

NEWINGTON-DOVER

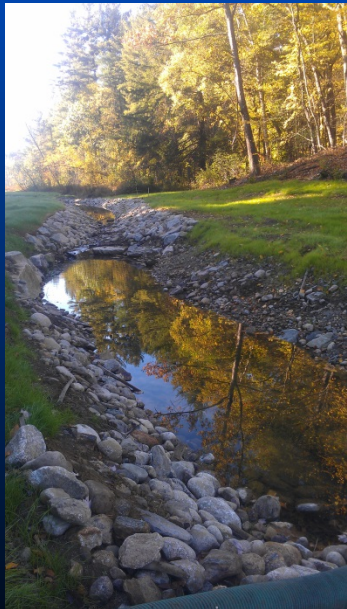
Improvements to NH Rte. 16 / Spaulding Turnpike / Little Bay Bridges

Tenants Association at Pease

AT

Great Bay Community College

JUNE 9, 2015

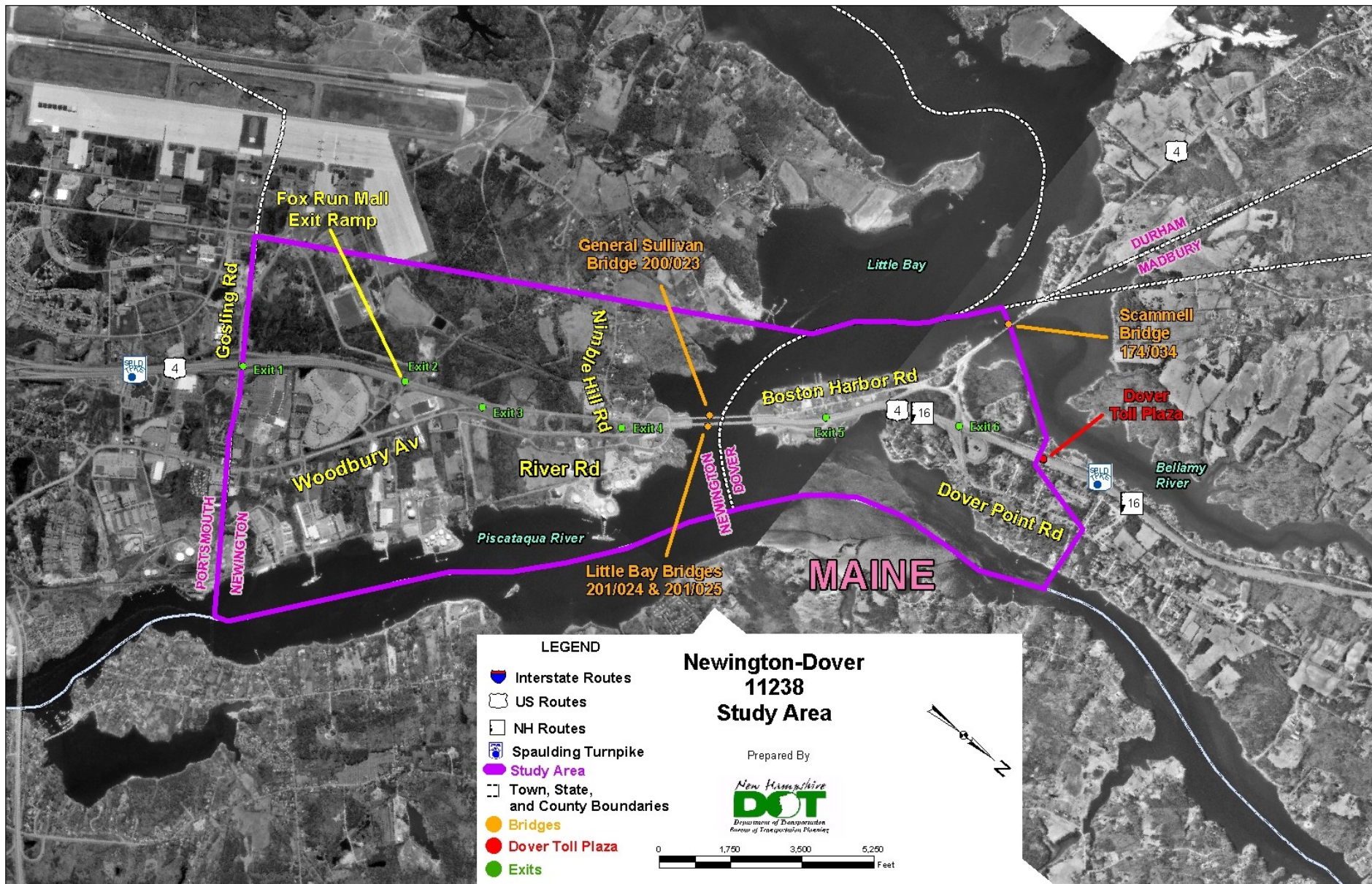


Meeting Agenda

- **Project Overview**
- **Status of Newington-Dover, 11238 Contracts**
 - **Contract L – New Little Bay Bridge SB**
 - **Contract M – Newington**
 - **Contract O – Little Bay Bridge NB Rehabilitation**
 - **Contract Q – Dover**
 - **Contract S – General Sullivan Bridge Rehabilitation**
 - **Condition & Status - General Sullivan Bridge**



Project Area



Project Need



16 4:49 PM

16 4:45 PM

Project Need



Project Funding & Estimated Cost

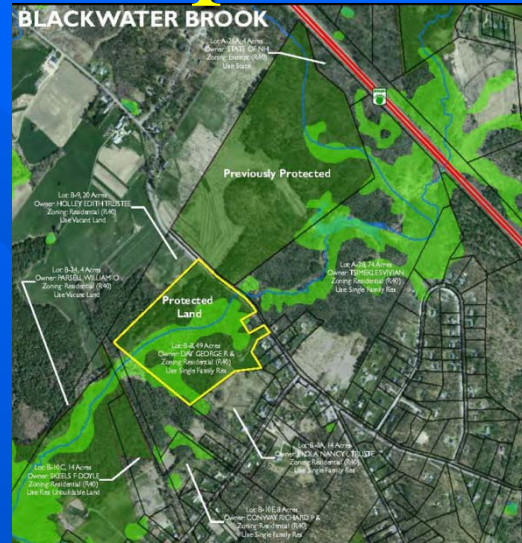


- Total Estimated Project Cost - \$269.7M
 - Engineering - \$20.4M
 - ROW - \$8.9M
 - Environmental Mitigation & TDM (Bus, Park'n'Rides) - \$20.9M (2010 Dollars)
 - ❖ \$12.66M federal CMAQ & Advanced ROW funding
 - Construction - \$207.2M (2010 Dollars)
 - \$219.5M (w/ inflation)

- Project Primarily Funded with Turnpike Toll Revenue & Bond Proceeds
 - \$31.4M dedicated Federal Earmarked Funds & Grants
 - CMAQ/Federal Funding for TDM Elements (P&R)
 - Final two contracts to be paid through combination of toll revenue and bonding, and is on schedule as approved through the State Ten Year Transportation Improvement Plan (STIP-2014).

Environmental Mitigation

Components



- Environmental Mitigation - \$4.37M (224 acres)
 - 120-acre Preservation of Tuttle Farm (Joint Effort w/ City, SRC, DOT) – (\$1.34M)
 - 40-acre Preservation of Day Property in Blackwater Brook Watershed – (\$0.23M)
 - 64 acres of Preservation in Knight Brook Watershed – (\$2.0M)

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Park 'n' Ride

- Park'n'Ride at Exit 9 in Dover – completed (\$3.49M)
- Park'n'Ride at Exit 13 in Rochester - completed (\$1.35M)
- Multi-use Park'n'Ride in Lee – CMAQ Location under review (est. \$85k)



NEWINGTON-DOVER 11238

Improved Downeaster Rail Service

- CMAQ Investment of \$2.0 M with N-D Turnpike Match



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Expanded Transit Service

- ❖ NH – Boston Bus Service (C&J)
- ❖ Express Coast Bus Service from Rochester, Dover, Somersworth/Berwick to Portsmouth Naval Shipyard
- ❖ Direct Bus Service – COAST Bus Service from Rochester to Pease



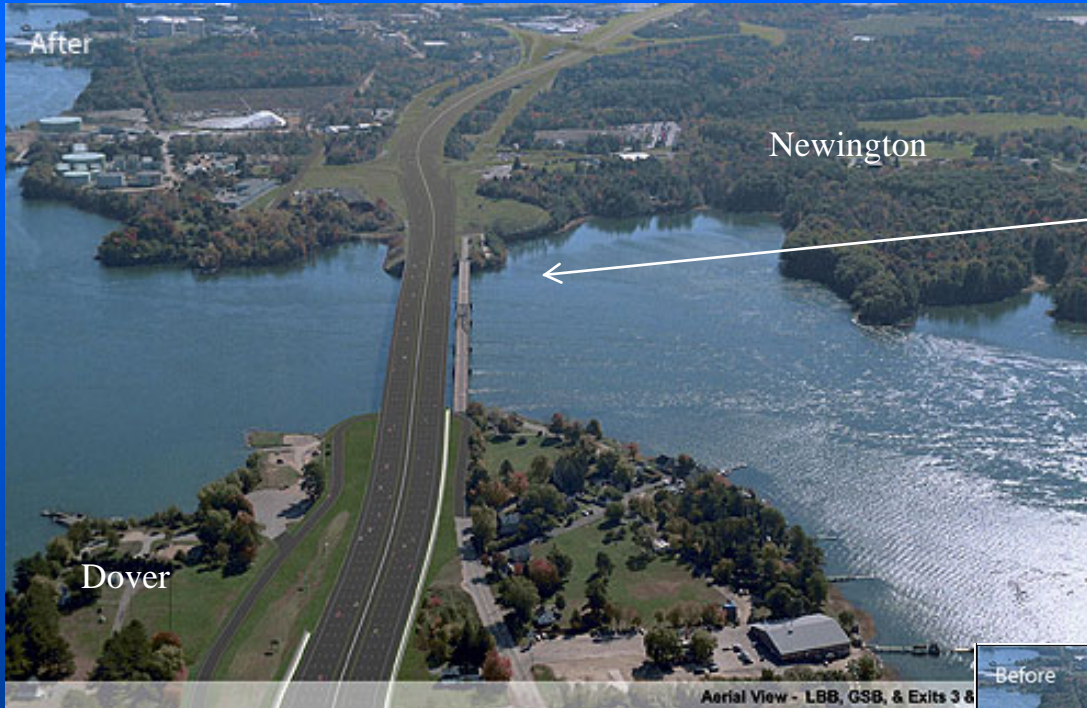
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Transportation Demand Management

