

# The Commonwealth's Accelerated Bridge Program

A large steel arch bridge spans a river, surrounded by autumn foliage. The bridge is a dark steel color and features a prominent arch structure. The surrounding landscape is lush with trees in various shades of green, yellow, and red, indicating the fall season. The sky is a clear, bright blue with a few wispy clouds. The bridge's reflection is visible in the calm water below.

March 13, 2009

*French King Bridge, Ill.*



# ABP Overview

- Authorization:  
Chapter 233 of the Acts of 2008  
Signed *August 4, 2008*





# ABP GOALS

- Program Goals:
  - Improve the Condition of the Commonwealth's Bridges
  - Stimulate Economic Development and Job Creation
  - Save Money by Completing Projects Sooner
  - Complete Projects Efficiently and Innovatively
  - Provide Transparency and Accountability
  - Provide Access & Opportunity for MWDBE



# ABP Size and Scope

- MassHighway:
  - \$2.078 Billion
  - Rehabilitate or replace 191 site specific bridges
  - Preserve over 300 bridges
- DCR
  - \$906 Million
  - Rehabilitate or replace 29 site specific bridges
  - Preserve 50 bridges

**Total Program: \$2,984,000,000**



# ABP Governance

- **Oversight Council**- oversee and coordinate program, provide project controls, transparency and accountability
- **Members**
  - Chair appointed by Governor
  - Secretary of Administration & Finance or designee
  - Secretary of Transportation and Public Works
  - Secretary of Energy and Environmental Affairs
  - Commissioner of Department of Capital Asset Management
  - Commissioner of MassHighway
  - Commissioner of Department of Conservation and Recreation



# How Did We Get Here?

Massachusetts' bridge inventory tells the story:

- 4676 bridges: vehicular & pedestrian
  - 543 were structurally deficient when bill filed
  - Decades of reduced maintenance and preservation
  - Bridges typically designed to last 50 years
- 60% of bridges are over 45 years old





# Determining Bridge Conditions

**Structurally Deficient equates to  
“Poor” condition:**

- 1. Deck (wearing surface, joints): 13%**
  - 2. Superstructure (beams, welds): 25%**
  - 3. Substructure (abutments): 22%**
- Combination of 2 or more: 40%**



