



Evaluation of 2023 New Speed Hump Requests

Newbury Street	Vicinity of 126 Elm Street
Brooks Street (Rockdale to Mt. Vernon)	Eunice Avenue (Fairhaven to Clark)
Chatham Street & Newbury Street	Mann Street
Coburn Avenue near Lakeview Elementary School	Third Street
Entry & Exits of Chilmark Street	

April 24, 2023

Petitions:	Various
Scheduled Committee Hearing:	April 26, 2023 Traffic & Parking Committee, Items 9b – 9m
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Over the last 30 years, communities have used traffic calming to improve the livability and safety of residential neighborhoods by promoting safer conditions for residents and those traveling through it by foot, bike, micro-mobility device, public transit, or motor vehicle. The installation of traffic calming devices typically improves safety and access for all users, but especially vulnerable users, by reducing over-all motor vehicle speeds and potentially reducing the volume of cut-through traffic or at least reducing the speed at which the cut-through traffic is traveling at.

Traffic Calming techniques are generally divided into four strategies:

1. **Horizontal Deflection** hinders the ability of a motorist to drive in a straight path by creating a horizontal shift in the roadway. This shift reduces the ability of a motorist to maintain speed while comfortably navigating the measure.
 - a. Lateral shift
 - b. Chicane
 - c. Realigned Intersection
 - d. Neighborhood Traffic Circle
 - e. Small Modern Roundabout/Mini-Roundabout
 - f. Modern Roundabout
2. **Vertical Deflection** creates a change in the height of the roadway that typically forces a motorist to slow down to maintain an acceptable level of comfort. Except when there is a large pedestrian presence on arterial roadways, vertical elements are typically reserved for Local and Collector Roadways.
 - a. Speed Hump
 - b. Speed Cushion

- c. Speed Table
 - d. Raised Crosswalk
 - e. Raised Intersection
3. **Street Width Reduction** narrows the width of a vehicle travel lane or roadway, so a motorist likely needs to slow the vehicle to maintain an acceptable level of comfort and safety. The measure can also reduce the distance required for pedestrian crossings, reducing exposure to vehicular conflicts.
- a. Curb Extension/Bulb-Out/Bump-Out
 - b. Choker
 - c. Median Island
 - d. On-Street Parking
 - e. Right-sizing/Road Diet
4. **Routing Restriction** prevents particular vehicle movements at an intersection and is intended to eliminate some portions of cut-through traffic.
- a. Diagonal Diverter
 - b. Closure/Partial Closure
 - c. Median Barrier/Forced Turn Island

Not included in this list of traffic calming strategies are new Stop signs, traffic signals, turn restrictions, speed limit signs and the like that typically accompany citizen requests when they submit complaints about motor vehicle speeding. These are not traffic calming devices, but rather regulatory traffic controls that are governed by either federal laws, state laws, or both through the Manual on Uniform Traffic Control Devices (MUTCD). Not only are Stop signs not a traffic calming measure, but research shows that installing unnecessary Stop signs can often result in more collisions, less compliance, and more speeding by drivers.

Unlike the regulatory traffic controls that require some form of legal enforcement, traffic calming measures are designed to be self-enforcing. Drivers are slowed down by the physical characteristics of the roadway, not by an artificially imposed speed limits, Stop signs, or police presence. Traffic calming is also not specifically aimed at reducing the volume of traffic, though it may have that effect when installed on local streets subject to speeding cut-through traffic.

