



I-84 HARTFORD PROJECT

Open Planning Studio #6 Presentation

December 10, 2015



I-84 HARTFORD PROJECT



Presentation Overview

1. What is the I-84 Hartford project?
2. Lowered highway possibilities (west)
3. Lowered highway possibilities (east)
4. Construction considerations
5. Learn more/provide input

Hello. Please allow me to tell you more about today's event.





What is the I-84 Hartford Project?

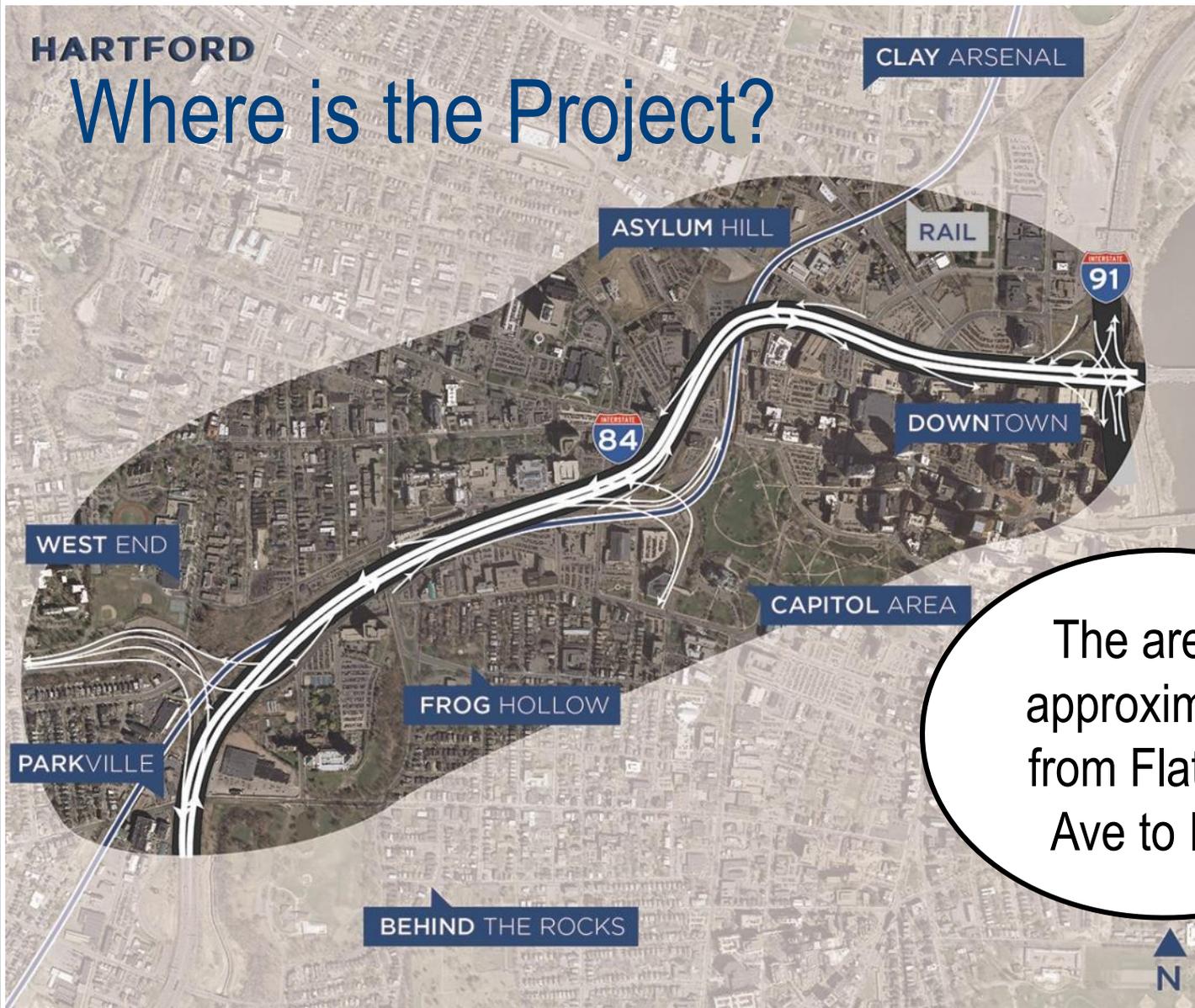
At Open Planning Studios, you can learn about the latest developments on the I-84 Hartford Project.





HARTFORD

Where is the Project?



The area is approximately from Flatbush Ave to I-91.



I-84 Project Background

- Rail line built in 1830s
- Opened 1969; elevated to avoid impacting rail line
- Designed for 55,000 vehicles/day (Asylum Avenue area)
- Carries 175,000 vehicles/day (Asylum Avenue area)



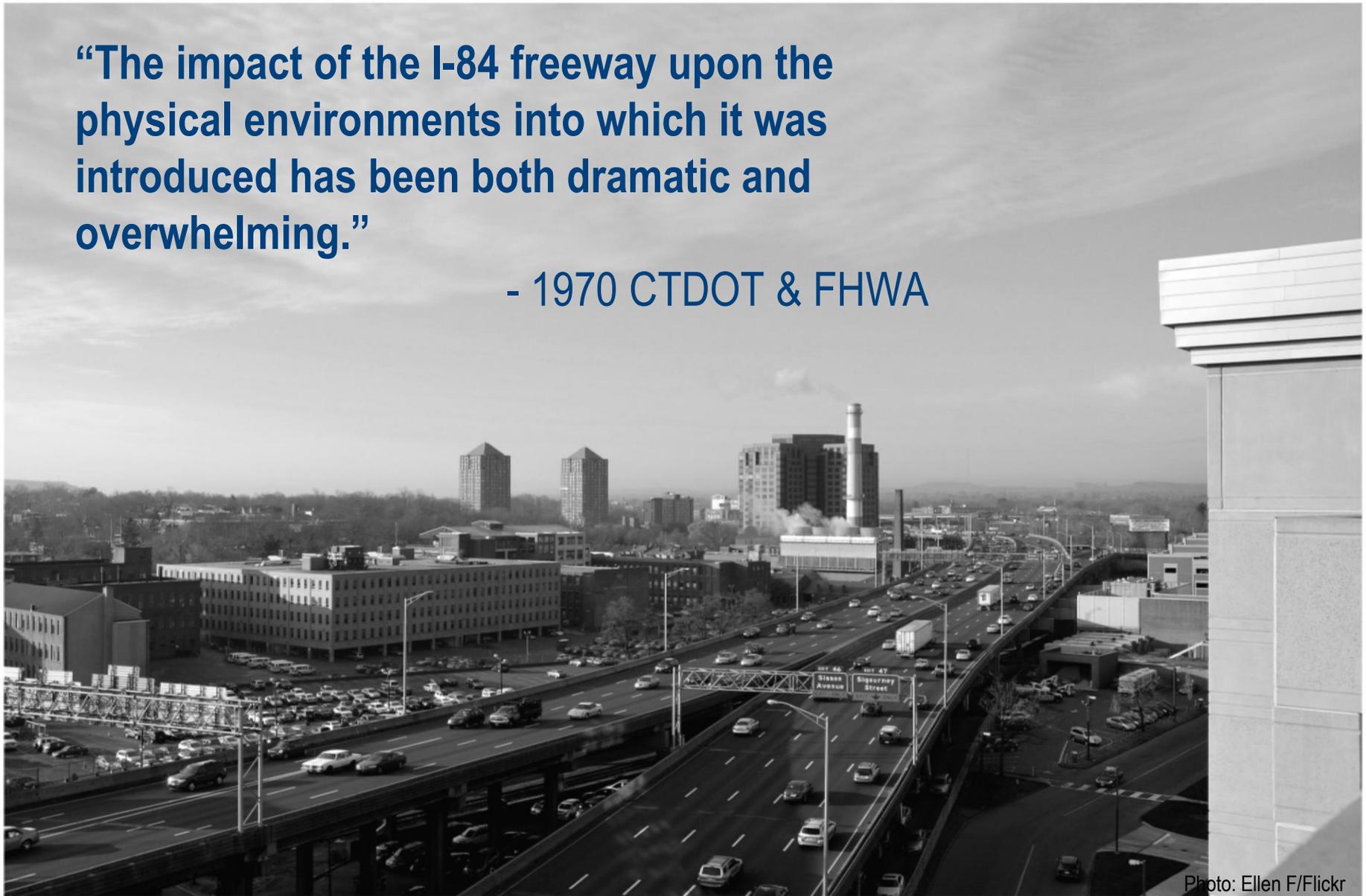
These aerials show I-84's footprint and profound shift in development patterns after it was built.





“The impact of the I-84 freeway upon the physical environments into which it was introduced has been both dramatic and overwhelming.”

- 1970 CTDOT & FHWA



Why Is It Needed?

1. *Bridge Deficiencies*

- Reaching end of lifespan
- \$60M since 2004
- Additional \$60M over next 5 years
- Bridges are safe; deterioration will continue

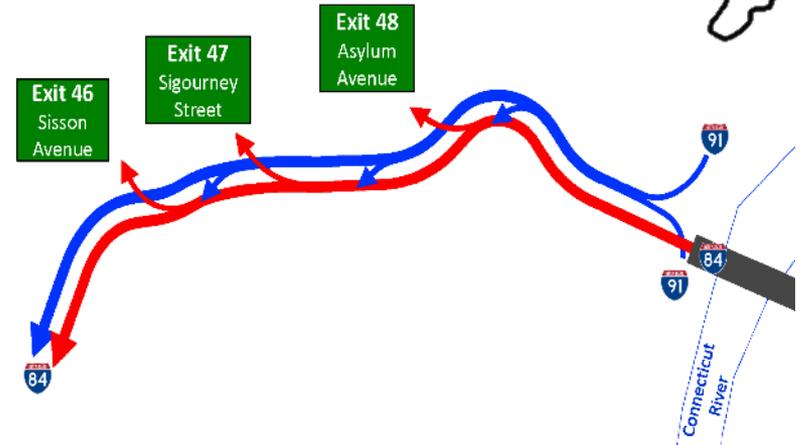
There are three major reasons why we're doing this project. The first is bridge deficiencies.



Why Is It Needed?

2. Operations and Safety

- Eight full/partial interchanges
- Weaves/lane drops
- Sharp curves
- High crash rates



Why Is It Needed?

3. Mobility: Moving People and Goods

- Freight volumes above national average
- Complete streets: improve pedestrian and bicyclist connections
- Transit and parking accommodations





Alternatives Overview



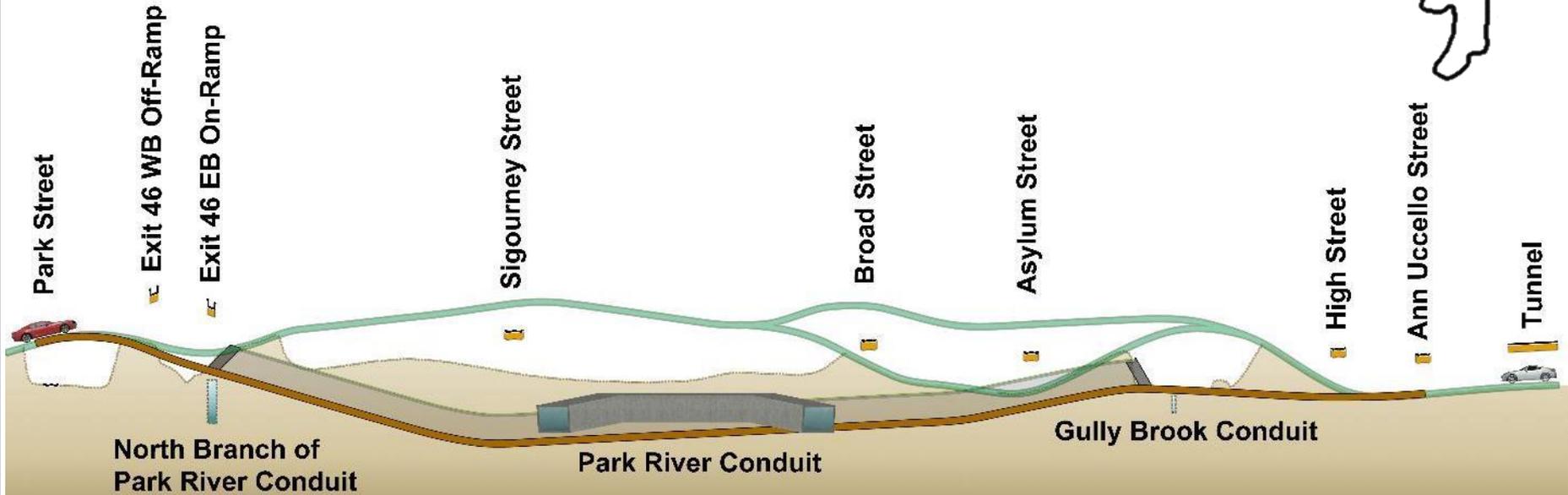
Here's what we think about the alternatives developed to date.



