North River Canal Corridor

Transportation Study

Introduction – Options Evaluation

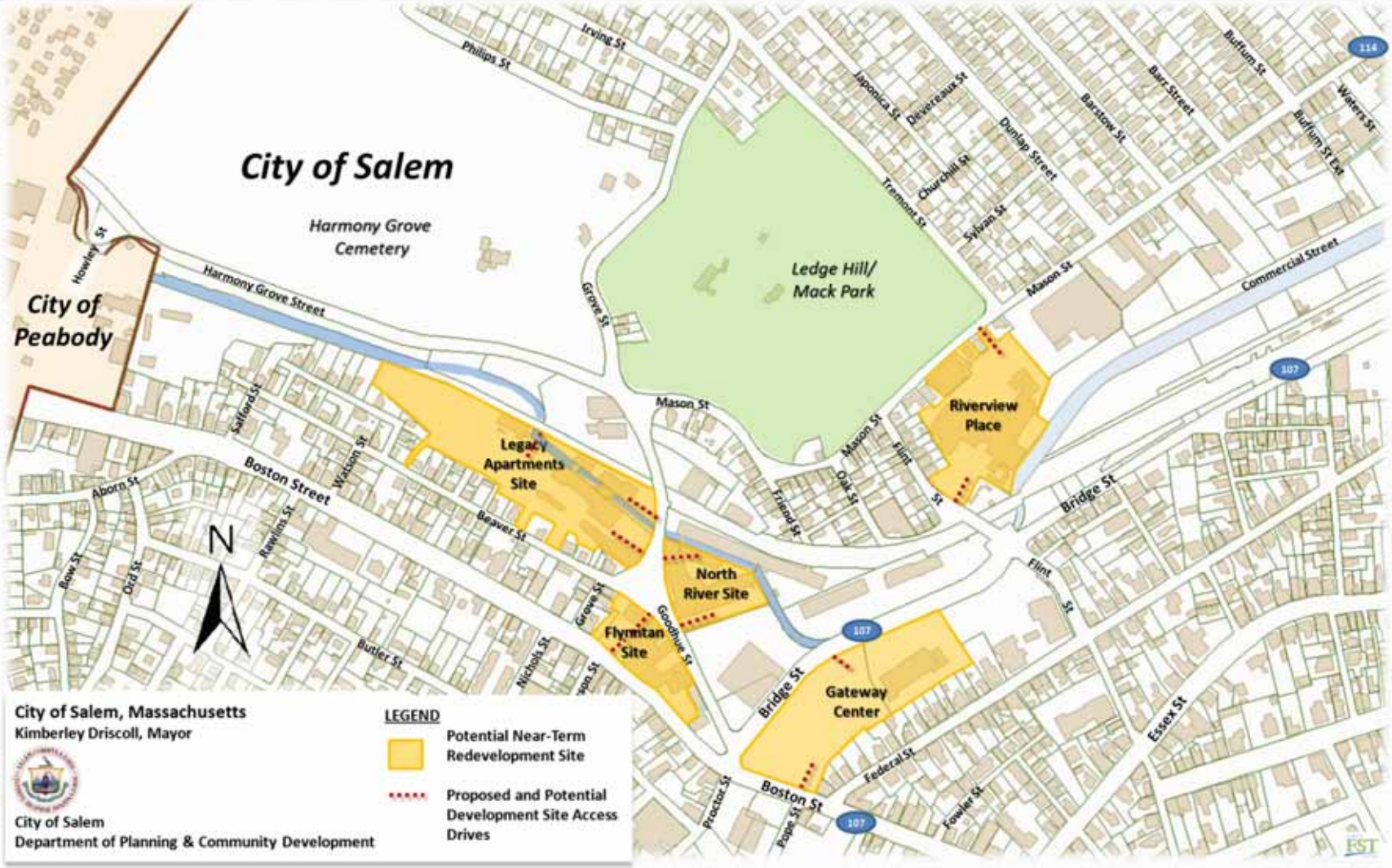
Salem, Massachusetts

City of Salem, Massachusetts
Kimberley Driscoll, Mayor

City of Salem
Department of Planning & Community Development

1/19/12

Study Area Overview



