

# 2021 NORTHERN MIDDLESEX REGIONAL TRAFFIC VOLUME REPORT

Northern Middlesex Council of Governments  
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Lowell, MA 01852  
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TTY: 617-994-6296

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*The preparation of this document was funded through a contract with the Massachusetts Department of Transportation, supported in part with funds from the Federal Highway Administration and the Federal Transit Administration, U.S. Department of Transportation. Its contents do not necessarily reflect the official views and policies of the US DOT.*

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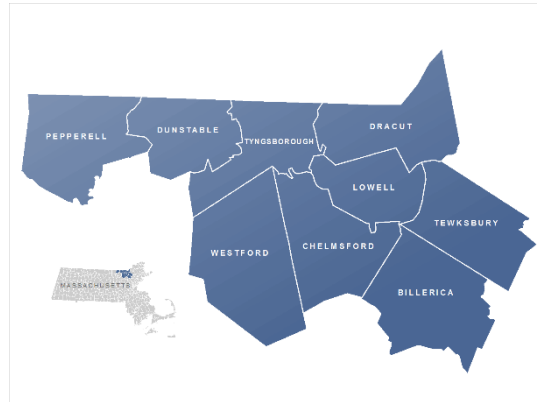
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## 1. INTRODUCTION

The 2021 Traffic Volume Data Report has been prepared in accordance with the Northern Middlesex Council of Governments (NMCOG) continuing traffic counting program. This report based on traffic counts collected in the Northern Middlesex region between 2011 and 2021. The 2021 program involved the systematic collection of data utilizing automatic traffic recorders in the region's nine member communities: Billerica, Chelmsford, Dracut, Dunstable, Lowell, Pepperell, Tewksbury, Tyngsborough, and Westford. The traffic counting season typically extends from April through November.



### Why Collect Traffic Count Data?

Traffic count data provides information on the movement of people and goods along a roadway and is utilized in transportation planning studies and the design of traffic improvements. Traffic counts are also essential in evaluating current operational conditions along roadway segments, and in helping to identify congestion issues. Historical traffic count data is analyzed to determine seasonal adjustment factors and volume growth trends, which are used in developing future growth rates for application in transportation planning studies. Such data is also useful to business and real estate development interests, and to marketing firms for use in assessing market potential.

#### 1.1 PERFORMANCE BASED APPROACH TO PLANNING

The Fixing America's Surface Transportation (FAST) Act continues many policies of the Moving Ahead for Progress in the 21<sup>st</sup> Century (MAP-21) Act, which created a performance-based and outcome-based program to address the many challenges facing the U.S. transportation system. The objective of the performance-based program is to invest resources in projects that collectively advance the achievement of national goals.

The FAST Act includes the following national goal areas:

- Safety;
- Infrastructure Condition;
- Congestion Reduction;
- System Reliability;
- Freight Movement and Economic Vitality;
- Environmental Sustainability;
- Accelerated Project Delivery;
- Improving transportation system resiliency and reliability and reducing (or mitigating) the stormwater impacts of surface transportation; and
- Enhancing travel and tourism.

The 2020 Northern Middlesex Regional Transportation Plan (RTP) outlined several measures to assess overall system performance in the region as part of addressing national goal areas of congestion reduction and system reliability. These include levels of travel time reliability, levels of truck travel time reliability, peak hour excessive delays, and percentage of non-single occupancy vehicle travel. The Northern Middlesex traffic-counting program serves as one of several data collection tools in determining overall congestion in the region and addressing regional performance measure targets adopted by the Northern Middlesex Metropolitan Planning Organization (NMMPO). The traffic data reported also assists in identifying future Transportation Improvement Program (TIP) projects and is used in prioritizing funding of eligible TIP projects.

Table 1-1: System Performance Measures and Targets

| Performance Measures   | Current Conditions (State) | Current Conditions (Region) | 2020 Target        | 2022 Target        | 2040 Regional Target |
|--|----------------------------|-----------------------------|--------------------|--------------------|----------------------|
| Level of Travel Time Reliability                                 | 68% Interstate             | 66.9% Interstate            | 68% Interstate     | 68% Interstate     | 80%                  |
|  | 80% Non-Interstate         | 80.6% Non-Interstate        | 80% Non-Interstate | 80% Non-Interstate | 97%                  |
| Level of Truck Travel Time Reliability                           | 1.85                       | 2.48                        | 1.85               | 1.85               | 1.98                 |
| Peak Hour Excessive Delay (annual hours per capita – Boston UZA) | 18.31                      | 18.31                       | 18.31              | 18.31              | 14.65                |
| Non-SOV Travel (Boston UZA)                                      | 33.60% (2016)              | 33.60%                      | 34.50%             | 35.10%             | 40.3%                |

Source: 2020-2040 Northern Middlesex Regional Transportation Plan

## 1.2 UPDATE TO THE TRAFFIC VOLUME DATA REPORT

The 2021 Regional Traffic Volume Report includes traffic counts collected by NMCOG and the Massachusetts Department of Transportation (MassDOT) Highway Division from 2011 through 2021. This report also includes data collected by various transportation consultants for specific studies performed by other entities throughout the region. Updated sections include truck percentages on select roadways, and traffic growth rates for each community and the region. The highest traffic volume locations in each community and the region, and maps showing various traffic volume trends throughout the region, have also been updated. A new chapter in the report focuses on the changes NMCOG implemented to the agency’s traffic counting best practices in order to keep staff safe, as well as document traffic conditions in the region during the COVID-19 pandemic.

## 1.3 NMCOG TRAFFIC COUNTING PROCEDURES

The Northern Middlesex Traffic Counting Program supports tasks outlined in the region’s Unified Planning Work Program (UPWP), and consists of data collection, data analysis, and reporting. Data collection is achieved through the use of six automatic traffic recorders (Jamar Trax Apollyon) with road tubes laid across the roadway. Vehicles drive over the road tubes sending air bursts to the sensors in the traffic counters, which record the bursts as vehicles. Vehicle classification is determined by the number and amount of time between bursts of air hitting the sensors. The counters record data for a

minimum of 48 hours (15 minute intervals) to ensure an appropriate amount of data is available for analysis purposes. Traffic counters are tested and calibrated on an annual basis, or whenever counters are repaired, to ensure accuracy.

NMCOG staff has partnered with MassDOT to report traffic volume data into a statewide interactive transportation data management system (MS2), and also maintains a regional database to assist local communities. In addition, NMCOG produces an annual report of activities, as directed in the UPWP.

#### 1.4 ROADWAY TYPES

As part of reporting activities, NMCOG staff provides data on several types of roadways monitored throughout the region. NMCOG uses the Highway Performance Management System (HPMS) Road Inventory Functional Classification Code for the Commonwealth of Massachusetts in categorizing each count performed. The classification of roadways is produced by MassDOT, with funding provided by the Federal Highway Administration (FHWA) through its State Planning and Research Program. The counts are separated into urban (U) or rural (R) designations and coded based on the following functional classifications:

|                              |                          |
|------------------------------|--------------------------|
| 1 = Interstate               | 5 = Major Collector      |
| 2 = Freeway/Expressway       | 6 = Minor Collector      |
| 3 = Other Principal Arterial | 7 = Local Road or Street |
| 4 = Minor Arterial           |                          |

These classifications are determined based on the role that the roadway plays within the transportation network. The level of mobility for each class increases from the low mobility local road class to the high mobility Interstate classification. Providing an example to further explain the classifications, the traffic count location “Rock Street East of Mount Vernon Street in Lowell” is known as a minor collector road in an urban area. Thus the functional classification would be designated as “U6”. Map 1.1 shows the Northern Middlesex regional roadway network with functional classifications designated throughout.

#### 1.5 PARTNERSHIP WITH MASSDOT

NMCOG conducts its traffic counting program in cooperation with MassDOT’s ongoing statewide traffic counting program administered by the Statewide Data Collection Department. At the beginning of each season, MassDOT provides a set of program procedures, including a list of requested traffic counts to be conducted by NMCOG staff (Table 1-2). NMCOG reports its progress to MassDOT staff on a quarterly and annual basis.



Table 1-2: MASSDOT HIGHWAY DIVISION REQUESTED TRAFFIC COUNT LOCATIONS FOR 2021

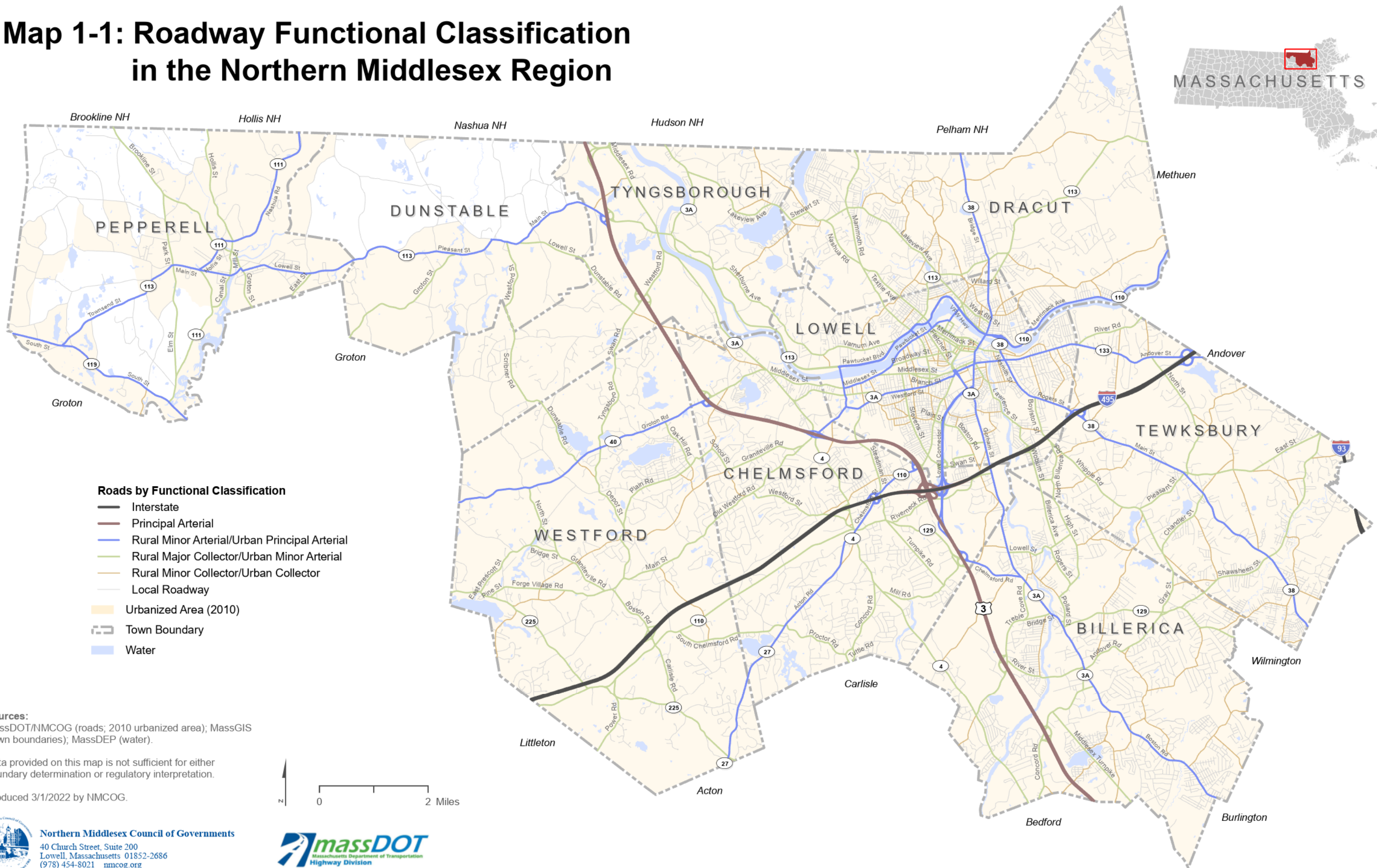
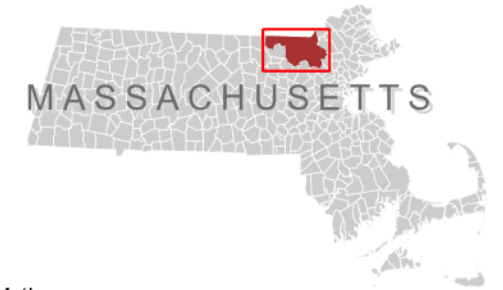
| MassDOT Station ID | Route/Street     | City/Town    | Location                   |
|--------------------|------------------|--------------|----------------------------|
| 4043               | Main St.         | Westford     | East of Graniteville Rd.   |
| 4044               | Princeton Rd.    | Chelmsford   | at Lowell C.L.             |
| 4046               | Graniteville Rd  | Chelmsford   | South of Richardson Rd.    |
| 4058               | Coburn Rd        | Tyngsborough | East of Lakeview Ave.      |
| 4066               | Concord Rd.      | Billerica    | East of Middlesex Tpk.     |
| 4075               | Wilder St.       | Lowell       | South of Pawtucket St.     |
| 4081               | Industrial Ave.  | Lowell       | South of Chelmsford St.    |
| 4086               | Lakeview Ave     | Lowell       | West of Rte. 38.           |
| 4106               | George Brown St. | Billerica    | at Tewksbury T.L.          |
| 4108               | Clark Rd.        | Tewksbury    | at Lowell C.L.             |
| 4109               | Trull Rd.        | Tewksbury    | North of Rte. 133          |
| 4136               | Westford St.     | Chelmsford   | North of Rte. 110          |
| 4142               | Lawrence St.     | Lowell       | East of Billerica St.      |
| 4143               | Lincoln St.      | Lowell       | West of Gorham St.         |
| 4146               | Woburn St.       | Lowell       | West of I-495.             |
| 4831               | Westford St.     | Lowell       | West of School St.         |
| 4835               | Nesmith St.      | Lowell       | North of East Merrimac St. |
| 4836               | Gorham St.       | Lowell       | South of Walnut St.        |
| 4839               | Gorham St.       | Lowell       | at Chelmsford T.L.         |
| 4922               | Gorham St.       | Lowell       | North of Elsworth St.      |

MassDOT requires that vehicle classification counts be conducted for each traffic count location. This method, outlined in the FHWA Vehicle Classification Scheme F Report (Figure 2-6), identifies the different classes of vehicles passing through the location during the data collection period. This provides an insight into the amount of truck traffic on the region's roadways. Further explanation of vehicle classification methods is provided in this report, with detailed vehicle class information available for each of the above locations upon request.

In addition to the MassDOT requested counts, NMCOG staff conducts traffic counts throughout the region as part of its transportation planning program. Over the years, NMCOG, MassDOT, and other organizations have counted a total of 900 locations, providing a comprehensive database covering the entire region (Table 2-6 through 2-14).

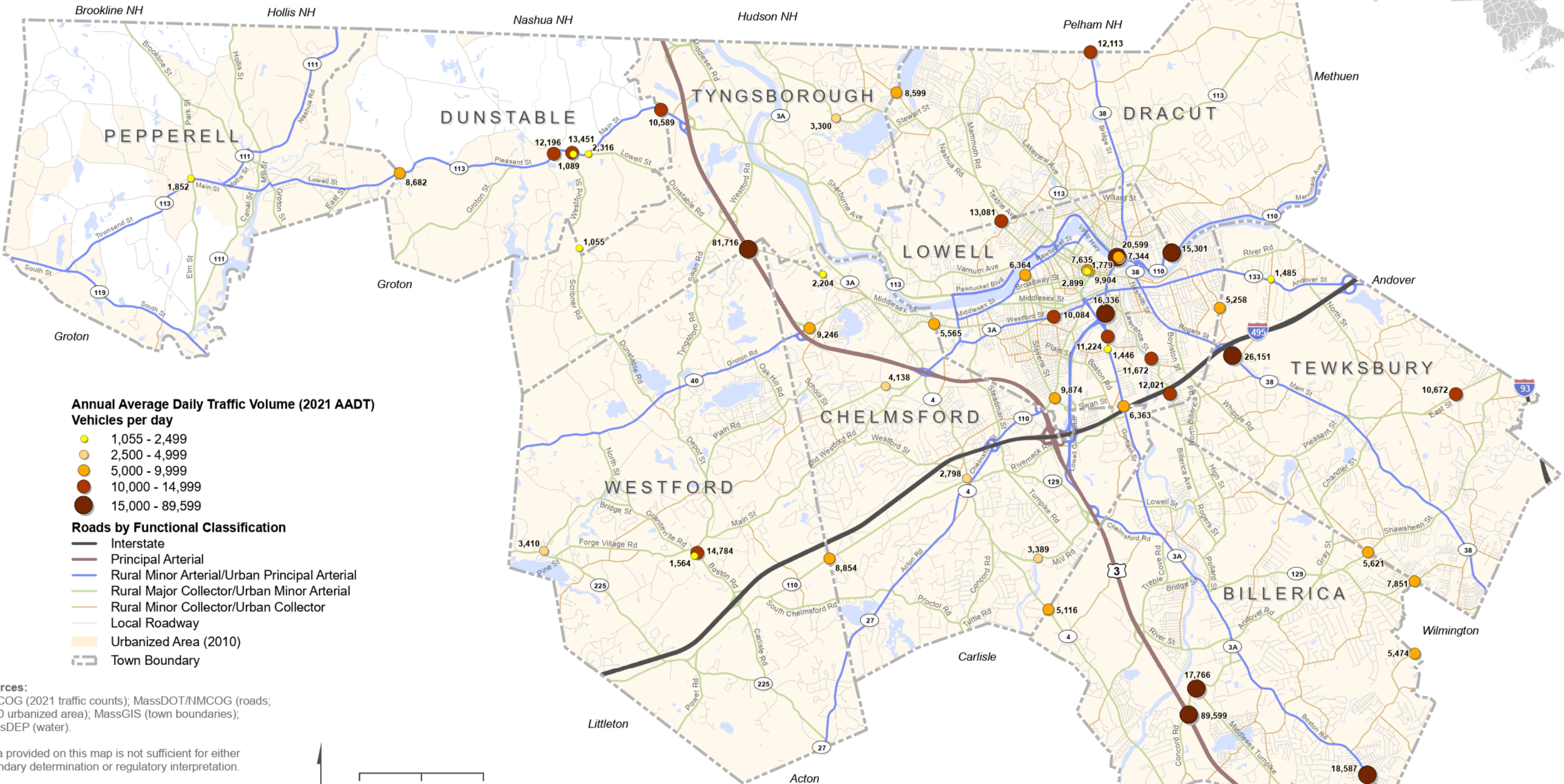
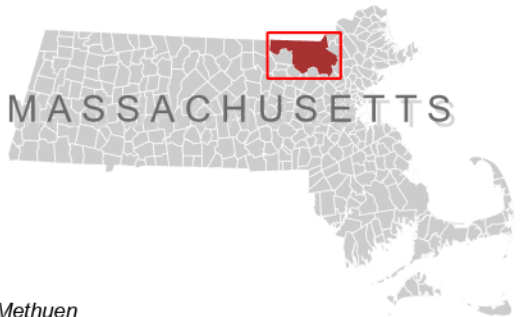


# Map 1-1: Roadway Functional Classification in the Northern Middlesex Region



Map 1-1 back

# Map 1-2: 2021 Traffic Count Locations



**Sources:**  
 NMCOG (2021 traffic counts); MassDOT/NMCOG (roads; 2010 urbanized area); MassGIS (town boundaries); MassDEP (water).

Data provided on this map is not sufficient for either boundary determination or regulatory interpretation.

Produced 3/1/2022 by NMCOG.



Map 1-2 Traffic count locations - Back

## 2. TRAFFIC MONITORING PROGRAM

NMCOG collects various types of traffic volume data as part of its overall traffic counting program. Traffic monitoring activities include ATR volumes, growth rate data, and vehicle classification.

### 2.1 AVERAGE DAILY TRAFFIC

Average Daily Traffic (ADT) counts represent the average number of vehicles passing a specified point during a 24-hour time period over an entire year. NMCOG counts specific locations for a minimum of 48 hours during the week. Data is collected and then averaged to produce average weekday traffic (AWD) volume. The AWD is then multiplied by an axle correction factor and a seasonal adjustment factor to determine the ADT volume presented in this report. Mass DOT’s seasonal adjustment factors and the axle correction factors which are presented in Tables 2-1 and 2-2.

Table 2-1: MASSDOT HIGHWAY DIVISION - STATEWIDE TRAFFIC DATA COLLECTION: SEASONAL FACTORS.

| 2019<br>Weekday<br>Seasonal<br>Factors | Month |      |      |      |      |      |      |      |      |      |      |      |
|--|-------|------|------|------|------|------|------|------|------|------|------|------|
|  | Jan   | Feb  | Mar  | Apr  | May  | Jun  | Jul  | Aug  | Sep  | Oct  | Nov  | Dec  |
| R1                                     | 1.22  | 1.14 | 1.12 | 1.06 | 1.00 | 0.96 | 0.87 | 0.85 | 0.96 | 0.99 | 1.04 | 1.12 |
| R2                                     | 0.95  | 0.96 | 0.98 | 0.97 | 0.97 | 0.93 | 0.97 | 0.94 | 0.96 | 0.90 | 0.92 | 0.93 |
| R3                                     | 1.15  | 1.06 | 1.07 | 1.00 | 0.89 | 0.88 | 0.89 | 0.89 | 0.95 | 0.92 | 1.02 | 1.01 |
| R4-R7                                  | 1.09  | 1.09 | 1.11 | 1.02 | 0.96 | 0.92 | 0.89 | 0.89 | 0.99 | 0.98 | 1.09 | 1.13 |
| Interstate                             | 1.03  | 1.01 | 0.98 | 0.94 | 0.94 | 0.92 | 0.95 | 0.93 | 0.94 | 0.94 | 0.97 | 1.04 |
| U2                                     | 1.01  | 1.00 | 0.94 | 0.93 | 0.91 | 0.89 | 0.93 | 0.90 | 0.90 | 0.91 | 0.94 | 1.02 |
| U3                                     | 1.06  | 1.03 | 0.98 | 0.94 | 0.93 | 0.91 | 0.95 | 0.91 | 0.92 | 0.93 | 0.97 | 1.00 |
| U4-U7                                  | 1.01  | 1.00 | 0.95 | 0.92 | 0.88 | 0.86 | 0.92 | 0.91 | 0.92 | 0.94 | 0.99 | 1.04 |

Table 2-2: AXLE CORRECTION FACTORS

| Functional Class | Axle Correction Factor |
|------------------|------------------------|
| <b>Rural (R)</b> |                        |
| 1                | 0.85                   |
| 2                | 0.96                   |
| 3                | 0.97                   |
| 4-7              | 0.98                   |
| <b>Urban (U)</b> |                        |
| 1                | 0.96                   |
| 2                | 0.99                   |
| 3                | 0.98                   |
| 4-7              | 0.99                   |

Seasonal factors are calculated from data collected at permanently installed continuous counting stations located throughout Massachusetts. The following locations provide traffic volume information on a continuous basis in the Northern Middlesex region.

- Route I-495 South of Route 4 in Chelmsford
- Route I-495 North of Route 4 in Chelmsford
- Lowell Connector S of Rte. I-495 in Chelmsford
- Lowell Connector North of Plain Street in Lowell
- Route I-495 North of the Lowell Connector
- Route I-495 South of Route 38 in Tewksbury
- Route I-495 South of Route 133 in Tewksbury
- Route 3 South of I-495 in Chelmsford

## 2.2 TRAFFIC VOLUME TRENDS IN THE NMCOG REGION

To determine traffic volume trends throughout the region, historical traffic data was analyzed and compared. Several permanent counting stations throughout the region provide continuous traffic data along key limited access highways. The MassDOT Transportation Data Management website collects, displays and analyzes traffic data throughout the Commonwealth. The figures in this section present AADT using the monthly ADT for those months that the traffic counting station are reporting data, malfunctioning counting stations can be decommissioned for months at a time while they wait to be repaired.

**FIGURE 2-1: YEARLY AVERAGE TRAFFIC VOLUME TRENDS FOR STATION 4170: ROUTE I-495 NORTH OF ROUTE 4 IN CHELMSFORD**

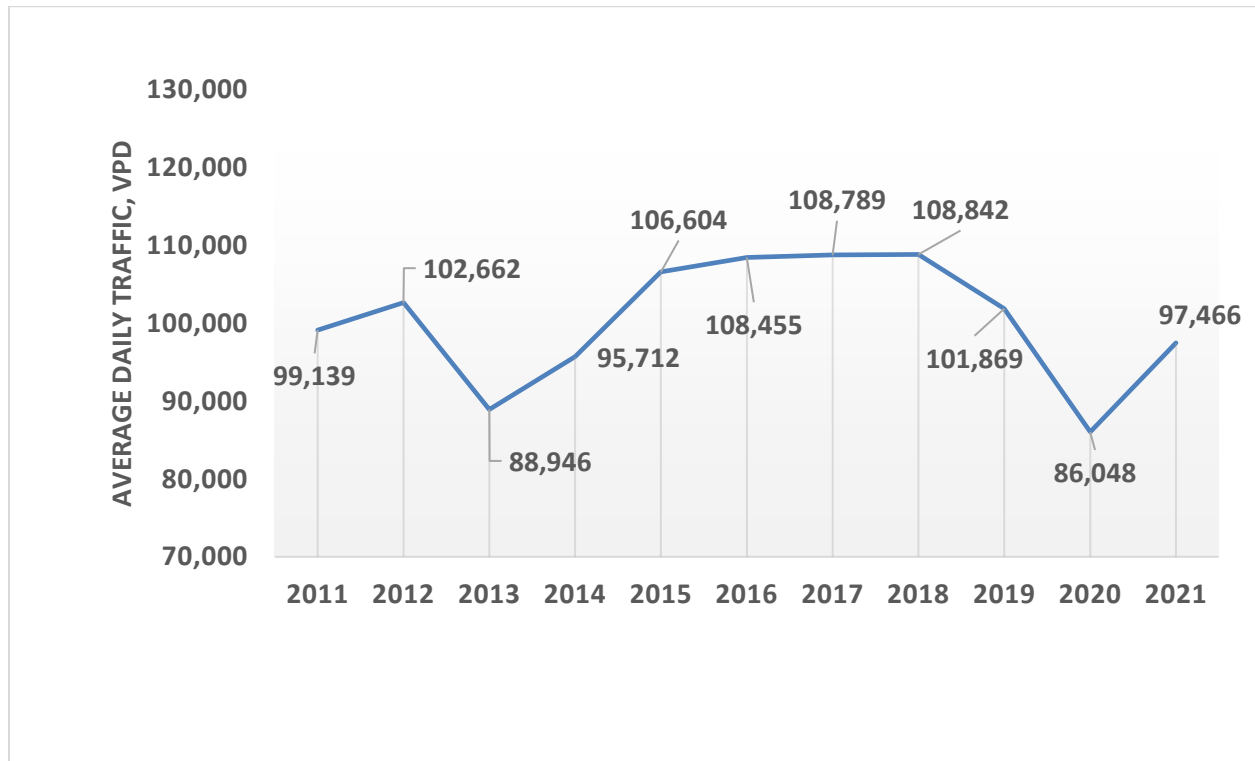


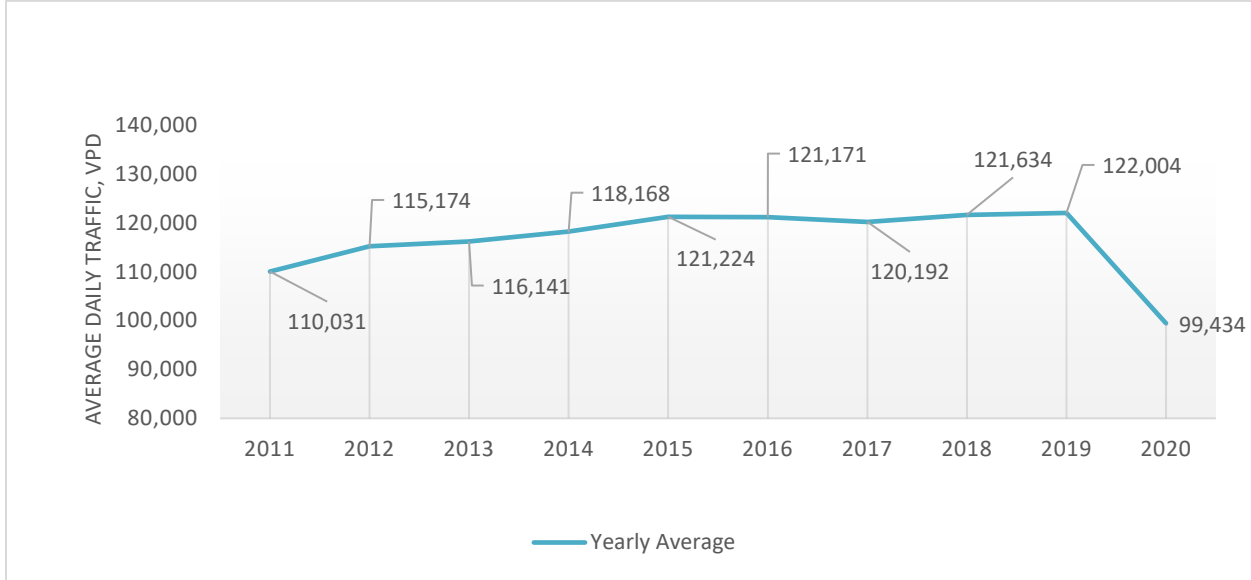
Figure 2-1 illustrates traffic volumes monitored at Interstate 495 north of Route 4 in Chelmsford for the years 2011 through 2021. Traffic volume was very consistent between the years of 2015 through 2018, with an average of 108,173 vehicles per day during that time period. In 2019, traffic volume along this section of I-495 dropped around 7,000 vehicles per day. In 2020, a significant drop in vehicles along I-495 and roadways around the country occurred as COVID -19 spread, causing schools and businesses to change their operations. In 2021, a return to more historical traffic volumes occurred, with an increase of traffic volume as the country began to open back up and daily life started to return to normal.

Figure 2-2, on the following page, shows traffic volumes collected at the permanent counting station on I-495 south of Route 133 in Tewksbury during the years 2011 through 2020. Overall traffic volumes are much higher on I-495 in Tewksbury than Chelmsford due to the proximity of I-93, a major commuting corridor for people working in the Boston area. Between 2011 and 2019, traffic volume at this location rose slowly but steadily every year. The effects of the Covid-19 Pandemic in 2020 can be seen very



clearly with an 18% decrease in traffic volume from the previous year. In 2021, data was not available at this permanent count location at the time that this report was compiled.

