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Massachusetts Department of Transportation
Highway Division

Advisory Group

Meeting #5

Cape Cod Bridges Program

March 13, 2025

Project File No. 608020

Agenda

1. Introductions
2. Funding Update
3. Environmental Update
4. Roadway Interchange Update
5. Subsurface Explorations
6. Property Acquisitions
7. Discussion

Bourne Bridge circa 1935

Introductions

Advisory Group Members

Program Team

- MassDOT
- USACE
- HNTB
- Stantec

State and Federal Elected Officials

- Office of Sen. Markey
- Office of Sen. Warren
- Office of U.S. Rep. Keating
- Office of U.S. Rep. Lynch
- State Sen. Cyr
- State Sen. Fernandes
- State Rep. Vieira
- State Rep. Peake
- State Rep. Diggs
- State Rep. Xiarhos
- State Rep. Moakley

Stakeholders

- Town of Bourne
- Association to Preserve Cape Cod
- Barnstable County Regional Board of Commissioners
- Barnstable County Sheriff's Office
- Bourne Commission on Disabilities
- Bourne Police
- Bourne Public Schools
- Bourne Recreation Authority
- Bourne Selectboard
- Bourne Town Administrator's Advisory Committee on Pedestrian Bicycle Committee
- Cape Cod Canal Region Chamber of Commerce
- Cape Cod Chamber of Commerce
- Cape Cod Commission
- Cape Cod Metropolitan Planning Organization
- Cape Cod Regional Transit Authority
- Upper Cape Cod Regional Technical High School
- US Army Corps of Engineers
- Federal Highway Administration
- Mass State Police
- MEMA

Funding Update

Funding Update – Sagamore Bridge Project

- A funding plan is in place for the Sagamore Bridge
- This plan relies upon Federal grants (Mega and BIP), USACE funds and State funds

Funding Update – Bourne Bridge Project

- The Bourne Bridge Replacement project was not awarded funding through the most recent Multimodal Project Discretionary Grant opportunity (FFY 2025-2026 Mega and INFRA)
- MassDOT is awaiting notification from USDOT regarding the FFY 2025 BIP application.

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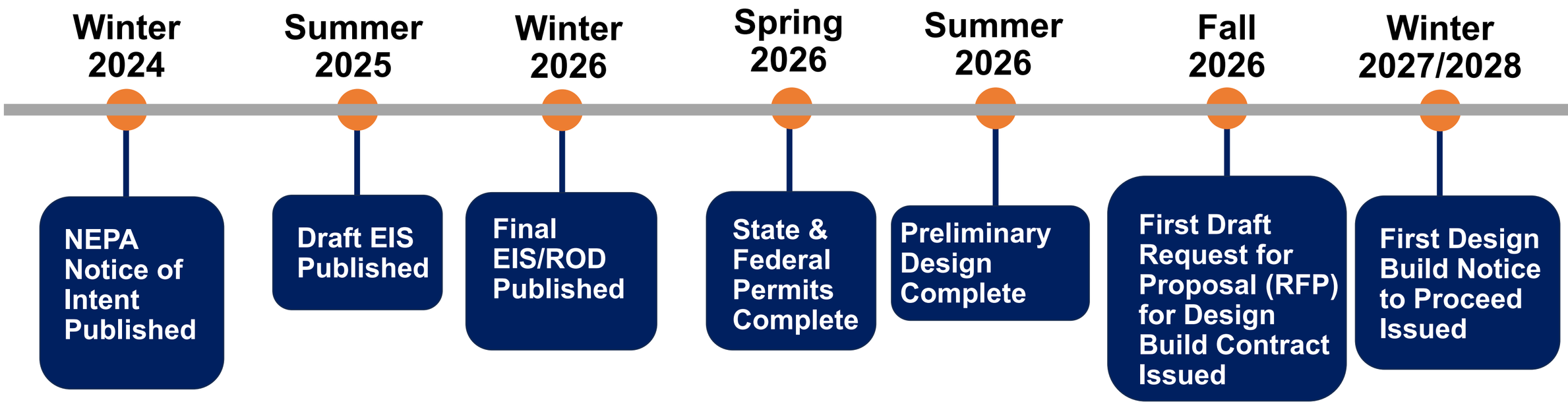
Sagamore Crossing Tentative Schedule



Additional Scheduling Notes:

- Contract packaging strategy is under development.
- Draft RFP for the first major Sagamore contract package is expected in **Fall 2026**.
- Construction duration will be determined based on contract packaging, with an estimated timeframe of **8 to 10 years**.
- Bourne Crossing approximately one year later depending on funding

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Environmental Update

Environmental Update

MassDOT and FHWA are advancing development of the DEIS/DEIR including ongoing coordination with Cooperating Agencies

The DEIS/DEIR remains on schedule to be published in summer 2025 and will formally identify the Preferred Alternative

Significant regulatory progress is being made under the following:

- US Endangered Species Act
- Magnuson-Stevens Act, Essential Fish Habitat (EFH) Provisions
- Section 106 of the National Historic Preservation Act
- Section 4(f) of the US DOT Act
    - MassDOT continues to coordinate with Bourne Recreation Authority specific to impacts and betterments to Bourne Scenic Park

The DEIS/DEIR will include a formal response to all comments received during the NEPA and MEPA scoping processes

A DEIS/DEIR public meeting will occur this summer to accompany the NEPA/MEPA comment periods

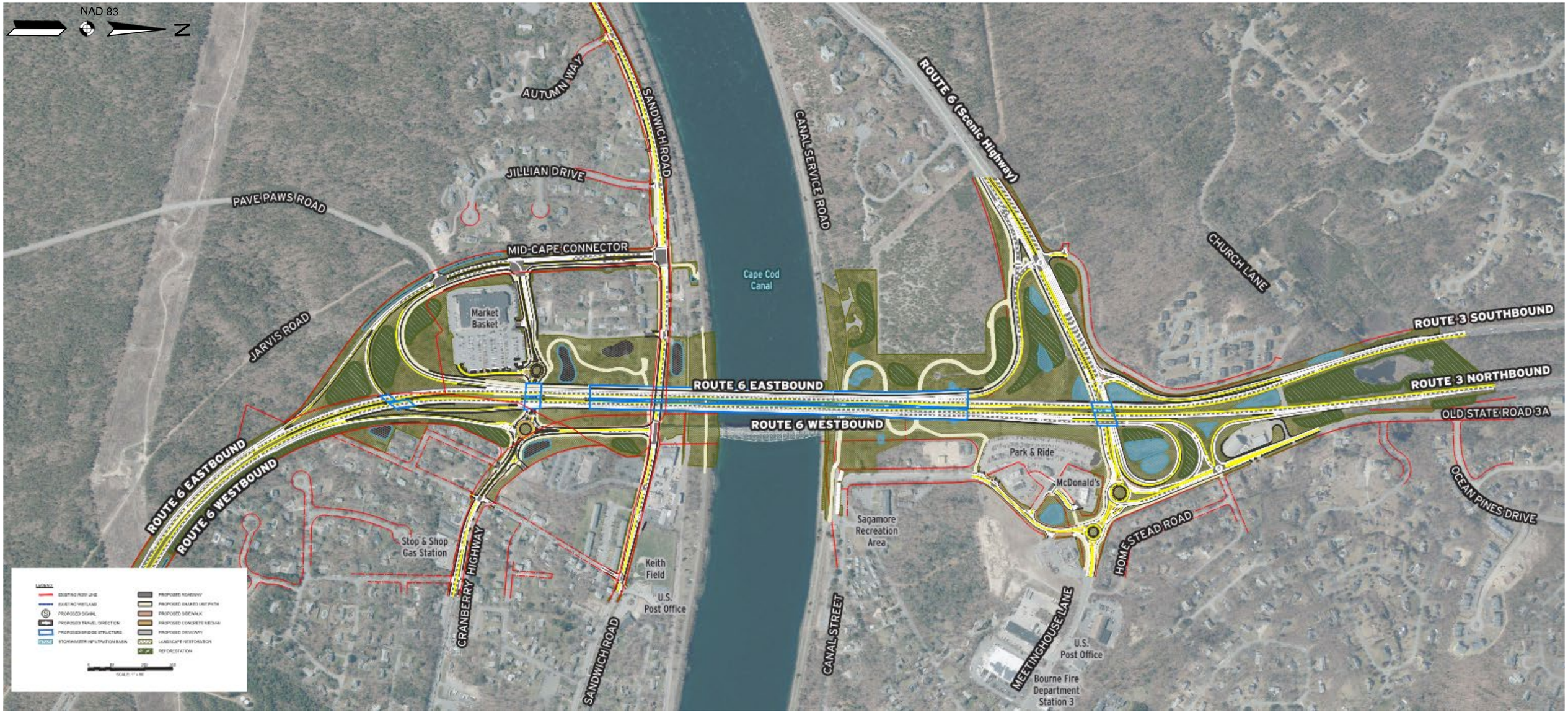
Roadway Interchange Update

Roadway Interchange Update

- The interchange evaluation process and the recommended Interchange Options were presented to the Advisory Group on October 22, 2024.
- This process was also presented at the November 18, 2024 Open House.
- The public is in general agreement with the recommended Interchange Options.
- These recommended Interchange Options form the Build Alternative for the Draft EIS.
- The preliminary design is advancing based on these recommendations.

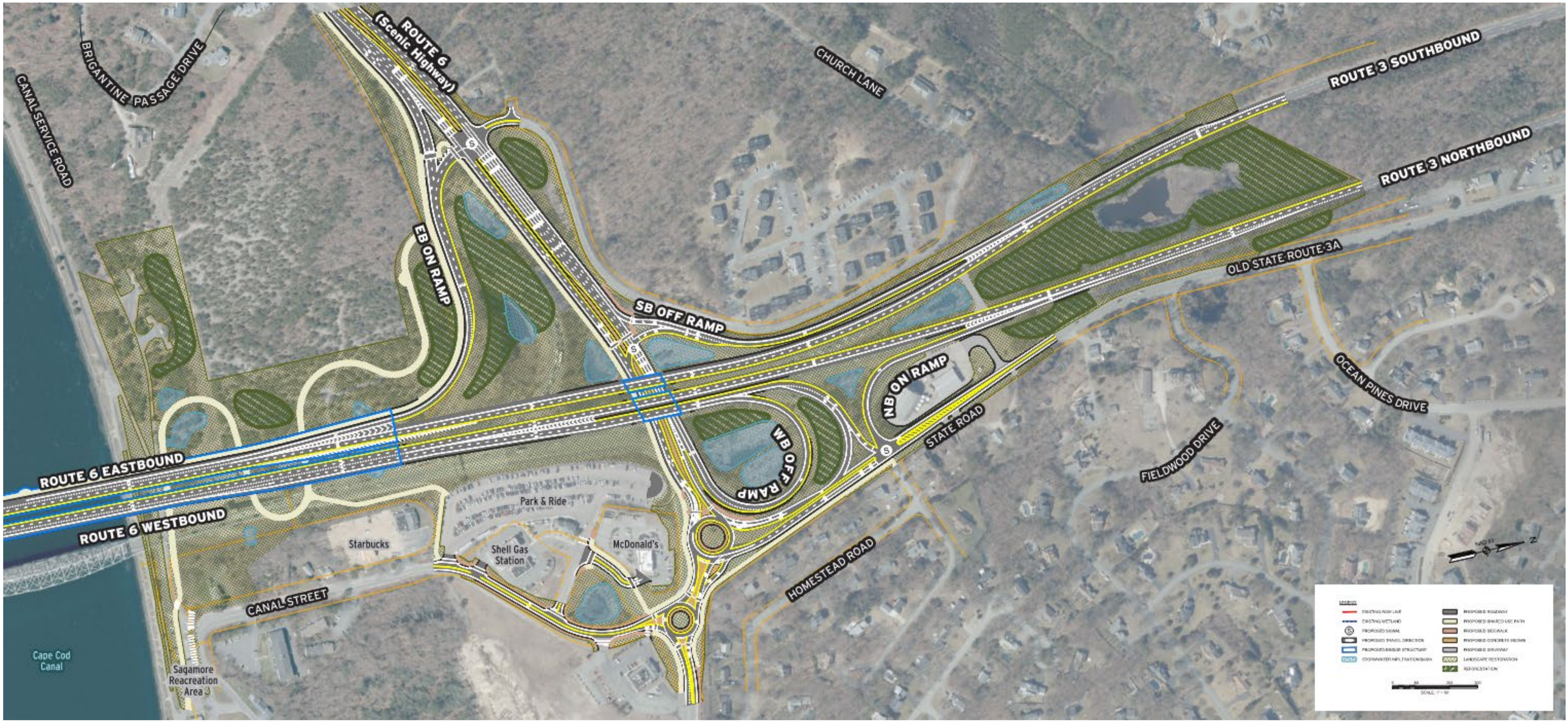
Sagamore Crossing

Sagamore Crossing (Build Alternative)



Sagamore North Intersection Controls

Sagamore North (Recommended)



