

US Route 3/NH 28 Hooksett 29611 Roadway Improvements Project



Working Group Meeting #7

December 11, 2023

9:00 AM – 10:30 AM





Project Vision

Improve roadway safety, mobility and efficiency to promote safe travel for motorized vehicles, pedestrians and bicyclists.

Project Purpose & Need

Improve long-term safety, efficiency and mobility on 1.4 miles of the US 3/NH 28 corridor between Alice Avenue/West Alice Avenue and Martins Ferry Road/Whitehall Road.

Corridor Deficiencies

Congestion

- *Significant intersection back-ups occur during peak hours*
- *Inadequate use of center turning lanes causes increased congestion and vehicular conflicts*

Safety

- *Poor sight distance exists and causes conflicts between vehicles throughout the corridor.*
- *Higher prevalence of crashes in southern portion of the corridor where there is more development*
- *Approximately 25% of crashes located between Brace Ave and Silver Ave*
- *404 crashes recorded from 2009-2018*

Access Management

- *Poorly defined and overlapping driveway limits on each side allow for uncontrolled access to US 3/NH 28.*

Corridor Deficiencies (cont.)

Bicycle Facilities

- *Insufficient/nonexistent shoulder widths pose safety challenges for bicyclists*

Pedestrian Facilities

- *Sidewalk discontinuity limits pedestrian access and mobility*
- *Fatal pedestrian crash near Silver Ave in Feb 2020*
- *Sidewalks limited to 0.26 miles (0.11 miles west side and 0.15 miles east side) at the southern end of the project*

