



# Public Informational Meeting

Live Event

Thursday, July 07, 2022 at 7:00 p.m.

State Projects # 0079-0240 & 0079-0246

## I-91/I-691/Route 15 Interchange Improvements

Cities of Meriden and Middletown, CT

Join us for a Question and Answer Session following the formal presentation and send us a question or a comment during the session.

*Email*

[DOTProject79-240@ct.gov](mailto:DOTProject79-240@ct.gov)

[DOTProject79-246@ct.gov](mailto:DOTProject79-246@ct.gov)

*Phone*

**(860) 944-1111**

*Webpage*

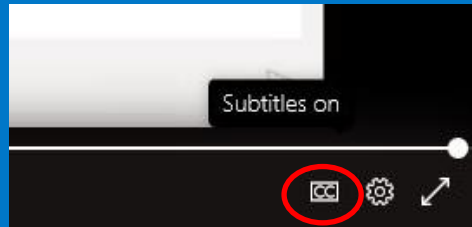
<https://portal.ct.gov/DOTMeriden79-240>

<https://portal.ct.gov/DOTMeriden79-246>

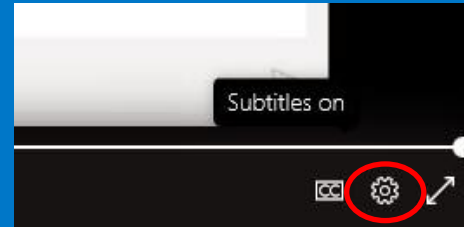
# How to View Captions or Subtitles

## Captions / Subtitles (MS Teams only)

1) Select “CC” at bottom right



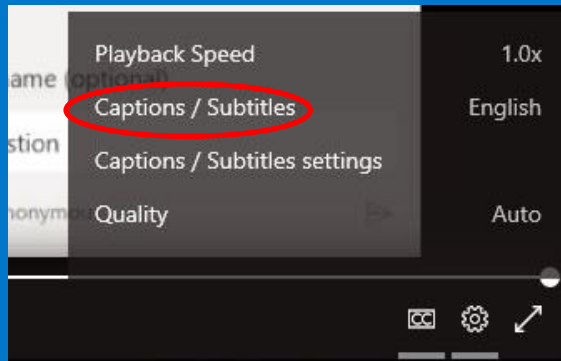
2) Select Settings wheel



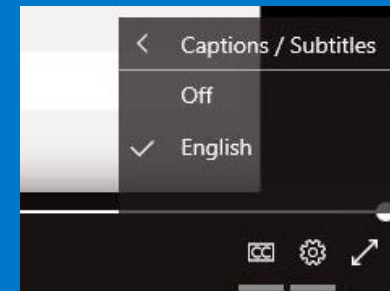
### Available Languages:

- English
- Spanish

3) Select “Captions / Subtitles”



4) Select desired language



# Virtual Meeting Format

- This meeting is live and recorded. A recording will be posted on the CTDOT website after tonight's meeting.
- There are three ways to communicate during the Q&A session:
  - Email: [DOTProject79-240@ct.gov](mailto:DOTProject79-240@ct.gov)  
[DOTProject79-246@ct.gov](mailto:DOTProject79-246@ct.gov)
  - Phone: [\(860\) 944-1111](tel:(860)944-1111) (reference Project [79-240](#) or [79-246](#) in your voicemail)
  - Chat: [MS Teams Live Event chat](#)
  - A moderator will post questions to the MS Teams Q&A chat.
  - We will answer questions at the end of the presentation.
  - Comment period ends on [July 21, 2022](#).



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# Title VI – Civil Rights

- Civil Rights flyer available

<https://portal.ct.gov/DOT/Business/Contract-Compliance/Civil-Rights-and-Accessibility>

- No person shall, on the basis of race, color or national origin, be excluded from participation or subject to discrimination in the development of these projects.

- Link for survey is available on the projects websites:

<https://portal.ct.gov/DOTMeriden79-240>

<https://portal.ct.gov/DOTMeriden79-246>



# Team Introduction

## CT Department of Transportation



**Michael Calabrese, P.E.**  
Division Chief of Highway Design



**Sebastian Cannamela, P.E.**  
Principal Engineer



**Meredith Andrews, P.E.**  
Project Manager



**Pinith Mar**  
Project Engineer

## Design Consultants



**Sajjad Alam, P.E.**  
Project Manager  
**Parsons**



**Antonio Margiotta, P.E.**  
Deputy Project Manager  
**GM2**



**Ranjit Bhave, P.E.**  
Highway Design Lead  
**Parsons**



**Panos Oikonomou, P.E.**  
Structures Design Lead  
**Parsons**

# Agenda

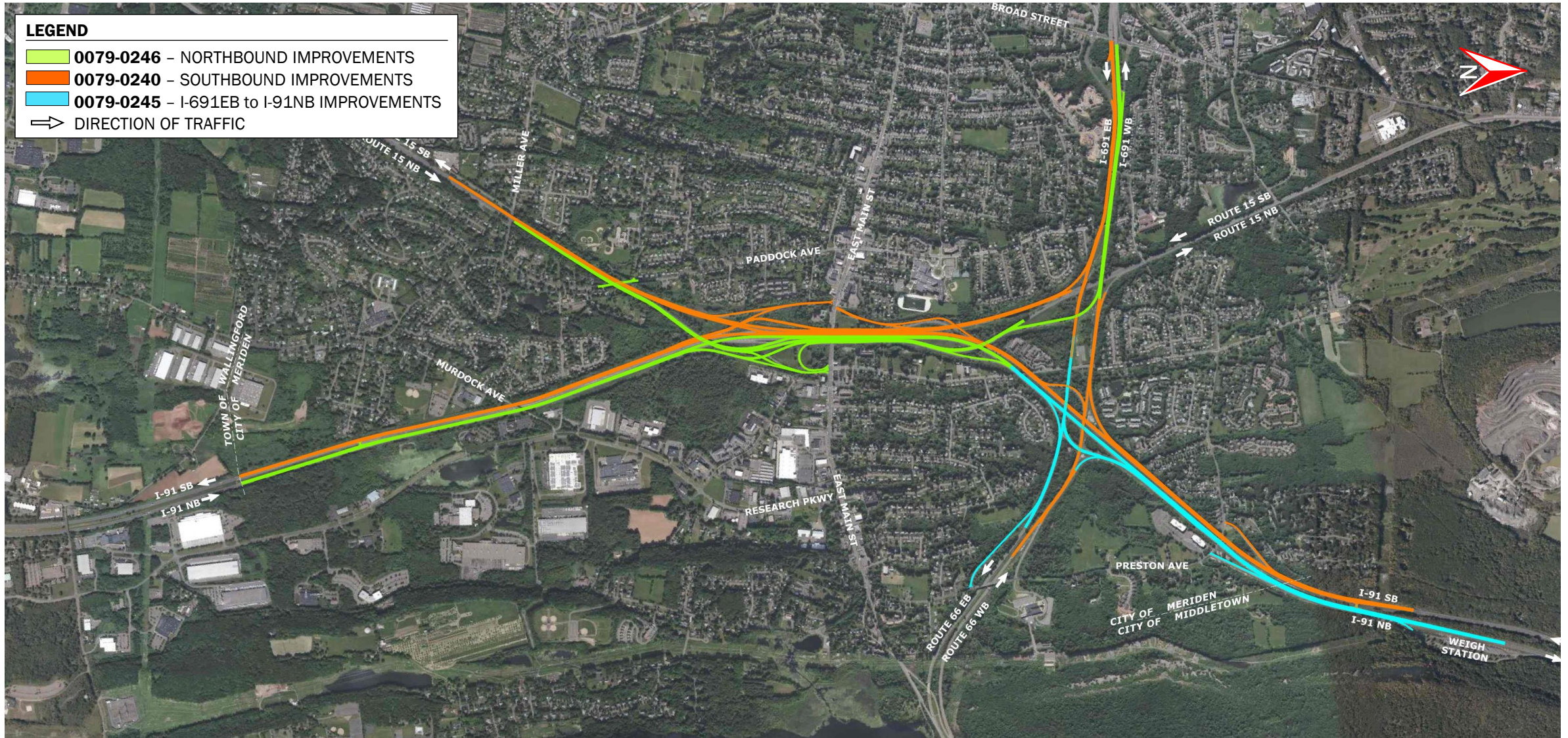
- Project Location
- Purpose & Need
- Existing Conditions
- Proposed Design
- Construction Overview
- Schedule and Cost
- Questions & Answers

# Project Location

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# I-91/I-691/Route 15 Interchange Improvements Program



# Purpose & Need

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**Reduce congestion  
and travel time by  
providing a  
Level of Service of D  
or better.**

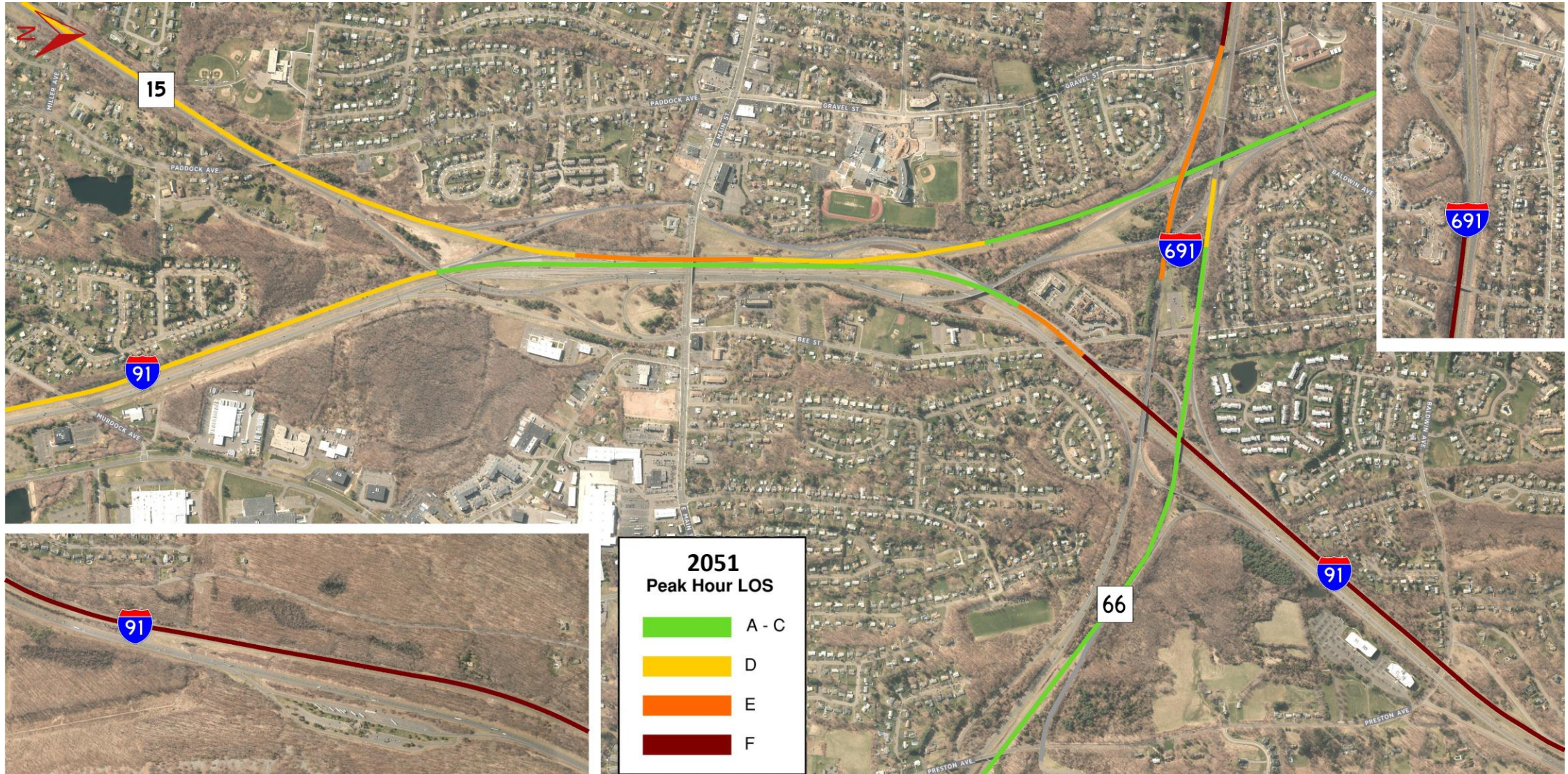
**Improve safety  
associated with  
crashes caused by  
congestion and  
weaving.**

# Existing Conditions

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# Peak Hour Level of Service – No Build

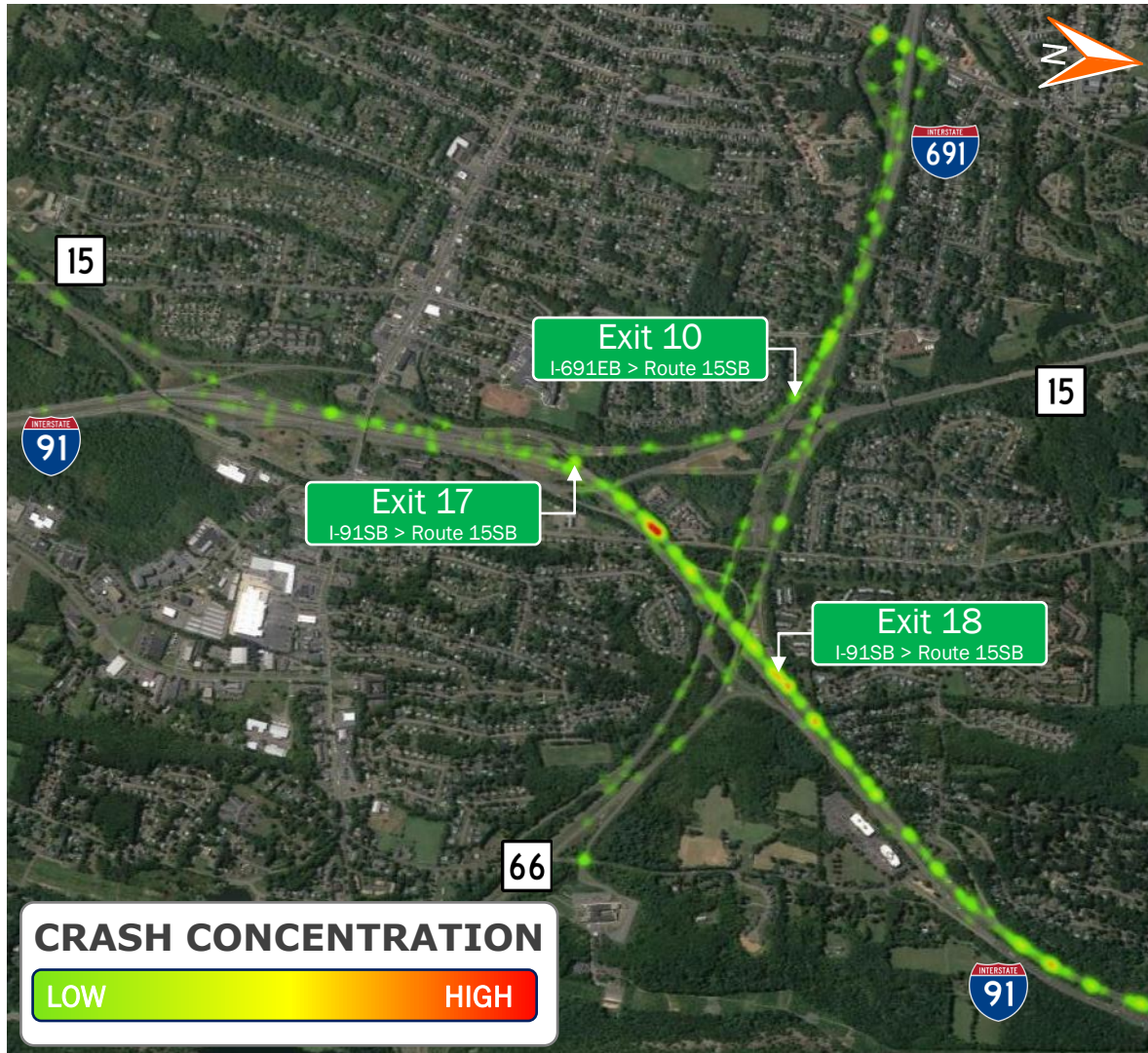
0079-0240  
Southbound



Critical LOS for AM or PM peaks selected for each highway segment, for design year 2051.

