





Tighe&Bond

Milton Road (NH Route 125) Corridor

Corridor Study

Prepared For:

City of Rochester Rochester, New Hampshire

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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 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 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.

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.





Off-Ramp Left Turn to Milton Road South

Milton Road to North at Off-Ramp Left Turns

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 STOP-sign 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 project² that would acquire the Martin's Family Drive-In 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

² Greenman-Pedersen, Inc. *Traffic Impact and Access Study – Cumberland Farms Redevelopment, Rochester, New Hampshire.* 26 Aug 2014.

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

Section 2 Existing Conditions

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 left-turn/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 corridor the form service along the Milton Road in of Bus Route 6 Bus Route 6 leaves the Farmington Fire Station on Main (Farmington/Rochester). 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 6N (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 NH Rte 11/US Rte 202	Milton Rd at 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	<u>2</u> 5	<u> 0</u>	_3	<u>_2</u>	_7	<u>_1</u>	_4	4
Total	9	5	5	<u> </u>	4	13	10	$\frac{4}{11}$	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	<u> 0</u>	<u>0</u> 5	<u> 0</u>	0	<u>0</u>	<u> 0</u>	$\frac{0}{10}$	<u>0</u> 11	<u> 0</u>
Total	9	5	5	10	4	<u>-0</u> 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	<u> 0</u>	<u>0</u> 5	<u>0</u>	<u>_1</u>	<u>0</u>	_0	$\frac{0}{10}$	<u>_1</u>	_0
Total	<u>9</u>	5	5	10	4	<u>0</u> 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	<u> 0</u>	<u>0</u> 5	<u>0</u>	<u>_1</u>	<u>0</u>	<u>_1</u>	_2	_1	_0
Total	<u>0</u> 9	5	5	10	4	13	<u>10</u>	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	8	2	4		2	_9	_8	_9	3
Total	9	<u> </u>	5	10	4	<u>9</u> 13	<u>8</u> 10	<u>9</u> 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 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	<u> 0 </u>	<u>_2</u>	<u>0</u> 6	$\frac{4}{17}$	<u> </u>	<u>4</u>	<u>1</u>	<u>0</u>	<u>_2</u>
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	_0	<u>0</u> 7	_0	_0	<u>0</u> 6	_0	<u>0</u> 9	<u>0</u> 4	<u>0</u>
Total	4	7	<u>0</u> 6	<u>0</u> 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	<u>0</u>	0	0	<u>0</u>	0	<u>_0</u>	<u>0</u>	0
Total	4	7	<u>0</u> 6	<u>0</u> 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	<u>0</u>	0		2	0	<u> 0</u>	1	0
Total	4	7	<u>0</u> 6	$\frac{1}{17}$	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	Õ
Snow/Slush	0	<u> </u>	0		0	0	0	0	0
Total	4	7	<u>0</u> 6	<u>0</u> 17	<u>0</u> 6	7	<u>0</u> 9	<u>0</u> 4	5
Weekday Commuter Peak:									
Weekday AM	0	0	0	2	0	1	0	1	0
Weekday PM	1	1	1	1	1	Ō	1	0	1
Non-Commuter Peak	- 3	<u></u>	- 5		5	6	8	<u>3</u>	4
Total	<u> </u>	7	<u>5</u> 6	<u>14</u> 17	6	7	9	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 non-commuter 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 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

³ Ibid. 1.

⁴ New Hampshire Department of Transportation Bureau of Transportation Planning, City of Rochester – Milton Road, 06 Mar 2014.

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 peak-hour 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

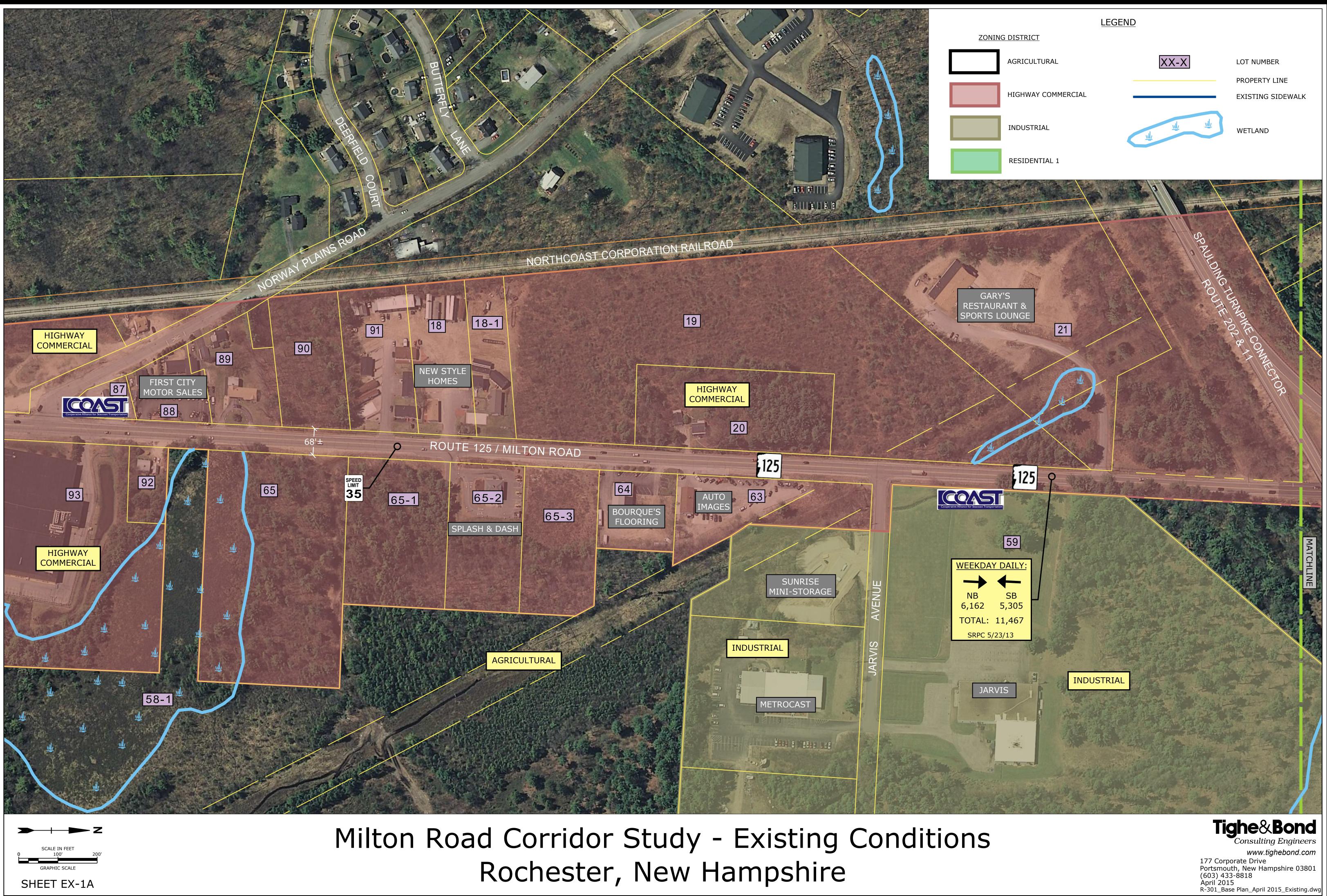
An annual average traffic-growth percentage was determined based on NHDOT historical traffic-volume data along Milton Road.⁷ Consistent with standard traffic engineering practice, this growth rate methodology is based on the assumption that recent traffic-volume trends may continue within the study area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

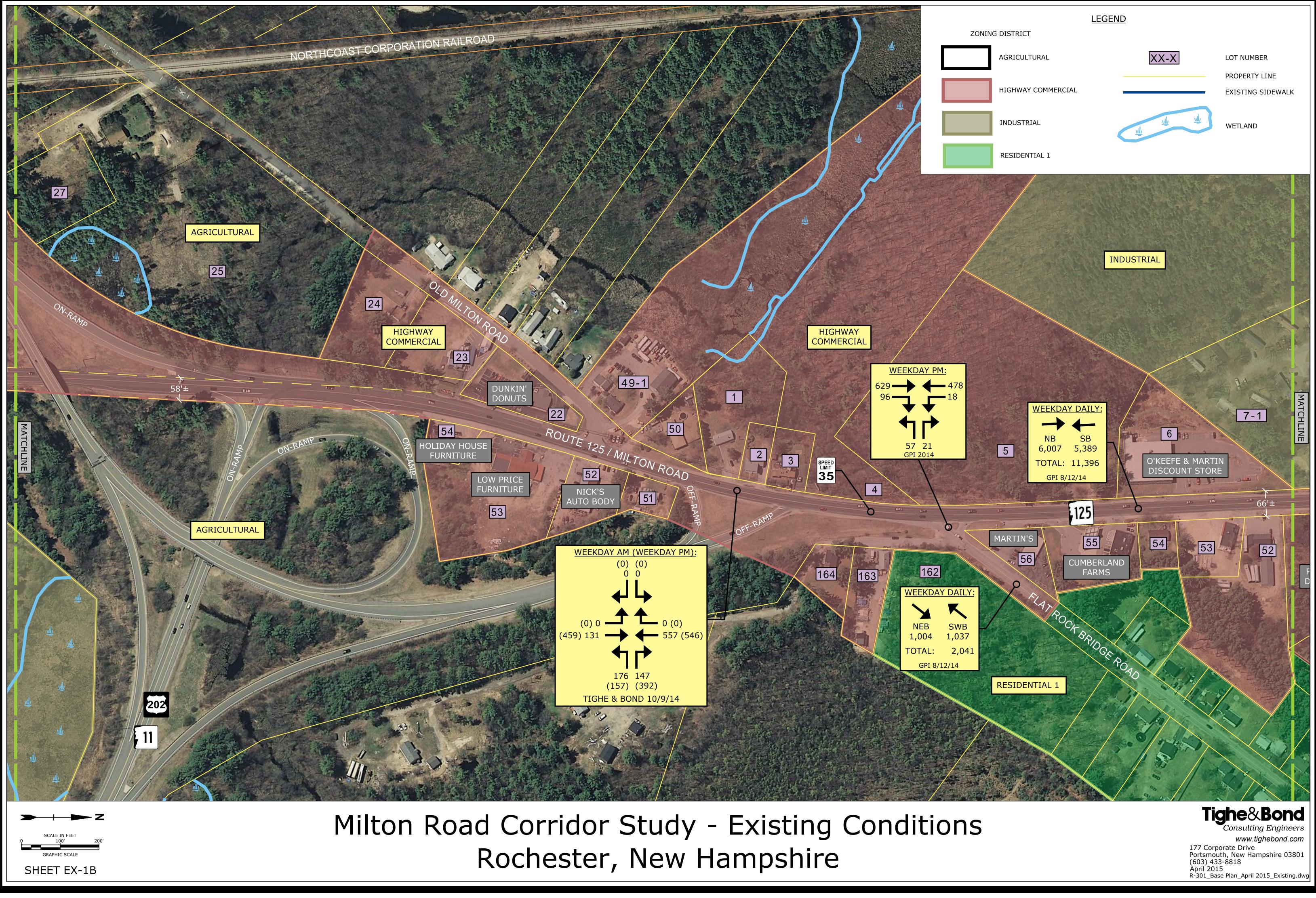
⁵ *New Hampshire Department of Transportation Bureau of Transportation Planning*, Group 4 Averages – Urban Highways, 06 Mar 2014.

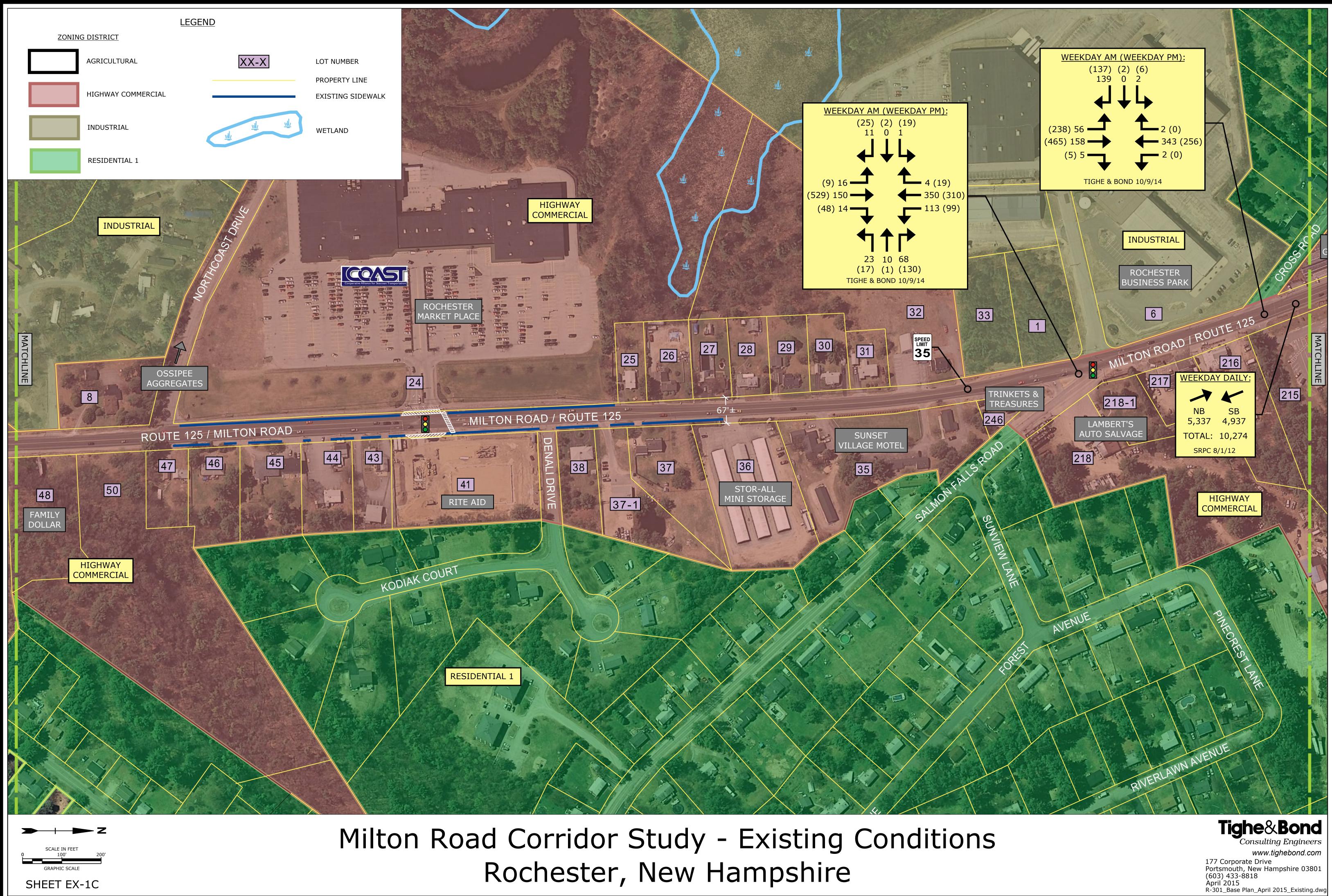
⁶ *Transportation Planning Handbook*. 3rd ed. Washington, DC: Institute if Transportation Engineers, 2009.

