



# I-84 HARTFORD PROJECT

## Open Planning Studio #5 Presentation

November 16, 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?

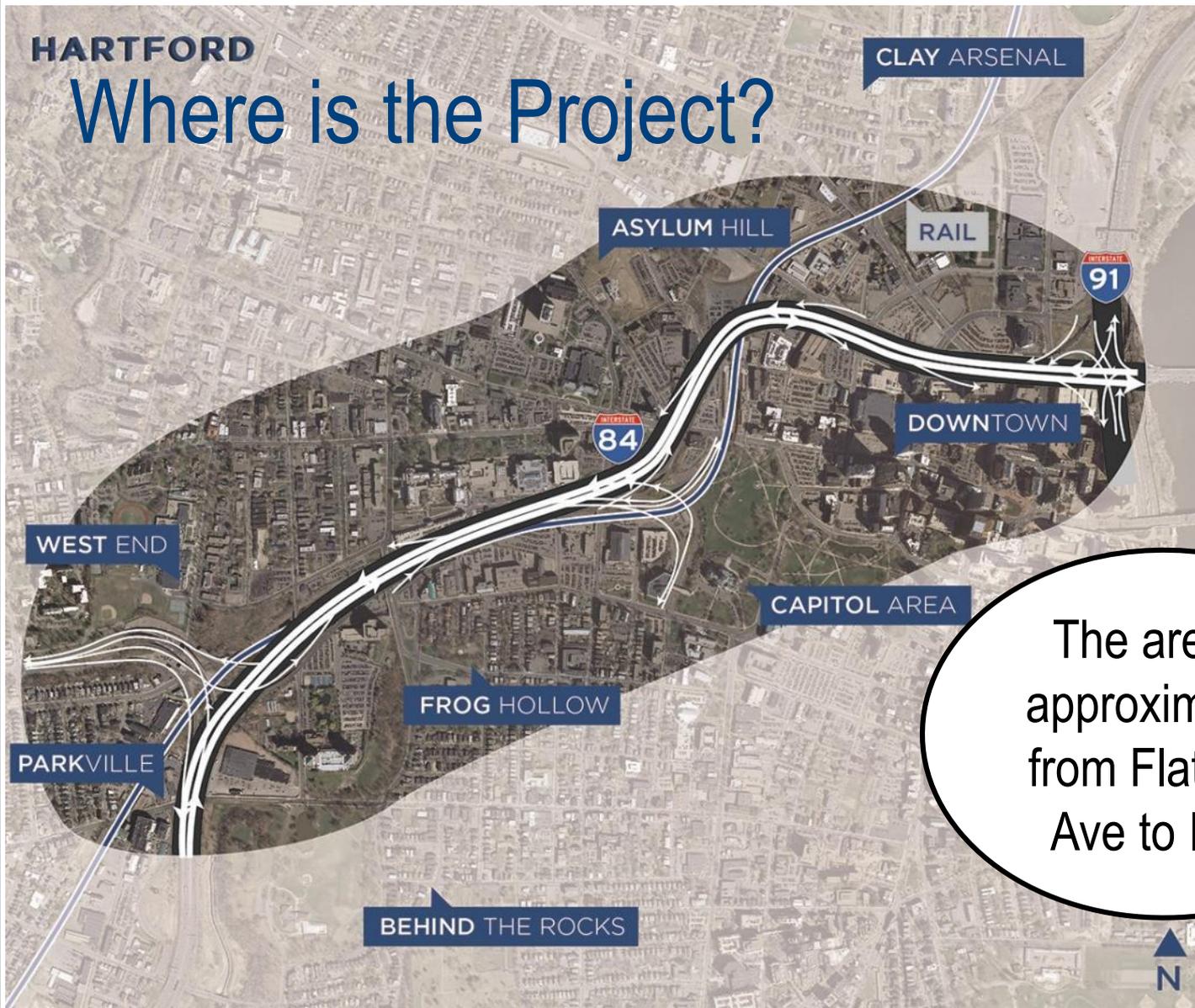
At Open Planning Studios, you can learn about the latest developments on the I-84 Hartford Project.





## 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)



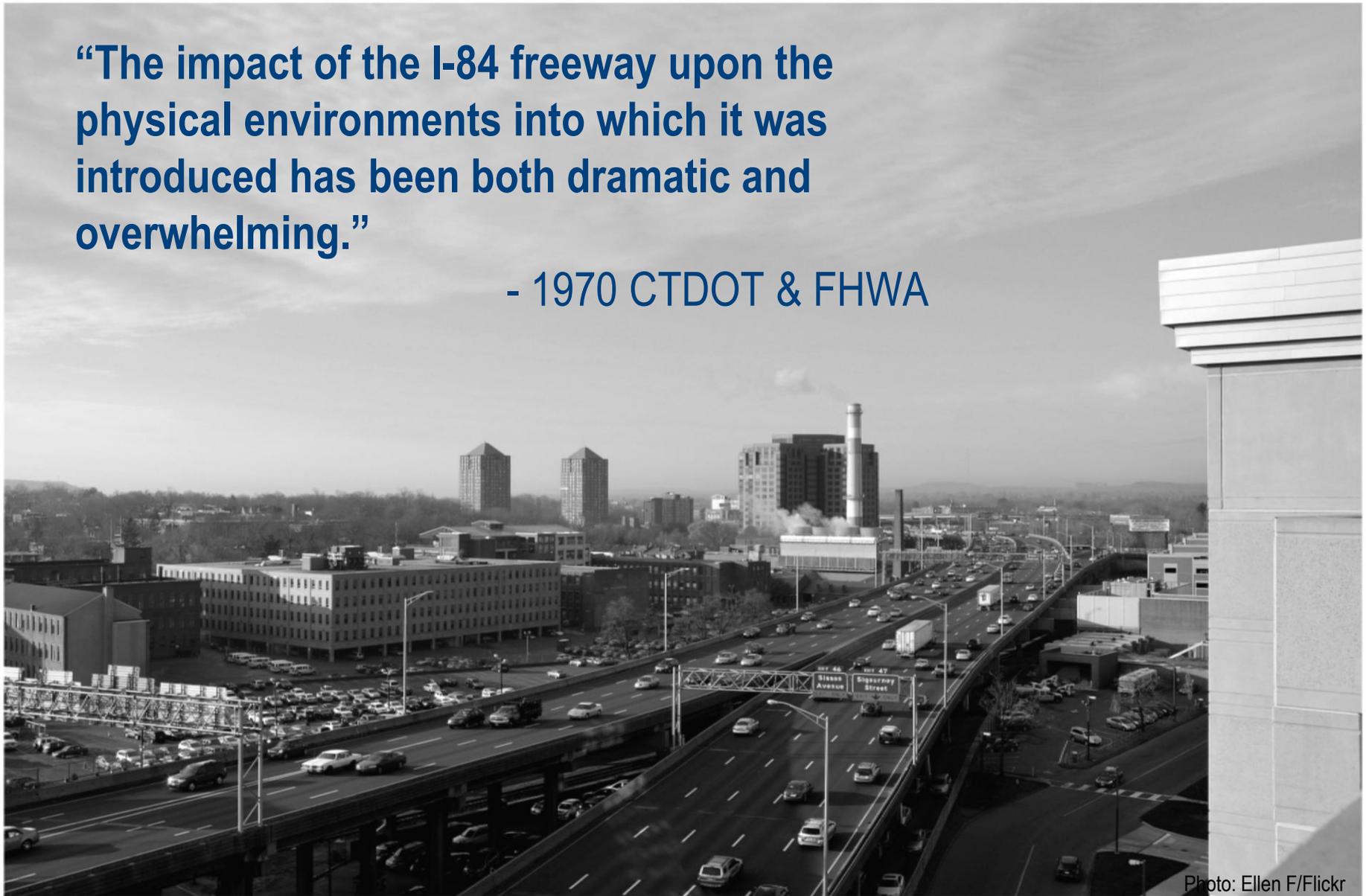
These aerials show I-84's footprint and profound shift in development patterns after it was built.





**“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

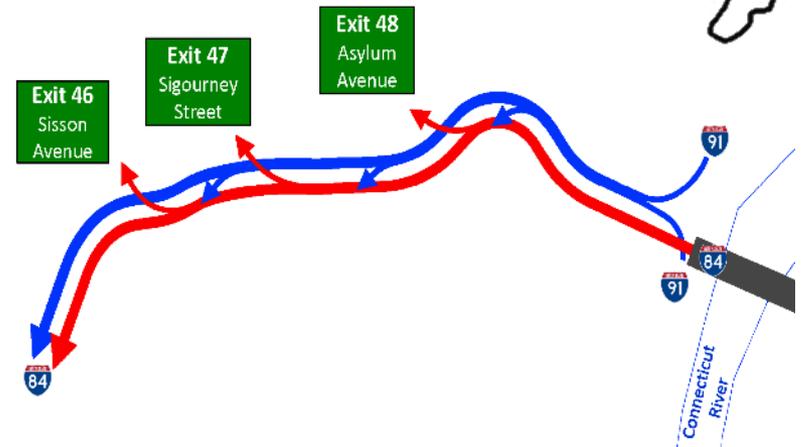
There are three major reasons why we're doing this project. The first is bridge deficiencies.



# 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

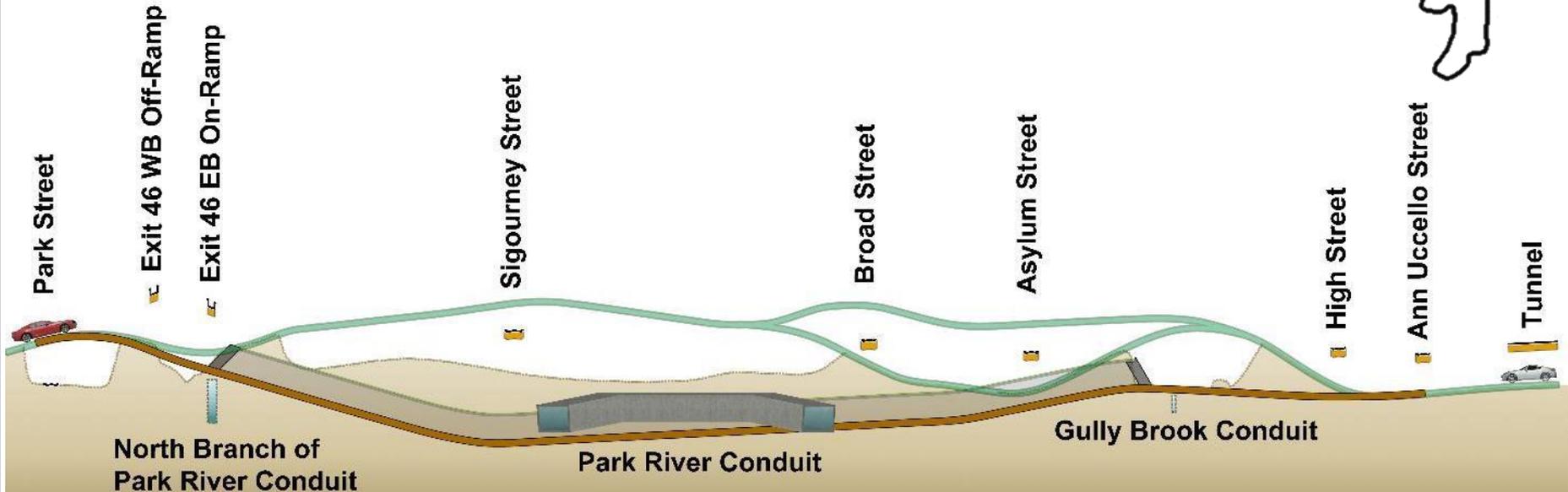


Here's what we think about the alternatives developed to date.