- ❖ Commute SMART Seacoast – a new Transportation Management Association (TMA) to promote:
 - Carpooling/vanpooling
 - Ride mass transit
 - Bicycle/walk
 - Telecommuting
 - Compressed work schedules
- ❖ Focus is employers and employees at Pease and within the Greater Seacoast
- ❖ More information at www.commuteSMART.org



NEWINGTON-DOVER 11238



Post Construction

Pre-Construction

NEWINGTON
SOUTHERLY
RENDERING



NEWINGTON-DOVER 11238



Post Construction

Pre-Construction

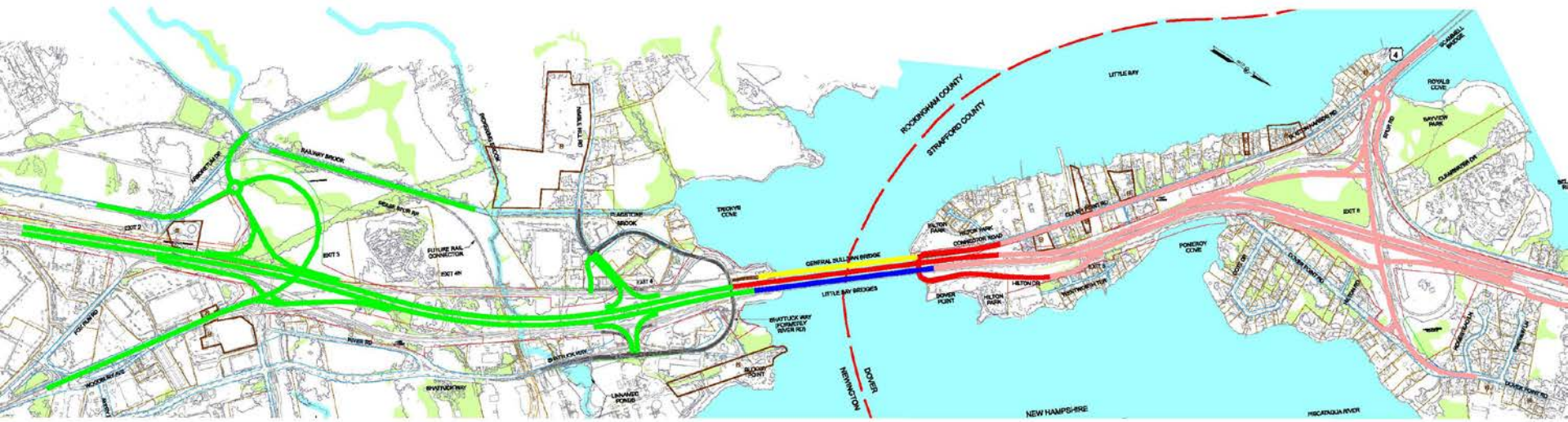


DOVER
NORTHERLY
RENDERING

Little Bay Bridges Contracts L, O, & S



Current Contract Breakout & Schedule



	CONSTRUCTION SCHEDULE											
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
CONTRACT L					\$54.1 M							
CONTRACT M						\$48.8 M						
CONTRACT O								\$34.0 M*				
CONTRACT Q												\$49.2 M*
CONTRACT S												\$31.7 M*

- Contracts Q & S schedules subject to change
- Based upon Turnpike Funding Without Bonding

CONSTRUCTION OUTREACH



The screenshot shows a web browser window displaying the official New Hampshire Department of Transportation (DOT) website for the Spaulding Turnpike Newington-Dover Project. The browser's address bar shows the URL <http://www.newington-dover.com/>. The website features a green header with the New Hampshire DOT logo and navigation links for Air, Rail, Highway, Bike/Ped, and Public Transit. A left sidebar contains a comprehensive menu of project-related topics. The main content area is titled "Welcome to Spaulding Turnpike Newington-Dover Project Website" and includes an aerial photograph of the project area, a detailed text description of the project's history and goals, and a "Major Project Elements" list. A right sidebar highlights "Construction Updates and Traffic Alerts" with a traffic cone icon and a "What's New..." section listing recent news items with dates.

New Hampshire DOT
Department of Transportation

an official NEW HAMPSHIRE government website

Air Rail Highway Bike/Ped Public Transit

Welcome to Spaulding Turnpike Newington-Dover Project Website

From 2003 to 2008, the project team, advisory task force (ATF), and interested Seacoast stakeholders have evaluated a range of reasonable alternatives to identify a preferred alternative to improve long-term mobility and safety along the Spaulding Turnpike between Exit 1 and the Dover toll plaza, just north of Exit 6. The 3.5-mile stretch of the Turnpike in this area is characterized by closely spaced interchanges, substandard geometry and shoulder areas, and capacity constrained conditions during the weekday morning and evening commuter periods. Currently, the Turnpike carries in excess of 70,000 vehicles per day. Future travel demand projections (approximately 94,000 vehicles per day are forecasted in 2025) indicate that if the Turnpike is not improved, weekday traffic congestion will spread to additional hours of the morning and evening, and safety conditions will continue to deteriorate.

Following the completion of the Environmental Impact Statement (EIS), a successful Public Hearing and the Federal Highway Administration's issuance of the Record of Decision in October, 2008, the Selected Alternative was approved to advance into final design to be developed into contract plans. [Preliminary and Final design](#) of the [selected alternative](#) was initiated on December 18, 2008.

Major Project Elements:

- 4 lanes in each direction (3 general purpose and 1 auxiliary lane) between Exit 3 (Woodbury Avenue) and Exit 6 (U.S. Route 4/Dover Point Road)
- 3 lanes in each direction south of Exit 3 and north of Exit 6
- 5 interchanges consolidated or reconfigured – Exit 2 and 5 are eliminated with Exits 3, 4 and 6 providing full access in all directions
- Rehabilitation and widening of Little Bay Bridges to accommodate 4 lanes in each direction
- Future planning for an elevated rail connection from the Newington Branch Line into Pease Tradeport
- Rehabilitation of General Sullivan Bridge for pedestrian, bicycle, and recreational uses
- Park and ride facilities at Exit 9 in Dover, Exit 13 in Rochester, and along U.S. 4 in Lee

Construction Updates and Traffic Alerts

What's New...

NEW: [Northbound Traffic Shift onto New Little Bay Bridge - Major Traffic Impacts Anticipated on June 3 and 4](#) (posted May 26, 2015)

[Planned Northbound Lane Closure on Little Bay Bridge](#) - Pavement Repairs Scheduled (posted 04/03/2015)

[NIGHT WORK NEAR EXIT 4](#) - Lane closures for installation of overhead sign structure (posted 03/31/15)

[CLOSING OF EXIT 5 NORTHBOUND RAMP](#) - Detour for several months to allow for construction work (posted 03/31/15)

[VIDEO: Unitt's Gas Line Directional Drill Video Beneath Little Bay](#)

PAST NEWS:

[2014 Updated Financial Plan](#) (posted 10/09/2014)

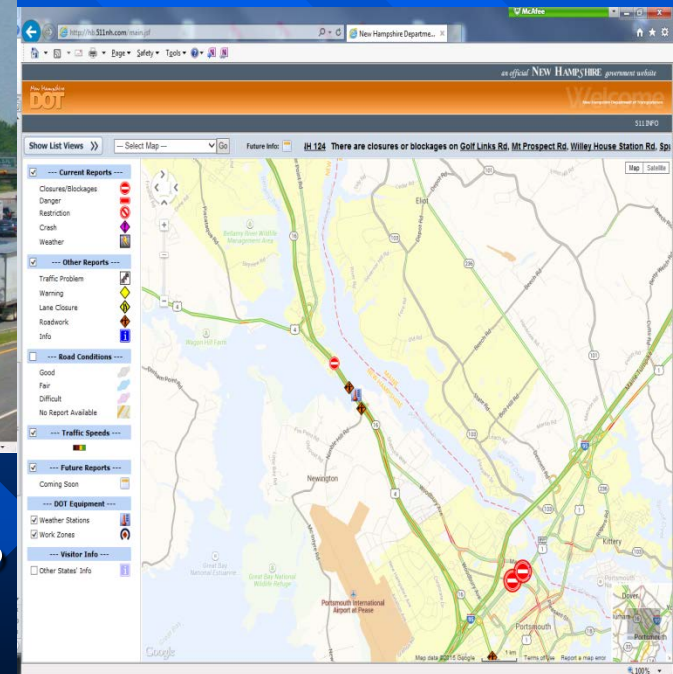
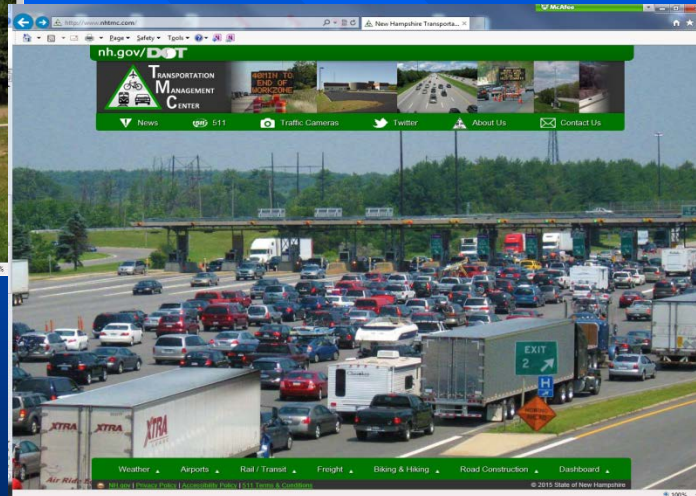
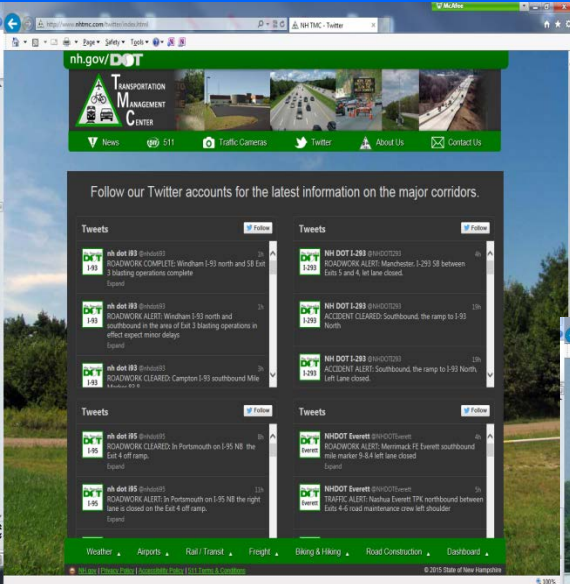
[October 8, 2014 Work Update](#)

[Tenants Association at Pease Presentation - April 9, 2014](#) (posted 04/09/14)

[January 2014 Work Update](#) (posted 1/14/14)

WEB SITE: www.newington-dover.com

CONSTRUCTION OUTREACH



■ For traveler/real-time information, please visit www.nhtmc.com.

