

Milton Road (NH Route 125) Corridor
Corridor Study

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City of Rochester
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## Section 1 Introduction

Based on discussions with City of Rochester officials, there are safety and accessibility concerns along the Milton Road (NH Route 125) corridor between Norway Plains Road (to the south) and Ridgewood Estates (to the north). In addition, future growth in the area may exacerbate existing deficiencies. The City of Rochester has requested that a Corridor Study be prepared to evaluate existing areas of concern and identify roadway and transportation improvements along the corridor due to several newly proposed developments, new zoning, and a recently designated Economic Revitalization District.

The City has raised concerns with delays, safety, and connectivity for residents, motorists, and business owners along the Milton Road corridor. Enhancing the integration and connectivity of the transportation system in this area is an important component in developing an efficient network that appropriately accommodates various modes of transportation such as vehicles, pedestrians, and transit users. A fully integrated and connected multi-modal transportation system is important for maintaining the quality of life of residents and workers, as well as a vibrant economy. Access Management strategies are also key in improving safety and efficiency by balancing the mobility and access needs of roadway users and enhance safe and efficient property access. Balancing mobility and access needs requires the planning of land uses and the adjacent transportation infrastructure.

With the City of Rochester's vision to implement improvements along the Milton Road corridor in addressing current and future needs, an opportunity is available to implement a Complete Streets design by improving transportation safety, accessibility, and mobility. With the goal of improving transportation efficiency, measures have been developed to minimize conflict, enhance connectivity, and establish consistency along the corridor. The transportation infrastructure recommendations have been developed to the characteristics of the area and to accommodate the needs and expectations of the roadway users.

This Milton Road Corridor Study includes a Base Plan developed from site reconnaissance, as well as available tax maps, aerial imagery, geographic information system (GIS) information, and public plans. Traffic counts were collected to understand current multi-modal travel, generation, and patterns along the Milton Road corridor. Based on coordination efforts with City officials, trip-generation estimates were formulated for parcels along the corridor assuming higher-use redevelopment potential. Transportation infrastructure improvements were developed to accommodate existing and estimated future traffic volumes along the Milton Road corridor. The traffic volumes and recommended improvement measures were established in accordance with City of Rochester, New Hampshire Department of Transportation (NHDOT), and national standards, as applicable.

## Section 2 <br> Existing Conditions

To evaluate the current traffic conditions and future impacts of potential redevelopment of existing parcels, existing roadway and traffic conditions have been established. Evaluation of existing conditions involves the description and quantification of existing roadways and traffic conditions in the area. For the purposes of this assessment, the Milton Road corridor is approximately 3 miles long between Norway Plains Road to the south and Ridgewood Estates to the north.

According to the City of Rochester's 2014 Zoning Map, the majority of the Milton Road corridor is comprised of the Highway Commercial District, with small abutting portions comprised of Industrial, Residential-1, and Agricultural Districts.

### 2.1 Study Area Roadways

The jurisdictional responsibility and classification of each major roadway within the study area is listed in Table 2-1. The jurisdiction and classification of the roadways were obtained from the NHDOT NH Roads - GIS Planning website.

TABLE 2-1
Roadway Classification

| Roadway | NH Legislative Classification | Federal Functional Classification |
| :---: | :---: | :---: |
| Milton Road | Compact Road (IV) | Minor Arterial (16) |
| Norway Plains Road | Local Road (V) | Local Road (19) |
| Jarvis Avenue | Local Road (V) | Local Road (19) |
| NH Route 11/US Route 202: |  |  |
| Milton Road SB to WB On-Ramp | Secondary Highway (II) | Other Principal Arterial (14) |
| Milton Road NB to WB On-Ramp | Primary Highway (I) | Other Principal Arterial (14) |
| Milton Road to EB On-Ramp | Secondary Highway (II) | Other Principal Arterial (14) |
| Off-Ramps | Secondary Highway (II) | Other Principal Arterial (14) |
| Old Milton Road | Local Road (V) | Local Road (19) |
| Flat Rock Bridge Road | Local Road (V) | Local Road (19) |
| Northcoast Drive | Local Road (V) | Local Road (19) |
| Salmon Falls Road | Local Road (V) | Minor Arterial (16) |
| Amarosa Drive | Private Road | Private Road (0) |
| Cross Road | Local Road (V) | Local Road (19) |
| Sewell Road | Local Road (V) | Local Road (19) |
| Forest Park Drive | Local Road (V) | Local Road (19) |

In addition to the information presented in Table 2-1, the NHDOT mapping information revealed that Amarosa Drive is under private ownership and the NH Route 11/

US Route 202 ramps are under NHDOT jurisdiction. The other major roadways within the study area are under City of Rochester jurisdiction, with Milton Road also within an Urban Compact Area.

### 2.2 Multi-Modal Facilities

### 2.2.1 Milton Road Vehicular Corridor

Within the study area, the approximate 3 mile Milton Road corridor is aligned in a north/south direction. Milton Road generally provides one travel lane in each direction with directional flow separated by double yellow centerlines. The speed limit along the Milton Road corridor within the study area is posted at 35 miles per hour ( mph ), and Milton Road south of Norway Plains Road posted at 30 mph . Based on a review of available tax maps, aerial imagery, GIS information, and public plans, Milton Road provides between 58 and 68 feet of available right-of-way. The corridor includes numerous unsignalized intersections with side streets and driveways for commercial, residential, and industrial uses. In addition, the Milton Road corridor within the study area provides signalized intersections with the Rochester Market Place/Rite Aid driveways and with Salmon Falls Road/Amarosa Drive.

### 2.2.1.1 Milton Road at NH Route 11/US Route 202 Off-Ramp

The NH Route 11/US Route 202 off-ramp intersects Milton Road from the east to form two unsignalized intersections. Left and right turns from the NH Route 11/ US Route 202 off-ramp operate under STOP-sign control that are separated by approximately 230 feet via a raised delta island. Based on coordination efforts with City of Rochester staff, vehicles turning left from the NH Route 11/US Route 202 off-ramp may have limited sight lines to see Milton Road northbound approaching vehicles.

In October 2014, sight distances were measured at the Milton Road intersection with the NH Route 11/US Route 202 off-ramp left turns to determine if the available sight lines for vehicles exiting driveways and minor street roadways meet or exceed the minimum distances required for approaching vehicles to safely stop. The available sight lines should be compared with minimum requirements, as established by the American Association of State Highway and Transportation Officials (AASHTO), ${ }^{1}$ as well as the City of Rochester and NHDOT requirements to achieve All Season Safe Sight Distances.

Sight distance is the length of roadway ahead visible to the driver. The Stopping Sight Distance (SSD) is the minimum distance required for a vehicle traveling along the major roadway to safely stop before reaching a stationary object in its path. The Intersection Sight Distance (ISD) is provided on minor street approach to allow the motorists of stopped vehicles sufficient view of the major roadway to decide when to enter the major roadway.

These measurements revealed that available sight distances exceed the SSD requirements, but ISD requirements may be limited due to overgrown vegetation along the east side of Milton Road to the south of the intersection.

[^0]

In addition, field observations conducted in October 2014 revealed that left-turning vehicles from the NH Route 11/US Route 202 off-ramp accepted short gaps in the Milton Road traffic stream that caused Milton Road southbound vehicles to brake in an effort to avoid collisions. In addition, sun glare during the weekday PM commuter peak period (i.e., between 4-6 PM) appeared to, at times, cause delay for turning vehicles exiting the off-ramp from proceeding onto Milton Road.

### 2.2.1.2 Milton Road at Flat Rock Bridge Road

Flat Rock Bridge Road intersects Milton Road from the east to form a three-legged unsignalized intersection. The Flat Rock Bridge Road approach operates under STOPsign control and consists of an exclusive left-turn lane and an exclusive right-turn lane for approximately 30 feet that are separated via a raised delta island. As part of the Cumberland Farms redevelopment project ${ }^{2}$ that would acquire the Martin's Family DriveIn Restaurant, the raised delta island presents confusion for Milton Road southbound motorists turning left onto Flat Rock Bridge Road as vehicles were observed driving on the left side of the island. In addition, left-turning motorists from Flat Rock Bridge Road onto Milton Road southbound are required to turn their heads more than 90 degrees to view oncoming Milton Road southbound vehicles.


Milton Road Southbound Left Turn to Flat Rock Bridge Road (wrong side of island)


Flat Rock Bridge Road Westbound Approach to Milton Road

[^1]
### 2.2.1.3 Milton Road at Northcoast Drive

Northcoast Drive intersects Milton Road from the west to form a T-type unsignalized intersection with the Northcoast Drive eastbound approach under STOP-sign control. The Milton Road and Northcoast Drive approaches to the intersection consist of single general-purpose travel lanes. Field observations revealed that heavy commercial vehicles utilize Northcoast Drive for Ossipee Aggregates Rochester Terminal and Rochester Market Place. Due to the presence of trucks turning to and from Northcoast Drive and the limited pavement geometry, vehicle progression along Milton Road northbound was found to be hindered when a truck turned left onto Northcoast Drive.


Milton Road Northbound Approach to Northcoast Drive

### 2.2.1.4 Milton Road at Rochester Market Place and Rite Aid

The Milton Road intersection with the Rochester Market Place and Rite Aid driveways is under traffic signal control with signal heads provided on mast arms. The Milton Road northbound and southbound approaches each provide an exclusive left-turn lane, and the Milton Road southbound approach also includes an exclusive right-turn lane. The traffic signal operates on a three phase system with a Milton Road northbound and southbound left-turn phase and overlapping right turns from Rochester Market Place, a Milton Road northbound and southbound through/right-turn phase, and a Rochester Market Place and Rite Aid permissive phase.

Upon field observations, signage and pavement markings appear to be in contradiction on some of the approaches to this intersection. The Milton Road southbound approach is striped for an exclusive left-turn lane, a through lane, and an exclusive right-turn lane. The Intersection Lane Control Sign, however, depicts a shared left-turn/through lane and an exclusive right-turn lane (R3-8[25] instead of R3-8[135]).


Milton Road Southbound Approach to Rochester Market Place and Rite Aid

In addition, field inventory revealed that the signage and pavement markings appear to be in contradiction on the Rochester Market Place driveway eastbound approach to Milton Road. The Rochester Market Place driveway approach consists of a shared leftturn/through lane and an exclusive right-turn lane that coincides with the Intersection Lane Control Signs posted on the mast arms (R3-8[2] and R3-8[5]). The Intersection Lane Control Sign posted on the south side of the Rochester Market Place driveway, however, depicts an exclusive left-turn lane and an exclusive right-turn lane (R3-8[15]).


Rochester Market Place Approach to Milton Road and Rite Aid

### 2.2.1.5 Milton Road at Salmon Falls Road and Amarosa Drive

The Milton Road intersection with Salmon Falls Road and Amarosa Drive is under traffic signal control with signal heads located on overhead span wires. The Milton Road northbound and southbound approaches each contain an exclusive left-turn lane, and the Milton Road northbound approach also includes a channelized right-turn lane onto Salmon Falls Road. The Salmon Falls Road and Amarosa Drive approaches each consist of a single general-purpose travel lane. Although STOP bars are striped on the Milton Road and Amarosa Drive approaches, there are no pavement markings to indicate where a vehicle should stop on a red traffic signal on the Salmon Falls Road approach. Salmon Falls Road intersects Milton Road at an acute angle (i.e., approximately 30 degree angle), which requires vehicles to make sharp left turns onto Milton Road southbound.


Salmon Falls Road Approach to Milton Road and Amarosa Drive
The Lambert's Auto Salvage driveway is along the north side of Salmon Falls Road and extends from the Milton Road for approximately 145 feet. There may be a conflict of vehicles due to driveway closely spaced to the signalized intersection. Based on the City
of Rochester's Site Plan Regulations, a driveway shall not be located 100 feet of an intersecting roadway on a Local Road or 200 feet on an Arterial. In addition, NHDOT policy states that the maximum width for any driveway shall be 50 feet, a driveway in an urban area shall not be placed within 100 feet of an intersection, and a driveway shall not encroach upon the curved section of an intersection's corner.


Salmon Falls Road (Lambert's Auto Salvage) from Milton Road and Amarosa Drive
Field observations conducted in October 2014 revealed that Milton Road southbound left-turning and through vehicles travelled through the intersection after the traffic signal indications turned red (i.e., red-light running) during both the weekday AM and weekday PM commuter peak periods (i.e., between 7-9 AM and between 4-6 PM). In addition, Milton Road northbound through vehicles were observed to travel through the intersection after the traffic signal indications turned red during the weekday AM commuter peak period.

### 2.2.2 Pedestrian Amenities

Sidewalks are provided along both sides of Milton Road from Northcoast Drive that end on the west side at the northern end of Rochester Market Place and end on the east side at Stor-All Mini Storage. At the Milton Road signalized intersection with the Rochester Market Place and Rite Aid driveways, crosswalks are striped across the Rochester Market Place driveway, Rite Aid driveway, and northern leg of Milton Road. These pedestrian crossings are under signalized pedestrian control. Raised tactile surfaces are provided on the northeast and northwest crosswalk junctions for people with visual impairments.

During field inventory in September 2014, there was a "Motorist Shall Yield to Pedestrians in Crosswalks" sign posted on Milton Road northbound between Jarvis Avenue and the NH Route 11/US Route 202 interchange. Although the only crosswalks provided within the study area are at the Milton Road intersection with the Rochester Market Place driveway and the Rite Aid driveway (approximately 1 mile to the north), discussions with City officials revealed that this sign was posted to provide motorists with a City-wide notification of yielding to pedestrians within crosswalks. Based on field reconnaissance in October 2014, this warning sign had been removed.


Milton Road Northbound (September 2014)


Milton Road Northbound (October 2014)

### 2.2.3 Available Public Transportation

The Cooperative Alliance for Seacoast Transportation (COAST) provides fixed route bus service along the Milton Road corridor in the form of Bus Route 6 (Farmington/Rochester). Bus Route 6 leaves the Farmington Fire Station on Main Street, travels along NH Route 11 and stops at Walmart, turns onto NH Route 125 and stops at Lilac Mall, and ends at Rochester Market Place. Stops along the Milton Road corridor within the study area include Norway Plains Road, Jarvis Avenue, Flat Rock Bridge Road, Old Milton Road, and Rochester Market Place. Bus Route 6S (i.e., from Farmington to Rochester) runs between 5:50 AM and 6:05 PM on weekdays, and Bus Route 6 N (i.e., from Rochester to Farmington) runs between 6:26 AM and 6:34 PM on weekdays. There is no bus service provided on the weekends. The COAST bus schedules are provided in the Appendix.

### 2.3 Safety Analysis

Crash data within the study area intersections were researched from the files of the NHDOT (2010-2012) and the Rochester Police Department (2011-2013). With reported crash data, there is an opportunity to investigate safety patterns with respect to such factors as an unusual amount of personal injuries, the time of day (e.g., peak traffic periods, sun glare periods, nighttime), seasonality, weather and roadway surface conditions (e.g., dry, wet, snow/ice), and collision type (e.g., angle, bicycle/pedestrian, fixed object, head-on, rear-end, sideswipe), if available. A summary of the NHDOT and Rochester Police Department crash data at the study area intersections that experienced 4 reported incidents or more is provided in Tables 2-2 and 2-3, respectively.

### 2.3.1 Milton Road at Norway Plains Road

Based on the NHDOT data, the Milton Road and Norway Plains Road intersection has experienced an average of 3 reported collisions per year during the 3 -year period. The majority of the incidents ( 8 of $9=89 \%$ ) occurred under dry roadway conditions, clear weather conditions, and during non-commuter peak periods (i.e., not between 7-9 AM or between 4-6 PM). A good portion of the reported collisions resulted in personal injury (4 of $9=44 \%$ ) and 2 of the reported 9 incidents involved pedestrians.

Based on the Rochester Police Department data, the Milton Road intersections with Norway Plains Road and First City Motor Sales have experienced an average of more than 1 reported collision per year during the 3 -year period. The incidents occurred under dry roadway conditions and clear weather conditions, and the majority of the collisions ( 3 of $4=75 \%$ ) occurred during non-commuter peak periods. Of particular note, all of the reported collisions resulted in personal injury and one incident involved a motorist receiving a citation for a "Child Restraint Violation."

TABLE 2-2
NHDOT Collision Data Summary

| Condition | Milton Rd at Norway Plains Rd | Milton Rd at Jarvis Ave | Milton Rd at <br> NH Rte 11/US Rte 202 | Milton Rd at <br> Flat Rock Bridge Rd | Milton Rd at Northcoast Dr | Milton Rd at Rochester Market Place | Milton Rd at Salmon Falls Rd | Milton Rd at Cross Rd | Milton Rd at Ridgewood Estates |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year: |  |  |  |  |  |  |  |  |  |
| 2010 | 2 | 1 | 3 | 3 | 0 | 1 | 7 | 3 | 0 |
| 2011 | 3 | 2 | 2 | 4 | 2 | 5 | 2 | 4 | 1 |
| 2012 | 4 | $\underline{2}$ | 0 | 3 | $\underline{2}$ | 7 | 1 | 4 | 4 |
| Total | 9 | 5 | 5 | 10 | 4 | 13 | 10 | 11 | 5 |
| Severity: |  |  |  |  |  |  |  |  |  |
| Property Damage Only | 5 | 3 | 4 | 7 | 2 | 12 | 8 | 9 | 5 |
| Injury | 4 | 2 | 1 | 3 | 2 | 1 | 2 | 2 | 0 |
| Fatal | $\bigcirc$ | $\frac{0}{5}$ | $\frac{0}{5}$ | $\underline{0}$ | $\bigcirc$ | 0 | 0 | 0 | $\frac{0}{5}$ |
| Total | 9 | 5 | 5 | 10 | 4 | 13 | 10 | 11 | 5 |
| Road Condition: |  |  |  |  |  |  |  |  |  |
| Dry | 8 | 5 | 5 | 9 | 4 | 13 | 8 | 10 | 4 |
| Wet | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 |
| Snowy/Icy | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| Total | 9 | 5 | 5 | 10 | 4 | 13 | 10 | 11 | 5 |
| Weather: |  |  |  |  |  |  |  |  |  |
| Clear | 8 | 4 | 5 | 6 | 4 | 10 | 7 | 6 | 4 |
| Rain/Cloudy | 1 | 1 | 0 | 3 | 0 | 2 | 1 | 4 | 1 |
| Snow/Slush | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 1 | 0 |
| Total | 9 | 5 | 5 | 10 | 4 | 13 | 10 | 11 | 5 |
| Weekday Commuter Peak: |  |  |  |  |  |  |  |  |  |
| Weekday AM | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 |
| Weekday PM | 1 | 2 | 1 | 2 | 1 | 3 | 2 | 2 | 2 |
| Non-Commuter Peak | $\frac{8}{9}$ | $\frac{2}{5}$ | $\frac{4}{5}$ | $\frac{7}{10}$ | $\frac{2}{4}$ | $\frac{9}{13}$ | $\frac{8}{10}$ | $\frac{9}{11}$ | $\frac{3}{5}$ |
| Total | 9 | 5 | 5 | 10 | 4 | 13 | 10 | 11 | 5 |

TABLE 2-3
Rochester Police Department Collision Data Summary

| Condition | Milton Rd at Norway Plains Rd | Milton Rd at Jarvis Ave | Milton Road at Dunkin' Donuts | Milton Rd at US Route 202 | Milton Rd at <br> Flat Rock Bridge Rd | Milton Rd at O'Keefe \& Martin Choice Furniture | Milton Rd at Rochester Market Place | Milton Rd at Salmon Falls Rd | Milton Rd at Cross Rd |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year: |  |  |  |  |  |  |  |  |  |
| 2010 | 3 | 2 | 2 | 10 | 4 | 1 | 5 | 3 | 3 |
| 2012 | 1 | 3 | 4 | 3 | 1 | 2 | 3 | 1 | 0 |
| 2012 | $\bigcirc$ | $\underline{2}$ | $\underline{0}$ | 4 | 1 | 4 | 1 | $\bigcirc$ | 2 |
| Total | 4 | 7 | 6 | 17 | 6 | 7 | 9 | 4 | 5 |
| Severity: |  |  |  |  |  |  |  |  |  |
| Property Damage Only | 0 | 4 | 2 | 12 | 5 | 4 | 7 | 3 | 3 |
| Injury | 4 | 3 | 4 | 5 | 1 | 3 | 2 | 1 | 2 |
| Fatal | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 4 | 7 | 6 | 17 | 6 | 7 | 9 | 4 | 5 |
| Manner: |  |  |  |  |  |  |  |  |  |
| Angle | 1 | 1 | 3 | 2 | 0 | 0 | 4 | 1 | 2 |
| Fixed Object | 0 | 2 | 0 | 6 | 2 | 2 | 0 | 0 | 0 |
| Head On | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rear End | 3 | 3 | 2 | 8 | 4 | 4 | 3 | 3 | 3 |
| Sideswipe | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Pedestrian | 0 | 1 | 1 | 0 | 0 | 1 | 2 | 0 | 0 |
| Moose | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 4 | 7 | 6 | 17 | 6 | 7 | 9 | 4 | 5 |
| Road Condition: |  |  |  |  |  |  |  |  |  |
| Dry | 4 | 6 | 6 | 14 | 4 | 6 | 9 | 3 | 5 |
| Wet | 0 | 1 | 0 | 2 | 0 | 1 | 0 | 0 | 0 |
| Snowy/Icy | 0 | 0 | 0 | 17 | $\frac{2}{6}$ | 0 | 0 | $\frac{1}{4}$ | 0 |
| Total | 4 | 7 | 6 | 17 | 6 | 7 | 9 | 4 | 5 |
| Weather: |  |  |  |  |  |  |  |  |  |
| Clear | 4 | 6 | 6 | 17 | 4 | 6 | 9 | 4 | 5 |
| Rain/Cloudy | 0 | 1 | 0 | 0 | 2 | 1 | 0 | 0 | 0 |
| Snow/Slush | $\bigcirc$ | $\bigcirc$ | 0 | 0 | 0 | $\frac{0}{7}$ | $\bigcirc$ | 0 | 0 |
| Total | 4 | 7 | 6 | 17 | 6 | 7 | 9 | 4 | 5 |
| Weekday Commuter Peak: |  |  |  |  |  |  |  |  |  |
| Weekday AM | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 1 | 0 |
| Weekday PM Non-Commuter Peak | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 |
| Non-Commuter Peak Total | $\frac{3}{4}$ | $\frac{6}{7}$ | $\frac{5}{6}$ | $\frac{14}{17}$ | $\frac{5}{6}$ | $\frac{6}{7}$ | $\frac{8}{9}$ | $\frac{3}{4}$ | $\frac{4}{5}$ |

### 2.3.2 Milton Road at Jarvis Avenue

Based on the NHDOT data, the Milton Road and Jarvis Avenue intersection has experienced an average of less than 2 reported collisions per year during the 3 -year period. The majority of the incidents occurred under dry roadway conditions (100\%) and clear weather conditions ( 4 of $5=80 \%$ ).

Based on the Rochester Police Department data, the Milton Road and Jarvis Avenue intersection has experienced an average of more than 2 reported collisions per year during the 3 -year period. The majority of the incidents occurred under dry roadway conditions and clear weather conditions ( 6 of $7=86 \%$ ). Of particular note, a majority of the reported collisions occurred during the non-commuter time periods, almost half resulted in personal injury ( 3 of $7=43 \%$ ), and one involved a pedestrian during rainy conditions on a Monday at 8:55 PM.

### 2.3.3 Milton Road at Dunkin' Donuts Driveways

Based on the NHDOT data, no collisions were reported at the Milton Road intersections with the Dunkin' Donuts driveways (64 Milton Road) during the time period evaluated.

Based on the Rochester Police Department data, the Milton Road intersections with the Dunkin' Donuts driveways have experienced an average of 2 reported collisions per year during the 3 -year period. The incidents occurred under dry roadway conditions and clear weather conditions. A majority of the reported collisions (5 of $6=83 \%$ ) occurred during the non-commuter time periods. Of particular note, most of the collisions resulted in personal injury ( 4 of $6=67 \%$ ), one involved a pedestrian that occurred on a Friday at 7:41 PM, and two entailed motorists receiving citations for "Failure to Yield."

### 2.3.4 Milton Road at NH Route 11/US Route 202

Based on the NHDOT data, the Milton Road and NH Route 11/US Route 202 interchange intersections have experienced an average of less than 2 reported collisions per year during the 3 -year period. All of the incidents occurred under dry roadway conditions and clear weather conditions. The NHDOT data did not distinguish between the individual intersections associated with the interchange (i.e., NH Route 11/US Route 202 off-ramp, NH Route 11/US Route 202 eastbound on-ramp, and NH Route 11/US Route 202 westbound on-ramps from Milton Road northbound and southbound).

