

# Removal of the Exit 21 Off-Ramp on Interstate 84 Eastbound (EB) in Waterbury State Project No. 151-340



**HNTB**

**Conceptual Public Information Meeting/CEPA  
Scoping Meeting  
March 23, 2023**



# Welcome!





# Removal of the Exit 21 Off-Ramp on Interstate 84 EB in Waterbury

## Project Leadership Team



### Connecticut Department of Transportation

- Michael N. Calabrese, PE, Division Chief
- Nilesh Patel, PE, Principal Engineer
- Jonathan Dean, PE, Project Manager
- Joe Belrose, EIT, Project Engineer

### HNTB Corporation

- Rudy Franciamore, PE, Project Manager
- David Schweitzer, PE, Technical Advisor
- Anna Mariotti, Public Information & Involvement



# Agenda

- **Connecticut Environmental Policy Act (CEPA)**
- **The New Mix: Overview & Breakout Projects**
- **Removal of Exit 21 Off-ramp on I-84 Eastbound (EB) in Waterbury**
  - ❖ **Need**
  - ❖ **Purpose & Components**
  - ❖ **Benefits**
- **Next Steps & How to Stay Involved**
- **Question & Answer Session**





# Connecticut Environmental Policy Act (CEPA)

## CEPA Core Purpose

- Identify and assess potential environmental impacts
- Evaluate alternatives to avoid or minimize such impacts
- Public Involvement

**CEPA review required for any State action that could have major impact on the environmental, social, and/or economic resources**



# CEPA

## Physical

- Air Quality & Greenhouse Gas Emissions
- Noise
- Traffic
- Utilities & Services
- Stormwater
- Solid & Hazardous Waste
- Aesthetics & Scenic Resources
- Cultural Resources
- Energy Use

## Natural

- Erosion or Sedimentation
- Surface Water
- Groundwater
- Floodplains
- Wetlands
- Fisheries
- Plants & Wildlife/ State Listed Species
- Changing Climate/Resilience

## Socioeconomic

- Land Use & Zoning
- State, Regional and Local Land Use Planning
- Public Health & Safety
- Recreational Resources
- Environmental Justice
- Plan of Conservation & Development

# CEPA

## What is CEPA Scoping?

- Gathering and analysis of information that a state agency will use to establish the breadth of environmental review of a proposed project.

## Public Scoping Process

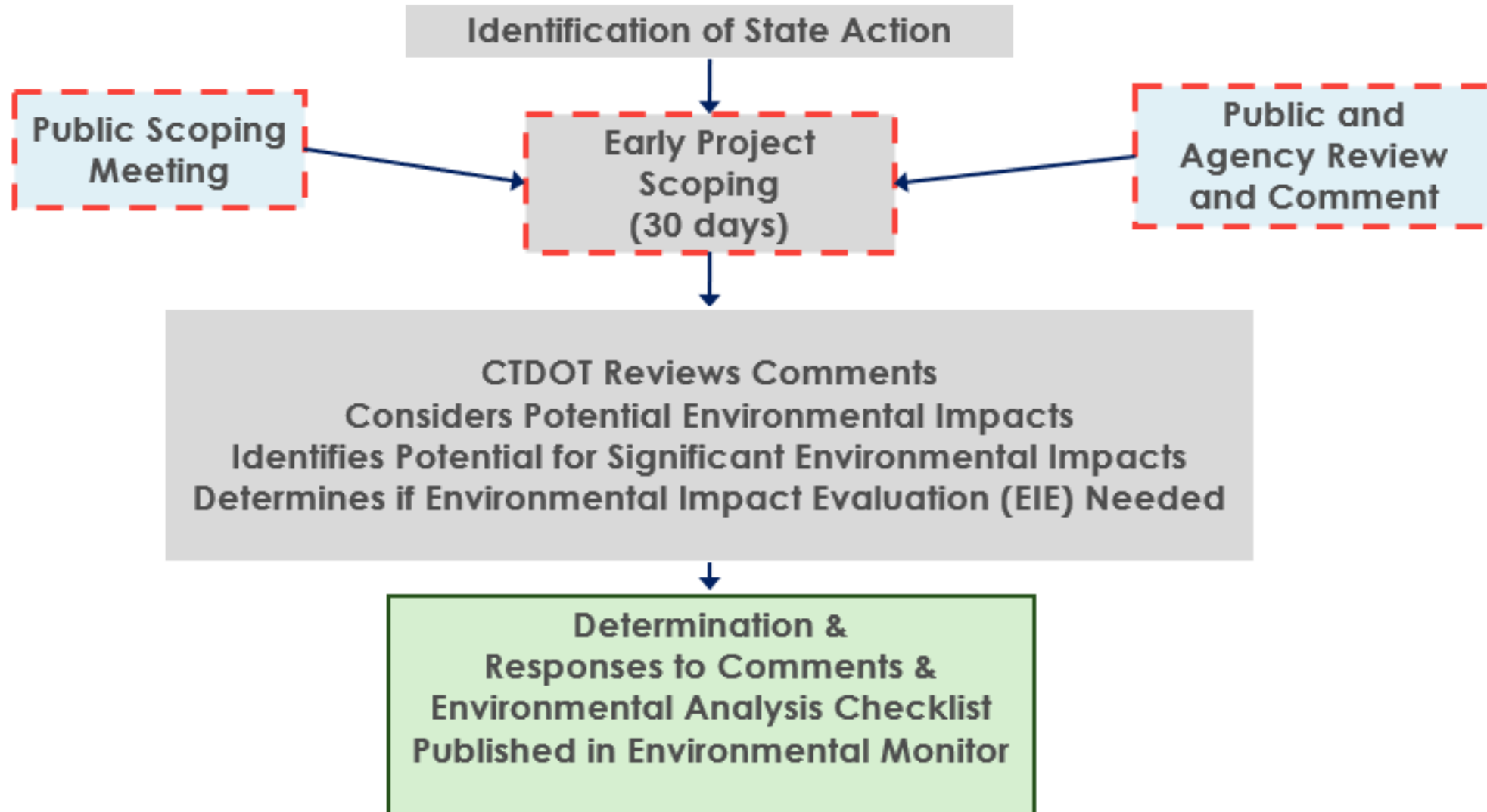
- Publish Notice of Project in *Environmental Monitor*
- Minimum 30-day public comment period
- Identify environmental concerns / potential alternatives
- Public Scoping Meeting
- Determine if an Environmental Impact Evaluation (EIE) is needed

<https://portal.ct.gov/CEQ/Environmental-Monitor/Environmental-Monitor/Environmental-Monitor---Current-Issue>





# CEPA Process



# To Summarize, CEPA:

- Identifies & evaluates project's potential impacts the environment.
- Enables project team to judge the appropriateness of proceeding with the action
- Provides opportunity for public review & comment through an early scoping process and later review of any Environmental Impact Evaluations (EIE), if one is produced.

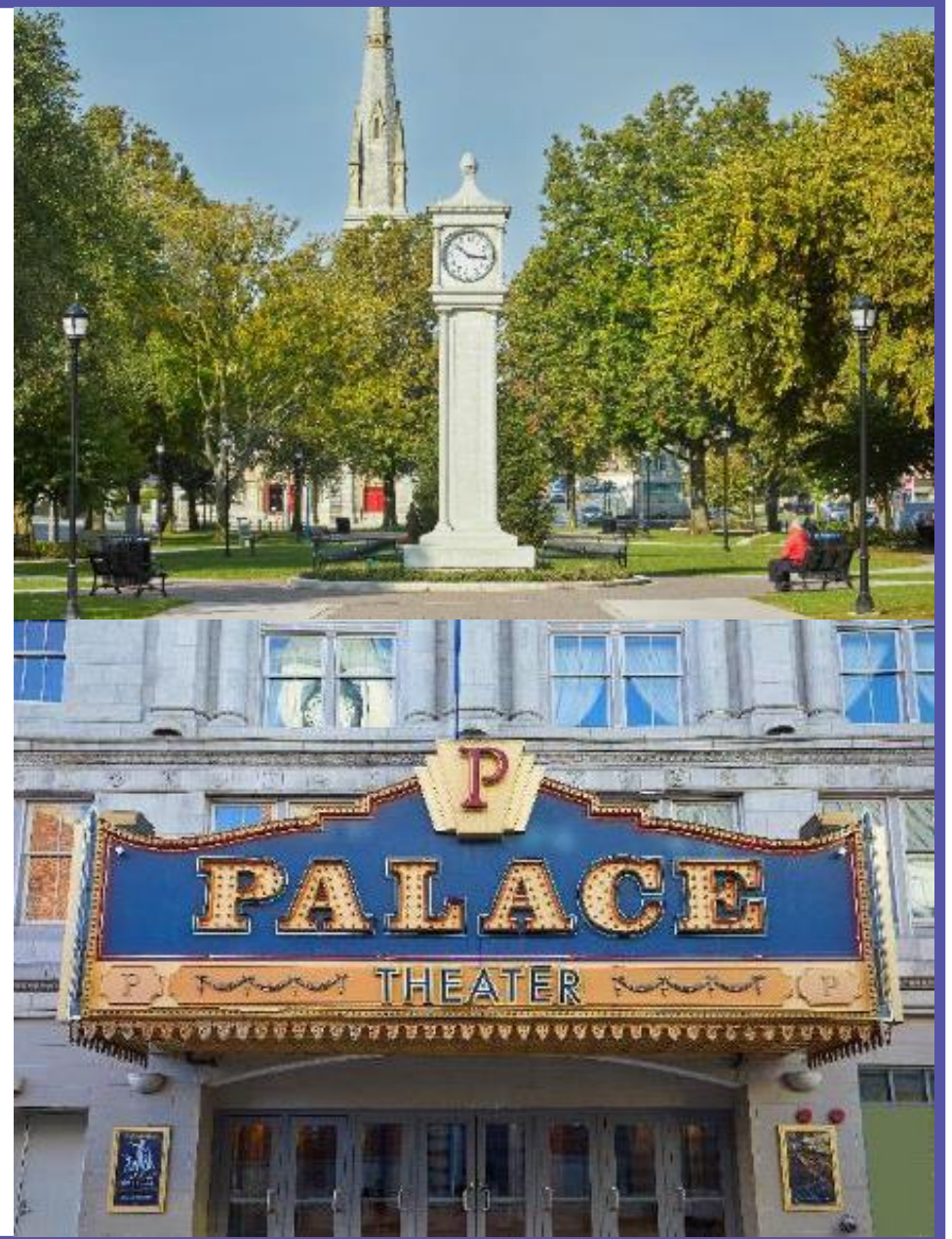


# **The New Mix: Overview & Breakout Projects**

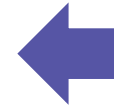


# The **New Mix** Project: Overview

- Long-term plan for the future of the Mixmaster
- Analyze rehabilitation and replacement options that:
  - Modernize
  - Improve safety & functionality
  - Improve function of local roadway network & the interchange
  - Reduce congestion
  - Align with economic development & community plans
- Projects will occur over time



# Breakout Projects to Occur Over Time



## Early Action Projects

Standalone improvements to the highway and local roadway network

## Near-Term Projects

Improvements to highway approaching Mixmaster compatible with Long-Term Projects



## Long-Term Projects

Reconstruction of core interchange structures



84new  
mix





# Breakout Projects Timeline



Projects for the short- and long-term future of the Mixmaster Interchange.