**Cost of Inaction**  
 For every dollar not spent on preservation today will cost twice in rehabilitation in 8 yrs

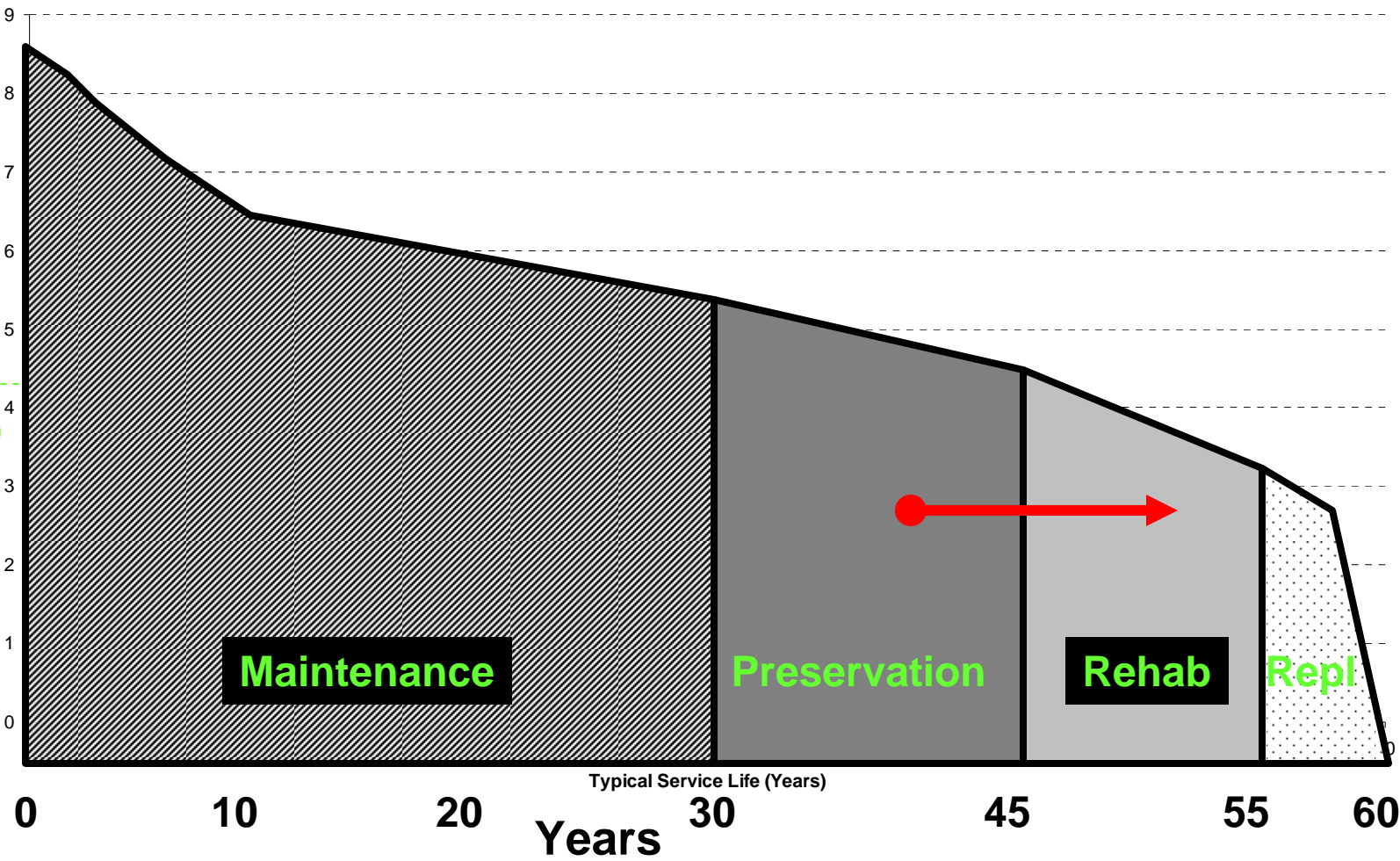


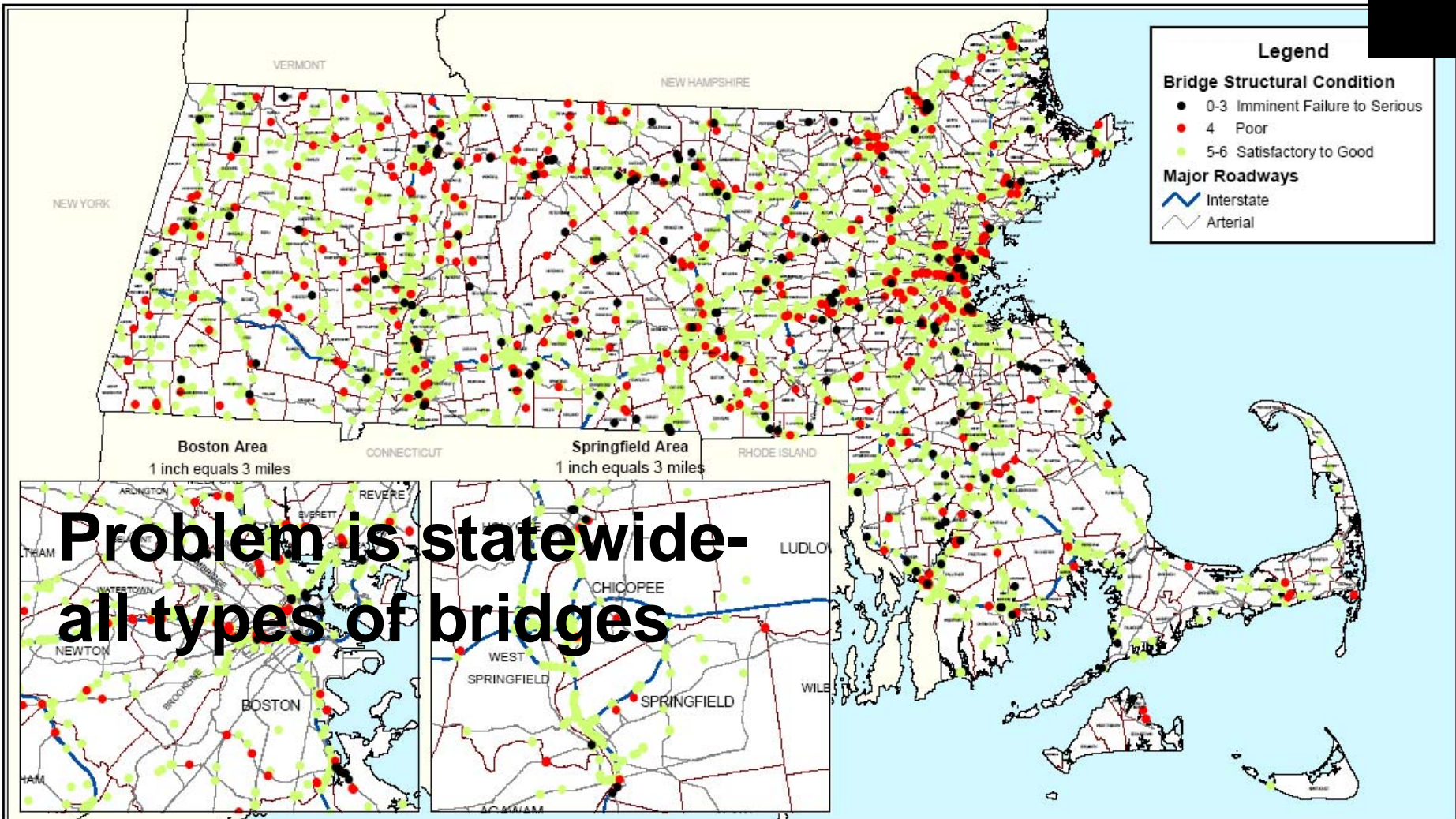
**\$ 1B Inflation**  
**\$.5B Deterioration**  
**\$1.5B Savings**

Bridge

Excellent  
 Very Good  
 Good  
 Satisfactory  
 Fair  
 Poor  
 Serious  
 Critical  
 Imminent Failure