**FIGURE 2-2: YEARLY AVERAGE TRAFFIC VOLUME TRENDS FOR STATION 4094: ROUTE I-495 SOUTH OF ROUTE 133 IN TEWKSBURY**



**FIGURE 2- 4: YEARLY AVERAGE TRAFFIC VOLUME TRENDS FOR STATION 4114: LOWELL CONNECTOR NORTH OF I-495 IN CHELMSFORD**

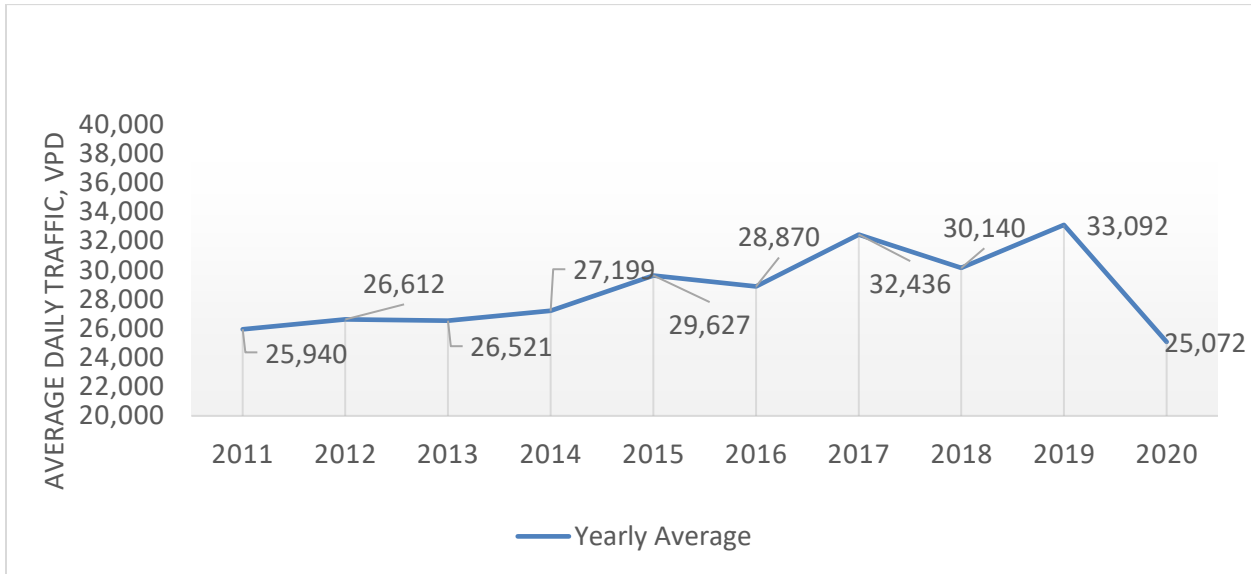


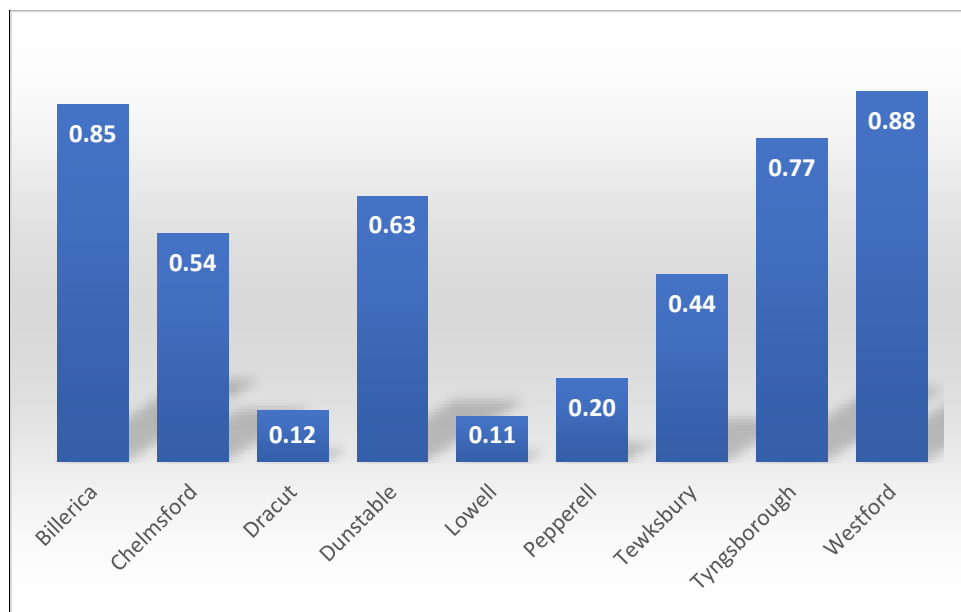
Figure 2-4 shows the yearly averages for traffic volume on the Lowell Connector just north of the I-495 interchange in Chelmsford. This side of the Lowell Connector has seen a slight but consistent increase in traffic volume since 2009. Future construction projects in the heart of Lowell will impact these numbers as commuters find alternative routes into Lowell. As with the majority of roadways in the region, traffic volumes saw a considerable drop in 2020 due to the COVID-19 Pandemic. Unlike the majority of other

locations, the drop in volume was not as severe at this location as it was in many others with an average decrease of 8,000 vehicles in 2020 compared to 2019. This could be reflected in the fact that the Lowell Connector is used as a way to navigate around the city rather than being used primarily to bring commuters in and out of workplace hubs such as Boston.

### 2.3 TRAFFIC GROWTH IN THE NORTHERN MIDDLESEX REGION.

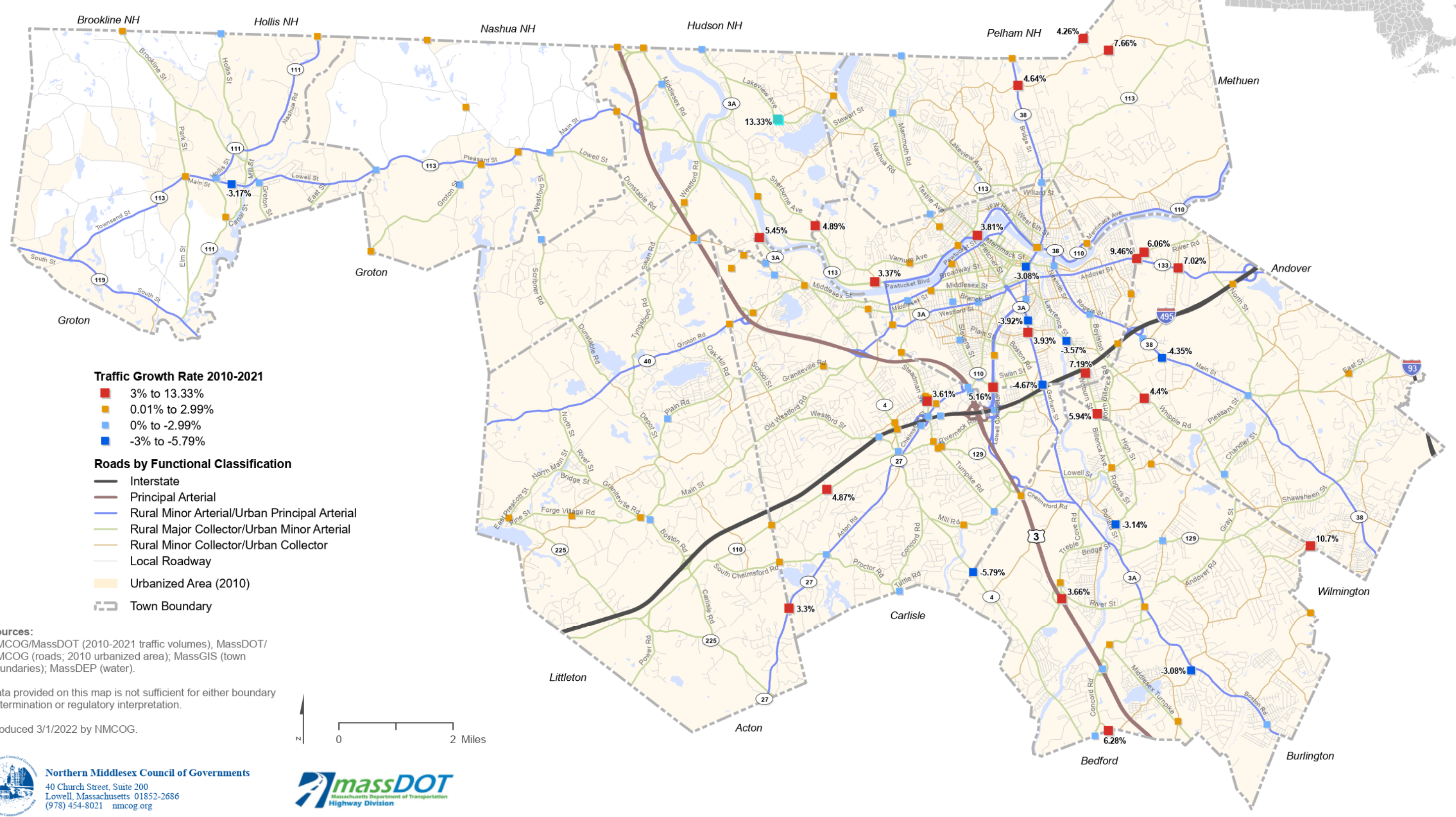
Maintaining traffic growth rates for the region’s communities is important in the determination of impacts from transportation improvements or new developments on the existing system. Growth rates are determined from NMCOG’s regional traffic counting activities and used widely in traffic impact analyses. Determining accurate traffic growth rates is dependent upon the data available and the accuracy of the data collected. NMCOG’s annual traffic counting program has compiled growth rate data at over 200 locations throughout the region since 2010. Average annual traffic volume growth rates have been calculated for locations where three or more counts have been performed since 2010. Figure 2-5 shows the average traffic volume growth rates for each community. Historical count data can be provided upon request.

**FIGURE 2-5: AVERAGE ANNUAL TRAFFIC GROWTH RATES FOR NORTHERN MIDDLESEX COMMUNITIES 2010 – 2021.**



Traffic growth in the region has been relatively constant, with the highest annual growth in traffic volume occurring in Billerica, Tyngsborough and Westford. The City of Lowell has the lowest average growth rate in the region with Dracut and Pepperell close behind. The City of Lowell is currently undergoing large-scale improvements to its existing transportation infrastructure such as redesigning the Lord Overpass to be an at-grade multi-modal boulevard and improvements to bridges over the canal system and Merrimack River. Map 2.1 shows traffic growth rates for selected locations throughout the Northern Middlesex region. Traffic growth trends have been compiled for all U.S. and State numbered routes and is reported as part of the regional traffic count database (Tables 2-6 through 2-14).

# Map 2-1: Traffic Growth Rate Ranges by Traffic Count Location (2010-2021)



**Sources:**  
 NMCOG/MassDOT (2010-2021 traffic volumes), MassDOT/  
 NMCOG (roads; 2010 urbanized area); MassGIS (town  
 boundaries); MassDEP (water).

Data provided on this map is not sufficient for either boundary  
 determination or regulatory interpretation.

Produced 3/1/2022 by NMCOG.



MAP 2-1 2016 Traffic Count Growth Rate Locations – 11x17 landscape back

## 2.4 HEAVY VEHICLE MONITORING PROGRAM

Vehicle classification counts are the basis for understanding freight movements on area roadways. Determining how many heavy vehicles travel on a roadway helps to identify key freight corridors in the Northern Middlesex region. NMCOG has collected vehicle classification data throughout the region since 2005. Prior to this, MassDOT maintained the classification database, providing information as needed.

MassDOT and NMCOG use the Federal Highway Vehicle Classification Scheme F Report to determine truck percentages at specific locations. This report outlines 13 different vehicle types from Class 1 motorcycles to Class 13 tandem trailers. An excerpt of that report is included in Figure 2-6 to illustrate the different classes of vehicles.

Map 2.2 provides an overview of truck volumes on monitored roadways throughout the Northern Middlesex Region. Truck volumes percentages for each community are provided in the traffic volume inventory database (Tables 2-6 through 2-14). Heavy vehicle percentages are determined by summing volumes in class 4 through 13 in the FHWA Vehicle Classification Scheme and dividing by the total volume for the location. A more in depth classification report with specific numbers for each vehicle class can be provided upon request. Table 2.3 shows the percentage of heavy vehicles on selected NMCOG roadways.

Results of the truck classification process show the roadways with highest percentage of trucks in the region. Ledge Road in Chelmsford has the highest and the second highest percentage of heavy vehicles in the region at 56.9% at Ledge Rd south of Dunstable Rd and at 53.1% at Ledge Rd south of Oak Hill Rd. Ledge Road is a local dead-end road in the northwest corner of Chelmsford in a residential neighborhood. A quarry at the southern end of the road recently reopened for business. While the average daily traffic (ADT) for the roadway is low (430 vehicles per day), over half of the vehicle traffic is comprised of heavy vehicles. South of Oak Hill Road, the public roadway ends and the asphalt road turns into a long dirt driveway used as access to the quarry. NMCOG continues to work with the Town of Chelmsford to monitor this road.

Alexander Road at the Wilmington town line is the roadway with the third highest percentage of heavy vehicles in our region for 2021. With an ADT of 5,474 for 2021 and a number of commercial and light industrial businesses found along its roadway, this corridor is an important thoroughway for both passenger and commercial vehicles. The last ATR count that NMCOG conducted on this roadway prior to 2021 was conducted before NMCOG had the capability to quantify heavy vehicles as a percentage of roadway traffic. It will be interesting to see if Alexander Road continues to see high heavy vehicle percentages or if this was a result of less passenger cars being on the roadway due to the pandemic.

Industrial Avenue west of East Street in Tewksbury is a new town-requested count location. Industrial Avenue is a short, dead end road in an industrial area with few businesses, but most or all of the businesses in the area cater to shipping and trucking. Industrial Avenue has an ADT of 488 vehicles, with 33.8% or 165 of those vehicles classified as heavy vehicles. This number is similar to Commercial Drive in Dracut north of Broadway Road. The businesses on Commercial Drive consist of a school bus depot, distribution center for a bottled water company, a shipping company and a moving company.

Table 2.3: Percent Heavy Vehicle Traffic by Selected NMCOG Roadways

| Community  | MassDOT Station | Location   | Year | ADT    | Average Truck Volume | Percent Trucks |
|------------|-----------------|--|------|--------|----------------------|----------------|
| Chelmsford |                 | Ledge Rd S of Dunstable Rd   | 2019 | 433    | 246                  | 56.9           |
| Chelmsford |                 | Ledge Rd S of Oak Hill Rd  | 2019 | 369    | 196                  | 53.1           |
| Billerica  |                 | Alexander Rd @<br>Wilmington Town Line                                       | 2021 | 5,474  | 2,135                | 39             |
| Tewksbury  |                 | Industrial Ave W of East St  | 2019 | 488    | 165                  | 33.8           |
| Dracut     |                 | Commercial Dr. N of Rte.<br>113 (Broadway Rd)                                | 2015 | 2,100  | 670                  | 31.9           |
| Billerica  | 4064            | Wyman Rd S of Rte.<br>3A(Boston Rd)  | 2020 | 5,854  | 1,270                | 21.7           |
| Pepperell  |                 | Heald St west of Park St   | 2021 | 1,852  | 339                  | 18.3           |
| Tewksbury  |                 | Shawsheen Street N of Rte.<br>38 (Main Street)                               | 2020 | 9,480  | 1,668                | 17.6           |
| Dunstable  |                 | Main St (Rte. 113) west of<br>Westford Street                                | 2021 | 13,451 | 2,233                | 16.6           |
| Tewksbury  |                 | Whipple Rd E of Pine St  | 2015 | 7,700  | 1,263                | 16.4           |
| Westford   |                 | E Prescott Rd E of Rte. 225<br>(Pleasant St)                                 | 2021 | 3,410  | 542                  | 15.9           |
| Tewksbury  | 4112            | Chandler St N of Whipple<br>Rd   | 2020 | 1,669  | 264                  | 15.8           |
| Billerica  |                 | Rangeway Rd N of Rte.<br>4(Nashua Rd)  | 2019 | 3,587  | 520                  | 14.5           |
| Lowell     |                 | Rte. 110 (Appleton St) W of<br>South St                                      | 2018 | 10,100 | 1,424                | 14.1           |
| Multiple   |                 | Rte. 113 (Pleasant<br>St/Dunstable Rd) @<br>Dunstable/Pepperell Town<br>Line | 2021 | 8,682  | 1,189                | 13.7           |
| Pepperell  |                 | Hollis Street @ NH State<br>Line   | 2019 | 2,139  | 293                  | 13.7           |
| Chelmsford |                 | Rte. 110 (Littleton Rd) E of<br>Hunt Rd                                      | 2019 | 10,600 | 1,389                | 13.1           |
| Billerica  | 4062            | Concord Rd @ Bedford<br>Town Line  | 2020 | 5,232  | 664                  | 12.7           |
| Chelmsford |                 | Dunstable Rd W of Marinel<br>Ave   | 2020 | 1,376  | 172                  | 12.5           |
| Chelmsford |                 | Dunstable Rd W of Rte. 40<br>(Groton Rd)/Vinal Square                        | 2020 | 1,704  | 213                  | 12.5           |

Figure 2-6: FHWA Vehicle Classification

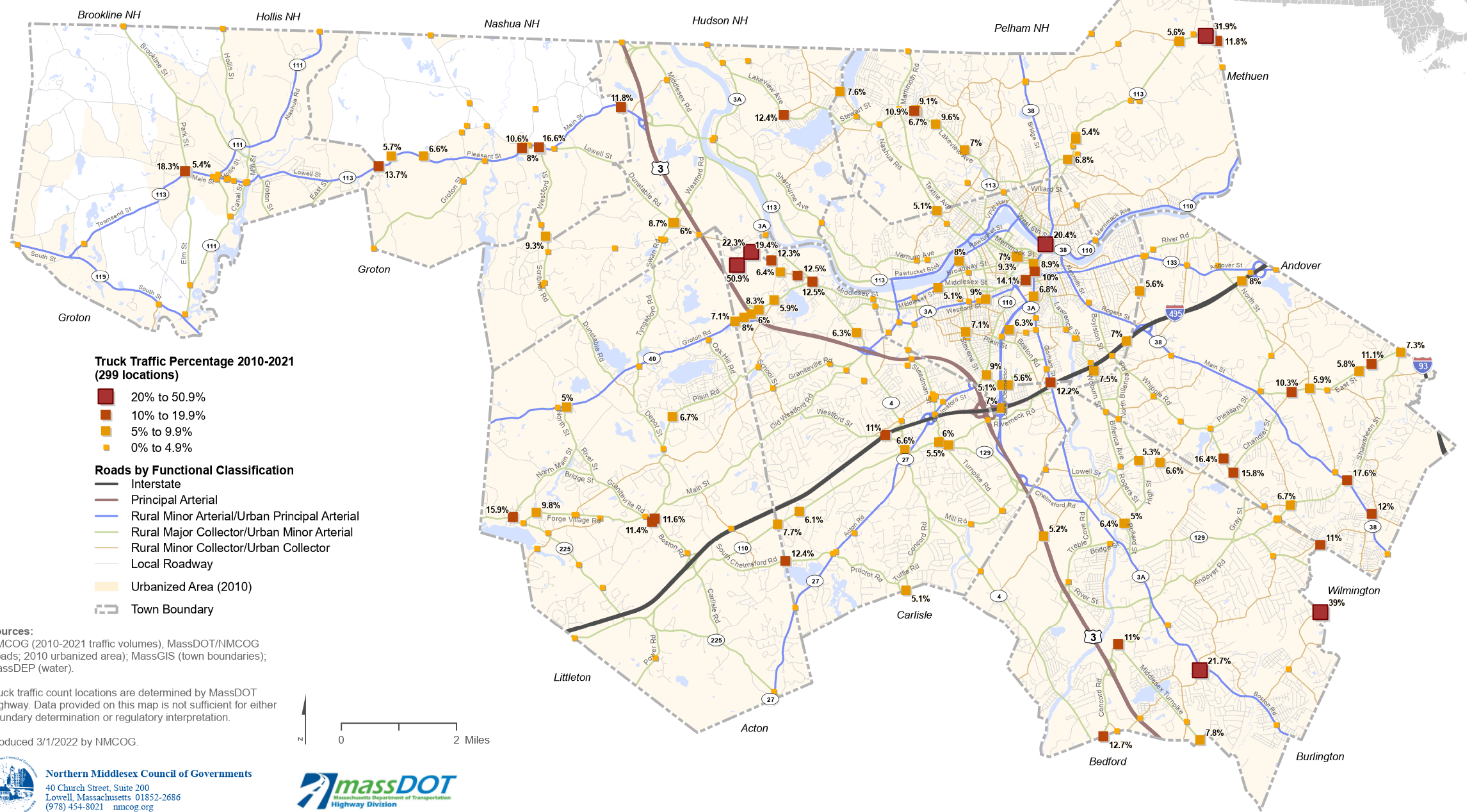
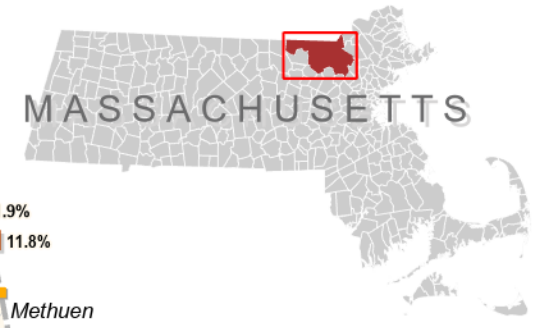
| Class | Vehicle Type   | Description  |
|-------|--|--|
| 1     | Motorcycles  | All two- or three-wheeled motorized vehicles. Typical vehicles in this category have saddle type seats and are steered by handle bars rather than wheels, i.e. motorcycles, mopeds, and three-wheeled motorcycles.   |
| 2     | Passenger Cars   | All sedans, coupes, and station wagons manufactured primarily for the purpose of carrying passengers and including those passenger cars pulling recreational or other light trailers.  |
| 3     | Other Two-Axle, Four-Tire, Single Unit Vehicles  | All two-axle, four-tire, vehicles other than passenger cars. Included in this classification are pickups, panels, vans, and other vehicles such as campers, motor homes, ambulances, hearses, carryalls, and minibuses. Other two-axle, four-tire single unit vehicles pulling recreational or other light trailers are included in this classification. |
| 4     | Buses  | All vehicles manufactured as traditional passenger-carrying buses with two axles and six tires or three or more axles. This category includes only traditional buses (including school buses) functioning as passenger-carrying vehicles.  |
| 5*    | Two-Axle, Six-Tire, Single Unit Trucks   | All vehicles on a single frame including trucks, camping and RV's, motor homes, etc., having 2 axles and dual rear wheels.   |
| 6*    | Three-Axle Single Unit Trucks  | All vehicles on a single frame including trucks, camping and recreational vehicles, motor homes, etc., having three axles.   |
| 7*    | Four or More Axle Single Unit Trucks   | All trucks on a single frame with four or more axles.  |
| 8*    | Four or Less Axle Single Trailer Trucks  | All vehicles with four or less axles consisting of two units, one of which is a tractor or straight truck power unit.  |
| 9*    | Five-Axle Single Trailer Trucks  | All five-axle vehicles consisting of two units, one of which is a tractor or straight truck power unit.  |
| 10*   | Six or More Axle Single Trailer Trucks   | All vehicles with six or more axles consisting of two units, one of which is a tractor or straight truck power unit.   |
| 11*   | Five or Less Axle Multi-Trailer Trucks   | All vehicles with five or less axles consisting of three or more units, one of which is a tractor or straight truck power unit.  |
| 12*   | Six-Axle Multi-Trailer Trucks  | All six-axle vehicles consisting of three or more units, one of which is a tractor or straight truck power unit.   |
| 13*   | Seven or More Axle Multi-Trailer Trucks  | All vehicles with seven or more axles consisting of three or more units, one of which is a tractor or straight truck power unit.   |
| 14    | Will be defined by MassDOT personnel for special studies.  |  |
| 15    | Will, by default, identify any vehicle which does not conform to the classification criteria for Class 1 through Class 14. |  |

Source: FHWA

**\*In reporting information on trucks the following criteria should be used:**

- **Truck tractor units traveling without a trailer will be considered single unit trucks.**
- **A truck tractor unit pulling other such units in a “saddle mount” configuration will be considered as one single unit truck and will be defined only by axles on the pulling unit.**
- **Vehicles shall be defined by the number of axles in contact with the roadway. Therefore, “floating” axles are counted only when in the down position.**
- **The term “trailer” includes both semi- and full trailers.**

# Map 2-2: Regional Truck Traffic Percentages by Traffic Count Location (2010-2021)





Map 2-2 back

## 2.5 Traffic Counting data trends in 2020 and 2021 due to COVID.

The spread of the pandemic in the late winter of 2020 created a public health event so dire that the Commonwealth of Massachusetts as well as many other states, particularly in the Northeast region, decided that the only way to curb the spread of the virus was to go into a mandatory shut down. All businesses, except those considered essential, closed their doors to the public. Companies that could work remotely did so, and schools worked to find ways to teach students from home. These factors caused traffic volume and public transportation ridership levels to drop dramatically, which presented new and unique challenges to the collection and analysis of traffic data for the year 2020 and beyond. As 2020 ended and 2021 began, the country and the economy was beginning to open up again. With the creation of vaccines, more information known about how the virus spreads, and a downtrend in new infections in the spring and summer of 2021, schools reopened, people returned to offices and more people started to feel comfortable going about their daily tasks as they did before 2020. As the economy, our schools, and workplaces opened up again, traffic volumes started to rise. The Greater Lowell Region’s traffic volume is still lower than pre-pandemic conditions, but it seems to be trending upward. Figures 2-7 through 2-9, shown below, illustrate the massive swing in traffic volumes along our major regional highways in 2020 and 2021. The data is collected from continuous permanent counting stations embedded in the highway through the MassDOT Transportation Data Management System.

**Figure 2-7: I-495 North of Rte. 4, Chelmsford 2020 & 2021**

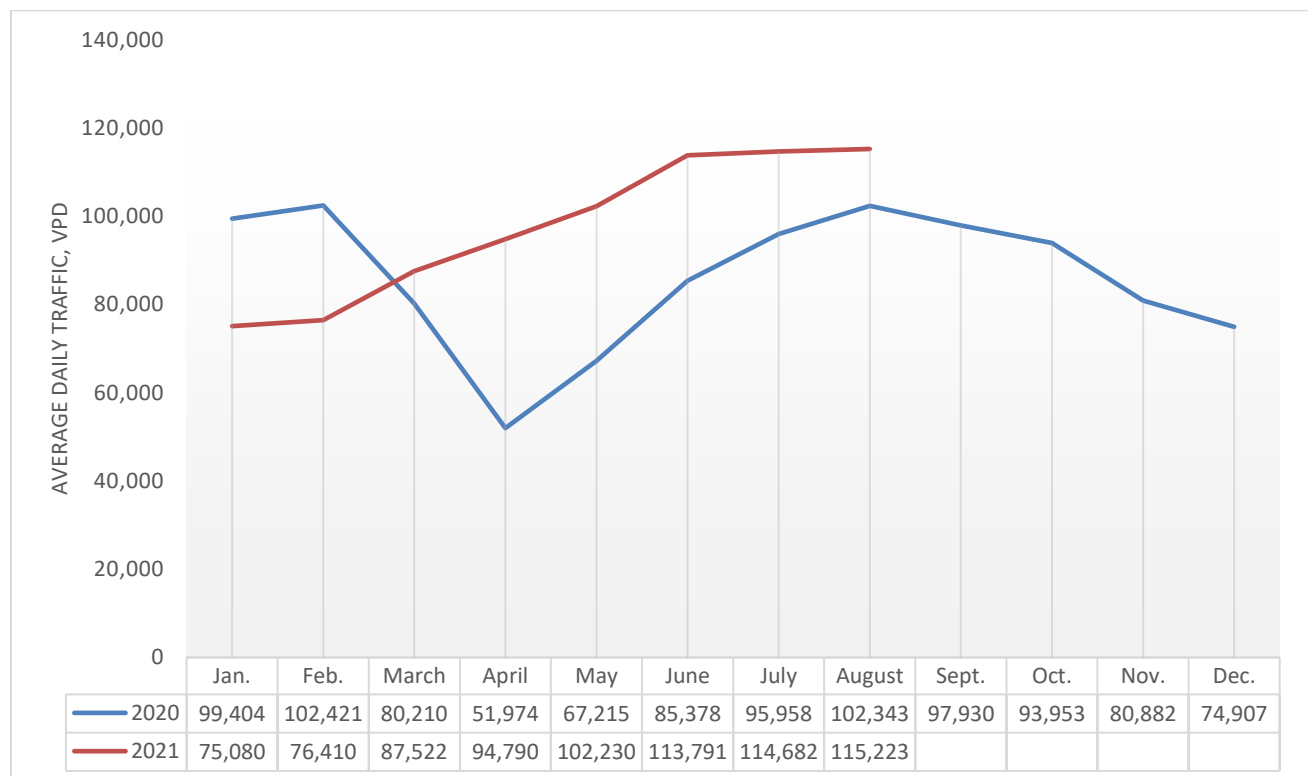


Figure 2-7 shows the traffic volume at I-495 north of Route 4 in Chelmsford throughout 2020 and 2021. As public awareness of the virus spread in the late winter and early spring of 2020, traffic volumes plummeted from the highest totals for the year in February to the lowest numbers seen in April. The volumes increased from the low point in April throughout August, which came close to the high water

mark seen in February. Traffic volumes declined steadily throughout the fall and into the end of the year as surges hit the region. Traffic volumes in January and February 2021 were dramatically lower than in the same months in 2020, which predates the shutdown that we experienced in the early spring of 2020. Starting in February, and continuing into the spring and early summer of 2021, traffic volumes increased before leveling out in the summer months. Traffic volume data was not available for this permanent counter from September through the rest of the calendar year 2021.

**Figure 2-8: I-495 South of Rte.3, Chelmsford 2020 & 2021.**

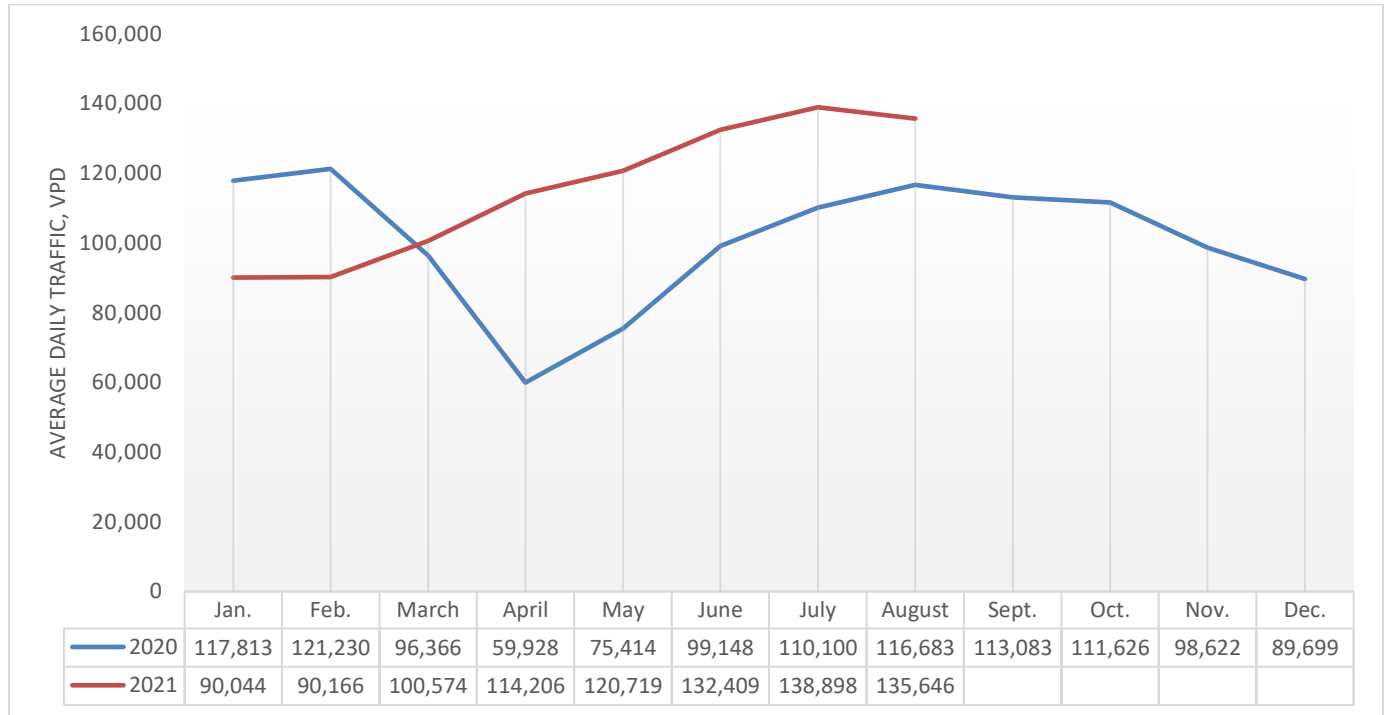


Figure 2-8 also illustrates the sharp drop in traffic volume in the late winter and spring of 2020 on I-495 south of Route 3 in Chelmsford. The decreases between February and April is much more significant for this stretch of I-495, showing a 67% drop in vehicular volume in two months. As seen at the I-495 north of Route 4 location, after April, traffic slowly increased throughout the summer. Volumes peaked in August, but still were at much lower volumes than pre- pandemic conditions. Traffic then trended downward to close out the year. The beginning of 2021 saw low traffic volumes, but steadily began to rise in March, before peaking in July with a traffic volume of 138,898 vehicles per day. Traffic volume data was not available for this location from September through December of 2021.