Based on the Rochester Police Department data, the Milton Road and NH Route 11/ US Route 202 interchange has experienced an average of over 5 reported collisions per year during the 3 -year period. The Rochester Police Department data did not distinguish between the individual intersections associated with the interchange. The majority of the incidents occurred under dry roadway conditions (14 of $17=83 \%$ ), clear weather conditions (100\%), and during the non-commuter time periods (14 of $17=83 \%$ ). Of particular note, most of the collisions consisted of rear-end types ( 8 of $17=47 \%$ ) and resulted in personal injury ( 12 of $17=71 \%$ ), with one incident involving a motorist receiving a citation for "Failure of Traffic Turning Left to Yield."

### 2.3.5 Milton Road at Flat Rock Bridge Road

Based on the NHDOT data, the Milton Road and Flat Rock Bridge Road intersection has experienced an average of over 3 reported collisions per year during the 3 -year period. The majority of the incidents occurred under dry roadway conditions ( 9 of $10=90 \%$ ), clear weather conditions ( 6 of $10=60 \%$ ), and during non-commuter peak periods ( 7 of $10=70 \%$ ).

Based on the Rochester Police Department data, the Milton Road and Flat Rock Bridge Road intersection has experienced an average of 3 reported collisions per year during the 3 -year period. The majority of the incidents occurred under dry roadway conditions ( 4 of $6=67 \%$ ), clear weather conditions ( 4 of $6=67 \%$ ), and during the non-commuter time periods ( 5 of $6=83 \%$ ). Of particular note, one collision entailed a motorist receiving a citation for "Driving under the Influence," one for "Conduct after Accident," and one for "Distracted Driving."

### 2.3.6 Milton Road at O'Keefe \& Martin Choice Furniture Driveways

Based on the NHDOT data, no collisions were reported at the Milton Road intersections with the O'Keefe \& Martin Choice Furniture driveways during the time period evaluated.

Based on the Rochester Police Department data, the Milton Road intersections with the O'Keefe \& Martin Choice Furniture driveways have experienced an average of over 2 reported collisions per year during the 3 -year period. The majority of the incidents ( 6 of $7=86 \%$ ) occurred under dry roadway conditions, clear weather conditions, and during the non-commuter time periods. Of particular note, one collision involved a pedestrian that occurred under rainy conditions on a Saturday at 5:16 PM and one entailed a motorist receiving a citation for "Negligent Driving."

### 2.3.7 Milton Road at Northcoast Drive

Based on the NHDOT data, the Milton Road and Northcoast Drive intersection has experienced an average of over 1 reported collision per year during the 3 -year period. The incidents occurred under dry roadway conditions and clear weather conditions. Of particular note, half of the reported collisions (2 of $4=50 \%$ ) resulted in personal injury.

Based on the Rochester Police Department data, there was only 1 reported collision during the 3 -year period at the Milton Road and Northcoast Drive intersection.

### 2.3.8 Milton Road at Rochester Market Place and Rite Aid

Based on the NHDOT data, the Milton Road, Rochester Market Place, and Rite Aid driveway intersection has experienced an average of over 4 reported collisions per year during the 3 -year period. The majority of the incidents occurred under dry roadway conditions ( $100 \%$ ), clear weather conditions (10 of $13=77 \%$ ), and during the noncommuter peak periods ( 9 of $13=69 \%$ ).

Based on the Rochester Police Department data, the Milton Road, Rochester Market Place, and Rite Aid driveway intersection has experienced an average of 3 reported collisions per year during the 3 -year period. The incidents were reported to have occurred under dry roadway and clear weather conditions, and the majority ( 8 of $9=$ $89 \%$ ) during the non-commuter time periods. Of particular note, two collisions involved a Milton Road northbound vehicle with a pedestrian, one of which entailed a motorist receiving a citation for "Driving While Intoxicated" on a Monday at 8:44 PM and the other occurring on a Friday at 7:23 PM. In addition, four incidents involved vehicles turning right from Rochester Market Place and Rite Aid conflicting with Milton Road approaching vehicles, one of which entailed a motorist being issued a citation for "Failure to Yield." These incidents may be attributed to vehicles turning right on a red signal indication (i.e., right-on-red) from the driveways or vehicles traveling through the red signal indication along Milton Road.

### 2.3.9 Milton Road at Salmon Falls Road and Amarosa Drive

The Milton Road, Salmon Falls Road, and Amarosa Drive intersection has experienced an average of over 3 reported collisions per year during the 3 -year period. The majority of the incidents occurred under dry roadway conditions ( 8 of $10=80 \%$ ), clear weather conditions ( 7 of $10=70 \%$ ), and during the non-commuter peak periods ( 8 of $10=$ 80\%).

Based on the Rochester Police Department data, the Milton Road, Salmon Falls Road, and Amarosa Drive intersection has experienced an average of more than 1 reported collision per year during the 3 -year period. The majority of the incidents occurred under dry roadway conditions ( 3 of $4=75 \%$ ), clear weather conditions ( $100 \%$ ), and during the non-commuter time periods ( 3 of $4=75 \%$ ). The majority of reported crashes involved rear-end type collisions ( 3 of $4=75 \%$ ), which are typically the most common type of incidents occurring at signalized intersections due to such factors as insufficient clearance intervals, poor visibility of traffic signal heads, and inadequate roadway lighting.

### 2.3.10 Milton Road at Cross Road

The Milton Road and Cross Road intersection has experienced an average of less than 4 reported collisions per year during the 3 -year period. The majority of the incidents occurred under dry roadway conditions ( 10 of $11=91 \%$ ), clear weather conditions ( 6 of $11=54 \%$ ), and during the non-commuter peak periods ( 9 of $11=82 \%$ ).

Based on the Rochester Police Department data, the Milton Road and Cross Road intersection has experienced an average of less than 2 reported collisions per year during the 3 -year period. The incidents occurred under dry roadway and clear weather conditions, and the majority during the non-commuter time periods ( 4 of $5=80 \%$ ).

### 2.3.11 Milton Road at Ridgewood Estates

The Milton Road and Ridgewood Estates intersection has experienced an average of less than 2 reported collisions per year during the 3 -year period. The majority of the incidents ( 4 of $5=80 \%$ ) occurred under dry roadway conditions and clear weather conditions.

Based on the Rochester Police Department data, no collisions were reported at the Milton Road and Ridgewood Estates intersection during the time period evaluated.

## Section 3 <br> Previously Identified Improvements

Prior to developing transportation improvement measures along the Milton Road corridor, research has been conducted of any previously identified improvements within the study area. Based on discussions with officials from the City of Rochester, Strafford Regional Planning Commission (SRPC), and NHDOT, the following provides specific improvements along the Milton Road corridor previously identified by others.

### 3.1 Improved Pedestrian Accommodations

Based on coordination efforts with SRPC staff, the Milton Road corridor has been identified to contain missing links within the existing sidewalk infrastructure. The Strafford Metropolitan Planning Organization 2013-2040 Metropolitan Transportation Plan states that "A transportation system that is conducive to walking can reap many benefits in terms of reduced traffic congestion and improved quality of life... The level of walking within a community is considered an indicator of a community's livability, which can be a factor for attracting businesses and workers as well as tourism." As presented in the Metropolitan Transportation Plan and ranked 18 of 55 on the SRPC's Regional Project Prioritization List, consideration is being given to improving pedestrian connectivity along Milton Road by constructing and repairing sidewalks between Chestnut Hill Road and Rochester Market Place/Rite Aid. Construction would potentially be between 2034 and 2035.

### 3.2 Milton Road at Norway Plains Road

As identified in the City of Rochester's 2001 Transportation Master Plan Chapter, recommendations were identified along NH Route 125 that were originally presented in The NH Route 125 Corridor Study prepared by CLD, Inc. in May 1999. At the Milton Road unsignalized intersection with Norway Plains Road, a double yellow centerline and a STOP line were recommended to be striped on Norway Plains Road. Based on field inventory, a STOP line is striped on the Norway Plains Road approach to Milton Road, but a double yellow centerline is not provided along Norway Plains Road.


Norway Plains Road Approach to Milton Road
As part of the NP Realty Associates, LLC subdivision, improvements were designed for the Milton Road and Norway Plains Road intersection. As shown on the July 2013

Norway Plains Road and Route 125 Amendment Improvement Plans prepared by Norway Plains Associates, Inc., the Norway Plains Road approach would be striped to provide exclusive left- and right-turn lanes and a striped median would be provided at the intersection to separate directional flow along Norway Plains Road. A copy of the improvement plan is provided in the Appendix.

### 3.3 Milton Road at Flat Rock Bridge Road

As identified in the City of Rochester's 2001 Transportation Master Plan Chapter, recommendations were identified at the Milton Road unsignalized intersection with Flat Rock Bridge Road that were originally presented in the May 1999 NH Route 125 Corridor Study prepared by CLD, Inc. As recommended, Flat Rock Bridge Road would be realigned at Milton Road to intersect at a near perpendicular angle (i.e., 90 degree angle). In addition, the raised island on Flat Rock Bridge Road to separate left and right turns onto Milton Road would be removed and the exclusive turn lanes would be maintained.

As part of the Cumberland Farms redevelopment project at the Milton Road and Flat Rock Bridge Road intersection, land along the site's frontage was provided to the City for the realignment of Flat Rock Bridge Road to intersect Milton Road at a typical T-type intersection (i.e., a more traditional 90 degree angle). Although not part of the project, a conceptual plan was prepared for the Cumberland Farms redevelopment project (as provided in the Appendix) that would allow the City to relocate Flat Rock Bridge Road to the north (i.e., toward the existing Martin's Family Drive-In Restaurant). In addition, the existing raised island on the Flat Rock Bridge Road approach that separates exiting left and right turns would be removed and a new raised island would be constructed to separate directional flow at the intersection (i.e., entering and exiting traffic on Flat Rock Bridge Road). These improvements would be anticipated to improve safety and eliminate confusion experienced by motorists.

## Section 4 Traffic Volumes

Current multi-modal and geometric conditions along the Milton Road corridor have been previously described. A traffic-volume baseline along the corridor has been developed to provide a foundation for assessing the transportation system to support existing and future traffic volumes.

### 4.1 Existing Conditions

Base year traffic conditions within the study area were developed by obtaining and collecting manual turning movement counts (TMCs), vehicle classification counts (i.e., separation of passenger vehicles, heavy vehicles, pedestrians, and cyclists), and automatic traffic recorder (ATR) counts.

### 4.1.1 Available Traffic Data

Traffic counts were obtained from the traffic study prepared for the Cumberland Farms redevelopment project for the Milton Road intersection with Flat Rock Bridge Road, as well as for Milton Road north of Flat Rock Bridge Road. ${ }^{3}$ In addition, traffic counts were obtained from the NHDOT Bureau of Traffic along Milton Road north of Flat Rock Bridge Road, south of NH Route 11/US Route 202, north of Cross Road, and at the Milton Town Line. ${ }^{4}$ The traffic count data collected by others are provided in the Appendix and summarized below.

- Milton Road north of Flat Rock Bridge Road: 11,440 vehicles per weekday and 13,390 vehicles per Saturday (2014)
- Milton Road south of NH Route 11/US Route 202: 9,500 vehicles per day (2013)
- Milton Road north of Cross Road: 8,900 vehicles per day (2013)
- Milton Road at the Milton Town Line: 5,000 vehicles per day (2013)


### 4.1.2 Supplemental Traffic Counts

To establish peaking characteristics within the Milton Road corridor, TMCs and vehicle classification counts were collected in October 2014 when schools were in regular session. The TMCs and vehicle classification counts were performed during the weekday AM peak period (7:00 to 9:00 AM) and the weekday PM peak period (4:00 to 6:00 PM). Based on preliminary discussions with the Rochester Public Works Committee and the Rochester Planning Board at public hearings on September 18, 2014 and September 20, 2014, respectively, the traffic counts were collected at the following locations. The count data are provided in the Appendix.

- Milton Road at the NH Route 11/US Route 202 off-ramp
- Milton Road at Salmon Falls Road and Amarosa Drive
- Milton Road at Cross Road

[^2]
### 4.1.3 Seasonal Adjustments

Traffic on a given roadway typically fluctuates throughout the year depending on the area and the type of roadway. Based on NHDOT guidelines for the preparation of a traffic study, existing traffic volumes must represent the peak of monthly average conditions. To determine if the traffic count data needed to be adjusted to account for this fluctuation, seasonal adjustment and historical count data provided by NHDOT were reviewed. ${ }^{5}$

The NHDOT Historical data revealed that traffic volumes in the month of October are representative of peak-month volumes during the weekday AM peak hour and are 1 percent lower than peak-month volumes during the weekday PM peak hour. Therefore, the traffic counts were adjusted accordingly to represent 2014 Existing peakhour traffic volumes during peak-month conditions. The NHDOT seasonal adjustment data are provided in the Appendix.

Figures EX-1A through EX-1D depict the current designated zonings relative to the project area with existing traffic volumes.

### 4.2 Design Year Conditions

To determine future traffic demands along the Milton Road corridor, existing traffic volumes were projected to the year 2034. For long-range transportation planning purposes, a 20-year design horizon was selected to consider long-term effects of traffic volumes and potential improvement measures as land use patterns tend to develop over long periods of time. ${ }^{6}$ Once the projected deficiencies are identified, improvements can be developed and prioritized. To estimate future traffic volumes, such factors as historical growth trends and future corridor land uses should be considered.

### 4.2.1 Historical Traffic Growth

An annual average traffic-growth percentage was determined based on NHDOT historical traffic-volume data along Milton Road. ${ }^{7}$ Consistent with standard traffic engineering practice, this growth rate methodology is based on the assumption that recent trafficvolume trends may continue within the study area to the design horizon.

The NHDOT historical data revealed that annual average traffic-volume trends have experienced an overall decline. To account for general population growth and traffic generated by potential smaller future developments outside of the Milton Road corridor over the next 20 years, a 0.5 percent compounded annual growth rate was used to represent a conservative (worse-case) scenario.

[^3]




### 4.2.2 Milton Road Corridor Current Land Uses

Most of the Milton Road corridor is zoned as Highway Commercial. The following provides a list of the other currently zoned land uses along the Milton Road corridor:

- Industrial: provided along the east side of Milton Road between Jarvis Avenue and the NH Route 11/US Route 202 interchange, along the west side of Milton Road south of Northcoast Drive, and along the west side of Milton Road between Salmon Falls Road and Cross Road.
- Residential: located along Flat Rock Bridge Road, along Denali Drive and Salmon Falls Road east of Milton Road, along Cross Road west of Milton Road, along the west side of Milton Road between Cross Road and Sewell Road, and along the east side of Milton Road between Sewell Road and Forest Park Drive.
- Agricultural: provided along the east side of Milton Road between Cross Road and Sewell Road.


### 4.2.3 Milton Road Corridor Potential Land Uses

### 4.2.3.1 Methodology

With the current land uses along the Milton Road corridor, there is the potential for future redevelopment of existing parcels with higher trip-generating uses. Other parcels were reviewed and compared to the City of Rochester's zoning requirements for the ratio of developed square footage to the lot size. For the purposes of this planning study, the following assumptions were made:

- Recently constructed uses would remain in current configuration (e.g., Rite Aid, Family Dollar, and recently approved Cumberland Farms).
- Existing uses with substantial vacant area remaining within the parcel were considered for potential expansion (i.e., Splash \& Dash, Jarvis Cutting Tools, Inc., and Lambert's Auto \& Truck Recyclers).
- Smaller parcels not meeting the City of Rochester's minimum lot coverage requirements were considered to be combined with other lots of similar zoning.
- Smaller parcels not meeting the City of Rochester's minimum lot coverage requirements or those that are surrounded by or close to other lots with similar zoning were considered into groupings and may also be identified to be rezoned.

Table 4-1 summarizes potential development along the Milton Road corridor. Figures P1A through P-1D identify parcels to remain "as is," parcels with availability for development expansion, and parcels that have been grouped. These assumptions were made for planning purposes and could vary as redevelopment of parcels are made in the future. In addition, wetland areas have been researched from available GIS information. As parcels are redeveloped in the future, more detailed and updated wetland data should be provided to determine developable lot area.

## TABLE 4-1

Potential Parcel Redevelopment

| Graphic <br> Figure/Parcel | Existing Use | Future Potential Use |
| :---: | :---: | :---: |
| Sheet P-1A: |  |  |
| 88 and 89 | First City Motor Sales | No Change |
| 90 | Vacant | 10,686 sf retail |
| 91, 18, and 18-1 | New Style Homes | 8,938 sf retail |
| 19 and 20 | Residence (36 Milton Road) | 100,620 sf retail |
| 21 | Gary's Restaurant \& Sports Lounge | 47,502 sf retail |
| 65 | Vacant | 38,064 sf retail |
| 65-1 | Vacant | 17,472 sf retail |
| 65-2 | Splash \& Dash | 12,792 sf retail (expansion) |
| 65-3 | Vacant | 12,324 sf retail |
| 59 | Jarvis Cutting Tools, Inc. | 288,600 sf industrial (expansion) |
| Sheet P-1B: |  |  |
| $25$ | Vacant | 53,040 sf agricultural |
| 24 | Residence (61 Old Milton Rd) | 7,800 sf retail |
| 23 | Residence (62 Milton Rd) | 6,396 sf retail |
| 50 | Residence ( 72 Old Milton Rd) | 3,744 sf retail |
| 1 and 2 | Residence (66 Milton Road) <br> Residence (68 Milton Road) | 11,271 sf retail |
| 3 and 4 | Residence (70 Milton Road) <br> Residence (68 Milton Road) | 76,752 sf retail |
| 5 | Residence (82 Milton Road) | 55,380 sf retail |
| 7-1 | Silver Bell Mobile Home Park | 57,689 sf industrial |
| 54 | Holiday House Furniture | 2,106 sf retail |
| 164 and 163 | Residence (8 Phillips Lane) Residence (36 Phillips Lane) | 7,566 sf residential |
| 162 | Vacant | 31,200 sf residential |
| 56 and 55 | Martin's Drive-In Restaurant Cumberland Farms | 4,650 sf Cumberland Farms (recently permitted) |
| 53 | Gas Station (83 Milton Road) | 4,368 sf retail |
| 52 | O'Keefe Martin Auctions | 16,146 sf retail |

## TABLE 4-1 (continued)

Potential Parcel Redevelopment

| Graphic Figure/Parcel | Existing Use | Future Potential Use |
| :---: | :---: | :---: |
| Sheet P-1C: $8$ | Residence (94 Milton Road) | 7,332 sf retail |
| 25 and 26 | Residence (108 Milton Road) Residence (112 Milton Road) | 6,786 sf retail |
| $\begin{aligned} & 27,28,29, \\ & 30,31, \text { and } 32 \end{aligned}$ | Residence (114 Milton Road) <br> Residence (116 Milton Road) <br> Residence (118 Milton Road) <br> Residence (122 Milton Road) <br> Journey Baptist Church | 59,904 sf industrial |
| 33 and 1 | Vacant Vacant | 15,678 sf industrial |
| 6 | NextGen Telecom Services Group, Inc. | 276,666 sf industrial |
| 48 | Vacant | 11,076 sf retail |
| 50 | Vacant | 47,502 sf retail |
| 38 | Residence (109 Milton Road) | 4,602 sf retail |
| 37-1 | Auto Tech Auto \& Trucks Services | 7,956 sf retail |
| 37 | Residence (111 Milton Road) | 7,956 sf retail |
| 218 | Lambert's Auto \& Truck Recyclers | 84,318 sf retail (expansion) |
| 218-1 and 217 | Residence (127 Milton Road) Lakeside Mobility \& Scooter LLC | 9,282 sf retail |
| Sheet P-1D: <br> 125 and 126 | Residence (1 Sewell Road) Residence (170 Milton Road) | 11,778 sf retail |
| 133 | Aroma Joe's Coffee | 3,900 retail |
| 211 | Vacant | 85,176 sf industrial |
| 143 | Vacant | 5,694 sf retail |
| 140 and 138 | Residence (179 Milton Road) DMR Industries, Inc. | 9,048 sf retail |
| 136 | Residence (183 Milton Road) | 4,758 sf retail |
| 135 | Residence (185 Milton Road) | 5,382 sf retail |
| 134 | Vacant | 17,784 sf retail |






### 4.2.3.2 Guidelines

This section evaluates potential re-use development of existing parcels with higherintense trip-generating uses. As each lot along the Milton Corridor is developed or redeveloped, site plans shall conform with all current and applicable City of Rochester, State of New Hampshire, and other governmental standards, regulations, policies, ordinances, and statutes. These guidelines consist of, but are not limited to:

- City of Rochester Zoning Ordinance
- City of Rochester Site Plan Regulations
- City of Rochester Subdivision Regulations
- City of Rochester Master Plan and Capital Improvement Program (CIP)
- NHDOT Driveway Statutes, Highway Design Manual, and Policy Relating to Driveways and Access to the State Highway System
- Institute of Transportation Engineers (ITE) Trip Generation Manual, Transportation Planning Handbook, and Traffic Engineering Handbook
- American Association of State Highway and Transportation Officials' (AASHTO's) A Policy on Geometric Design of Highways and Streets
- Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD)
- Highway Capacity Manual (HCM)
- National Cooperative Highway Research Program (NCHRP)


### 4.2.3.3 Redeveloped Land Use Trips

The land use for each parcel along the Milton Road corridor was reviewed to establish an estimate of the volume of vehicle trips generated by existing land use types. The site specific traffic volumes were projected based on trip-generation rates published in the ITE Trip Generation Manual. ${ }^{8}$ Individual land uses and business details for existing developments were confirmed with City of Rochester staff where needed to assist in determining appropriate ITE Land Use Codes. For the scenario of potential redevelopment of existing parcels with higher trip-generating uses, traffic engineering judgment was applied in selecting ITE Land Use Codes for those parcels considered for redevelopment.

The following provides a summary of the redeveloped or expanded land uses along the Milton Road corridor that could occur within the 20 year design horizon. The tripgeneration calculations are provided in the Appendix.

- Norway Plains Road and NH Route 11/US Route 202 Eastbound Ramps:
- East Side of Corridor $= \pm 80,650$ square feet of retail space (ITE Land Use Code 820 [Shopping Center]) and $\pm 288,600$ square feet of industrial space (ITE Land Use Code 760 [Research and Development Center]).
- West Side of Corridor $= \pm 167,750$ square feet of retail space (ITE Land Use Code 820 [Shopping Center]).

[^4]- NH Route 11/US Route 202 Eastbound Ramps to Flat Rock Bridge Road:
- East Side of Corridor $= \pm 27,270$ square feet of retail space (ITE Land Use Code 820 [Shopping Center]) and $\pm 38,770$ square feet (general standard of 1 unit/2,100 square feet $\approx 18$ dwelling units) of residential space (ITE Land Use Code 220 [Apartment]).
- West Side of Corridor $= \pm 161,340$ square feet of retail space (ITE Land Use Code 820 [Shopping Center]), $\pm 53,040$ square feet of agricultural space (ITE Land Use Code 110 [General Light Industrial]), and $\pm 57,690$ square feet of industrial space (ITE Land Use Code 760 [Research and Development Center]).
- Flat Rock Bridge Road to Salmon Falls Road:
- East Side of Corridor $= \pm 172,690$ square feet of retail space (ITE Land Use Code 820 [Shopping Center]).
- West Side of Corridor $= \pm 14,120$ square feet of retail space (ITE Land Use Code 820 [Shopping Center]) and $\pm 352,250$ square feet of industrial space (ITE Land Use Code 760 [Research and Development Center]).
- Salmon Falls Road to Ridgewood Estates:
- East Side of Corridor $= \pm 42,670$ square feet of retail space (ITE Land Use Code 820 [Shopping Center]) and $\pm 85,180$ square feet of agricultural space (ITE Land Use Code 110 [General Light Industrial].
- West Side of Corridor $= \pm 15,680$ square feet of retail space (ITE Land Use Code 820 [Shopping Center]).


### 4.2.4 Design Year Traffic Volumes

The 2034 Design Year traffic volumes were developed by applying a 0.5 percent compounded annual growth rate to the 2014 traffic volumes (or 10.5 percent growth over 20 years). In addition, traffic was then added to the Milton Road corridor that was associated with the potential redevelopment of existing parcels with higher tripgenerating uses. The potential future traffic volumes and traffic volumes are shown graphically on Figures P-1A through 9-1D.

## Section 5 <br> Potential Improvements

Improvement measures considered desirable to alleviate roadway system operational and safety deficiencies should be considered. The following provides a description of some improvement measures to be considered that would be expected to improve the Milton Road corridor. As future development occurs along the Milton Road corridor and as transportation improvements are implemented, the roadway and traffic-volume conditions in which these recommendations are based may change. Therefore, the following improvement measures are subject to revision as the Milton Road corridor evolves.

