

Accelerated Bridge Program

Charles River Basin Project Update

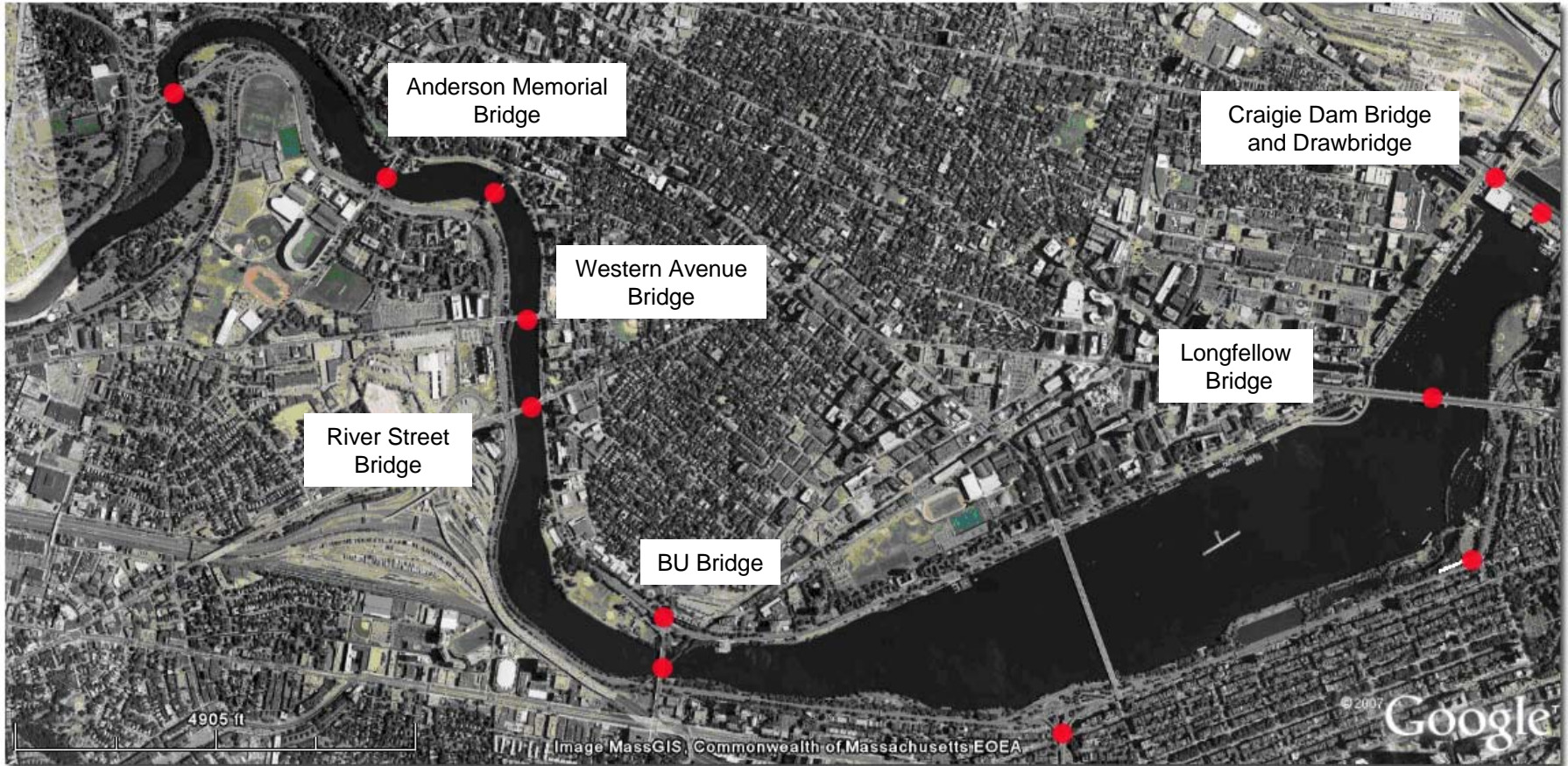
March 2, 2010



Accelerated Bridge Program

- Authorization:
 - C. 233 of the Acts of 2008
 - Project completion by 2016
- 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
 - Transparency and accountability

