

# Wilton Exit 16 Linkage Study





## Town of Wilton, New York February, 2012

This report was prepared in cooperation with the Town of Wilton, Capital District Transportation Committee (CDTC), Saratoga County Planning Department, Capital District Transportation Authority (CDTA), Capital District Regional Planning Commission (CDRPC), and the New York State Department of Transportation (NYSDOT). This report was funded in part through grant[s] from the Federal Highway Administration [and Federal Transit Administration] and the United States Department of Transportation. The contents do not necessarily reflect the official views or policies of these governmental agencies.

The land use and transportation options and concepts presented in this report are designed to help support the existing and future land use pattern described in the Town's Comprehensive Plan and other land use studies commissioned by the Town of Wilton. The various land use and transportation options identified in the report are based on an analysis of existing and expected future conditions in the study area. Many of the actions identified in the study are not intended for short-term implementation. A considerable amount of design work still remains to be done before any of these projects can be constructed. The options and concepts set forth in this report are conceptual in nature and do not commit the Town of Wilton, CDTC, CDTA, NYSDOT, or Saratoga County to funding any of the improvements. The concepts need to be investigated in more detail before any financial commitment can be made.



## Acknowledgements

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## Project Overview

### Project Background & Purpose

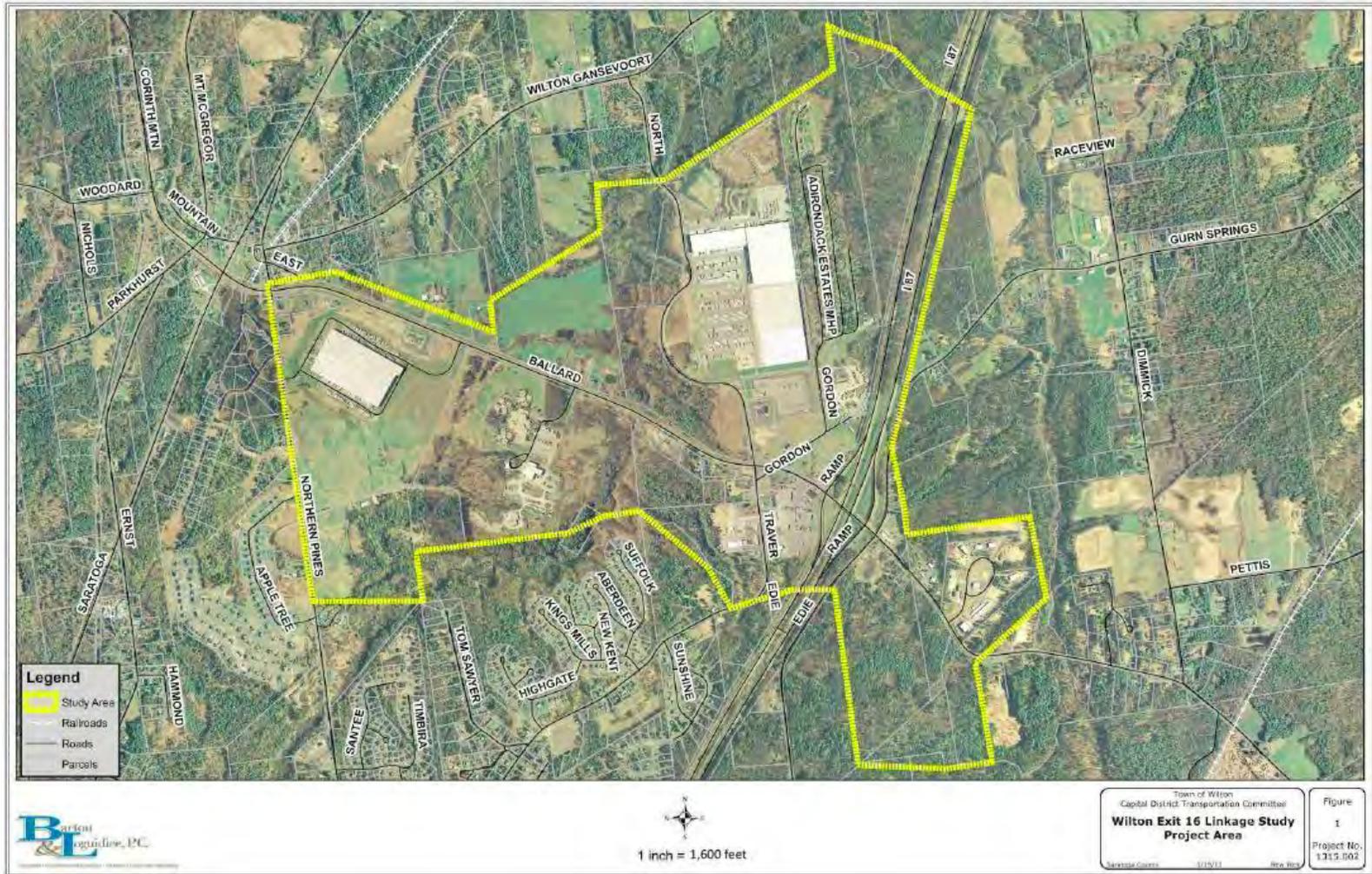
The Capital District Transportation Committee (CDTC) is the designated Metropolitan Planning Organization (MPO) to carry out federal requirements for cooperative transportation planning and programming within the metropolitan areas surrounding the greater Capital District area including Saratoga Springs. The Linkage Program, sponsored and administered by CDTC, was created in part to assist local communities to implement the broader regional transportation goals and strategies of CDTC's "New Visions 2035" regional transportation plan.

The Wilton Exit 16 Linkage Study was proposed by the Town of Wilton to CDTC to evaluate the study area around Northway Exit 16 and develop concepts and options to ensure a true center of the community is created, capitalizing on the existing Hamlet zoning within this area. The study area concepts and options are intended to create a strong sense of identity and adequately provide for the multi-modal needs of residents, businesses and property owners.

The Town of Wilton, located in north-central Saratoga County, is one of the fastest growing communities in upstate New York. A benefactor of this commercial growth is the Adirondack Northway's Exit 16 area which is in transition from a rural setting to a center for light industry, warehousing and commerce. The primary study area is centered on Ballard Road (County Route 33) from just east of Commerce Park Drive to Northern Pines Road. Located within this approximately two mile stretch of roadway are several large regional commercial warehousing businesses such as the Target and Ace distribution warehouses, multiple smaller commercial business, a well known truck stop and restaurant, Ballard Elementary School, the Town Hall and a fire department, the Global Business Tech Park, the Wilton Medical Arts facility, an RV Sales & Service Center, a small industrial park and an informal but well used park and ride lot on private property. In addition to these general land uses, this area is also where the Town of Wilton Municipal Offices are located as well as the Town Highway Department maintenance facilities. There are also large tracts of yet to be developed vacant land in the study area as well as municipal sewer and water infrastructure which makes this part of Wilton prime for continued commercial development.



Figure 1: Study Area Map





The primary purpose of this study was to work with stakeholders to identify prudent growth strategies that respond to the following conditions present in the Northway Exit 16 Corridor:

- Formulation of possible redevelopment strategies towards the creation of a new town center on Ballard Road east or west of the Northway, building on existing facilities such as the Town Hall, the Ballard Road Elementary School, the Ballard Road Firehouse and the NYS Police Barracks;
- A distinct transition from industrial and commercial to retail traveling from west to east along Ballard Road, which might indicate the need to create a more diverse mix of land uses on the corridor both east and west of the Northway;
- Pedestrian, streetscape and gateway upgrades that address the current lack of these amenities and might improve the public perception of the Exit 16 Corridor;
- Identify transportation options that acknowledge the existing presence of heavy truck traffic and warehouse land uses which rely on this form of transportation;
- Identify alternative transportation options that might provide trail crossings in naturally constrained areas, and bicycle and pedestrian options over Interstate 87;
- Formalization of pedestrian and vehicular linkages and interconnections between the Hamlet zone and difficult to access commercial areas such as the Ace Hardware Warehouse, the Target warehouse facility and other smaller-scale adjacent retail uses;
- Branding of the corridor, drawing from the success of the Wilton Global Job Development Corporation's Blueprint for Economic and Job Growth, to firmly link the corridor to the new hamlet and nearby technology centers, thereby raising the awareness of the Exit 16 corridor as a site for new technology based industries;

Addressing these conditions has been at the forefront of the Town's recent planning initiatives and are supported by the Town's 2004 Comprehensive Plan (See Planning Area 7 of the Comprehensive Plan), as well as the initiatives expressed in the 2009 Wilton "Blueprint for Economic and Job Growth." The ultimate purpose of this linkage study is to identify and address current and proposed future land use development patterns, address vehicular and traffic safety concerns at key intersections, identify and address alternative modes of transportation such as bicycle and pedestrian improvements within and to the corridor, and increase the overall connectivity both through and to the emerging hamlet.



## Public Participation & Planning

To assist in the development of this study, and to provide local as well as regional guidance to the consultant team working on the study, a broad and diverse group of individuals was assembled to form the Exit 16 Linkage Study Advisory Committee (SAC). This group met on a semi-regular basis to discuss the development of the study and consisted of representatives from the Capital District Transportation Committee (CDTC), the Town of Wilton Town Board, the Town of Wilton Engineering and Planning Department, the Saratoga County Planning Department, the New York State Department of Transportation (NYSDOT), the Capital District Regional Planning Commission (CDRPC), the Wilton Water & Sewer Authority, Saratoga Economic Development Corporation, local business and/or land owners, and several residents of the Ballard Road area. Copies of all SAC meeting minutes can be found in Appendix A.

In addition to the input and oversight provided by the SAC, the Ballard Road area has been the focus of several past land use, planning and economic development studies that identified various recommendations and strategies for continued growth of the corridor. Elements of many of these existing studies were incorporated to some degree into this study. The following is a list of those previous studies:

- 2004 Town of Wilton Comprehensive Plan
- 2009 Wilton Blueprint for Economic and Job Growth
- 2009 Town of Wilton Traffic Planning Study Update Report
- Town of Wilton Zoning Ordinance
- 2007 Open Space, Recreation and Pathways Plan

Collectively, based on the current conditions of the study area and future growth and development anticipated by the 2004 Comprehensive Plan, the Study Advisory Committee developed four primary goals to serve as the basis for the study area concepts and options. The concepts and options were created to address the specific needs of the study area and are intended to guide the emergence of the Hamlet and more intense development activity in the surrounding areas:

### Wilton Exit 16 Linkage Study Goals:

1. Identify potential pedestrian, bicycle and trail improvements throughout the corridor including:
  - ✓ Sidewalks
  - ✓ Trail Connections within and connecting to the corridor
  - ✓ Pedestrian safety and flow

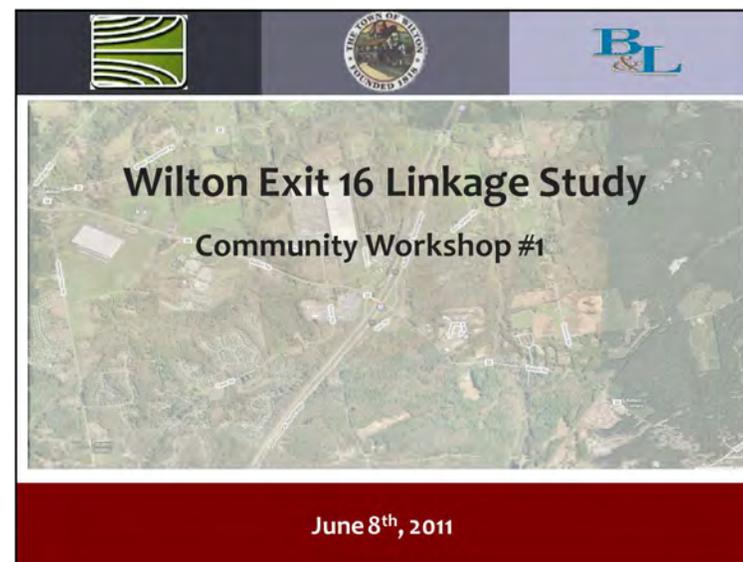


2. Encourage the emergence of the Hamlet at the Ballard Road/Traver Road intersection.
3. Accommodate future Light Industrial commercial growth in the corridor.
4. Address truck and vehicular access and circulation at the Northway Exit 16 interchange and ramps as well as at other key intersections within the corridor.