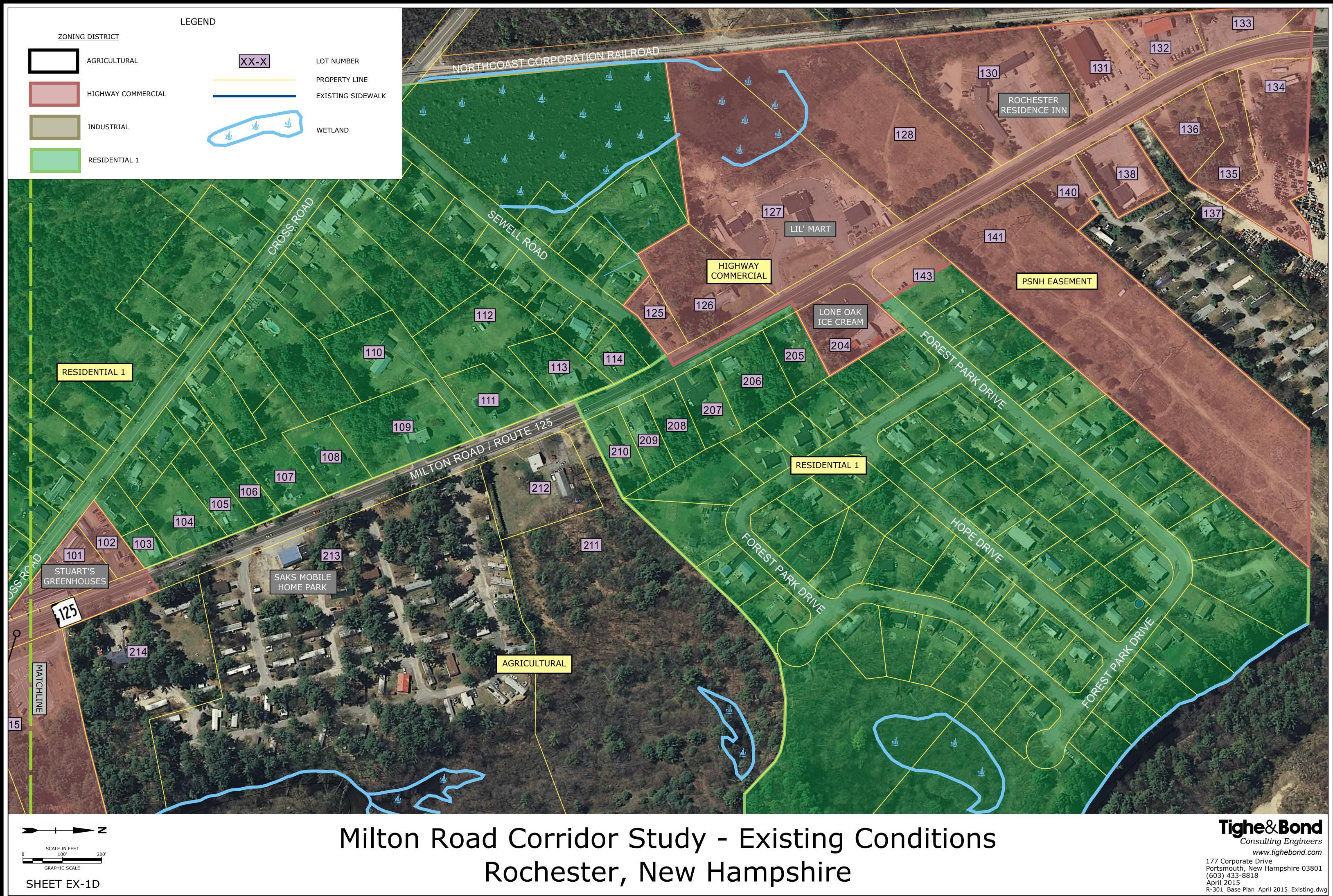
⁷ Ibid. 3.



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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 P-1A 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.

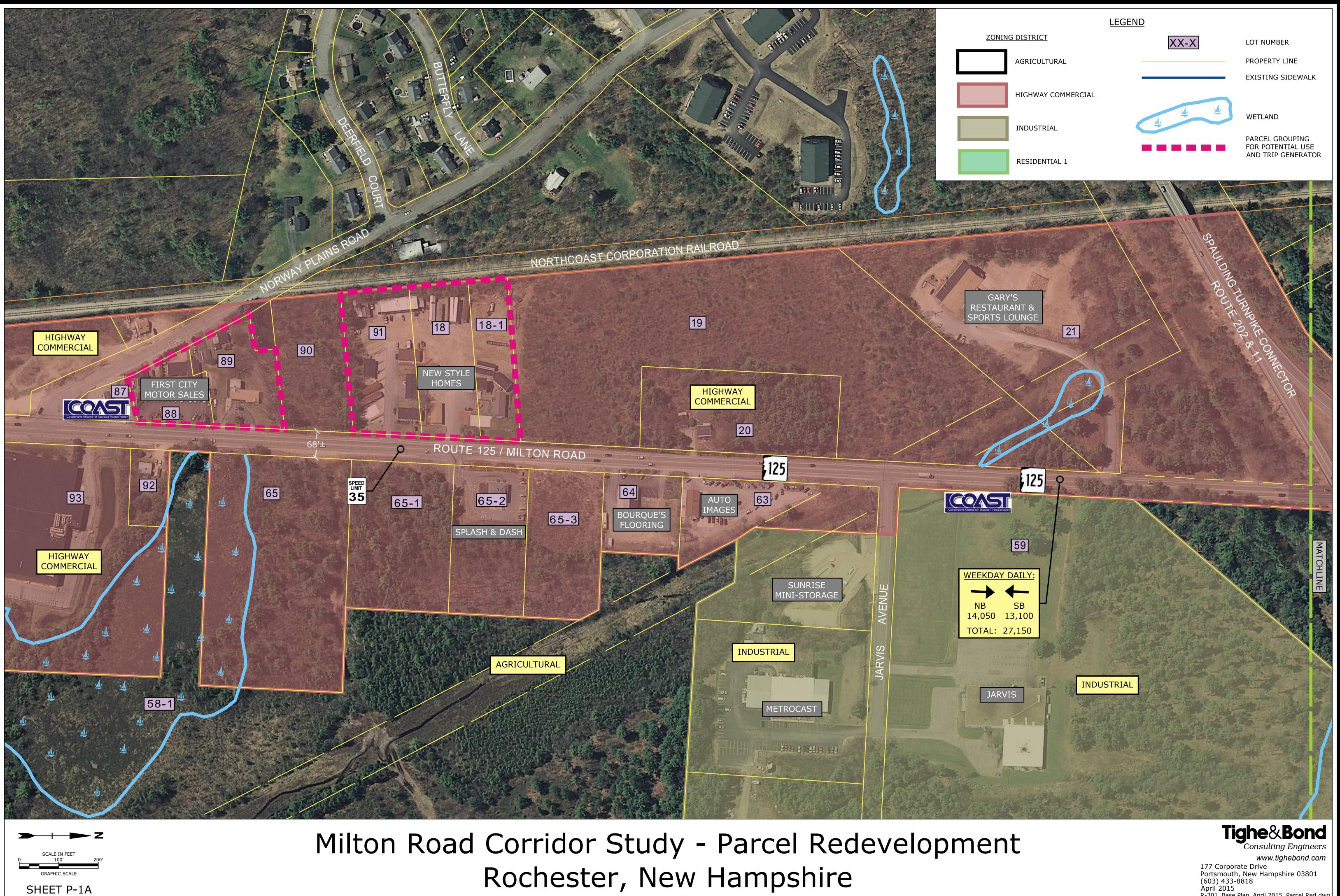
TABLE 4-1

Potential Parcel Redevelopment

Graphic 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) Residence (68 Milton Road)	11,271 sf retail		
3 and 4	Residence (70 Milton Road) 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		

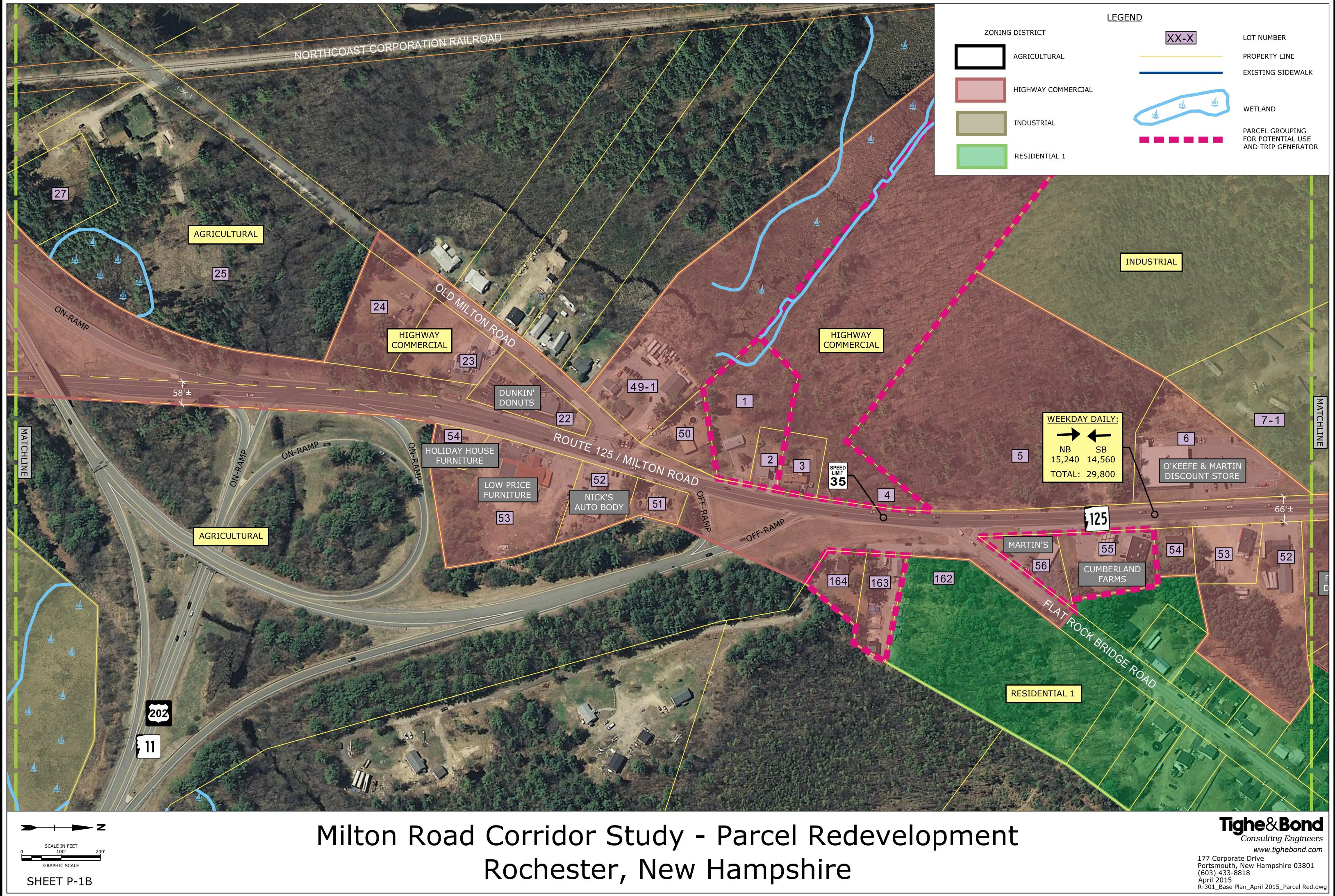
TABLE 4-1 (continued)Potential Parcel Redevelopment

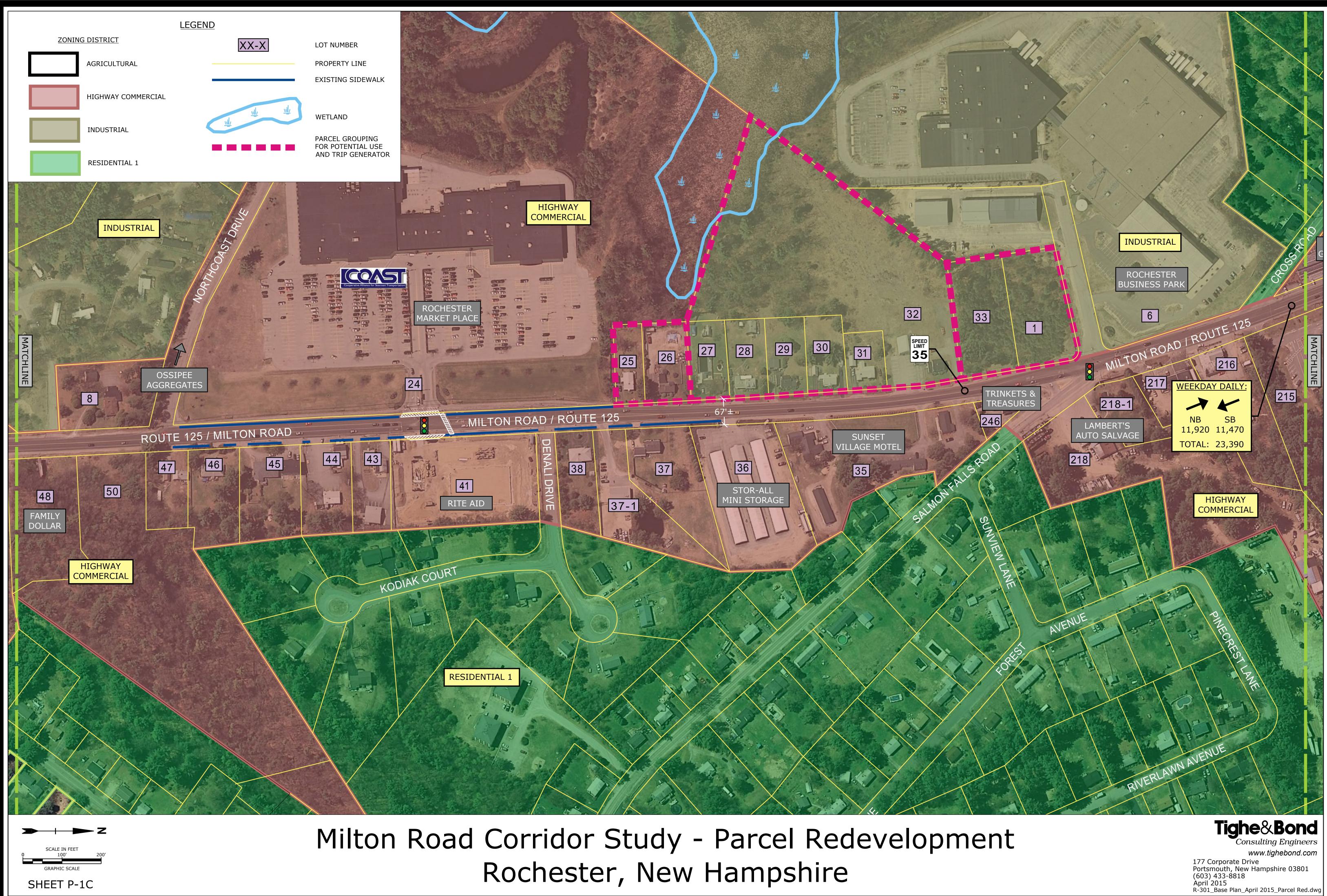
Graphic Figure/Parcel	Existing Use	Future Potential Use		
Sheet P-1C:				
8	Residence (94 Milton Road)	7,332 sf retail		
25 and 26	Residence (108 Milton Road) Residence (112 Milton Road)	6,786 sf retail		
27, 28, 29, 30, 31, and 32	Residence (114 Milton Road) Residence (116 Milton Road) Residence (118 Milton Road) Residence (122 Milton Road) 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:				
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		

