

Exit 3 Area NB Mainline Final Configuration

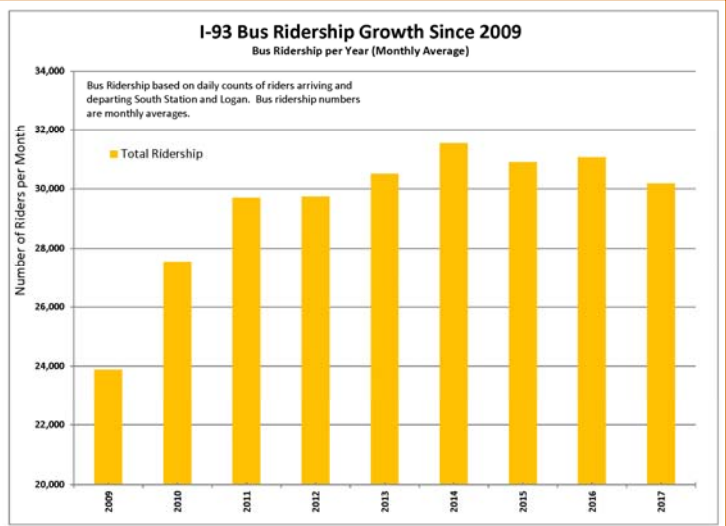
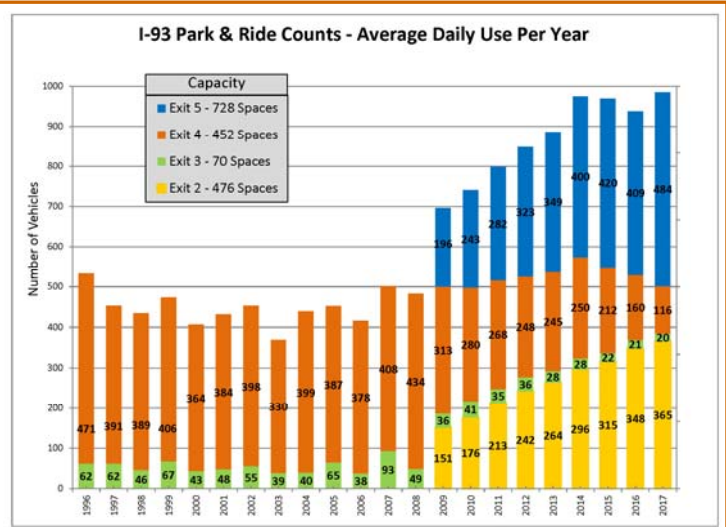
Contract 13933H finalized the reconstruction of Exit 3 and tied in all the previous projects in the area. The project included:

- Widening of 2.2 miles of NB I-93 mainline in Windham, mostly north of Exit 3.
- Construction of the new I-93 NB on- and off-Exit 3 ramps.
- Relocation of a portion of Route 111A.
- Finalization of Route 111 reconstruction.

This project was completed in May of 2017.



Park and Rides and Bus Ridership



From the initiation of the I-93 Improvement project, the NHDOT recognized that an important means to improve traffic within the corridor would be to help reduce the number of vehicles on the roadway. The implementation of Travel Demand Management strategies included increasing the number of Park and Ride facilities while expanding the bus ridership. This effort resulted in new Park and Ride/Bus Facilities at Exits 2, 3, 4 and 5, as well as funding for new buses running from Manchester to Boston. See Page 7 for a listing of related projects.

Since the implementation of this strategy in the I-93 Corridor, NHDOT has been tracking the use of the Park & Rides and bus ridership, and has seen a steady growth in the use of the Park & Rides. Since the early 2000s through June of 2017, the number of vehicles has more than doubled. The use of Park & Rides results in the number of cars on the highway being reduced by almost a 1,000 vehicles per day. Since 2009, bus ridership has increased from an average of 24,000 to above 30,000 riders per month, a 25% increase.

Note that in each of the graphs to the left, the data for the year 2017 is based on averages only through the first half of the year, through June of 2017.

CORRIDOR NEWS

I-93 Construction News and Highlights

Summer 2017 ~ Issue No. 18

I-93 IMPROVEMENTS

2017 Progress:

I-93 Widening Projects are Making Great Strides

There has been exciting progress in 2017 including the completion of one major project with another to follow this fall: the Exit 3 Area Northbound Mainline Final Configuration project (Contract 13933H) was completed in May 2017, and the Exit 3 Park and Ride project (Contract 10418H) should be completed by November 2017. When the Exit 3 Park and Ride is done, all of the Exit 3 Area I-93 Improvements will be finished.