Mainline Alternatives

- Alternative 1: No Build **Green**
- Alternative 2 (elevated) **Blue**
- Alternative 3 (lowered) **Yellow**
- Alternative 4 (tunnel) **Brown**

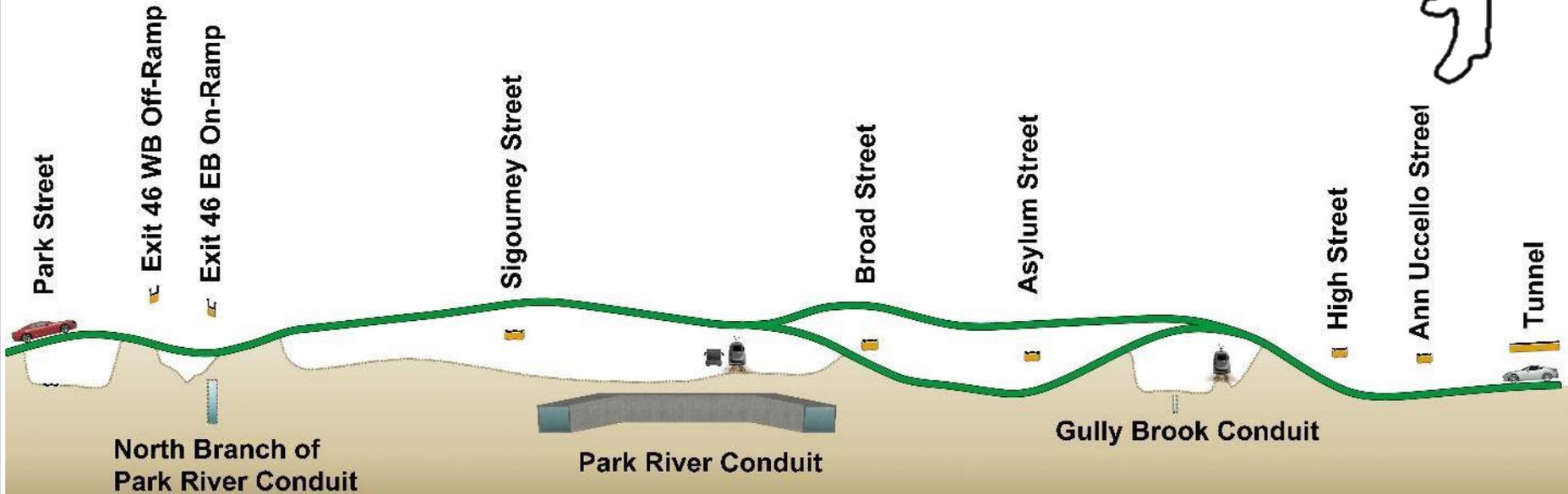
The number of each alternative relates to its vertical profile elevation.



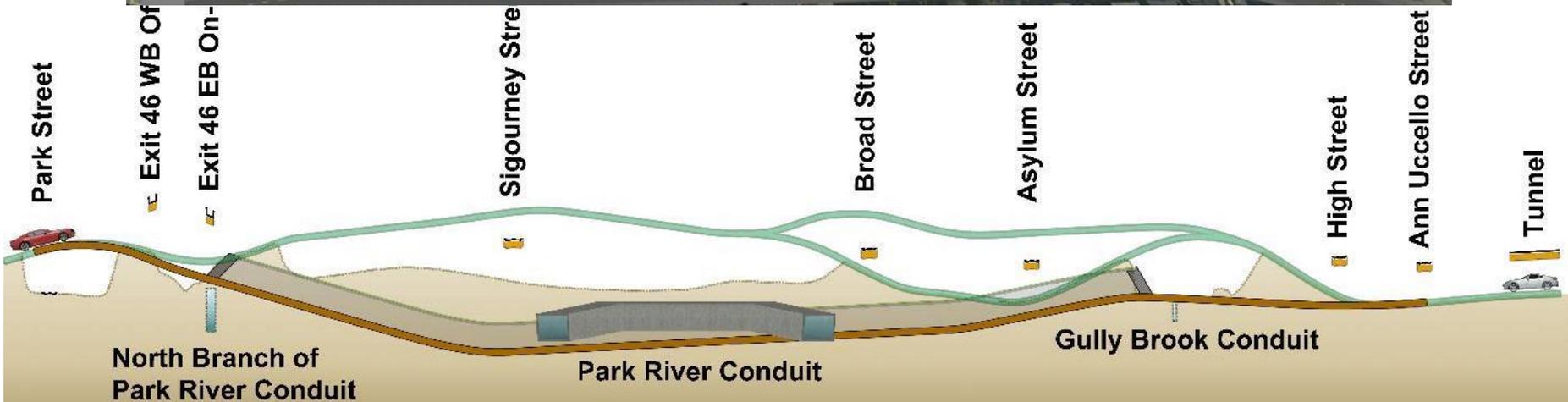
Mainline Alternatives

- Alternative 1: No Build
- Alternative 2 (Elevated Highway)
- Alternative 3 (Lowered Highway)
- Alternative 4 (Tunneled Highway)

The number of each alternative relates to its vertical profile elevation.



Alternative 4: Tunneled Highway





Mainline Alternatives

The letter of each alternative relates to its horizontal alignment.

Legend

Alternatives 2A/3A



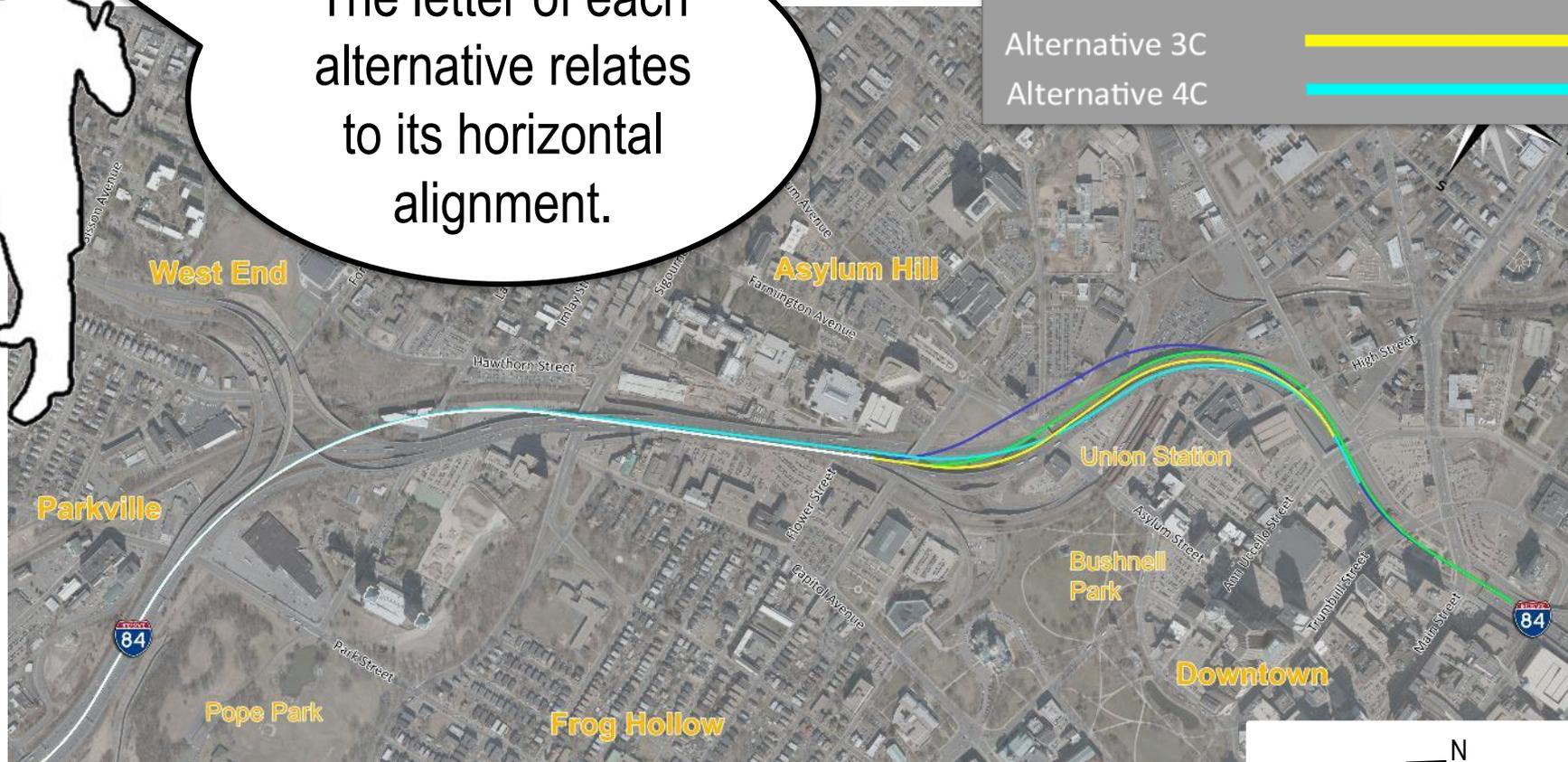
Alternative 3B



Alternative 3C



Alternative 4C



Various Ramp Options

The alternatives are further defined by interchange options to the east and west of Sigourney Street.



10 WESTERN
OPTIONS

SIGOURNEY STREET



15 EASTERN
OPTIONS



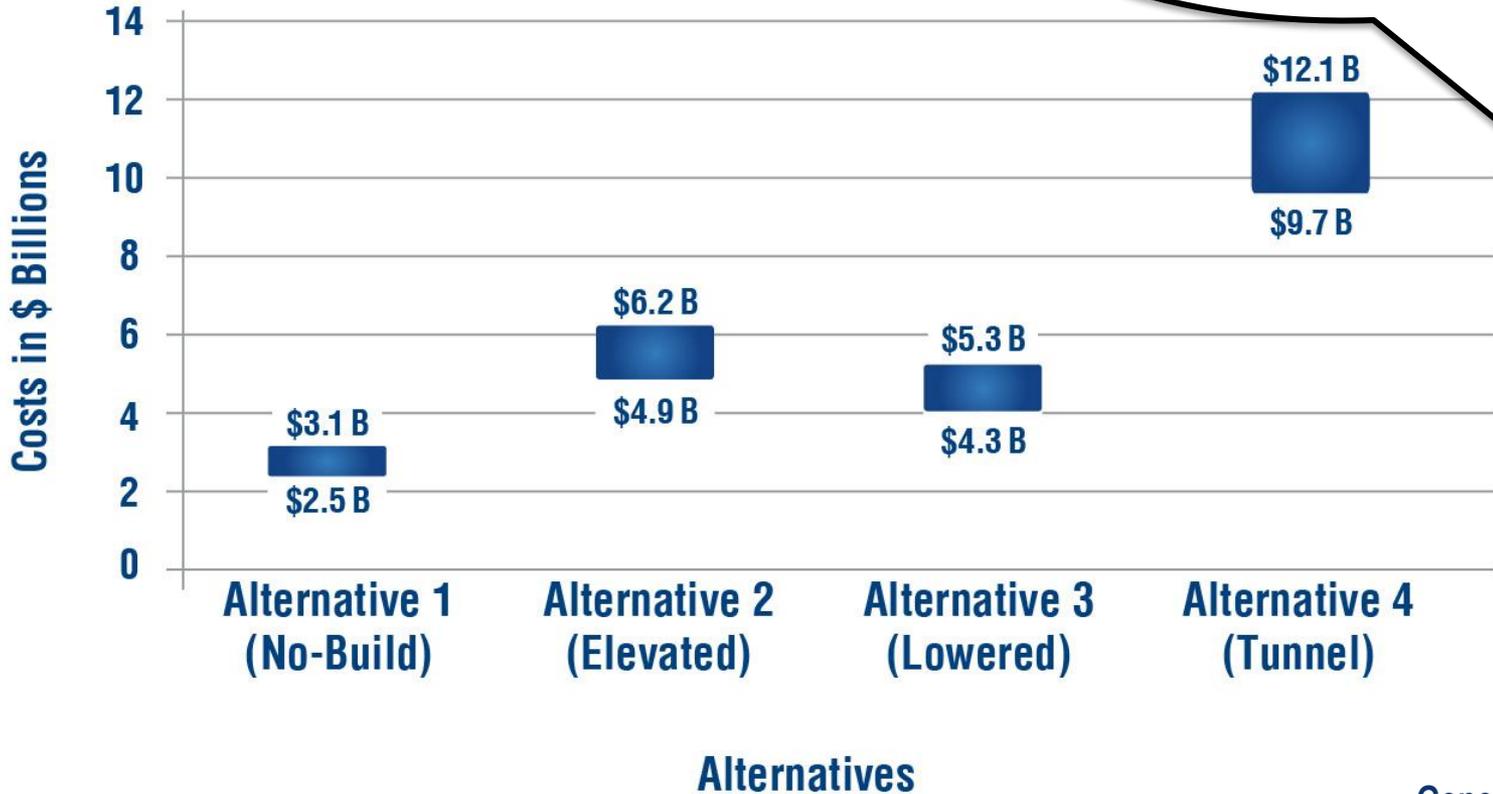
Trumbull & High Street
Interchanges Closed





Cost Estimates

The estimates are represented in future dollars to the mid-point of construction.