Charles River Basin ABP Bridges



Craigie Dam Bridge and Drawbridge



Craigie Drawbridge

History and Description



- Originally constructed in 1910 and replaced in 1962
- Twin Double-Leaf Bascule Bridge
 - 45 ft. span over navigation channel
 - 3 “Boston Bound” traffic lanes
 - 2 “Cambridge Bound” traffic lanes
 - Sidewalks on each side

Craigie Dam Bridge and Drawbridge Streetscape Improvements

- Improve bike and pedestrian flow by creating a new multi-use path
- Widen the existing sidewalk abutting the Museum of Science
 - Remove existing retaining wall and existing 5' wide pedestrian path
 - Construct a new expanded multi-use path, with a new retaining wall at the back edge



Craigie Dam Bridge and Drawbridge Project Phasing

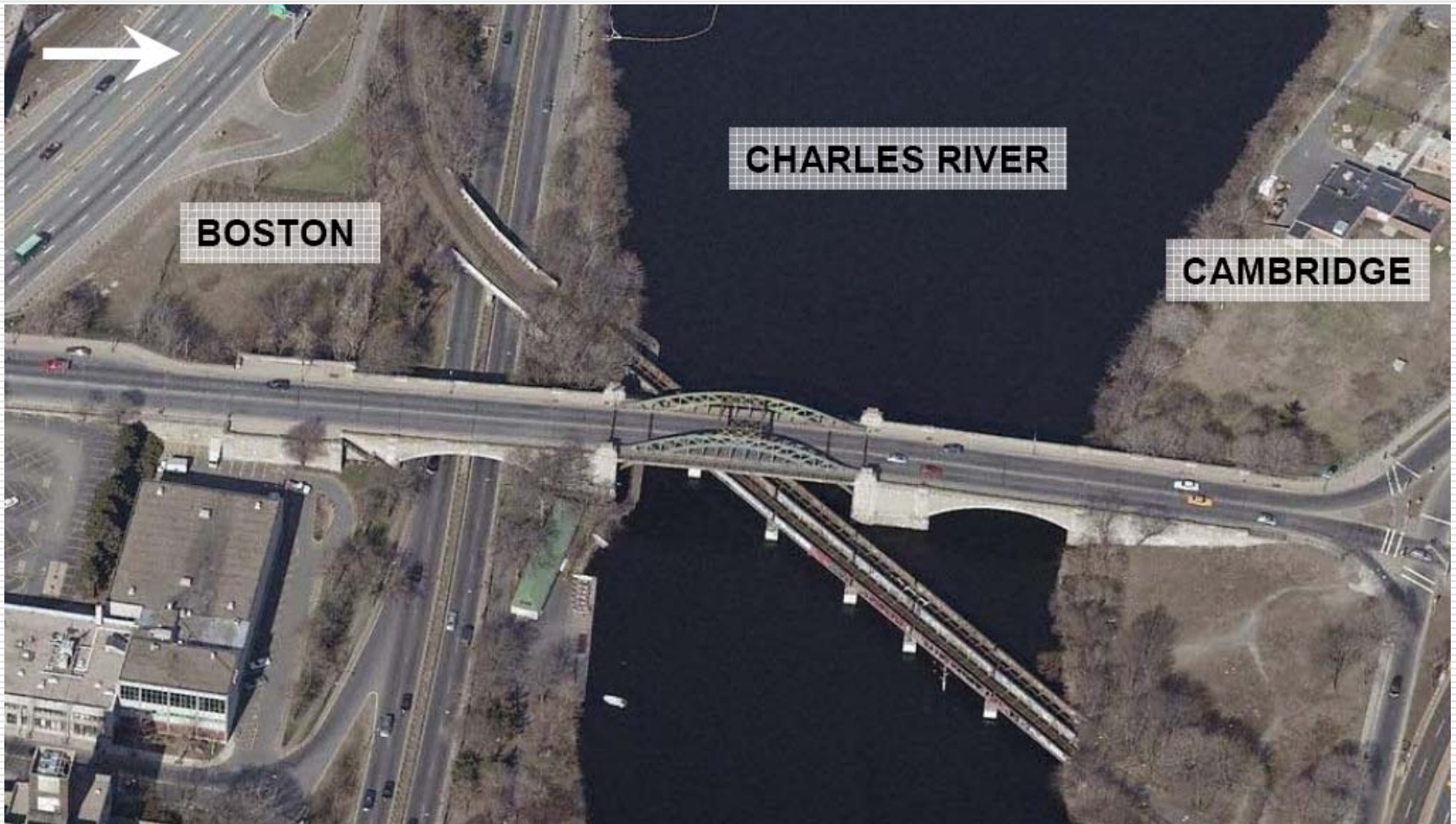
Task	2009							2010								2011											
	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A
<u>Dam Bridge</u>																											
Phase I	█	█	█	█	█	█	█	█	█																		
Phase II										█	█	█	█	█	█	█	█										
<u>Draw Bridge</u>																											
Phase III																		█	█	█	█	█	█				
Phase IV																		█	█	█	█	█	█				
<u>Streetscape</u>																								█	█	█	█