The six remaining projects of this 14-year project include four located north of Exit 3, and two corridor paving contracts—one project (Contract 13933A) will reconstruct and widen I-93 south of Exit 1 and the second project (Contract 14633J) will pave a 4th lane for the NB and SB barrels of I-93 between Exit 1 and Exit 5. All of the I-93 Widening Improvements are on track for completion in 2020, and we continue to thank you for your patience as we transform the I-93 corridor to better meet all the communities' needs for the present and into the 21st century.

Advancing the few remaining projects, most of them north of Exit 3, continues. Below is an overview of the projects that are under construction in 2017.

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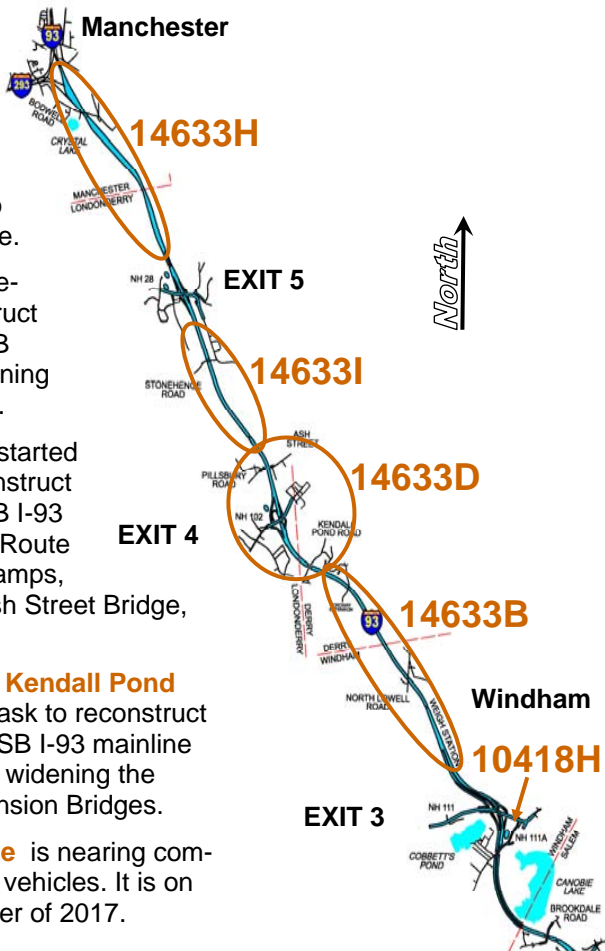
Contract 14633H - North of Exit 5 to the I-293 Interchange continues its reconstruction of the NB and SB I-93 roadways to four lanes. Traffic has been placed under temporary signal control on Bodwell Road to allow widening work on Bodwell Bridge.

Contract 14633I - Exit 4 to Exit 5, began in March 2017, and it will reconstruct and widen about 2 miles of NB and SB mainline north of Exit 4 including widening work on the Stonehenge Road Bridge.

Contract 14633D - Exit 4 Area also started this year, in January 2017. It will reconstruct and widen about 2 miles of NB and SB I-93 roadway in the Exit 4 area, widen NH Route 102 and reconstruct the northbound ramps, replace the NH 102 Bridge and the Ash Street Bridge, and widen the Kendall Pond Bridge.

Contract 14633B - Weigh Station to Kendall Pond Road is about halfway done with its task to reconstruct and widen about 3.5 miles of NB and SB I-93 mainline between Exits 3 and 4. Work includes widening the North Lowell Road and Fordway Extension Bridges.

Contract 10418H - Exit 3 Park & Ride is nearing completion, providing over 140 spaces for vehicles. It is on schedule to be completed by November of 2017.



I-93 Widening Advances Between Exit 3 and the I-293 Interchange



NB and SB Mainline Widening, Weigh Station to Kendall Pond Road

Contract 14633B begins north of Exit 3 and continues to reconstruct and widen approximately 3.5 miles of both the NB and SB lanes of I-93.



LEFT TO RIGHT: Pedestrian box culvert is installed, a completed drainage detention basin, and blasting operations continue on the I-93 SB barrel for widening.