**Figure 2-9: Rte. 3 at Chelmsford town line, Billerica 2020 & 2021.**

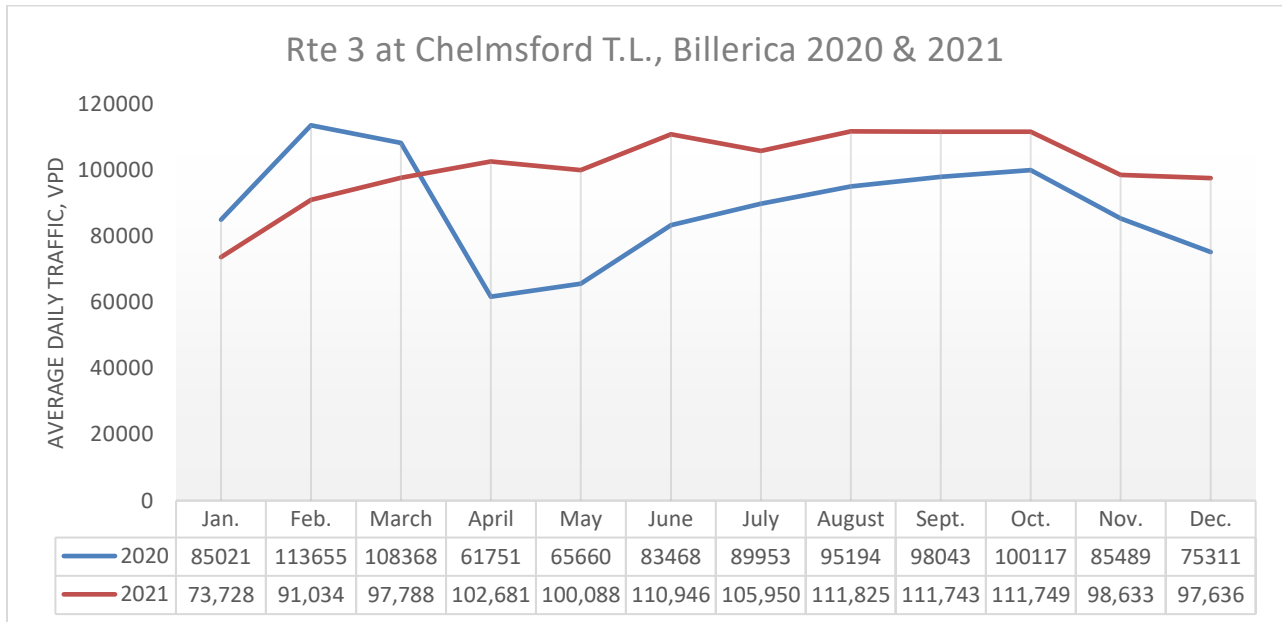


Figure 2-9 shows traffic volume trends on Route 3 in Billerica at the Chelmsford town line for 2020. Covid-19 restrictions implemented in March 2020 resulted in the steep drop in traffic volume between March and April. Modest gains were made throughout the spring and summer months. Those gains peaked in October and declined throughout the rest of 2020. Traffic volumes in 2021 once again started the year lower than they were in 2020, and started to rise in the spring of 2021 before peaking in August with a traffic volume of 111,825 vehicles per day.

**MODIFIED TRAFFIC COUNTING PROCEDURES DURING THE COVID-19 PANDEMIC**

Due to the Covid-19 pandemic safety methods, best practices and the length of the traffic counting season was handled very differently in 2020 than it has been in previous years. NMCOG did not begin our traffic counting season in April as we do every other year, instead the first counters of the 2020 season were not laid in the roadways until June 22

In June of 2020, discussions on lifting the Phase 2 restrictions in Massachusetts were becoming a reality. This would allow some retailers and service based businesses to reopen with occupancy restrictions and enhanced safety procedures. NMCOG decided to track the phased reopening by monitoring traffic along selected roadways, counting them multiple times during the 2020 traffic counting season. Twelve locations were chosen along major commuting, freight or business corridors in the region from our database of historical counts, so we could compare historical traffic volumes to traffic volume during the pandemic. Table 2-4 lists the modified traffic program count locations.

**Table 2-4: Repeating Traffic Counts 2020 & 2021.**

| NMCOCG     |   |             |
|------------|---|-------------|
| ID         | Traffic Count Location  | Communities |
| <b>385</b> | Rte. 3A (Gorham St) @ Chelmsford/Lowell Town Line                   | Multiple    |
| <b>635</b> | Rte. 110 (Littleton Rd) @ Chelmsford/Westford Town Line             | Multiple    |
| <b>231</b> | Rte. 113 (Pleasant St/Dunstable Rd) @ Dunstable/Pepperell Town Line | Multiple    |
| <b>157</b> | Rte. 40 (Groton Rd) E Rte. 3 NB                                     | Chelmsford  |
| <b>971</b> | East St W of Whittemore St  | Tewksbury   |
| <b>185</b> | Mammoth Rd @ Lowell/Dracut Town Line                                | Multiple    |
| <b>87</b>  | Rte. 4 (Nashua Rd/Boston Rd) @ Billerica/Chelmsford Town Line       | Multiple    |
| <b>77</b>  | Rte. 3A (Boston Rd) N of Community Rd                               | Billerica   |
| <b>435</b> | Woburn St S of I-495  | Lowell      |
| <b>199</b> | Rte. 110 (VFW Highway/Merrimack Ave) @ Lowell/Dracut Town Line      | Multiple    |
| <b>804</b> | Boston Rd S of Hildreth St  | Westford    |
| <b>234</b> | Rte. 113 (Kendall Rd/Main St) @ Dunstable/Tyngsborough Town Line    | Multiple    |

From late June until the end of October, road tubes were placed once a month at each of the selected locations in order to document traffic volumes, vehicle classifications, and to determine how peak travel times were changing. Table 2-5 shows each traffic count location, the monthly AADT for the 2020 season, as well as historical AADTs from counts done at the same location. Growth rate data, as well as the percentage of heavy vehicles from the most recent count, can also be found on Table 2-5. Traffic counts were conducted once a month at each of the selected locations, but counts do not always return accurate data when placed. Road tubes breaking, equipment failure and construction can all lead due to unreliable data, which has to be rejected. Gaps in the monthly data for selected 2020 counts are due to incomplete data or data that was rejected after it was downloaded and analyzed.

In 2021, NMCOCG returned to a more traditional approach regarding traffic counting. Safety protocols were still strictly adhered to, but traffic count locations were counted only once if the count was successful. In the spring of 2021, NMCOCG counted all modified program locations in order to continue tracking the reopening of the Commonwealth throughout the pandemic. Table 2-5, located below, shows the Average Daily Traffic (ADT) for each of the locations that were counted multiple times in 2020 and in the spring of 2021.

Table 2-5: Repeating Traffic Count Statistics

| NMCOG ID | 2020 Repeating Traffic Count Locations                        | Communities                | ADT 2010 | ADT 2011 | ADT 2012 | ADT 2013 | ADT 2014 | ADT 2015 | ADT 2016 | ADT 2017 | ADT 2018 | ADT 2019 | June 2020 | July 2020 | August 2020 | September 2020 | October 2020 | ADT 2021 | Growth Rate 2010 - 2021 |
|----------|---|----------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-------------|----------------|--------------|----------|-------------------------|
| 385      | Rte. 3A (Gorham St)   | Chelmsford/<br>Lowell      |          |          |          |          |          |          |          |          | 7,400    |          |           | 4,114     | 5,569       | 5,794          |              | 6,363    | -2.34                   |
| 635      | Rte. 110 (Littleton Rd) @<br>Chelmsford/Westford<br>Town Line | Chelmsford/<br>Westford    |          |          | 8,300    | 8,700    |          |          |          |          |          | 10,283   |           | 6,792     | 6,769       |                | 7,278        | 8,854    | -1.54                   |
| 231      | Rte. 113 (Pleasant<br>St/Dunstable Rd)                        | Dunstable/<br>Pepperell    |          |          |          | 8,700    | 14,600   |          | 8,400    |          |          | 9,295    |           | 7,286     | 7,371       | 7,118          |              | 8,682    | -2.60                   |
| 157      | Rte. 40 (Groton Rd) E Rte.<br>3 NB                            | Chelmsford                 |          | 8,200    |          |          |          | 8,100    |          |          | 9,461    |          |           | 7,226     | 7,382       | 7,615          |              | 9,426    | -0.79                   |
| 971      | East St W of Whittemore<br>St                                 | Tewksbury                  |          |          |          |          |          |          |          | 9,974    |          | 12,592   | 6,122     |           | 8,910       | 9,252          |              | 10,672   | -2.41                   |
| 5        | Mammoth Rd  | Dracut/<br>Lowell          |          |          | 14,500   |          | 12,000   | 12,100   |          |          |          |          | 7,739     | 11,626    |             | 11,744         |              | 13,081   | -2.38                   |
| 87       | Rte. 4 (Nashua Rd/Boston<br>Rd)                               | Billerica/<br>Chelmsford   | 5,500    |          |          |          |          |          | 7,200    |          |          |          | 2,798     |           |             | 2,843          | 3,996        | 5,116    | -3.76                   |
| 77       | Rte. 3A (Boston Rd) N of<br>Community Rd                      | Billerica                  |          |          | 19,500   |          |          |          |          |          |          |          |           | 12,894    | 15,139      | 14,977         | 12,123       | 18,587   | -7.61                   |
| 435      | Woburn St S of I-495  | Lowell                     |          |          |          |          |          |          |          |          | 13,096   |          | 8,096     | 7,486     | 10,136      |                | 10,734       | 12,021   | -0.36                   |
| 199      | Rte. 110 (VFW<br>Highway/Merrimack Ave)                       | Dracut/<br>Lowell          |          |          |          |          | 14,600   |          |          |          |          |          | 11,729    |           |             | 7,502          | 9,416        | 15,301   | -5.92                   |
| 804      | Boston Rd S of Hildreth St                                    | Westford                   |          |          | 15,500   |          |          |          | 13,200   |          |          |          |           | 10,262    | 11,589      |                | 12,046       | 14,784   | -1.78                   |
| 234      | Rte. 113 (Kendall Rd/Main<br>St)                              | Dunstable/<br>Tyngsborough |          |          |          |          | 10,200   |          | 11,700   |          |          |          | 9,808     | 9,169     | 7,582       | 10,354         |              | 10,589   | 0.25                    |

**Table 2-5: 2020 Repeating Traffic Count Statistics Back**

Figures 2-10 through 2-21 graphs out the change in traffic volumes throughout the summer and fall of 2020 and spring of 2021 at each of the selected locations in the NMCOC region. The most recent traffic count that was conducted before the Covid-19 Pandemic has been included to show the fluctuations in traffic volume due to the pandemic.

**Figure 2-10: Boston Rd South of Hildreth St., Westford.**

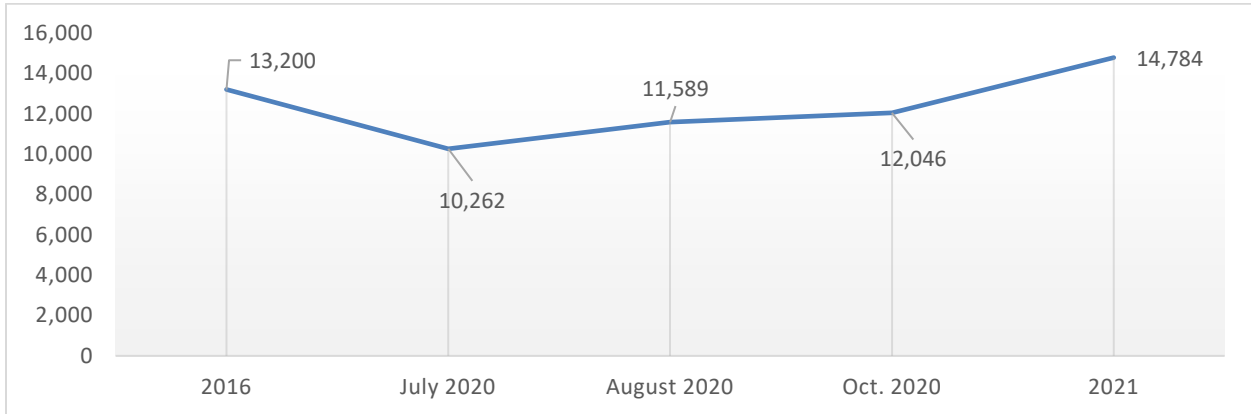
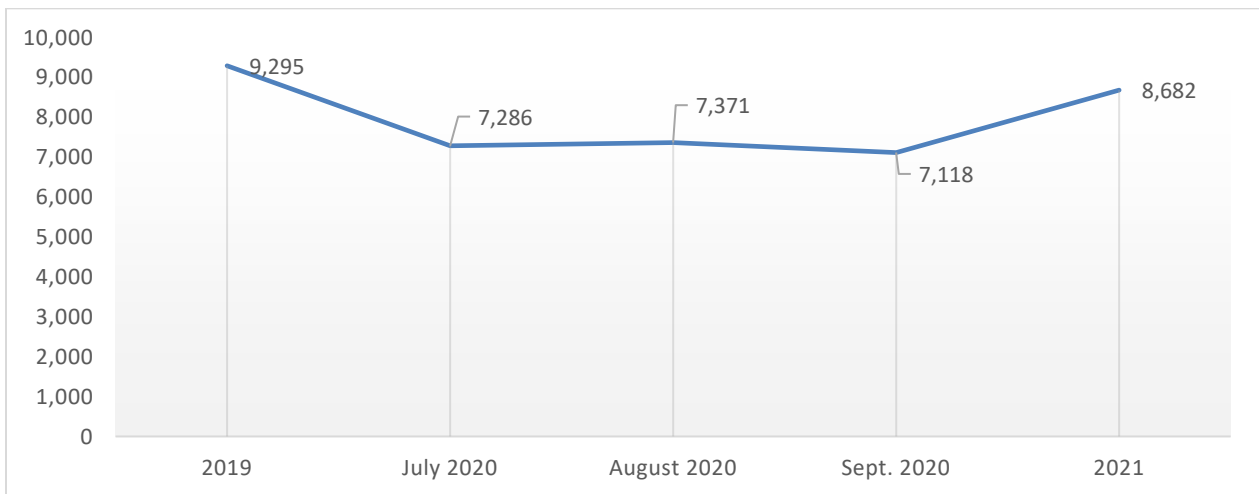


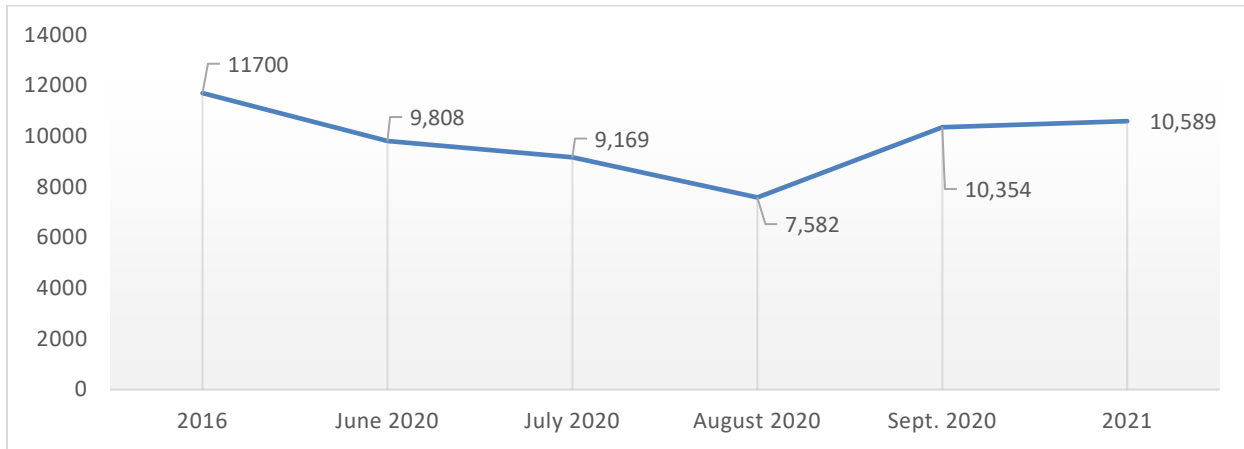
Figure 2-10 shows the traffic on Boston Road south of Hildreth Road in Westford for 2016 and the counts done in July, August and October of 2020. In 2016, this location saw on average 13,200 vehicles per day. In July of 2020, that number dropped by almost 3,000 vehicles to 10,262. Traffic slowly increased with modest gains in August and October, but still more than 1,000 vehicles a day less than seen in 2016. This location was counted again in the spring of 2021. An Average Daily Traffic (ADT) volume of 14,784 was recorded, an increase of 1,584 vehicles over the ADT recorded in 2016.

**Figure 2-11: Rte. 113 (Pleasant St/ Dunstable Rd) at Dunstable/ Pepperell town line.**





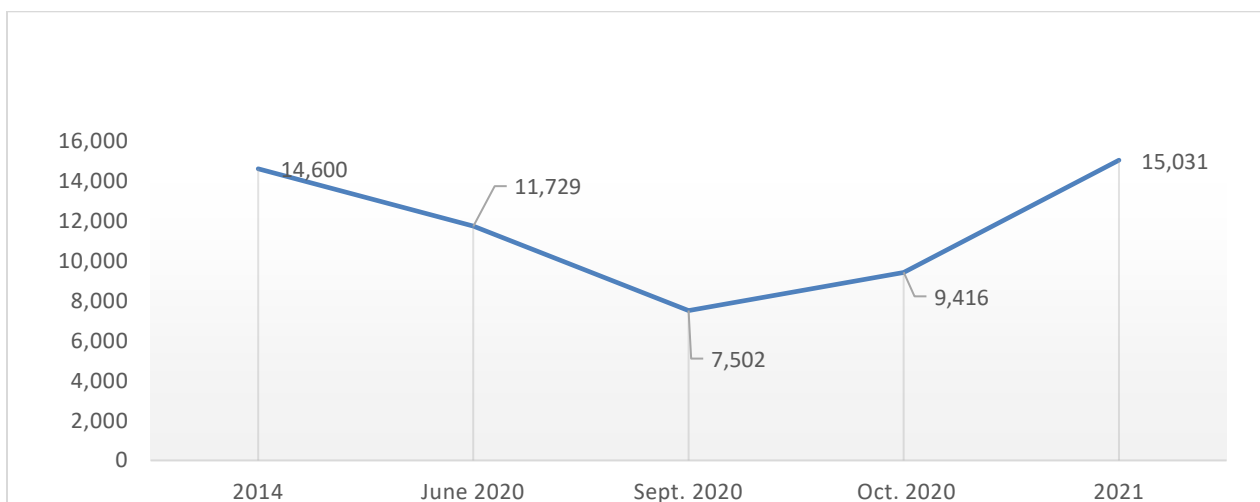
**Figure 2-12: Rte. 113 (Kendall Rd/ Main St.) at Dunstable/ Tyngsborough town line.**



Figures 2-11 and 2-12, shown above, show traffic volumes on Rte. 113 at the Pepperell and Dunstable border and on Rte. 113 on the Dunstable and Tyngsborough town line near Route 3. Route 113 at the Pepperell and Dunstable town line saw an average of 9,295 vehicles per day in 2019, which dropped to 2,000 less vehicles per day in July 2020. Throughout the summer and into the early fall of 2020, the traffic volumes remained flat in the very low seven thousand range. This location was counted again in the spring of 2021 and at that time traffic volume rebounded with an ADT of 8,682 vehicles. An increase of over 1,500 vehicles and the highest volume recorded at this location since 2019.

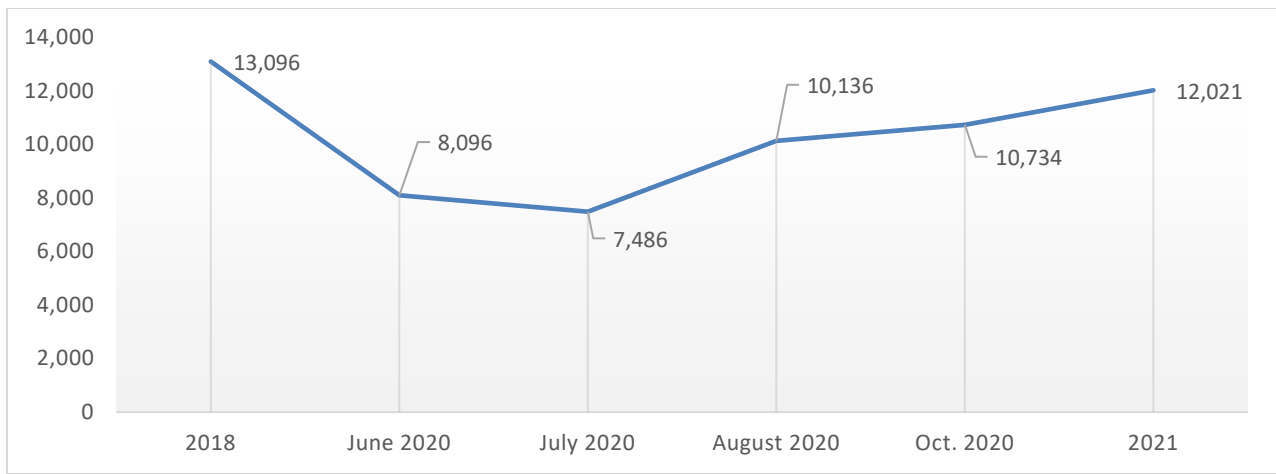
Further east at Route 113 at the border of Dunstable and Tyngsborough, saw a drop in traffic volume from a historical volume of 11,700 in 2016 to a low of 7,582 vehicles per day in August of 2020. This section saw a sustained and more severe drop in traffic volumes throughout the summer of 2020 than the count at the Dunstable and Pepperell town line, but in September 2020 saw a dramatic increase of traffic, which almost brought traffic levels back to pre-pandemic numbers. This location was counted in the spring of 2021 and produced an ADT of 10,589 vehicles. This was a modest increase over the ADT of 10,354 collected in September of 2020 but the highest traffic volumes seen at this location since 2016.

**Figure 2-13: Rte. 110 (VFW Hwy./ Merrimack Ave.) at Lowell/ Dracut city line.**



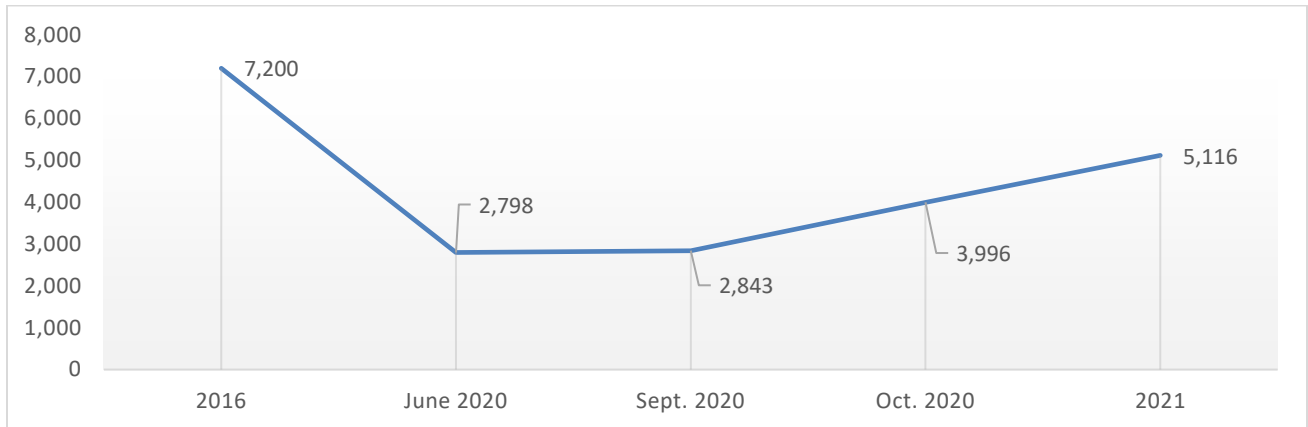
The VFW Highway/ Merrimack Ave corridor follows the Merrimack River and connects the Greater Lowell Region to I-93 and is a major transportation corridor for workers and goods moving in and out of the region. In 2014, this corridor saw an AADT of 14,600, which gets halved by the time we get to September of 2020 with an AADT of 7,502. After hitting a low in September, traffic volume made modest gains, but even October’s volume was far lower than the volume recorded in June of 2020. An ADT of 15,031 vehicles per day was counted in early 2021, showing a 100% increase in traffic from September of 2020 to spring 2021.

**Figure 2-14: Woburn St. South of I-495, Lowell.**



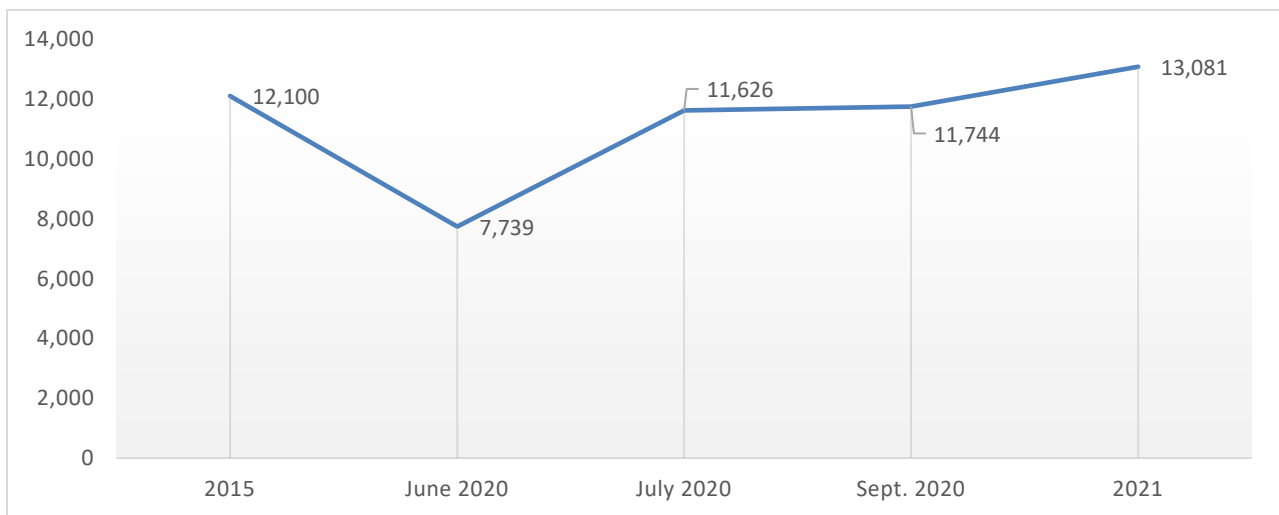
Woburn St at I-495 in Lowell is another major transportation corridor into the Greater Lowell region that has seen a sharp drop in traffic volume since the pandemic has started but seems to be on pace to return to pre-pandemic traffic volumes much quicker than some of our other roadways have. This may be due to I-495 being a transportation corridor for people looking for recreational or vacation destinations in the warmer months. Beginning in July when the real warm weather for this region becomes prevalent, we see traffic volumes on I-495 rise dramatically through July and August before leveling out a bit with the last count in October. The difference between 2018 and the traffic volumes seen in October 2020 is only about 2,400 vehicles per day. While still a large number, it’s a smaller gap than what we see on some other roadways. Traffic volume continued to increase on Woburn Street throughout 2020 and into 2021. Traffic counts conducted at the same location show an increase of 12% in traffic volume from October 2020 to 2021 and a 60% increase in vehicular volume when compared to July of 2020.

**Figure 2-15: Rte. 4 (Nashua Rd/ Boston Rd) at Billerica/ Chelmsford town line.**



Route 4 at the Billerica and Chelmsford town line saw a major drop in traffic volume during the pandemic, but hasn't seen the climb back to historical levels that other corridors have experienced. This stretch of roadway may have been affected by the lack of commuters as well as a lack of children being bused or driven to the schools found on this roadway. Even in the spring of 2021, traffic volume remains much lower at this location than per-pandemic traffic counts would suggest is the "normal" traffic volume for this roadway. Traffic volume increased by 83% from June 2020 but is still down 29% from the 2016 count. Additional counts will be undertaken at this location in order to see if this corridor returns to pre-pandemic traffic volumes.

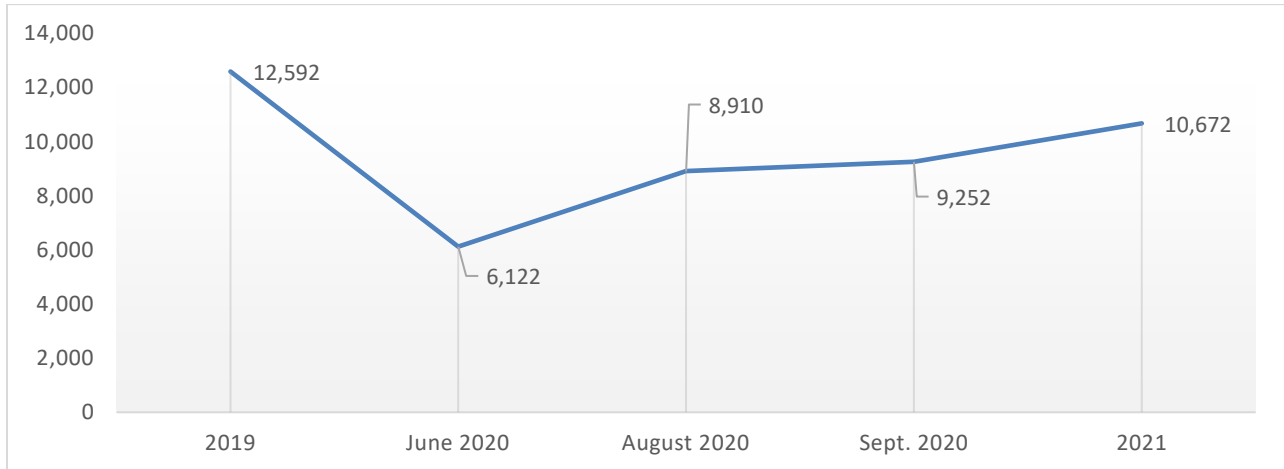
**Figure 2-16: Mammoth Rd at Dracut/ Lowell city line.**



Mammoth Road at the Dracut/ Lowell border is one of the only roadways studied in the NMCOC region that did not see a sharp and sustained drop in traffic volume in 2020. As shown in Figure 2-16, traffic volume dropped from 12,100 in 2015 to 7,739 in June of 2020, but quickly rebounded to an ADT of 11,626 by July of 2020. By the middle of September 2020, traffic volume rose back to finish just slightly under 2015 levels. This corridor is used by a significant amount of commercial vehicles moving goods in and out of the Greater Lowell region via Interstate-93, which may account for the lack of falling traffic

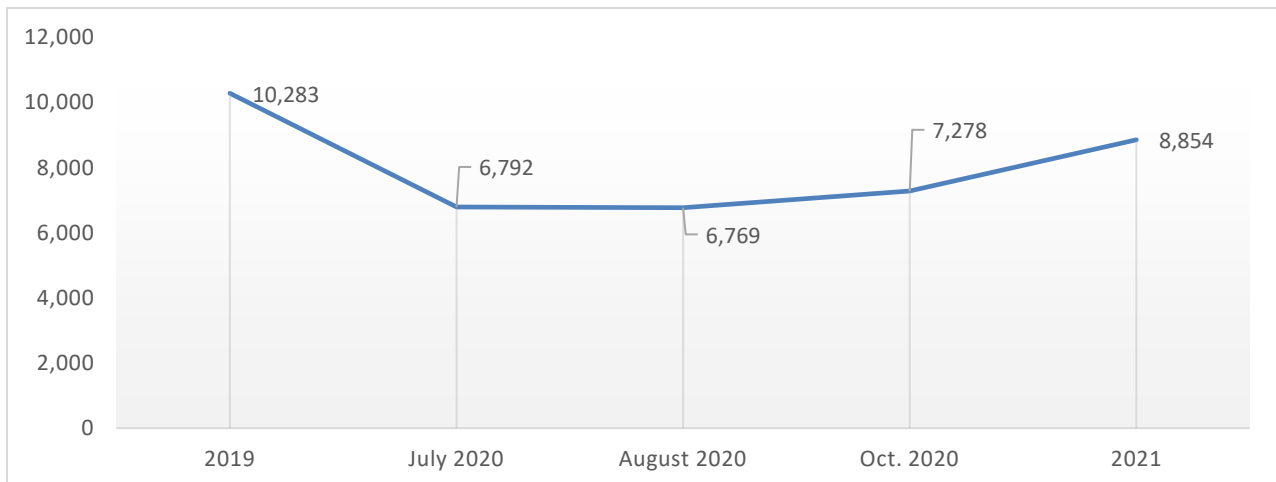
volumes throughout the pandemic. Counts done in 2021 showed traffic volumes surpassing the volumes recorded in 2015 by 8%

**Figure 2-17: East St. West of Whittemore St., Tewksbury.**



East Street west of Whittemore Street in Tewksbury is a major economic corridor for the region and connects many warehouses and shipping companies with Interstate 93 as well as people going to work or recreational activities in Boston or New Hampshire. Traffic volume was halved between the last historical traffic count in 2019 through June of 2020, before making modest gains throughout the summer of 2020. Traffic volumes increased in 2021 by 74% between June of 2020 and 2021 and by 15% between September 2020 and 2021. The traffic volume of 10,672 in 2021 is still 15% lower than the recorded traffic volume in 2019 which was recorded at 12,592 vehicles per day.

