



WILTON-MILFORD-AMHERST-BEDFORD

NH Route 101 Corridor Improvements 13692D & 13692E Project Selection

Nashua RPC TTAC

March 8, 2023

Agenda

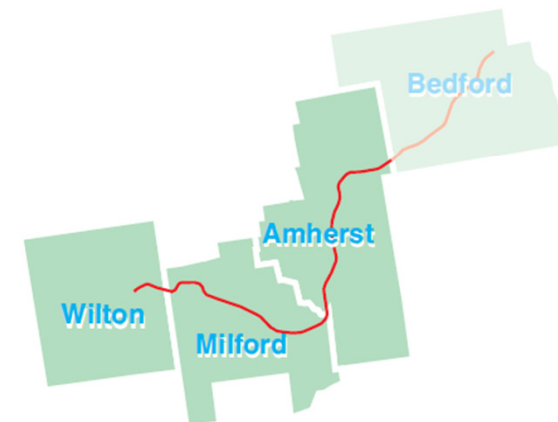
- Project Status
- NH 101 Project
Prioritization – 13692D &
13692E Locations
- 13692D Recommended
Alternative
- Public Outreach Synopsis
- Next Steps & Schedule



New Hampshire Route 101 Corridor Plan

Amherst, Milford, Wilton

Final Report
September 2002



Prepared for the Nashua Regional Planning Commission (NRPC) by:

Wallace Floyd Design Group
Vanasse Hangen Brustlin, Inc.
RKG Associates, Inc.

Project Status – General



- Completed NH 101 Safety Analysis & Prioritization
 - Data-driven approach to establish project priorities consistent with Strategic Highway Safety Plan
- 13692D Preliminary Design
 - Data Collection: survey, ROW, & environmental coordination
 - Alternatives Analysis
- Public Outreach
 - Amherst & Milford First Responders, February 14
 - Town of Amherst, March 6
 - Town of Milford, March 7

13692E Amherst – Priority 1



- Scope: NH 101 Safety & Widening Improvements from Blueberry Hill Road to Camp Road



Figure 6: Segment 10 - 12: Schoolhouse Rd to Blueberry Hill Rd

13692D Milford – Priority 2



- Scope: NH 101 “Bypass” Safety Improvements from NH 13 Interchange to Old Wilton/Phelan Road



Figure 9: Segment 20 - 23: End of Ramp for NH 13 Interchange to 101/101A Intersection