Purpose

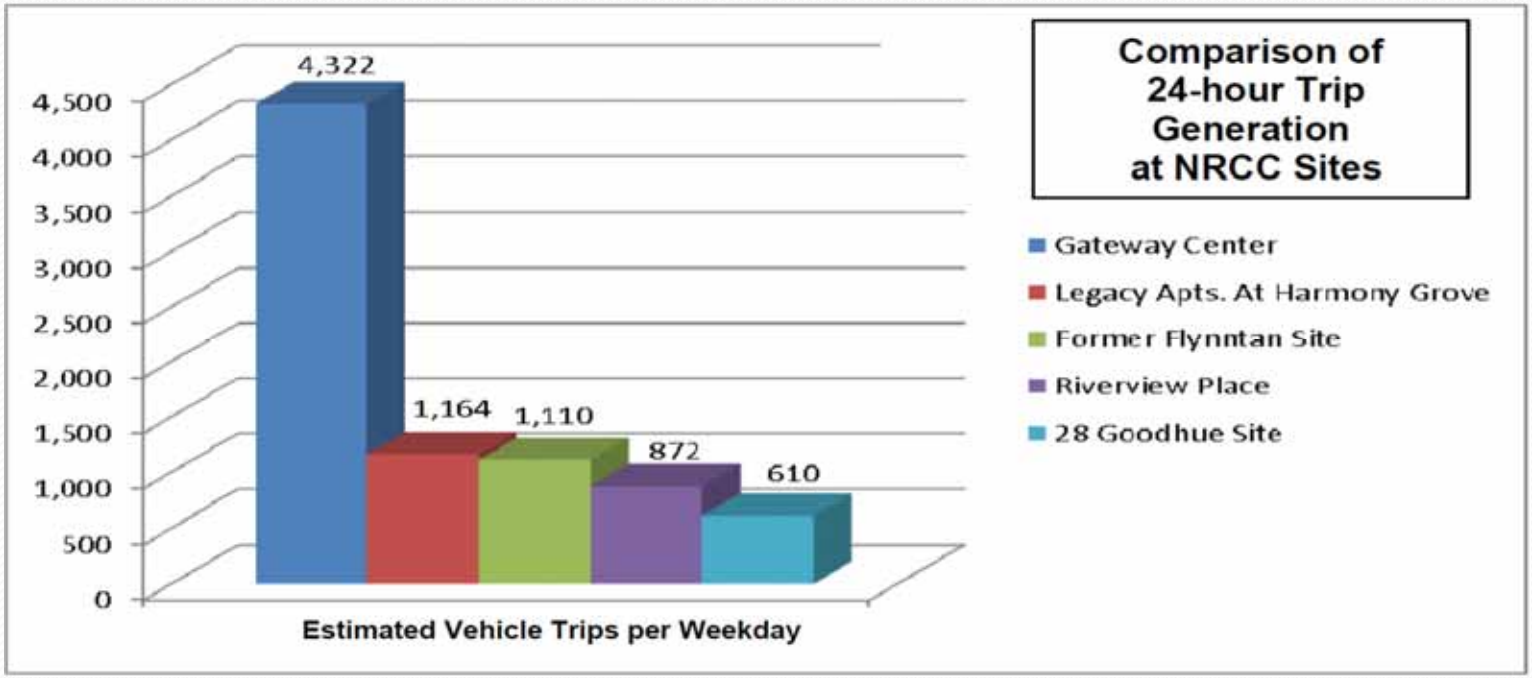
- Identify *cumulative* impacts of developments over next five years (2016)
- Determine *transportation system* improvements
- Identify *implementation* priorities
- Provide *order of magnitude* costs

Not starting from scratch:

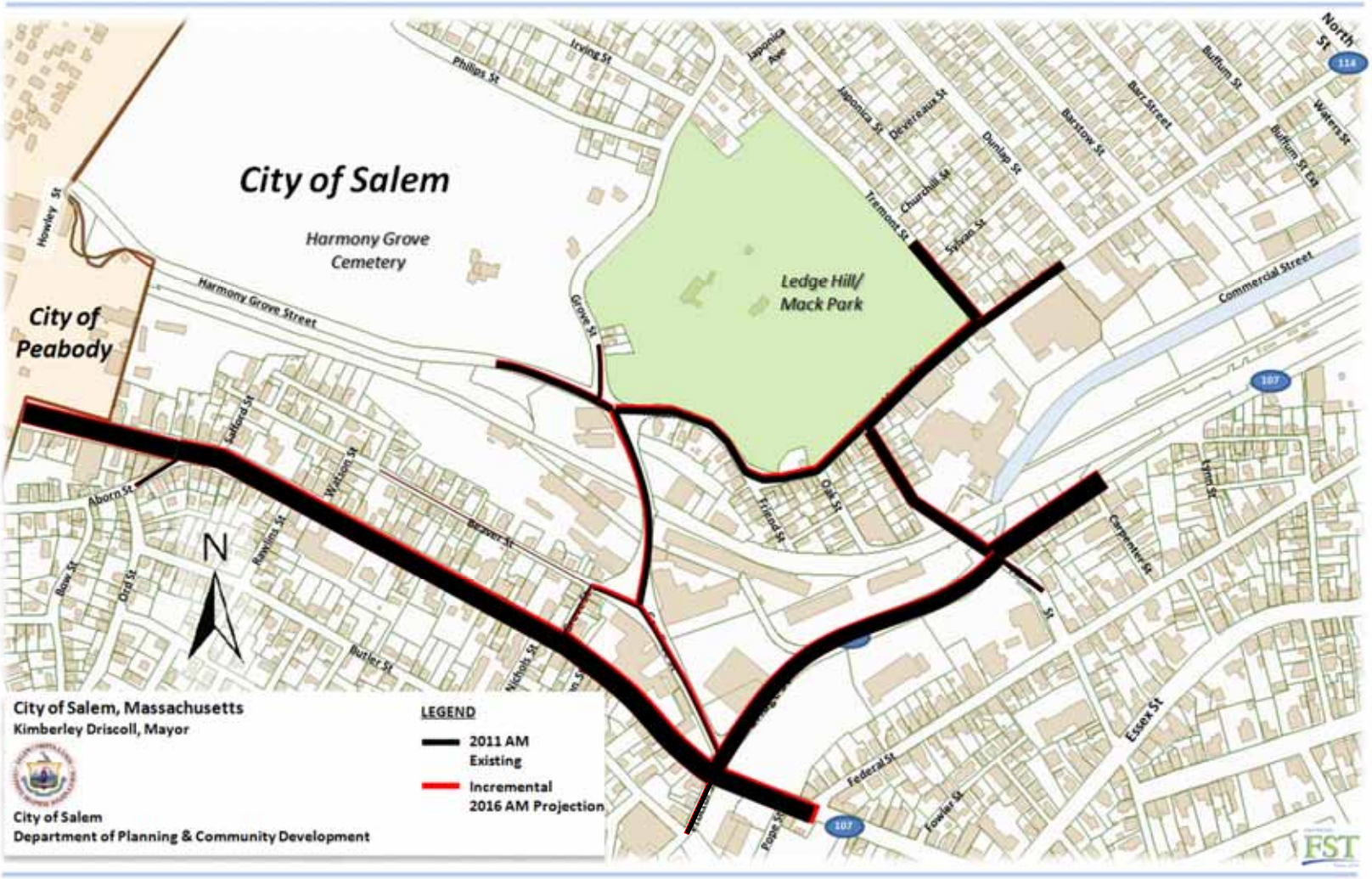
- NRCC Neighborhood Master Plan (2003)
- TIS for Routes 1A, 114, and 107 (2005)
- Functional Design Report New Ruane Judicial Center (2006)
- Records of Decision – 28 Goodhue Street, Riverview Place (2007)
- Gateway Center Traffic Impact and Access Study (2009)
- Peabody/Salem Corridor Concept Action Plan (2011)
- Legacy Apartments TIAS (2011)