Sagamore North Interchange Recommended Design Rendering

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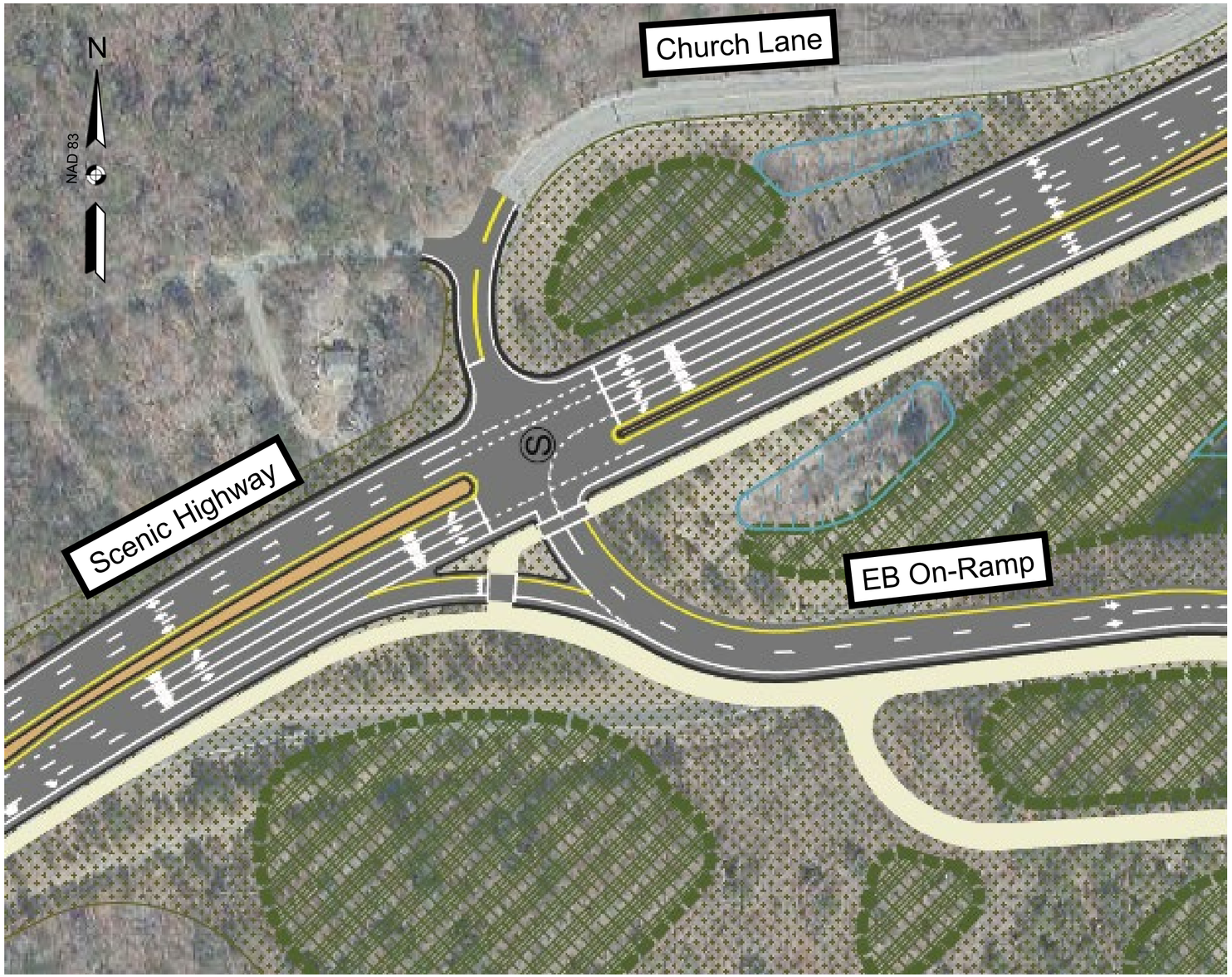
Scenic Highway and Church Lane/EB On-ramp Intersection

Geometric Changes

- Second WB left turn lane.
- Extended 3rd WB lane to crest.

Operations

- Delay similar or lower than existing.
- Shorter queue lengths.
- WB left turn queue contained in left turn lanes.



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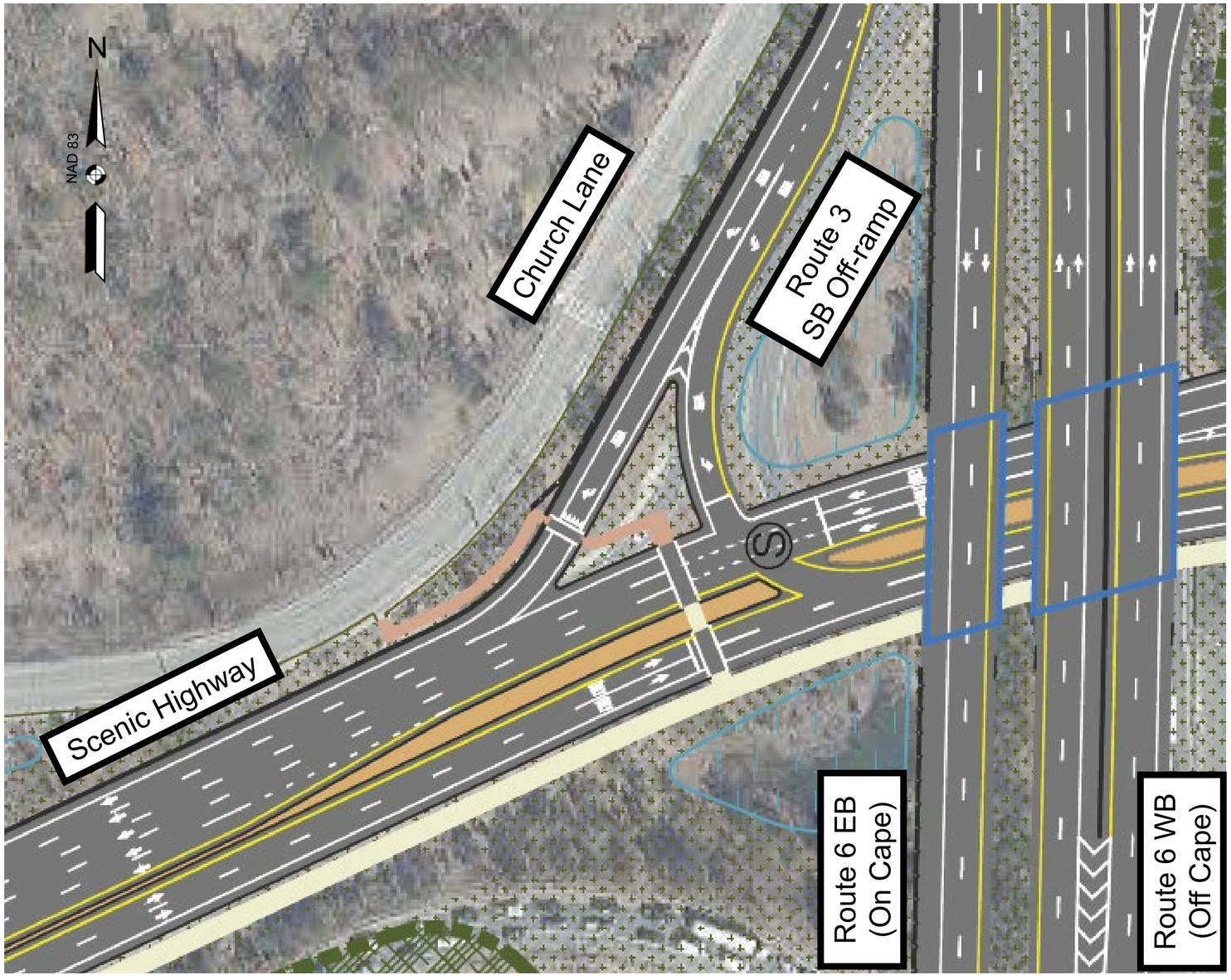
Scenic Highway and SB Off-ramp Intersection

Geometric Changes

- Two eastbound lanes.
- Three westbound lanes.
- Left and right turn lanes extended on the ramp.

Operations

- In general delays and queues are reduced.
- SB ramp significant improvement.



Sagamore North Interchange – Rendering looking Southeast

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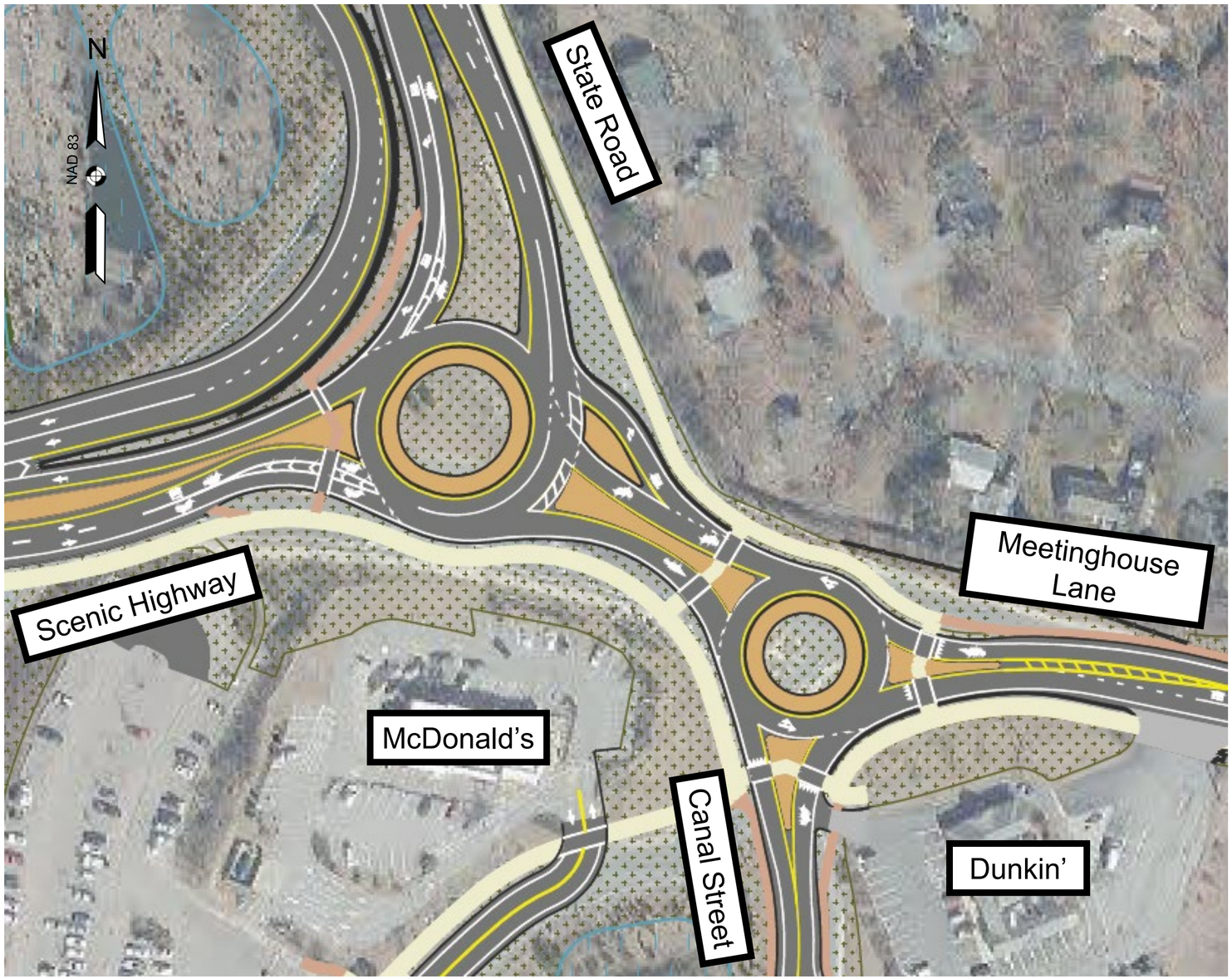
Scenic Highway, State Rd, Canal St, and Meetinghouse Ln Intersections

Geometric Changes

- Two Roundabouts
  - 2 Lanes from Scenic EB to State NB
  - Right turn lane for State SB to Scenic WB
  - Slip right lane for Meetinghouse/Canal right to State

Operations

- Congestion from EB weave eliminated
- Operations improved by splitting intersection



State Road, Route 3 NB Ramps Intersection

Geometric Changes

- New Route 6 WB Off-Ramp
- New signalized intersection
- Potential for single left turn lane

Operations

- Slight increase in delays/queues with installation of a signal but well within acceptable limits.