In addition to the guidance provided by the SAC, and to further support and validate the needs and objectives of the study, several meetings were held and various approaches were utilized to collect input from as many stakeholders as possible who may have had an interest or direct connection to the corridor and/or its businesses. Specifically, the public input process included the following elements:

1. A public Visioning Workshop
2. Survey of Park & Ride Users
3. Individual Meetings with Key Stakeholders
4. Discussions with the NYS Department of Transportation
5. Public Information Meeting on the final plan

The project SAC officially met for the first time in March 2011 to conduct a study kick off meeting. The purpose of this initial meeting was to allow committee members to meet each other, coordinate the tasks associated with the project, discuss the overall project schedule and discuss preliminary ideas, issues and concerns within the Study area. In addition, at several of the early SAC meetings, key stakeholders were identified who could be interviewed about their particular issues and concerns. These stakeholder interviews occurred during the mid-late summer 2011 and their comments were incorporated into the study's preliminary options and concepts.



In addition to identifying important stakeholders in the project study area, the SAC noted the need to investigate the informal park and ride lot located on the east side of the Exit 16 interchange near the intersection of Edie Road and Ballard Road. Given the heavy use of the park and ride lot relative to other formal park and ride lots in the Capital District and the fact that the lot is on private property the SAC requested that a survey be undertaken. A park & ride user survey was developed and distributed to 48 commuters by CDTC interns on June 17, 2011 to determine who was using the lot and their travel patterns. There was a 27% return rate on the surveys. The full park & ride user survey and results can be found in Appendix B.



To further bolster public input, an initial public information workshop was conducted in June 2011 to introduce the project to the general public, share existing conditions data about the corridor and solicit general feedback on opportunities and constraints that the SAC should be aware of in the study area. A summary of the workshop including the Power Point presentation is included in Appendix C. The following excerpts are from public comments received at the workshop that provide some insight into the issues and concerns expressed by the public:

*"Northway bridge at interchange gets congested due to truck traffic and the ramps being so close together"*

*"Cars heading west (on Ballard Road) can't get around trucks turning south (same with cars heading east and trucks turning north)"*

*"No center turn lane (on Ballard Road) is an issue; trucks don't use the center lane near truck plaza for turning"*

*"The Corridor currently still has a rural feel, residents would like to maintain that rural-ness" [Note: This comment was specifically referring to the area west of the Ballard/North/Traver Road intersection.]*

*"Can have businesses develop closer to road but maintain rural atmosphere through design guidelines and standards (buffers – trees, berms)" [Note: The comment refers to the need to provide adequate green space on the site to maintain a more natural look and feel in the hamlet area. Distribution centers should be properly screened from the roadway.]*

The draft options and concept plans were reviewed by the NYSDOT representative liaison to the SAC. As NYSDOT only owns the bridge and intersections related to the I-87 interchange, NYSDOT review of the concepts and options in this report was minimal. However, it was encouraged to ensure that the plans formulated for the Ballard Road/Northway Exit 16 Interchange were technically feasible and not in conflict with long range state highway planning and implementation initiatives. A meeting was held with officials from Saratoga County to ensure that the concepts and options were not in conflict with County plans and had no immediate fatal flaws as the County owns Ballard Road.

Based on the initial SAC meetings, the stakeholder interviews, the park & ride user survey results, NYSDOT/Saratoga County review and input from the public information workshop, preliminary land use, transportation and pedestrian options and concept plans were developed for the Exit 16 study area. These draft options and concept plans were reviewed with the SAC and modified based on their input. The final draft options and concepts expressed in this study represent preferred ideas to address short term and long term efforts to modify and improve current and anticipated future transportation and land use issues found within the study area.



## Existing Conditions

### Community & Regional Setting

Located only a few miles north of the City of Saratoga Springs, the Wilton Exit 16 Linkage study area is centered around the Ballard Road/Northway Exit 16 interchange in the northern portion of the Town of Wilton in Saratoga County. This part of northern Saratoga County and the Town is defined by its relatively rural, suburban character. Wilton has experienced significant residential and commercial growth over the past twenty years, particularly in the southern portion of town. However, this growth has continued to move north up the I-87 corridor and is now evident in the new residential subdivisions and commercial uses found along and in close proximity to Ballard Road.

As noted previously, the primary spine of the study area is the Ballard Road (a.k.a., County Route 33) corridor that runs from Commerce Park Drive in the east to Northern Pines Road in the west. The study area is also one of only two areas in the Town of Wilton to have an I-87 northbound and southbound exit interchange. Unlike the Exit 15 area which has become the retail/commercial center in Wilton, the Ballard Road/Exit 16 area has emerged as one of the primary centers for light industrial and large-scale warehouse use in the Town.

The Town of Wilton does not have any incorporated Villages within its municipal boundaries however several smaller hamlet areas do exist. One such hamlet area is located at the intersection of Ballard Road and Traver Road. Traditionally known as the "Gurn Springs" Hamlet, this immediate area is characterized by smaller scale commercial uses typical of many older hamlets. However unlike most hamlets, this area is not well defined as a hamlet and has minimal residential land uses in close proximity to the central intersection. More dense residential neighborhoods can be found to the west and south of the hamlet area. The one exception is the Adirondack Estates Mobile Home Park located roughly one-quarter of a mile to the north of the hamlet on Gordon Lane.

Although uses in this area are predominately commercial in nature, there are governmental and educational uses as well. There are no direct rail lines or connections within the study area nor are there any regional airports. The Town's 2004 Comprehensive Plan actively encourages supporting the larger-scale light industrial and warehouse uses in this area as well as supporting further development and re-definition of a mixed-use hamlet. Existing conditions can be seen in Figure 12 of Appendix G.

### Land Use

The Exit 16 study area contains a diversity of land uses with the majority being commercial and light industrial in nature. There are also significant tracts of open/vacant land suitable for future development in close proximity to Ballard Road and adjacent existing commercial land uses. In the immediate Study area, there are approximately 85-90 parcels comprising roughly 1,200 acres of land.





In addition to the specific zoning district requirements found in the Town's Zoning Ordinance, the Town adopted revised H-1 Hamlet District regulations in 2008. The intent of the H-1 district is to *"encourage increased pedestrian oriented residential, commercial and retail activity and create a location where greater flexibility is permitted and encouraged for the mixed use of retail, office and residential uses"*. Within the Exit 16 Study area, the H-1 Hamlet zone is generally located on the southwest side of the Ballard Road/Traver Road intersection, and extends southward past the Wilton Town Office complex. A thin sliver of the lands to the east of Traver Road are also included in this H-1 zoning district. It was envisioned by the Comprehensive Plan that this small portion of the Ballard road corridor could be developed into a mixed-use hamlet center providing smaller-scale retail and office uses to support the larger, more intense commercial uses in the area.

These H-1 regulations included specific design guidelines as summarized below:

*Building Location & Setbacks* – buildings are to be located between 15-25 feet of the right-of-way to minimize the amount of open frontage and still accommodate necessary utility infrastructure like sewer and water mains.

*Site Design* – in order to accommodate implementation of a "Greenbelt Plan" in the H-1 district, the required front 15 feet of a parcel shall only be used for municipal easement of infrastructure amenities as well as ornamental light poles, street trees, grassy areas, etc.

*Architectural Design Standards* – buildings and their main entries shall be located towards the front and relate to public streets. Entrances to buildings should be architecturally defined and articulated by architectural elements.

*Parking and Vehicle Access* – Parking shall be in the side or rear yards of buildings. Interconnections between adjacent commercial uses shall be required.

*Pedestrian and Bicycle Access* – Sidewalks and multi-use trails should be incorporated into the site planning process. Public spaces are strongly encouraged in the H-1 district.

Guidelines for new buildings encourage multi-story, mixed-uses with commercial/retail uses on the ground level and apartments or offices on the upper levels. Buildings shall generally relate in design features and scale to the adjacent buildings. Buildings should be designed to enhance and contribute to the surrounding area, rather than detract from it.

Guidelines for new building design discourage long uninterrupted stretches of wall or roof plane. Pitched hip or gable roofs are encouraged. Mechanical equipment such as air conditioning units, HVAC systems, exhaust pipes or stack, elevator housings and satellite dishes and other telecommunications-related devices shall be reasonably screened from view from public right-of-ways.



## Major Employers

Proximity to the I-87 Exit 16 interchange and access to an improved County highway (Ballard Road) have led to the development of several large, regional, commercial distribution facilities (see Appendix G Figure 13). The Ace Hardware distribution facility is roughly 700,000 square feet in size and is located at the western end of the study area on Ballard Road. The Target Corporation distribution facility is roughly 1,000,000 square feet in size and is located in the center of the study area just to the north of Ballard Road on North Road. In addition to these stand alone distribution centers, there is a concentration of new office space (Wilton Medical Arts Center & Wilton Global Business Park) as well as small scale retail uses and educational and civic uses. Approximately 20 individual businesses and organizations were identified that currently are located within the study area. These businesses and organizations employ roughly 1,650 people who travel to and from the study area every day. Table 1 below outlines these employers, their locations within the study area and the number of employees each has.

Table 1: Major Employers

	Business	Address	# of Employees
1	Target Distribution Center	129 North Rd.	700
2	Ace Hardware Distribution Center	55 CR 34	345
3	Wilton Medical Arts	North Rd.	200
4	DA Collins	265 Ballard Rd.	100
5	Parillo - Wilton Travel Plaza	215 Ballard Rd.	71
6	Ballard Elementary	300 Ballard Rd.	49
7	Granite & Marble Works	8 Commerce Park Dr.	18
8	Ernst Repair Garage	9 Commerce Park Dr.	2
9	Adirondack Mechanical Services / Eagle Construction	1 Commerce Park Dr.	18
10	Redbud Development	2 Commerce Park Dr.	3
11	Affordable Storage	3 Commerce Park Dr.	6
12	Highland & Company	10 Commerce Park Dr.	25
13	Saratoga / Titan Propane	4 Commerce Park Dr.	9
14	KLN LLC / Premium Provisions	12 Commerce Park Dr.	8
15	Rodney Powers - Contractor	14 Commerce Park Dr.	2
16	Town of Wilton	22 Traver Rd.	71
17	Alpin Haus	30 Gordon Lane	15
18	Stewart's	225 Ballard Rd.	6
19	NYS Police	301 Ballard Rd.	N/A
20	Wilton Fire Department	270 Ballard Rd.	N/A
<b>TOTAL:</b>			<b>1648</b>



## Natural Resources

Within the Exit 16 study area there are several areas of natural resources that merit consideration if additional development is to occur. Bisecting the study area in a north-south orientation is the Snook Kill. This is the primary surface water resource in this part of northern Wilton and is classified as C(T). This water quality classification indicates that recreational use of the stream is acceptable as is fishing. As such the NYS Department of Environmental Conservation (DEC) stocks this portion of the Snook Kill with Brown Trout on a yearly basis.