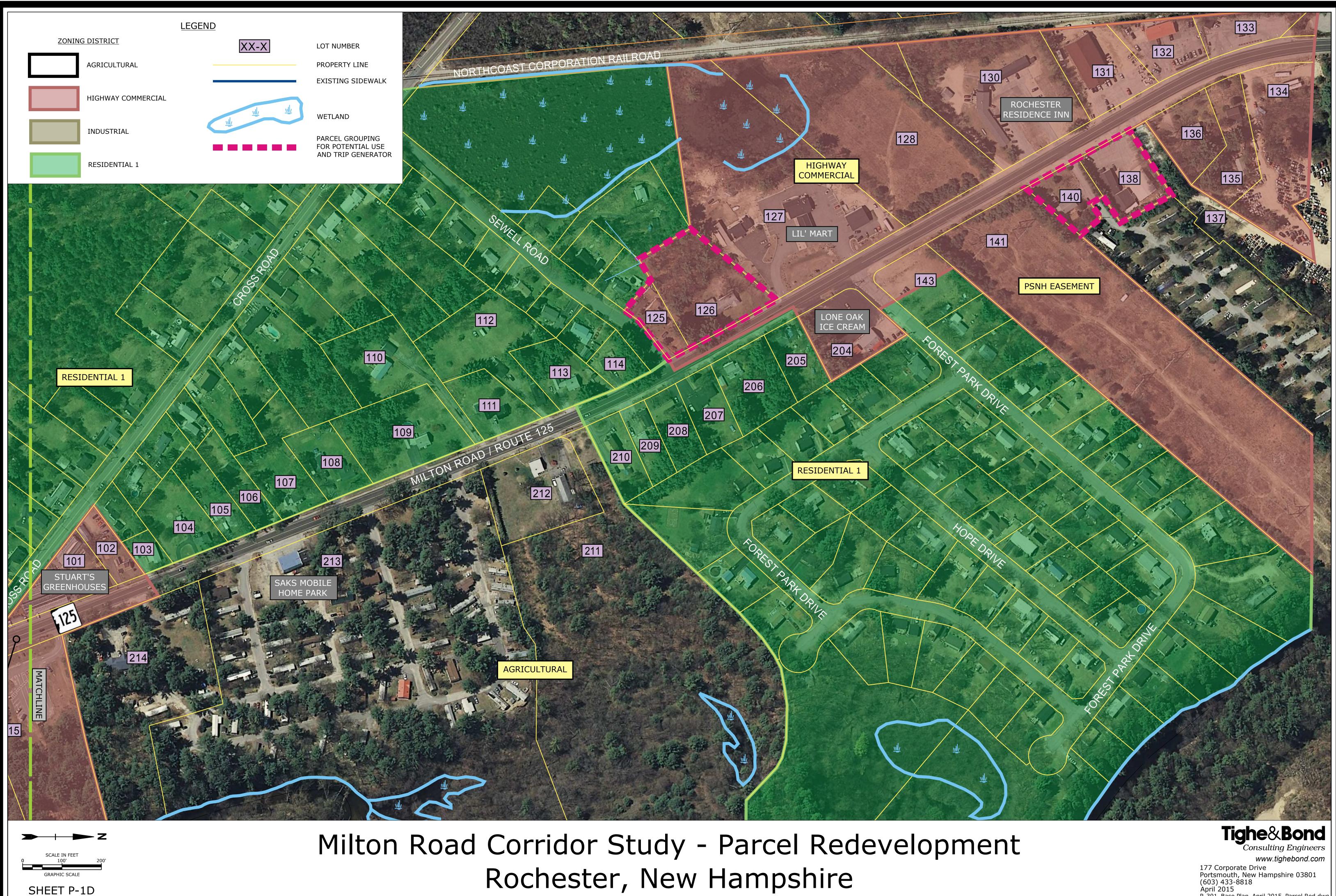


Rochester, New Hampshire

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Rochester, New Hampshire

177 Corporate Drive Portsmouth, New Hampshire 03801 (603) 433-8818 April 2015 R-301_Base Plan_April 2015_Parcel Red.dw

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 = ±167,750 square feet of retail space (ITE Land Use Code 820 [Shopping Center]).

⁸ *Trip Generation Manual*, 9th ed. Washington, DC: Institute of Transportation Engineers, 2012.

• NH Route 11/US Route 202 Eastbound Ramps to Flat Rock Bridge Road:

- East Side of Corridor = ±27,270 square feet of retail space (ITE Land Use Code 820 [Shopping Center]) and ±38,770 square feet (general standard of 1 unit/2,100 square feet ≈ 18 dwelling units) of residential space (ITE Land Use Code 220 [Apartment]).
- West Side of Corridor = ±161,340 square feet of retail space (ITE Land Use Code 820 [Shopping Center]), ±53,040 square feet of agricultural space (ITE Land Use Code 110 [General Light Industrial]), and ±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 = ±172,690 square feet of retail space (ITE Land Use Code 820 [Shopping Center]).
- West Side of Corridor = ±14,120 square feet of retail space (ITE Land Use Code 820 [Shopping Center]) and ±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 = ±42,670 square feet of retail space (ITE Land Use Code 820 [Shopping Center]) and ±85,180 square feet of agricultural space (ITE Land Use Code 110 [General Light Industrial].
- West Side of Corridor = ±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 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 left-turn lane 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 (pc/h/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 pc/h/l 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 85th 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 ITE⁹ 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

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.

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.

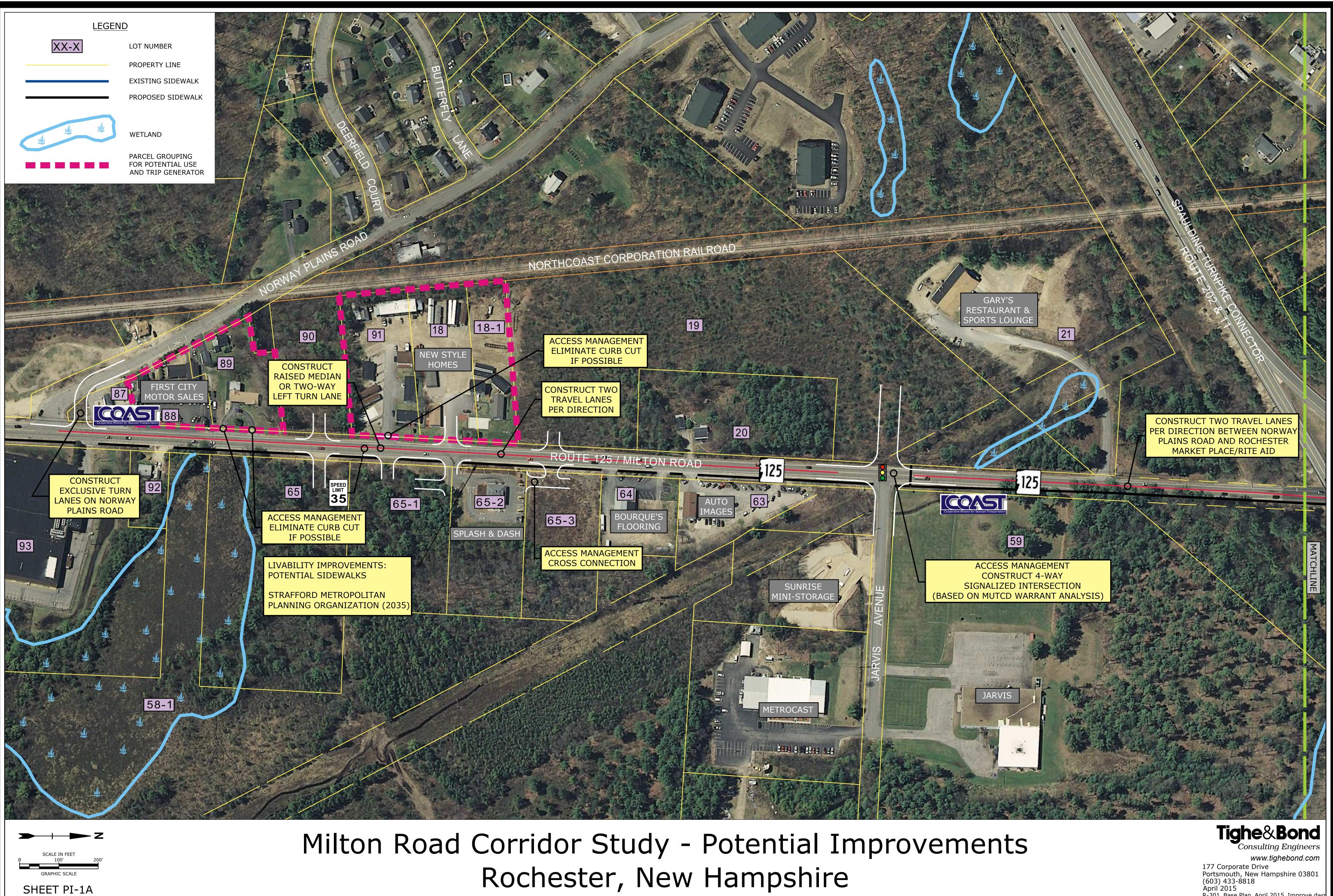
Wheelchair accessible ramps and crosswalks should be considered at driveways and intersections to accommodate pedestrian connectivity to improve multi-modal mobility in accordance with ADA design requirements. Crosswalks and associated pedestrian crossing warning signs designed in accordance with the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

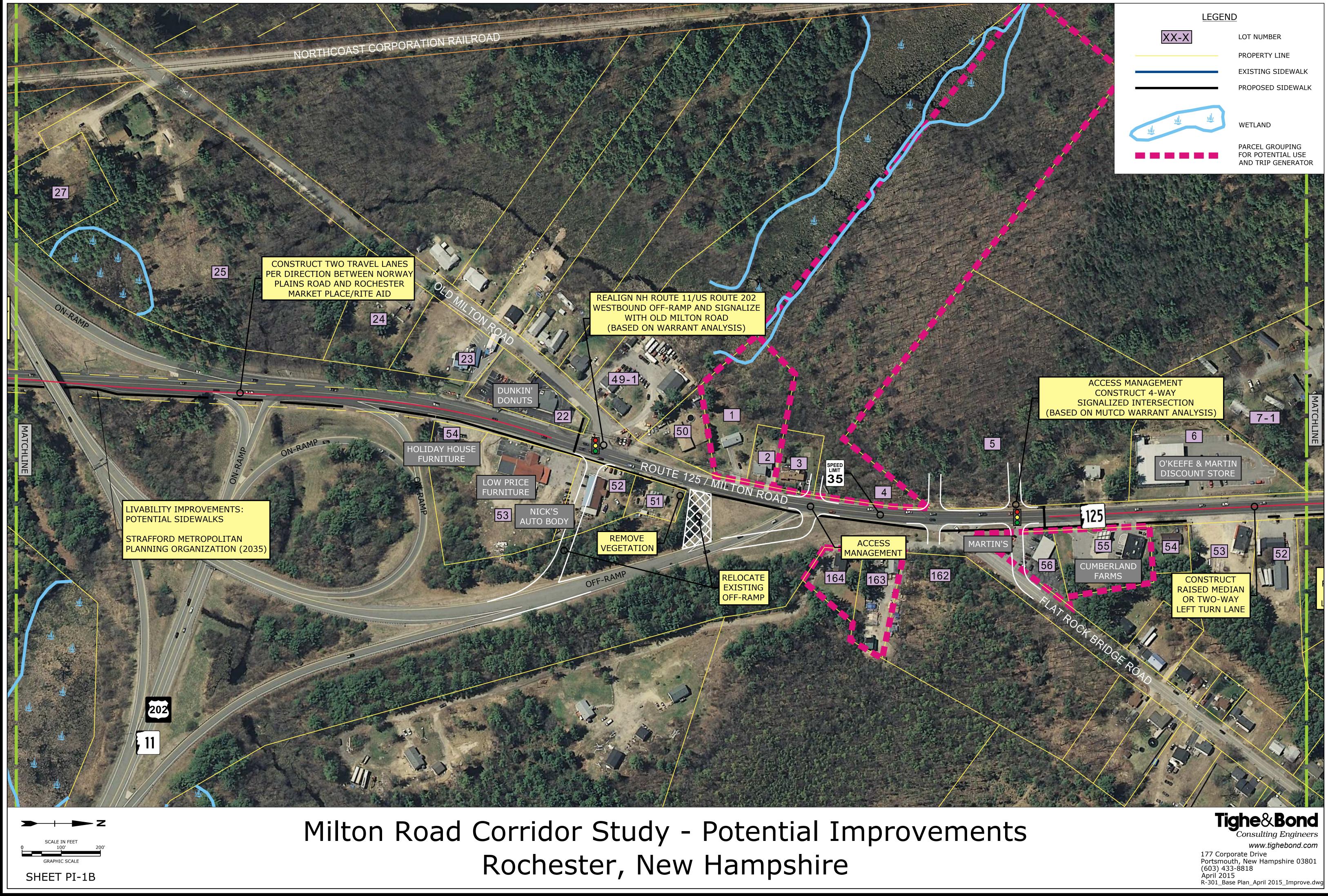
¹¹ Smart Growth Transportation Guidelines: An ITE Recommended Practice. Washington, D.C.: Institute of Transportation Engineers, 2010.

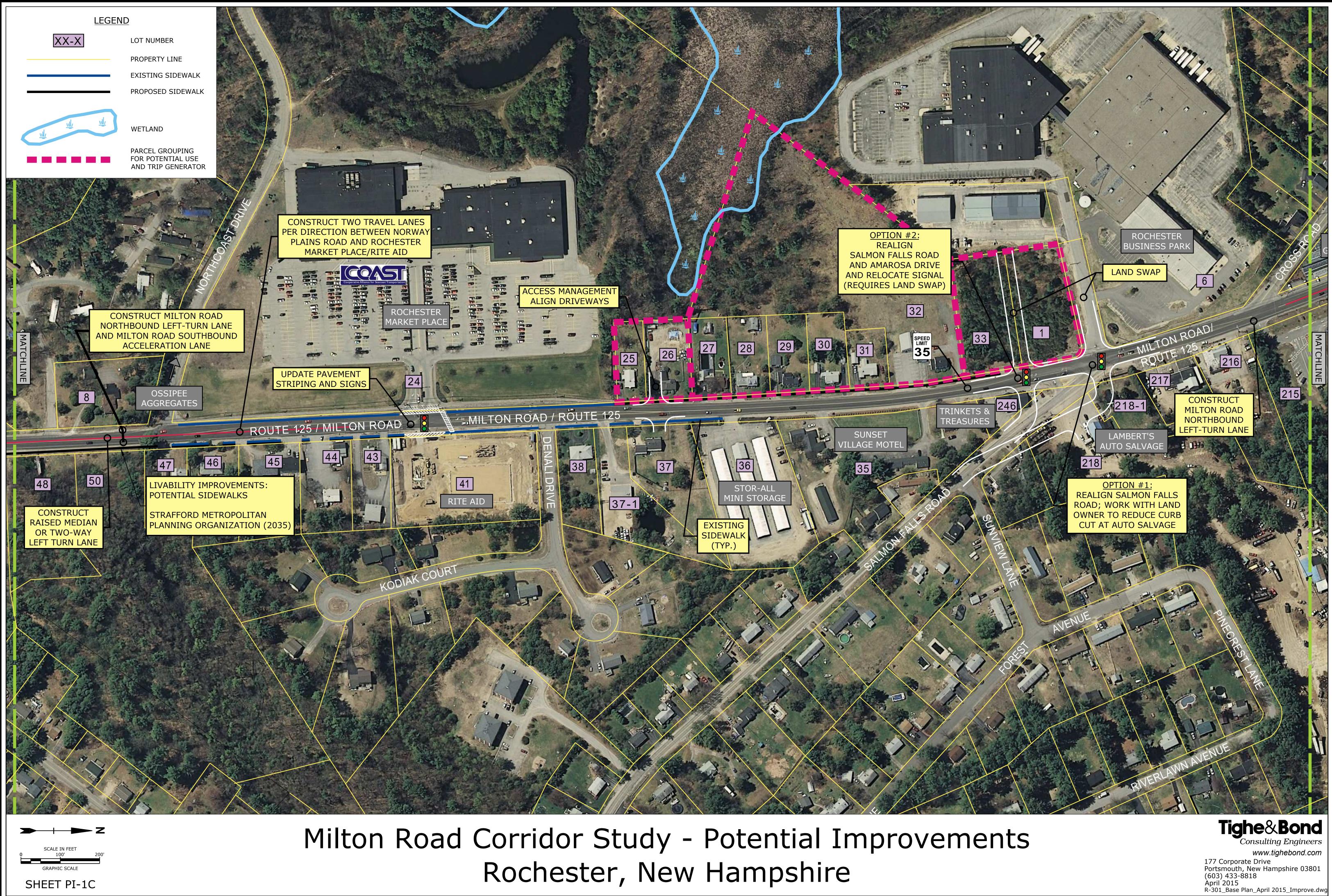
retail development) may require or substantiate a specific need for increased transit. Locating bus stops near these higher land uses can enhance ridership. Therefore, the City of Rochester should consider meeting with COAST officials to discuss ridership information, success of the current bus system,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