Exit 4 Ramps, with NB and SB Mainline Widening

Contract 14633D continues the widening and reconstructing northward from the I-93 Bridges over Kendall Pond Road to just north of the historic Ash Street/Pillsbury Road Bridge.
LEFT: Abutment work for the replacement bridge to carry NH Route 102 over I-93.
ABOVE: The installation of a 16-duct conduit run on NH Route 102.

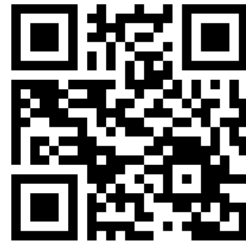
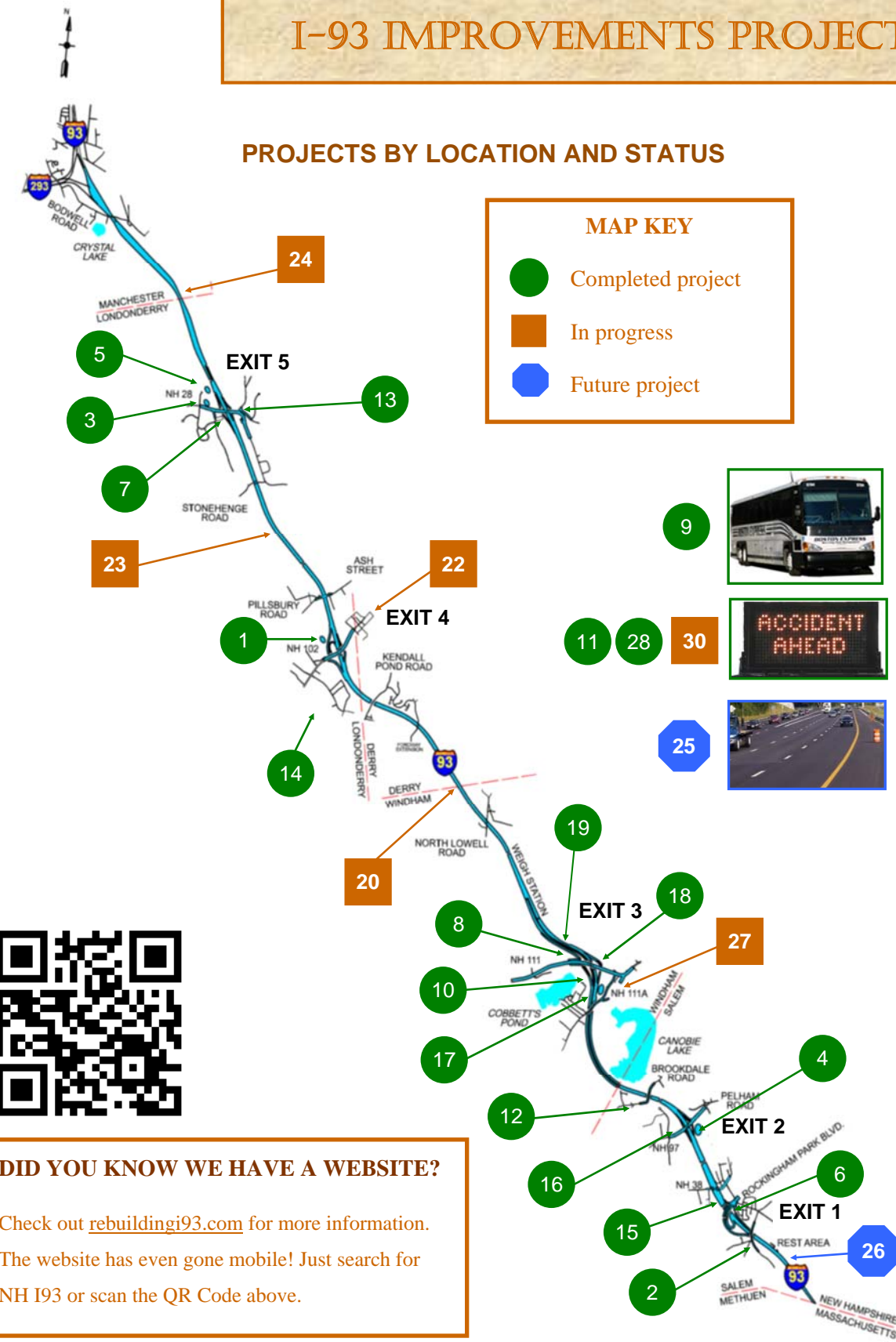
I-93 PROJECT SUMMARY OF PROJECTS TO DATE					
	Status	Project Description	Contract Number	Constructed To/From	Cost (M)
1	Complete	Exit 4 Bus Terminal/PNR	10418M	01/06 - 05/07	\$1.4
2	Complete	Cross Street Bridge	13933B	11/06 - 10/08	\$6.6
3	Complete	Exit 5 PNR/Rockingham Road	10418I	12/06 - 10/08	\$7.2
4	Complete	Exit 2 Bus Terminal/PNR	10418G	03/07 - 10/08	\$7.1
5	Complete	Exit 5 Bus Terminal/Maintenance Facility	10418N	08/07 - 10/08	\$7.4
6	Complete	Exit 1 Ramps & Bridges	13933C	09/07 - 10/09	\$24.1
7	Complete	Exit 5 Ramps & Bridges	14633E	07/08 - 05/10	\$15.1
8	Complete	Exit 3 SB Off-Ramp & NB Bridges	13933K	09/08 - 11/10	\$26.8
9	Complete	Bus Procurement -Operation for Expanded Service	10418L	Service Began 11/08	\$19.1
10	Complete	Exit 3 NB Mainline	13933G	06/09 - 04/12	\$30.8
11	Complete	Phase I Intelligent Transportation Systems (ITS)	10418Z	11/09 - 11/11	\$4.5
12	Complete	Brookdale Road Bridge	13933F	08/10 - 07/12	\$5.0