# 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.

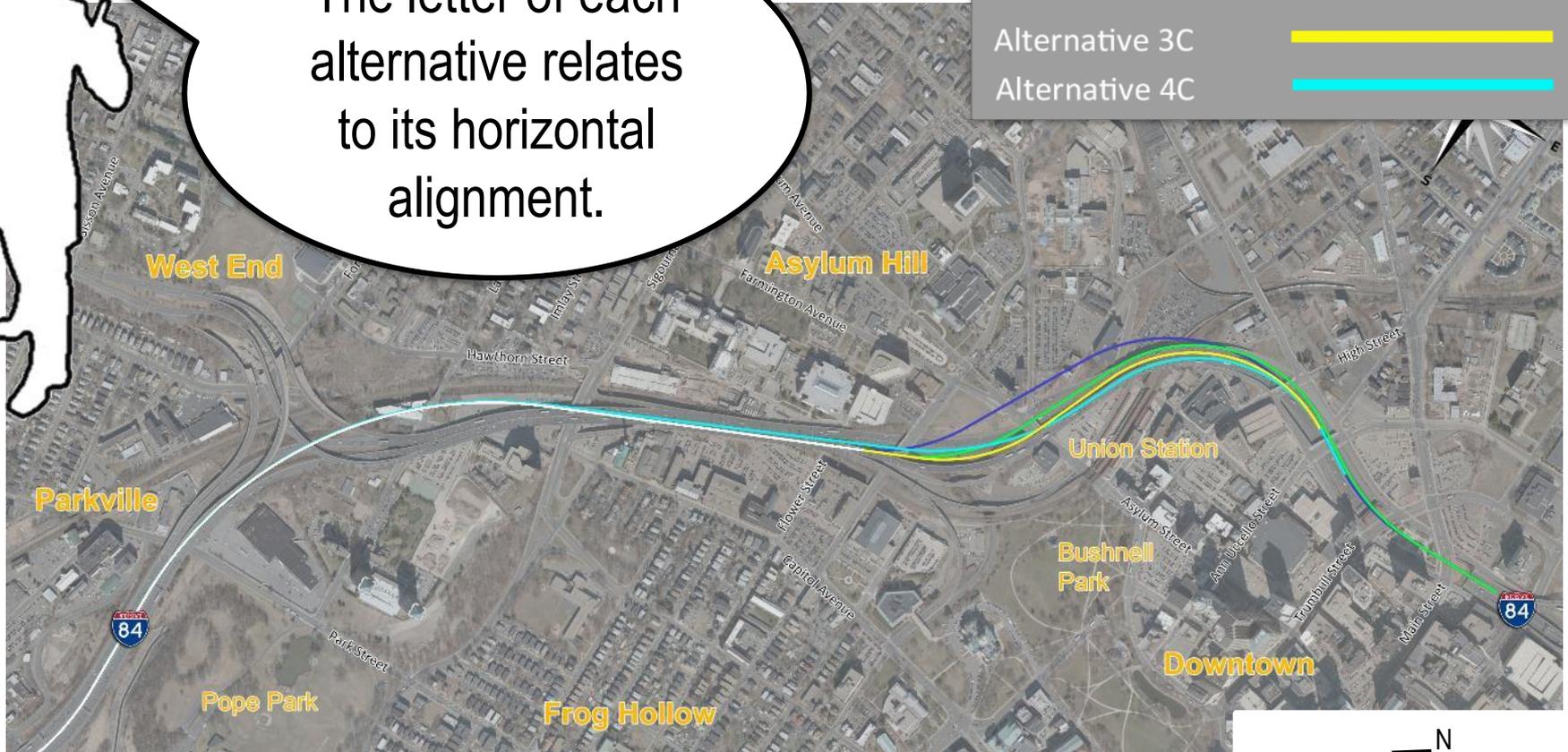


# Mainline Alternatives

The letter of each alternative relates to its horizontal alignment.

## Legend

- Alternatives 2A/3A 
- Alternative 3B 
- Alternative 3C 
- Alternative 4C 



# Various Ramp Options

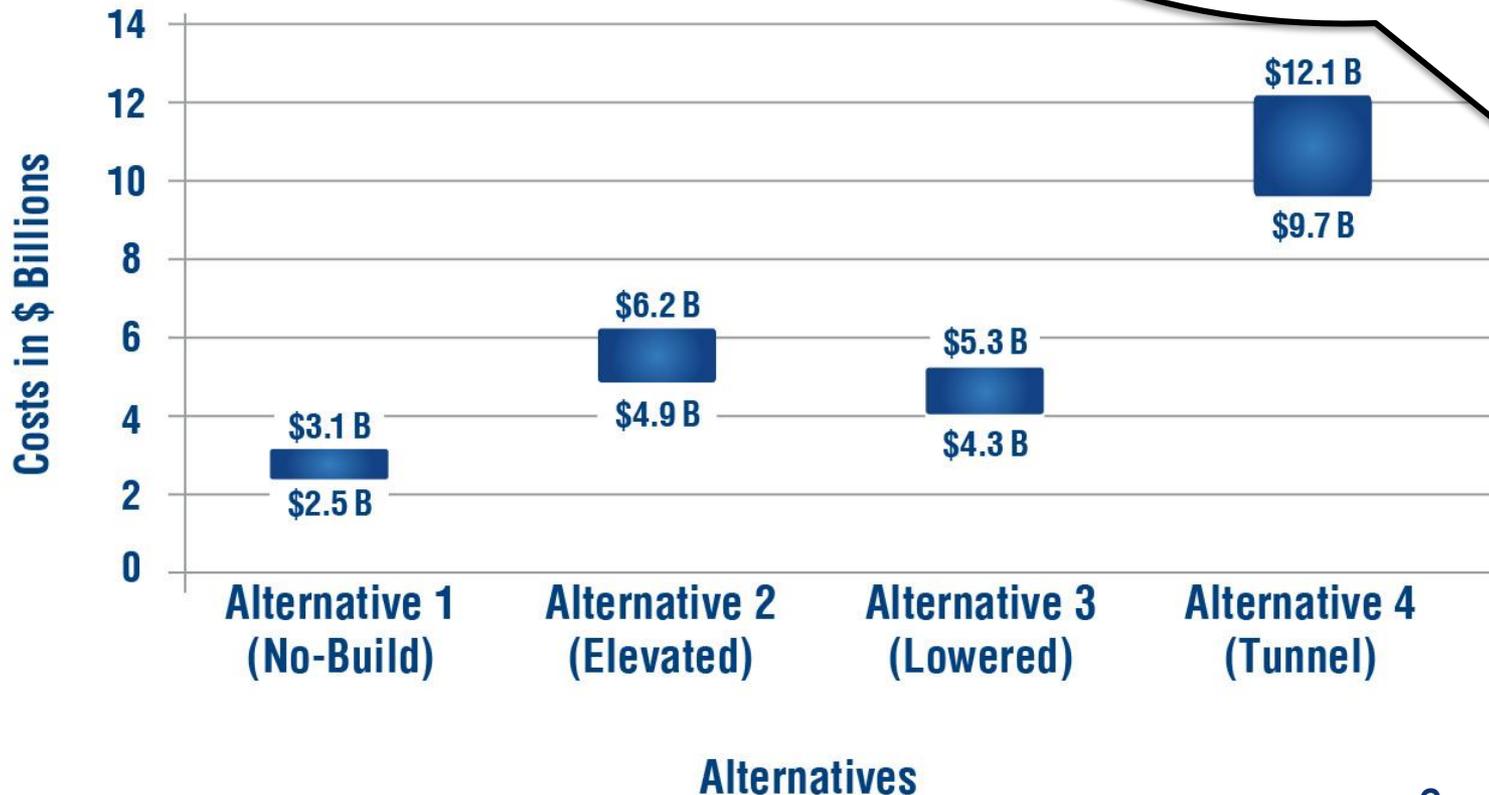
The alternatives are further defined by interchange options to the east and west of Sigourney Street.