SD





**Legend**

**Bridge Structural Condition**

- 0-3 Imminent Failure to Serious
- 4 Poor
- 5-6 Satisfactory to Good

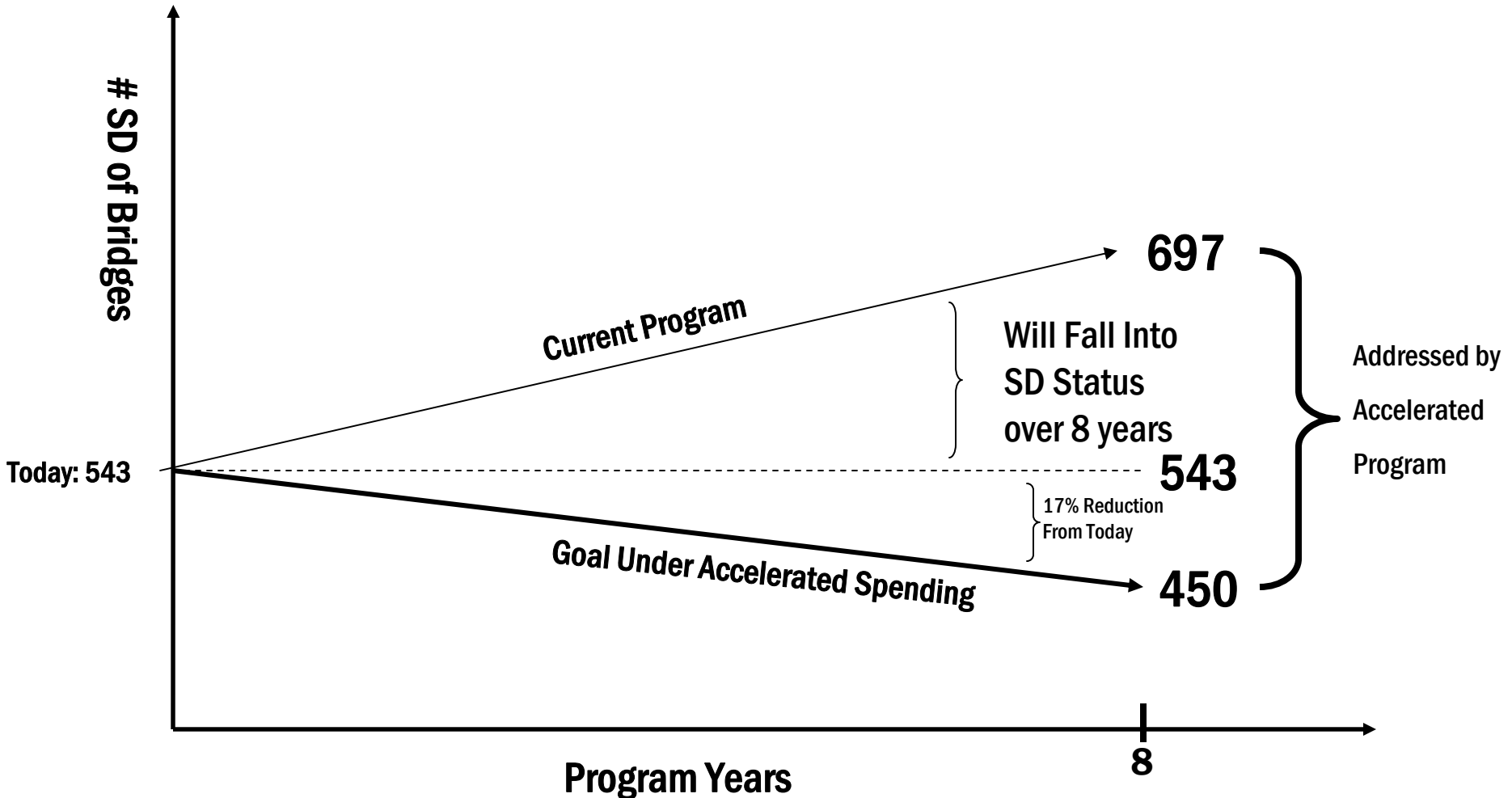
**Major Roadways**

- Interstate
- Arterial

**Problem is statewide-  
all types of bridges**



# Goal: Reduce by at least 250 the number of SD bridges





# Planning

Learn from other multi-billion dollar projects around the country:

- MWRA: Boston Harbor Project (Treatment Plant)
- Missouri: Safe and Sound Bridge Program
- Illinois: Toll way Congestion Relief Program
- Oregon: Transportation Investment Bridge Program
- Central Artery Project
- FHWA national workshop last month



