



I-84 HARTFORD PROJECT

Open Planning Studio Meeting #2

July 29, 2015

Meeting Agenda

1. OPS #1 highlights
2. Alternatives screening process
3. Screening criteria
4. Range of alternatives
5. Update on tunnel alternative
6. Construction considerations
7. Next steps

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





OPS #1 Highlights

The Open Planning Studio is where you can hear about the latest developments on the I-84 Hartford Project



OPS #1 summary

- Held late April, 2015
- 400 - 500 attendees
- Social media very active
- Significant news coverage
- Several new concepts developed
- Event well received



Lessons learned

- Aids in communicating project complexity
- Provides direct interaction with public
- Offers many engagement opportunities
- Project team learns more from public



EXISTING VIADUCT REPLACED WITH LOWERED HIGHWAY, IMPROVED LOCAL CONNECTIONS OVER HIGHWAY, AND NEW RAMPS AT ASYLUM AVENUE

POTENTIAL NEW RAIL STATION/ HEAD-HOUSE

WALKABLE CONNECTION BETWEEN ASYLUM HILL AND DOWNTOWN

NEW ON/OFF RAMPS AT ASYLUM



Alternatives Screening Process

We have a lot of highway alternatives to evaluate, and we'll show you our process.

RAIL LINE RELOCATED WEST OF I-84

CT FASTRAK STATION