Longfellow Bridge



BU Bridge



BU Bridge Project Scope



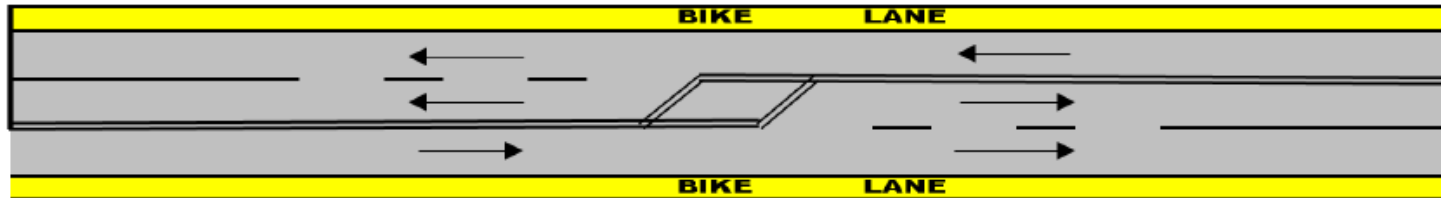
- Full deck rehabilitation including both sidewalks
- Superstructure steel repairs
- Historic restoration
- Environmental enhancements through new drainage systems
- Improve pedestrian and bicycle access