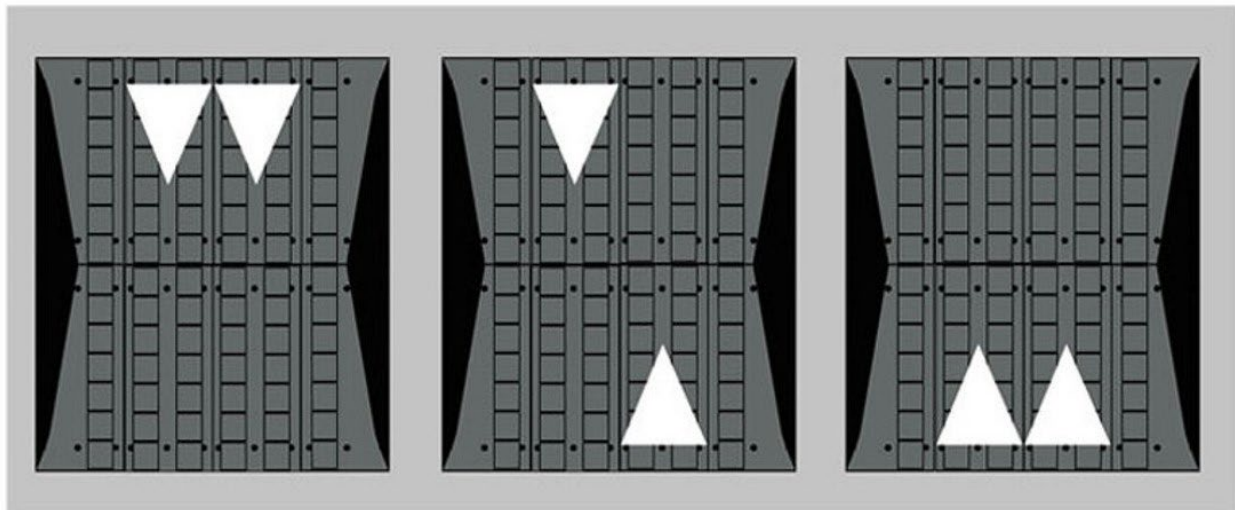
Though fairly new to Central Massachusetts, communities in Eastern Massachusetts have had active traffic calming programs dating back to the late 1990s. These include Cambridge, Newton, Salem, Somerville, and Brookline – which I led from 2005 to 2023 before joining the City of Worcester. The use of these elements, particularly vertical elements, have been part of the Massachusetts Department of Transportation’s (MassDOT) Project Development and Design Guide since 2006.

Worcester Pilot Program

In 2020, at the request of the City Council, the City Manager instructed the Department of Public Works & Parks (DPW&P) to initiate a pilot seasonal speed hump program for residential roadways to determine the success of speed humps in addressing safety concerns caused by speeding motor vehicles. The program was initially established to identify, in consultation with District City Councilors, two residential streets per district to install these traffic calming elements from July to October.

The selected elements were rubberized speed cushions that are designed to slow cars down without significantly affecting emergency response time. Speed cushions are several small speed humps installed across the width of the road with spaces between them, and are designed to accommodate vehicle speeds of 15-20 mph. These elements have been used by other communities in New England either as seasonal traffic calming or as pilot programs to test locations where the 85th percentile speed is 8 to 10+ mph above the speed limit before installing permanent speed humps. The positive aspects of these elements are that wider axle of emergency vehicles such as fire trucks and ambulances are able to straddle the cushions (when correctly placed) and drive over them without significantly reducing speed. They are also designed to minimize their impact of storm water management by stopping short of the roadway gutter line.

The downside of these elements is that in the northeast region they must be removed for four to five months out of the year to allow for snow clearing – thereby limiting the protection they provide to just half of the year. Additionally, because they are bolted into the pavement, when removed they leave holes that allow water to penetrate and then the normal winter freeze-thaw process prematurely compromises the roadway surface and prematurely escalates the deterioration of the of the roadway surface resulting in extra maintenance costs. Additionally, the rubberized speed humps themselves deteriorate after multiple uses and must be replaced. Labor costs for annual installation and removal are also costly. Given these factors, installation of permanent speed humps is more cost effective and preferred once a location has been determined to be acceptable and appropriate.



In 2021, the DPW&P purchased and installed, using outside contractors, 20 sets of speed humps at the following locations

District 1:

Beechmont Street at house numbers 19 & 58
Squantum Street at house numbers 15 & 43

District 2:

Alexander Road at house number 3
Uxbridge Street at house numbers 15, 40, & 68

District 3:

Crowningshield Road at house numbers 33 & 59

Whitla Drive at house numbers 14 & 43

District 4:

Murray Street at pole numbers 11 & 14

Woodland Street at house numbers 74 & 114

District 5:

Coolidge Road at house numbers 42 & 110

Moreland Green Drive at pole numbers 9 & 16/17

During a public hearing before the Traffic & Parking Committee in 2022, residents from Whitla Drive requested that their street no longer participate in the program. Additionally, residents from 110 Coolidge Road requested that the speed humps be relocated away from their house due to noise associated with the speed humps being disruptive to their use of a front porch. Though residents of other streets requested participation in this process, during the 2022 season DPW&P installed 19 sets of speed humps, using an outside contractor, at the same locations (minus Whitla Drive and relocating Coolidge Road):