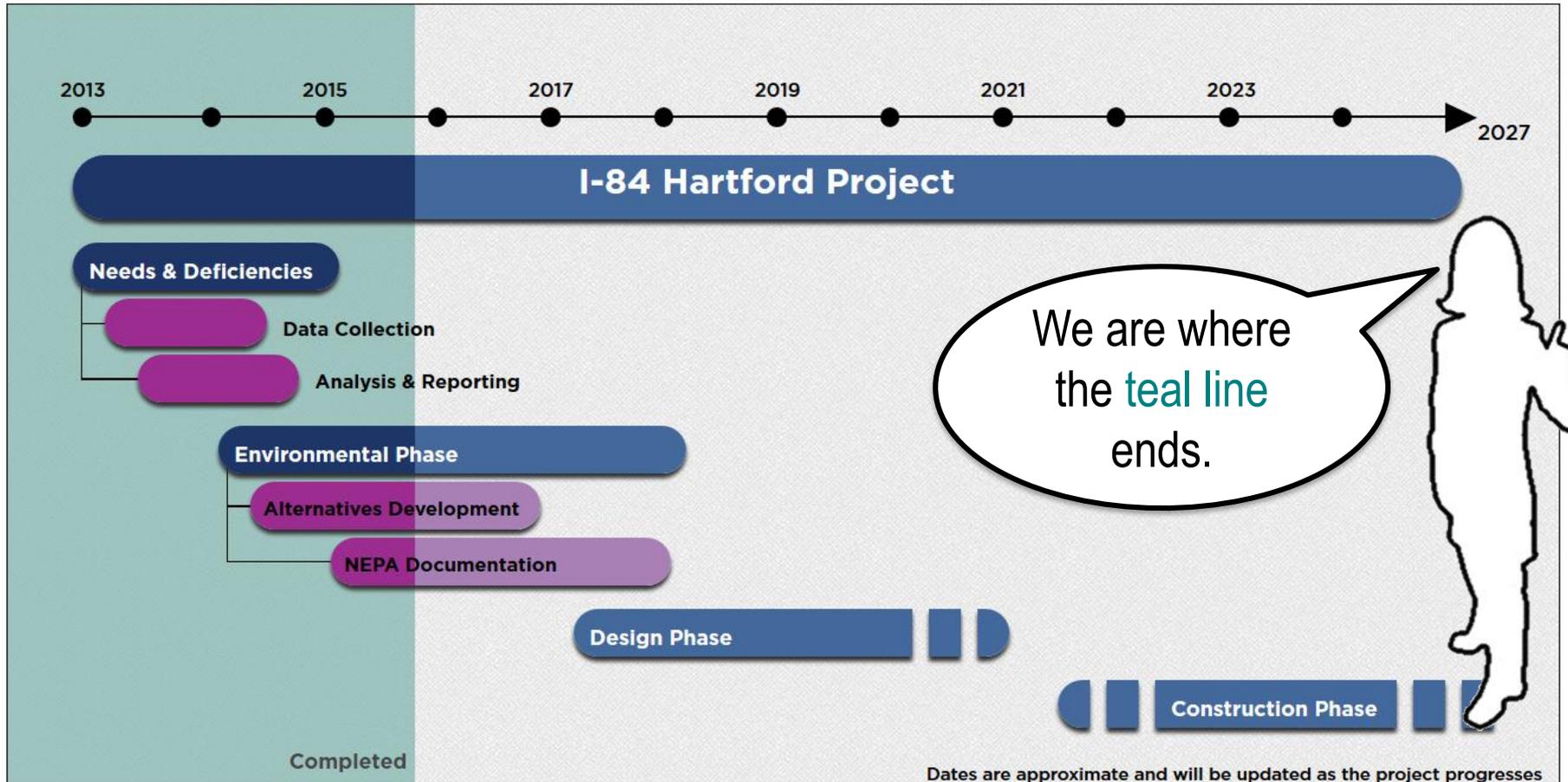
# Cost Estimates

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





# Project Schedule



# 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

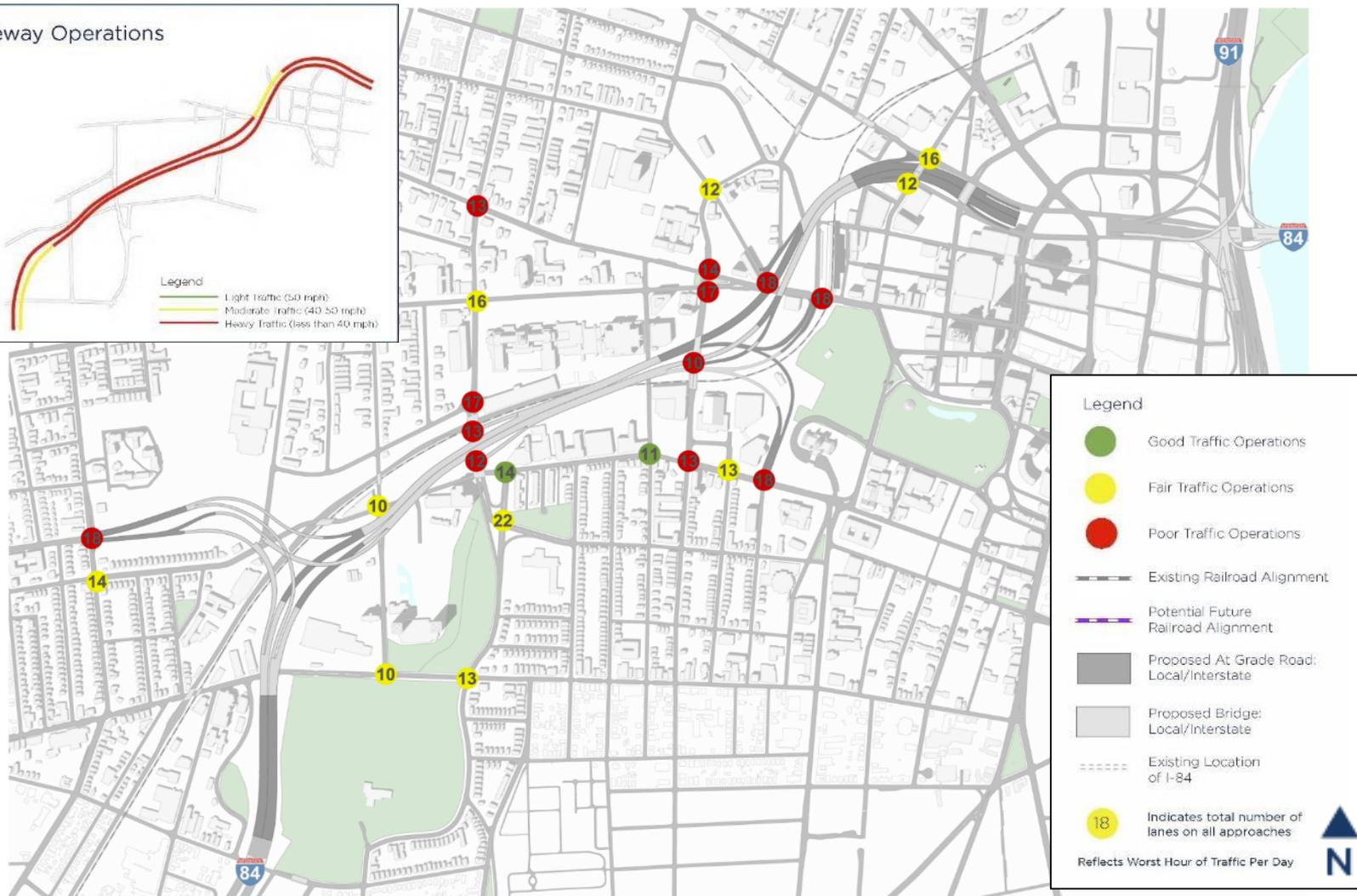
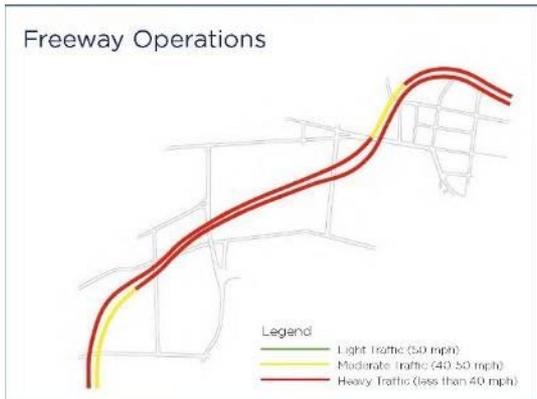
- Good Traffic Operations
- Fair Traffic Operations
- Poor Traffic Operations
- Existing Railroad Alignment
- Potential Future Railroad Alignment
- Proposed At Grade Road: Local/Interstate
- Proposed Bridge: Local/Interstate
- Existing Location of I-84
- 18 Indicates total number of lanes on all approaches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





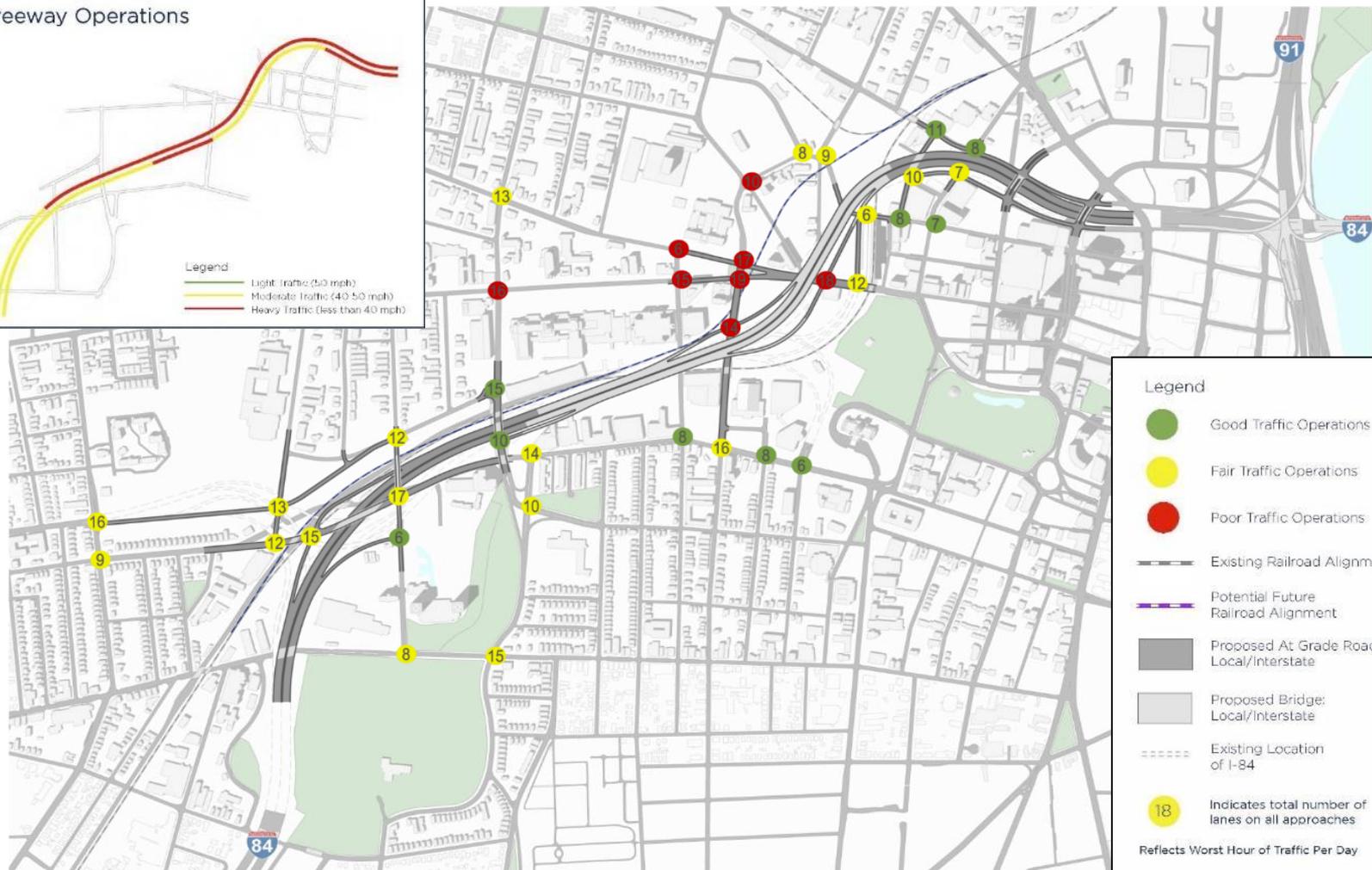
## Existing Conditions





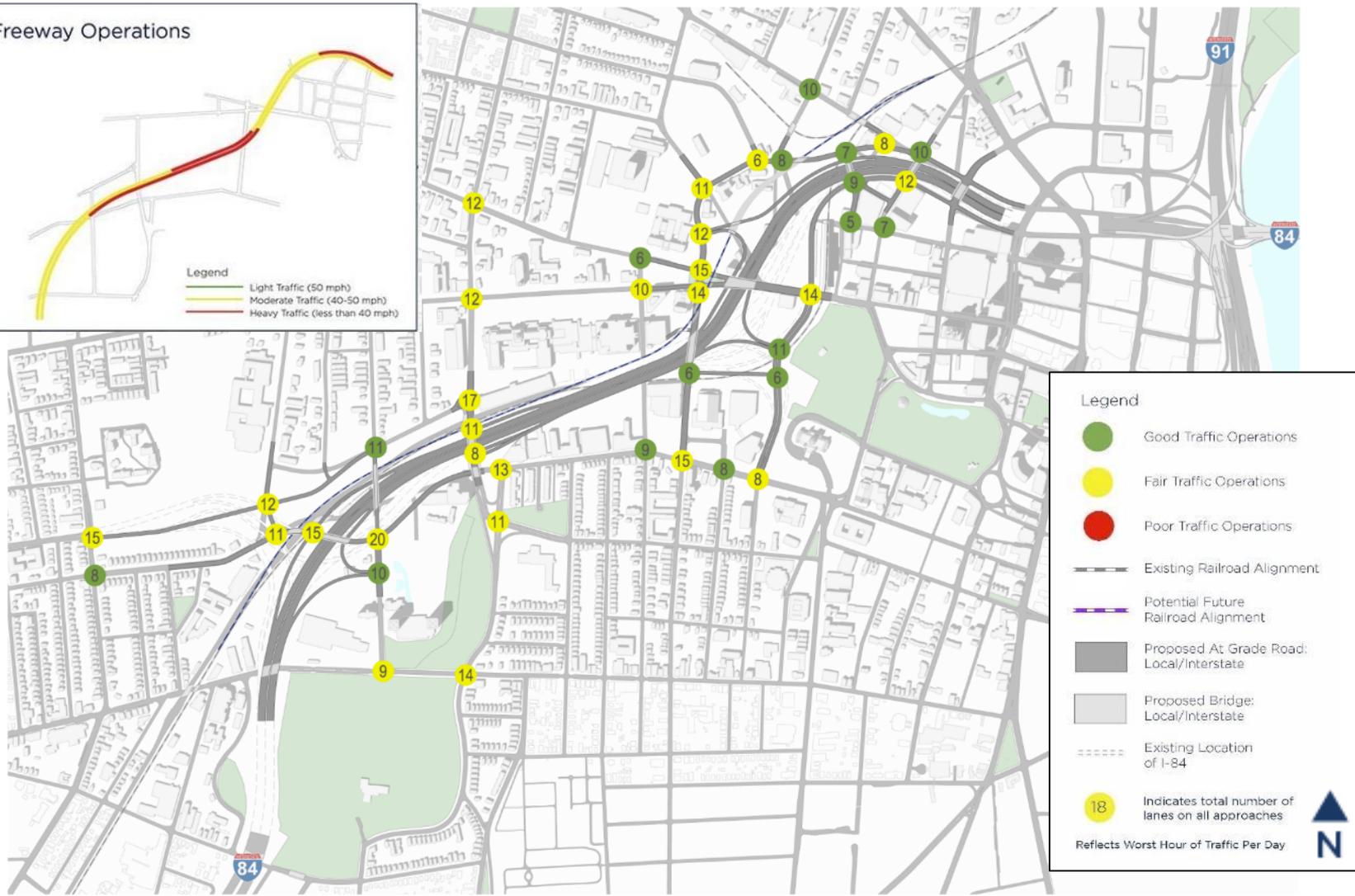
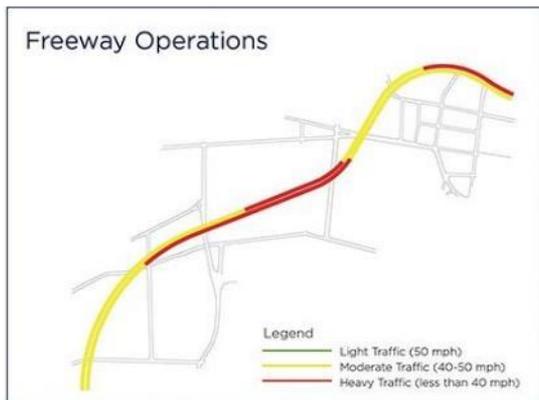
## Elevated Highway