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Sagamore North Interchange – Rendering looking Southwest

Sagamore South Intersection Controls

Sagamore South Interchange Recommended Design

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Sagamore South Interchange Recommended Design Rendering

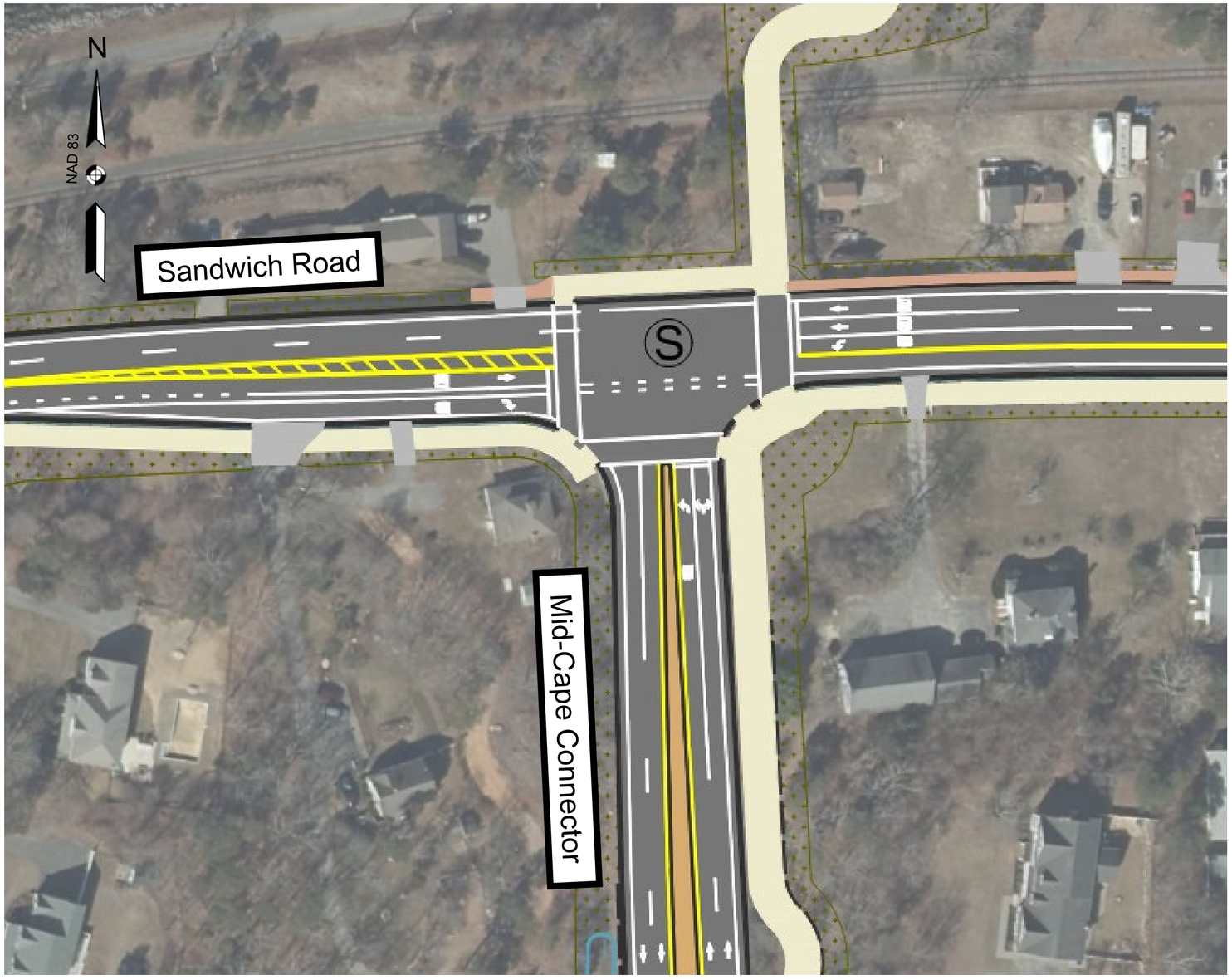
Sandwich Rd and Mid-Cape Connector Intersection

Geometric Changes

- Added 2nd WB travel lane
  - Connector Road to Autumn Way

Operations

- Added WB lane reduces delays/queues on Sandwich Rd.
- NB queues do not impact Factory Outlet Way intersection.



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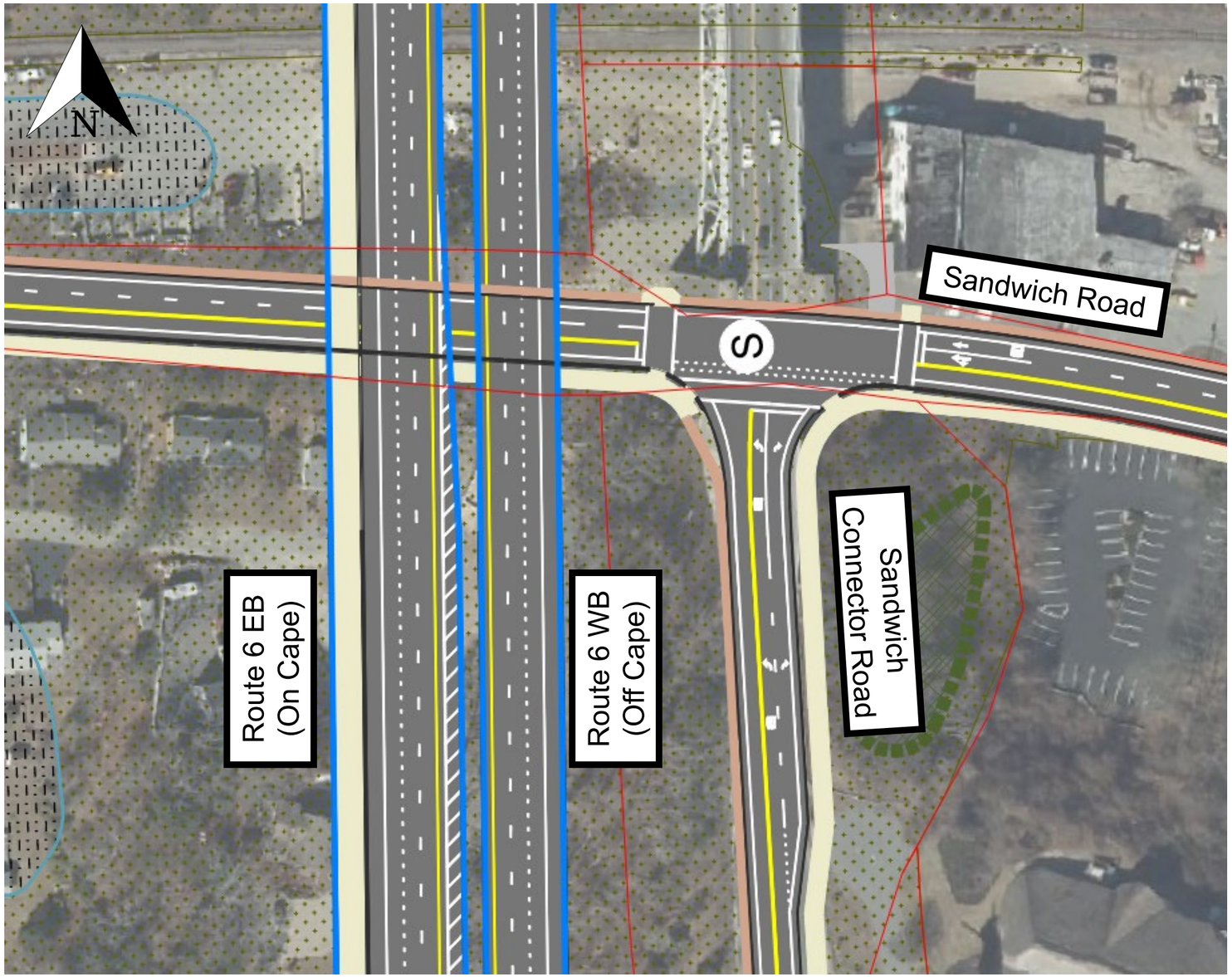
Sandwich Rd and Sandwich Connector Rd Intersection

- Geometric Changes
  - New Connector Road
    - One SB lane
    - One NB left turn lane
    - One NB left/right turn lane
  - Two WB lanes on Sandwich
  - One EB lane on Sandwich
- Operations
  - Delays and queues considerably less than at Sandwich Rd/Mid-Cape Connector



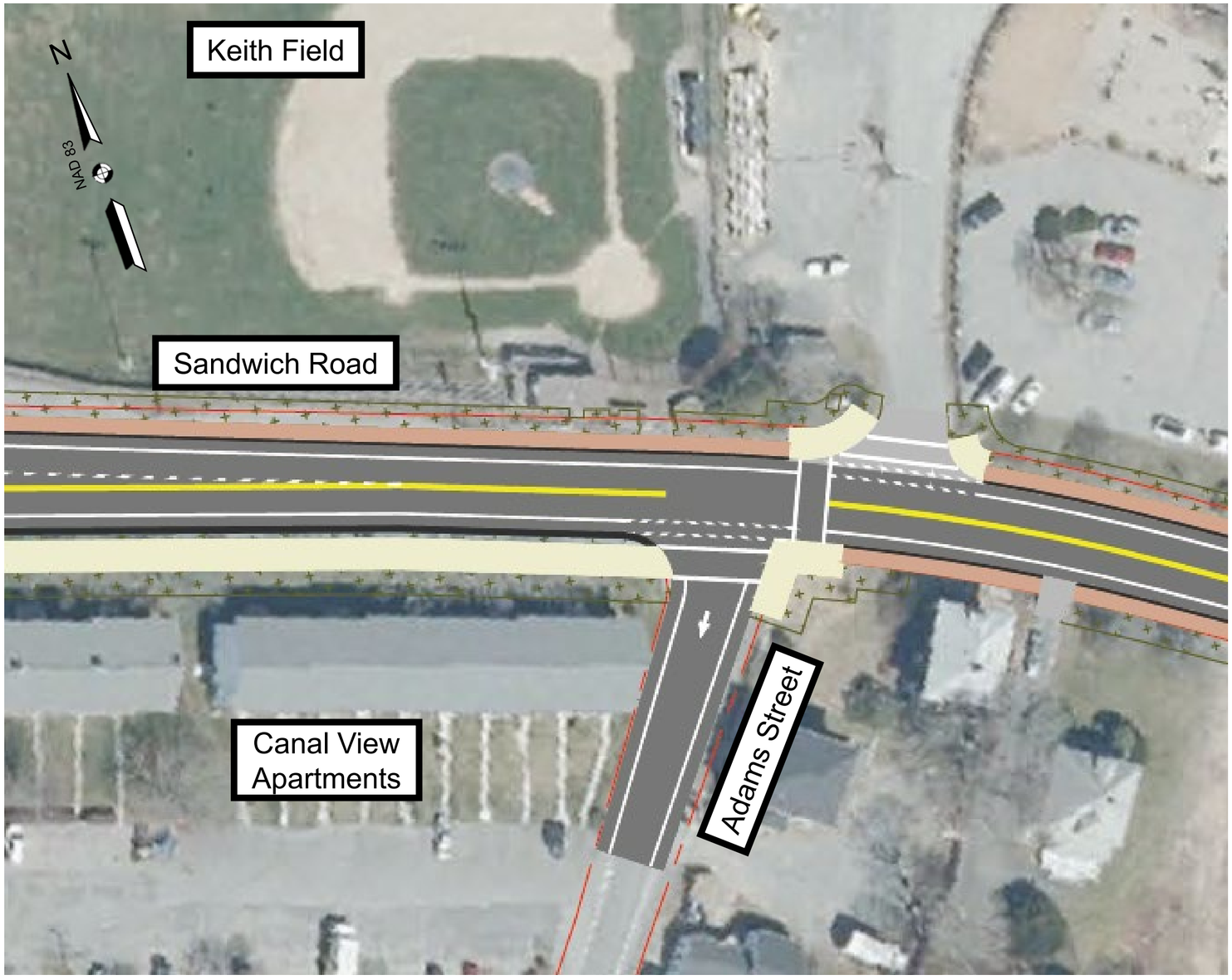
Sandwich Rd and Adams St Intersection

Geometric Changes

- Similar to existing

Operations

- Operations improved considerably without traffic destined for Route 6 WB.



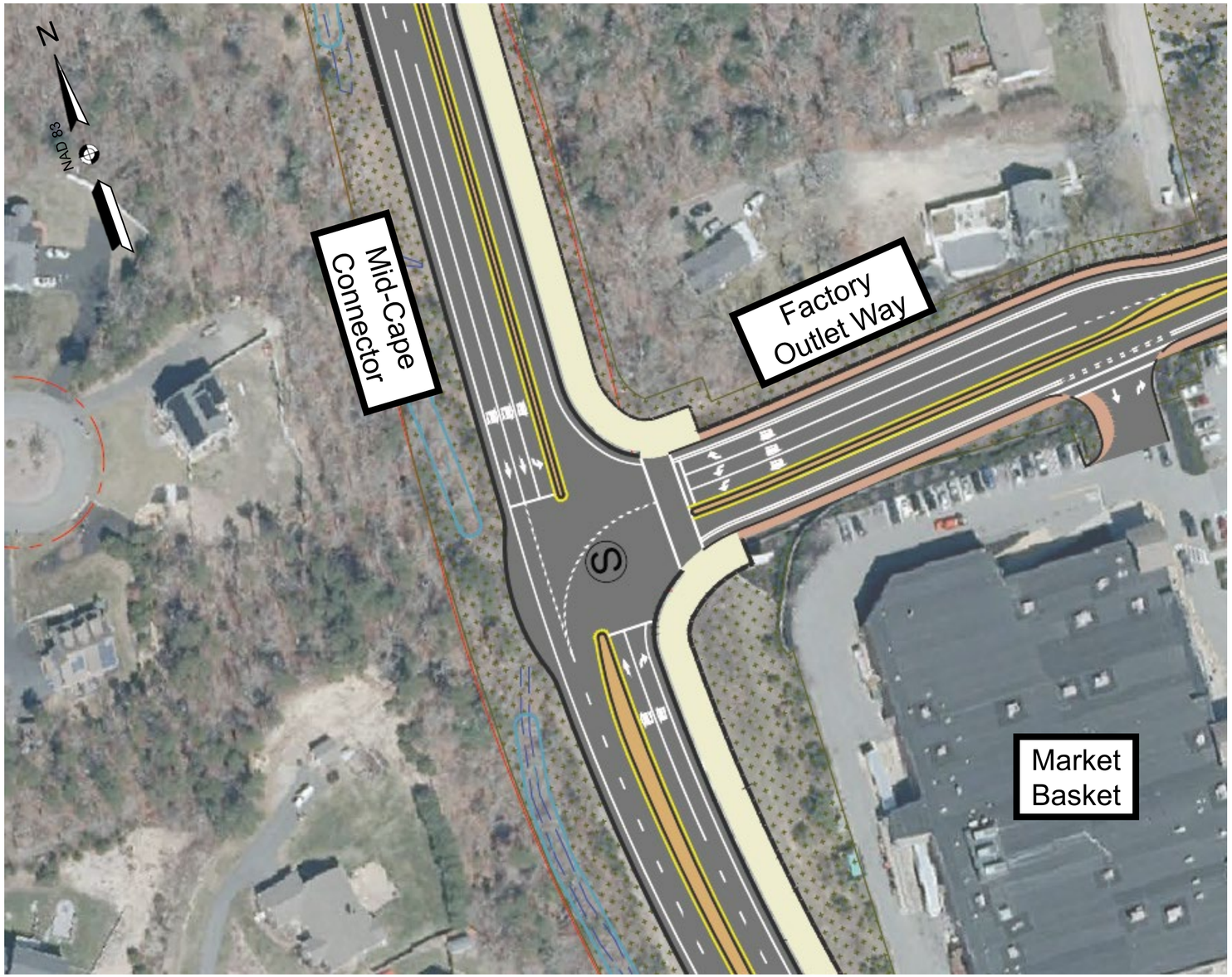
Factory Outlet Way and Mid-Cape Connector Intersection

Geometric Changes

- Maintains existing lane configurations

Operations

- Increase in delays/queues with increased volumes but still within acceptable limits.