13692F Bedford – Priority 3

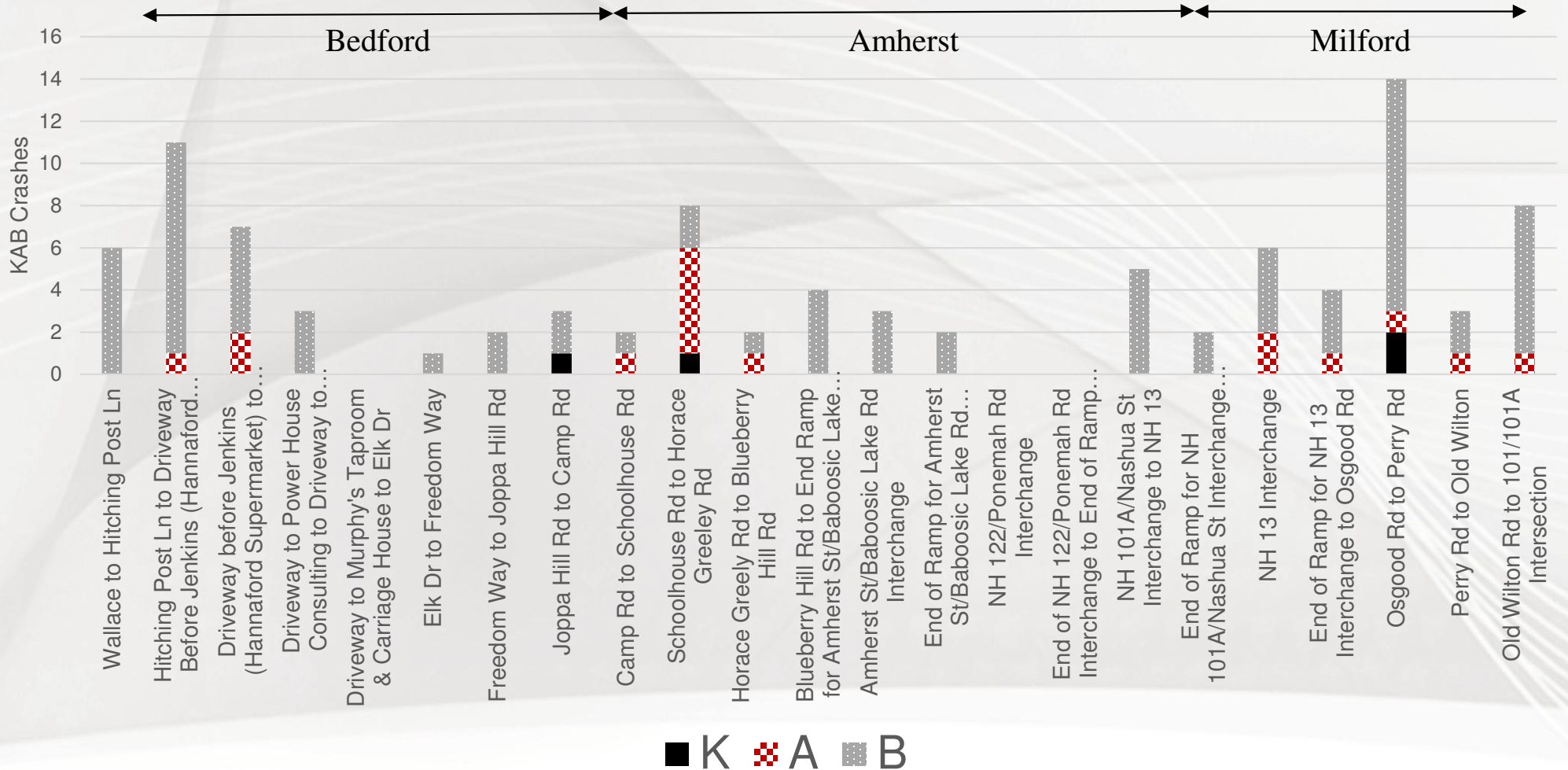


- Scope: NH 101 Safety & Widening Improvements from Elk Drive to Wallace Road

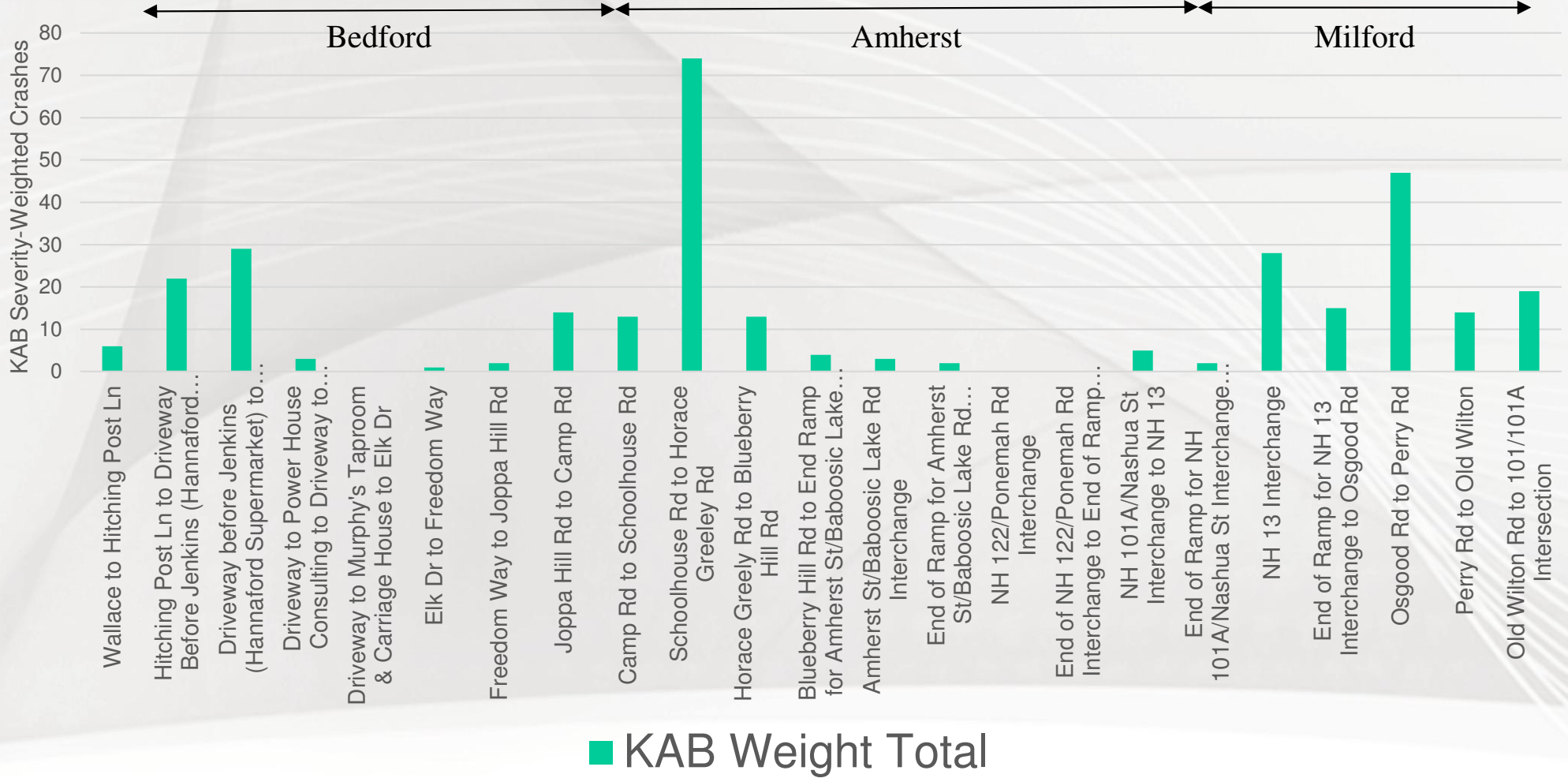


Figure 4: Segment 1 - 5: Wallace Rd to Elk Dr

KAB Crashes (2014 – 2020)