Freeway Operations



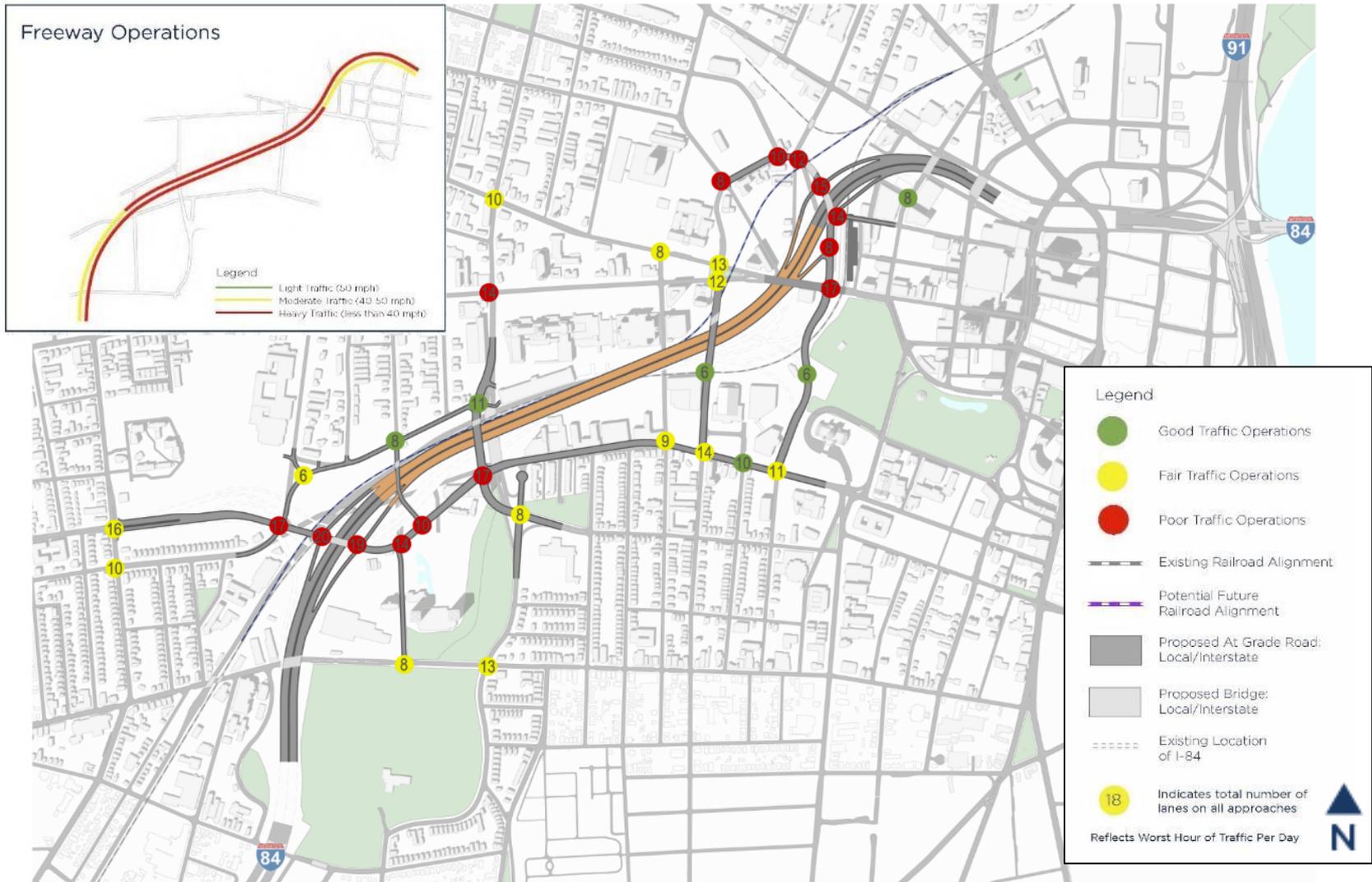


## Lowered Highway





## Tunnel



# Mainline Analysis Tells Us:

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



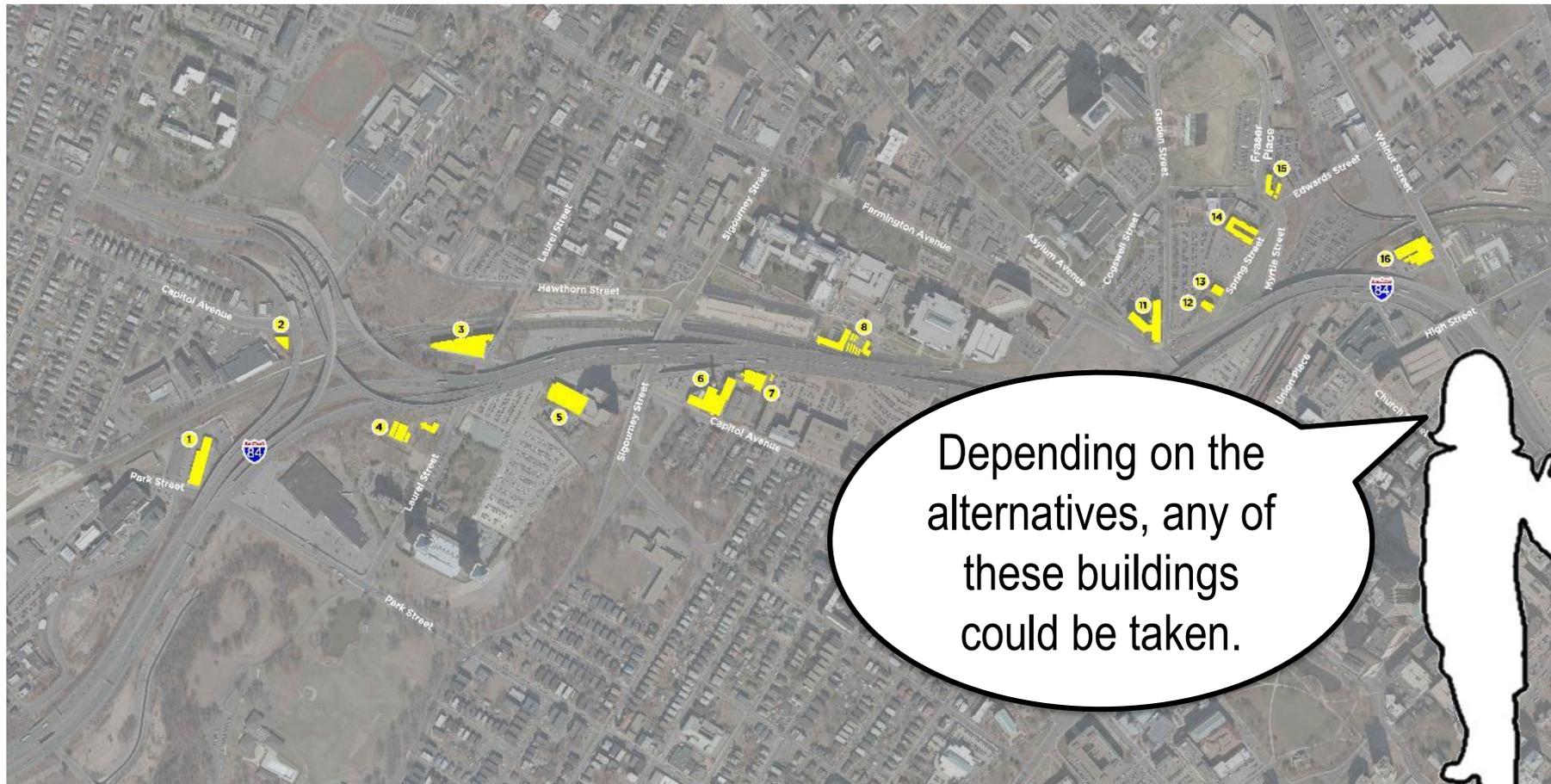
# Intersection Analysis Tells Us:

- 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)

The map displays the I-84 interchange area in Hartford, Connecticut, with streets including Capitol Avenue, Park Street, Laurel Street, Hawthorn Street, and Sigourney Street. Five potential building impact areas are highlighted in yellow and numbered 1 through 5. Three inset photographs provide visual context for these areas: inset 1 shows a large brick building at the intersection of Park Street and I-84; inset 2 shows a brick building at the intersection of Capitol Avenue and I-84; inset 3 shows a long brick building along Hawthorn Street. A stick figure on the right side of the map has a speech bubble that reads: "Again, it depends on the alternative."



# Potential Building Impacts (East)



## 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 2/3											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	
<b>Purpose &amp; Need</b>																														
Bridge Structure Deficiencies																														
Mainline Traffic Performance																														
Safety Considerations																														
Local Road Traffic Performance																														
Bike/Ped Accommodations																														
<b>Goals &amp; Objectives</b>																														
Rail Accommodations																														
Multi-Modal Connectivity																														
Cost Effectiveness																														
Neighborhood Connections																														
Viewsheds																														
Opportunities for Land Development																														
<b>Other Considerations</b>																														
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	E3(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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- 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



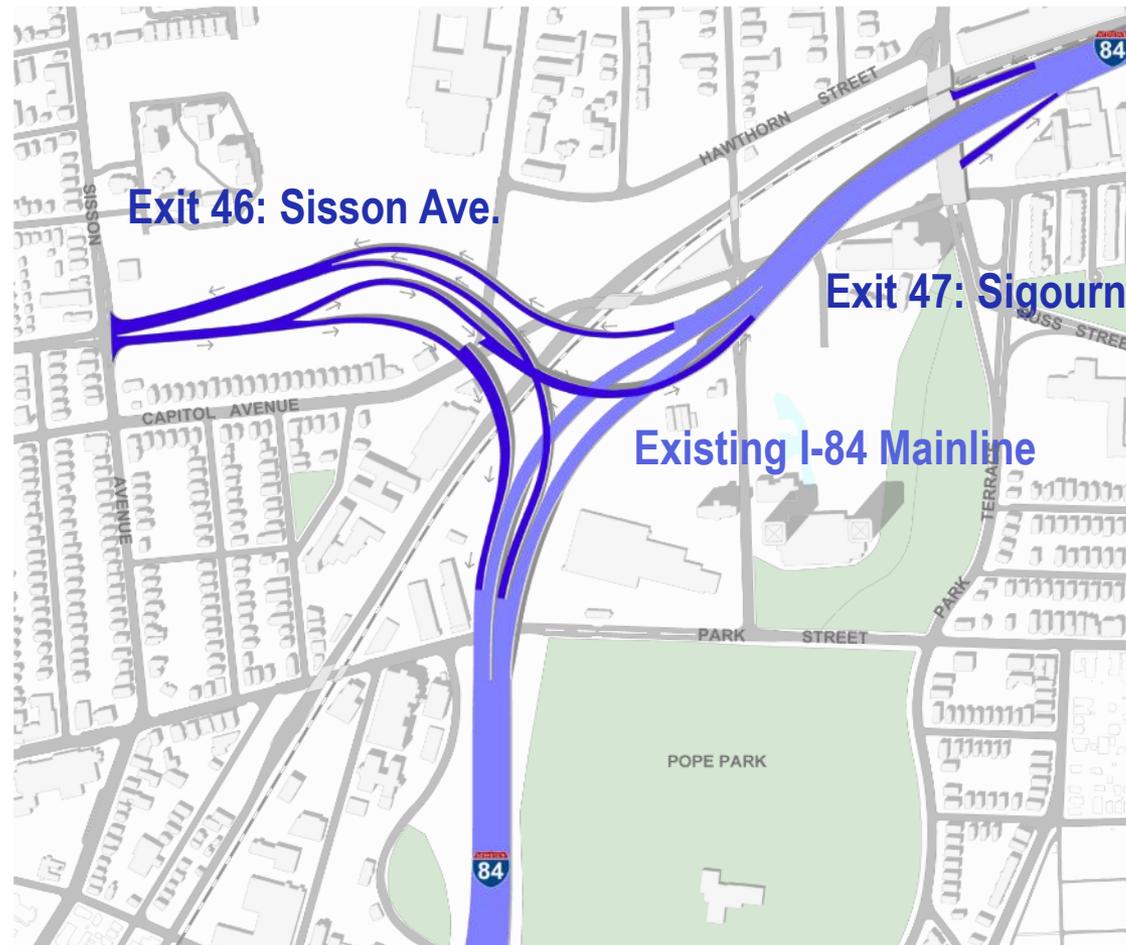


# Existing Conditions (West)





# Existing Mainline and Ramps (West)





## 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 New Local Roads*



**Preliminary**

*Subject to change based upon ongoing analysis and design*





# Option W3-3

## *Proposed Roadway Layout*



**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

## Potentially Impacted Buildings



**Preliminary**

*Subject to change based upon ongoing analysis and design*





# Option W3-3

## Potential Complete Streets



**CONCEPTUAL - FOR ILLUSTRATIVE PURPOSES ONLY**

*Subject to change 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 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 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 E4 (S)