There are also substantial State (NYS DEC) and Federal wetlands within the Exit 16 study area. According to the Blueprint for Economic and Job Growth Report, there are approximately 150 acres of wetlands that traverse through the study area. Most of the federally designated wetlands are found along the Snook Kill, while the State designated wetlands are somewhat more dispersed across the study area. It is also noteworthy to mention that of all the lands within the study area that are constrained, just five parcels contain almost 50 percent of those constrained lands. There is also a large aquifer complex that underlies a majority of the study area and is a source of water for local homes and businesses that do not enjoy municipal water service. Maps of these resources can be found in Appendix G Figures 7-10.



## Public Infrastructure

There are significant public infrastructure assets within the Exit 16 study area. Vehicular access to the Exit 16 study area is primarily via the Adirondack Northway (I-87) and US Route 9 and is more fully described in the following section. Other important public infrastructure assets include municipal water, municipal sewer, gas, electricity, fiber optics and telecommunications.

Adirondack Northway Interchange 16



Based on information provided by the Town of Wilton, municipal water is present in the central and southern portion of the study area and is distributed through a series of water mains that extend along Ballard Road from Traver Road on the east to the Ballard Elementary School in the western portion of the corridor. The recent completion of the new 36" Saratoga County water main along US Route 9 has provided additional opportunities for interconnection of the municipal water supply in the western portion of the study area.



Sewer infrastructure is also present in the study area. A trunk line extending from a 10" primary sewer main along Northern Pines Road provides wastewater collection to the southern and central portion of the study area. Situated along Ballard Road, this sewer line services the bulk of the existing businesses in the corridor up to and including those on North Road. Currently there are no municipal water or sewer services east of the Northway on Ballard Road, limiting larger-scale commercial development potential on these vacant lands. (See Figure 14 in Appendix G for mapping of sewer and water infrastructure in the study area).

### Transportation Infrastructure

The primary roadway through the study area is Ballard Road which is owned and maintained by Saratoga County (CR 33). Within the limits of the study area, Ballard Road extends from Northern Pines Road east to Commerce Park Drive. It is a two- to three-lane facility with wide shoulders. Signalized intersections along Ballard Road include Traver Road/North Road and the southbound and northbound ramps at I-87 Exit 16. The functional classification of Ballard Road is Rural Major Collector throughout the study area as is Traver Road. All other roads are classified as local.

### *Existing Plans*

Several plans and traffic studies have been completed which identify concepts and options for the transportation system in the Exit 16 Study area. Those plans were reviewed as part of this study and include the following:

- 2004 Town of Wilton Comprehensive Plan  
The town's Comprehensive plan recommended a corridor study of the Ballard Road area to address issues such as future land use conflicts, access management, development buffers, landscaping and site plan requirements. In addition, the development of a Hamlet at Travers Road/Exit 16 was recommended with design elements that consider traffic calming, pedestrian accessibility, an attractive streetscape, site designs with buildings placed closer to the street and parking in the rear or on the side, quality green space, mixed uses (i.e. residential over office space), access management, and shared parking arrangements.
- Open Space, Recreation and Pathways Plan, April 2007  
This plan was prepared to develop strategies to preserve and enhance open space, recreation and pathways throughout the town for the enjoyment of future generations. Fifteen recommendations were proposed for pathways including the development of a bike and walking trail system that links parks, subdivisions, open space parcels, service providers, shopping areas and natural areas. The trail system should include a variety of trail types (including on-road bike paths and off-road multi-use trails) and should have the dual purpose of facilitating transportation as well as offering recreational opportunities. Future reconstruction of the bridge at Exit 16 by NYSDOT should consider the incorporation of bicycle and pedestrian pathways to safely connect the trail opportunities on both sides of the Northway.



- 2009 Update to the Traffic Planning Study, May 2009  
The purpose of this study was to update the assessment of existing and projected traffic conditions and recommend necessary improvements to accommodate increased traffic volumes associated with further development within the Town of Wilton over the next 10+/- years. The study primarily focused on town owned facilities. Within this study, the intersection of Ballard Road/Traver Road was evaluated and operates with little delay. However, future traffic projections indicate significant increases in volumes on the Ballard Road corridor and recommended a future study of the corridor. This current study implements that recommendation.
- Traffic Impact Study, Wilton Global Development Campus, October 2003  
This study was prepared to evaluate the traffic impacts of a potential 500,000 square foot (SF) mixed-use development at the former Wilton Developmental Center along the south side of Ballard Road. Uses include the corporate headquarters of D.A. Collins Construction Co. and possibly office, light industrial, research & development, etc. The results of the study indicate that the Ballard Road roadway network could support up to 300,000 SF of development with signal timing changes and without the need for infrastructure improvements. To accommodate the build-out at 500,000 SF, roadway improvements would be needed along Ballard Road between Traver Road and I-87 as well as ramp widening at the Exit 16 northbound off-ramp.

#### *Traffic Counts and Levels of Service*

Intersection turning movement counts for the weekday afternoon peak hour were provided by CDTC for the intersections of Traver Road/North Road (April 2011) and the Exit 16 Ramps (October 2010). See Appendix G Figure 4 for the existing traffic volume data. These volumes are consistent with those collected in 2003 for the *Wilton Global Development Campus*. Truck percentages are high at the Ballard Road intersections with North Road/Traver Road and the Exit 16 ramps. For seven of the movements at these three locations, the percentage of trucks ranges from 8% to 16%. According to NYSDOT, truck volumes are considered high when they represent more than 8% of the traffic on a collector. Considering the distribution and warehouse land uses surrounding Ballard Road, it is not surprising that truck traffic is high. The 16% truck percentage is for the eastbound right-turn at the Exit 16 southbound ramp.

Based on the analysis for the *Wilton Global Development Campus*, completed in 2003, the signalized intersections are generally operating in the level of service A/B/C range with left-turn movements on Ballard Road at the ramps experiencing more delay for level of service D. Field observations indicate long queues between Traver Road/North Road and the Southbound Ramps during a short duration period coinciding with afternoon shift changes at Target and Ace. The 2010-2011 existing conditions data confirm that the level of service at the signalized intersections remain in the B/C range. The analysis can be viewed in Appendix E.

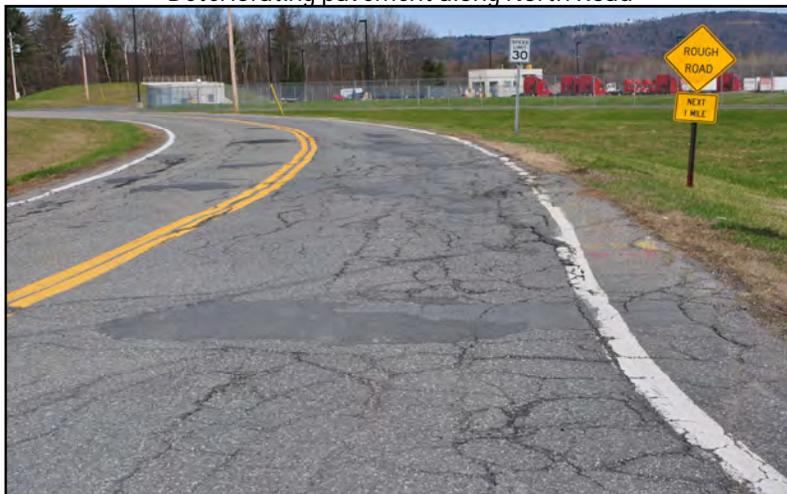


### *Physical Condition of the Roadways*

Ballard Road has a pavement condition rating of 7 in the area west of I-87 while east of I-87 it is an 8 (based on 2009 data collected by CDTC). The NYS bridge condition rating at the Ballard Road/I-87 Interchange is 5.42 and the bridge is not considered to be structurally deficient (bridge rating from NYSDOT and the bridge was last inspected 9/4/2009). Overall, the major infrastructure in the corridor is in good condition.

However, North Road from its intersection with the Target entrance to the study area limits is in an advance state of deterioration such that total reconstruction is needed. The intersection of North Road at the Target entrance is an unconventional three-way intersection that operates under yield sign and multiple stop sign controls. The alignment of the intersection favors traffic entering and exiting Target while the traffic controls favor traffic traveling along North Road.

Deteriorating pavement along North Road



Looking southeast to intersection on North Road

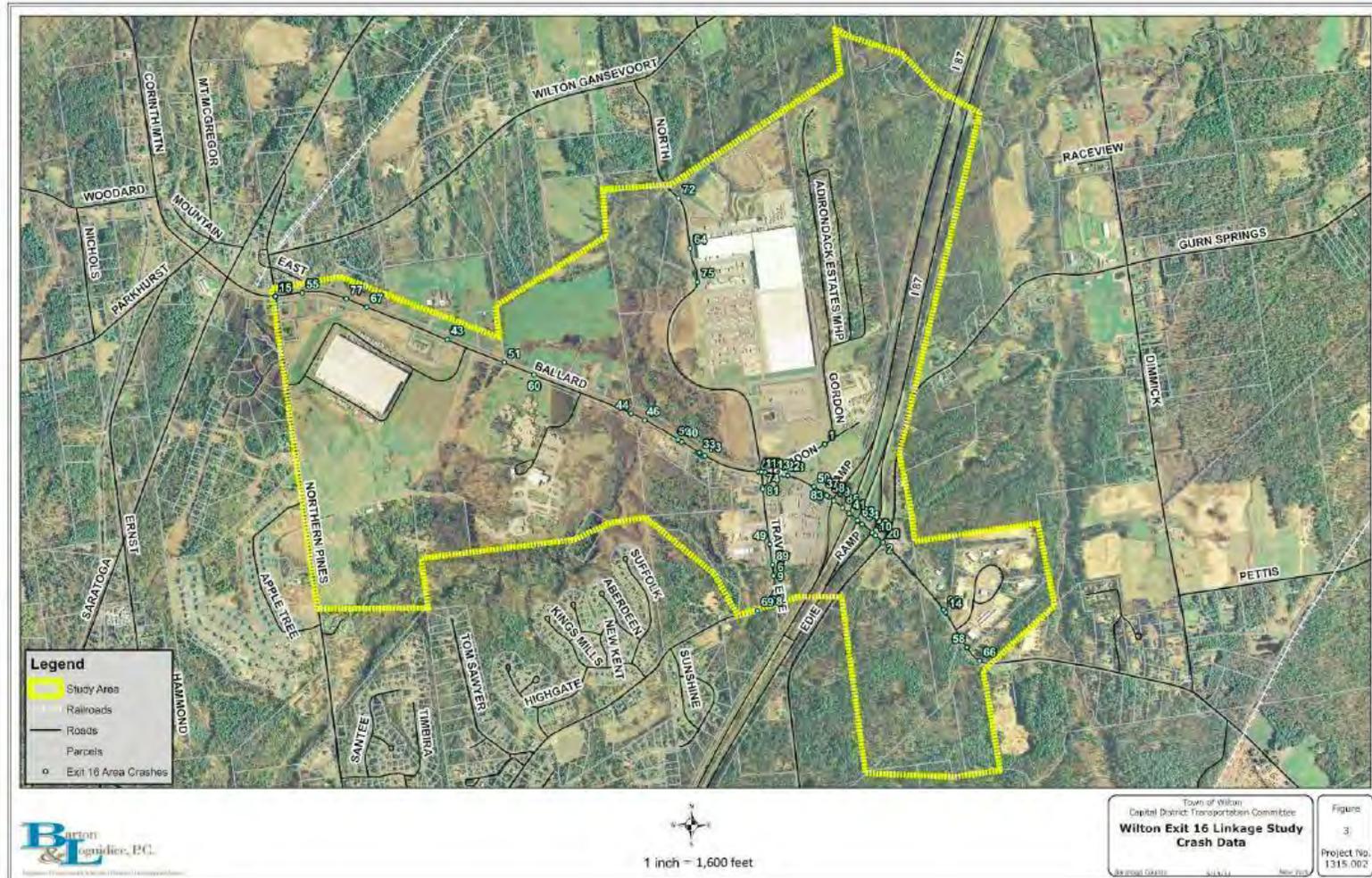


### *Crash Data*

Crash data provided by CDTC for the five-year period of 2005-2009 indicate a total of 90 crashes in the study area. There were 49 crashes on Ballard Road between Traver Road/North Road and Edie Road: 0 fatalities, 12 personal injury crashes, and 37 property damage only and non-reportable crashes. Prominent types of crashes among the 49 were rear-end and left-turn. Crash data are shown in Appendix D and crash maps are shown in Appendix G Figures 3-5 along with a crash location map in Figure 3 below.