Factory Outlet Way and Market Basket Driveways

Geometric Changes

- Right-in/right-out at western driveway.
- Single lane roundabout at eastern driveway.

Operations

- All approaches have acceptable delays and operate under capacity.
- WB queue does not impact roundabout at the Route 6 WB Off-ramp.

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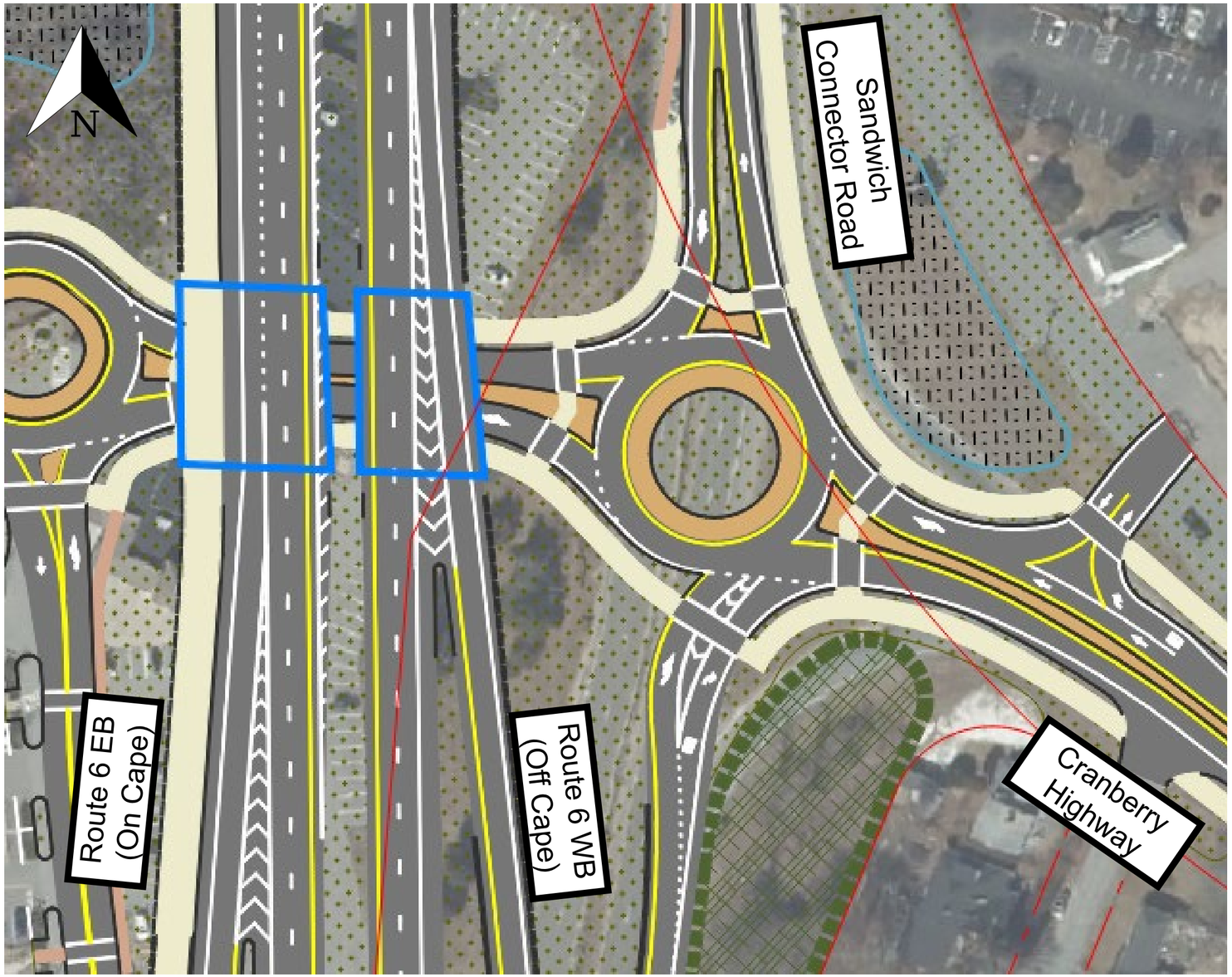
Cranberry Highway, WB Off-Ramp, Sandwich Connector Road Intersection

- Geometric Changes
  - Single lane roundabout
  - Exclusive right turn lane for ramp traffic
- Operations
  - WB ramp and EB movement have minimal delays queues
  - Slightly higher delays/queues for traffic approaching on Cranberry Highway but operates under capacity



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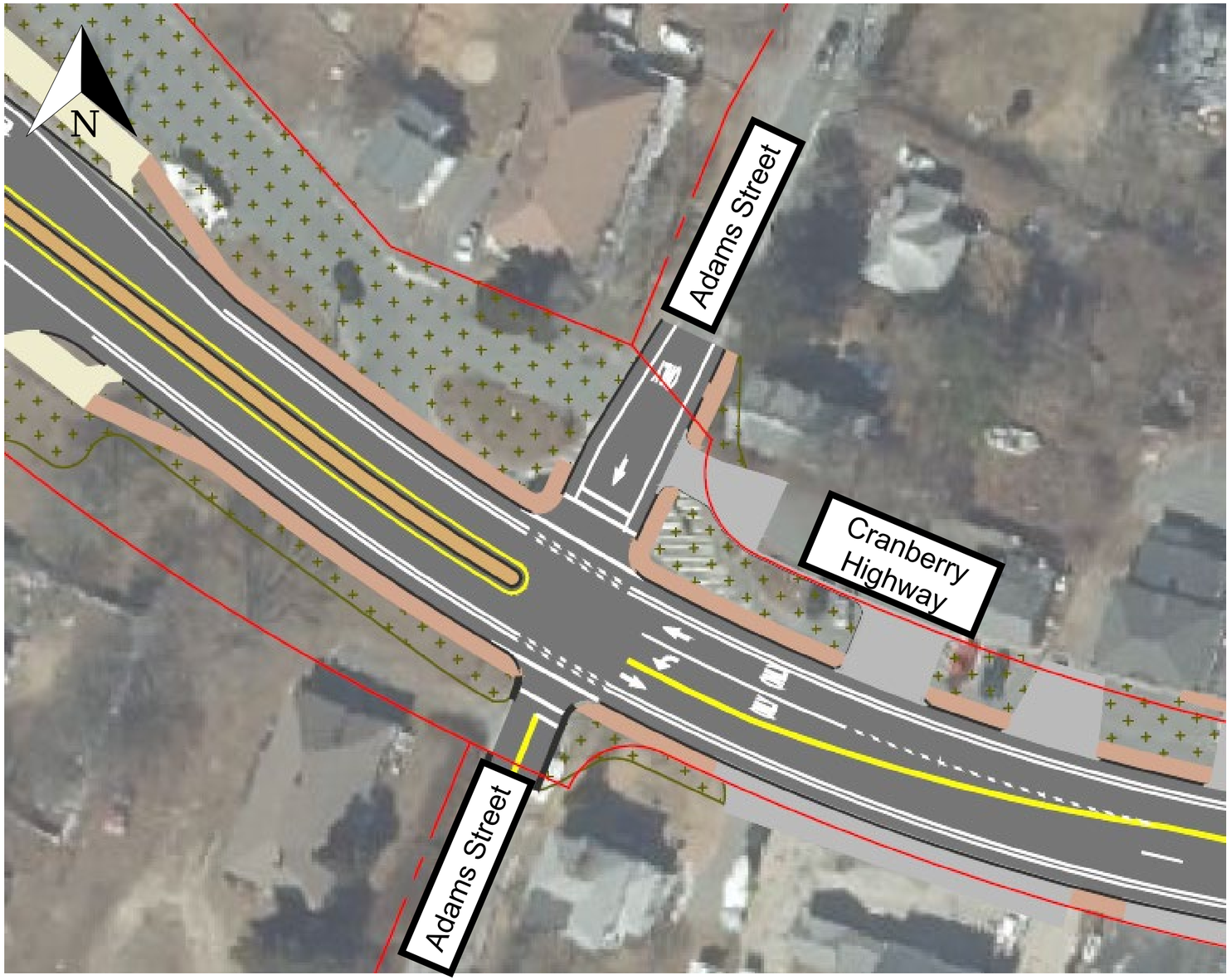
Cranberry Highway and Adams St Intersection

- Geometric Changes
  - Adams Street will remain one way
  - Cranberry Highway
    - One lane in each direction
    - Added left turn lane to Adams Street
- Operations
  - Adams Street traffic benefits from removal of traffic destined for the Sagamore Bridge



Bourne Crossing

Bourne Crossing (Build Alternative)

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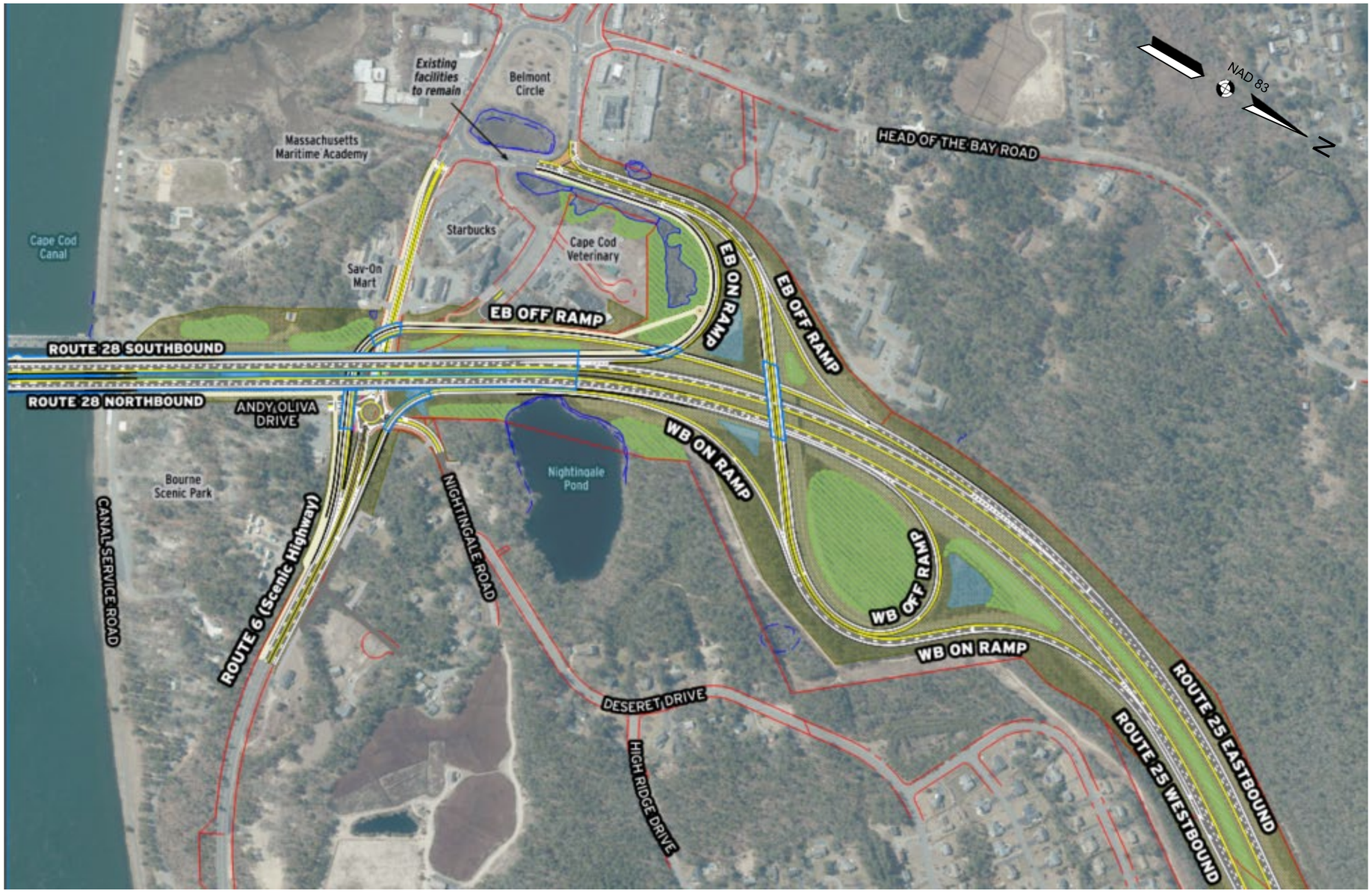
Bourne North Intersection Controls

Bourne North Interchange (Recommended)