Early Action  
Projects

Mid to late  
2020s

Near-Term  
Projects

Late 2020s to  
mid 2030s

Long-Term  
Projects

Mid 2030s  
to 2045

Incremental Improvements. Increased Functionality. Enhanced Safety.



# Early Action Projects

- Smaller, standalone improvements to the highway & local roadway network
- Intended to improve safety & traffic operations
- Done in coordination with the City of Waterbury
- Review process separate from the New Mix

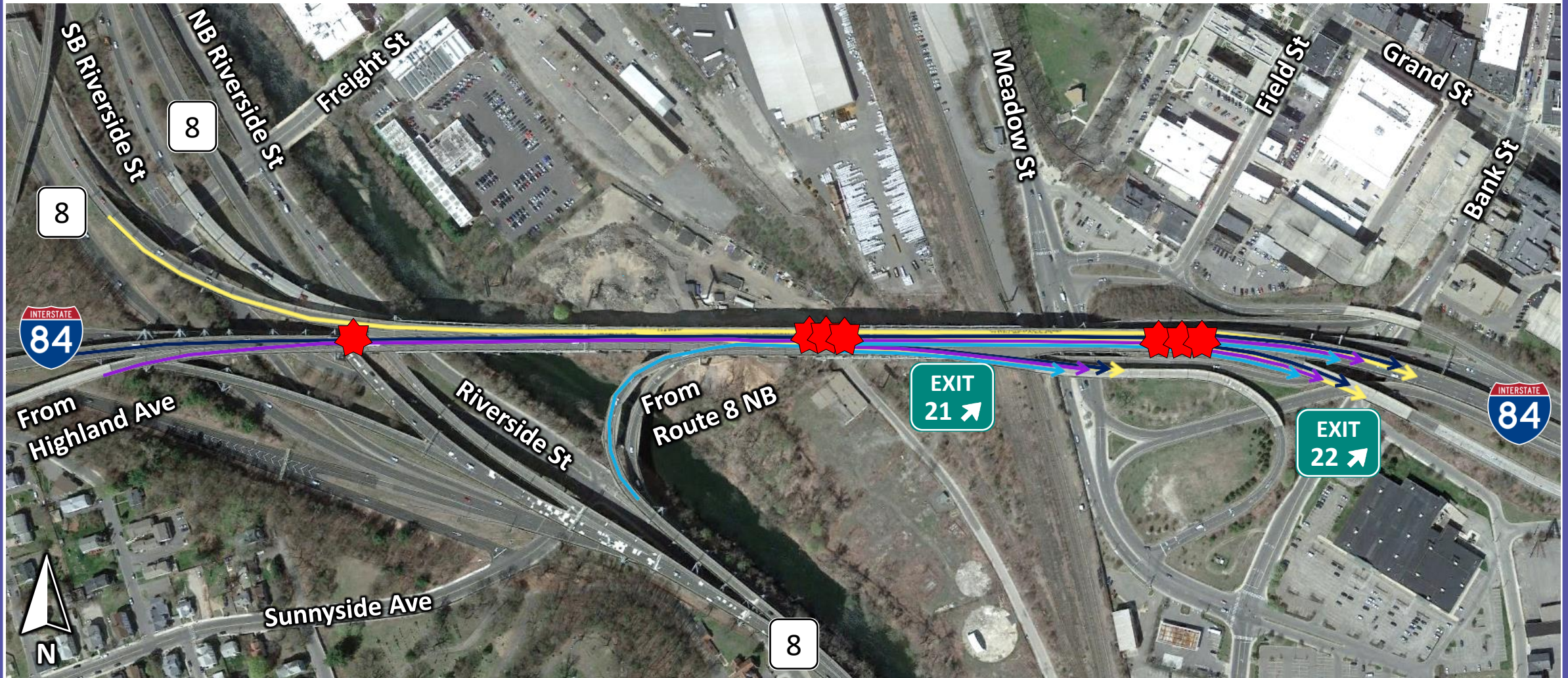


# **Removal of the Exit 21 Off-Ramp on Interstate 84 EB in Waterbury:**

## **Project Need**



# Project Need: Current Issues



## Vehicle Routes

— From I-84    — From Highland Ave    — From Route 8 SB    — From Route 8 NB

★ Conflict Points



# Project Need: Congestion (2017)



200 ft

© 2017 Microsoft Corporation

[Bing Maps Terms of Usage](#)



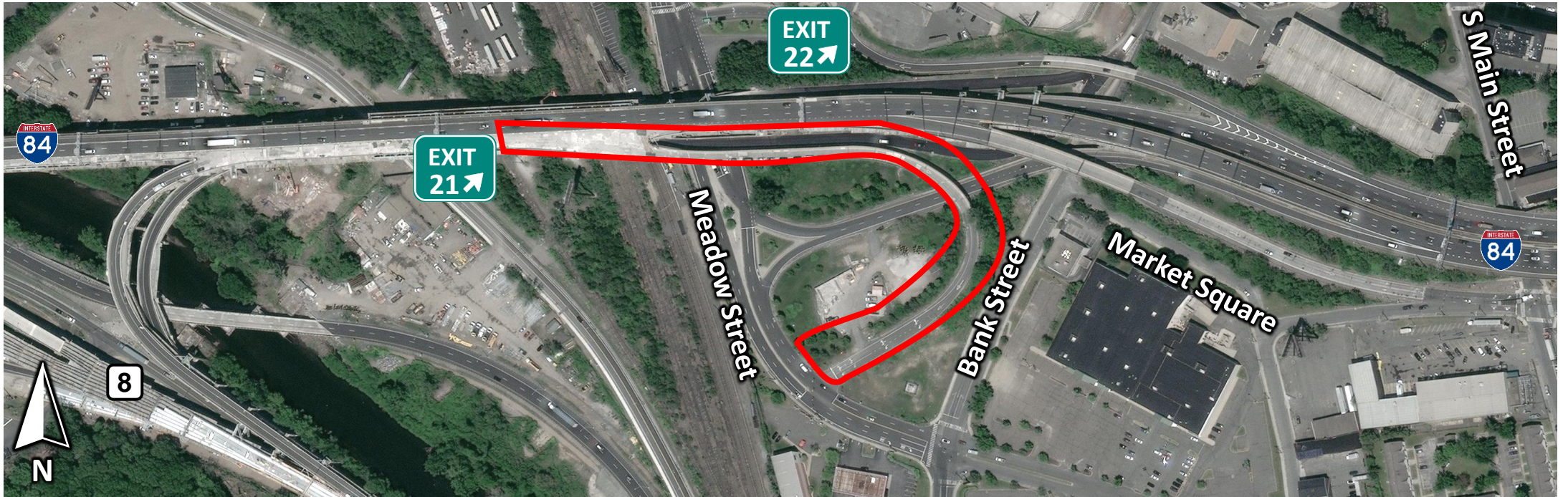


# 2031: Conditions with Exit 21 Off-ramp Open (No Build)





# Project Need: Summary



- Substandard distances for Ramp Merges/ Weaves/ Diverges
- High Crash Location
- Recurring congestion
- Deficient Traffic Operations
- Bridge in poor condition

# **Solutions: Project Purpose & Components**

# Project Purpose

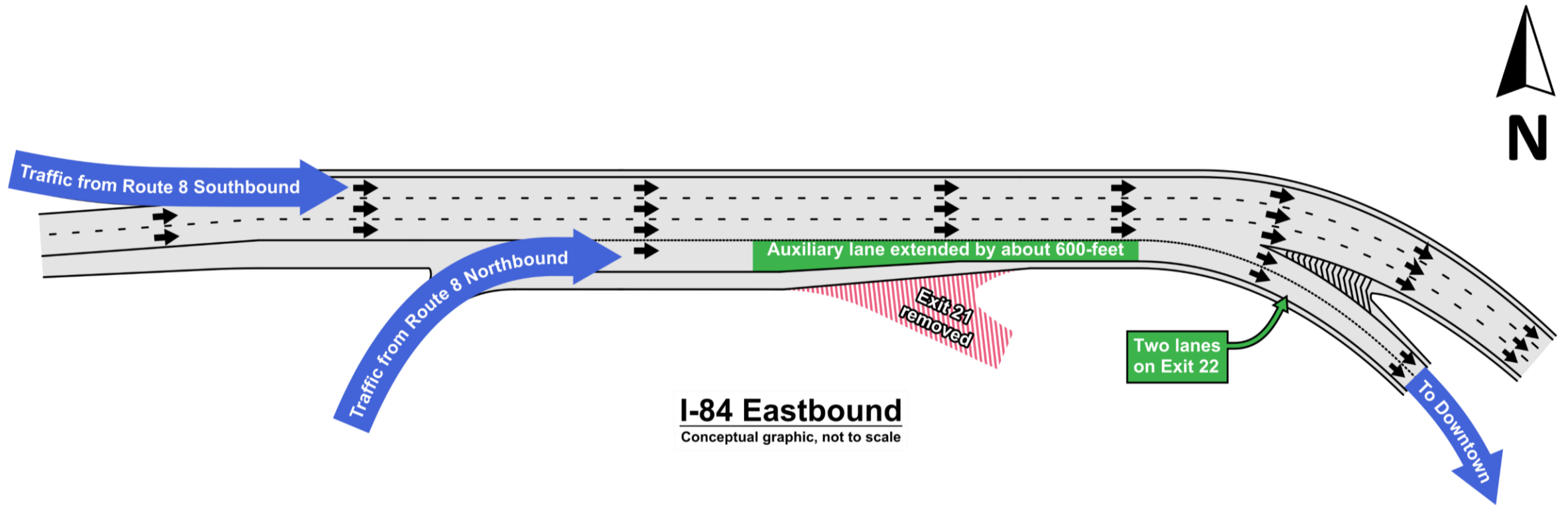
## Improve:

- **Safety** on I-84 EB in the vicinity of Exits 19-22
- **Traffic Operations** on I-84 EB in the vicinity of Exits 19-22
- **Air Quality** (Reduction of idling cars)





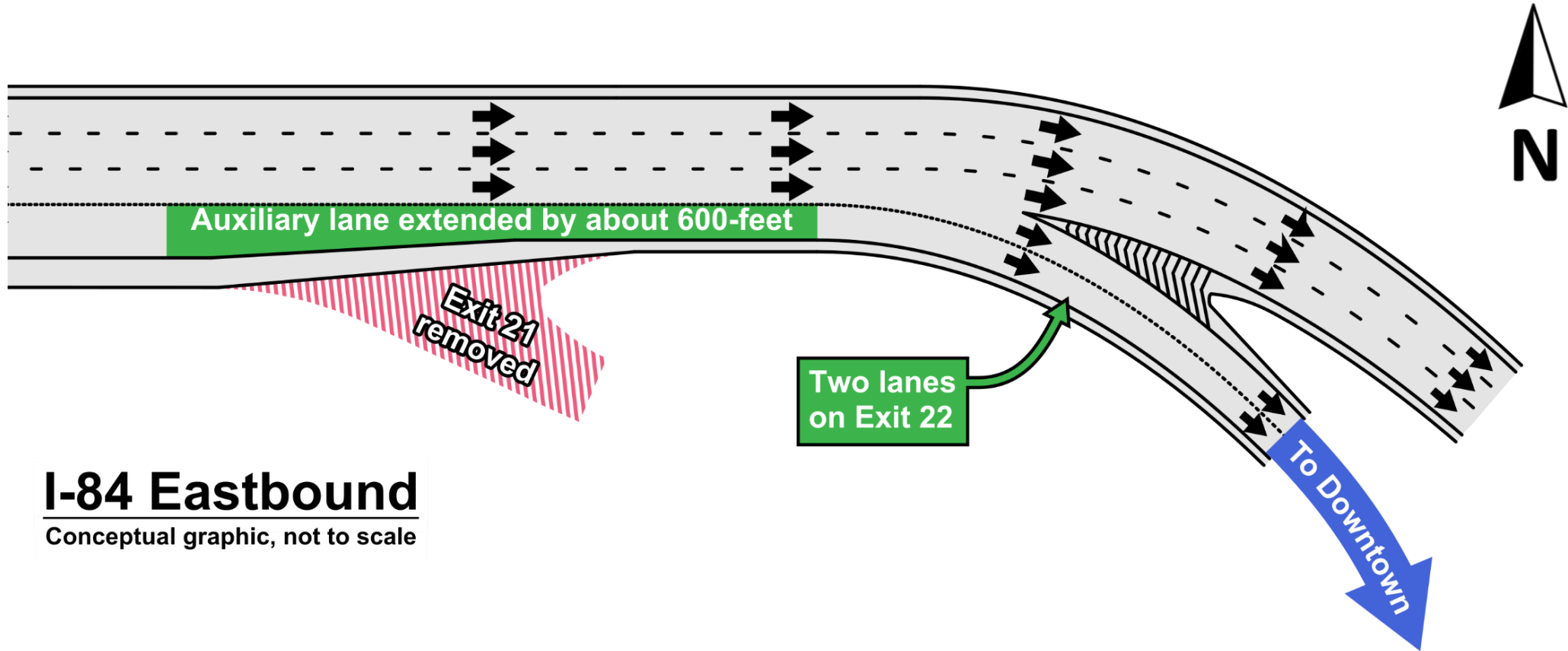
# Solutions: Close Exit 21 & Lengthen Auxiliary (Weave) Lane



**I-84 Eastbound**  
Conceptual graphic, not to scale



# Solutions: Accommodate Additional Traffic on Exit 22



**I-84 Eastbound**

Conceptual graphic, not to scale

# 2031: Conditions with Exit 21 Closed (Build)





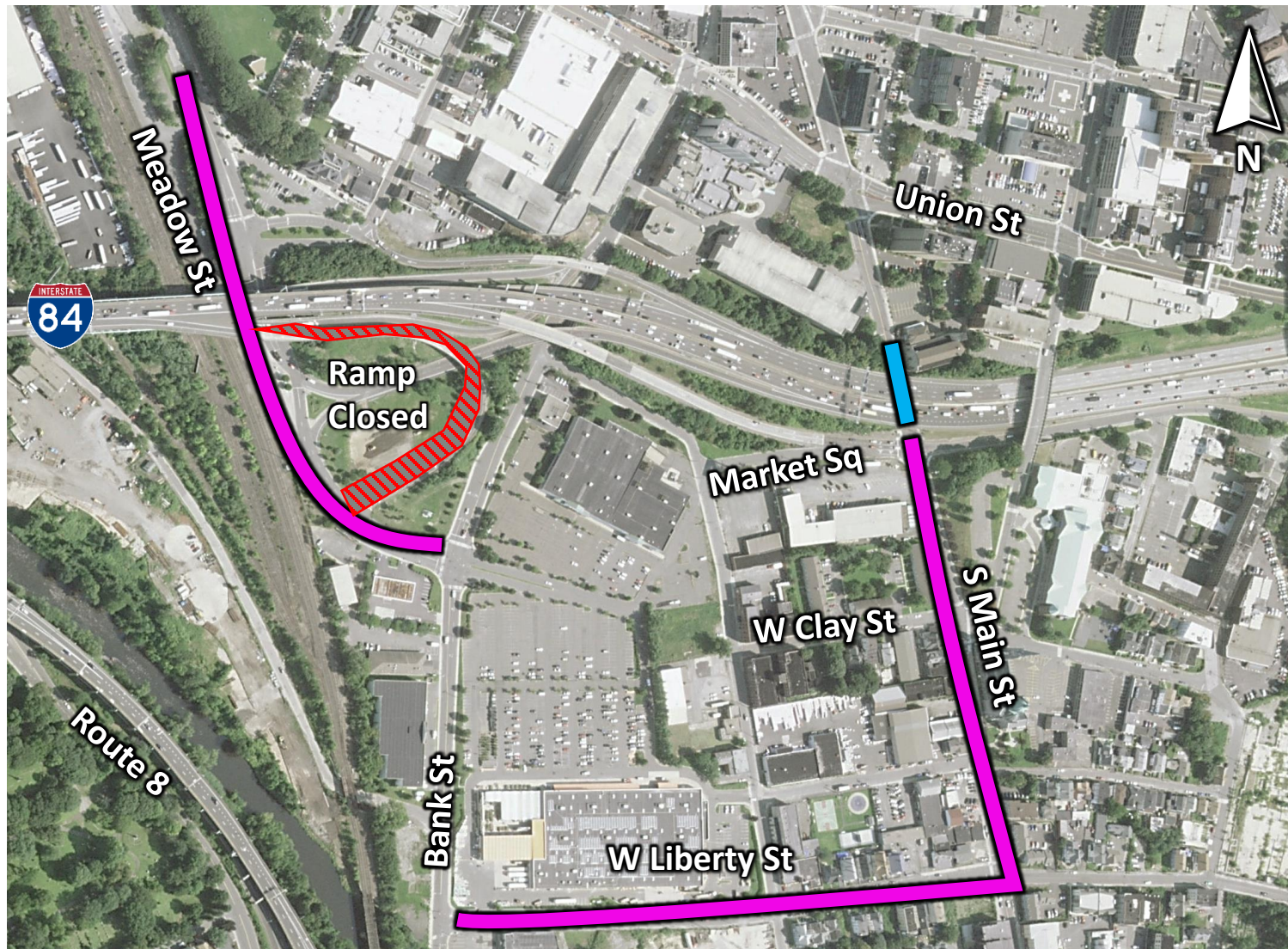
# Project Solutions: Improvements to Local Roadway Network to Accommodate Additional Traffic






- New traffic signal controls
- Signal phasing and timing improvements
- Pavement marking repositioning



# Project Solutions: Urban Design Opportunities



-  Road Closure
-  Underpass Improvements
-  Roadway Improvements

- Bike and Pedestrian Improvements
- Aesthetic Improvements (such as public art)
- Landscaping
- Wayfinding signage
- Lighting
- Formalized Parking
- Bus Shelters



# Project Solutions: Urban Design Opportunities

## Decorative Plantings



Philadelphia, PA

Decorative plantings can bring life to the street, providing aesthetic interest and a buffer between vehicles and pedestrians.

## Underpass Lighting



Philadelphia, PA

Well lit underpasses offer safe and inviting passage for all users.

## Wayfinding Signage



Missoula, MT

Signage can help orient travelers and give an identity or brand to a city or neighborhood.

## Pedestrian & Bicyclist Friendly Intersections



New York, NY

Pedestrian and bicyclist friendly intersections include safety features to make nonmotorized travel a more inviting and comfortable choice.

## Public Art



Augusta, GA

Public art can help enliven a space and create a recognizable or meaningful landmark in a city.

## Bus Shelters



Waterbury, CT

Bus shelters protect transit riders from the elements. They can help improve the safety and comfort of bus patrons.

## Benches



Clinton, IA

Public seating invites neighbors to enjoy the streetscape. Benches can encourage active street life, by offering respite or opportunities to gather.