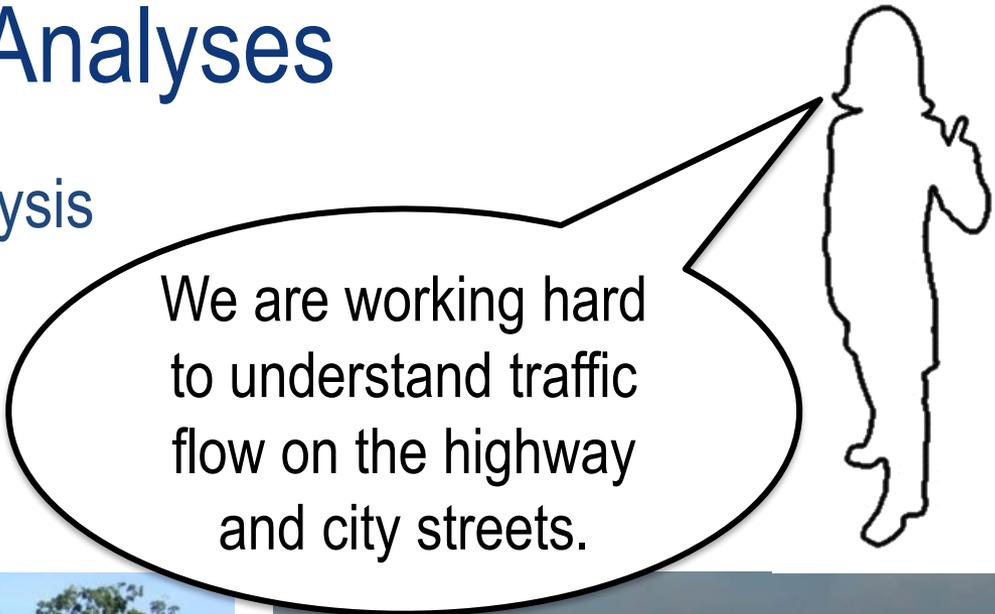
Project Schedule



Dates are approximate and will be updated as the project progresses

Preliminary Traffic Analyses

- Perform I-84 mainline analysis
- Analyze local road intersections



We are working hard to understand traffic flow on the highway and city streets.



Bicycle/Pedestrian Considerations

- Collect information/usage patterns
- Incorporate data into the traffic model
- Continue to meet with stakeholders/users
- Balancing lanes with walkability/bike usage





I-84 HARTFORD PROJECT

Legend

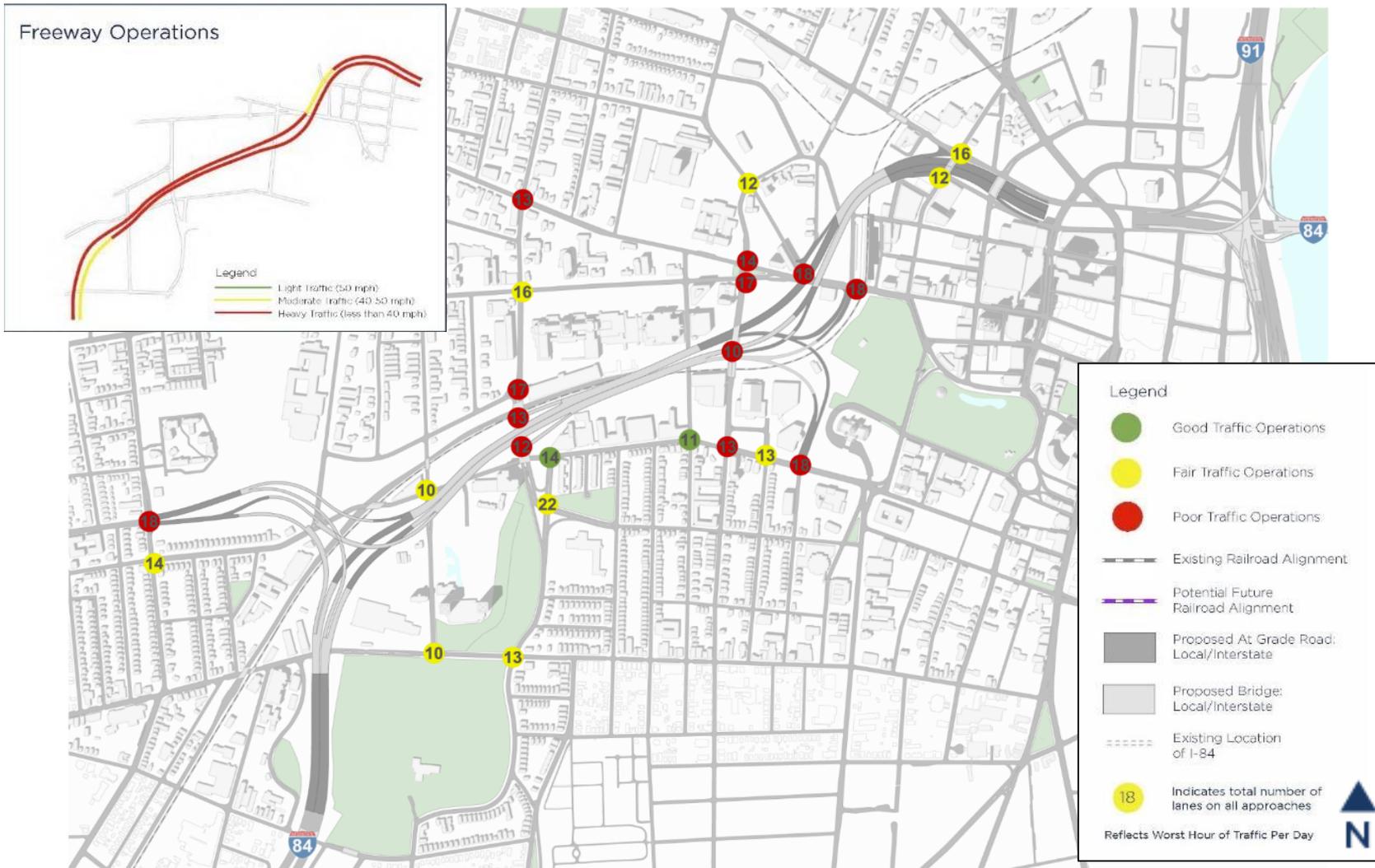
- Good Traffic Operations
- Fair Traffic Operations
- Poor Traffic Operations
- Existing Railroad Alignment
- Potential Future Railroad Alignment
- Proposed At Grade Road: Local/Interstate
- Proposed Bridge: Local/Interstate
- Existing Location of I-84
- 18 Indicates total number of lanes on all approaches
Reflects Worst Hour of Traffic Per Day

Now let's take a look at traffic operations. Green is good, yellow is fair, and red is poor.



