

MaPPS Tool What is it?

MassDOT Project Planning System is a planning phase tool with environmental and safety screening function, to improve agency project coordination and expedite project delivery

Every Day Counts 2

- Agency & Business Process Implementation Teams

Strategic Highway Research Program 2

- Funding & FHWA Implementation Assistance



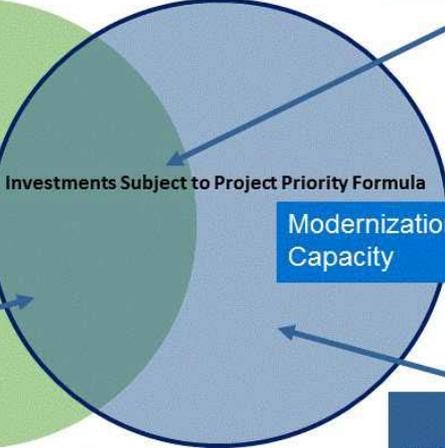
Re

Investments that are prioritized through rigorous asset management systems such as the bridge and pavement systems in the Highway Division, that do not make added improvements to the infrastructure will not be subject to the project priority formula.

A significant portion of MassDOT's projects that arise from asset management systems also modernize the existing system. These projects will be subject to the project priority formula.

Asset Management

Modernization and Capacity



Asset management activities that do not come out of a rigorous asset management system will be subject to the project priority formula, unless the current system is improved to meet this standard.

All projects that modernize the existing system or expand capacity will be subject to the project priority formula.