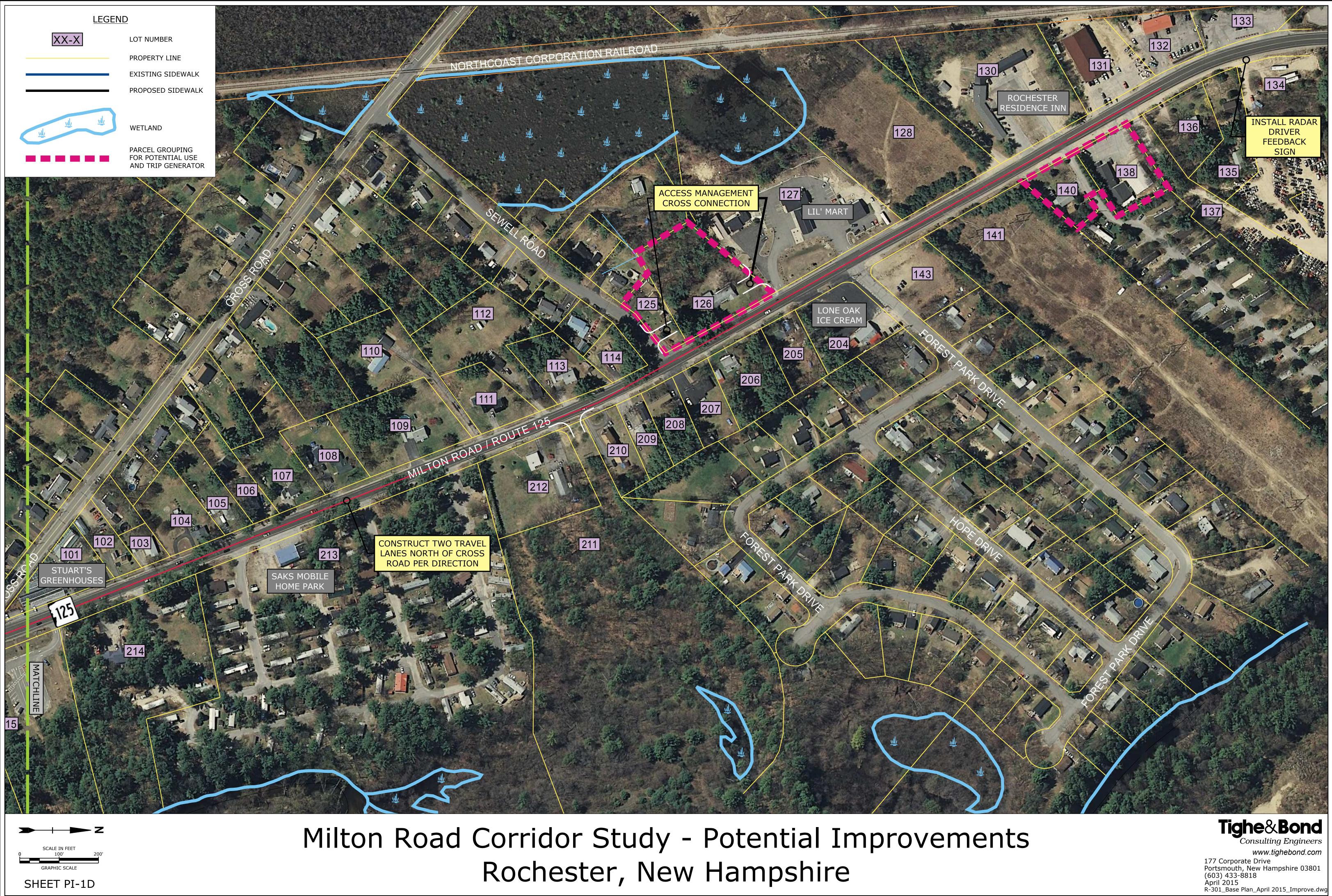
In addition, the City and COAST officials should collaborate on the potential construction of bus bays (buss pullout areas) in which a bus has a specified area to pull out of the traffic stream to load and unload passengers. This design would provide a protected area for passengers outside of the Milton 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.



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Rochester, New Hampshire

Section 6 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 multi-modal 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:

 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:

 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:

- 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.
- 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:

 Realign Flat Rock Bridge Road at Milton Road to provide a more traditional 90 degree angled intersection. 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:

- Provide a Milton Road northbound exclusive left-turn lane at Northcoast Drive to allow northbound through vehicles to bypass turning vehicles.
- 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:

 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:

- 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.
- 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.
- 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:

 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 lane 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.
- 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 ±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 ±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:

 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:

 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:

- 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.
- 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:

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:

 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.

- Meet with Seacoast MPO and SRPC representatives to discuss available funding mechanisms and opportunities to implement improvements along the Milton Road corridor.
- 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.

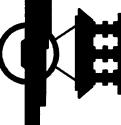
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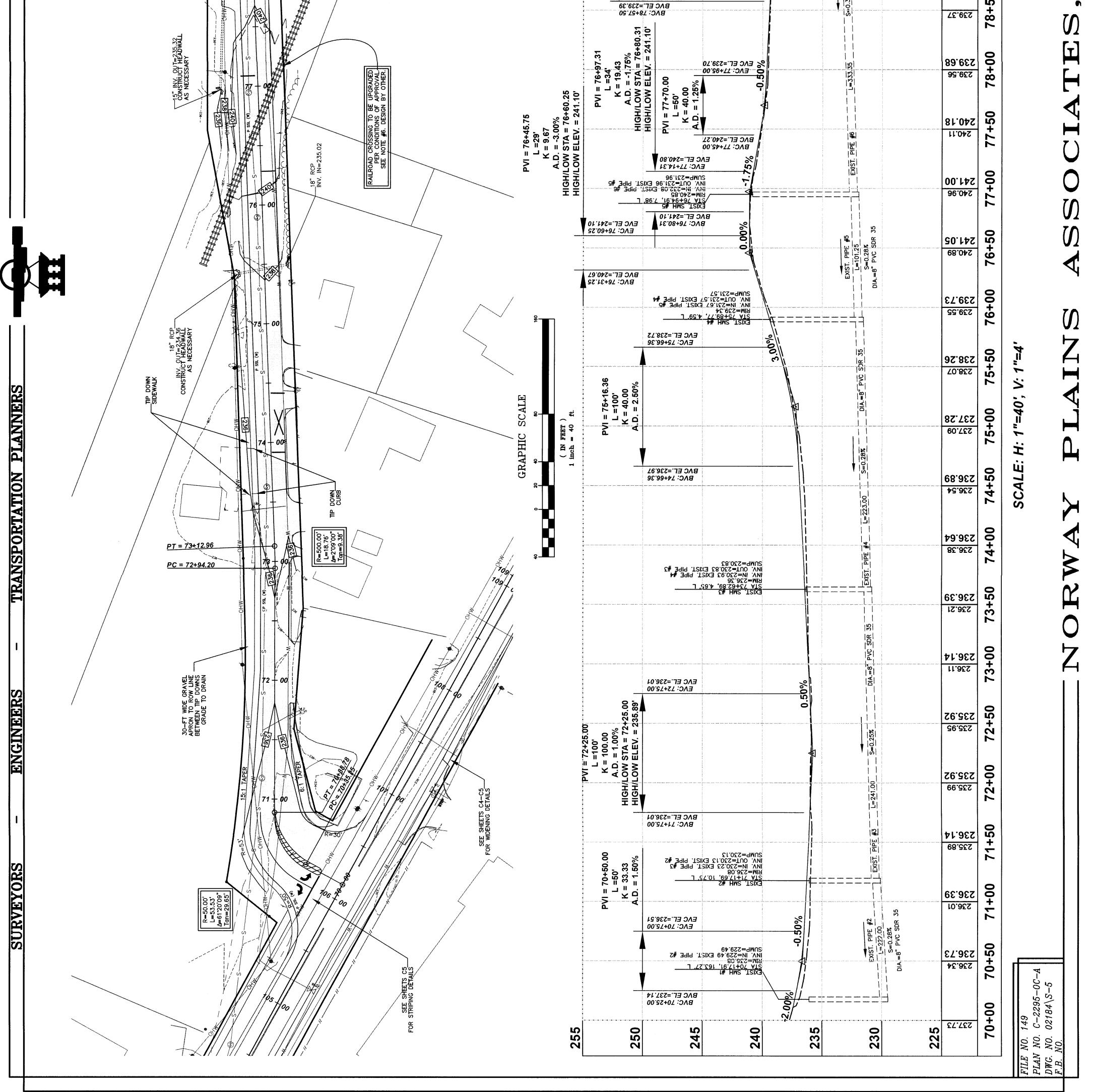
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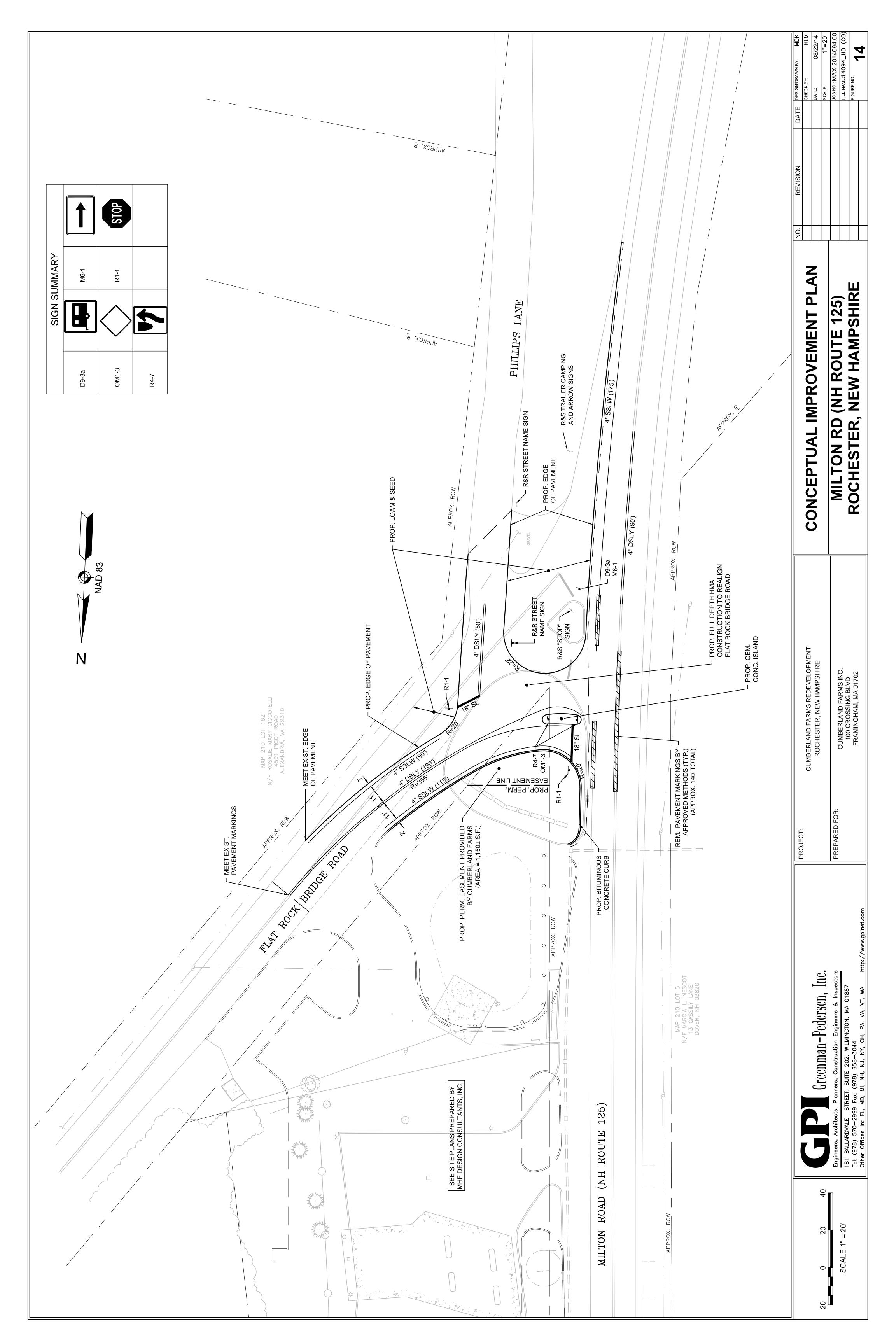
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COAST Bus Schedules



Member Login



Home

Schedules & Maps

General Information

How to Ride

About COAST

Home » Schedules & Maps » Route 6



Connections:

Route 2 at Lilac Mall Route 20 at Rochester City Hall/Lilac Mall

About making connections

Fare Information COAST Regional Fare: \$1.50 for routes 1, 2, 6, 7, 20, 33, trolleys 40 and 41.

COAST Clipper Connection Fare: \$3.25 for routes 2cc, 41cc, 100, 101 and 103

More about fares

Transit Trip Planner Google

Start e.g. Green St, Somersworth, NH

End e.g. Fox Run Mall, Newington, NH

09/10/2014 9:50 PM V

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 Information

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

Route 6 (Effective 6/25/2012)

Bus Stop Listing Schedule Мар

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

Route 6 Southbound 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)

Route 6 Northbound Stops:

ROCHESTER

- NH125 (Market Basket)
- NH125 (Dunkin Donuts)
- · NH125/Norway Plains Rd.
- · Wakefield St. (Community Way) Southbound
- · Wakefield St. (Spaulding High School)
- · Wakefield St./Union St. (Ben Franklin Crafts)
- North Main St./Cove Ct.
- · North Main St. (Holy Rosary Church)
- North Main St. (Pizza Hut/Dunkin Donuts)
- NH Rte. 11 (Greenwood Inn)
- NH Rte. 11 (Cocheco River Estates)
- · NH Rte. 11 (Wal-Mart)
- NH Rte. 11 (Lilac City Pediatrics)

FARMINGTON:

- NH Rte. 11 (Family Care of Farmington)
- NH Rte. 11/NH Rte. 153 (Irving)
- Main St. (Fire Station)
- · 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)

· North Main St./Fortier Dr.

- - Strafford Co. Dialysis Center (on request only)

Schedule and Service Information

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

4

- Thanksgiving Day
- · Christmas Day.

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.

about every 1/4-mile.

Connectio	ons	
Route	Connects With	Bus Stop
1	2, 3, 33	Dover Transportation Center
	2, 3	Shaw's
	1, 3, 33	Dover Transportation Center
	1, 3	Shaw's
	4	Fox Run Mall
2	6	Lilac Mall
	7	Fox Run Mall
	Trolley (40)	Fox Run Mall
	Trolley (41)	Market Square
6	2	Lilac Mall
	5	Newmarket Downtown Gazebo
7	Trolley (40)	Portsmouth Transportation
00	1.0	Center
33	1, 2	Dover Transportation Center
	2, 4, 7	Fox Run Mall
Trolley (40/41)	4	Plaza 800
	7	Portsmouth Transportation
		Center

Route 6 Bus Stops

Southbound

FARMINGTON

Main St. (Fire Station)

Mechanic/Crowley Sts. North Main St. (Market Place) Central/Spring Sts. Central St./Orchard Cir. Colonial Cir. (Trotting Park) High/Tappan Sts. (Rite Aid) NH11 (NAPA Auto Parts) NH11 (Collins & Aikman) NH11/NH153 NH11 (Family Care of Farmington)

ROCHESTER

NH11 (Lilac City Pediatrics) NH11 (Wal-Mart)

Strafford County Dialysis (ON-CALL) NH11 (Northgate Apts.)