TRAFFIC CAMERAS

Contract L (Completed)

New Little Bay Bridge





Contract L

Contract L - SB New Little Bay Bridge Construction

- Project completed by Cainbro Contractors of Maine at cost of \$54.1M
- Construction Initiated in 2010 Completed in Fall 2013
- Spaulding Turnpike Dover Approach Work
- Spaulding Turnpike Newington Roadway Approach
- Wentworth Terrace - Now Opened for Two-way Traffic
- Pedestrian & Bicycle Structure (Approach to GSB)

Construction – Contract L

Little Bay Bridge



**Temporary Trestle to Construct Phase I - Cost
\$5 Million (2010-12)**

Construction – Contract L

Little Bay Bridge



**Deck Reinforcing Steel
and Concrete Pour
(2012)**



**Final Bridge Deck
(2013)**

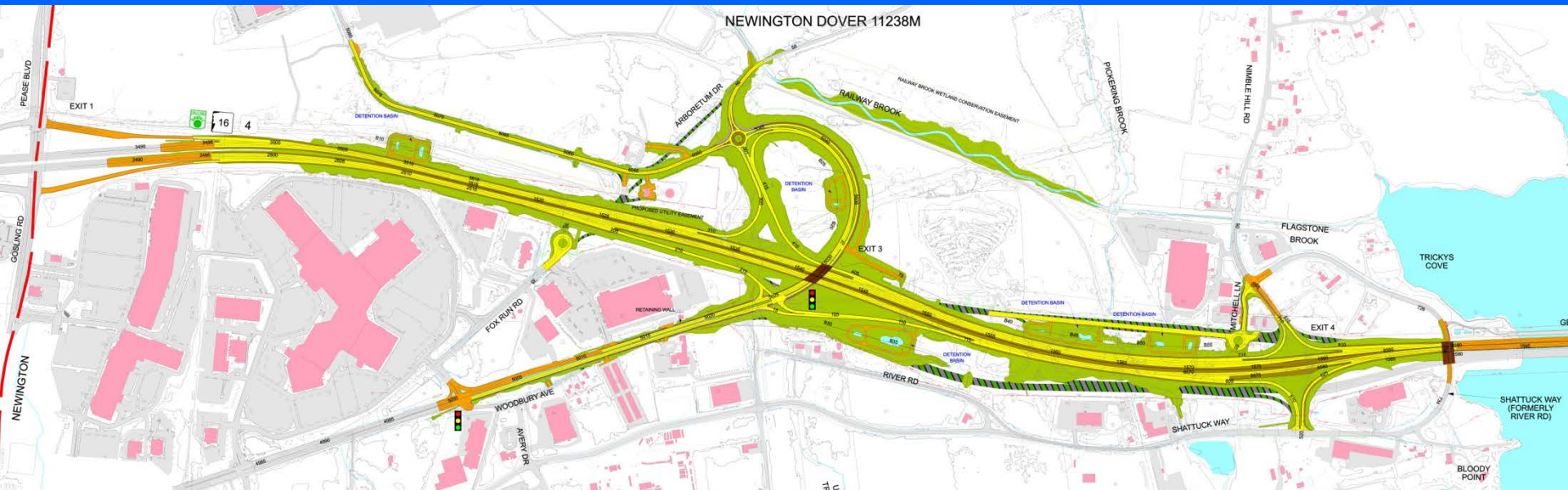
Construction – Contract L

Ped and Bikeway to GSB

- Pedestrian, Bicycle Access to GSB
- Wentworth Terrance/Hilton Park Access Under LBB's



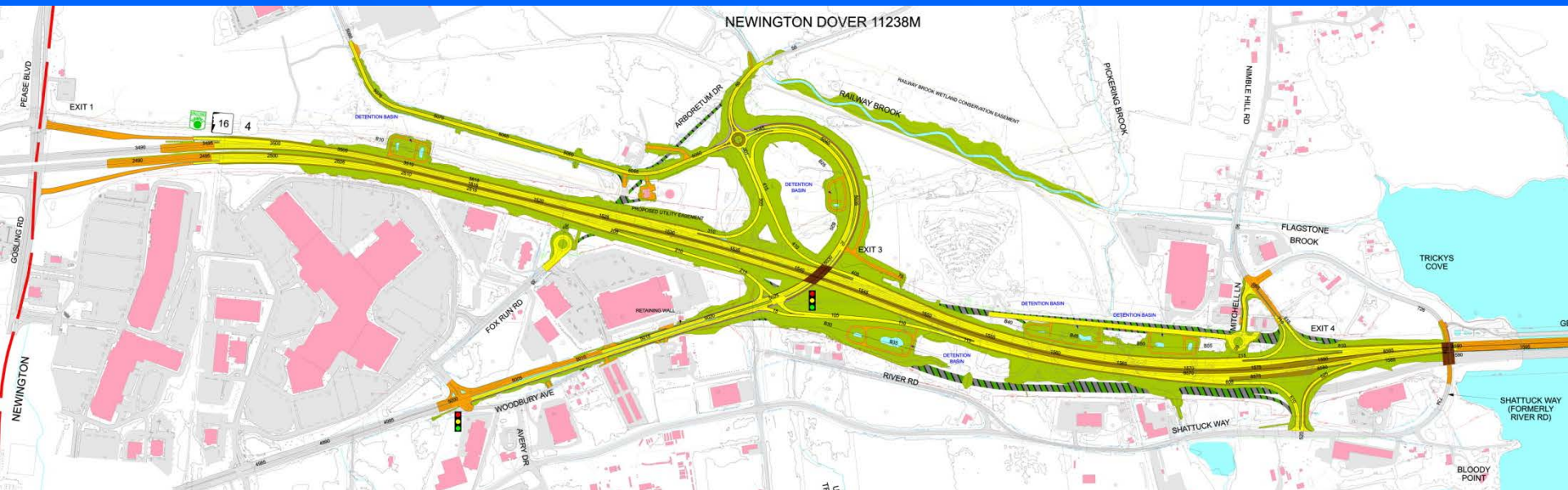
Contract M



Contract M Construction

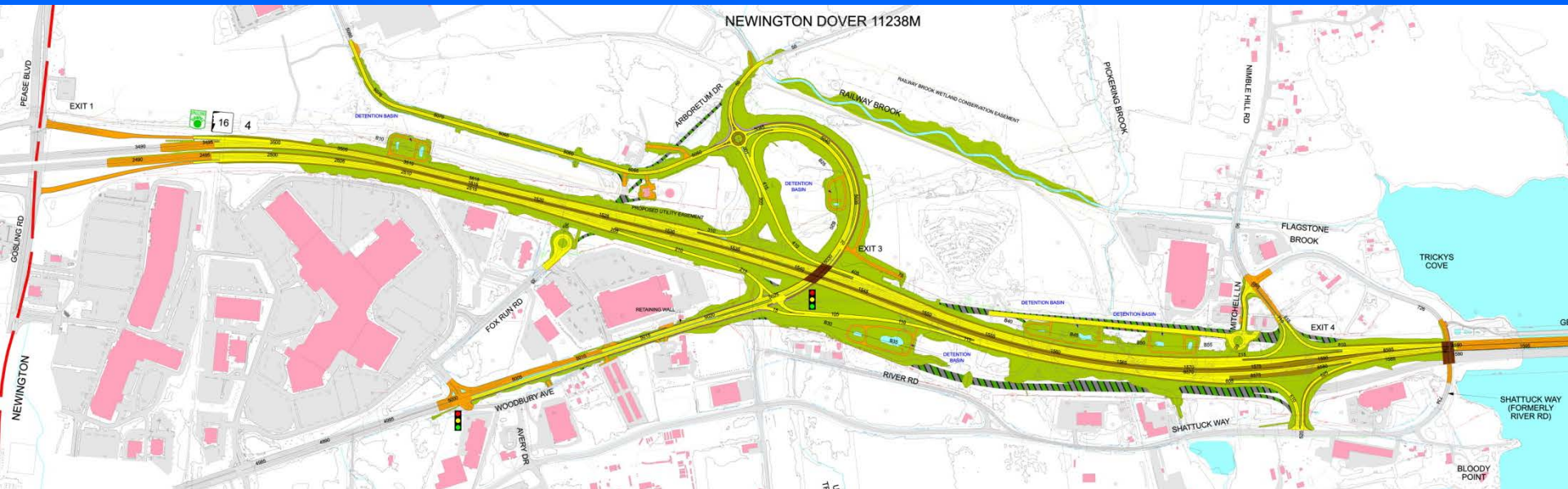
- Contractor: A. J. Coleman
- Construction Cost: \$48.7M
- Construction Duration: 2012 – 2015

Contract M (continued)



- Constructs Four Lanes NB & SB along Turnpike within Median of Existing Facility (Minimal ROW Impacts)
- Provides a Full Service Interchange at Exit 3 and Reconstructs Woodbury Avenue with Additional Access into Pease Development Authority
- Accommodates Future Consideration for Railroad Spur

Contract M (continued)



- Exit 4 Ramp with New Mitchell Lane
- Approach Roadwork into Dover to Shift SB and NB Traffic onto LBB completed under Contract L
- Improves Stormwater Detention Basins for Water Quality Treatment
- Railway Brook Restoration (Wetland Mitigation)