NEW SMALLER SISSON AVE. INTERCHANGE

POTENTIAL EXPANDED OPEN SPACE FOR SCHOOL OR COMMUNITY GARDENS

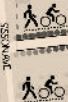
TRANSIT ORIENTED DEVELOPMENT OPPORTUNITIES

ARTSPACE HARTFORD TO REMAIN

FUTURE MIXED USE DEVELOPMENT FACING ASYLUM AVE + BUSHNELL PARK

POTENTIAL AIR RIGHTS DEVELOPMENT

NEW CREATIVE BUSINESS



BOARD 6 SHOWS MORE OPTIONS OF THIS AREA

POTENTIAL DEVELOPMENT

PEDESTRIAN/BIKE IMPROVEMENTS ON LAUREL AND SIGOURNEY

ON/OFF RAMPS AT SIGOURNEY

PROPOSED HIGHWAY SHIFTED SLIGHTLY SOUTH

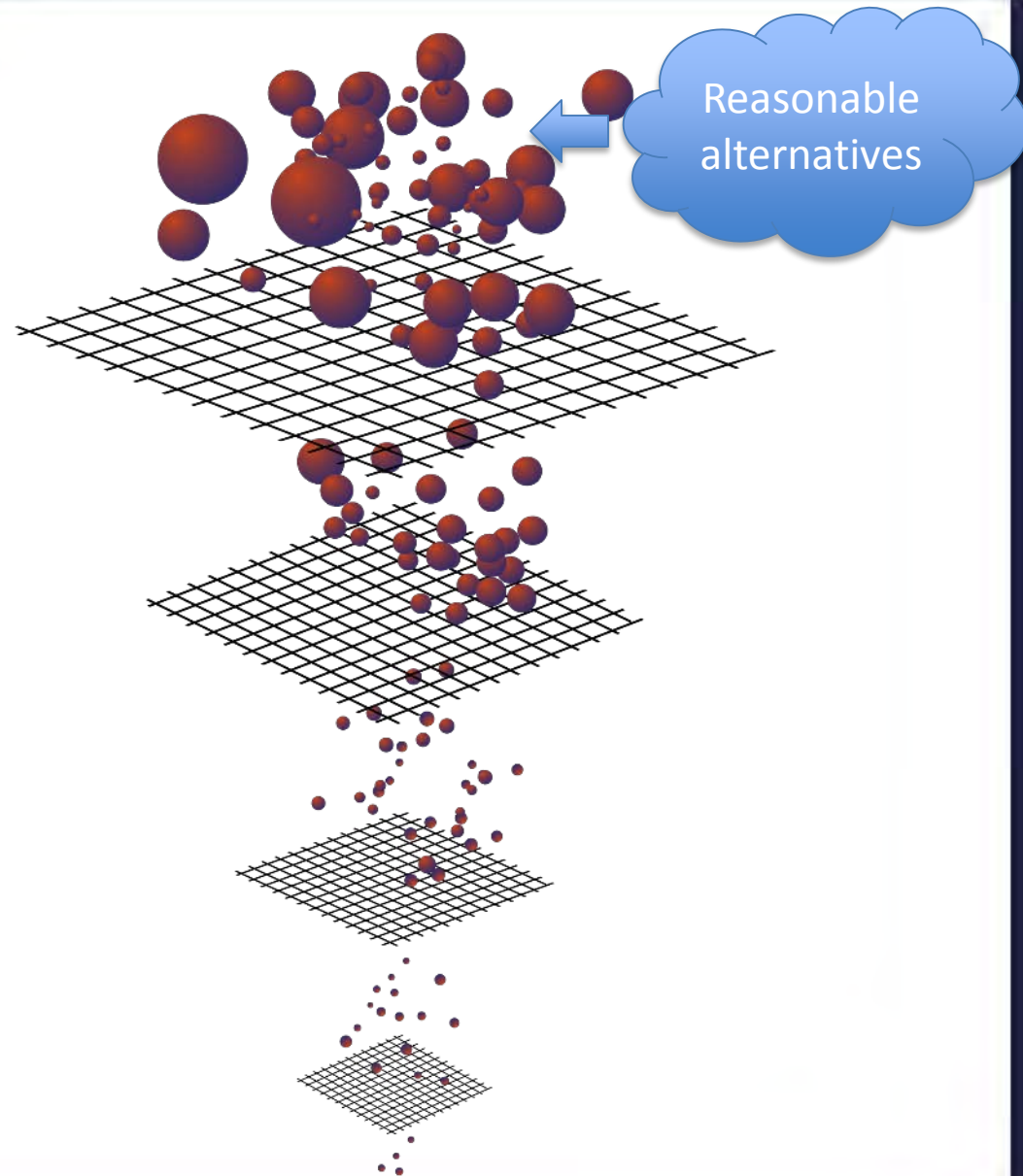
BROAD STREET: BIKE / PEDESTRIAN CONNECTIONS BETWEEN ASYLUM HILL AND FROG HOLLOW

KEY FOR LANDS
 Highway Related
 Public Transit
 Land Use/ Street

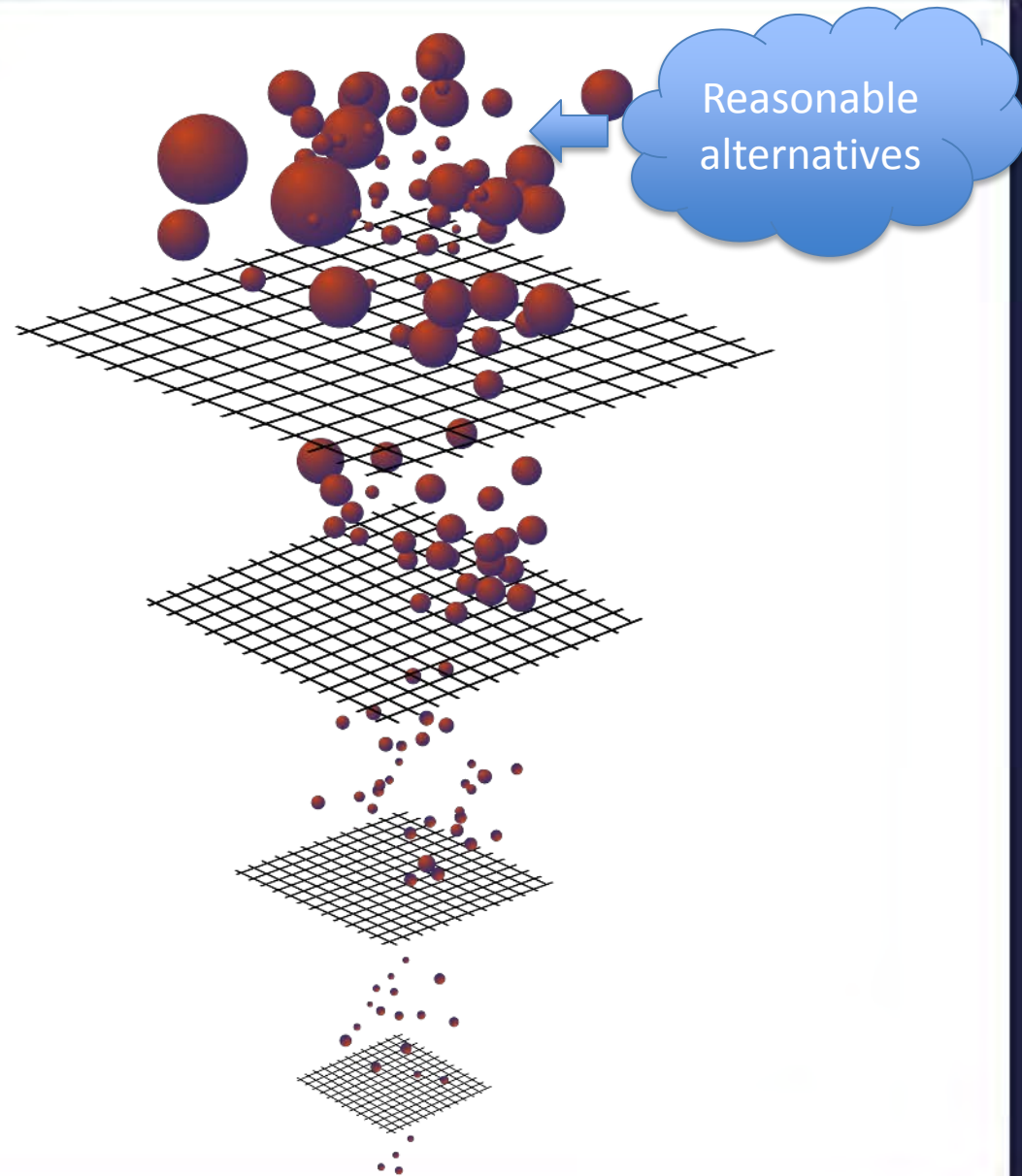
LEGEND



First, we identified a reasonable range of alternatives that fix the aging bridges

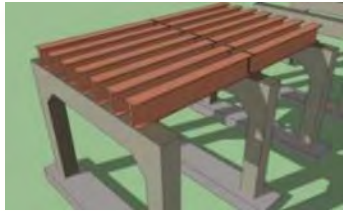


After that, we
continue to
screen for other
important
criteria

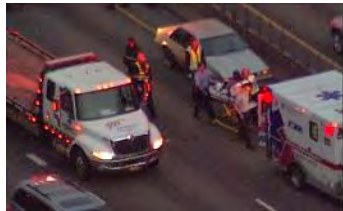




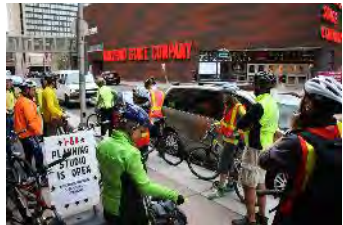
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Screen 1: Bridge structures



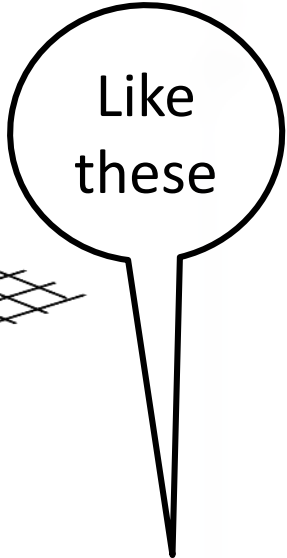
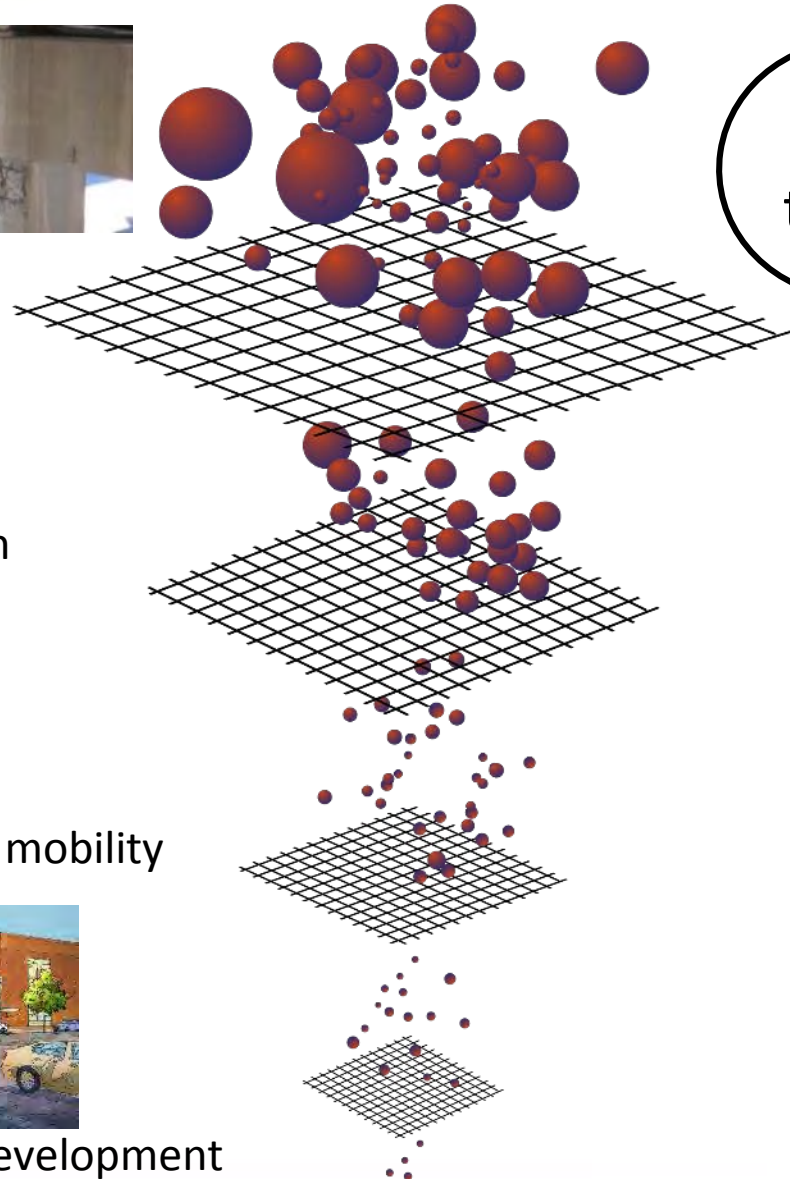
Screen 2: Highway safety and congestion