13	Complete	Exit 5/Route 28 Interchange	14633F	03/11 - 10/14	\$37.3
14	Complete	South Road Mitigation	10418F	03/11 - 08/14	\$1.1
15	Complete	Exit 1 Area, NB & SB Mainline	13933D	03/11 - 08/13	\$31.3
16	Complete	Exit 2 Interchange Reconstruction	13933E	08/12—03/16	\$45.2
17	Complete	Exit 3 SB Bridges over Routes 111 & 111A	13933N	01/12 - 09/13	\$11.5
18	Complete	Exit 3 SB Mainline, SB On-Ramp & NH 111	13933I	10/12 - 10/16	\$35.4
19	Complete	Exit 3 NB Mainline, NH Route 111A	13933H	12/13 - 05/17	\$34.9
28	Complete	Smart Work Zone	13933Z	7/11 - 5/15	\$1.5
29	Complete	Misc. Early Construction Projects	Misc.	Prior to 2007	\$0.6
Completed Construction subtotal:					\$353.8
20	In Progress	NB & SB Mainline between Exit 3 & 4	14633B	02/16 - 10/19	\$54.4
21	In Progress	NH 102 Bridge - Now Part of Contract 14633D	N/A	N/A	N/A
22	In Progress	NB & SB Mainline, Ramps & NH 102 Br. at Exit 4	14633D	01/17 - 10/20	\$72.3
23	In Progress	NB & SB Mainline between Exit 4 & 5	14633I	03/17 - 08/19	\$36.8
24	In Progress	NB & SB Mainline North of Exit 5	14633H	06/16 - 10/19	\$48.8
27	In Progress	Exit 3 Park and Ride	10418H	11/16 - 10/17	\$2.1
30	In Progress	Smart Work Zone	14633Z	04/15 - 06/18	\$1.7
Under Construction subtotal:					\$216.1
25	Future	Future Corridor Paving	14633J	2018-2020	\$14.3
26	Future	NB & SB Mainline South of Exit 1	13933A	2018-2020	\$17.9
Future Projects subtotal:					\$32.2
Total Construction Cost:					\$602.1