# Mainline Crash Summary

0079-0240  
Southbound



Crash Summary is based on UConn Connecticut Crash Data Repository (May 1, 2014 – Apr 30, 2017)  
HMVMT: Hundred million vehicle miles travelled

## ● I-91 Southbound

- 493 total crashes (326 crashes / HMVMT)
- 150 Injury, 2 Fatal
- 75% Rear End | 12% Sideswipe | 11% Fixed Object

## ● I-691 / Route 66 Eastbound

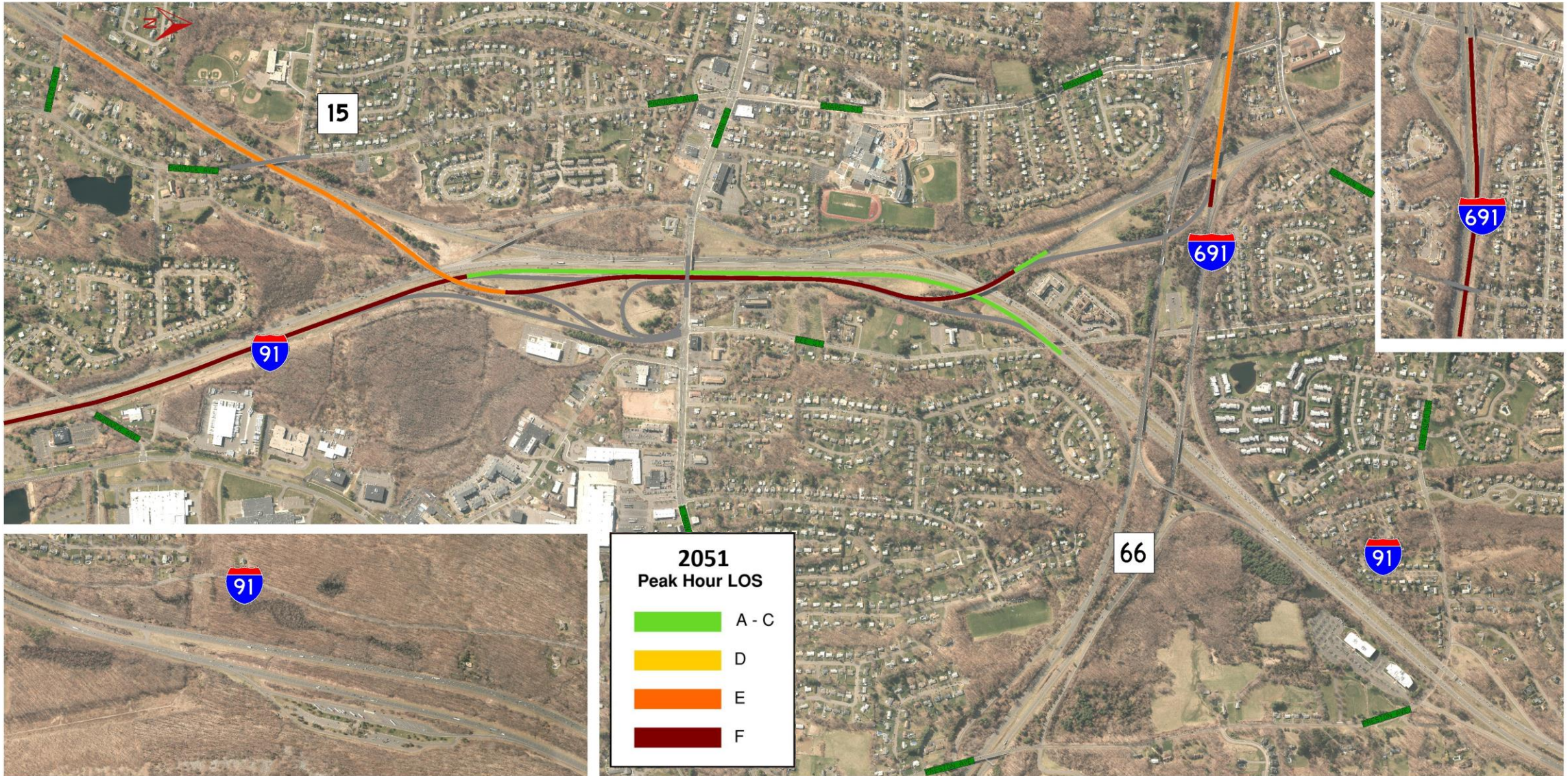
- 80 total crashes (150 crashes / HMVMT)
- 23 Injury, 1 Fatal
- 50% Rear End | 15% Sideswipe | 29% Fixed Object

## ● Route 15 Southbound

- 56 total crashes (69 crashes / HMVMT)
- 11 Injury
- 50% Rear End | 27% Sideswipe | 23% Fixed Object

# Peak Hour Level of Service – No Build

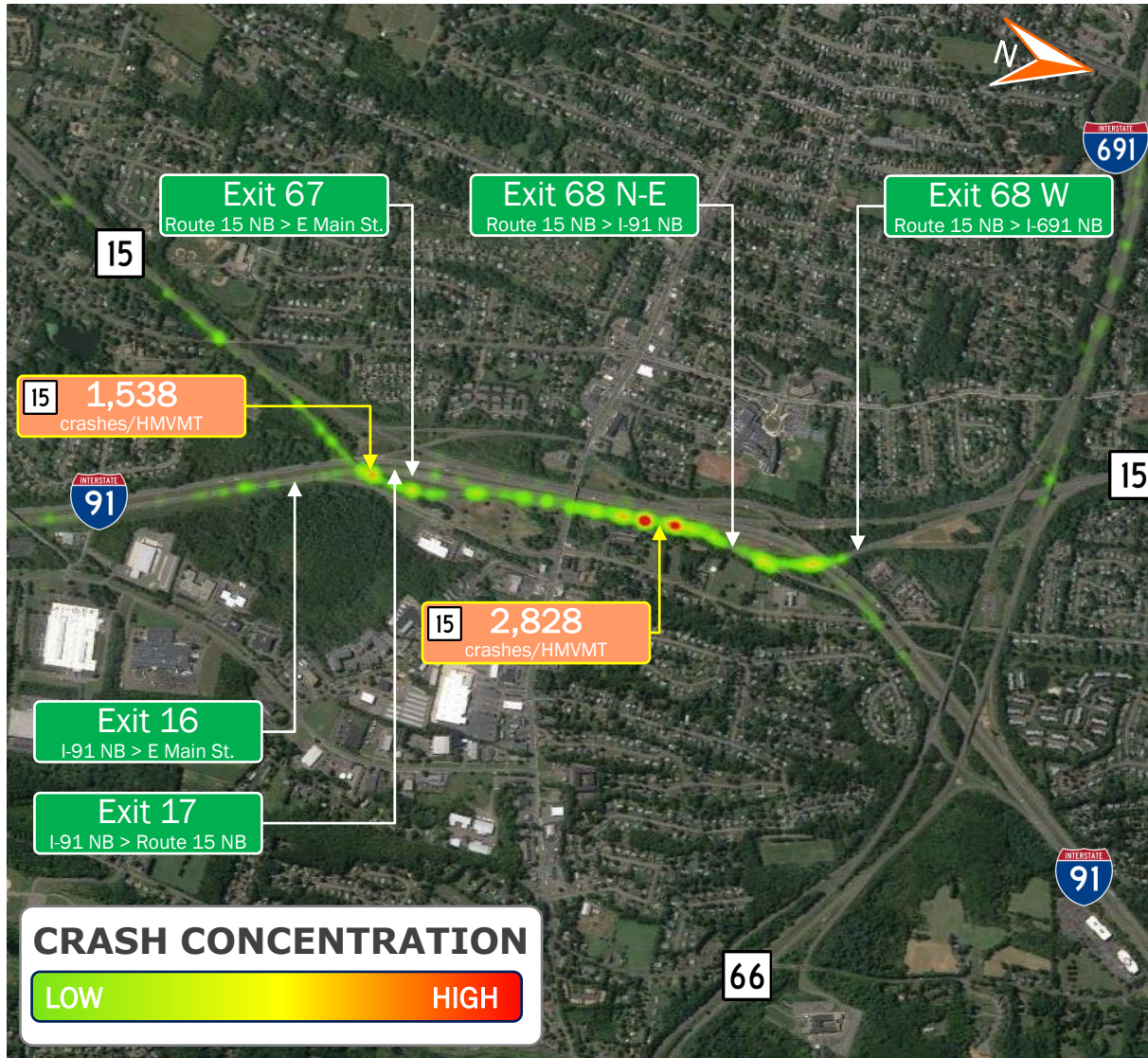
0079-0246  
Northbound



Critical LOS for AM or PM peaks selected for each highway segment, for design year 2051.

# Mainline Crash Summary

0079-0246  
Northbound



## I-91 Northbound

- 132 total crashes (91 crashes / HMVMT)
- 33 Injury
- 27% Rear End | 31% Sideswipe | 38% Fixed Object

## I-691 Westbound

- 61 total crashes (116 crashes / HMVMT)
- 15 Injury
- 31% Rear End | 26% Sideswipe | 39% Fixed Object

## Route 15 Northbound

- 659 total crashes (767 crashes / HMVMT)
- 185 Injury, 1 Fatality
- 84% Rear End | 7% Sideswipe | 9% Fixed Object

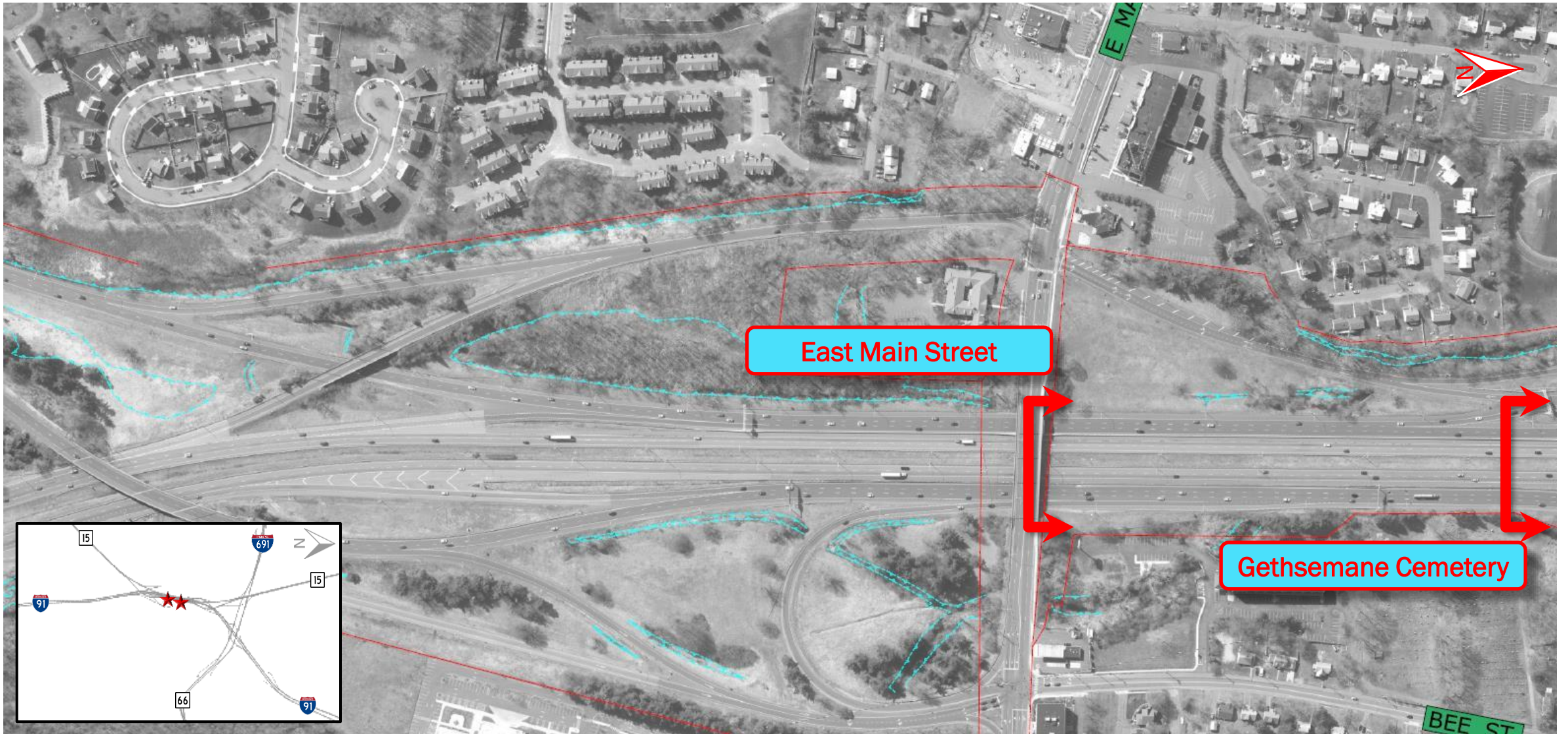
Crash Summary is based on UConn Connecticut Crash Data Repository (May 1, 2014 – Apr 30, 2017)  
HMVMT: Hundred million vehicle miles travelled



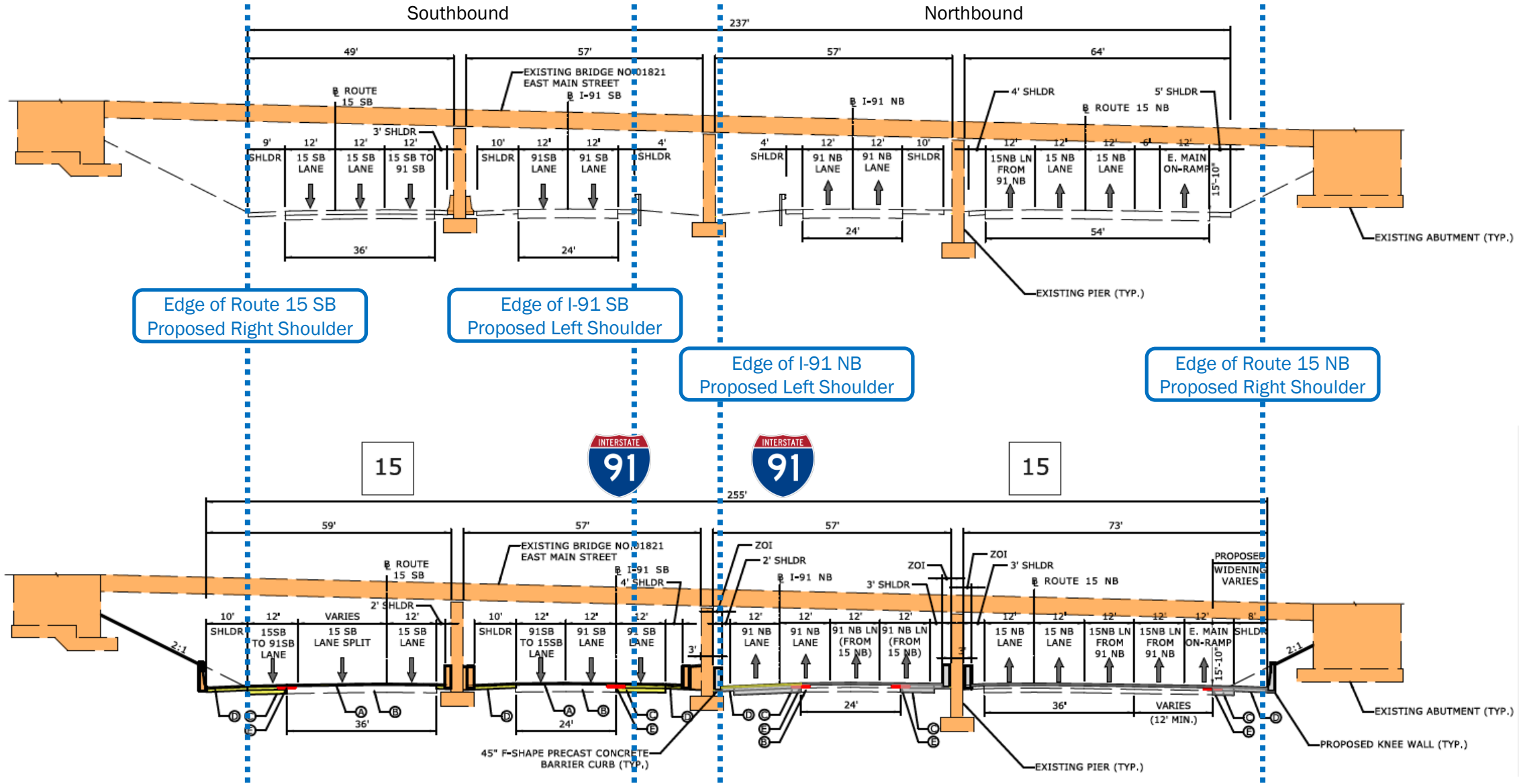
# Key Constraints

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# Critical Sections

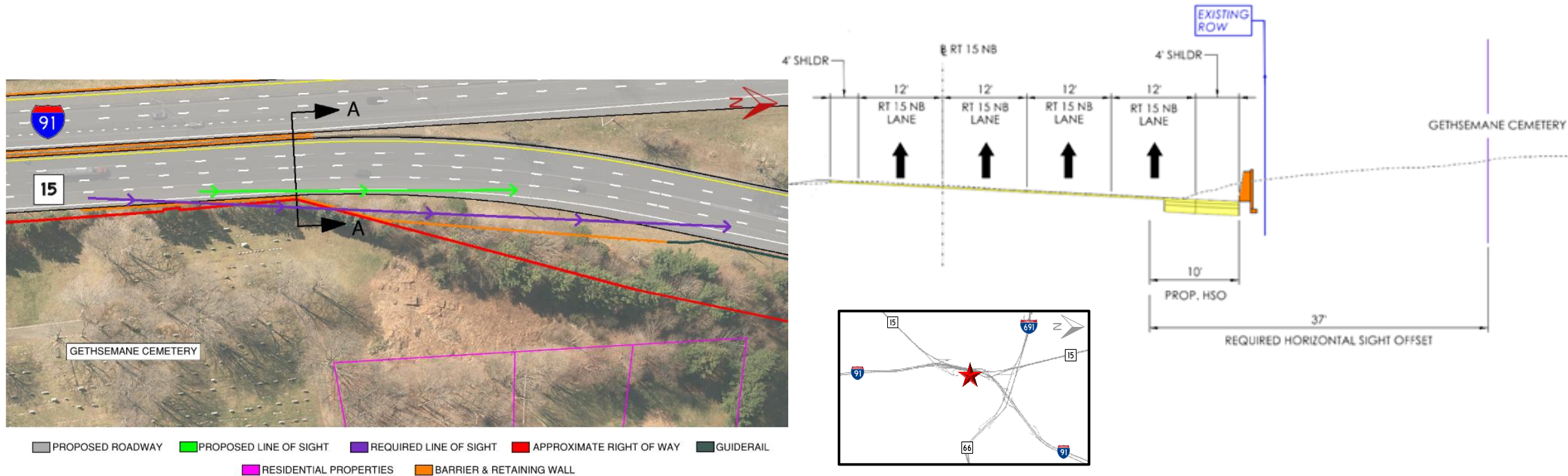


# Critical Section – East Main Street Bridge



# Critical Section – Gethsemane Cemetery

- Dates back to 1884 and considered Ancient Burial Ground under CT Law
- ROW and horizontal sight distance constraints
- Highway alignment optimized to avoid any impact to the cemetery