NH11/Cardinal Dr North Main St. (Globe Shopping Mall) North Main St./Cushing Blvd. (Burger King)

North Main St. (Holy Rosary Church) North Main/Union Sts. (Foster's Daily Democrat - No sign)

Wakefield St. (Rochester City Hall) *(Connect to route 2)*

Wakefield St. (Spaulding High School)

Lilac Mall (Connect to route 2) NH125 (Market Basket plaza)

Northbound

ROCHESTER

NH125 (Market Basket plaza) Wakefield St. (Spaulding High School)

Wakefield St. (Rochester City Hall) *(Connect to route 2)*

North Main St. (Holy Rosary Church) North Main St./Fortier Dr.

North Main St. (Pizza Hut/Dunkin Donuts)

NH11 (Greenwood Inn)

NH11 (Cocheco River Estates)

NH11 (Wal-Mart)

Strafford County Dialysis (ON-CALL) NH11 (Lilac City Pediatrics)

FARMINGTON

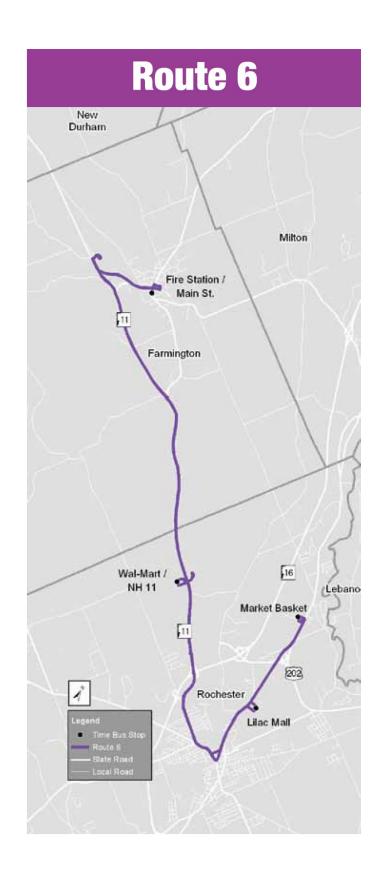
NH11 (Family Care of Farmington) NH11/NH153 (Irving)

High/Tappan Sts. (Rite Aid) Main St. (Fire Station)

Mechanic/Crowley Sts. North Main St. (Market Place) Central/Spring Sts. Central St./Orchard Cir. Colonial Cir. (Trotting Park)

	Route 6 Monday – Friday Farmington / Rochester	iday	Farmington	1 / Rochest	er					9
	FARMINGTON									
an	Main St. (Fire Station)	5:50a	6:50a	8:45a	9:55a	11:05a		12:55p	4:20p	5:30p
108	ROCHESTER									
: 1	NH 11 (Wal-Mart)	6:04	7:05	00:6	10:10	11:20		1:10	4:35	5:45
00	Lilac Mall	6:19	7:20	9:15	10:25	11:35	12:20p	1:25	4:50	6:00
5	NH 125 (Market Basket)	6:24	7:25	9:20	10:30	11:40	12:25	1:30	4:55	6:05
an	ROCHESTER									
INO	NH 125 (Market Basket)	6:26	7:30	9:26	10:36		12:26	1:36	5:00	6:06
aH.	NH 11 (Wal-Mart)	6:42	7:47	9:43	10:53		12:43	1:53	5:17	6:23
90	FARMINGTON		*					*		*
N	Main St. (Fire Station)	6:49	7:58	9:54	11:04		12:54	2:04	5:28	6:34

Runs marked * will continue up NH11 and drop off passengers at Trotting Park, Orchard Cir., Spring, Mechanic, and Market Place, in that order.



Traffic Count Data

Burea	u of	Bureau of Planning, Traffic Section, Traffic Reports	orts	ts							06-Mar-14
STAT.	TYPI		FC	2006	2007	2008	2009	2010	2011	2012	2013
Town: ROCHESTER	CHE	STER									
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

Burea	u of	Bureau of Planning, Traffic Section, Traffic Rep	Reports								06-Mar-14
STAT.	TYPI	STAT. TYPE LOCATION	FC	2006	2007	2008	2009	2010	2011	2012	2013
Town: ROCHESTER	CHE	STER									
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) (61389110- 61389111)	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)	60	*	*	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) (81389126- 81389127)	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

Burea	u of	Bureau of Planning, Traffic Section, Traffic Reports	orts								06-Mar-14
STAT.	TYPI	TYPE LOCATION	FC	2006	2007	2008	2009	2010	2011	2012	2013
Town: ROCHESTER	CHE	STER									
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) (21389116- 21389117)	06	*	*	7200	*	7400	*	*	7300
389070	82	NH 125 (GONIC RD) SOUTH OF OAK ST (SB- NB) (81389118-81389119)	14	*	14000	*	*	13000	*	*	13000
389071	82	US 202/NH 11 (HIGHLAND ST) WEST OF EASTERN AVENUE (EB-WB) (81389134- 81389135)	14	11000	*	*	0066	*	*	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 (SB- NB) (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

			BUF	BUREAU OF TRAFFIC	FRAFFIC						
Burea	u of	Bureau of Planning, Traffic Section, Traffic Reports	orts								06-Mar-14
STAT.	TYPI	TYPE LOCATION	FC	2006	2007	2008	2009	2010	2011	2012	2013
Town: ROCHESTER	CHE	STER									
389080	82	NH 202A (NO. MAIN ST) OVER COCHECO RIVER (EB-WB) (81389170-81389171)	16	*	*	*	18000	*	*	20000	*
389081	82	PICKERING RD AT DOVER TL (SB-NB) (81389132-81389133)	07	*	*	3400	*	*	2800	*	*
389082	62	SPAULDING TPK/NH 16 BETWEEN EXITS 16-17 (SB-NB) (61389120-61389121)	02	*	12700	*	*	12500	*	*	13000
389084	82	NH 125 (WAKEFIELD ST) SOUTH OF CHESTNUT HILL RD (SB-NB) (81389122- 81389123)	16	*	16000	×	*	14000	*	*	13000
389085	82	BRIDGE ST OVER COCHECO RIVER (SB-NB) (81389168-81389169)	19	*	2100	*	*	*	1900	*	1200
389086	82	WHITEHALL RD OVER NH NORTHCOAST RAILROAD (SB-NB) (81389142-81389143)	19	*	*	2400	*	2200	*	*	3300
389087	82	CHESLEY HILL RD OVER RICKERS BROOK (EB-WB) (81389166-81389167)	60	*	*	370	*	420	*	*	510
389088	82	NH 125 (GONIC RD) UNDER SPAULDING TPK EXIT 12 (SB-NB) (81389172-81389173)	14	*	18000	*	*	*	*	21000	14000
389089	82	OLD DOVER RD OVER WARDLEY BROOK (SB- NB) (81389164-81389165)	16	*	5900	*	*	5300	*	*	4800
389090	02	SPAULDING TPK AT ROCHESTER TOLL BETWEEN EXITS 9-11 (SB-NB) (01389101- 01389100)	12	24668	25323	23320	22276	22348	22409	22923	23965
389091	82	US 202/NH 11 (HIGHLAND ST) EAST OF EASTERN AVE (EB-WB) (81389146-81389147)	14	14000	*	*	11000	*	*	11000	*
389092	82	NH 202A (NO. MAIN ST) WEST OF CONGRESS ST	16	14000	*	*	13000	*	*	15000	*
389093	82	PICKERING RD NORTH OF OAK ST (SB-NB) (81389162-81389163)	17	4400	*	*	3900	*	*	4100	*

Burea	u of	Bureau of Planning, Traffic Section, Traffic Rep	Reports								06-Mar-14
STAT.	TYPE	STAT. TYPE LOCATION	FC	2006	2007	2008	2009	2010	2011	2012	2013
Town: ROCHESTER	CHE	STER									
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 (SB- NB) (81389154-81389155)	14	*	*	0006	*	*	0006	*	*
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 (EB- WB) (81389174-81389175)	60	*	1100	*	*	1200	*	*	006
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	60	*	*	*	680	*	*	740	*

TRAFFIC IMPACT AND ACCESS STUDY

CUMBERLAND FARMS REDEVELOPMENT ROCHESTER, NEW HAMPSHIRE



GPI 181 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

Traffic Impact and Access Study Cumberland Farms Redevelopment Rochester, New Hampshire

August 2014



Traffic Survey Expedition 106 Sharon Road N. Quincy, MA 02171 P: 617-448-5686 F: 617-801-8800 www.tsetraffic.com

Start	09-Aug-14	Sou	uthbound	Noi	thbound	Co	mbined	10-Aug	Sou	uthbound	No	rthbound	Cor	mbined
Time	Sat	A.M.	. P.M	. A.M.	P.M	. A.M.	P.M.	Sun	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	I		037		925		962			284		110	103	
% 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



Traffic Survey Expedition 106 Sharon Road N. Quincy, MA 02171 P: 617-448-5686 F: 617-801-8800 www.tsetraffic.com

12:00 2 110 5 101 7 211 6 95 6 108 112 12 12:15 2 95 6 101 8 196 8 79 5 93 13 1 12:30 5 99 14 106 9 205 3 89 9 115 12 2 01:16 5 106 6 139 11 22 114 4 22 110 107 19 2 114 4 22 110 107 19 2 114 4 2 110 107 113 4 2 110 107 114 4 2 100 3 1113 4 20 103 4 113 4 2 100 3 112 2 12 2 112 2 2 3 3 2 103 3 3 2 1113 4 1113 4 110 3 130 7 2 11	Start	11-Aug-14		thbound		thbound		mbined	12-Aug		uthbound		rthbound		nbined
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Time	Mon	A.M.				. A.M.		Tue			. A.M			P.M.
12:45 2 83 2 112 4 196 3 89 9 115 12 2 01:10 3 86 5 113 8 199 9 107 10 107 19 2 01:13 2 87 6 139 11 245 3 122 8 10 10 107 19 2 104 4 2 104 4 2 104 4 2 104 4 2 104 4 4 2 104 4 4 2 104 4 4 2 104 4 4 2 113 4 209 2 83 1 104 3 121 2 2 2 2 2 2 2 103 3 13 100 3 1 121 2 2 2 2 120 3 2112 4 91 3 13 130 7 2 2 133 3 133 144 <t< th=""><th>12:00</th><th></th><th></th><th></th><th></th><th></th><th>7</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>203</th></t<>	12:00						7								203
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	12:15		2	95	6	101	8	196		8	79	5	93	13	172
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	12:30		5	99	4	106	9	205		3	89	9	115	12	204
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	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



Traffic Survey Expedition 106 Sharon Road N. Quincy, MA 02171 P: 617-448-5686 F: 617-801-8800 www.tsetraffic.com

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

	13-Aug-14		ithbound		thbound		mbined	14-Aug		hbound		hbound		bined
Time	Wed	<u>A.M.</u>	P.M		<u> </u>	<u>A.M.</u>	P.M.	Thu	<u>A.M.</u>	P.M*	<u>A.M.</u>	<u>P.M.</u>	<u>A.M.</u>	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		*	*	*	*	*	
02:45			90 84	2	109	4	193		*	*	*	*	*	
		2							*	*	*	*	*	
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	124	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		*	*	*	*	*	
09:30		84	9	76	23	160	33		*	*	*	*	*	
		84 74	9 15	76 59	24 18	133	33		*	*	*	*	*	
10:00							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	2	2311	2863	1749	4028	4060	6891		0	0	0	0	0	
Day Total	-		174		77		951		0	-	Ű		0	
% Total	21	1.1%	26.1%	16.0%	36.8%	10		(0.0%	0.0%	0.0%	0.0%	0	
Peak	- 1	0:45	04:15	10:45	04:00	10:45	04:00	-	-	-	-	-	-	
Vol.		387	409	394	598	781	987	-	-	-	-	-	-	
P.H.F.		.939	0.812	0.921	0.952	0.948	0.872							
					0.002	0.040	0.012							
	ADT 11	221		11 221										

ADT ADT 11,221 AADT 11,221

hester, NH lilton Road ent To Site			Total	26	თ	o	22	49	154	349	349	335	349	411	449	465	415	432	427	384	384	316	251	195	142	70	45	6037
Site Code: Rochester, NH Station ID: Milton Roa Adjacent To Sit		96	666	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Site S		91	95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		86	06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		81	85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		76	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0		71	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
48-568 01-880 01-880		66	70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F: 617-4 Www.tse		61	65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	~
K		56	60	0	0	0	0	0	~	-	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	с
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		46	50	-	0	~	~	ო	7	12		4	11	9	ო	4	7	9	9	11	9	б	7	4	~	9	2	129
		41	45	10	4	0	9	11	35	82	84	60	48	57	38	59	65	50	52	58	64	66	55	39	29	10	16	966
		36	40	9	4	7	7	21	62	154	156	154	150	158	166	172	141	168	168	152	159	131	100	81	61	28	16	2422
3arros		-	35	ი	-	-	ω	14	47	66	97	116	140	190	240	227	201	207	199	163	155	110	88	69	51	26	11	2469
Project #: Rochester, NH Client: John DeBarros	Southbound	Start	Time	08/09/14	01:00	02:00	03:00	04:00	02:00	00:90	00:20	08:00	00:60	10:00	11:00	12 PM	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total

Theffic Survey Expedition 106 Sharon Road N. Quincy, MA 02171 P: 617-448-5686

Page 1

Project #: Rochester, NH Client: John DeBarros	Barros					b	100 242 N. Quin F. 617-4 F. 617-8 WWW.tse	run run 77, MA 48-5686 01-8800 traffic.	02171 02171 0000				Site (St	Site Code: Roc Station ID: N Adjac
Southbound														
Start		36	41	46	51	56	61	99	71	76	81	86	91	96
Time	35	40	45	50	55	09	65	70	75	80	85	06	95	666
08/10/14	11	5	5	2	0	0	0	0	0	0	0	0	0	0
01:00	4	1	4	0	0	0	0	0	0	0	0	0	0	0
02:00	ო	4	4	-	0	0	0	0	0	0	0	0	0	0
03:00	5	0	7	-	0	0	0	0	0	0	0	0	0	0
04:00	ო	4	ო	ო	0	0	0	0	0	0	0	0	0	0
05:00	5	16	ω	4	-	0	0	0	0	0	0	0	0	0
00:90	14	31	35	5	0	0	0	0	0	0	0	0	0	0
02:00	28	59	37	14	0	2	0	0	0	0	0	0	0	0
08:00	52	66	59	თ	~	0	0	0	0	0	0	0	0	0
00:60	82	138	20	12	-	0	0	0	0	0	0	0	0	0
10:00	153	162	58	7	0	0	0	0	0	0	0	0	0	0
11:00	206	181	<u>66</u>	ω	0	0	0	0	0	0	0	0	0	0
12 PM	203	169	53	13	0	. 	0	0	0	0	0	0	0	0
13:00	212	175	58	13	0	0	0	0	0	0	0	0	0	0
14:00	140	180	85	4	0	0	0	0	0	0	0	0	0	0
15:00	162	174	48	13	0	0	0	0	0	0	0	0	0	0
16:00	144	184	72	2	~	0	0	0	0	0	0	0	0	0
17:00	109	191	73	9	0	0	0	0	0	0	0	0	0	0
18:00	129	146	87	14	0	0	0	0	0	0	0	0	0	0
19:00	89	132	66	10	0	0	0	0	0	0	0	0	0	0
20:00	92	06	43	0	0	0	0	0	0	0	0	0	0	0
21:00	35	49	15	0	ო	0	0	0	0	0	0	0	0	0
22:00	21	29	15	4	0	0	0	0	0	0	0	0	0	0
23:00	9	5	8	2	0	0	0	0	0	0	0	0	0	0
Total	1908	2236	974	152	1	e	0	0	0	0	0	0	0	0