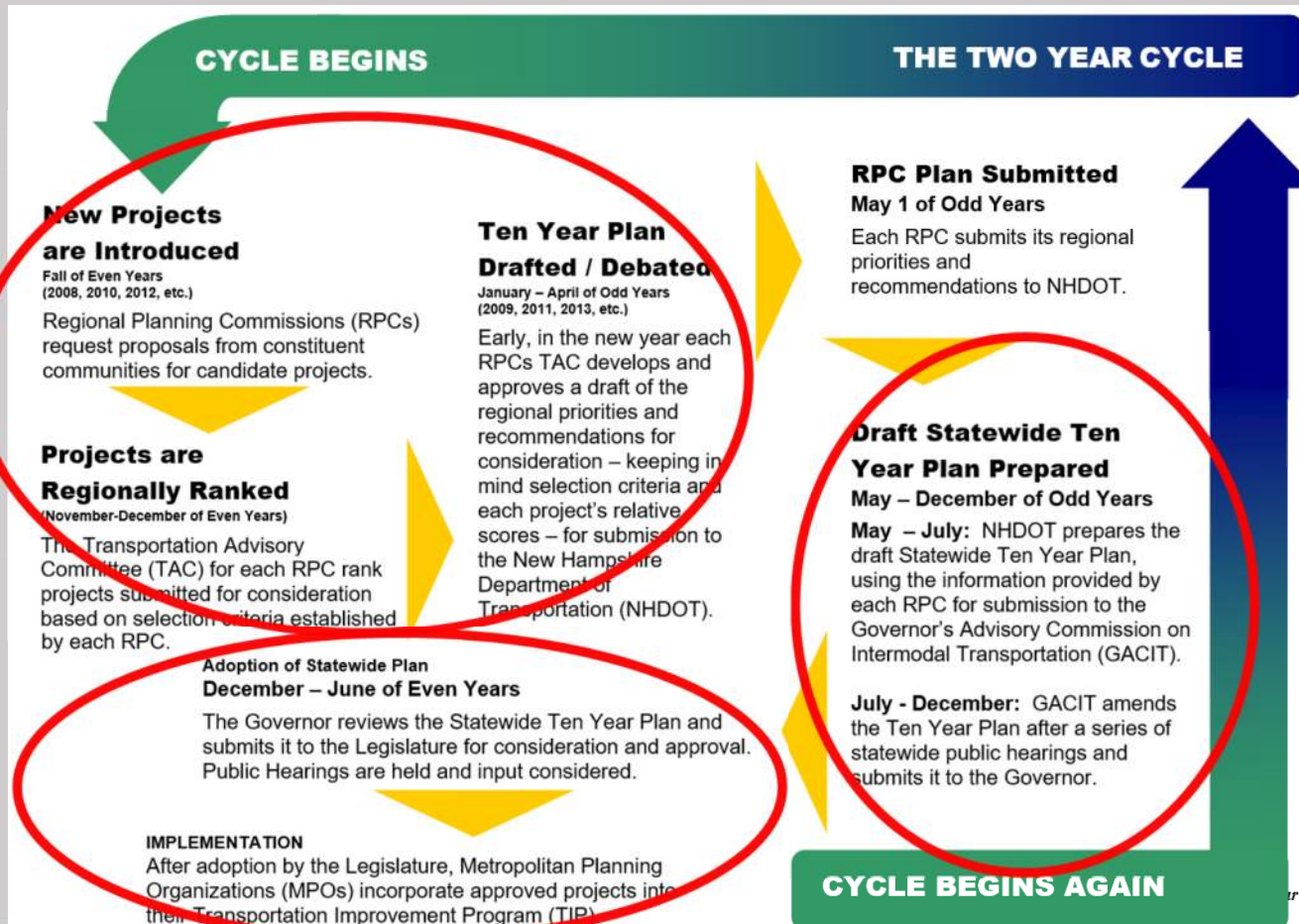
Intersection Improvements

- *Traffic signals require ADA and equipment upgrades to improve preemption, timing and coordination and promote efficient traffic flow.*

Ten Year Plan Process

RPC

Governor & Legislature



Project Development Process

- Step 1 • Develop and evaluate improvement alternatives ✓
- Step 2 • Identify impacted natural and cultural resources ✓
- Step 3 • Refine design alternatives ✓
- Step 4 • Select proposed action ✓
- Step 5 • Prepare environmental document for proposed action
- Step 6 • Public Hearing (Fall 2024)

Project Development Process (cont.)

Step 7

- Final design (2024-2026)

Step 8

- Environmental permitting (2025-2026)

Step 9

- Right of Way Acquisition (2025-2026)

Step 10

- Construction (2027-2029)

Stakeholders Input

- 6 - Working Group Meetings
- 1 - Open House
- 1 - Online Survey
- 2 - Public Information Meetings



Project Working Group

- Comprised of Town Officials, emergency services, Regional Planning Commission, vested stakeholders and now residents, business owners
- Six Working Group meetings (November 2020 - January 2023)
 - Developed the Project Vision, the Purpose and Need Statement, and reviewed the Public Involvement Plan
 - Provided insight to corridor challenges and operations

Working Group Member	Organization
Captain Jake Robie	Hooksett Police Department
Joseph Stalker	Hooksett Emergency Services (Police/Fire/Rescue)
Andre Garron	Town Administrator
David Boutin	Hooksett Town Council
Lawrence Yassanye	Southern New Hampshire University (SNHU)
Bruce A. Thomas, PE	Community Development/ Town Engineer
Nate Miller	Southern NH Planning Commission (SNHPC)
Superintendent Bill Rearick	Hooksett School District
Richard Radwanski	NHDOT District 5 Engineer
Jessica Frail	Resident
Michelle Canning	Pro Technologies
State Rep. JR Hoell	State Representative
Tom Osborne	Osbornes Farm and Garden Centers, LLC
Tony Crawford	Circle T Car Wash