# Project Benefits

# Project Benefits: Improved Safety & Reduced Crash Rate on I84 EB

- Closing Exit 21 Off-ramp results in safety benefits to drivers
- Increased safety & potential 9-10% reduction in crashes in vicinity of Exit 22
- Improved traffic operations on highway, potentially improving air quality

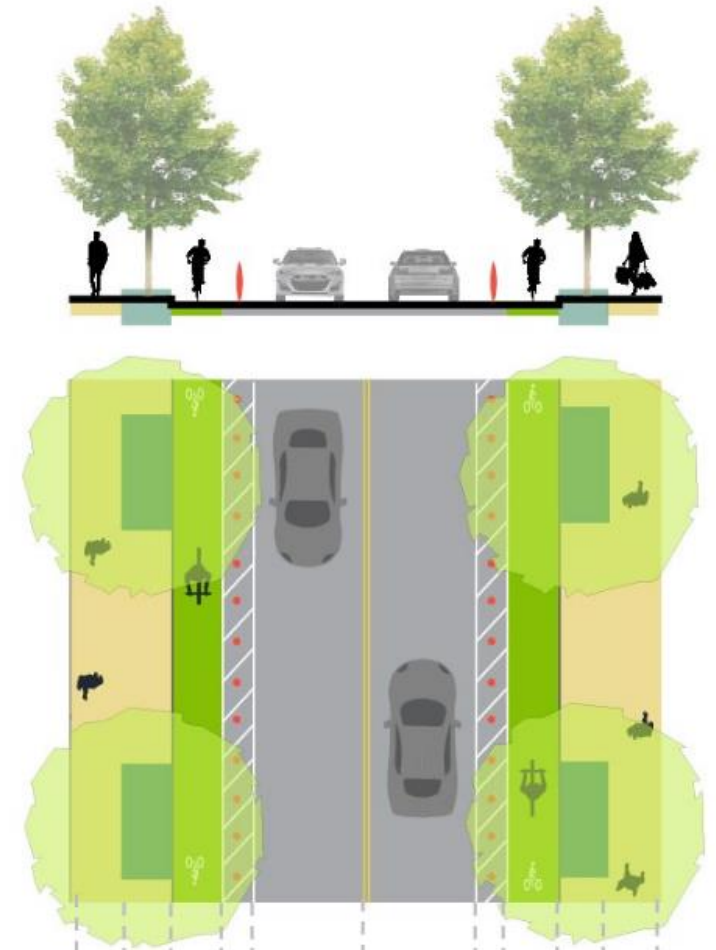


**84new  
mix**



# Summary of Expected Benefits to Local Roadway Network

- Improved traffic operations
- Streetscape and urban design for safer & welcoming streets for bicyclists & pedestrians
- Improved safety for pedestrians & bicyclists
- Beautification of area with Urban Design elements such as public art, decorative plantings, wayfinding signage
- **Improved Travel Times to Key Destinations**