# Proposed Design

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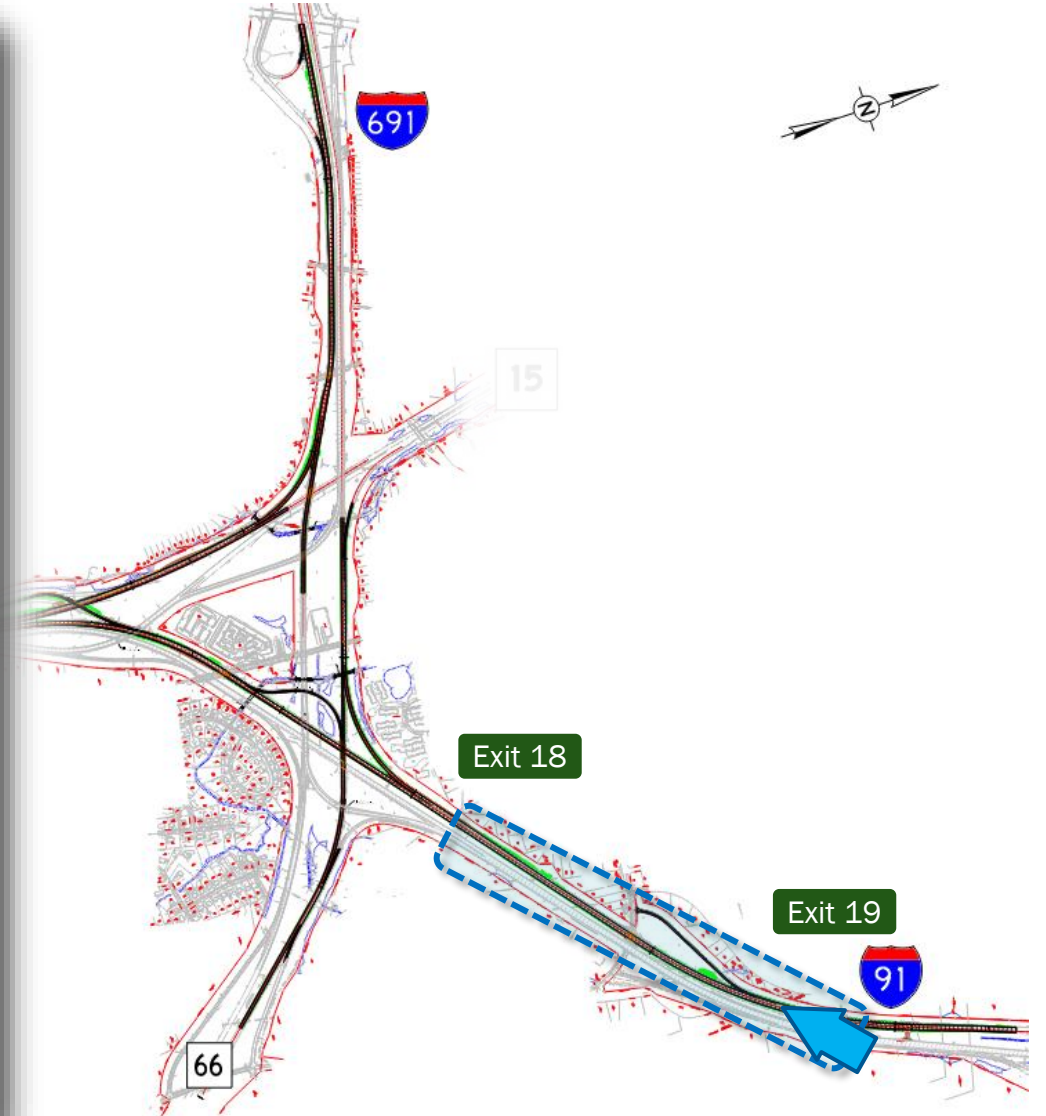
# 0079-0240: Southbound Improvements

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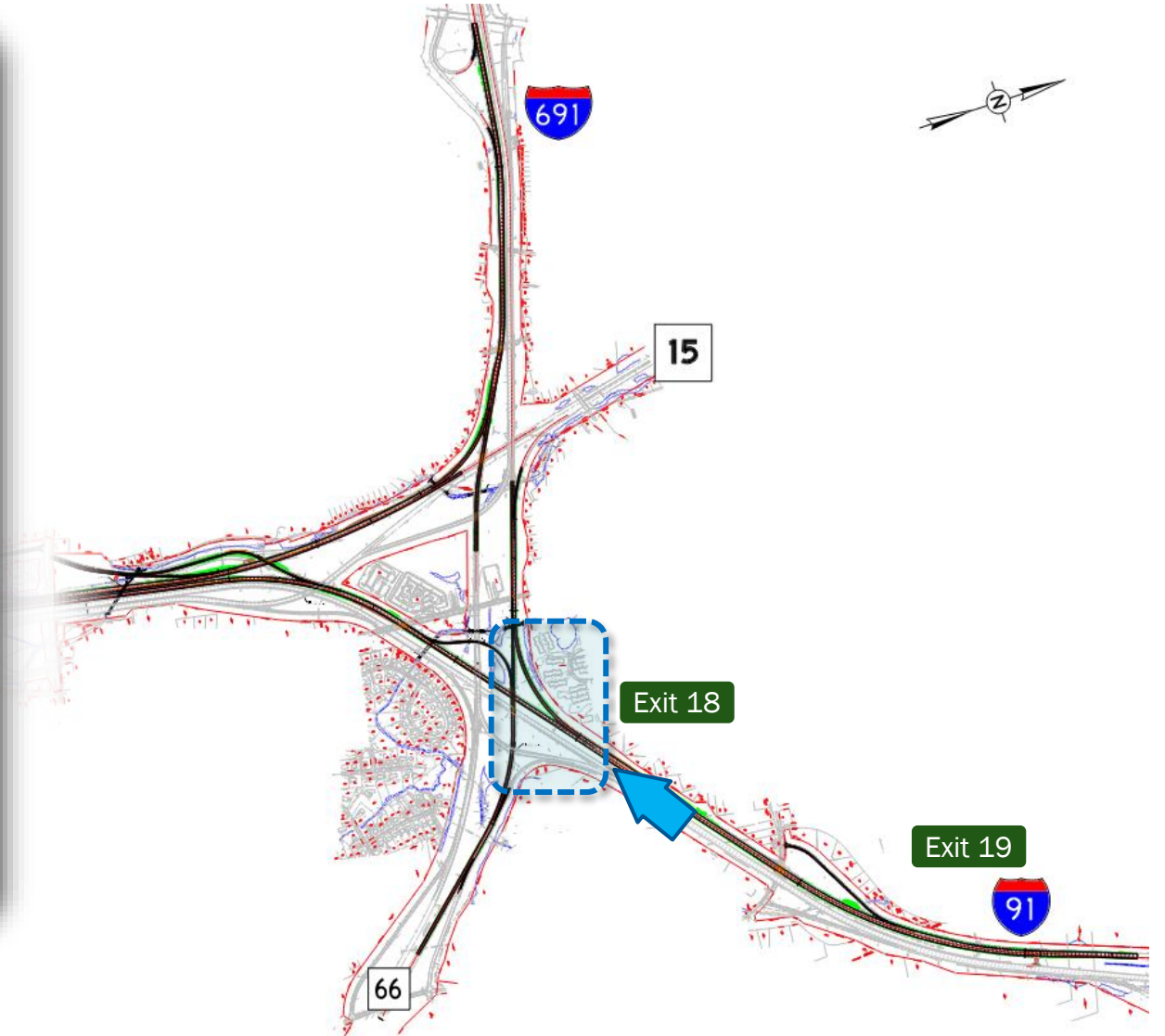
# I-91 SB Widening

I-91 SB widened to provide an additional operational lane between Exits 18 and 19.

Bridge #03052 (I-91 SB over Baldwin Ave) widened and rehabilitated



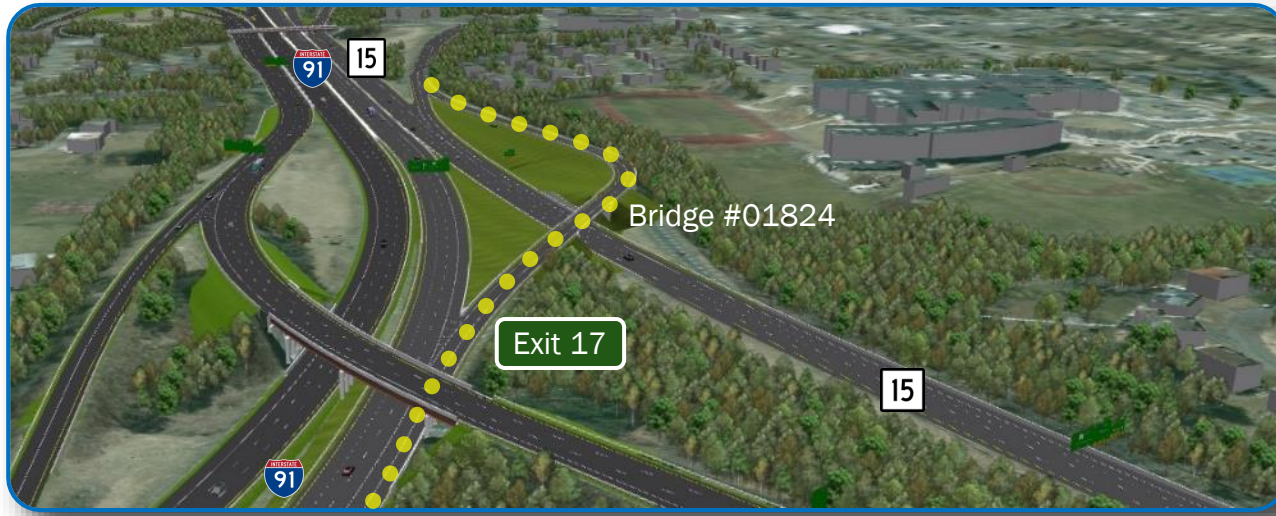
# Exit 18 (I-91 SB) Ramp Widening



Exit 18 ramp from I-91 SB to I-691 WB widened to accommodate two lanes.