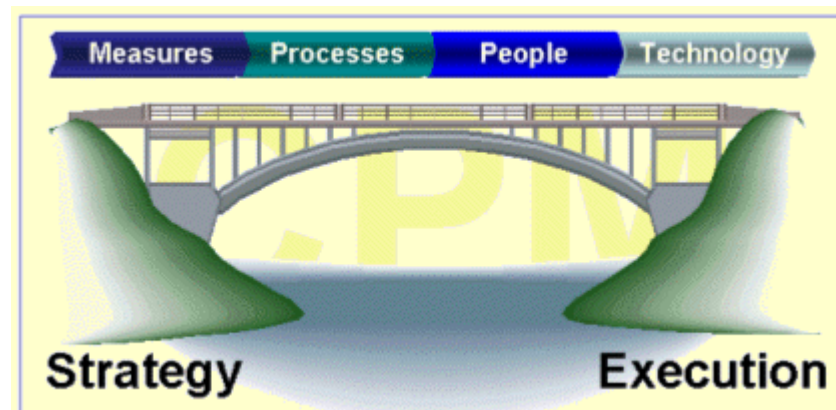
# The Strategy

- **Prioritize work**: most cost effective, “procurement-friendly”  
“shovel ready”, statewide, mega-projects, preserve, repair, replace
- **Innovative contracting**: design-build, incentives, bundling
- **Accelerated construction**: standardize designs, prefab, single phase construction,
- **Mobility impacts**: corridor-wide analysis
- **Programmatic Agreements**: Permitting, state & federal agencies
- **Project Controls**: system-wide emphasis on measuring budget and schedule, risk management



# The Strategy

- **Maximize business participation**: outreach to small companies, minority, and women owned businesses
- **Embedded Management Organization**: all bridgework responsibility of Secretary of Transportation
- **Transparency of Program**: robust reporting and benchmarking of milestones





# On-going Considerations

- Vehicular traffic-Commuters
- Bicycles and Pedestrians
- Program sequencing
- Noise
- Cash flow
- Abutter impacts
- Community Involvement
- Strategic Partners: Labor, CIM, ACEC, FHWA





# Progress to Date

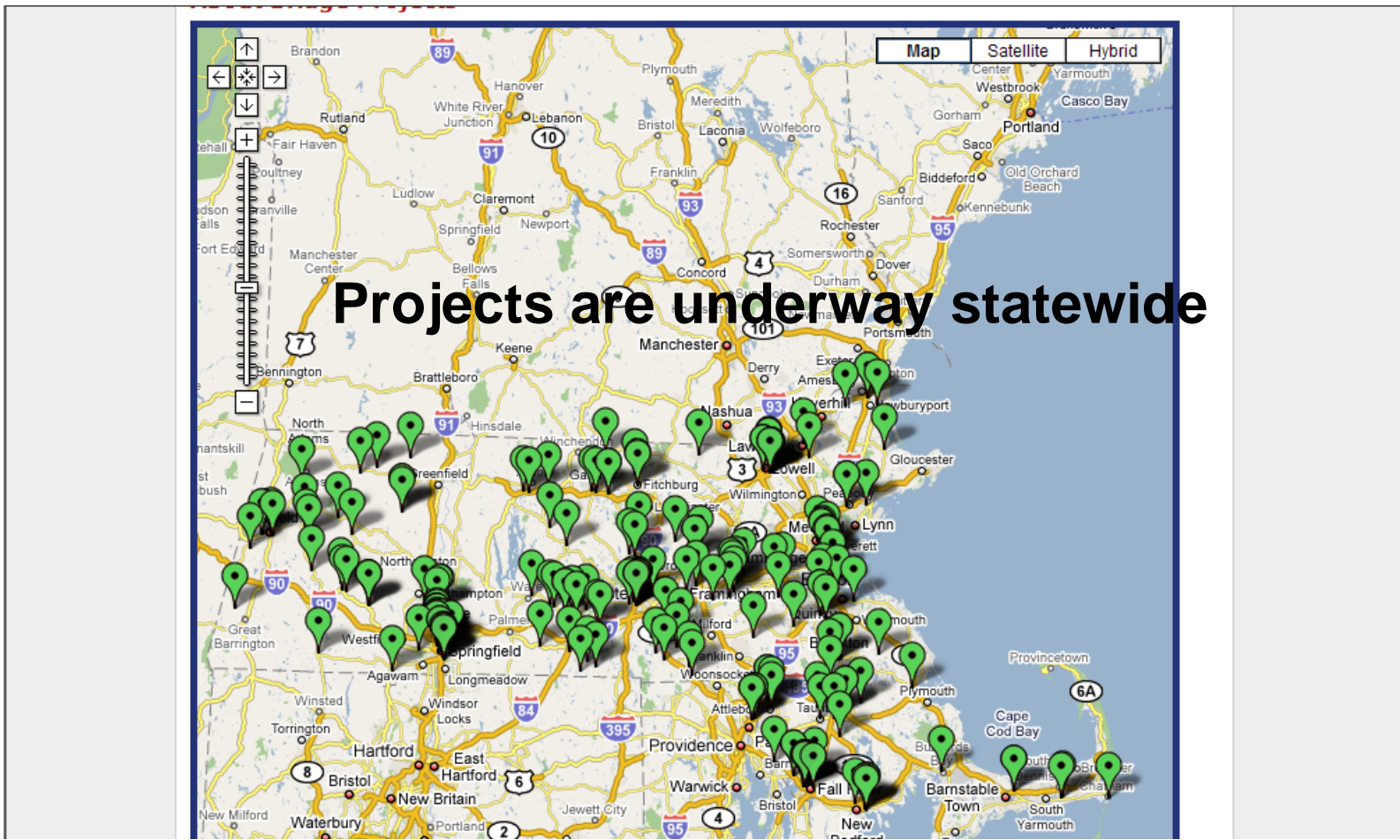
- 50 Projects Advertised totaling \$284 million
  - 44 MassHighway projects
    - \$207 Million
  - 6 DCR projects
    - \$77 Million