P

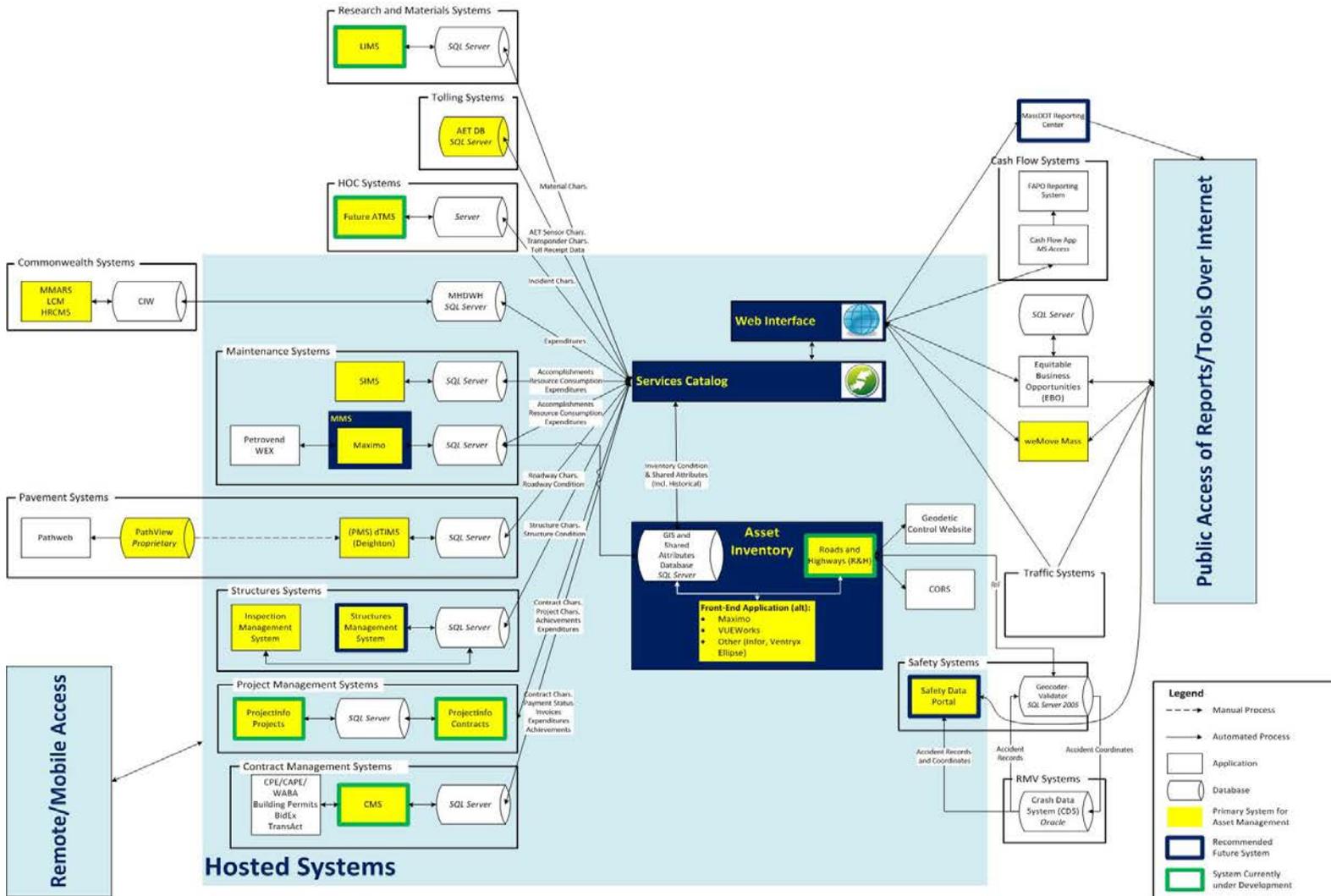
ourbaix
B. Mullan
Stephen Silveira

July 1, 2015

Complex Processes



Why a New Approach?



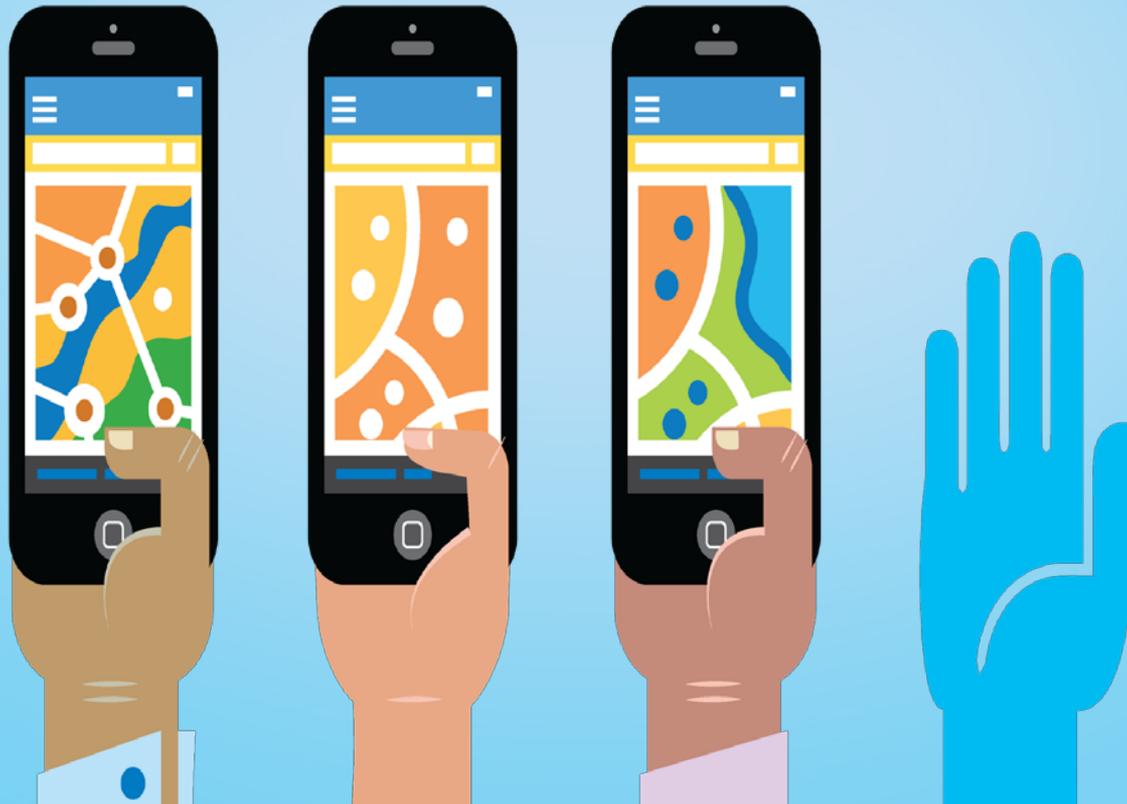
Complex Processes

There's
an **app**
for that!