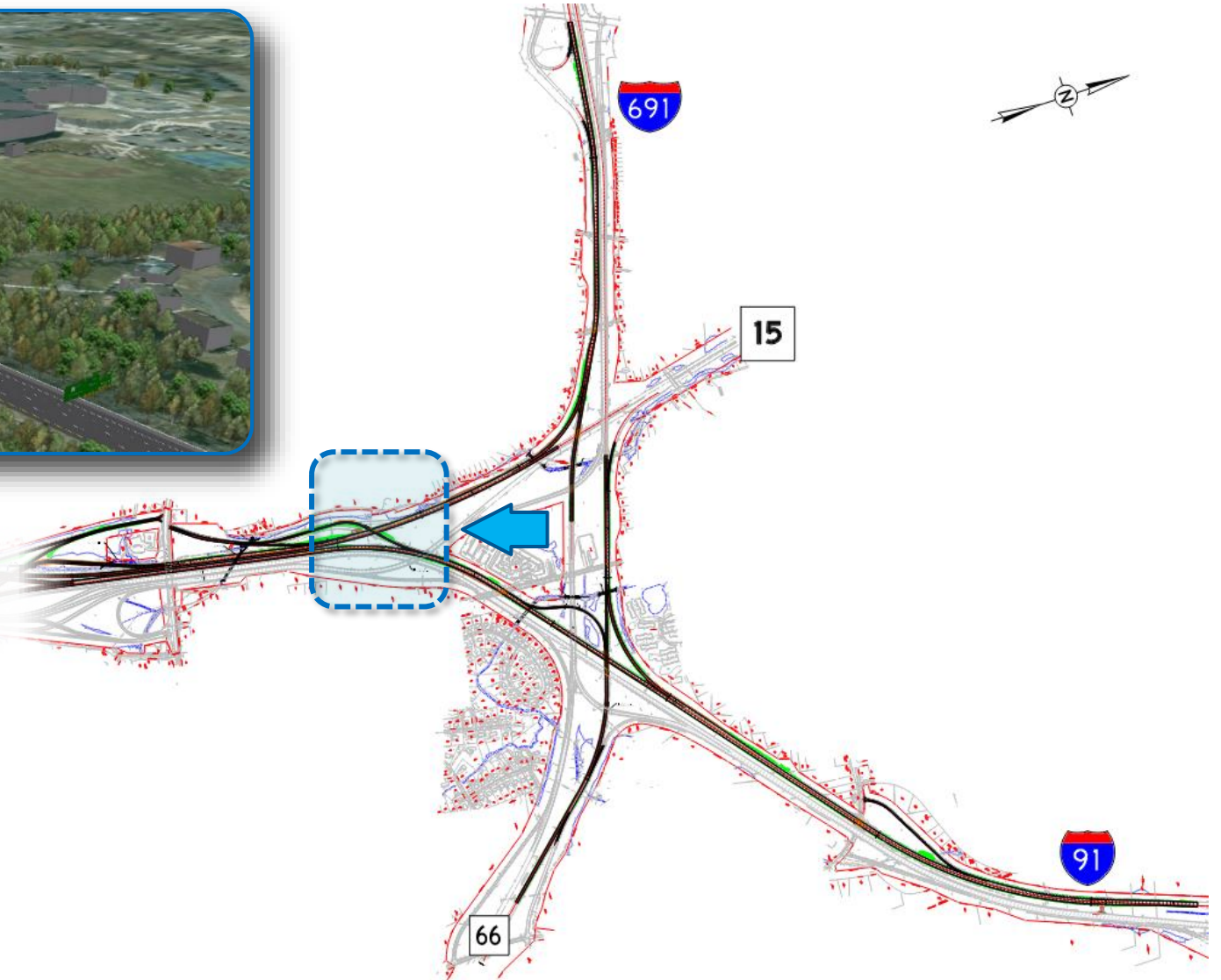


# Exit 17 (I-91 SB) Ramp Realignment

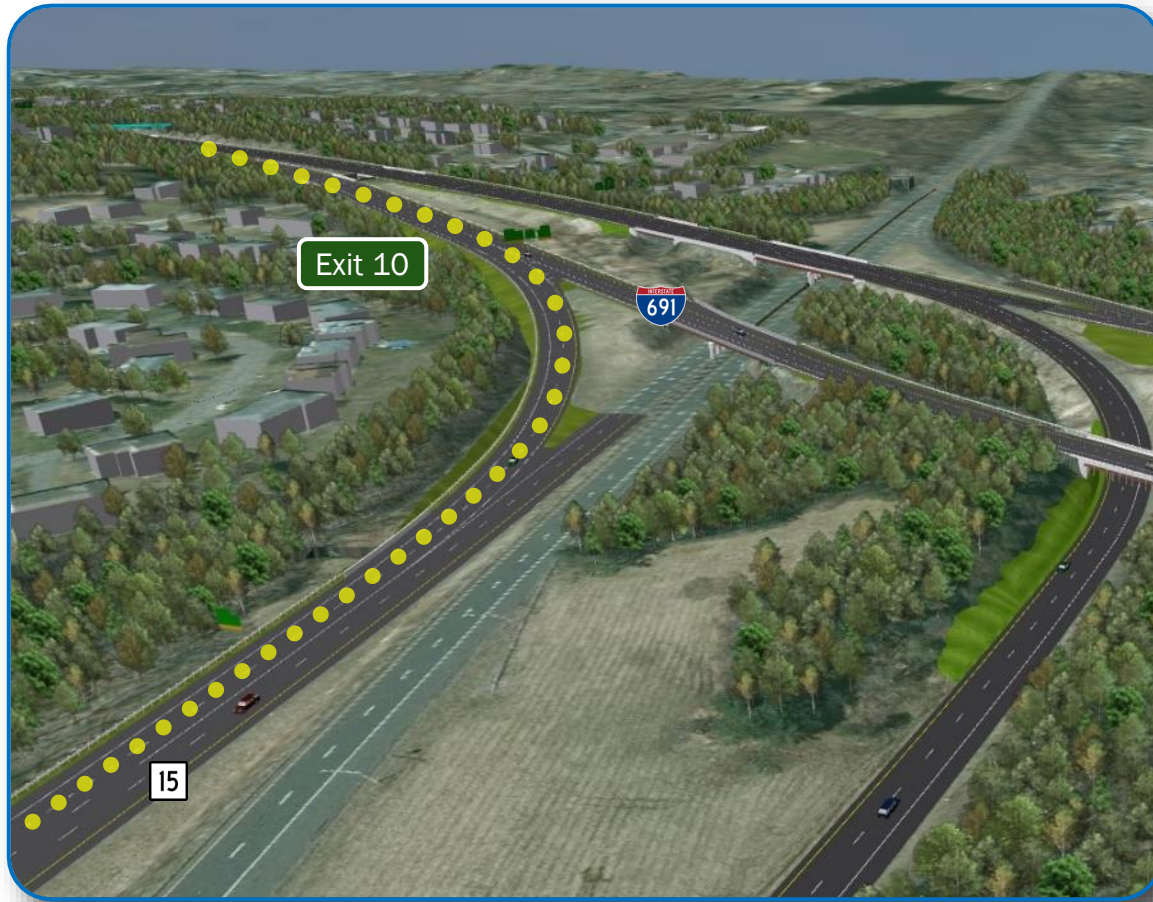


Exit 17 from I-91 SB to East Main Street realigned, and Bridge #01824 replaced.

One-lane slip-ramp from Exit 17 to Route 15 SB relocated.

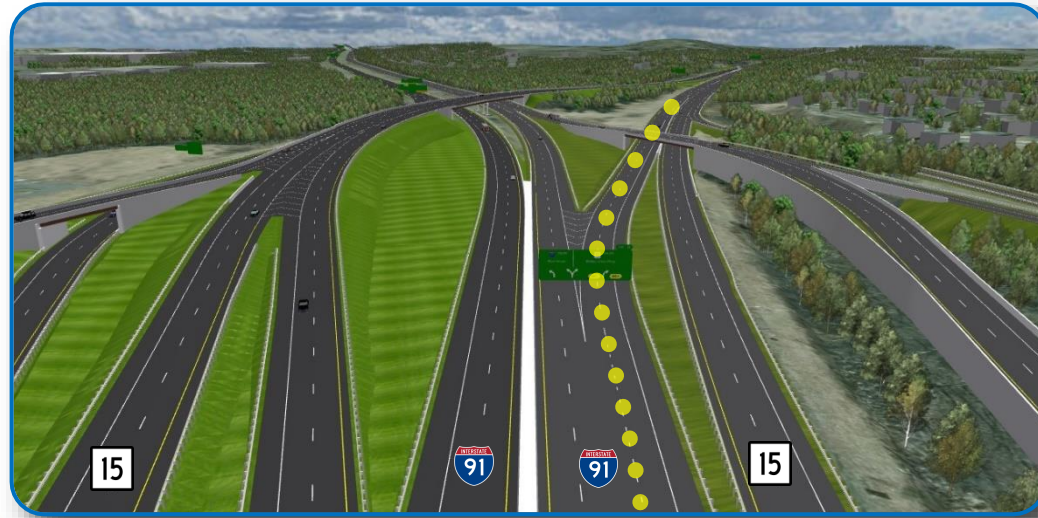


# Exit 10 (I-691 EB) Ramp Widening



Exit 10 ramp from I-691 EB to Route 15 SB widened to accommodate two lanes.

# New Ramp from I-91 SB to Route 15 SB

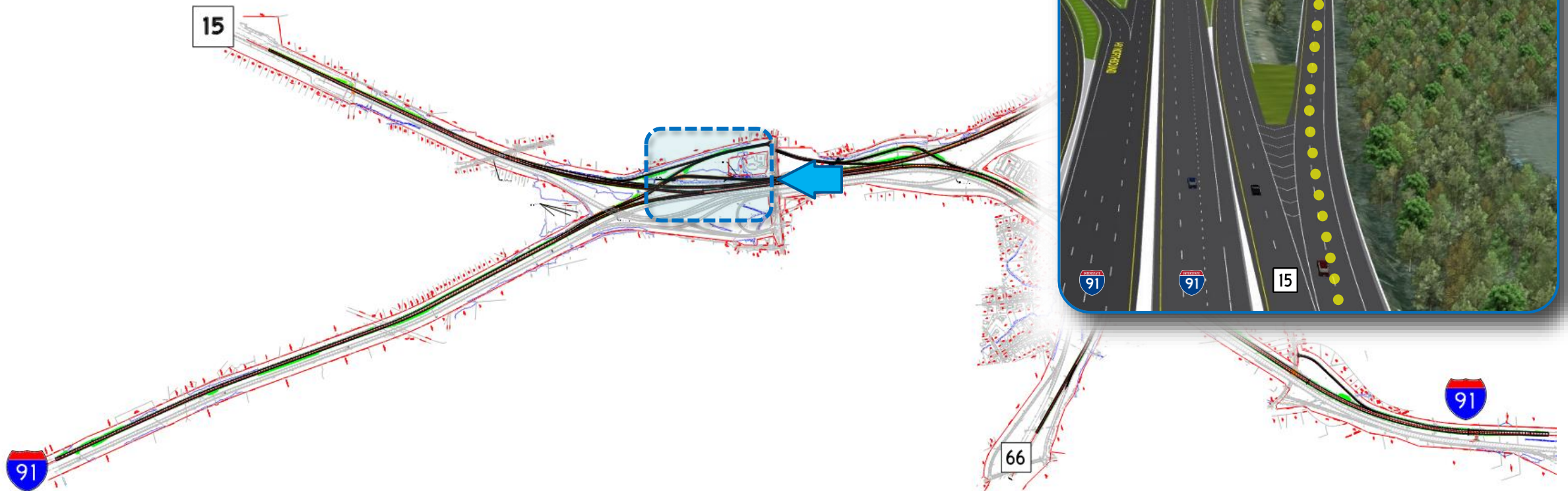


New two-lane right exit ramp provided for traffic from I-91 SB to Route 15 SB.

# New Ramp from Route 15 SB to I-91 SB

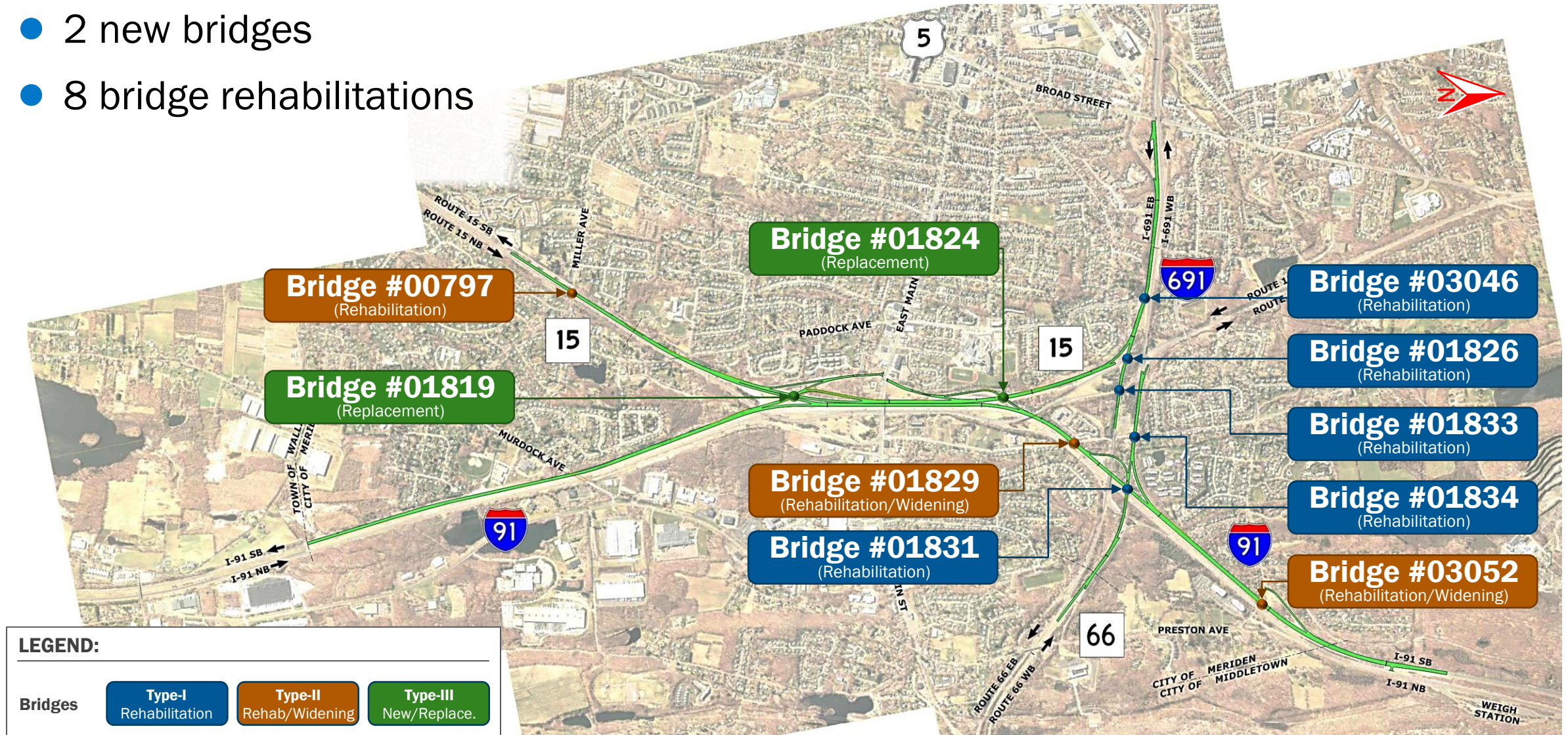
Existing one-lane left exit ramp (Exit 67S) replaced.

New two-lane ramp provided for traffic from Route 15 SB to I-91 SB, and Bridge #01819 (ramp from E. Main Street to I-91 SB) replaced.



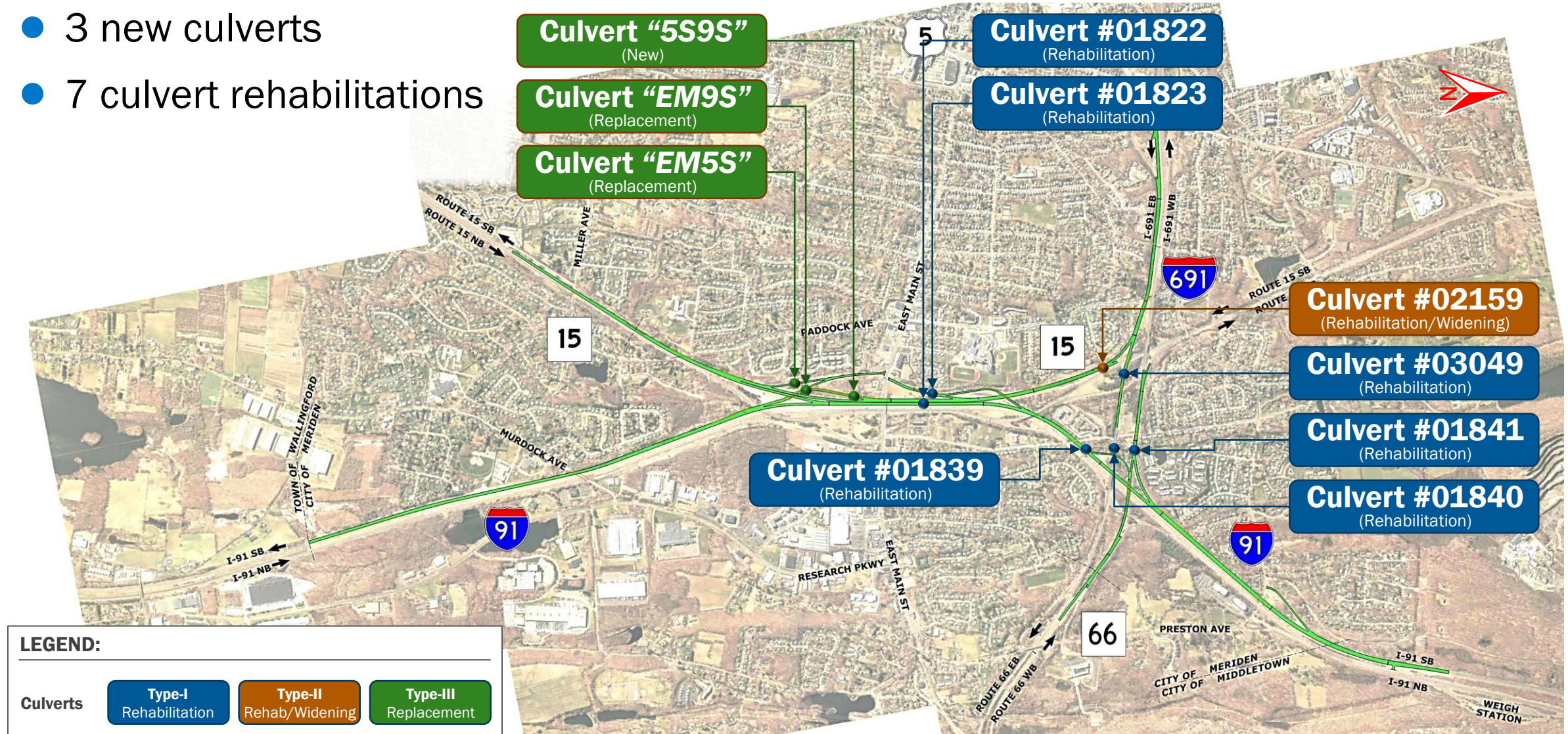
# Bridges

- 2 new bridges
- 8 bridge rehabilitations



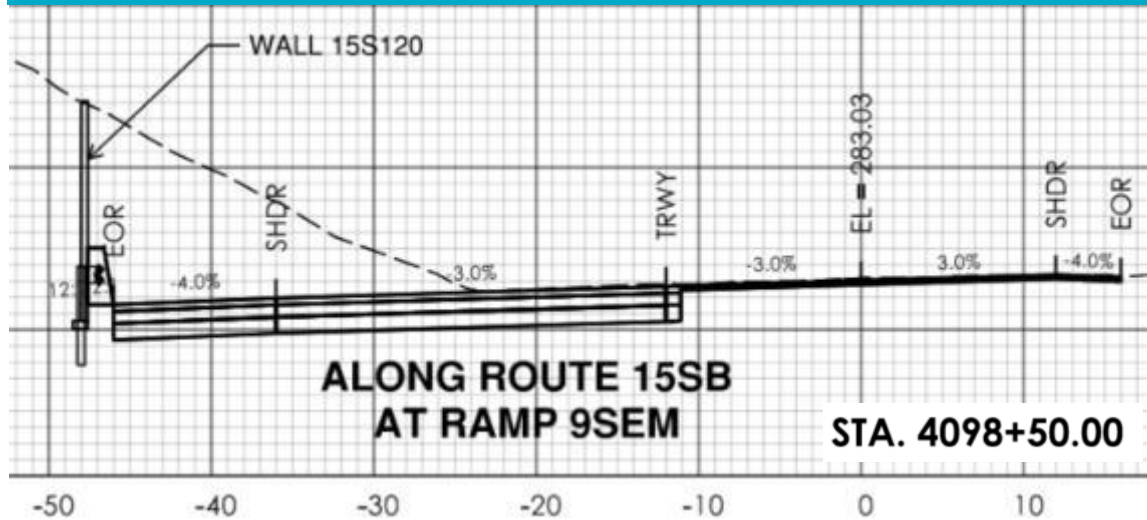
# Culverts

- 3 new culverts
- 7 culvert rehabilitations



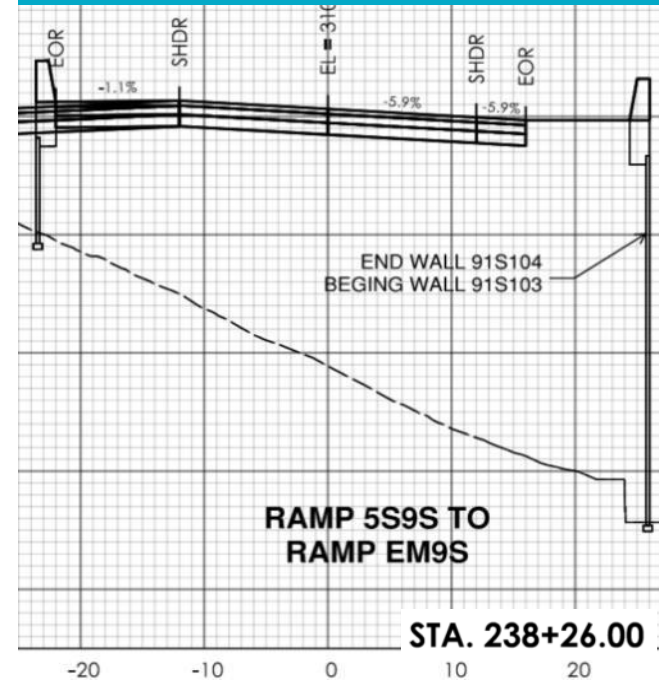
# Retaining Walls

## Route 15 Southbound



- 10 walls, 2,650 ft total length
- 7 walls
  - Less than 54" high, Concrete Barrier
- 3 walls
  - Avg. Height = 10'10", Length = 334 ft
- ★ Highest wall 15S-120
  - Up to 17 ft high, 150ft long