 Total

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Traffic Survey Expedition 106 Sharon Road

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e: Rochester, NH ID: Milton Road Adjacent To Site

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Traffic Survey Expedition 106 Sharon Road N. Quincy, MA 02171 P. 617-448-5686 F. 617-801-8800 www.tsetraffic.com

	Total	11	1 4	12	19	56	179	327	342	308	344	352	344	387	381	377	378	397	332	279	216	167	92	57	26	5397
96	666	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
91	95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
86	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81	85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
76	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
71	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
66	70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	60	0	0	0	0	0	0	0	~	0	0	0	0	0	~	0	0	0	0	0	0	0	0	0	0	2
51	55	0	~	0	0	0	0	ო	2	0	0	-	0	0	~	0	0	-	0	4	0	0	0	0	0	13
46	50	0	-	-	-	5	11	13	10	14	8	б	12	0	4	12	ი	11	44	12	13	4	4	~	-	179
41	45	ო	9	5	9	8	58	109	111	78	55	55	53	67	71	53	84	76	70	73	65	25	13	11	-	1156
36	40	ო	2	4	7	24	20	128	141	134	166	150	152	182	163	156	137	172	124	97	100	74	32	27	15	2260
-	35	5	4	2	5	19	40	74	77	82	115	137	127	129	141	156	148	137	124	93	38	64	43	18	6	1787
Start	Time	08/11/14	01:00	02:00	03:00	04:00	05:00	00:90	02:00	08:00	00:60	10:00	11:00	12 PM	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total

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Traffic Survey Expedition 106 Sharon Road N. Quincy, MA 02171 P. 617-443-5686 F. 617-801-8800 www.tsetraffic.com

	Total	18	14	13	23	55	178	341	350	364	313	353	344	339	442	342	356	425	321	289	198	143	89	55	24	5389
96	666	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	o
91	95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
86	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C
81	85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	С
76	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	С
71	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
66	70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C
61	65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	С
51	55	0	~	. 	0	0	. 	0	0	0	2	. 	0	2		2	. 	0	2	0	2	0	2	0	0	18
46	50	~	0	-	ო	2	13	12	14	14	7	12	4	7	9	7	8	4	14	17	7	~	9	9	2	168
41	45	7	2	2	റ	12	61	106	110	89	67	63	45	76	73	57	72	62	85	71	46	31	23	1	с	1183
36	40	7	9	4	9	21	76	144	123	165	115	146	156	125	153	162	154	175	138	137	82	63	34	24	8	2224
-	35	ო	5	5	5	20	27	79	103	96	122	131	139	129	209	114	121	184	82	64	61	48	24	14	11	1796
Start	Time	08/12/14	01:00	02:00	03:00	04:00	02:00	00:90	00:20	08:00	00:60	10:00	11:00	12 PM	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total

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Traffic Survey Expedition 106 Sharon Road N. Quincy, MA 02171 P. 617-448-5686 F. 617-801-8800 www.tsetraffic.com

<u>Southbound</u> Start	nd 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	06	95	666	Total
08/13/14	4	4	6	0	0	0	0	0	0	0	0	0	0	0	17
01:00	œ	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	9
03:00	9	9	6	-	0	0	0	0	0	0	0	0	0	0	22
04:00	21	16	15	~	0	0	0	0	0	0	0	0	0	0	53
02:00	48	61	45	5	~	0	0	0	0	0	0	0	0	0	160
00:90	77	127	97	14	7	0	0	0	0	0	0	0	0	0	317
02:00	101	160	77	ი	0	0	0	0	0	0	0	0	0	0	347
08:00	93	153	06	11	~	0	0	0	0	0	0	0	0	0	348
00:60	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	ω	~	0	0	0	0	0	0	0	0	0	369
12 PM	164	144	80	7	-	0	0	0	0	0	0	0	0	0	396
13:00	173	147	60	15	0	0	0	0	0	0	0	0	0	0	397
14:00	113	146	60	11	-	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	-	0	0	0	0	0	0	0	0	0	389
17:00	107	109	57	16	0	~	0	0	0	0	0	0	0	0	292
18:00	59	93	70	12	0		0	0	0	0	0	0	0	0	237
19:00	187	48	23	9	0	0	0	0	0	0	0	0	0	0	264
20:00	57	33	16	-	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	8066	11119	5374	798	71	10	~	0	0	0	0	0	0	0	27281
		15th P 50th P 85th P 95th P	15th Percentile : 50th Percentile : 85th Percentile : 95th Percentile :	13 MPH 26 MPH 37 MPH 42 MPH	IIII										
Statistics	Me Me Number of Percent of	Mean Speed(Average) 10 MPH Pace Speed Number in Pace Percent in Pace Number of Vehicles > 55 MPH Percent of Vehicles > 55 MPH	Speed(Average) : PH Pace Speed : Number in Pace : Percent in Pace : icles > 55 MPH : icles > 55 MPH :	26 MPH 29-38 MPH 8254 30.3% 11 0.0%	TI4%~%										

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Trattic Survey Expedition 106 Sharon Road N. Quincy, MA 02171 P. 617-448-5686 F. 617-801-8800 WWW.tsetraffic.com

		Total	38	23	13	13	17	42	130	175	215	277	352	470	493	556	562	445	429	415	386	314	222	163	94	81	5925
	96	666	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	91	95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	86	06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	81	85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	76	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	71	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	66	70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	61	65	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	56	60	0	0	0	0	0	0	0	0	-	0	0	0	0	~	0	0	0	0	0	0	0	0	0	0	2
	51	55	0	2	0	0	0	0	0	4	2	-	-	~	0	. 	-	0	2	0	0	0	-	0	-	0	17
	46	50		0	0	0	0	5	8	10	8	8	12	თ	7	12	2	13	11	12	13	ω	4	9	0	2	151
	41	45	10	10	4	0	5	9	38	46	60	55	70	68	81	75	80	72	93	81	96	62	55	41	30	27	1165
	36	40	16	7	5	9	9	16	45	69	94	109	159	175	225	202	234	194	189	179	166	153	100	57	32	36	2474
	. 	35	11	4	4	7	9	15	39	44	50	104	110	217	180	265	245	166	134	143	111	91	62	59	31	16	2114
Northbound	Start	Time	08/09/14	01:00	02:00	03:00	04:00	05:00	00:90	00:20	08:00	00:60	10:00	11:00	12 PM	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	

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Traffic Survey Expedition 106 Sharon Road N. Quincy, MA 02171 P: 617-448-5686 F: 617-801-8800 www.tsetraffic.com

	Total	36	24	17	13	5	20	41	103	196	263	352	412	519	515	406	420	374	342	362	280	176	114	54	66	5110
96	666	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
91	95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
86	06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81	85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
76	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
71	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
99	70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
56	60	0	0	0	0	0	0	0	-	0	-	-	0	0	0	0	0	0	0	-	0	0	0	0	0	9
51	55	~	0	~	0	0	0	~	2	~	0	~	0	~	-	ო	0	~	0	2	0	~	0	2	0	18
46	50	0	0	2	0	0	0	ო	8	7	13	8	10		13	8	14	12	17	12	10	6	2	ო	. 	163
41	45	9	8	7	5 2	0	4	15	32	51	71	60	63	72	91	108	103	94	83	103	61	22	23	13	12	1107
36	40	14	7	ო	2	4	13	19	35	80	107	147	187	195	182	156	162	146	132	147	140	75	57	21	32	2067
-	35	15	5	4	9	-	ო	ო	25	57	71	135	152	240	228	131	141	121	110	97	69	69	30	15	20	1748
Start	Time	08/10/14	01:00	02:00	03:00	04:00	05:00	00:00	02:00	08:00	00:60	10:00	11:00	12 PM	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total

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Traffic Survey Expedition 106 Sharon Road N. Quincy, MA 02171 P. 617-448-5686 F. 617-801-8800 www.tsetraffic.com

		Total	17	21	8	ი	15	47	115	172	224	268	364	405	420	446	465	586	590	567	410	298	245	143	107	65	6007
	96	666	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	91	95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	86	06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	81	85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	76	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	71	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<u>66</u>	70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	61	65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	56	60	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	51	55	0	~	0	0	~	0	0		0	0	~	0	ი	0	~	~	0	2	~	0	~	0	0	-	14
	46	50	~	0	2	0	0	ო	4	15	7	6	19	14	10	ო	11	-	15	28	17	4	5	5	9	с	192
	41	45	4	ო	0	ო	2	15	37	55	34	84	84	76	85	79	68	103	117	141	116	76	37	25	24	18	1286
	36	40	9	6	4	0	6	1	47	69	111	106	143	178	193	188	168	231	248	246	152	125	125	59	47	31	2506
	-	35	9	8	2	9	ო	18	27	32	70	69	117	137	129	176	217	240	210	150	124	93	77	54	30	12	2007
Northbound	Start	Time	08/11/14	01:00	02:00	03:00	04:00	05:00	00:90	02:00	08:00	00:60	10:00	11:00	12 PM	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total

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Traffic Survey Expedition 106 Sharon Road N. Quincy, MA 02171 P. 617-448-5686 F. 617-801-8800 WWW.tsetraffic.com

		Total	26	24	4	10	17	53	117	182	230	283	344	385	434	450	440	568	556	573	432	319	258	141	73	88	6007
	96	666	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	91	95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	86	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	81	85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	76	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	71	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	66	70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	61	65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	56	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	. 	0	0	0	0	-
	51	55	~	0	0	0	0	0	0	0	-	. 	2	0	0	. 	0	0	0	0	~	0	~	0	0	1	6
	46	50	4	2	0	0	2	~	5	7	12	11	5		12	9	20	14	10	22	18	16	8	4	9	3	199
	41	45	ø	5	2	2	2	20	37	62	48	60	85	70	73	70	93	119	82	118	110	110	49	32	20	21	1298
	36	40	9	10	-	2	5	16	46	56	91	105	135	147	171	186	175	242	268	269	196	136	120	70	30	40	2523
	~	35	7	7		9	8	16	29	57	78	106	117	157	178	187	152	193	196	164	107	56	80	35	17	23	1977
Northbound	Start	Time	08/12/14	01:00	02:00	03:00	04:00	05:00	00:90	00:20	08:00	00:60	10:00	11:00	12 PM	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total

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Traffic Survey Expedition 106 Sharon Road N. Quincy, MA 02171 P. 617-448-5686 F. 617-801-8800 www.tsetraffic.com

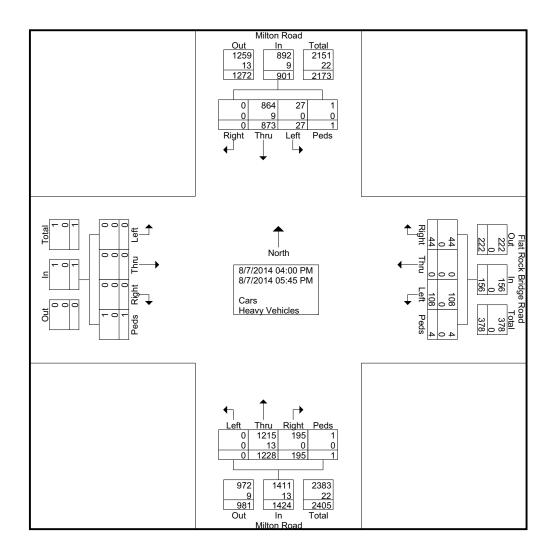
36	46 51	56 61 27	66 70	71	76	81	86	91	96	H
45 5		9	02	75	80	85	06	95	666	Total
			0	0	0	0	0	0	0	37
9		0	0	0	0	0	0	0	0	22
က			0	0	0	0	0	0	0	12
0 0			0 0	0 0	0 0	0 0	0 0	0	0	13
			50	5 0	5 0	20	5 0	- -	-	97 72
0 0 0 0 0 0			00					- c	- c	141 141
36 8			0	0 0	0	00	0 0	00	0	266
46 8			0	0	0	0	0	0	0	212
73 11			0	0	0	0	0	0	0	275
61 9		0	0	0	0	0	0	0	0	304
69			0	0	0	0	0	0	0	386
89 12 20 2			0 (0 (0 0	0 0	0 0	0 0	0 0	419
9			0 (0	0	0	0	0	0	45/
73 8			0 (0	0	0 0	0 (0	0	412
90 11 20 11) (0 0	-	0	0	0 0	0	519 700
60			0 (0	0	0 0	0 (0 (0	598
100 14			- 0	5 0	-	0	0	-	0	530
86 0			0 (0 (0 0	0 0	0 0	0 0	0 (401
36			0 (0 0	0	0	0 (0	0	280
37			0	0	0	0	0	0	0	1/9
22 3			0	0	0	0	0	0	0	108
2			0	0	0	0	0	0	0	20
9			0	0	0	0	0	0	0	55
2357 1062 153 13			0	0	0	0	0	0	0	5777
11927 5918 858 71		14 3	0	0	0	0	0	0	0	28826
15th Percentile :13 MPH50th Percentile :26 MPH85th Percentile :38 MPH95th Percentile :42 MPH										
Mean Speed(Average) : 27 MPH 10 MPH Pace Speed : 29-38 MPH										
Number in Pace : 8863 Percent in Pace : 30.7% Number of Vehicles > 55 MPH : 17 Percent of Vehicles > 55 MPH : 0.1%										



Traffic Survey Expedition 106 Sharon Road N. Quincy, MA 02171 P: 617-448-5686 F: 617-801-8800 www.tsetraffic.com

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

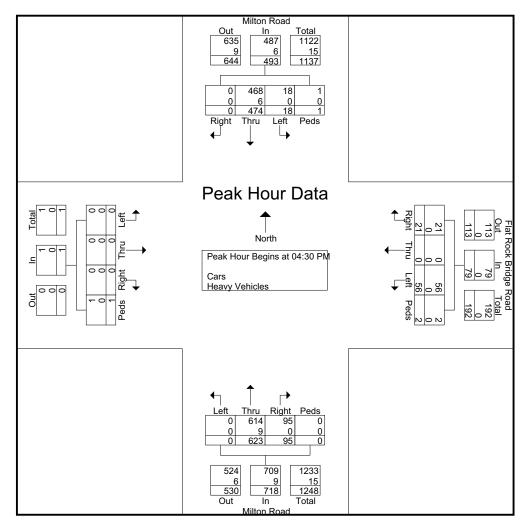
								Group	s Print	ed- Car	s - Hea	avy Ve	hicles								
		M	ilton R	oad			M	ilton R	oad							F	lat Ro	ck Bric	lge Ro	ad	
		N	orthbo	und			S	outhbo	und			E	astbou	ind			N	estbou	und		
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
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
					1					1											
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	1424	3	96.9	0	0.1	901	0	0	0	100	1	69.2	0	28.2	2.6	150	2402
Total %	0	49.5	7.9	0.1	57.4	1.1	35.2	0	0.1	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	0	50.5	100	100	55.1	100	33	0	100		0	0	0	100	100	100	0	100	100	100	
% 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





File Name : PM Site Code : 1 Start Date : 8/7/2014 Page No : 2 of 4

		Mi	Iton Ro	bad			Mi	ilton Ro	bad							F	lat Ro	ck Brid	ge Ro	ad]
		No	orthbou	und			Sc	outhbo	und			E	astbou	nd			W	estbou	Ind		
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 An	nalysis	From (04:00 P	M to 0	5:45 PN	l - Peal	< 1 of 1														
Peak Hour for	Entire	Inters	ection I	Begins	at 04:30	D 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





Traffic Survey Expedition 106 Sharon Road N. Quincy, MA 02171 P: 617-448-5686 F: 617-801-8800 www.tsetraffic.com

