP 116.75-135.65

**Objectives**

The process goal is to ensure that project risks are proactively managed over the life of the project. Accomplishing this goal helps to eliminate re-work, minimize design changes and ultimately minimize the cost of the project and the time required to complete the project.

CPD WEBLINK TO RISK MANAGEMENT GUIDANCE

**PARAMETER EXPANSION to the  
LIMITED SCOPE PROJECT  
DELIVERY APPROACH**

# PARAMETER EXPANSION TO THE LIMITED SCOPE PROJECT DELIVERY APPROACH

## Three major changes

- *Additional work allowed in two original project types*
  - Pavement Resurfacing (mill 'x', pave 'x' plus one")
  - Bridge Deck/Superstructure Replacement
- *Additional project types*
- *Elimination of the formal Preliminary Engineering Phase*

# ADDITIONAL WORK ALLOWED

## Pavement Resurfacing (mill 'x', pave 'x' plus one")

- Cross-slope Improvement (plus 1")
- Shoulder Reconstruction \*
- Full Depth Pavement Repair \*
- Full Depth Reclamation \*
- Cold and Hot In-Place Recycling
- Additional features as necessary upon approval by FHWA

\* (not to exceed 10% of the total pavement area for concrete and HMA)

# ADDITIONAL WORK CAVEAT

## Pavement Resurfacing (mill 'x', pave 'x' plus one")

If project has Full Depth Pavement Repair or Full Depth Reclamation > 10% of the total pavement area:

- *Conduct and submit pavement life cycle cost analysis for FHWA approval*
  - If approved, project can be delivered via Limited Scope:
    - *No CSDE evaluation*
    - *No Design Exception*
  - If life cycle cost analysis not approved; not Limited Scope

# ADDITIONAL WORK ALLOWED

## Bridge Deck/Superstructure Replacement

- Ability to overlay a bridge deck with more than 1" of pavement to accommodate Bridge Deck Waterproof Surface Course overlays
- Requires a Design Exception Report if controlling substandard design elements are present on the structure
- Superstructure replacement projects requiring environmental documents other than a Categorical Exclusion (CE) Document cannot use the Limited Scope Project Delivery Approach

# ADDITIONAL PROJECT TYPES

- Drainage Improvement
- Simple Culvert Structural Repair
- Median Crossover Improvement
- Sign Structure Installation
- ITS Installation
- Simple Intersection Improvement  
(no reduction in lane or shoulder width, minimal utility/right of way)
- Additional project types (upon approval by FHWA)



# CHECKLIST & CD REPORT REQUIREMENTS

| <b>Project Type</b>                    | <b>Checklist Required?</b> | <b>CD Report Required?</b> | <b>Other Requirements</b>  |
|--|----------------------------|----------------------------|--|
| Pavement resurfacing                   | Yes                        | Yes                        |  |
| Bridge deck/superstructure replacement | Yes                        | Yes                        |  |
| Drainage Improvements                  | Yes                        | Yes                        |  |
| Simple Culvert Structural Repair       | Yes                        | Yes                        |  |
| Median Crossover Improvement           | Yes                        | Yes                        |  |
| Sign Structure Installation            | Yes                        | No                         | Include a Summary Document if there are multiple sites   |
| ITS Installation                       | No                         | No                         | A Systems Engineering Review Form (SERF) is required, and if applicable, a Concept of Operations Report. |
| Simple Intersection Improvement        | Yes                        | Yes                        |  |

# ELIMINATION OF FORMAL PE PHASE

- **LS PE activities and corresponding WBS deliverables distributed to the LS CD and LS FD Phases**
  - *LS CD Phase – Approved Environmental Document*
  - *LS FD Phase – Approved Design Exception Report (if needed)*
- **Possible because project scope should not change once PPA is selected at end of LS CD Phase**
- **Eliminating formal LS PE Phase = significant administrative costs and time savings**

# LIMITED SCOPE PROJECT DELIVERY APPROACH

- Provides for a faster, more efficient, programmatically approved way to deliver small-scope projects
- Allows greater flexibility to address functional and structural life deficiencies of Department assets
- Additional Limited Scope information available in Section V of the “Project Customization Guideline”

# PROJECT DELIVERY APPROACH CHOICES

- LS Project Delivery Approach is a tool to deliver Capital projects
- Standard project delivery approach is also a tool to deliver Capital projects
- Consider project objective, solution alternatives & impacts (ROW, utilities, environ., etc.)
- Choose the most appropriate delivery tool

# STANDARD AND LIMITED SCOPE PROJECT DELIVERY CUSTOMIZATION

- Standard CD, PE & FD and LS CD & LS FD Network Diagrams activities SHOULD be customized per project specific needs
- Coordinate all recommended modifications with FHWA (Area Engineer) prior to making them (e.g., additional utility activities)
- Once FHWA concurrence is received, modify the scope and schedule accordingly



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## Capital Project Delivery

### Limited Scope Project Delivery Process Approach

In order to effectively administer the planning and design of transportation-related problems with a limited scope, the New Jersey Department of Transportation (NJDOT) has developed a Limited Scope Project Delivery Approach.

The Limited Scope project types are:

- Pavement resurfacing (mill 'x', pave 'x' plus one)
- Bridge deck/superstructure replacement
- Drainage improvements
- Simple culvert structural repair
- Median crossover improvement
- Sign structure installation
- Intelligent Transportation Systems (ITS) installation
- Simple intersection improvement (no reduction in lane or shoulder width, minimal utility/right of way involvement)

Additional information regarding the project types can be found in Section V of the [Project Delivery Process Project Customization Guideline](#) (pdf 389k).

The main difference between the Limited Scope Project Delivery Approach and the standard Capital Project Delivery (CPD) process is that the Limited Scope Project Delivery Approach does not have a formal Preliminary Engineering (PE) Phase. The applicable CPD process PE deliverables have been distributed to the Limited Scope Concept Development (CD) and Limited Scope Final Design (FD) Phases. The two key former Limited Scope PE deliverables were distributed as follows: Approved Environmental Document is in the Limited Scope CD Phase and approved Design Exception Report (if needed) is in the Limited Scope FD

CPD WEBLINK TO LIMITED SCOPE GUIDANCE

# ADDITIONAL INFORMATION AND QUESTIONS

- **Project Questions**

- Dana Hecht, Project Manager 530 – 2535

- **CPD Website Questions**

- Bob Signora, Project Manager 530 – 3516

- **Visit CPD Web site**

- Overview page
  - Limited Scope Project Delivery Process Approach

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