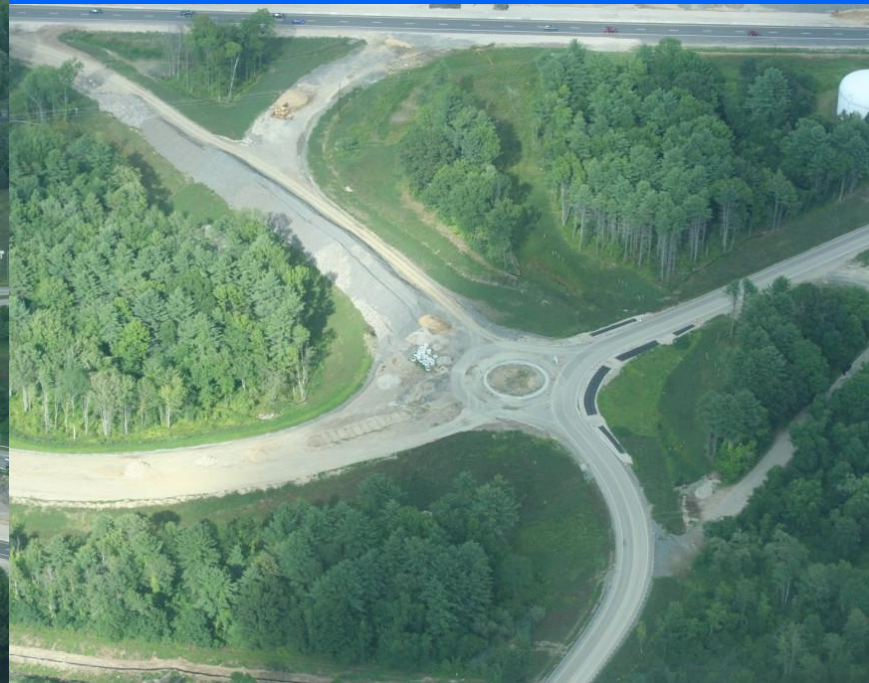
Construction – Contract M

Construction Operations for 2015:

- Exit 2 Ramp Closure July/August 2015
- Exit 3 Ramp and Woodbury Avenue Bridge (Early Fall 2015)
- Exit 4 Ramp Construction (Summer 2015)
- Stormwater Detention Basin & Railway Brook Construction (Completed)
- Southbound Traffic Shifted to New LBB (Completed in Nov. 2014)
- Northbound Traffic Shifted to New LBB in June 2015
- Newington Turnpike 'M' Construction Completion Nov. 2015

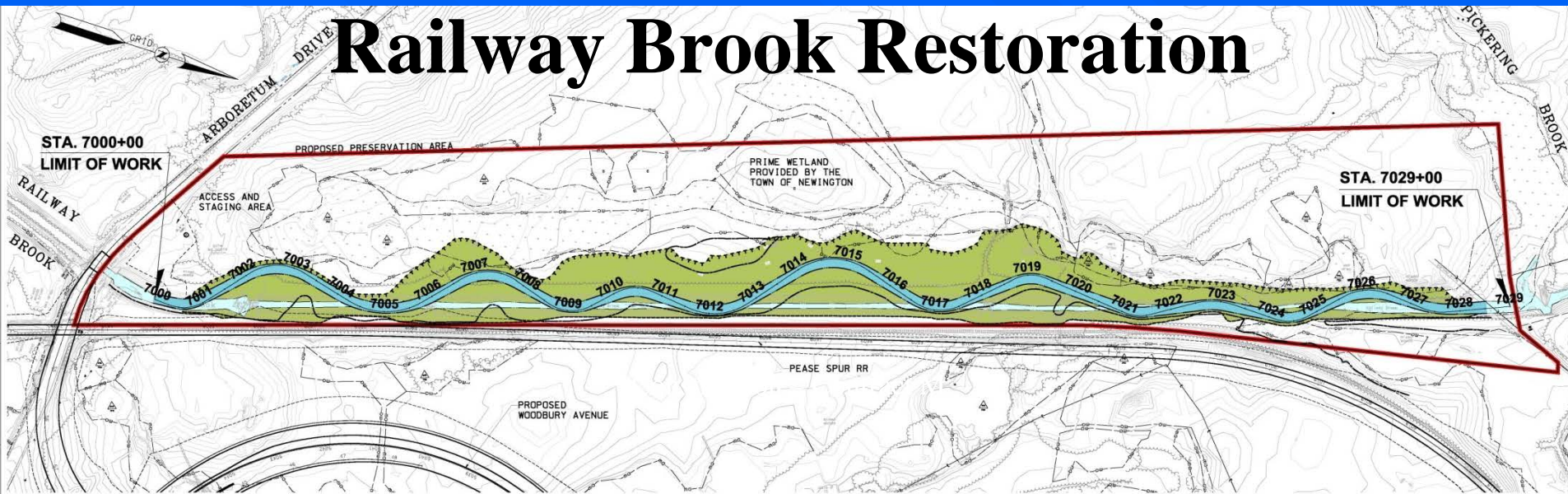


Construction – Contract M

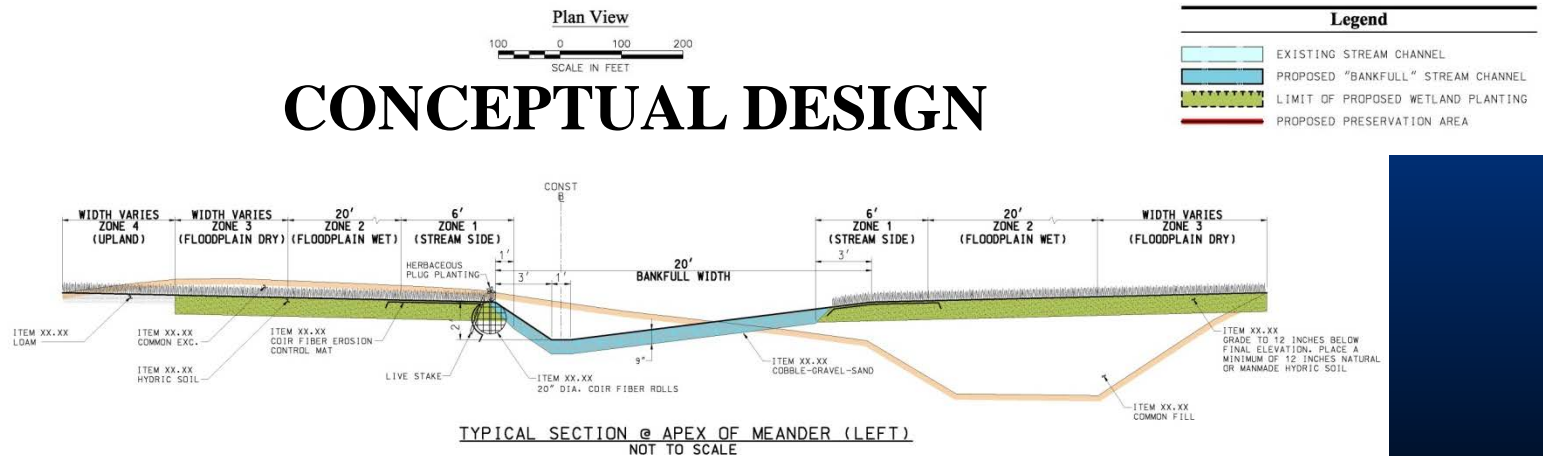


Construction – Contract M

Railway Brook Restoration



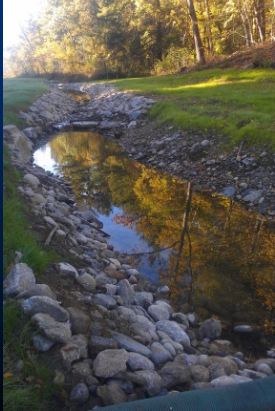
CONCEPTUAL DESIGN



Construction – Contract M

Railroad Brook Restoration

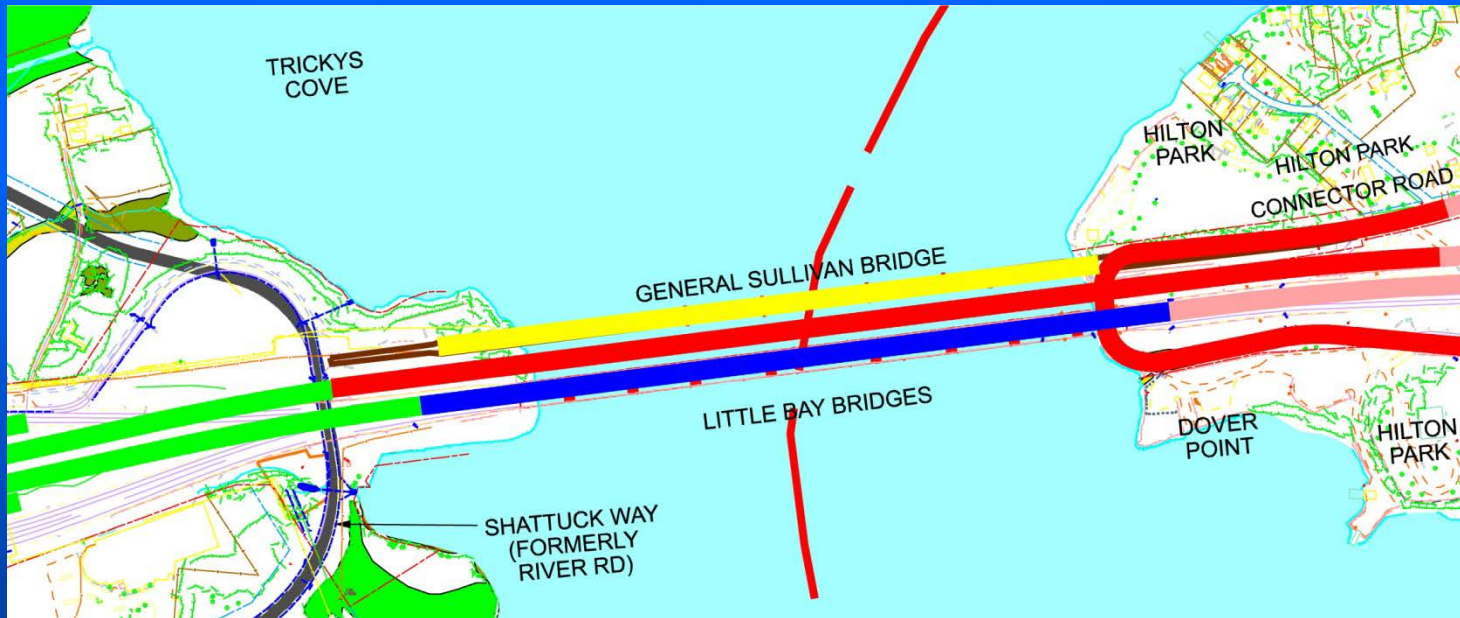
- Initiated in Summer 2014
- Completion Summer 2015
- Cost: \$800K