Screen 3: Pedestrian, bicycle and transit mobility



Screen 4: Urban design and economic development





I-84 HARTFORD PROJECT



When we're finished, a few options will be studied in great detail

Screen 1: Bridge structures



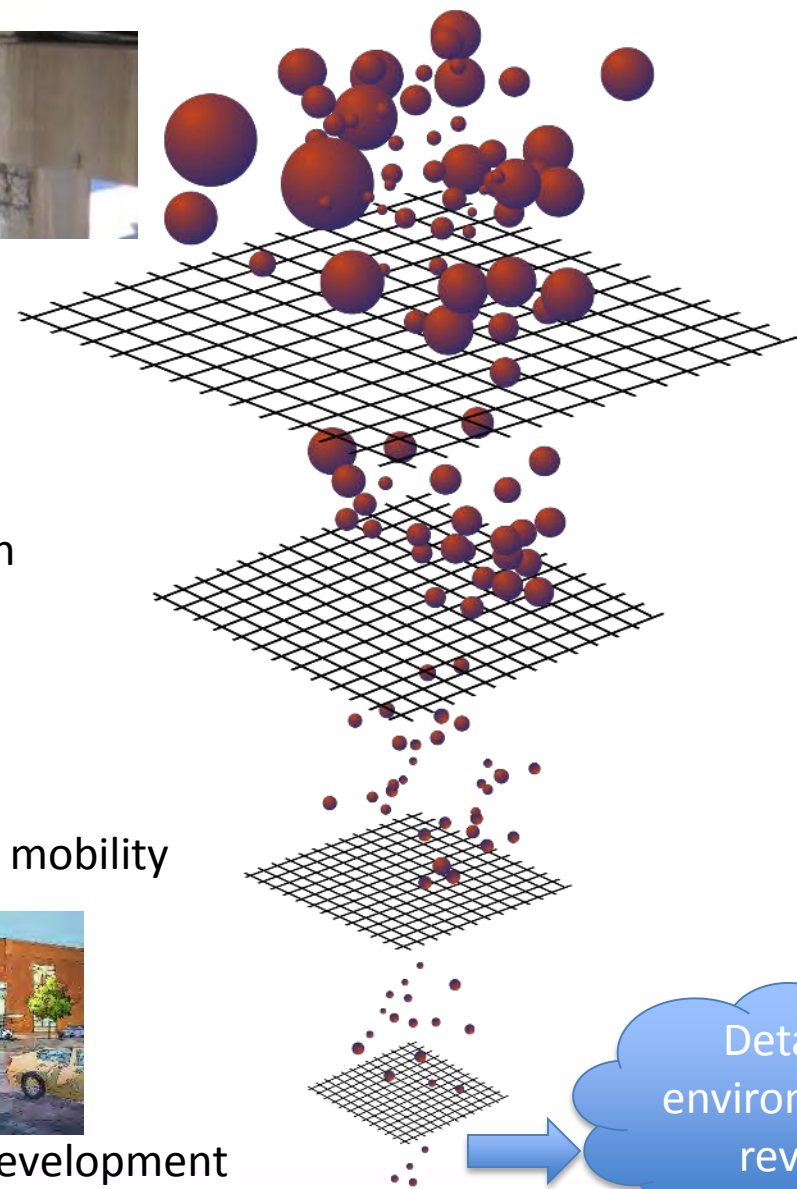
Screen 2: Highway safety and congestion



pedestrian, bicycle and transit mobility

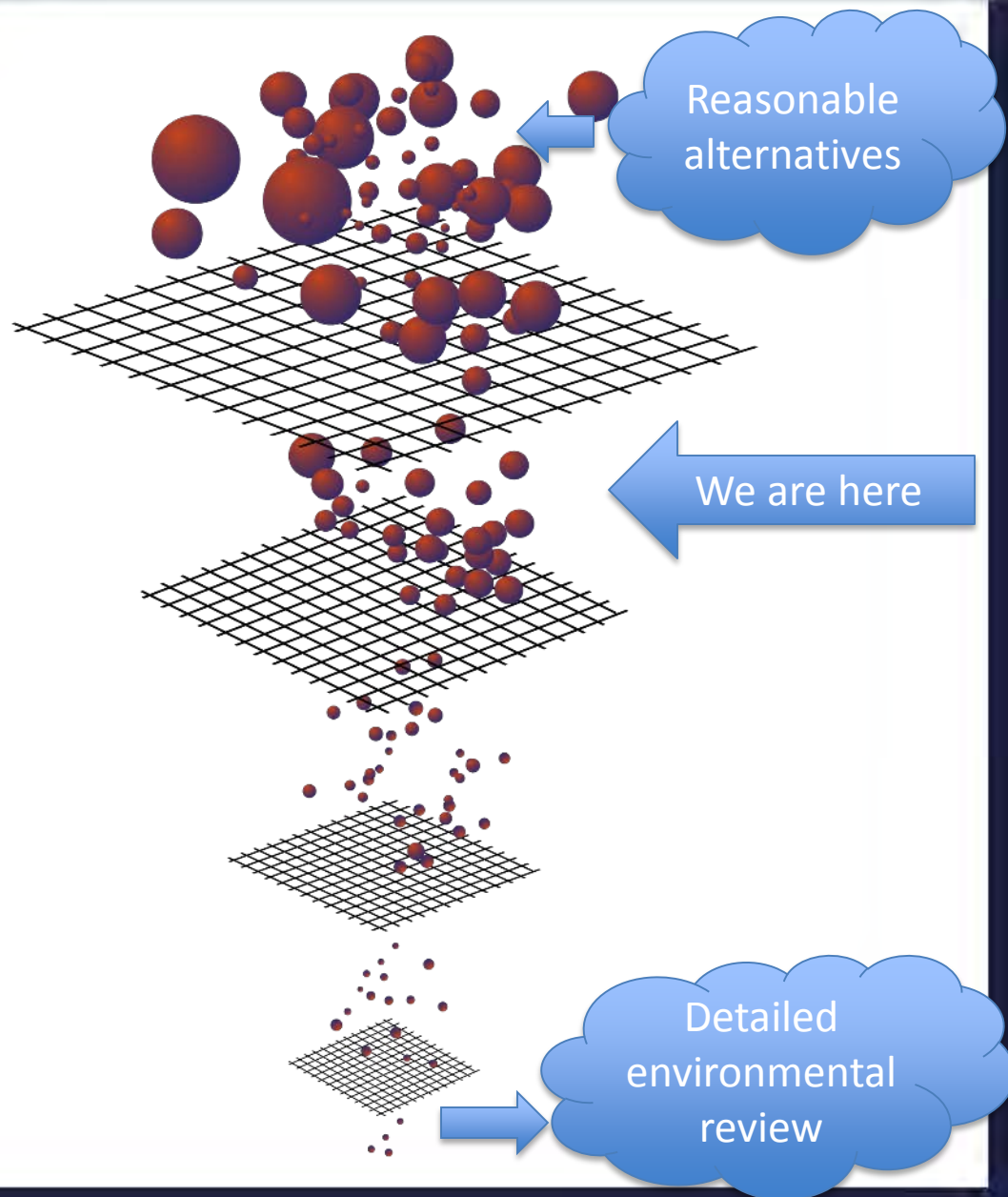


urban design and economic development

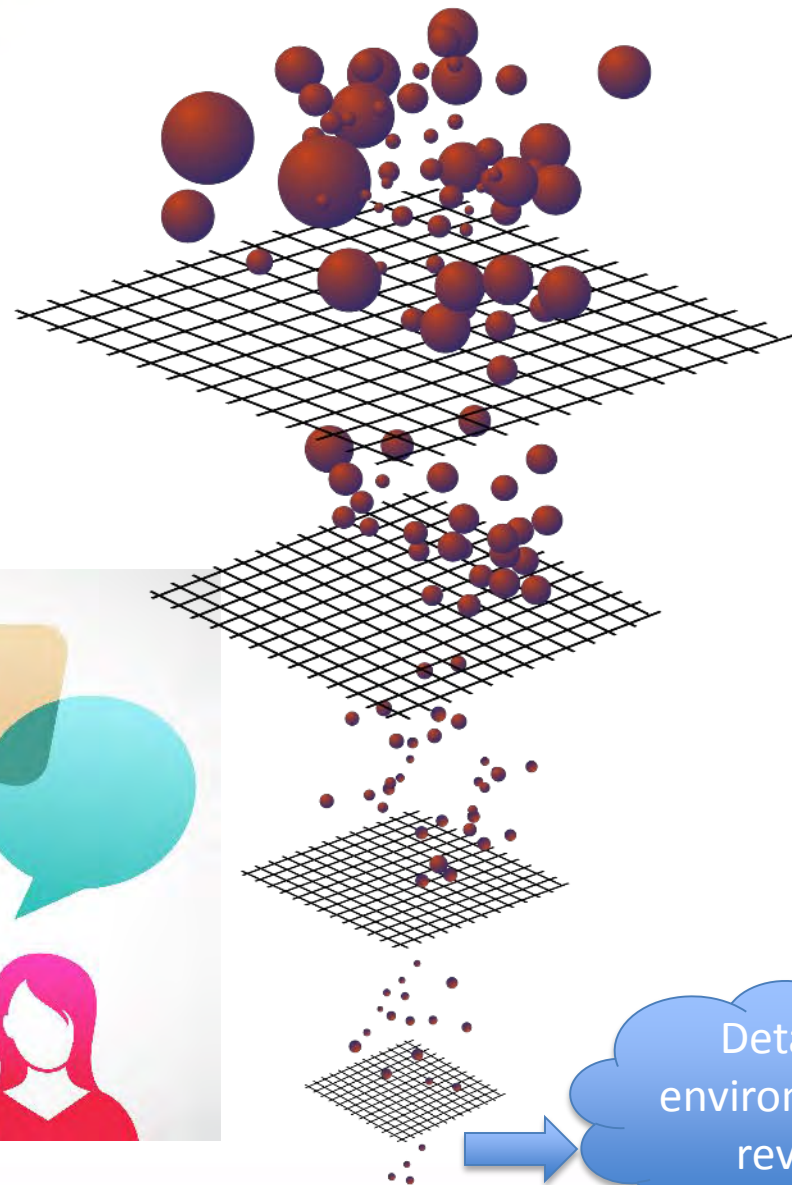




As of today, we are just beyond the first screen



There will be lots of opportunity for additional input



Detailed environmental review



Screening Criteria

I. PURPOSE AND NEED

A. Purpose

The purpose of the I-84 Hartford Project is to address structural deficiencies, improve traffic operations and safety, and reduce congestion on I-84 mainline and its interchanges between Flatbush Avenue and I-91 in Hartford. Addressing these deficiencies Northeast and provide access to Hartford. Addressing these deficiencies bicyclists and pedestrians.