BU Bridge

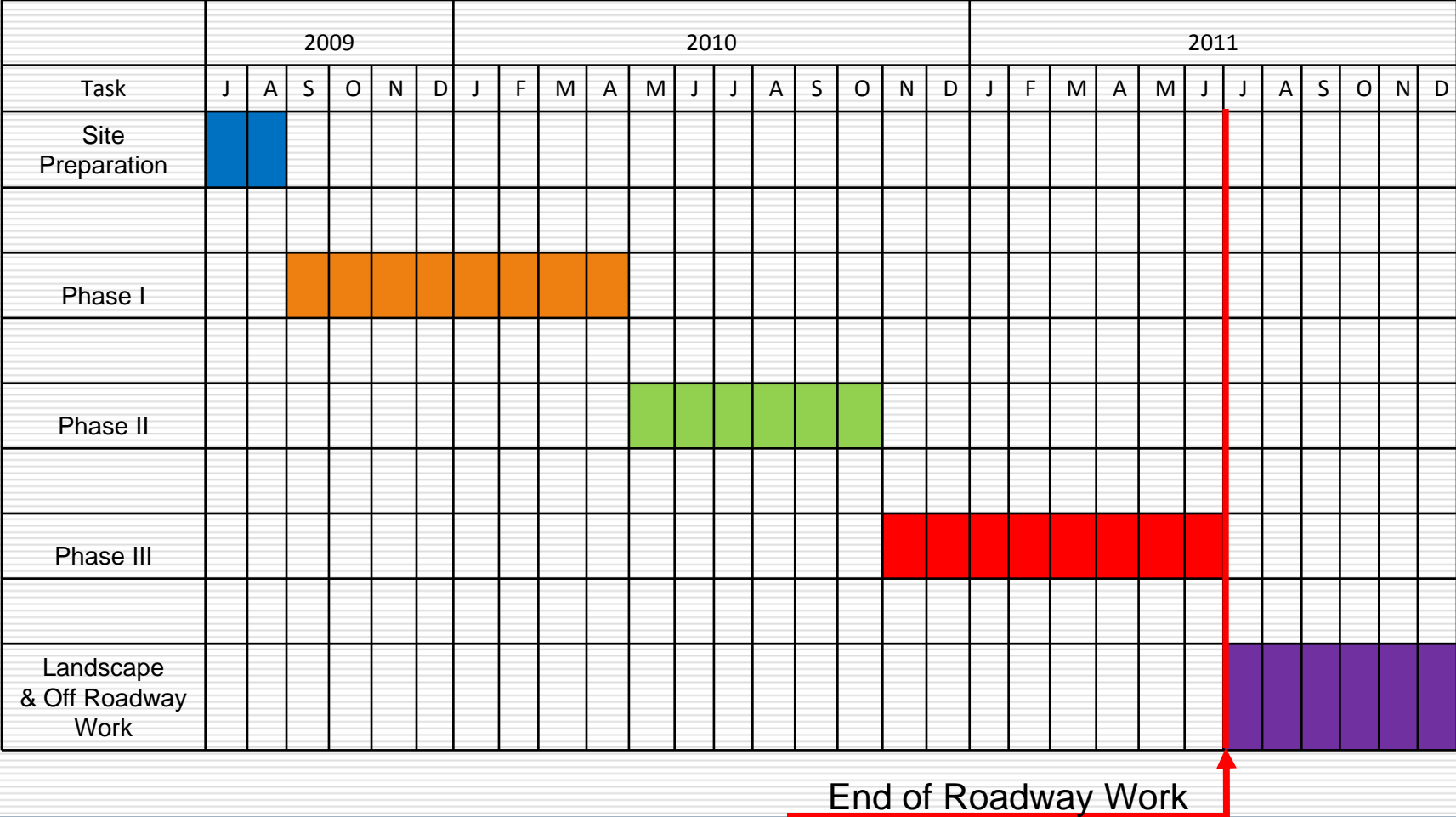
Lane Striping – Proposed Final Condition