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

- Interchange with Cogswell and Spruce St



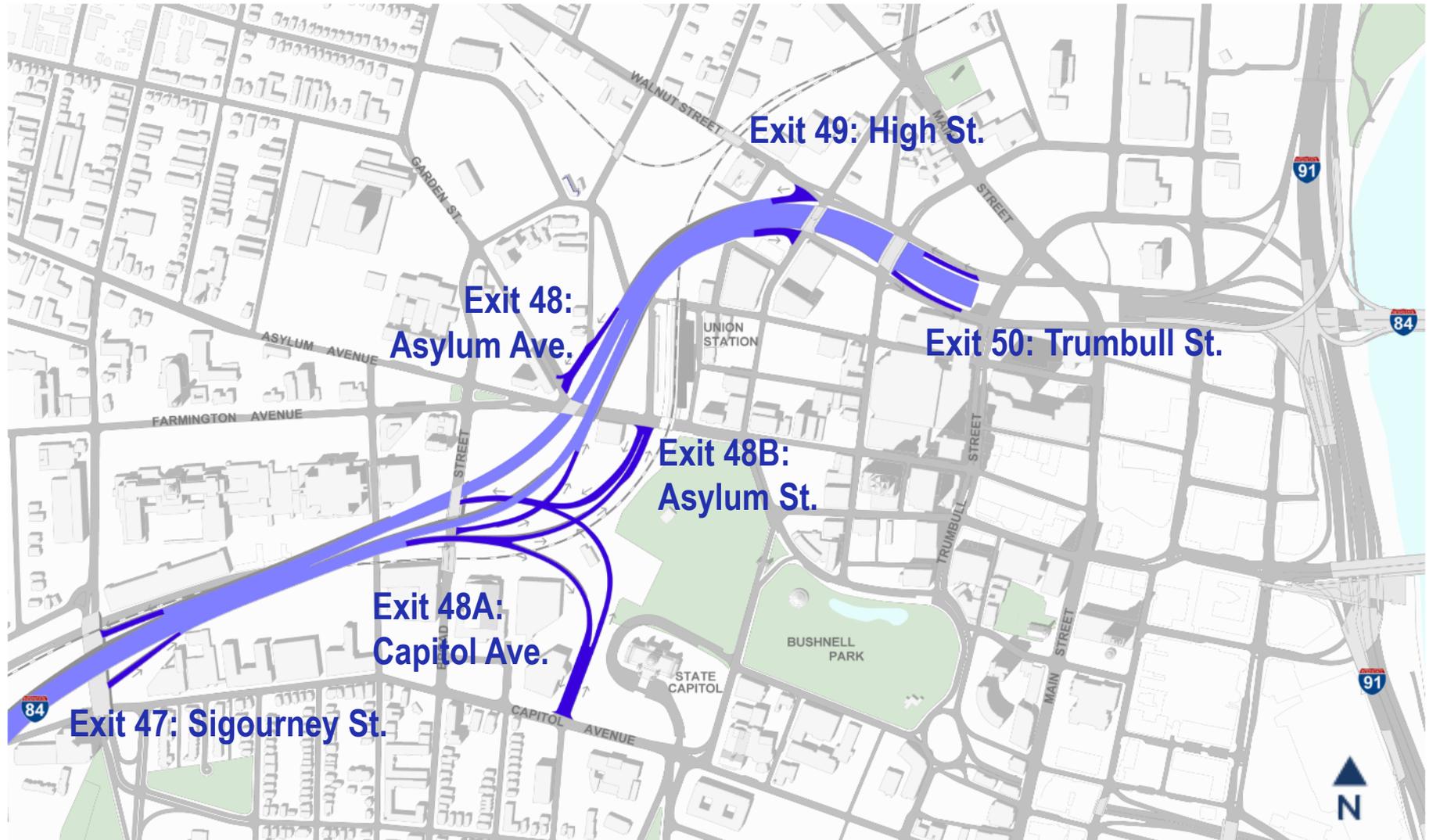


# Existing Conditions (East)



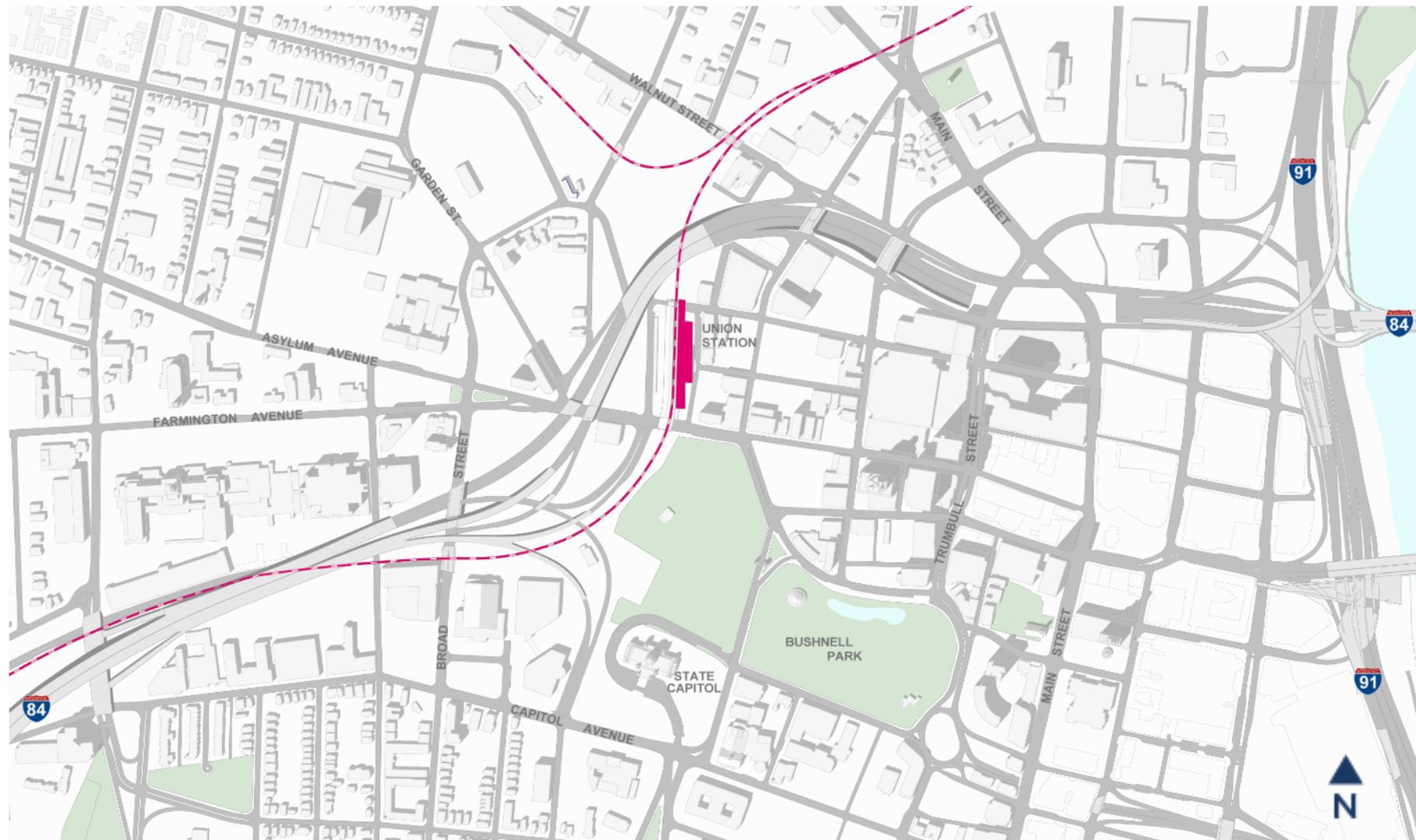


# Existing Mainline and Ramps (East)



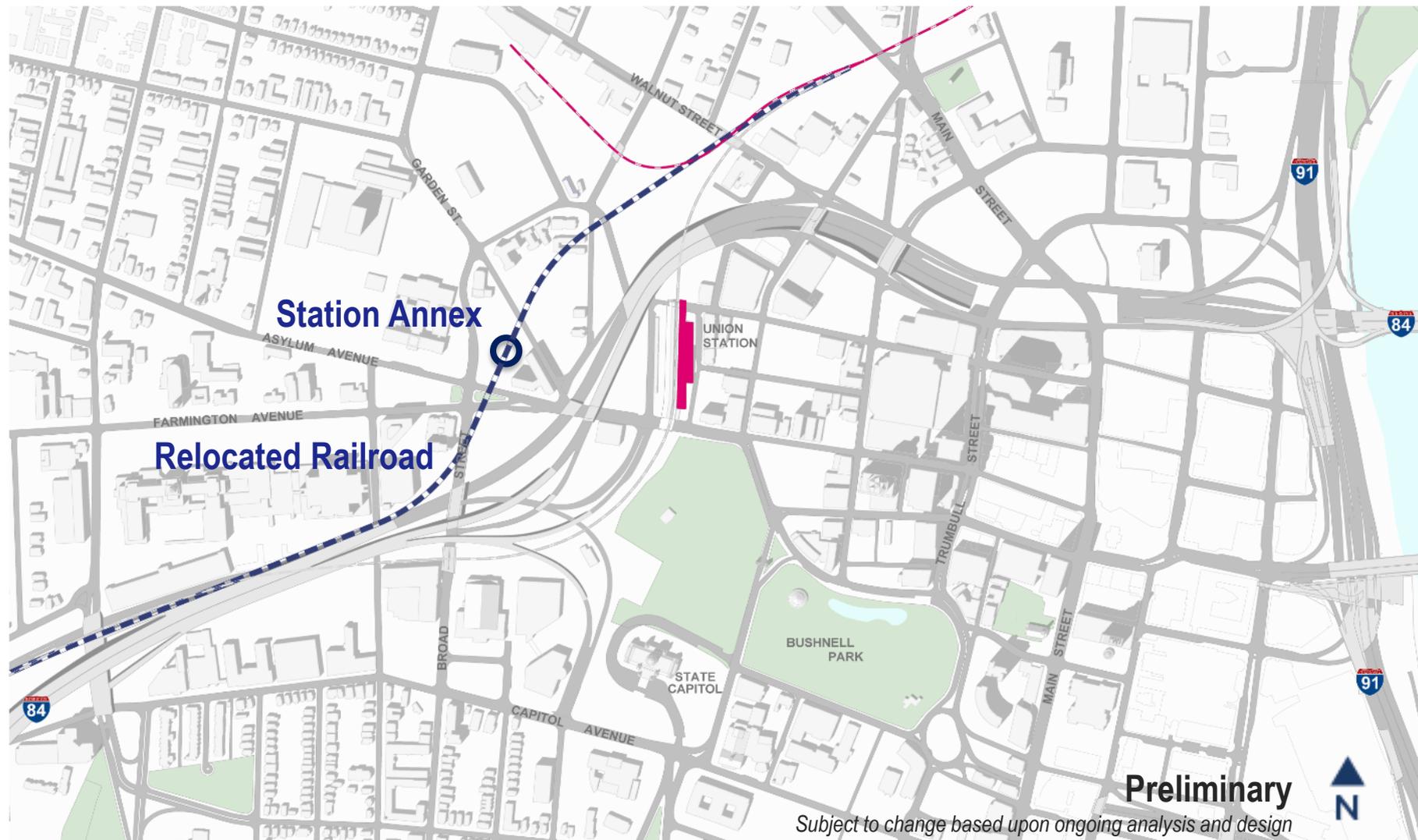


# Existing Railroad (East)





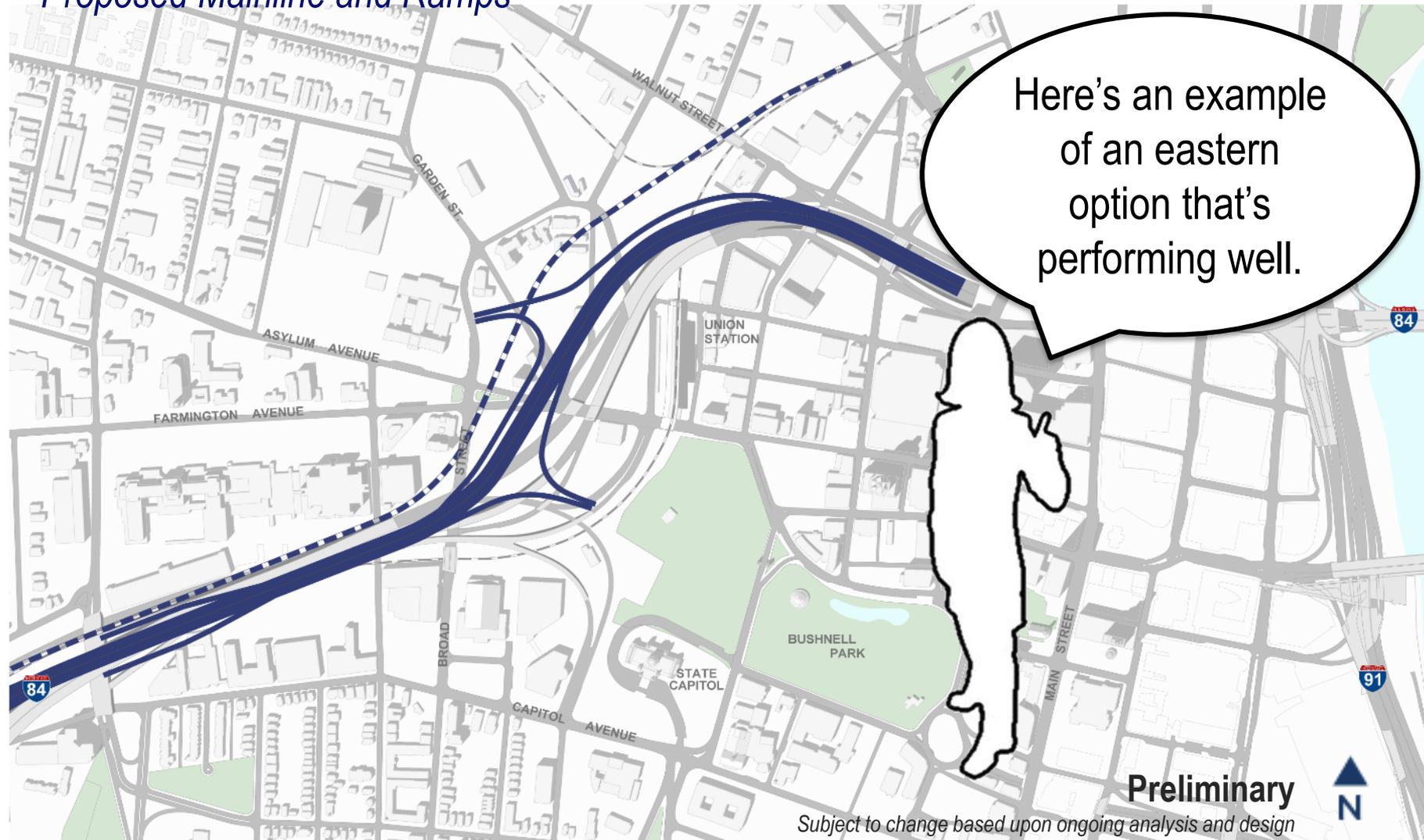