## I-91 Southbound



- 14 walls, 5,270 ft total length
- 4 walls
  - Less than 54" high Concrete Barrier
- 10 walls
  - Avg. Height = 6'9" Length = 3,910 ft'
- ★ Highest wall 91S-104
  - Up to 30 ft high 880ft long

## Retaining walls optimized to minimize impacts to:

- Right of way
- Wetlands
- Environmentally sensitive areas
- Adjacent structures

# 0079-0246: Northbound Improvements

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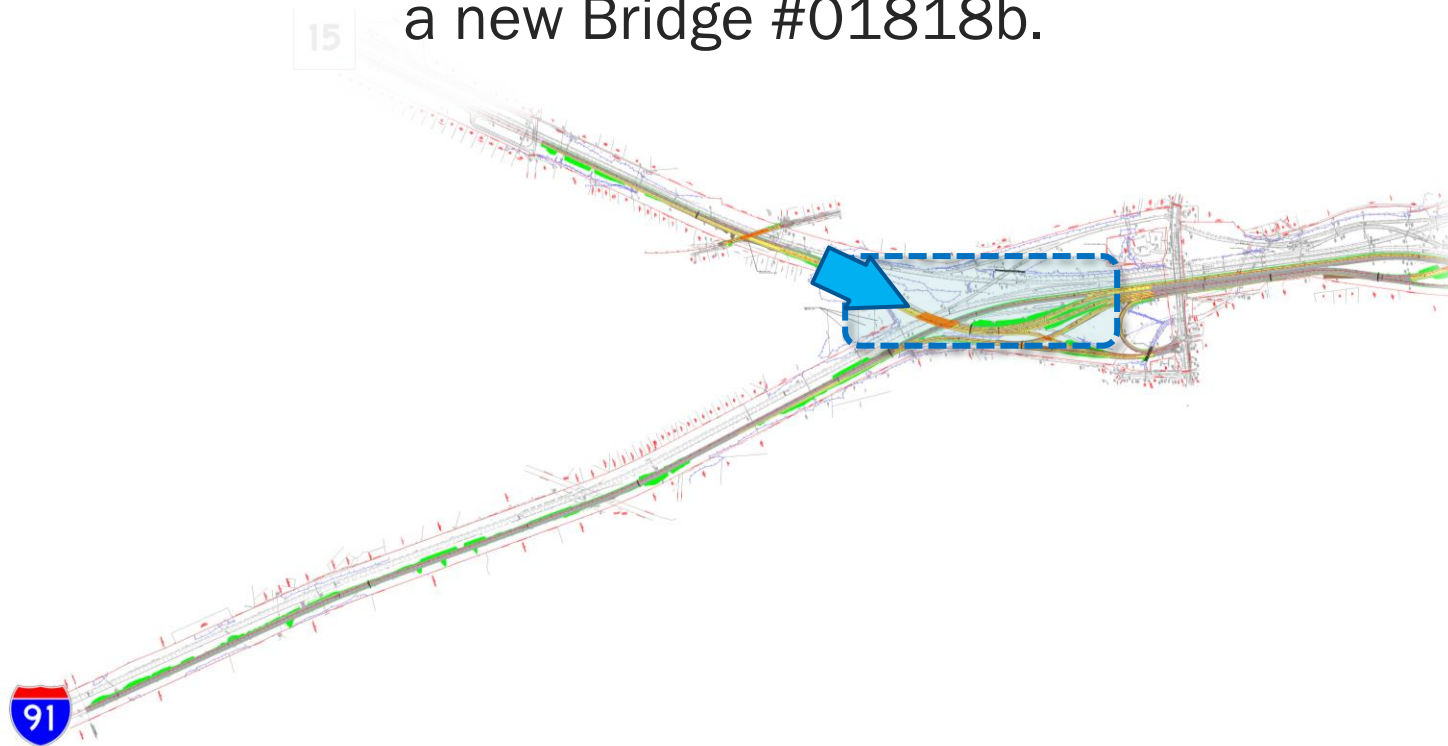


# New Ramp from Route 15 NB to I-91 NB

New two-lane exit ramp from Route 15 NB to I-91 NB will reduce congestion at existing Exit 68 N-E.

Bridge #01818 (Route 15 NB over I-91) replaced.

Exit 67 ramp to E. Main St. realigned with a new Bridge #01818b.

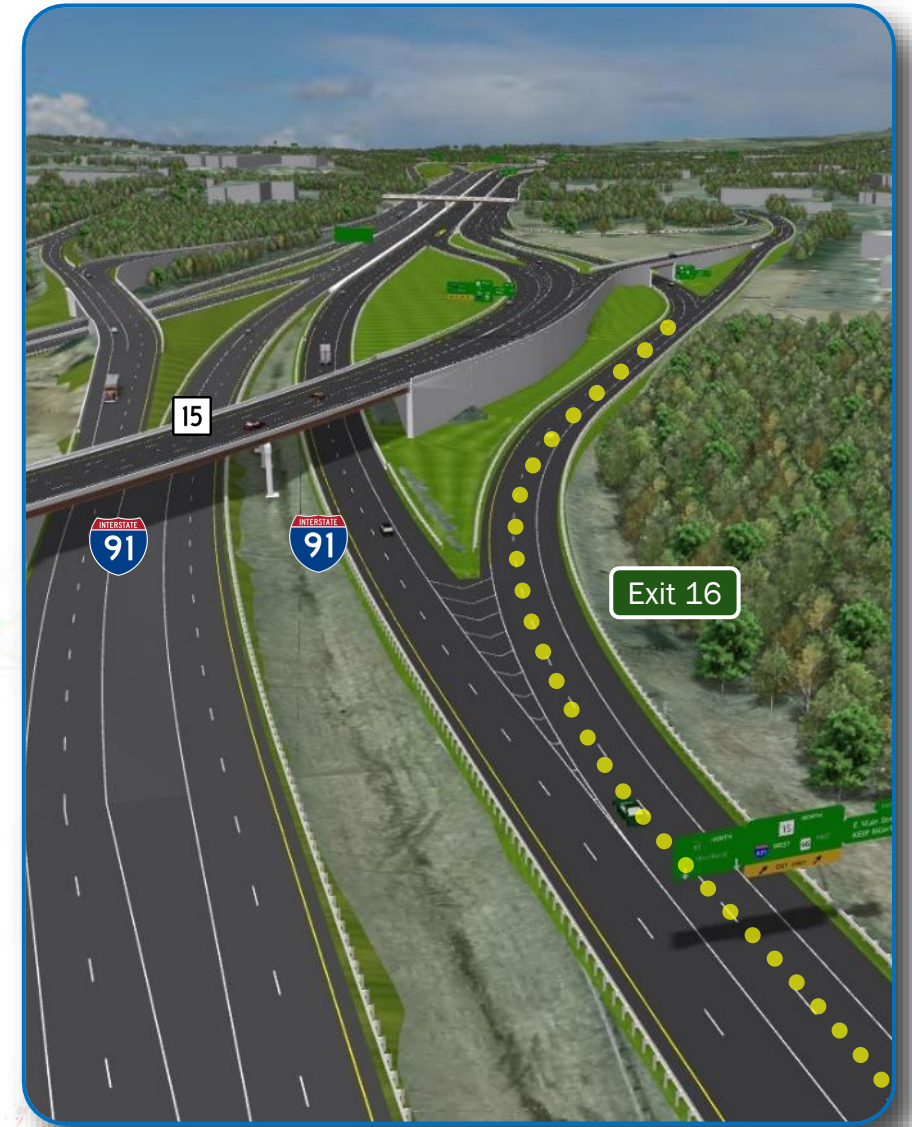
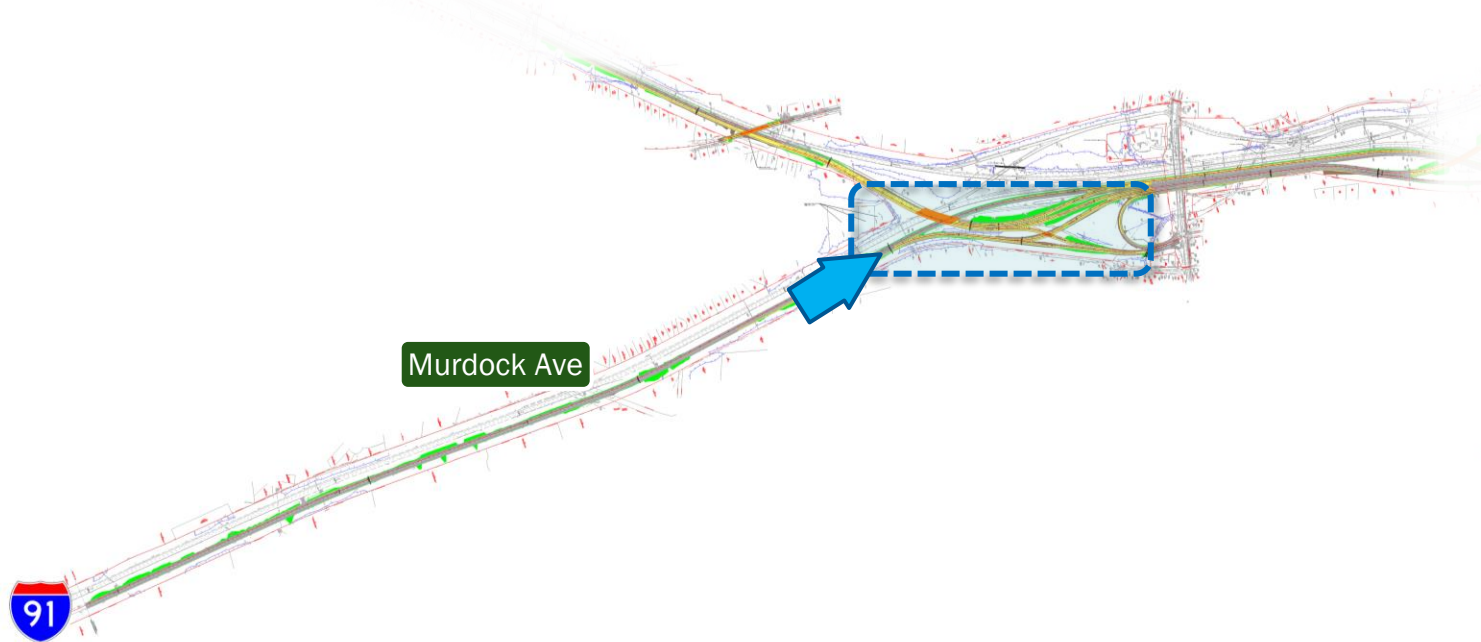


# Exits 16 & 17 (I-91 NB) Reconfiguration

Existing Exit 17 removed and relocated to Exit 16.

Exit 16 widened and realigned to provide a new two-lane off-ramp to Route 15 NB and one-lane ramp to E. Main St.

I-91 widened to four lanes between Murdock Ave. and Exit 16.

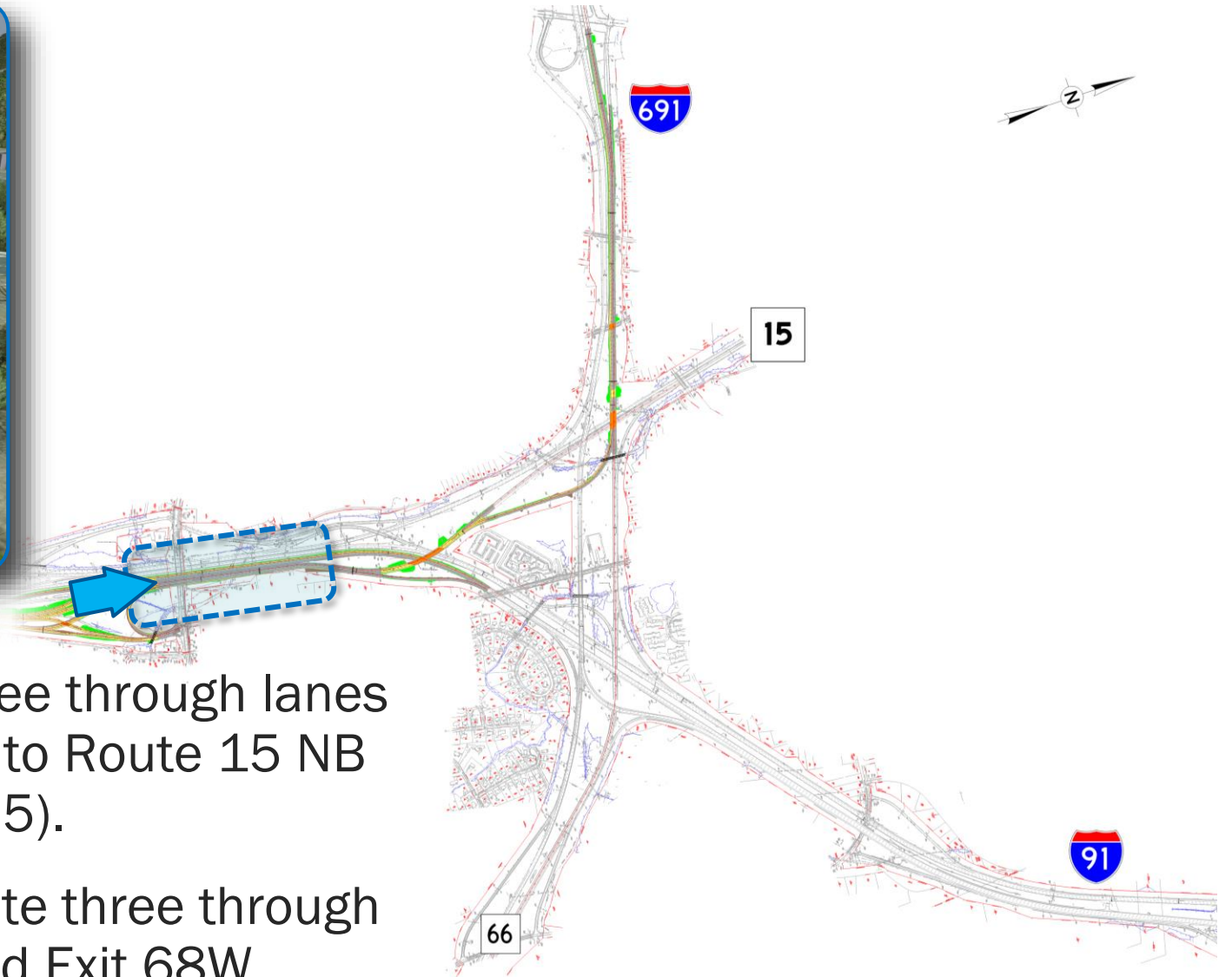


# I-91 NB and Route 15 NB Widening



I-91 NB widened to accommodate three through lanes between on-ramp from Route 15 NB to Route 15 NB bridge over I-91 (#01825).