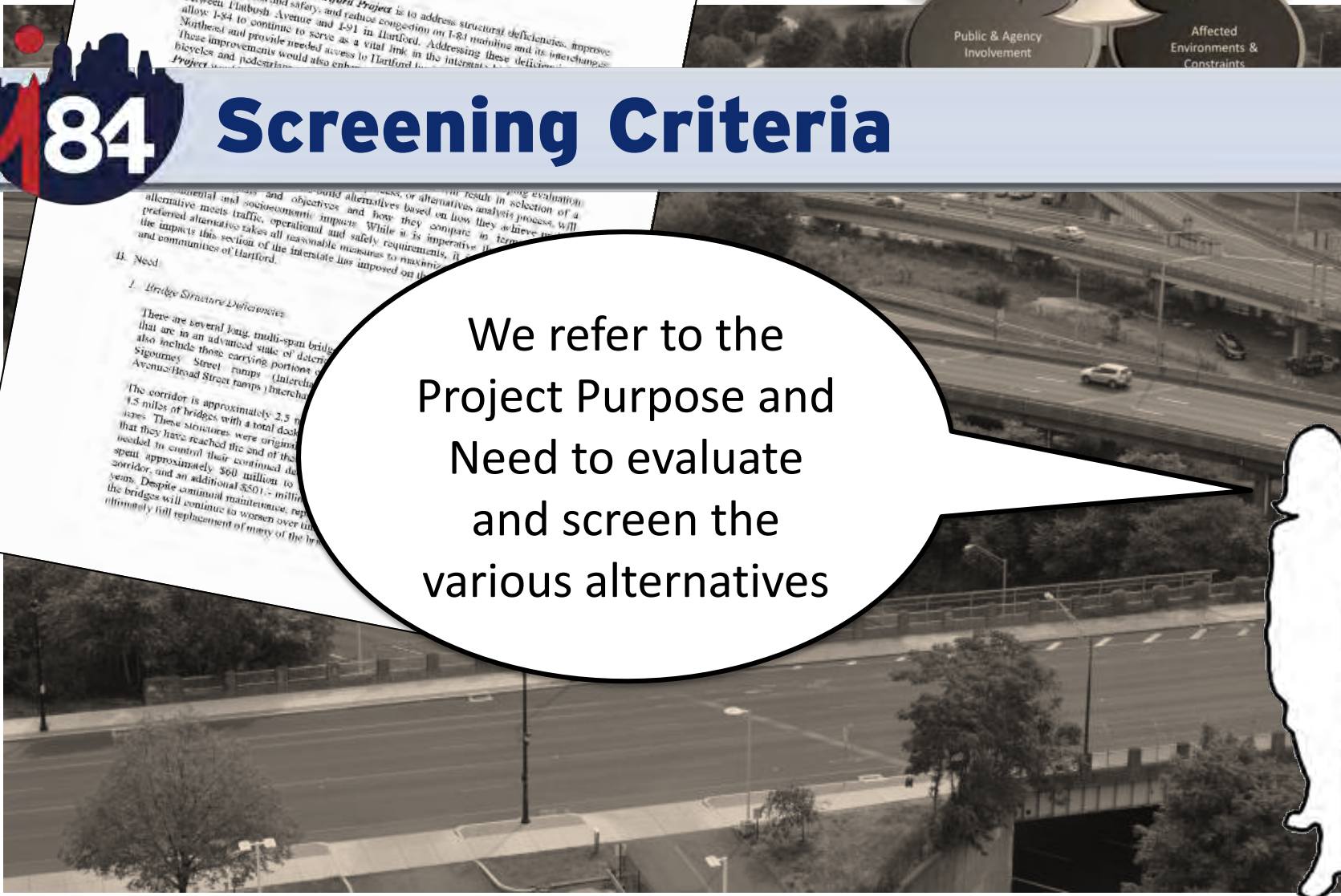
B. Need

1. Bridge Structure Deficiencies

There are several long, multi-span bridges that are in an advanced state of deterioration also include those carrying portions of Sigourney Street ramps (Interchange Avenue/Flatbush Street ramps) Interchange

The corridor is approximately 2.5 miles long and 4.5 miles of bridges with a total deck area of approximately 1.5 million square feet that they have reached the end of their useful life span and need to be replaced. The project is needed to control their continued deterioration and an additional \$501.5 million is needed for the replacement of many of the bridges. Despite continual maintenance, repair and replacement of many of the bridges, the bridges will continue to worsen over time and ultimately full replacement of many of the bridges is necessary.