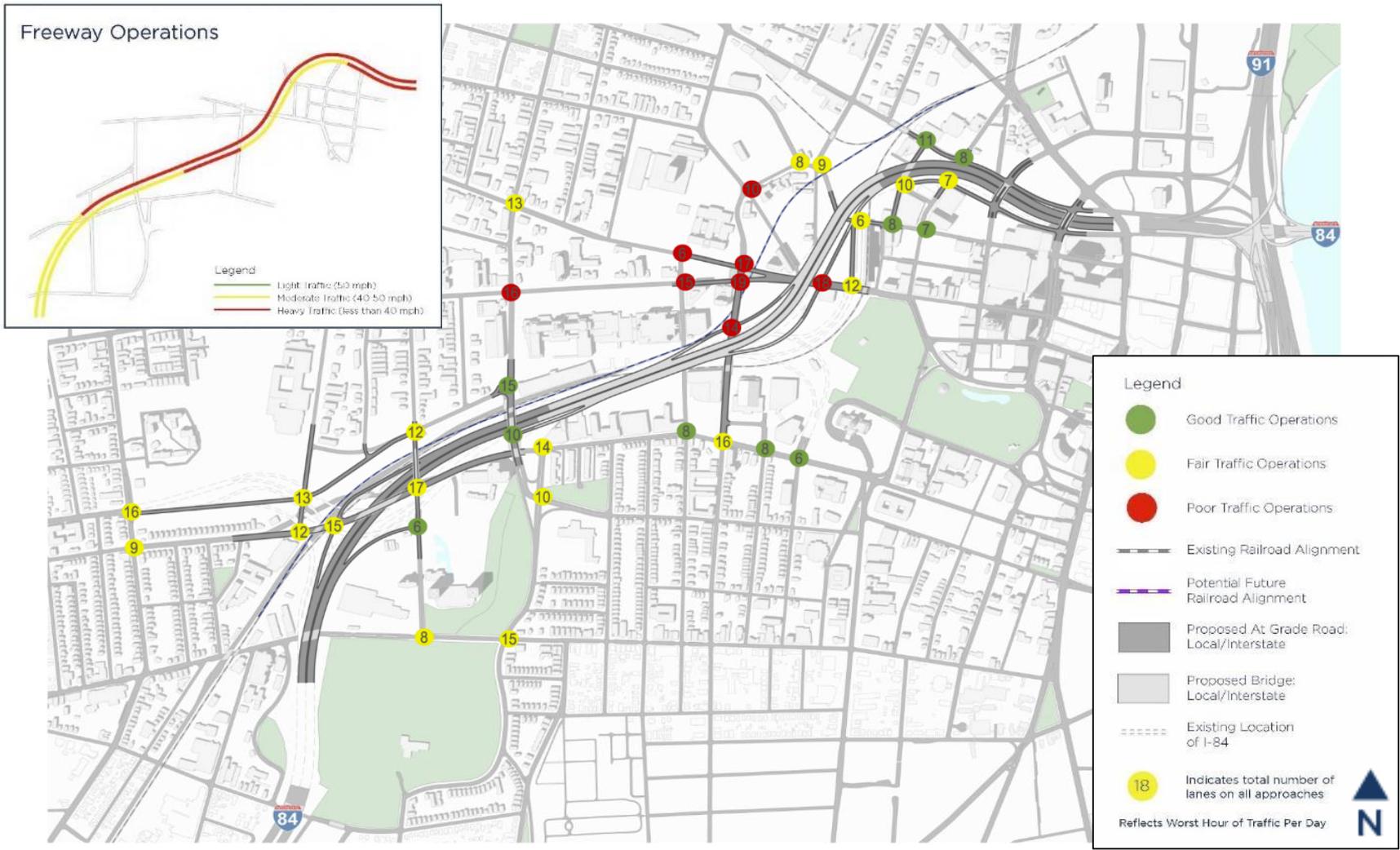


Existing Conditions



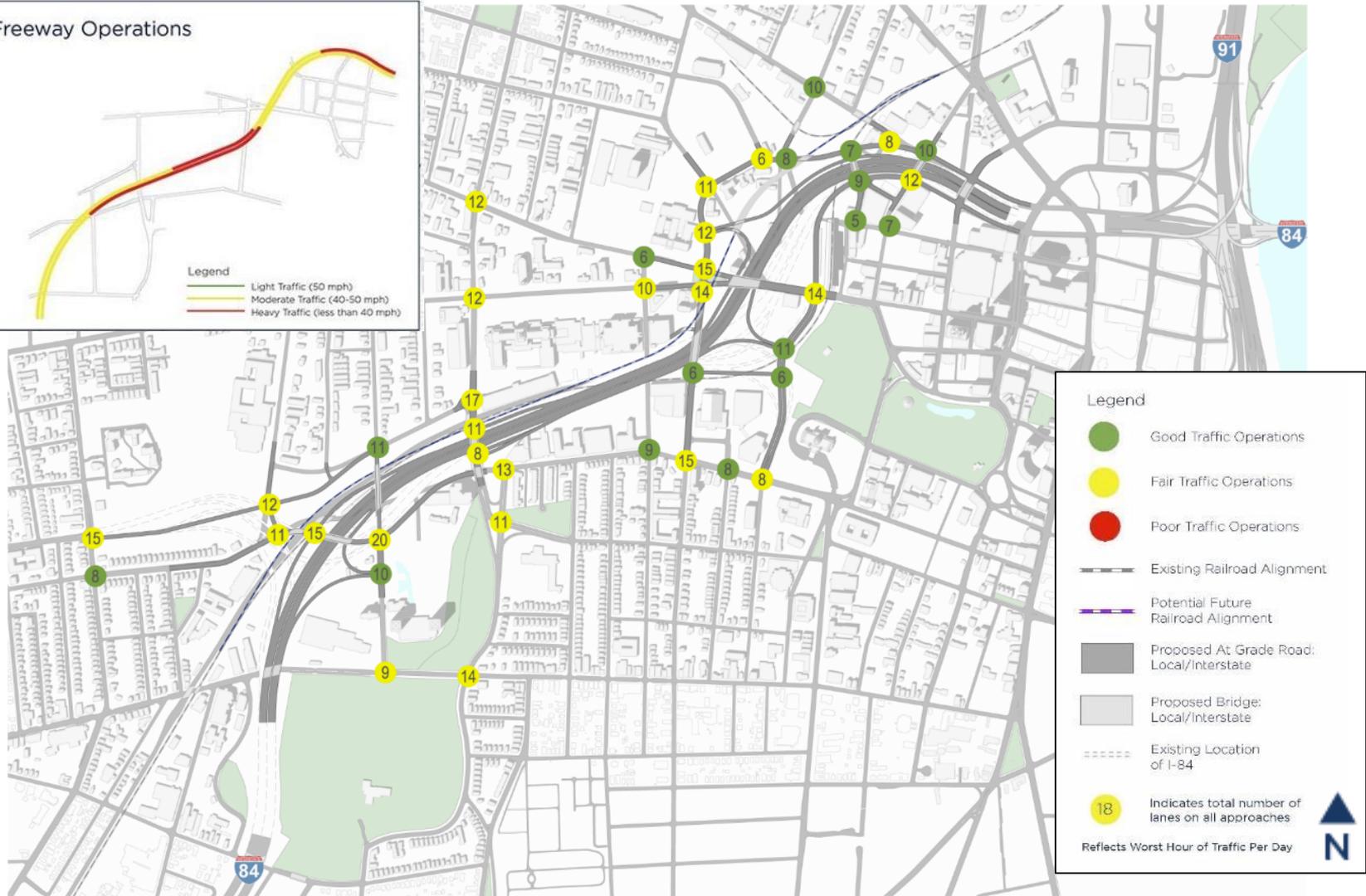


Elevated Highway



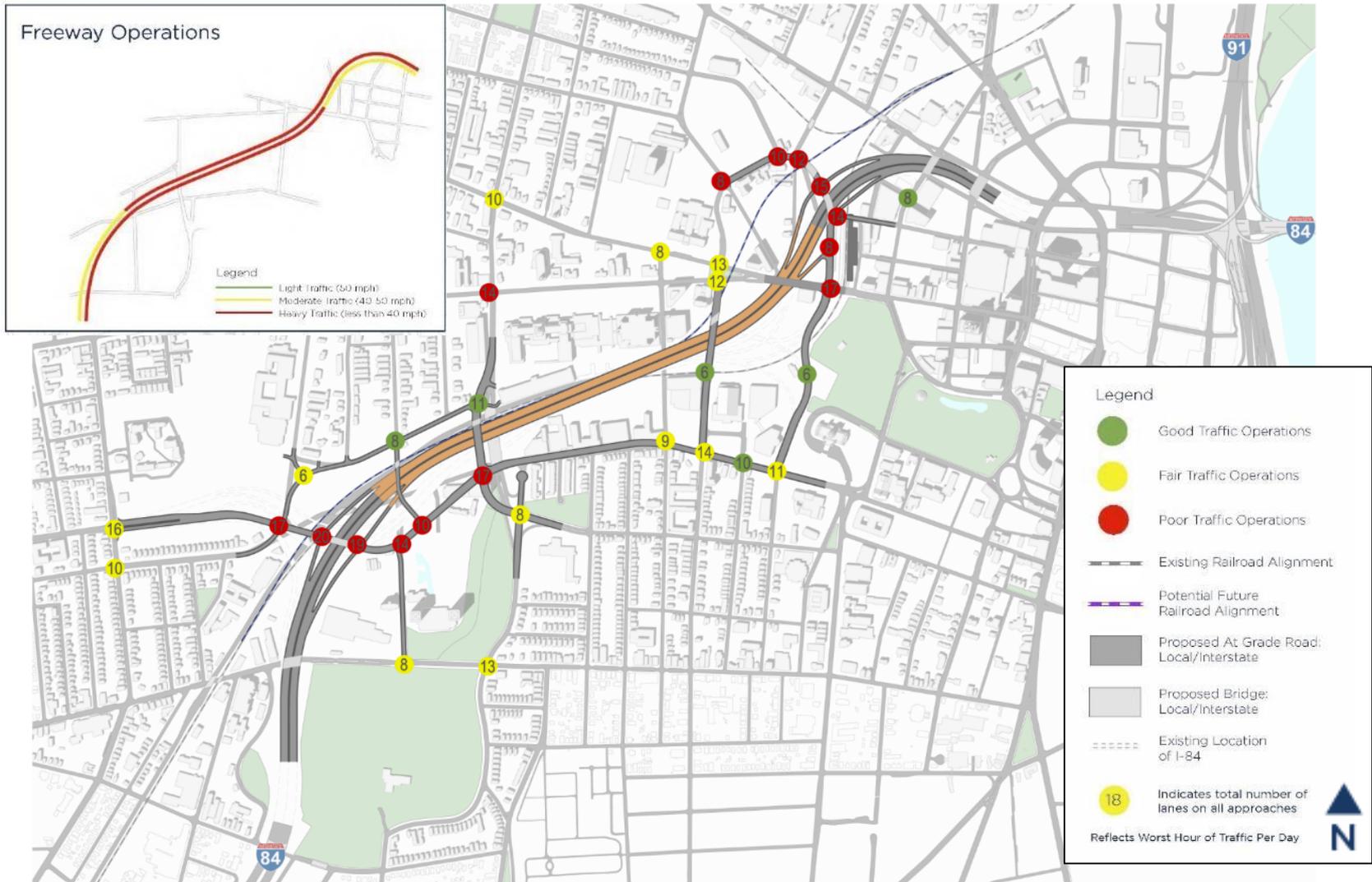


Lowered Highway





Tunnel



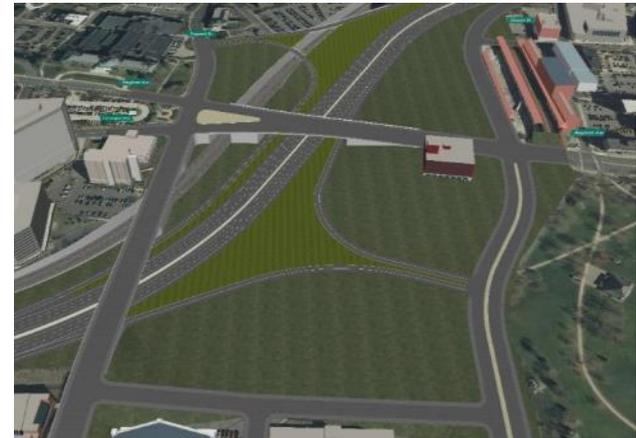
Mainline Analysis Tells Us:

- Interchange spacing affects the mainline
- Poor intersections affect the mainline



Intersection Analysis Tells Us:

- Keep Sigourney Street ramps
- Create new roads to add redundancy
- Better mainline operations = improve intersections
- More walkable/bikeable corridors can be achieved





Potential Building Impacts



Depending on the alternatives, any of these buildings could be taken.





Potential Building Impacts (West)

1

2

3

4

5

Capitol Avenue

Park Street

Laurel Street

Hawthorn

Sigourney Street

84

3

1

3

Again, it depends on the alternative.



Potential Building Impacts (East)



11

15

8

11

12

14

13

16

6

12

Initial Analysis Shows...

Criteria	EASTERN OPTIONS														WESTERN OPTIONS										TUNNELED HIGHWAY					
	N-B	ELEVATED HWY			LOWERED HIGHWAY							ELEVATED / LOWERED HIGHWAY										ALT 4								
		ALT 1	ALT 2A		ALT 3A			ALT 3B				ALT 3C			ALT 2/3										4A	4B	4C-1	4C-2		
	E1	E2(S)	E3	E1-1	E1-2	E2(S)	E3	E4	E5(S)	E1(S)	E2(S)	E3(S)	E4(S)	E1(S)	E2(S)	W1	W2	W3-1	W3-2	W3-3	W4	W5	W6-1	W6-2	W7					
Purpose & Need																														
Bridge Structure Deficiencies																														
Mainline Traffic Performance																														
Safety Considerations																														
Local Road Traffic Performance																														
Bike/Ped Accommodations																														
Goals & Objectives																														
Rail Accommodations																														
Multi-Modal Connectivity																														
Cost Effectiveness																														
Neighborhood Connections																														
Viewsheds																														
Opportunities for Land Development																														
Other Considerations																														
Changes to Travel Patterns																														
Permit Feasibility																														
Impacted Buildings																														
Construction Costs																														

Other Considerations	
Good	
Fair	
Poor	
Critical Flaw	
More Analysis Needed	

Alternatives heavy on green are performing well. Those heavy on red or black are not.



Initial Analysis Shows...

Criteria	EASTERN OPTIONS													WESTERN OPTIONS										TUNNELED HIGHWAY					
	N-B	ELEVATED HWY			LOWERED HIGHWAY							ELEVATED / LOWERED HIGHWAY						TUNNELED HIGHWAY											
		ALT 1	ALT 2A		ALT 3A			ALT 3B				ALT 3C		ALT 3/3			ALT 4												
E1	E2(S)	E3	E1-1	E1-2	E2(S)	E3	E4	E5(S)	E1(S)	E2(S)	E3(S)	E4(S)	E1(S)	E2(S)	W1	W2	W3-1	W3-2	W3-3	W4	W5	W6-1	W6-2	W7	4A	4B	4C-1	4C-2	
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Impacted Buildings																													
Construction Costs																													

- Some lowered highway options perform well
 - Relocated railroad creates interchange opportunities
 - New roadways create redundancy in network
- Additional building impacts



Lowered Highway Possibilities (West)





Options That Perform Well (West)

Alternative 3A/3B: Option W3-1



Alternative 3A/3B: Option W3-2



Alternative 3A/3B: Option W3-3



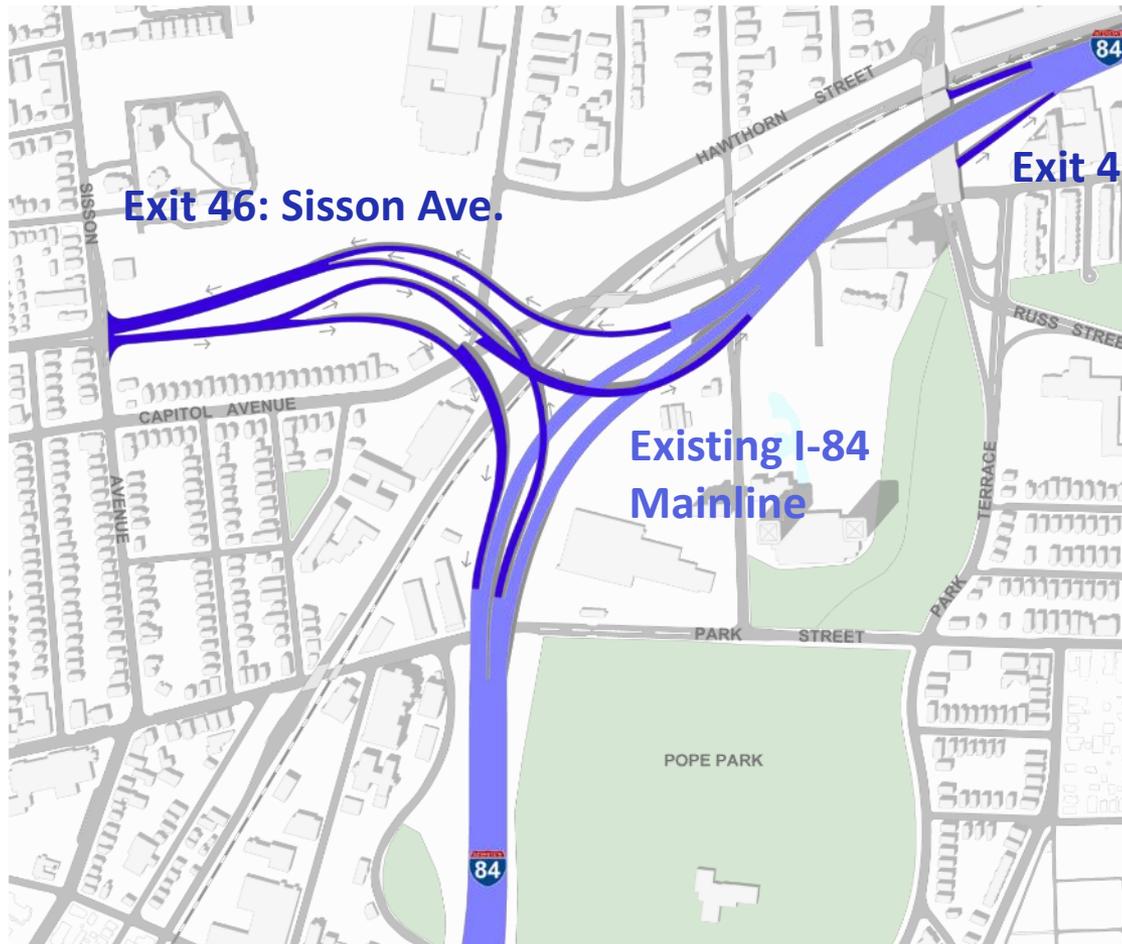


Existing Conditions (West)





Existing Mainline and Ramps (West)



Exit 46: Sisson Ave.

Exit 47: Sigourney St.

Existing I-84
Mainline



Option W3-3

Proposed Mainline and Ramps

Here's an example of a western option that's performing well.



Preliminary

Subject to change based upon ongoing analysis and design



Option W3-3

Proposed Roadway Layout



Preliminary

Subject to changed based upon ongoing analysis and design



Option W3-3

Potentially Impacted Buildings



Preliminary

Subject to change based upon ongoing analysis and design



Option W3-3

Potentially Available Land (~15 acres)



Preliminary

Subject to change based upon ongoing analysis and design





Option W3-3

Potential Complete Streets



CONCEPTUAL - FOR ILLUSTRATIVE PURPOSES ONLY

Subject to changed based upon ongoing analysis and design

Sisson Ramps

Existing Aerial View Looking North





Sisson Ramps

Potential Aerial View Looking North





Realigned Capitol Avenue

Existing Street View Looking East



Here's Capitol Ave today. Imagine what THIS could look like!