District 1:

Beechmont Street at house numbers 19 & 58

Squantum Street at house numbers 15 & 43

District 2:

Alexander Road at house number 3

Uxbridge Street at house numbers 15, 40, & 68

District 3:

Crowningshield Road at house numbers 33 & 59

District 4:

Murray Street at pole numbers 11 & 14

Woodland Street at house numbers 74 & 114

District 5:

Coolidge Road at house numbers 42 & 104

Moreland Green Drive at pole numbers 9 & 16/17

Proposed Calendar Year 2023 Program

The city established the Department of Transportation & Mobility (DTM) in FY22, with an overall mission to *“plan, coordinate, design, and implement transportation programs and projects that promote safe, equitable and sustainable mobility options.”* Following an initial period of organization and staff hiring, management of the traffic calming program has been transferred to DTM’s jurisdiction for calendar year 2023.

No data has been collected on the pilot program for the 2021 or 2022 installations and therefore no analysis of their overall effectiveness has been conducted. DTM is retroactively

assessing travel speed reductions using SteetLight InSight, a software database of anonymized location records from smart phones and navigation devise in connected cars and trucks. These data, in conjunction with resident surveys will be used to recommend locations for continued installation, including conversion to permanent speed humps or alternative traffic calming installations.

Industry standards relative to the spacing of speed humps to maintain a consistent 20 to 25 mph speed limit dictate placement every 300 to 600 feet; otherwise, speed reduction is only experienced at the installation sites and vehicles tend to accelerate back to higher speeds upon departure. In examining the existing locations, to achieve the consistent target of 20 to 25 mph speed, the following additional speed humps are recommended:

District 1:

Beechmont Street (2 originally vs 5 recommended)

Squantum Street (2 originally vs 4 recommended)

District 2:

Alexander Road (1 originally is satisfactory given slope of roadway)

Uxbridge Street (3 originally vs 4 recommended)

District 3:

Crowningshield Road (2 originally vs 4 recommended)

Second location to be determined in consultation with the District Councilor.

District 4:

Murray Street (2 originally is satisfactory)

Woodland Street (2 originally vs 3 recommended)

District 5:

Coolidge Road (2 originally vs 3 needed)

Moreland Green Drive (2 originally vs 4 needed assuming intent was these 2 blocks)

DTM will utilized an outside contractor to install the existing speed humps back in the current locations and additionally locate the recommended supplemental speed humps following consultation with neighborhood residents and procurement of additional speed humps, as needed. These initial installations are expected to take place in May 2023 and remain through early November.

Pending Council Petitions for additional Speed Hump INstallations

A number of petitions requesting additional speed hump installations have been filed. Each of these locations has been assessed based on traffic and speed data, street grade and geometric conditions to inform staff's recommendations.

9b. Hassan Ijaz request installation of speed humps at entries and exits of Chilmark St.

Chilmark Street is a dead-end street classified as a Local roadway under City jurisdiction by the Massachusetts Department of Transportation. The roadway is approximately 26 feet curb to curb, allows two-way travel, and runs in a northeast/southwest direction connecting residents to Adams Street to the north. Parking is allowed on both sides of the street. Sidewalks are largely present on both sides of the street from Adams Street to Marshall Street, along the

eastern curblines between Marshall Street and Sewar Street, and not present from Sewar Street to the dead-end. Cobra head street lighting is present throughout the corridor. The streets that feed into Chilmark Street generally do so in an uphill manner.

Land use along Chilmark Street is a mixture of single and multi-family residential.

DTM staff have analyzed the motor vehicle traffic volume and speeds for Chilmark Street using Streetlight software. The street is under the statutory (unposted) speed limit of 30 mph per Chapter 90, Section 17 of the Massachusetts General Laws. The average motor vehicle speed on Chilmark Street is 17 mph, and the 85th percentile speed is 22 mph. Though there are outlier motor vehicles that speed, 95% of the vehicles traveling on the roadway are traveling at or below the speed limit. The average daily volume is 573 vehicles which is within range for a Local roadway.

DTM staff have analyzed the available crash data from the Massachusetts Department of Transportation Crash Database. Between January 2018 and March 2023 there has been 7 reported crashes all involving parked vehicles. One of the seven crashes noted that the driver exceeded the posted speed limit and struck 8 other parked motor vehicles in the early morning hours. No crashes reported involved vulnerable roadway users (pedestrians and cyclists). None of the crashes occurred at the intersection locations.