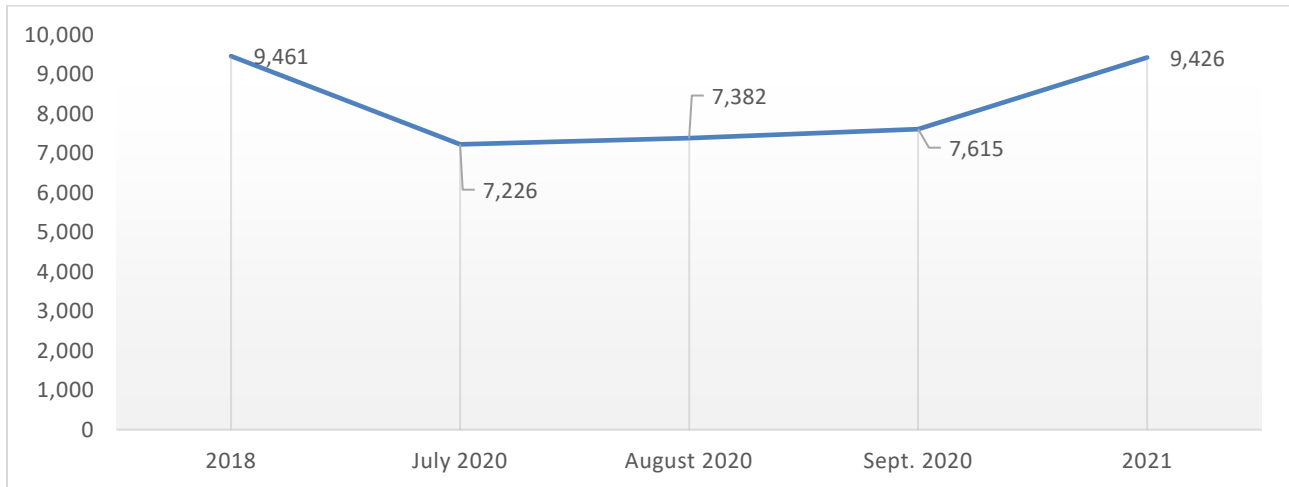
**Figure 2-18: Rte. 110 (Littleton Rd.) at Chelmsford/ Westford town line.**



Route 110 at the Chelmsford and Westford town line saw traffic volumes drop from 10,283 to 6,792 vehicles in July 2020. Unlike other roadways that were studied throughout the pandemic this corridor seemed to flat line after hitting the low in July of 2020 only gaining 486 vehicles

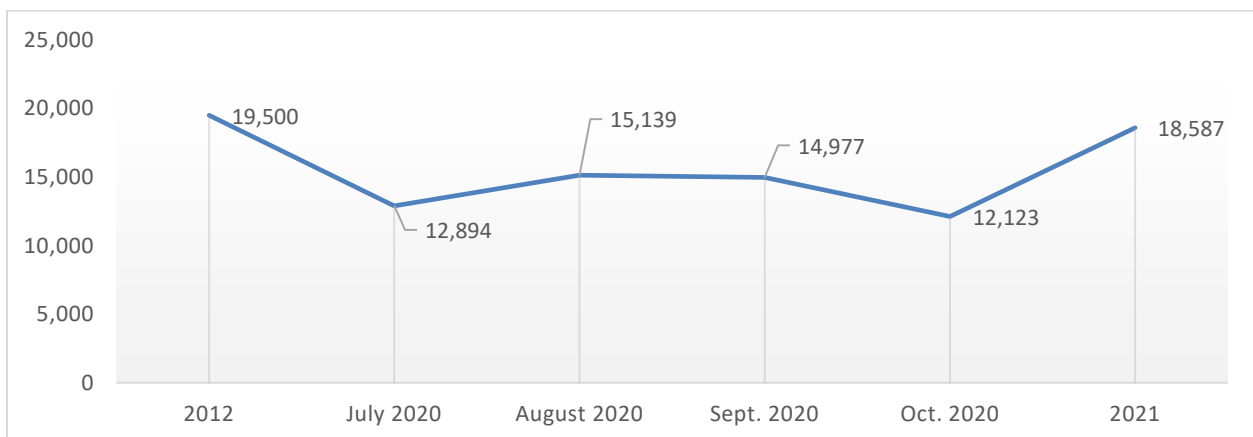
per day on average between July and September of 2020. An increase of almost 24% traffic volume occurred between the count conducted in September 2020 and 2021. The ADT of 9,426 recorded in 2021 is just slightly lower than the traffic volumes recorded in 2018 at the same location.

**Figure 2-19: Rte. 40 (Groton Rd.) East of Rte. 3 northbound, Chelmsford.**



Route 40 east of Route 3 northbound, saw a more extreme flattening of traffic volume between July and September of 2020 with an increase of only 389 vehicles per day. However, the drop from historical traffic volumes as seen in 2018 with an ADT of 9,461 to the low in July with an ADT of 7,226 was less of a severe drop in traffic volume than what we see on many of our other transportation corridors in the region. By 2021, traffic volumes once again rose to pre-pandemic levels with an ADT of 9,426 vehicles per day.

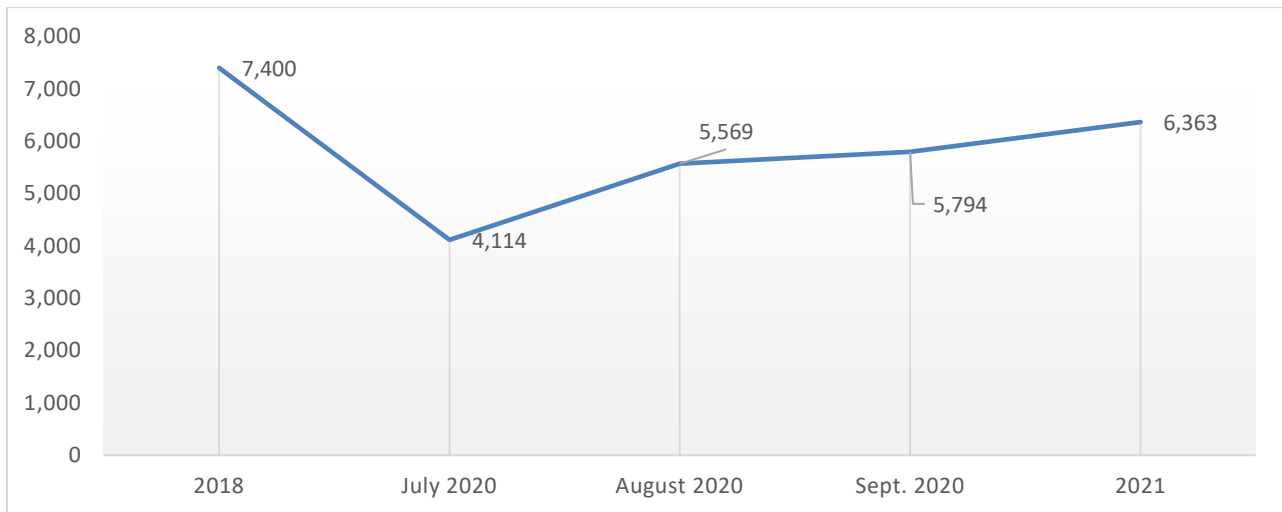
**Figure 2-20: Rte. 3A (Boston Rd.) North of Community Rd., Billerica.**



Route 3A in Billerica is the main transportation corridor for goods and people throughout Billerica. The section of roadway studied here was the extreme south end of Billerica near the Bedford town line. In 2012 this section of Rte. 3A saw an ADT of 19,500 which dropped to an ADT of 12,894 by July of 2020. What is interesting about this roadway was after the second lowest point in July of 2020 was hit traffic

starts climbing back up through July and plateaued in August. By September the volume starts to drop again until we hit an ADT of 12,123 in October 2020. It seems that this roadway saw an increase of traffic in the summer months when school was out but once the school year started again numbers drop once again until they are actual lower than the June 2020 numbers. In 2021 traffic volumes increased from a low of 12,123 ADT in October of 2020 to 18,587 vehicles in 2021, marking an increase in traffic by 53%. Traffic volumes in 2021 were almost 5% less than what was recorded in 2012 at the same location.

**Figure 2-21: Rte. 3A (Gorham St.) at Chelmsford/ Lowell city line.**



The final modified count location is located at Route 3A at the Lowell and Chelmsford border. As shown in Figure 2-21, this roadway saw a dramatic drop of in traffic volume from the last historical pre-pandemic count in 2018 to the one conducted in July of 2020. Just like the traffic counts conducted on Route 3A north of Community Road in Billerica, this section of 3A only saw modest increase through the summer and fall of 2020. Traffic volume increased in 2021 with an ADT of 6,363, a 10% increase in traffic volume when compared to September of 2020, and an increase of 55% from the lowest traffic volumes recorded in July of 2020.

A trend noticed while collecting traffic data in 2020 was the increase in non-passenger vehicles on the road. In the spring and early summer of 2020 as people were staying home from work, school and daily errands, the number of vehicles making home deliveries such as Amazon, FedEx and UPS increased dramatically. People turned to on-line shopping and grocery delivery systems to do the shopping that they would normally do in person at a brick and motor store. As things started to open up and people returned to offices, schools and stores, heavy vehicle percentages began to drop when compared to 2020 numbers. Table 2-6, found below, illustrates the drop some roadways saw in heavy vehicle traffic in 2021 when compared to that same location in 2020.

**Table 2-6: 2020 & 2021 Percent Heavy Vehicles for Repeated Traffic Counts**

| 2020 Repeating Traffic Count Locations                  | Communities                | % Heavy Vehicles at Last Count in 2020 | % Heavy Vehicles in 2021 | % Change in Heavy Vehicles 2020 - 2021 |
|---|----------------------------|--|--------------------------|--|
| Rte. 3A (Gorham St)                                     | Chelmsford/<br>Lowell      | 12.4                                   | 12.2                     | -1.6                                   |
| Rte. 110 (Littleton Rd) @ Chelmsford/Westford Town Line | Chelmsford/<br>Westford    | 11.5                                   | 7.7                      | -33.0                                  |
| Rte. 113 (Pleasant St/Dunstable Rd)                     | Dunstable/<br>Pepperell    | 13.7                                   | 13.7                     | 0.0                                    |
| Rte. 40 (Groton Rd) E Rte. 3 NB                         | Chelmsford                 | 9.5                                    | 8.3                      | -12.6                                  |
| East St W of Whittemore St                              | Tewksbury                  | 12.2                                   | 5.8                      | -52.5                                  |
| Mammoth Rd  | Dracut/ Lowell             | 8.9                                    | 5.1                      | -42.7                                  |
| Rte. 4 (Nashua Rd/Boston Rd)                            | Billerica/<br>Chelmsford   | 7.6                                    | 4.6                      | -39.5                                  |
| Rte. 3A (Boston Rd) N of Community Rd                   | Billerica                  | 4.5                                    | 3.1                      | -31.1                                  |
| Woburn St S of I-495                                    | Lowell                     | 13.8                                   | 7.5                      | -45.7                                  |
| Rte. 110 (VFW Highway/Merrimack Ave)                    | Dracut/ Lowell             | 19.4                                   | 4.0                      | -79.4                                  |
| Boston Rd S of Hildreth St                              | Westford                   | 12.2                                   | 11.6                     | -4.9                                   |
| Rte. 113 (Kendall Rd/Main St)                           | Dunstable/<br>Tyngsborough | 15.3                                   | 11.8                     | -22.9                                  |

In the spring of 2021 COVID restrictions were loosened slightly as the first wave receded and more people felt comfortable returning to public life. Offices were partially opened, classrooms saw children in them again and more people began to shop at brick and mortar stores rather than purchase all their necessities on-line and have them delivered. These events led to a decrease in the percentage of heavy vehicles on the roadways as the number of passenger vehicles increased.

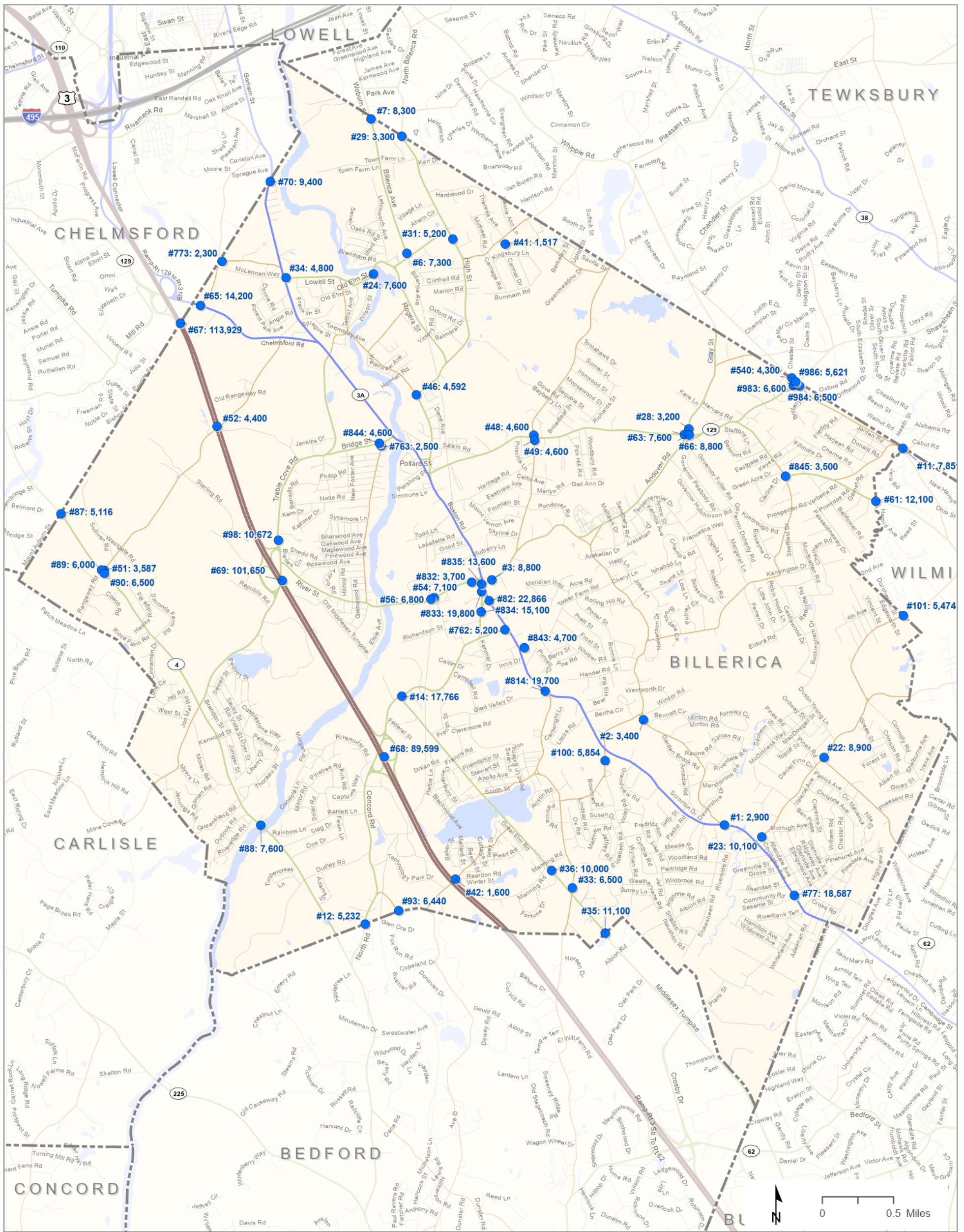
All but one of the twelve roadways monitored in 2020 and counted again in 2021, experienced a reduction in the amount of heavy vehicles found on the roadways. Route 113 on the Dunstable and Pepperell town line was the outlier that showed no change in heavy vehicle traffic between 2020 and 2021. This location had a heavy vehicle percentage of 11.7% when it was counted in 2019. Route 110 on the Dracut and Lowell line had the largest drop in heavy vehicles going from 19.4% in 2020 to 4.0% in 2021. When this location was counted in 2014, the percentage of heavy vehicles was 5.8% of the total traffic volume.

## 2.6 NORTHERN MIDDLESEX TRAFFIC COUNT INVENTORY

The database of traffic counts in the Northern Middlesex region, compiled over the past twelve years, is presented in Tables 2-7 through 2-15. This data includes Average Daily Traffic volumes from 2011 through 2021 collected by NMCOG as well as various other organizations. The data is broken out by community and presented in alphabetical order. Traffic count locations are shown on Maps 2-3 through 2-11, with each community represented in alphabetical order. Detailed traffic volume data, including volume data prior to 2010, is available by contacting NMCOG staff at (978) 454-8021 or by emailing [dtilton@nmcog.org](mailto:dtilton@nmcog.org). The traffic volumes presented in this report can be broken down by time of day and day of week, upon request. This traffic count inventory and report can also be found on the NMCOG website: [www.nmcog.org](http://www.nmcog.org).



# Map 2-3: Billerica Traffic Count Locations 2010-2021



● Traffic Count Location (labeled by ID)

### Roads by Functional Classification

- Interstate
- Principal Arterial
- Rural Minor Arterial/Urban Principal Arterial
- Rural Major Collector/Urban Minor Arterial
- Rural Minor Collector/Urban Collector
- Local Roadway
- Urbanized Area (2010)
- Town Boundary

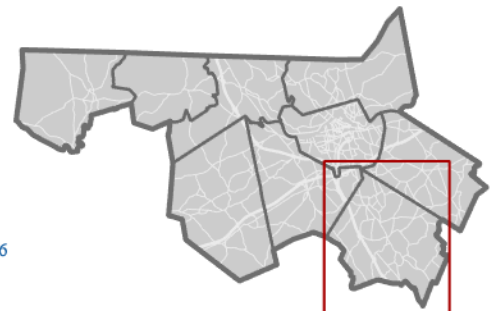
**Sources:**  
MassDOT/NMCOG (traffic counts; roads; 2010 urbanized area);  
MassGIS (town boundaries);  
MassDEP (water).

Data provided on this map is not sufficient for either boundary determination or regulatory interpretation.

Produced 3/1/2022 by NMCOG



**Northern Middlesex  
Council of Governments**  
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Lowell, Massachusetts 01852-2686  
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Map 2.3 Billerica Traffic Counts back

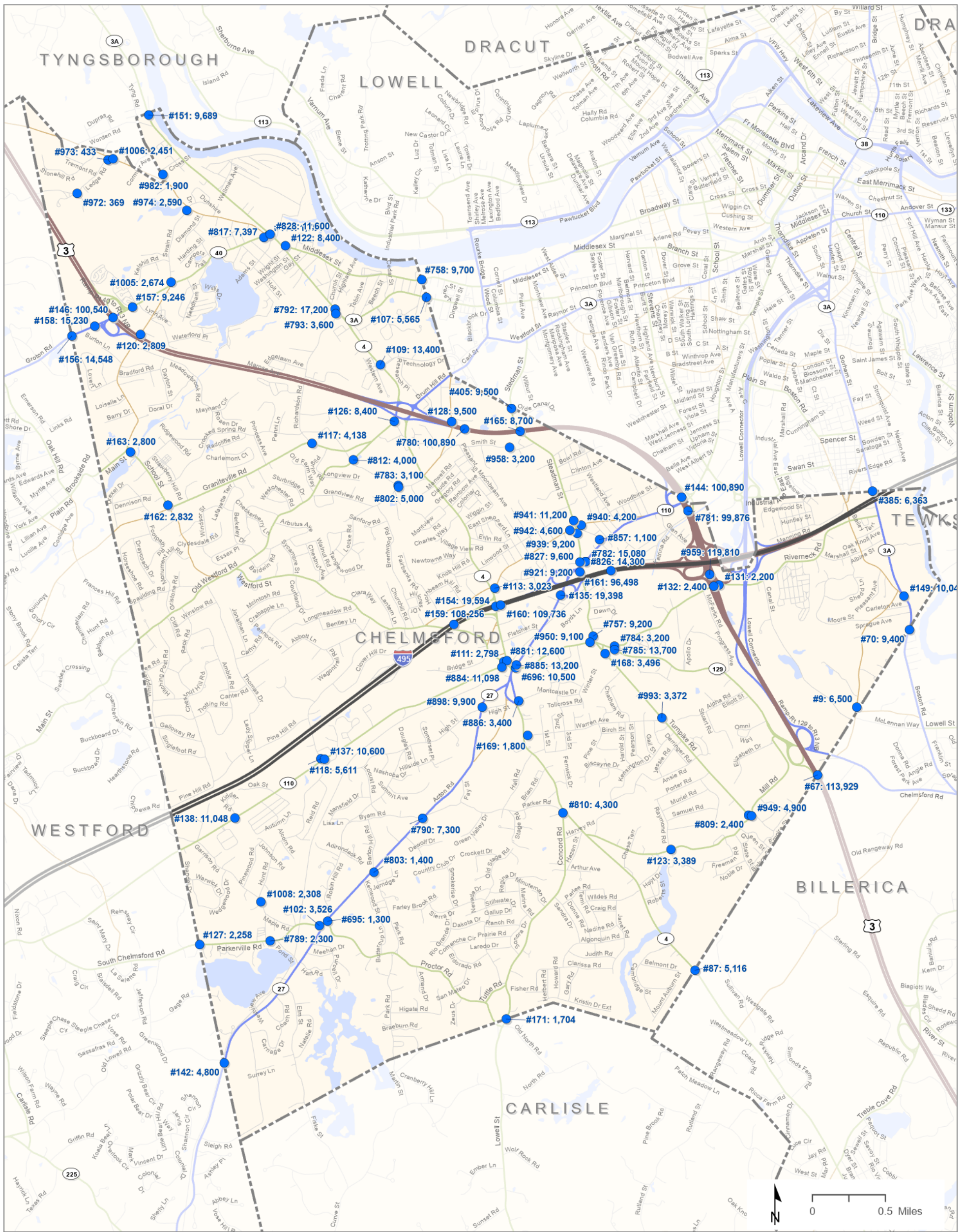
Table 2-7: Town of Billerica Traffic Volumes, 2011 - 2021

| NMCOG ID | Town of Billerica Traffic Locations                        | Counted By | Average Daily Traffic Volumes |          |          |          |          |          |          |          |          |          |          | Growth Rate | % Heavy Vehicles (Most Recent Count) |
|----------|--|------------|-------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------------|--------------------------------------|
|          |  |            | ADT 2011                      | ADT 2012 | ADT 2013 | ADT 2014 | ADT 2015 | ADT 2016 | ADT 2017 | ADT 2018 | ADT 2019 | ADT 2020 | ADT 2021 |             |                                      |
| 101      | Alexander St @ Wilmington Town Line                        | NMCOG      |                               |          | 5,800    |          |          |          |          |          |          |          | 5,474    |             | 39                                   |
| 773      | Alpine St E of Brick Kiln Rd                               | NMCOG      | 2,000                         |          |          | 2,300    |          |          |          |          |          |          |          |             | 2.2                                  |
| 983      | Andover Rd S of Whipple Rd                                 | NMCOG      |                               |          |          |          |          |          | 6,600    |          |          |          |          |             | 3.2                                  |
| 845      | Baldwin Rd S of Rte. 129 (Salem Rd)                        | NMCOG      | 3,800                         |          |          |          | 3,500    |          |          |          |          |          |          |             | 2.8                                  |
| 6        | Billerica Ave N of "T" Station entrance                    | NMCOG      |                               | 6,500    |          |          |          |          |          | 7,300    |          |          |          |             | 3.8                                  |
| 7        | Billerica Ave/Woburn St @ Billerica/Tewksbury Town Line    | NMCOG      |                               |          | 7,900    | 8,300    |          |          |          |          |          |          |          |             | 4.5                                  |
| 763      | Bridle Rd S of Bridge St                                   | NMCOG      | 2,600                         |          |          | 2,500    |          |          |          |          |          |          |          |             | 1.9                                  |
| 762      | Charnstaffe Ln W of Rte. 3A (Boston Rd)                    | NMCOG      |                               |          | 5,200    |          |          |          |          |          |          |          |          |             |                                      |
| 12       | Concord Rd @ Bedford Town Line                             | NMCOG      | 5,900                         |          |          | 6,900    |          |          | 6,900    |          |          | 5,232    |          | -1.42       | 12.7                                 |
| 14       | Concord Rd E of Middlesex Turnpike                         | NMCOG      |                               | 15,700   | 15,900   |          | 15,100   | 15,600   |          | 15,800   | 21,467   |          | 17,766   | 1.64        | 11.0                                 |
| 23       | Cook St E of Rte. 3A (Boston Rd)                           | NMCOG      |                               | 10,100   |          |          |          |          |          |          |          |          |          |             |                                      |
| 22       | Cook St N of Bicknell Rd                                   | NMCOG      |                               |          |          | 8,900    |          |          |          |          |          |          |          |             | 4.4                                  |
| 24       | Faulkner St @ Concord River                                | NMCOG      |                               |          | 7,600    |          |          |          |          |          |          |          |          |             |                                      |
| 31       | High St between Mt Pleasant & Alrose Dr.                   | NMCOG      |                               |          |          | 5,200    |          |          |          |          |          |          |          |             | 5.3                                  |
| 32       | High St E of Pollard St                                    | MassDOT    |                               |          |          | 6,755    |          |          |          |          |          |          |          |             | 5.0                                  |
| 29       | High St/North Billerica Rd @ Billerica/Tewksbury Town Line | NMCOG      | 2,600                         |          |          | 3,300    |          |          |          |          |          |          |          |             | 3.3                                  |
| 33       | Lexington Rd E of Middlesex Turnpike                       | NMCOG      |                               | 6,700    |          |          |          | 6,500    |          |          |          |          |          |             | 3.7                                  |
| 34       | Lowell St E of Rte. 3A (Boston Rd)                         | NMCOG      |                               | 4,800    |          |          |          |          |          |          |          |          |          |             |                                      |
| 35       | Middlesex Turnpike @ Bedford Town Line                     | NMCOG      |                               |          |          |          | 11,100   |          |          |          |          |          |          |             | 7.8                                  |
| 41       | Oak St E of Sheldon St                                     | NMCOG      | 1,300                         |          |          | 1,500    |          |          | 1,600    |          |          | 1,517    |          | 0.19        | 6.6                                  |
| 42       | Orchard Rd N of Rte. 3 Bridge                              | NMCOG      | 1,500                         |          |          | 1,600    |          |          |          |          |          |          |          |             | 0.5                                  |

2021 NORTHERN MIDDLESEX REGIONAL TRAFFIC VOLUME REPORT

| NMCOG ID | Town of Billerica Traffic Locations         | Counted By          | Average Daily Traffic Volumes |          |          |          |          |          |          |          |          |          |          | Growth Rate | % Heavy Vehicles (Most Recent Count) |
|----------|---|---------------------|-------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------------|--------------------------------------|
|          |   |                     | ADT 2011                      | ADT 2012 | ADT 2013 | ADT 2014 | ADT 2015 | ADT 2016 | ADT 2017 | ADT 2018 | ADT 2019 | ADT 2020 | ADT 2021 |             |                                      |
| 46       | Pollard St N of High St                     | NMCOG               | 6,400                         |          |          | 5,900    |          |          | 6,000    |          |          | 4,592    |          | -3.69       | 6.4                                  |
| 48       | Pond St N of Rte. 129 (Salem Rd)            | NMCOG               |                               | 4,600    | 4,600    |          |          |          |          |          |          |          |          |             |                                      |
| 49       | Pond St S of Rte. 129 (Salem Rd)            | NMCOG               |                               | 4,600    |          |          |          |          |          |          |          |          |          |             |                                      |
| 51       | Rangeway Rd N of Rte. 4(Nashua Rd)          | NMCOG               |                               |          |          |          |          |          |          |          | 3,587    |          |          |             | 14.5                                 |
| 52       | Rangeway Rd over Rte. 3                     | MassDOT, NMCOG (11) | 4,100                         |          |          |          | 4,400    |          |          |          |          |          |          |             | 5.2                                  |
| 54       | River St E of Parker Rd                     | Multiple Agencies   |                               |          | 7,100    |          |          |          |          |          |          |          |          |             |                                      |
| 65       | Rte. 129 (Chelmsford Rd) E of Brick Kiln Rd | NMCOG               |                               | 14,200   |          |          |          |          |          |          |          |          |          |             |                                      |
| 61       | Rte. 129 (Salem Rd) @ Wilmington Town Line  | NMCOG               |                               | 12,100   |          |          |          |          |          |          |          |          |          |             |                                      |
| 66       | Rte. 129 (Salem Rd) E of Gray Rd            | NMCOG               | 8,800                         |          |          |          |          |          |          |          |          |          |          |             |                                      |
| 68       | Rte. 3 S of Concord Rd                      | MassDOT             | 88,606                        | 95,209   |          |          | 101,112  |          | 106,813  | 107,881  | 110,039  | 93,533   | 89,599   | -0.65       |                                      |
| 69       | Rte. 3 S of Treble Cove Rd                  | MassDOT             | 90,503                        | 94,163   |          | 101,650  |          | 110,790  | 111,676  | 112,793  | 115,049  | 97,792   |          | 0.43        |                                      |
| 77       | Rte. 3A (Boston Rd) N of Community Rd       | NMCOG               |                               | 19,500   |          |          |          |          |          |          |          | 12,123   | 18,587   | -0.52       | 3.1                                  |
| 814      | Rte. 3A (Boston Rd) N of Lexington Rd       | NMCOG               |                               | 19,700   |          |          |          |          |          |          |          |          |          |             |                                      |
| 82       | Rte. 3A (Boston Rd) S of Concord Rd         | MassDOT             | 23,454                        |          |          | 22,866   |          |          |          |          |          |          |          |             |                                      |
| 88       | Rte. 4 (Nashua Rd) @ Concord River          | NMCOG               | 7,600                         |          |          |          |          |          |          |          |          |          |          |             |                                      |
| 89       | Rte. 4 (Nashua Rd) N of Rangeway Rd         | NMCOG               |                               |          |          |          | 6,000    |          |          |          |          |          |          |             | 3.3                                  |
| 985      | Shawsheen E of Whipple Rd                   | NMCOG               |                               |          |          |          |          |          | 6,500    |          |          |          |          |             | 3.5                                  |
| 93       | Springs Rd @ Bedford Town Line              | NMCOG               |                               |          | 3,000    |          |          | 4,000    |          |          | 6,440    |          |          | 19.11       | 4.7                                  |
| 843      | Tower Farm Rd E of Rte. 3A (Boston Rd)      | NMCOG               | 5,800                         |          |          |          |          |          |          | 4,700    |          |          |          |             | 1.5                                  |
| 98       | Treble Cove Rd N of Rte. 3                  | NMCOG               |                               |          | 10,300   |          |          | 8,100    |          |          | 10,672   |          |          | 0.60        | 6.2                                  |
| 986      | Whipple Rd N of Shawsheen St                | NMCOG               |                               |          |          |          |          |          | 5,600    |          |          |          | 5,621    |             | 3.2                                  |
| 984      | Whipple Rd S of Shawsheen St                | NMCOG               |                               |          |          |          |          |          | 6,500    |          |          |          |          |             | 3.8                                  |
| 100      | Wyman Rd S of Rte. 3A(Boston Rd)            | NMCOG               | 8,100                         |          |          | 8,000    |          |          | 7,700    |          |          | 5,854    |          | -4.47       | 21.7                                 |

# Map 2-4: Chelmsford Traffic Count Locations 2010-2021



**● Traffic Count Location (labeled by ID)**

**Roads by Functional Classification**

- Interstate
- Principal Arterial
- Rural Minor Arterial/Urban Principal Arterial
- Rural Major Collector/Urban Minor Arterial
- Rural Minor Collector/Urban Collector
- Local Roadway
- Urbanized Area (2010)
- - - Town Boundary

**Sources:**  
 MassDOT/NMCOG (traffic counts; roads; 2010 urbanized area);  
 MassGIS (town boundaries);  
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Data provided on this map is not sufficient for either boundary determination or regulatory interpretation.