Realigned Capitol Avenue

Potential Street View Looking East





Lowered Highway Possibilities (East)



Options That Perform Well (East)

Alternative 3A: Option E5 (S)

THE I-84 HARTFORD PROJECT
Lowered Highway
Mainline Alternative 3A
Interchange Option E5(S)

- Directional Split (WB Loop Ramps at Cogswell, EB Loop Ramps at Bushnell) with Sigourney Ramps



Alternative 3B: Option E3 (S)

THE I-84 HARTFORD PROJECT
Lowered Highway
Mainline Alternative 3B
Interchange Option E3(S)

- Interchange with Edwards and extended Spruce St



Alternative 3B: Option E2 (S)

THE I-84 HARTFORD PROJECT
Lowered Highway
Mainline Alternative 3B
Interchange Option E2(S)

- Interchange with Cogswell and extended Spruce St



Alternative 3B: Option E4 (S)

THE I-84 HARTFORD PROJECT
Lowered Highway
Mainline Alternative 3B
Interchange Option E4(S)

- Interchange with Cogswell and Spruce St



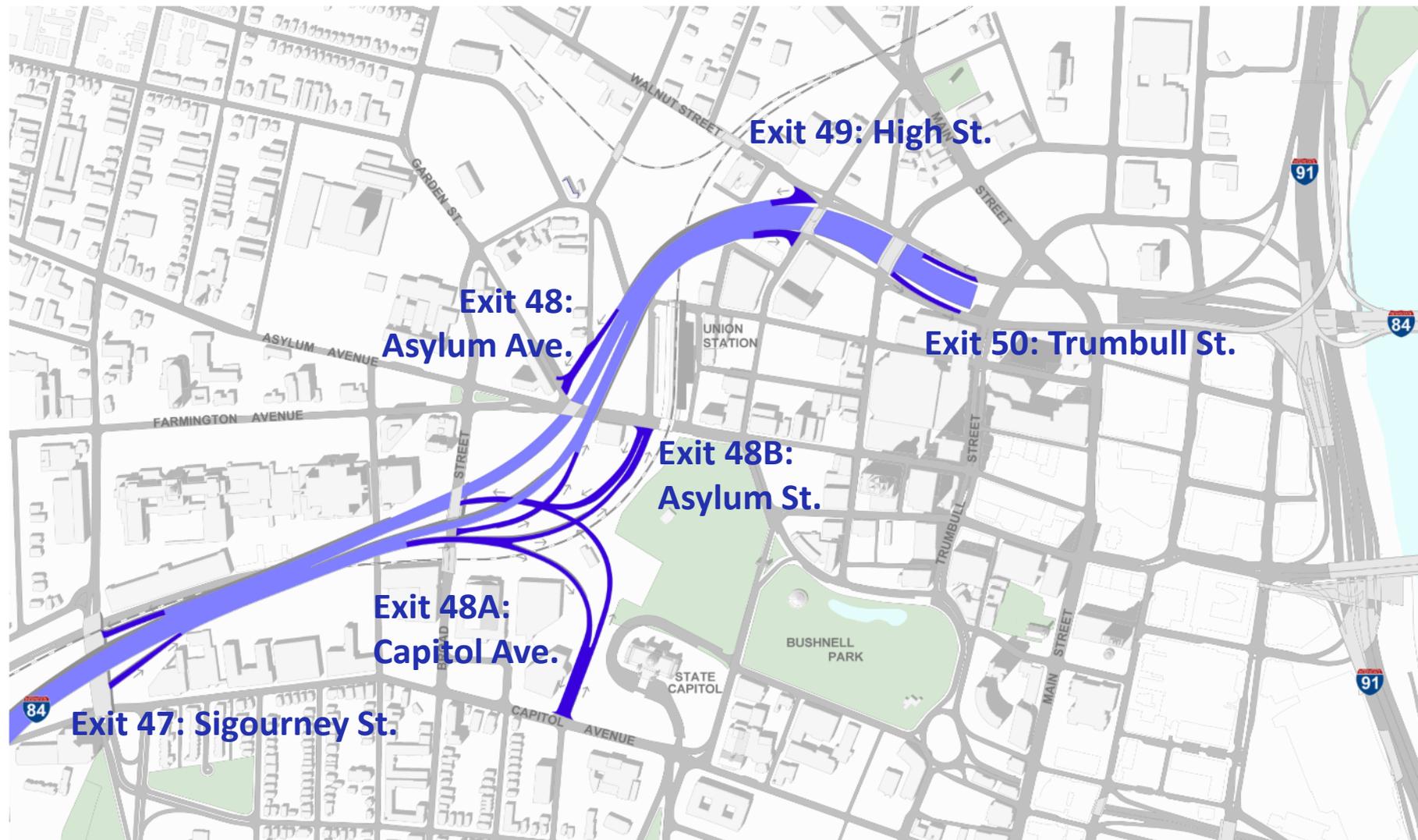


Existing Conditions (East)



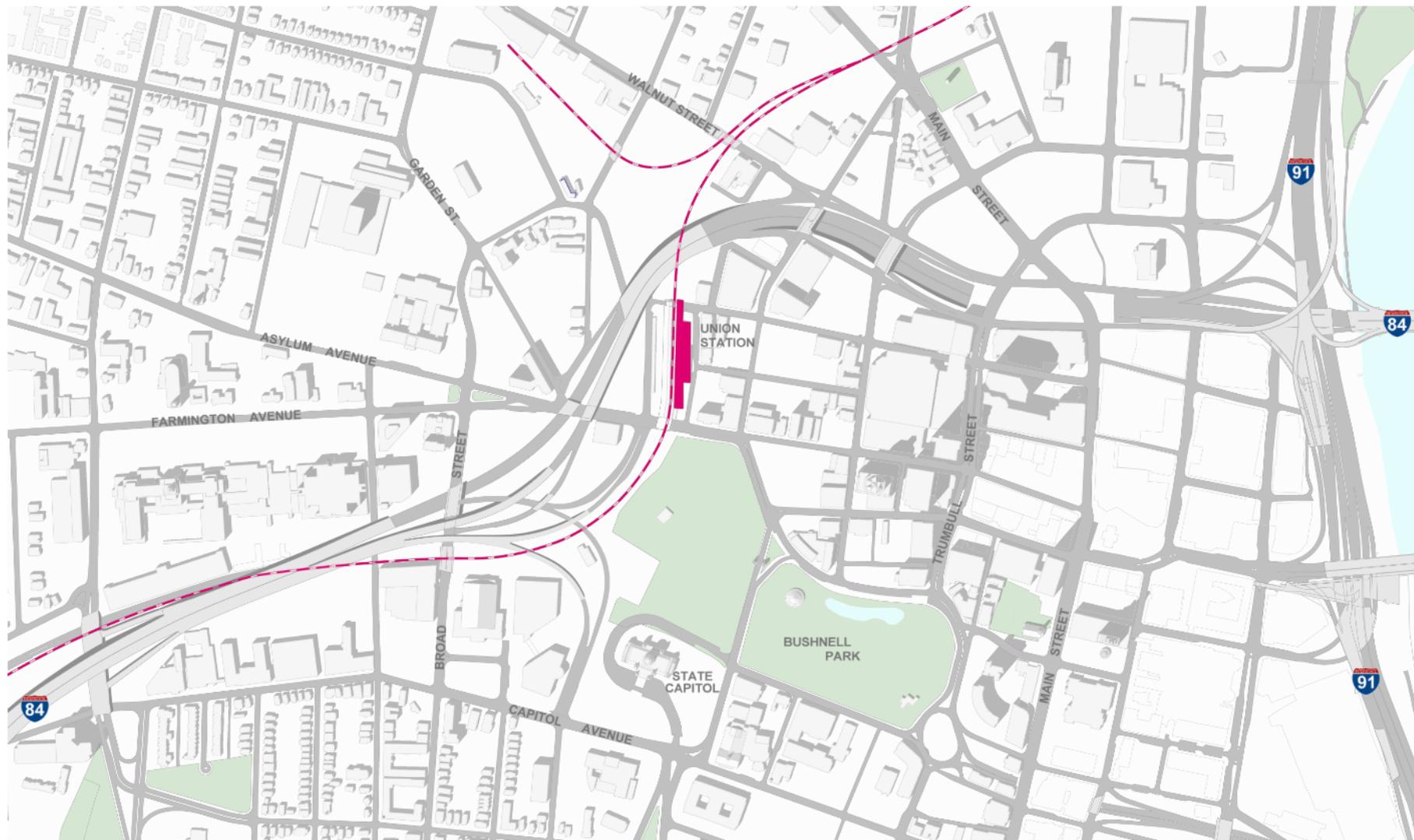


Existing Mainline and Ramps (East)



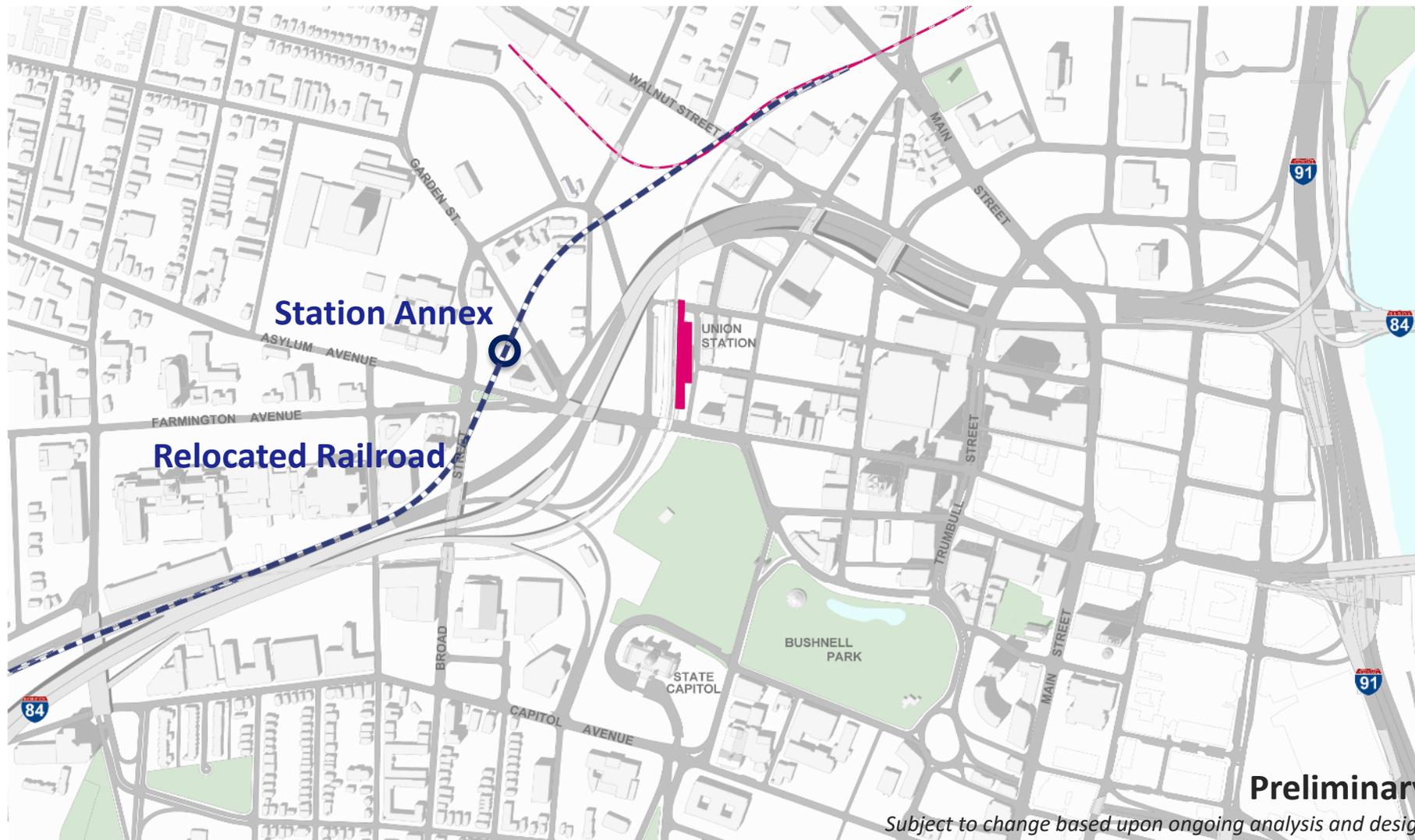


Existing Railroad (East)





Relocated Railroad and New Station Annex



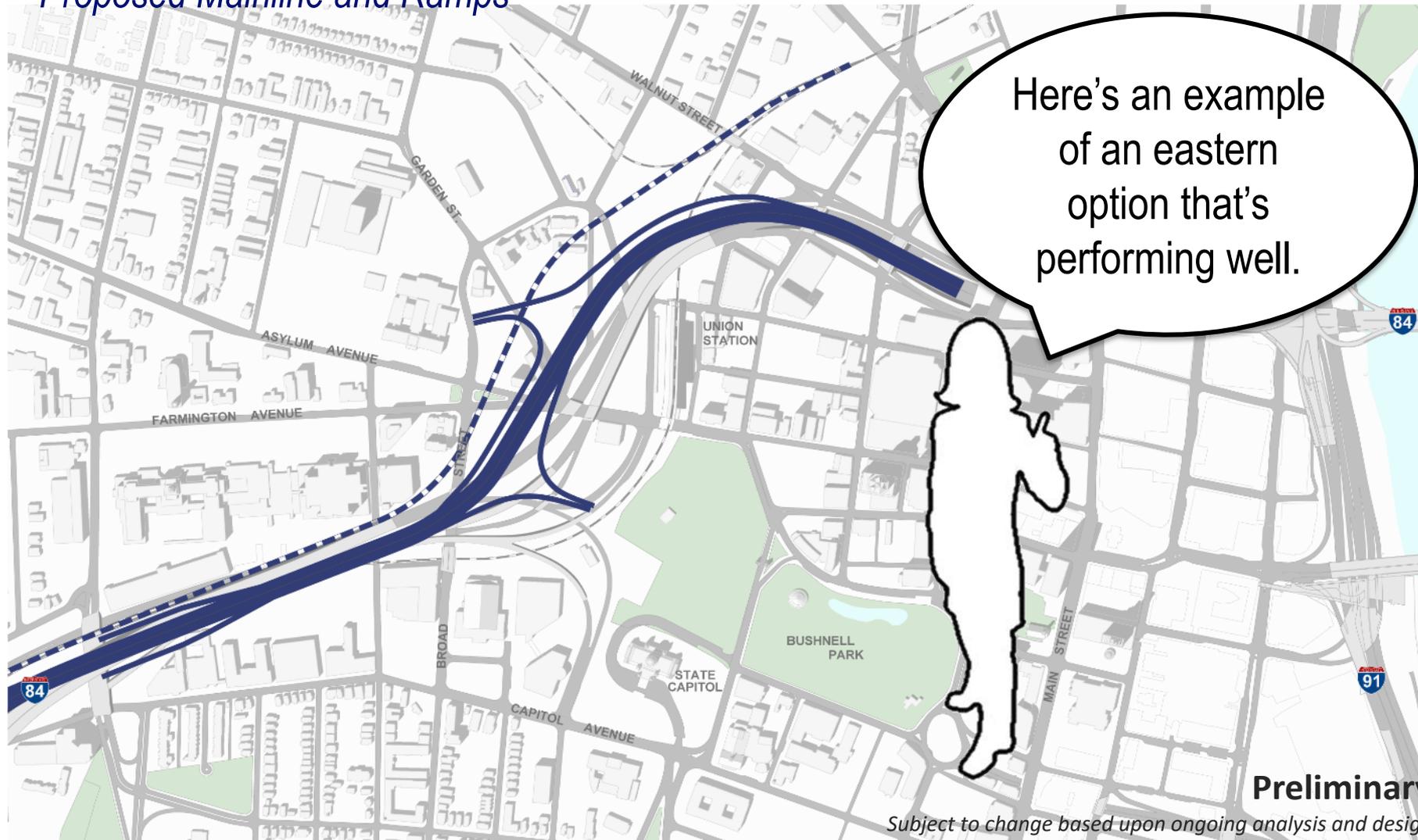
Preliminary

Subject to change based upon ongoing analysis and design



Option 3B: E2(S)

Proposed Mainline and Ramps



Here's an example of an eastern option that's performing well.