# Relocated Railroad and New Station Annex





# Option 3B: E2(S)

*Proposed Mainline and Ramps*



**Preliminary**

*Subject to change based upon ongoing analysis and design*





# Option 3B: E2(S)

## *Proposed New Local Roads*



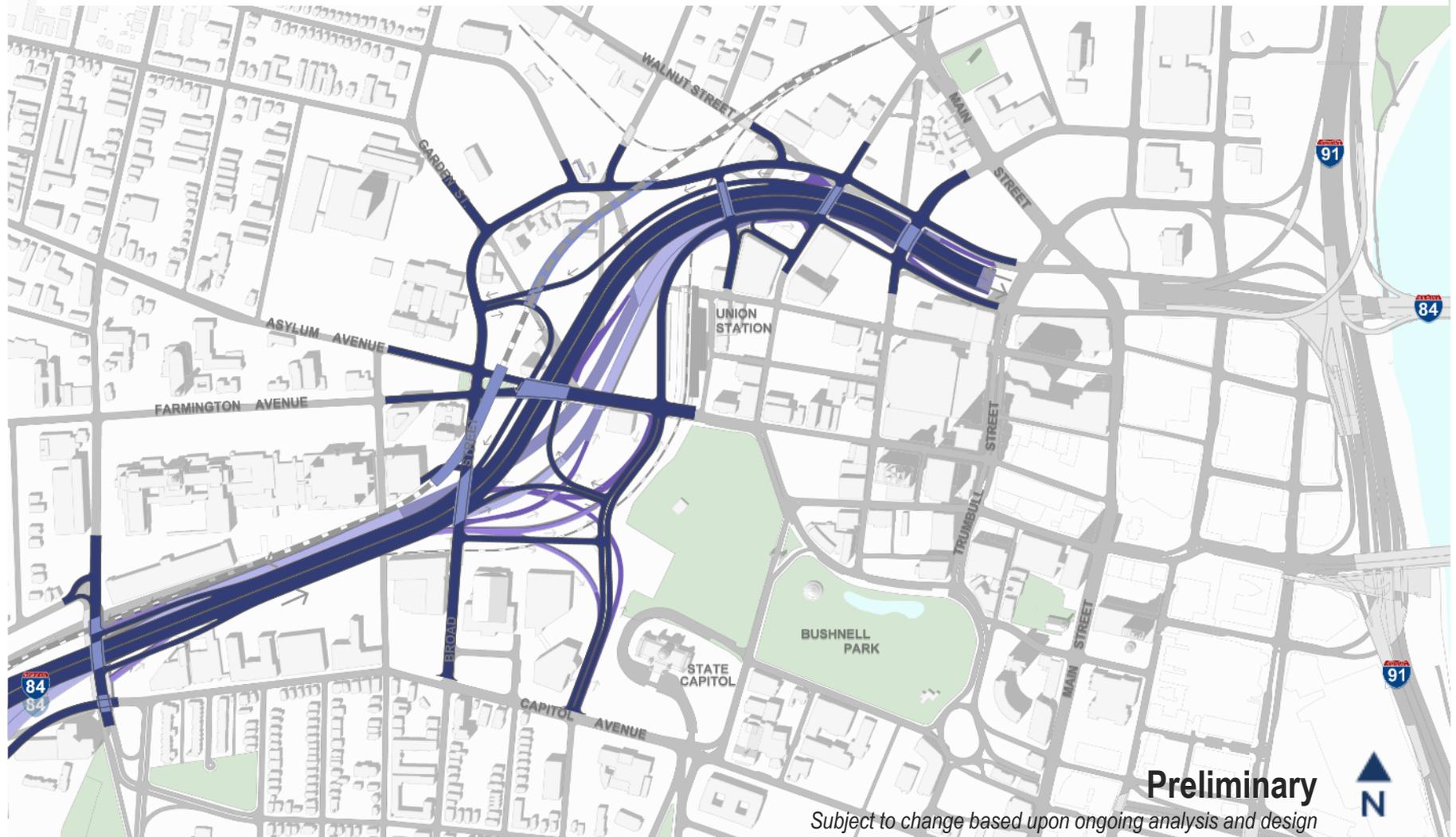
**Preliminary**

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# Option 3B: E2(S)