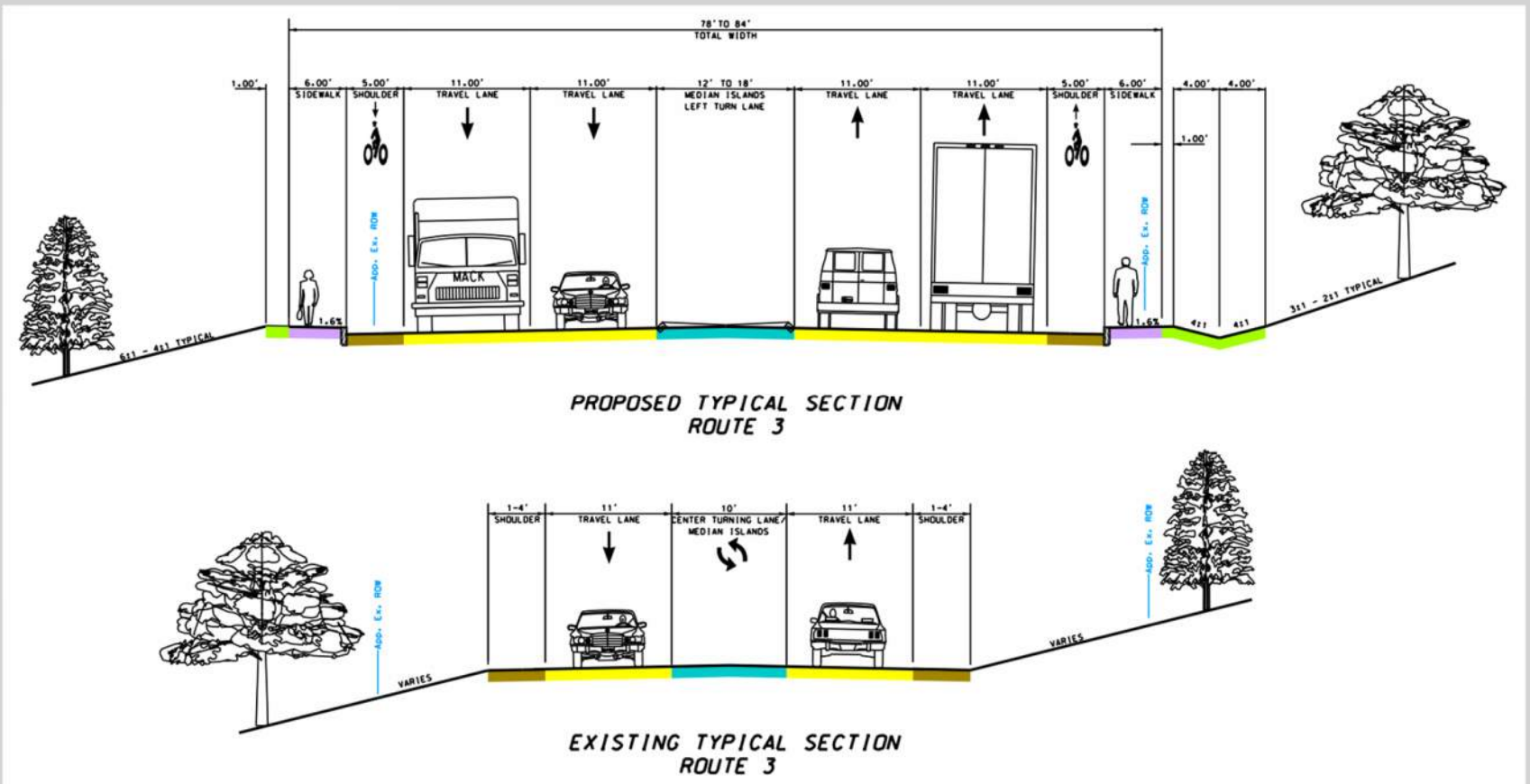
History of Stakeholders Input

- WG #1 - 11/18/2020 - Presented corridor deficiencies and drafted project vision and P&N statement
- WG #2 - 01/20/2021 - Presented traffic counts and preliminary improvements at the signalized intersections
- WG #3 - 06/11/2021 - Presented 5-lane alternative and impacts. Discussed Mammoth Road signalized intersection and roundabout. Discussed additional turning lanes at signalized intersections
- WG #4 - 10/18/2021 Presented 3-lane alternative and impacts. Compared the 5-lane to the 3-lane alternative
- PI Meeting #1 - 02/22/2022 Presented corridor traffic growth, 5-lane/3-lane comparison, natural and cultural resources. Many questions for specific properties, mixed feedback on alternatives

History of Stakeholders Input (cont.)

- February 25 to March 22, 2022: Opened MetroQuest Survey to the public
- WG #5 - 05/23/2022 PI meeting recap, public survey results. Presented signalized intersection and roundabout comparison
- 06/06/2022: Town Planning Board Meeting – Voted unanimously 7-0 in support for the 5-lane alternative. No consensus on the sidewalk locations or Mammoth Road intersection solution.
- 07/06/2022: Town Council Public Meeting – Voted unanimously 8-0 in favor of the 5-lane alternative. No further comments on the roundabout. Town Council voted in favor (5 vs. 3 votes) for sidewalk on one side vs two sides of Route 3
- WG #6 - 01/04/2023 Summary of impacts for 5-lane design, proposed roundabout at Mammoth Road to facilitate U-turns, sidewalks on both sides for increased pedestrian connectivity and traffic calming
- PI Meeting #2 – 10/24/2023 Presented 5-lane design alternative, negative public feedback on median island design and questions on roundabout, sidewalk locations and number of lanes