Lane Configurations

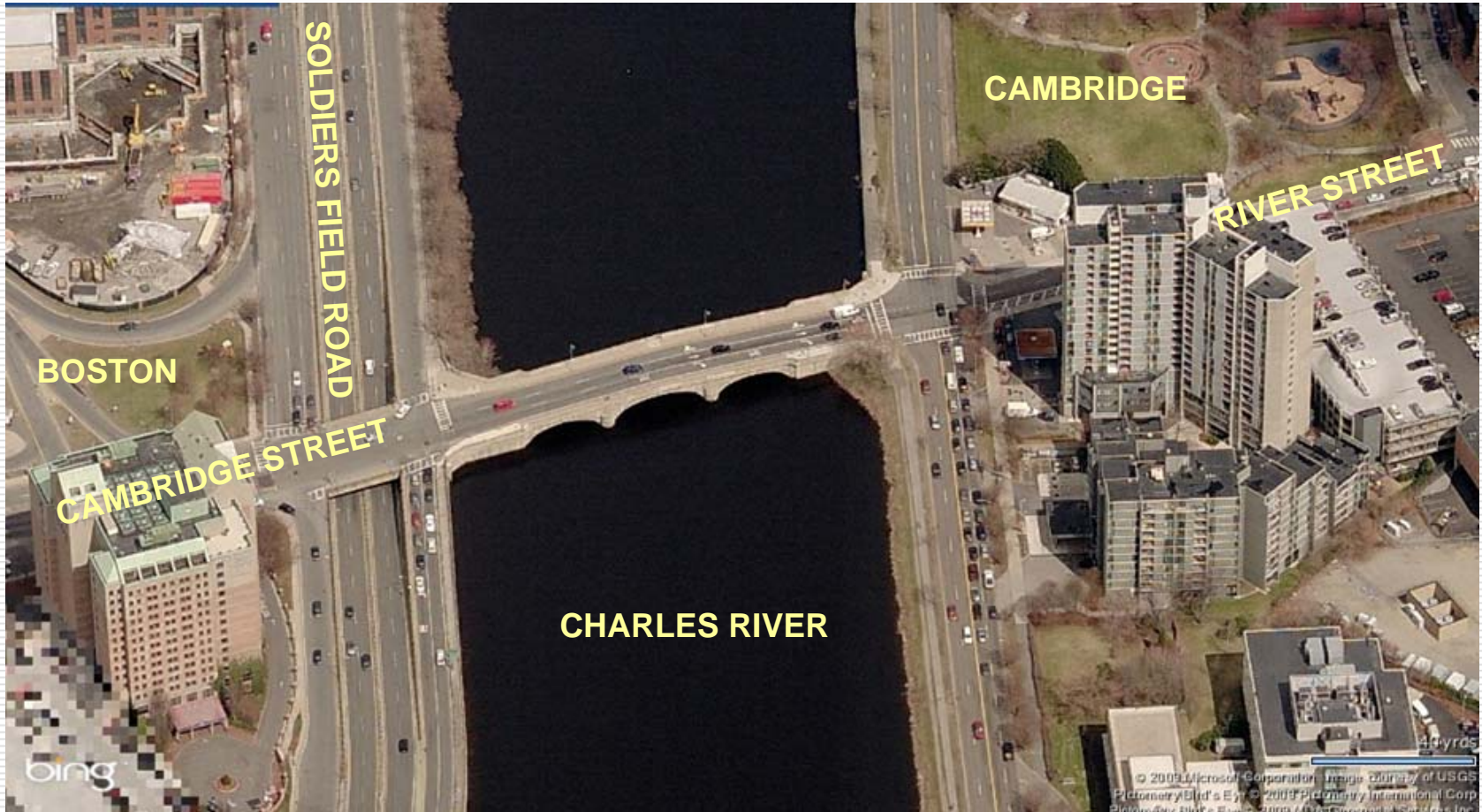
3-LANE, 2-WAY MARKING FOR CHANGING DIRECTION OF CENTER LANE



BU Bridge Project Phasing



River Street Bridge



River Street Bridge History and Description

- Constructed in 1925
- Earth-Filled reinforced concrete arch bridge
- 3 Spans
- Roadway surface rehabilitation in 1981



Western Avenue Bridge



Innovation, Efficiency, Transparency

Western Avenue Bridge History and Description



- Constructed in 1924
- Earth-Filled reinforced concrete arch bridge
- 3 Spans
- Roadway surface rehabilitation in 1981

River Street & Western Avenue Bridges

Traffic Considerations

- Current Conditions - 40' wide roadways with two 8.5' sidewalks
- Three vehicular lanes of traffic in one direction
- Accommodate the same level of vehicular capacity while introducing a dedicated bike lane
- The sidewalk width will be maintained to provide a comfortable pedestrian environment
- Maintain waterway access

Anderson Memorial Bridge



Anderson Memorial Bridge

Rehabilitation Needs

(based on conditions assessment)

- Retain existing piers and abutments
- Rehabilitate existing arches
- Restore ornamental features where possible
- Replace bridge elements:
 - Spandrel walls
 - Approach walls
 - Parapets
 - Lighting



Magazine Beach Pedestrian Bridge



Magazine Beach Pedestrian Bridge History and Description



- Constructed in 1953
- Single (82' long) span steel girder, crossing Memorial Drive
- Access to bridge via 8'-wide ramps sloped at 8.2%
- Bridge has been severely damaged due to an impact from a large vehicle
- Bridge does not conform to ADA standards