### 5.1 Seacoast Metropolitan Planning Organization Goals

As provided within City of Rochester's 2001 Transportation Master Plan Chapter, the Seacoast Metropolitan Planning Organization (Seacoast MPO) has identified regional transportation goals. The following goals should be considered when considering different transportation improvements:

- Develop a transportation system which affords mobility for all and provides welldesigned and suitable access to employment, housing, service, and recreation areas.
- Manage, maintain, and enhance the existing transportation system to maximize safety and efficiency, and reduce the need for new roadway/bridge construction.
- Reduce the necessity for roadway construction by developing, maintaining, and encouraging the use of viable alternatives to reduce single occupancy vehicles.
- Promote transportation policies and improvements consistent with preserving and enhancing cultural, social, economic, and environmental resources.
- Encourage better integration of land use and transportation planning.
- Establish a transportation system that facilitates economic development.


### 5.2 Milton Road Intersections

### 5.2.1 Milton Road at Norway Plains Road

As previously described, improvements were identified for the Milton Road and Norway Plains Road intersection in the City of Rochester's 2001 Transportation Master Plan Chapter that were originally presented in The NH Route 125 Corridor Study prepared by CLD, Inc. in May 1999. A double yellow centerline was recommended to be striped on Norway Plains Road to separate directional flow and provide motorists with a better understanding of travel paths.

In addition, the NP Realty Associates, LLC subdivision proposed improvements for the Milton Road and Norway Plains Road intersection. As proposed, exclusive turn lanes would be provided on the Norway Plains Road approach and a striped median would be provided at the intersection to separate directional flow along Norway Plains Road.

Based on field inventory, a STOP line is striped on the Norway Plains Road approach to Milton Road, but pavement markings were not present to separate turn lanes or
directional flow along Norway Plains Road. These safety improvements should be considered for implementation.

### 5.2.2 Milton Road at Jarvis Avenue

Lots 19 and 20 have been estimated to potentially build up to 100,620 square feet of retail space. These lots are located along the east side of Milton Road opposite Jarvis Avenue, which may have the build potential of up to 288,600 square feet of industrial space expansion. If these potential developments are developed, consideration should be given to aligning the Lots 19/20 driveway across from Jarvis Avenue to create a standard four-way intersection and placing the intersection under traffic signal control.

### 5.2.3 Milton Road at NH Route 11/US Route 202 Off-Ramp

As previously described, sight lines may be limited between left-turning vehicles exiting from the NH Route 11/US Route 202 off-ramp and Milton Road northbound vehicles due to vegetation on the southeast corner of the intersection. The overgrown vegetation on the southeast corner of the intersection should be trimmed within the right-of-way to enhance sight lines.

To improve operations and reduce delay on the NH Route 11/US Route 202 off-ramp, a traffic signal warrant analysis was conducted to determine if traffic signal control is currently warranted at this location. Existing and future traffic volumes were compared with the requirements established in the MUTCD. The intersection was analyzed using the following volume-related warrants:

- Warrant 1 - Eight-Hour Vehicular Volume
- Condition A - Minimum Vehicular Volume
- Condition B - Interruption of Continuous Traffic
- Combination of Conditions A and B
- Warrant 2 - Four-Hour Vehicular Volume, and
- Warrant 3 - One-Hour Vehicular Volume

Although existing traffic volumes do not meet the volume-related warrants for traffic signal installation, future traffic volumes may indicate that a traffic signal may be justified. In determining if signal control should be installed, a number of factors are involved, including intersection operations, safety, and engineering judgment. Accordingly, this intersection should be monitored and consideration should be given to installing a traffic signal if and when warranted. In addition and due to the proximity of Old Milton Road, consideration should be given to aligning the NH Route 11/US Route 202 off-ramp left turns across from Old Milton Road to create a standard four-way signalized intersection if the potential developments along the corridor are developed and the projected traffic volumes are reached.

### 5.2.4 Milton Road at Flat Rock Bridge Road

As previously described, improvements have been identified for the Milton Road and Flat Rock Bridge Road intersection in the City of Rochester's 2001 Transportation Master Plan Chapter that were originally presented in The NH Route 125 Corridor Study prepared by CLD, Inc. in May 1999. Flat Rock Bridge Road would be realigned at Milton Road to intersect at a near perpendicular angle (i.e., 90 degree angle). To help advance this
design, the Cumberland Farms redevelopment project provided land to the City of Rochester along the northeast corner of the intersection so as to relocate Flat Rock Bridge Road to the north. In addition, a new raised island would be constructed to separate directional flow at the intersection (i.e., entering and exiting traffic on Flat Rock Bridge Road). Accordingly, the City of Rochester should consider impacts to this intersection and prepare an improvement design to identify the feasibility of reconstructing the intersection (e.g., right-of-way impacts, cost, etc.).

Lot 5 has been estimated to potentially build up to 55,380 square feet of retail space. This lot is located along the east side of Milton Road opposite Flat Rock Bridge Road, which may have the build potential of up to an additional 18 apartment units. If the potential developments along the corridor are developed, consideration should be given to aligning the Lot 5 driveway across from Flat Rock Bridge Road to create a standard four-way signalized intersection.

### 5.2.5 Milton Road at Northcoast Drive

Based on field reconnaissance, heavy commercial vehicles utilize Northcoast Drive for Ossipee Aggregates Rochester Terminal and the truck access for Rochester Market Place. The City of Rochester should investigate the potential of constructing a Milton Road northbound exclusive left-turn lane to allow northbound through vehicles to bypass turning vehicles. In addition, a Milton Road southbound acceleration from Northcoast Drive to the south may be deemed appropriate for heavy vehicles turning right from Northcoast Drive to then merge with the mainline traffic stream.

### 5.2.6 Milton Road at Rochester Market Place and Rite Aid

Based on field inventories, signage and pavement markings are in conflict on the Milton Road southbound approach and the Rochester Market Place approach to the signalized intersection. The signage and pavement markings be upgraded accordingly to coincide with the appropriate vehicular lane usage.

### 5.2.7 Milton Road at Salmon Falls Road and Amarosa Drive

Field reconnaissance revealed that there are no pavement markings on the Salmon Falls Road approach to the signalized intersection with Milton Road to indicate where vehicles should stop on a red signal indication. Pavement striping (i.e., a STOP bar/line) should be provided on the Salmon Falls Road approach so vehicles do not encroach into the Milton Road traffic stream on a red signal indication and so vehicles can be registered into the traffic signal through the existing loop detectors.

Vehicles were observed traveling through the Milton Road and Salmon Falls Road signalized intersection during a red signal indication (i.e., red light running). Some measures to be considered to help reduce this illegal event are increased enforcement (e.g., police detail and/or red light cameras), improvements to the traffic signal operations through timing changes or capacity improvements, or installation of back plates in accordance with MUTCD around the traffic signal heads to improve the signal visibility in cases of sun glare.

Due to the acute angle of the Salmon Falls Road approach at Milton Road (i.e., approximately 30 degree angle), vehicles are required to make sharp left turns onto Milton Road southbound. In addition, the Lambert's Auto Salvage driveway may not be in conformance with local and state regulations and policy. Therefore, consideration should be given to realigning Salmon Falls Road to provide a more traditional 90 degree angled intersection and redesigning curb cuts in the vicinity of the intersection.

Lot s 33, 1, and 6 have been estimated to potentially build up to 292,344 square feet of industrial space. These lots are located along the east side of Milton Road opposite Salmon Falls Road. If the potential developments along the corridor are developed, consideration should be given to the following design options to create a standard fourway signalized intersection for Milton Road, Salmon Falls Road, and Amarosa Drive:

- Option 1: realign the Salmon Falls Road leg of the intersection to intersect Milton Road across from Amarosa Drive to create a standard four-way signalized intersection. This design would allow Salmon Falls Road to be reconstructed to intersect Milton Road at more of a 90 -degree angle, but would require land acquisition from Lots 218 and 218-1.
- Option 2: construct a shared driveway on Lot 1 for the potential parcel redevelopment of Lots 33 and 1 across from Salmon Falls Road to create a standard four-way signalized intersection (the current layout of Amarosa Drive would be discontinued). This design would also allow Salmon Falls Road to be reconstructed to intersect Milton Road at more of a 90 -degree angle. This concept would require a land swap between Lot 1 and the current layout of Amarosa Drive and land acquisition from Lot 246.


### 5.2.8 Milton Road at Cross Road

Due to the high vehicular demand of Milton Road northbound left turns onto Cross Road, consideration should be given to constructing a Milton Road northbound left-turn lane. Based on an initial comparison to AASHTO guidelines, an exclusive left-turn lane on the Milton Road northbound approach is warranted. With the proximity to the Milton Road and Salmon Falls Road signalized intersection, the Milton Road northbound left-turn lane would be constructed in a "back-to-back" design with the Milton Road southbound leftturn Iane at Salmon Falls Road.

### 5.3 Milton Road Corridor

In accordance with NHDOT, HCM, and standard traffic engineering practice, the number of lanes along a roadway segment is dependent upon the traffic stream density in terms of passenger cars per mile per lane ( $\mathrm{pc} / \mathrm{h} / \mathrm{l}$ ). Different factors can affect the traffic stream density such as, but not limited to, vehicle speeds, heavy vehicles, driver population (i.e., traffic flows or arrival patterns), terrain, and the number of active intersections and driveways. The capacity of and the number of required travel lanes along roadway segments are typically governed by the presence of signalized intersections. HCM information provides different operating levels (i.e., levels of service) for multilane roadway segments. Based on general NHDOT information, a default value of $1,000 \mathrm{pc} / \mathrm{h} / \mathrm{I}$ was assumed to represent the upper limit on lane capacity (i.e., $\pm 20,000$ vehicles per day). For the purposes of this planning study, the following roadway segments should be considered for multiple travel lanes:

- Milton Road northbound and southbound between Norway Plains Road and Rochester Market Place/Rite Aid
- Milton Road northbound and southbound north of Cross Road

Two-Way Left-Turn Lanes (TWLTLs) remove left-turning vehicles from the through traffic stream and allow the turning vehicles to be stored in the striped median area until an acceptable gap is available in the mainline traffic stream. Continuous TWLTLs are often used to address capacity and safety concerns for left-turning vehicles. The number of through travel lanes adjacent to the TWLTL should be limited to two per direction. The
width of a TWLTL should be no less than the widths of the adjacent travel lanes and no more than 16 feet wide so as not to allow vehicles to align side-by-side or mislead motorists into believing that the TWLTL should be used as a travel lane.

- According to NCHRP, a raised median design should be considered rather than TWLTLs when daily traffic volumes are greater than 20,000 vehicles per day.
- Based on discussions with NHDOT engineers, the potential construction of a TWLTL is dependent on the daily traffic volumes and NHDOT uses other states' thresholds as guidelines.
- Indiana DOT has determined that TWLTLs may be appropriate on 2-lane roadways with between 5,000-12,500 vehicles per day and on 4-lane roadways with between 10,000-25,000 vehicles per day.
- Iowa DOT has determined that TWLTLs may be appropriate on 2-lane roadways with a minimum of 6,000 vehicles per day and on 4-lane roadways with between 10,000-12,000 vehicles per day.
- Kentucky DOT has determined that TWLTLs may be appropriate on 2-lane roadways with no more than 17,000 vehicles per day and on 4-lane roadways with no more than 24,000 vehicles per day.

Therefore, a TWLTL could be considered for construction currently and as an interim prior to the full potential build-out of the underutilized parcels. As traffic volumes increase with more development along the Milton Road corridor, it is recommended the City of Rochester, in conjunction with site plan review applications, monitor traffic volumes as a raised median island may become more desirable than the construction of a TWLTL design. As the trip-generation projections for the potential full build of the underutilized parcels could vary, the City of Rochester should conduct a monitoring program of the traffic volumes along sections of Milton Road to determine when the daily thresholds would be exceeded for the 2 design alternatives (i.e., TWLTL and raised median)

### 5.3.1 Access Management

Access Management strategies are an important key in improving safety and efficiency by balancing the mobility and access needs of roadway users and enhance safe and efficient property access. According to the FHWA, Access Management techniques are designed to increase roadway capacity, reduce collisions, and manage congestion. Some Access Management approaches include:

- Increase the spacing between signalized intersections, which would enhance vehicular traffic flow along major arterials, reduce congestion, and improve air quality along heavily traveled corridors.
- Access location, design, spacing, and traffic control. Numerous driveways along a corridor increase potential conflicts, where fewer curb cuts spaced further apart allow for traffic to merge in a more orderly manner and reduce the rate of vehicular collisions. Consideration could be provided to combining driveways for residential and non-residential sites with provisions to include requirements for the necessary easements and maintenance agreements.
- Interconnected commercial sites would allow vehicular traffic to enter and exit abutting uses without being required to repeatedly access the major roadway system. Site Plan regulations could include language to provide easements across abutting properties for vehicular and non-motorized traffic.
- Adequate driveway throats would prevent entering vehicles from backing into the mainline roadway system while waiting to access a site. Sufficient driveway throat length (e.g., 50 feet) would provide space for vehicles to maneuver on a site at an adequate distance away from the entrance.
- The construction of exclusive turn lanes would remove slowing or stopping turning vehicles from the through traffic stream.
- The provision of median treatments such as raised median islands would separate directional flow, reduce the number of conflicting movements, and provide protection for pedestrians.

Based on the Access Management section of the City of Rochester's Site Plan Regulations, consideration should be given to maximum practical spacing of driveways from other driveways and intersecting roadways. The City also provides guidance on the location and number of driveways based on topography, sight lines, and other nearby driveways (adjacent and opposite). In addition, driveways should be designed with a maximum slope of 8 percent, a minimum width of 20 feet (unless single-family residential), and intersect with streets at an angle near to 90 degrees. As documented within the City of Rochester Master Plan - Transportation chapter, consideration should be given to providing residential access through neighborhood streets and not along collectors or arterials, consolidating driveways and sharing access, and encouraging internal vehicular connections between commercial developments.

### 5.3.2 Sight Distance

To identify potential safety concerns associated with site access, sight distances should be evaluated with each development along the Milton Road corridor to determine if the available sight lines for vehicles exiting driveways and minor street roadways meet or exceed the minimum distances required for approaching vehicles to safely stop. The available sight distances should be compared with minimum requirements, as established by AASHTO. In addition, sight lines should meet City of Rochester and NHDOT requirements to achieve All Season Safe Sight Distances.

To ensure the safe and efficient flow of traffic to and from each site, plantings, vegetation, landscaping, and signing along the site frontages should be kept low to the ground or set back sufficiently from the edge of the site driveways and along Milton Road so as not to inhibit the available sight lines. In accordance with the City of Rochester's Site Plan Regulations, "Any vegetation that will be situated near the intersection of a driveway and the main road (within the sight triangle as may be defined in the Zoning Ordinance), shall be properly selected, and pruned between the heights of 2 feet and 8 feet above the ground, in order that visibility among motorists exiting onto the road, motorists driving along the road, and pedestrians on the sidewalk, will not be impaired."

### 5.3.3 Radar Driver Feedback Signs

Due to preliminary discussions with City of Rochester representatives and field observations, vehicles appear to travel at speeds higher than the posted speed limit of 35 mph along Milton Road north of The Rochester Residence Inn. To determine if vehicular speeds are a safety concern in the area, a speed study should be conducted to measure actual vehicle speeds over a minimum of a 24 -hour period to also record vehicles during non-peak hours when platooning may not be present. The measured average and $85^{\text {th }}$ percentile speeds would then be compared with the posted speed limit. If the measured travel speeds indicate a safety concern, then consideration may be
given to installing a radar driver speed feedback sign. The radar speed indicator sign would display the speed of approaching vehicles and bring attention to motorists (and those in proximity) that vehicles may be exceeding the speed limit.

### 5.3.4 Parking

Based on City of Rochester's Site Plan Regulations, the minimum number of off-street parking spaces shall be provided on each site based upon the type of use. To support the number of parking spaces for each site, the peak period parking demand anticipated to be generated should be researched from ITE ${ }^{9}$ parking generation data.

All developments should provide parking lots in conformance with the Americans with Disabilities Act (ADA) requirements. The design of handicapped parking spaces should also conform to the New Hampshire Architectural Barrier Free Design Code.

### 5.3.5 Transportation Demand Management Measures

In recognition of the existing and future traffic demands on the study area roadway system, a number of TDM measures should be considered to be implemented by existing and future land owners and tenants along the Milton Road corridor to help reduce the number of single occupant vehicles (SOVs), to encourage the use of alternative modes of transportation, and to better manage projected traffic volumes. In an effort to maximize vehicle occupancy and thereby reduce the vehicular demand, the following TDM strategies should be considered to reduce SOV trips and improve vehicle emissions in the area by offering more and healthier travel opportunities.

### 5.3.5.1 Ridesharing

Ridesharing programs refer to commuters riding in vehicles with other travelers rather than driving alone to work to reduce the number of SOVs. Ridesharing is suitable for people who share a similar commute schedule. Participating in ridesharing can result in better air quality and a reduction in vehicular costs (e.g., insurance and maintenance), congestion, and fuel consumption. Based on information published by the Federal Highway Administration (FHWA), ridesharing provides transportation choices for those who own a vehicle but choose to reduce fuel costs, own a vehicle but wish to reduce commuting time by taking advantage of high-occupancy vehicle (HOV) highway travel lanes, utilize fixed-route public transit and occasionally require access to a vehicle, cannot afford a vehicle, or are unable to operate a vehicle. "Transportation choices are an important part of livable communities because they enhance the flexibility of travelers to adapt their transportation behavior to their values and lifestyles in ways that advance their financial, social, health and environmental goals." ${ }^{10}$ The most common forms of ridesharing are carpool and vanpools.

- Carpools generally use a person's own automobile, in which one person can drive while the passengers may contribute to gasoline, tolls, or parking. Another option of carpooling would be that each person within the vehicle could alternate driving their vehicle without exchanging money.
- Vanpools generally use rented vans for 9 to 14 employees who commute together to work. Employees with longer-distance commutes (10+ miles) are typically the market for vanpools. Most groups meet at one or two locations such

[^5]as a park-and-ride lot and share the cost of the vanpool (e.g., lease, gasoline, insurance, maintenance, etc.).

### 5.3.5.2 Preferential Parking

Land developers should consider providing designated parking spaces for carpool and vanpool vehicles as an incentive for ridesharing. The designated spaces would be monitored to ensure that those vehicles parked in these spaces match the registrations of participants.

Consideration could be given to providing on-site preferential parking spaces for alternatively fueled vehicles (AFVs) that run on fuels other than gasoline and diesel produced from petroleum, such as biodiesel, electricity, ethanol, hydrogen, methanol, natural gas, propane, reformulated gasoline, solar energy, and oxygenated gasoline. These vehicles are generally more environmentally friendly as they produce less air pollutants and greenhouse gases, have improved fuel economy, and support environmental sustainability.

In addition, accommodations should be considered for car sharing (e.g., Zipcar or similar service) in which vehicles are made available to individuals who subscribe to the service. This type of automobile rental service is intended to provide a convenient opportunity for people who desire to rent a vehicle for short periods at any time on an as-needed basis. Car sharing programs typically provide more fuel efficient vehicles and drivers tend to make fewer overall trips, which reduce greenhouse gas emissions and the number of vehicle miles travelled.

### 5.3.5.3 Non-Motorized Transportation Amenities

Non-motorized transportation includes walking and bicycling to and within a site. These modes of travel provide both recreation and transportation. To improve non-motorized transportation to and within the site, consideration should be given to implementing design measures in accordance with Smart Growth Principles by improving multi-modal mobility, completing missing links in the transportation network to provide connectivity, and creating a pedestrian and bicycle friendly environment. ${ }^{11}$ These goals can be met by replacing and constructing sidewalks along Milton Road with a planting strip between the sidewalks and the roadway, striping crosswalks, installing bicycle racks on-site for tenants and visitors, and providing weather-protected bicycle parking in residential areas. The City of Rochester should encourage developers/applicants to provide pedestrian connections with surrounding networks via funding and/or implementation.

Wheelchair accessible ramps and crosswalks should be considered at driveways and intersections to accommodate pedestrian connectivity to improve multi-modal mobility in accordance with ADA design requirements. Crosswalks and associated pedestrian crossing warning signs designed in accordance with the requirements established in the MUTCD should be installed at and in advance of pedestrian crossing locations.

COAST provides fixed route bus service along the Milton Road corridor with Bus Route 6 (Farmington/Rochester) stopping at Norway Plains Road, Jarvis Avenue, Flat Rock Bridge Road, Old Milton Road, and Rochester Market Place. Bus Route 6 runs on weekdays from 5:50 AM to 6:34 PM, but does not provide service on the weekends. Large developments (e.g., redevelopment of industrial park, apartment/housing subdivisions,

[^6]retail development) may require or substantiate a specific need for increased transit. Locating bus stops near these higher land uses can enhance ridership. Therefore, the City of Rochester should consider meeting with COAST officials to discuss ridership information, success of the current bus system, and future considerations (e.g., additional stops, additional service lines, reduced operations, etc.).

In addition, the City and COAST officials should collaborate on the potential construction of bus bays (buss pullout areas) in which a bus has a specified area to pull out of the traffic stream to load and unload passengers. This design would provide a protected area for passengers outside of the Milton Road through traffic and would minimize delay to Milton Road through traffic. At determined locations, consideration should be given to placing bus benches and shelters to provide waiting passengers with seating and protection from the elements.





## Section 6 <br> Conclusions

Based on discussions with City of Rochester officials, there are safety and accessibility concerns along the Milton Road (NH Route 125) corridor between Norway Plains Road (to the south) and Ridgewood Estates (to the north) that would be exacerbated with the addition of future traffic growth in the area.

Observations and research have been conducted to evaluate existing areas of concern and identify safety and operational deficiencies. In addition, there is the potential for future redevelopment of existing parcels along the Milton Road corridor with higher tripgenerating uses. Transportation infrastructure improvements have been developed to accommodate existing and estimated future traffic volumes along the corridor.

This Corridor Study has identified safety, connectivity, and operational concerns for residents, motorists, and business owners along the Milton Road corridor. Improvements have been recommended to enhance the integration and connectivity of the transportation system in developing an efficient network to accommodate multimodal transportation. Access Management strategies have also been recommended to improve safety and efficiency.

This planning study provides recommended improvements to the Milton Road corridor that City of Rochester should consider implementing in the coming years. The following provides a list of potential action items, in no order of priority, that the City should consider prioritizing and budgeting for:

- Milton Road at Norway Plains Road:
o Stripe exclusive left- and right-turn lanes on the Norway Plains Road approach and stripe a median on Norway Plains Road to separate directional flow.
- Milton Road at Jarvis Avenue:
o Construct a driveway for potential development on the east side of Milton Road across from Jarvis Avenue and place under traffic signal control if and when warranted in accordance with MUTCD guidelines.
- Milton Road at NH Route 11/US Route 202 Off-Ramp:
o Trim vegetation on the southeast corner of the Milton Road and NH Route 11/ US Route 202 off-ramp intersection within the right-of-way to enhance sight lines.
o Realign the NH Route 11/US Route 202 off-ramp left-turn lane across from Old Milton Road and place under traffic signal control if and when warranted in accordance with MUTCD guidelines.
- Milton Road at Flat Rock Bridge Road:
o Realign Flat Rock Bridge Road at Milton Road to provide a more traditional 90 degree angled intersection.
o Construct a driveway for potential development on the east side of Milton Road across from the relocated Flat Rock Bridge Road and place under traffic signal control if and when warranted in accordance with MUTCD guidelines.


## - Milton Road at Northcoast Drive:

o Provide a Milton Road northbound exclusive left-turn lane at Northcoast Drive to allow northbound through vehicles to bypass turning vehicles.
o Provide a Milton Road southbound acceleration from Northcoast Drive to the south for heavy vehicles turning right from Northcoast Drive to then merge with the mainline traffic stream.