Figure 3: Crash Location Map for Crashes from 2005-2009





### *Park and Ride*

Although there is no transit service in the study area, an informal park and ride lot exists on private property in the northeast quadrant at the intersection of Ballard Road and Edie Road. According to the land owner, the site has been used by commuters as a park and ride drop off and pick up location for many years. The land owner has allowed the lot, plows the lot in the winter and has even expanded and paved certain sections of the lot over time.

Observations of this parking area taken over the span of one week in the summer of 2011 indicate that the average daily usage is approximately 50-60 vehicles not including the vehicles actually on the road for the carpool. According to anecdotal information provided by Capital District Transportation Authority (CDTA), this is one of the most heavily used informal park & ride facilities in the greater Capital District. To learn more about who is using the lot and where they were coming from and going to, a user survey in the form of a mail-back questionnaire was distributed by CDTC on June 17, 2011. Forty eight surveys were distributed by CDTC interns and 13 were returned (27% response rate). Of the users that responded, most were daily users of the lot who carpooled to work over 30 miles away generally to Latham and Albany. Improvements to the private lot that are suggested by the users primarily include improved pavement and better lighting. Several also noted that they did not want to lose access to the lot in the future. The survey results are summarized in Appendix B.

Existing Informal Park & Ride Lot



The CDTA is in the midst of a Regional Park and Ride Lot study designed to evaluate the current park and ride lots across the region and develop criteria and options for the creation of park and ride lots in the future. A draft report is in development and contains a section on park and ride lot expansion/improvement recommendations. These concepts are being utilized to highlight future options for an Exit 16 park and ride lot.

### *Bicycle and Pedestrian Infrastructure*

A key deficiency found throughout the Exit 16 study area is a lack of pedestrian and bicycle facilities. Research into existing land uses and employers within the corridor indicate that there are approximately 1,650 employees on any given day working in the general area near the Traver Road/Ballard Road intersection. As such, there are currently no pedestrian facilities in place such as sidewalks, demarcated crosswalks, pedestrian



activated walk signals, etc., connecting major employment nodes to businesses within the corridor. As a result, many employees who routinely venture out of their workplace during the day for lunch or errands are forced to use their vehicles adding increased volume and congestion to the local road systems. Potential health benefits by not encouraging and supporting physical walking activities by local employees are being lost by a lack of pedestrian amenities in this corridor.

Cyclist in ROW



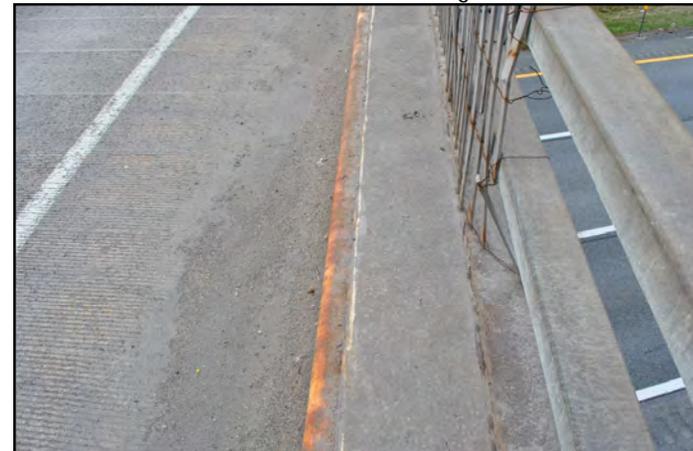
Pedestrians walking in ROW



Recent development projects that have gone through the Town's site plan review process like the Stewarts Shop at the corner of Traver and Ballard roads and the Glens Falls Medical Arts building on North Road do have internal sidewalks. However they do not have street side pedestrian sidewalks that connect them to other adjacent land uses. Adequate frontage does exist for each of these existing commercial uses to install sidewalks along or within the right of way, so the potential does exist for future sidewalk development within the hamlet area.

The lack of sidewalks on the Northway Exit 16 bridge/overpass is an issue that has been repeatedly raised by the public and is noted in the Open Space, Recreation and Pathways plan. This 2-lane bridge was not designed to specifically include pedestrian facilities and only has four foot wide shoulders with raised curbs for drainage/snow storage. Using this shoulder as a pedestrian in winter is challenging.

Curb on Exit 16 Bridge





Although there are no sidewalks within the study area, there are existing trails and pathways and opportunities for expanded trails throughout the Ballard Road corridor. The shoulder along Ballard Road is quite wide (in many places over 8 feet in width) and is suitable for on-road pedestrian and bicycle use in warmer months. Winter conditions make utilizing Ballard Road for such uses difficult given the need for snow removal and snow storage along and within this shoulder area. Other on-road shared use lanes, trails and pathways exist along US Route 9 (Saratoga County Bike Route 9), Wilton-Gansevoort Road, Corinth Mountain Road and Dimmick Road. In addition to these on-road trails and pathways, there is a natural trail system behind Wilton Town Hall that extends from Traver Road west behind the Kings Mills subdivision and the Wilton Global Development site off Ballard Road. Opportunities for new and expanded pedestrian and bicycle trails and pathways are more fully described in the concepts and options section of this study. A map of existing and proposed trail improvements can be seen in Appendix G, Figure 11.

#### Environmental Justice and Environmental Mitigation

Federal law requires planning studies such as the Wilton Exit 16 Linkage Study to document any potential environmental justice and environmental mitigation issues. There is one small section of the study area that has an environmental justice target population (low income). A discussion of the issue and map can be viewed in Appendix F. In addition, per federal requirements the study area was screened utilizing CDTC's environmental mitigation procedures. Many of the issues screened were covered in the natural resources section of this report. Water resources, especially wetlands and the aquifer in the study area, have been noted and will need to be considered when land use and transportation projects are designed and implemented in the study area. A map of potentially affected resources is also included in Appendix F.



## Land Use and Transportation Analysis

Given the current complexion of existing land uses, and the large amount of vacant land across the study area, the SAC sought to gauge the anticipated future land use development potential within the study area. CDTC staff, in conjunction with the SAC and project consultants developed land use forecast models for the Exit 16/Ballard Road area. The following summarizes the approach taken to develop the land use forecasts for the Exit 16/Ballard Road Linkage Study and the potential future motor vehicle trips related to future land use. As a basis for these models, the Wilton Blueprint for Economic Growth Study was reviewed. That study evaluated at a sketch level of detail the amount of land that might be available for future development. The analysis identified 12,449,752 SF of land area with development potential (including land needed for parking). Given that future land uses have not yet been identified in the Exit 16/Ballard Road study area, assumptions were made regarding the potential future mix of land uses based on current zoning.

Two land use mixes were developed:

- Land Use Mix A:       52% light industrial     45% office       3% retail
- Land Use Mix B:       72% light industrial     25% office       3% retail

These general land uses are defined as follows:

- Light Industrial = warehousing/light manufacturing (very low trip generators at peak hours)
- Office = Technology park offices/research and development (lower trip generators than traditional office buildings at peak times)
- Retail = Specialty retail that tends to be small, service oriented retail stores such as small restaurants, small clothing stores, real estate offices, florists, dance studios, etc.

Based on those mixes, the square footage of potential building area (not including parking) was calculated for each of the three land use types assuming a 50% build out scenario through the year 2025. This resulted in the following:



Table 2: Build Out Scenarios

	Land Use Mix A 50% Build Out (SF)	Land Use Mix B 50% Build Out (SF)
Light Industrial	1,618,468	2,240,955
Office	1,220,478	722,488
Retail	62,248	62,248
Total	2,901,194	3,025,691

Estimates regarding the number of trips that might be added to the transportation system were then developed based on these land use types. Trip generation rates were reviewed from ITE's Trip Generation report and from CDTC observed trip generation rates of similar land uses in the Capital Region. The tables below show the estimated number of trips based on the potential land use mixes:

Table 3 and 4: PM Peak Hour Trip Generation with Forecasted Land Uses

	PM Peak Hour Trips Mix A (2,901,194 SF)	Number Entering	Number Exiting
High Cube Warehouse (LU 152) (Light Ind.)	162	53	109
Research and Development Center (LU 760) (Office)	653	98	555
RPI Tech Park (CDTC Observed) (Office)	391	43	348
Specialty Retail Center (LU 814) (Retail)	84	37	47
Total Trips	1,290	231	1,059

	PM Peak Hour Trips Mix B (3,025,691 SF)	Number Entering	Number Exiting
High Cube Warehouse (LU 152) (Light Ind.)	224	74	150
Research and Development Center (LU 760) (Office)	387	58	329
RPI Tech Park (CDTC Observed) (Office)	231	25	206
Specialty Retail Center (LU 814) (Retail)	84	37	47
Total Trips	926	194	732



To model potential traffic impacts, most of these proposed trips were added to the system west of the Northway (I-87) though a small number of trips related to the office land use were added to the system east of the Northway as follows:

Tables 5 and 6: PM Peak Hour Trips Added to the System

<i>Building Mix A</i>	Trips Added West of I-87		Trips Added East of I-87		Overall Total
	Number	Number	Number	Number	
	Entering	Exiting	Entering	Exiting	
High Cube Warehouse (LU 152) (Light Ind.)	53	109	0	0	162
Research and Development Center (LU 760) (Office)	90	509	8	46	653
RPI Tech Park (CDTC Observed) (Office)	39	320	4	28	391
Specialty Retail Center (LU 814) (Retail)	37	47	0	0	84
<b>Total Trips</b>	<b>219</b>	<b>985</b>	<b>12</b>	<b>74</b>	<b>1,290</b>

<i>Building Mix B</i>	Trips Added West of I-87		Trips Added East of I-87		Overall Total
	Number	Number	Number	Number	
	Entering	Exiting	Entering	Exiting	
High Cube Warehouse (LU 152) (Light Ind.)	74	150	0	0	224
Research and Development Center (LU 760) (Office)	50	283	8	46	387
RPI Tech Park (CDTC Observed) (Office)	22	177	3	29	231
Specialty Retail Center (LU 814) (Retail)	37	47	0	0	84
<b>Total Trips</b>	<b>183</b>	<b>657</b>	<b>11</b>	<b>75</b>	<b>926</b>

The resulting traffic forecast for the two land use scenarios is summarized and shown in Appendix E. The results appear to indicate that despite increasing the land usage by 50%, the existing roadways and intersections will still perform at acceptable levels as shown in the level of service (LOS) analysis also in Appendix E. The LOS analysis represents the worst one hour of time when traffic is the heaviest in the afternoon peak.