We refer to the Project Purpose and Need to evaluate and screen the various alternatives





- Over 100 potential alternatives developed
- Each must satisfy *Purpose & Need Statement*
 - Bridge deficiencies
 - Safety and operations
 - Mobility



Bridge deficiencies

Bridge Conditions: Fair to Poor in general

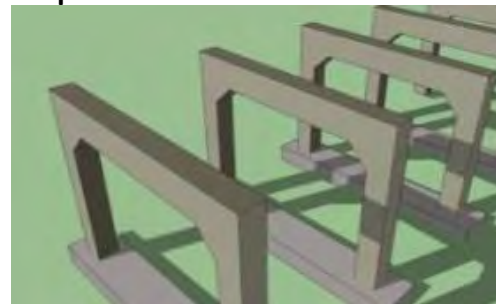
- Many bridges reaching end of intended lifespan
- CTDOT spent over \$60M on repairs since 2004
- An additional \$60M will be spent over next 5 years
- Bridges are safe, but deterioration will continue



Deck



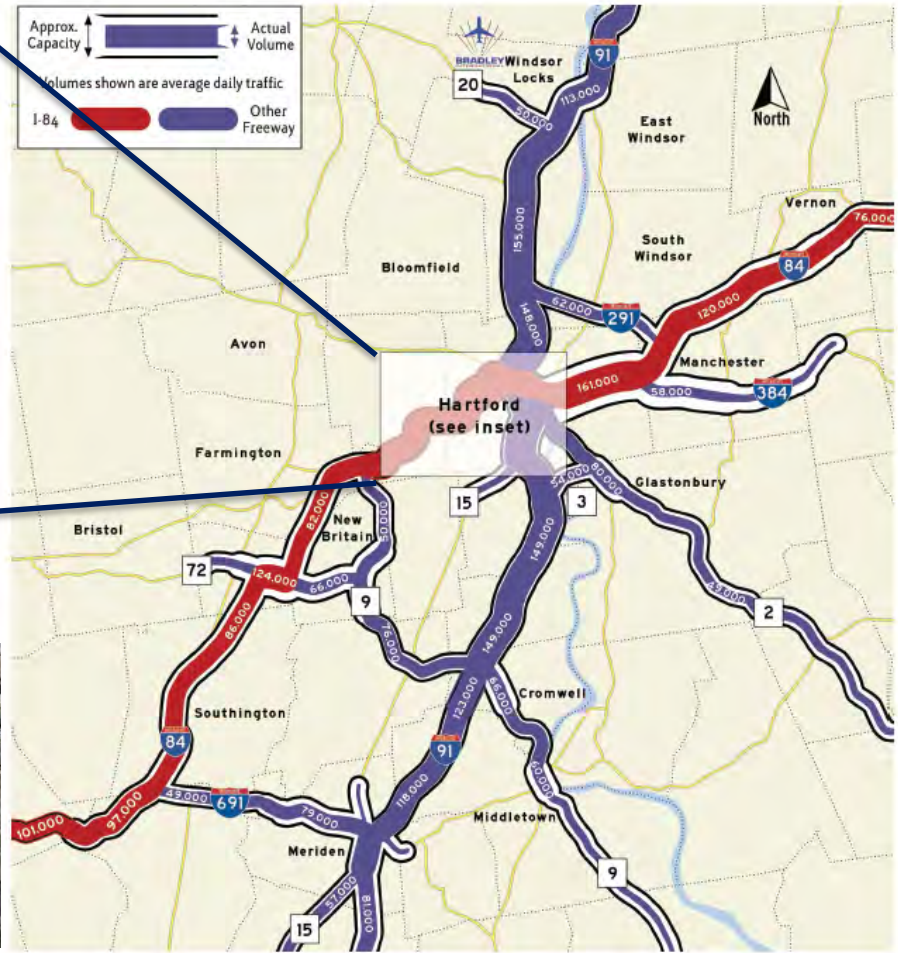
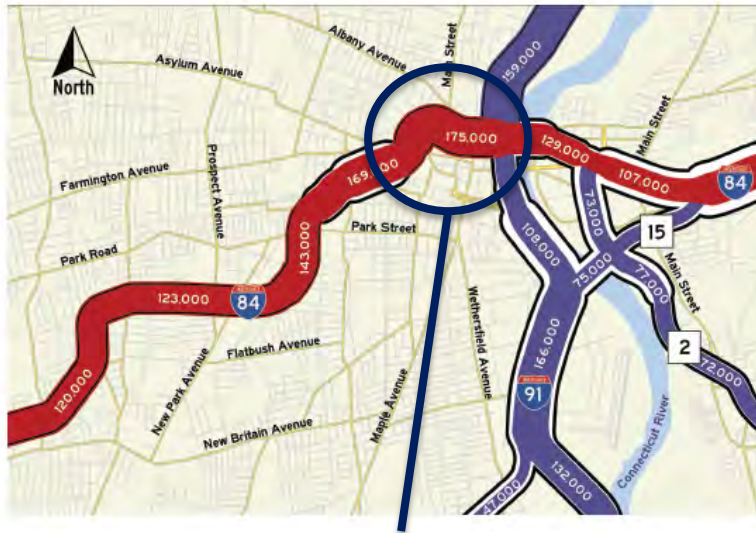
Super Structure



Sub Structure



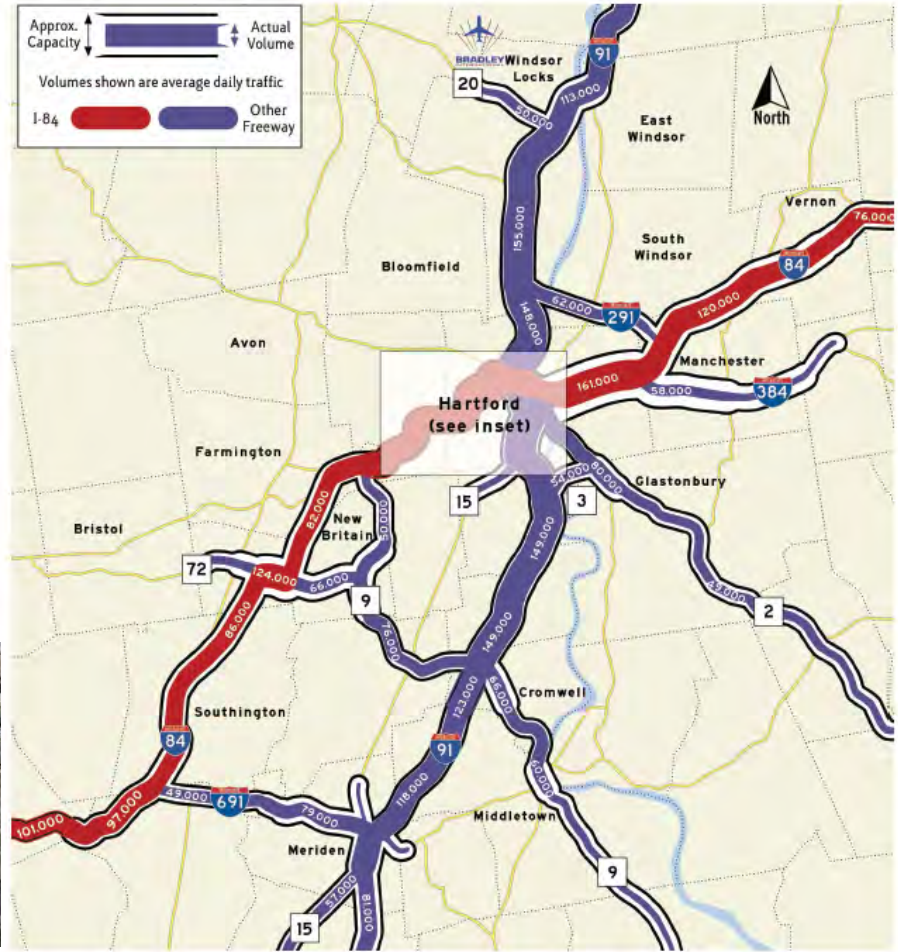
Safety and operations



Highest daily traffic volume in CT



Safety and operations



High accident segments



Mobility: Moving People and Goods

- Car and truck movement
- Transit integration
- Pedestrian and bicyclist accommodation
- Parking supply and management