Historic NRCC Count Locations

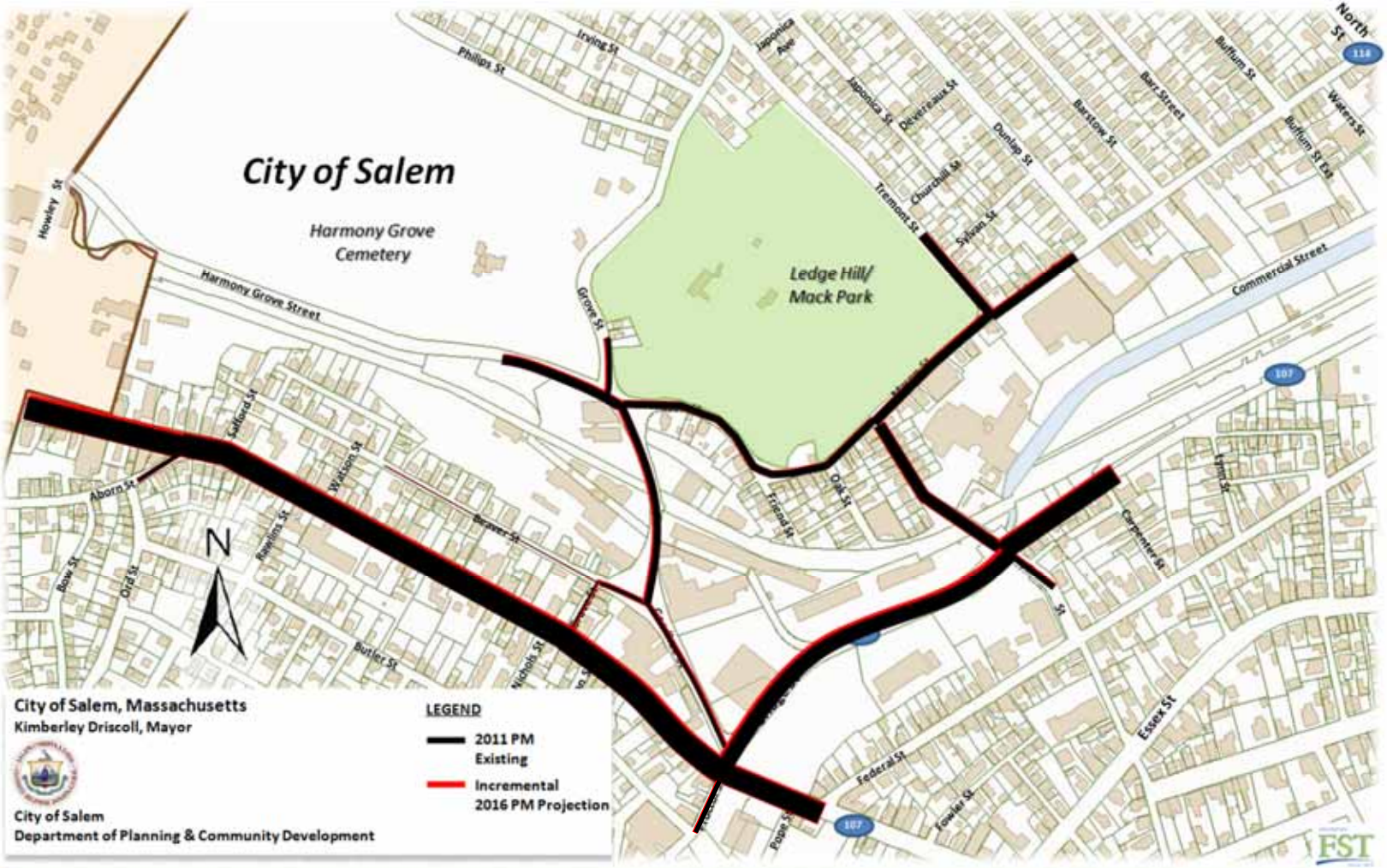
Daily Trip Generation Overview