US 3 Typical Section

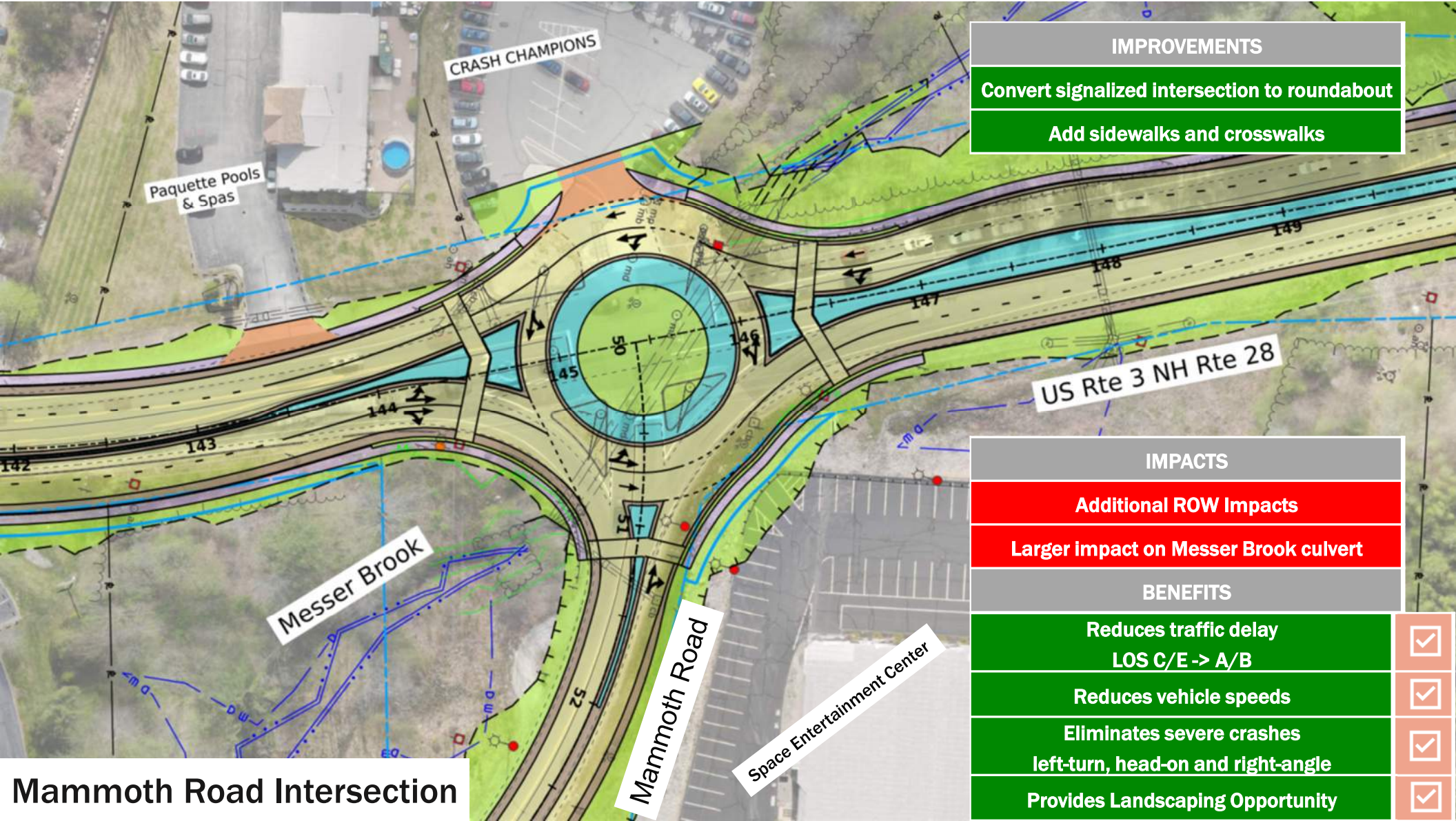


5 lane vs. 3 lane alternatives

- 06/06/2022: Town Planning Board unanimously voted for the 5-lane alternative
- 07/07/2022: Town Council unanimously voted for the 5-lane alternative

Mammoth Road Intersection Comparison (Roundabout vs. Traffic Signal)