Recommendation: Generally, municipalities that have experience with traffic calming will use raised crosswalks at entry ways to their main urban arterials as a way to increase pedestrian safety and slow motor vehicle turning movements from the major arterial onto the local and collector roadways. However, based on the fact that Chilmark is classified as a local roadway, that the streets that enter it do so from an uphill grade, the documented speed and volume are within range of what is expected on a local roadway, and only one reported crash that is attributed to excessive speed staff does not believe that Chilmark Street is a candidate for speed humps or the raised crosswalks typically used in this type of request.

9c. Chris Farnsworth et al. request installation of speed hump on Third St. at the bottom of the hill

Third Street is a dead-end street classified as a Local roadway under City jurisdiction by the Massachusetts Department of Transportation. The roadway is approximately 25 feet curb to curb, allows two-way travel, and runs in a northeast/southwest direction connecting residents to Mill Street to the north. Parking is allowed on both sides of the street. There are no sidewalks on the street. Cobra head street lighting is present throughout the corridor. Third Street is downhill toward Mill Street and levels out approximately 400 feet from Mill Street.

Land use along Third Street is a mixture of single and multi-family residential.

DTM staff have analyzed the motor vehicle traffic volume and speeds for Third Street using Streetlight software. The street is under the statutory (unposted) speed limit of 30 mph per Chapter 90, Section 17 of the Massachusetts General Laws. The average motor vehicle speed on Third Street is 16 mph, and the 85th percentile speed is 20 mph. Though there are outlier motor vehicles that speed, 95% of the vehicles traveling on the roadway are traveling at or below the speed limit. The average daily volume is 147 vehicles which is within range for a Local roadway.

DTM staff have analyzed the available crash data from the Massachusetts Department of Transportation Crash Database. Between January 2018 and March 2023 there has been one reported crash. The single crash was a single motor vehicle crash that made an improper turn and struck a wall on the high end of Third Street outside the requested area. No crashes reported involved vulnerable roadway users (pedestrians and cyclists) and speed was not reported as a factor in the single crash.

Recommendation: Based on the documented speed and volume being within range of what is expected on a local roadway and only one reported crash that did not involve speeding, staff does not believe that Third Street is a candidate for speed humps.

9d. Eileen Tougas request installation of three (3) speed humps on Mann St.

Mann Street is classified as a Local roadway under City jurisdiction by the Massachusetts Department of Transportation. The roadway is approximately 30 feet curb to curb, allows two-way travel, and runs in a north/south direction connecting May Street on the south and Chandler Street to the north. Parking is allowed on both sides of the street. Sidewalks are present on both sides of the street and range in width from 5 to 7 feet. Cobra head street lighting is present throughout the corridor. There are pedestrian crosswalks with ADA compliant ramps at the entryways into Beaver Brooke Park. Mann Street is under STOP control at its intersection with May Street and its intersection with Chandler Street.

Land use along Mann Street is a mixture of single and multi-family residential. It additionally provides access to Beaver Brooke Park and commercial buildings that include Strike Zone indoor cages and Open Sky Community Services. There is also an automotive sales business at the southeast corner of the intersection of Mann Street and Chandler Street.

DTM staff have analyzed the motor vehicle traffic volume and speeds for Mann Street using Streetlight software. The street is under the statutory (unposted) speed limit of 30 mph per Chapter 90, Section 17 of the Massachusetts General Laws. The average motor vehicle speed on this portion of Mann Street is 19 mph, and the 85th percentile speed is 25 mph. Though there are outlier motor vehicles that speed, 95% of the vehicles traveling on the roadway are traveling at or below 32 mph. The average daily volume is 2334 vehicles which is on the higher end of the spectrum for an appropriate range for an urban local roadway. This is likely caused by the activities at the park, Strike Zone, and Open Sky Community Services and some cut-through traffic between the two arterial roadways.

DTM staff have analyzed the available crash data from the Massachusetts Department of Transportation Crash Database. Between January 2018 and March 2023 there has been seven crashes reported on Mann Street. Two crashes involved motor vehicles in traffic with one of the drivers being cited for inattention, reckless driving, etc. All other crashes involved collisions between a moving vehicle and a parked motor vehicle. No crashes reported involvement of vulnerable roadway users (pedestrians and cyclists) and speed was not reported as a factor in any of the crashes.