## *Proposed Roadway Layout*



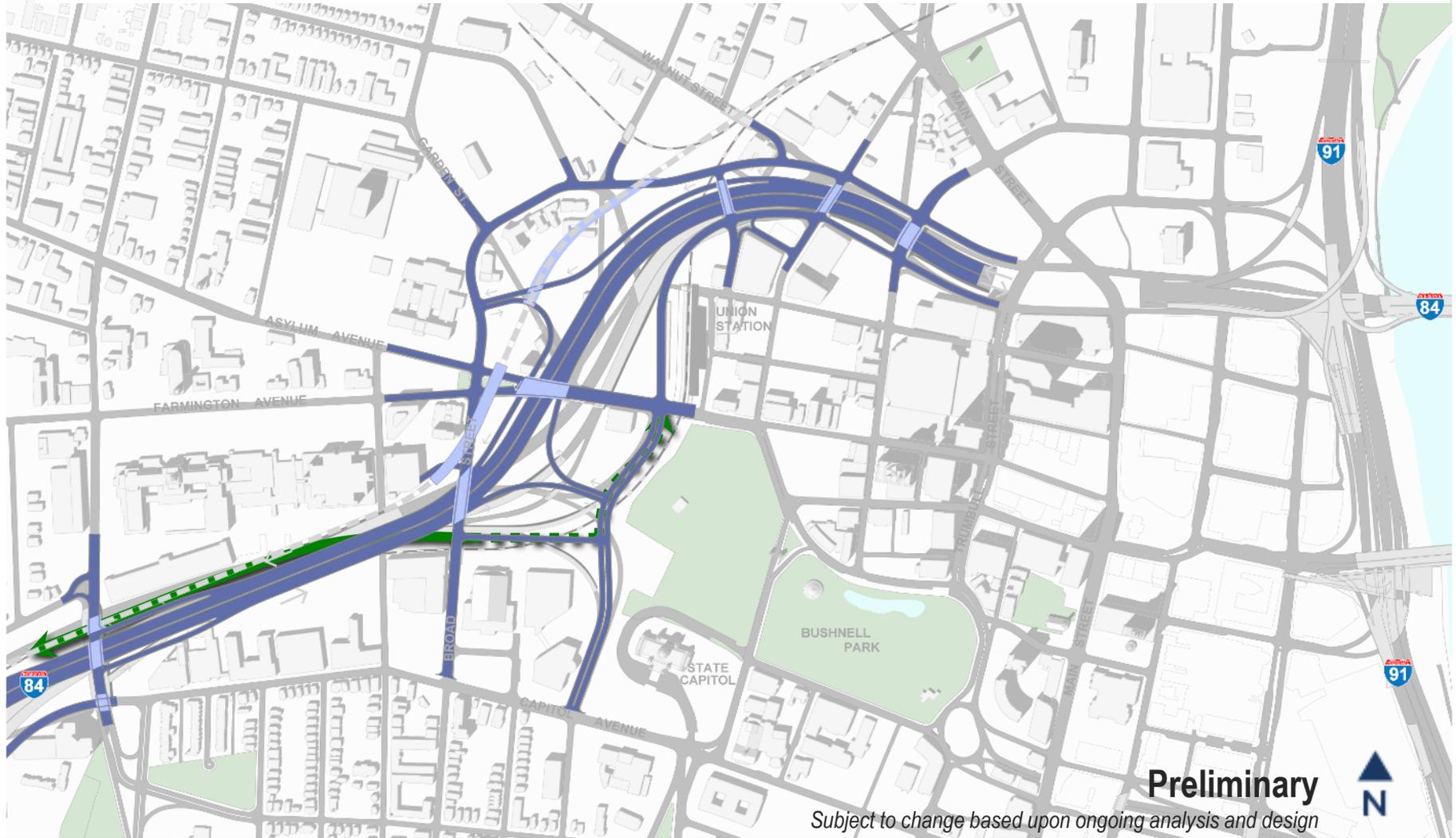
**Preliminary**

*Subject to change based upon ongoing analysis and design*



# Option 3B: E2(S)

## Potential CT *fastrak* Realignment



Preliminary

Subject to change based upon ongoing analysis and design



# Option 3B: E2(S)

## Potentially Impacted Buildings



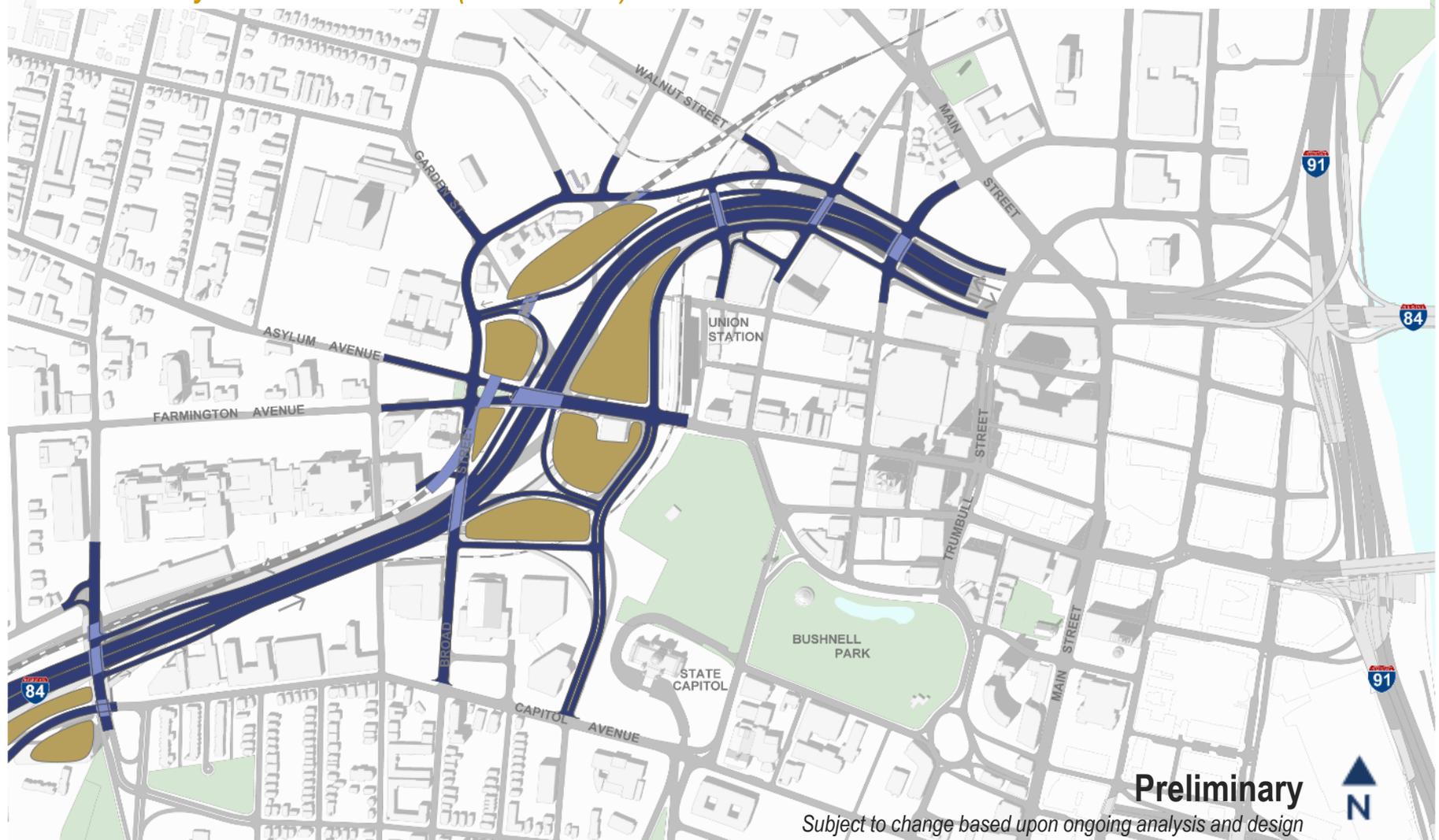
Preliminary

Subject to change based upon ongoing analysis and design



# Option 3B: E2(S)

*Potentially Available Land (~15 acres)*



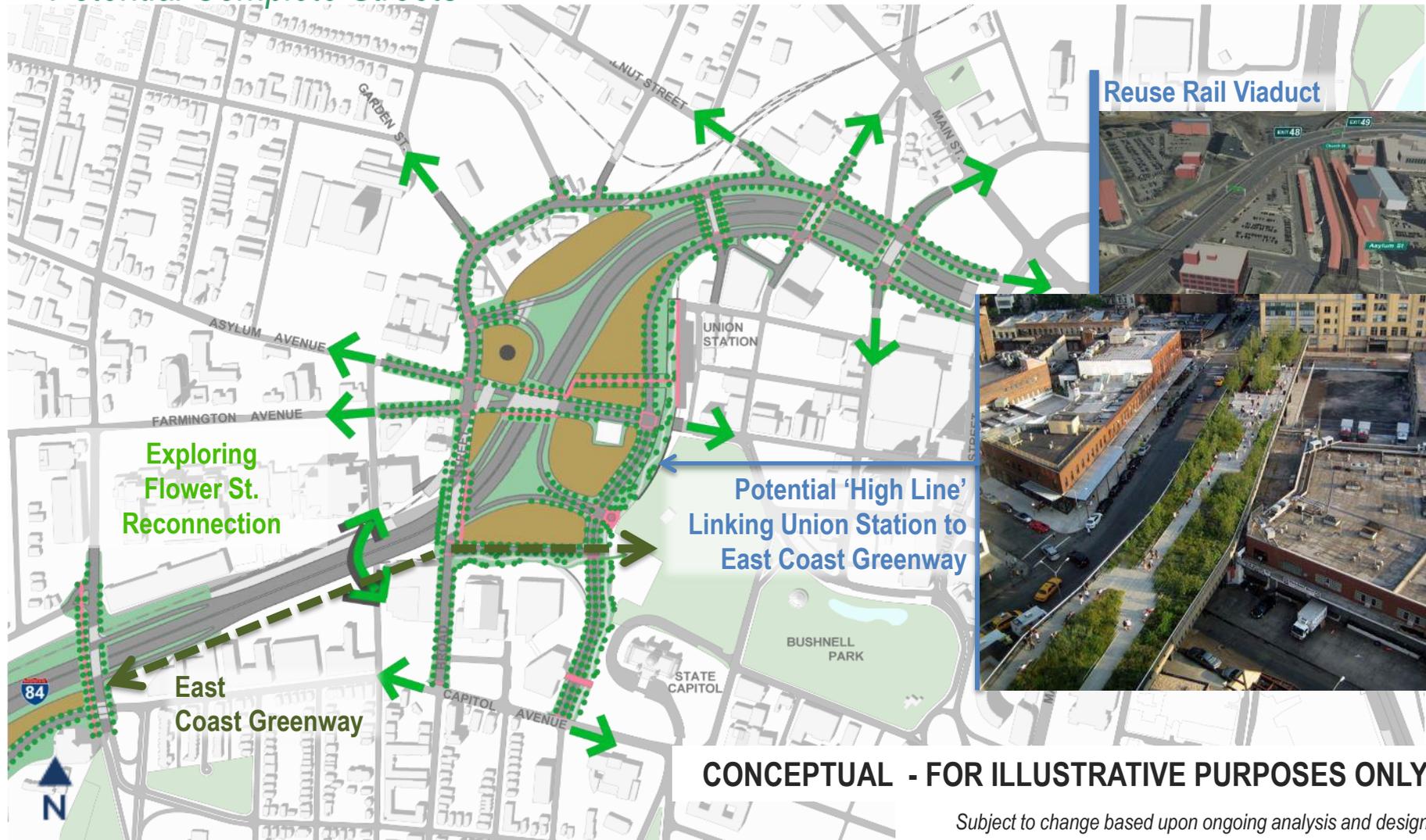
**Preliminary**

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# Option 3B: E2(S)