	Two-lane Roundabout	Signalized Intersection	Remarks
Traffic Operations	●	●	Roundabout promotes slightly better traffic flow and lower corridor speeds
Safety	●	●	# of crashes /year for roundabout typically up to 50% lower than signalized intersection; crashes are also less severe
ROW Impacts	●	●	Roundabout has more ROW impacts due to larger footprint
Environmental Impacts	●	●	Roundabout has larger impact on existing Messer Brook culvert
Aesthetics	●	●	Roundabout provides opportunity for corridor landscaping
Maintenance Cost	●	●	Roundabout requires less maintenance than signalized intersection
Construction Cost	●	●	Roundabout may have a higher construction cost
Bike/Ped. Facilities	●	●	Roundabout may require a period when users get used to non-signalized intersection operations



IMPROVEMENTS
Convert signalized intersection to roundabout
Add sidewalks and crosswalks

IMPACTS
Additional ROW Impacts
Larger Impact on Messer Brook culvert

BENEFITS	
Reduces traffic delay LOS C/E -> A/B	<input checked="" type="checkbox"/>
Reduces vehicle speeds	<input checked="" type="checkbox"/>
Eliminates severe crashes left-turn, head-on and right-angle	<input checked="" type="checkbox"/>
Provides Landscaping Opportunity	<input checked="" type="checkbox"/>