- Milton Road at Rochester Market Place and Rite Aid:
o Update the signage and pavement markings at the Milton Road intersection with Rochester Market Place and Rite Aid to reflect appropriate vehicular lane usage.
- Milton Road at Salmon Falls Road and Amarosa Drive:
o Stripe a STOP bar/line on the Salmon Falls Road approach to Milton Road to indicate where vehicles should stop on a red traffic signal indication.
o Reduce the number of vehicles traveling through the Milton Road and Salmon Falls Road signalized intersection during a red indication (red light running). Some actions to be considered are increased enforcement (e.g., police detail and/or red light cameras), improve traffic signal operations through timing changes or capacity improvements, and install back plates in accordance with MUTCD around the traffic signal heads to improve the signal visibility in cases of sun glare.
o Realign Salmon Falls Road at Milton Road to provide a more traditional 90 degree angled intersection. Relocate Amarosa Drive across from the realigned Salmon Falls Road for potential development on the east side of Milton Road.
- Milton Road at Cross Road:
o Construct a Milton Road northbound exclusive left-turn lane at Cross Road that would constructed in a "back-to-back" design with the Milton Road southbound left-turn Iane at Salmon Falls Road.
- Corridor Improvements:
o Widen Milton Road to provide multiple travel lanes between Norway Plains Road and Rochester Market Place/Rite Aid.
o Widen Milton Road to provide multiple travel lanes north of Cross Road.
o Along Milton Road between Norway Plains Road and Jarvis Avenue, between Flat Rock Bridge Road and Northcoast Drive, and between Rochester Market Place and Salmon Falls Road:
- Construct a Two-Way Left-Turn Lane to improve operations and safety (on 2-lane roadways with $\pm 15,000$ vehicles per day or less, on 4-lane roadways with 20,000 vehicles per day or less).
- Construct a raised median to improve operations and safety (on 2-lane roadways with more than $\pm 15,000$ vehicles per day, on 4 -lane roadways with more than 20,000 vehicles per day). Consideration should be provided to downstream impacts (i.e., vehicles being required to reverse direction at signalized intersections).
- As the trip-generation projections for the potential full build of the underutilized parcels could vary, the City of Rochester should conduct a monitoring program of the traffic volumes along sections of Milton Road to determine when the daily thresholds would be exceeded for the 2 design alternatives (i.e., TWLTL and raised median).
- Access Management:
o Encourage and consider regulating Access Management strategies to improve safety and efficiency by balancing the mobility and access needs of roadway users and enhance safe and efficient property access. Some techniques include access location, design, spacing, and traffic control; interconnections between commercial sites; and sufficient driveway throat lengths.
- Sight Distance:
o Ensure that each new development or redevelopment project along the Milton Road corridor evaluates sight distances to determine if available sight lines for vehicles exiting driveways and minor street roadways meet or exceed the minimum distances required for approaching vehicles to safely stop in accordance with City of Rochester and NHDOT requirements as well as AASHTO guidelines.
- Parking:
o Parking lot layouts for uses along the Milton Road corridor should be based on City of Rochester's Site Plan Regulations and supported with peak period parking demand information from ITE parking generation data and/or available data from existing similar uses.
o Parking lots should be designed in conformance with ADA requirements and the New Hampshire Architectural Barrier Free Design Code.
- Sidewalks:
o Encourage developers/applicants to provide pedestrian connections with surrounding networks via funding and/or implementation.
- Transportation Demand Management:
o Encourage Transportation Demand Management measures by existing and future land owners along the Milton Road corridor to help reduce the number of single occupant vehicles, encourage the use of alternative modes of transportation, and better manage projected traffic volumes.
- Coordination:
o Coordinate with SRPC staff regarding the Strafford Metropolitan Planning Organization 2013-2040 Metropolitan Transportation Plan that identified improvements to pedestrian connectivity along Milton Road by constructing
and repairing sidewalks between Chestnut Hill Road and Rochester Market Place.
o Meet with Seacoast MPO and SRPC representatives to discuss available funding mechanisms and opportunities to implement improvements along the Milton Road corridor.
o Meet with COAST representatives to discuss ridership information, success of the current bus system, and future considerations (e.g., additional stops, additional service lines, reduced operations, etc.), as large developments (e.g., redevelopment of industrial park, apartment/housing subdivisions, retail development) may require or substantiate a specific need for increased transit.


# APPENDIX <br> Improvement Plans by Others COAST Bus Schedules <br> Traffic Count Data <br> Traffic-Volume Adjustment Data Trip-Generation Calculations 

## Improvement Plans by Others

Tighe\&Bond



## COAST Bus Schedules

Home » Schedules \& Maps » Route 6

## rintable Schedule

## E) Connections:

Route 2 at Lilac Mall
Route 20 at Rochester City Haliiliiliac Mall

About making connections


Plan by: Departure Time V
Get Directions

WHAT'S THIS? Put in where you are and where you're going -
Google Transit will tell you where the bus stops are, which routes to take, and what time to be at the stop!
Please note: the Trip Planner is provided as a helpful tool; neither COAST nor Google are responsible if your trip doesn't work exactly as planned or imagined.

## General Schedule

nformation
All schedules read from top to bottom.

Always be ready at the stop a few minutes early
Can't find your stop? Help reading the schedule.
New to riding the bus? Please see our New Riders Guide on how to ride the bus.

## Route 6



Stops marked with an asterisk (*) may make connections with Route 2. Bold stops correspond to timepoints on the schedule table.

Route 6 Southbound Stops: Route 6 Northbound Stops:

## FARMINGTON:

- Fire Station/Main St
- Mechanic/Crowley Sts.
- North Main St. (Market Place)
- Central/Spring Sts.
- Central St./Orchard Cir
- Colonial Cir. (Trotting Park 1)
- Colonial Cir. (Trotting Park 2)
- High/Tappan Sts. (Rite Aid)
- NH Rte. 11 (NAPA Auto Parts)
- NH Rte. 11 (Collins-Aikman)
- NH Rte. 11/NH Rte. 153
- NH Rte. 11 (Family Care of Farmington)

ROCHESTER:

- NH Rte. 11 (Lilac City Pediatrics)
- NH Rte. 11 (Wal-Mart)
- Strafford Co. Dialysis Center (on request only)
- NH Rte. 11 (Northgate Apts.)
- NH Rte. 11/Cardinal Dr.
- North Main St. (Globe Shopping Mall)
- North Main/Cushing Blvd. (Burger King)
- North Main (Holy Rosary Church)
- North Main/River St.
- Wakefield St. (Rochester City Hall) *
- Wakefield St. (Spaulding High School)
- Wakefield St. (Community Way) Northbound
- Lilac Mall *
- NH125 (Hannaford)
- NH125/Jarvis Ave (MetroCast)
- NH125/Flat Rock Bridge Rd. (Cumberland Farms)

NH125 (Market Basket)

COAST does not operate service on Sundays. Also, there is no service on the following holidays:

- New Year's Day
- Memorial Day
- Independence Day
- Labor Day
- Thanksgiving Day
- Christmas Day.

$\downarrow$
Schedules read from top to bottom. (.) Only timed stops are listed on the schedule. Times are approximate! See the following pages for complete stop listing. Please be at your stop about 5 minutes early.

Bus stops are located about every 1/4-mile.

| Connections |  |  |
| :---: | :---: | :---: |
| Route | Connects With | Bus Stop |
| 1 | 2, 3, 33 | Dover Transportation Center |
|  | 2, 3 | Shaw's |
| 2 | 1, 3, 33 | Dover Transportation Center |
|  | 1,3 | Shaw's |
|  | 4 | Fox Run Mall |
|  | 6 | Lilac Mall |
|  | 7 | Fox Run Mall |
|  | Trolley (40) | Fox Run Mall |
|  | Trolley (41) | Market Square |
| 6 | 2 | Lilac Mall |
| 7 | 5 | Newmarket Downtown Gazebo |
|  | Trolley (40) | Portsmouth Transportation Center |
| 33 | 1,2 | Dover Transportation Center |
| Trolley (40/41) | 2, 4, 7 | Fox Run Mall |
|  | 4 | Plaza 800 |
|  | 7 | Portsmouth Transportation Center |



## Traffic Count Data

Tighe\&Bond
STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION BUREAU OF TRAFFIC

| Bureau of Planning, Traffic Section, Traffic Reports |  |  |  |  |  |  |  |  |  |  | $\frac{\text { 06-Mar-14 }}{2013}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| STAT. | TYPE | LOCATION | FC | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |  |
| Town: ROCHESTER |  |  |  |  |  |  |  |  |  |  |  |
| 389022 | 82 | SALMON FALLS RD EAST OF FLAT ROCK BRIDGE RD | 16 | 4000 | * | * | * | * | * | 3200 | * |
| 389024 | 82 | PORTLAND ST NORTH OF CARSON ST | 16 | * | * | 3100 | * | * | 3800 | * | * |
| 389025 | 82 | CHARLES ST SOUTH OF LIBERTY ST | 17 | 4400 | * | * | 4500 | * | * | 5000 | * |
| 389026 | 82 | LOWELL ST WEST OF TEBBETS RD (EB-WB) (81389180-81389181) | 19 | 1200 | * | * | 1700 | * | * | 1800 | * |
| 389028 | 82 | NH 125 (COLUMBUS AVE) SOUTH OF SUMMER ST | 16 | * | * | 9400 | * | * | 11000 | * | * |
| 389029 | 82 | NH 125 (COLUMBUS AVE) SOUTH OF BRADLEY COURT | 16 | * | * | 11000 | * | * | 10000 | * | * |
| 389030 | 82 | NH 108 (SO. MAIN ST) WEST OF WHITEHALL RD | 16 | 18000 | * | * | * | * | * | 21000 | * |
| 389031 | 82 | US 202/NH 11 (HIGHLAND ST) SOUTH OF GROVE ST (SB-NB) (81389102-81389103) | 14 | * | * | 9300 | * | * | 10000 | * | * |
| 389032 | 82 | NH 11 (FARMINGTON RD) EAST OF CARDINAL DR | 14 | * | 21000 | * | * | * | * | 20000 | 19000 |
| 389034 | 82 | NH 108 (ROCHESTER HILL RD) SOUTH OF HILLCREST DR (SB-NB) (81389136-81389137) | 16 | 13000 | * | * | 13000 | * | * | 11000 | * |
| 389035 | 82 | CHAMBERLAIN ST EAST OF FRANKLIN ST | 19 | * | * | 1600 | * | 1200 | * | * | 920 |
| 389036 | 82 | TEBBETS RD OVER SPAULDING TURNPIKE (EB-WB) (81389150-81389151) | 19 | * | 4200 | * | * | * | 3700 | * | 4000 |
| 389039 | 82 | SALMON FALLS RD EAST OF PORTLAND ST | 16 | 5600 | * | * | * | * | * | 5900 | * |
| 389040 | 62 | SPAULDING TPK/NH 16 BETWEEN EXITS 12-13 (SB-NB) (61389104-61389105) | 14 | * | 31000 | * | * | 31000 | * | * | 31000 |
| 389042 | 62 | SPAULDING TPK/NH 16/US 202 BETWEEN EXITS 13-14 (SB-NB) (61389106-61389107) | 14 | * | 28500 | * | * | 33200 | * | * | 32000 |

STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION BUREAU OF TRAFFIC

| Bureau of Planning, Traffic Section, Traffic Reports |  |  |  |  |  |  |  |  |  |  | 6-Mar-14 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| STAT. | TYPE | LOCATION | FC | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
| Town: ROCHESTER |  |  |  |  |  |  |  |  |  |  |  |
| 389044 | 62 | SPAULDING TPK/NH 16/US 202 BETWEEN EXITS 14-15 (SB-NB) (61389108-61389109) | 14 | * | 26400 | * | * | 29900 | * | * | 29000 |
| 389046 | 62 | SPAULDING TPK/NH 11/NH 16/US 202 BETWEEN EXITS 15-16 (SB-NB) (6138911061389111) | 14 | * | 23000 | * | * | 24800 | * | * | 24000 |
| 389048 | 62 | US 202/NH 11 EAST OF SPAULDING TPK EXIT 16 (EB-WB) (61389112-61389113) | 14 | * | 12000 | * | * | * | * | 12000 | 12000 |
| 389049 | 82 | ROCHESTER NECK RD OVER ISINGLASS RIVER (EB-WB) (81389015-81389016) | 09 | * | * | 1500 | * | * | 1100 | * | * |
| 389050 | 82 | PICKERING RD OVER COCHECO RIVER | 17 | * | * | 7000 | * | * | 6500 | * | * |
| 389051 | 22 | NH 11 (FARMINGTON RD) AT FARMINGTON TL (EB-WB) (21389128-21389129) | 06 | * | * | 16000 | * | * | 16000 | * | * |
| 389052 | 82 | NH 125 (MILTON RD) NORTH OF CROSS RD (SB-NB) (81389124-81398125) | 16 | 17000 | * | * | * | * | * | 8900 | * |
| 389053 | 82 | NH 108 (ROCHESTER HILL RD) AT SOMERSWORTH TL (SB-NB) (8138912681389127) | 06 | * | * | 12000 | * | * | 13000 | * | * |
| 389054 | 82 | US 202 (WASHINGTON ST) AT BARRINGTON TL (SB-NB) (81389176-81389177) | 07 | * | 5500 | * | * | 5600 | * | * | 5300 |
| 389055 | 62 | NH 125 (CALEF HWY) AT BARRINGTON TL (SB-NB) (61389178-61389179) | 02 | * | 14000 | * | * | 13000 | * | * | 14000 |
| 389057 | 82 | CHESTNUT HILL RD NORTH OF HANSON AVE | 19 | * | * | 4000 | * | * | 3700 | * | * |
| 389058 | 62 | US 202/NH 11 (HIGHLAND ST) AT MAINE SL (SB-NB) (61389114-61389115) | 14 | 11000 | * | * | * | * | * | 9400 | * |
| 389062 | 82 | SUMMER ST EAST OF WAKEFIELD ST | 16 | * | * | 3500 | * | * | 3600 | * | * |
| 389065 | 62 | NH 125 (MILTON RD) AT MILTON TL (SB-NB) (61389130-61389131) | 16 | * | 5600 | * | * | 6200 | * | * | 5000 |


| Bureau of Planning, Traffic Section, Traffic Reports |  |  |  |  |  |  |  |  |  |  | $\begin{gathered} \hline \text { 06-Mar-14 } \\ \hline 2013 \\ \hline \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| STAT. | TYPE | LOCATION | FC | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |  |
| Town: ROCHESTER |  |  |  |  |  |  |  |  |  |  |  |
| 389066 | 82 | OLD DOVER RD AT SOMERSWORTH TL | 16 | * | 4600 | * | * | 4700 | * | * | 4100 |
| 389067 | 82 | CHARLES ST NORTH OF HANCOCK ST | 17 | * | * | 3500 | * | * | 4100 | * | * |
| 389068 | 82 | NH 125 (HANCOCK ST) NORTH OF CHARLES ST | 16 | 16000 | * | * | 14000 | * | * | 13000 | * |
| 389069 | 22 | US 202 (WASHINGTON ST) SOUTH OF CHESLEY HILL RD (SB-NB) (2138911621389117) | 06 | * | * | 7200 | * | 7400 | * | * | 7300 |
| 389070 | 82 | NH 125 (GONIC RD) SOUTH OF OAK ST (SBNB) (81389118-81389119) | 14 | * | 14000 | * | * | 13000 | * | * | 13000 |
| 389071 | 82 | US 202/NH 11 (HIGHLAND ST) WEST OF EASTERN AVENUE (EB-WB) (8138913481389135) | 14 | 11000 | * | * | 9900 | * | * | 10000 | * |
| 389072 | 82 | EASTERN AVE SOUTH OF HIGHLAND ST (US 202/NH 11) | 17 | * | * | 3500 | * | * | 3100 | * | * |
| 389073 | 82 | NH 125 (MILTON RD) SOUTH OF NH 11/US 202 (SB-NB) (81389144-81389145) | 16 | * | 11000 | * | * | 11000 | * | * | 9500 |
| 389074 | 82 | NH 125 (GONIC RD) NORTH OF BROCK ST (SBNB) (81389037-81389038) | 16 | * | 17000 | * | * | 16000 | * | * | 14000 |
| 389075 | 82 | WASHINGTON ST SOUTH OF WALNUT ST | 16 | * | * | 5200 | * | * | 5900 | * | * |
| 389076 | 82 | NH 202A (WALNUT ST) WEST OF SPAULDING TPK | 07 | * | 5300 | * | * | * | 5000 | * | 4700 |
| 389077 | 82 | NO. MAIN ST NORTH OF TEN ROD RD (SB-NB) (81389160-81389161) | 16 | 13000 | * | * | * | * | * | 12000 | * |
| 389078 | 82 | NH 202A (SO. MAIN ST) NORTH OF WINTER ST | 16 | * | 13000 | * | * | 13000 | * | * | 10000 |
| 389079 | 82 | PORTLAND ST EAST OF JEREMIAH LANE | 16 | * | 5500 | * | * | 5700 | * | * | 5400 |


| Bureau of Planning, Traffic Section, Traffic Reports |  |  |  |  |  |  |  |  |  |  | $\begin{gathered} \text { 06-Mar-14 } \\ \hline 2013 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| STAT. | TYPE | LOCATION | FC | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |  |
| Town: ROCHESTER |  |  |  |  |  |  |  |  |  |  |  |
| 389094 | 82 | SPAULDING AVE OVER SALMON FALLS RIVER (EB-WB) (81389138-81389139) | 19 | * | 950 | * | * | 960 | * | * | 940 |
| 389095 | 82 | FLAT ROCK BRIDGE RD OVER SALMON FALLS RIVER (EB-WB) (81389148-81389149) | 19 | * | 1400 | * | * | 1500 | * | * | 1100 |
| 389096 | 82 | LITTLE FALLS BRIDGE RD OVER COCHECO RIVER (SB-NB) (81389140-81389141) | 19 | * | 4300 | * | * | 5100 | * | * | 4500 |
| 389097 | 82 | US 202/NH 11 WB OVER US 202/NH 11 WB (SBNB) (81389154-81389155) | 14 | * | * | 9000 | * | * | 9000 | * | * |
| 389098 | 82 | US 202/NH 11 WB UNDER US 202/NH 11 WB (EB-WB) (81389152-81389153) | 14 | * | 6400 | * | * | 4900 | * | * | 5300 |
| 389099 | 82 | FOUR ROD RD OVER RICKERS BROOK (EBWB) (81389174-81389175) | 09 | * | 1100 | * | * | 1200 | * | * | 900 |
| 389156 | 82 | BLACKWATER RD SOUTH OF TEBBETS RD | 17 | 630 | * | * | 750 | * | * | 840 | * |
| 389158 | 82 | SUMMER ST WEST OF ALLEN ST | 17 | * | * | 6300 | * | * | 8600 | * | * |
| 389203 | 82 | STILLWATER CIRCLE SOUTH OF FLAGG ROAD | 09 | * | * | * | 680 | * | * | 740 | * |

# Traffic Impact and Access Study 

## Cumberland Farms Redevelopment

 Rochester, New Hampshire181 Ballardvale Street, Suite 202 Wilmington, Massachusetts 01887
(978) 570-2999

## PREPARED FOR:

Cumberland Gulf Group of Companies 100 Crossing Boulevard Framingham, Massachusetts 01702

August 2014
Cumberland Farms Redevelopment
Rochester, New Hampshire
August 2014


Huparice Surywey Rxpedition
106 sinaron Roadl
$\mathbb{N}^{2}$, Quincyr Mre 02171
P: $617=448-5686$
F": $617=801=8800$
WWr.tsetraffic.com
Site Code: Rochester, NH Station ID: Milton Road Adjacent To Site

| Start | 09-Aug-14 | 4 Southbound |  | Northbound |  | Combined |  | 10-Aug Sun | Southbound |  | Northbound |  | Combined |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Time | Sat | A.M. | P.M. | A.M. | P.M. | A.M. | P.M. |  | A.M. | P.M. | A.M. | P.M. | A.M. | P.M. |
| 12:00 |  | 12 | 113 | 13 | 116 | 25 | 229 |  | 7 | 118 | 9 | 125 | 16 | 243 |
| 12:15 |  | 5 | 120 | 4 | 121 | 9 | 241 |  | 6 | 117 | 13 | 141 | 19 | 258 |
| 12:30 |  | 5 | 116 | 14 | 115 | 19 | 231 |  | 7 | 95 | 4 | 121 | 11 | 216 |
| 12:45 |  | 4 | 116 | 7 | 141 | 11 | 257 |  | 3 | 109 | 10 | 132 | 13 | 241 |
| 01:00 |  | 2 | 99 | 8 | 115 | 10 | 214 |  | 5 | 121 | 8 | 141 | 13 | 262 |
| 01:15 |  | 3 | 113 | 5 | 158 | 8 | 271 |  | 3 | 116 | 5 | 122 | 8 | 238 |
| 01:30 |  | 3 | 109 | 8 | 139 | 11 | 248 |  | 3 | 106 | 5 | 115 | 8 | 221 |
| 01:45 |  | 1 | 94 | 2 | 144 | 3 | 238 |  | 8 | 117 | 6 | 137 | 14 | 254 |
| 02:00 |  | 2 | 113 | 3 | 145 | 5 | 258 |  | 2 | 112 | 7 | 124 | 9 | 236 |
| 02:15 |  | 2 | 110 | 2 | 150 | 4 | 260 |  | 5 | 93 | 4 | 95 | 9 | 188 |
| 02:30 |  | 3 | 106 | 6 | 133 | 9 | 239 |  | 4 | 77 | 6 | 99 | 10 | 176 |
| 02:45 |  | 2 | 103 | 2 | 134 | 4 | 237 |  | 1 | 127 | 0 | 88 | 1 | 215 |
| 03:00 |  | 4 | 99 | 7 | 114 | 11 | 213 |  | 3 | 98 | 3 | 109 | 6 | 207 |
| 03:15 |  | 4 | 110 | 3 | 112 | 7 | 222 |  | 0 | 107 | 1 | 99 | 1 | 206 |
| 03:30 |  | 4 | 110 | 2 | 102 | 6 | 212 |  | 5 | 103 | 7 | 102 | 12 | 205 |
| 03:45 |  | 10 | 108 | 1 | 117 | 11 | 225 |  | 2 | 89 | 2 | 110 | 4 | 199 |
| 04:00 |  | 8 | 93 | 2 | 124 | 10 | 217 |  | 2 | 101 | 0 | 92 | 2 | 193 |
| 04:15 |  | 6 | 98 | 4 | 101 | 10 | 199 |  | 4 | 89 | 3 | 89 | 7 | 178 |
| 04:30 |  | 13 | 93 | 5 | 102 | 18 | 195 |  | 4 | 115 | 2 | 87 | 6 | 202 |
| 04:45 |  | 22 | 100 | 6 | 102 | 28 | 202 |  | 3 | 101 | 0 | 106 | 3 | 207 |
| 05:00 |  | 18 | 112 | 5 | 96 | 23 | 208 |  | 5 | 110 | 2 | 100 | 7 | 210 |
| 05:15 |  | 40 | 93 | 10 | 109 | 50 | 202 |  | 7 | 84 | 6 | 79 | 13 | 163 |
| 05:30 |  | 48 | 99 | 8 | 102 | 56 | 201 |  | 11 | 97 | 2 | 72 | 13 | 169 |
| 05:45 |  | 48 | 80 | 19 | 108 | 67 | 188 |  | 11 | 88 | 10 | 91 | 21 | 179 |
| 06:00 |  | 66 | 73 | 17 | 108 | 83 | 181 |  | 11 | 108 | 8 | 92 | 19 | 200 |
| 06:15 |  | 93 | 91 | 31 | 104 | 124 | 195 |  | 14 | 91 | 5 | 100 | 19 | 191 |
| 06:30 |  | 105 | 81 | 27 | 92 | 132 | 173 |  | 24 | 95 | 9 | 89 | 33 | 184 |
| 06:45 |  | 85 | 71 | 55 | 82 | 140 | 153 |  | 36 | 84 | 19 | 81 | 55 | 165 |
| 07:00 |  | 83 | 55 | 38 | 77 | 121 | 132 |  | 34 | 76 | 19 | 79 | 53 | 155 |
| 07:15 |  | 76 | 71 | 55 | 91 | 131 | 162 |  | 26 | 85 | 35 | 70 | 61 | 155 |
| 07:30 |  | 96 | 66 | 36 | 77 | 132 | 143 |  | 36 | 69 | 20 | 61 | 56 | 130 |
| 07:45 |  | 94 | 59 | 46 | 69 | 140 | 128 |  | 44 | 67 | 29 | 70 | 73 | 137 |
| 08:00 |  | 80 | 61 | 47 | 75 | 127 | 136 |  | 39 | 78 | 37 | 44 | 76 | 122 |
| 08:15 |  | 79 | 46 | 48 | 50 | 127 | 96 |  | 54 | 48 | 43 | 49 | 97 | 97 |
| 08:30 |  | 80 | 42 | 61 | 48 | 141 | 90 |  | 56 | 47 | 53 | 42 | 109 | 89 |
| 08:45 |  | 96 | 46 | 59 | 49 | 155 | 95 |  | 71 | 52 | 63 | 41 | 134 | 93 |
| 09:00 |  | 74 | 50 | 65 | 40 | 139 | 90 |  | 69 | 34 | 54 | 38 | 123 | 72 |
| 09:15 |  | 88 | 33 | 67 | 49 | 155 | 82 |  | 69 | 25 | 61 | 32 | 130 | 57 |
| 09:30 |  | 99 | 33 | 78 | 39 | 177 | 72 |  | 87 | 20 | 74 | 24 | 161 | 44 |
| 09:45 |  | 88 | 26 | 67 | 35 | 155 | 61 |  | 78 | 25 | 74 | 20 | 152 | 45 |
| 10:00 |  | 95 | 27 | 82 | 29 | 177 | 56 |  | 85 | 12 | 71 | 20 | 156 | 32 |
| 10:15 |  | 97 | 11 | 90 | 22 | 187 | 33 |  | 94 | 22 | 74 | 9 | 168 | 31 |
| 10:30 |  | 104 | 18 | 89 | 27 | 193 | 45 |  | 106 | 16 | 103 | 15 | 209 | 31 |
| 10:45 |  | 115 | 14 | 91 | 16 | 206 | 30 |  | 95 | 19 | 104 | 10 | 199 | 29 |
| 11:00 |  | 106 | 12 | 96 | 21 | 202 | 33 |  | 115 | 8 | 86 | 36 | 201 | 44 |
| 11:15 |  | 104 | 7 | 128 | 22 | 232 | 29 |  | 117 | 7 | 110 | 16 | 227 | 23 |
| 11:30 |  | 135 | 17 | 124 | 24 | 259 | 41 |  | 102 | 4 | 95 | 11 | 197 | 15 |
| 11:45 |  | 104 | 9 | 122 | 14 | 226 | 23 |  | 127 | 2 | 121 | 3 | 248 | 5 |
| Total |  | 2511 | 3526 | 1765 | 4160 | 4276 | 7686 |  | 1700 | 3584 | 1482 | 3628 | 3182 | 7212 |
| Day Total |  |  | 037 |  | 925 |  | 962 |  |  | 84 |  | 10 | 10394 |  |
| \% Total |  | 21.0\% | 29.5\% | 14.8\% | 34.8\% |  |  |  | 16.4\% | 34.5\% | 14.3\% | 34.9\% |  |  |
| Peak | - | 10:45 | 12:00 | 11:00 | 01:15 | 11:00 | 01:15 | - | 11:00 | 01:00 | 11:00 | 00:15 | 11:00 | 00:15 |
| Vol. | - | 460 | 465 | 470 | 586 | 919 | 1015 | - | 461 | 460 | 412 | 535 | 873 | 977 |
| P.H.F. |  | 0.852 | 0.969 | 0.918 | 0.927 | 0.887 | 0.936 |  | 0.907 | 0.950 | 0.851 | 0.949 | 0.880 | 0.932 |