KAB Severity-Weighted Crashes



KAB Severity-Weighted Crashes per MVMT



13692F

13692E

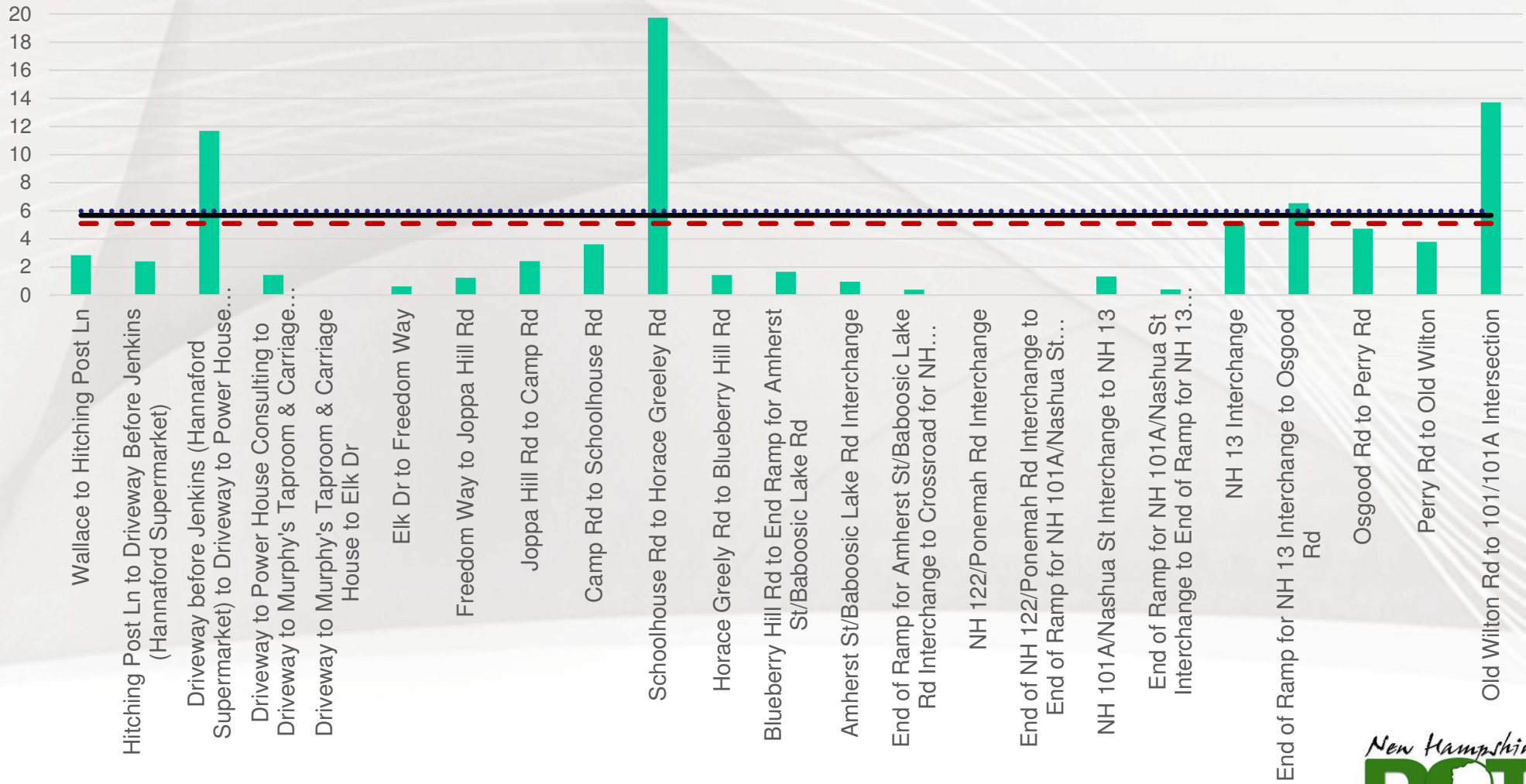
13692D

Bedford

Amherst

Milford

Severity-Weighted Crashes per MVMT



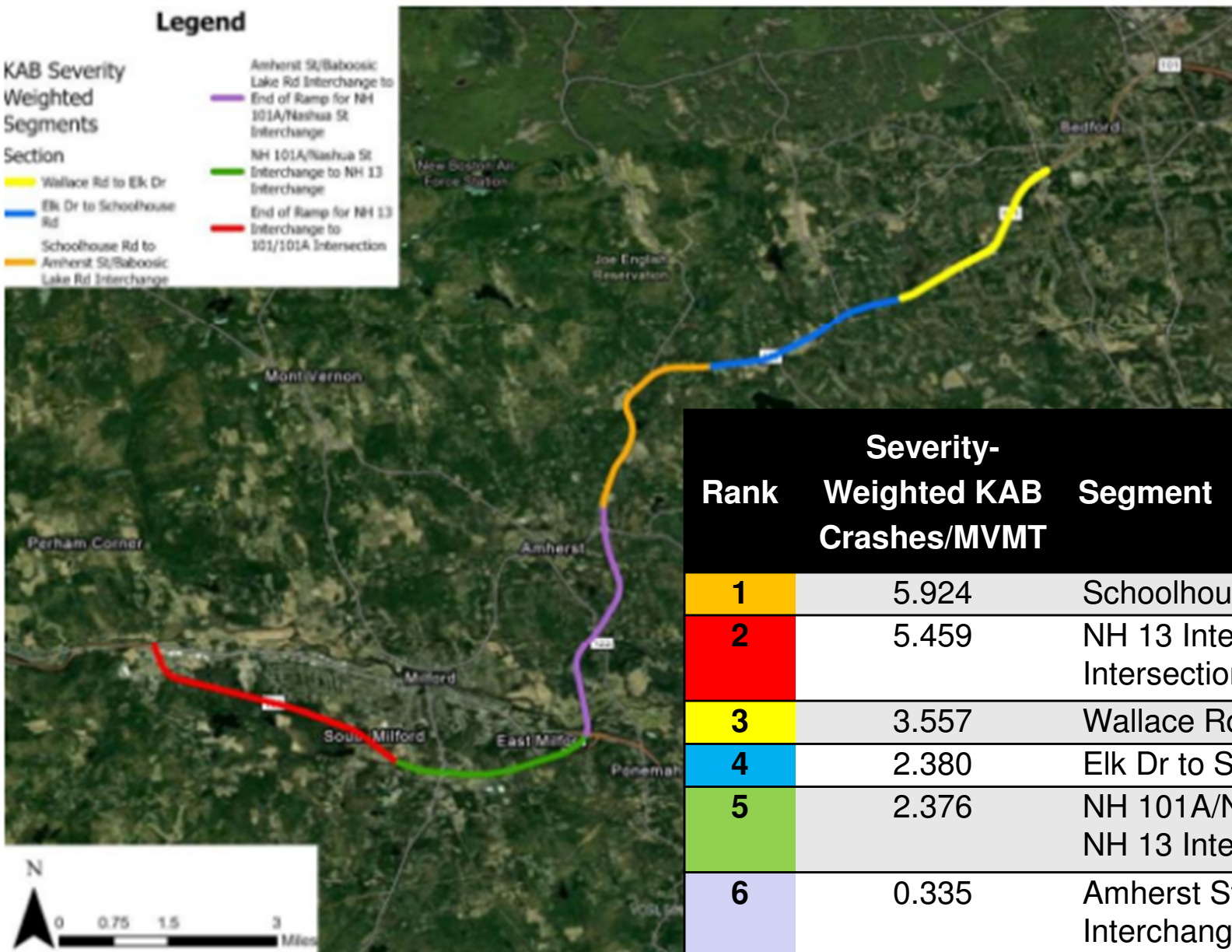
KAB Weighted Average per MVMT

Nashua Region

Southern New Hampshire Region

New Hampshire State

KAB Severity-Weighted Crashes per MVMT



Rank	Severity-Weighted KAB Crashes/MVMT	Segment
1	5.924	Schoolhouse Rd to Amherst St
2	5.459	NH 13 Interchange to 101/101A Intersection
3	3.557	Wallace Rd to Elk Dr
4	2.380	Elk Dr to Schoolhouse Rd
5	2.376	NH 101A/Nashua St Interchange to NH 13 Interchange
6	0.335	Amherst St to NH 101A/Nashua St Interchange

W-M-A-B Project Funding



Priority	No.	TOWN	PRELIMINARY ENGINEERING				ROW		Construction		
			Preliminary		Final		ROW Acquisitions		(CON + CE)		
			2018	2023	2023	2024	2023	2025	2023	2024	2026
1	13692D	Milford	\$880,000	\$-	\$220,000	\$-	\$143,000	\$-	\$5,225,537	\$2,918,288	\$-
2	13692E	Amherst	\$-	\$880,000	\$-	\$565,400	\$-	\$523,108	\$-	\$-	\$5,421,834

Notes:

- SNHRPC/Bedford proposing Corridor Study Update for NH 101 Bedford Segments for 2025-2034 TYP.
- Costs include Inflation & Administrative Costs



WILTON-MILFORD-AMHERST-BEDFORD

NH Route 101 Corridor Improvements 13692D Alternatives

Purpose & Need



NH Strategic Highway Safety Plan (2022-2026)

- *Critical area of emphasis: **address roadway departures** (highest % of roadway fatalities in NH)*
- *Higher speeds lead to more severe crashes*