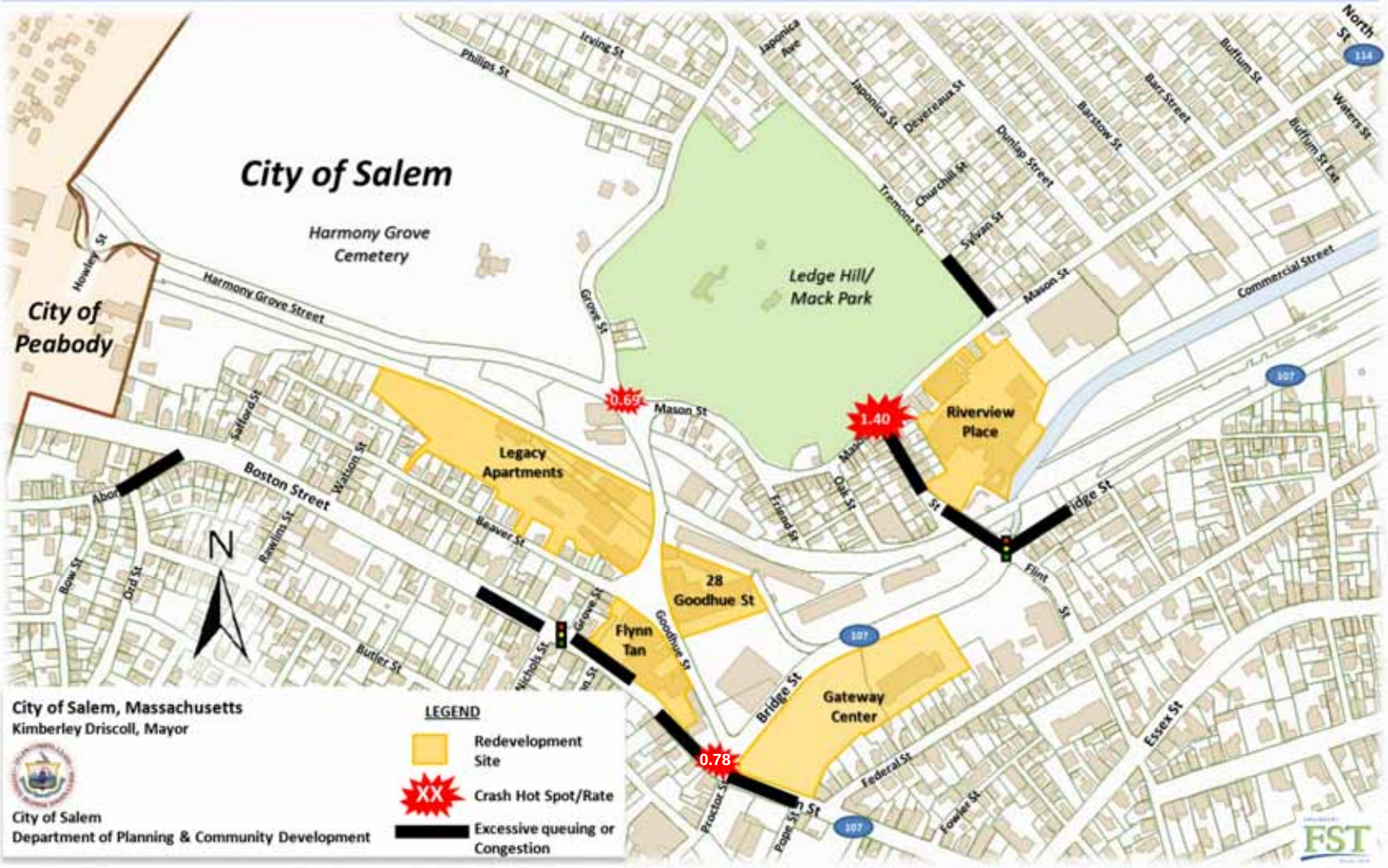
Expected AM Peak Growth 2011-2016



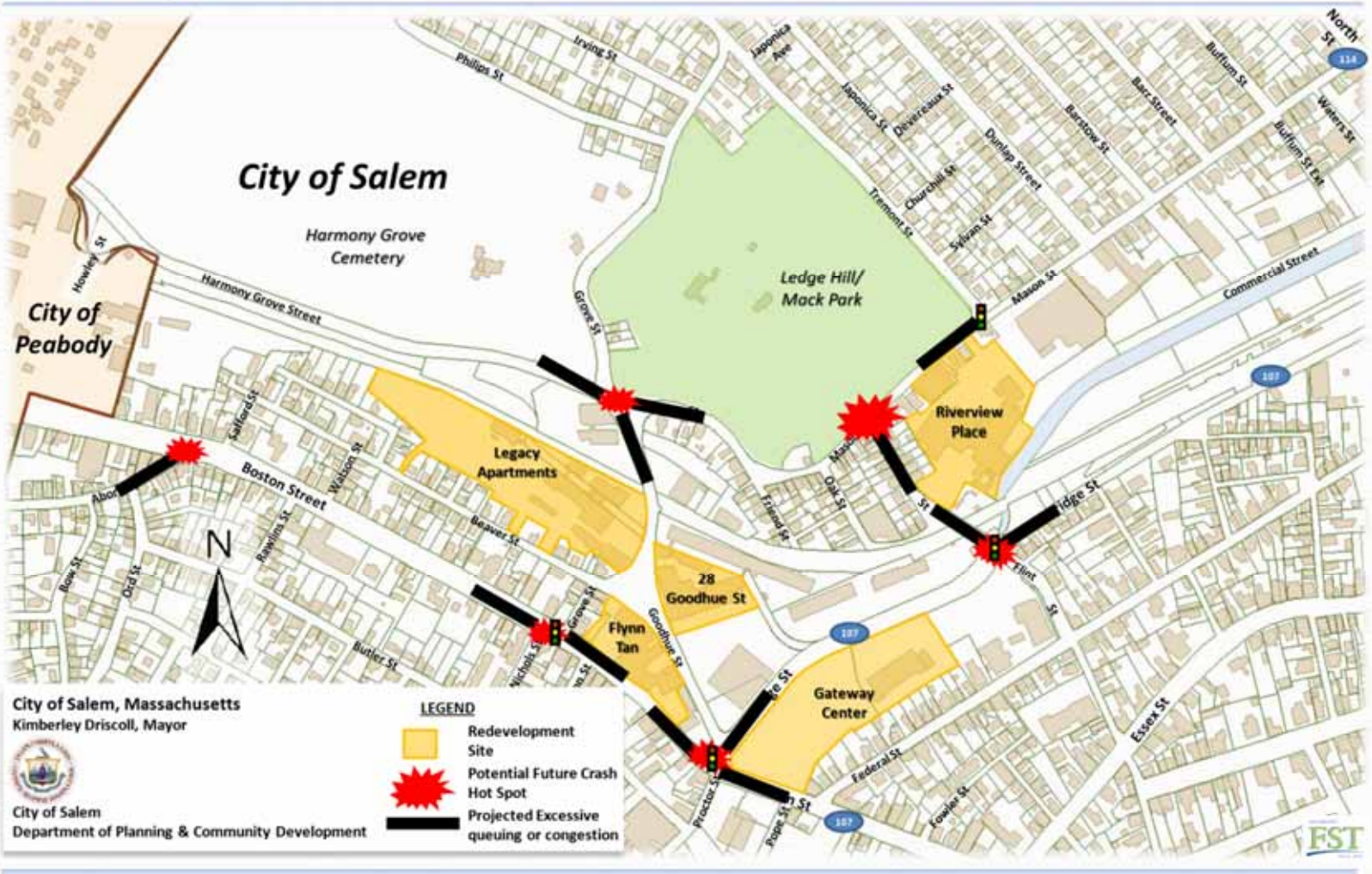