Tryactice Survvey 줄주odition
106 Sharion Roacl
N', Quincey', MIA O21T1
P; $617 /=448=5686$
F푸 $617=801=8800$
WWW:tsetranicictocona

Site Code: Rochester, NH Station ID: Milton Road Adjacent To Site

| Start | 11-Aug-14 | 4 Southbound |  | Northbound |  | Combined |  | 12-Aug Tue | Southbound |  | Northbound |  | Combined |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Time | Mon | A.M. | P.M. | A.M. | P.M. | A.M. | P.M. |  | A.M. | P.M. | A.M. | P.M. | A.M. | P.M. |
| 12:00 |  | 2 | 110 | 5 | 101 | 7 | 211 |  | 6 | 95 | 6 | 108 | 12 | 203 |
| 12:15 |  | 2 | 95 | 6 | 101 | 8 | 196 |  | 8 | 79 | 5 | 93 | 13 | 172 |
| 12:30 |  | 5 | 99 | 4 | 106 | 9 | 205 |  | 3 | 89 | 9 | 115 | 12 | 204 |
| 12:45 |  | 2 | 83 | 2 | 112 | 4 | 195 |  | 1 | 76 | 6 | 118 | 7 | 194 |
| 01:00 |  | 3 | 86 | 5 | 113 | 8 | 199 |  | 9 | 107 | 10 | 107 | 19 | 214 |
| 01:15 |  | 5 | 106 | 6 | 139 | 11 | 245 |  | 3 | 122 | 8 | 126 | 11 | 248 |
| 01:30 |  | 2 | 87 | 6 | 97 | 8 | 184 |  | 2 | 110 | 2 | 104 | 4 | 214 |
| 01:45 |  | 4 | 102 | 4 | 97 | 8 | 199 |  | 0 | 103 | 4 | 113 | 4 | 216 |
| 02:00 |  | 5 | 93 | 4 | 116 | 9 | 209 |  | 7 | 73 | 2 | 115 | 9 | 188 |
| 02:15 |  | 3 | 106 | 2 | 119 | 5 | 225 |  | 3 | 99 | 0 | 100 | 3 | 199 |
| 02:30 |  | 3 | 96 | 1 | 113 | 4 | 209 |  | 2 | 83 | 1 | 104 | 3 | 187 |
| 02:45 |  | 1 | 82 | 1 | 117 | 2 | 199 |  | 1 | 87 | 1 | 121 | 2 | 208 |
| 03:00 |  | 1 | 92 | 2 | 120 | 3 | 212 |  | 4 | 91 | 3 | 130 | 7 | 221 |
| 03:15 |  | 4 | 92 | 2 | 155 | 6 | 247 |  | 1 | 93 | 2 | 138 | 3 | 231 |
| 03:30 |  | 3 | 107 | 4 | 143 | 7 | 250 |  | 8 | 89 | 4 | 156 | 12 | 245 |
| 03:45 |  | 11 | 87 | 1 | 168 | 12 | 255 |  | 10 | 83 | 1 | 144 | 11 | 227 |
| 04:00 |  | 9 | 106 | 1 | 152 | 10 | 258 |  | 12 | 108 | 4 | 151 | 16 | 259 |
| 04:15 |  | 6 | 101 | 3 | 139 | 9 | 240 |  | 5 | 99 | 2 | 148 | 7 | 247 |
| 04:30 |  | 15 | 102 | 6 | 166 | 21 | 268 |  | 11 | 120 | 8 | 123 | 19 | 243 |
| 04:45 |  | 26 | 88 | 5 | 133 | 31 | 221 |  | 27 | 98 | 3 | 134 | 30 | 232 |
| 05:00 |  | 28 | 83 | 5 | 143 | 33 | 226 |  | 31 | 104 | 8 | 150 | 39 | 254 |
| 05:15 |  | 47 | 99 | 9 | 160 | 56 | 259 |  | 37 | 86 | 6 | 146 | 43 | 232 |
| 05:30 |  | 58 | 72 | 9 | 136 | 67 | 208 |  | 58 | 72 | 16 | 131 | 74 | 203 |
| 05:45 |  | 46 | 78 | 24 | 128 | 70 | 206 |  | 52 | 59 | 23 | 146 | 75 | 205 |
| 06:00 |  | 68 | 76 | 16 | 102 | 84 | 178 |  | 66 | 92 | 8 | 132 | 74 | 224 |
| 06:15 |  | 81 | 79 | 30 | 114 | 111 | 193 |  | 96 | 73 | 36 | 103 | 132 | 176 |
| 06:30 |  | 96 | 67 | 34 | 82 | 130 | 149 |  | 91 | 70 | 35 | 107 | 126 | 177 |
| 06:45 |  | 82 | 57 | 35 | 112 | 117 | 169 |  | 88 | 54 | 38 | 90 | 126 | 144 |
| 07:00 |  | 71 | 61 | 43 | 80 | 114 | 141 |  | 73 | 56 | 44 | 91 | 117 | 147 |
| 07:15 |  | 85 | 62 | 40 | 73 | 125 | 135 |  | 73 | 52 | 41 | 96 | 114 | 148 |
| 07:30 |  | 80 | 47 | 34 | 70 | 114 | 117 |  | 103 | 49 | 36 | 73 | 139 | 122 |
| 07:45 |  | 106 | 46 | 55 | 75 | 161 | 121 |  | 101 | 41 | 61 | 59 | 162 | 100 |
| 08:00 |  | 76 | 47 | 60 | 63 | 136 | 110 |  | 83 | 40 | 44 | 61 | 127 | 101 |
| 08:15 |  | 80 | 52 | 47 | 61 | 127 | 113 |  | 97 | 43 | 66 | 76 | 163 | 119 |
| 08:30 |  | 69 | 35 | 50 | 65 | 119 | 100 |  | 99 | 32 | 54 | 63 | 153 | 95 |
| 08:45 |  | 83 | 33 | 67 | 56 | 150 | 89 |  | 85 | 28 | 66 | 58 | 151 | 86 |
| 09:00 |  | 78 | 24 | 50 | 41 | 128 | 65 |  | 79 | 28 | 66 | 48 | 145 | 76 |
| 09:15 |  | 81 | 32 | 57 | 39 | 138 | 71 |  | 77 | 27 | 90 | 26 | 167 | 53 |
| 09:30 |  | 87 | 25 | 76 | 34 | 163 | 59 |  | 67 | 16 | 55 | 36 | 122 | 52 |
| 09:45 |  | 98 | 11 | 85 | 29 | 183 | 40 |  | 90 | 18 | 72 | 31 | 162 | 49 |
| 10:00 |  | 98 | 15 | 97 | 23 | 195 | 38 |  | 69 | 13 | 95 | 18 | 164 | 31 |
| 10:15 |  | 108 | 14 | 90 | 26 | 198 | 40 |  | 92 | 16 | 72 | 18 | 164 | 34 |
| 10:30 |  | 83 | 19 | 87 | 40 | 170 | 59 |  | 97 | 19 | 93 | 21 | 190 | 40 |
| 10:45 |  | 63 | 9 | 90 | 18 | 153 | 27 |  | 95 | 7 | 84 | 16 | 179 | 23 |
| 11:00 |  | 80 | 8 | 107 | 13 | 187 | 21 |  | 83 | 9 | 101 | 15 | 184 | 24 |
| 11:15 |  | 89 | 11 | 95 | 11 | 184 | 22 |  | 84 | 8 | 79 | 26 | 163 | 34 |
| 11:30 |  | 92 | 5 | 102 | 22 | 194 | 27 |  | 93 | 4 | 93 | 26 | 186 | 30 |
| 11:45 |  | 83 | 2 | 101 | 19 | 184 | 21 |  | 84 | 3 | 112 | 21 | 196 | 24 |
| Total |  | 2308 | 3089 | 1665 | 4342 | 3973 | 7431 |  | 2366 | 3023 | 1675 | 4332 | 4041 | 7355 |
| Day Total |  | 5397 |  | 6007 |  | 11404 |  | 5389 |  |  | 6007 |  | 11396 |  |
| \% Total |  | 20.2\% | 27.1\% | 14.6\% | 38.1\% |  |  |  | 20.8\% | 26.5\% | 14.7\% | 38.0\% |  |  |
| Peak | - | 09:30 | 03:30 | 11:00 | 03:45 | 11:00 | 03:45 | - | 07:30 | 01:00 | 11:00 | 03:30 | 11:00 | 04:00 |
| Vol. | - | 391 | 401 | 405 | 625 | 749 | 1021 | - | 384 | 442 | 385 | 599 | 729 | 981 |
| P.H.F. |  | 0.905 | 0.937 | 0.946 | 0.930 | 0.946 | 0.952 |  | 0.932 | 0.906 | 0.859 | 0.960 | 0.930 | 0.947 |

Project \#:
Rochester, NH
Client: John DeBarros


Hupartic Surpwey
106 sharon Road
NJ', Quincer, Mre 02171
P: $617=448-5686$
F³ $617=801=8800$
wwrwtsetraffic.cora

Site Code: Rochester, NH Station ID: Milton Road Adjacent To Site

| Start | 13-Aug-14 | Southbound |  | Northbound |  | Combined |  | 14-Aug | Southbound |  | Northbound |  | Combined |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Time | Wed | A.M. | P.M. | A.M. | . P.M. | A.M. | P.M. | Thu | A.M. | P.M. | A.M. | P.M. | A.M. | P.M. |  |
| 12:00 |  | 8 | 97 | 14 | 87 | 22 | 184 |  | * | * | * | * | * |  |  |
| 12:15 |  | 7 | 105 | 9 | 110 | 16 | 215 |  | * | * | * | * | * |  | * |
| 12:30 |  | 1 | 107 | 8 | 126 | 9 | 233 |  | * | * | * | * | * |  | * |
| 12:45 |  | 1 | 87 | 6 | 96 | 7 | 183 |  | * | * | * | * | * |  | * |
| 01:00 |  | 6 | 95 | 6 | 110 | 12 | 205 |  | * | * | * | * | * |  | * |
| 01:15 |  | 4 | 96 | 6 | 128 | 10 | 224 |  | * | * | * | * | * |  | * |
| 01:30 |  | 4 | 116 | 6 | 114 | 10 | 230 |  | * | * | * | * | * |  | * |
| 01:45 |  | 2 | 90 | 4 | 105 | 6 | 195 |  | * | * | * | * | * |  | * |
| 02:00 |  | 2 | 85 | 5 | 103 | 7 | 188 |  | * | * | * | * | * |  | * |
| 02:15 |  | 3 | 70 | 3 | 97 | 6 | 167 |  | * | * | * | * | * |  | * |
| 02:30 |  | 1 | 86 | 1 | 114 | 2 | 200 |  | * | * | * | * | * |  | * |
| 02:45 |  | 0 | 90 | 3 | 98 | 3 | 188 |  | * | * | * | * | * |  | * |
| 03:00 |  | 2 | 84 | 2 | 109 | 4 | 193 |  | * | * | * | * | * |  | * |
| 03:15 |  | 4 | 57 | 4 | 140 | 8 | 197 |  | * | * | * | * | * |  | * |
| 03:30 |  | 9 | 99 | 2 | 134 | 11 | 233 |  | * | * | * | * | * |  | * |
| 03:45 |  | 7 | 82 | 5 | 136 | 12 | 218 |  | * | * | * | * | * |  |  |
| 04:00 |  | 10 | 72 | 3 | 147 | 13 | 219 |  | * | * | * | * | * |  | * |
| 04:15 |  | 8 | 126 | 6 | 157 | 14 | 283 |  | * | * | * | * | * |  | * |
| 04:30 |  | 14 | 91 | 10 | 155 | 24 | 246 |  | * | * | * | * | * |  | * |
| 04:45 |  | 21 | 100 | 6 | 139 | 27 | 239 |  | * | * | * | * | * |  | * |
| 05:00 |  | 26 | 92 | 6 | 120 | 32 | 212 |  | * | * | * | * | * |  | * |
| 05:15 |  | 35 | 71 | 11 | 160 | 46 | 231 |  | * | * | * | * | * |  |  |
| 05:30 |  | 55 | 74 | 17 | 126 | 72 | 200 |  | * | * | * | * | * |  | * |
| 05:45 |  | 44 | 55 | 22 | 124 | 66 | 179 |  | * | * | * | * | * |  | * |
| 06:00 |  | 65 | 61 | 18 | 122 | 83 | 183 |  | * | * | * | * | * |  | * |
| 06:15 |  | 91 | 69 | 39 | 91 | 130 | 160 |  | * | * | * | * | * |  | * |
| 06:30 |  | 89 | 56 | 39 | 98 | 128 | 154 |  | * | * | * | * | * |  | * |
| 06:45 |  | 72 | 51 | 45 | 90 | 117 | 141 |  | * | * | * | * | * |  | * |
| 07:00 |  | 90 | 77 | 39 | 81 | 129 | 158 |  | * | * | * | * | * |  | * |
| 07:15 |  | 68 | 90 | 81 | 79 | 149 | 169 |  | * | * | * | * | * |  |  |
| 07:30 |  | 97 | 60 | 78 | 71 | 175 | 131 |  | * | * | * | * | * |  | * |
| 07:45 |  | 92 | 37 | 68 | 49 | 160 | 86 |  | * | * | * | * | * |  | * |
| 08:00 |  | 91 | 27 | 59 | 55 | 150 | 82 |  | * | * | * | * | * |  | * |
| 08:15 |  | 89 | 28 | 46 | 50 | 135 | 78 |  | * | * | * | * | * |  | * |
| 08:30 |  | 74 | 31 | 56 | 37 | 130 | 68 |  | * | * | * | * | * |  | * |
| 08:45 |  | 94 | 21 | 51 | 37 | 145 | 58 |  | * | * | * | * | * |  | * |
| 09:00 |  | 72 | 28 | 61 | 30 | 133 | 58 |  | * | * | * | * | * |  | * |
| 09:15 |  | 84 | 12 | 58 | 29 | 142 | 41 |  | * | * | * | * | * |  | * |
| 09:30 |  | 76 | 15 | 80 | 25 | 156 | 40 |  | * | * | * | * | * |  | * |
| 09:45 |  | 84 | 9 | 76 | 24 | 160 | 33 |  | * | * | * | * | * |  |  |
| 10:00 |  | 74 | 15 | 59 | 18 | 133 | 33 |  | * | * | * | * | * |  | * |
| 10:15 |  | 72 | 15 | 70 | 23 | 142 | 38 |  | * | * | * | * | * |  |  |
| 10:30 |  | 91 | 12 | 72 | 16 | 163 | 28 |  | * | * | * | * | * |  | * |
| 10:45 |  | 103 | 7 | 103 | 13 | 206 | 20 |  | * | * | * | * | * |  | * |
| 11:00 |  | 97 | 5 | 103 | 14 | 200 | 19 |  | * | * | * | * | * |  | * |
| 11:15 |  | 89 | 4 | 81 | 16 | 170 | 20 |  | * | * | * | * | * |  | * |
| 11:30 |  | 98 | 2 | 107 | 15 | 205 | 17 |  | * | * | * | * | * |  | * |
| 11:45 |  | 85 | 4 | 95 | 10 | 180 | 14 |  | * | * | * | * | * |  | * |
| Total |  | 2311 | 2863 | 1749 | 4028 | 4060 | 6891 |  | 0 | 0 | 0 | 0 | 0 |  | 0 |
| Day Total |  | 5174 |  | 5777 |  | 10951 |  |  | 0 |  | 0 - |  | 0 |  |  |
| \% Total |  | 21.1\% | 26.1\% | 16.0\% | 36.8\% |  |  |  | 0.0\% | 0.0\% | 0.0\% | 0.0\% |  |  |  |
| Peak |  | 10:45 | 04:15 | 10:45 | 04:00 | 10:45 | 04:00 | - | - | - | - | - | - |  | - |
| Vol. | - | 387 | 409 | 394 | 598 | 781 | 987 | - | - | - | - | - | - |  |  |
| P.H.F. |  | 0.939 | 0.812 | 0.921 | 0.952 | 0.948 | 0.872 |  |  |  |  |  |  |  |  |

ADT ADT 11,221 AADT 11,221

Site Code: Rochester, NH
Station ID: Milton Road
Adjacent To Site

P: $61 /=4 \cdot 48=5686$
Fiv $61 /=801=8800$
F: $617=801=8800$
$w w w . t s e t r e c t i c . c o n a$
感

Project \#:
Project NH Rochester, NH
Client: John DeBarros

| Southbound |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start | 1 | 36 | 41 | 46 | 51 | 56 | 61 | 66 | 71 | 76 | 81 | 86 | 91 | 96 |  |
| Time | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 999 | Total |
| 08/09/14 | 9 | 6 | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 |
| 01:00 | 1 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 02:00 | 1 | 7 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 03:00 | 8 | 7 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 |
| 04:00 | 14 | 21 | 11 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 49 |
| 05:00 | 47 | 62 | 35 | 7 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 154 |
| 06:00 | 99 | 154 | 82 | 12 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 349 |
| 07:00 | 97 | 156 | 84 | 11 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 349 |
| 08:00 | 116 | 154 | 60 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 335 |
| 09:00 | 140 | 150 | 48 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 349 |
| 10:00 | 190 | 158 | 57 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 411 |
| 11:00 | 240 | 166 | 38 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 449 |
| 12 PM | 227 | 172 | 59 | 4 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 465 |
| 13:00 | 201 | 141 | 65 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 415 |
| 14:00 | 207 | 168 | 50 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 432 |
| 15:00 | 199 | 168 | 52 | 6 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 427 |
| 16:00 | 163 | 152 | 58 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 384 |
| 17:00 | 155 | 159 | 64 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 384 |
| 18:00 | 110 | 131 | 66 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 316 |
| 19:00 | 88 | 100 | 55 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 251 |
| 20:00 | 69 | 81 | 39 | 4 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 195 |
| 21:00 | 51 | 61 | 29 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 142 |
| 22:00 | 26 | 28 | 10 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 70 |
| 23:00 | 11 | 16 | 16 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 45 |
| Total | 2469 | 2422 | 998 | 129 | 15 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6037 |





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| Start | 1 | 36 | 41 | 46 | 51 | 56 | 61 | 66 | 71 | 76 | 81 | 86 | 91 | 96 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Time | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 999 | Total |
| 08/10/14 | 11 | 5 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 |
| 01:00 | 4 | 11 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 |
| 02:00 | 3 | 4 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| 03:00 | 5 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| 04:00 | 3 | 4 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| 05:00 | 5 | 16 | 8 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 34 |
| 06:00 | 14 | 31 | 35 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 85 |
| 07:00 | 28 | 59 | 37 | 14 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 140 |
| 08:00 | 52 | 99 | 59 | 9 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 220 |
| 09:00 | 82 | 138 | 70 | 12 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 303 |
| 10:00 | 153 | 162 | 58 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 380 |
| 11:00 | 206 | 181 | 66 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 461 |
| 12 PM | 203 | 169 | 53 | 13 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 439 |
| 13:00 | 212 | 175 | 58 | 13 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 460 |
| 14:00 | 140 | 180 | 85 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 409 |
| 15:00 | 162 | 174 | 48 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 397 |
| 16:00 | 144 | 184 | 72 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 406 |
| 17:00 | 109 | 191 | 73 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 379 |
| 18:00 | 129 | 146 | 87 | 14 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 378 |
| 19:00 | 89 | 132 | 66 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 297 |
| 20:00 | 92 | 90 | 43 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 225 |
| 21:00 | 35 | 49 | 15 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 104 |
| 22:00 | 21 | 29 | 15 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 69 |
| 23:00 | 6 | 5 | 8 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| Total | 1908 | 2236 | 974 | 152 | 11 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5284 |



Quincy MEA
(6) $1 /-448-5686$
$617-801-8800$
 Adjacent To Site

| Start | 1 | 36 | 41 | 46 | 51 | 56 | 61 | 66 | 71 | 76 | 81 | 86 | 91 | 96 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Time | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 999 | Total |
| 08/11/14 | 5 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| 01:00 | 4 | 2 | 6 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| 02:00 | 2 | 4 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| 03:00 | 5 | 7 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 |
| 04:00 | 19 | 24 | 8 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 56 |
| 05:00 | 40 | 70 | 58 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 179 |
| 06:00 | 74 | 128 | 109 | 13 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 327 |
| 07:00 | 77 | 141 | 111 | 10 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 342 |
| 08:00 | 82 | 134 | 78 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 308 |
| 09:00 | 115 | 166 | 55 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 344 |
| 10:00 | 137 | 150 | 55 | 9 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 352 |
| 11:00 | 127 | 152 | 53 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 344 |
| 12 PM | 129 | 182 | 67 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 |
| 13:00 | 141 | 163 | 71 | 4 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 381 |
| 14:00 | 156 | 156 | 53 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 377 |
| 15:00 | 148 | 137 | 84 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 378 |
| 16:00 | 137 | 172 | 76 | 11 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 397 |
| 17:00 | 124 | 124 | 70 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 332 |
| 18:00 | 93 | 97 | 73 | 12 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 279 |
| 19:00 | 38 | 100 | 65 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 216 |
| 20:00 | 64 | 74 | 25 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 167 |
| 21:00 | 43 | 32 | 13 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 92 |
| 22:00 | 18 | 27 | 11 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 57 |
| 23:00 | 9 | 15 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 |
| Total | 1787 | 2260 | 1156 | 179 | 13 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5397 |





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Southbound

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| Start | 1 | 36 | 41 | 46 | 51 | 56 | 61 | 66 | 71 | 76 | 81 | 86 | 91 | 96 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Time | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 999 | Total |
| 08/13/14 | 4 | 4 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| 01:00 | 8 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| 02:00 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 03:00 | 6 | 6 | 9 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 |
| 04:00 | 21 | 16 | 15 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 53 |
| 05:00 | 48 | 61 | 45 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 160 |
| 06:00 | 77 | 127 | 97 | 14 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 317 |
| 07:00 | 101 | 160 | 77 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 347 |
| 08:00 | 93 | 153 | 90 | 11 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 348 |
| 09:00 | 106 | 146 | 54 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 316 |
| 10:00 | 118 | 149 | 62 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 340 |
| 11:00 | 154 | 150 | 56 | 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 369 |
| 12 PM | 164 | 144 | 80 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 396 |
| 13:00 | 173 | 147 | 60 | 15 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 397 |
| 14:00 | 113 | 146 | 60 | 11 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 331 |
| 15:00 | 112 | 125 | 71 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 322 |
| 16:00 | 198 | 95 | 84 | 11 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 389 |
| 17:00 | 107 | 109 | 57 | 16 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 292 |
| 18:00 | 59 | 93 | 70 | 12 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 237 |
| 19:00 | 187 | 48 | 23 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 264 |
| 20:00 | 57 | 33 | 16 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 107 |
| 21:00 | 17 | 33 | 12 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 64 |
| 22:00 | 19 | 19 | 7 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 49 |
| 23:00 | 4 | 5 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| Total | 1948 | 1977 | 1063 | 170 | 14 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5174 |
| Grand Total | 9908 | 11119 | 5374 | 798 | 71 | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27281 |