Route 15 NB widened to accommodate three through lanes between E. Main Street and Exit 68W.



# Exit 68W (Route 15 NB) Widened



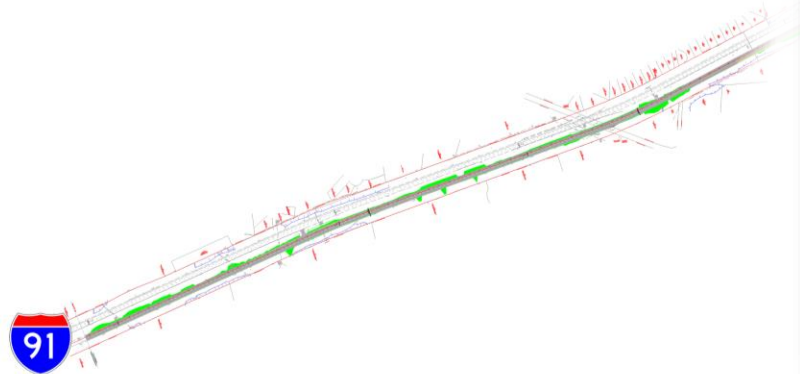
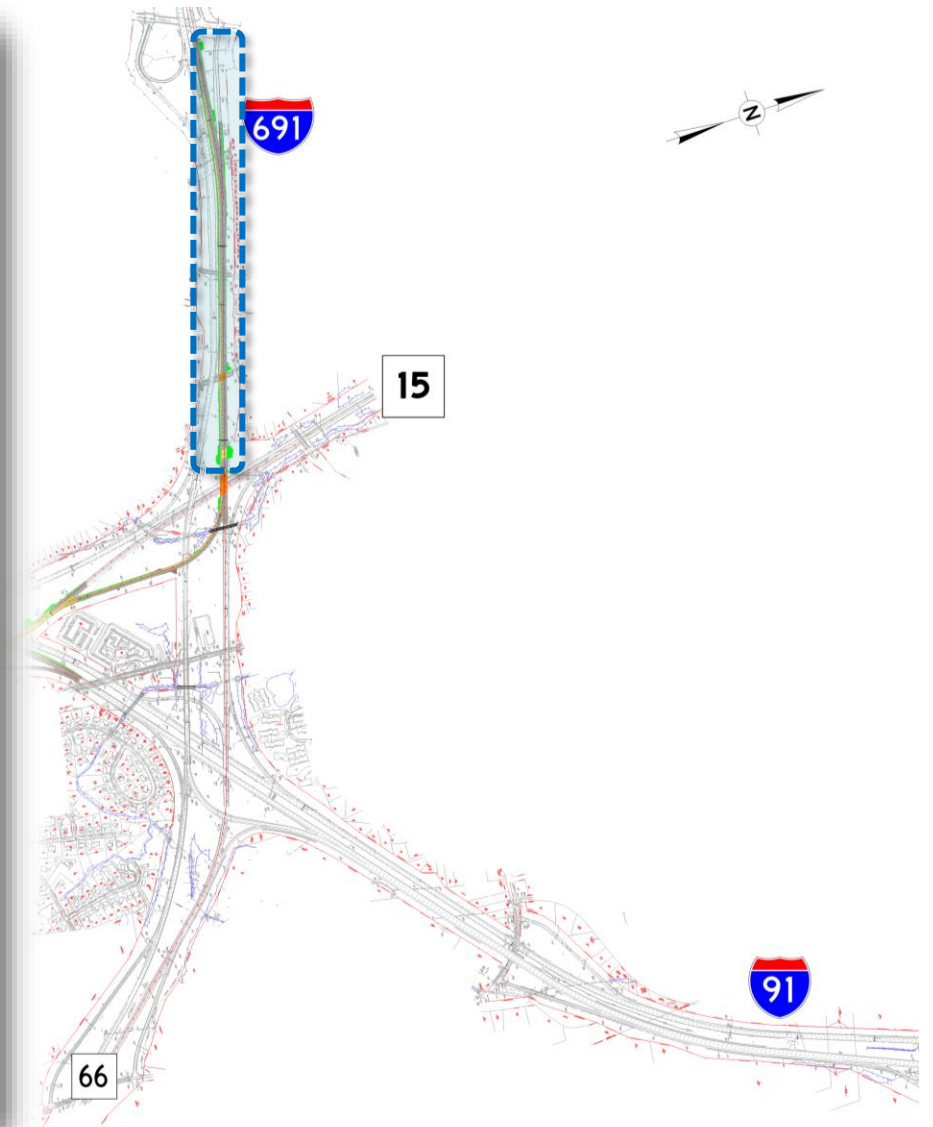
Exit 68W ramp from Route 15 NB to I-691 WB widened to accommodate two lanes.

Bridge #01825 (Route 15 NB over I-91) replaced.

# I-691 WB Widened

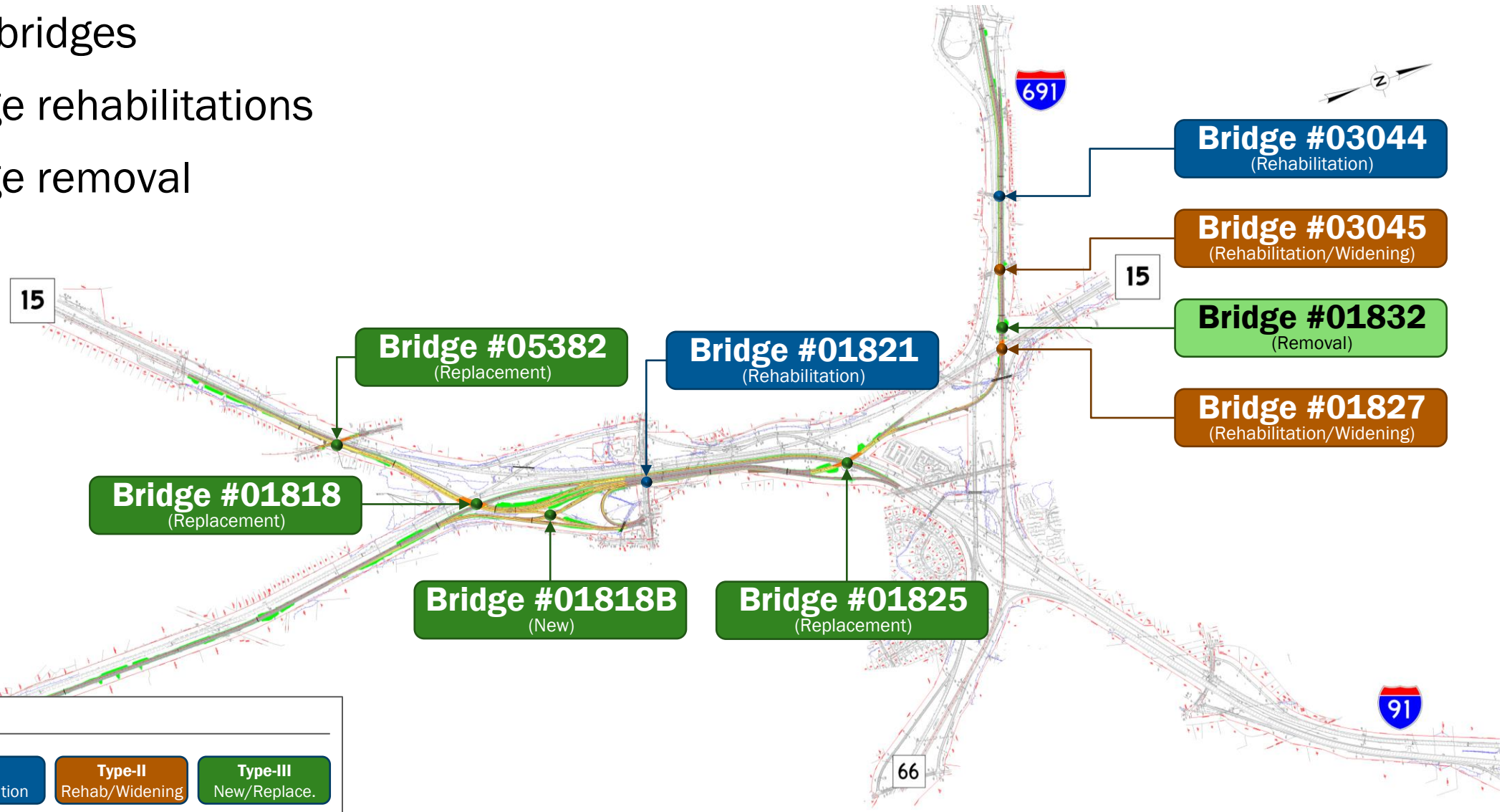
I-691 WB widened to provide an additional lane between on-ramp from Route 15 NB to Broad St.

Three bridges on I-691 WB rehabilitated / widened.



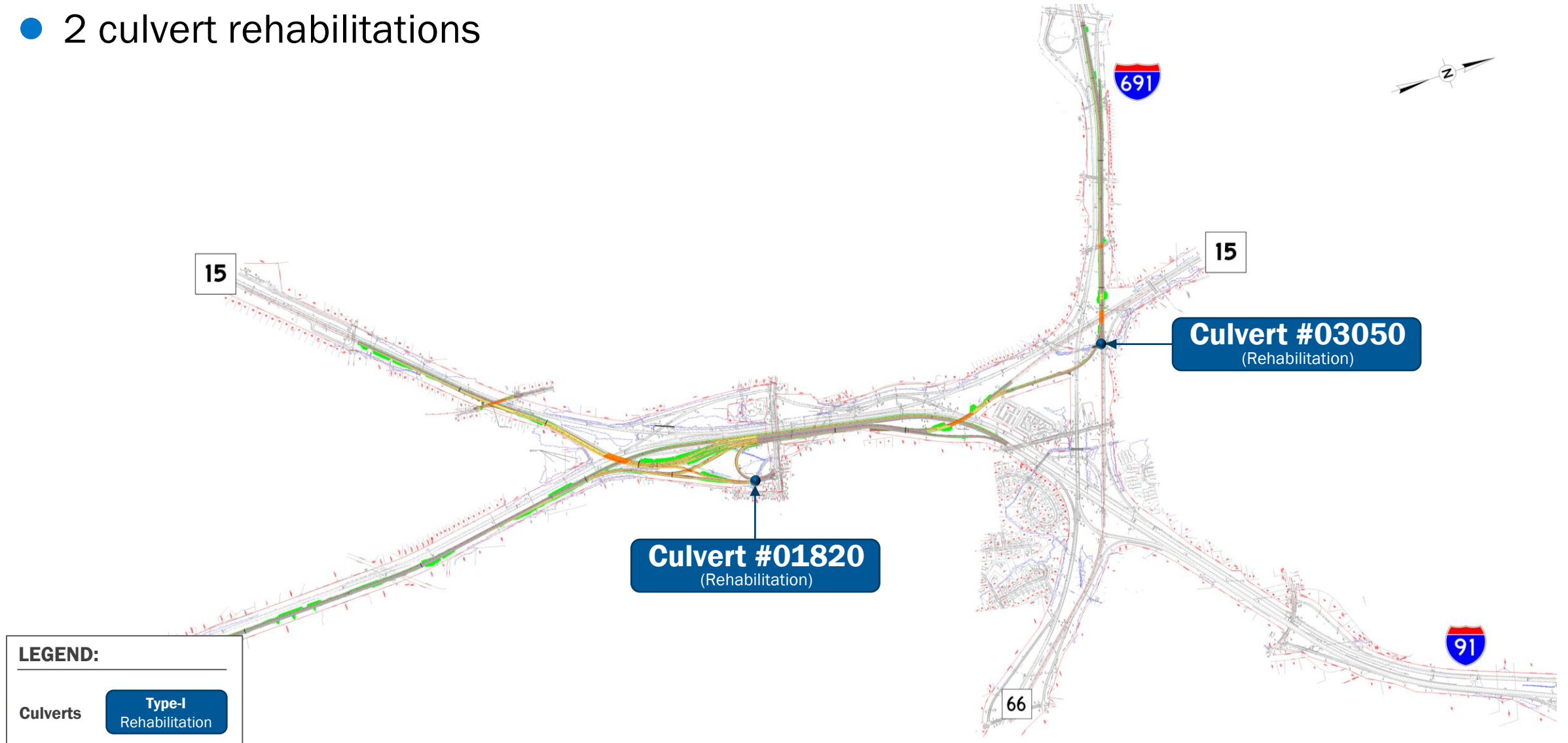
# Bridges

- 4 new bridges
- 4 bridge rehabilitations
- 1 bridge removal



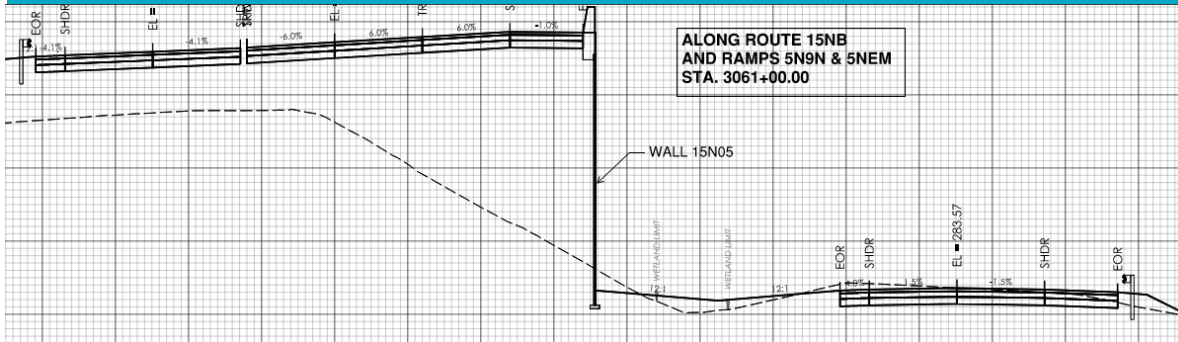
# Culverts

- 2 culvert rehabilitations

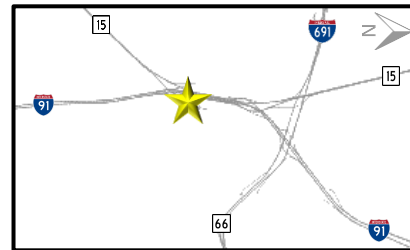


# Retaining Walls

## Route 15 Northbound



- 14 walls, 3,000 ft total length
- 6 walls
  - Average height < 7 ft
- 8 walls
  - Height 14 ft to 31 ft



- ★ Highest wall 15N-105, North of Bridge #01818
  - Up to 31 ft high, 430 ft long

## I-691 Westbound

- 4 walls, 800 ft total length
- Average height 6 ft to 8 ft
- Highest wall I691W-116, Average height 8 ft.