Recommendation: Based on the documented speed being within range of what is expected on an urban local roadway and that excessive motor vehicle speeding is not the cause of motor vehicles crashes, staff does not believe that Mann Street is a candidate for speed humps. Given the high motor vehicle volumes, when the roadway is reconstructed or perhaps separately as part of a Transportation & Mobility improvement study, staff recommends incorporating Safe

Routes to Parks design measures to improve safety and access for pedestrians, cyclists, and other vulnerable roadway users traveling to and from the park.

9f. Peter Cromwick et al. request installation of speed humps on Cowden St.

Cowden Street is classified as a Local roadway under City jurisdiction by the Massachusetts Department of Transportation. The roadway is approximately 30 feet curb to curb, allows two-way travel, and runs in an east/west direction connecting Edlin Street on the east and Heard Street to the west. Parking is allowed on both sides of the street. There are no sidewalks located on the street. Cobra-head street lighting exists along the corridor. Cowden Street is under STOP control at its intersection with Edlin Street and its intersection with Heard Street. The street runs downhill at a steep grade toward Edlin Street with an approximate 200 ft straight section before and 165 ft straight section after.

Land use along this portion of Cowden Street is single family residential.

DTM staff have analyzed the motor vehicle traffic volume and speeds for this section of Cowden Street using Streetlight software. The street is under the statutory (unposted) speed limit of 30 mph per Chapter 90, Section 17 of the Massachusetts General Laws. The average motor vehicle speed on this portion of Cowden Street is 22 mph, and the 85th percentile speed is 23 mph. Though there are outlier motor vehicles that speed, 95% of the vehicles traveling on the roadway are traveling at or below 34 mph. The average daily volume is 637 vehicles which is within range for a Local roadway.

DTM staff have analyzed the available crash data from the Massachusetts Department of Transportation Crash Database. Between January 2018 and March 2023 there has been no reported crashes along the street segment between the intersections.

Recommendation: Based on the documented speed and volume being within range of what is expected on a local roadway and a lack of any reported crashes, staff does not believe that Cowden Street is a candidate for speed humps.

9g. Pat Callum et al. request installation of speed humps on Eunice Ave. between Fairhaven Rd. and Clark St.

Eunice Avenue is classified as a Local roadway under City jurisdiction by the Massachusetts Department of Transportation. The roadway is approximately 29 feet curb to curb, allows two-way travel, and runs in a north/south direction connecting Brandon Road on the north and Clark Street to the south. Parking is allowed on both sides of the street, but both sides are prohibited overnight in the winter months. Sidewalks are located on both sides of the street along with a tree lawn and street trees. Cobra-head street lighting exists along the corridor. Eunice Ave is under STOP control at its intersection with Fairhaven Road and its intersection with Clark Street.

Land use along this portion of Eunice Avenue is single family residential.

DTM staff have analyzed the motor vehicle traffic volume and speeds for this section of Eunice Avenue using Streetlight software. The street is under the statutory (unposted) speed limit of 30 mph per Chapter 90, Section 17 of the Massachusetts General Laws. The average motor vehicle speed on this portion of Eunice Avenue is 16 mph, and the 85th percentile speed is 21 mph. Though there are outlier motor vehicles that speed, 95% of the vehicles traveling on the roadway

are traveling at or below the statutory speed limit. The average daily volume is 792 vehicles which is within range for a Local roadway.

DTM staff have analyzed the available crash data from the Massachusetts Department of Transportation Crash Database. Between January 2018 and March 2023 there has been no reported crashes along the street segment between the intersections.

Recommendation: Based on the documented speed and volume being within range of what is expected on a local roadway and a lack of any reported crashes, staff does not believe that Eunice Avenue is a candidate for speed humps.

9h. Jacqueline Coppedge et al., on behalf of Grace Christian Centre, request installation of speed humps in the vicinity of 126 Elm St.