 106 Shamon Road

| Start | 1 | 36 | 41 | 46 | 51 | 56 | 61 | 66 | 71 | 76 | 81 | 86 | 91 | 96 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Time | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 999 | Total |
| 08/09/14 | 11 | 16 | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 38 |
| 01:00 | 4 | 7 | 10 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 |
| 02:00 | 4 | 5 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| 03:00 | 7 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| 04:00 | 6 | 6 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| 05:00 | 15 | 16 | 6 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 |
| 06:00 | 39 | 45 | 38 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 130 |
| 07:00 | 44 | 69 | 46 | 10 | 4 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 175 |
| 08:00 | 50 | 94 | 60 | 8 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 215 |
| 09:00 | 104 | 109 | 55 | 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 277 |
| 10:00 | 110 | 159 | 70 | 12 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 352 |
| 11:00 | 217 | 175 | 68 | 9 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 470 |
| 12 PM | 180 | 225 | 81 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 493 |
| 13:00 | 265 | 202 | 75 | 12 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 556 |
| 14:00 | 245 | 234 | 80 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 562 |
| 15:00 | 166 | 194 | 72 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 445 |
| 16:00 | 134 | 189 | 93 | 11 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 429 |
| 17:00 | 143 | 179 | 81 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 415 |
| 18:00 | 111 | 166 | 96 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 386 |
| 19:00 | 91 | 153 | 62 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 314 |
| 20:00 | 62 | 100 | 55 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 222 |
| 21:00 | 59 | 57 | 41 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 163 |
| 22:00 | 31 | 32 | 30 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 94 |
| 23:00 | 16 | 36 | 27 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 81 |
| Total | 2114 | 2474 | 1165 | 151 | 17 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5925 |




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Project \#: Rochester, NH
Client: John DeBarros Northbound


| Start | 1 | 36 | 41 | 46 | 51 | 56 | 61 | 66 | 71 | 76 | 81 | 86 | 91 | 96 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Time | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 999 | Total |
| 08/10/14 | 15 | 14 | 6 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 36 |
| 01:00 | 5 | 11 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 |
| 02:00 | 4 | 3 | 7 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| 03:00 | 6 | 2 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| 04:00 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 05:00 | 3 | 13 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 |
| 06:00 | 3 | 19 | 15 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 41 |
| 07:00 | 25 | 35 | 32 | 8 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 103 |
| 08:00 | 57 | 80 | 51 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 196 |
| 09:00 | 71 | 107 | 71 | 13 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 263 |
| 10:00 | 135 | 147 | 60 | 8 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 352 |
| 11:00 | 152 | 187 | 63 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 412 |
| 12 PM | 240 | 195 | 72 | 11 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 519 |
| 13:00 | 228 | 182 | 91 | 13 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 515 |
| 14:00 | 131 | 156 | 108 | 8 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 406 |
| 15:00 | 141 | 162 | 103 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 420 |
| 16:00 | 121 | 146 | 94 | 12 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 374 |
| 17:00 | 110 | 132 | 83 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 342 |
| 18:00 | 97 | 147 | 103 | 12 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 362 |
| 19:00 | 69 | 140 | 61 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 280 |
| 20:00 | 69 | 75 | 22 | 9 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 176 |
| 21:00 | 30 | 57 | 23 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 114 |
| 22:00 | 15 | 21 | 13 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 54 |
| 23:00 | 20 | 32 | 12 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 |
| Total | 1748 | 2067 | 1107 | 163 | 18 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5110 |

P= 6 $17-448=5686$
F: $61 /-801=8800$
 Adjacent To Site

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start | 1 | 36 | 41 | 46 | 51 | 56 | 61 | 66 | 71 | 76 | 81 | 86 | 91 | 96 |  |
| Time | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 999 | Total |
| 08/11/14 | 6 | 6 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| 01:00 | 8 | 9 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| 02:00 | 2 | 4 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 03:00 | 6 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 04:00 | 3 | 9 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| 05:00 | 18 | 11 | 15 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 47 |
| 06:00 | 27 | 47 | 37 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 115 |
| 07:00 | 32 | 69 | 55 | 15 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 172 |
| 08:00 | 70 | 111 | 34 | 7 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 224 |
| 09:00 | 69 | 106 | 84 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 268 |
| 10:00 | 117 | 143 | 84 | 19 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 364 |
| 11:00 | 137 | 178 | 76 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 405 |
| 12 PM | 129 | 193 | 85 | 10 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 420 |
| 13:00 | 176 | 188 | 79 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 446 |
| 14:00 | 217 | 168 | 68 | 11 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 465 |
| 15:00 | 240 | 231 | 103 | 11 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 586 |
| 16:00 | 210 | 248 | 117 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 590 |
| 17:00 | 150 | 246 | 141 | 28 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 567 |
| 18:00 | 124 | 152 | 116 | 17 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 410 |
| 19:00 | 93 | 125 | 76 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 298 |
| 20:00 | 77 | 125 | 37 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 245 |
| 21:00 | 54 | 59 | 25 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 143 |
| 22:00 | 30 | 47 | 24 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 107 |
| 23:00 | 12 | 31 | 18 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 65 |
| Total | 2007 | 2506 | 1286 | 192 | 14 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6007 |

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P: $617=448=5686$
F: $61 /=8011=8800$

## wWM, wsetrateric.coma

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| Northboun |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start | 1 | 36 | 41 | 46 | 51 | 56 | 61 | 66 | 71 | 76 | 81 | 86 | 91 | 96 |  |
| Time | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 999 | Total |
| 08/13/14 | 6 | 17 | 7 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 37 |
| 01:00 | 8 | 7 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 |
| 02:00 | 4 | 3 | 1 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| 03:00 | 7 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| 04:00 | 7 | 10 | 6 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 |
| 05:00 | 16 | 23 | 15 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 56 |
| 06:00 | 63 | 50 | 19 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 141 |
| 07:00 | 172 | 50 | 36 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 266 |
| 08:00 | 80 | 77 | 46 | 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 212 |
| 09:00 | 72 | 118 | 73 | 11 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 275 |
| 10:00 | 95 | 136 | 61 | 9 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 304 |
| 11:00 | 145 | 162 | 69 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 386 |
| 12 PM | 143 | 174 | 89 | 12 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 419 |
| 13:00 | 184 | 191 | 76 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 457 |
| 14:00 | 138 | 193 | 73 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 412 |
| 15:00 | 220 | 198 | 90 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 519 |
| 16:00 | 256 | 242 | 90 | 8 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 598 |
| 17:00 | 172 | 242 | 100 | 14 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 530 |
| 18:00 | 142 | 164 | 86 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 401 |
| 19:00 | 125 | 113 | 36 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 280 |
| 20:00 | 53 | 84 | 37 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 179 |
| 21:00 | 40 | 42 | 22 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 108 |
| 22:00 | 26 | 29 | 13 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 70 |
| 23:00 | 15 | 28 | 9 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 55 |
| Total | 2189 | 2357 | 1062 | 153 | 13 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5777 |
| Grand Total | 10035 | 11927 | 5918 | 858 | 71 | 14 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28826 |

$\begin{array}{rr}\text { 15th Percentile : } & 13 \mathrm{MPH} \\ \text { 50th Percentile : } & 26 \mathrm{MPH} \\ \text { 85th Percentile : } & 38 \mathrm{MPH} \\ \text { 95th Percentile : } & 42 \mathrm{MPH} \\ & \\ \text { Mean Speed(Average) : } & 27 \mathrm{MPH} \\ 10 \mathrm{MPH} \text { Pace Speed : } & 29-38 \mathrm{MPH} \\ \text { Number in Pace : } & 8863 \\ \text { Percent in Pace : } & 30.7 \% \\ \text { Number of Vehicles > 55 MPH : } & 17 \\ \text { Percent of Vehicles >55 MPH : } & 0.1 \%\end{array}$
Statistics

GPI Project \#:
Rochester, NH
Client: John DeBarros

106 Shamen Road
106 sharon Road!

P: $617=448=5686$
F": $617=801=8800$
w'w wsetradric.coma

File Name : PM
Site Code : 1
Start Date : 8/7/2014
Page No : 1 of 4

Groups Printed- Cars - Heavy Vehicles

|  | Milton Road Northbound |  |  |  |  | Milton Road Southbound |  |  |  |  | Eastbound |  |  |  |  | Flat Rock Bridge Road Westbound |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start <br> Time | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Int. Total |
| 04:00 PM | 0 | 164 | 20 | 1 | 185 | 2 | 101 | 0 | 0 | 103 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 6 | 0 | 17 | 305 |
| 04:15 PM | 0 | 162 | 18 | 0 | 180 | 2 | 106 | 0 | 0 | 108 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 6 | 2 | 18 | 306 |
| 04:30 PM | 0 | 168 | 26 | 0 | 194 | 5 | 139 | 0 | 0 | 144 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 5 | 1 | 16 | 354 |
| 04:45 PM | 0 | 140 | 25 | 0 | 165 | 3 | 120 | 0 | 1 | 124 | 0 | 0 | 0 | 1 | 1 | 12 | 0 | 9 | 1 | 22 | 312 |
| Total | 0 | 634 | 89 | 1 | 724 | 12 | 466 | 0 | 1 | 479 | 0 | 0 | 0 | 1 | 1 | 43 | 0 | 26 | 4 | 73 | 1277 |
| 05:00 PM | 0 | 147 | 21 | 0 | 168 | 3 | 106 | 0 | 0 | 109 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 6 | 0 | 18 | 295 |
| 05:15 PM | 0 | 168 | 23 | 0 | 191 | 7 | 109 | 0 | 0 | 116 | 0 | 0 | 0 | 0 | 0 | 22 | 0 | 1 | 0 | 23 | 330 |
| 05:30 PM | 0 | 135 | 34 | 0 | 169 | 3 | 100 | 0 | 0 | 103 | 0 | 0 | 0 | 0 | 0 | 23 | 0 | 7 | 0 | 30 | 302 |
| 05:45 PM | 0 | 144 | 28 | 0 | 172 | 2 | 92 | 0 | 0 | 94 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 4 | 0 | 12 | 278 |
| Total | 0 | 594 | 106 | 0 | 700 | 15 | 407 | 0 | 0 | 422 | 0 | 0 | 0 | 0 | 0 | 65 | 0 | 18 | 0 | 83 | 1205 |
| Grand Total | 0 | 1228 | 195 | 1 | 1424 | 27 | 873 | 0 | 1 | 901 | 0 | 0 | 0 | 1 | 1 | 108 | 0 | 44 | 4 | 156 | 2482 |
| Apprch \% | 0 | 86.2 | 13.7 | 0.1 |  | 3 | 96.9 | 0 | 0.1 |  | 0 | 0 | 0 | 100 |  | 69.2 | 0 | 28.2 | 2.6 |  |  |
| Total \% | 0 | 49.5 | 7.9 | 0 | 57.4 | 1.1 | 35.2 | 0 | 0 | 36.3 | 0 | 0 | 0 | 0 | 0 | 4.4 | 0 | 1.8 | 0.2 | 6.3 |  |
| Cars | 0 | 1215 | 195 | 1 | 1411 | 27 | 864 | 0 | 1 | 892 | 0 | 0 | 0 | 1 | 1 | 108 | 0 | 44 | 4 | 156 | 2460 |
| \% Cars | 0 | 98.9 | 100 | 100 | 99.1 | 100 | 99 | 0 | 100 | 99 | 0 | 0 | 0 | 100 | 100 | 100 | 0 | 100 | 100 | 100 | 99.1 |
| Heavy Vehicles \% Heavy Vehicles | 0 | 1.1 | 0 | 0 | 0.9 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.9 |



GPI Project \#:
Rochester, NH
Client: John DeBarros


File Name : PM
NT: Quinacy Mre 02171
Site Code : 1
P $\quad 617=448-5686$
Start Date : 8/7/2014
F플 $617 / 801=8800$
www tsetraftic.com

|  | Milton Road Northbound |  |  |  |  | Milton Road Southbound |  |  |  |  | Eastbound |  |  |  |  | Flat Rock Bridge Road Westbound |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Int. Total |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Peak Hour for Entire Intersection Begins at 04:30 PM |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 04:30 PM | 0 | 168 | 26 | 0 | 194 | 5 | 139 | 0 | 0 | 144 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 5 | 1 | 16 | 354 |
| 04:45 PM | 0 | 140 | 25 | 0 | 165 | 3 | 120 | 0 | 1 | 124 | 0 | 0 | 0 | 1 | 1 | 12 | 0 | 9 | 1 | 22 | 312 |
| 05:00 PM | 0 | 147 | 21 | 0 | 168 | 3 | 106 | 0 | 0 | 109 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 6 | 0 | 18 | 295 |
| 05:15 PM | 0 | 168 | 23 | 0 | 191 | 7 | 109 | 0 | 0 | 116 | 0 | 0 | 0 | 0 | 0 | 22 | 0 | 1 | 0 | 23 | 330 |
| Total Volume | 0 | 623 | 95 | 0 | 718 | 18 | 474 | 0 | 1 | 493 | 0 | 0 | 0 | 1 | 1 | 56 | 0 | 21 | 2 | 79 | 1291 |
| \% App. Total | 0 | 86.8 | 13.2 | 0 |  | 3.7 | 96.1 | 0 | 0.2 |  | 0 | 0 | 0 | 100 |  | 70.9 | 0 | 26.6 | 2.5 |  |  |
| PHF | . 000 | . 927 | . 913 | . 000 | . 925 | . 643 | . 853 | . 000 | . 250 | . 856 | . 000 | . 000 | . 000 | . 250 | . 250 | . 636 | . 000 | . 583 | . 500 | . 859 | . 912 |
| Cars | 0 | 614 | 95 | 0 | 709 | 18 | 468 | 0 | 1 | 487 | 0 | 0 | 0 | 1 | 1 | 56 | 0 | 21 | 2 | 79 | 1276 |
| \% Cars | 0 | 98.6 | 100 | 0 | 98.7 | 100 | 98.7 | 0 | 100 | 98.8 | 0 | 0 | 0 | 100 | 100 | 100 | 0 | 100 | 100 | 100 | 98.8 |
| Heavy Vehicles | 0 | 9 | 0 | 0 | 9 | 0 | 6 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| \% Heavy Vehicles | 0 | 1.4 | 0 | 0 | 1.3 | 0 | 1.3 | 0 | 0 | 1.2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1.2 |



GPI Project \#:
Rochester, NH
Client: John DeBarros

Trpactic Sjurvey expeclition
106 Shany R Rosad

File Name: PM
P: $617 /=44$
F': $617=801=8800$
Wrww-tsetratriceaoma
Site Code : 1
Start Date: 8/7/2014
Page No : 4 of 4
Groups Printed- Heavy Vehicles

|  | Milton Road Northbound |  |  |  |  | Milton Road Southbound |  |  |  |  | Eastbound |  |  |  |  | Flat Rock Bridge Road Westbound |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start <br> Time | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Int. Total |
| 04:00 PM | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 04:15 PM | 0 | 1 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 04:30 PM | 0 | 4 | 0 | 0 | 4 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 04:45 PM | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Total | 0 | 7 | 0 | 0 | 7 | 0 | 6 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |


| 05:00 PM | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 05:15 PM | 0 | 3 | 0 | 0 | 3 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 05:30 PM | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 05:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 6 | 0 | 0 | 6 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |




Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 04:30 PM

| 04:30 PM | 0 | 4 | 0 | 0 | 4 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 04:45 PM | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 05:00 PM | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 05:15 PM | 0 | 3 | 0 | 0 | 3 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| Total Volume | 0 | 9 | 0 | 0 | 9 | 0 | 6 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| \% App. Total | 0 | 100 | 0 | 0 |  | 0 | 100 | 0 | 0 |  | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 |  |  |
| PHF | . 000 | 563 | 000 | 000 | 563 | . 000 | 750 | 000 | 000 | 750 | . 000 | 000 | 000 | 000 | 000 | . 000 | 000 | 000 | 000 | 000 | 625 |

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

|  | 04:30 PM |  |  |  |  | 04:00 PM |  |  |  |  | 04:00 PM |  |  |  |  | 04:00 PM |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| +0 mins. | 0 | 4 | 0 | 0 | 4 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +15 mins. | 0 | 1 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +30 mins. | 0 | 1 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +45 mins. | 0 | 3 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 9 | 0 | 0 | 9 | 0 | 6 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| \% App. Total | 0 | 100 | 0 | 0 |  | 0 | 100 | 0 | 0 |  | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 |  |
| PHF | . 000 | . 563 | . 000 | . 000 | . 563 | . 000 | . 750 | . 000 | . 000 | . 750 | . 000 | . 000 | . 000 | . 000 | . 000 | . 000 | . 000 | . 000 | . 000 | . 000 |



Date: 10/9/2014
Location: 125 at 202 off-ramp
Time Interval: 7-9 AM \& 4-6 PM
City: Rochester, NH
Project Number: 27-0301-2

| Time | Milton Road SB |  |  | 202 Off-Ramp WB |  |  | Milton Road NB |  |  | Residential Driveway EB |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | SB | SB | SB | WB | WB | WB | NB | NB | NB | EB | EB | EB |
|  | Right | Thru | Left | Right | Thru | Left | Right | Thru | Left | Right | Thru | Left |
| 7:00-7:15 | 0 | 102 | 0 | 38 | 0 | 47 | 0 | 30 | 0 | 0 | 0 | 0 |
| 7:15-7:30 | 0 | 147 | 0 | 37 | 0 | 47 | 0 | 37 | 0 | 0 | 0 | 0 |
| 7:30-7:45 | 0 | 152 | 0 | 40 | 0 | 36 | 0 | 40 | 0 | 0 | 0 | 0 |
| 7:45-8:00 | 0 | 156 | 0 | 32 | 0 | 46 | 0 | 24 | 0 | 0 | 0 | 0 |
| 8:00-8:15 | 0 | 99 | 0 | 33 | 0 | 43 | 0 | 32 | 0 | 0 | 0 | 0 |
| 8:15-8:30 | 0 | 112 | 0 | 34 | 0 | 42 | 0 | 19 | 0 | 0 | 0 | 0 |
| 8:30-8:45 | 0 | 101 | 0 | 27 | 0 | 18 | 0 | 35 | 0 | 0 | 0 | 0 |
| 8:45-9:00 | 0 | 94 | 0 | 41 | 0 | 36 | 0 | 41 | 0 | 0 | 0 | 0 |


| Time | Street Name |  |  | Street Name |  |  | Street Name |  |  | Street Name |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | SB | SB | SB | WB | WB | WB | NB | NB | NB | EB | EB | EB |
|  | Right | Thru | Left | Right | Thru | Left | Right | Thru | Left | Right | Thru | Left |
| 16:00-16:15 | 0 | 152 | 0 | 106 | 0 | 44 | 0 | 103 | 0 | 0 | 0 | 0 |
| 16:15-16:30 | 0 | 140 | 0 | 93 | 0 | 37 | 0 | 105 | 0 | 0 | 0 | 0 |
| 16:30-16:45 | 0 | 118 | 0 | 102 | 0 | 41 | 0 | 143 | 0 | 0 | 0 | 0 |
| 16:45-17:00 | 0 | 136 | 0 | 91 | 0 | 35 | 0 | 108 | 0 | 0 | 0 | 0 |
| 17:00-17:15 | 0 | 142 | 0 | 88 | 0 | 33 | 0 | 106 | 0 | 0 | 0 | 0 |
| 17:15-17:30 | 0 | 142 | 0 | 98 | 0 | 38 | 0 | 112 | 0 | 0 | 0 | 0 |
| 17:30-17:45 | 0 | 118 | 0 | 75 | 0 | 29 | 0 | 104 | 0 | 0 | 0 | 0 |
| 17:45-18:00 | 0 | 123 | 0 | 76 | 0 | 27 | 0 | 91 | 0 | 0 | 0 | 0 |

Date: 10/9/2014
Location: 125 at 202 off-ramp
Time Interval: 7-9 AM \& 4-6 PM
City: Rochester, NH
Project Number: 27-0301-2

HEAVY VEHICLES

| Time | Milton Road SB |  |  | 202 Off-Ramp WB |  |  | Milton Road NB |  |  | Residential Driveway EB |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | SB | SB | SB | WB | WB | WB | NB | NB | NB | EB | EB | EB |
|  | Right | Thru | Left | Right | Thru | Left | Right | Thru | Left | Right | Thru | Left |
| 7:00-7:15 | 0 | 4 | 0 | 6 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| 7:15-7:30 | 0 | 8 | 0 | 3 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 0 |
| 7:30-7:45 | 0 | 9 | 0 | 2 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| 7:45-8:00 | 0 | 11 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 |
| 8:00-8:15 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15-8:30 | 0 | 7 | 0 | 4 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 |
| 8:30-8:45 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45-9:00 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |

HEAVY VEHICLES

| Time | Milton Road SB |  |  | 202 Off-Ramp WB |  |  | Milton Road NB |  |  | Residential Driveway EB |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | SB | SB | SB | WB | WB | WB | NB | NB | NB | EB | EB | EB |
|  | Right | Thru | Left | Right | Thru | Left | Right | Thru | Left | Right | Thru | Left |
| 16:00-16:15 | 0 | 2 | 0 | 5 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 16:15-16:30 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:30-16:45 | 0 | 4 | 0 | 5 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| 16:45-17:00 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00-17:15 | 0 | 4 | 0 | 2 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| 17:15-17:30 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:30-17:45 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:45-18:00 | 0 | 3 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |

Date: 10/7/2014
Location: Salmon Falls Rd at Milton Rd
Time Interval: 7-9 AM \& 4-6 PM
City: Rochester, NH
Project Number: 27-0301-2

| Time | Milton Road SB |  |  | Salmon Falls Road WB |  |  | Milton Road NB |  |  | Amarosa EB |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | SB | SB | SB | WB | WB | WB | NB | NB | NB | EB | EB | EB |
|  | Right | Thru | Left | Right | Thru | Left | Right | Thru | Left | Right | Thru | Left |
| 7:00-7:15 | 4 | 85 | 26 | 17 | 2 | 4 | 3 | 25 | 8 | 1 | 0 | 0 |
| 7:15-7:30 | 8 | 73 | 29 | 20 | 6 | 3 | 2 | 39 | 10 | 6 | 0 | 0 |
| 7:30-7:45 | 3 | 99 | 29 | 17 | 3 | 6 | 1 | 41 | 2 | 0 | 0 | 0 |
| 7:45-8:00 | 2 | 86 | 25 | 20 | 0 | 1 | 6 | 46 | 2 | 4 | 0 | 1 |
| 8:00-8:15 | 6 | 82 | 27 | 11 | 1 | 7 | 5 | 24 | 2 | 1 | 0 | 0 |
| 8:15-8:30 | 1 | 75 | 24 | 14 | 2 | 7 | 2 | 32 | 2 | 2 | 0 | 1 |
| 8:30-8:45 | 4 | 87 | 22 | 16 | 0 | 4 | 1 | 33 | 2 | 0 | 0 | 0 |
| 8:45-9:00 | 0 | 57 | 18 | 14 | 0 | 1 | 5 | 50 | 1 | 0 | 0 | 1 |


| Time | Street Name |  |  | Street Name |  |  | Street Name |  |  | Street Name |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | SB | SB | SB | WB | WB | WB | NB | NB | NB | EB | EB | EB |
|  | Right | Thru | Left | Right | Thru | Left | Right | Thru | Left | Right | Thru | Left |
| 16:00-16:15 | 7 | 54 | 15 | 41 | 9 | 9 | 15 | 116 | 5 | 15 | 9 | 16 |
| 16:15-16:30 | 0 | 64 | 22 | 40 | 0 | 7 | 12 | 144 | 2 | 6 | 1 | 2 |
| 16:30-16:45 | 1 | 69 | 16 | 44 | 0 | 8 | 7 | 118 | 0 | 3 | 0 | 2 |
| 16:45-17:00 | 1 | 87 | 27 | 49 | 1 | 4 | 14 | 115 | 5 | 5 | 0 | 1 |
| 17:00-17:15 | 2 | 78 | 30 | 37 | 0 | 4 | 15 | 152 | 2 | 11 | 1 | 4 |
| 17:15-17:30 | 2 | 63 | 21 | 51 | 1 | 6 | 5 | 139 | 1 | 4 | 1 | 1 |
| 17:30-17:45 | 0 | 45 | 21 | 48 | 0 | 6 | 6 | 132 | 1 | 2 | 0 | 2 |
| 17:45-18:00 | 0 | 72 | 13 | 36 | 1 | 1 | 6 | 125 | 0 | 5 | 0 | 0 |