## Retaining walls optimized to minimize impacts to:

- Right of way
- Wetlands
- Environmentally / culturally sensitive areas
- Adjacent structures



# Other Improvements

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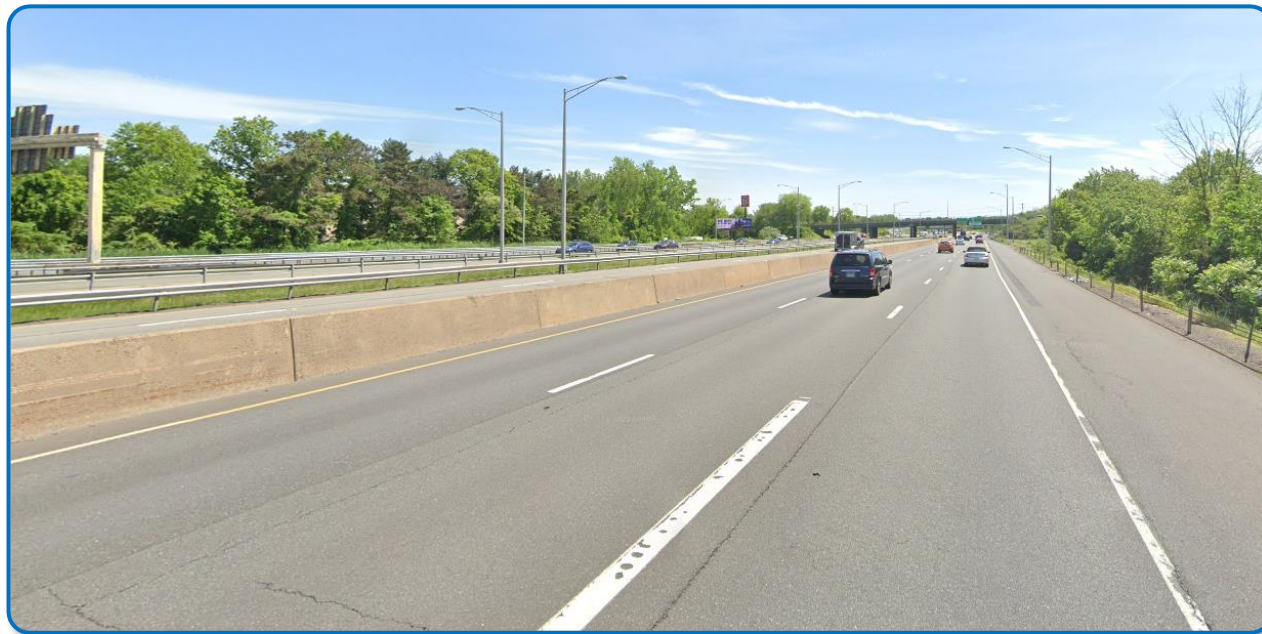
# Safety Improvements

- Barriers and guiderails to be upgraded
- Highway lighting to be upgraded
- All existing signs to be replaced – coordination with adjacent projects
- Bridge mounted signs to be replaced with overhead mounted sign structures



# Pavement

- I-91, I-691, and Route 15 to be repaved within project limits
- New pavement requires new pavement marking for the entire project
- Design coordinated with adjacent / overlapping projects



# Concrete Pavement Repairs

- Work Description
  - Remove asphalt
  - Repair concrete slabs & joints
  - Add new asphalt
  
- Operations
  - Day / night-time
  - Short-term ramp detours



# Drainage

- Existing Conditions
  - Deteriorated corrugated metal pipes: Beyond design life – need replacement
  - Clogged pipes, catch basins & outlets: Require cleaning/repairs to restore capacity
- Drainage Scope
  - Relocate existing drainage
  - Grassed swales and ditches
  - Outlet protection
  - Clean existing pipes and basins
  - Install new catch basins
  - Replace aging metal pipes



# Noise Mitigation

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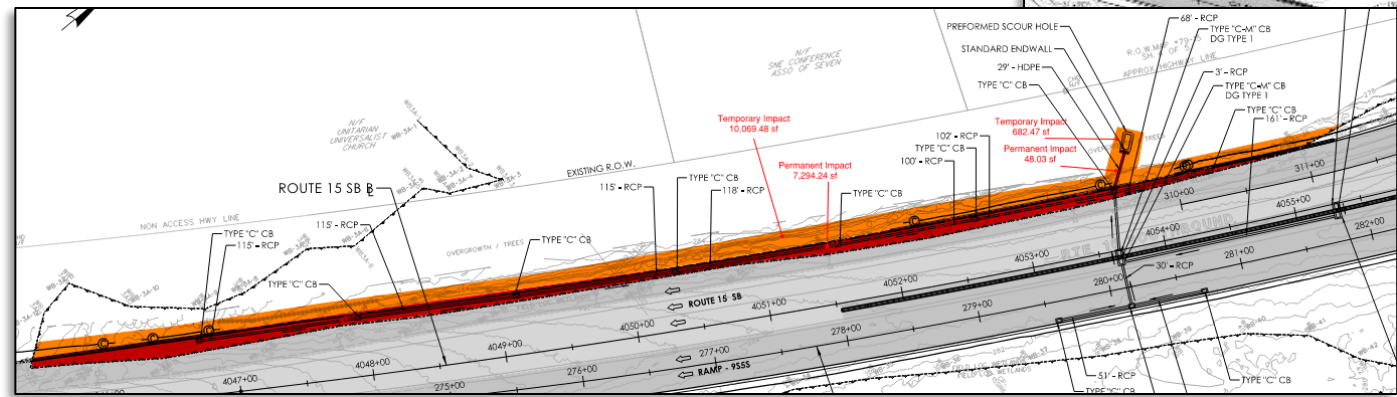
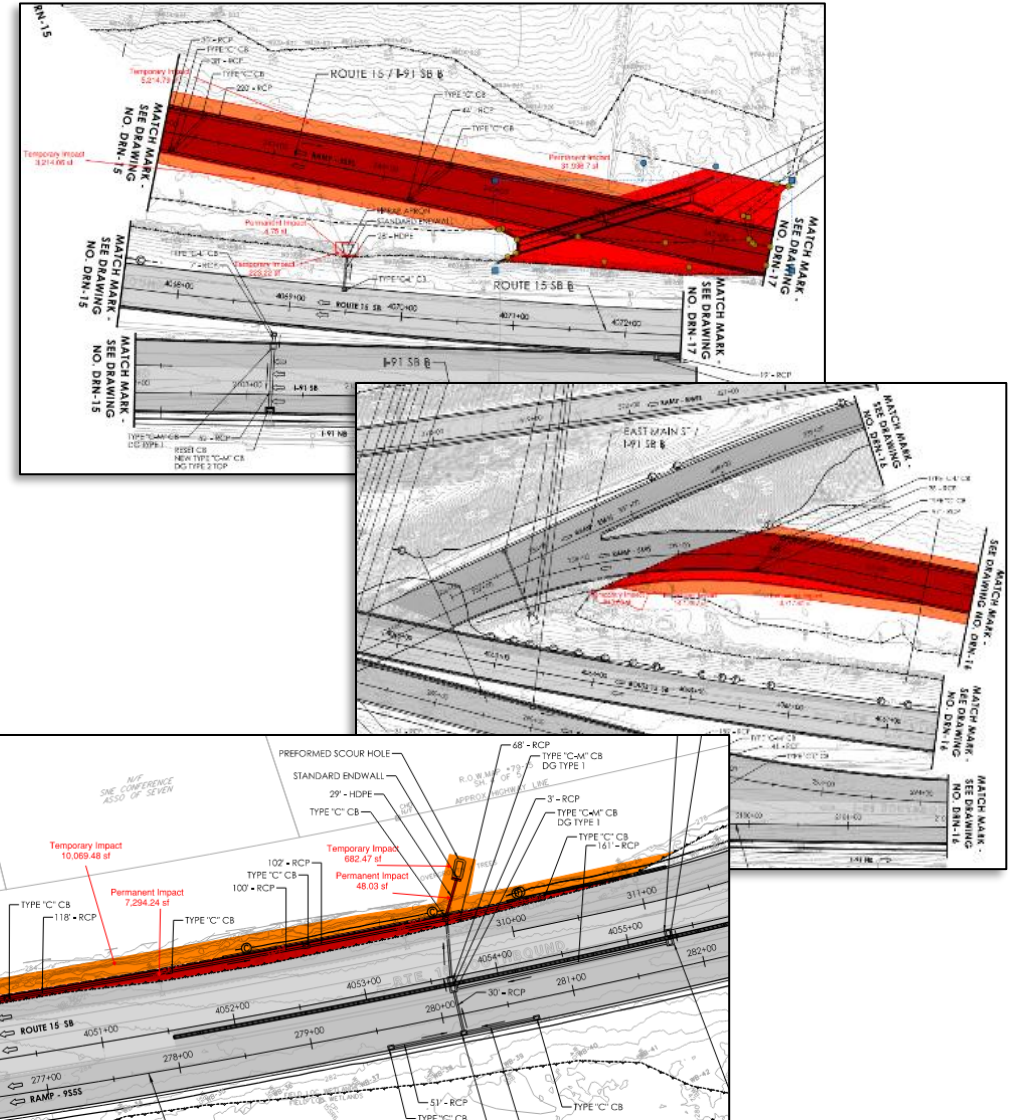
- Project meets FHWA definition of Type I Federal-Aid Highway Project
  - FHWA Noise Standard – 23 Code of Federal Regulation, Part 772
  - CTDOT Highway Traffic Noise Abatement Policy for Projects Funded by FHWA, 2017
- Noise study in progress
  - FHWA's Traffic Noise Model v2.5
  - Multiple noise models generated for the study area
- Potential noise mitigation, if...
  - Predicted noise level approach/exceed FHWA Noise Abatement Criteria, or
  - Predicted Build traffic noise level exceed existing level by 15 dB(A)
- Noise barriers to meet feasibility and reasonableness criteria defined by CTDOT Noise Abatement Policy

# Wetlands

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# Wetland Impacts

- 0079-0240 Southbound: 57 Impacts to wetland and watercourses (approx. 3.5 acre of permanent and temporary impacts)
- 0079-0246 Northbound: 30 individual impacts to wetlands and watercourses (approx. 1 acre of permanent and temporary impacts)
- Wetland Impacts
  - Repair/replacement of end-walls
  - New outlet protection
  - Roadway realignment/widening
  - Access roads
- Mitigation Strategies
  - Retaining walls
  - New/expanded wetlands

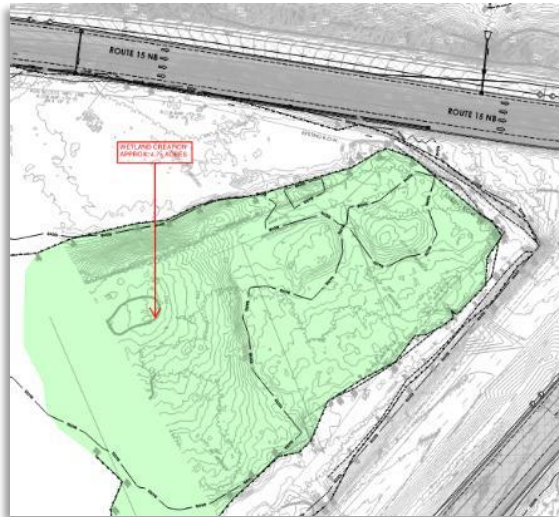




# Wetland Mitigation

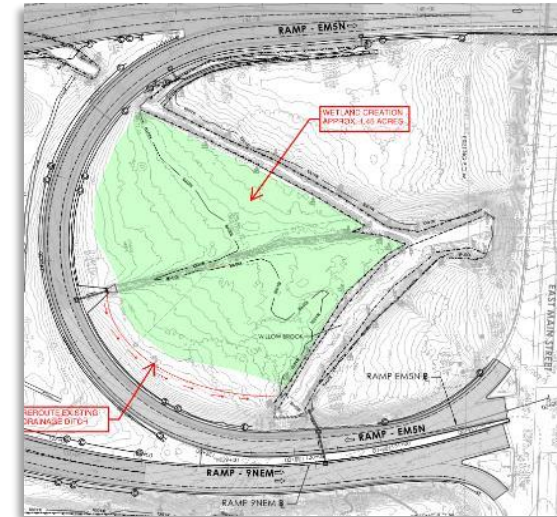
## Wetland Mitigation Area #1

- Included in Project 0079-0240
- Approx. 4 acre at south end
- Associated with Willow Brook
- Existing wetland
- Mitigation strategies
  - Expand existing wetlands
  - New lower wetland with riparian buffers



## Wetland Mitigation Area #2

- Included in Project 0079-0246
- Approx. 1 acre at East Main Street on-ramp
- Swale & Willow Brook convergence
- Grassed field and trees
- Mitigation strategies
  - New wetland
  - Rerouted drainage ditch



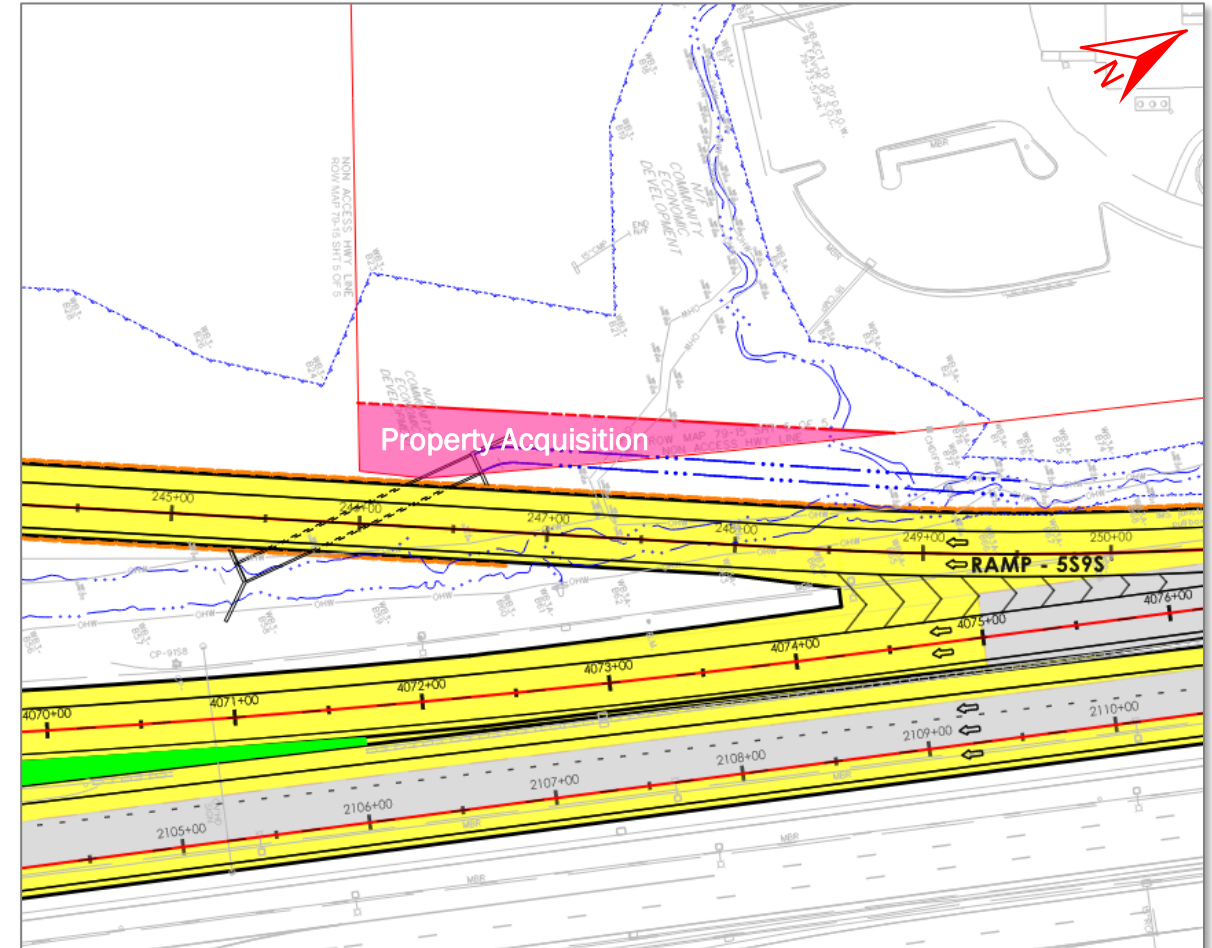
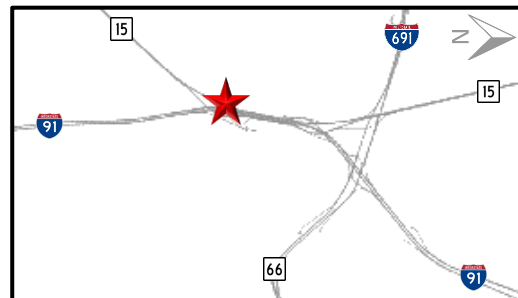
# Right of Way