Elm Street is classified as a Minor Urban Arterial roadway under City jurisdiction by the Massachusetts Department of Transportation. The roadway is approximately 31 feet curb to curb, allows two-way travel, and runs in an east/west direction connecting Main Street on the east and Park Ave to the west. Parking is allowed on the northern curblane. Sidewalks are located on both sides of the street. Cobra-head street lighting exists along the corridor. There are marked crosswalks on all four legs of the nearby intersection of Elm Street and Russell Street. Russell Street to the north of the intersection is two-way with bike lanes and is STOP controlled at Elm Street. There are Rectangular Rapid Flashing Beacons (RRFBs) at both Russell crosswalk locations and the eastern crosswalk across Elm Street. The installation of the RRFB at the STOP controlled crosswalk does not comply with FHWA's Interim Approval as they have red flashing lights and is located at a STOP controlled intersection – neither of which is allowed.

Land use along Elm Street is primarily multifamily residential. Grace Christian Center is located at the southeast intersection of Elm St at Russell St and St. Spyridon Greek Orthodox Cathedral and Veterans Memorial is located at the northeast corner. Elm Park is located at the northwest corner.

DTM staff have analyzed the motor vehicle traffic volume and speeds for this section of Elm Street using Streetlight software. The street is under the statutory (unposted) speed limit of 30 mph per Chapter 90, Section 17 of the Massachusetts General Laws. The average motor vehicle speed on this portion of Elm Street is 19 mph, and the 85th percentile speed is 28 mph. Though there are outlier motor vehicles that speed, 95% of the vehicles traveling on the roadway are traveling at or below 32 mph. The average daily volume is 3557 vehicles which is within range for a minor urban arterial roadway.

DTM staff have analyzed the available crash data from the Massachusetts Department of Transportation Crash Database. Between January 2018 and March 2023 there has been two crashes reported on Elm Street in the vicinity of 126 Elm and eleven crashes in the intersection of Elm Street and Russell Street. All crashes involved either a roadside object (curb or guardrail) or angle crashes involving vehicles failing to yield at the STOP sign. No crashes reported involvement of vulnerable roadway users (pedestrians and cyclists) and speed was not reported as a factor in any of the crashes. Most crashes that involved a driver being cited by the Police involved 'failure to yield' offenses.

Recommendation: Based on the documented speed and volume being within range of what is expected on a minor urban arterial roadway and that excessive motor vehicle speeding is not the

cause of motor vehicles crashes, staff does not believe that Elm Street in the vicinity of 126 Elm Street is a candidate for speed humps. When the roadway is reconstructed, or as a standalone retrofit project, we would recommend the potential inclusion of curb extensions or other improvements at the intersection with Russell Street to further improve sightlines.

9i. Councilor Candy Mero-Carlson request installation of temporary speed bumps along Coburn Ave. by Lakeview Elementary School

Coburn Avenue is classified as a Local roadway under City jurisdiction by the Massachusetts Department of Transportation. The roadway is approximately 30 feet curb to curb, allows two-way travel, and runs in a north/south direction connecting abutting residential properties to Belmont Street on the north and Lake Ave to the south/east. Parking is allowed on both sides of the street but is restricted during school on the eastern curb line. Sidewalks are generally 6 feet between the property line and tree lawn. Coburn Street is STOP controlled at its intersections with Lakeview Street. Traditional cobra-head street lighting is installed throughout the entire corridor. Curb ramps are generally apex design and non-compliant with ADA requirements and crosswalks, where installed, are faded and in need of repainting.

Adjacent land use is mostly single-family residential with the Lake View Elementary School located at the southeast corner of the intersection of Coburn Avenue and Lakeview Street. Lakeview Playground is located at the northeast corner of the intersection.

DTM staff have analyzed the motor vehicle traffic volume and speeds for this section of Coburn Avenue using Streetlight software. The street is under the statutory (unposted) speed limit of 30 mph per Chapter 90, Section 17 of the Massachusetts General Laws during non-school hours and the posted 20 mph School Zone speed limit during school hours. The average motor vehicle speed on this portion of Coburn Ave is 24 mph, and the 85th percentile speed is 32 mph. Because of the school zone staff also examined the weekday peak hour speeds that correspond to arrival and dismissal. The average motor vehicle speed on this portion of Coburn Ave during the weekday morning peak hour is 24 mph, and the 85th percentile speed is 33 mph. The average motor vehicle speed on this portion of Coburn Ave during the weekday afternoon peak hour is 23 mph, and the 85th percentile speed is 31 mph. Though there are outlier motor vehicles that speed, 95% of the vehicles traveling on the roadway are traveling at or below 36 mph during all 3 time periods. The average daily volume is 1169 vehicles which is within range for an urban local roadway, especially one that has a school located on it.