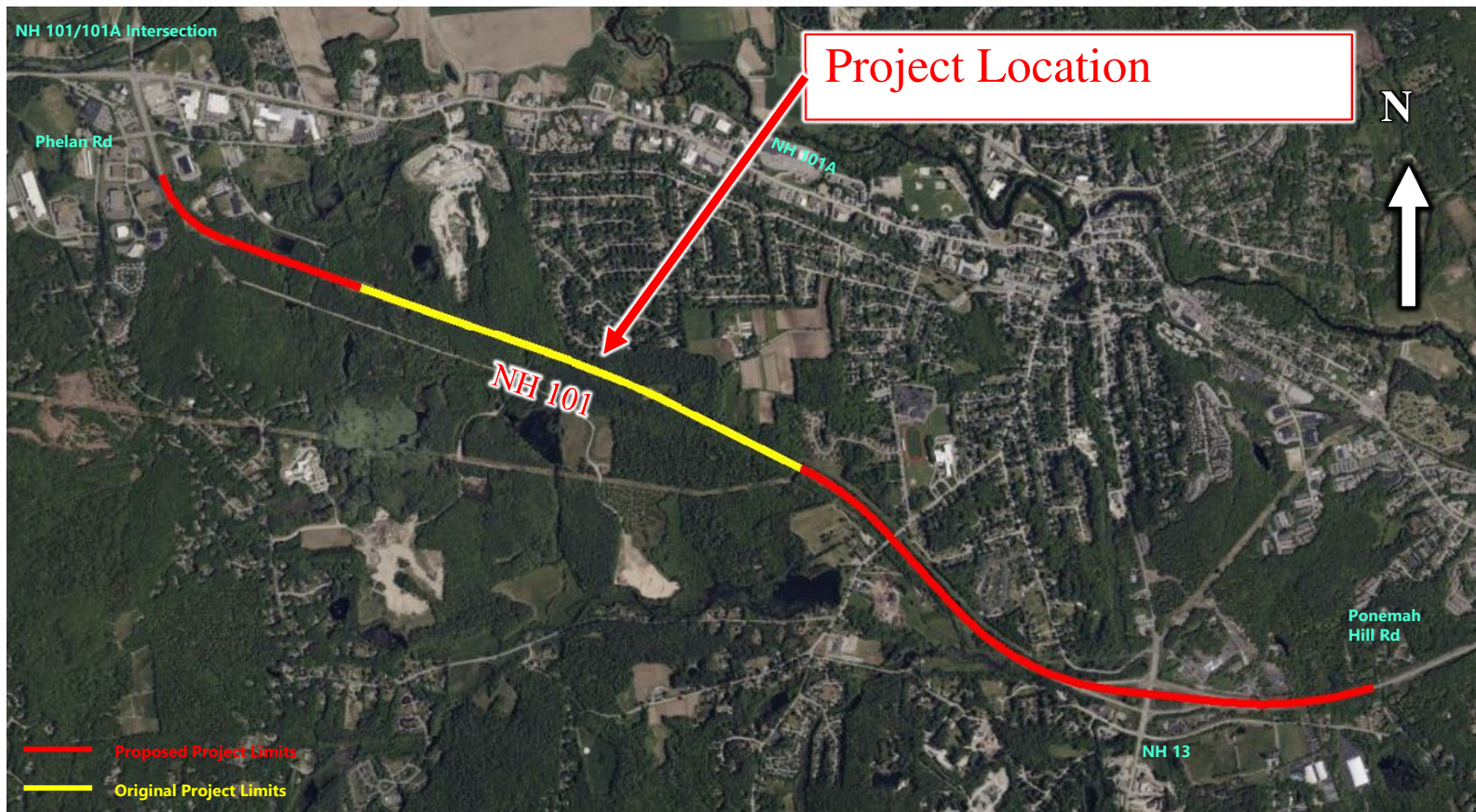
Project Purpose: *improve NH 101 corridor safety*

- *Significant crash history w/ high proportion of roadway departures*
- *2 fatalities and 6 severe injuries between Phelan Road and Ponemah Hill Road; most within Wilton-Milford-Amherst-Bedford corridor*