# Interactive Project Map

[www.mass.gov/acceleratedbridges](http://www.mass.gov/acceleratedbridges)





# Daily Project Updates Available on-line

The screenshot displays a web-based map interface. A pop-up window is centered over a location in northern Massachusetts, providing the following information:

- Project #:** 603602
- Bridge Name:** ASHLAND- BRIDGE REPLACEMENT, A-14-002, ROUTE 135 (UNION STREET) OVER THE SUDBURY RIVER
- Description:** The proposed project consists of replacing the existing Union Street (Route 135) bridge over the Sudbury River in its present location with minor improvements to the approach roadways. The bridge will remain open during construction utilizing staged construction.
- Image:** Three small photographs showing the current bridge structure and the surrounding area.

The background map shows the state of Massachusetts with numerous green location pins indicating other project sites. Major highways like I-95, I-89, and I-91 are visible. The bottom of the map includes a Google logo and a copyright notice for 2008.



# Examples of Bridge Work Underway

- Boston/Cambridge- Craigie Dam Bridge & Drawbridge
- Fall River- I-95 over Taunton River
- Middleborough-Raynham I-495
- Springfield- Longhill Street & Rte 5
- Attleboro- I-95 & I-295
- Westborough- Lyons Street over Rte 9
- Peabody- I-95 over Rte 128
- Statewide preservation contracts



# Other Progress



- MassHighway Team in place:
  - Shoukry Elnahal, ABP Director
  - Walter Heller, Director of Project Delivery
  - Tom Donald, Director of Project Design
  - 155 staff in place; 40 in process; Year 1 80%, Year 2 postings starting soon
- DCR Team building in close coordination with MassHighway