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

								Gro	oups P	rinted- H	leavy	Vehicl	es								_
			ilton R					ilton R								F	lat Ro	ck Brid	lge Ro	ad	
		N	orthbo	und			S	outhbo	und			E	astbou	Ind			N	<u>/estbo</u>	und		
Start	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
Time								· · · · g····					·					· · · · · ·			
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
1																					
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
1																					
Grand Total	0	13	0	0	13	0	9	0	0	9	0	0	0	0	0	0	0	0	0	0	22
Apprch %	0	100	0	0		0	100	0	0		0	0	0	0		0	0	0	0		
Total %	0	59.1	0	0	59.1	0	40.9	0	0	40.9	0	0	0	0	0	0	0	0	0	0	

		Mi	Iton Ro	bad			Mi	Iton Ro	bad							F	lat Ro	ck Brid	ge Ro	ad	
		No	orthbou	und			So	uthbo	und			E	astbou	Ind			W	/estbou	und		
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 Ar	nalysis	From (04:00 F	PM to 0	5:45 PN	1 - Pea	k 1 of 1	1													
Peak Hour for	r Entire	Inters	ection	Begins	at 04:3	D 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:

I bait i bait i b				9		-														
	04:30 PN	1				04:00 PN	Л				04:00 PM	N				04:00 PM	Λ			
+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

	Mi	lton Road	SB	202	Off-Ram	o WB	Mil	ton Road	NB	Resider	ntial Drive	eway EB
	SB	SB	SB	WB	WB	WB	NB	NB	NB	EB	EB	EB
Time	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

	St	reet Nan	าย	St	treet Nan	ne	St	treet Nan	ne	St	treet Nam	ne
	SB	SB	SB	WB	WB	WB	NB	NB	NB	EB	EB	EB
Time	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

	Mil	ton Roac	I SB	202	Off-Ram	o WB	Mil	ton Road	NB	Resider	ntial Drive	eway EB
	SB	SB	SB	WB	WB	WB	NB	NB	NB	EB	EB	EB
Time	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

	Mi	ton Road	I SB	202	Off-Ram	o WB	Mil	ton Road	NB	Resider	ntial Drive	eway EB
	SB	SB	SB	WB	WB	WB	NB	NB	NB	EB	EB	EB
Time	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

HEAVY VEHICLES

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

	Mi	ton Road	SB	Salmo	n Falls Ro	ad WB	Mil	ton Road	NB	A	marosa E	B
	SB	SB	SB	WB	WB	WB	NB	NB	NB	EB	EB	EB
Time	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
		reet Nan	-		reet Nan	-		reet Nan	-		treet Nan	-
	SB	SB	SB	WB	WB	WB	NB	NB	NB	EB	EB	EB
Time	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

	Mi	ton Road	SB	Salmo	n Falls Ro	ad WB	Mil	ton Road	NB	A	marosa E	В
	SB	SB	SB	WB	WB	WB	NB	NB	NB	EB	EB	EB
Time	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	/EHICLES					
	Mi	ton Road	SB	Salmo	n Falls Ro	ad WB	Mil	ton Road	NB	A	marosa E	В
	SB	SB	SB	WB	WB	WB	NB	NB	NB	EB	EB	EB
Time	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

	Mi	ton Road	SB	Be	v's Cafe \	NB	Mil	ton Road	NB	Cr	oss Road	EB
	SB	SB	SB	WB	WB	WB	NB	NB	NB	EB	EB	EB
Time	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
		ton Road	-	-	v's Cafe \			ton Road		_	oss Road	
	SB	SB	SB	WB	WB	WB	NB	NB	NB	EB	EB	EB
Time	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

	Mi	ton Roac	I SB	Be	v's Cafe \	NB	Mil	ton Road	NB	Cr	oss Road	EB
	SB	SB	SB	WB	WB	WB	NB	NB	NB	EB	EB	EB
Time	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

	Mi	ton Road	I SB	Be	v's Cafe V	WB	Mil	ton Road	NB	Cr	oss Road	EB
	SB	SB	SB	WB	WB	WB	NB	NB	NB	EB	EB	EB
Time	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

HEAVY VEHICLES

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 Transportation Planning Group 4 - Urban Highways

Month	Avg. Weekday	Adj. To Avg.	Adj. To Avg. Adj. To Peak	Avg. Saturday	Adj. To Avg.	<u>Adj. To Avg. Adj. To Peak</u>
January	303,209	1.10	1.17	264,294	1.09	1.18
February	310,361	1.07	1.14	221,927	1.29	1.41
March	316,917	1.05	1.12	285,808	1.00	1.09
April	334,816	0.99	1.06	293,105	0.98	1.07
Мау	349,527	0.95	1.01	302,837	0.95	1.03
June	353,866	0.94	1.00	312,453	0.92	1.00
July	346,008	0.96	1.02	298,894	0.96	1.05
August	352,666	0.94	1.00	301,518	0.95	1.04
September	340,876	0.97	1.04	303,479	0.95	1.03
October	340,098	0.98	1.04	301,288	0.95	1.04
November	323,336	1.03	1.09	283,293	1.01	1.10
December	314,882	1.06	1.12	277,095	1.04	1.13
Year Avg.	332,214			287,166		

Month	Weekday AM Peak		Adj. To Avg. Adj. To Peak	Weekday PM Peak	Adj. To Avg.	Adj. To Peak	Saturday Midday Peak	Adj. To Avg.	Adj. To Peak
January	23,647	1.04	1.11	27,359	1.07	1.13	22,790	1.05	1.11
February		1.02	1.08	27,553	1.06	1.12	18,839	1.27	1.34
March	24,330	1.01	1.08	28,527	1.03	1.08	24,172	0.99	1.04
April		0.97	1.03	29,822	0.98	1.03	24,338	0.99	1.04
Мау		0.95	1.01	30,649	0.96	1.00	25,007	0.96	1.01
June		0.96	1.02	30,785	0.95	1.00	25,067	0.96	1.01
July		1.06	1.12	29,585	0.99	1.04	24,347	0.99	1.04
August		1.03	1.09	30,525	0.96	1.01	25,190	0.95	1.00
September		0.94	1.00	30,217	0.97	1.02	25,105	0.96	1.00
October		0.94	1.00	30,434	0.96	1.01	25,227	0.95	1.00
November	24,502	1.01	1.07	28,608	1.02	1.08	23,826	1.01	1.06
December	22,564	1.09	1.16	27,273	1.07	1.13	24,247	0.99	1.04
Year Avg.	24,682			29,278			24,013		

Historical Traffic Growth Rate^a Milton Road - Rochester, New Hampshire

									Average
				Υe	Year				Annual
Location	200 6	2002	2008	2009	2010	2011	2012	2013	Rate
South of NH 11/US 202		11,000			11,000			9,500	-2.38%
North of Cross Road	17,000						8,900		-10.22%
At Milton Town Line		2.600			6.200			5.000	-1.73%

Average Annual Growth Rate = -2.39%

^a Source: State of New Hampshire Department of Transportation Bureau of Traffic - Bureau of Planning, Traffic Section, Traffic Reports, 06 Mar 14.

Trip-Generation Calculations

Tighe&Bond

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

	Norway Pl Rte 11/R	Jorway Plains Rd to Rte 11/Rte 202 EB	Rte 11/Rte Flat Rock	Rte 11/Rte 202 EB to Flat Rock Bridge Rd	Flat Rock B Salmon	Flat Rock Bridge Rd to Salmon Falls Rd	Salmon F Ridgewoo	Salmon Falls Rd to Ridgewood Estates
Time Period/Direction	East Side	West Side	East Side	East Side West Side	East Side	East Side West Side	East Side	West Side
Weekday Daily:								
Enter Fvit	4,164 A 16A	3,582 2 5 8 7	042 612	5,137 5,137	4,843 1 813	1,731 1,731	1,208	0.00 0.20 0.20
Total	<u>7,207</u> 8,328	7,164	<u>1,284</u>	<u>10,274</u>	9,686	3,462	<u>2,416</u>	670
Weekday AM Peak Hour:								
Enter	356	100	18	239	135	331	94	6
<u>Exit</u>	<u>108</u>	<u>61</u>	<u>55</u>	<u>66</u>	<u>83</u>	71	<u>25</u>	<u>9</u>
Total	464	161	74	338	218	402	119	15
Weekday PM Peak Hour:								
Enter	297	299	55	415	415	81	86	28
<u>Exit</u>	540	<u>323</u>	<u>57</u>	<u>545</u>	449	<u>346</u>	<u>155</u>	<u>30</u>
Total	837	622	112	960	864	427	241	58

Institute of Transportation Engineers (ITE), 9th Edition Land Use Code (LUC) 820 - Shopping Center 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 Ln T = 0.65 Ln (X) + 5.83Ln T = 0.65 Ln = 80.650+ 5.83 Ln T = 8.68T = 5905.13T = 5,906 vehicle trips with 50% (2,953 vpd) entering and 50% (2,953 vpd) exiting. WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC Ln T = 0.61 Ln (X) + 2.24Ln T = 0.61 Ln = 80.650 + 2.24Ln T = 4.92T = 136.73T = 137 vehicle trips with 62% (85 vph) entering and 38% (52 vph) exiting. WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC Ln T = 0.67 Ln (X) + 3.31Ln T = 0.67 Ln80.650 + 3.31 Ln T = 6.25T = 518.73T = 519 vehicle trips 249 with 48% (vph) entering and 52% (270 vph) exiting. SATURDAY DAILY Ln T = 0.63 Ln (X) + 6.23Ln T = 0.63 Ln = 80.650+ 6.23 Ln T = 9.00T = 8068.92T = 8,070 vehicle trips vpd) entering and 50% (with 50% (4,035 vpd) exiting. 4,035 SATURDAY PEAK HOUR OF GENERATOR Ln T = 0.65 Ln (X) + 3.78Ln T = 0.65 Ln80.650 + 3.78 Ln T = 6.63T = 760.20T = 760 vehicle trips with 52% (395 vph) entering and 48% (365 vph) exiting. SUNDAY DAILY T = 25.24 * (X)T = 25.24 * 80.650T = 2035.61T = 2,036 vehicle trips with 50% (1,018 vpd) entering and 50% (1,018 vpd) exiting. SUNDAY PEAK HOUR OF GENERATOR T = 3.12 * (X)T = 3.12 *80.650 T = 251.63T = 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 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 Ln T = 0.83 Ln (X) + 3.09Ln T = 0.83 Ln = 288.600 + 3.09Ln T = 7.79T = 2421.12T = 2,422 vehicle trips with 50% (1,211 vph) entering and 50% (1,211 vph) exiting. WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC Ln T = 0.87 Ln (X) + 0.86Ln T = 0.87 Ln = 288.600 + 0.86Ln T = 5.79T = 326.55T = 327 vehicle trips with 83% (271 vph) entering and 17% (56 vph) exiting. WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC Ln T = 0.83 Ln (X) + 1.06Ln T = 0.83 Ln = 288.600 + 1.06Ln T = 5.76T = 317.98T = 318 vehicle trips with 15% (48 vph) entering and 85% (270 vph) exiting. SATURDAY DAILY T = 1.27 * (X) + 104.92T = 1.27 *288.600 + 104.92 T = 471.44T = 472 vehicle trips vph) entering and 50% (236 vph) exiting. with 50% (236 SATURDAY PEAK HOUR OF GENERATOR T = 0.24 * (X)T = 0.24 * 288.600T = 69.26T = 69 vehicle trips with 50% (35 vph) entering and 50% (34 vph) exiting. SUNDAY DAILY T = 1.11 * (X)T = 1.11 *288.600 T = 320.35T = 320 vehicle trips with 50% (160 vph) entering and 50% (160 vph) exiting. SUNDAY PEAK HOUR OF GENERATOR T = 0.16 * (X)T = 0.16 * 288.600T = 46.18T = 46 vehicle trips with 50% (23 vph) entering and 50% (23 vph) exiting.

Institute 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 T = 42.70 * (X)T = 42.70 * 167.750T = 7162.93T = 7,164 vehicle trips with 50% (vpd) entering and 50% (3,582 vpd) exiting. 3,582 WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC T = 0.96 * (X)T = 0.96 * 167.750T = 161.04T = 161 vehicle trips with 62% (100 vpd) entering and 38% (61 vpd) exiting. WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC T = 3.71 * (X)T = 3.71 * 167.750T = 622.35T = 622 vehicle trips with 48% (299 vpd) entering and 52% (323 vpd) exiting. SATURDAY DAILY T = 49.97 * (X)T = 49.97 * 167.750T = 8382.47T = 8,382 vehicle trips with 50% (4,191 vpd) entering and 50% (4,191 vpd) exiting. SATURDAY PEAK HOUR OF GENERATOR T = 4.82 * (X)T = 4.82 * 167.750T = 808.56T = 809 vehicle trips with 52% (388 vpd) exiting. 421 vpd) entering and 48% (SUNDAY DAILY T = 25.24 * (X)T = 25.24 * 167.750T = 4234.01T = 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)T = 3.12 * 167.750T = 523.38T = 523 vehicle trips with 49% (256 vpd) entering and 51% (267 vpd) exiting.

Land Use Code (LUC) 820	<i>n Engineers (ITE), 9th Edit</i> - Shopping Center - 11/US Rte 202 and Flat Re		idge Rd
Average Vehicle Trips Ends v Independent Variable (X):	rs: 1,000 Sq. Feet Gross Le 27.270	easable	Area
AVERAGE WEEKDAY DAILY T = 42.70 * (X) T = 42.70 * 27.270 T = 1164.43 T = 1,164 vehicle trips with 50% (582)	vpd) entering and 50% (582	vpd) exiting.
WEEKDAY MORNING PEAK HO T = 0.96 * (X) T = 0.96 * 27.270 T = 26.18	OUR OF ADJACENT STREET TRAF	FIC	
T = 26 vehicle trips	vpd) entering and 38% (10	vpd) exiting.
T = 3.71 * (X) T = 3.71 * 27.270 T = 101.17 T = 101 vehicle trips	JR OF ADJACENT STREET TRAFF vpd) entering and 52% (vpd) exiting.
SATURDAY DAILY T = 49.97 * (X) T = 49.97 * 27.270 T = 1362.68 T = 1,364 vehicle trips with 50% (682)	vpd) entering and 50% (682	vpd) exiting.
SATURDAY PEAK HOUR OF GET T = 4.82 * (X) T = 4.82 * 27.270 T = 131.44 T = 131 vehicle trips with 52% (68	NERATOR vpd) entering and 48% (63	vpd) exiting.
SUNDAY DAILY T = 25.24 * (X) T = 25.24 * 27.270 T = 688.29 T = 688 vehicle trips with 50% (344	vpd) entering and 50% (344	vpd) exiting.
SUNDAY PEAK HOUR OF GENE T = 3.12 * (X) T = 3.12 * 27.270 T = 85.08 T = 85 vehicle trips with 49% (42)	RATOR vpd) entering and 51% (43	vpd) exiting.