Location Aware Apps

Tightly integrated and designed to work together



Platform Architecture



**ArcGIS
Online**



**REST
Server**



**ArcGIS
Server**



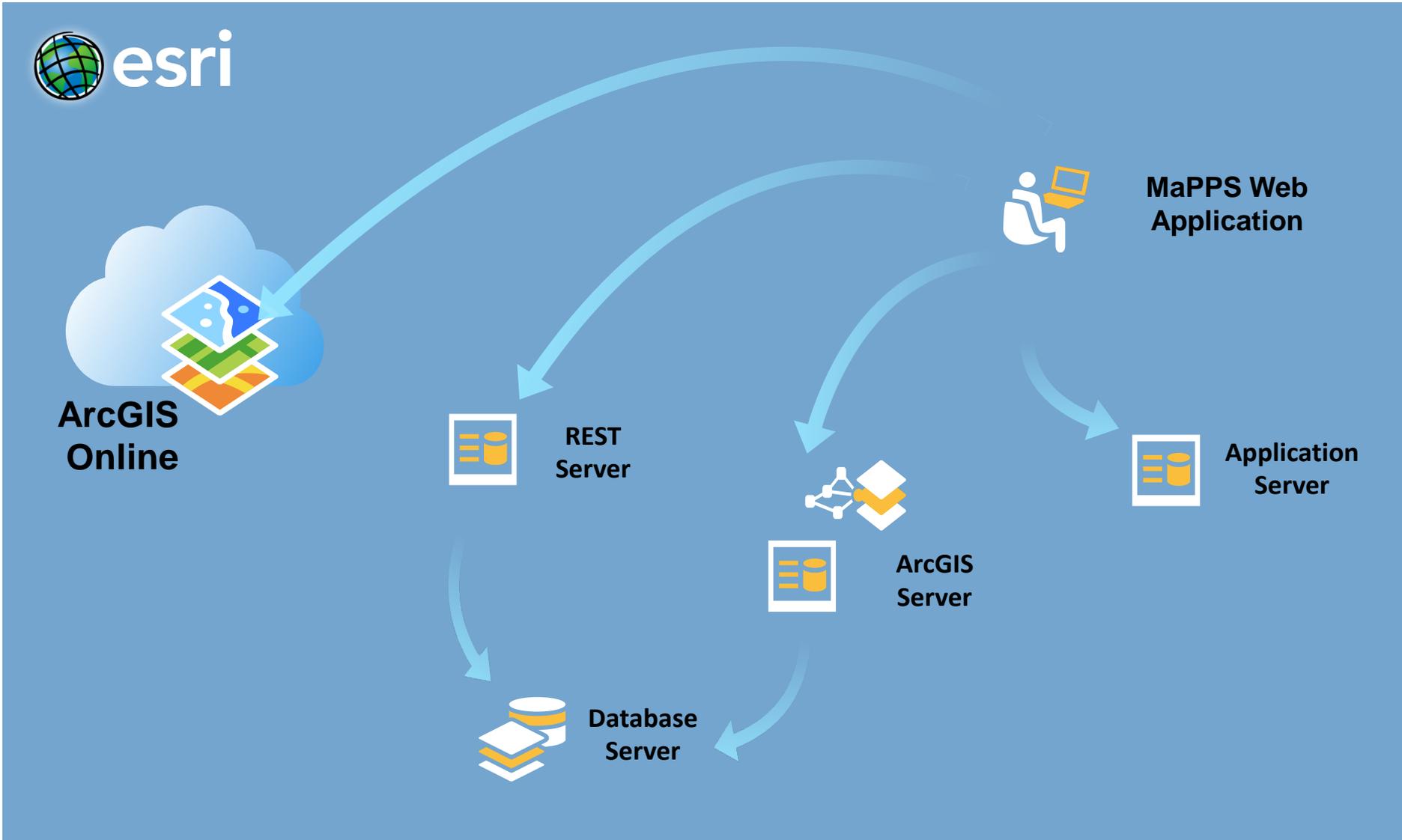
**Database
Server**



**Application
Server**

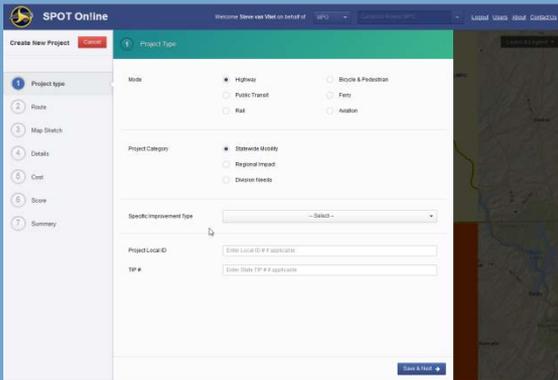


**MaPPS Web
Application**



Workflow Overview

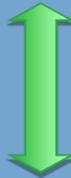
Project Planning



Create & Map Project

Spatial Analysis & Project Editing

Draft Project
(private)