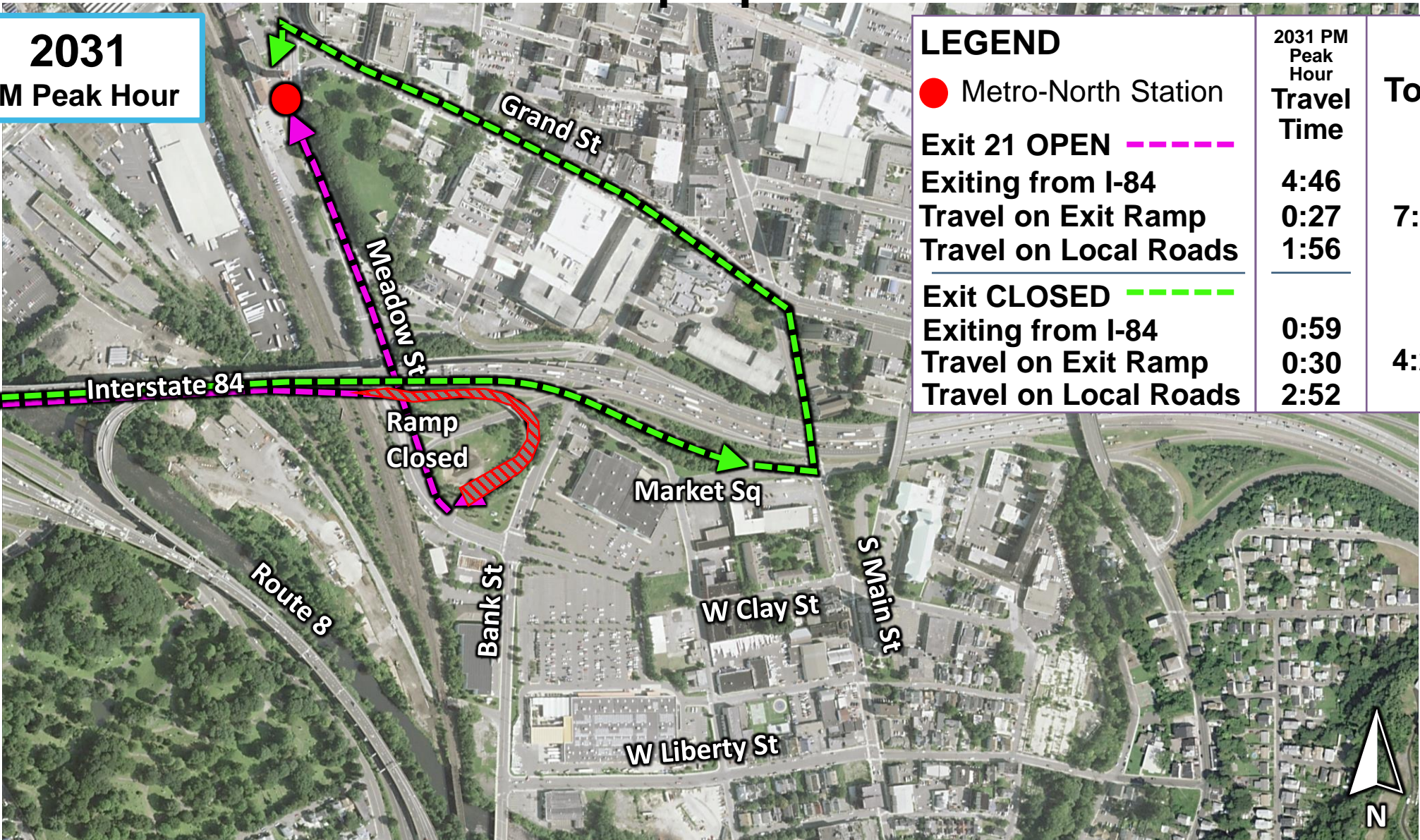




# Travel Times with Exit 21 Off-ramp Open VS Closed

**2031**  
PM Peak Hour

**START**  
From I-84  
EB Exit 20



## LEGEND

● Metro-North Station

Exit 21 OPEN ---

Exiting from I-84

Travel on Exit Ramp

Travel on Local Roads

Exit CLOSED ---

Exiting from I-84

Travel on Exit Ramp

Travel on Local Roads

2031 PM  
Peak  
Hour  
Travel  
Time

**Total**

4:46  
0:27  
1:56

**7:09**

0:59  
0:30  
2:52

**4:21**

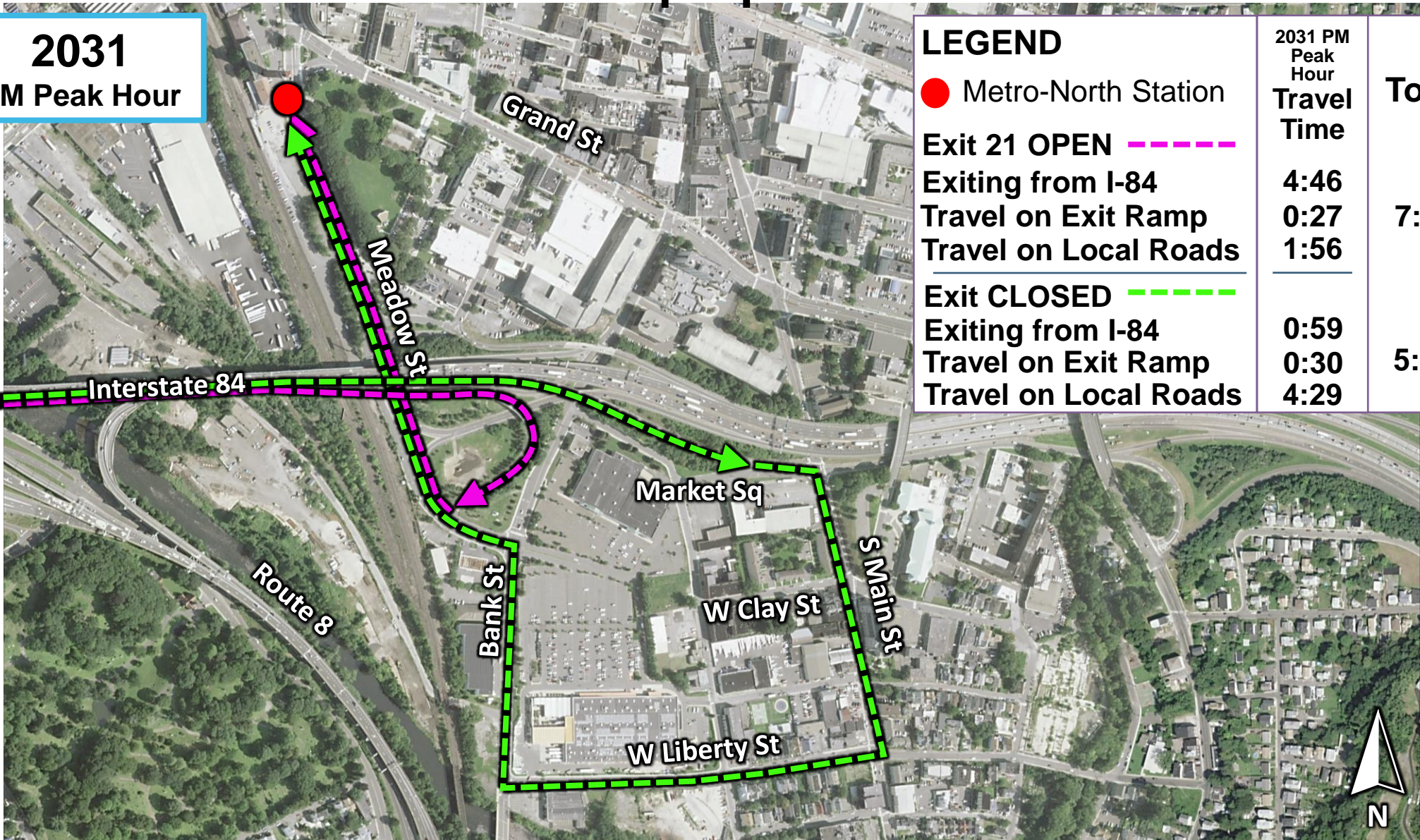




# Travel Times with Exit 21 Off-ramp Open VS Closed

**2031**  
PM Peak Hour

**START**  
From I-84  
EB Exit 20



## LEGEND

● Metro-North Station

Exit 21 OPEN ---

Exiting from I-84

Travel on Exit Ramp

Travel on Local Roads

Exit CLOSED ---

Exiting from I-84

Travel on Exit Ramp

Travel on Local Roads

2031 PM  
Peak  
Hour  
Travel  
Time

**Total**

4:46  
0:27  
1:56

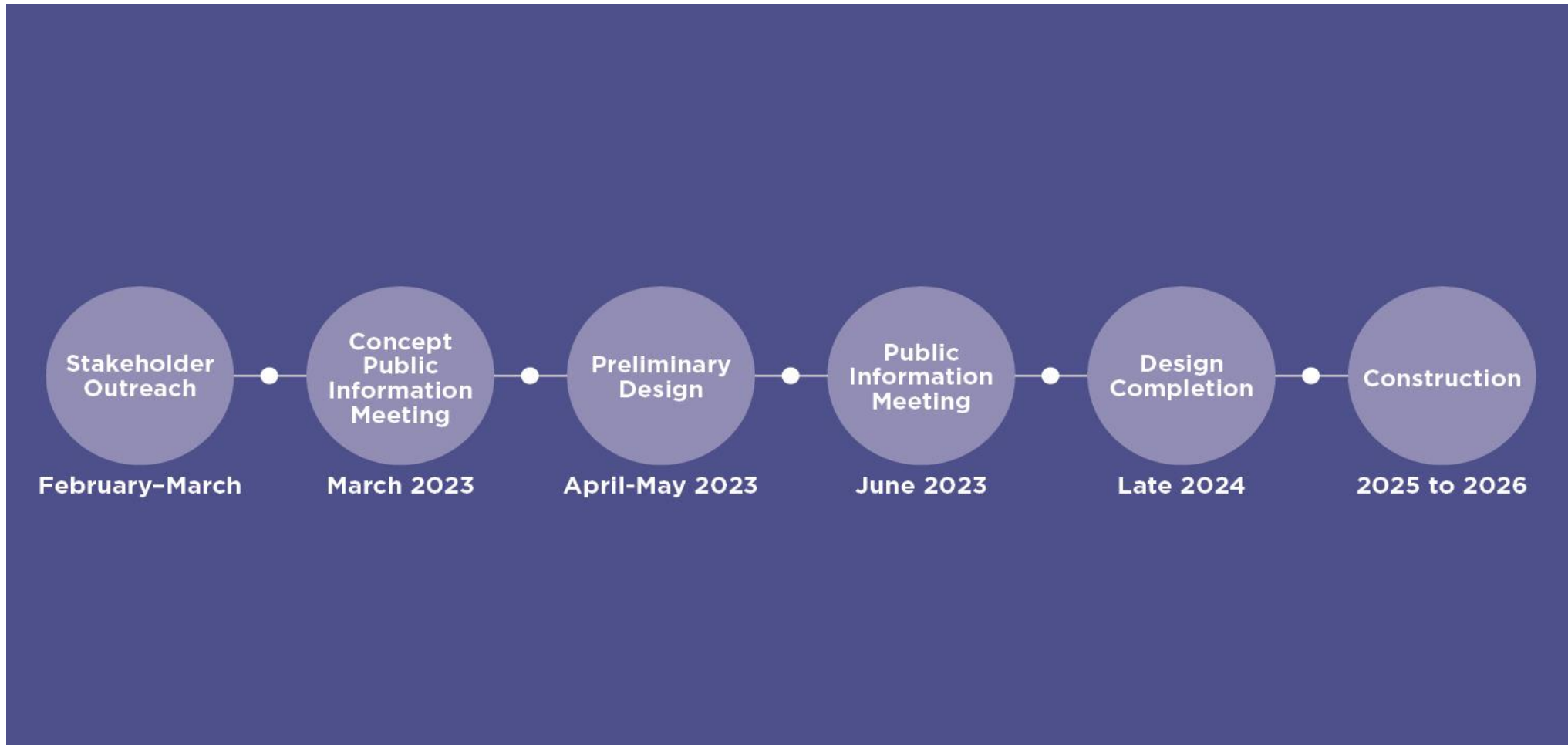
**7:09**

0:59  
0:30  
4:29

**5:58**



# Anticipated Project Cost & Timeline



**Anticipated cost \$20 - \$25M**



# **Next Steps & How to Stay Involved**

# Don't forget to share your input!

*For consideration under CEPA scoping, please share your input by the close of business on Monday, April 10, 2023, using any of the methods below.*

- On the New Mix website's comment form, found at: <https://bit.ly/NewMixInput>
- Leaving a voice message on the New Mix Project's comment line at 203-805-8018
- Emailing [TheNewMixWaterbury@gmail.com](mailto:TheNewMixWaterbury@gmail.com)
- Mailing comments to: New Mix Project CEPA Comments, Attn: Jonathan Dean, Project Manager, 2800 Berlin Turnpike, PO Box 317546, Newington, CT 06131-7546



# Next Public Meeting

Anticipated in June/July 2023

**Where:**

Maloney Magnet School

**Topics:**

Overall Project Update, Urban Design Discussion & Feedback, Overview of CEPA Public Comments Received, Next Steps, Q&A





# Question & Answer Session

State Project # 151-340

Share your feedback, input and ask questions:



Call us at 203-805-8018



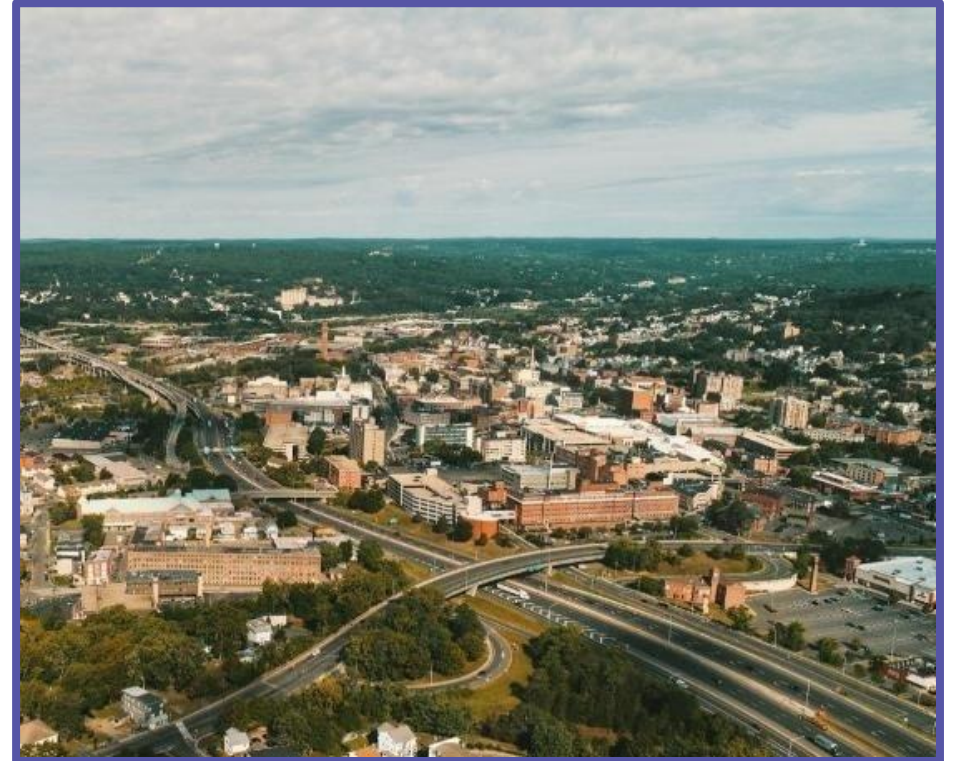
Project Email:  
[thenewmixwaterbury@gmail.com](mailto:thenewmixwaterbury@gmail.com)



Webpage: [newmixwaterbury.com](http://newmixwaterbury.com)



Signup to be alerted about future  
Public Meetings: [bit.ly/NewMixEmail](https://bit.ly/NewMixEmail)



**HNTB**

**84** new mix



# Thank you.



# EXTRA SLIDES



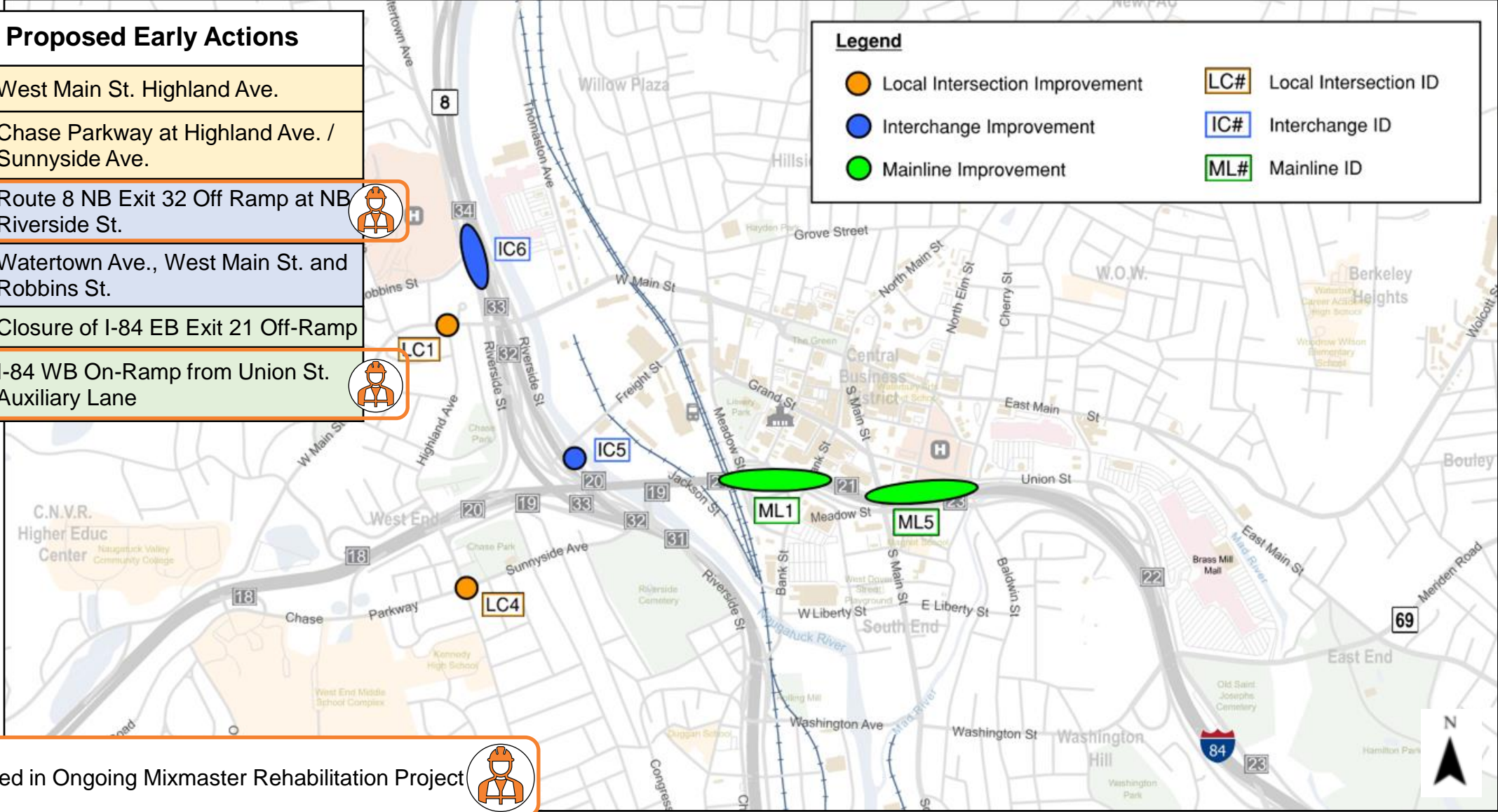


# Proposed Early Action Projects

Proposed Early Actions	
LC1	West Main St. Highland Ave.
LC4	Chase Parkway at Highland Ave. / Sunnyside Ave.
IC5	Route 8 NB Exit 32 Off Ramp at NB Riverside St.
IC6	Watertown Ave., West Main St. and Robbins St.
ML1	Closure of I-84 EB Exit 21 Off-Ramp
ML5	I-84 WB On-Ramp from Union St. Auxiliary Lane