Produced 3/1/2022 by NMCOG

**massDOT**  
 Massachusetts Department of Transportation  
 Highway Division

**Northern Middlesex Council of Governments**  
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 Lowell, Massachusetts 01852-2686  
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Map 2.4 Chelmsford Traffic Counts back

**Table 2-8: Town of Chelmsford Traffic Volumes, 2011 - 2021**

| NMCOG ID | Town of Chelmsford Traffic Locations               | Counted By          | Average Daily Traffic Volumes |          |          |          |          |          |          |          |          |          |          | Growth Rate | % Heavy Vehicles (Most Recent Count) |
|----------|--|---------------------|-------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------------|--------------------------------------|
|          |  |                     | ADT 2011                      | ADT 2012 | ADT 2013 | ADT 2014 | ADT 2015 | ADT 2016 | ADT 2017 | ADT 2018 | ADT 2019 | ADT 2020 | ADT 2021 |             |                                      |
| 171      | Concord Rd @ Carlisle Town Line                    | NMCOG               | 2,500                         |          | 2,400    | 2,400    |          | 2,600    | 2,700    |          | 2,550    | 1,704    |          | -3.98       | 5.1                                  |
| 810      | Concord Rd S of Rte. 4 (Boston Rd)                 | NMCOG               |                               | 4,300    |          |          |          |          |          |          |          |          |          |             |                                      |
| 940      | Dalton Rd E of Steadman St                         | NMCOG               |                               |          |          | 4,100    | 4,100    | 4,200    |          |          |          |          |          | 0.02        | 1.8                                  |
| 113      | Dalton Rd W of Rte. 4 (North Rd)                   | NMCOG               |                               |          | 2,900    |          |          | 3,000    |          |          | 3,023    |          |          | 0.85        | 3.1                                  |
| 942      | Dalton Rd W of Steadman St                         | NMCOG               |                               |          |          | 4,700    | 4,700    | 4,600    |          |          |          |          |          | -0.02       | 2.1                                  |
| 783      | Davis Rd W of Locke Rd                             | NMCOG               |                               |          |          |          | 3,100    |          |          |          |          |          |          |             | 3.1                                  |
| 1006     | Dunstable Rd S of Ledge Rd                         | NMCOG               |                               |          |          |          |          |          |          | 2,270    | 2,451    |          |          |             | 9.8                                  |
| 1012     | Dunstable Rd W of Marinel Ave                      | NMCOG               |                               |          |          |          |          |          |          |          |          | 1,376    |          |             | 12.5                                 |
| 116      | Dunstable Rd W of Rte. 40 (Groton Rd)/Vinal Square | NMCOG               |                               |          |          |          | 2,200    |          |          |          |          | 1,704    |          |             | 12.5                                 |
| 1008     | Garrison Rd S of Hunt Rd                           | NMCOG               |                               |          |          |          |          |          |          |          | 2,308    |          |          |             | 7.3                                  |
| 757      | Golden Cove Rd N of Rte. 129 (Billerica Rd)        | NMCOG               | 9,100                         |          |          | 8,900    | 9,400    | 9,200    | 9,200    |          |          |          |          | 0.22        | 4.2                                  |
| 921      | Golden Cove Rd S of Rte. 110 (Chelmsford St)       | NMCOG               |                               |          |          |          | 9,400    | 9,400    | 9,200    |          |          |          |          | -2.13       | 4.3                                  |
| 117      | Graniteville Rd S of Richardson Rd                 | NMCOG, MassDOT (07) |                               | 3,800    |          |          | 3,800    |          |          | 4,000    |          |          | 4,138    | 1.11        | 2                                    |
| 118      | Hunt Rd N of Rte. 110 (Littleton Rd)               | NMCOG               |                               |          | 4,900    |          |          |          |          |          | 5,611    |          |          |             | 5.4                                  |
| 159      | I-495 .5 km S of Rte. 4 (North Rd)                 | MassDOT             | 108,256                       |          |          |          |          | 198,788  | 198,192  | 203,439  | 204,660  | 156,974  |          | 5.63        | 11.0                                 |
| 973      | Ledge Rd S of Dunstable Rd                         | NMCOG               |                               |          |          |          |          |          | 340      | 427      | 433      |          |          | 0.27        | 56.9                                 |
| 972      | Ledge Rd S of Oak Hill Rd                          | NMCOG               |                               |          |          |          |          |          | 220      | 312      | 369      |          |          | 0.68        | 53.1                                 |
| 802      | Locke Rd S of Davis Rd                             | NMCOG               |                               |          |          |          | 5,000    |          |          |          |          |          |          |             | 3.4                                  |
| 119      | Lowell Connector S of Rte. I-495                   | MHD                 |                               |          |          |          |          | 29,451   | 29,687   | 30,140   | 33,092   | 25,072   |          | -4.96       |                                      |
| 120      | Main St N/E of Rte. 3                              | NMCOG               | 3,500                         |          |          |          |          |          |          |          | 2,809    |          |          |             | 8.6                                  |
| 102      | Maple Rd W of Rte. 27 (Acton Rd)                   | NMCOG               | 3,800                         |          |          | 3,900    |          |          | 4,300    |          |          | 3,526    |          | -0.90       | 4.6                                  |
| 758      | Middlesex St @ Lowell/Chelmsford Town Line         | MHD                 | 11,700                        |          |          |          | 9,700    |          |          |          |          |          |          |             | 3.7                                  |
| 122      | Middlesex St E of Princeton St                     | MHD                 |                               | 8,400    |          |          |          |          |          |          |          |          |          |             |                                      |
| 123      | Mill Rd E of Raymond Rd                            | NMCOG               |                               | 2,600    |          |          |          | 3,000    |          |          |          |          | 3,389    | 2.43        | 2.6                                  |
| 949      | Mill Rd E of Turnpike Rd                           | NMCOG               |                               |          |          |          |          | 4,900    |          |          |          |          |          |             | 2.7                                  |
| 982      | Mission Rd S of Cross St                           | NMCOG               |                               |          |          |          |          |          | 1,900    |          |          |          |          |             | 2.3                                  |

2021 NORTHERN MIDDLESEX REGIONAL TRAFFIC VOLUME REPORT

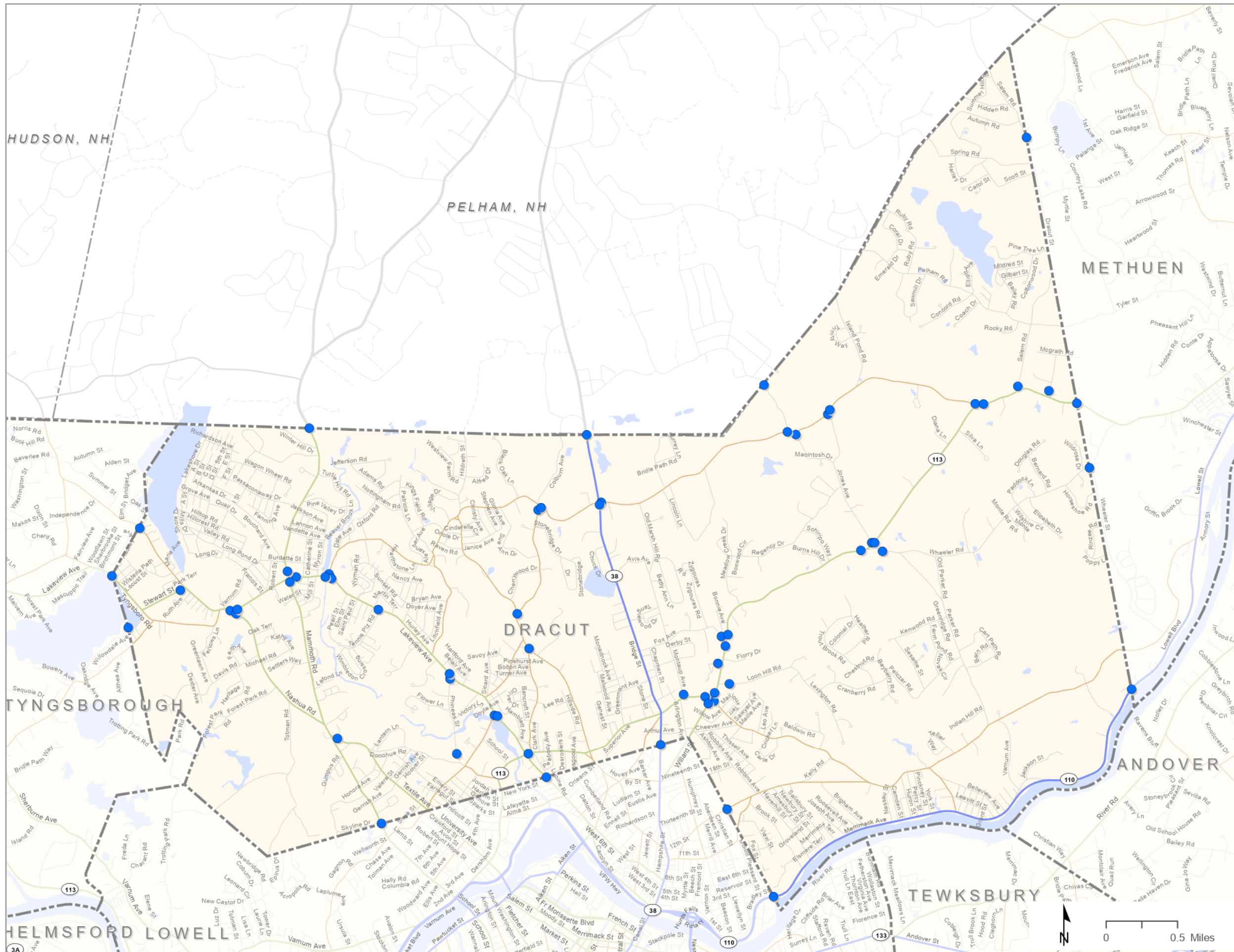
| NMCOG ID | Town of Chelmsford Traffic Locations                     | Counted By        | Average Daily Traffic Volumes |          |          |          |          |          |          |          |          |          |          | Growth Rate | % Heavy Vehicles (Most Recent Count) |
|----------|--|-------------------|-------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------------|--------------------------------------|
|          |  |                   | ADT 2011                      | ADT 2012 | ADT 2013 | ADT 2014 | ADT 2015 | ADT 2016 | ADT 2017 | ADT 2018 | ADT 2019 | ADT 2020 | ADT 2021 |             |                                      |
| 128      | Parkhurst Rd E of Rte. 3                                 | MHD               |                               |          | 9,500    |          |          |          |          |          |          |          |          |             |                                      |
| 695      | Proctor Rd S of Rte. 27 (Acton Rd)                       | NMCOG             |                               |          |          | 1,300    |          |          |          |          |          |          |          |             | 2.6                                  |
| 793      | Richardson Rd S of Rte. 3A (Princeton St)                | MHD               |                               | 3,600    |          |          |          |          |          |          |          |          |          |             |                                      |
| 131      | Riverneck Rd E of Rte. 3                                 | NMCOG             | 2,200                         |          |          |          |          |          |          |          |          |          |          |             |                                      |
| 784      | Riverneck Rd N of Rte. 129 (Billerica Rd)                | Multiple Agencies |                               | 3,300    |          | 3,100    | 3,200    |          |          |          |          |          |          | -1.52       | 3                                    |
| 132      | Riverneck Rd over Rte. 3                                 | Multiple Agencies |                               |          |          | 2,400    |          |          |          |          |          |          |          |             | 3.2                                  |
| 782      | Rte. 110 (Chelmsford St) E of Golden Cove Rd/Steadman St | MassDOT           | 15,080                        |          | 14,300   |          |          |          |          |          |          |          |          |             |                                      |
| 135      | Rte. 110 (Chelmsford St) S of I-495 Ramp                 | MHD               | 20,747                        | 22,046   |          |          | 19,398   |          |          |          |          |          |          | -2.17       |                                      |
| 137      | Rte. 110 (Littleton Rd) E of Hunt Rd                     | NMCOG             |                               |          |          |          |          |          |          |          | 11,098   |          |          |             | 13.1                                 |
| 138      | Rte. 110 (Littleton Rd) W of Kidder St                   | NMCOG             |                               |          |          |          |          | 9,300    |          |          | 11,048   |          |          |             | 10.1                                 |
| 884      | Rte. 110 (Littleton Rd) W of Rte. 4 (North Rd)           | NMCOG             |                               |          | 9,700    |          |          |          |          |          | 11,098   |          |          |             | 6                                    |
| 885      | Rte. 110 E of Chelmsford Center                          | NMCOG             |                               |          | 13,200   |          |          |          |          |          |          |          |          |             |                                      |
| 785      | Rte. 129 (Billerica Rd) E of Riverneck Rd                | NMCOG             |                               | 14,200   | 14,300   | 13,400   | 13,700   |          |          |          |          |          |          | -1.76       | 5.5                                  |
| 696      | Rte. 129 (Billerica Rd) E of Rte. 110 (Chelmsford St)    | MHD               |                               |          | 10,500   |          |          |          |          |          |          |          |          |             |                                      |
| 950      | Rte. 129 (Billerica Rd) W of Golden Cove Rd              | MHD               |                               |          |          |          | 9,100    |          |          |          |          |          |          |             | 6.0                                  |
| 142      | Rte. 27 (Acton Rd) @ Chelmsford/Westford Town Line       | NMCOG             | 4,149                         | 4,383    |          |          |          | 4,800    |          |          |          |          |          | 3.92        | 1.9                                  |
| 898      | Rte. 27 (Acton Rd) N of High St                          | MassDOT           |                               |          | 9,900    |          |          |          |          |          |          |          |          |             |                                      |
| 790      | Rte. 27 (Acton Rd) S of Byam Rd                          | MassDOT           |                               |          | 7,300    |          |          |          |          |          |          |          |          |             |                                      |
| 67       | Rte. 3 @ Billerica/Chelmsford Town Line                  | MassDOT           | 102,910                       | 104,899  |          |          | 113,929  | 119,398  | 120,353  | 121,557  | 123,988  | 95,624   |          | -0.88       |                                      |
| 144      | Rte. 3 @ Lowell/Chelmsford Town Line                     | MassDOT           | 87,147                        | 89,018   |          |          |          |          |          |          |          |          |          |             |                                      |
| 145      | Rte. 3 N of I-495  | MassDOT           |                               |          |          | 101,474  |          |          |          |          |          |          |          |             |                                      |
| 781      | Rte. 3 north I-495                                       | MassDOT           | 99,687                        | 102,097  | 99,876   |          |          | 110,599  | 111,484  | 112,599  | 114,851  | 97,623   |          | -0.26       |                                      |
| 959      | Rte. 3 S of I-495  | NMCOG             |                               |          |          |          | 119,810  |          |          |          |          |          |          |             |                                      |
| 780      | Rte. 3 S of Rte. 4 (North Rd)                            | NMCOG             |                               |          | 108,548  |          |          | 100,890  | 101,697  | 102,714  | 104,768  | 89,053   |          | -2.57       |                                      |
| 146      | Rte. 3 S of Rte. 40 (Groton Rd)                          | MHD               |                               |          |          |          | 100,540  |          |          |          |          |          |          |             | 6.0                                  |
| 385      | Rte. 3A (Gorham St) @ Chelmsford/Lowell Town Line        | NMCOG             |                               |          |          |          |          |          |          | 7,400    |          | 4,289    | 4,752    | -17.89      | 12.2                                 |
| 149      | Rte. 3A (Gorham St) S of Carlisle St (Chelmsford)        | MHD               |                               |          |          |          | 10,045   |          |          |          |          |          |          |             |                                      |
| 107      | Rte. 3A (Princeton St) @ Lowell/Chelmsford Town Line     | MassDOT           |                               | 5,300    |          | 5,000    | 5,600    |          |          | 5,900    |          |          | 5,565    | 0.63        | 2.9                                  |



2021 NORTHERN MIDDLESEX REGIONAL TRAFFIC VOLUME REPORT

| NMCOG ID | Town of Chelmsford Traffic Locations                                       | Counted By        | Average Daily Traffic Volumes |          |          |          |          |          |          |          |          |          |          | Growth Rate | % Heavy Vehicles (Most Recent Count) |
|----------|--|-------------------|-------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------------|--------------------------------------|
|          |  |                   | ADT 2011                      | ADT 2012 | ADT 2013 | ADT 2014 | ADT 2015 | ADT 2016 | ADT 2017 | ADT 2018 | ADT 2019 | ADT 2020 | ADT 2021 |             |                                      |
| 151      | Rte. 3A (Tyngsborough Rd/Middlesex Rd) @ Chelmsford/Tyngsborough Town Line | NMCOG             |                               |          | 7,400    |          |          | 7,400    |          |          | 9,689    |          |          | 5.16        | 3.9                                  |
| 87       | Rte. 4 (Nashua Rd/Boston Rd) @ Billerica/Chelmsford Town Line              | NMCOG, MHD (02)   |                               |          |          |          |          | 7,200    |          |          |          | 3,996    | 5,116    | -5.79       | 4.6                                  |
| 109      | Rte. 4 (North Rd) N of Technology Dr.                                      | MassDOT           | 14,700                        |          |          |          |          |          |          | 13,400   |          |          |          |             | 6.3                                  |
| 881      | Rte. 4 (North Rd) N of Westford St   | Multiple Agencies |                               |          | 12,600   |          |          |          |          |          |          |          |          |             |                                      |
| 154      | Rte. 4 (North Rd) over I-495   | NMCOG             |                               |          |          |          | 19,594   |          |          |          |          |          |          |             |                                      |
| 156      | Rte. 40 (Groton Rd) @ Chelmsford/Westford Town Line                        | NMCOG             |                               | 13,674   | 13,506   |          | 12,900   |          |          |          | 14,548   |          |          | 1.07        | 10.2                                 |
| 157      | Rte. 40 (Groton Rd) E Rte. 3 NB  | NMCOG             | 8,200                         |          |          |          | 8,100    |          |          | 9,461    |          | 7,615    | 9,246    | 2.36        | 8.3                                  |
| 158      | Rte. 40 (Groton Rd) W of Rte. 3 NB   | Multiple Agencies |                               |          |          |          |          |          |          | 14,548   | 15,230   |          |          |             | 8.7                                  |
| 817      | Rte. 40 (Groton Rd) W of Vinal Square                                      | NMCOG             |                               |          |          |          | 6,500    |          |          | 7,397    |          |          |          |             | 3.5                                  |
| 160      | Rte. I-495 N of Rte. 4 (North Rd)  | NMCOG             | 93,807                        | 99,806   |          |          |          | 109,736  | 109,407  | 112,303  | 110,856  | 86,721   |          | -0.94       |                                      |
| 161      | Rte. I-495 S of Rte. 3   | NMCOG             | 107,741                       | 109,853  | 96,498   |          |          | 107,611  | 107,288  | 114,002  | 120,048  | 101,642  |          | -0.71       |                                      |
| 162      | School St N of Graniteville Rd   | NMCOG             |                               |          | 2,832    |          |          |          |          |          |          |          |          |             | 1.0                                  |
| 163      | School St S of Main St   | NMCOG             |                               |          |          |          |          | 2,800    |          |          |          |          |          |             | 2.1                                  |
| 958      | Smith St W of Steadman St  | NMCOG             |                               |          |          |          | 3,200    |          |          |          |          |          |          |             | 1.7                                  |
| 941      | Steadman St N of Dalton Rd   | NMCOG             |                               |          |          | 10,900   | 10,500   | 11,200   |          |          |          |          |          | 0.03        | 3.4                                  |
| 827      | Steadman St N of Rte. 110 (Chelmsford St)                                  | HSH               |                               |          | 9,600    |          |          |          |          |          |          |          |          |             |                                      |
| 165      | Steadman St over Rte. 3  | NMCOG             |                               |          |          | 8,700    |          |          |          |          |          |          |          |             | 3.2                                  |
| 939      | Steadman St S of Dalton Rd   | NMCOG             |                               |          |          | 8,300    | 8,700    | 9,200    |          |          |          |          |          | 10.84       | 3.5                                  |
| 405      | Stedman St @ Lowell/Chelmsford Town Line                                   | Multiple Agencies |                               |          |          |          | 9,000    | 9,500    |          |          |          |          |          |             | 3.4                                  |
| 857      | Subway Ave N of Rte. 110 (Chelmsford St)                                   | NMCOG             |                               | 1,000    |          |          | 1,200    | 1,100    |          |          |          |          |          | 0.27        | 1                                    |
| 886      | Summer St E of Rte. 4(Boston Rd)   | NMCOG             |                               |          | 3,400    |          |          |          |          |          |          |          |          |             |                                      |
| 1005     | Swain Rd N of Rte. 40 (Groton Rd)  | NMCOG             |                               |          |          |          |          |          |          | 2,400    | 2,674    |          |          |             | 9.6                                  |
| 974      | Swain Rd S of Dunstable Rd   | NMCOG             |                               |          |          |          |          |          | 2,600    | 2,400    | 2,590    |          |          | 0.00        | 8.7                                  |
| 809      | Turnpike Rd N of Mill Rd   | NMCOG             |                               | 2,400    |          |          | 2,400    |          |          |          |          |          |          |             | 1.6                                  |
| 168      | Turnpike Rd S of Rte. 129 (Billerica Rd)                                   | NMCOG             |                               |          | 3,200    |          | 3,100    | 2,900    |          |          | 3,496    |          |          | 0.46        | 4.9                                  |
| 111      | Westford St N of Rte. 110 (Littleton Rd)                                   | NMCOG             |                               | 2,900    |          |          | 3,500    |          |          | 3,971    |          |          | 2,798    | -0.44       | 6.6                                  |

Map 2-5 Dracut 11x17 landscape



# Map 2-5: Dracut Traffic Count Locations 2010-2021

- Traffic Count Location (labeled by ID)
- Roads by Functional Classification
- Interstate
  - Principal Arterial
  - Rural Minor Arterial/Urban Principal Arterial
  - Rural Major Collector/Urban Minor Arterial
  - Rural Minor Collector/Urban Collector
  - Local Roadway
- Urbanized Area (2010)
  - Town Boundary

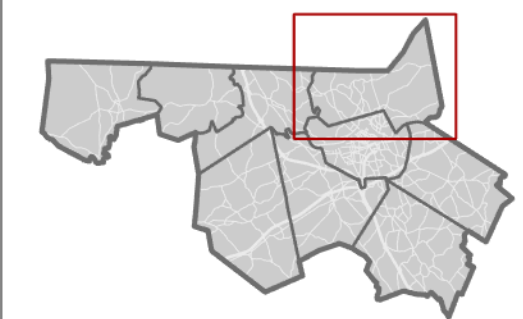
**Sources:**  
 MassDOT/NMCOG (traffic counts; roads; 2010 urbanized area); MassGIS (town boundaries); MassDEP (water).

Data provided on this map is not sufficient for either boundary determination or regulatory interpretation.

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Map 2-5 Dracut 11x17 landscape back

**Table 2-9: Town of Dracut Traffic Volumes, 2011 - 2021**

| NMCOG ID | Town of Dracut Traffic Locations           | Counted By   | Average Daily Traffic Volumes |          |          |          |          |          |          |          |          |          |          | Growth Rate | % Heavy Vehicles (Most Recent Count) |      |
|----------|--|--------------|-------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------------|--------------------------------------|------|
|          |  |              | ADT 2011                      | ADT 2012 | ADT 2013 | ADT 2014 | ADT 2015 | ADT 2016 | ADT 2017 | ADT 2018 | ADT 2019 | ADT 2020 | ADT 2021 |             |                                      |      |
| 172      | Arlington St E of Rte. 113                 | NMCOG        | 4,700                         |          |          |          | 5,500    |          |          |          |          |          |          |             |                                      | 4.1  |
| 176      | Colburn Ave E of Hildreth St               | NMCOG        | 2,100                         |          |          |          |          |          |          |          |          |          |          |             |                                      |      |
| 875      | Colburn Rd S of Cross Rd                   | NMCOG        |                               |          | 2,000    |          |          |          |          |          |          |          |          |             |                                      |      |
| 956      | Commercial Dr. N of Rte. 113 (Broadway Rd) | NMCOG        |                               |          |          |          | 2,100    |          |          |          |          |          |          |             |                                      | 31.9 |
| 876      | Cross Rd E of Colburn Rd                   | NMCOG        |                               |          | 5,000    |          |          |          |          |          |          |          |          |             |                                      |      |
| 177      | Donahue Rd E of Mammoth Rd                 | NMCOG        | 5,200                         |          |          |          |          |          |          |          |          |          |          |             |                                      |      |
| 954      | Fox Ave N of Rte. 113 (Broadway Rd)        | NMCOG        |                               |          |          |          | 2,400    |          |          |          |          |          |          |             |                                      | 1.8  |
| 180      | Jones Ave N of Rte. 113 (Broadway)         | NMCOG        |                               |          |          | 1,600    |          |          |          |          |          |          |          |             |                                      | 2.4  |
| 300      | Lakeview Ave @ Lowell/Dracut Town Line     | NMCOG        |                               |          |          | 8,600    |          |          |          |          |          |          |          |             |                                      | 3    |
| 877      | Lakeview Ave E of Nashua Rd                | NMCOG        |                               |          | 9,000    |          |          |          |          | 8,900    |          |          |          |             |                                      | 3.8  |
| 1013     | Lakeview Ave E of Primrose Hill Rd         | NMCOG        |                               |          |          |          |          |          |          |          |          | 13,994   |          |             |                                      | 6.7  |
| 1014     | Lakeview Ave W of Primrose Hill Rd         | NMCOG        |                               |          |          |          |          |          |          |          |          | 16,718   |          |             |                                      | 10.9 |
| 184      | Lakeview Ave W of Tennis Plaza Rd          | NMCOG        |                               |          |          | 16,000   |          |          |          |          |          |          |          |             |                                      | 9.6  |
| 951      | Loon Hill Rd E of Rte. 113 (Broadway Rd)   | NMCOG & NRPC |                               |          |          |          | 2,100    |          |          |          |          |          |          |             |                                      | 1.2  |
| 185      | Mammoth Rd @ Lowell/Dracut Town Line       | NMCOG        |                               | 14,500   |          | 12,000   | 12,100   |          |          |          |          | 11,744   | 13,081   | -1.22       |                                      | 5.1  |
| 186      | Mammoth Rd @ NH State Line                 | NMCOG        |                               | 8,900    |          |          |          | 9,500    |          |          |          |          |          |             |                                      | 3.3  |
| 187      | Mammoth Rd N of Lakeview Ave               | NMCOG        | 12,500                        |          |          | 11,200   |          |          | 11,100   |          |          | 10,051   |          | -2.45       |                                      | 4.2  |
| 188      | Mammoth Rd S of Lakeview Ave               | NMCOG        |                               |          | 9,800    |          |          |          |          |          |          |          |          |             |                                      |      |
| 189      | Marsh Hill Rd E of Rte. 38 (Bridge St)     | NMCOG        |                               |          |          |          |          | 4,900    |          | 6,032    |          |          |          |             |                                      | 2.4  |
| 1007     | Marsh Hill Rd S of Richardson Rd           | NMCOG        |                               |          |          |          |          |          |          | 5,220    |          |          |          |             |                                      |      |
| 190      | Marsh Hill Rd W of Jones Ave               | NMCOG        |                               | 3,400    |          |          |          |          |          | 5,322    |          |          |          |             |                                      |      |
| 191      | Methuen Rd E of Jones Ave                  | NMCOG        |                               |          |          | 4,400    |          |          |          |          |          |          |          |             |                                      | 2.5  |
| 192      | Methuen Rd W of Rte. 113                   | NMCOG        |                               |          |          |          |          | 3,700    |          |          |          |          |          |             |                                      | 2.0  |

2021 NORTHERN MIDDLESEX REGIONAL TRAFFIC VOLUME REPORT

| NMCOG ID | Town of Dracut Traffic Locations                               | Counted By        | Average Daily Traffic Volumes |          |          |          |          |          |          |          |          |          |          | Growth Rate | % Heavy Vehicles (Most Recent Count) |      |
|----------|--|-------------------|-------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------------|--------------------------------------|------|
|          |  |                   | ADT 2011                      | ADT 2012 | ADT 2013 | ADT 2014 | ADT 2015 | ADT 2016 | ADT 2017 | ADT 2018 | ADT 2019 | ADT 2020 | ADT 2021 |             |                                      |      |
| 193      | Methuen St @ Dracut/Lowell Town Line                           | NMCOG             |                               |          |          |          | 2,400    |          |          |          |          |          |          |             |                                      | 1.6  |
| 196      | Montaup Ave N of Rte. 113 (Arlington St/Broadway)              | NMCOG             |                               | 1,200    |          |          |          |          |          |          |          |          |          |             |                                      |      |
| 871      | Nashua Rd N of Lakeview Ave                                    | AC (2006)         |                               |          | 13,700   |          |          |          |          |          |          |          |          |             |                                      |      |
| 872      | Nashua Rd S of Lakeview Ave                                    | NRPC              |                               |          | 6,400    |          |          |          |          |          |          |          |          |             |                                      |      |
| 218      | Nashua Rd/Long Pond Rd @ Dracut/Tyngsborough Town Line         | NMCOG             |                               |          | 6,500    |          |          |          |          |          |          |          | 8,599    |             |                                      | 7.6  |
| 756      | Parker Ave S of Lakeview Ave                                   | NMCOG             | 3,600                         |          |          |          |          |          |          |          |          |          |          |             |                                      |      |
| 197      | Phineas St N of Hampson St                                     | NMCOG & MVPC      |                               |          |          | 4,100    |          |          |          |          |          |          |          |             |                                      | 2.4  |
| 198      | Phineas St S of Lakeview Ave                                   | NMCOG             |                               | 3,700    |          |          |          |          |          |          |          |          |          |             |                                      |      |
| 1011     | Primrose Hill Rd N of Lakeview Ave                             | NMCOG             |                               |          |          |          |          |          |          |          | 4,561    | 4,090    |          |             |                                      | 9.1  |
| 679      | Richardson Rd @ NH State Line                                  | NMCOG & MVPC      |                               |          |          |          | 1,100    |          |          | 1,300    |          |          |          |             |                                      | 2.3  |
| 200      | Rte. 110 (Merrimack Ave) @ Methuen Town Line                   | MassDOT           |                               | 13,100   |          |          |          |          |          |          |          |          |          |             |                                      |      |
| 199      | Rte. 110 (VFW Highway/Merrimack Ave) @ Lowell/Dracut Town Line | NMCOG             |                               |          |          | 14,600   |          |          |          |          |          | 9,416    | 15,301   | 0.80        |                                      | 4    |
| 207      | Rte. 113 (Arlington St) W of Broadway Rd                       | NMCOG             |                               |          |          |          | 12,500   |          |          |          |          |          |          |             |                                      | 6.8  |
| 202      | Rte. 113 (Broadway Rd) @ Methuen Town Line                     | NMCOG             |                               |          |          |          | 12,000   |          |          |          |          |          |          |             |                                      | 11.8 |
| 962      | Rte. 113 (Broadway Rd) E of Fox Ave                            | NMCOG             |                               |          |          |          |          | 11,500   |          |          |          |          |          |             |                                      | 4.6  |
| 203      | Rte. 113 (Broadway Rd) N of Arlington St                       | NMCOG             |                               |          |          |          | 12,500   |          |          |          |          |          |          |             |                                      | 4.6  |
| 204      | Rte. 113 (Broadway Rd) N of Jones Ave                          | Multiple Agencies |                               | 8,300    |          |          | 9,000    |          |          |          |          |          |          |             |                                      | 4.6  |
| 946      | Rte. 113 (Broadway Rd) N of Methuen Rd                         | NMCOG             |                               |          |          |          | 12,500   |          |          |          |          |          |          |             |                                      | 5.6  |
| 205      | Rte. 113 (Broadway Rd) S of Jones Ave                          | NMCOG             |                               |          |          |          | 9,900    |          |          |          |          |          |          |             |                                      | 3.7  |
| 963      | Rte. 113 (Broadway Rd) W of Fox Ave                            | NMCOG             |                               |          |          |          |          | 12,600   |          |          |          |          |          |             |                                      | 5.4  |
| 209      | Rte. 38 (Bridge St) @ NH State Line                            | NMCOG             | 12,667                        | 11,619   | 11,413   |          | 12,334   |          |          |          |          | 12,046   | 12,113   | -0.49       |                                      |      |
| 210      | Rte. 38 (Bridge St) S of Marsh Hill Rd                         | NMCOG             |                               |          |          |          |          | 11,400   |          |          |          |          |          |             |                                      | 4.1  |
| 947      | Salem Rd N of Rte. 113 (Broadway Rd)                           | NMCOG             |                               |          |          |          | 3,700    |          |          |          |          |          |          |             |                                      | 2.1  |