DTM staff have analyzed the available crash data from the Massachusetts Department of Transportation Crash Database. Between January 2018 and March 2023 there has been one crash on Coburn Ave between Anna Street and Lakeview Street. The single crash involved a parked motor vehicle during the early hours of the day and with the roadway condition noted as “ice”. No crashes reported involvement of vulnerable roadway users (pedestrians and cyclists) and speed was not reported as a factor in the single crash.

Recommendation: Although the documented speed and volume are within range of what is expected on a local, residential roadway and that excessive motor vehicle speeding is not the cause of motor vehicles crashes during the entire day, because the 85th percentile speed is in excess of 10 mph above the posted 20 mph school zone speed limit during arrival and dismissal hours and given the number of vulnerable roadways users (elementary school aged pedestrians and cyclists) that are present on the roadway, staff is recommending the installation of 2 sets of speed humps on Coburn Avenue positioned 250 feet north of Anna Street and 500 feet north of

Anna Street to ensure motor vehicles traveling through this section maintain a 20 to 25 mph speed.

9j. Terry Habib request installation of speed humps on Brooks St. from Rockdale St. to Mount Ave.

Brooks Street in the vicinity of Rockdale St and Mount Ave is classified as a Minor Urban Arterial roadway under City jurisdiction by the Massachusetts Department of Transportation. The roadway is approximately 30 feet curb to curb, allows two-way travel, and runs in a northwest/southeast direction connecting Ararat Street on the north and West Boylston Street to the south. Parking is prohibited on both sides of the street. Sidewalks are present on the southern curb line along Kendrick Field and are approximately 6 feet wide. Mount Ave and Rockdale St are STOP controlled at their intersections with Brooks Street. An ALL-WAY STOP control is in place at the intersection of Newbury Street and Austin Street. There are no marked crosswalks in the vicinity of this section of Brooks Street. The section of Brooks Street is uphill and in the middle of a double reverse curve in the roadway. Cobra head street lighting is present along the corridor.

Adjacent land use is 3 single family residential homes and the Massachusetts League of Community Health Centers - James W. Hunt Jr. Training & Learning Center on the northern curb and Kendrick Field on the southern curb.

DTM staff have analyzed the motor vehicle traffic volume and speeds for this section of Brooks Street using Streetlight software. The street is under the statutory (unposted) speed limit of 30 mph per Chapter 90, Section 17 of the Massachusetts General Laws. The average motor vehicle speed on this portion of Brooks Street is 25 mph, and the 85th percentile speed is 30 mph. Though there are outlier motor vehicles that speed, 95% of the vehicles traveling on the roadway are traveling at or below 37 mph. The average daily volume is 3964 vehicles which is within range for an urban minor arterial roadway.

DTM staff have analyzed the available crash data from the Massachusetts Department of Transportation Crash Database. Between January 2018 and March 2023 there have been 3 crashes on Brooks Street between Mount Ave and Rockdale St. One crash involved a parked motor vehicle, one involved a motor vehicle in traffic where a vehicle traveling on Brooks St collided with a left turning vehicle from Mount Ave, and one involved a head-on collision at the intersection with Mount Ave. No crashes reported involvement of vulnerable roadway users (pedestrians and cyclists) and speed was not reported as a factor in any of the three crashes.

Recommendation: This portion of Brooks Street, based on the double reverse curve and the hill makes it not a candidate for raised speed humps. Even if that geometry did not exist, based on the documented speed and volume being within range of what is expected on a minor arterial roadway and that excessive motor vehicle speeding is not the cause of the 3 motor vehicles crashes, staff does not believe that this section of Brooks Street is a candidate for speed humps. When the roadway is reconstructed, we would recommend investigating the potential inclusion of curb extensions and a crosswalk at Rockland Street to provide a pedestrian connection between the neighborhood and Kenrick Field.

9k and 9l. Doreen Beauchene request installation of speed humps in the vicinity of Chatham St. and Newbury St.