Automated
Geoprocessing

Draft Project
(public)



Review / Comment

Project Export / Submittal



PNF



PIF

Login Page

MassDOT Project Planning System (v1.13)

My Projects Clear Create Project

MassDOT Project Planning System

username ▲

password

Disclaimer:
The MassDOT Project Planning System (MaPPS) is a Geographic Information System (GIS) and project development tool for online project planning, automated analysis, reporting and collaboration. The system is intended to provide a user friendly, web-based environment for populating ProjectNeed and Project Initiation Forms, mapping project limits, sharing project data internally within MassDOT and externally with resource agencies, and for planning-phase project commenting. MaPPS was developed in collaboration with the Federal Highway Administration through the Second Strategic Highway Research Program (SHRP2) product Expediting Project Delivery (C19) and the Every Day Counts 2 (EDC2) initiative called Geospatial Data Collaboration

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Edit Delete Export Reports Comments Changes

Move mouse to get coordinates

MaPPS | MassDOT

Project Description

MassDOT Project Planning System

Create Project Cancel

1 Project Type
✓ Project Need & Initiation

2 Project Description

3 Sketching

4 GeoProcessing

5 Project Need Form (PNF)

6 Project Initiation Form (PIF)

7 Report

Project Name: Bridge Replacement:Route 38

Proponent: Tim Dexter

Title: Environmental Analyst

Municipality / Organization: MassDOT

Completed by: Tim Dexter

Title: Environmental Analyst

Phone: (617) 368-8794

Email: timothy.dexter@state.ma.us

Date: 3/6/2015 

Previous Save & Next

Project Sketching

The screenshot displays the MassDOT Project Planning System interface. On the left, a vertical sidebar titled "Create Project" contains a list of steps: 1. Project Type, 2. Project Description, 3. Sketching (highlighted in blue), 4. GeoProcessing, 5. Project Need Form (PNF), 6. Project Initiation Form (PIF), and 7. Report. A "Cancel" button is located at the top right of this sidebar. The main area is a map showing a road network. A search bar at the top of the map contains the text "Shawsheen street, tawksbury, Ma". A road segment is highlighted in blue, and a dashed line indicates a sketching operation. Below the map, there is a section titled "Select template to create feature" with two options: "Project Lines" (represented by a red line icon) and "Project Polygons" (represented by a blue polygon icon). At the bottom of the interface, there are "Previous" and "Save & Next" buttons, and a standard GIS toolbar with various navigation and editing tools.

Geoprocessing: Running

The screenshot displays the 'MassDOT Project Planning System' interface. On the left, a vertical navigation pane shows a list of steps: 1. Project Type, 2. Project Description, 3. Sketching, 4. GeoProcessing (highlighted), 5. Project Need Form (PNF), 6. Project Initiation Form (PIF), and 7. Report. A 'Cancel' button is located at the top right of this pane. The main content area is titled '4 GeoProcessing' and features a 'Run GeoProcessing' button. Below the button, the system logs the execution of the 'GeoProcessing Tool' with the following details:

- Executing (GeoProcessing Tool): Tool 16BA0934-DC31-4021-887F-39BAF336A815 Both
- Start Time: Fri Mar 06 23:22:42 2015
- Executing (Tool): Tool
- 'D:\arcgisserv\endirectories\arcgissystem\arcgisinput\MapPSGService.GPServer\extractedw101\Connection to MASSDOT.sde\IMSSDOT.SDE.GPTests\16BA0934-DC31-4621-887F-39BAF336A815 Both
- Start Time: Fri Mar 06 23:22:42 2015
- Running script Tool...

The log output lists various intersection checks, with several highlighted in yellow to indicate findings:

- Intersection found with Road Inventory...
- Intersection found with MassDOT Inventory of Flood Prone Areas...
- No Intersection found with Bridge Database...
- Intersection found with Road Inventory...
- No Intersection found with Top 200 Crash Intersection Layer...
- Intersection found with HSIP Clusters...
- No Intersection found with HSIP Pedestrians Crash Clusters...
- No Intersection found with HSIP Bicycle Crash Clusters...
- No Intersection found with Coldwater Fish Resources...
- No Intersection found with Massachusetts Coastal Zone...
- No Intersection found with NHESP Certified Vernal Pools...
- No Intersection found with NHESP Certified Vernal Pools...
- No Intersection found with MassDCP "Impaired Waters" - 2012 Integrated List of Waters (305(b)/303(d))...
- No Intersection found with NHESP 2008 Estimated Habitats of Rare Wildlife...
- No Intersection found with NHESP 2008 Priority Habitats of Rare Species...
- No Intersection found with BioMap2 Core Habitat...
- No Intersection found with Wild and Scenic River...
- No Intersection found with Environmental Justice Populations...
- No Intersection found with Estuarine and Marine Deepwater and Wetland Habitats...
- Intersection found with MassDOT Inventory of Flood Prone Areas...
- No Intersection found with Top 200 Crash Intersection Layer...
- Intersection found with HSIP Clusters...
- No Intersection found with HSIP Pedestrians Crash Clusters...
- No Intersection found with HSIP Bicycle Crash Clusters...
- No Intersection found with Coldwater Fish Resources...
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- No Intersection found with NHESP 2008 Priority Habitats of Rare Species...
- No Intersection found with BioMap2 Core Habitat...
- No Intersection found with Wild and Scenic River...
- No Intersection found with Environmental Justice Populations...
- No Intersection found with Estuarine and Marine Deepwater and Wetland Habitats...
- Completed script Tool...

At the bottom of the interface, there are 'Previous' and 'Save & Next' buttons.

Project Initiation Form (PIF)

MassDOT Project Planning System

Create Project Cancel

- Project Type
 - ✓ Project Need & Initiation
- Project Description
- Sketching
- GeoProcessing
- Project Need Form (PNF)
- Project Initiation Form (PIF)**
- Report

6 Project Initiation Form (PIF)

MASSDOT - HIGHWAY DIVISION

Project Initiation Form

Part I - General Information

Project Location: Main Street (SR 38)

Project Need: Briefly restate the primary project need or goal as developed in the Project Need Form (e.g. rehabilitate a roadway, improve safety at an intersection, reduce corridor congestion, improve pedestrian facilities, or provide bike accommodation).

Existing bridge is structurally deficient and needs superstructure and substructure replacement.

Regional Benefit: Describe any regional benefits that would be realized should the Project Need be met.

The bridge is an important connect on Main Street (SR 38), which is an important arterial providing a connection from I-495 south to Route 128 / I-95. Replacing the bridge is essential to maintaining this important corridor.

Previous Save & Next

PIF Report

PIF Page 1:

MassDOT - Highway Division
Project Initiation Form

Proponent: Tim Dexter **Title:** Environmental Analyst
Municipality/Organization: MassDOT
PIF completed by: Tim Dexter **Title:** Environmental Analyst
Phone: (857) 368-8794 **Email:** timothy.dexter@state.ma.us
Date: Fri Mar 06 2015 00:00:00 GMT-0800 (Pacific Standard Time)

Part I – General Information

Project Location: Main Street (SR 38) over Shawsheen River, Tewksbury, MA

Project Need: Briefly restate the primary project need or goal as developed in the Project Need Form (e.g. rehabilitate a roadway, improve safety at an intersection, reduce corridor congestion, improve pedestrian facilities, or provide bike accommodation).

Existing bridge is structurally deficient and needs superstructure and substructure replacement.

Regional Benefit: Describe any regional benefits that would be realized should the Project Need be met.

The bridge is an important connect on Main Street (SR 38), which is an important arterial providing a connection from I-495 south to Route 128 / I-95. Replacing the bridge is essential to maintaining this important corridor.

Part II – Project Costs and Responsibilities

Estimated Costs: Provide available cost estimates or estimated cost ranges in current-year

Estimated Construction Costs:	Estimated Other Costs:
Construction Items:	Planning/Design:
Contingencies (10%):	Right-of-way:
Other Constr. Costs (10%):	Environmental Mitigation:
Total Construction Cost:	Total Other Costs:

Anticipated Funding Program:

Indicate all potential sources of funding that may apply to the project

- | | | |
|------------------------------|--------------------------------|-------------------------------|
| <input type="checkbox"/> STP | <input type="checkbox"/> CMAQ | <input type="checkbox"/> HSIP |
| <input type="checkbox"/> TAP | <input type="checkbox"/> NHPP | <input type="checkbox"/> HPP |
| <input type="checkbox"/> NFA | <input type="checkbox"/> Other | |

A blue carpet with a yellow and blue striped runner. The text "QUESTIONS?" is overlaid in white.

QUESTIONS?