Magazine Beach Pedestrian Bridge Proposed Elevation

- 10' wide ramp and walkway
- 5% slope ramp walkway
- 42" high railing



Thank You



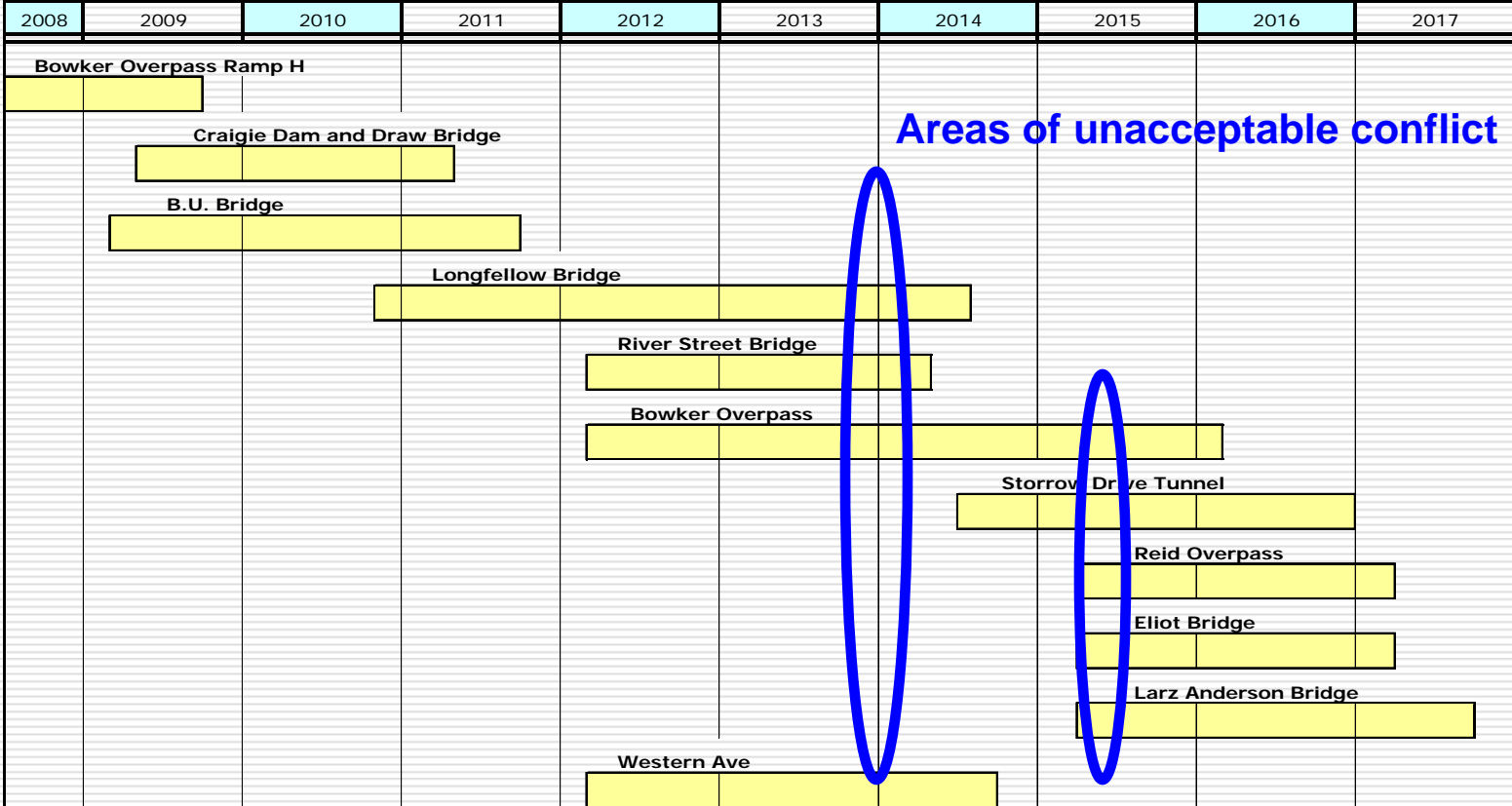
Innovation, Efficiency, Transparency

Active Risk Management & Sequencing Phase II

- Building upon the Phase I Sequencing Report prepared by Beta
- Identify all possible points of programmatic and project risk
- Establish risk triggers
- Evaluate projects for design-build and innovative project delivery potential
- Develop mitigation strategies such as intersection shifts to maintain traffic
- Maintain and monitor the overall program schedule with consideration of established risk