Mobility: A balanced approach

We need to do
both well for
project success





Range of Alternatives

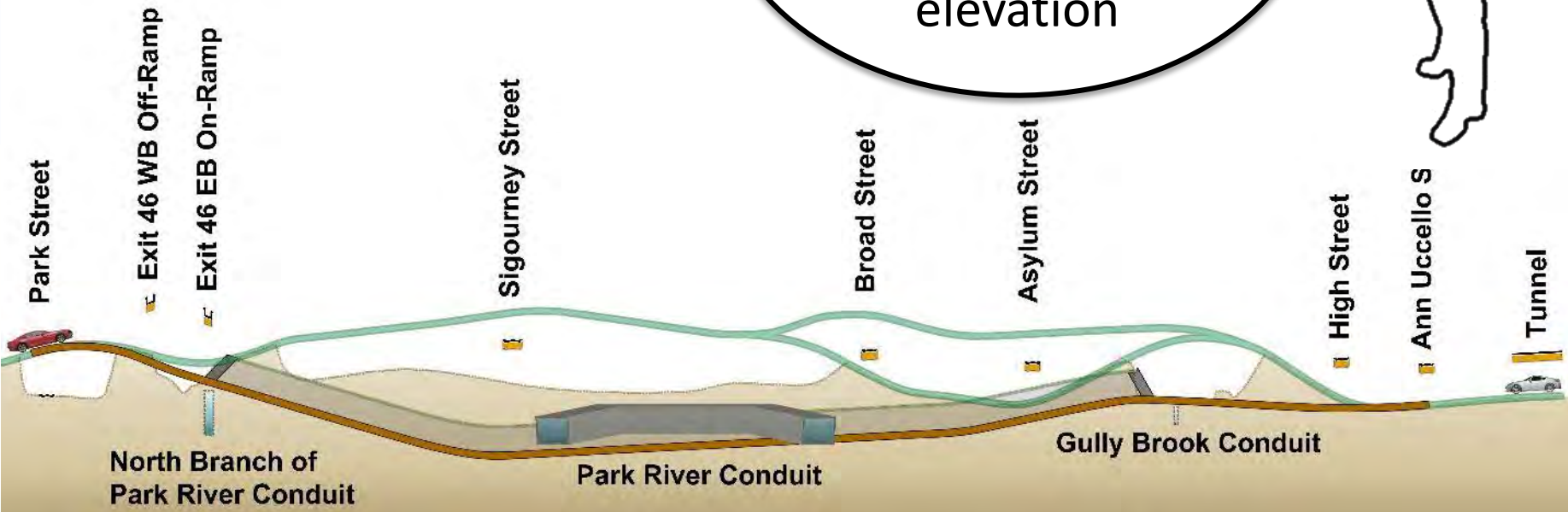
Here's how we think about the alternatives developed to-date



Mainline alternatives (vertical):

- No Build (as is) Green
- Alt 2 (elevated) Blue
- Alt 3 (lowered) Yellow
- Alt 4 (tunnel) Brown

The number of each alternative relates to its vertical profile elevation

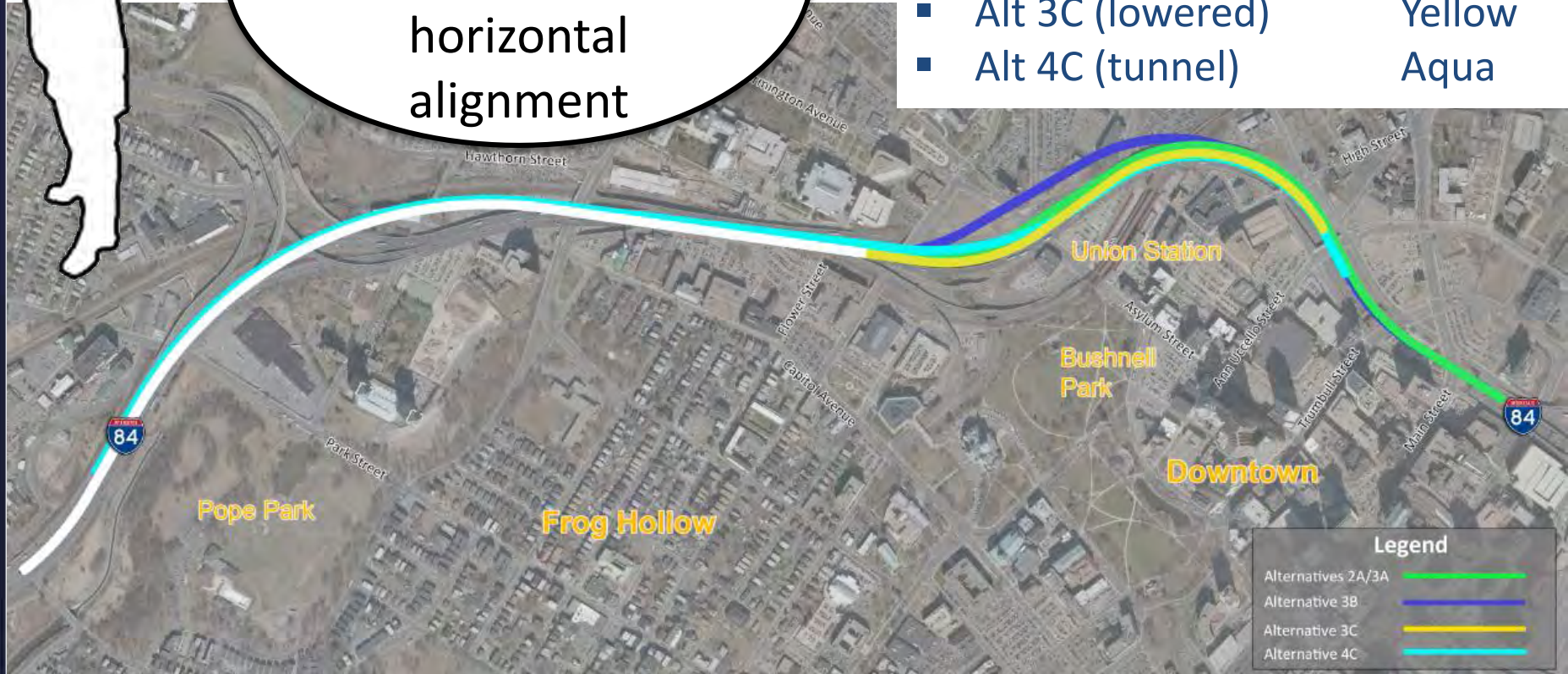




Mainline alternatives (horizontal):

The letter of each alternative relates to its horizontal alignment

- Alt 2A (elevated) Green
- Alt 3A (lowered) Green
- Alt 3B (lowered) Blue
- Alt 3C (lowered) Yellow
- Alt 4C (tunnel) Aqua