Date: 10/7/2014
Location: Salmon Falls Road at Milton Road
Time Interval: 7-9 AM \& 4-6 PM
City: Rochester, NH
Project Number: 27-0301-2

HEAVY VEHICLES

| Time | Milton Road SB |  |  | Salmon Falls Road WB |  |  | Milton Road NB |  |  | Amarosa EB |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | SB | SB | SB | WB | WB | WB | NB | NB | NB | EB | EB | EB |
|  | Right | Thru | Left | Right | Thru | Left | Right | Thru | Left | Right | Thru | Left |
| 7:00-7:15 | 0 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 7:15-7:30 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 |
| 7:30-7:45 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 |
| 7:45-8:00 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 |
| 8:00-8:15 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 |
| 8:15-8:30 | 0 | 5 | 1 | 0 | 0 | 1 | 0 | 4 | 0 | 1 | 0 | 0 |
| 8:30-8:45 | 0 | 1 | 3 | 3 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 |
| 8:45-9:00 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 |

HEAVY VEHICLES

| Time | Milton Road SB |  |  | Salmon Falls Road WB |  |  | Milton Road NB |  |  | Amarosa EB |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | SB | SB | SB | WB | WB | WB | NB | NB | NB | EB | EB | EB |
|  | Right | Thru | Left | Right | Thru | Left | Right | Thru | Left | Right | Thru | Left |
| 16:00-16:15 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 0 | 0 |
| 16:15-16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 2 | 0 | 1 |
| 16:30-16:45 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 |
| 16:45-17:00 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00-17:15 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 0 |
| 17:15-17:30 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 |
| 17:30-17:45 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:45-18:00 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |



Date: 10/7/2014
Location: Cross Rd. at Milton Rd
Time Interval: 7-9 AM \& 4-6 PM
City: Rochester, NH
Project Number: 27-0301-2

| Time | Milton Road SB |  |  | Bev's Cafe WB |  |  | Milton Road NB |  |  | Cross Road EB |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | SB | SB | SB | WB | WB | WB | NB | NB | NB | EB | EB | EB |
|  | Right | Thru | Left | Right | Thru | Left | Right | Thru | Left | Right | Thru | Left |
| 7:00-7:15 | 1 | 77 | 0 | 0 | 0 | 0 | 0 | 28 | 17 | 35 | 0 | 1 |
| 7:15-7:30 | 0 | 86 | 0 | 0 | 0 | 0 | 0 | 33 | 19 | 32 | 1 | 2 |
| 7:30-7:45 | 0 | 95 | 0 | 0 | 0 | 0 | 1 | 39 | 13 | 35 | 1 | 0 |
| 7:45-8:00 | 1 | 75 | 0 | 0 | 0 | 0 | 2 | 50 | 11 | 35 | 0 | 1 |
| 8:00-8:15 | 1 | 87 | 2 | 0 | 0 | 0 | 2 | 26 | 10 | 37 | 0 | 3 |
| 8:15-8:30 | 0 | 70 | 0 | 0 | 0 | 0 | 0 | 36 | 12 | 35 | 0 | 0 |
| 8:30-8:45 | 1 | 88 | 0 | 0 | 0 | 0 | 0 | 32 | 16 | 24 | 1 | 0 |
| 8:45-9:00 | 0 | 60 | 0 | 0 | 0 | 0 | 0 | 47 | 15 | 20 | 0 | 0 |


| Time | Milton Road SB |  |  | Bev's Cafe WB |  |  | Milton Road NB |  |  | Cross Road EB |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | SB | SB | SB | WB | WB | WB | NB | NB | NB | EB | EB | EB |
|  | Right | Thru | Left | Right | Thru | Left | Right | Thru | Left | Right | Thru | Left |
| 16:00-16:15 | 1 | 55 | 0 | 0 | 0 | 0 | 1 | 101 | 50 | 32 | 0 | 0 |
| 16:15-16:30 | 0 | 54 | 0 | 0 | 0 | 0 | 3 | 131 | 56 | 34 | 0 | 0 |
| 16:30-16:45 | 1 | 51 | 0 | 0 | 0 | 0 | 0 | 96 | 66 | 41 | 0 | 0 |
| 16:45-17:00 | 1 | 70 | 0 | 0 | 0 | 0 | 1 | 106 | 51 | 41 | 0 | 1 |
| 17:00-17:15 | 2 | 81 | 0 | 0 | 0 | 0 | 1 | 125 | 64 | 41 | 0 | 1 |
| 17:15-17:30 | 1 | 65 | 0 | 0 | 0 | 0 | 0 | 137 | 53 | 25 | 0 | 0 |
| 17:30-17:45 | 0 | 50 | 0 | 0 | 0 | 0 | 0 | 127 | 50 | 18 | 0 | 0 |
| 17:45-18:00 | 0 | 68 | 0 | 0 | 0 | 0 | 0 | 111 | 50 | 21 | 0 | 0 |

Date: 10/7/2014
Location: Cross Rd. at Milton Rd
Time Interval: 7-9 AM \& 4-6 PM
City: Rochester, NH
Project Number: 27-0301-2
HEAVY VEHICLES

| Time | Milton Road SB |  |  | Bev's Cafe WB |  |  | Milton Road NB |  |  | Cross Road EB |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | SB | SB | SB | WB | WB | WB | NB | NB | NB | EB | EB | EB |
|  | Right | Thru | Left | Right | Thru | Left | Right | Thru | Left | Right | Thru | Left |
| 7:00-7:15 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15-7:30 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 |
| 7:30-7:45 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 0 | 0 | 0 |
| 7:45-8:00 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 5 | 1 | 3 | 0 | 0 |
| 8:00-8:15 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 |
| 8:15-8:30 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 2 | 0 | 0 |
| 8:30-8:45 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| 8:45-9:00 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 |

HEAVY VEHICLES

| Time | Milton Road SB |  |  | Bev's Cafe WB |  |  | Milton Road NB |  |  | Cross Road EB |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | SB | SB | SB | WB | WB | WB | NB | NB | NB | EB | EB | EB |
|  | Right | Thru | Left | Right | Thru | Left | Right | Thru | Left | Right | Thru | Left |
| 16:00-16:15 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 |
| 16:15-16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 0 | 0 | 0 |
| 16:30-16:45 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 16:45-17:00 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 17:00-17:15 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 |
| 17:15-17:30 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 17:30-17:45 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 17:45-18:00 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |

## Traffic-Volume Adjustment Data

Tighe\&Bond
TRAFFIC VOLUME ADJUSTMENT FACTORS Automatic Traffic Recorder Report (2013)
Prepared by the New Hampshire Department of Transportation Bureau of


287,166

332,214

Year Avg.

## ,

Historical Traffic Growth Rate ${ }^{\text {a }}$
Milton Road - Rochester, New Hampshire


[^7]
## Trip-Generation Calculations

Potential Redeveloped Land Use Trip-Generation Summary
Milton Road Corridor between Norway Plains Road and Ridgewood Estates

| Time Period/Direction | Norway Plains Rd to Rte 11/Rte 202 EB |  | Rte 11/Rte 202 EB to Flat Rock Bridge Rd |  | Flat Rock Bridge Rd to Salmon Falls Rd |  | Salmon Falls Rd to Ridgewood Estates |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | East Side | West Side | East Side | West Side | East Side | West Side | East Side | West Side |
| Weekday Daily: |  |  |  |  |  |  |  |  |
| Enter | 4,164 | 3,582 | 642 | 5,137 | 4,843 | 1,731 | 1,208 | 335 |
| Exit | 4,164 | 3,582 | 642 | 5,137 | 4,843 | 1,731 | 1,208 | 335 |
| Total | 8,328 | 7,164 | 1,284 | 10,274 | 9,686 | 3,462 | 2,416 | 670 |
| Weekday AM Peak Hour: |  |  |  |  |  |  |  |  |
| Enter | 356 | 100 | 18 | 239 | 135 | 331 | 94 | 9 |
| Exit | 108 | $\underline{61}$ | $\underline{55}$ | $\underline{99}$ | 83 | $\underline{71}$ | $\underline{25}$ | $\underline{6}$ |
| Total | 464 | 161 | 74 | 338 | 218 | 402 | 119 | 15 |
| Weekday PM Peak Hour: |  |  |  |  |  |  |  |  |
| Enter | 297 | 299 | 55 | 415 | 415 | 81 | 86 | 28 |
| Exit | 540 | 323 | $\underline{57}$ | 545 | 449 | 346 | 155 | 30 |
| Total | 837 | 622 | 112 | 960 | 864 | 427 | 241 | 58 |

## I nstitute of Transportation Engineers (ITE), 9th Edition <br> Land Use Code (LUC) 820 - Shopping Center <br> East Side between Norway Plains Rd and NH Rte 11/ US Rte 202

Average Vehicle Trips Ends vs: 1,000 Sq. Feet Gross Leasable Area Independent Variable (X): 80.650

## Average Weekday Daily



## Weekday Morning Peak Hour of Adjacent Street Traffic

$\mathrm{Ln} \mathrm{T}=0.61 \mathrm{Ln}(\mathrm{X})+2.24$
$\operatorname{Ln} T=0.61 \operatorname{Ln} \quad 80.650+2.24$
$\operatorname{Ln} T=4.92$
$\mathrm{T}=136.73$
$\mathrm{T}=137$ vehicle trips with $62 \%$ ( $85 \quad v p h$ ) entering and $38 \% ~(52 \quad$ vph) exiting.

## Weekday Evening Peak Hour of Adjacent Street Traffic

$\operatorname{Ln} T=0.67 \operatorname{Ln}(X)+3.31$
$\operatorname{Ln} T=0.67 \operatorname{Ln} \quad 80.650+3.31$
$\operatorname{Ln} T=6.25$
$\mathrm{T}=518.73$
$\mathrm{T}=519$ vehicle trips with $48 \%(249 \mathrm{vph})$ entering and $52 \%$ ( 270 vph ) exiting.

## Saturday Daily

| $\operatorname{LnT}=0.63 \operatorname{Ln}(X)+6.23$ |  |  |
| :---: | :---: | :---: |
| $\mathrm{Ln} \mathrm{T}=0.63 \mathrm{Ln} \quad 80.650$ | +6.23 |  |
| $\mathrm{Ln} \mathrm{T}=9.00$ |  |  |
| $\mathrm{T}=8068.92$ |  |  |
| $\mathrm{T}=8,070$ vehicle trips |  |  |
| with 50\% ( 4,035 | vpd) entering and 50\% ( | 4,035 vpd) exiting. |

## Saturday Peak Hour of Generator

$\operatorname{Ln} T=0.65 \operatorname{Ln}(X)+3.78$
$\operatorname{Ln} T=0.65 \operatorname{Ln} \quad 80.650+3.78$
$\operatorname{LnT}=6.63$
$\mathrm{T}=760.20$
$\mathrm{T}=760$ vehicle trips with 52\% ( 395 vph) entering and 48\% ( 365 vph) exiting.

## Sunday Daily

```
    T = 25.24 * (X)
    T=25.24* 80.650
    T = 2035.61
    T=2,036 vehicle trips
        with 50% ( 1,018 vpd) entering and 50% ( 1,018 vpd) exiting.
```

Sunday Peak Hour of Generator
$\mathrm{T}=3.12$ * (X)
$\mathrm{T}=3.12 * \quad 80.650$
$\mathrm{T}=251.63$
$\mathrm{T}=252$ vehicle trips
with $49 \%$ ( 123 vpd) entering and 51\% ( 129 vpd) exiting.

## Institute of Transportation Engineers (ITE), 9th Edition Land Use Code (LUC) 760 - Research and Development Center <br> East Side between Norway Plains Rd and NH Rte 11/ US Rte 202

Average Vehicle Trips Ends vs: 1,000 Sq. Feet Gross Floor Area
Independent Variable (X): 288.600

## Average Weekday Daily

$\operatorname{Ln} T=0.83 \operatorname{Ln}(X)+3.09$
$\operatorname{Ln} T=0.83 \operatorname{Ln} \quad 288.600+3.09$
$\operatorname{LnT}=7.79$
$T=2421.12$
$T=2,422$ vehicle trips with $50 \%$ ( $1,211 \mathrm{vph})$ entering and $50 \% ~(1,211 \mathrm{vph})$ exiting.

## Weekday Morning Peak Hour of Adj acent Street Traffic

$\operatorname{Ln} T=0.87 \operatorname{Ln}(X)+0.86$
$\operatorname{Ln} T=0.87 \operatorname{Ln} \quad 288.600+0.86$
$\operatorname{Ln} T=5.79$
$\mathrm{T}=326.55$
T = 327 vehicle trips with $83 \%$ ( 271 vph$)$ entering and $17 \%$ ( 56 vph$)$ exiting.

## Weekday Evening Peak Hour of Adjacent Street Traffic

$\operatorname{Ln} T=0.83 \operatorname{Ln}(X)+1.06$
$\operatorname{Ln} T=0.83 \mathrm{Ln} \quad 288.600+1.06$
$\operatorname{LnT}=5.76$
$T=317.98$
T = 318 vehicle trips with $15 \%$ ( $48 \quad \mathrm{vph})$ entering and $85 \% ~(270 \mathrm{vph})$ exiting.

## Saturday Daily

$\mathrm{T}=1.27$ * $(\mathrm{X})+104.92$
$\mathrm{T}=1.27$ * $288.600+104.92$
$\mathrm{T}=471.44$
$\mathrm{T}=472$ vehicle trips
with 50\% ( 236 vph) entering and 50\% ( 236 vph) exiting.
Saturday Peak Hour of Generator
$\mathrm{T}=0.24$ * (X)
$\mathrm{T}=0.24$ * 288.600
$\mathrm{T}=69.26$
$\mathrm{T}=69$ vehicle trips with 50\% (

Sunday Daily
$\mathrm{T}=1.11$ * $(\mathrm{X})$
$\mathrm{T}=1.11$ * 288.600
$\mathrm{T}=320.35$
T = 320 vehicle trips
with $50 \%$ ( 160 vph$)$ entering and $50 \%$ ( 160 vph ) exiting.
Sunday Peak Hour of Generator
$\mathrm{T}=0.16^{*}(\mathrm{X})$
$\mathrm{T}=0.16^{*} \quad 288.600$
$T=46.18$
T = 46 vehicle trips
with $50 \%$ ( 23 vph ) entering and $50 \%$ ( 23 vph ) exiting.

## I nstitute of Transportation Engineers (ITE), 9th Edition

## Land Use Code (LUC) 820 - Shopping Center

West Side between Norway Plains Rd \& NH Rte 11/ US Rte 202
Average Vehicle Trips Ends vs: 1,000 Sq. Feet Gross Leasable Area Independent Variable (X): 167.750

## Average Weekday Daily

$\mathrm{T}=42.70$ * (X)
$\mathrm{T}=42.70$ * 167.750
$\mathrm{T}=7162.93$
T = 7,164 vehicle trips
with $50 \%$ ( 3,582 vpd) entering and 50\% ( 3,582 vpd) exiting.

## Weekday Morning Peak Hour of Adj acent Street Traffic

$\mathrm{T}=0.96$ * (X)
$\mathrm{T}=0.96$ * 167.750
$\mathrm{T}=161.04$
$\mathrm{T}=161$ vehicle trips
with $62 \%$ ( 100 vpd ) entering and $38 \%$ ( 61 vpd ) exiting.
Weekday Evening Peak Hour of Adjacent Street Traffic
$\mathrm{T}=3.71$ * (X)
$\mathrm{T}=3.71$ * 167.750
$\mathrm{T}=622.35$
$\mathrm{T}=622$ vehicle trips
with $48 \%$ ( 299 vpd ) entering and 52\% ( 323 vpd ) exiting.

## Saturday Daily

$\mathrm{T}=49.97$ * (X)
$\mathrm{T}=49.97$ * 167.750
$\mathrm{T}=8382.47$
$\mathrm{T}=8,382$ vehicle trips
with $50 \%$ ( $4,191 \mathrm{vpd}$ ) entering and $50 \%$ ( $4,191 \mathrm{vpd}$ ) exiting.

## Saturday Peak Hour of Generator

$\mathrm{T}=4.82$ * (X)
$\mathrm{T}=4.82$ * 167.750
$\mathrm{T}=808.56$
$\mathrm{T}=809$ vehicle trips
with 52\% ( 421 vpd ) entering and 48\% ( 388 vpd) exiting.
Sunday Daily
$\mathrm{T}=25.24$ * $(\mathrm{X})$
$\mathrm{T}=25.24$ * 167.750
$\mathrm{T}=4234.01$
$\mathrm{T}=4,234$ vehicle trips
with $50 \%$ ( 2,117 vpd) entering and 50\% ( 2,117 vpd) exiting.
Sunday Peak Hour of Generator
T = 3.12 * (X)
$\mathrm{T}=3.12$ * 167.750
$\mathrm{T}=523.38$
$\mathrm{T}=523$ vehicle trips
with $49 \%$ ( 256 vpd) entering and $51 \%$ ( 267 vpd) exiting.

## I nstitute of Transportation Engineers (ITE), 9th Edition

Land Use Code (LUC) 820 - Shopping Center

## East Side between NH Rte 11/ US Rte 202 and Flat Rock Bridge Rd

Average Vehicle Trips Ends vs: 1,000 Sq. Feet Gross Leasable Area Independent Variable (X): 27.270

## Average Weekday Daily

$\mathrm{T}=42.70$ * (X)
$\mathrm{T}=42.70$ * 27.270
$\mathrm{T}=1164.43$
$\mathrm{T}=1,164$ vehicle trips
with 50\% ( 582 vpd ) entering and 50\% ( 582 vpd ) exiting.

## Weekday Morning Peak Hour of Adj acent Street Traffic

$\mathrm{T}=0.96$ * (X)
$\mathrm{T}=0.96$ * 27.270
$\mathrm{T}=26.18$
$\mathrm{T}=26$ vehicle trips
with $62 \%$ ( 16 vpd) entering and $38 \% ~(10 \quad$ vpd) exiting.
Weekday Evening Peak Hour of Adjacent Street Traffic
$\mathrm{T}=3.71$ * $(\mathrm{X})$
$\mathrm{T}=3.71$ * 27.270
$\mathrm{T}=101.17$
$\mathrm{T}=101$ vehicle trips
with $48 \%$ ( 48 vpd) entering and 52\% ( 53 vpd) exiting.

## Saturday Daily

$\mathrm{T}=49.97$ * (X)
$\mathrm{T}=49.97$ * 27.270
$\mathrm{T}=1362.68$
T = 1,364 vehicle trips
with $50 \%$ ( 682 vpd ) entering and 50\% ( 682 vpd ) exiting.

## Saturday Peak Hour of Generator

$\mathrm{T}=4.82$ * (X)
$\mathrm{T}=4.82$ * 27.270
$\mathrm{T}=131.44$
$\mathrm{T}=131$ vehicle trips
with 52\% ( 68
vpd) entering and $48 \%$ ( 63 vpd) exiting.
Sunday Daily
$\mathrm{T}=25.24$ * (X)
$\mathrm{T}=25.24$ * 27.270
$\mathrm{T}=688.29$
$\mathrm{T}=688$ vehicle trips
with 50\% ( 344 vpd ) entering and 50\% ( 344 vpd ) exiting.
Sunday Peak Hour of Generator
$\mathrm{T}=3.12$ * (X)
$\mathrm{T}=3.12$ * 27.270
$\mathrm{T}=85.08$
T = 85 vehicle trips
with 49\% ( 42
42
vpd) entering and 51\% ( 43
$43 \mathrm{vpd})$ exiting.

# Institute of Transportation Engineers (ITE), 9th Edition <br> Land Use Code (LUC) 220 - Apartment <br> East Side between NH Rte 11/ US Rte 202 and Flat Rock Bridge Rd 

Average Vehicle Trips Ends vs: Dwelling Units<br>Independent Variable (X): 18

## Average Weekday Daily

$\mathrm{T}=6.65 *(\mathrm{X})$
$\mathrm{T}=6.65 * \quad 18$
$\mathrm{T}=119.70$
$\mathrm{T}=120$ vehicle trips with $50 \% ~(60 \mathrm{vpd})$ entering and $50 \% ~(\quad 60 \mathrm{vpd})$ exiting.

## Weekday Morning Peak Hour of Adj acent Street Traffic

$\mathrm{T}=0.51 *(\mathrm{X})$
$\mathrm{T}=0.51 * 18$
$\mathrm{T}=9.18$
T $=9$ vehicle trips with $20 \%$ ( 2 vph ) entering and $80 \%$ ( 7 vph) exiting.

Weekday Evening Peak Hour of Adjacent Street Traffic
$T=0.62 *(X)$
$\mathrm{T}=0.62$ * 18
$\mathrm{T}=11.16$
$\mathrm{T}=11$ vehicle trips with $65 \%$ ( 7 vph ) entering and $35 \%$ ( 4 vph ) exiting.

## Saturday Daily

$\mathrm{T}=6.39$ * (X)
$\mathrm{T}=6.39 * \quad 18$
$\mathrm{T}=115.02$
$\mathrm{T}=116$ vehicle trips
with 50\% ( 58 vpd) entering and 50\% ( 58 vpd) exiting.

## Saturday Peak Hour of Generator

$\mathrm{T}=0.52$ * (X)
$\mathrm{T}=0.52 * \quad 18$
$\mathrm{T}=9.36$
T $=9$ vehicle trips
with $50 \%$ ( 5 vph ) entering and $50 \%$ ( 4 vph) exiting.

## Sunday Daily

$T=5.86$ * $(X)$
$\mathrm{T}=5.86 * \quad 18$
$\mathrm{T}=105.48$
$\mathrm{T}=106$ vehicle trips with $50 \% ~(53 \mathrm{vpd})$ entering and $50 \% ~(\quad 53 \mathrm{vpd})$ exiting.

## Sunday Peak Hour of Generator

$$
\begin{aligned}
& \mathrm{T}=0.51 *(\mathrm{X}) \\
& \mathrm{T}=0.51 * \quad 18 \\
& \mathrm{~T}=9.18 \\
& \mathrm{~T}=9 \text { vehicle trips }
\end{aligned}
$$

with $50 \%$ ( 5 vph ) entering and $50 \% ~(\quad 4 \mathrm{vph})$ exiting.

## I nstitute of Transportation Engineers (ITE), 9th Edition <br> Land Use Code (LUC) 820 - Shopping Center <br> West Side between NH Rte 11/ US Rte 202 and Flat Rock Bridge Rd

Average Vehicle Trips Ends vs: 1,000 Sq. Feet Gross Leasable Area Independent Variable (X): 161.340

## Average Weekday Daily



## Weekday Morning Peak Hour of Adjacent Street Traffic

$\operatorname{Ln} T=0.61 \operatorname{Ln}(X)+2.24$
$\operatorname{Ln} T=0.61 \mathrm{Ln} \quad 161.340+2.24$
$\operatorname{LnT}=5.34$
$\mathrm{T}=208.71$
$\mathrm{T}=209$ vehicle trips with $62 \%$ ( 130 vph) entering and $38 \% ~(79 \quad v p h)$ exiting.

Weekday Evening Peak Hour of Adjacent Street Traffic
$\operatorname{Ln} T=0.67 \operatorname{Ln}(X)+3.31$
$\operatorname{Ln} T=0.67 \operatorname{Ln} \quad 161.340+3.31$
$\operatorname{Ln} T=6.72$
$\mathrm{T}=825.47$
$\mathrm{T}=825$ vehicle trips with $48 \%$ ( 396 vph) entering and 52\% ( 429 vph) exiting.

## Saturday Daily

$\operatorname{Ln~T}=0.63 \operatorname{Ln}(X)+6.23$
$\operatorname{LnT}=0.63 \mathrm{Ln} \quad 161.340+6.23$
$\operatorname{LnT}=9.43$
$\mathrm{T}=12489.13$
$\mathrm{T}=12,490$ vehicle trips with $50 \%$ ( 6,245 vpd) entering and $50 \% ~(6,245 \mathrm{vpd})$ exiting.