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# Right of Way Impacts

## Property Impact – Ramp 5S9S

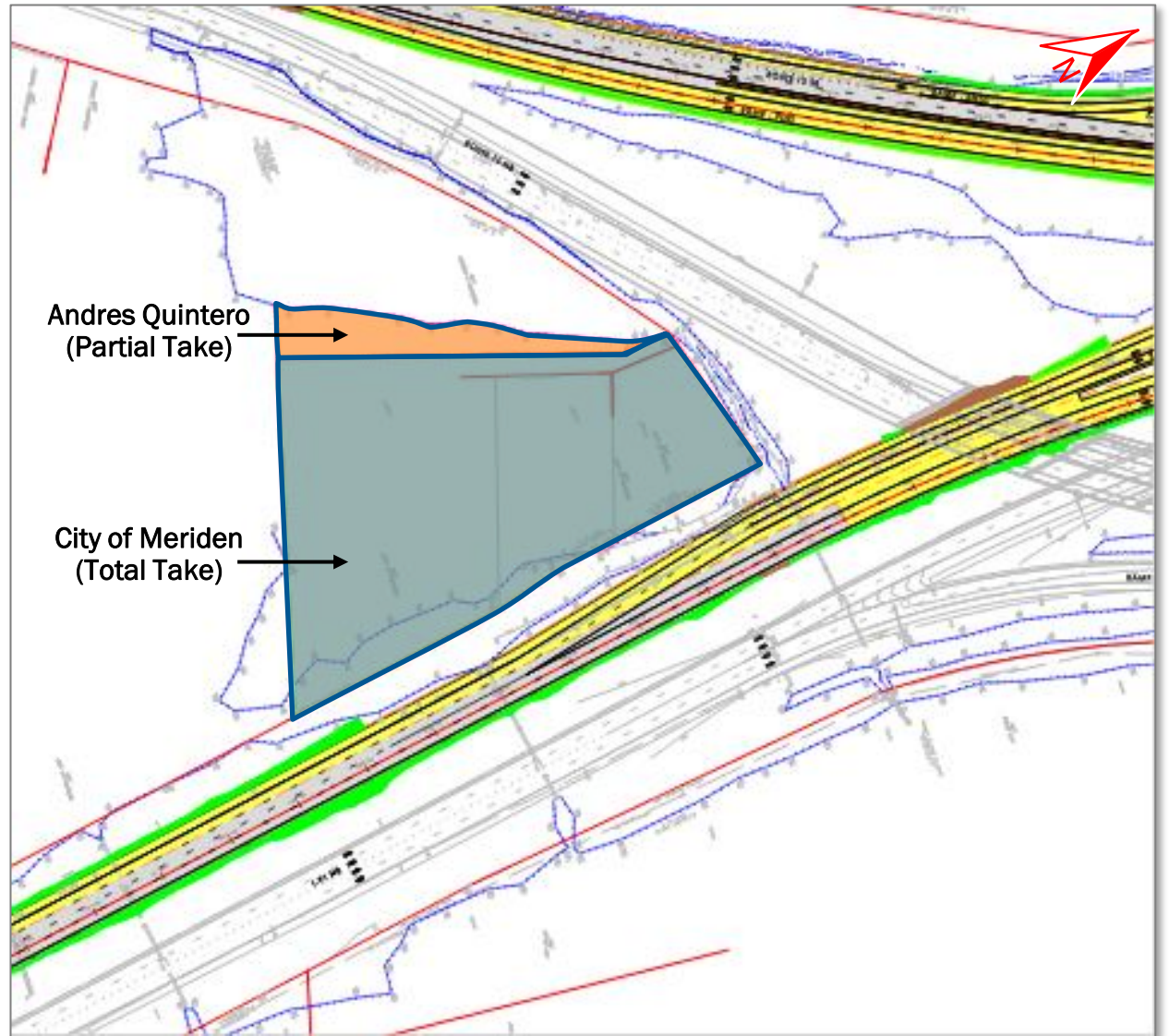
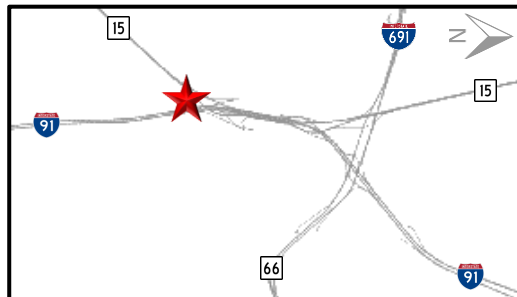
- New ramp from Route 15 SB to I-91 SB
- New culvert and stream realignment
- Approx. 6,300 sq. ft. partial acquisition
- Owned by Community Economic Development



# Right of Way Impacts

## Property Impact – Wetland Mitigation Area #1

- Wetland mitigation site
- Andres F. Quintero Property
  - Partial acquisition
  - Approx. 19,200 sq.ft.
- City of Meriden Property
  - Total acquisition
  - Approx. 185,000 sq.ft.



# Stakeholder Coordination

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# Utility Coordination

- Some utilities crossing the highway corridors will be impacted
- Introductory utility coordination meeting conducted on June 24, 2021
- Further coordination to start in the Final Design phase

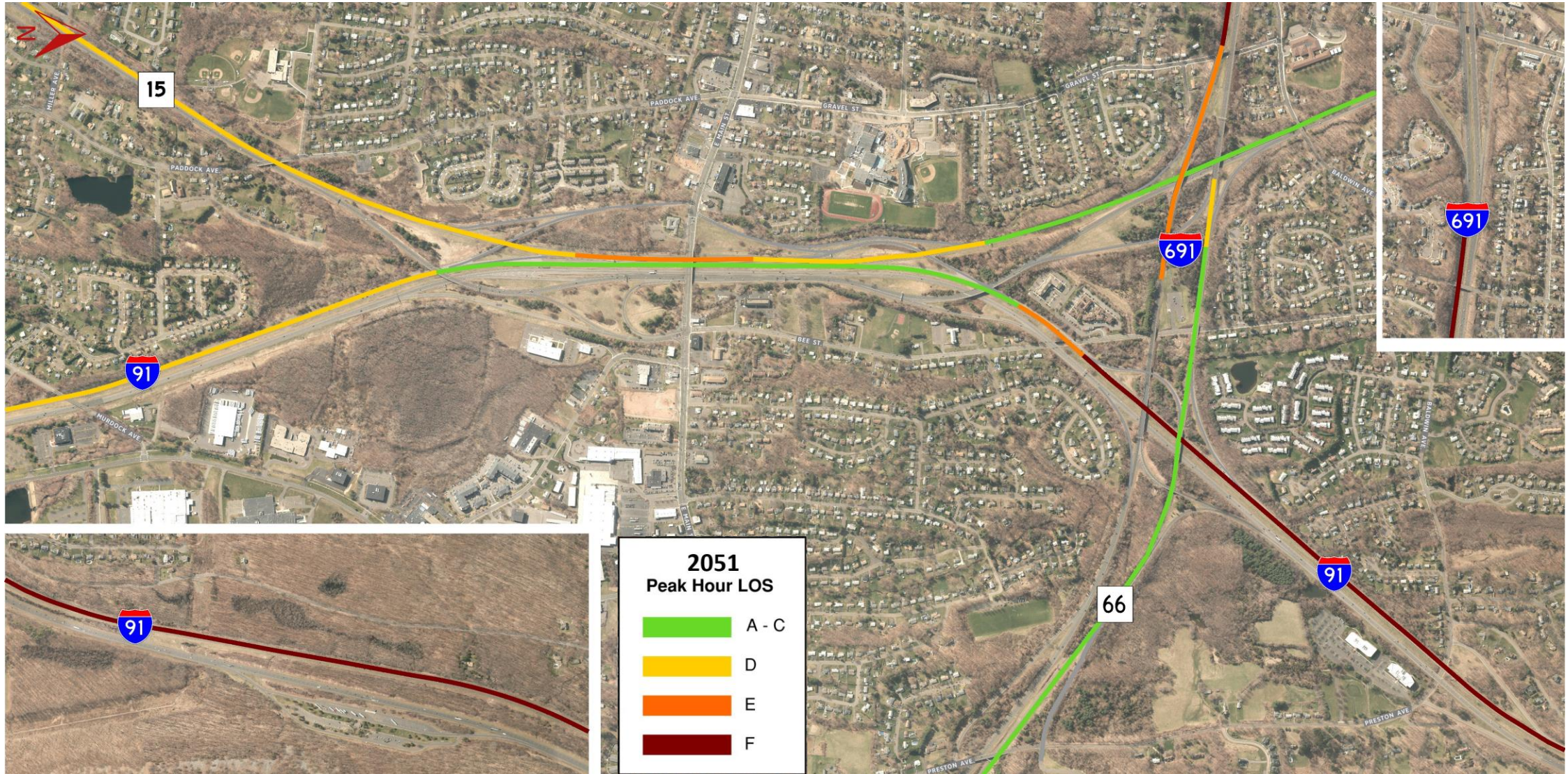
City	Type of Utility	Company
Meriden	Cable TV	<ul style="list-style-type: none"> <li>• CoxCom, LLC</li> </ul>
	Communication	<ul style="list-style-type: none"> <li>• Crown Castle Fiber, LLC</li> <li>• The Southern New England Telephone Company</li> <li>• WiTel Communication, LLC</li> </ul>
	Electric	<ul style="list-style-type: none"> <li>• The Connecticut Light and Power Company</li> </ul>
	Gas	<ul style="list-style-type: none"> <li>• Algonquin Gas Transmission Company</li> <li>• Yankee Gas Services Company</li> </ul>
	Railroad	<ul style="list-style-type: none"> <li>• Amtrak – National Railroad Passenger Corp.</li> <li>• The York Hill Trap Rock Quarry Company</li> </ul>
	Water	<ul style="list-style-type: none"> <li>• City of Meriden, Department of Public Works- Water Bureau</li> </ul>
Middletown	Cable TV	<ul style="list-style-type: none"> <li>• Comcast of Connecticut, Inc</li> </ul>
	Communication	<ul style="list-style-type: none"> <li>• Cellco Partnership</li> <li>• Crown Castle Fiber, LLC</li> <li>• The Southern New England Telephone Company</li> </ul>
	Electric	<ul style="list-style-type: none"> <li>• The Connecticut Light and Power Company</li> </ul>
	Gas	<ul style="list-style-type: none"> <li>• Algonquin Gas Transmission Company</li> <li>• Yankee Gas Services Company</li> </ul>
	Petroleum Pipeline	<ul style="list-style-type: none"> <li>• Buckeye Pipe Line Company, L.P.</li> </ul>
	Railroad	<ul style="list-style-type: none"> <li>• Providence and Worcester Railroad Company</li> <li>• The York Hill Trap Rock Quarry Company</li> </ul>
	Water	<ul style="list-style-type: none"> <li>• City of Middletown Water and Sewer Department</li> </ul>

# Improved Level of Service

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# Peak Hour Level of Service – No Build

0079-0240  
Southbound



Critical LOS for AM or PM peaks selected for each highway segment, for design year 2051.



# Peak Hour Level of Service – Build

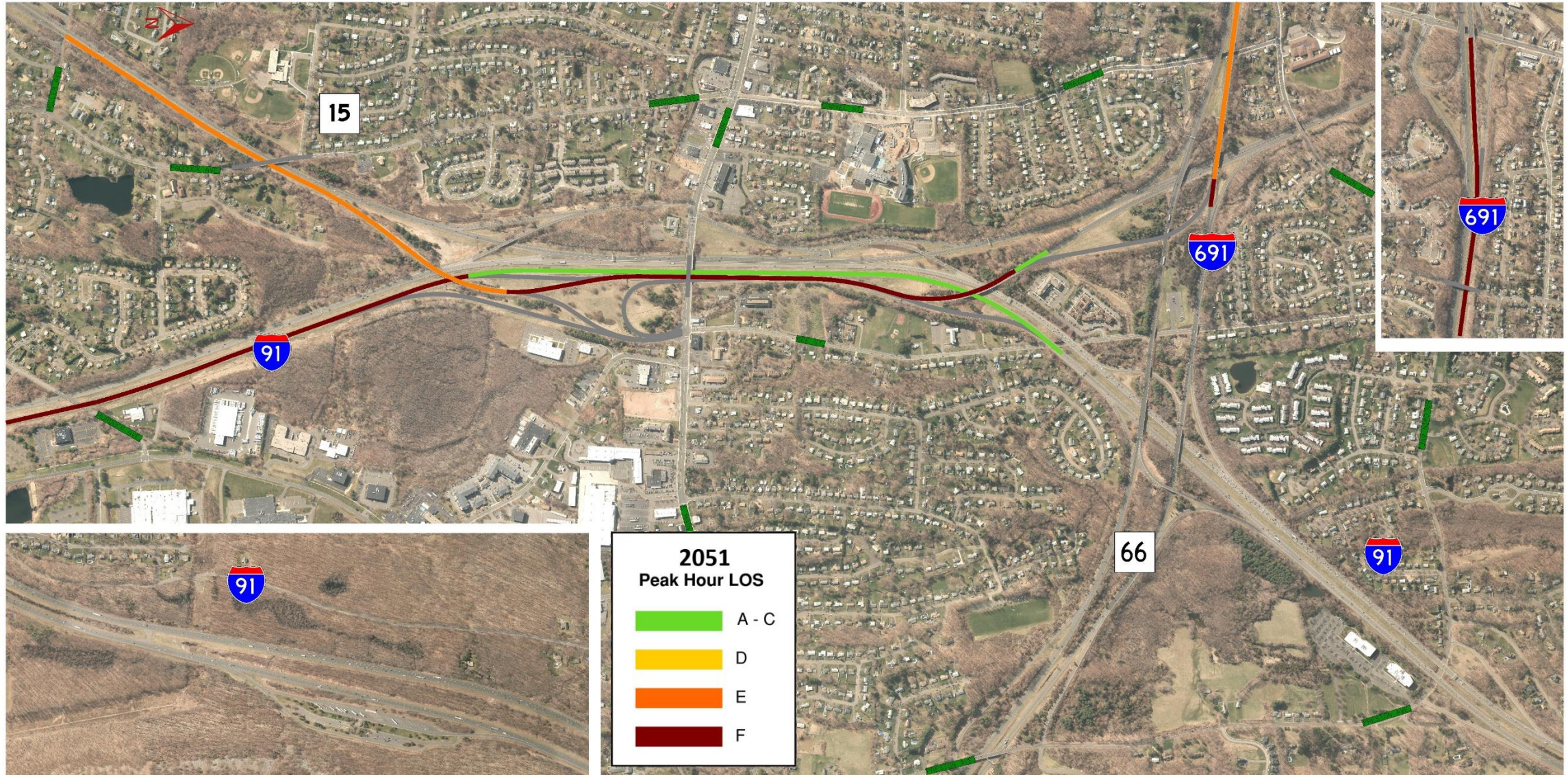
0079-0240  
Southbound



Critical LOS for AM or PM peaks selected for each highway segment, for design year 2051.

# Peak Hour Level of Service – No Build

0079-0246  
Northbound



Critical LOS for AM or PM peaks selected for each highway segment, for design year 2051.

# Peak Hour Level of Service – Build

0079-0246  
Northbound



Critical LOS for AM or PM peaks selected for each highway segment, for design year 2051.

# Historic & Archaeological Resources

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# Historic & Archaeological Resources

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- No historic properties will be impacted
- Gethsemane Cemetery
  - Dates back to 1884 and considered Ancient Burial Ground under CT Law
  - Highway alignment optimized to avoid any impact to the Cemetery
- Bridge #00797
  - Route 15 over Miller Ave
  - Built in 1946
  - Concrete arch repairs / structure strengthening

# Construction Overview

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## Stage Construction

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- Project assessed for constructability and efficient traffic flow
- Sequence of construction divided into three major stages for each project
- Closed-road detours avoided to minimize impact to traveling public
- Temporary bridges avoided to reduce construction cost
- Construction operations
  - Lane closures (off-peak)
  - Day/nights
  - Possibly weekends
  - Short-term ramp detours

# Anticipated Permits Schedule

- **Permits**

- CTDOT Flood Management Certification (FMC)
- 401 Water Quality Certification
- 404 Inland Wetland & Watercourses (multiple Pre-Construction Notifications)
- CTDEEP General Permit for Stormwater and Dewatering Wastewaters Associated with Construction Activity

- **Coordination with:**

- USACE
- EPA
- CTDEEP Fisheries
- CT SHPO
- CTDEEP NDDB
- Cities of Meriden & Middletown

- **Schedule:**

- 0079-0246 (NB): Jan. 2023
- 0079-0240 (SB): Apr. 2024



# Schedule & Cost

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# Cost Estimate & Schedule

	<u>0079-0246</u> <i>Northbound</i>	<u>0079-0240</u> <i>Southbound</i>
<ul style="list-style-type: none"> <li>● <b>Cost Estimate</b> <ul style="list-style-type: none"> <li>■ Construction</li> </ul> </li> </ul>	\$215M	\$169 M
<ul style="list-style-type: none"> <li>● <b>Schedule</b> <ul style="list-style-type: none"> <li>■ Final Design Plans (FDP)</li> <li>■ Design Completion Date</li> <li>■ Advertisement</li> <li>■ Construction Notice to Proceed</li> <li>■ Construction Duration</li> </ul> </li> </ul>	Aug 2023 Sep 2023 Jan 2024 Spring 2024 4-5 years	Aug 2024 Sep 2024 Jan 2025 Spring 2025 4-5 years

# 3D Visualization

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# I-91 Northbound to I-691 Westbound



# I-91 Southbound to Route 15 Southbound





# Public Informational Meeting

Thursday, July 07, 2022 at 7:00 p.m.

State Projects # 0079-0240 & 0079-0246

## I-91/I-691/Route 15 Interchange Improvements

Cities of Meriden and Middletown, CT

## Questions & Answers Session

*Email*

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**(860) 944-1111**

*Webpage*

<https://portal.ct.gov/DOTMeriden79-240>

<https://portal.ct.gov/DOTMeriden79-246>

*Meeting Recording*

<https://portal.ct.gov/dot/general/CTDOT-VPIM-Library>