Welcome & Introductions

- Ethan Britland – Project Manager (MassDOT)
- Michael Clark – Transportation Planner (MassDOT)
- Mark Arigoni, L.A. – Principal-in-Charge (MMI)
- Van Kacoyannakis, P.E. – Traffic (MMI)
- Sarah Paritsky – Public Involvement (Regina Villa)
Agenda

- Welcome & Introductions
- Overview Working Group Meeting #5
- Continued Refinement of Alternatives
- Next Steps
Elimination & Regrouping of Alternatives Developed

Alternatives removed for further consideration

- I-91 North & Southbound Split (East & West Side)
- New Route 5 Bridge Connection (East & West Side)
- I-91 relocated to Route 5 Corridor, connection to MassPike (West Side)
- Tunnel Only Option
- At-Grade Option
Working Group Meeting #5 Regrouping of Alternatives

- Relocated Rail Line & Relocated Highway (West Side)
- Reconstructed Elevated Structure (Modern Viaduct)
- Sunken, Tunnel, or Combination(s) & Various Alignments & Configurations.
- No-Build (Short, Mid-term, Long-term)
I-91 & Rail Relocated to West Side
(3 to 7 New Bridges Option)
## I-91 & Rail Relocated to West Side

### POTENTIAL BENEFITS

- Removes overhead visual / physical impediment of I-91 viaduct structure & rail
- Removes traffic / noise from City of Springfield side of river
- Green corridor redevelopment opportunities along East Bank
- Relieves I-91 southern section (Longmeadow Curve) traffic congestion
- Maintain 3 lanes on I-91 corridor

### POTENTIAL IMPACTS

- Merger of I-91 & Route 5 traffic
- Increased traffic noise west side/barricades required
- Reconstruct I-291 & I-91 interchange
- Stormwater / groundwater control
- Water tables
- Existing Army Corps levee system on both sides of levee
- Extensive utility relocation
- Row / property acquisitions and takings
- Neighborhood disruptions
- Designated park land impacts
MORE DETAILED POTENTIAL IMPACTS (CONTINUED)

• "FLIP FLOP" RAIL & INTERSTATE IN LONGMEADOW

• SKEWED RIVER CROSSING FOR INTERSTATE AND RAIL, INCREASED IMPACTS

• RAIL RELOCATED DESIGN BASED ON INTERSTATE DESIGN COMPONENTS, MAY NOT BE PERMITTED

• VERTICAL GRADE CHALLENGES AT EVERY INTERCHANGE (RAIL CLEARANCE)

• UPWARDS OF 50+ TAKINGS OF HOMES AND BUSINESSES IN AGAWAM

• MAJOR ENVIRONMENTAL IMPACTS (RIVER, WETLANDS, LANDFILL, AND PARKLANDS)

• NOT ALLOWED TO PROVIDE AN EXIT OFF AN INTERSTATE FOR A PRIVATE ENTITY
  - ISOLATE BONDI’S ISLAND, SPRINGFIELD WATER & SEWER COMMISSION, LANDFILL

• REPLACE MEMORIAL BRIDGE, HISTORIC STRUCTURE

• UPWARDS OF 50+ TAKINGS OF BUSINESSES AND HOMES IN WEST SPRINGFIELD

• AT LEAST 7 NEW/RECONSTRUCTED BRIDGES FOR NEW INTERSTATE AND RAIL

• MAJOR IMPACTS TO MEMORIAL AVENUE, ENTRANCE TO WEST SPRINGFIELD

• KEEP THE CONTROLLING GRADES OF UNION STATION AND RAIL YARD IN WEST SPRINGFIELD
Reconstructed Elevated Section

Existing Viaduct with parking garages under
Reconstructed Elevated Viaduct Example

Opportunities with a reconstructed Elevated Viaduct
Elevated Section Example

Opportunities with a reconstructed Elevated Viaduct
Opportunities with a new bridge section to blend with Memorial Bridge and the City architecture, not attempt mimic.
# POTENTIAL BENEFITS

