

## Hemlock Lane

**Date:** February 8, 2024  
**Project name:** Bedford Traffic Calming Study

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Residents on Hemlock Lane have brought concerns about cut-through traffic and speeds to the attention of Bedford Transportation Advisory Committee (TAC) Task Force. In accordance with the Town of Bedford [Traffic Calming Policy](#), residents submitted a petition (Attachment A) signed by 15 of 19 households (this satisfies the policy requirement of at least 75% of the households in the study area) to conduct a traffic calming study. The petition cites the following issues:

- 1. Hemlock is a popular cut-through for traffic traveling to and from Rte 3, especially at commuting hours.*
- 2. Excessive speed and difficult sightlines along the slight hill and curve in the road are hazardous for residents entering /exiting driveways.*
- 3. Because children must cross Hemlock to access school bus stops, calming is a necessity.*
- 4. Several young children who are now preschool age, will be using the school buses for years to come.*
- 5. Heavy traffic makes left turns at Hemlock and Rte 62 dangerous in all directions. This is also true for Hemlock and Page Rd due to road curves on Page and high downhill speeds.*
- 6. The sidewalk is only on one side of the street requiring residents and pedestrians to cross traffic to access it.*

To conduct the traffic calming study, Jacobs was hired to collect speed, volume, and crash data for comparison to thresholds established by the policy. This memorandum provides a brief description of Hemlock Lane's engineering characteristics, summarizes the study methodology and findings of the evaluation, and recommends next steps. As Stage 1 speed mitigation has already been applied (as described below), this memorandum evaluates Hemlock Lane for Stage 2 mitigation as described in the [Town's Traffic Calming Toolkit](#).

## Roadway Characteristics

Hemlock Lane connects Route 62/Burlington Road and Page Road and is located to the southwest of Exit 73 off Route 3 (Figure 1). Hemlock Lane is a local road with posted speed limit of 25 mph. The intersections on either end are stop-controlled on Hemlock Lane. Both Route 62/Burlington Road and Page Road are arterials with 25 mph speed limits. The neighborhood is comprised of single-family homes. The roadway width is approximately 24 feet.

# Memorandum

As a known cut-through street, the Town has responded by making periodic directed patrols and temporarily installing speed feedback signs. Therefore, Hemlock Lane is assumed to have undergone Stage 1 traffic calming mitigation as described in the policy.

Work completed by the Bedford Public Works in 2016 evaluated the impacts of a sidewalk on either the east or west side of Hemlock Lane. The west side was selected as the preferred alternative, presumably because it did not require as many retaining walls or easements as the west side, and the sidewalk was eventually constructed.