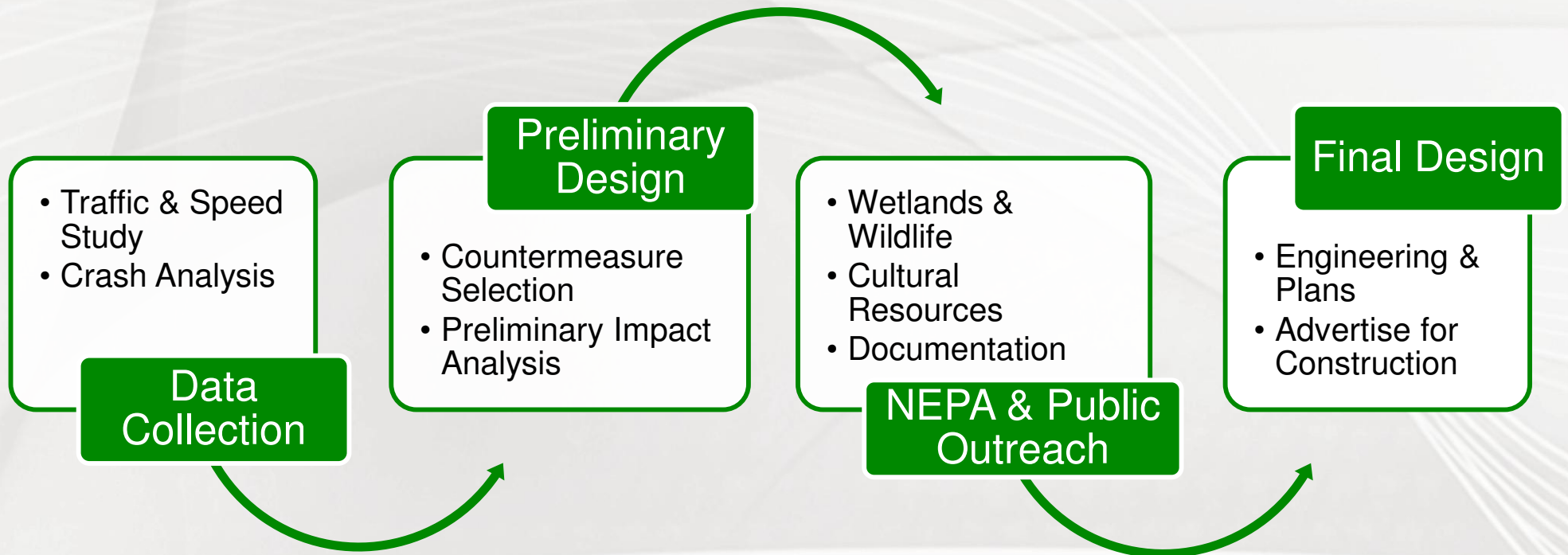
Recommended Alternative



- Install 6-ft median buffer and low-cost countermeasures to address lane departures and run-off-road crashes



Project Development Process



Traffic & Speed Analysis Summary



- **Speed Analysis**

- Vehicle speed data collected in June 2022
- 85th percentile speed ranges from 5-6 mph above Speed Limit
- Pace speed between 50-59 mph range for all days

- **Traffic Capacity**

- Current & Future traffic volume projects do not exceed HCM capacities for 2-lane highways
- Passing capacity is approaching zero during weekday AM, weekday PM, and Saturday peak hours

- **Widening & Capacity Improvements**

- **Not Recommended**

Crash Diagnosis Summary

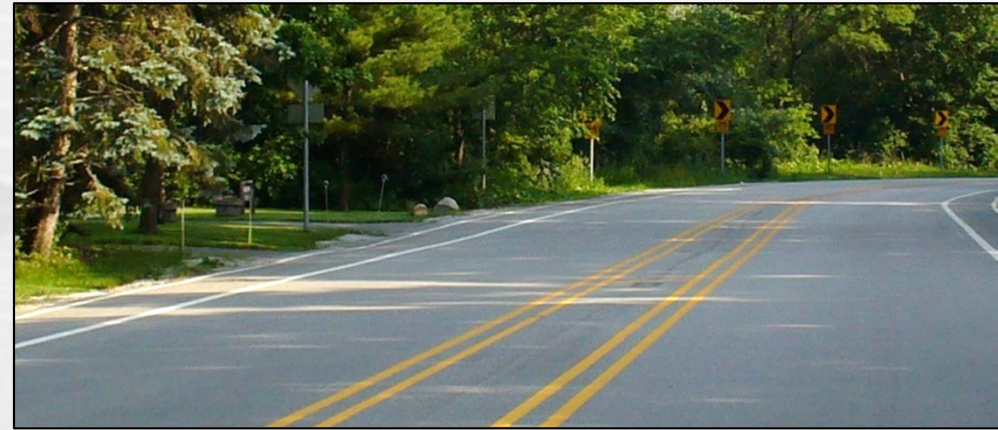


- Contributing factors:
 - **Cross-centerline crashes.** 2 cross-centerline crashes resulting in fatalities
 - **Run-off-road crashes.** Many fixed object crashes, scattered along corridor
 - **Nighttime crashes.** ~50% of crashes occur at night
 - **Animal crashes.** Several animal crashes, clustered toward east end

Countermeasure Selection



- **Median Buffer**
 - 2-ft vs. 10-ft
 - Existing vs. Wider Pavement
- **Median Barrier**
 - Concrete vs. Cable
 - Existing vs. Wider Pavement



Countermeasure Selection



- **Low-Cost Countermeasures**
 - Centerline and shoulder rumble strips
 - Wider pavement markings
 - Post mounted delineators on road edge
 - Roadside barrier delineators
 - Animal fencing