Table 7: Summary of Level of Service Analysis for Signalized Intersections

Intersection		Traffic Control	PM Peak Hour		
			2010 (Existing)	2025 (Mix A)	2025 (Mix B)
Ballard Rd/I-87 NB		S	A (13.2) A (8.4) C (24.7)	C (52.2) A (8.3) D (38.9)	C (31.7) A (8.3) D (47.5)
EB	TR				
WB	LT				
NB	LR				
Overall			B (15.8)	C (36.1)	C (30.0)
Ballard Rd/I-87 SB		S	A (9.7) A (7.8) B (19.2)	C (45.8) A (7.7) C (31.2)	B (18.0) A (7.3) C (32.6)
EB	LT				
WB	TR				
SB	LR				
Overall			B (10.8)	C (33.1)	B (16.6)
Ballard Rd/North Rd/ Traver Rd		S	C (22.4) B (18.0) C (25.6) B (19.8) C (28.8) C (39.7) A (8.6)	C (33.6) D (43.7) D (47.1) B (19.5) D (43.0) C (38.6) B (12.9)	C (33.6) C (25.1) D (46.1) B (20.3) D (44.0) D (48.1) B (13.0)
EB	L				
WB	TR				
	L				
NB	TR				
	LTR				
SB	LT				
	R				
Overall			C (24.1)	C (37.2)	C (31.7)

Key: S = Signalized  
 EB = Eastbound, WB = Westbound, NB = Northbound, SB = Southbound  
 L = Left, T = Through, R = Right  
 X (Y.Y) = Level of Service (Delay, seconds per vehicle)



## Proposed Concepts and Options

The review of existing conditions concluded that the Ballard Road corridor currently provides adequate levels of service to accommodate existing truck and vehicular traffic. In addition, the sketch level land use and transportation forecasts produced for this study indicate that the corridor will continue to operate at acceptable levels of service even with future growth. However given the significant development potential that exists in the corridor, even beyond that evaluated in this study, improvements and modifications to existing road segments and intersections may be needed as future development occurs. With this in mind, the study advisory committee (SAC) focussed on developing a number of land use and transportation related concepts and options for the short and long terms that support the study goals. Many of these concepts and options are not needed today and may only be necessary with new development. Therefore, a mitigation fee process should be considered for the study area. The town should also use these ideas over the long term in the site plan review process for new development (including any required traffic impact studies) and as reference for when the state and/or county is pursuing major infrastructure projects in the study area. It should be noted that capacity additions related to speculated future development are not considered by NYSDOT as a matter of policy. The options and ideas are organized into various categories, the specific components of which are outlined below.

Future Land Uses – The Exit 16 corridor has been the focus of several planning studies and is widely considered by the Town to be a prime area for increased commercial/light industrial development. As such, this study recognizes this development potential and has offered concept level options that not only support this type of development but supports the re-establishment of the Gurn Springs Hamlet.

Future Roadway and Commuting Improvements – To maintain the efficient use of the current road network and to offer improvement suggestions to road segments, intersections and the Exit 16 interchange as new development occurs, a number of roadway and intersection options have been identified. Opportunities for park and ride are also explored to support study area commuters.

Future Pedestrian/Bicycle/Trail Improvements – Options for pedestrian and bicycle use of the corridor were developed to implement the Town's Open Space, Recreation and Pathways plan, to fill gaps in the existing bicycle and pedestrian system and to offer multi-modal transportation options in the study area as new development occurs.

### Exit 16 Study Area Land Use and Transportation Circulation Concepts

To graphically express the general land use and transportation issues and opportunities within the study area, a land use and transportation circulation concept map was created. This concept map depicts many of the potential future land uses, potential future road improvements, potential future bicycle/pedestrian/trail links and interconnections, and potential park and ride opportunities described in this plan. The map was developed using input from the SAC, stakeholders and the public and is illustrated in Figure 4 and again in Appendix G Figure 15.



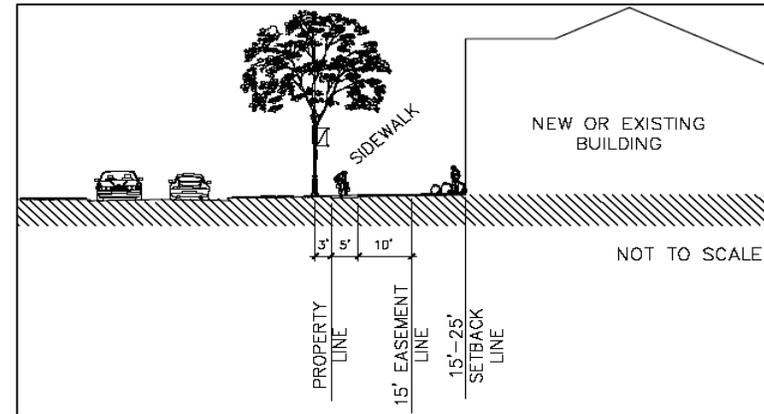


### Future Land Uses

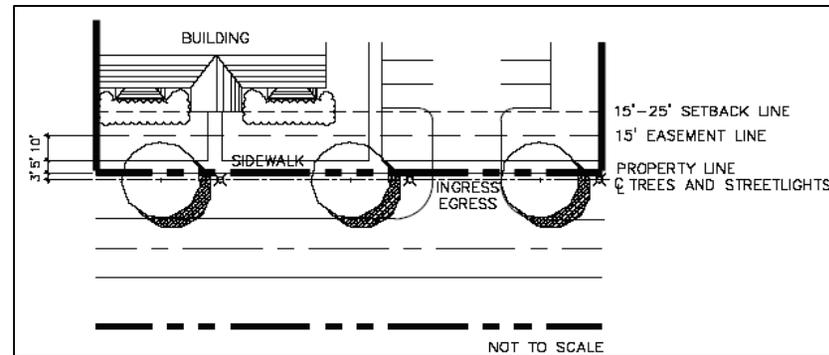
The Town Comprehensive Plan and recently revised zoning law clearly identify the Ballard Road corridor for future mixed use development (in the form of a re-established Gurn Springs Hamlet) and light industrial/commercial uses. Although the Gurn Springs Hamlet area has yet to emerge as a clearly defined hamlet, it is zoned for hamlet uses (H-1) as described on page 14 and is intended to provide service/restaurant/retail options for employees in the study area. The Wilton Exit 16 Linkage Study reinforces the need for the H-1 District to support smaller-scale, mixed use land uses and site designs that encourage walking, especially given the development potential in other sections of the study area for industrial/commercial uses. The Town Planning Board should carefully review any development proposed in the H-1 District for consistency with the adopted site design guidelines and standards.

A key to the re-establishment of the hamlet is the incorporation of pedestrian facilities into the designs of all new development. The H-1 District zoning requires that sidewalks be placed to safely separate pedestrians from vehicular traffic. In addition, pedestrian resting spots such as benches and low lying walls should be incorporated into a site's development to accommodate pedestrian and bicycle access. Bike racks should also be provided within accessible, visible locations. The site plan review process will be critical to the implementation of pedestrian and bicycle facilities in the Hamlet area.

To potentially assist with re-establishing the Gurn Springs Hamlet, the Wilton Medical Facility owns several larger parcels of land near its current building east of North Road and north of Ballard Road. Should the medical facility pursue an expansion toward Ballard Road, the design of the facility should be encouraged to support the H-1 District by utilizing the H-1 site design guidelines. Although the lands are not currently part of the H-1 District, encouraging design elements that are consistent with the hamlet district will ensure long term continuity with development on the south side of Ballard Road and may allow the medical facility to serve as an anchor to the Gurn Springs Hamlet.



Cross Section of Build-to Line for New Development in H-1 District, Parking in Rear



Greenbelt Plan View for the Hamlet One (H-1)



Commerce Park Industrial Park



Outside of the Hamlet area there are a number of parcels that may support future commercial/light industrial uses as the town is aggressively pursuing new development of this type in the Ballard Road corridor. One opportunity site is the area along the north side of Ballard Road just west of North Road. Large tracts of vacant open land are present and in close proximity to the Target and Ace distribution facilities. The lands are well served by existing sewer and water infrastructure and several hundred thousand square feet of new commercial development may be possible. Another site is the Wilton Global Development Campus which has the potential to accommodate upwards of 500,000 square feet of new or expanded light industrial and commercial office uses. Finally, there are significant vacant lands in the vicinity of the Commerce Industrial Park on the south side of Ballard Road which are viewed as opportunity sites for future development.

As noted in the Town Comprehensive Plan, reducing or eliminating conflicts between commercial/industrial development and existing residential development is desired in the Ballard Road corridor. In addition, there is a desire outside of the Hamlet area to maintain the corridor's rural character. Therefore, the town should consider appropriate access

management (discussed in the next section) and buffering of future development throughout the study area in the site plan review process. The H-1 Hamlet zone outlines site design guidelines for buffering (landscaping, fencing, berming, etc.) and a 35% green space requirement. Similar site design elements should be considered for new development throughout the study area. Proper buffering of wetland features should also be considered during the site plan review process as a method of preserving water quality.

Finally, a number of recreational opportunities exist throughout the study area. Incorporating trail facilities throughout the study area is a long term goal of the town and is discussed on page 38. A trail network can provide access to the wetlands and streams for fishing and other recreational activities in the future. In addition, a new town park might be considered in the future on New York State owned lands south of the Ace Warehouse and the Wilton Global Development Campus. A park at this location would serve as a buffer between the neighborhood on the south and the commercial/industrial development to the north and would also serve to maintain valuable open space in the corridor.

### *Future Roadway and Commuting Improvements*

The sketch level evaluation of traffic conditions in 2025, based on two future growth scenarios, indicate that the Ballard Road corridor will operate at acceptable levels of service with future growth. However given the significant development potential that exists within the corridor, even beyond what was evaluated in this study, improvements and modifications to existing road segments and intersections may be needed as development occurs. Several improvement concepts and options were developed for access management, intersections and roadways, and park and ride. Many



of the concepts and options, especially for intersections and roadways, will only be needed with new development. The town should work closely with developers to help pay for the improvements as public funds for large scale capital projects are not likely to be available in the short term, particularly federal funds which may not be available for new projects for at least 8 to 10 years. Even if federal and state funds are available, they will be highly competitive. As a result, the town should consider implementing a mitigation fee program for developers to help pay their fair share of the cost of transportation improvements made necessary by new development projects. A generic environmental impact statement is needed to establish the legal framework for mitigation fees.

### Access Management

Access management, which addresses the need to pro-actively plan for and manage how vehicles access properties and roads within the corridor, should be an intricate part of every future development proposal. The primary areas for growth in the study area are on the north side of Ballard Road, west of the Northway; as well as the south side of Ballard Road, east of the Northway. As these areas develop, it is important to apply access management principles to their access points. Driveways to the mainline should be limited, should be well-defined and should be directly across from other driveways. Cross access among adjoining parcels should be encouraged and North Road should be evaluated as a primary access point for the parcels north of Ballard Road. If warranted, a new signal may be needed if extensive new development is constructed on the parcels south of Ballard Road with driveway access at the intersection with Commerce Industrial Park. In addition, shared driveways, dedicated access roads off of primary roads and shared parking should be used in the hamlet area as well as in any newly developed area.

Scotty's Restaurant & Truck Stop



There are currently multiple curb cuts along the eastern end of Ballard Road from the Traver Road intersection to the Exit 16 interchange. Proper access and road delineation techniques should be applied to this segment to alleviate conflict points in this area of higher traffic relative to the rest of Ballard Road. A boulevard treatment could be considered to better define lane separations, reduce driveway widths, add street trees, add walking/biking facilities and assist in creating a sense of place as one approaches the Gurn Springs Hamlet core. A planted raised median could also be considered from the Ballard/Traver Road intersection east to the Cemeteries on Ballard Road to create a gateway entrance to the Hamlet and to offer opportunities for pedestrian refuge. It should be noted that a raised median will preclude and/or limit driveway access. Aggressive access management applications in this and in other parts of the Ballard Road corridor will maintain efficient traffic operations in the corridor over the long term while also enhancing bicycle and pedestrian access.



The informal park and ride lot located northeast of the Ballard/Edie/Gurn Springs Road intersection has about 170 feet of open access across its frontage and vehicles park abutting Ballard Road. Should this lot become a formal park and ride lot or should some other land use be proposed, access management controls will be needed to reduce the open driveway access width along the frontage.