Expected PM Peak Growth 2011-2016



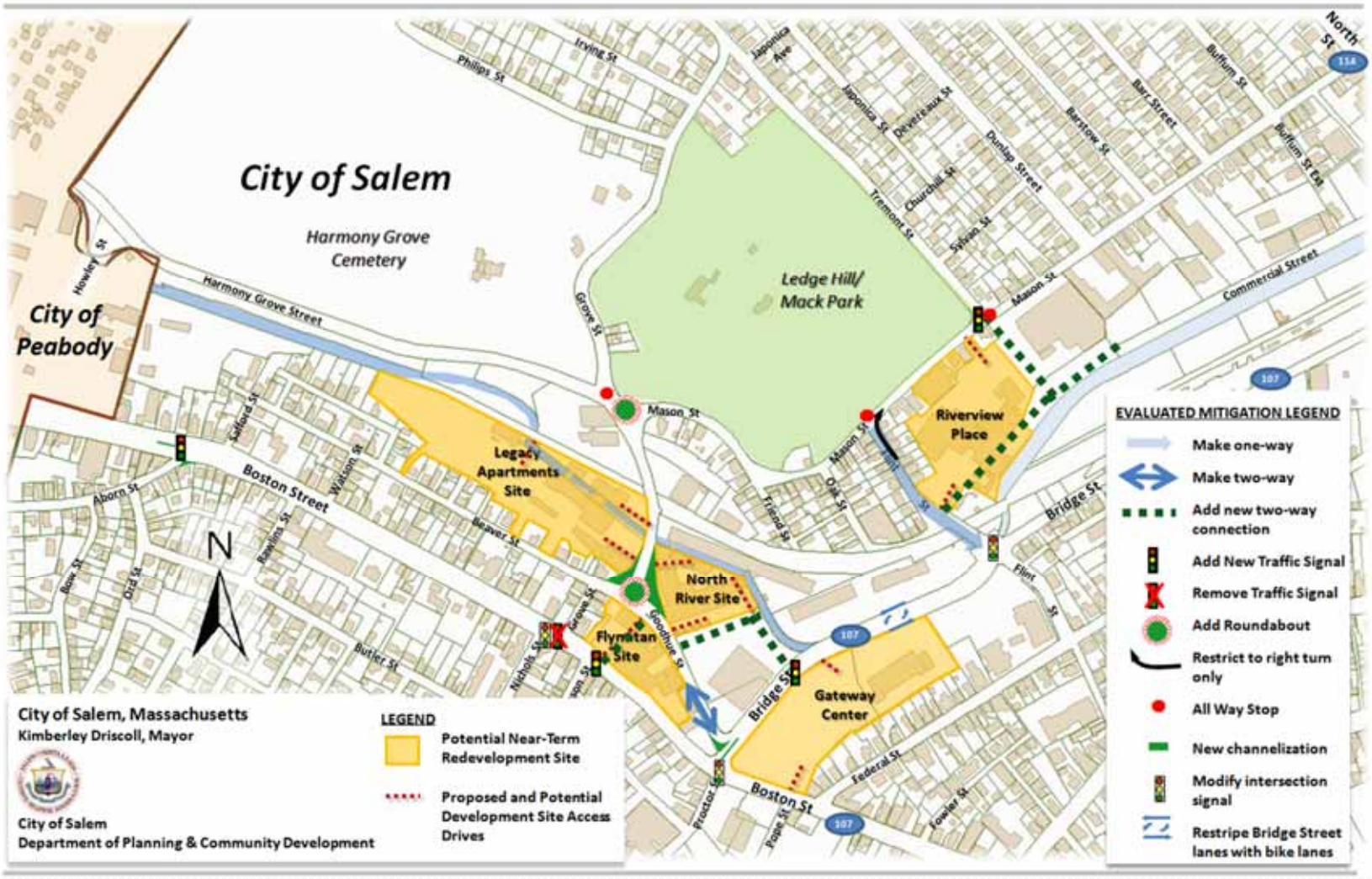
2011 Overview – Safety/Congestion 'Hot Spots'