Given our later analysis of Newbury Street, this section will focus on Chatham Street between Crown Street and Newbury Street. This block of Chatham Street is classified as a Local roadway under City jurisdiction by the Massachusetts Department of Transportation. The roadway is approximately 25 feet curb to curb, allows one-way westbound travel, and runs in an east/west direction connecting Newbury Street on the west and Irving Street to the east. Parking is allowed along the southern curb and prohibited along the northern curblines. Sidewalks are present on both sides of the street, however those along the northern curb are non-ADA compliant brick and are only 5 to 6 feet wide. Chatham Street is STOP controlled at its intersection with Newbury Street. The section of Chatham Street is downhill. Cobra head street lighting is present along this block, but the poles further narrow the sidewalk along the northern curblines creating pinch points for pedestrians with mobility changes.

Adjacent land use is mostly multi-family residential.

DTM staff have analyzed the motor vehicle traffic volume and speeds for this section of Chatham Street using Streetlight software. The street is under the statutory (unposted) speed limit of 30 mph per Chapter 90, Section 17 of the Massachusetts General Laws. The average motor vehicle speed on this portion of Chatham Street is 13 mph, and the 85th percentile speed is 18 mph. Though there are outlier motor vehicles that speed, 95% of the vehicles traveling on the roadway are traveling at or below the statutory speed limit. The average daily volume is 482 vehicles which is within range for an urban local roadway.

DTM staff have analyzed the available crash data from the Massachusetts Department of Transportation Crash Database. Between January 2018 and March 2023 there have been 3 crashes on Chatham Street between Crown Street and Newbury Street. All three crashes involved a parked motor vehicle; one was during a reported snowstorm. Two were hit and runs. No crashes reported involvement of vulnerable roadway users (pedestrians and cyclists) and speed was not reported as a factor in any of the three crashes.

Recommendation: This portion of Chatham Street, based on the downhill geometry, makes it not a candidate for raised speed humps. Even if this geometry did not exist, based on the documented speed and volume being within range of what is expected on a local, residential roadway and that excessive motor vehicle speeding is not the cause of motor vehicles crashes, staff does not believe that Chatham Street is a candidate for speed humps.

9m. Doreen Beauchene request installation of speed humps on Newbury St.

Newbury Street is classified as a Local roadway under City jurisdiction by the Massachusetts Department of Transportation. The roadway is approximately 25 feet curb to curb, allows two-way travel, and runs in a north/south direction connecting abutting residential properties to Pleasant Street on the north and Chandler Street to the south. Parking is allowed along the western curblines. Sidewalks are generally 8 feet between the property line and curb line. Newbury Street is STOP controlled at its intersections with Pleasant and Chandler Streets. An ALL-WAY STOP control is in place at the intersection of Newbury Street and Austin Street. Traditional cobra-head street lighting is installed throughout the entire corridor. Curb ramps are generally apex design and non-compliant with ADA requirements and crosswalks, where installed, are faded and in need of repainting.

Adjacent land use is mostly multi-family residential with commercial at the intersections with Pleasant and Chandler Streets. Several neighborhood pocket parks are located on the street at

the intersections with Austin Street and Chatham Street. There is a large HUD residential property, Conway Gardens, located on Newbury Street.

DTM staff have analyzed the motor vehicle traffic volume and speeds for Newbury Street using Streetlight software. The street is under the statutory (unposted) speed limit of 30 mph per Chapter 90, Section 17 of the Massachusetts General Laws. The average motor vehicle speed on Newbury Street is 16 mph and the 85th percentile speed is 19 mph. Though there are outlier motor vehicles that speed, 95% of the vehicles traveling on the roadway are traveling under the statutory speed limit. The average daily volume is 1250 vehicles which is within range for an urban local roadway.

DTM staff have analyzed the available crash data from the Massachusetts Department of Transportation Crash Database. Between January 2018 and March 2023 there have been 16 crashes on Newbury Street. Eight crashes involved parked motor vehicles, three involved motor vehicles in traffic, two involved crashes with other objects (tree, fence), one involved a non-fatal crash with a pedestrian, and one involved a non-fatal crash with a cyclist. The two crashes involving vulnerable roadway users took place at the ALL-WAY STOP CONTROL intersection with Austin Street and Newbury Street and both were in marked crosswalks. Speed was not reported as a factor in these two crashes, nor was it cited as a factor in the other 14 crashes.

Recommendation: Based on the documented speed and volume being within range of what is expected on a local, residential roadway and that excessive motor vehicle speeding is not the cause of motor vehicles crashes, staff does not believe that Newbury Street is a candidate for speed humps. When the roadway is reconstructed, we would recommend the potential inclusion of curb extensions at the intersection with Austin Street to improve sightlines between pedestrians and drivers.