Tools are available to the town to more strongly consider access management in the Ballard Road Corridor during the site plan review process. In 2009, CDTC completed an Access Management Study for a major corridor in Albany County within which a number of useful local access management planning tools were developed and made available for use throughout the Capital District. Included in Appendix H are CDTC's Site Plan Review Access Management Checklist, an Access Management Toolbox, and sample zoning text for Access Management.

The Site Plan Review Access Management Checklist (AM Checklist) is intended to be used to evaluate vehicular and pedestrian access during the site plan review process. Each question should be answered by the Town's Planning Board to determine whether or not the proposed project includes the necessary level of on-site access management. The practice of completing the AM Checklist will ensure that all aspects of pedestrian and vehicle access to a site will be considered. Continued use of the AM Checklist will also prioritize access management throughout the town while providing consistent reminders about the general concepts of Access Management. The Access Management Toolbox provides a list of site design and roadway access management tools, their advantages and some concerns that Planning Board members should keep in mind. If the town should choose to implement access management in a much stronger way in town code, sample zoning language is provided.

### Intersection and Roadway Concepts

CDTC developed two optimistic sketch level land use forecasts for this study, each totaling about 3 million square feet of building area. The difference between the two forecasts is the square footage mix of the potential land uses. From the land use forecasts, an estimated 900 to 1,300 new weekday PM peak hour trips could be generated by the year 2025. The analysis at this sketch level of detail shows future traffic levels of service at the signalized corridor intersections to be acceptable at an overall Level of Service C (see Table 7), though certain movements have a Level of Service D which is minimally acceptable. The land use and traffic volume forecasts are discussed on page 25 and additional details are included in Appendix E.

Because the forecasted Level of Service is considered acceptable for both 2025 scenarios, major intersection improvements should be considered long term and directly related to new development. It will be important through the Town's site plan review process to identify opportunities for developer contributions to implement the transportation improvements identified below, particularly if larger scale improvements are to be pursued in a shorter timeframe (less than 8 years).

The various concepts and options are described as follows:

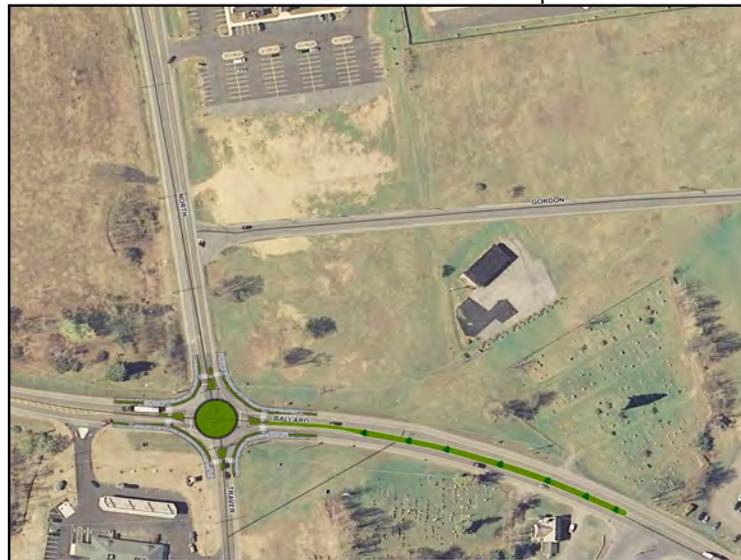


1. Optimized signal timing patterns for the three existing corridor traffic signals should be explored to improve traffic flow. Currently, the traffic signals operate with inconsistent timing patterns. A thorough evaluation of alternative timing patterns may offer low cost, short term options for consideration.
2. As lands develop north of Ballard Road (both east and west of North Road) a realignment of the North Road/Target intersection to a more conventional intersection should be considered. The intersection is currently configured to give Target vehicles a straight route to the signal at Ballard Road, leaving North Road with a skewed approach to the Target driveway. As development occurs, such a configuration may not be optimal and North Road may need to be brought into a right angle with the Target driveway, creating a traditional three legged intersection. An alternative to the realignment would be the construction of a roundabout which would add capacity, slow traffic down and maintain a relatively straight route for trucks entering/exiting Target.
3. Consider realigning Gordon Lane so that it intersects with North Road instead of Ballard Road. The current skewed configuration of Gordon Lane at Ballard Road creates line of sight hazards as well as difficulties for traffic attempting to make eastbound turning movements. The new intersection should be located as far away from the Ballard Road intersection as possible. Coordination with Glens Falls Hospital on its future plans for the existing medical facility will be critical to identifying an appropriate alignment option for Gordon Lane.

Existing Intersection



Gordon Lane Realignment, Roundabout  
and Ballard Rd Boulevard Concepts





4. As described in the access management section, a boulevard treatment (that does not include a raised median) could be considered for Ballard Road from the Northway to Traver/North Roads to create a gateway entrance to the Gurn Springs Hamlet. A boulevard treatment should consider the installation of sidewalks, bike lanes or a bicycle path, street trees, pedestrian crosswalks and ornamental, pedestrian scaled street lighting. A median could also be considered from the Ballard/Traver Road intersection east to the Cemeteries on Ballard Road. A raised median would preclude/limit driveway access in this section. A conceptual illustration of a boulevard treatment with a median is shown on page 35 and in the image at right.
5. A right turn lane should be evaluated for the Ballard/North/Traver Road intersection heading northbound on Traver Road. Although the level of service analysis shows that the intersection operates acceptably in the 2025 forecasts, the intersection as currently configured may not have the necessary storage capacity to allow for smooth traffic flow.
6. With new development in the longer term, the intersection of Ballard/Traver/North Road may need additional improvements. A roundabout should be explored to provide capacity, enhance the gateway entrance to the Hamlet, enhance the pedestrian environment and slow traffic down. A concept of a roundabout for this intersection is shown to the right and in Figure 16c in Appendix G.
7. Consideration should be given to repaving North Road from the Target driveway north to CR 32 (Wilton Gansevoort Road) as the pavement condition is deteriorating. Signs have already been installed indicating rough road ahead for one mile.
8. An eastbound right-turn lane from Ballard Road at the southbound on-ramp to I-87 may be needed long term to accommodate traffic increases for this movement and eliminate stacking in front of Scotty's Restaurant and Truck Stop. The stacking of motor vehicles, particularly trucks, limits left turns into Scotty's. Traffic traveling eastbound on Ballard Road tends to distribute with roughly half the traffic entering the Northway Southbound ramp and the other half traveling east over the Northway. Additional vehicle trips added to the system due to new corridor development will likely continue this pattern.

Roundabout Concept at Ballard & Traver





9. If new development occurs on both sides of I-87 in the future, resulting in additional traffic heading in both directions over the I-87 bridge, consideration should be given to adding left turn capacity at the signals for the I-87 entrance/exit ramps (i.e. a leading left turn phase at the signals or left turn lanes). This action would likely only be considered at the time NYSDOT is evaluating the need to reconstruct the bridge and if development has contributed financially in some manner for the improvement. Because this large scale action would be development driven, it is critical for the town to work with developers on a financing mechanism.

### Park and Ride

As discussed in previous sections of this report, an informal park and ride lot was found at the intersection of Ballard Road with Edie/Gurn Springs Road. This lot is heavily used relative to other formal park and ride lots in the town of Wilton and throughout the Capital District and the users can be considered potential customers for local business. The current location of the lot is ideal for park and ride for a number of reasons:

- ✓ It is located in one of the fastest growing sections of the Capital Region with growth potential.
- ✓ It is located adjacent to the Northway (I-87), reducing the time spent circulating from the highway to the lot.
- ✓ It is located more than 10 miles outside of downtown Albany and other centers of employment (i.e. Latham, Glens Falls, etc.)
- ✓ It is located "upstream" of the most severe Northway congestion points and commuters tend to meet up before entering these locations.

According to the Capital District Transportation Authority's (CDTA) Draft Park and Ride/Express Bus Study, projected growth in the Capital Region suggests a greater market for express bus services and park and ride lots in the future. It is likely that additional formal park and ride lots will be needed over time, especially in the growing I-87 corridor. Locations that best meet the above four criteria will likely be encouraged by CDTA and other entities.

Given that the existing informal park and ride lot already meets these criteria and has demonstrated success in attracting park and ride users, it may be a location that merits consideration for a formal park and ride lot in the future. The opportunity is noted in the Draft CDTA Park and Ride/Express Bus Study. That said, the lot is privately owned and the property owner may have other plans for the property. Coordination between the Town, CDTA and the property owner will be critical if any park and ride facility is to be evaluated for this location. If it becomes clear that the property owner's plans for the site can not incorporate park and ride options, alternative locations in the Ballard Road corridor will need to be considered. The following identifies some options for maintaining park and ride options at the current lot location, even with new development, and identifies some alternative sites for consideration.



- 1) Encouraging Shared Use Lots: There are many types of businesses that do not use their parking lots during regular commute hours. Though these land use types do not exist today, if they are considered in the future shared use parking may present an opportunity. Examples of such uses include churches, movie theaters, meeting halls, parks, etc. Shopping and personal service areas are also ideal for shared use as the businesses benefit from the additional customers and they are typically busiest on weekends. Smaller scale, Hamlet-style commercial uses such as coffee shops and banks have particularly experienced benefits from park and ride lots. Though large scale shopping is not allowed under current zoning in the study area, some of these personal service uses are allowed which may make shared use parking a viable option. Lease agreements for the parking spaces may be required for successful implementation.
- 2) Incorporate Park and Ride into the Town's Site Plan Approval process: All future commercial site development applications in the eastern end of the study area seeking project approval should incorporate on-site park and ride spaces into their final site plans. If this linkage study is adopted by the Town, the site plan approval process should require a certain percentage of park and ride spaces for commuters during typical commute hours at the Gurn Springs Road location. The advantage to the Town is that these spaces would not require a lease agreement as the owner is bound to provide the spaces by the site plan approval.
- 3) Market Incentives: Market oriented incentives can be offered by the Town to encourage park and ride facilities through such tools as allowances for higher building densities or parking requirement reductions. Lease agreements may be needed to implement these approaches.
- 4) Alternatives to the existing informal park and ride lot's location include publicly owned facilities such as the Town Hall or other existing businesses in close proximity to the Northway with parking capacity during commute hours. The Town Hall site, with 50 spaces, is specifically identified as an opportunity in CDTA's Draft Park and Ride/Express Bus Study. Although not identified in the CDTA study, another option for consideration is the lands located behind (to the north) of the existing Mobil Gas Station on Ballard Road. There is ample space for several dozen vehicles to park at this location and the site is adjacent to the southbound off ramp of the Northway. Additionally, a new park and ride lot at this location would compliment the existing land use resulting in more customers. Finally, just outside of the Ballard Road/Exit 16 area, the CDTA Park and Ride lot study is considering a location on the south side of Ballard Road near Dimmik Road to capitalize on an area that is used mainly on the weekend.