2016 Overview – Potential Safety/Congestion 'Hot Spots'



Options Evaluated - Overview

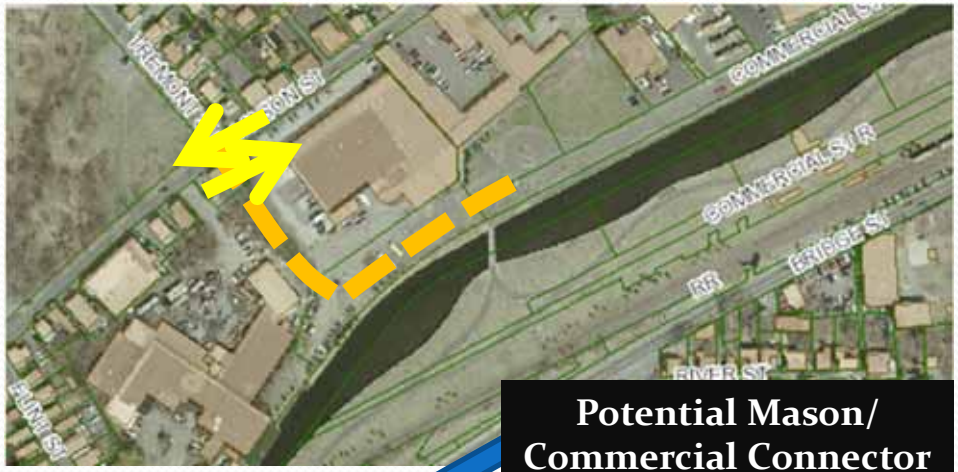


Mason Street at Tremont Street Signal

- Pros
  - Reduces peak hour congestion for Tremont Street approach
  - Addresses poor sight line from Tremont Street
  - Construction funding
- Cons
  - May encourage greater use of Tremont Street as cut through
  - Proposed widening into park would increase pedestrian crossing distance
  - Maintenance costs/may increase rear-end crashes
  - May increase guard rail crashes

Commercial Street/Mason Connector

- Pros
  - Would reduce SB traffic on Mason Street approaching Flint Street if connected to Flint Street
  - Provides Commercial Street a new access via proposed Mason /Tremont Street signalized location
- Cons
  - Challenging grades and drainage
  - Would add a new leg to Mason Tremont and potentially increase crash rates
  - Maintenance costs/may increase rear-end crashes
  - Right of way and residences affected
  - Likely increases Tremont Street traffic



Potential Mason/ Commercial Connector

Commercial Street/Flint Street Connector

- Pros
  - May reduce Mason Street SB traffic approaching Flint Street enhance safety
  - Can reduce Flint Street traffic
  - Provides alternative Commerical Street access
- Cons
  - Safety issues with close spacing to Bridge/Flint signal and with difficult North Street approach
  - If traffic increases too much, congestion at future Commercial/Flint intersection
  - Right of way issues
  - Impacts to Leslie's Retreat

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Make Flint Street one-way southbound to Riverview Entrance near Oak Street

- Pros
  - Reduces Flint Street traffic by about a third
  - Allows parking on one side of Flint Street to remain
  - Would not affect Oak or Friend Street volumes
  - Easy to test/low cost
- Cons
  - Flint Street residents and northbound traffic must use Mason/Goodhue Streets
  - Requires another new connection like Mason/ Commercial connection or Goodhue/Bridge connection to reduce its impacts
  - An earlier *northbound* one-way test failed, as it had adverse impacts on Oak and Mason Streets

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Keep Flint Street two-way – right out only with relocated on-street parking at Riverview

- Pros
  - May reduce Flint Street traffic by about a sixth
  - Would not affect Flint Street abutter 2-way access
- Cons
  - Works effectively only if Flint Street on street parking is relocated to the Riverview site with a safe crossing (e.g., HAWK signal)
  - Regular enforcement will be required without channelization at Mason

Create Bridge/Goodhue Connector

- Pros
  - Creates a new Bridge Street pedestrian crossing opportunity
  - Allows Boston/Bridge intersection alterations
  - Could reduce Flint Street traffic
  - Connects Gateway to other NRCC developments
  - Benefits Gateway access from Bridge Streets
  - New Bridge Street access
- Cons
  - Requires right of way
  - flood plain
  - Works best with a signal at Bridge Street opposite the Gateway site
  - Unfunded right of way /construction costs