# Other Progress



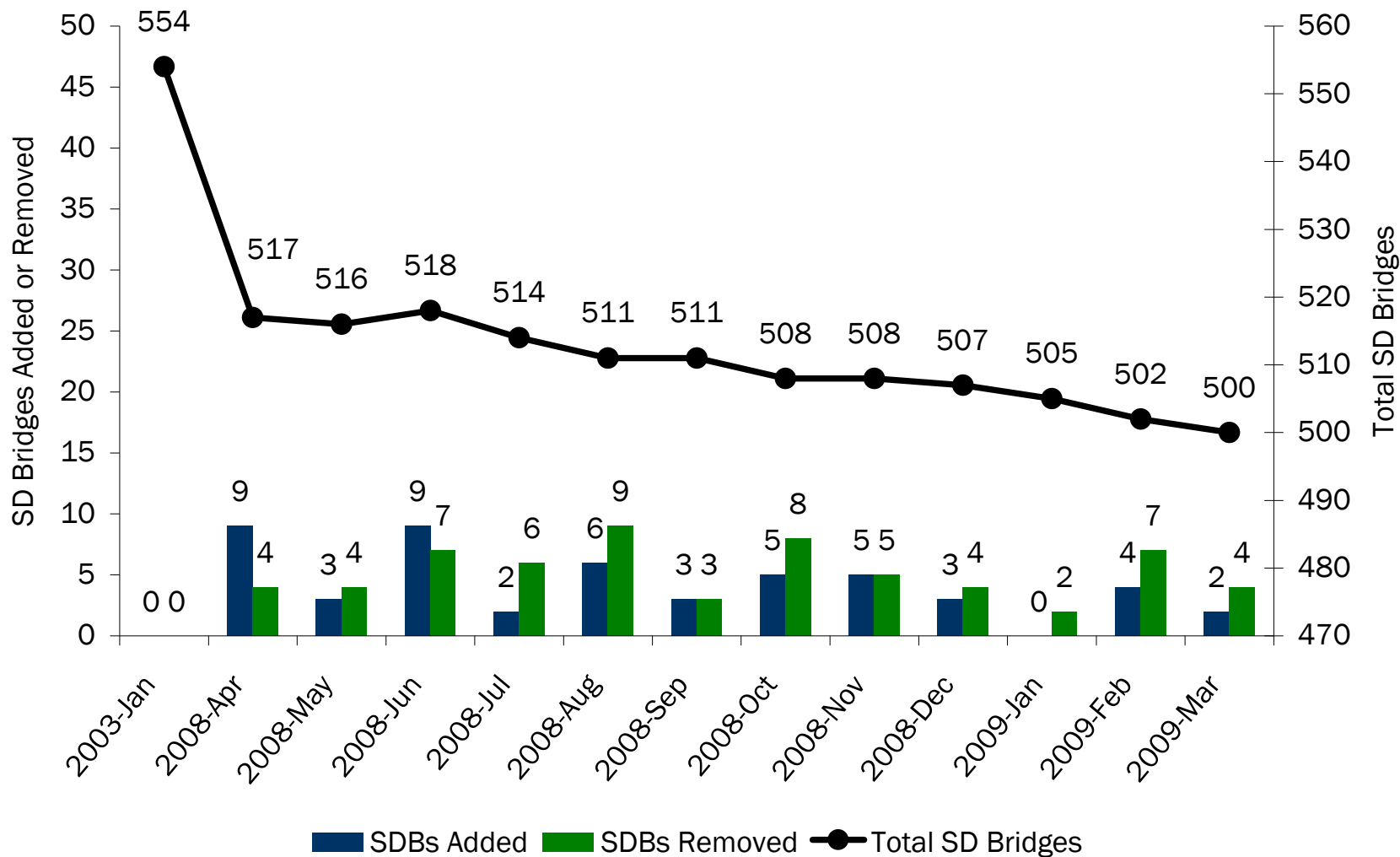
- Program-wide agreements with permitting authorities.
- New Equitable Business Opportunity software allows on-line reporting of certified payrolls
- MWDBE participation ahead of the 14% goal. Currently at 17% of total contracts committed to date.
- Thousands of jobs created (14,000 direct, indirect and induced jobs per \$ billion- national measure)