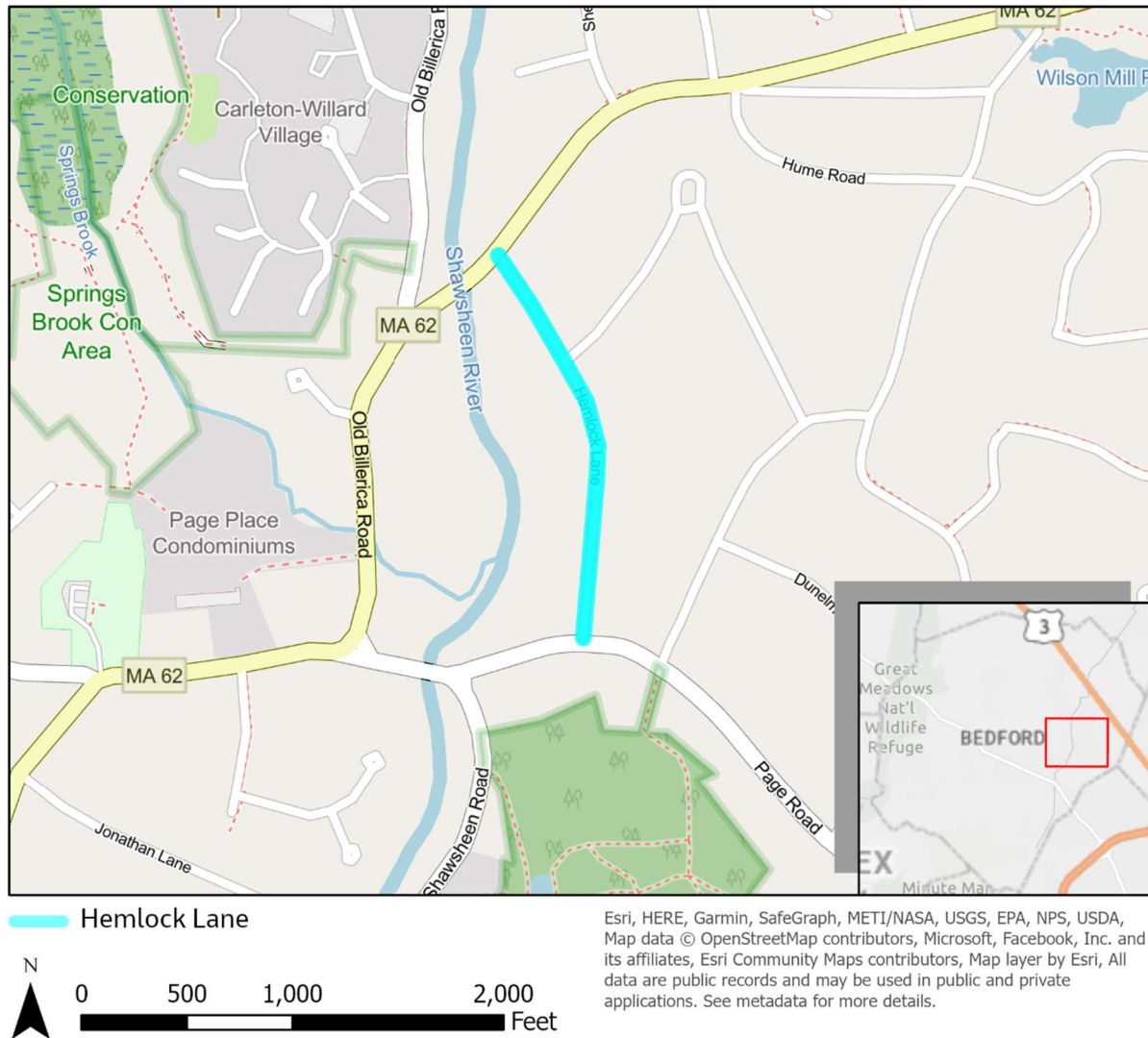


Figure 1. Hemlock Lane

The Bedford Police Department reviewed crashes on Hemlock Lane for the three-year period between January 1, 2020 and December 31, 2022. There was one crash on Hemlock Lane (involving a car backing out of a driveway and hitting a parked vehicle), and three crashes on Burlington Road at the intersection with Hemlock Lane. There were no injuries.

The three crashes at the Burlington Road intersection were all rear end crashes, where a westbound vehicle turning left onto Hemlock was hit from behind. In one of these crashes, the driver was cited for 'following too closely' and in another the driver indicated that they were distracted.

## Policy Thresholds

The Traffic Calming Policy establishes the following thresholds (note that only a speed **or** volume issue needs to be verified in order for action to be taken):

### *Speed*

- *85<sup>th</sup> percentile speed greater than or equal to 8MPH above the posted speed limit. If a specific speed limit is not posted, the de facto speed limit is 25mph.*

### *Volume*

- *Actual/measured daily volume greater than 1,000 vehicles*

*-OR-*

- *Actual/measured peak hour volume 20% or greater of the total daily traffic*

## Data Collection and Evaluation

Two 24-hour periods of speed and volume data (Attachment B) were collected on Tuesday, October 3<sup>rd</sup> and Thursday, October 5<sup>th</sup> using an Automatic Traffic Recorder (ATR). The ATR was located approximately halfway down Hemlock Lane, just south of the slight curve. Table 1 summarizes the comparison of the data to the policy thresholds and verifies that there are both speeding issues and issues with cut-through traffic. The data further indicate that the directional split is 60% southbound traffic and 40% northbound.

**Table 1. Data Evaluation**

|        | Threshold  | Data  | Does data meet threshold?                               |
|--------|--|---|---|
| Speed  | 85 <sup>th</sup> percentile speed greater than or equal to 8MPH above the posted speed limit | 85 <sup>th</sup> percentile speed = 36.0 mph                                    | Yes, the data verify that there is a speeding issue.    |
| Volume | Actual/measured daily volume greater than 1,000 vehicles                                     | Daily volume (both directions, average of two 24-hour periods) = 2,276 vehicles | Yes, the data verify that there is a cut-through issue. |
|        | -OR-<br>Actual/measured peak hour volume 20% or greater of the total daily traffic           | Peak hour volume (greatest hourly volume/daily traffic) = 30% of daily traffic  | Yes, the data verify that there is a cut-through issue. |

In addition, turning movement counts (TMCs) were gathered at the intersections at either end of Hemlock Lane to address the neighborhood concern regarding left-turns. The TMCs confirm that left-turn volumes are high at the intersections (Figure 2), particularly turning from southbound Route 62/Burlington Road onto Hemlock Lane and turning from southbound Hemlock Lane onto eastbound Page Road during the morning peak hour.