#### *Future Pedestrian/Bicycle/Trail Improvements*

Several specific options were developed to create new and improved bicycle and pedestrian connections throughout the study area. To support pedestrian activity in the future hamlet area and to provide pedestrian interconnections of existing businesses within the eastern portion of Ballard Road, it is suggested that future development projects, or expansions of existing commercial uses be required to install sidewalks and American's with Disabilities Act compliant pedestrian-friendly features. As discussed on page 31, sidewalks are currently required with new development in the



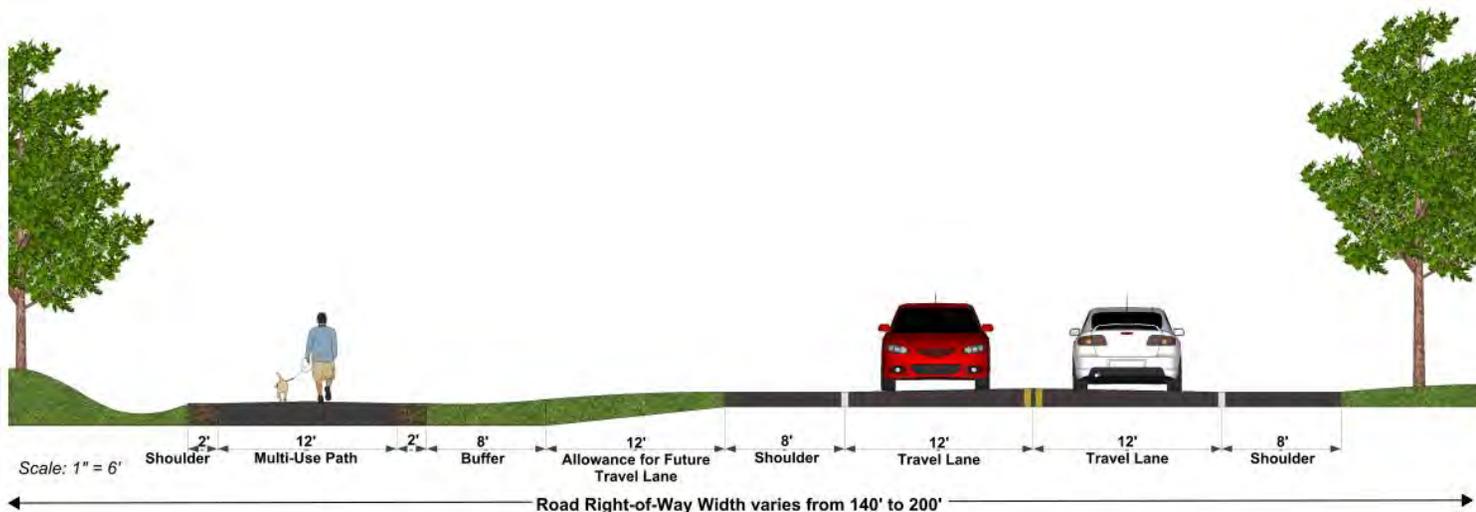
H-1 District (Gurn Springs Hamlet). Along with sidewalks, the installation of pedestrian-scaled street lighting, benches, properly identified street crosswalks, and pedestrian-activated cross walk signals in the area around the Ballard/Traver/North Road intersection could encourage more pedestrian use within the study area and help foster a sense of place for the Gurn Springs hamlet.

Just outside of the Hamlet District there is a significant concentration of residential homes in close proximity to the Ballard Road commercial uses. Adirondack Estates Mobile Home Park is located 3/10 of a mile north of the Ballard/Traver Road intersection and contains roughly 300-350 residents. Currently there are no sidewalk connections from this residential neighborhood to the Ballard Road area and businesses. To accommodate pedestrian connections to this residential neighborhood, it is suggested that a new multi-use bike/ped trail be added along the entire length of Gordon Lane. In addition, a potential walking connection should be considered to the north of the Target distribution center which not only provides access to North Road but may also link to a future north/south oriented trail as described below. Target alone employs over 700 people and there are over 1,600 employees in the entire study area which represent a large number of potential users of the sidewalks/trails.

To connect existing local and regional trail networks to the Ballard Road area, efforts should be made to utilize the large right-of-way along Ballard Road for development of a multi-use, off road trail. Below is a conceptual illustration of a potential multi-use trail which could be constructed instead of formal sidewalks from Northern Pines to Traver Road. Most of Ballard Road enjoys a right of way (ROW) that extends from 140' to 200'

### **Cross Section of Multi-Use Path (Off Road Trail)**

**Ballard Road: West of North Road**



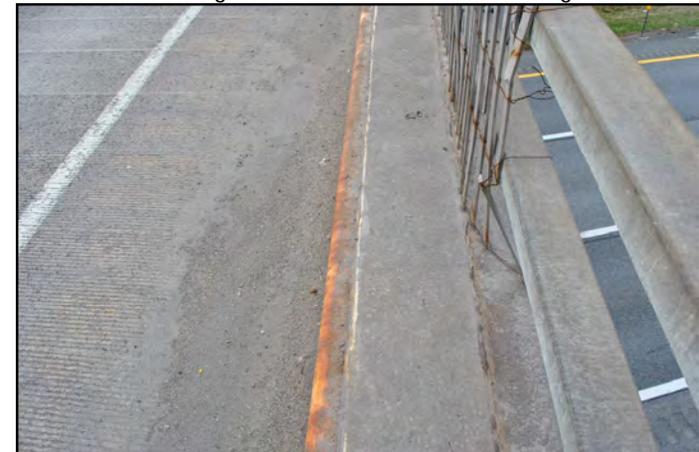


along its entire length from Northern Pines Road in the west to Dimmick Road in the east. This large, open ROW is ideal for use as an off-road trail that can accommodate pedestrian as well as bicycle users. With such a large ROW to work with, the multi-use trail can be set back far enough from the road edge to accommodate snow storage for plowing and still allow year round walking and cycling opportunities. If setbacks of existing buildings or other issues do not allow for an off road trail, especially in the more developed section of the corridor, an on street bicycle lane might be considered as well as signed shared use lanes, as appropriate with a five foot sidewalk.

Supporting the inter-connection of the proposed Ballard Road multi-use trail would be the extension of unimproved pedestrian trail systems in a linear north/south orientation on vacant preserved lands west of Traver Road and west of North Road. There are significant natural features and ecological preserves in these areas of the study corridor that contain limited unimproved trail networks. To interconnect these semi-isolated trails with the existing southern residential neighborhoods and the Gurn Springs hamlet core, it is proposed that new trail segments be constructed that connect to Ballard Road and points north to Wilton Gansevoort Road and beyond. Depending upon a more detailed user analysis and user study, these trail linkages can be either improved surface trails (paved), or semi-improved surface trails comprised of compacted gravel with features such as benches, bike racks, etc.

The Town is particularly concerned with future implementation of bicycle and pedestrian facilities on the Exit 16 Bridge. Although the documented shoulder width on the bridge is 4 feet on each side (curb to curb), the incorporation of a curbed area for drainage/snow storage (as shown at right) on the bridge itself limits the space for bicycle/pedestrians. If the bridge is replaced at some future time, NYSDOT will evaluate the bicycle and pedestrian needs. The addition of sidewalks and possible bicycle lanes along one or both sides should be considered. At a minimum, consideration should be given to incorporating an appropriate shoulder without the raised curb in the design of the bridge. The concept of bike and ped access on this bridge has been noted in other town plans such as the Comprehensive Plan and the Open Space, Recreation and Pathways plan.

Existing Curb/Shoulder on Exit 16 Bridge





## Implementation & Funding

The land use and transportation concepts and options developed for the Exit 16 Linkage Study support the study goals but may only be necessary with new development. Prior to considering implementation of any of the options and concepts, detailed engineering and design work will need to be undertaken. The concepts and options are for the town's long term use in the site plan review process and as reference for when the town, county or state is pursuing major infrastructure projects in the study area. Therefore, the Town should create a framework within which these actions can be undertaken including a possible mitigation fee program for new development. Currently, the Town Board and Planning Department have done an exemplary job in implementing recent planning efforts undertaken in Wilton. It will be vital that town officials and staff, Saratoga County, NYSDOT, other stakeholders and most importantly the development community work together to ensure the town's goals are met.

To begin the process of strategizing how the concepts and options will be taken to the next level, an implementation matrix (below) was created to provide a logical and methodical framework toward the implementation of each concept. For each concept, the implementation leader, involved groups, starting point and action item is listed. In addition, potential funding sources are identified including a mix of private and public options. Since the vast majority of the concepts are directly tied with new development, it will be important through the Town's site plan review process to identify opportunities for private developer contributions to implement the land use and transportation improvements throughout this report, particularly if larger scale improvements are to be pursued in a shorter timeframe (less than 8 years).

It should be noted that as the State and Federal Government reassess the allocation of public funds due to budgetary constraints, the public funding sources listed below may change, expand or contract due to fluxuations in the economy and changes in state or federal transportation policy. Therefore what may be a viable funding stream today for a particular project may not be available tomorrow or in a year's time. Proper financial planning will be critical to the implementation of many of these study area concepts as public dollars alone are not likely to be available.

### Timeframe

The preferred concepts in this plan will require a significant long-term commitment from the Town in order to be successfully implemented. Each concept involves many different steps and phases, some of which are interdependent, and some of which may be completed individually. The proposed land use and transportation improvements will require coordination with NYSDOT, Saratoga County and other agencies but most importantly will be dependent on private development activity. Without private development, many of the traffic capacity concepts will not be necessary. With that in mind, the concepts have been designated as long-term projects (8+ years), short term projects (0-8 years) or both for ongoing initiatives. Long term projects include major infrastructure work (such as the Exit 16 Bridge) or those that will likely involve federal or state funding. Projects which require less planning, are more minor in scope and can be undertaken directly by the Town are identified as short-term projects.



Implementation Matrix					
Concepts and Options for Further Exploration	Potential Partners	First Steps	Potential Funding Source(s)*	Implementation Timing	
				Short	Long
<i>Future Land Uses</i>					
Encourage use of H-1 District site design standards and guidelines as appropriate on parcels adjacent to North Road (these parcels are adjacent to the H-1 District boundaries)	Town of Wilton Site Plan Applicants/Developers Saratoga County	Work with site plan applicants to consider H-1 design standards in site plans	Private Developer(s)	X	X
Incorporate appropriate green space and buffering of new development (particularly for light industrial/commercial uses) in the H-1 District and throughout the study area	Town of Wilton Site Plan Applicants/Developers Saratoga County	Work with site plan applicants to incorporate appropriate green space and buffering into all new site plans	Private Developer(s)	X	X
Explore the future need for a town park on public lands behind Ace and Wilton Global Development Center	Town of Wilton State of New York Saratoga County	Identify current town park resources and determine whether a park at this location is needed	Town of Wilton Saratoga County NYSOPRHP		X
Consider a mitigation fee program for new development so that private developers pay their fair share of required transportation improvements in the study area	Town of Wilton Site Plan Applicants/Developers Saratoga County NYSDOT CDTC	Consider developing a Generic Environmental Impact Statement for the study area which provides the legal framework for collecting mitigation fees for transportation projects	Private Developers Town of Wilton Saratoga County	X	



Implementation Matrix					
Concepts and Options for Further Exploration	Potential Partners	First Steps	Potential Funding Source(s)*	Implementation Timing	
				Short	Long
<i>Future Roadway and Commuting Improvements</i>					
Access management should be considered for every new development proposal	Town of Wilton Site Plan Applicants/Developers Saratoga County CDTC	Work with site plan applicants to incorporate access management into all new site plans	Private Developer(s)	X	X
Explore options for a formal park and ride lot	Land Owner(s) CDTA Town of Wilton Saratoga County NYSDOT	Further evaluate park and ride locations and obtain funding for upgrading existing lot(s) or creating new park and ride spaces	Private Developer(s) TIP (Park and Ride Lot set-aside) MMPF	X	X
Evaluate optimized signal timing patterns for all signals on Ballard Road	Town of Wilton Saratoga County NYSDOT	Create a corridor model to optimize the signal timing patterns	Private Developer(s) Town of Wilton	X	
Consider realigning Gordon Lane to North Road	Town of Wilton Site Plan Applicants/Developers	Discussions with Target and Wilton Health Clinic if future expansion occurs	Private Developer(s) Town of Wilton MMPF	X	
Consider options for the North Road/Target intersection (install a three legged intersection or roundabout)	Target Corporation Site Plan Applicants/Developers Town of Wilton Saratoga County	Evaluate the need for intersection changes if Target expands and with new development off of North Road, north of Ballard Road	Private Developer(s) Town of Wilton MMPF		X
Consider repaving North Road between the Target driveway and County Route 32	Target Corporation Town of Wilton	Evaluate pavement condition and identify needed improvements	Target Corporation, Private Developer(s) Town of Wilton	X	