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

Average Vehicle Trips Ends vs:Dwelling UnitsIndependent Variable (X):18

AVERAGE WEEKDAY DAILY

 $\begin{array}{l} T = 6.65 * (X) \\ T = 6.65 * 18 \\ T = 119.70 \\ T = 120 \ \text{vehicle trips} \\ \text{with } 50\% \ (\ \ 60 \ \ \text{vpd}) \ \text{entering and } 50\% \ (\ \ \ 60 \ \ \text{vpd}) \ \text{exiting.} \end{array}$

WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC

 $\begin{array}{l} T = 0.51 \ ^{*} \ (X) \\ T = 0.51 \ ^{*} \ 18 \\ T = 9.18 \\ T = 9 \ \text{vehicle trips} \\ \text{with } 20\% \ (\ 2 \ \text{vph}) \ \text{entering and } 80\% \ (\ 7 \ \text{vph}) \ \text{exiting.} \end{array}$

WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC

T = 0.62 * (X) T = 0.62 * 18 T = 11.16 T = 11 vehicle tripswith 65% (7 vph) entering and 35% (4 vph) exiting. **SATURDAY DAILY**

$\begin{array}{l} T = \ 6.39 \ ^{*} \ (X) \\ T = \ 6.39 \ ^{*} \ 18 \\ T = \ 115.02 \\ T = \ 116 \ vehicle \ trips \\ with \ 50\% \ (\ 58 \ vpd) \ entering \ and \ 50\% \ (\ 58 \ vpd) \ exiting. \end{array}$

SATURDAY PEAK HOUR OF GENERATOR

 $\begin{array}{l} T = 0.52 * (X) \\ T = 0.52 * 18 \\ T = 9.36 \\ T = 9 \text{ vehicle trips} \\ \text{with } 50\% (5 \text{ vph}) \text{ entering and } 50\% (4 \text{ vph}) \text{ exiting.} \end{array}$

SUNDAY DAILY

 $\begin{array}{l} T = 5.86 \ ^{*} \ (X) \\ T = 5.86 \ ^{*} \ 18 \\ T = 105.48 \\ T = 106 \ \text{vehicle trips} \\ \text{with } 50\% \ (\ 53 \ \text{vpd}) \ \text{entering and } 50\% \ (\ 53 \ \text{vpd}) \ \text{exiting.} \end{array}$

SUNDAY PEAK HOUR OF GENERATOR

T = 0.51 * (X) T = 0.51 * 18 T = 9.18 T = 9 vehicle tripswith 50% (5 vph) entering and 50% (4 vph) exiting.

Institute of Transportation Engineers (ITE), 9th Edition Land Use Code (LUC) 820 - Shopping 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 Leasable Area Independent Variable (X): 161.340 AVERAGE WEEKDAY DAILY Ln T = 0.65 Ln (X) + 5.83 $Ln T = 0.65 Ln \quad 161.340 + 5.83$ Ln T = 9.13T = 9267.64T = 9,268 vehicle trips with 50% (4,634 vpd) entering and 50% (4,634 vpd) exiting. WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC Ln T = 0.61 Ln (X) + 2.24 $Ln T = 0.61 Ln \quad 161.340 + 2.24$ Ln T = 5.34T = 208.71T = 209 vehicle trips with 62% (130 vph) entering and 38% (79 vph) exiting. WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC Ln T = 0.67 Ln (X) + 3.31 $Ln T = 0.67 Ln \quad 161.340 + 3.31$ Ln T = 6.72T = 825.47T = 825 vehicle trips with 48% (396 vph) entering and 52% (429 vph) exiting. SATURDAY DAILY Ln T = 0.63 Ln (X) + 6.23 $Ln T = 0.63 Ln \quad 161.340 + 6.23$ Ln T = 9.43T = 12489.13T = 12,490 vehicle trips 6,245 vpd) entering and 50% (6,245 vpd) exiting. with 50% (SATURDAY PEAK HOUR OF GENERATOR Ln T = 0.65 Ln (X) + 3.78Ln T = 0.65 Ln161.340 + 3.78 Ln T = 7.08T = 1193.07T = 1,193 vehicle trips with 52% (620 vph) entering and 48% (573 vph) exiting. SUNDAY DAILY T = 25.24 * (X)T = 25.24 * 161.340T = 4072.22T = 4,072 vehicle trips with 50% (2,036 vpd) entering and 50% (2,036 vpd) exiting. SUNDAY PEAK HOUR OF GENERATOR T = 3.12 * (X)T = 3.12 *161.340 T = 503.38T = 503 vehicle trips with 49% (246 vpd) entering and 51% (257 vpd) exiting.

Institute of Transportation Engineers (ITE), 9th Edition Land Use Code (LUC) 110 - General Light Industrial 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 T = 6.97 * (X)T = 6.97 * 53.040T = 369.69T = 370 vehicle trips with 50% (185 vph) entering and 50% (185 vph) exiting. WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC T = 0.92 * (X)T = 0.92 * 53.040T = 48.80T = 49 vehicle trips with 88% (43 vph) entering and 12% (6 vph) exiting. WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC T = 0.97 * (X)T = 0.97 * 53.040T = 51.45T = 51 vehicle trips with 12% (6 vph) entering and 88% (45 vph) exiting. SATURDAY DAILY T = 1.32 * (X)T = 1.32 *53.040 T = 70.01T = 70 vehicle trips with 50% (35 vph) entering and 50% (35 vph) exiting. SATURDAY PEAK HOUR OF GENERATOR T = 0.14 * (X)T = 0.14 * 53.040T = 7.43T = 7 vehicle trips vph) entering and 53% (4 vph) exiting. with 47% (3 SUNDAY DAILY T = 0.68 * (X)T = 0.68 * 53.040T = 36.07T = 36 vehicle trips vph) entering and 50% (18 vph) exiting. with 50% (18 SUNDAY PEAK HOUR OF GENERATOR T = 0.10 * (X)T = 0.10 * 53.040T = 5.30T = 5 vehicle trips with 48% (2 vph) entering and 52% (3 vph) exiting.

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 Ln T = 0.83 Ln (X) + 3.09Ln T = 0.83 Ln 57.690 + 3.09Ln T = 6.46T = 636.33T = 636 vehicle trips with 50% (318 vph) entering and 50% (318 vph) exiting. WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC Ln T = 0.87 Ln (X) + 0.86Ln T = 0.87 Ln 57.690 + 0.86Ln T = 4.39T = 80.47T = 80 vehicle trips with 83% (66 vph) entering and 17% (14 vph) exiting. WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC Ln T = 0.83 Ln (X) + 1.06Ln T = 0.83 Ln 57.690 + 1.06Ln T = 4.43T = 83.57T = 84 vehicle trips with 15% (13 vph) entering and 85% (71 vph) exiting. SATURDAY DAILY T = 1.27 * (X) + 104.92T = 1.27 *57.690 + 104.92 T = 178.19T = 178 vehicle trips with 50% (89 vph) entering and 50% (89 vph) exiting. SATURDAY PEAK HOUR OF GENERATOR T = 0.24 * (X) $T = 0.24 \times 57.690$ T = 13.85T = 14 vehicle trips with 50% (7 vph) entering and 50% (7 vph) exiting. SUNDAY DAILY T = 1.11 * (X)T = 1.11 * 57.690 T = 64.04T = 64 vehicle trips with 50% (32 vph) entering and 50% (32 vph) exiting. SUNDAY PEAK HOUR OF GENERATOR T = 0.16 * (X)T = 0.16 * 57.690T = 9.23T = 9 vehicle trips with 50% (5 vph) entering and 50% (4 vph) exiting.

Institute of Transportation Engineers (ITE), 9th Edition Land Use Code (LUC) 820 - Shopping Center 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 Ln T = 0.65 Ln (X) + 5.83 $Ln T = 0.65 Ln \quad 172.690 + 5.83$ Ln T = 9.18T = 9686.36T = 9,686 vehicle trips with 50% (4,843 vpd) entering and 50% (4,843 vpd) exiting. WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC Ln T = 0.61 Ln (X) + 2.24 $Ln T = 0.61 Ln \quad 172.690 + 2.24$ Ln T = 5.38T = 217.55T = 218 vehicle trips with 62% (135 vph) entering and 38% (83 vph) exiting. WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC Ln T = 0.67 Ln (X) + 3.31 $Ln T = 0.67 Ln \quad 172.690 + 3.31$ Ln T = 6.76T = 863.94T = 864 vehicle trips with 48% (415 vph) entering and 52% (449 vph) exiting. SATURDAY DAILY Ln T = 0.63 Ln (X) + 6.23 $Ln T = 0.63 Ln \quad 172.690 + 6.23$ Ln T = 9.48T = 13035.66T = 13,036 vehicle trips with 50% (6,518 vpd) entering and 50% (6,518 vpd) exiting. SATURDAY PEAK HOUR OF GENERATOR Ln T = 0.65 Ln (X) + 3.78Ln T = 0.65 Ln172.690 + 3.78 Ln T = 7.13T = 1246.97T = 1,247 vehicle trips with 52% (vph) entering and 48% (599 vph) exiting. 648 SUNDAY DAILY T = 25.24 * (X)T = 25.24 * 172.690T = 4358.70T = 4,360 vehicle trips with 50% (2,180 vpd) entering and 50% (2,180 vpd) exiting. SUNDAY PEAK HOUR OF GENERATOR T = 3.12 * (X)T = 3.12 *172.690 T = 538.79T = 539 vehicle trips with 49% (264 vpd) entering and 51% (275 vpd) exiting.

- Shopping Center		۲d
vs: 1,000 Sq. Feet Gross L 14.120	easable	Area
vpd) entering and 50% (302	vpd) exiting.
OUR OF ADJACENT STREET TRAF	FIC	
und) optoring and 28% (5	und) oxiting
		vpu) exiting.
		vpd) exiting.
vpd) entering and 50% (353	vpd) exiting.
NERATOR		
vpd) entering and 48% (33	vpd) exiting.
$v_{\rm red}$ optoring and 50% (179	und) oxiting
	170	vpu) exiting.
	22	vpd) exiting.
	- Shopping Center ock Bridge Rd and Salmon /s: 1,000 Sq. Feet Gross L 14.120 vpd) entering and 50% (pur of Adjacent Street Traff vpd) entering and 38% (ur of Adjacent Street Traff vpd) entering and 52% (vpd) entering and 52% (NERATOR vpd) entering and 48% (vpd) entering and 48% (ock Bridge Rd and Salmon Falls Fvs:1,000 Sq. Feet Gross Leasable14.120vpd) entering and 50% (302our of Adjacent Street Trafficvpd) entering and 38% (5ur of Adjacent Street Trafficvpd) entering and 52% (27vpd) entering and 50% (353NERATOR33vpd) entering and 48% (33vpd) entering and 50% (178

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

Ln T = 0.83 Ln (X) + 3.09 $Ln T = 0.83 Ln \quad 352.250 + 3.09$ Ln T = 7.96T = 2856.65T = 2,858 vehicle trips with 50% (1,429 vph) entering and 50% (1,429 vph) exiting. WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC Ln T = 0.87 Ln (X) + 0.86 $Ln T = 0.87 Ln \quad 352.250 + 0.86$ Ln T = 5.96T = 388.38T = 388 vehicle trips with 83% (322 vph) entering and 17% (66 vph) exiting. WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC Ln T = 0.83 Ln (X) + 1.06 $Ln T = 0.83 Ln \quad 352.250 + 1.06$ Ln T = 5.93T = 375.18T = 375 vehicle trips vph) entering and 85% (319 vph) exiting. with 15% (56 SATURDAY DAILY T = 1.27 * (X) + 104.92T = 1.27 *352.250 + 104.92 T = 552.28T = 552 vehicle trips vph) entering and 50% (276 vph) exiting. with 50% (276 SATURDAY PEAK HOUR OF GENERATOR T = 0.24 * (X)T = 0.24 * 352.250T = 84.54T = 85 vehicle trips with 50% (43 vph) entering and 50% (42 vph) exiting. SUNDAY DAILY T = 1.11 * (X)T = 1.11 *352.250 T = 391.00T = 392 vehicle trips with 50% (196 vph) entering and 50% (196 vph) exiting. SUNDAY PEAK HOUR OF GENERATOR T = 0.16 * (X)T = 0.16 * 352.250T = 56.36T = 56 vehicle trips with 50% (28 vph) entering and 50% (28 vph) exiting.

Land Use Code (LUC) 820	on Engineers (ITE), 9th Edi - Shopping Center n Falls Rd and Ridgewood		
Average Vehicle Trips Ends v Independent Variable (X):	/s: 1,000 Sq. Feet Gross L 42.670	easable	Area
Average Weekday Daily T = 42.70 * (X) T = 42.70 * 42.670 T = 1822.01 T = 1,822 vehicle trips with 50% (911)	vpd) entering and 50% (911	vpd) exiting.
WEEKDAY MORNING PEAK HC T = 0.96 * (X) T = 0.96 * 42.670 T = 40.96 T = 41 vehicle trips	DUR OF ADJACENT STREET TRA	FFIC	
•	vpd) entering and 38% (16	vpd) exiting.
T = 3.71 * (X) T = 3.71 * 42.670 T = 158.31 T = 158 vehicle trips	UR OF ADJACENT STREET TRAF		ynd) exitina
SATURDAY DAILY T = 49.97 * (X) T = 49.97 * 42.670 T = 2132.22 T = 2,132 vehicle trips	vpd) entering and 50% (
SATURDAY PEAK HOUR OF GE T = 4.82 * (X) T = 4.82 * 42.670 T = 205.67 T = 206 vehicle trips		99	
SUNDAY DAILY T = 25.24 * (X) T = 25.24 * 42.670 T = 1076.99 T = 1,078 vehicle trips with 50% (539)	vpd) entering and 50% (539	vpd) exiting.
SUNDAY PEAK HOUR OF GENE T = 3.12 * (X) T = 3.12 * 42.670 T = 133.13 T = 133 vehicle trips with 49% (65	RATOR vpd) entering and 51% (68	vpd) exiting.

Institute of Transportation Engineers (ITE), 9th Edition Land Use Code (LUC) 110 - General Light Industrial 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 T = 6.97 * (X)T = 6.97 * 85.180T = 593.70T = 594 vehicle trips 297 vph) entering and 50% (with 50% (297 vph) exiting. WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC T = 0.92 * (X)T = 0.92 * 85.180 T = 78.37T = 78 vehicle trips vph) entering and 12% (with 88% (69 9 vph) exiting. WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC T = 0.97 * (X)T = 0.97 * 85.180T = 82.62T = 83 vehicle trips with 12% (10 vph) entering and 88% (73 vph) exiting. SATURDAY DAILY T = 1.32 * (X)T = 1.32 *85.180 T = 112.44T = 112 vehicle trips with 50% (vph) entering and 50% (56 vph) exiting. 56 SATURDAY PEAK HOUR OF GENERATOR T = 0.14 * (X)T = 0.14 * 85.180T = 11.93T = 12 vehicle trips vph) entering and 53% (6 vph) exiting. with 47% (6 SUNDAY DAILY T = 0.68 * (X)T = 0.68 * 85.180T = 57.92T = 58 vehicle trips with 50% (29 vph) entering and 50% (29 vph) exiting. SUNDAY PEAK HOUR OF GENERATOR T = 0.10 * (X)T = 0.10 * 85.180T = 8.52T = 9 vehicle trips with 48% (4 vph) entering and 52% (5 vph) exiting.

Land Use Code (LUC) 820	on Engineers (ITE), 9th Edi - Shopping Center on Falls Rd and Ridgewood		es
Average Vehicle Trips Ends Independent Variable (X):	vs: 1,000 Sq. Feet Gross L 15.680	easable	Area
Average WeekDay Daily T = 42.70 * (X) T = 42.70 * 15.680 T = 669.54 T = 670 vehicle trips with 50% (335)	vpd) entering and 50% (335	vpd) exiting.
WEEKDAY MORNING PEAK HC T = 0.96 * (X) T = 0.96 * 15.680 T = 15.05 T = 15 vehicle trips	DUR OF ADJACENT STREET TRAF	FIC	
•	vpd) entering and 38% (6	vpd) exiting.
T = 3.71 * (X) T = 3.71 * 15.680 T = 58.17 T = 58 vehicle trips	UR OF ADJACENT STREET TRAFT		vpd) exiting.
SATURDAY DAILY T = 49.97 * (X) T = 49.97 * 15.680 T = 783.53 T = 784 vehicle trips with 50% (392)	vpd) entering and 50% (392	vpd) exiting.
SATURDAY PEAK HOUR OF GE T = 4.82 * (X) T = 4.82 * 15.680 T = 75.58 T = 76 vehicle trips			
SUNDAY DAILY T = 25.24 * (X) T = 25.24 * 15.680 T = 395.76 T = 396 vehicle trips with 50% (198)	vpd) entering and 50% (198	vpd) exiting.
SUNDAY PEAK HOUR OF GENE T = 3.12 * (X) T = 3.12 * 15.680 T = 48.92 T = 49 vehicle trips with 49% (24)	erator vpd) entering and 51% (25	vpd) exiting.