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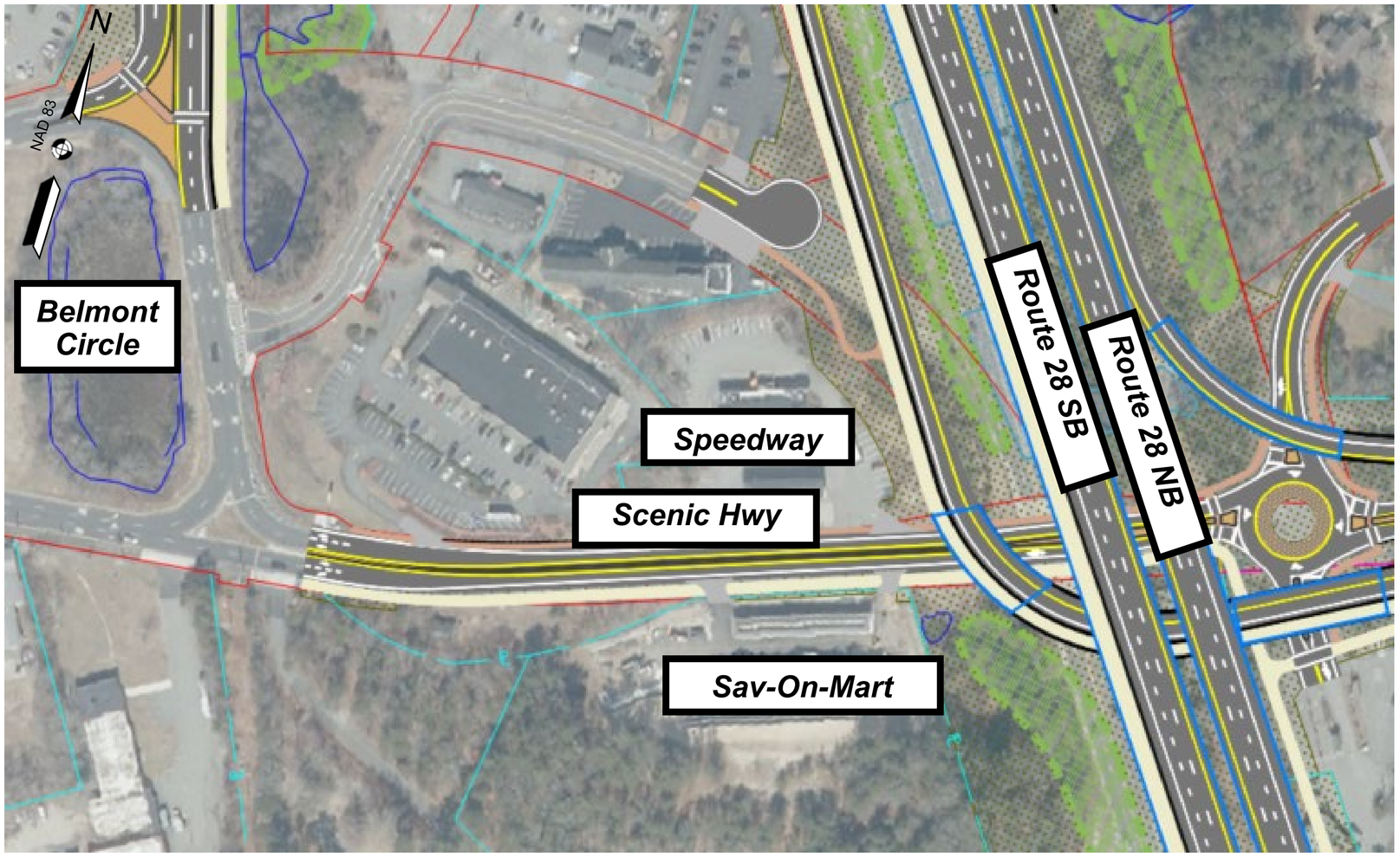
Scenic Highway – West of Mainline



Geometric Changes

- Scenic Highway narrows to one lane in each direction allowing improvements to multimodal accommodations.

Operations

- Direct connect ramps reduce the traffic volumes within Belmont Circle by 37%.
- Allows Belmont Circle to largely remain in its current configuration.

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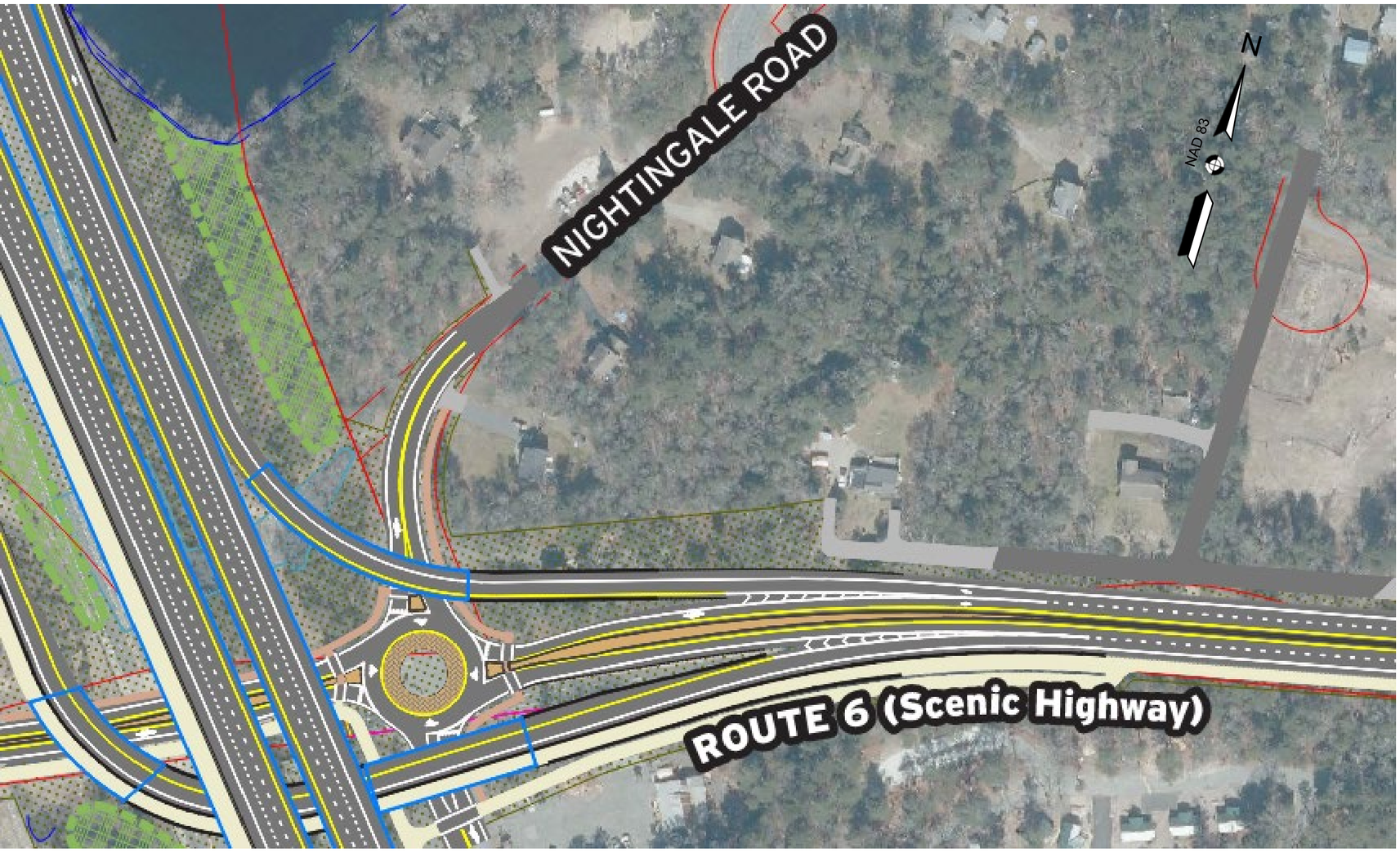
Scenic Highway – West of Mainline Aerial Rendering

Scenic Highway – East of Mainline



Geometric Changes

- Single lane roundabout to improve operations and safety.
- Creates a gateway into Belmont Circle.

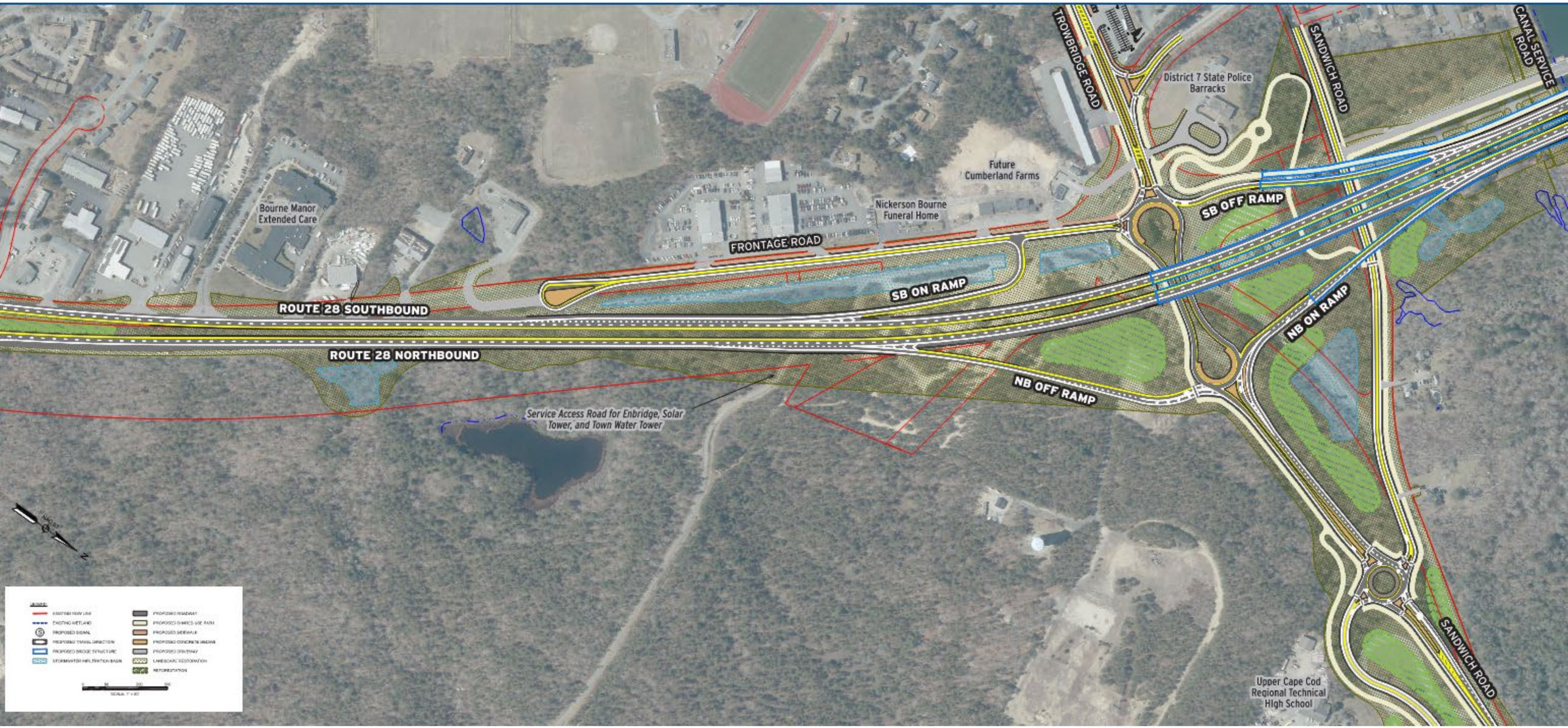
Operations

- Direct connect ramps reduce the traffic volumes at the Nightingale intersection by 50%.
- Improves access to/from the Nightingale neighborhood and Bourne Scenic Park.

Scenic Highway – East of Mainline Aerial Rendering

Bourne South Intersection Controls

Bourne South Interchange (Recommended)



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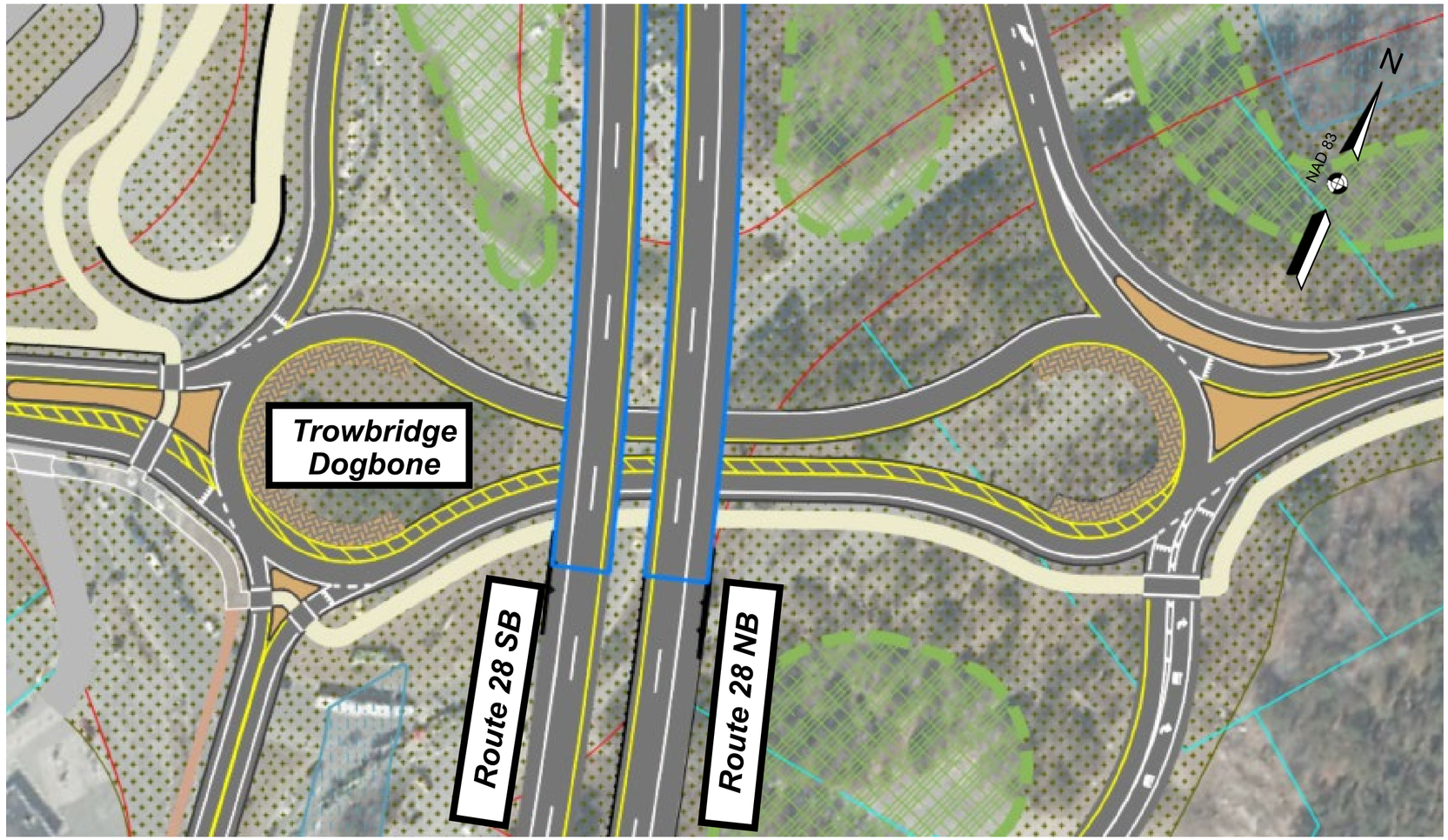
Trowbridge Road – Dogbone Geometry



- Geometric Changes
  - Rotary is eliminated and replaced with a single lane dogbone and access to (4) new ramps.
- Operations
  - The proposed Route 28 overpass significantly improves traffic operations for both the regional and local traffic.
  - The dogbone efficiently processes traffic with reduced queues that do not extend to the mainline.