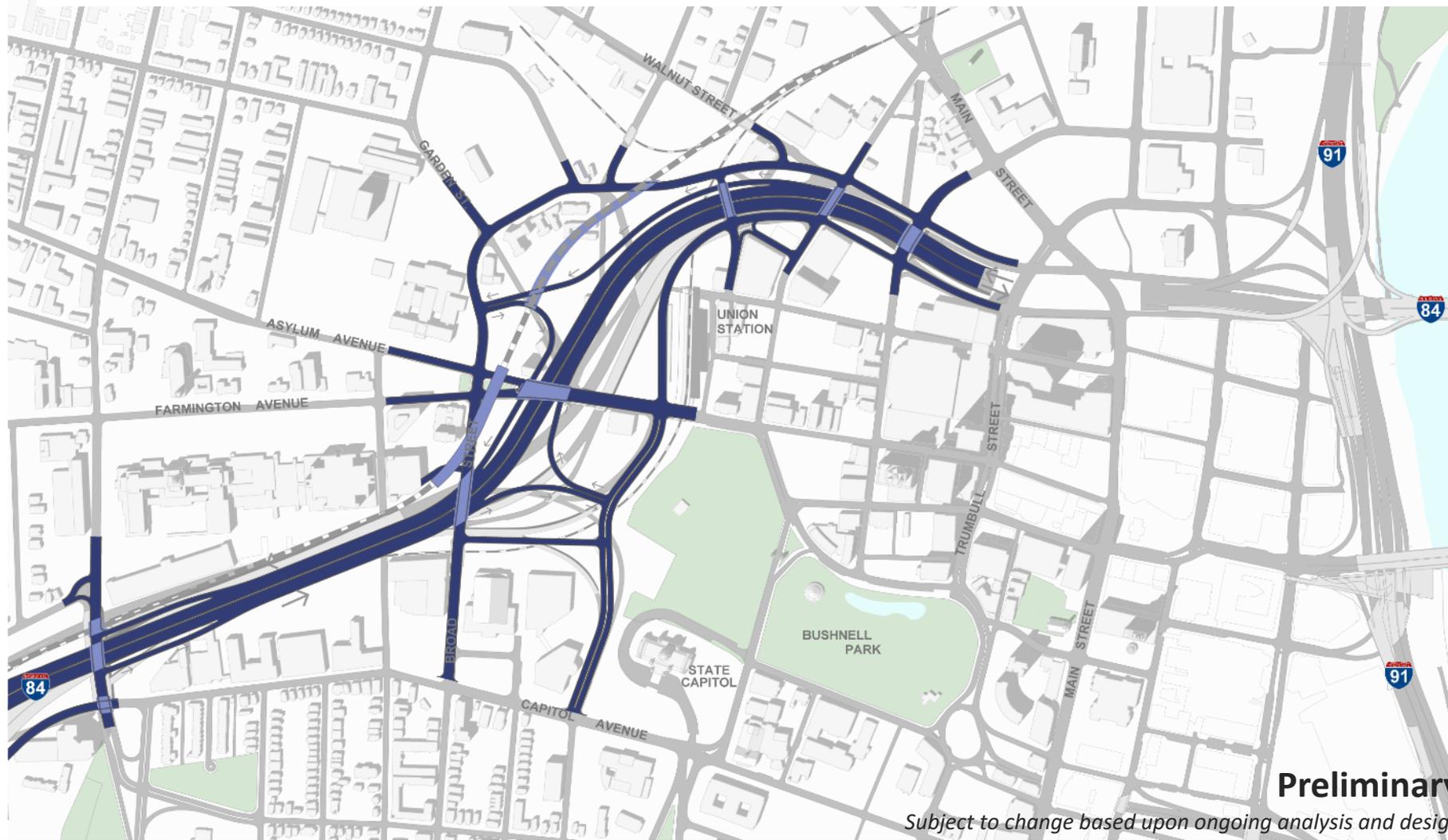
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Option 3B: E2(S)

Proposed Roadway Layout



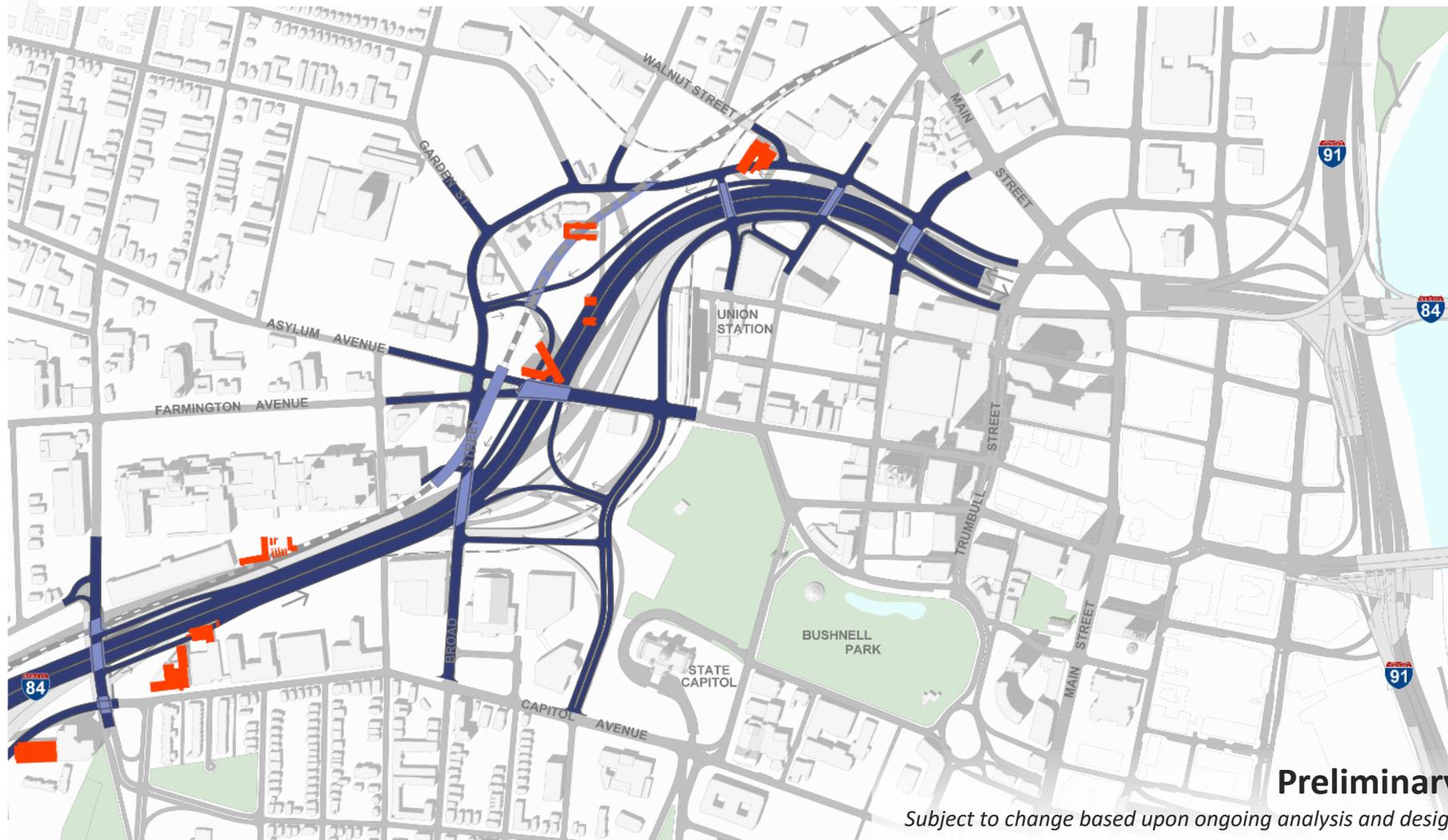
Preliminary

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Option 3B: E2(S)

Potentially Impacted Buildings



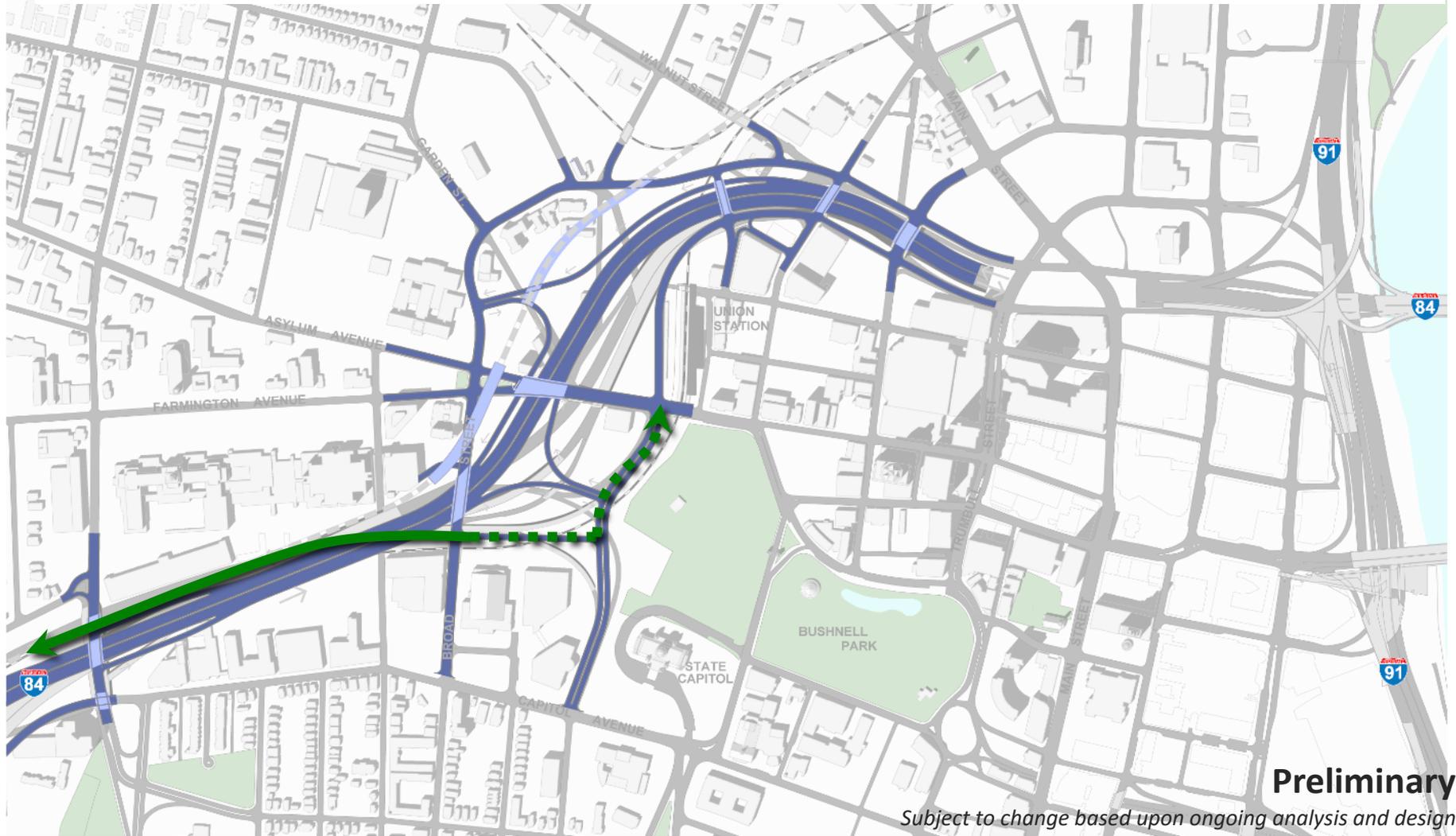
Preliminary

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Option 3B: E2(S)