**Legend**

- Local Intersection Improvement
- Interchange Improvement
- Mainline Improvement
- LC# Local Intersection ID
- IC# Interchange ID
- ML# Mainline ID



Included in Ongoing Mixmaster Rehabilitation Project

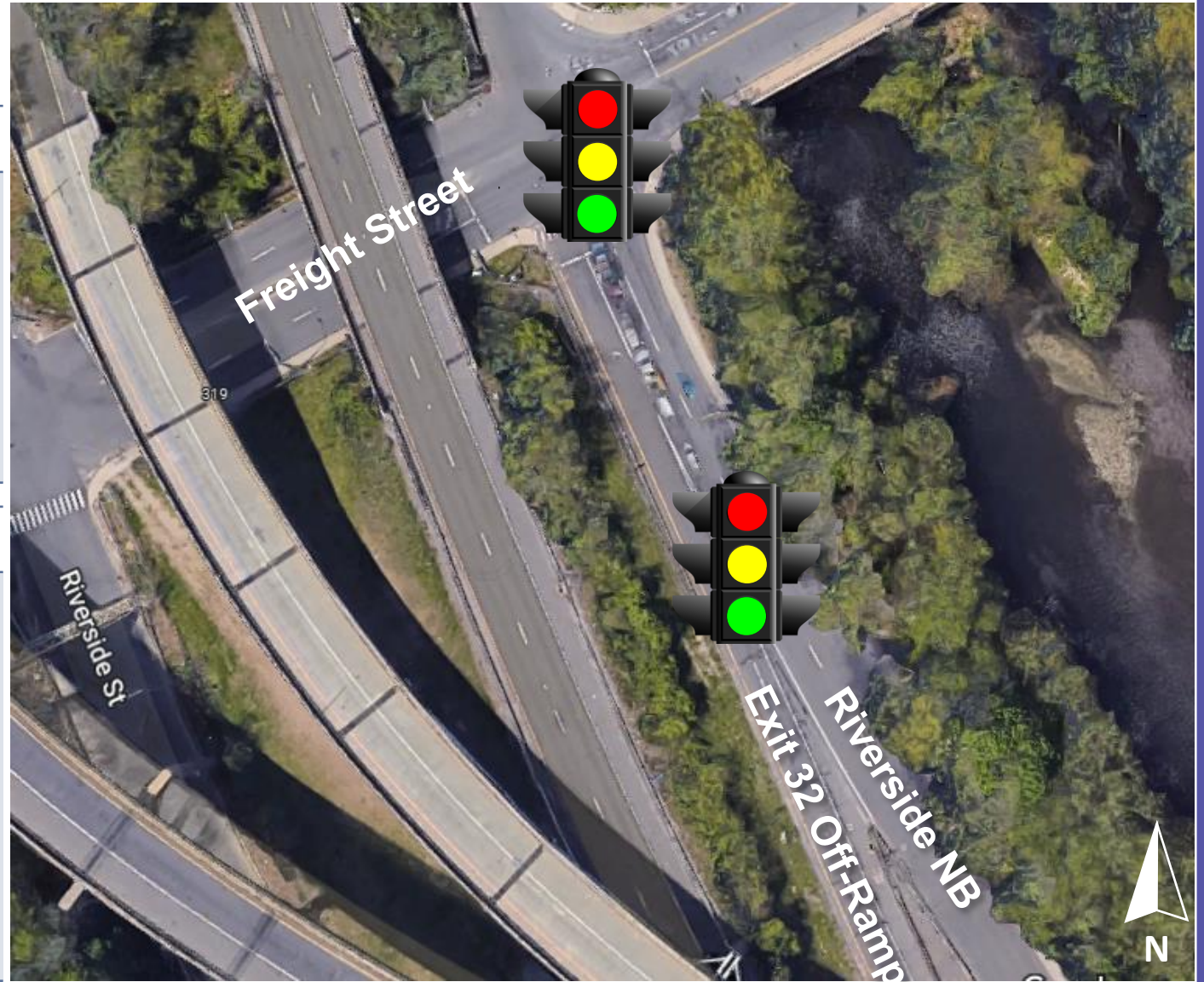
# Early Action Project Example – Local Road

Route 8 NB Exit 32 at Freight Street/Riverside Street NB

Deficiencies	Solutions
<ul style="list-style-type: none"><li>•High Crash Location</li><li>•Deficient Traffic Operations at West Main Street</li></ul>	<ul style="list-style-type: none"><li>•Install offset traffic signal</li><li>•Clustered Control</li><li>•Optimize signal timing</li><li>•Modify approach alignments</li></ul>

## Intended Outcomes

- Relieve pressure from West Main Street signal
- Improve traffic operations
- Reduce congestion (improve air quality)
- Reduce crash rate (improve safety)
- Low impact solution
- Included in rehabilitation project (reduces rework)





# Proposed Early Actions: Exit 21



Potential Utility and Rights-of-Way Impacts

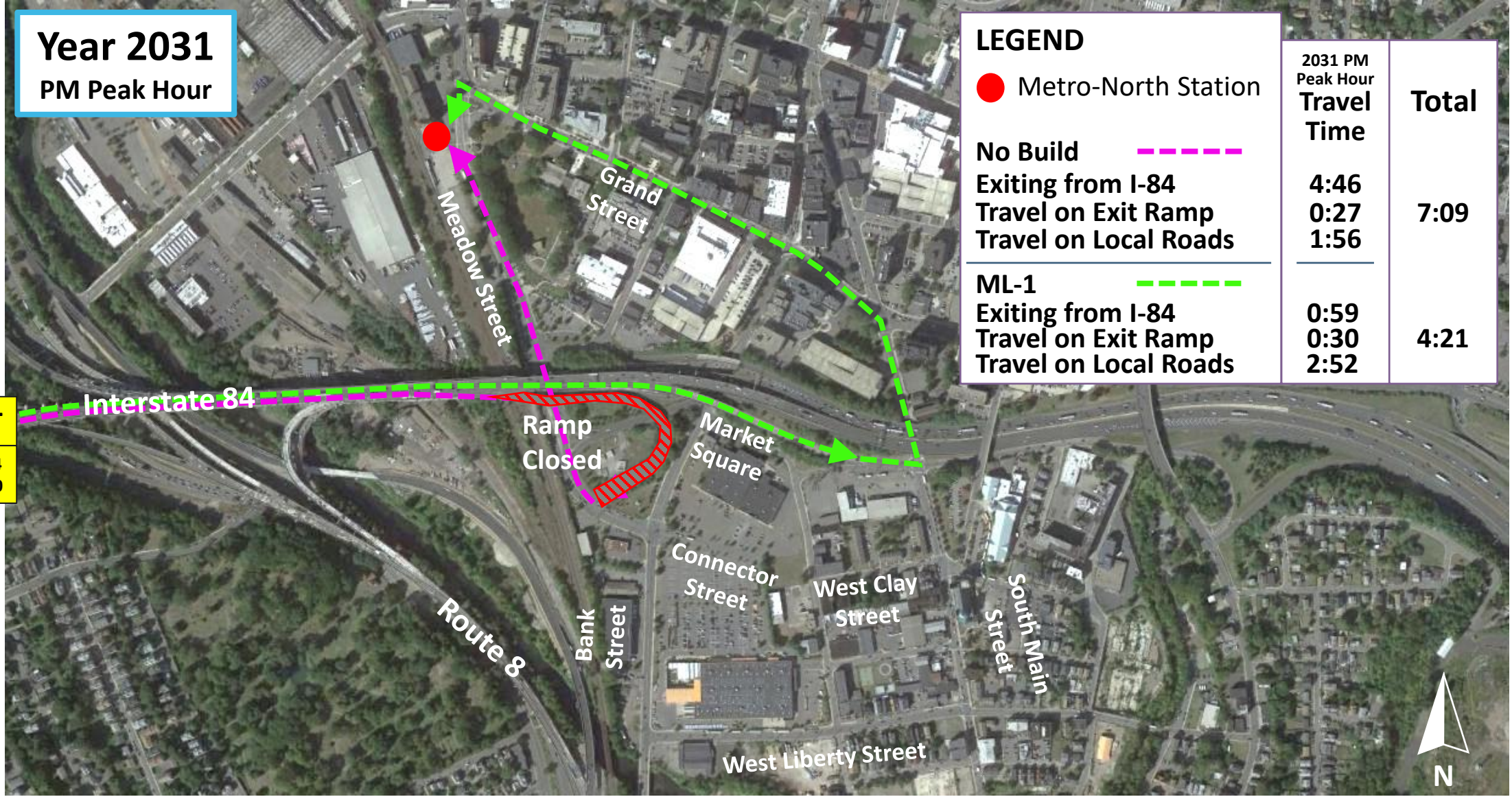


# No Build VS Proposed Access and Travel Times

**Year 2031  
PM Peak Hour**

LEGEND		2031 PM Peak Hour Travel Time	Total
<span style="color: red;">●</span>	Metro-North Station		
<b>No Build</b> <span style="color: magenta;">- - - - -</span>			
Exiting from I-84		4:46	7:09
Travel on Exit Ramp		0:27	
Travel on Local Roads		1:56	
<b>ML-1</b> <span style="color: green;">- - - - -</span>			
Exiting from I-84		0:59	4:21
Travel on Exit Ramp		0:30	
Travel on Local Roads		2:52	