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Trowbridge Road – Dogbone Aerial Rendering

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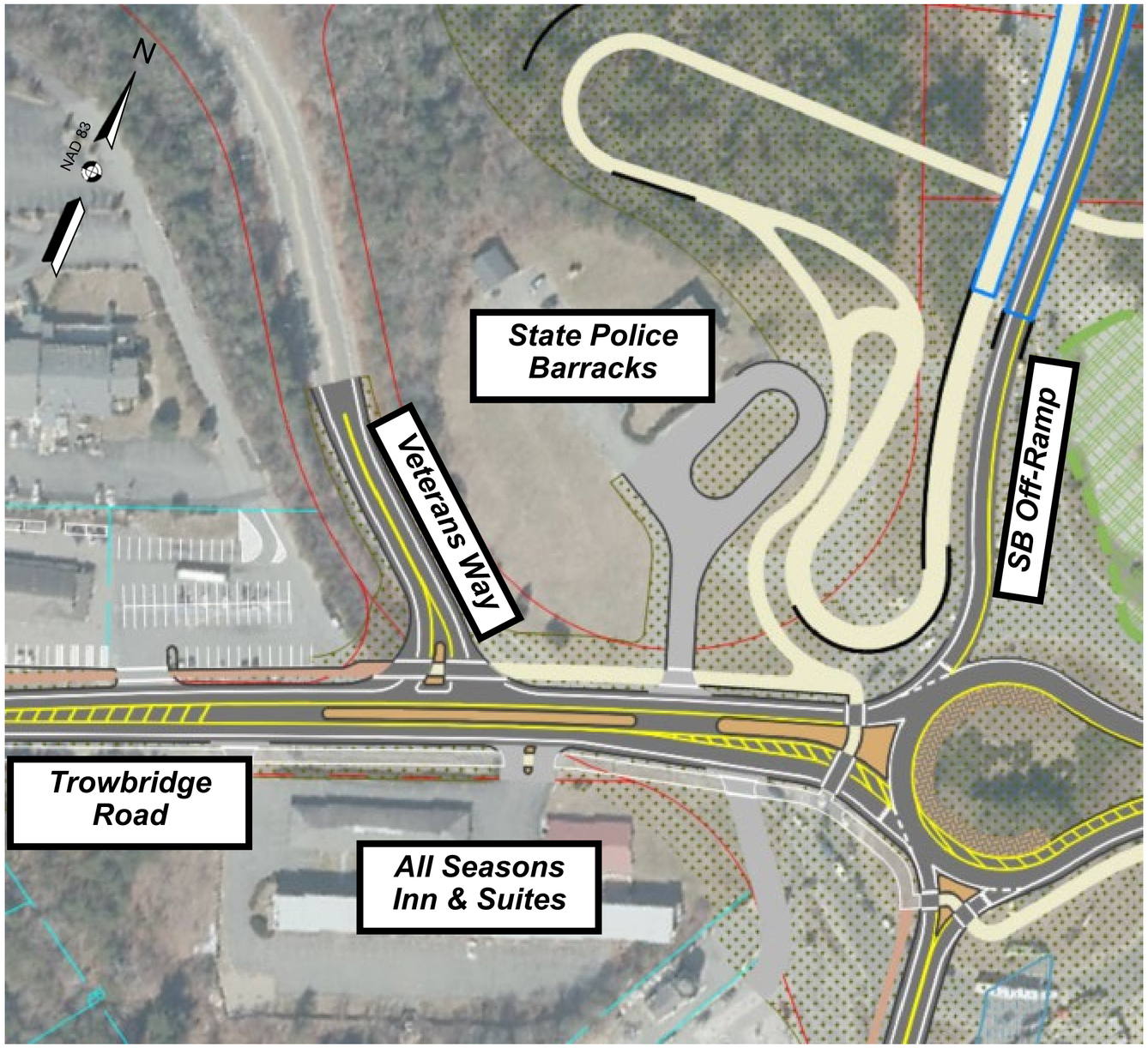
Trowbridge Road at Veterans Road



Geometric Changes

- Right In Right Out to eliminate wrong way crashes.
- Reduces cross walk length by 50%.

Operations

- Currently, Veterans Way is used as a cut through with no driveway access points along the roadway.
- With improvements to the interchange and reduced congestion, Veterans Way will have much lower volumes and will be a less desirable route.

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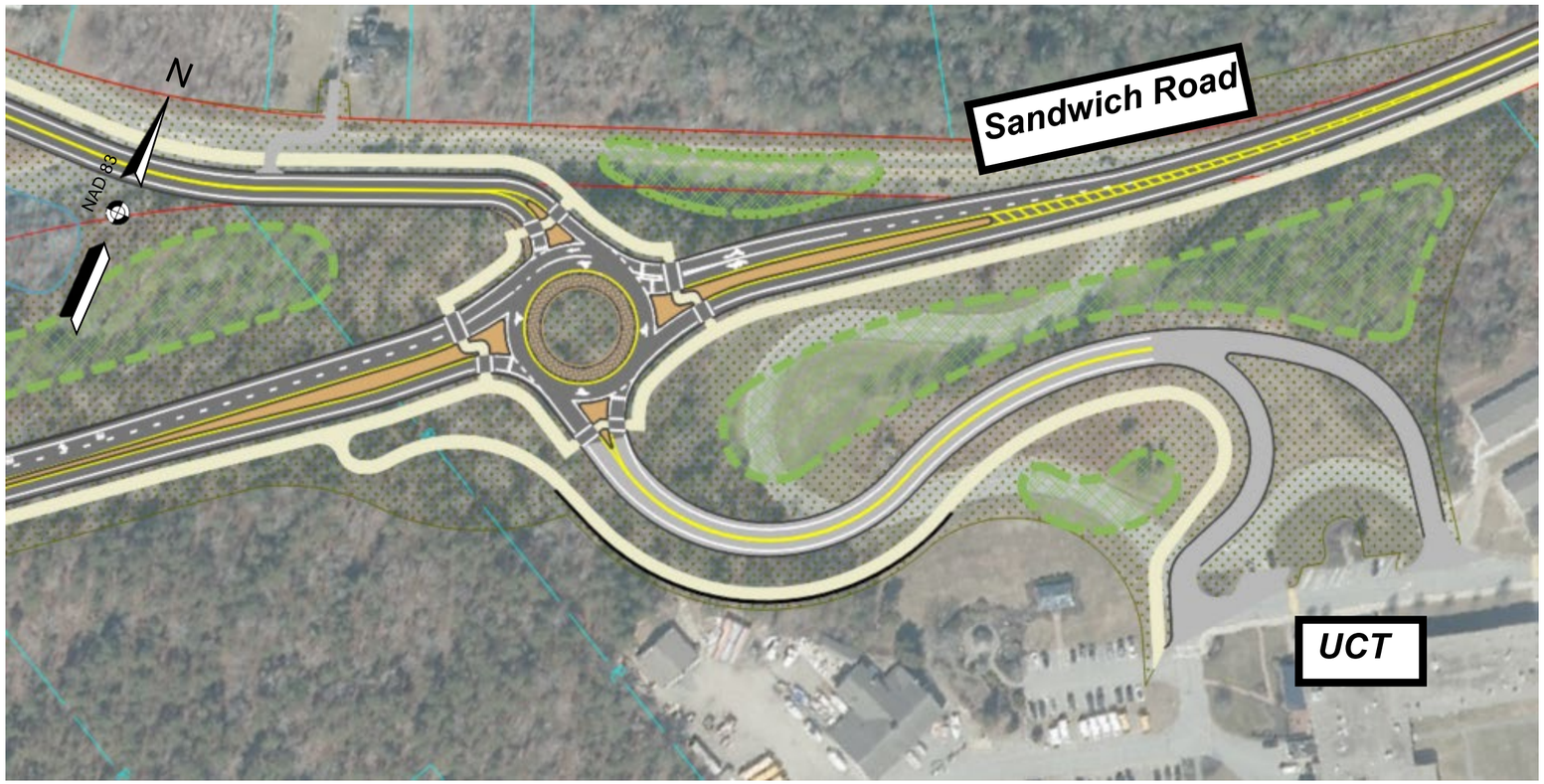
Sandwich Road at Upper Cape Technical School



Geometric Changes

- Re-aligned UCT driveway with re-aligned Sandwich Road.
- Improves sight lines in all directions.

Operations

- New Bourne South interchange configuration will reduce congestion and the number of vehicles using upper Sandwich.
- Roundabout provides operational and safety benefits.
- Eliminates the need for police details at the high school driveway.