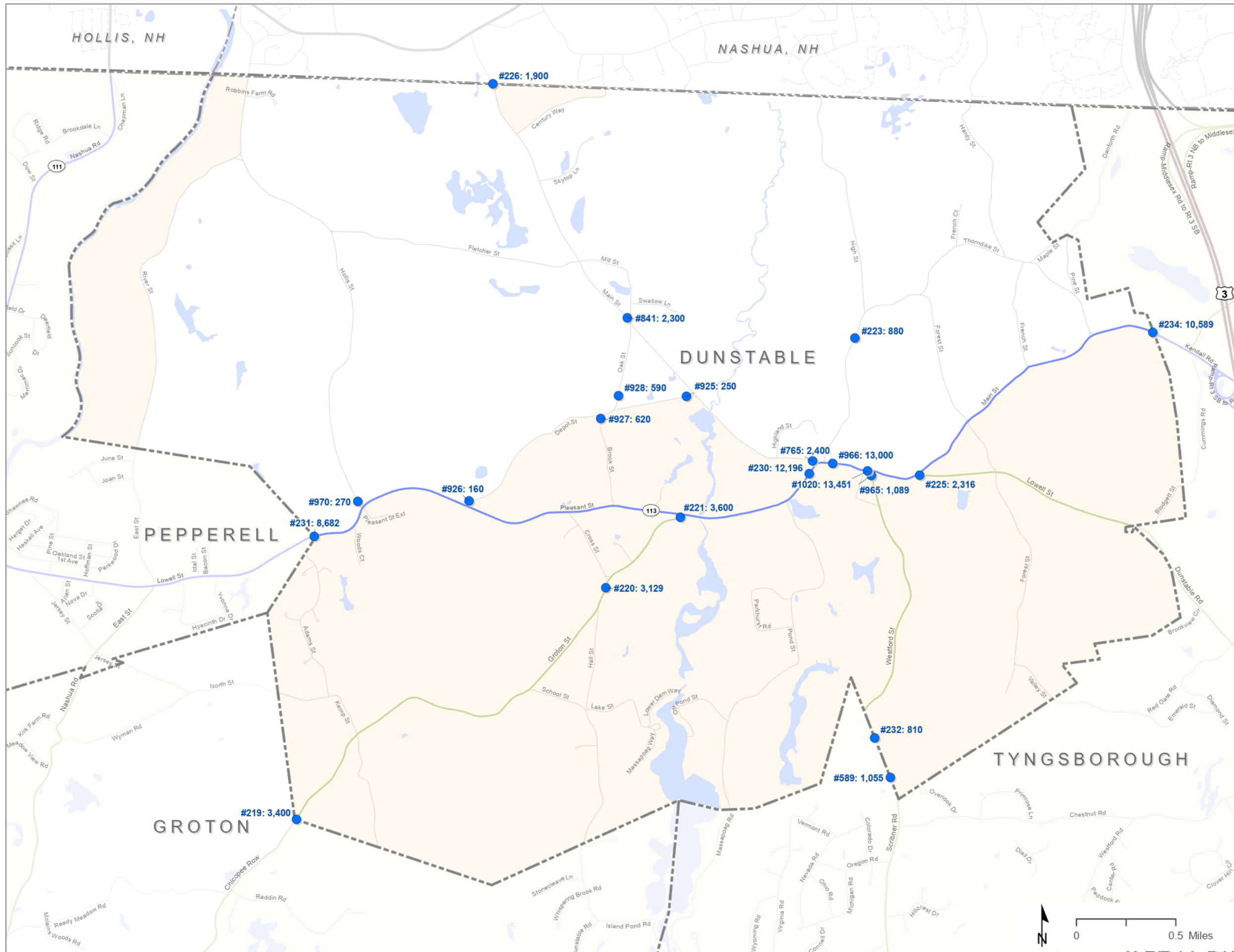
2021 NORTHERN MIDDLESEX REGIONAL TRAFFIC VOLUME REPORT

| NMCOG ID | Town of Dracut Traffic Locations              | Counted By | Average Daily Traffic Volumes |          |          |          |          |          |          |          |          |          |          | Growth Rate | % Heavy Vehicles (Most Recent Count) |     |
|----------|---|------------|-------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------------|--------------------------------------|-----|
|          |   |            | ADT 2011                      | ADT 2012 | ADT 2013 | ADT 2014 | ADT 2015 | ADT 2016 | ADT 2017 | ADT 2018 | ADT 2019 | ADT 2020 | ADT 2021 |             |                                      |     |
| 953      | Wheeler Rd @ Methuen Town Line                | NMCOG      |                               |          |          |          | 1,200    |          |          |          |          |          |          |             |                                      | 3.8 |
| 952      | Wheeler Rd E of Broadway Rd                   | NMCOG      |                               |          |          |          | 2,200    |          |          |          |          |          |          |             |                                      | 3.6 |
| 955      | Willard St S of Rte. 113 (Arlington St)       | NMCOG      |                               |          |          |          | 5,200    |          |          |          |          |          |          |             |                                      | 2.7 |
| 214      | Willowdale Rd @ Dracut/Tyngsborough Town Line | NMCOG      |                               |          |          |          |          |          |          |          | 4,038    |          |          |             |                                      |     |

Dracut Traffic Back



# Map 2-6: Dunstable Traffic Count Locations 2010-2021



- Traffic Count Location (labeled by ID)
- Roads by Functional Classification**
- Interstate
- Principal Arterial
- Rural Minor Arterial/Urban Principal Arterial
- Rural Major Collector/Urban Minor Arterial
- Rural Minor Collector/Urban Collector
- Local Roadway
- Urbanized Area (2010)
- Town Boundary

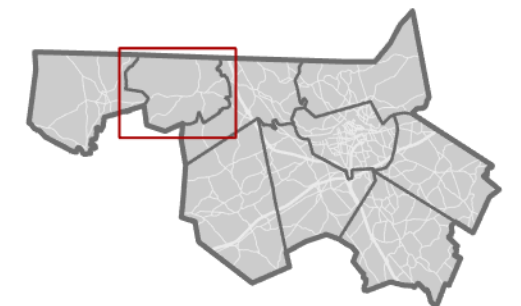
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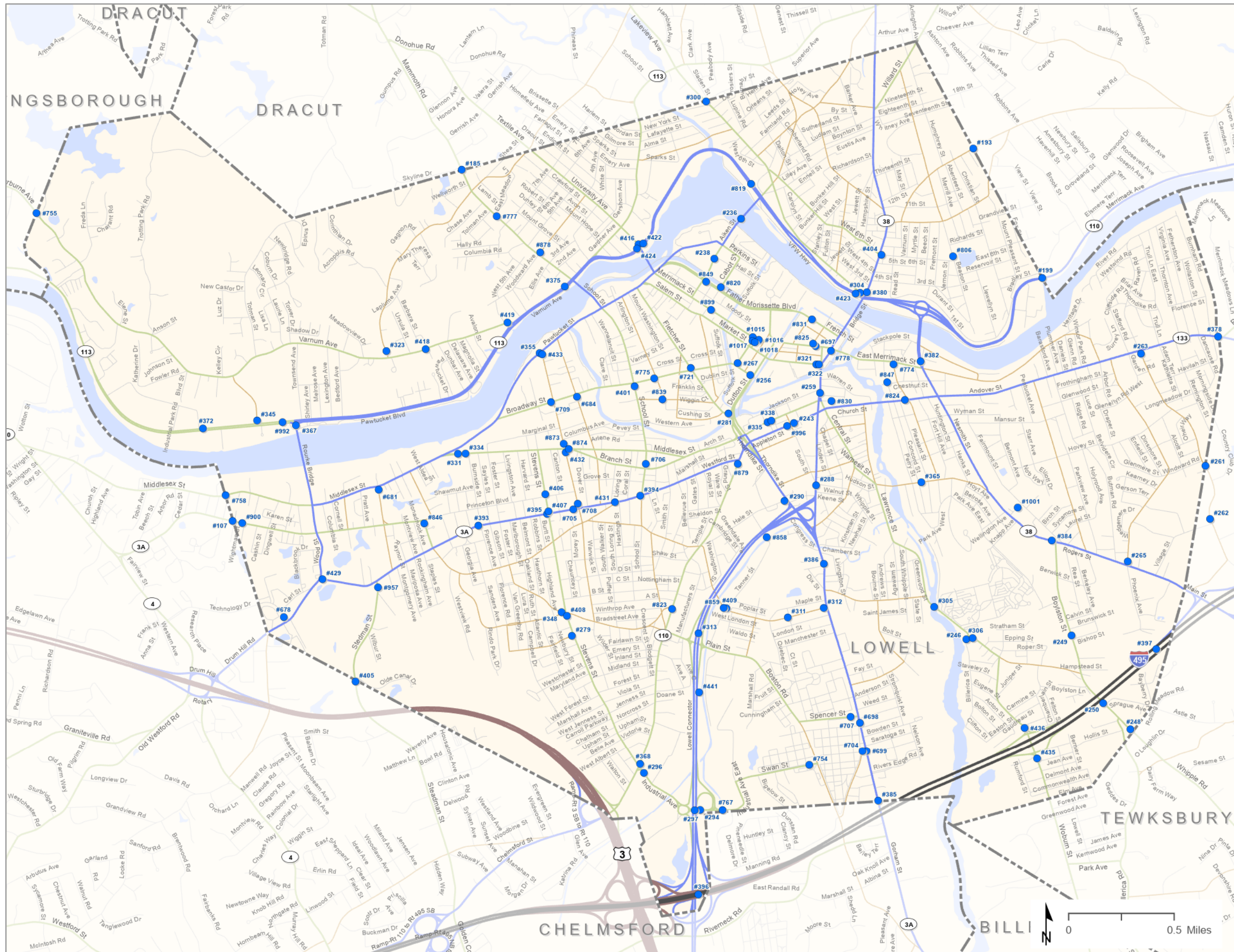


Map 2.6 Dunstable 11X17 back

**Table 2-10: Town of Dunstable Traffic Volumes, 2011 - 2021**

| NMCOG ID | Town of Dunstable Traffic Locations                                 | Counted By | Average Daily Traffic Volumes |          |          |          |          |          |          |          |          |          |          | Growth Rate | % Heavy Vehicles (Most Recent Count) |      |
|----------|---|------------|-------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------------|--------------------------------------|------|
|          |   |            | ADT 2011                      | ADT 2012 | ADT 2013 | ADT 2014 | ADT 2015 | ADT 2016 | ADT 2017 | ADT 2018 | ADT 2019 | ADT 2020 | ADT 2021 |             |                                      |      |
| 927      | Brook Street S of Depot St and Rte. 113 (Main St)                   | NMCOG      |                               |          |          | 620      |          |          |          |          |          |          |          |             |                                      | 4.3  |
| 926      | Depot Street E of Route 113 (Pleasant St)                           | NMCOG      |                               |          |          | 160      |          |          |          |          |          |          |          |             |                                      | 6.6  |
| 925      | Depot Street W of Main St (between Main and Oak St)                 | NMCOG      |                               |          |          | 250      |          |          |          |          |          |          |          |             |                                      | 1.4  |
| 220      | Groton St S of Cross St   | NMCOG      | 3,500                         |          |          |          |          | 2,500    |          |          |          | 3,129    |          |             | -1.33                                | 11.4 |
| 221      | Groton St S of Rte. 113 (Pleasant St)                               | NMCOG      |                               | 3,300    |          |          |          |          | 3,600    |          |          |          |          |             |                                      | 2.3  |
| 219      | Groton St/Chicopee Row @ Groton Town Line                           | NMCOG      |                               |          | 2,700    |          |          |          |          |          | 3,400    |          |          |             |                                      | 1.7  |
| 223      | High St S of Thorndike St   | NMCOG      |                               |          |          |          |          |          | 880      |          |          |          |          |             |                                      | 1.1  |
| 970      | Hollis St N of Rte. 113 (Pleasant St)                               | NMCOG      |                               |          |          |          |          |          | 270      |          |          |          |          |             |                                      | 5.7  |
| 225      | Lowell St @ Rte. 113 (Main St)                                      | NMCOG      |                               | 3,100    |          |          |          |          | 2,600    |          |          |          |          | 2,316       | -2.81                                | 2.5  |
| 1020     | Main St (Rte. 113) west of Westford Street                          | NMCOG      |                               |          |          |          |          |          |          |          |          |          | 13,451   |             |                                      | 16.6 |
| 226      | Main St @ NH State Line   | NMCOG      |                               |          | 1,600    |          |          |          |          |          | 1,900    |          |          |             |                                      | 1.3  |
| 841      | Main St N of Oak St   | NMCOG      | 2,100                         |          |          | 2,300    |          |          | 2,300    |          |          |          |          |             | 1.90                                 | 1.6  |
| 765      | Main St W of Rte. 113 (Pleasant St)                                 | NMCOG      | 2,400                         |          |          |          |          |          | 2,400    |          |          |          |          |             |                                      | 2.1  |
| 928      | Oak Street N of Depot Street  | NMCOG      |                               |          |          | 590      |          |          |          |          |          |          |          |             |                                      | 3.1  |
| 966      | Rte. 113 (Main St) E of High St                                     | NMCOG      |                               |          |          |          |          |          | 13,000   |          |          |          |          |             |                                      | 4.1  |
| 230      | Rte. 113 (Pleasant St) W of Main St                                 | NMCOG      |                               |          |          |          |          |          | 11,700   |          |          |          |          | 12,196      |                                      | 10.6 |
| 231      | Rte. 113 (Pleasant St/Dunstable Rd) @ Dunstable/Pepperell Town Line | NMCOG      |                               |          | 8,700    | 14,600   |          |          | 8,400    |          |          | 9,295    | 7,118    | 8,682       | -0.03                                | 13.7 |
| 965      | Westford St S of Rte. 113 (Main St)                                 | NMCOG      |                               |          |          |          |          |          | 1,100    |          |          |          |          | 1,089       |                                      | 8    |

Dunstable Traffic Back



# Map 2-7: Lowell Traffic Count Locations 2010-2021

- Traffic Count Location (labeled by ID)
- Roads by Functional Classification**

  - Interstate
  - Principal Arterial
  - Rural Minor Arterial/Urban Principal Arterial
  - Rural Major Collector/Urban Minor Arterial
  - Rural Minor Collector/Urban Collector
  - Local Roadway

- Urbanized Area (2010)
- Town Boundary

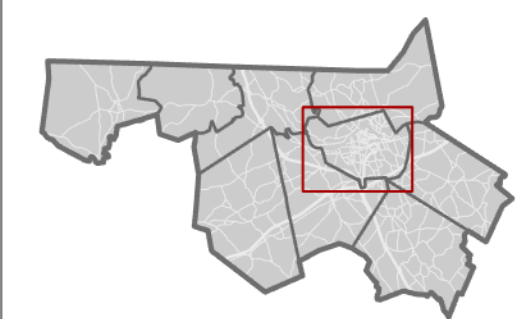
**Sources:**  
 MassDOT/NMCOG (traffic counts; roads; 2010 urbanized area);  
 MassGIS (town boundaries);  
 MassDEP (water).

Data provided on this map is not sufficient for either boundary determination or regulatory interpretation.

Produced 3/1/2022 by NMCOG



**Northern Middlesex Council of Governments**  
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 Lowell, Massachusetts 01852-2686  
 (978) 454-8021 nmco.org



Map 2-7 Lowell 11x17 landscape back

**Table 2-11: City of Lowell Traffic Volumes, 2011 - 2021**

| NMCOG ID | City of Lowell Traffic Locations                       | Counted By        | Average Daily Traffic Volumes |          |          |          |          |          |          |          |          |          |          | Growth Rate | % Heavy Vehicles (Most Recent Count) |     |
|----------|--|-------------------|-------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------------|--------------------------------------|-----|
|          |  |                   | ADT 2011                      | ADT 2012 | ADT 2013 | ADT 2014 | ADT 2015 | ADT 2016 | ADT 2017 | ADT 2018 | ADT 2019 | ADT 2020 | ADT 2021 |             |                                      |     |
| 878      | 4th St E of Mammoth Rd                                 | NMCOG             |                               |          | 1,900    |          |          |          |          |          |          |          |          |             |                                      |     |
| 236      | Aiken St S of Aiken St Bridge                          | NMCOG             |                               | 14,400   |          |          |          |          |          |          |          |          |          |             |                                      |     |
| 238      | Aiken St S of Hall St                                  | MassDOT           |                               |          | 10,747   |          |          |          | 11,865   |          |          |          |          |             |                                      |     |
| 681      | Baldwin Street S of Middlesex Street                   | NMCOG             |                               | 6,100    |          |          | 6,000    | 5,900    |          |          |          |          |          |             | -0.82                                | 2   |
| 806      | Beacon St N of 6th St                                  | NMCOG             |                               |          |          |          |          | 1,400    |          |          |          |          |          |             |                                      | 1.4 |
| 246      | Billerica St S of Lawrence St                          | NMCOG             |                               | 960      |          |          | 1,100    |          |          |          |          |          |          |             |                                      | 0.9 |
| 249      | Boylston St N of Bishop St                             | NMCOG             | 8,800                         |          |          |          |          |          |          |          |          |          |          |             |                                      |     |
| 250      | Boylston St S of I-495                                 | NMCOG             | 6,800                         |          |          | 7,900    |          |          |          |          |          |          |          |             |                                      | 2.9 |
| 1018     | Cardinal O'Connell Parkway Northbound 1 way (Vol Only) | NMCOG             |                               |          |          |          |          |          |          |          |          |          | 1,779    |             |                                      |     |
| 1017     | Cardinal O'Connell Parkway Southbound 1 way (Vol Only) | NMCOG             |                               |          |          |          |          |          |          |          |          |          | 2,899    |             |                                      |     |
| 704      | Carlisle St S of Rte. 3A (Gorham St)                   | NMCOG             |                               |          |          |          | 1,800    |          |          |          |          |          |          |             |                                      | 1.9 |
| 259      | Central St S of Jackson St                             | NMCOG             |                               |          |          |          |          |          |          | 18,700   |          |          |          |             |                                      |     |
| 262      | Clark Rd N of Village St                               | NMCOG             |                               |          | 5,400    |          |          |          |          |          |          |          |          |             |                                      |     |
| 265      | Douglas Rd N of Rte. 38 (Rogers St)                    | NMCOG             |                               |          | 2,700    |          |          |          |          |          |          |          |          |             |                                      |     |
| 267      | Dummer St N of Broadway St                             | NMCOG             | 6,100                         |          |          |          |          |          |          |          |          |          |          |             |                                      |     |
| 849      | Father Morissette Blvd E of Aiken St                   | NMCOG             | 9,000                         |          |          |          |          |          |          |          |          |          |          |             |                                      |     |
| 847      | Fayette St N of Chestnut St                            | NMCOG             | 2,700                         |          |          |          |          |          |          |          |          |          |          |             |                                      |     |
| 279      | Fleming St W of Stevens St                             | Multiple Agencies |                               |          | 760      |          |          | 740      |          |          | 722      |          |          |             | -0.83                                | 1.7 |
| 721      | Fletcher St N of Broadway St                           | MassDOT & NMCOG   |                               |          | 13,364   |          |          |          |          |          |          |          |          |             |                                      |     |
| 281      | Fletcher St N of Thorndike St/Dutton St                | NMCOG             | 18,800                        |          |          |          |          |          |          |          |          |          |          |             |                                      |     |
| 288      | Gorham St S of Walnut St                               | NMCOG             |                               | 18,998   |          |          | 20,434   |          |          | 14,100   |          |          | 16,336   |             | -1.56                                | 6.8 |
| 858      | Howard St S of Lowell Connector Overpass               | NMCOG             |                               | 1,400    |          |          |          |          |          |          |          |          |          |             |                                      |     |
| 767      | Industrial Ave E of Lowell Connector NB Ramps          | NMCOG             | 9,000                         |          | 8,500    |          |          |          |          |          |          |          |          |             |                                      | 5.6 |
| 294      | Industrial Ave E of Lowell Connector Overpass          | NMCOG             |                               |          |          | 12,200   |          |          |          |          |          |          |          |             |                                      | 5.1 |

2021 NORTHERN MIDDLESEX REGIONAL TRAFFIC VOLUME REPORT

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|----------|---|--------------------------|-------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------------|--------------------------------------|------|
|          |   |                          | ADT 2011                      | ADT 2012 | ADT 2013 | ADT 2014 | ADT 2015 | ADT 2016 | ADT 2017 | ADT 2018 | ADT 2019 | ADT 2020 | ADT 2021 |             |                                      |      |
| 296      | Industrial Ave S of Rte. 110 (Chelmsford St)    | Multiple Agencies        |                               | 12,400   |          |          |          |          | 11,600   |          | 13,542   |          |          | 9,874       | -2.55                                | 9    |
| 297      | Industrial Ave under Connector                  | NMCOG                    |                               |          |          |          |          |          | 12,600   |          |          | 17,132   |          |             |                                      | 6.4  |
| 304      | Lakeview Ave W of Rte. 38 (Bridge St)           | NMCOG, GPI (08)          |                               | 6,400    |          |          |          | 6,200    | 6,100    |          | 6,300    | 7,680    |          | 7,344       | 1.84                                 | 28.5 |
| 305      | Lawrence St @ Concord River                     | NMCOG                    | 10,000                        |          |          |          |          |          |          | 11,500   |          |          |          |             |                                      | 3.1  |
| 306      | Lawrence St E of Billerica St                   | NMCOG                    |                               | 9,900    |          |          |          | 10,400   |          |          |          | 11,628   |          | 11,672      | 1.99                                 | 3.4  |
| 311      | Lincoln St W of Autumn St                       | NMCOG                    |                               |          |          | 2,500    |          |          |          |          |          |          |          |             |                                      | 1.5  |
| 312      | Lincoln St W of Rte. 3A (Gorham St)             | NMCOG                    |                               | 1,100    |          |          |          | 1,300    |          |          | 1,300    |          |          | 1,446       | 3.93                                 | 3.1  |
| 859      | Lincoln St W of Tanner St                       | NMCOG                    |                               | 4,000    |          |          |          |          |          |          |          |          |          |             |                                      |      |
| 313      | Lowell Connector N of Plain St                  | MassDOT                  |                               |          | 53,650   |          |          |          | 54,569   | 55,006   | 55,846   | 56,963   | 48,419   |             | -1.39                                |      |
| 441      | Lowell Connector S of Plain St                  | MassDOT                  |                               |          |          | 24,084   |          |          | 42,925   | 43,268   | 43,929   | 44,808   | 48,446   |             | 16.86                                |      |
| 777      | Mammoth Rd S of Eighth Ave                      | NMCOG                    |                               |          | 11,700   |          |          |          | 11,800   |          |          | 13,112   |          |             | 2.01                                 | 5.5  |
| 321      | Market St W of Central St                       | Multiple Agencies        |                               |          | 11,700   |          |          |          | 7,200    |          |          |          | 6,371    |             | -3.19                                | 8.9  |
| 1001     | Meryl Dr. W of Fairmount St                     | NMCOG                    |                               |          |          |          |          |          |          |          | 200      |          |          |             |                                      | 3.1  |
| 899      | Merrimack St E of Cabot St                      | NMCOG                    |                               |          | 7,600    |          |          |          |          |          |          |          |          |             |                                      |      |
| 1016     | Merrimack St East of Cardinal O'Connell Parkway | NMCOG                    |                               |          |          |          |          |          |          |          |          |          | 9,904    |             |                                      | 9.3  |
| 1015     | Merrimack St west of Cardinal O'Connell Parkway | NMCOG                    |                               |          |          |          |          |          |          |          |          |          | 7,635    |             |                                      | 7.0  |
| 331      | Middlesex St E of Pawtucket St                  | Multiple Agencies        |                               |          | 8,300    |          |          | 8,400    |          |          |          |          |          |             |                                      | 4.9  |
| 874      | Middlesex St E Wilder St                        | NMCOG                    |                               |          | 8,600    |          |          |          |          |          |          |          |          |             |                                      |      |
| 334      | Middlesex St W of Burnside St                   | NMCOG                    |                               |          |          | 8,300    |          |          | 8,900    |          |          | 10,148   |          |             | 4.45                                 | 6    |
| 335      | Middlesex St W of Garnet St                     | NMCOG                    | 8,800                         |          |          |          |          |          |          |          |          |          |          |             |                                      |      |
| 338      | Middlesex St W of Pearl St                      | MassDOT                  |                               |          |          |          |          | 7,569    |          |          |          |          |          |             |                                      |      |
| 345      | Old Ferry Rd N of Rte. 113 (Pawtucket Blvd)     | MassDOT, NMCOG, VSB (17) | 8,400                         |          |          | 8,900    |          |          |          | 10,100   |          |          |          |             | 3.37                                 | 3.2  |
| 348      | Parker St E of Stevens St                       | NMCOG                    |                               |          |          | 5,100    |          |          |          |          |          |          |          |             |                                      | 1.8  |
| 355      | Pawtucket St W of Wilder St                     | NMCOG                    |                               |          |          | 7,800    |          |          |          |          |          |          |          |             |                                      | 2.1  |
| 839      | Rock St W of Mt Vernon St                       | NMCOG                    | 4,300                         |          |          |          |          |          |          |          |          |          |          |             |                                      |      |

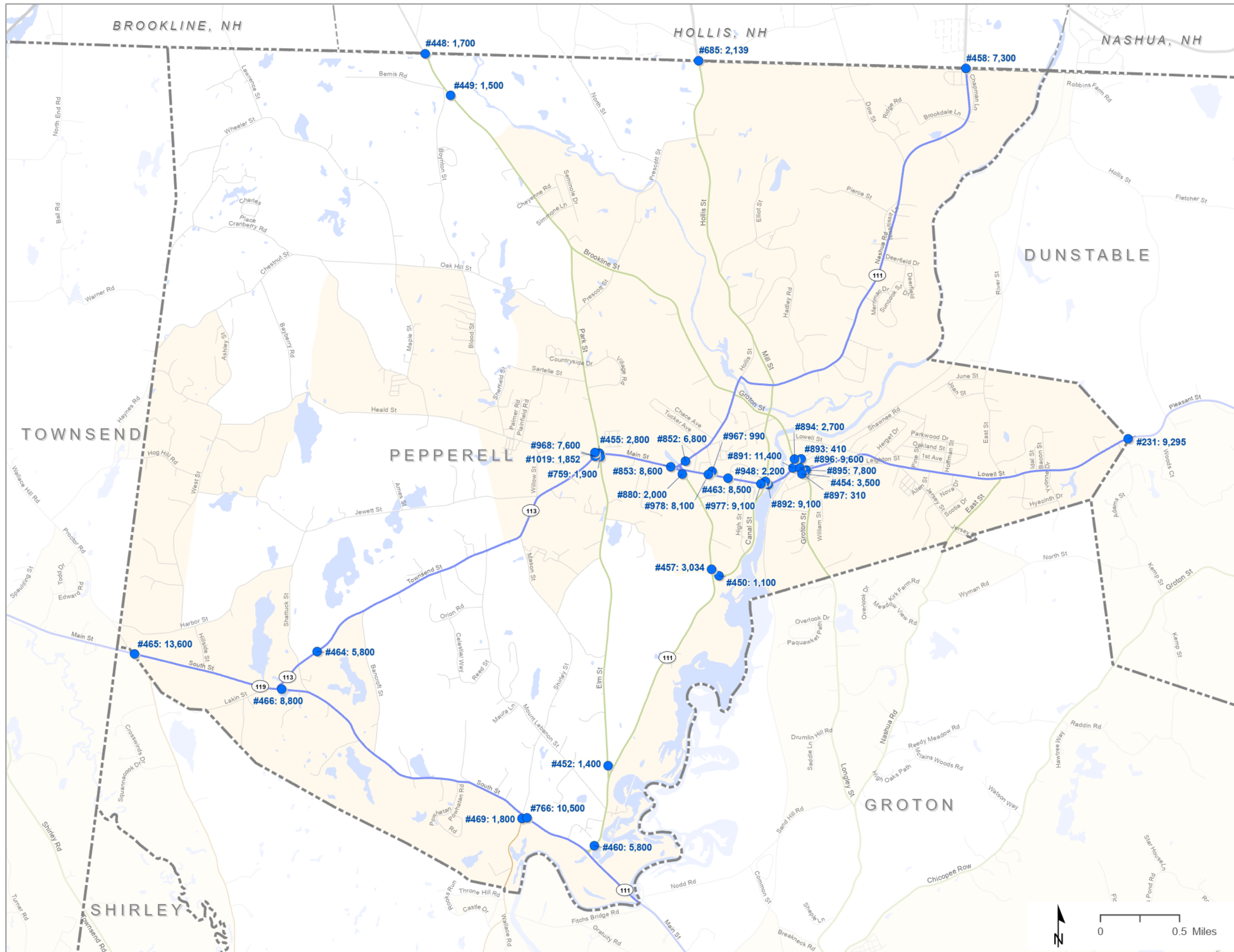


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|----------|--|---------------------------|-------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------------|--------------------------------------|------|
|          |  |                           | ADT 2011                      | ADT 2012 | ADT 2013 | ADT 2014 | ADT 2015 | ADT 2016 | ADT 2017 | ADT 2018 | ADT 2019 | ADT 2020 | ADT 2021 |             |                                      |      |
| 243      | Rte. 110 (Appleton St) E of South St                             | NMCOG                     |                               |          |          |          |          |          |          |          | 9,400    |          |          |             |                                      | 4.4  |
| 996      | Rte. 110 (Appleton St) W of South St                             | NMCOG                     |                               |          |          |          |          |          |          |          | 10,100   |          |          |             |                                      | 14.1 |
| 879      | Rte. 110 (Chelmsford St) S of Rte. 3A (Westford St)              | NMCOG                     |                               |          | 12,900   |          |          |          |          |          |          |          |          |             |                                      |      |
| 992      | Rte. 113 (Pawtucket Blvd) E of Old Ferry Rd (677 Pawtucket Blvd) | VSB                       |                               |          |          |          |          |          |          | 21,700   |          |          |          |             |                                      |      |
| 375      | Rte. 113 (Pawtucket Blvd) W of Mammoth Rd                        | MassDOT                   | 24,564                        | 25,504   |          | 25,946   |          |          |          |          |          |          |          |             | 1.88                                 |      |
| 372      | Rte. 113 (Pawtucket Blvd) W of Old Ferry Rd                      | NMCOG                     | 12,600                        | 12,872   |          |          |          |          |          |          |          |          |          |             |                                      |      |
| 208      | Rte. 38 (Bridge St) @ Lowell/Dracut Town Line                    | MassDOT                   | 12,453                        | 13,111   | 14,075   |          |          |          | 12,925   | 14,223   | 14,422   | 12,584   | 11,550   |             | -0.91                                |      |
| 380      | Rte. 38 (Bridge St) N of VFW Highway                             | MassDOT                   | 20,132                        | 24,456   |          |          |          | 17,586   |          |          | 19,486   |          |          |             | -0.53                                |      |
| 382      | Rte. 38 (Nesmith St) N of East Merrimack St                      | NMCOG                     |                               | 27,571   |          |          |          | 30,959   |          |          | 28,500   |          |          |             | 0.56                                 |      |
| 384      | Rte. 38 (Rogers St) N of Boylston St                             | MassDOT                   | 22,941                        | 23,188   |          | 23,674   |          |          | 22,417   | 25,345   | 25,700   | 24,994   | 22,225   |             | -0.39                                |      |
| 386      | Rte. 3A (Gorham St) N of Elsworth St                             | NMCOG                     |                               | 17,344   |          |          |          | 17,288   |          |          | 16,302   |          |          | 11,224      | -3.92                                | 4.4  |
| 846      | Rte. 3A (Pine St) S of Princeton Blvd                            | NMCOG                     | 5,000                         |          |          |          |          |          |          |          |          |          |          |             |                                      |      |
| 900      | Rte. 3A (Princeton St) W of Corey St                             | Precision Data Industries |                               | 6,226    |          |          |          |          |          |          |          |          |          |             |                                      |      |
| 393      | Rte. 3A (Westford St) @ Tyler Park (W of Florence Ave)           | NMCOG                     |                               |          | 7,000    |          |          |          |          |          |          |          |          |             |                                      |      |
| 394      | Rte. 3A (Westford St) W of School St                             | NMCOG                     |                               | 12,157   |          |          |          | 12,749   |          |          | 10,797   |          |          | 10,084      | -1.89                                | 9    |
| 395      | Rte. 3A (Westford St) W of Stevens St                            | Multiple Agencies         | 7,900                         |          |          |          |          |          |          |          |          |          |          |             |                                      |      |
| 396      | Rte. I-495 N of Lowell Connector                                 | MassDOT                   | 124,472                       | 134,032  | 120,361  | 124,831  | 126,035  | 128,033  | 127,649  | 125,513  | 125,669  | 98,898   |          |             | -2.57                                | 7.0  |
| 397      | Rte. I-495 S of Rte. 38 (Main St in Tewksbury)                   | MassDOT                   | 118,268                       | 111,160  | 114,790  |          |          | 127,007  | 136,914  | 130,332  | 127,723  | 131,794  | 96,826   |             | -0.31                                |      |
| 401      | School St S of Broadway St                                       | NMCOG                     |                               |          | 9,300    |          |          |          |          |          |          |          |          |             |                                      |      |
| 404      | Sixth St E of Rte. 38 (Bridge St)                                | NMCOG                     | 3,800                         |          |          |          |          |          |          |          |          |          |          |             |                                      |      |
| 957      | Stedman St S of Westford St                                      | NMCOG                     |                               |          |          |          |          | 10,300   |          | 10,300   |          |          |          |             |                                      | 4.3  |
| 406      | Stevens St N of Princeton Blvd                                   | NMCOG                     |                               |          | 4,200    |          |          |          | 4,200    |          |          | 3,862    |          |             | -1.34                                | 6.6  |
| 407      | Stevens St N of Rte. 3A (Westford St)                            | Multiple Agencies         | 4,700                         |          |          |          |          |          |          |          |          |          |          |             |                                      |      |
| 408      | Stevens St S of Parker St  | NMCOG                     |                               |          |          |          |          |          | 10,000   |          |          |          |          |             |                                      | 7.1  |
| 754      | Swan St W of Boston Rd   | NMCOG                     | 4,900                         |          |          |          |          |          |          |          |          |          |          |             |                                      |      |