Alternatives Analysis

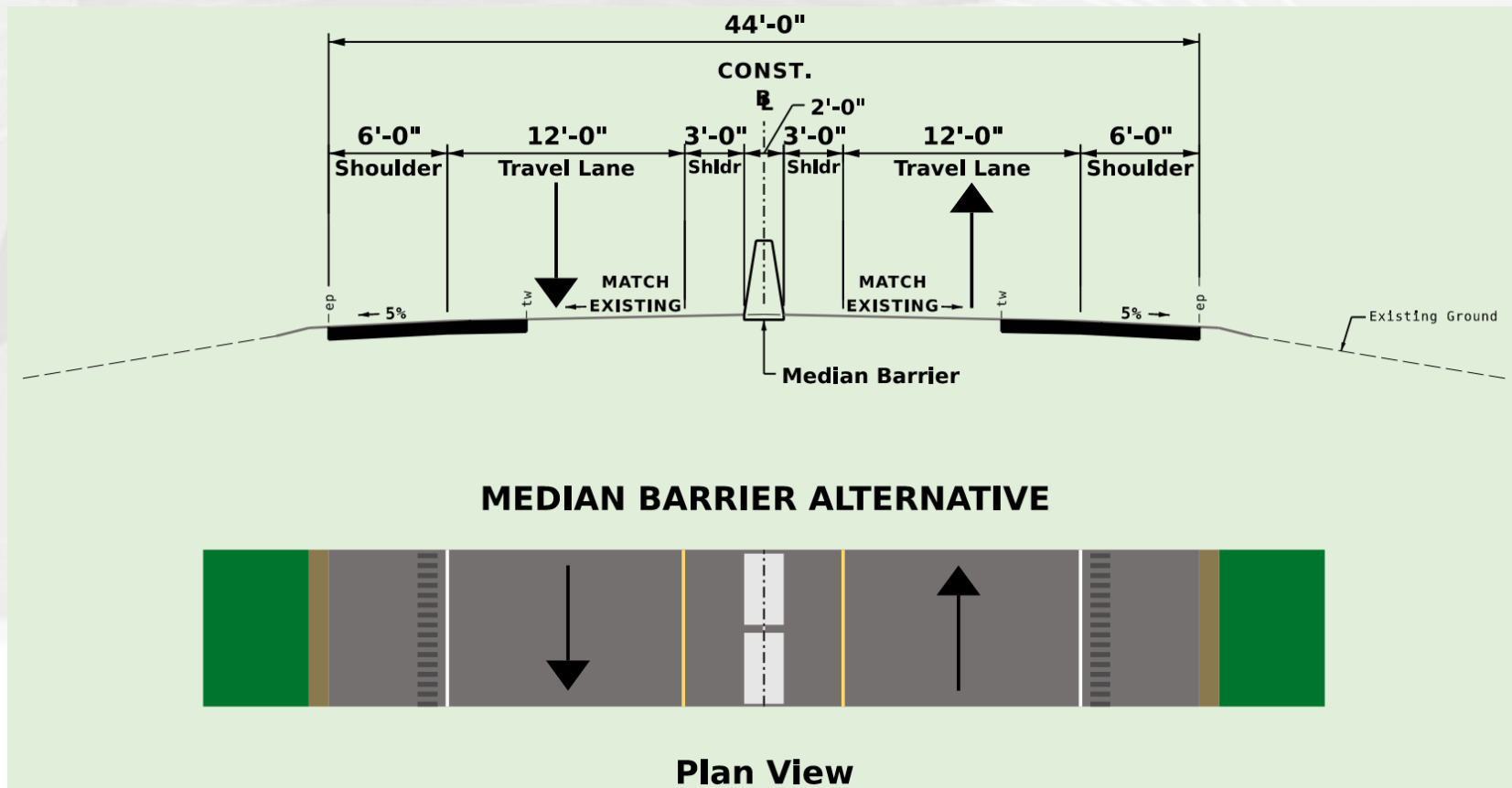


Concept	Package	Lives Saved Injuries Prevented	Total Benefit	Total Cost	B/C Ratio
1	Low-cost countermeasures	<1	\$494,652	\$20,000	24.73
2	Median barrier + low-cost countermeasures	4	\$2,100,533	\$2,880,000	0.73
3	6-ft median buffer + low-cost countermeasures	5	\$4,082,492	\$1,380,000	2.96