**START**  
From I-84  
EB Exit 20



Interstate 84

Route 8

Meadow Street

Grand Street

Ramp Closed

Market Square

Connector Street

West Clay Street

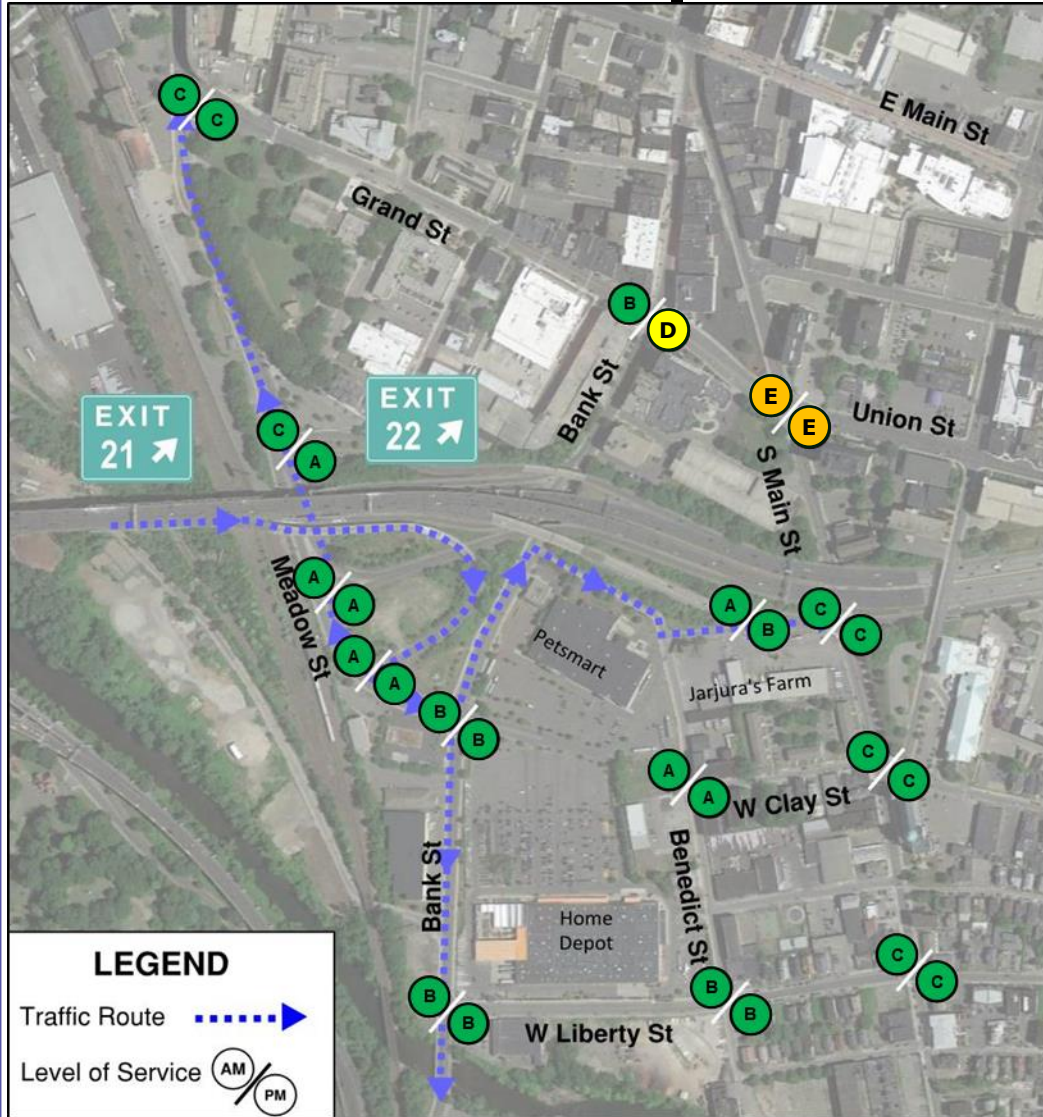
South Main Street

West Liberty Street

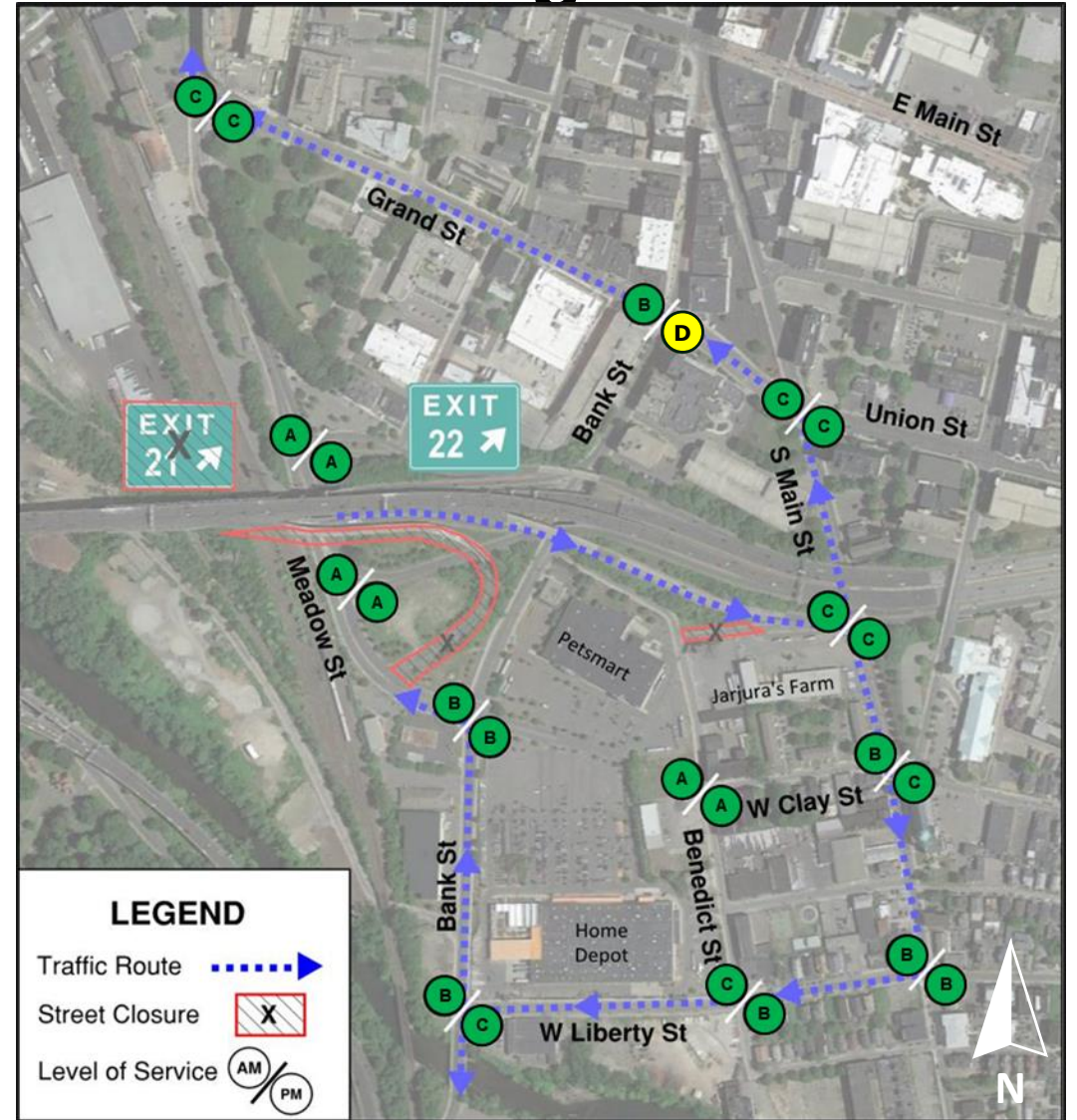




# No-Build VS Proposed Conditions LOS Rating



No Build



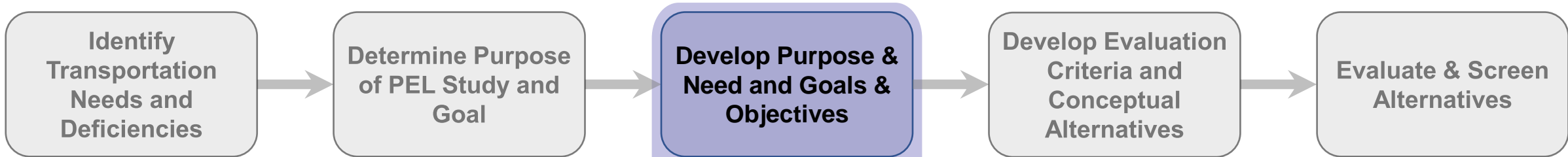
Proposed



# Solutions: Urban Design Opportunities





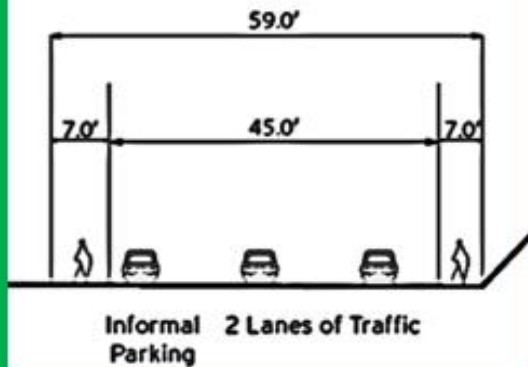


NEEDS (problems)	PURPOSE (solutions)
Structural Deficiencies	To improve I-84/Route 8 bridge conditions.
Geometric Deficiencies	To improve I-84/Route 8 roadway conditions.
Operational (Traffic) Deficiencies (including congestion)	To improve the level of service of I-84/Route 8 and associated local road network.
GOALS & OBJECTIVES (Intended Outcomes)	
<ul style="list-style-type: none"> <li>• Allow for connections to the Naugatuck River and Greenway;</li> <li>• Enhance mobility equity and safety for bicyclists and pedestrians;</li> <li>• Integrate the Project with ongoing City projects;</li> <li>• Improve access to Downtown and key destinations;</li> <li>• Strengthen surrounding neighborhoods as gateways to the City's Central Business District (CBD);</li> <li>• Support City revitalizing goals of the CBD;</li> <li>• Enhance access to multimodal facilities;</li> <li>• Avoid, minimize or mitigate potential Project consequences to the environment;</li> </ul>	<ul style="list-style-type: none"> <li>• Improve system performance;</li> <li>• Reduce congestion;</li> <li>• Reduce crash rates;</li> <li>• Maintain critical system linkages in Connecticut and the Northeast;</li> <li>• Facilitate connectivity with Waterbury through the local road network including multimodal travel;</li> <li>• Improve the local roadway network;</li> <li>• Reduce interchange complexity;</li> </ul>