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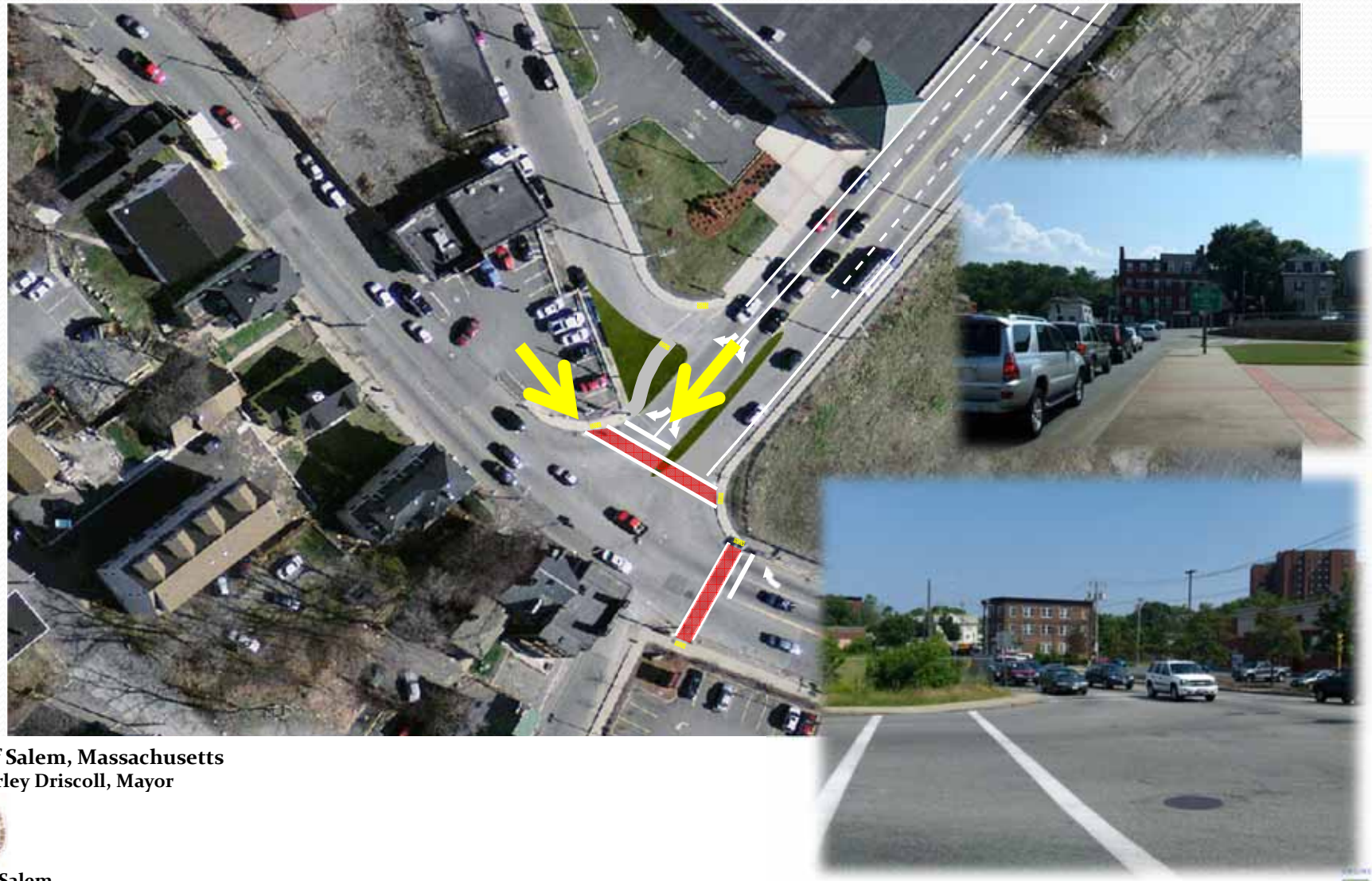
Rethinking Boston/Bridge Streets



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Hanson at Boston Streets Connector

- Pros
  - Would relocate some eastbound left turns to Bridge Street
  - Relocates development related Grove Street volumes between Beaver and Boston Streets
  - May relocate some westbound traffic off Goodhue Street if done in connection with Boston/Bridge Street reconfiguration
- Cons
  - Steep grades requires a costly solution
  - Does not address Goodhue at Bridge Street
  - Requires elimination of Grove/Nichols pedestrian signals, perhaps reversing their one-way flow patterns
  - Requires parking elimination on Boston Street and left turn lane in narrower segment

Rethinking Harkin Square - Grove at Harmony Grove Streets

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Thanks
Questions??

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