AFTER

BEFORE

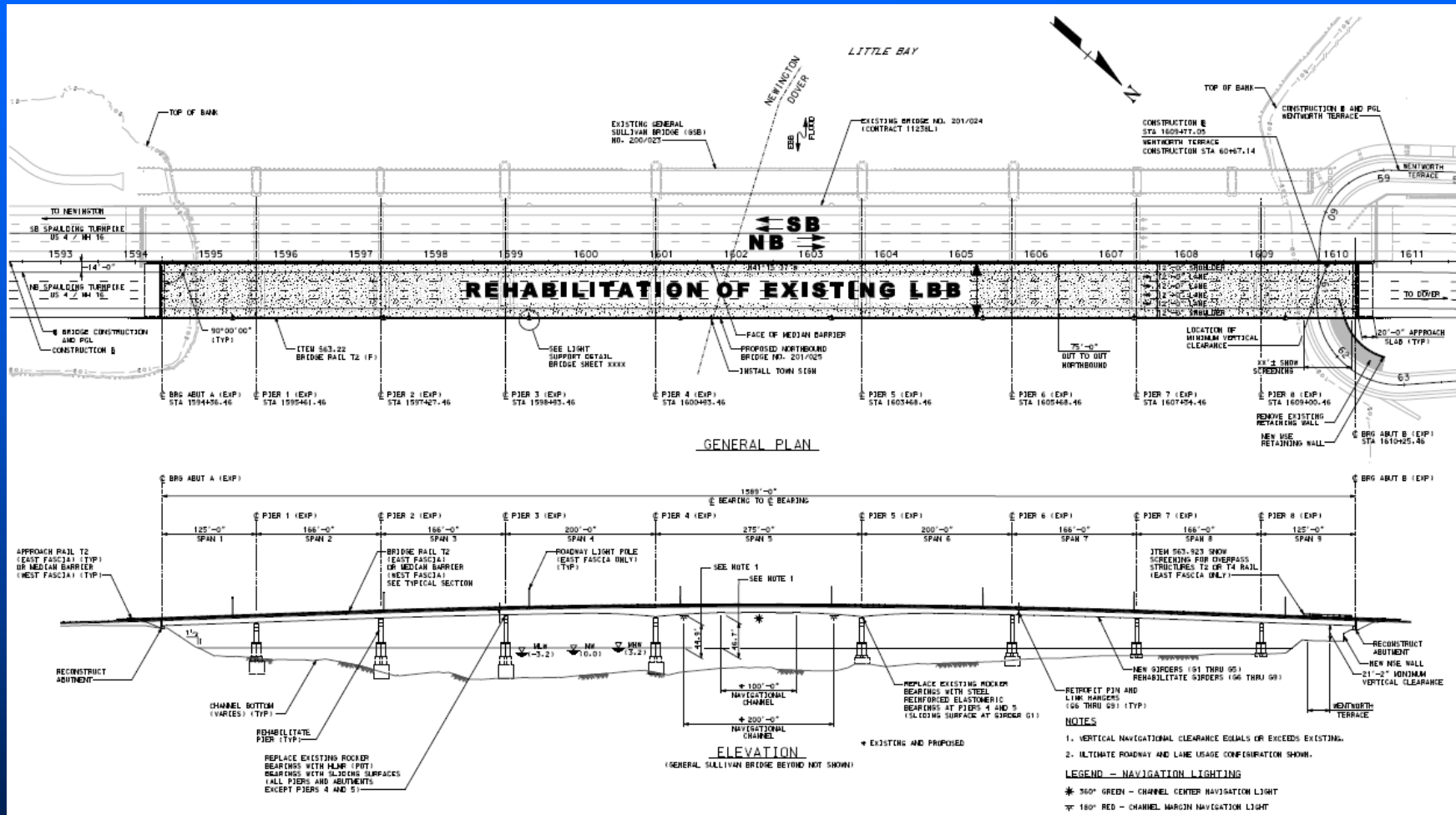
Construction - Contract O



Contract O – Existing Little Bay Bridges Rehabilitation

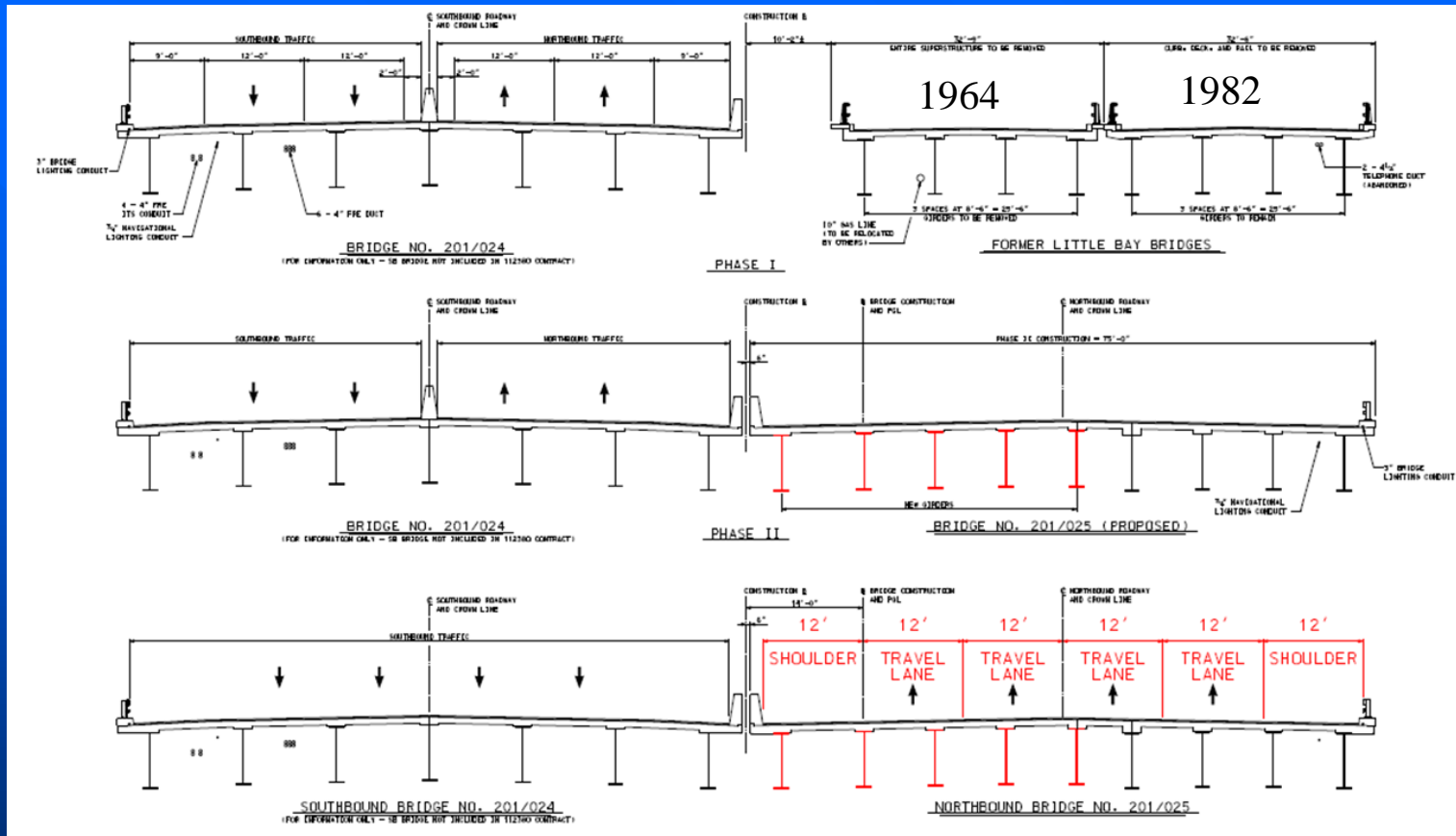
- Opened Bids on October 23, 2014 (\$20,444,479.01)
- Contractor: A. R. S. Audley, Inc.
- Construction Duration: 2015 – 2017
- Concurrent Construction with Contracts M and Q

Construction - Contract O



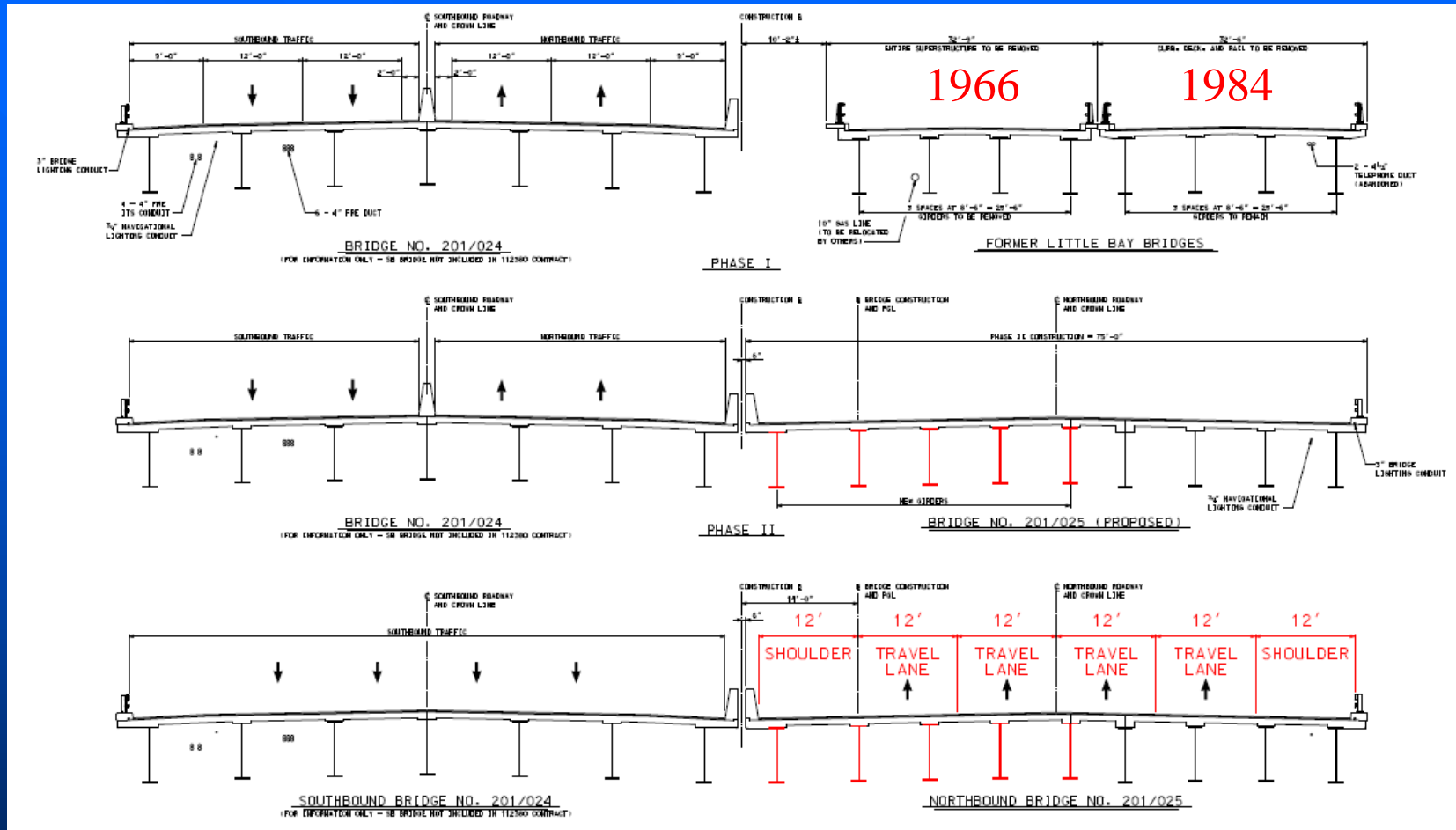
- Rehabilitates Existing 9 Span 1,589' Little Bay Bridges to provide Four Lanes of NB Traffic