I-93 IMPROVEMENTS PROJECTS

PROJECTS BY LOCATION AND STATUS

MAP KEY

- Completed project
- In progress
- Future project



DID YOU KNOW WE HAVE A WEBSITE?

Check out rebuildingi93.com for more information. The website has even gone mobile! Just search for NH I93 or scan the QR Code above.

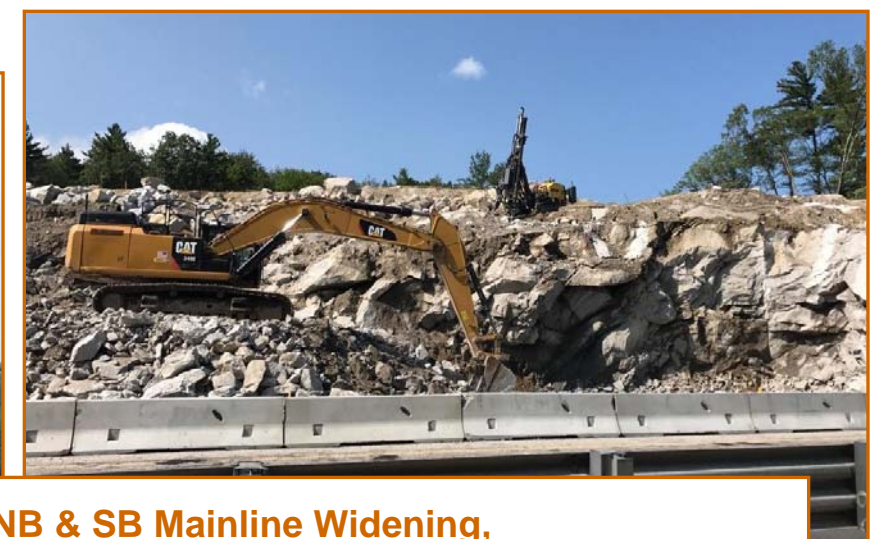
I-93 Widening Advances Between Exit 3 and the I-293 Interchange



NB and SB Mainline Widening, Between Exits 4 and 5

Contract 14633I widens and reconstructs approximately 2 miles of both the NB and SB lanes of I-93, and widens the bridges carrying I-93 over Stonehenge Road.

LEFT: NB barrel sand placement, facing south.
BELOW: Stonehenge Road Bridge beam setting, facing North.



NB & SB Mainline Widening, North of Exit 5 to the I-293 Interchange

Contract 14633H will reconstruct and widen 3.3 miles of NB and SB I-93, from just north of Exit 5 in Londonderry to the I-293 split in Manchester. Two bridges over Bodwell Road, the bridge over Co-has Brook, and several major culverts will be widened.
LEFT: Installing soundwall on I-93 NB facing south.
ABOVE: Rock removal along the I-93 NB barrel.

Exit 3 Park and Ride

Contract 10418H will construct a new Park and Ride facility in the area of Exit 3, just east of the I-93 NB off-ramp in Windham, creating over 140 spaces for vehicles. The new Park and Ride will replace the temporary Park and Ride that is at the intersection of NH 111 and Wall Street.

The Contractor started work in the spring of 2017 with clearing trees and placing embankment materials. Blasting for rock excavation was performed and the blasted rock was crushed to create gravel / select materials needed for the project. Paving will be completed in the fall. This project is on track to be completed by November 2017.



LEFT: Aerial showing entire new Park and Ride site.
ABOVE: Site work.

Historic Ash Street Bridge - Robert J. Prowse Memorial Bridge

To accommodate the I-93 improvements, several bridges have been or will be replaced because they are too short to provide for the expanded number of lanes. Among these is the historic and nationally significant Ash Street Bridge, also called the Robert J. Prowse Memorial Bridge, which carries Ash Street over I-93 in Londonderry. It was constructed in 1962 using groundbreaking, award-winning, innovative design conceived by NHDOT designer, Robert Prowse. The bridge is historic because it was the first welded-steel rigid-frame overpass on the interstate system - a 146 foot clear span with no central pier - and its success sparked the welded deck girder bridges that are still designed and built to this day. It received an award in 1964 for its engineering and aesthetics from the American Institute of Steel Construction.