- Modern design & construction techniques to (viaduct/bridge) increase light under, vision under, and through to river side
- Maintains street level infrastructure
- Signature structure
- Keep I-91 north & south garages in same locations
- Relieves south end bridge / I-91 congestion (with 3 lanes)
- Reduce maintenance cost with new construction techniques

# POTENTIAL IMPACTS

- Significant structure(s)
- Construction duration
- Maintainance of viaduct = maintenance costs
- Railroad is constraint to riverfront access
- Reconstruct I-291 & I-91 interchange
- Existing army corps levee system on both sides of river
- Utility relocation
- Temporary vs. permanent row takings
- Neighborhood disruptions
- Designated park land effects
Sunken, Depressed, or Tunnel

POTENTIAL BENEFITS
- REMOVE OVERHEAD VISUAL / PHYSICAL IMPROVEMENT OF I-91 VIADUCT STRUCTURE
- ELIMINATE SOUTH END BRIDGE / I-91 CONGESTION
- MAINTAIN 3 LANES ON I-91 CORRIDOR
- AT-GRADE CONNECTION OVER DEPRESSED I-91
- MODERN NOISE SOURCE
- CREATE GREEN DEVELOPMENT CORRIDOR ALONG CIVIC REVERE FRONTAGE

POTENTIAL IMPACTS
- SIGNIFICANT EXCAVATION & STRUCTURAL RETAINING WALLS
- RECONSTRUCT I-91 EXITS & ON-RAMP
- RECONSTRUCT I-290 & I-91 INTERCHANGE
- LOSS OF PARKING GARAGES (I-91 N & I-91 S)
- EXITING ARMY CORPS LEVEE SYSTEM ON BOTH SIDES OF RIVER
- RAILROAD IS A CONSTRAINT TO NEIGHBORHOOD ACCESS
- EXTENSIVE UTILITY RELLOCATION
- ROW TAKINGS
- NEIGHBORHOOD DISRUPTION / PROPERTY ACQUISITIONS
- DESIGNATED PARK LAND EFFECTS

LEGEND
- CURRENT I-91 ALIGNMENT WITH MODIFICATIONS TO MAINTAIN 3 LANES IN EACH DIRECTION & TAPER ROADS TO PROPOSED CONDITION
- I-91 DEPRESSED SECTION
- MODIFY / CONSTRUCT HIGHWAY OR ROADWAY INFRASTRUCTURE
- DESIGNATED PARK LAND

CONCEPT - DEPRESSED SECTION

March 16, 2016
Sunken/Tunnel Section Example
Sunken/Tunnel Section Example
Sunken/Tunnel Section Example
Sunken/Tunnel Example

ILLUSTRATIVE ELEVATION OF EXISTING CONDITIONS
I-91 VIADUCT CORRIDOR

ILLUSTRATIVE ELEVATION OF PROPOSED
PARTIALLY DEPRESSED I-91 VIADUCT CORRIDOR
Sunken/Tunnel Alternative

<table>
<thead>
<tr>
<th>POTENTIAL BENEFITS</th>
<th>POTENTIAL IMPACTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>• REMOVES OVERHEAD VISUAL / PHYSICAL IMPEDIMENT OF I-91 VIADUCT STRUCTURE</td>
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<tr>
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</tr>
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<td></td>
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No Build – Enhance Existing

**Potential Benefits**
- Limited / no construction impacts
- Relocate deck replacement (2017 years)
- Relocate South End Bridge / I-91 intersection
- Maintain 3 lanes on I-91 corridor
- No new ROW impacts
- No major utility impacts

**Potential Impacts**
- Maintain overall visual / physical impact of I-91 Viaduct structure
- Continual Viaduct maintenance
- Connector from I-91 West End & Memorial Bridge not existent
- Railroad is a constraint to riverfront access
# No-Build (Enhance Existing)

## POTENTIAL BENEFITS

- **LIMITED CONSTRUCTION IMPACTS**
- **RELIEVES SOUTH END BRIDGE / I-91 CONGESTION**
- **MAINTAIN 3 LANES ON I-91 CORRIDOR**
- **NO NEW ROW IMPACTS**
- **NO MAJOR UTILITY IMPACTS**
- **MAINTAINS EXISTING INFRASTRUCTURE (RAMPS, BRIDGES, UTILITIES, ETC.)**