Construction - Contract O



- **Original Bridge Opened to NB Traffic in 1964 for NB Traffic with SB Traffic on General Sullivan Bridge**
- **Easterly Half of Bridge Opened to NB Traffic in 1982, SB Shifted to 1964 Bridge and General Sullivan Bridge Closed to Vehicular Traffic**

Construction – Contract O



- Older Structural Steel Members being Replaced to Meet Current Standards
- Utilize 1984 Superstructure as Work Platform to Replace 1966 Beams & Deck
- Utilize New Beams & Concrete Deck as Work Platform to Replace 1984 Deck

Contract Q



Contract Q - Dover

- Advertising Date: July 2016
- Construction: 2016 - 2020
- Completes and Opens All Spaulding Turnpike Improvements
- Concurrent Construction with Contracts O and S

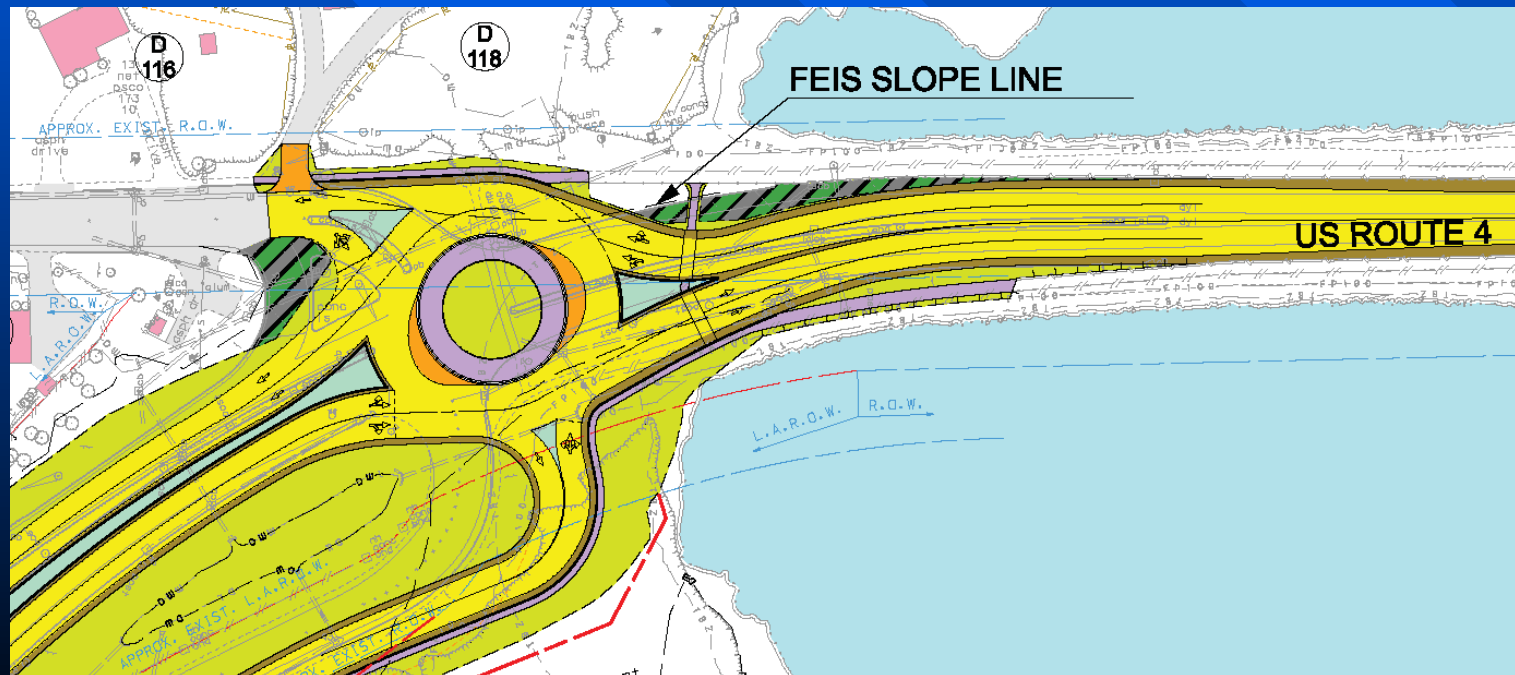
Contract Q (continued)



- Provides a Full Service Interchange at Exit 6
- Eliminates Exit 5
- Introduces 2 Signalized Intersections for Exit 6 Ramps
- Roundabout Replaces Signalized Intersection at Boston Harbor Rd.
- Constructs 4 Sections of Soundwall – North and South of Exit 6 and Dover Toll Plaza

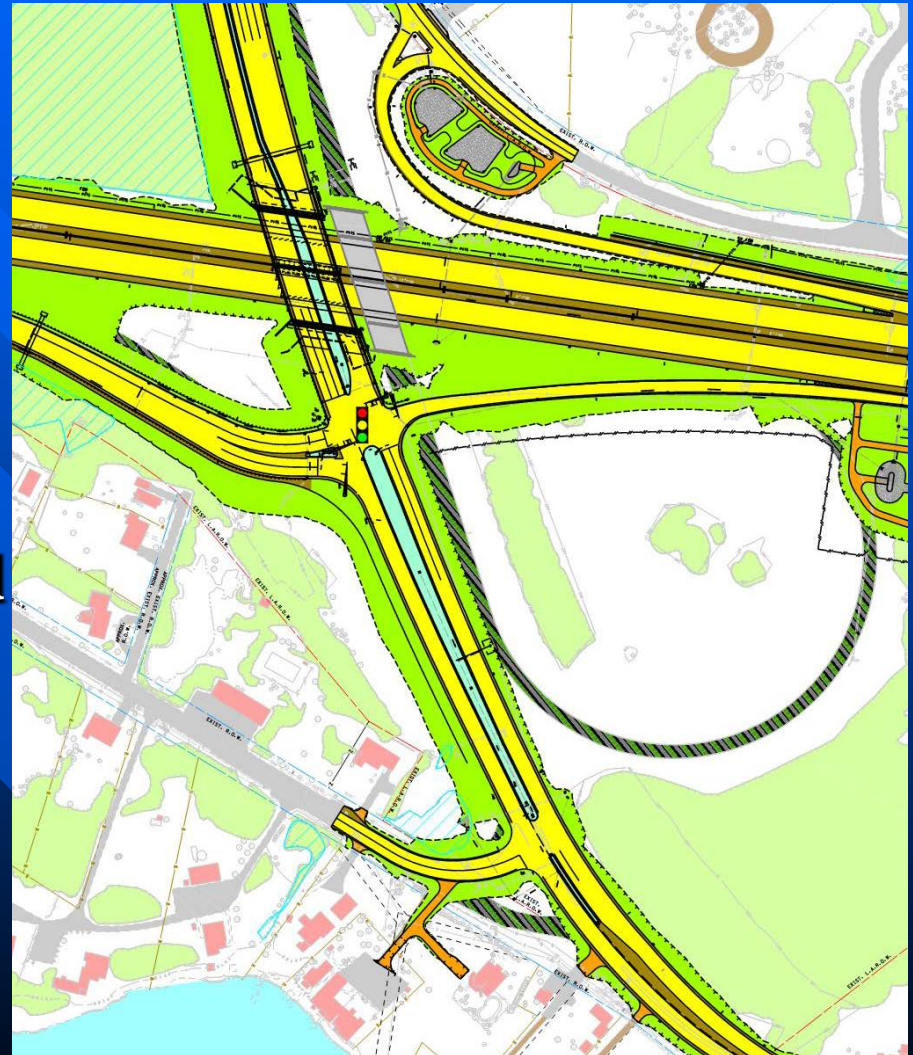
Contract Q – Boston Harbor Rd.

- Roundabout Replaces Signalized Intersection at Boston Harbor Rd.
- Two-Lane Hybrid Roundabout



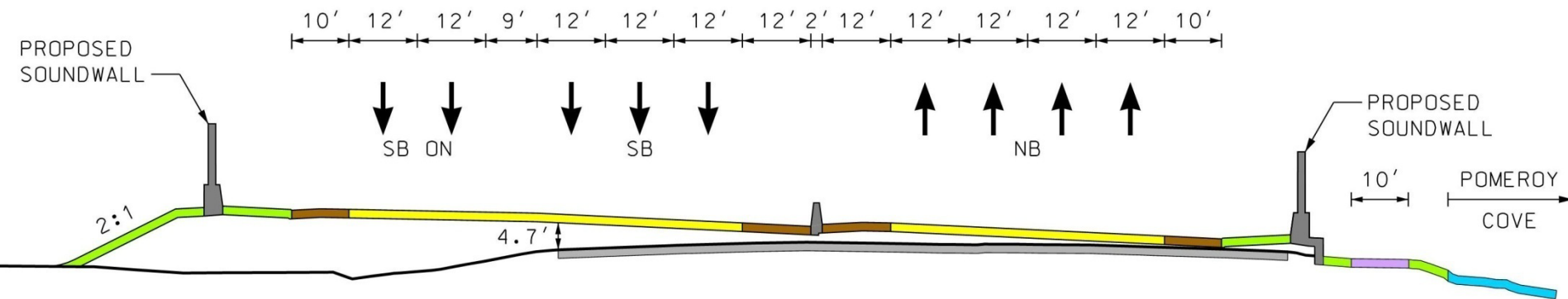
Contract Q - Exit 6

- New Bridge South of Existing
- Signalized Intersection at Exit 6 NB Ramps
- New Eastbound Access Along Dover Point Road