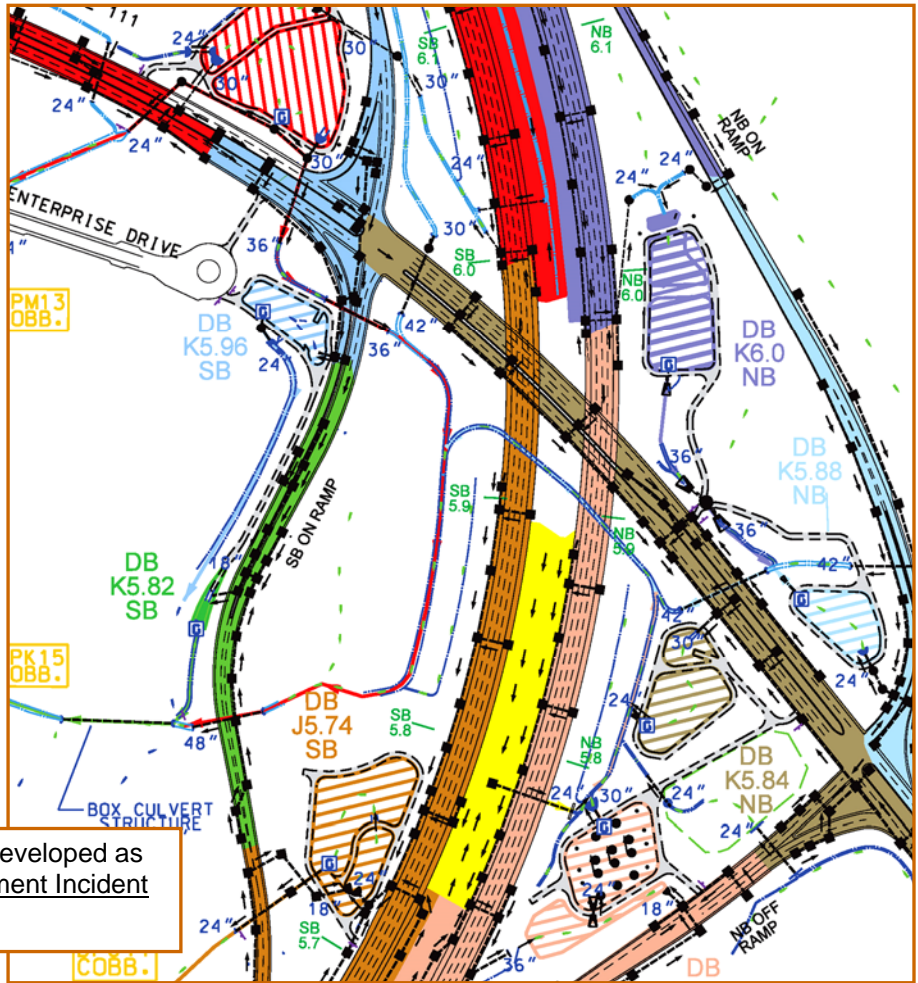
Looking for a Bridge?

The Ash Street Bridge (also known as the Robert J. Prowse Memorial Bridge) must be removed in order to accommodate the widening of I-93, and NHDOT continues to search for a way to repurpose or sell this beautiful and historic bridge.

Exit 3 Spill Containment & Incident Response Plan

The Final Environmental Impact Statement (FEIS) for I-93 included commitments for spill containment measures due to the environmental sensitivity of Canobie Lake. Project approval included requirements that measures be taken to "capture and isolate any inadvertent hazardous material spills" before they enter Canobie Lake. Over and above the commitments of the FEIS, the NHDOT has applied the same approach to Cobbett's Pond.

The principal goal of the requirements was to minimize the risk of impacts from hazardous material spills to these waterbodies. Consequently, a Spill Containment and Risk Assessment Report for the Exit 3 area was developed and would later be the basis for the development of Exit 3 Spill Containment Incident Response Plan.



RIGHT: Color Coded Map developed as part of Exit 3 Spill Containment Incident Response Plan.

The design and construction of I-93 reflects an evaluation of the potential risks of spills in the Exit 3 area. The level of risk was compared to the cost of avoidance and the potential benefit of the mitigation measure. Risk mitigation measures fell into two categories: avoidance and spill containment. Avoidance elements included measures that control the vehicle as to avoid crashes such as clear zone application, guardrail/barrier treatments, signs, and use of rumble strips. Spill containment measures include utilizing closed drainage systems routed to water quality basins with impervious material to prevent/minimize infiltration, and shut-offs valves, so that hazardous materials could be contained.

The Exit 3 Spill Containment Incident Response Plan was developed working with the local incident responders and Southeastern New Hampshire Hazardous Material Mutual Aid District personnel. This response plan, containing plans/maps, detailed information tables and training materials, was turned over to incident response personnel in July of 2017.

The Incident Response Plan will assist in ensuring the design elements associated with spill containment will effectively be utilized by the incident responders in the field to minimize/contain hazardous spills, thereby protecting Canobie Lake and Cobbett's Pond.