### Hemlock Lane at Rte 62/Burlington Road



### Hemlock Lane at Page Road

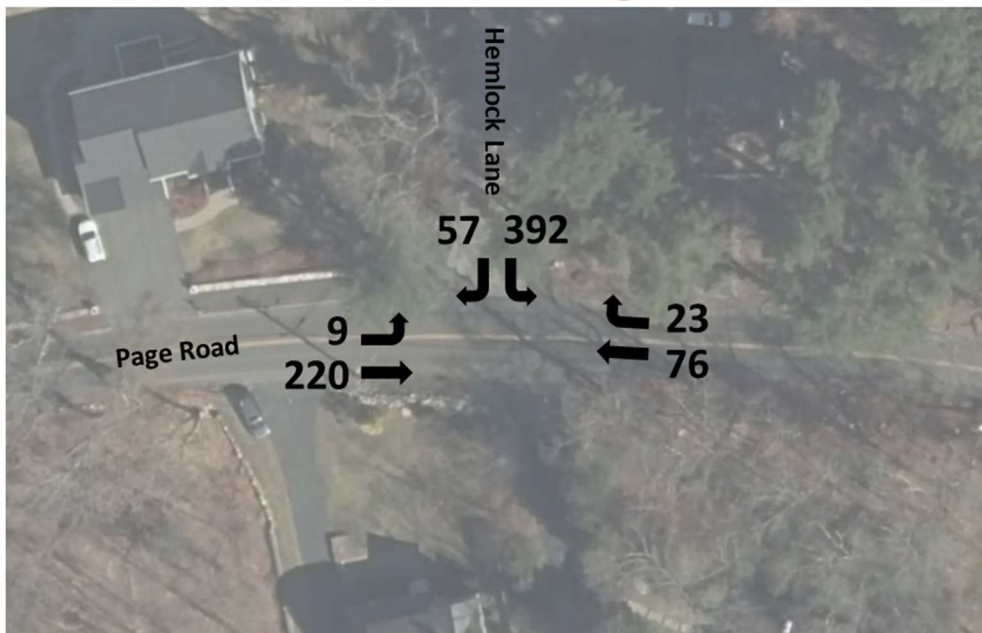


Figure 2. AM Peak Hour Turning Movement Volumes for October 3, 2023 (note that the peak hours occurred at slightly different times so volumes do not match exactly)

## Recommendations

The comparison of the collected data to the policy's established thresholds indicates that issues with speed and cut-through traffic persist despite police patrols and the installation of speed feedback signs.

The following preliminary actions are recommended:

- Restripe road with 10' travel lanes and fog lines to visually slow down traffic. Lanes right now are 11-12' wide.
- Install a crosswalk where the sidewalk crosses Hemlock Lane at Route 62. Utilizing the new fog lines, "T-off" the end of Hemlock Lane to slow turning traffic.
- Install intersection ahead signs on Route 62 to alert drivers that they are approaching an intersection and that traffic may be slowing accordingly. For example, a W2-2 warning sign (shown below) would be located 800 feet on Route 62/Burlington Road in advance of the intersection with Hemlock Lane <sup>1</sup>.



W2-2

## Next Steps

As noted in the Traffic Calming Policy, evaluating the effectiveness of the traffic calming measure three months after its installation will indicate its effect on traffic patterns and driver behavior. If the preliminary actions do not address the identified issues, then escalation to a more intensive mitigation measure(s) from the [Town's Traffic Calming Toolkit](#) is recommended.

Additional options could include:

- Raised crossing/intersection at Hemlock Lane at Hilltop Drive.
- Morning NO LEFT TURN restrictions for vehicles making a left onto Hemlock Drive from Route 62/Burlington Road.
- Installing a second sidewalk on the east side of Hemlock Lane. Note that retaining walls and sidewalk easements are needed in some areas.

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<sup>1</sup> See the *Manual on Uniform Traffic Control Devices* Section 2C.46 on Intersection Warning Signs for additional information: <https://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part2c.pdf> and Section 2A.16 for the placement of the sign: <https://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part2a.pdf>