Contract Q

Spaulding Turnpike

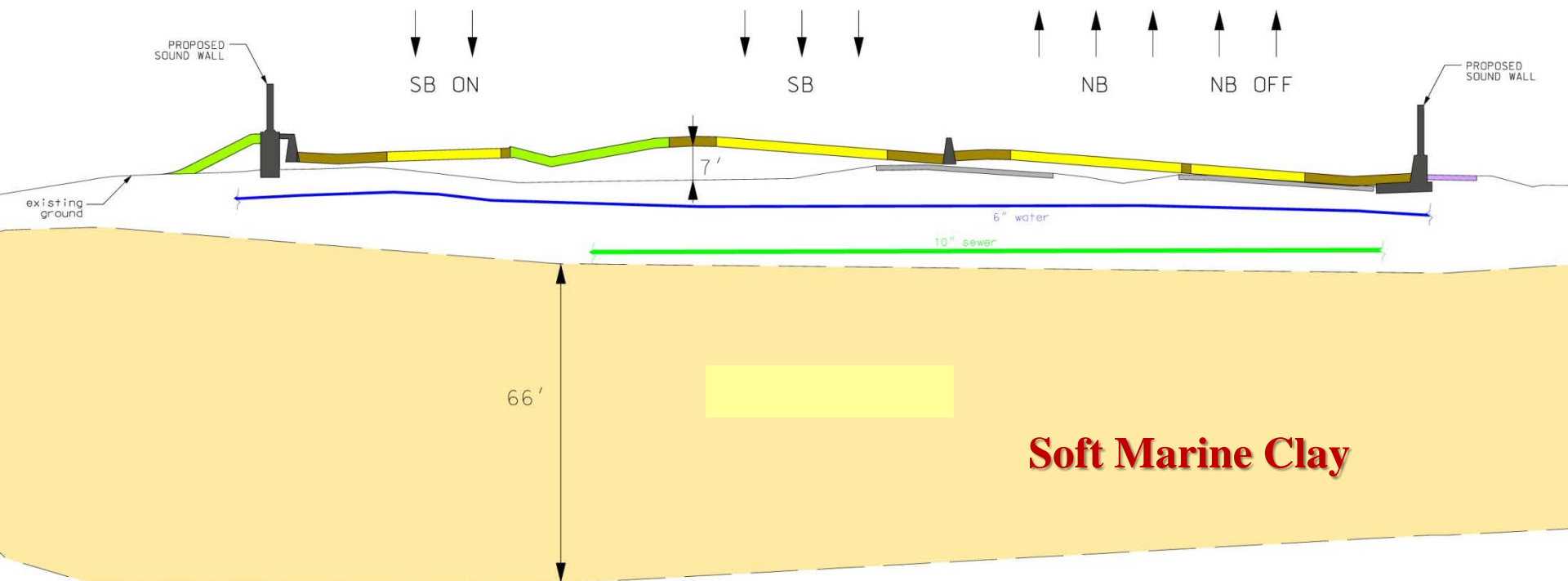


- 40' of Spaulding Turnpike Widening
- SB Raise in Elevation
- Soundwalls along NB and SB
- Pomeroy Cove Bike and Pedestrian Paved Pathway (10' wide) is maintained

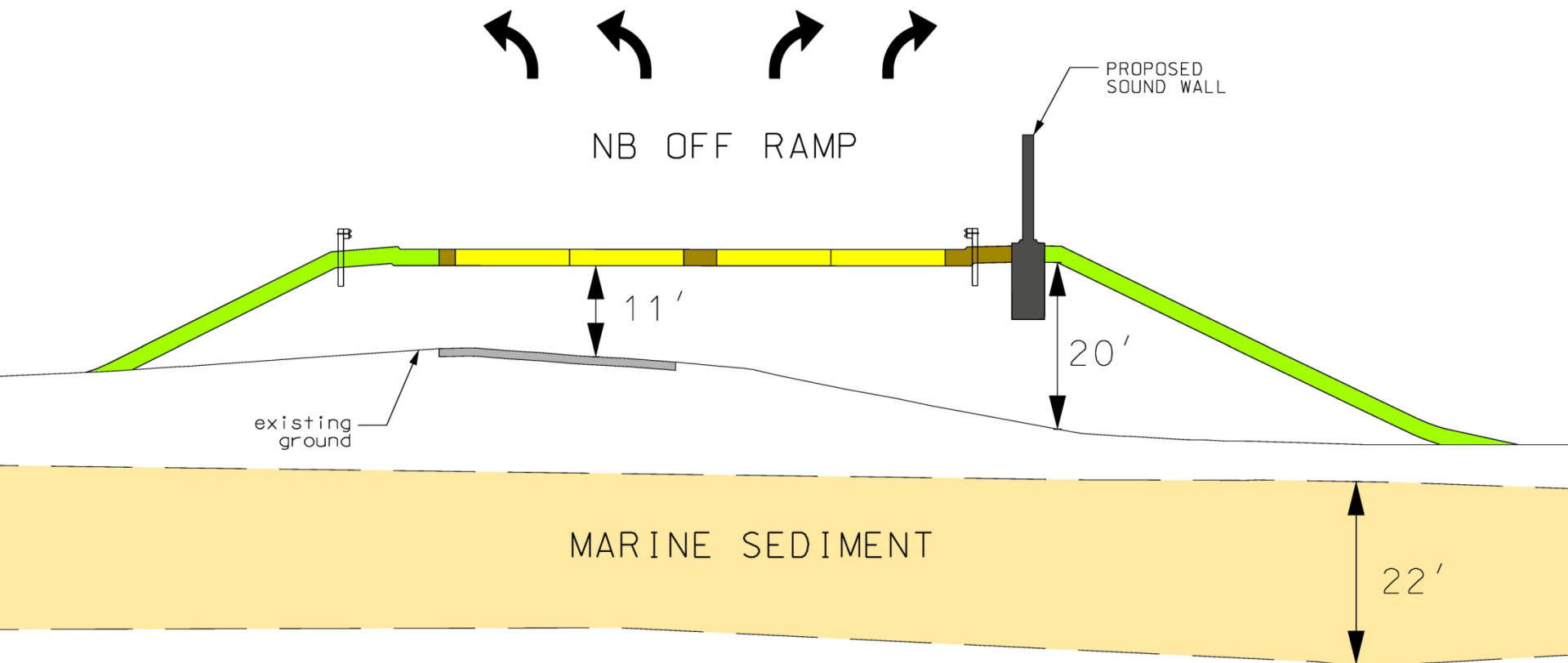
Engineering Challenges

Cross Section

Just North of Pomeroy Cove



Cross Section NB Off Ramp



Settlement Platform Constructed under Contract M



Initial Construction Phase

- Exit 5 Test Embankment Area
- Settlement Testing
- UNH Study

Settlement Platform

Embankment Area

- Installation of Sand Drains



Settlement Platform

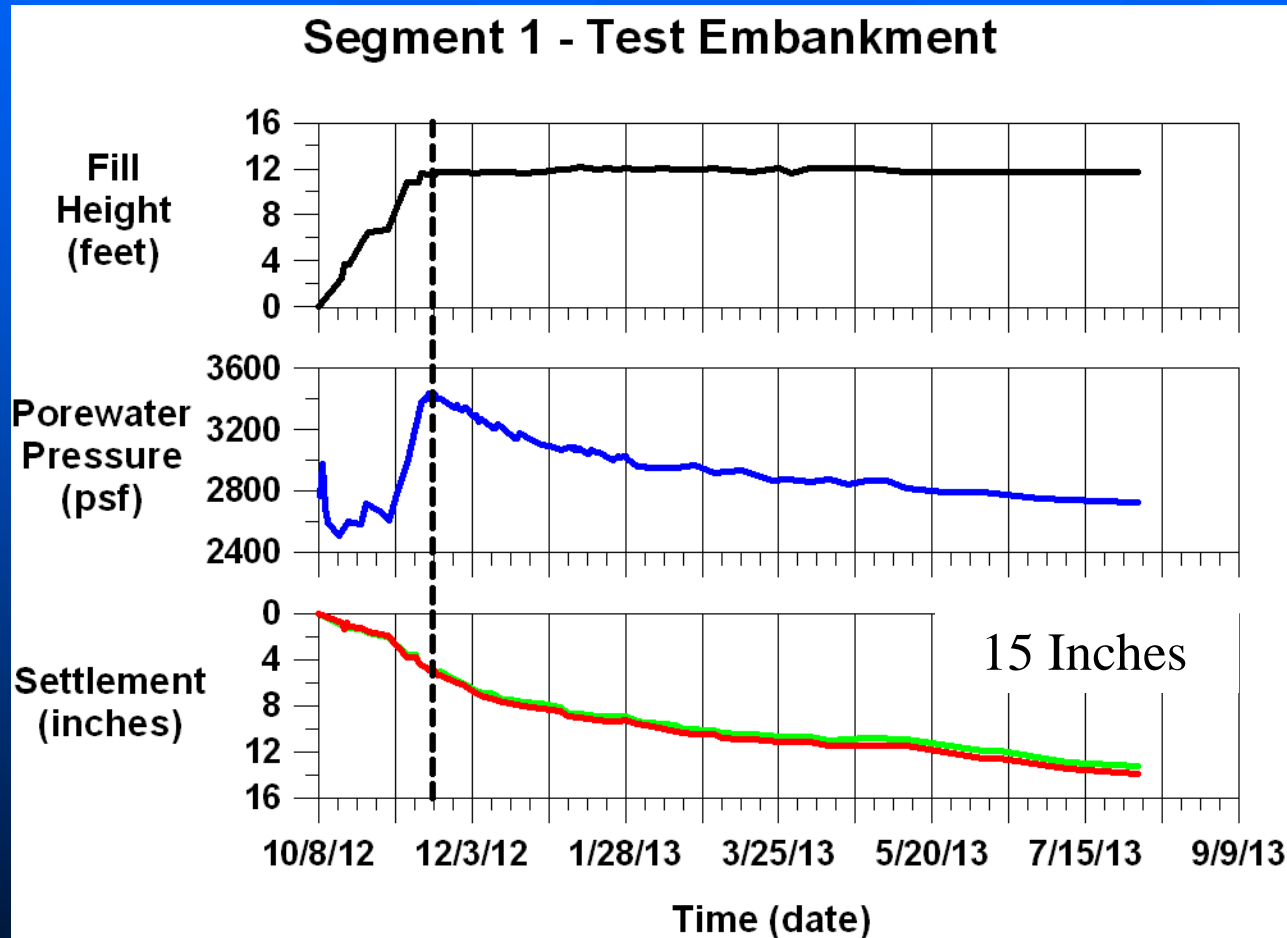
Embankment Area

- Installation of Sand Drains



Contract Q

Soft Soil Settlement Predictions



- Over eight months, have seen over 15 inches of settlement
- Anticipate settlement periods of 45 days to be included in each construction phase