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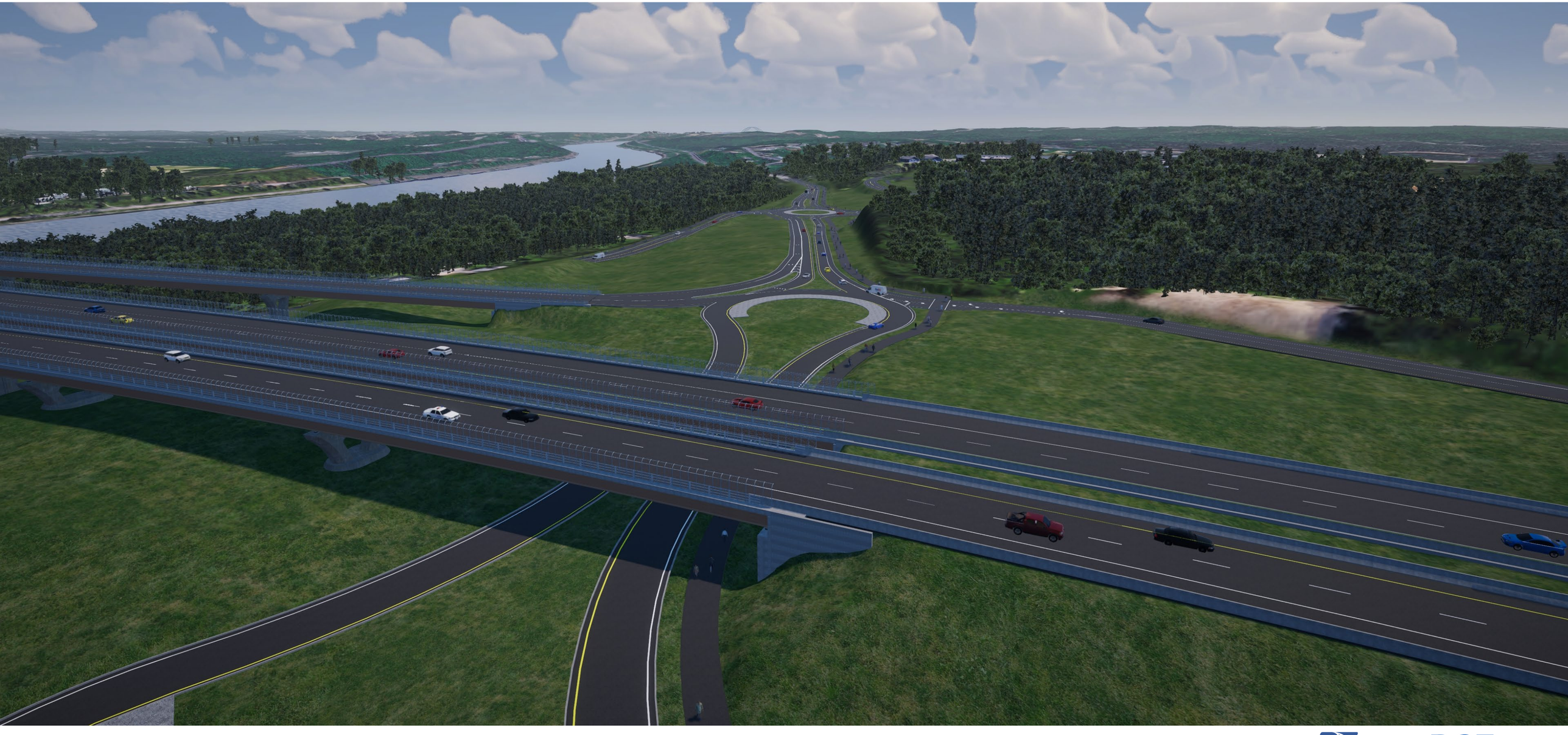
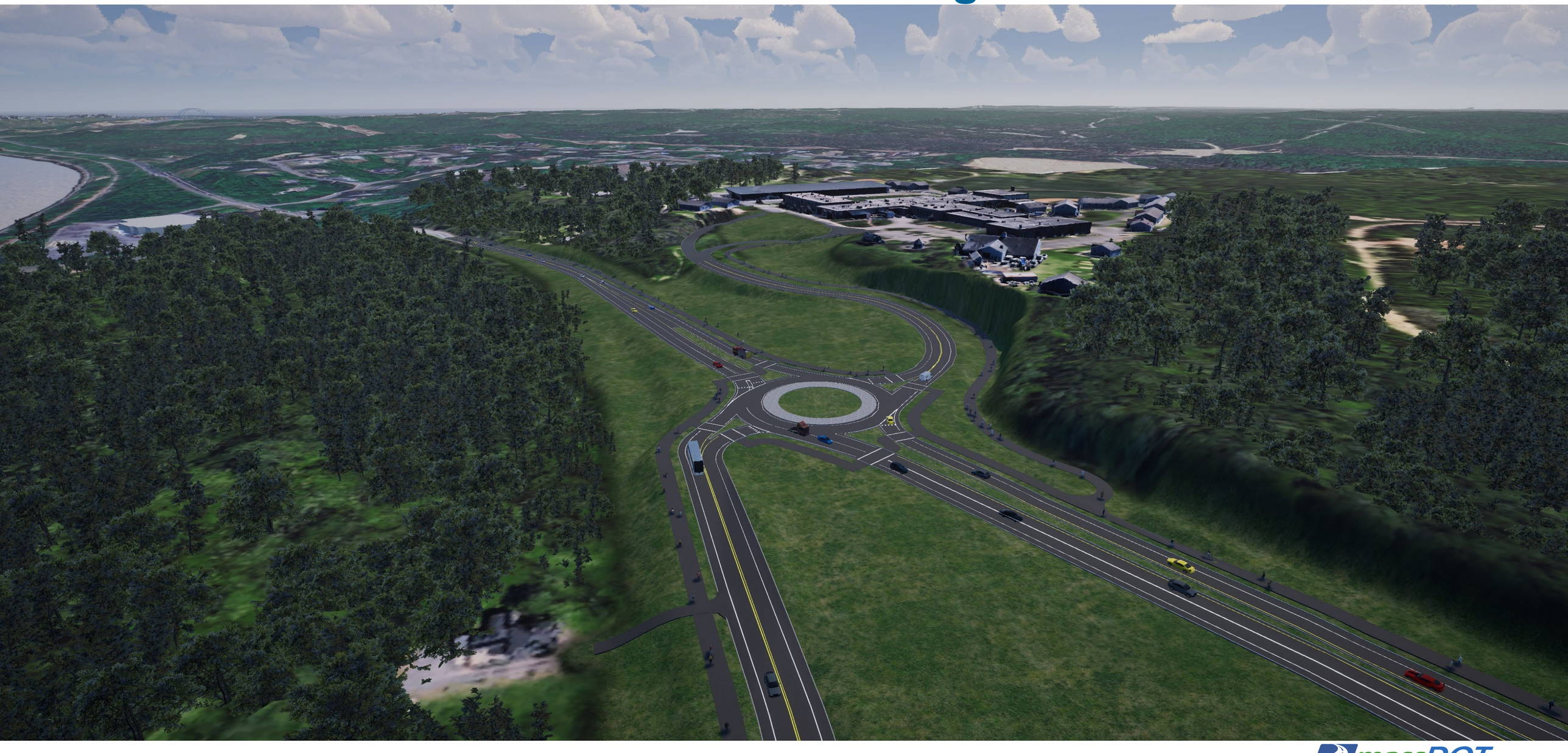
Sandwich Road at UCT Aerial Rendering



Sandwich Road at UCT Aerial Rendering



Subsurface Explorations

Subsurface Explorations

- Borings will be performed to inform the design of the program.
- They provide important information about the subsurface conditions, such as the composition and strength of the soil.
- Borings are required at proposed bridge abutments, piers, walls, detention ponds, travel lanes etc.
- The borings will be located on MassDOT, USACE, United States Government, Town of Bourne, and private property

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Subsurface Explorations

- An engineer will mark boring locations with spray paint.
- A drill rig is required to obtain ground samples at various depths.
- Depending on the location of the boring, tree trimming and clearing may be required.
- Borings in or adjacent to roadways may require signs, cones, and barriers; and traffic may be affected.
- Due to the size of the program, the borings will be taken in phases over several years. Abutting property owners will be notified prior to commencement of work

Property Acquisitions

Early Property Acquisitions

- MassDOT has received approval from FHWA to proceed with early property acquisitions (prior to NEPA completion).
- Without this early approval, contact with property owners would not occur until the spring of 2026.
- Initiating this process early, reduces the period of uncertainty for property owners concerned about the disposition of their property.
- Initiating the process early also provides additional time for MassDOT to work with property owners on their relocation.

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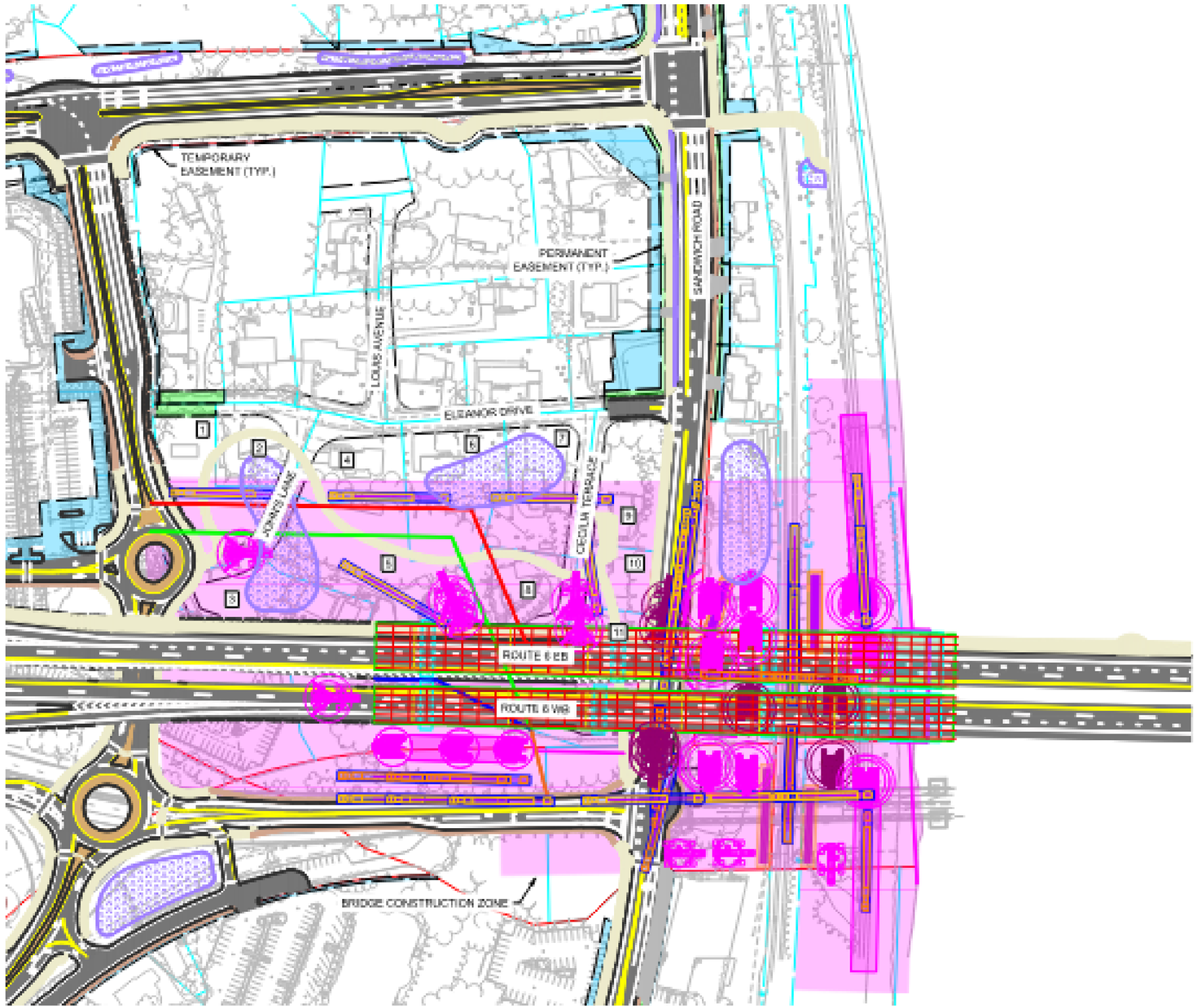
Early Property Acquisitions

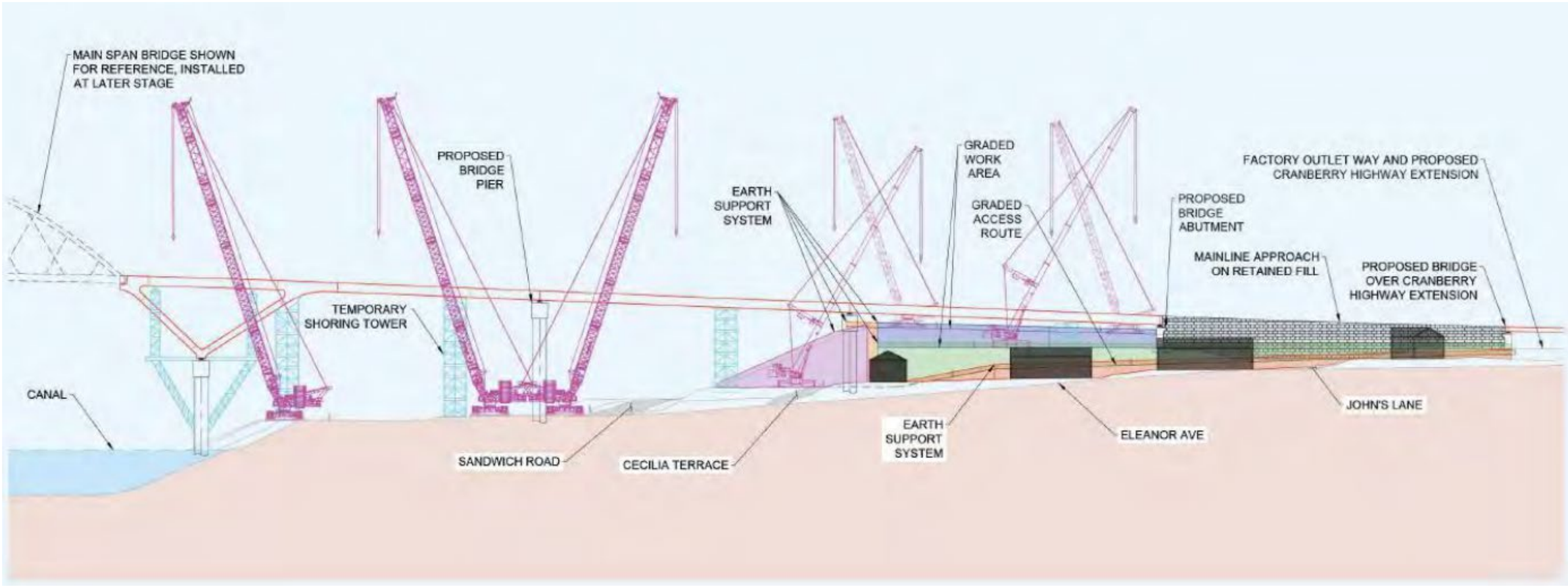
- These early acquisitions are necessary for the construction of the new Sagamore Bridge.
- Sufficient room must be made available for the contractor to safely assemble, position and operate cranes.
- Heavy earthworks and temporary retaining walls will be needed in this area to provide working platforms and access.
- In the final build condition, the disturbed area will accommodate new bridge and approaches, storm water management basins, shared use paths, and access ways to the bridge for future maintenance and inspection.

This photo is illustrative and is not intended to represent the aesthetics of the Sagamore Bridge piers.