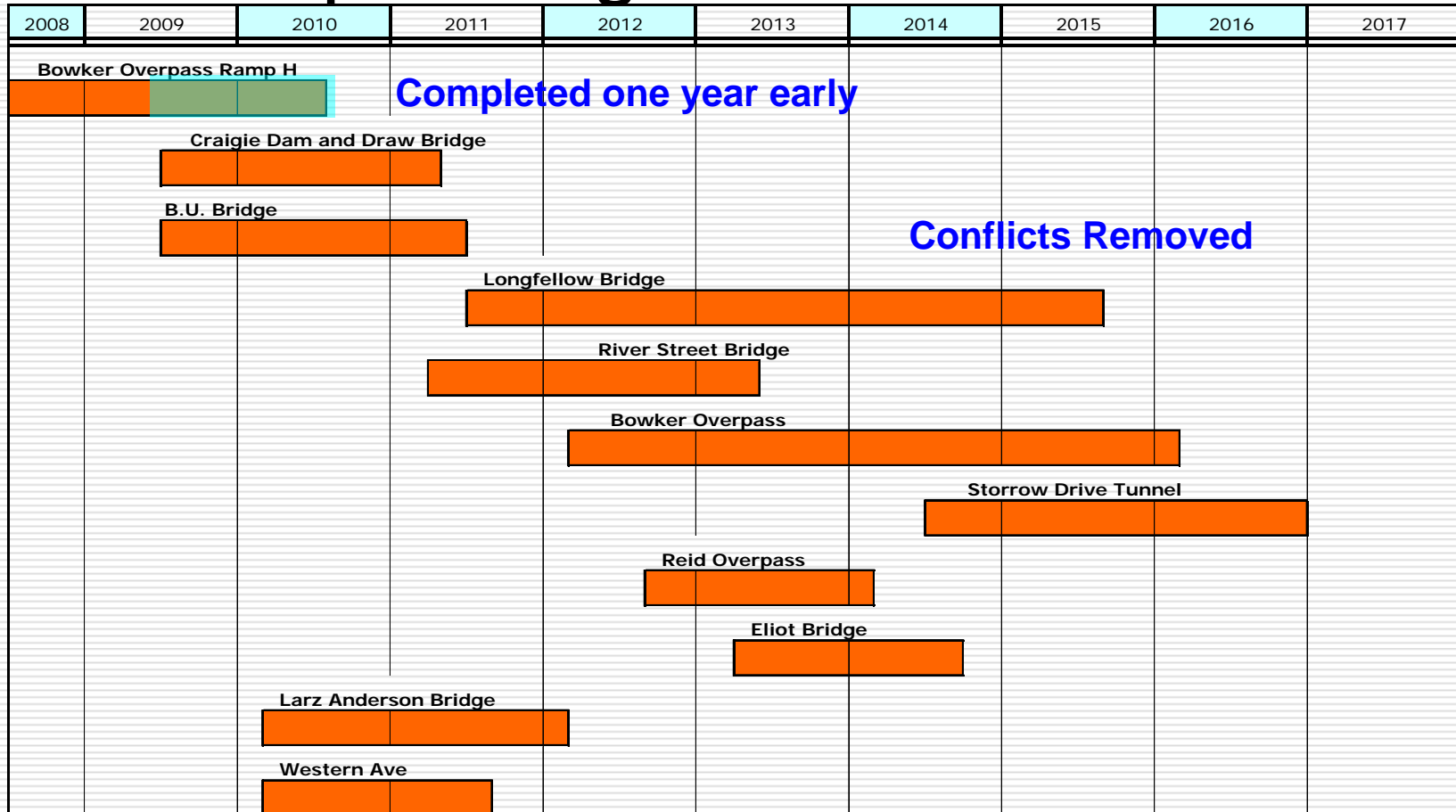


Charles River Basin Sequencing and Risk



Areas of unacceptable conflict

Charles River Basin Sequencing and Risk Phase I



Comprehensive Traffic Management and Analysis



- Create a Basin-wide travel demand model
- Develop options that minimize traffic
- Preserve safe operations for all modes of transportation
- Coordination with surrounding cities and projects