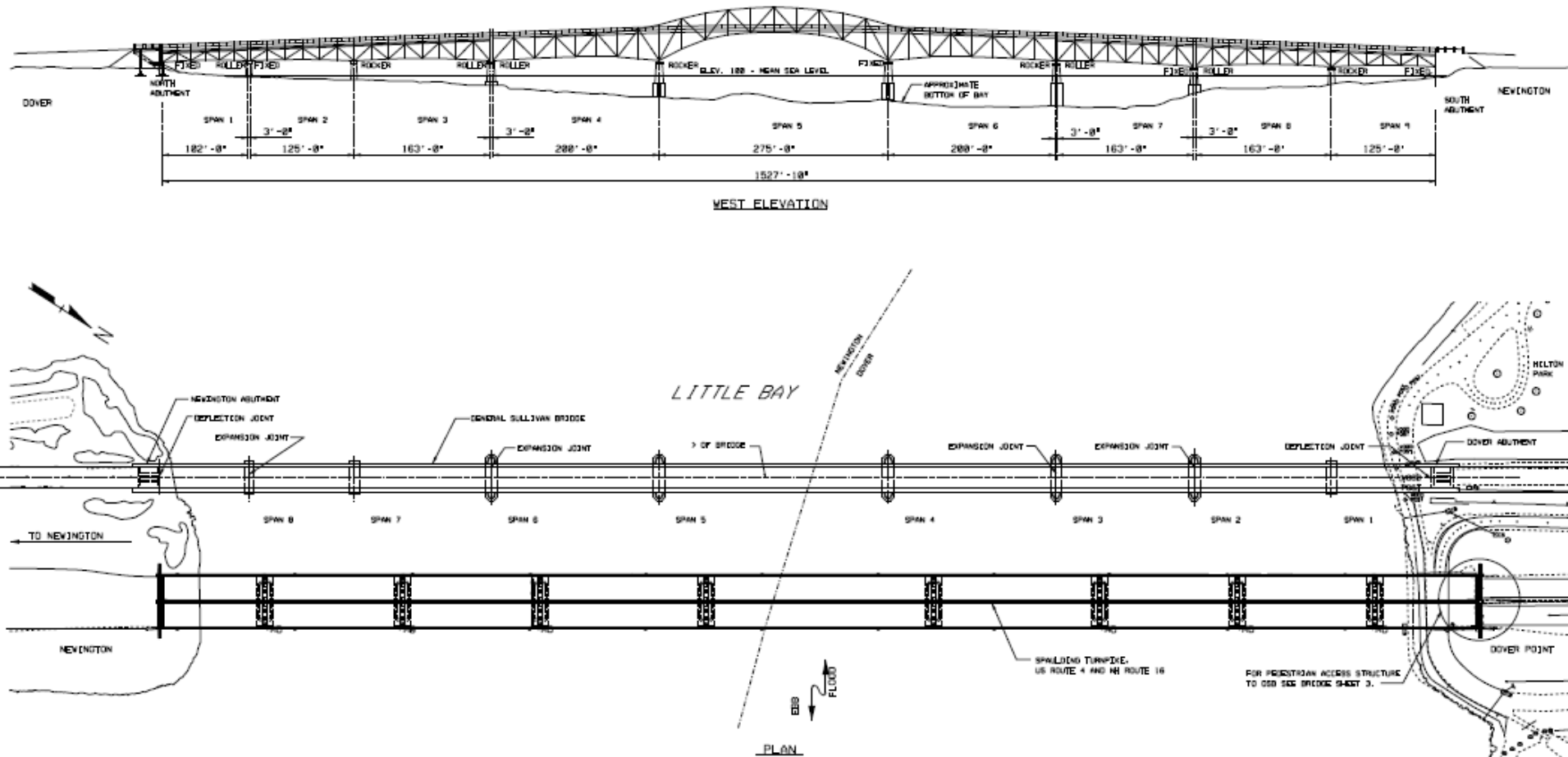
Contract S



Contract S – General Sullivan Bridge Rehabilitation

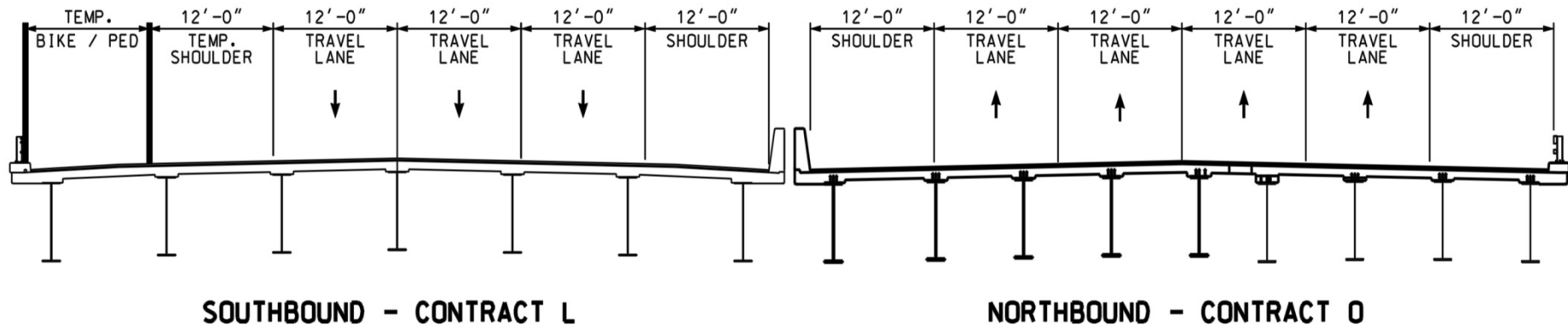
- Tentative Advertising Date: Late 2018
- Tentative Construction: 2018 – 2021
- Concurrent Construction with Contract Q

Contract S - General Sullivan Bridge



- Rehabilitates Existing 9-Span (1527 ft.) General Sullivan Bridge for Pedestrian and Bicycle Use

Contract S - General Sullivan Bridge



- Includes Temporary Relocation of Pedestrians and Bicycles on New Little Bay Bridge during GSB Rehabilitation or Possible Use of a Temporary Bus Service During Closure Period

General Sullivan Bridge - Work To Date



- First Detailed Inspection Completed in 2009
- Underwater Inspection Completed in 2011
- New Dover Approach Bridge Constructed in 2013 (Contract L)
- Dover Abutment Rehabilitated 2013 (Contract L)
- In-Depth, Hands-On Inspection Completed in May 2014
- Capacity Load Rating Completed Sept. 2014



General Sullivan Bridge – Preliminary Results from 2014 Inspection



- Deterioration Continues - Worse than 5 Years Ago
- Deck Concrete Significantly Spalled on Underside
- Outside Stringers Critically Deteriorated
- Interior Three Stringers in Fair to Good Condition
- Floor Beams Fair to Poor
- Span 7 (previously fenced) Span - Truss Limited Capacity
- Lattice Trusses for All Other Spans Fair to Poor



General Sullivan Bridge - Overview



Spans 1-2-3 (Dover)



Spans 7-8-9 (Newington)



Spans 4-5-6 (Center Spans)

General Sullivan Bridge

2014 Inspection Overview



General Sullivan Bridge 2014 Inspection Deck



General Sullivan Bridge 2014 Inspection

Stringers

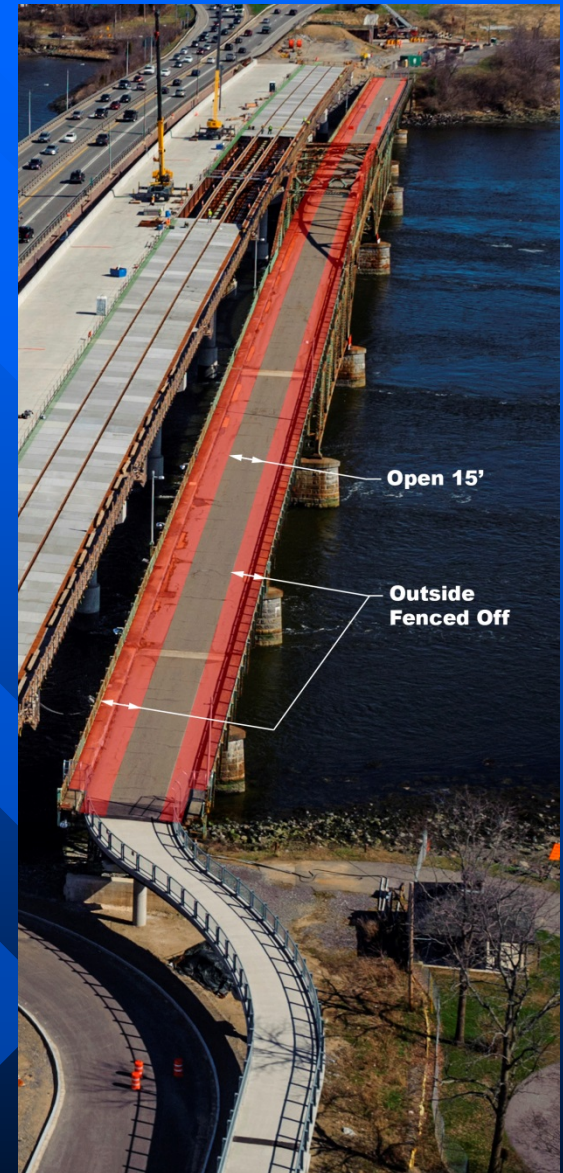


General Sullivan Bridge 2014 Inspection

Truss Members



General Sullivan Bridge - Next Steps



Install 15' Wide Fencing Full Length of Bridge

General Sullivan Bridge - Next Steps

- Fence Entire Deck to 15'+/- wide
(Completed in December 2014)
- Detailed Structural Analysis & Evaluation
Continues
- Evaluate Environmental Commitments
(Historic Preservation) – Summer 2015
- Assess Rehabilitation & Replacement
Options - Winter 2015-2016
- Develop Rehabilitation or Replacement
Plans – 2016 - 17
- Follow-up Inspection in 2016
- Tentative Advertising Date: Late 2018
- Tentative Construction: 2019 – 2021/22



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<http://www.newington-dover.com/>



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THANK YOU

Questions/Comments