2021 NORTHERN MIDDLESEX REGIONAL TRAFFIC VOLUME REPORT

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|----------|---|-------------------|-------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------------|--------------------------------------|-----|
|          |   |                   | ADT 2011                      | ADT 2012 | ADT 2013 | ADT 2014 | ADT 2015 | ADT 2016 | ADT 2017 | ADT 2018 | ADT 2019 | ADT 2020 | ADT 2021 |             |                                      |     |
| 678      | Technology Dr. W of Westford St.          | NMCOG             |                               |          |          |          |          | 4,700    |          |          |          |          |          |             |                                      | 3.8 |
| 418      | Varnum Ave S of Frechette St              | NMCOG             |                               |          |          |          |          | 7,600    |          |          |          |          |          |             |                                      | 3.3 |
| 419      | Varnum Ave W of Rte. 113 (Pawtucket Blvd) | NMCOG             |                               |          | 8,200    |          |          |          |          |          |          |          |          |             |                                      |     |
| 819      | VFW Highway W of Aiken St                 | NMCOG             |                               | 15,200   |          |          |          |          |          |          |          |          |          |             |                                      |     |
| 422      | VFW Hwy E of University Ave (Textile Ave) | MassDOT           | 18,327                        | 19,266   |          |          |          | 13,281   | 13,427   | 13,615   | 12,728   | 10,488   |          | -5.35       |                                      |     |
| 423      | VFW Hwy W of Rte. 38 (Bridge St)          | MassDOT           | 17,693                        |          |          |          | 18,788   |          | 22,083   | 21,395   | 20,794   | 17,134   | 20,599   | 1.82        |                                      |     |
| 424      | VFW Hwy W of University Ave               | Multiple Agencies | 14,764                        | 15,499   |          | 15,772   |          | 16,152   | 15,282   | 15,496   | 15,588   | 12,417   |          | -1.99       |                                      |     |
| 684      | Walker Street S of Broadway               | NMCOG             |                               |          |          | 3,500    |          |          |          |          |          |          |          |             |                                      | 2.6 |
| 323      | West Meadow Rd N of Varnum Ave            | NMCOG             |                               |          | 7,500    |          |          |          |          | 7,100    |          |          |          |             |                                      | 4.3 |
| 429      | Westford St E of Wood St                  | CoL & NMCOG       |                               | 12,200   |          |          |          | 12,300   |          |          |          |          |          |             |                                      | 3.9 |
| 431      | Westford St W of Pine St                  | Multiple Agencies | 9,300                         |          |          |          |          |          |          |          |          |          |          |             |                                      | 4.9 |
| 873      | Wilder St N of Middlesex St               | NMCOG             |                               |          | 8,600    |          |          |          |          |          |          |          |          |             |                                      |     |
| 708      | Wilder St N of Rte. 3A (Westford St)      | NMCOG             |                               |          |          | 5,700    |          |          |          |          |          |          |          |             |                                      | 2.4 |
| 432      | Wilder St S of Middlesex St               | NMCOG             | 5,200                         |          |          |          |          |          |          |          |          |          |          |             |                                      |     |
| 433      | Wilder St S of Pawtucket St               | Multiple Agencies | 7,600                         |          |          | 6,100    |          |          | 7,500    |          |          |          | 6,364    | -1.81       |                                      | 8   |
| 435      | Woburn St S of I-495                      | Multiple Agencies |                               | 7,300    |          |          |          | 7,900    |          |          | 13,096   |          | 10,734   | 12,021      | 7.19                                 | 7.5 |



# Map 2-8: Pepperell Traffic Count Locations 2010-2021

- Traffic Count Location (labeled by ID)
- Roads by Functional Classification
  - Interstate
  - Principal Arterial
  - Rural Minor Arterial/Urban Principal Arterial
  - Rural Major Collector/Urban Minor Arterial
  - Rural Minor Collector/Urban Collector
  - Local Roadway
- Urbanized Area (2010)
- Town Boundary

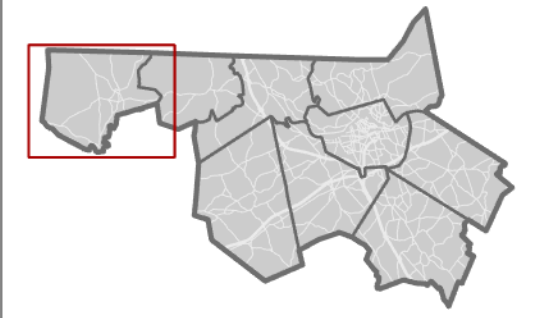
**Sources:**  
 MassDOT/NMCOG (traffic counts; roads; 2010 urbanized area); MassGIS (town boundaries); MassDEP (water).

Data provided on this map is not sufficient for either boundary determination or regulatory interpretation.

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Map 2-8 Pepperell 11x17 landscape

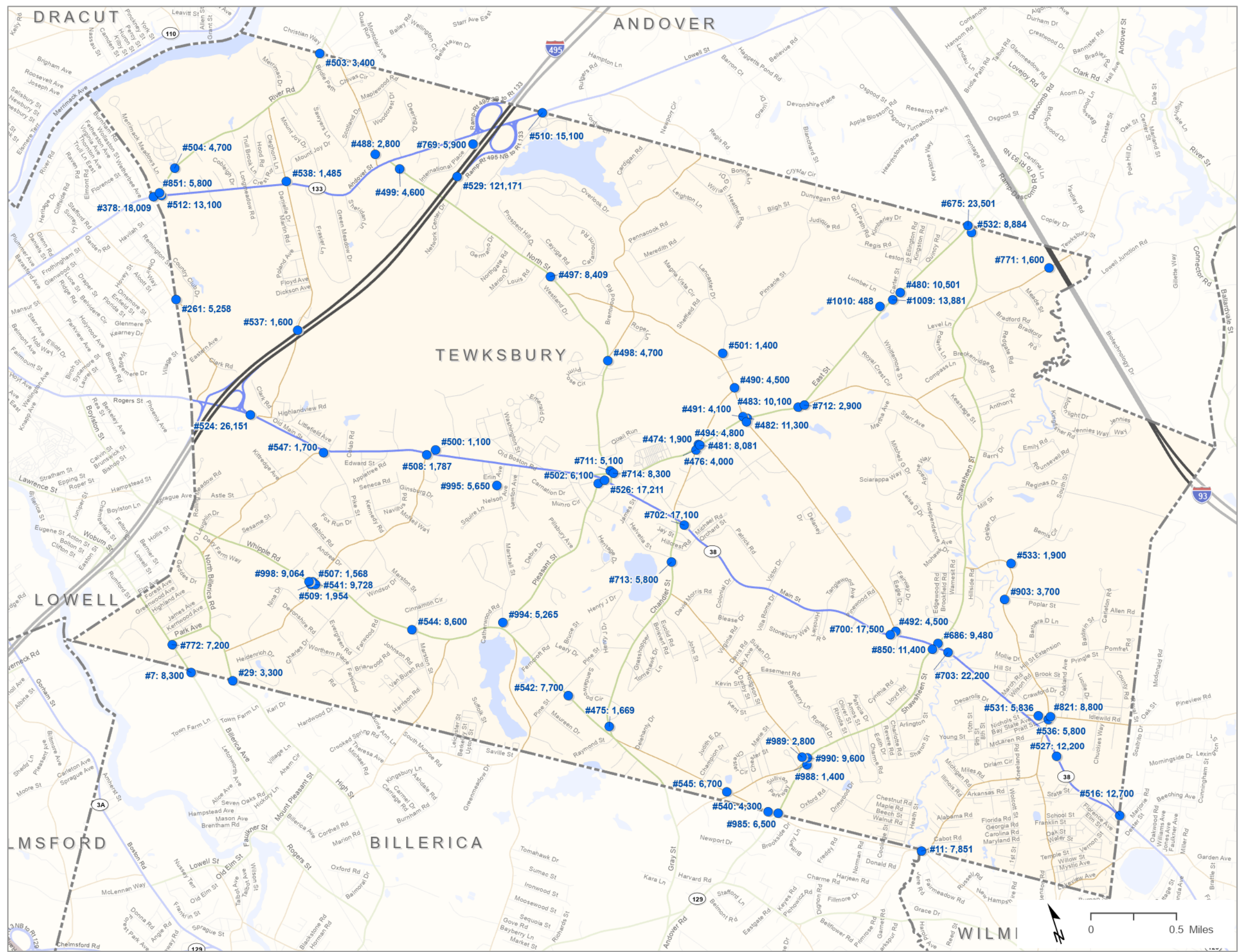
**Table 2-12: Town of Pepperell Traffic Volumes, 2011 - 2021**

| NMCOG ID | Town of Pepperell Traffic Locations          | Counted By   | Average Daily Traffic Volumes |          |          |          |          |          |          |          |          |          |          | Growth Rate | % Heavy Vehicles (Most Recent Count) |      |
|----------|--|--------------|-------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------------|--------------------------------------|------|
|          |  |              | ADT 2011                      | ADT 2012 | ADT 2013 | ADT 2014 | ADT 2015 | ADT 2016 | ADT 2017 | ADT 2018 | ADT 2019 | ADT 2020 | ADT 2021 |             |                                      |      |
| 448      | Brookline St @ NH State Line                 | NMCOG & NRPC |                               |          | 1,700    |          |          |          |          |          | 1,700    |          |          |             |                                      | 4.8  |
| 450      | Canal Rd @ Rte. 111 (Nashua Rd)              | NMCOG        | 1,400                         |          |          | 1,100    |          |          |          |          |          |          |          |             |                                      | 4.4  |
| 967      | Cross St N of Main St (Rte. 113)             | NMCOG        |                               |          |          |          |          | 990      |          |          |          |          |          |             |                                      | 2.3  |
| 452      | Elm St N of Rte. 111 (Nashua Rd)             | NMCOG        |                               |          |          | 1,400    |          |          |          |          |          |          |          |             |                                      | 4.1  |
| 759      | Elm St S of Rte. 113 (Main St)               | NMCOG        | 1,800                         |          |          | 1,600    |          |          | 1,900    |          |          |          |          | 0.93        |                                      | 0.5  |
| 894      | Groton St N of Railroad St                   | NMCOG        |                               |          | 2,700    |          |          |          |          |          |          |          |          |             |                                      |      |
| 896      | Groton St S of Main St                       | NMCOG        |                               |          | 9,600    |          |          |          |          |          |          |          |          |             |                                      |      |
| 454      | Groton St S of Tarbell St (Rte. 113)         | NMCOG        |                               |          | 3,500    |          |          |          |          |          | 3,500    |          |          |             |                                      |      |
| 1019     | Heald St west of Park St                     | NMCOG        |                               |          |          |          |          |          |          |          |          |          | 1,852    |             |                                      |      |
| 685      | Hollis Street @ NH State Line                | NRPC & NMCOG | 1,800                         |          |          | 2,000    |          |          |          |          |          | 2,139    |          | 2.35        |                                      | 13.7 |
| 897      | Hotel Place W of Groton St                   | NMCOG        |                               |          | 310      |          |          |          |          |          |          |          |          |             |                                      |      |
| 948      | Mill St N of Rte. 113 (Main St)              | NMCOG        |                               |          |          |          | 2,200    |          |          |          |          |          |          |             |                                      | 1.4  |
| 455      | Park St N of Main St                         | NMCOG        |                               |          |          |          |          |          | 2,800    |          |          |          |          |             |                                      | 5.4  |
| 893      | Railroad St E of Groton St                   | NMCOG        |                               |          | 410      |          |          |          |          |          |          |          |          |             |                                      |      |
| 852      | Rte. 111 (Hollis St) N of Rte. 113 (Main St) | NMCOG        |                               | 7,800    | 7,600    |          |          | 6,800    |          |          |          |          |          | -0.74       |                                      | 4.9  |
| 458      | Rte. 111 (Nashua Rd) @ NH State Line         | NMCOG & NRPC |                               |          |          |          | 7,300    |          |          |          |          |          |          |             |                                      | 3.4  |
| 457      | Rte. 111 (River Rd) N of Canal Rd            | NMCOG        |                               | 3,600    |          |          |          |          |          |          |          | 3,034    |          |             |                                      | 6.3  |
| 460      | Rte. 111 (River Rd) N of Rte. 119 (South Rd) | NMCOG        | 6,000                         |          |          | 5,800    |          |          |          |          |          |          |          |             |                                      | 3.0  |
| 880      | Rte. 111 (River Rd) S of Rte. 113 (Main St)  | NMCOG        |                               |          | 3,500    |          |          |          | 2,000    |          |          |          |          |             |                                      | 3.4  |
| 892      | Rte. 113 (Main St) E of Mill St              | NMCOG        |                               |          | 9,100    |          |          |          |          |          |          |          |          |             |                                      |      |
| 978      | Rte. 113 (Main St) W of Cross St             | NMCOG        |                               |          |          |          |          |          | 8,100    |          |          |          |          |             |                                      | 3.3  |
| 977      | Rte. 113 (Main St) W of Mill/ Canal St       | NMCOG        |                               |          |          |          |          |          | 9,100    |          |          |          |          |             |                                      | 4.0  |
| 463      | Rte. 113 (Main St) W of Pleasant St          | NMCOG        |                               | 10,100   |          |          | 8,500    |          |          |          |          |          |          |             |                                      | 3.3  |
| 853      | Rte. 113 (Main St) W of Rte. 111 (Hollis St) | NMCOG        |                               | 11,600   |          |          |          | 8,600    |          |          |          |          |          |             |                                      | 4.3  |

2021 NORTHERN MIDDLESEX REGIONAL TRAFFIC VOLUME REPORT

| NMCOG ID | Town of Pepperell Traffic Locations             | Counted By           | Average Daily Traffic Volumes |          |          |          |          |          |          |          |          |          |          | Growth Rate | % Heavy Vehicles (Most Recent Count) |     |
|----------|---|----------------------|-------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------------|--------------------------------------|-----|
|          |   |                      | ADT 2011                      | ADT 2012 | ADT 2013 | ADT 2014 | ADT 2015 | ADT 2016 | ADT 2017 | ADT 2018 | ADT 2019 | ADT 2020 | ADT 2021 |             |                                      |     |
| 464      | Rte. 113 (Townsend St) Btwn Shattuck & Bancroft | NMCOG                | 5,800                         |          |          |          |          |          | 5,800    |          |          |          |          |             |                                      | 2.2 |
| 968      | Rte. 113 (Townsend St) W of Park St             | NMCOG                |                               |          |          |          |          |          | 7,600    |          |          |          |          |             |                                      | 3.9 |
| 467      | Rte. 119 (South Rd) @ Groton Town Line          | NMCOG and MRPC(2007) |                               |          |          |          |          |          |          |          |          |          |          |             |                                      |     |
| 465      | Rte. 119 (South Rd) @ Groton/Townsend Town Line | NMCOG                |                               |          |          | 13,500   |          |          | 13,600   |          |          |          |          |             |                                      | 4.1 |
| 466      | Rte. 119 (South Rd) E of Rte. 113 (Townsend St) | NMCOG                | 8,800                         |          |          |          |          |          |          |          |          |          |          |             |                                      |     |
| 766      | Rte. 119 (South Rd) E of Shirley St             | NMCOG                | 10,500                        |          |          |          |          |          |          |          |          |          |          |             |                                      |     |
| 469      | Shirley St S of Rte. 119 (South Rd)             | NMCOG                | 1,900                         |          |          |          |          | 1,800    |          |          |          |          |          |             |                                      | 2.9 |
| 895      | Tarbell St E of Groton St                       | NMCOG                |                               |          | 7,800    |          |          |          |          |          |          |          |          |             |                                      |     |

# Map 2-9: Tewksbury Traffic Count Locations 2010-2021



- Traffic Count Location (labeled by ID)
- Roads by Functional Classification**
- Interstate
  - Principal Arterial
  - Rural Minor Arterial/Urban Principal Arterial
  - Rural Major Collector/Urban Minor Arterial
  - Rural Minor Collector/Urban Collector
  - Local Roadway
- Urbanized Area (2010)
  - Town Boundary

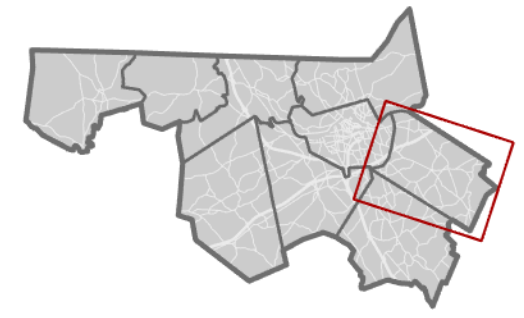
**Sources:**  
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Data provided on this map is not sufficient for either boundary determination or regulatory interpretation.

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Map 2-9 Tewksbury 11x17 landscape back



**Table 2-13: Town of Tewksbury Traffic Volumes, 2011 - 2021**

| NMCOG ID | Town Tewksbury Traffic Locations            | Counted By | Average Daily Traffic Volumes |          |          |          |          |          |          |          |          |          |          | Growth Rate | % Heavy Vehicles (Most Recent Count) |      |
|----------|---|------------|-------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------------|--------------------------------------|------|
|          |   |            | ADT 2011                      | ADT 2012 | ADT 2013 | ADT 2014 | ADT 2015 | ADT 2016 | ADT 2017 | ADT 2018 | ADT 2019 | ADT 2020 | ADT 2021 |             |                                      |      |
| 547      | Astle St W of Rte. 38 (Main St)             | NMCOG      |                               | 2,300    |          |          | 1,700    |          |          |          |          |          |          |             |                                      | 1.7  |
| 988      | Beech St S of Shawsheen St                  | NMCOG      |                               |          |          |          |          |          |          | 1,400    |          |          |          |             |                                      | 4    |
| 248      | Boylston St @ Lowell/Tewksbury Town Line    | NMCOG      |                               |          | 7,800    |          |          |          |          |          |          |          |          |             |                                      |      |
| 475      | Chandler St N of Whipple Rd                 | NMCOG      | 1,800                         |          |          | 2,200    |          |          |          | 2,000    |          |          | 1,669    |             | -0.91                                | 15.8 |
| 713      | Chandler St W of Helvetia St                | NMCOG      | 5,800                         |          |          |          |          |          |          |          |          |          |          |             |                                      |      |
| 261      | Clark Rd @ Lowell/Tewksbury Town Line       | NMCOG      |                               | 4,700    |          | 4,400    | 4,800    |          |          |          | 4,900    |          |          | 5,258       | 1.32                                 | 5.6  |
| 675      | East St @ Andover Town Line                 | MVPC       | 23,501                        |          |          |          |          |          |          |          |          |          |          |             |                                      |      |
| 480      | East St E of Carter St                      | HSH        |                               |          |          |          |          |          |          | 10,501   |          |          |          |             |                                      | 11.1 |
| 481      | East St E of Chandler St                    | HSH        |                               |          |          |          |          |          |          | 8,081    |          |          |          |             |                                      | 10.3 |
| 1009     | East St E of Industrial Ave                 | NMCOG      |                               |          |          |          |          |          |          |          |          | 13,881   |          |             |                                      | 8.8  |
| 482      | East St E of Livingston St                  | NMCOG      |                               |          |          |          |          |          | 11,300   |          |          |          |          |             |                                      | 5.9  |
| 483      | East St E of Maple St                       | NMCOG      |                               |          |          | 10,100   |          |          |          |          |          |          |          |             |                                      | 4.3  |
| 714      | East St E of North St                       | NMCOG      | 8,300                         |          |          |          |          |          |          |          |          |          |          |             |                                      |      |
| 971      | East St W of Whittemore St                  | NMCOG      |                               |          |          |          |          |          |          | 9,974    |          | 12,592   | 9,252    | 10,672      | 1.75                                 | 5.8  |
| 488      | Fiske St N of Rte. 133 (Andover St)         | NMCOG      | 3,100                         |          |          | 2,800    |          |          |          |          |          |          |          |             |                                      | 3    |
| 989      | Foster Rd N of Shawsheen St                 | NMCOG      |                               |          |          |          |          |          |          | 2,800    |          |          |          |             |                                      | 2.6  |
| 1010     | Industrial Ave W of East St                 | NMCOG      |                               |          |          |          |          |          |          |          |          | 488      |          |             |                                      | 33.8 |
| 769      | International Pl S of Rte. 133 (Andover St) | NMCOG      | 6,100                         |          |          | 5,900    |          |          |          |          |          |          |          |             |                                      | 2.1  |
| 490      | Livingston St N of Chandler St              | NMCOG      | 4,500                         |          |          |          |          |          |          |          |          |          |          |             |                                      |      |
| 491      | Livingston St N of East St                  | NMCOG      |                               |          |          | 4,100    |          |          |          |          |          |          |          |             |                                      | 2.8  |
| 492      | Livingston St N of Main St                  | NMCOG      |                               |          |          |          |          | 4,500    |          |          |          |          |          |             |                                      | 2.9  |

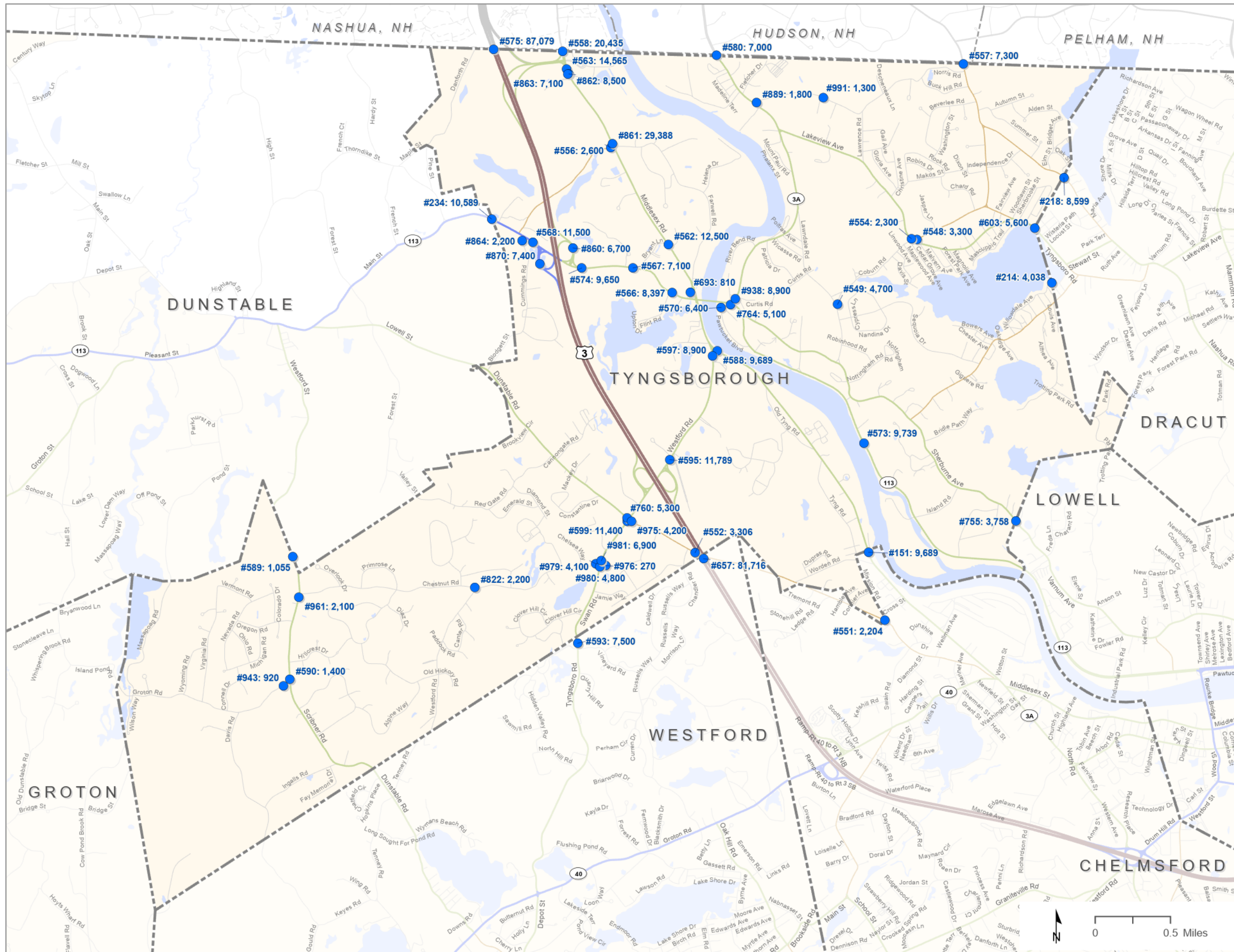
2021 NORTHERN MIDDLESEX REGIONAL TRAFFIC VOLUME REPORT

| NMCOG ID | Town Tewksbury Traffic Locations                   | Counted By             | Average Daily Traffic Volumes |          |          |          |          |          |          |          |          |          |          | Growth Rate | % Heavy Vehicles (Most Recent Count) |     |
|----------|--|------------------------|-------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------------|--------------------------------------|-----|
|          |  |                        | ADT 2011                      | ADT 2012 | ADT 2013 | ADT 2014 | ADT 2015 | ADT 2016 | ADT 2017 | ADT 2018 | ADT 2019 | ADT 2020 | ADT 2021 |             |                                      |     |
| 994      | Marshall St N of Pleasant St                       | NMCOG                  |                               |          |          |          |          |          |          |          | 5,265    |          |          |             |                                      | 4.9 |
| 995      | Marshall St S of Erlin St                          | NMCOG                  |                               |          |          |          |          |          |          |          | 5,650    |          |          |             |                                      |     |
| 497      | North St N of Catamount Dr.                        | NMCOG                  |                               |          |          |          |          |          |          |          |          | 8,409    |          |             |                                      | 2.8 |
| 711      | North St N of East St                              | NMCOG                  |                               |          |          |          |          | 5,100    |          |          |          |          |          |             |                                      | 3.1 |
| 498      | North St S of Kendall Rd                           | NMCOG                  |                               |          |          | 4,700    |          |          |          |          |          |          |          |             |                                      | 4.6 |
| 499      | North St S of Rte. 133 (Andover St)                | NMCOG                  |                               |          | 4,600    |          |          |          |          |          |          |          |          |             |                                      |     |
| 500      | Old Boston Rd E of Rte. 38 (Main St)               | NMCOG                  |                               | 1,100    |          |          |          |          |          |          |          |          |          |             |                                      |     |
| 987      | Patten Rd W of Shawsheen St                        | NMCOG                  |                               |          |          |          |          |          |          | 3,000    |          |          |          |             |                                      | 6.7 |
| 501      | Pinnacle St N of Livingston St                     | NMCOG                  | 1,400                         |          |          |          |          |          |          |          |          |          |          |             |                                      |     |
| 503      | River Rd @ Andover Town Line                       | NMCOG                  |                               |          | 3,400    |          |          |          |          |          |          |          |          |             |                                      |     |
| 504      | River Rd @ Trull Brook Golf                        | NMCOG                  |                               | 3,500    |          |          |          |          | 4,700    |          |          |          |          |             |                                      | 1.6 |
| 851      | River Rd N of Rte. 133 (Andover St)                | NMCOG                  |                               | 3,700    | 5,300    |          |          | 5,500    |          |          | 5,800    |          |          |             | 9.46                                 | 4.6 |
| 507      | Rogers St E of Whipple Rd                          | NMCOG                  |                               |          |          |          |          |          |          |          | 1,568    |          |          |             |                                      |     |
| 508      | Rogers St W of Rte. 38 (Main St)                   | NMCOG                  |                               |          |          |          |          |          |          |          | 1,787    |          |          |             |                                      |     |
| 509      | Rogers St W of Whipple Rd                          | Multiple Agencies      |                               |          | 1,400    |          |          | 1,600    | 1,600    |          | 1,787    | 1,954    |          |             | 6.60                                 | 8.6 |
| 510      | Rte. 133 (Andover St) @ Andover Town Line          | NMCOG                  |                               |          |          |          |          | 15,100   |          |          |          |          |          |             |                                      | 4.9 |
| 378      | Rte. 133 (Andover St) @ Lowell/Tewksbury Town Line | NMCOG, MassDOT(06, 09) |                               |          | 18,009   |          |          |          |          |          |          |          |          |             |                                      | 2   |
| 512      | Rte. 133 (Andover St) E of River Road              | NMCOG                  |                               | 13,100   |          |          |          |          |          |          |          |          |          |             |                                      |     |
| 524      | Rte. 38 (Main St) S of I-495                       | MassDOT                | 26,114                        | 32,858   | 33,599   |          |          | 24,710   |          |          | 25,271   | 25,372   | 20,907   | 26,151      | 0.02                                 |     |
| 526      | Rte. 38 (Main St) S of Pleasant St                 | MassDOT & NMCOG        | 17,158                        | 17,211   |          |          |          |          | 17,408   | 15,306   | 15,520   | 15,582   | 11,218   |             | -4.33                                |     |
| 527      | Rte. 38 (Main St) S of South St                    | NMCOG                  | 13,600                        |          |          |          |          | 12,200   |          |          |          |          |          |             |                                      | 4.6 |
| 529      | Rte. I-495 S of Rte. 133 (Andover St)              | MassDOT                | 110,032                       | 115,175  |          |          |          |          | 121,171  | 120,192  | 121,634  | 122,004  | 99,434   |             | -1.20                                | 8.0 |