Alternatives Analysis

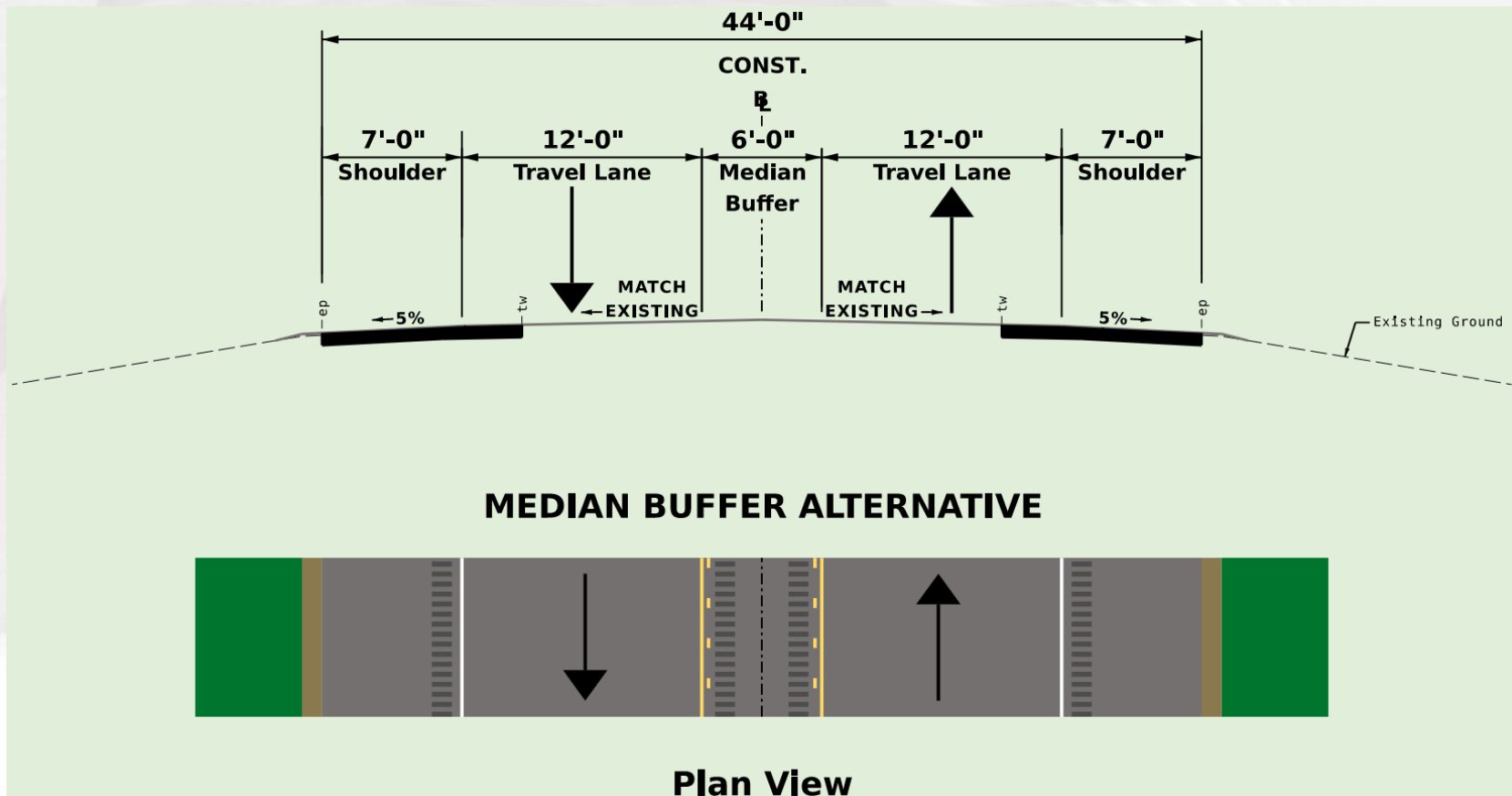
- Median Barrier (Temp. Widening)
 - Construction Costs \$2,880,000





Alternatives Analysis

- 6' Median Buffer (No Widening)
 - Construction Costs \$1,380,000



Alternatives Analysis



	Alternative 1 Low-Cost Countermeasures	Alternative 2 Median Barrier	Alternative 3 Median Buffer
Construction Cost	\$20 K	\$2.88 M	\$1.38 M
Wetland Impacts	No	Likely	No
NHDES or USACE Permits	No	Likely	No
MS4 - Stormwater Treatment	No	Likely	No
Federal and State Listed Species Impacts	No	Likely	No
Benefit-Cost Ratio (B/C)	24.73	0.73	2.96
Lives Saved and Serious Injuries Prevented	<1	4	5

Public Outreach



- Public Informational Meetings
 - Amherst & Milford First Responders, February 14
 - Town of Amherst, March 6
 - Town of Milford, March 7
- Project & Location Priorities
 - General agreement
 - Milford (Priority 2, 1st project)
 - Amherst (Priority 1, 2nd project)
- Milford “Bypass” 13692D
 - Ideal is wider roadway w/ barrier
 - Understand financial limitations
 - Prefer safety improvements now over waiting for more funding

Next Steps



- **Advance, Advertise, & Construct 13692D Project**
 - Public Informational Meetings March 2023
 - Preliminary & Coordination Plans February-May 2023
 - NEPA Approval May 2023
 - Final Design May-July 2023
 - Advertise Project for Construction August 22, 2023
 - Construction 2024
- **Develop 13692E Project:**
 - Data Collection & Alternatives Begin Summer, 2023
 - Preliminary Design & NEPA 2024
 - Public Hearing & Final Design 2025
 - ROW & Construction 2026-2027

Contact Information



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Presentation Material is Available on the Department's website

www.nh.gov/dot/projects

Wilton-Milford-Amherst-Bedford 13692D

Questions?