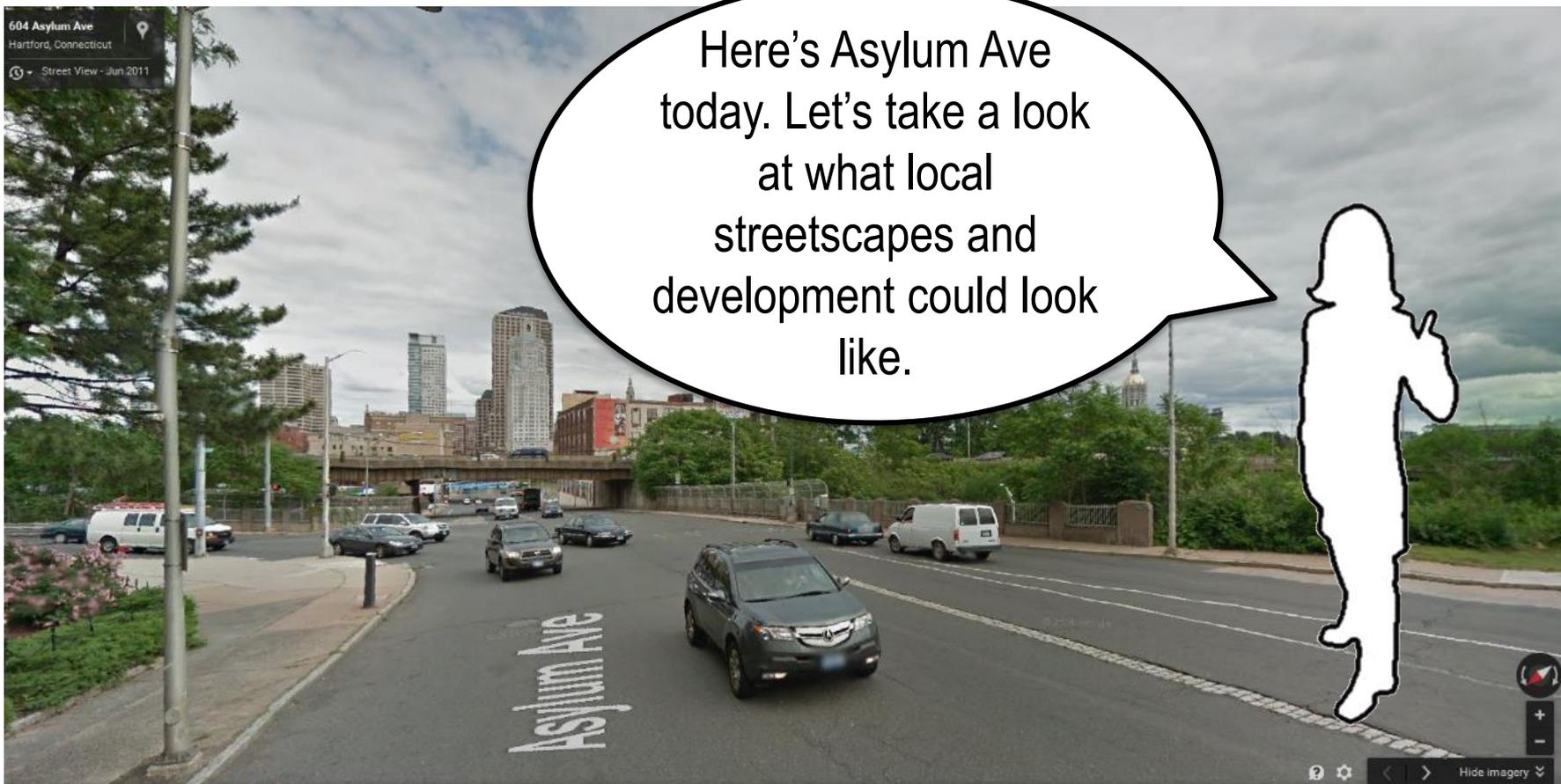
## Potential Complete Streets





# Asylum Avenue

*Existing View Looking East Toward Downtown*





# Asylum Avenue

*Potential View Looking East Toward Downtown*





# Intermodal Opportunities



**CONCEPTUAL - FOR ILLUSTRATIVE PURPOSES ONLY**

*Subject to change based upon ongoing analysis and design*



# Intermodal Opportunities

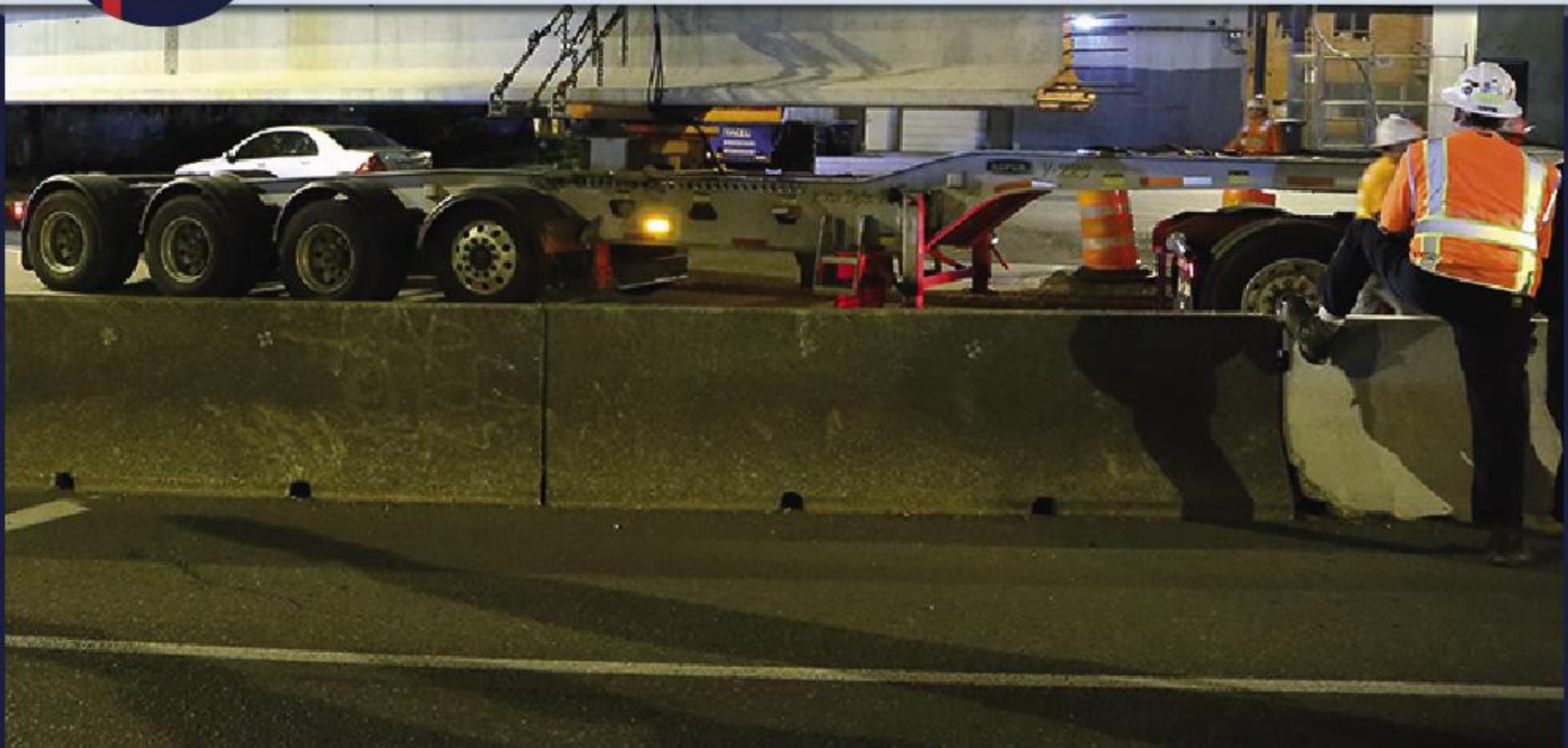


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# Construction Considerations



# Construction Considerations

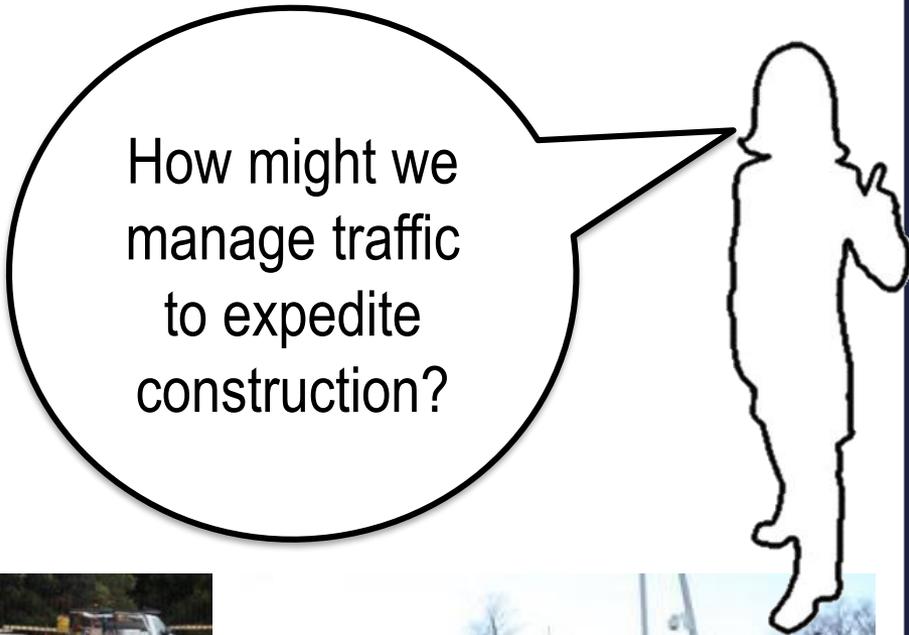
- Impact upon stakeholders
- Maintaining traffic affects type of construction
- Conventional vs. accelerated techniques
- Section or lane closures

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

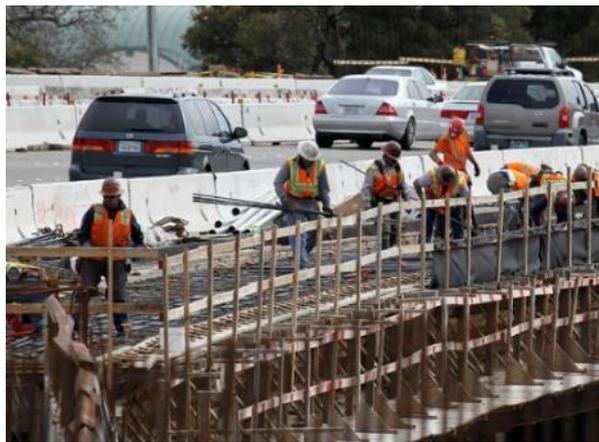


# Reducing Traffic During Construction

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

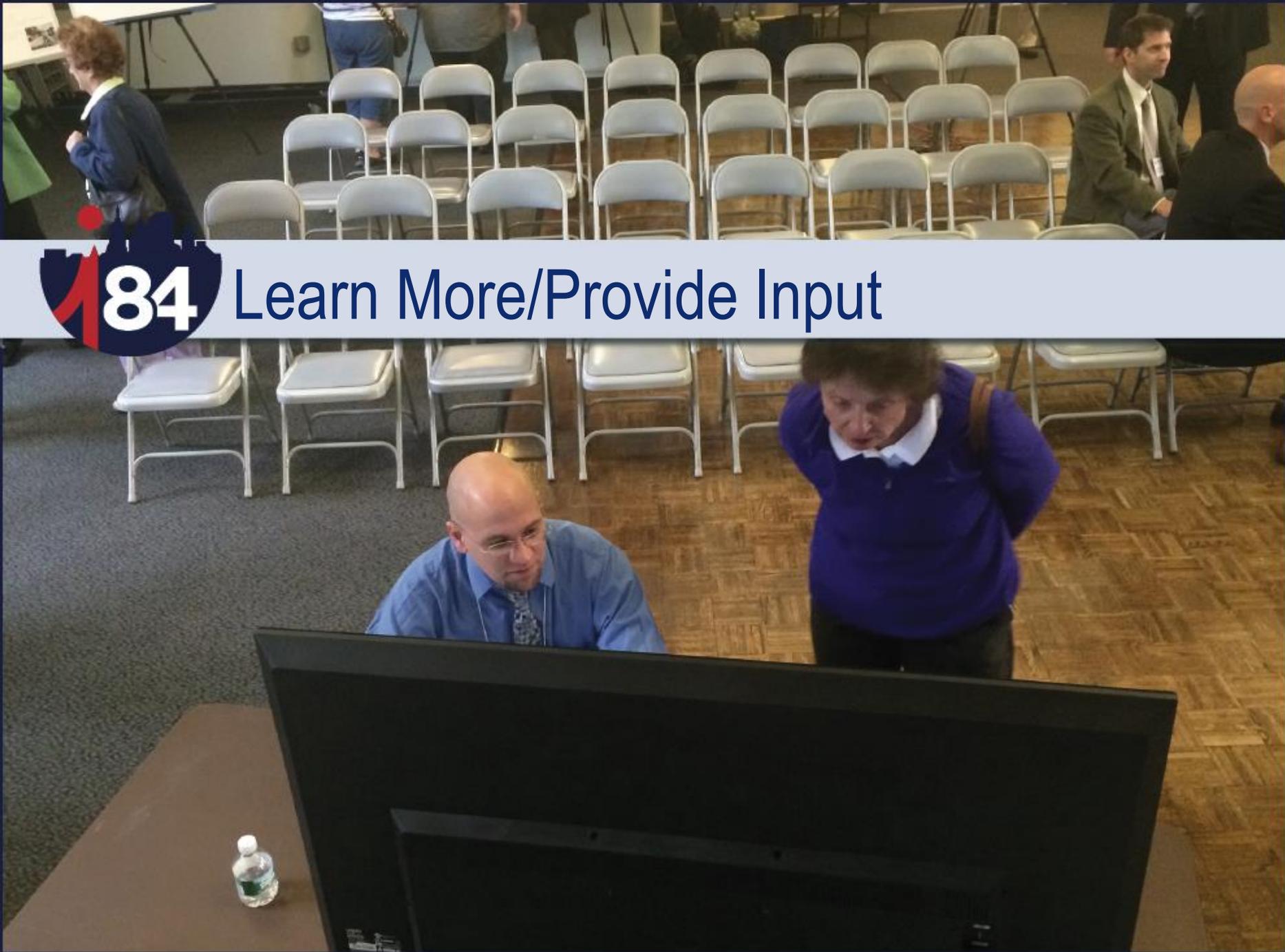


How might we manage traffic to expedite construction?





## Learn More/Provide Input





## Visit our Interactive Alternatives Webpage

- View and assess the alternatives
- Provide feedback, ask questions
- [i84hartford.com](http://i84hartford.com)

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

**Interactive Alternatives Analysis:  
Evaluating the Alternatives**

**OPEN PLANNING STUDIO**  
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.

**3D INTERACTIVE MODEL**  
Explore the project area.





## 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](http://i84hartford.com)!





# I-84 HARTFORD PROJECT



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