2021 NORTHERN MIDDLESEX REGIONAL TRAFFIC VOLUME REPORT

| NMCOG ID | Town Tewksbury Traffic Locations            | Counted By | Average Daily Traffic Volumes |          |          |          |          |          |          |          |          |          |          | Growth Rate | % Heavy Vehicles (Most Recent Count) |
|----------|---|------------|-------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------------|--------------------------------------|
|          |   |            | ADT 2011                      | ADT 2012 | ADT 2013 | ADT 2014 | ADT 2015 | ADT 2016 | ADT 2017 | ADT 2018 | ADT 2019 | ADT 2020 | ADT 2021 |             |                                      |
| 531      | Salem Rd E of Rte. 38 (Main St)             | NMCOG      | 6,200                         |          |          | 5,700    |          |          | 5,700    |          |          | 5,836    |          | -0.73       | 12.0                                 |
| 990      | Shawsheen St E of Beech St                  | NMCOG      |                               |          |          |          |          |          | 9,600    |          |          |          |          |             | 3.7                                  |
| 532      | Shawsheen St S of East St                   | MHD        |                               |          |          |          |          |          |          |          |          | 8,884    |          |             | 7.3                                  |
| 850      | Shawsheen St S of Rte. 38 (Main St)         | NMCOG      |                               | 11,400   |          |          |          |          |          |          |          |          |          |             |                                      |
| 686      | Shawsheen Street N of Rte. 38 (Main Street) | NMCOG      |                               | 10,400   |          |          |          |          |          |          |          | 9,480    |          |             | 17.6                                 |
| 533      | South St N of Bridge St                     | NMCOG      | 1,900                         |          |          |          |          |          |          |          |          |          |          |             |                                      |
| 903      | South St S of Poplar St                     | NMCOG      |                               |          |          | 3,700    |          |          |          |          |          |          |          |             | 2.2                                  |
| 536      | South St S of Salem Rd                      | NMCOG      | 4,600                         |          |          |          | 5,800    |          |          |          |          |          |          |             | 4.4                                  |
| 537      | Trull Rd N of I-495                         | NMCOG      | 1,400                         |          |          |          | 1,600    |          |          |          |          |          |          |             | 2                                    |
| 538      | Trull Rd N of Rte. 133 (Andover St)         | NMCOG      |                               | 910      |          |          | 990      |          |          | 1,300    |          |          | 1,485    | 7.02        | 1.7                                  |
| 771      | Vale St W of I-93 Overpass                  | NMCOG      | 1,600                         |          |          |          |          |          |          |          |          |          |          |             |                                      |
| 11       | Whipple Rd @ Billerica/Tewksbury Town Line  | NMCOG      |                               | 4,000    | 4,300    | 6,600    | 7,300    |          | 7,900    |          | 8,967    | 7,038    | 7,851    | 10.70       | 11                                   |
| 542      | Whipple Rd E of Pine St                     | NMCOG      |                               |          |          |          | 7,700    |          |          |          |          |          |          |             | 16.4                                 |
| 998      | Whipple Rd N of Rogers St                   | NMCOG      |                               |          |          |          |          |          |          | 9,064    |          |          |          |             |                                      |
| 541      | Whipple Rd S of Rogers St                   | NMCOG      |                               |          |          |          |          |          |          | 9,728    |          |          |          |             |                                      |
| 544      | Whipple Rd W of Marston St                  | NMCOG      |                               |          |          |          |          | 8,600    |          |          |          |          |          |             | 2.7                                  |
| 545      | Whipple Rd W of Patten Rd                   | NMCOG      |                               |          |          | 6,700    |          |          |          |          |          |          |          |             | 3.2                                  |
| 772      | Woburn St S of Park Ave                     | NMCOG      | 7,200                         |          |          |          |          |          |          |          |          |          |          |             |                                      |

# Map 2-10: Tyngsborough Traffic Count Locations 2010-2022



- Traffic Count Location (labeled by ID)
- Roads by Functional Classification**
- Interstate
  - Principal Arterial
  - Rural Minor Arterial/Urban Principal Arterial
  - Rural Major Collector/Urban Minor Arterial
  - Rural Minor Collector/Urban Collector
  - Local Roadway
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  - Town Boundary

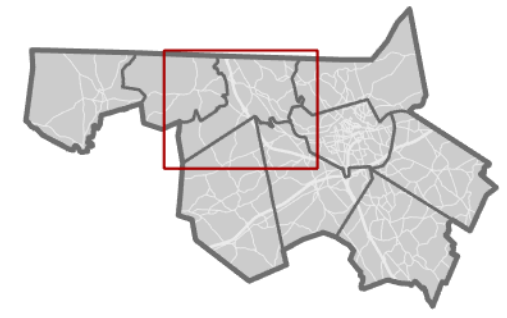
**Sources:**  
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Map 2-10 Tyngsborough 11x17 landscape back

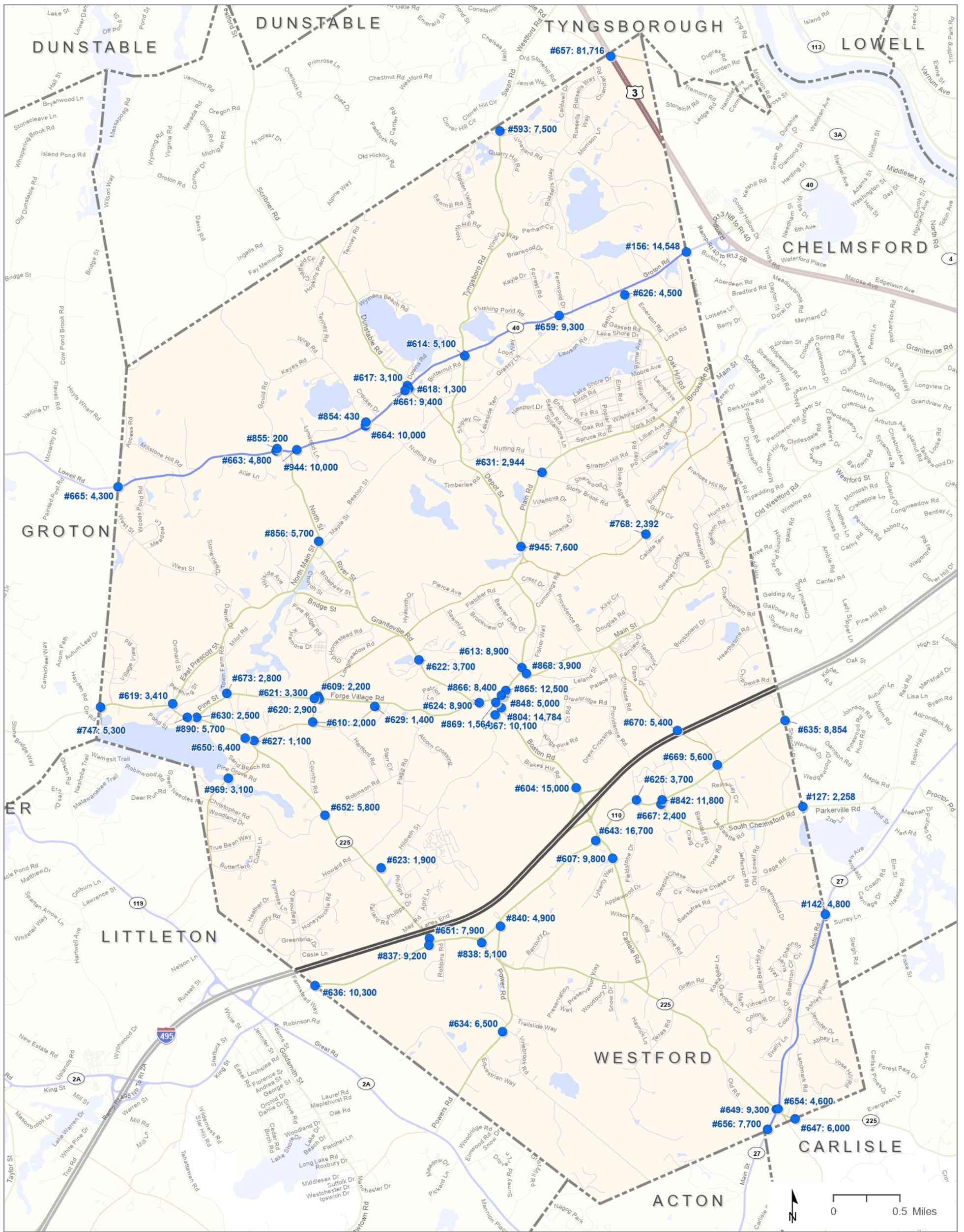
**Table 2-14: Town of Tyngsborough Traffic Volumes, 2011 - 2021**

| NMCOG ID | Town of Tyngsborough Traffic Locations           | Counted By  | Average Daily Traffic Volumes |          |          |          |          |          |          |          |          |          |          | Growth Rate | % Heavy Vehicles (Most Recent Count) |      |
|----------|--|---|-------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------------|--------------------------------------|------|
|          |  |   | ADT 2011                      | ADT 2012 | ADT 2013 | ADT 2014 | ADT 2015 | ADT 2016 | ADT 2017 | ADT 2018 | ADT 2019 | ADT 2020 | ADT 2021 |             |                                      |      |
| 822      | Chestnut Rd W of Westford Rd                     | NMCOG   |                               |          |          |          | 2,200    |          |          |          |          |          |          |             |                                      | 0.6  |
| 548      | Coburn Rd E of Lakeview Ave                      | NMCOG   |                               | 1,500    |          |          | 1,600    |          |          |          | 1,800    |          |          | 3,300       | 13.33                                | 12.4 |
| 864      | Cummings Rd S of Rte. 113 (Kendall Rd)           | NMCOG   |                               | 2,200    |          |          |          |          |          |          |          |          |          |             |                                      |      |
| 551      | Dunstable Rd @ Chelmsford/Tyngsborough Town Line | NMCOG   |                               |          |          | 2,200    |          |          |          |          |          |          |          | 2,204       |                                      | 12.3 |
| 760      | Dunstable Rd N of Westford Rd                    | NMCOG   | 4,800                         |          |          |          |          |          |          | 5,300    |          |          |          |             |                                      | 3.6  |
| 975      | Dunstable Rd S of Westford Rd                    | NMCOG   |                               |          |          |          |          |          |          | 4,200    |          |          |          |             |                                      | 6    |
| 552      | Dunstable Rd W of Rte. 3                         | NMCOG   |                               |          | 2,700    |          |          | 2,600    |          |          | 3,306    |          |          |             | 3.74                                 | 6    |
| 938      | Frost Rd N of Rte. 113                           | NMCOG   |                               |          |          | 8,900    |          |          |          |          |          |          |          |             |                                      | 3.4  |
| 943      | Groton Rd W of Scribner Rd                       | NMCOG   |                               |          |          | 920      |          |          |          |          |          |          |          |             |                                      | 3.1  |
| 554      | Lakeview Ave N of Coburn Rd                      | NMCOG   | 2,500                         |          |          |          |          | 2,300    |          |          |          |          |          |             |                                      | 3    |
| 556      | Locust Ave W of Middlesex Rd                     | NMCOG   | 2,600                         | 2,600    |          |          |          |          |          | 2,600    |          |          |          |             | 0.00                                 | 1.4  |
| 557      | Long Pond Rd @ NH State Line                     | NMCOG   |                               | 7,300    |          |          |          |          |          |          |          |          |          |             |                                      |      |
| 558      | Middlesex Rd @ NH State Line                     | MassDOT (2004-2008,2010,2011) & NRPC (2001-2003, 2009), | 20,586                        |          | 22,563   |          |          | 19,495   | 19,826   | 19,885   | 19,805   | 16,339   |          |             | -1.65                                |      |
| 861      | Middlesex Rd N of Locust Ave                     | NMCOG   |                               | 14,200   |          |          |          |          |          |          | 29,388   |          |          |             |                                      |      |
| 862      | Middlesex Rd N of TJ Maxx Plaza NB only          | NMCOG   |                               | 8,500    |          |          |          |          |          |          |          |          |          |             |                                      |      |
| 863      | Middlesex Rd N of TJ Maxx Plaza SB only          | NMCOG   |                               | 7,100    |          |          |          |          |          |          |          |          |          |             |                                      |      |
| 562      | Middlesex Rd S of Bryant Ln                      | NMCOG   |                               | 12,500   |          |          |          |          |          |          |          |          |          |             |                                      |      |
| 563      | Middlesex Rd S of Rte. 3 Ramps                   | NMCOG   |                               |          |          |          |          |          |          |          | 14,565   |          |          |             |                                      |      |
| 889      | Norris St E of Frost Rd                          | NMCOG   |                               |          | 1,900    |          |          |          | 1,800    |          |          |          |          |             |                                      | 3.1  |
| 566      | Rte. 113 (Kendall Rd) E of Flint Rd              | NMCOG   |                               |          |          |          |          |          |          |          | 8,397    |          |          |             |                                      | 9.1  |
| 567      | Rte. 113 (Kendall Rd) W of Bryant Ln             | Multiple Agencies                                       | 6,400                         | 7,100    |          |          |          |          |          |          |          |          |          |             |                                      |      |
| 568      | Rte. 113 (Kendall Rd) W of Rte. 3                | NMCOG (98), MassDOT                                     |                               | 11,500   |          |          |          |          |          |          |          |          |          |             |                                      |      |

2021 NORTHERN MIDDLESEX REGIONAL TRAFFIC VOLUME REPORT

| NMCOG ID | Town of Tyngsborough Traffic Locations                           | Counted By          | Average Daily Traffic Volumes |          |          |          |          |          |          |          |          |          |          | Growth Rate | % Heavy Vehicles (Most Recent Count) |
|----------|--|---------------------|-------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------------|--------------------------------------|
|          |  |                     | ADT 2011                      | ADT 2012 | ADT 2013 | ADT 2014 | ADT 2015 | ADT 2016 | ADT 2017 | ADT 2018 | ADT 2019 | ADT 2020 | ADT 2021 |             |                                      |
| 234      | Rte. 113 (Kendall Rd/Main St) @ Dunstable/Tyngsborough Town Line | NMCOG               |                               |          |          | 10,200   |          | 11,700   |          |          |          | 10,354   | 10,589   | 0.54        | 11.80                                |
| 573      | Rte. 113 (Pawtucket Blvd) 15 Miles (2.4km) W of Lowell           | NMCOG               | 9,494                         | 9,636    | 8,565    |          | 10,259   | 10,895   | 11,026   | 11,150   | 11,105   | 9,162    |          | -0.44       |                                      |
| 570      | Rte. 113 (Pawtucket Blvd) S of Rte. 3A (Frost Rd)                | Multiple Agencies   |                               | 6,400    |          |          |          |          |          |          |          |          |          |             |                                      |
| 574      | Rte. 113(Kendall Rd) E of Rte. 3                                 | Multiple Agencies   |                               |          |          |          |          |          |          |          | 9,650    |          |          |             | 9.7                                  |
| 575      | Rte. 3 @ NH State Line   | MassDOT & NH DOT    |                               |          | 86,453   |          |          | 82,327   | 82,986   | 83,816   | 85,492   | 72,668   |          | -2.28       | 4                                    |
| 657      | Rte. 3 @ Tyngsborough/Westford Town Line                         | MassDOT             | 87,987                        | 88,047   | 96,625   |          | 98,649   |          | 104,211  | 105,253  | 107,358  | 91,254   | 81,716   | -0.79       |                                      |
| 860      | Rte. 3 Exit 35 NB Ramps  | NMCOG               |                               | 6,700    |          |          |          |          |          |          |          |          |          |             |                                      |
| 870      | Rte. 3 Exit 35 SB Ramps  | NMCOG               |                               | 7,400    |          |          |          |          |          |          |          |          |          |             |                                      |
| 580      | Rte. 3A (Frost Rd) @ NH State Line                               | NMCOG & NRPC (2011) | 7,805                         | 6,700    |          | 6,800    |          |          |          | 7,000    |          |          |          | -1.72       | 3.5                                  |
| 588      | Rte. 3A (Middlesex Rd) S of Westford Rd                          | Multiple Agencies   |                               |          |          |          |          |          |          |          | 9,689    |          |          |             | 3.9                                  |
| 589      | Scribner Rd @ Dunstable Town Line                                | NMCOG               |                               |          |          |          |          |          |          |          |          |          | 1,055    |             | 9.3                                  |
| 590      | Scribner Rd N of Groton Rd                                       | NMCOG               | 1,300                         |          |          | 1,400    |          |          |          |          |          |          |          |             | 1.9                                  |
| 961      | Scribner Rd S of Chestnut Rd                                     | NMCOG               |                               |          |          |          |          | 2,100    |          |          |          |          |          |             | 1.6                                  |
| 764      | Sherburne Ave E of Rte. 3A (Frost Rd)                            | NMCOG               |                               |          |          |          | 5,100    |          |          |          |          |          |          |             | 1.9                                  |
| 980      | Swan Rd S of Westford Rd   | NMCOG               |                               |          |          |          |          |          | 4,800    |          |          |          |          |             | 2.9                                  |
| 755      | Varnum Ave/Sherburne Ave @ Lowell/Tyngsborough Town Line         | NMCOG               | 2,800                         |          |          |          | 2,700    |          |          | 3,758    |          |          |          | 4.89        |                                      |
| 595      | Westford Rd E of Rte. 3  | Multiple Agencies   |                               |          | 10,900   |          |          |          |          |          | 11,789   |          |          |             |                                      |
| 981      | Westford Rd E of Swan Rd   | NMCOG               |                               |          |          |          |          |          | 6,900    |          |          |          |          |             |                                      |
| 599      | Westford Rd W of Dunstable Rd                                    | NMCOG               |                               |          |          |          |          |          | 11,400   |          |          |          |          |             | 8.7                                  |
| 979      | Westford Rd W of Swan Rd   | NMCOG               |                               |          |          |          |          |          | 4,100    |          |          |          |          |             | 1.9                                  |
| 232      | Westford St @ Dunstable/Tyngsborough Town Line                   | NMCOG               |                               |          |          | 810      |          |          |          |          |          |          |          |             | 1.3                                  |

# Map 2-11: Westford Traffic Count Locations 2010-2021



**● Traffic Count Location (labeled by ID)**

**Roads by Functional Classification**

- Interstate
- Principal Arterial
- Rural Minor Arterial/Urban Principal Arterial
- Rural Major Collector/Urban Minor Arterial
- Rural Minor Collector/Urban Collector
- Local Roadway
- Urbanized Area (2010)
- Town Boundary

**Sources:**  
 MassDOT/NMCOG (traffic counts; roads; 2010 urbanized area);  
 MassGIS (town boundaries);  
 MassDEP (water).

Data provided on this map is not sufficient for either boundary determination or regulatory interpretation.

Produced 3/1/2022 by NMCOG

**massDOT**  
 Massachusetts Department of Transportation  
 Highway Division

**Northern Middlesex Council of Governments**  
 40 Church Street, Suite 200  
 Lowell, Massachusetts 01852-2686  
 (978) 454-8021 nmco.org



Map 2-3 Westford 11x17 landscape back

**Table 2-15: Town of Westford Traffic Volumes, 2011 - 2021**

| NMCOG ID | Town of Westford Traffic Locations        | Counted By | Average Daily Traffic Volumes |          |          |          |          |          |          |          |          |          |          | Growth Rate | % Heavy Vehicles (Most Recent Count) |      |
|----------|---|------------|-------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------------|--------------------------------------|------|
|          |   |            | ADT 2011                      | ADT 2012 | ADT 2013 | ADT 2014 | ADT 2015 | ADT 2016 | ADT 2017 | ADT 2018 | ADT 2019 | ADT 2020 | ADT 2021 |             |                                      |      |
| 969      | Beaver Brook Rd at Beaver Brook           | NMCOG      |                               |          |          |          |          | 3,100    |          |          |          |          |          |             |                                      | 3    |
| 604      | Boston Rd N of I - 495                    | NMCOG      | 14,700                        |          |          |          |          |          | 15,000   |          |          |          |          |             |                                      | 4.1  |
| 804      | Boston Rd S of Hildreth St                | NMCOG      |                               | 15,500   |          |          |          |          | 13,200   |          |          |          | 12,046   | 14,784      | -0.46                                | 11.6 |
| 867      | Boston Rd S of Main St                    | NMCOG      |                               | 10,100   |          |          |          |          |          |          |          |          |          |             |                                      |      |
| 607      | Carlisle Rd N of Liberty Way              | NMCOG      |                               |          | 9,800    |          |          |          |          |          |          |          |          |             |                                      |      |
| 609      | Cold Spring Rd N of Forge Village Rd      | NMCOG      |                               |          | 2,200    |          |          |          |          |          |          |          |          |             |                                      |      |
| 610      | Cold Spring Rd N of Patten Rd             | NMCOG      |                               | 2,000    |          |          |          |          |          |          |          |          |          |             |                                      |      |
| 613      | Depot Rd N of Main St                     | NMCOG      |                               | 8,900    |          |          |          |          |          |          |          |          |          |             |                                      |      |
| 614      | Depot Rd S of Rte. 40 (Groton Rd)         | NMCOG      |                               |          |          | 5,100    |          |          |          |          |          |          |          |             |                                      | 3.5  |
| 945      | Depot St W of Plain St                    | NMCOG      |                               |          |          |          | 7,600    |          |          |          |          |          |          |             |                                      | 2.5  |
| 617      | Dunstable Rd N of Rte. 40 (Groton Rd)     | NMCOG      | 3,100                         |          |          |          |          |          |          |          |          |          |          |             |                                      |      |
| 618      | Dunstable Rd S of Rte. 40 (Groton Rd)     | NMCOG      | 1,300                         |          |          |          |          |          |          |          |          |          |          |             |                                      |      |
| 619      | E Prescott Rd E of Rte. 225 (Pleasant St) | NMCOG      |                               |          |          |          | 3,100    |          |          |          |          |          | 3,410    |             |                                      | 15.9 |
| 620      | Forge Village Rd E of Cold Spring Rd      | NMCOG      |                               |          |          | 2,400    | 2,900    |          |          |          |          |          |          |             |                                      | 3.3  |
| 621      | Forge Village Rd W of Cold Spring Rd      | NMCOG      |                               |          |          |          |          |          |          | 3,300    |          |          |          |             |                                      | 3.8  |
| 855      | Gould St N of Rte. 40 (Groton Rd)         | NMCOG      |                               | 200      |          |          |          |          |          |          |          |          |          |             |                                      |      |
| 622      | Graniteville Rd N of Bixby Lane           | NMCOG      |                               | 3,700    |          |          |          |          |          |          |          |          |          |             |                                      |      |
| 623      | Hildreth St E of Rte. 225 (Concord Rd)    | NMCOG      | 1,700                         |          |          |          |          |          | 1,900    |          |          |          |          |             |                                      | 0.7  |
| 869      | Hildreth St W of Boston Rd                | NMCOG      |                               | 1,400    |          |          |          |          |          |          |          |          | 1,564    |             |                                      | 11.4 |
| 854      | Keyes Rd N of Rte. 40 (Groton Rd)         | NMCOG      |                               | 430      |          |          |          |          |          |          |          |          |          |             |                                      |      |
| 848      | Lincoln St E of Boston Rd (1 way)         | NMCOG      | 4,700                         | 5,000    |          |          |          |          |          |          |          |          |          |             |                                      |      |
| 768      | Lowell Rd E of Stony Brook Rd             | NMCOG      | 1,400                         |          |          |          |          |          |          |          | 2,392    |          |          |             |                                      | 7.1  |
| 868      | Main St E of Depot St                     | NMCOG      |                               | 3,900    |          |          |          |          |          |          |          |          |          |             |                                      |      |
| 624      | Main St E of Graniteville Rd              | NMCOG      |                               | 8,500    |          |          | 7,700    |          |          | 8,900    |          |          |          |             | 0.78                                 | 4.8  |
| 865      | Main St E of Lincoln St                   | NMCOG      |                               | 12,500   |          |          |          |          |          |          |          |          |          |             |                                      |      |

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| NMCOG ID | Town of Westford Traffic Locations                             | Counted By          | Average Daily Traffic Volumes |          |          |          |          |          |          |          |          |          |          | Growth Rate | % Heavy Vehicles (Most Recent Count) |     |
|----------|--|---------------------|-------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------------|--------------------------------------|-----|
|          |  |                     | ADT 2011                      | ADT 2012 | ADT 2013 | ADT 2014 | ADT 2015 | ADT 2016 | ADT 2017 | ADT 2018 | ADT 2019 | ADT 2020 | ADT 2021 |             |                                      |     |
| 626      | Oak Hill Rd S of Rte. 40 (Groton Rd)                           | NMCOG               | 4,800                         |          |          | 4,500    |          |          |          |          |          |          |          |             |                                      | 1.4 |
| 127      | Parkerville Rd/S Chelmsford Rd @ Chelmsford/Westford Town Line | NMCOG               | 2,200                         |          | 2,400    | 2,200    |          | 2,700    | 2,600    |          | 3,306    | 2,258    |          | 0.29        | 12.4                                 |     |
| 627      | Patten Rd E of Rte. 225 (Pleasant St)                          | NMCOG               | 1,100                         |          |          | 1,100    |          |          |          |          |          |          |          |             | 3.3                                  |     |
| 629      | Patten Rd W of Forge Village Rd                                | NMCOG               |                               |          |          |          | 1,400    |          |          |          |          |          |          |             | 2.0                                  |     |
| 630      | Pine St E of Rte. 225 (Pleasant St)                            | NMCOG               |                               |          |          |          |          | 2,500    |          |          |          |          |          |             | 2.2                                  |     |
| 631      | Plain Rd N of Stony Brook Rd                                   | NMCOG               | 3,800                         |          |          | 3,600    |          |          | 3,800    |          |          | 2,944    |          | -2.82       | 6.7                                  |     |
| 840      | Powers Rd S of Rte. 110 (Littleton Rd)                         | NMCOG               | 4,900                         |          |          |          |          |          |          |          |          |          |          |             |                                      |     |
| 634      | Powers Rd S of Vine Brook Rd                                   | NMCOG               | 6,100                         |          |          | 6,500    |          |          |          |          |          |          |          |             | 3.9                                  |     |
| 635      | Rte. 110 (Littleton Rd) @ Chelmsford/Westford Town Line        | NMCOG               |                               | 8,300    | 8,700    |          |          |          |          |          | 10,283   | 7,278    | 8,854    | 0.74        | 7.7                                  |     |
| 636      | Rte. 110 (Littleton Rd) @ Littleton Town Line                  | NMCOG               |                               |          |          | 10,300   |          |          |          |          |          |          |          |             | 3.7                                  |     |
| 842      | Rte. 110 (Littleton Rd) E of South Chelmsford Rd               | NMCOG               | 11,800                        |          |          |          |          |          |          |          |          |          |          |             |                                      |     |
| 643      | Rte. 110 (Littleton Rd) W of Boston Rd                         | BST(07), NMCOG (11) | 16,700                        |          |          |          |          |          |          |          |          |          |          |             |                                      |     |
| 837      | Rte. 110 (Littleton Rd) W of Rte. 225 (Concord Rd)             | NMCOG               | 9,200                         |          |          |          |          |          |          |          |          |          |          |             |                                      |     |
| 647      | Rte. 225 (Carlisle Rd) @ Carlisle Town Line                    | NMCOG               | 6,000                         |          |          |          |          |          |          |          |          |          |          |             |                                      |     |
| 649      | Rte. 225 (Carlisle Rd) W of Rte. 27 (Acton Rd)                 | NMCOG               |                               |          |          |          | 9,300    |          |          |          |          |          |          |             | 2.5                                  |     |
| 650      | Rte. 225 (Concord Rd) N of Patten Rd                           | NMCOG               |                               |          | 6,400    |          |          |          |          |          |          |          |          |             |                                      |     |
| 651      | Rte. 225 (Concord Rd) N of Rte. 110 (Littleton Rd)             | NMCOG               |                               | 7,900    |          |          |          |          |          |          |          |          |          |             |                                      |     |
| 652      | Rte. 225 (Concord Rd) S of Robinson Rd                         | NMCOG               |                               |          |          |          | 5,800    |          |          |          |          |          |          |             | 2.1                                  |     |
| 890      | Rte. 225 (Pleasant St) W of Oak St (West of Senior Center)     | NMCOG               |                               |          | 5,700    |          |          |          |          |          |          |          |          |             |                                      |     |
| 654      | Rte. 27 (Acton Rd) N of Rte. 225 (Carlisle Rd)                 | NMCOG               |                               |          | 4,600    |          |          |          |          |          |          |          |          |             |                                      |     |
| 656      | Rte. 27(Acton Rd) @ Acton Town Line                            | NMCOG               | 7,100                         |          |          |          | 7,700    |          |          |          |          |          |          |             | 3.9                                  |     |
| 665      | Rte. 40 (Groton Rd) @ Groton Town Line                         | NMCOG               |                               | 4,300    |          |          |          |          |          |          |          |          |          |             |                                      |     |
| 659      | Rte. 40 (Groton Rd) E of Forrest Rd                            | NMCOG               |                               |          | 9,300    |          |          |          |          |          |          |          |          |             |                                      |     |
| 944      | Rte. 40 (Groton Rd) E of North St                              | NMCOG               |                               |          |          |          | 10,000   |          |          |          |          |          |          |             | 5.0                                  |     |
| 663      | Rte. 40 (Groton Rd) W of Gould Rd                              | NMCOG               |                               |          |          | 4,800    |          |          |          |          |          |          |          |             | 2.1                                  |     |

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| NMCOG ID | Town of Westford Traffic Locations                        | Counted By      | Average Daily Traffic Volumes |          |          |          |          |          |          |          |          |          |          | Growth Rate | % Heavy Vehicles (Most Recent Count) |     |
|----------|---|-----------------|-------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------------|--------------------------------------|-----|
|          |   |                 | ADT 2011                      | ADT 2012 | ADT 2013 | ADT 2014 | ADT 2015 | ADT 2016 | ADT 2017 | ADT 2018 | ADT 2019 | ADT 2020 | ADT 2021 |             |                                      |     |
| 664      | Rte. 40 (Groton Rd) W of Nutting Rd                       | NMCOG           |                               | 10,000   |          |          |          |          |          |          |          |          |          |             |                                      |     |
| 667      | S Chelmsford Rd S of Rte. 110 (Littleton Rd)              | VHB, NMCOG      |                               |          | 2,400    |          |          |          |          |          |          |          |          |             |                                      |     |
| 593      | Swan Rd/Tyngsborough Rd @ Tyngsborough/Westford Town Line | NMCOG           |                               |          | 7,500    |          |          |          |          |          |          |          |          |             |                                      |     |
| 669      | Tadmuck Rd N of Rte. 110 (Littleton Rd)                   | HA              |                               |          | 5,600    |          |          |          |          |          |          |          |          |             |                                      |     |
| 670      | Tadmuck Rd N of Rte. I-495                                | NMCOG           |                               |          |          | 5,400    |          |          |          |          |          |          |          |             |                                      | 1.6 |
| 673      | Town Farm Rd N of Forge Village Rd                        | NMCOG & MassDOT |                               |          |          |          |          | 2,800    |          |          |          |          |          |             |                                      | 9.8 |

### 3. GLOSSARY OF ACRONYMS AND ABBREVIATIONS

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The traffic counts contained in this book originate from various agencies and companies, and the sources of the counts are indicated by the following symbols:

NMCOG = Northern Middlesex Council of Governments  
 Mass DOT = Massachusetts Department of Transportation, formerly MHD  
 MRPC = Montachusett Regional Planning Commission  
 TEC = Transportation Engineering Construction  
 V&A = Vanasse & Associates (also Vai)  
 VHB = Vanasse Hangen Brustlin  
 CoL = City of Lowell  
 NRPC = Nashua Regional Planning Commission  
 NHDOT = New Hampshire Department of Transportation  
 MVPC = Merrimack Valley Planning Commission  
 AC = Accurate Counts Inc.  
 PD = Precision Data  
 BST = Bay State Traffic Data  
 FPA = Fort Point Associates (Hamilton Canal Study)

Abbreviations found throughout this report are included in the following list:

NH or N.H. = New Hampshire  
 C.L. of CL = City Line  
 S.L. or SL = State Line  
 T.L. or TL = Town Line  
 Rt or Rte. = Route  
 I = Interstate  
 US = United States Route  
 Rd = Road  
 St = Street  
 Av or Ave = Avenue  
 Dr = Drive  
 Cir = Circle  
 Btwn = Between  
 N = North  
 S = South  
 E = East  
 W = West  
 U = Urban  
 R = Rural  
 ADT = Average Daily Traffic  
 AWD = Average weekday volume  
 RTP = Regional Transportation Plan  
 TIP = Transportation Improvement Program  
 UPWP = Unified Planning Work Program