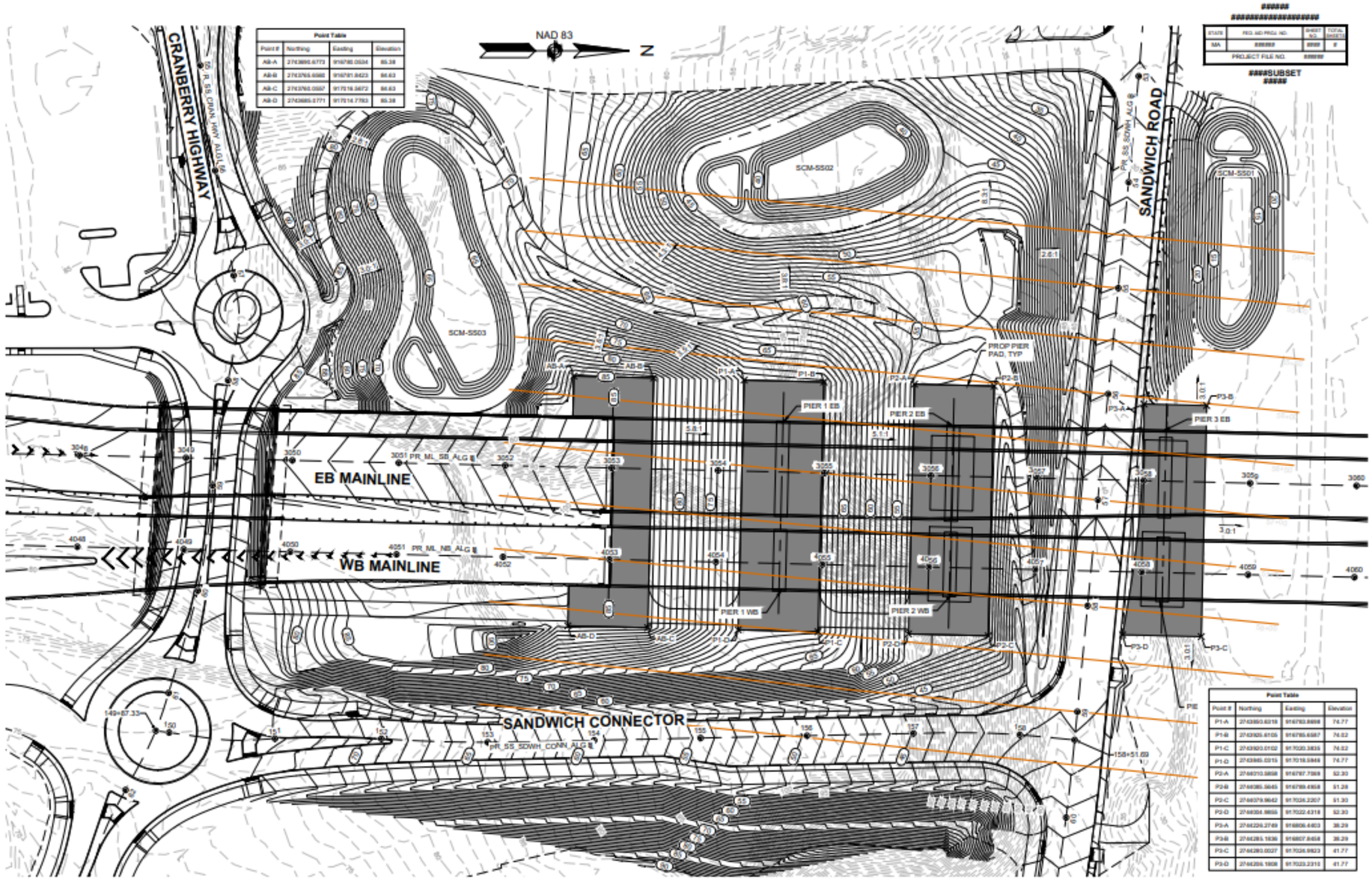
Early Property Acquisitions – Sagamore South



Early Property Acquisitions – Sagamore South



Sagamore South – Conceptual Final Build Condition



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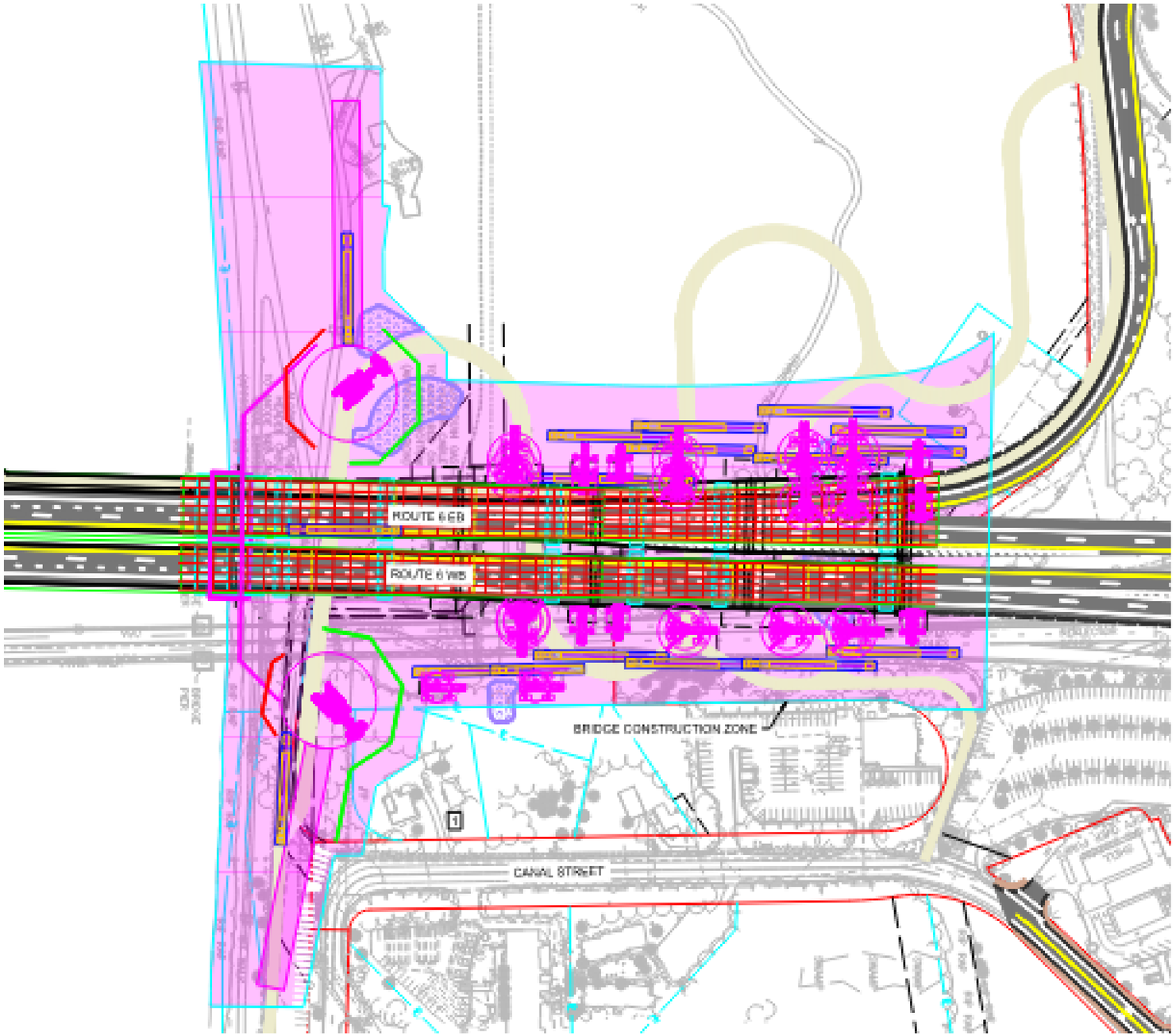
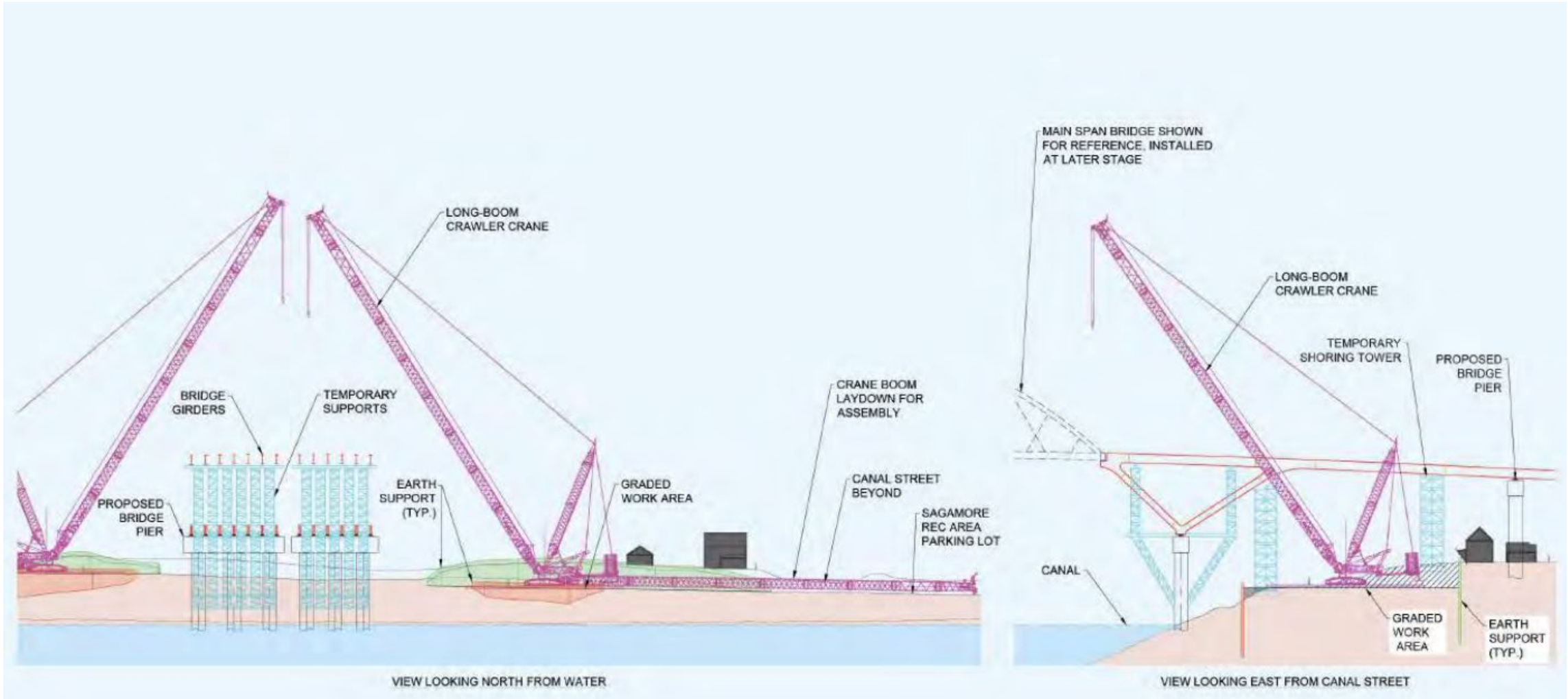
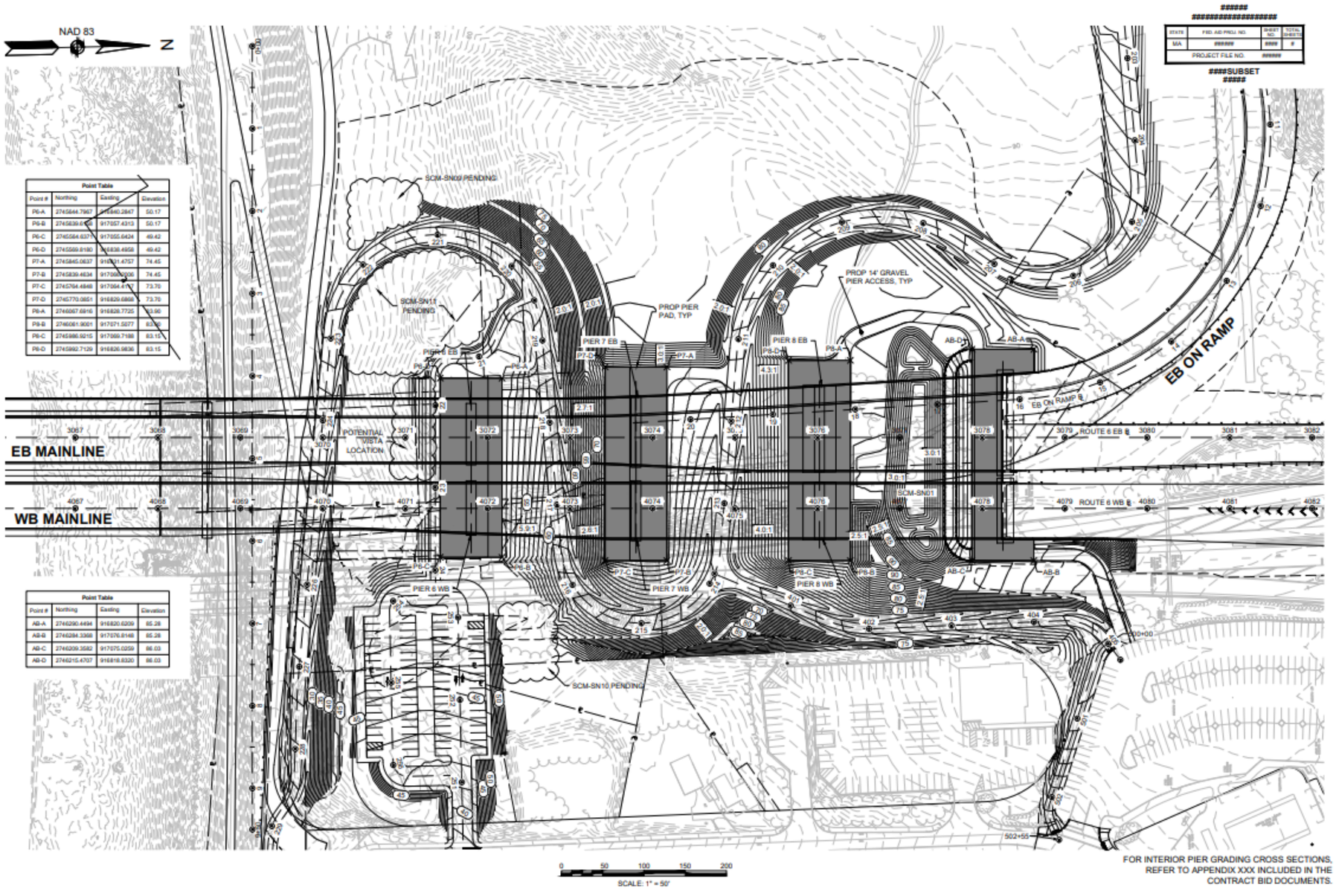
Early Property Acquisitions – Sagamore North



Early Property Acquisitions – Sagamore North



Sagamore North – Conceptual Final Build Condition



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Questions and Discussion