Mammoth Road Intersection

CRASH CHAMPIONS

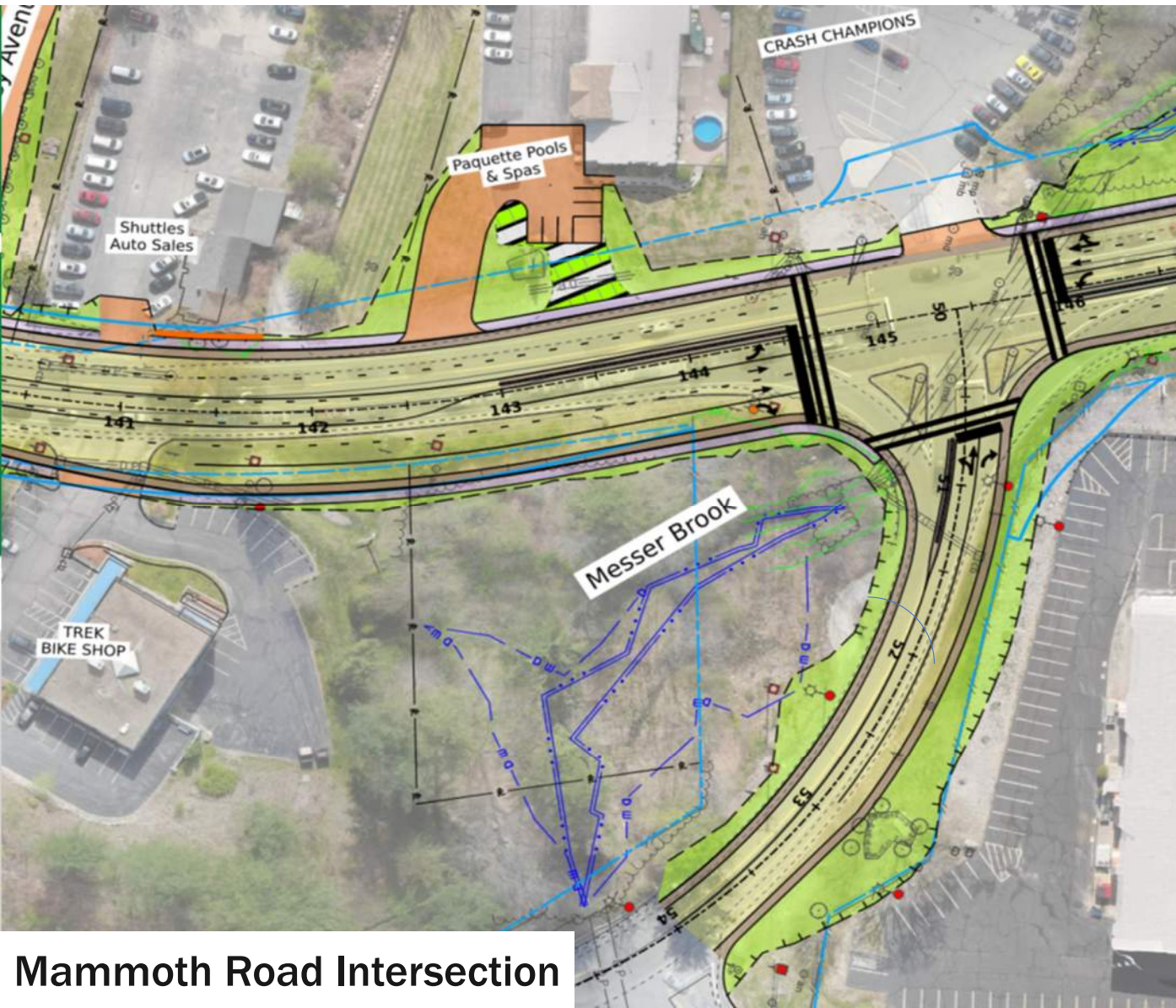
Paquette Pools & Spas

Messer Brook

Mammoth Road

Space Entertainment Center

US Rte 3 NH Rte 28

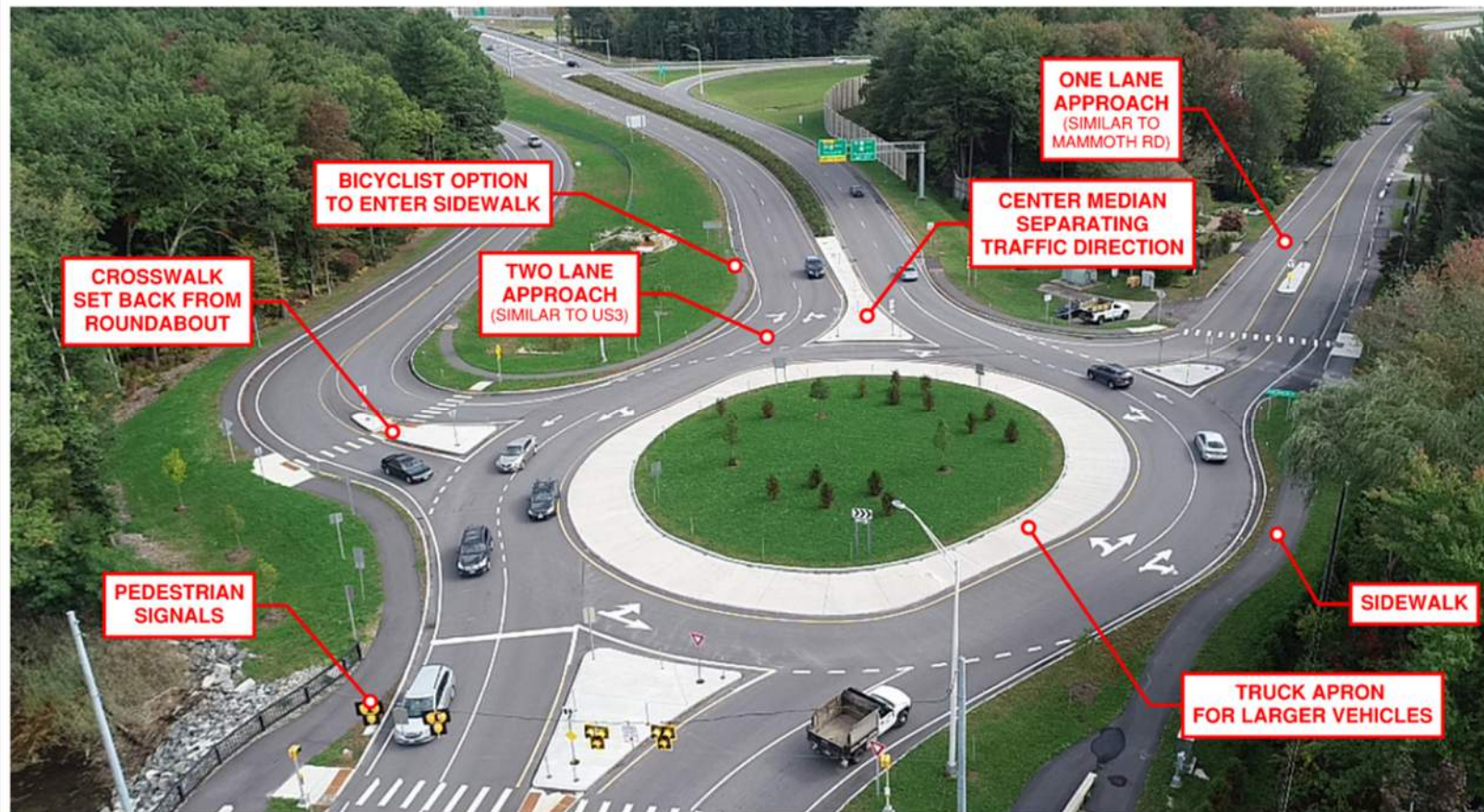


- IMPROVEMENTS**
- Add second thru lane and designated NB right turn lane
 - Add sidewalks and crosswalks