Potential CTfastrak Realignment



Preliminary

Subject to change based upon ongoing analysis and design



Option 3B: E2(S)

Potentially Available Land (~15 acres)



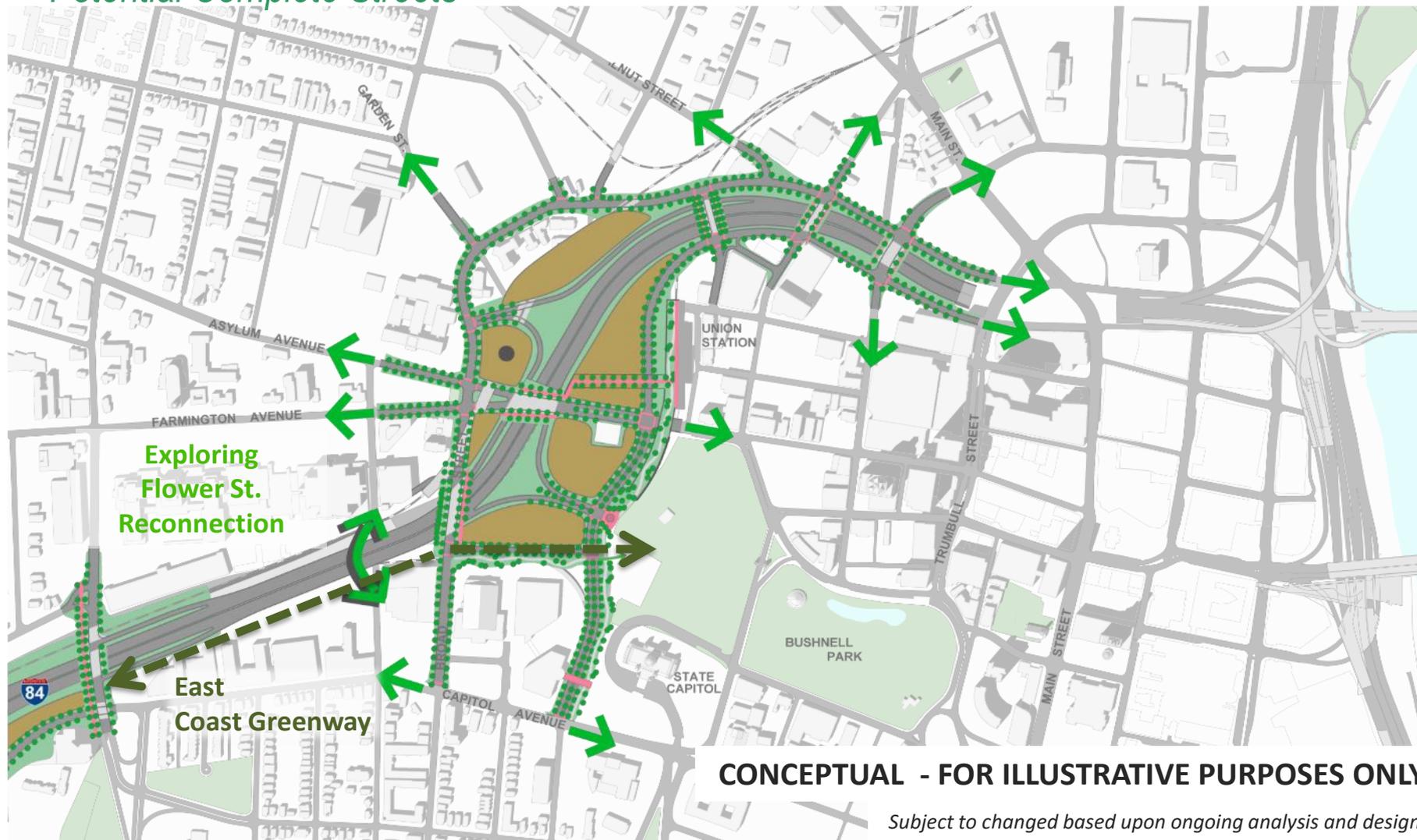
Preliminary

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Option 3B: E2(S)

Potential Complete Streets



Exploring
Flower St.
Reconnection

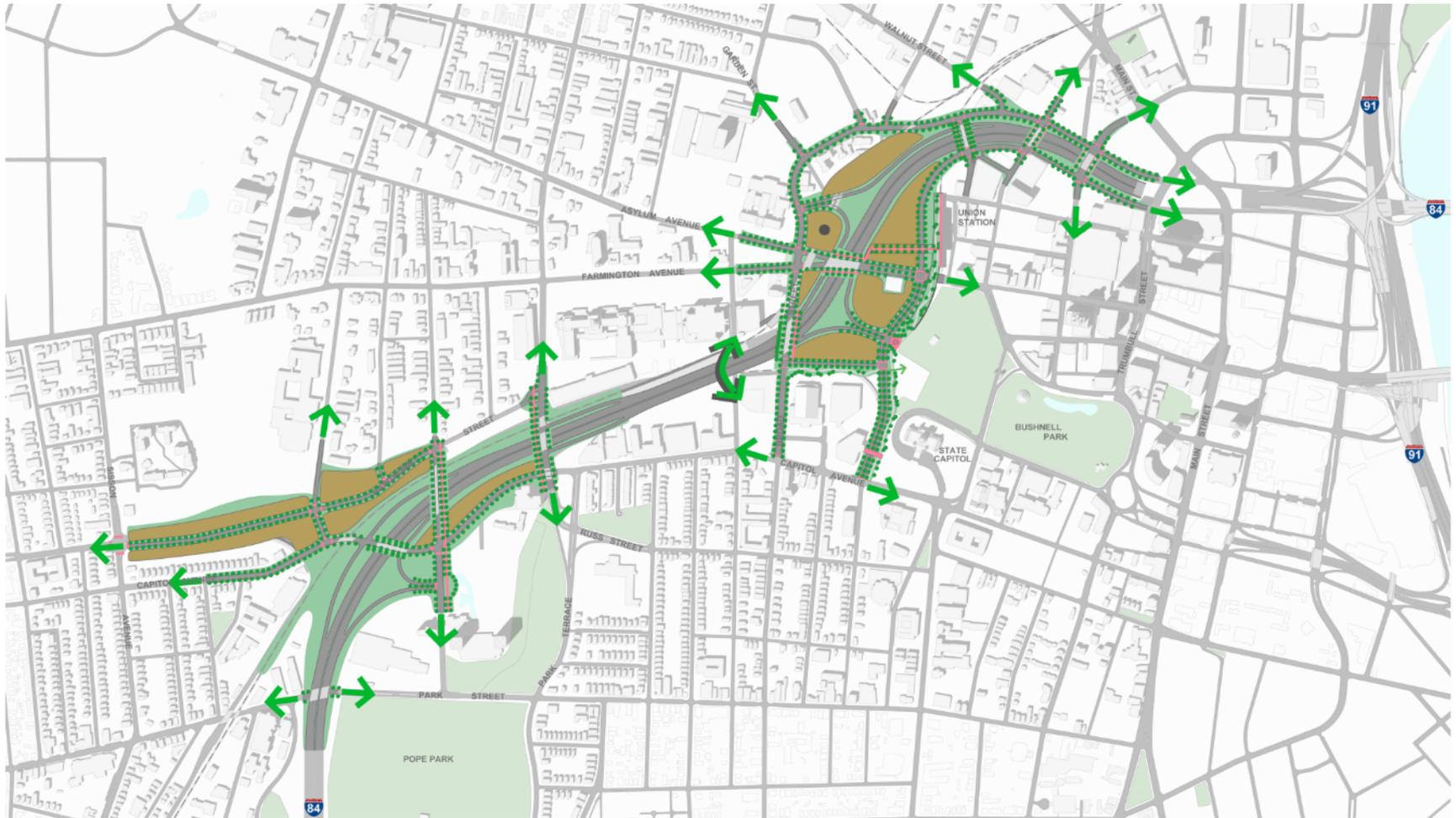
East
Coast Greenway

CONCEPTUAL - FOR ILLUSTRATIVE PURPOSES ONLY

Subject to changed based upon ongoing analysis and design.



Lowered Options W3-3 & 3B E2(S)



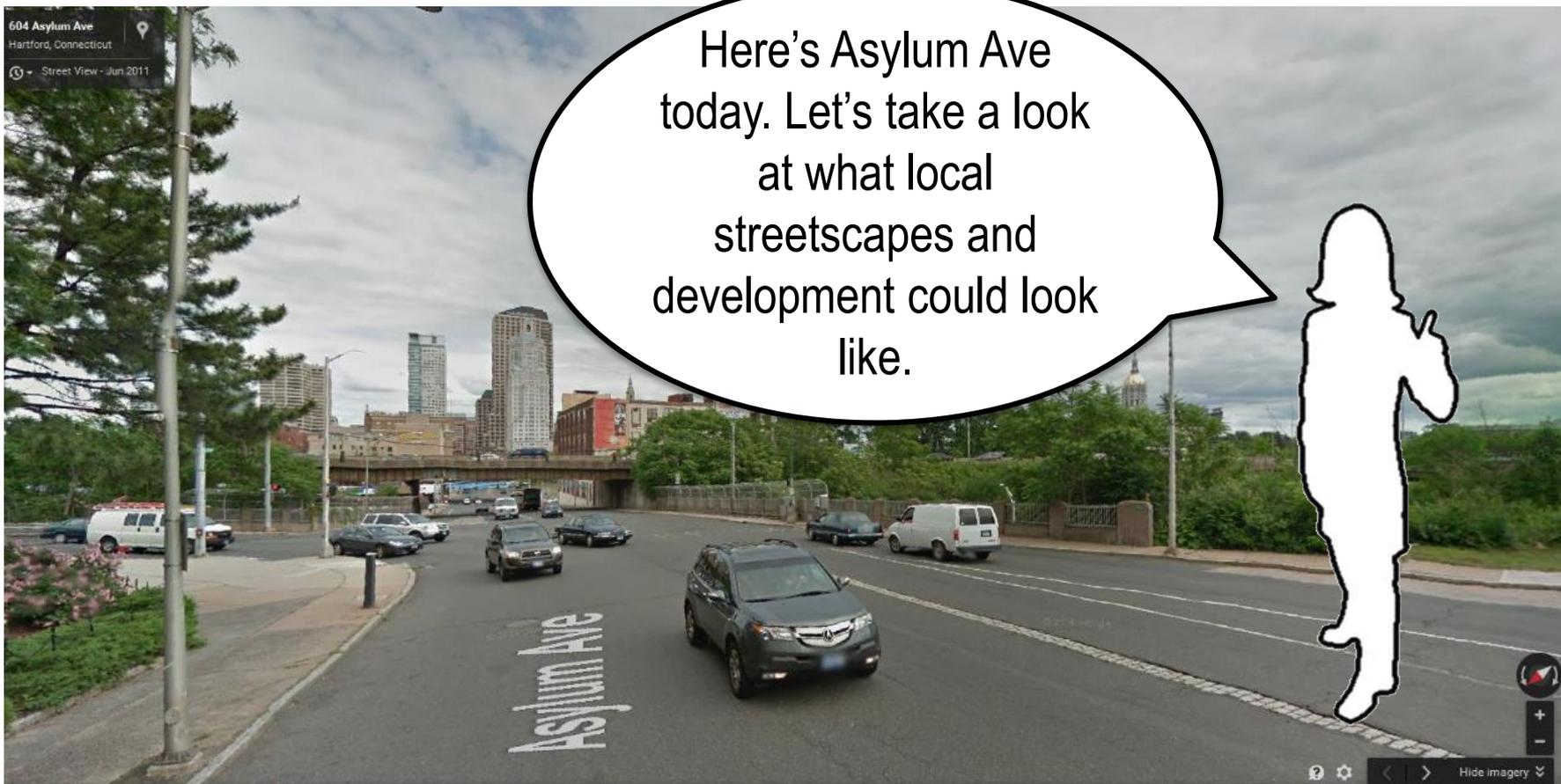
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Asylum Avenue