***May be further refined to incorporate issues and data identified during stakeholder and public involvement processes including coordination with project partners and the public.***

# ML-1 Urban Design Opportunities

South Main Street Existing

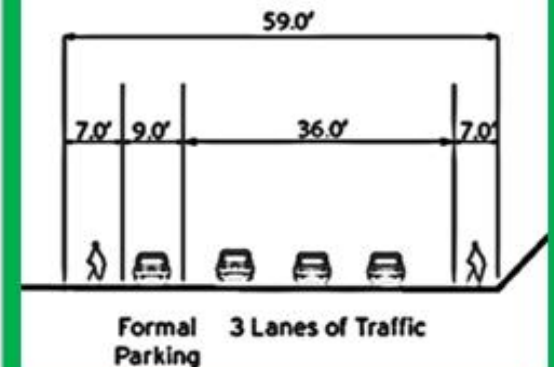


Between Clay and McMahon Streets

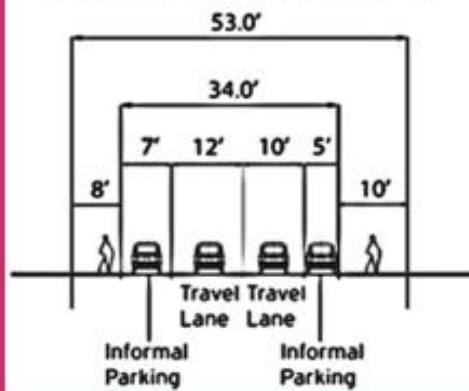


Roadway Improvements

South Main Street Proposed



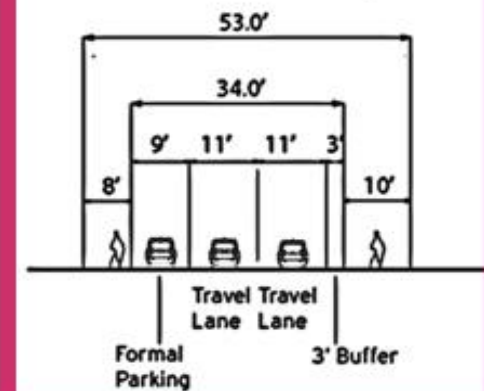
South Main Street Existing



Between Liberty and Clay Streets



South Main Street Proposed

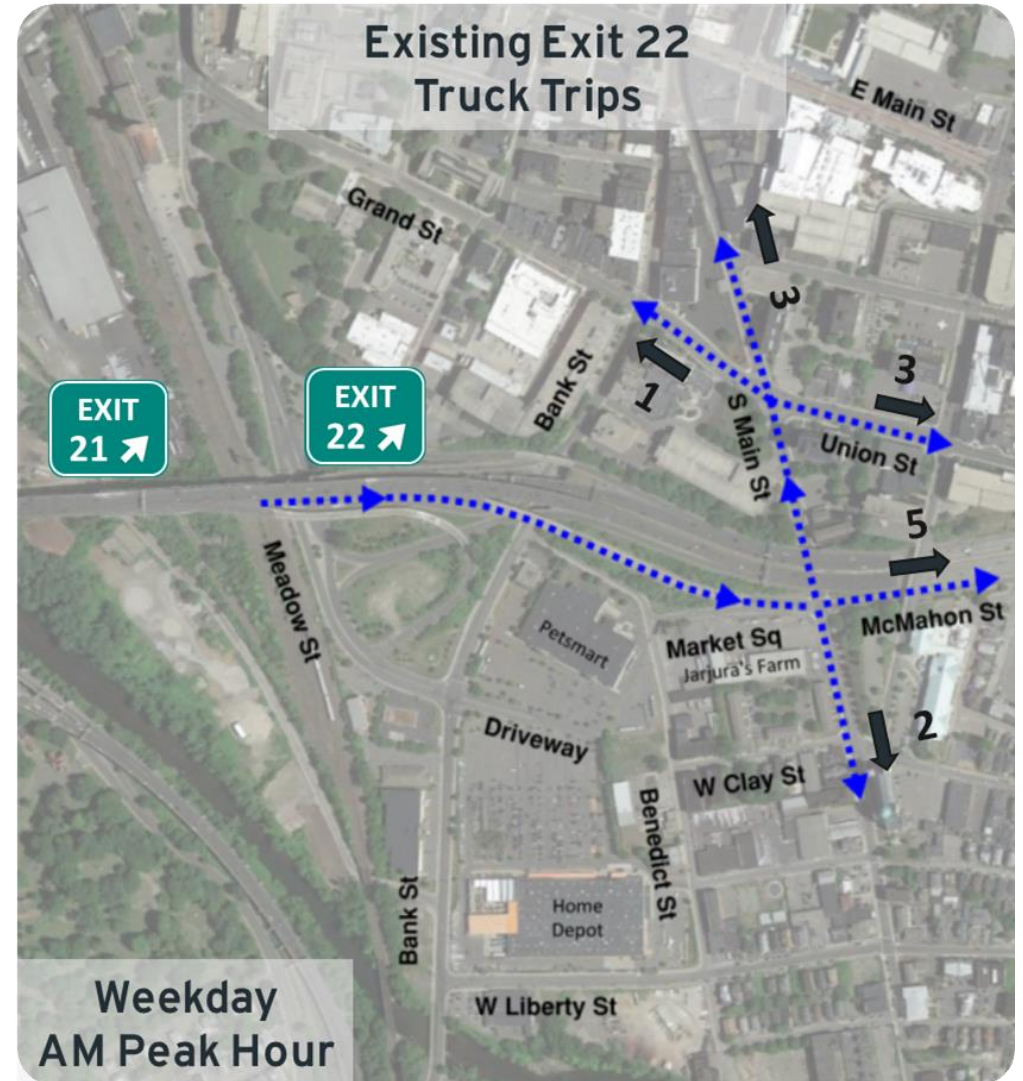
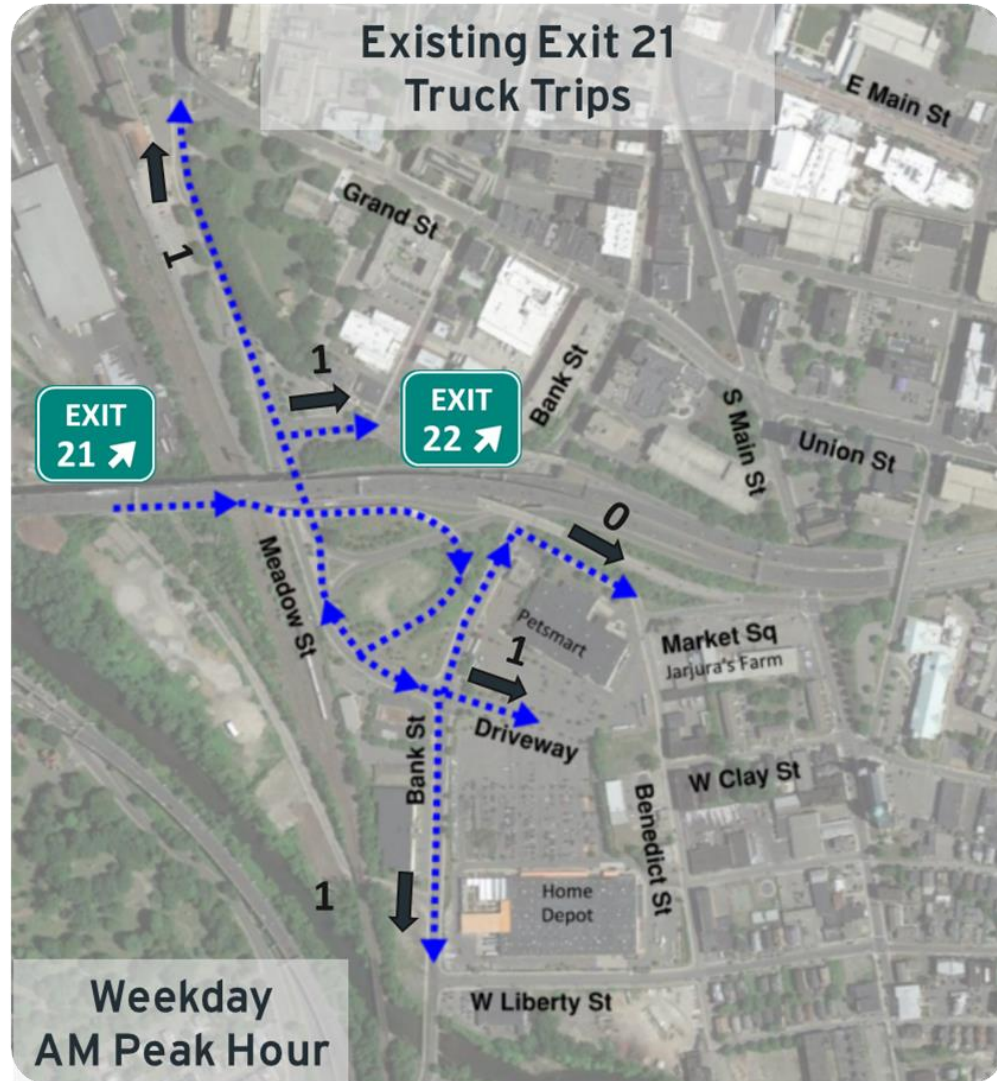


# Large Truck Data

- **Between 75 and 125 = Average daily trucks on I-84 Eastbound Exit 21**
  - 48% traveling North and 52% traveling South
  - Typically less than 10 trucks during weekday peak hours
- **Between 125 and 275 = Average daily trucks on I-84 Eastbound Exit 22**
  - 41% traveling North and 14% traveling South
  - Typically less than 20 trucks during weekday peak hours
  - Assumed to increase by 50% after Exit 21 is eliminated
- **Local road network improvements will be implemented between Exit 22 and Meadow/Bank Street intersection (apparent large truck destination) that should allay safety concerns**



# Large Truck Data





# Large Truck Data