- IMPACTS**
- More widening in the NB direction creates additional impacts to TREK
- BENEFITS**
- Reduces traffic delay
LOS C/E -> B/C
 - May have lower construction costs
 - Smaller impact on existing Messer Brook culvert

Mammoth Road Intersection

2-Lane Roundabout – US 4 at Boston Harbor Rd. in Dover, NH



Median Islands

- Safety
 - Reduces pedestrian crashes at crosswalks
 - Cross one direction of traffic at a time
 - Traffic Calming
 - Limits left turn conflicts; reduces crashes by 15% or more
- Driver experience
 - Reduced congestion
 - More predictable motorist experience
- Aesthetics
 - Landscaping opportunities
- Lots of concern expressed from local businesses at the PI meeting
- Additional median openings have been added



Pedestrian Facilities

- Town Council voted in favor (5 vs. 3 votes) for sidewalk on one side vs two sides of Route 3
- Questions raised at PI meeting about necessity of sidewalk on both sides
- NHDOT recommended sidewalks on both sides for increased pedestrian connectivity and traffic calming
- NHDOT recommends crosswalks at major intersections (Alice Ave, Mammoth Rd, Whitehall Rd) as well as mid-block crossings at Zachary Dr and potentially Brace Ave
- Sidewalk has been eliminated north of Mammoth Rd on the east side of Route 3

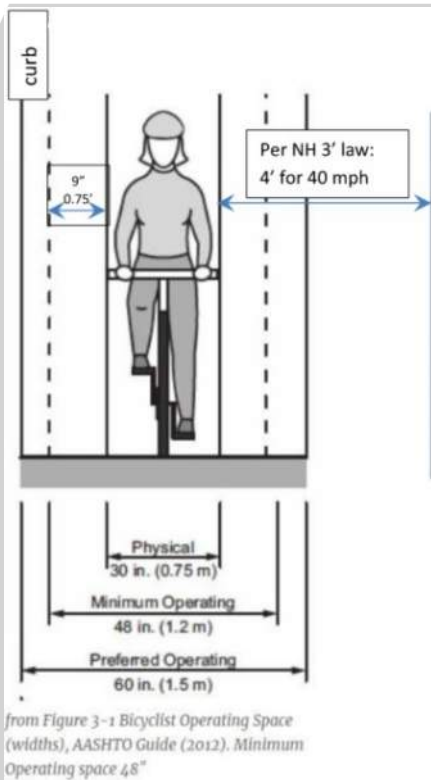


Bicycles Accommodations

- 5-ft shoulders are part of NHDOT standard typical section
- Lane and shoulder combined widths match those in adjacent segments of US 3
- The 5-ft shoulder width can support bicycle traffic



Bicycles Accommodations (cont.)



Hooksett Rte 3 Strava Data – Jan. 1 – Dec. 31, 2022

	Rte 3 - South of Mammoth	Mammoth Rd	Rte 3 - North of Mammoth
Peak Volume - Hour	5:00 PM	5:00 PM	7:00 PM
Peak Volume - Day	Saturday	Tuesday	Tuesday
Peak Volume - Month	June	August	June
Leisure Trips	284	776	555
Commuter Trips	21	194	185
Total Trips	305	970	740

Note: Strava users represent from 3%-30% of total bicycle users (source 2018 Colorado Study).

- Use 11' lane with 5' shoulder or 12' lane with 4' shoulder

Next Steps

- Public Information meeting Jan/Feb 2024
- Public Officials meeting March 2024
- WG Meeting April 2024
 - Summarize the PI and PO meetings discussions and confirm proposed action
- Public Hearing
 - Summer/Fall 2024
 - Present the preferred alternative and the draft environmental document

Thank you!

Contact information:

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