Existing View Looking East Toward Downtown





Asylum Avenue

Potential View Looking East Toward Downtown





Intermodal Opportunities

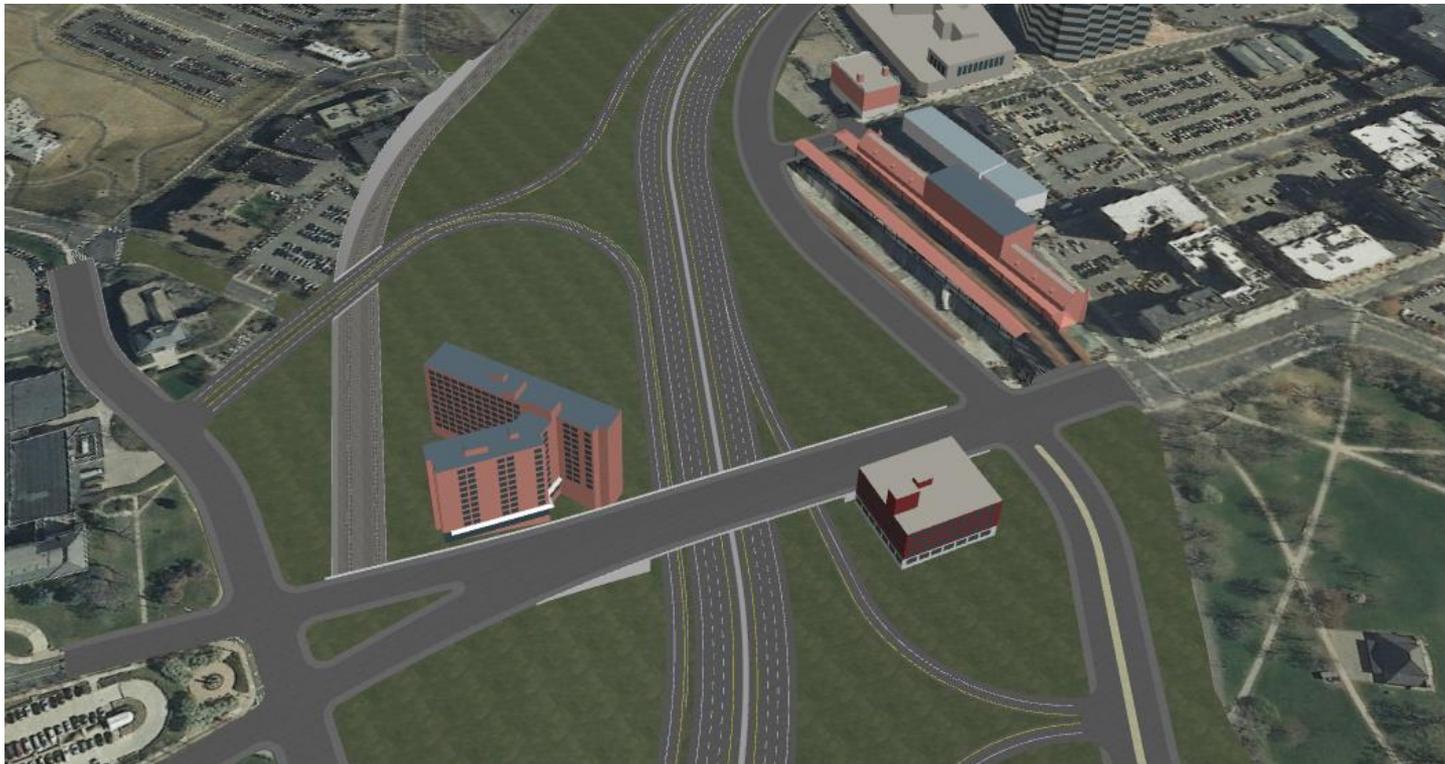


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Intermodal Opportunities

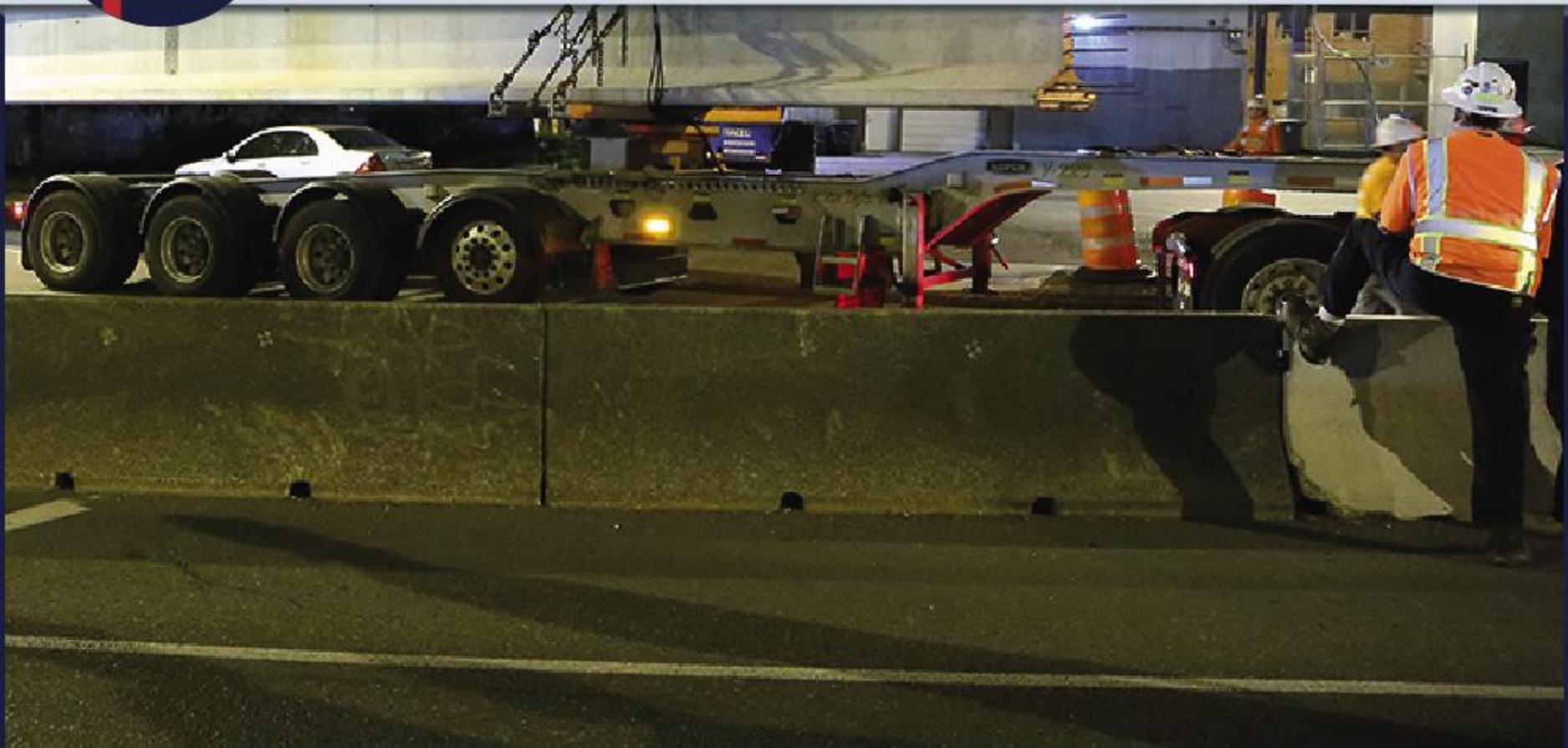


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Construction Considerations



Construction Considerations

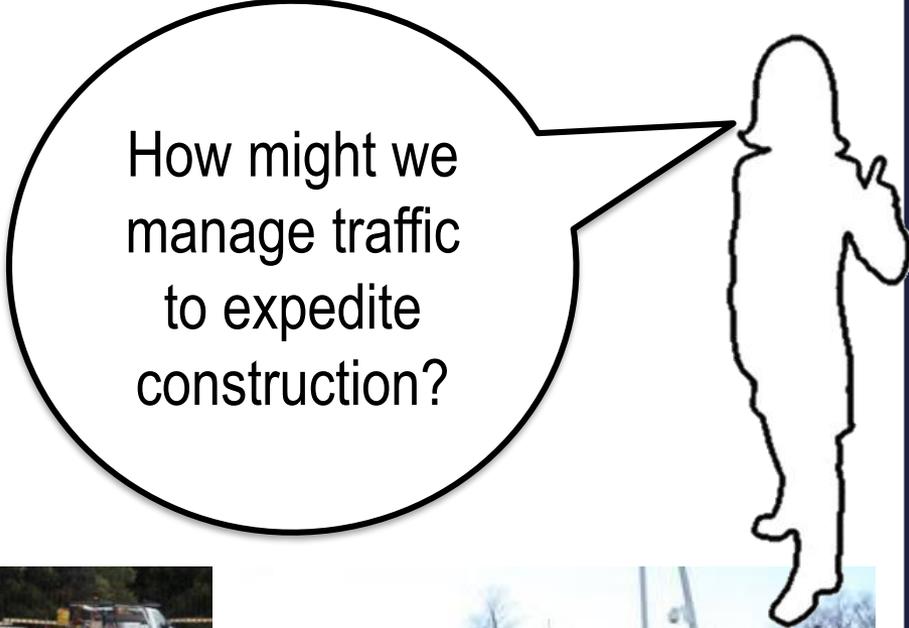
- Impact upon stakeholders
- Maintaining traffic affects type of construction
- Conventional vs. accelerated techniques
- Section or lane closures

Conventional construction methods maintain traffic but typically take a long time.



Reducing Traffic During Construction

- Promote transit options
- Free/reduced fares?
- Carpooling / rideshare
- Other (e.g. bicycling)

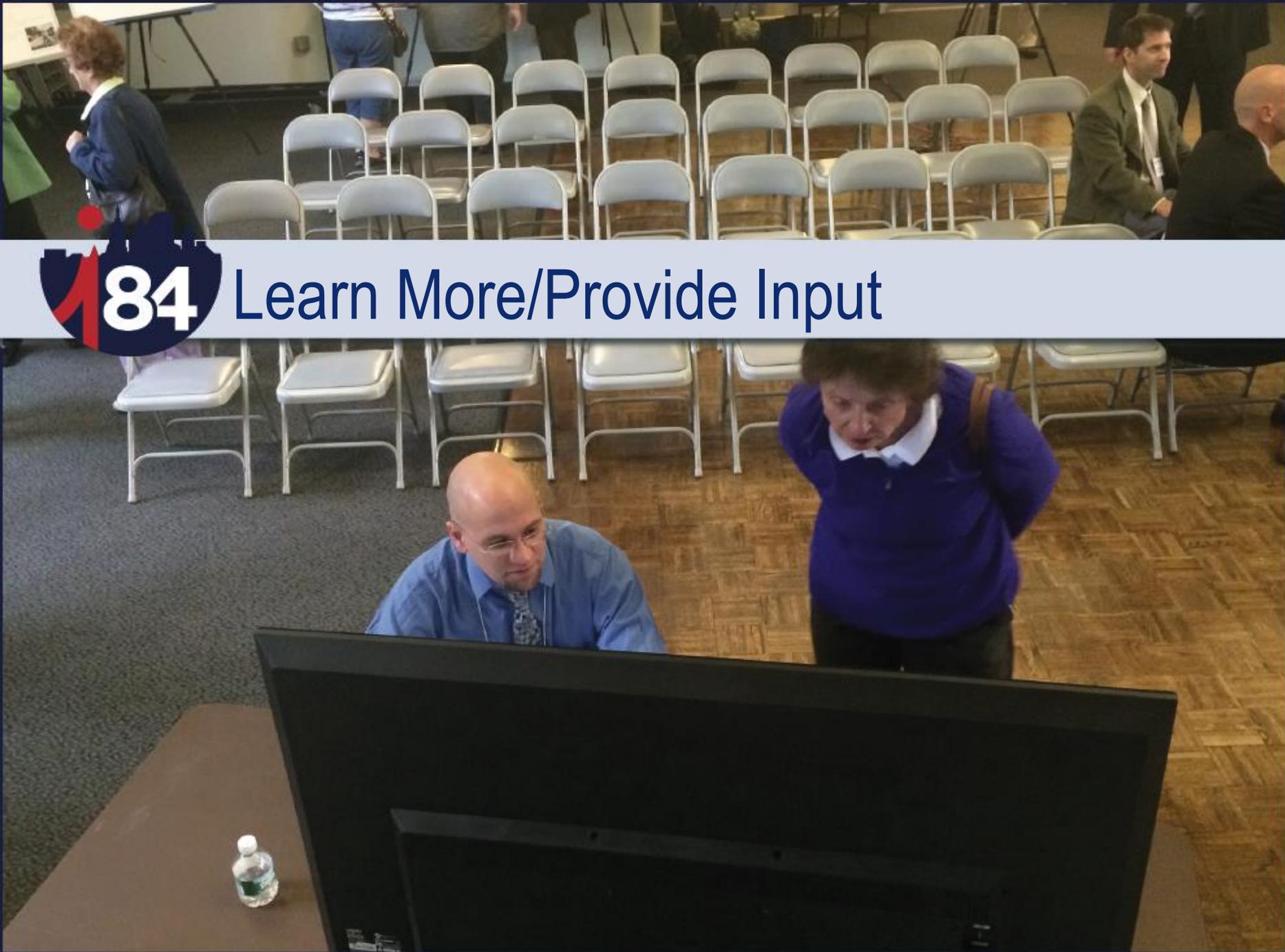


How might we manage traffic to expedite construction?





Learn More/Provide Input





Visit our Interactive Alternatives Webpage

- View and assess the alternatives
- Provide feedback, ask questions
- i84hartford.com

We continue to test how well each alternative performs from a mobility perspective.

The screenshot displays the 'Interactive Alternatives Analysis' webpage. It features a grid of map thumbnails for different alternatives: 'Alternative 2/3 W2', 'Alternative 2/3 W3-1', and 'Alternative 2/3 W4'. A central map shows a highway alignment with options for 'Elevated', 'Lowered', and 'Tunnel'. Below the maps, a 3D cross-section diagram illustrates the highway's profile over various conduits: 'North Branch of Park River Conduit', 'Park River Conduit', and 'Gully Brook Conduit'. A navigation menu on the right includes: 'OPEN PLANNING STUDIOS' (View materials from our August 12th event.), 'INTERACTIVE ALTERNATIVES ANALYSIS', 'HARTFORD TIMELINE' (Read a brief history of transportation in Hartford.), 'RELATED PROJECTS' (View map and descriptions of other projects related to I-84.), and '3D INTERACTIVE MODEL' (Explore the project area.).

**Interactive Alternatives Analysis:
Evaluating the Alternatives**





Public Input Is Crucial!

With your help, we would like to narrow down the number of options for further consideration



Submit a comment at this meeting, or at i84hartford.com!





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Thank you for joining me! Feel free to ask the meeting staff questions, or visit the website for more info!