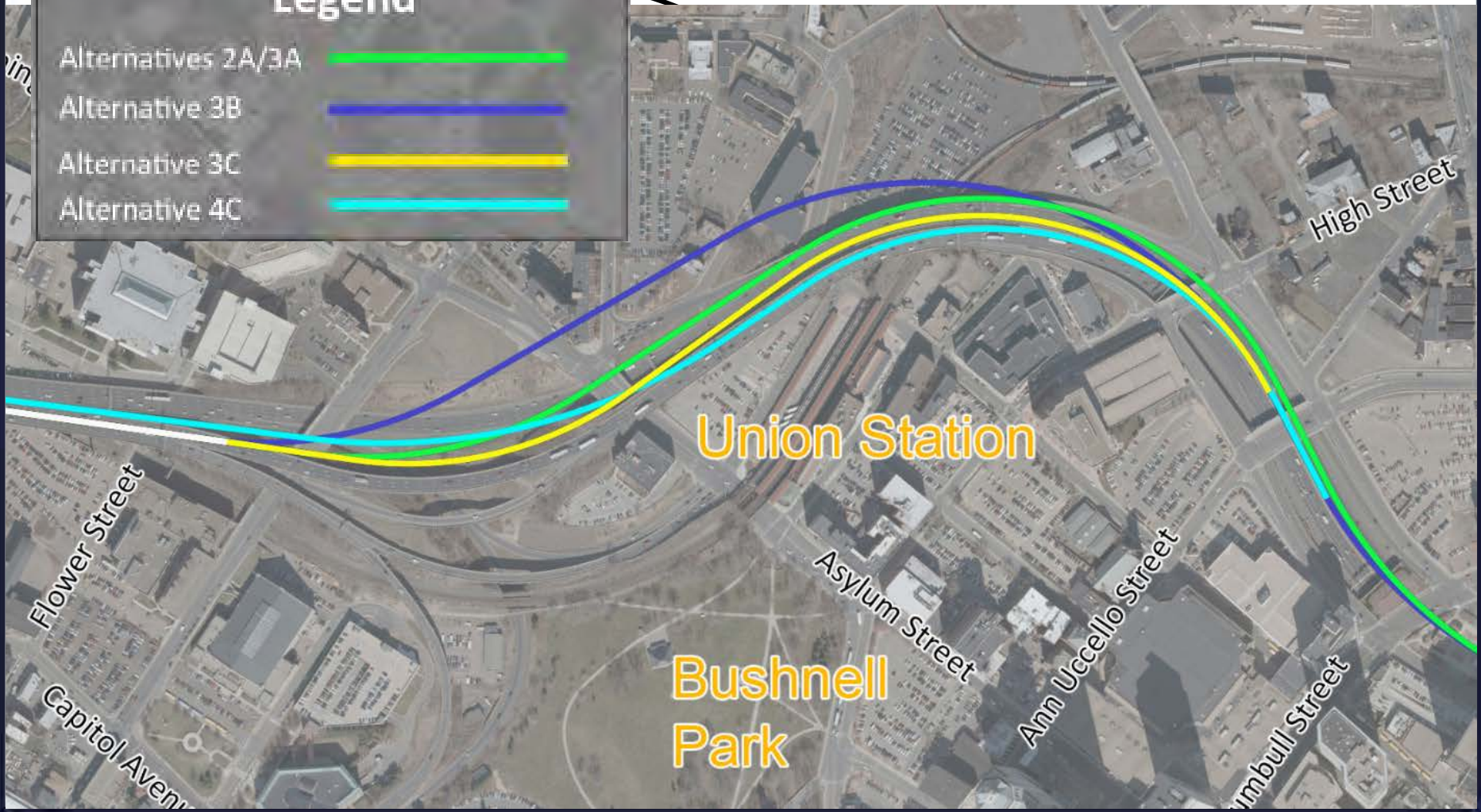




Mainline alternatives (horizontal):

Legend

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



Interchange Options

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





Interchange Options

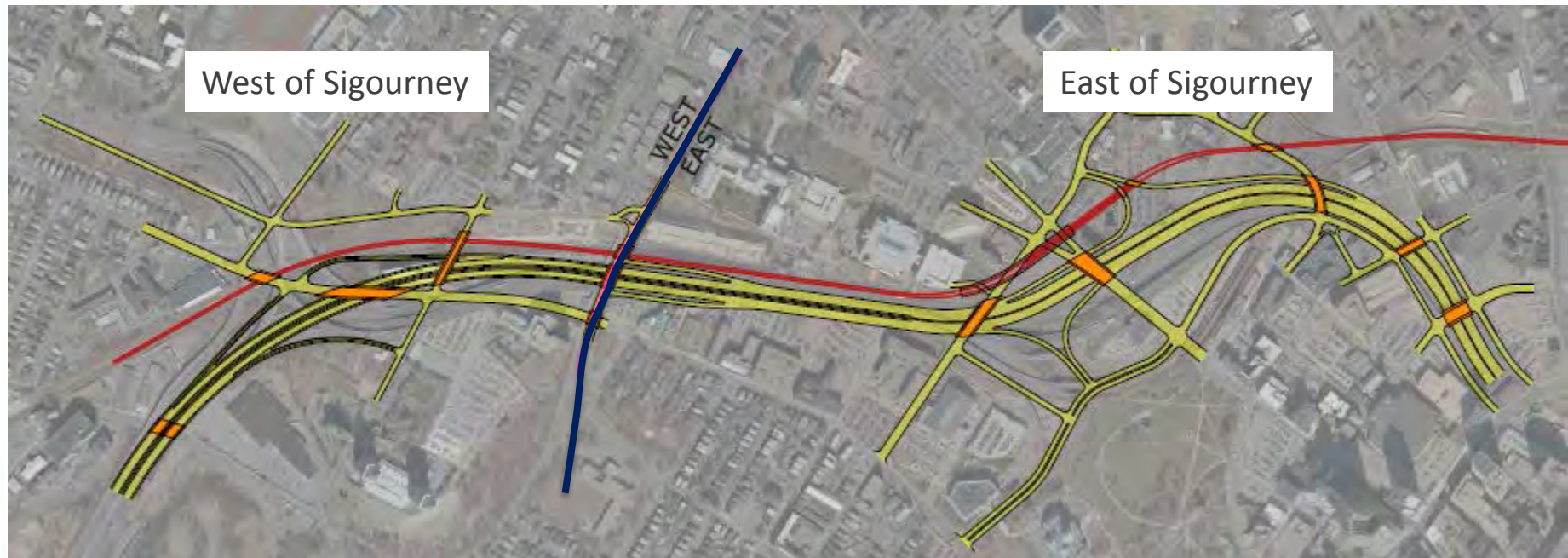
The east and west options can be combined in many different ways...





Interchange Options

Alternative	Options west of Sigourney	Options east of Sigourney
2A (elevated)	8	3
3A, 3B, 3C (lowered)	8	11
4 (tunnel)	1	1