## POTENTIAL IMPACTS

- **MAINTAINS OVERHEAD VISUAL / PHYSICAL IMPEDIMENT OF I-91 VIADUCT STRUCTURE**
- **REQUIRES DECK REPLACEMENT (20+ YEARS)**
- **CONTINUAL VIADUCT MAINTENANCE**
- **CONNECTION FROM I-291 WESTBOUND & MEMORIAL BRIDGE NOT-EXISTENT**
- **RAILROAD IS A CONSTRAINT TO RIVERFRONT ACCESS**
Short-Term Alternatives

- Document proposed improvements to be implemented as part of MGM project
- Renovate stairway, investigate ADA accommodations on west end of the south end bridge (Agawam)
- Bike lanes, bike accommodations across the south end bridge, connect the bike path in Agawam to Springfield
- Pedestrian connection to CT River bikeway/walk needed near south end bridge - need to cross tracks
Short-Term Alternatives

Under Viaduct Health, Safety, and Aesthetic, Improvements
Short-Term Alternatives

Enhancing & Creating Important Connectivity
Short-Term Alternatives

- Under Viaduct Health, Safety, Lighting, and Aesthetic, Improvements
Short-Term Alternatives

- Provide better, safer and more visible access to pedestrian bridge behind old basketball Hall of Fame or relocate structure
- Improve and enhance existing walkway underneath the railroad into Riverfront Park
- Upgrade at-grade crossing in river front park to an active crossing
Short-Term Alternatives

- Provide sidewalk in Springfield on the west side of Route 5 to connect Forest Park to Longmeadow

- Revise timing and coordinate (Signals in Longmeadow)
  - Route 5 and Forest Glen
  - Route 5 and Converse Street

- Provide right turn lane on Forest Glen (WB) at the intersection of Route 5
Short-Term Alternatives

- Provide interstate symbols on I-91 in the vicinity of the viaduct to improve routing for motor vehicles
- Additional spot ADA improvements including sidewalk repair, ADA ramps, countdown heads, and minor timing changes throughout the primary study area.
Mid-Term Alternatives
Mid-Term Alternatives
I-91 Lane Drop, South End Bridge & Route 83 Connection
Mid-Term Alternatives
I-91 Lane Drop, South End Bridge & Route 83 Connection
Over the top from I-291 to I-91 south (right side)

Split exit to serve Memorial Bridge (right side)

Over railroad tracks
Long-Term Alternatives
Three Preferred Alternatives

- **Reconstructed Elevated**
  - Increase Spans, Reduce Piers in Urban Core
  - Pedestrian Connections thru Embankments (Arches)

- **Sunken, Depressed, and/or Tunnel**
  - Along Current I-91 Alignment

- **Sunken, Depressed, and/or Tunnel**
  - Modified I-91 Alignment(s)
Long-Term Alternatives
Reconstructed Elevated

- Increase Spans, Reduce Piers in Urban Core
- Pedestrian Connections thru Embankments (Arches)
Long-Term Alternatives
Sunken/Tunnel Alternatives

- Along Current I-91 Alignment
Long-Term Alternatives
Sunken/Tunnel Alternative

- Modified I-91 Alignment(s)
## Project Schedule

### Tasks

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task 1</td>
<td>Study Area, Goals &amp; Objectives, Evaluation Criteria, and Public Involvement Plan</td>
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<td>Task 2</td>
<td>Existing Conditions, Future No Build Conditions and Issues Evaluation</td>
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<td></td>
<td></td>
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<tr>
<td>Task 3</td>
<td>Alternatives Development</td>
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<td></td>
</tr>
<tr>
<td>Task 4</td>
<td>Alternatives Analysis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task 5</td>
<td>Recommendations</td>
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<tr>
<td>Task 6</td>
<td>Final Report</td>
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### Events

- Working Group Meeting
  ![Working Group Meeting](image)
- Public Meeting
  ![Public Meeting](image)
Questions & Comments

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Study Website Link:
www.massdot.state.ma.us/i91viaductstudy