## Saturday Peak Hour of Generator

| $\operatorname{Ln~} \mathrm{T}=0.65 \mathrm{Ln}(\mathrm{X})+3.78$ |  |  |  |
| :---: | :---: | :---: | :---: |
| $\mathrm{Ln} \mathrm{T}=0.65 \mathrm{Ln} \quad 161.340$ | +3.78 |  |  |
| $\operatorname{LnT}=7.08$ |  |  |  |
| $\mathrm{T}=1193.07$ |  |  |  |
| T = 1,193 vehicle trips |  |  |  |
| with 52\% ( 620 | vph) entering and 48\% ( | 573 | vph) exiting. |
| Sunday Daily |  |  |  |
| $\mathrm{T}=25.24 *(\mathrm{X})$ |  |  |  |
| $\mathrm{T}=25.24$ * 161.340 |  |  |  |
| $\mathrm{T}=4072.22$ |  |  |  |
| T $=4,072$ vehicle trips |  |  |  |
| with 50\% ( 2,036 | vpd) entering and 50\% ( | 2,036 | vpd) exiting. |

## Sunday Peak Hour of Generator

$\mathrm{T}=3.12$ * (X)
$\mathrm{T}=3.12 * \quad 161.340$
$\mathrm{T}=503.38$
$\mathrm{T}=503$ vehicle trips with $49 \%$ ( 246 vpd) entering and 51\% ( 257 vpd) exiting.

## Institute of Transportation Engineers (ITE), 9th Edition <br> Land Use Code (LUC) 110 - General Light I ndustrial <br> West Side between NH Rte 11/ US Rte 202 and Flat Rock Bridge Rd

Average Vehicle Trips Ends vs: 1,000 Sq. Feet Gross Floor Area
Independent Variable (X): 53.040

## Average Weekday Daily

$\mathrm{T}=6.97$ * (X)
$\mathrm{T}=6.97$ * 53.040
$\mathrm{T}=369.69$
$\mathrm{T}=370$ vehicle trips
with $50 \%$ ( 185 vph ) entering and $50 \%$ ( 185 vph ) exiting.

## Weekday Morning Peak Hour of Adj acent Street Traffic

$\mathrm{T}=0.92$ * (X)
$\mathrm{T}=0.92$ * 53.040
$\mathrm{T}=48.80$
$\mathrm{T}=49$ vehicle trips with 88\% ( 43 vph ) entering and 12\% ( 6 vph ) exiting.

Weekday Evening Peak Hour of Adjacent Street Traffic
$\mathrm{T}=0.97$ * (X)
$\mathrm{T}=0.97$ * 53.040
$\mathrm{T}=51.45$
$\mathrm{T}=51$ vehicle trips
with $12 \%$ ( 6 vph ) entering and $88 \%$ ( 45 vph ) exiting.
Saturday Daily
$\mathrm{T}=1.32$ * (X)
$\mathrm{T}=1.32$ * 53.040
$\mathrm{T}=70.01$
$\mathrm{T}=70$ vehicle trips with 50\% ( 35 vph ) entering and 50\% ( 35 vph ) exiting.

Saturday Peak Hour of Generator
$\mathrm{T}=0.14$ * (X)
$\mathrm{T}=0.14$ * 53.040
$\mathrm{T}=7.43$
$\mathrm{T}=7$ vehicle trips
with $47 \%$ ( $3 \quad \mathrm{vph}$ ) entering and $53 \%$ ( $4 \quad \mathrm{vph}$ ) exiting.
Sunday Daily
$\mathrm{T}=0.68$ * (X)
$\mathrm{T}=0.68$ * 53.040
$\mathrm{T}=36.07$
$\mathrm{T}=36$ vehicle trips with $50 \%$ ( 18 vph ) entering and $50 \%$ ( 18 vph) exiting.

Sunday Peak Hour of Generator
T = 0.10 * (X)
$\mathrm{T}=0.10$ * 53.040
$\mathrm{T}=5.30$
$\mathrm{T}=5$ vehicle trips

## Institute of Transportation Engineers (ITE), 9th Edition Land Use Code (LUC) 760 - Research and Development Center West Side between NH Rte 11/ US Rte 202 and Flat Rock Bridge Rd

Average Vehicle Trips Ends vs: 1,000 Sq. Feet Gross Floor Area Independent Variable (X): 57.690

## Average Weekday Daily

$\operatorname{Ln} T=0.83 \operatorname{Ln}(X)+3.09$
$\operatorname{Ln} T=0.83 \operatorname{Ln} 57.690+3.09$
$\operatorname{LnT}=6.46$
$T=636.33$
$T=636$ vehicle trips with $50 \%$ ( 318 vph ) entering and $50 \%$ ( 318 vph ) exiting.

## Weekday Morning Peak Hour of Adj acent Street Traffic

$\operatorname{Ln} T=0.87 \operatorname{Ln}(X)+0.86$
$\operatorname{Ln} T=0.87 \operatorname{Ln} \quad 57.690+0.86$
$\operatorname{Ln} T=4.39$
$T=80.47$
$\mathrm{T}=80$ vehicle trips with 83\% ( 66
vph) entering and $17 \%$ ( 14 vph ) exiting.

## Weekday Evening Peak Hour of Adj acent Street Traffic

$\operatorname{Ln} T=0.83 \operatorname{Ln}(X)+1.06$
$\operatorname{Ln} T=0.83 \mathrm{Ln} \quad 57.690+1.06$
$\operatorname{LnT}=4.43$
$T=83.57$
$\mathrm{T}=84$ vehicle trips with $15 \%$ ( 13 vph$)$ entering and $85 \%$ ( 71 vph$)$ exiting.

## Saturday Daily

$\mathrm{T}=1.27 *(\mathrm{X})+104.92$
$\mathrm{T}=1.27$ * $57.690 \quad+104.92$
$\mathrm{T}=178.19$
$\mathrm{T}=178$ vehicle trips with $50 \%$ ( 89 vph$)$ entering and $50 \% ~(89 \mathrm{vph})$ exiting.

Saturday Peak Hour of Generator
$\mathrm{T}=0.24$ * (X)
$\mathrm{T}=0.24$ * 57.690
$\mathrm{T}=13.85$
$\mathrm{T}=14$ vehicle trips with $50 \%$ ( 7 vph ) entering and $50 \%$ ( 7 vph$)$ exiting.

Sunday Daily
$\mathrm{T}=1.11$ * $(\mathrm{X})$
$\mathrm{T}=1.11 * \quad 57.690$
$T=64.04$
$\mathrm{T}=64$ vehicle trips with $50 \%$ ( 32 vph$)$ entering and $50 \%$ ( 32 vph ) exiting.

## Sunday Peak Hour of Generator

$\mathrm{T}=0.16^{*}(\mathrm{X})$
$\mathrm{T}=0.16$ * 57.690
$\mathrm{T}=9.23$
T $=9$ vehicle trips with $50 \%$ ( 5 vph ) entering and $50 \%$ ( 4 vph$)$ exiting.

## I nstitute of Transportation Engineers (ITE), 9th Edition <br> Land Use Code (LUC) 820 - Shopping Center <br> East Side between Flat Rock Bridge Rd and Salmon Falls Rd

Average Vehicle Trips Ends vs: 1,000 Sq. Feet Gross Leasable Area Independent Variable (X): 172.690

## Average Weekday Daily



## Weekday Morning Peak Hour of Adjacent Street Traffic

$\operatorname{Ln~T}=0.61 \mathrm{Ln}(\mathrm{X})+2.24$
$\operatorname{Ln} T=0.61 \mathrm{Ln} \quad 172.690+2.24$
$\operatorname{Ln} T=5.38$
$\mathrm{T}=217.55$
$\mathrm{T}=218$ vehicle trips with $62 \%$ ( 135 vph) entering and $38 \% ~(\quad 83 \quad v p h)$ exiting.

Weekday Evening Peak Hour of Adjacent Street Traffic
$\operatorname{Ln} T=0.67 \operatorname{Ln}(X)+3.31$
$\operatorname{Ln} T=0.67 \operatorname{Ln} \quad 172.690+3.31$
$\operatorname{Ln} T=6.76$
$T=863.94$
$\mathrm{T}=864$ vehicle trips with $48 \%$ ( $415 \quad v p h)$ entering and $52 \% ~(449 \quad v p h)$ exiting.

## Saturday Daily

$\operatorname{Ln} T=0.63 \operatorname{Ln}(X)+6.23$
$\operatorname{Ln} T=0.63 \operatorname{Ln} \quad 172.690+6.23$
$\operatorname{LnT}=9.48$
$T=13035.66$
$T=13,036$ vehicle trips with $50 \%$ ( 6,518 vpd) entering and $50 \% ~(6,518 \mathrm{vpd})$ exiting.

## Saturday Peak Hour of Generator

| $\mathrm{Ln} \mathrm{T}=0.65 \mathrm{Ln}(\mathrm{X})+3.78$ |  |  |  |
| :---: | :---: | :---: | :---: |
| $\mathrm{Ln} \mathrm{T}=0.65 \mathrm{Ln} \quad 172.690$ | +3.78 |  |  |
| $\operatorname{LnT}=7.13$ |  |  |  |
| $\mathrm{T}=1246.97$ |  |  |  |
| T = 1,247 vehicle trips |  |  |  |
| with 52\% ( 648 | vph) entering and 48\% ( | 599 | vph) exiting. |
| Sunday Daily |  |  |  |
| $\mathrm{T}=25.24 *(\mathrm{X})$ |  |  |  |
| $\mathrm{T}=25.24$ * 172.690 |  |  |  |
| $\mathrm{T}=4358.70$ |  |  |  |
| T $=4,360$ vehicle trips |  |  |  |
| with 50\% ( 2,180 | vpd) entering and 50\% ( | 2,180 | vpd) exiting. |

Sunday Peak Hour of Generator
$\mathrm{T}=3.12$ * (X)
$\mathrm{T}=3.12 * \quad 172.690$
$\mathrm{T}=538.79$
$\mathrm{T}=539$ vehicle trips with 49\% ( 264 vpd ) entering and 51\% ( 275 vpd ) exiting.

## I nstitute of Transportation Engineers (ITE), 9th Edition <br> Land Use Code (LUC) 820 - Shopping Center <br> West Side between Flat Rock Bridge Rd and Salmon Falls Rd

Average Vehicle Trips Ends vs: 1,000 Sq. Feet Gross Leasable Area Independent Variable (X): 14.120

## Average Weekday Daily

$\mathrm{T}=42.70$ * (X)
$\mathrm{T}=42.70$ * 14.120
$\mathrm{T}=602.92$
$\mathrm{T}=604$ vehicle trips
with 50\% ( 302 vpd ) entering and 50\% ( 302 vpd) exiting.

## Weekday Morning Peak Hour of Adj acent Street Traffic

$\mathrm{T}=0.96$ * (X)
$\mathrm{T}=0.96$ * 14.120
$\mathrm{T}=13.56$
$\mathrm{T}=14$ vehicle trips
with $62 \%$ ( 9 vpd) entering and $38 \%(\quad 5 \quad$ vpd) exiting.
Weekday Evening Peak Hour of Adj acent Street Traffic
$\mathrm{T}=3.71$ * (X)
$\mathrm{T}=3.71$ * 14.120
$\mathrm{T}=52.39$
$\mathrm{T}=52$ vehicle trips
with $48 \%$ ( 25 vpd) entering and 52\% ( 27 vpd) exiting.

## Saturday Daily

$\mathrm{T}=49.97$ * (X)
$\mathrm{T}=49.97$ * 14.120
$\mathrm{T}=705.58$
$\mathrm{T}=706$ vehicle trips
with $50 \%$ ( 353 vpd) entering and 50\% ( 353 vpd) exiting.

## Saturday Peak Hour of Generator

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\(\mathrm{T}=4.82\) * (X)
\(\mathrm{T}=4.82\) * 14.120
\(T=68.06\)
\(\mathrm{T}=68\) vehicle trips
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    with \(52 \%\) ( 35 vpd ) entering and \(48 \%(33\) vpd) exiting.
    Sunday Daily
$\mathrm{T}=25.24$ * $(\mathrm{X})$
$\mathrm{T}=25.24$ * 14.120
$\mathrm{T}=356.39$
$\mathrm{T}=356$ vehicle trips
with 50\% ( 178 vpd) entering and 50\% ( 178 vpd) exiting.

Sunday Peak Hour of Generator
T = 3.12 * (X)
$\mathrm{T}=3.12$ * 14.120
$\mathrm{T}=44.05$
$\mathrm{T}=44$ vehicle trips
with 49\% ( 22
22
vpd) entering and 51\% ( 22
$22 \mathrm{vpd})$ exiting.

## Institute of Transportation Engineers (ITE), 9th Edition Land Use Code (LUC) 760 - Research and Development Center West Side between Flat Rock Bridge Rd and Salmon Falls Rd

Average Vehicle Trips Ends vs: 1,000 Sq. Feet Gross Floor Area Independent Variable (X): 352.250

## Average Weekday Daily

$\operatorname{Ln} T=0.83 \operatorname{Ln}(X)+3.09$
$\operatorname{Ln} T=0.83 \operatorname{Ln} \quad 352.250+3.09$
$\operatorname{Ln} T=7.96$
$T=2856.65$
$T=2,858$ vehicle trips
with $50 \%$ ( $1,429 \mathrm{vph})$ entering and $50 \% ~(1,429 \mathrm{vph})$ exiting.

## Weekday Morning Peak Hour of Adj acent Street Traffic

$\operatorname{Ln} T=0.87 \mathrm{Ln}(X)+0.86$
$\operatorname{Ln} T=0.87 \operatorname{Ln} \quad 352.250+0.86$
$\operatorname{LnT}=5.96$
$\mathrm{T}=388.38$
$\mathrm{T}=388$ vehicle trips
with $83 \%$ ( 322 vph) entering and $17 \%$ ( 66 vph) exiting.
Weekday Evening Peak Hour of Adjacent Street Traffic
$\operatorname{Ln} T=0.83 \operatorname{Ln}(X)+1.06$
$\operatorname{Ln} T=0.83 \operatorname{Ln} \quad 352.250+1.06$
$\operatorname{Ln} T=5.93$
$T=375.18$
T $=375$ vehicle trips
with $15 \%$ ( $56 \quad \mathrm{vph})$ entering and $85 \% ~(319 \mathrm{vph})$ exiting.

## Saturday Daily

$\mathrm{T}=1.27$ * $(\mathrm{X})+104.92$
$\mathrm{T}=1.27$ * $352.250+104.92$
$\mathrm{T}=552.28$
$\mathrm{T}=552$ vehicle trips
with $50 \%$ ( 276 vph$)$ entering and $50 \%$ ( 276 vph ) exiting.
Saturday Peak Hour of Generator
$\mathrm{T}=0.24$ * (X)
$\mathrm{T}=0.24$ * 352.250
$\mathrm{T}=84.54$
$\mathrm{T}=85$ vehicle trips with $50 \%$ ( 43 vph$)$ entering and $50 \%$ ( 42 vph$)$ exiting.

Sunday Daily
$\mathrm{T}=1.11$ * $(\mathrm{X})$
$\mathrm{T}=1.11 * \quad 352.250$
$\mathrm{T}=391.00$
T = 392 vehicle trips
with $50 \%$ ( 196 vph$)$ entering and $50 \%$ ( 196 vph ) exiting.
Sunday Peak Hour of Generator
$\mathrm{T}=0.16$ * $(\mathrm{X})$
$\mathrm{T}=0.16^{*} \quad 352.250$
$\mathrm{T}=56.36$
$T=56$ vehicle trips
with $50 \%$ ( 28 vph ) entering and $50 \%$ ( 28 vph ) exiting.

# I nstitute of Transportation Engineers (ITE), 9th Edition <br> Land Use Code (LUC) 820 - Shopping Center <br> East Side between Salmon Falls Rd and Ridgewood Estates 

Average Vehicle Trips Ends vs: 1,000 Sq. Feet Gross Leasable Area Independent Variable (X): 42.670

## Average Weekday Daily

$\mathrm{T}=42.70$ * (X)
$\mathrm{T}=42.70$ * 42.670
$\mathrm{T}=1822.01$
$\mathrm{T}=1,822$ vehicle trips
with 50\% ( 911 vpd) entering and 50\% ( 911 vpd) exiting.

## Weekday Morning Peak Hour of Adj acent Street Traffic

$\mathrm{T}=0.96$ * (X)
$\mathrm{T}=0.96$ * 42.670
$\mathrm{T}=40.96$
$\mathrm{T}=41$ vehicle trips
with $62 \%$ ( 25 vpd ) entering and $38 \%$ ( 16 vpd ) exiting.
Weekday Evening Peak Hour of Adj acent Street Traffic
$\mathrm{T}=3.71$ * $(\mathrm{X})$
$\mathrm{T}=3.71$ * 42.670
$\mathrm{T}=158.31$
$\mathrm{T}=158$ vehicle trips
with $48 \%$ ( 76 vpd) entering and 52\% ( 82 vpd) exiting.

## Saturday Daily

$\mathrm{T}=49.97$ * (X)
$\mathrm{T}=49.97$ * 42.670
$\mathrm{T}=2132.22$
$\mathrm{T}=2,132$ vehicle trips
with $50 \%$ ( $1,066 \mathrm{vpd}$ ) entering and 50\% ( 1,066 vpd) exiting.

## Saturday Peak Hour of Generator

$\mathrm{T}=4.82$ * (X)
$\mathrm{T}=4.82$ * 42.670
$\mathrm{T}=205.67$
$\mathrm{T}=206$ vehicle trips
with 52\% ( 107 vpd ) entering and 48\% ( 99 vpd) exiting.
Sunday Daily
$\mathrm{T}=25.24$ * (X)
$\mathrm{T}=25.24$ * 42.670
$\mathrm{T}=1076.99$
T = 1,078 vehicle trips
with 50\% ( 539 vpd ) entering and 50\% ( 539 vpd ) exiting.
Sunday Peak Hour of Generator
T = 3.12 * (X)
$\mathrm{T}=3.12$ * 42.670
$\mathrm{T}=133.13$
$\mathrm{T}=133$ vehicle trips
with 49\% ( 65 vpd) entering and 51\% ( 68 vpd) exiting.

## Institute of Transportation Engineers (ITE), 9th Edition <br> Land Use Code (LUC) 110 - General Light Industrial <br> East Side between Salmon Falls Rd and Ridgewood Estates

Average Vehicle Trips Ends vs: 1,000 Sq. Feet Gross Floor Area Independent Variable (X): 85.180

## Average Weekday Daily

$\mathrm{T}=6.97 *(\mathrm{X})$
$\mathrm{T}=6.97 * \quad 85.180$
$\mathrm{T}=593.70$
$T=594$ vehicle trips with 50\% ( 297 vph) entering and 50\% ( 297 vph) exiting.

## Weekday Morning Peak Hour of Adj acent Street Traffic

$\mathrm{T}=0.92 *(\mathrm{X})$
$\mathrm{T}=0.92$ * 85.180
$\mathrm{T}=78.37$
$\mathrm{T}=78$ vehicle trips with $88 \%$ ( 69 vph) entering and $12 \% ~(\quad 9 \quad v p h)$ exiting.

## Weekday Evening Peak Hour of Adjacent Street Traffic

$\mathrm{T}=0.97$ * (X)
$\mathrm{T}=0.97$ * 85.180
$\mathrm{T}=82.62$
$\mathrm{T}=83$ vehicle trips with $12 \%$ ( 10 vph$)$ entering and $88 \%$ ( 73 vph) exiting.

Saturday Daily
$\mathrm{T}=1.32 *(\mathrm{X})$
$\mathrm{T}=1.32^{*} \quad 85.180$
$\mathrm{T}=112.44$
$T=112$ vehicle trips with $50 \%$ ( 56 vph) entering and 50\% ( 56 vph) exiting.

Saturday Peak Hour of Generator
$\mathrm{T}=0.14 *(\mathrm{X})$
$\mathrm{T}=0.14$ * 85.180
$\mathrm{T}=11.93$
$\mathrm{T}=12$ vehicle trips
with $47 \%$ ( $6 \quad v p h)$ entering and $53 \%(\quad 6 \quad v p h)$ exiting.
SUNDAY DAILY
$\mathrm{T}=0.68 *(\mathrm{X})$
$\mathrm{T}=0.68^{*} \quad 85.180$
$\mathrm{T}=57.92$
$\mathrm{T}=58$ vehicle trips with $50 \%$ ( 29 vph$)$ entering and $50 \%$ ( 29 vph$)$ exiting.

Sunday Peak Hour of Generator
$\mathrm{T}=0.10$ * $(\mathrm{X})$
$\mathrm{T}=0.10$ * 85.180
$\mathrm{T}=8.52$
T $=9$ vehicle trips with 48\% ( 4

4 vph) entering and 52\% (
5 vph ) exiting.

## Institute of Transportation Engineers (ITE), 9th Edition <br> Land Use Code (LUC) 820 - Shopping Center <br> West Side between Salmon Falls Rd and Ridgewood Estates

Average Vehicle Trips Ends vs: 1,000 Sq. Feet Gross Leasable Area Independent Variable (X): 15.680

## Average Weekday Daily

$\mathrm{T}=42.70$ * (X)
$\mathrm{T}=42.70$ * 15.680
$\mathrm{T}=669.54$
$\mathrm{T}=670$ vehicle trips
with 50\% ( 335 vpd ) entering and 50\% ( 335 vpd) exiting.

## Weekday Morning Peak Hour of Adj acent Street Traffic

$\mathrm{T}=0.96$ * (X)
$\mathrm{T}=0.96$ * 15.680
$\mathrm{T}=15.05$
$\mathrm{T}=15$ vehicle trips
with $62 \%$ ( 9 vpd) entering and $38 \%(6)$
Weekday Evening Peak Hour of Adj acent Street Traffic
$\mathrm{T}=3.71$ * $(\mathrm{X})$
$\mathrm{T}=3.71$ * 15.680
$\mathrm{T}=58.17$
$\mathrm{T}=58$ vehicle trips
with $48 \%$ ( 28 vpd ) entering and 52\% ( 30 vpd) exiting.

## Saturday Daily

$\mathrm{T}=49.97$ * (X)
$\mathrm{T}=49.97$ * 15.680
$\mathrm{T}=783.53$
$\mathrm{T}=784$ vehicle trips
with 50\% ( 392 vpd) entering and 50\% ( 392 vpd) exiting.

## Saturday Peak Hour of Generator

$\mathrm{T}=4.82$ * (X)
$\mathrm{T}=4.82$ * 15.680
$\mathrm{T}=75.58$
$\mathrm{T}=76$ vehicle trips
with $52 \%$ ( 40
vpd) entering and 48\% ( 36
vpd) exiting.
Sunday Daily
$\mathrm{T}=25.24$ * (X)
$\mathrm{T}=25.24$ * 15.680
$\mathrm{T}=395.76$
$\mathrm{T}=396$ vehicle trips
with 50\% ( 198 vpd) entering and 50\% ( 198 vpd) exiting.
Sunday Peak Hour of Generator
T = 3.12 * (X)
$\mathrm{T}=3.12$ * 15.680
$\mathrm{T}=48.92$
T $=49$ vehicle trips
with $49 \%$ ( $24 \quad v p d$ ) entering and 51\% ( 25 vpd) exiting.


[^0]:    ${ }^{1}$ A Policy on Geometric Design of Highways and Street. 6th ed. Washington, D.C.: American Association of State Highway and Transportation Officials (AASHTO), 2011.

[^1]:    2 Greenman-Pedersen, Inc. Traffic Impact and Access Study - Cumberland Farms Redevelopment, Rochester, New Hampshire. 26 Aug 2014.

[^2]:    ${ }^{3}$ Ibid. 1.
    4 New Hampshire Department of Transportation Bureau of Transportation Planning, City of Rochester - Milton Road, 06 Mar 2014.

[^3]:    5 New Hampshire Department of Transportation Bureau of Transportation Planning, Group 4 Averages - Urban Highways, 06 Mar 2014.
    6 Transportation Planning Handbook. $3^{\text {rd }}$ ed. Washington, DC: Institute if Transportation Engineers, 2009.
    7 Ibid. 3.

[^4]:    8 Trip Generation Manual, $9^{\text {th }}$ ed. Washington, DC: Institute of Transportation Engineers, 2012.

[^5]:    9 Parking Generation. 4th ed. Washington, DC: Institute of Transportation Engineers, 2010.
    10 Kay, Michael, Kevin McCoy, and William M. Lyons. Moving Together in the 21st Century: How Ridesharing Supports Livable Communities. Rep. no. FHWA-HEP-13-029. Washington: Federal Highway Administration, Office of Planning, 2013.

[^6]:    11 Smart Growth Transportation Guidelines: An ITE Recommended Practice. Washington, D.C.: Institute of Transportation Engineers, 2010.

[^7]:    Average Annual Growth Rate $=\mathbf{- 2 . 3 9 \%}$
    a Source: State of New Hampshire Department of Transportation Bureau of Traffic - Bureau of Planning, Traffic Section, Traffic Reports, 06 Mar 14.