Traffic analysis ongoing

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

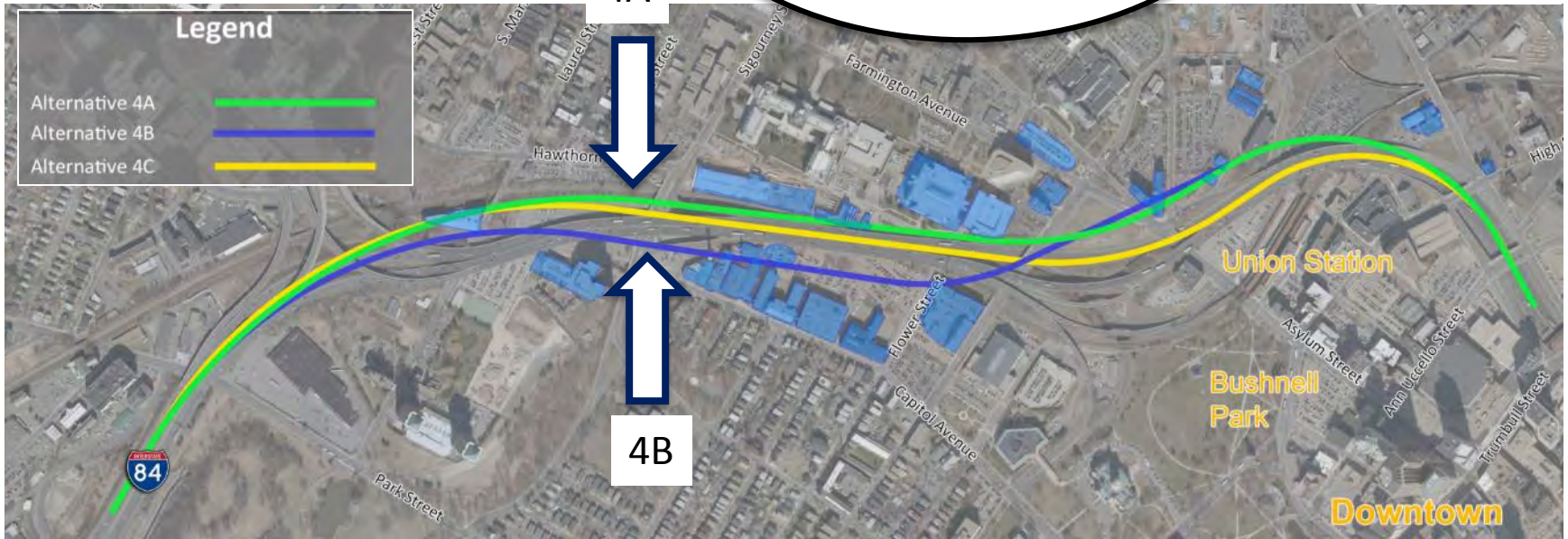




3 Tunnel Alignments Considered

Blue shaded buildings are potentially impacted

Alternatives 4A and 4B have significant property impacts





3 Tunnel Alignments Considered

Alternative 4C
(yellow line)
builds tunnel
under existing
highway



Blue shaded buildings are potentially impacted





Tunnel challenges

While the tunnel offers some exciting benefits, it has many challenges



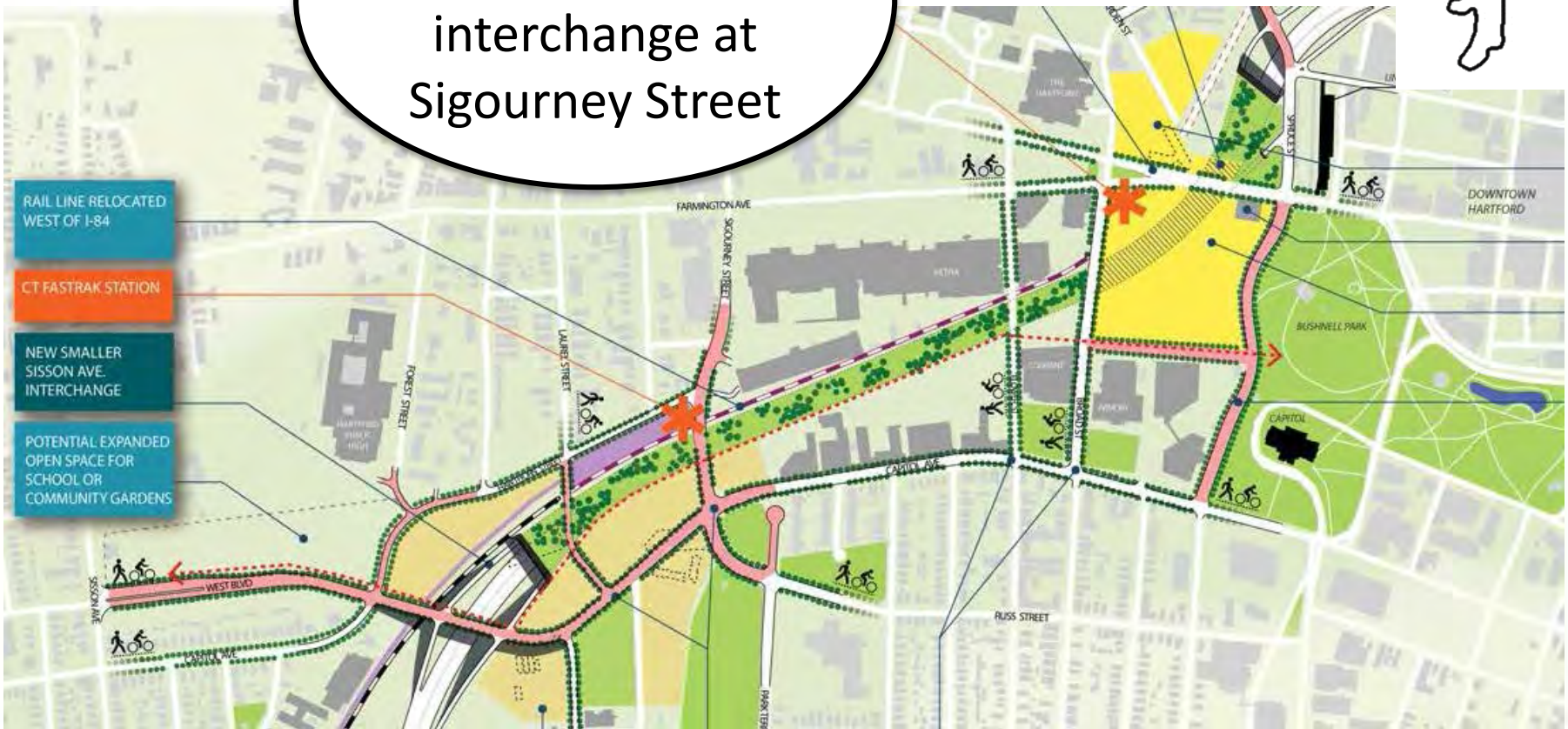
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- POTENTIAL EXPANDED OPEN SPACE FOR SCHOOL OR COMMUNITY GARDENS





Tunnel challenges

We are unable to provide an interchange at Sigourney Street



RAIL LINE RELOCATED WEST OF I-84

CT FASTRAK STATION

NEW SMALLER SISSON AVE INTERCHANGE

POTENTIAL EXPANDED OPEN SPACE FOR SCHOOL OR COMMUNITY GARDENS

Tunnel challenges

This could result in a lot of traffic on local streets such as Capitol Ave





Tunnel challenges

More detailed engineering is revealing even greater cost than originally assumed



Tunnel challenges

Temporary structures would need to be built to support existing highway during tunnel construction





Construction Considerations

Maintaining traffic during construction will affect how the project is constructed



Maintaining Traffic

Building 'on-top' of the existing highway alignment is more difficult than building off alignment



Alternative 3B



Alternative 3C

Maintaining Traffic

Alternative 3B, for example, could be partially built to the north of the existing alignment



Alternative 3B



Alternative 3C



Maintaining Traffic

Alternative 3C
however, gets built
directly in the existing
I-84 footprint



Alternative 3B



Alternative 3C



Conventional Construction

Conventional construction methods maintain traffic but typically takes a long time



Conventional Construction

Bridges are usually constructed on-site



Conventional Construction

Often, temporary construction is needed which increases overall cost





Accelerated Construction

Accelerated construction methods limit traffic flow to achieve shorter construction duration



Example: I-84 Southington, CT





Accelerated Construction

Often, bridges can be constructed offsite and transported when they're ready



Example: I-84 Southington, CT





Accelerated Construction

Temporary construction is minimized which could save time and money



Example: I-84 Southington, CT





Maintaining Traffic

So how might we manage traffic to expedite construction?





Maintaining Traffic

We might consider closing sections of I-84 or some of the travel lanes



Maintaining Traffic

This could minimize property impacts and require less temporary construction





Maintaining Traffic

We would also want to maximize use of transit options, such as CTfastrak, commuter rail, and local bus





Maintaining Traffic

There are many other ways to manage demand in and out of Hartford, especially during the peak hours





Maintaining Traffic



The good news is that other states have taken these steps with great success!



I-40 Knoxville, Tennessee



What's next

Where do we
go from here?



More meetings scheduled...

- OPS in August and September, November and December
- Public meetings in October
- Local pop-up events all summer long

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





More meetings scheduled...

We hope you continue to participate in the I-84 Hartford Project by attending these informative events!





Thank You!

Thank you for your time. We deeply appreciate your time and your commitment to helping us reach the best possible solution for the State of Connecticut, the Capitol Region, and the City of Hartford.

Your I-84 Hartford Project Team