# Structurally Deficient Trend Reversing

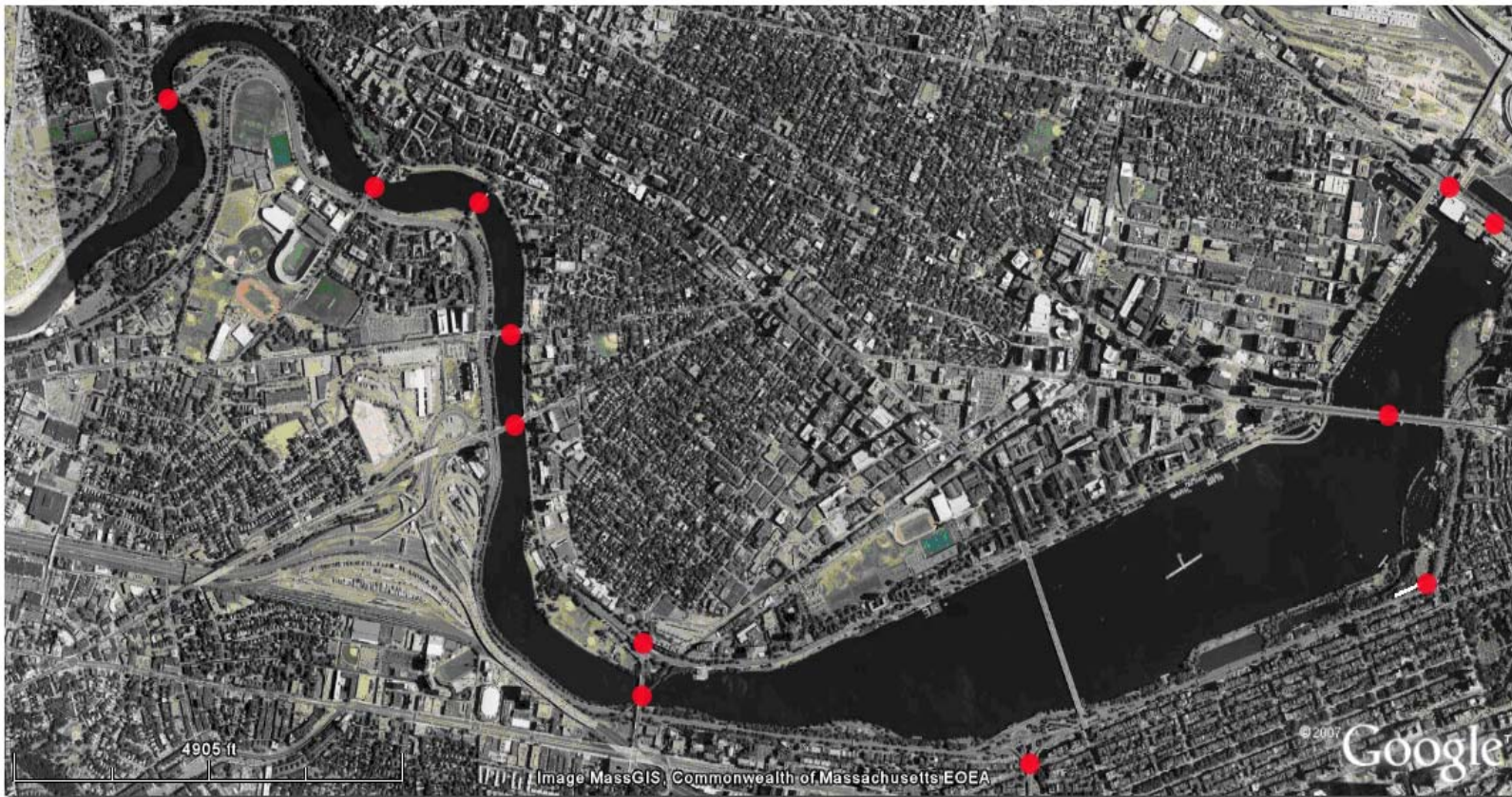
MassHighway - Structurally Deficient Bridges





# Issues to watch

## High Risk Projects: Mega-projects, Charles River Basin





**Thank You! Questions?**  
**[www.mass.gov/acceleratedbridges](http://www.mass.gov/acceleratedbridges)**