Implementation Matrix					
Concepts and Options for Further Exploration	Potential Partners	First Steps	Potential Funding Source(s)*	Implementation Timing	
				Short	Long
Consider the need for a right turn lane on the northbound leg of the Ballard/Traver/North Road intersection with new development	Site Plan Applicants/Developers Town of Wilton Saratoga County	If new development is proposed in the vicinity of the intersection, further evaluate the need for the right turn lane	Private Developer(s) Town of Wilton Saratoga County MMPF		X
Consider the need for a roundabout with new development at the Ballard/Traver/North Road intersection	Site Plan Applicants/Developers Saratoga County Town of Wilton NYSDOT	Obtain funding for design development	Target Corporation Private Developer(s) TIP (Linkage Transition Engineering set-aside) Town of Wilton		X
Consider boulevard treatments on Ballard Road East of North Road and West of I-87 to create a Hamelt Gateway	Saratoga County Town of Wilton NYSDOT	Obtain funding for design development	Private Developer(s) MMPF TEP TCSP Town of Wilton		X
Consider a raised median East of North Road to the cemeteries on Ballard Road	Saratoga County Town of Wilton NYSDOT	Obtain funding for design development	Private Developer(s) MMPF TEP Town of Wilton		X
Evaluate the need for a right turn lane eastbound on Ballard Road to the I-87 Southbound ramp with new development	NYSDOT Saratoga County Town of Wilton	Obtain funding for facility upgrade and design development	Private Developer(s) Town of Wilton MMPF TIP		X
With new development and a NYSDOT bridge project, evaluate the need to add left turn capacity at the I-87 Exit 16 traffic signals	NYSDOT Saratoga County Town of Wilton	Conduct a detailed engineering analysis	Private Developer(s) Town of Wilton MMPF TIP		X



Implementation Matrix					
Concepts and Options for Further Exploration	Potential Partners	First Steps	Potential Funding Source(s)*	Implementation Timing	
				Short	Long
With future development south of Ballard Road, evaluate the need for a signal at Commerce Industrial Park Road	Town of Wilton Site Plan Applicants/Developers	As growth occurs, work with developers to evaluate signal needs	Private Developer(s) Town of Wilton MMPF		X
<i>Future Pedestrian/Bicycle/Trail Improvements</i>					
Install ADA compliant pedestrian crossings at Ballard/North/Traver Road intersection	Town of Wilton Saratoga County NYSDOT Site Plan Applicants/Developers	Obtain funding for existing facility upgrade and/or design development	Private Developer(s) Town of Wilton TIP SPOT TEP	X	X
Incorporate pedestrian facilities and sidewalks with new Hamlet area development following H-1 District requirements	Site Plan Applicants/Developers Town of Wilton Saratoga County	Work with site plan applicants to incorporate pedestrian facilities and sidewalks into site plans per H-1 District requirements.	Private Developer(s) Town of Wilton TIP SPOT TEP	X	X
Consider installing a multi-use bike/ped trail along Ballard Road from Northern Pines Road to Traver Road	Saratoga County Town of Wilton Property Owners NYSDOT	Further evaluate the feasibility of a multi-use trail	Private Developer(s) Town of Wilton TIP TEP NYSOPRHP SRTS		X
Consider adding a multi-use bike/ped trail along Gordon Lane	Town of Wilton Site Plan Applicants/Developers Land Owners	Work with site plan applicants to develop and implement the trail	Private Developer(s) Town of Wilton NYSOPRHP TEP	X	



Implementation Matrix					
Concepts and Options for Further Exploration	Potential Partners	First Steps	Potential Funding Source(s)*	Implementation Timing	
				Short	Long
Consider installing bike/ped connections between Adirondack Estates, Target, North Road and the local trail network	Site Plan Applicants/Developers Town of Wilton Land Owners	Work with site plan applicants to incorporate trail designs into all new site plans	Private Developer(s) Town of Wilton NYSOPRHP	X	X
Explore extension of the local trail network in a north/south orientation on lands west of Traver/North Road	Site Plan Applicants/Developers Land Owners Town of Wilton Saratoga County	Work with site plan applicants to incorporate trail designs into all new site plans	Private Developer(s) Town of Wilton NYSOPRHP	X	X
With new development and with a NYSDOT bridge project, explore adding bicycle and pedestrian facilities onto the Exit 16 bridge	NYSDOT Saratoga County DPW Town Board Town Highway Department	Work with NYSDOT on bridge design options when a bridge project is pursued	Town of Wilton NYSDOT TIP MMPF		X**

*Notes:*

\*Descriptions and definitions of the various fund source options are provided on page 47.

\*\* NYSDOT currently has no plans to replace the I-87 Exit 16 overpass bridge due to limited funding, structural condition and current prioritization needs.

As noted previously the implementation of most of these projects will require a multi-phase process for each proposed concept. A town level implementation team should be established and a Town Project Coordinator should be identified such as the Town Engineer or Director of Planning. In addition, the Town should take into account that multi-faceted transportation improvements of this magnitude include a significant administrative component, especially if the projects are grant funded. As such the Town should be prepared to not only oversee the physical construction of these projects, but have the tools and staff necessary to properly oversee the administration of the funding mechanisms used to pay for these projects.

A typical implementation process includes:

1. Agency Coordination. The Town should meet with officials of NYSDOT Planning/Programming, Saratoga County, and CDTC to address design and jurisdictional concerns as well as identify potential strategies concerning funding. The goal should be to allow the Town to determine the best



course of action regarding project phasing and funding cycles. A preliminary construction cost estimate for the preferred concepts should also be included in this phase. The town should also have the staff capacity and tools in place to appropriately administer (in both the design and construction phases) a transportation project, especially those that are likely to be funded through state or federal programs.

2. Design. Conduct needed surveys, including rights-of-way, utilities, topography, and related items. Establish appropriate design criteria and review with NYSDOT and Saratoga County (i.e. design speed, lane width, etc.). Prepare construction documents, with review by agencies as called for by the requirements of NYSDOT and Saratoga County projects. Conduct environmental review of project.

3. Public Education and Outreach. Ongoing public input should be sought through a coordinated outreach program. This program could consist of public meetings, announcements at Town Board meetings, the preparation of a media kit and press releases, coordination with local media, and Town web site updates.

4. Construction. The final step will be to construct the improvements using the required bidding and oversight procedures, as required by the funding agency. Depending on the project and the funding agency, this may be accomplished with Town labor and/or by putting the project out to bid.



### Grant & Funding Opportunities Overview:

There are several potential State and Federal funding sources to assist in the implementation of the various options and concepts. It should be noted that many if not all of these are reimbursement programs. Therefore, the town will need to front the money for the project and will need to follow the appropriate local project administration guidelines.

- Transportation Improvement Program (TIP)
- Spot Improvement Program (SPOT)
- Transportation Enhancement Program (TEP)
- Transportation and Community and System Preservation Pilot Program (TCSP)
- New York State Multi-Modal Program Funding (MMPF)
- New York State Office of Parks, Recreation and Historic Preservation (OPRHP)
- Safe Routes to School (SRTS)

Transportation Improvement Program (TIP): The CDTC is the designated Metropolitan Planning Organization (MPO) for the Capital Region. The CDTC has responsibility under federal law to adopt a multi-year program of proposed transportation improvement projects within the MPO area. CDTC with input from NYSDOT and local government is responsible for programming federal transportation funds for state and local highway and transit projects. CDTC notifies communities when soliciting projects for the TIP under the various federal funding programs. CDTC is committed to enhancing pedestrian and bicycle mobility in the MPO area. As part of their planning process, CDTC typically allocates funds for pedestrian and bicycle projects. Communities interested in having their project considered for funding must complete and submit a Project Justification Package for CDTC review at the time of solicitation for new projects. If the project is selected, it receives federal funds generally up to a maximum of 80% of the overall cost. The remaining 20% is the responsibility of the project sponsor. Each federal aid program has different eligibility requirements but for most roadway reconstruction projects, the minimum requirement is that the facility must be on the federal aid eligible list and thus the road must function as a collector or arterial highway. CDTC has reserved federal funds in the TIP for specific set-aside programs that target specific project types.

Spot Improvement Program (SPOT): This program sets aside \$100,000 per year for bicycle and pedestrian projects too small for other programs like the Transportation Enhancements Program. Spot Improvements address bicycle and pedestrian issues at specific locations such as intersections, short lengths of roadway, or single destinations (e.g., an office building or shopping center), which bridge physical or functional gaps in the system rather than providing new routes. The Spot Improvement program offers 80% funding with a 20% local match requirement.



TEP (Transportation Enhancement Program): The TEP is a federal reimbursement program administered by the New York State Department of Transportation (NYSDOT) through the Capital District Transportation Committee. This program provides funding for transportation projects of cultural, aesthetic, historic and environmental significance. Eligible projects must fall into one or more of the twelve Federal Highway Administration (FHWA) categories. Additionally, the project must have a transportation relationship with the surface transportation system and must be available for public access and use. The TEP program offers 80% funding with a 20% local match requirement.

TCSP (Transportation and Community and System Preservation Pilot Program): The TCSP is a nationwide discretionary program administered by the Federal Highway Administration. TCSP funding availability is limited, with the Federal share payable on account of any TCSP project or activity set at 80%. To be eligible for funding, projects must meet several objectives which include: improving the efficiency of the transportation system; reducing the environmental impacts of transportation; ensuring efficient access to jobs, services and centers of trade; and encouraging private sector development patterns.

MMPF (New York State Multi-Modal Program Funding): The MMPF legislation requires that all funds are solely utilized for capital project costs for construction, reconstruction, reconditioning and preserving facilities and equipment with a service life of 10 years or more. However, funds cannot be used for the mandated non-federal matching share of federally funded projects. The amount of funds available under the MMPF is very limited. The most likely scenario is to utilize multi-modal funding for right-of way acquisition, preliminary engineering, and construction supervision and the inspection portion of a project.

NYS Office of Parks, Recreation and Historic Preservation (OPRHP): The OPRHP has two programs related to parks and trails. The Recreational Trails Program is a State-administered, Federal assistance program to provide and maintain recreational trails for both motorized and non-motorized recreational trail use. Funds for the Recreational Trails Program (RTP) are provided by SAFETEA-LU. The RTP program offers 80% funding with a 20% local match requirement. The Park Matching Grant Program is a state program for the acquisition or development of parks and recreational facilities.

Safe Routes to School (SRTS): The SRTS is a federal, state and local effort to enable and encourage children, including those with disabilities, to walk and bicycle to school and to make walking and bicycling to school safe and appealing. The goal of New York's Safe Routes to School Program is to assist communities in developing and implementing projects and programs that encourage walking and bicycling to school while enhancing the safety of these trips. These programs can bring a wide range of benefits to students and the community. These include an easy way for children to get the regular physical activity they need for good health and even to ease traffic jams and reduce pollution around schools. A major goal of the program is to increase bicycle, pedestrian and traffic safety.

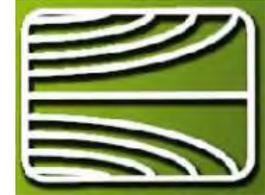


## Appendix A Study Advisory Committee Meeting Summaries



**Town of Wilton  
Exit 16 Linkage Study**

Study Advisory Committee (SAC)  
**Meeting #1** – Thursday, March 17<sup>th</sup>, 2011  
Wilton Town Hall – 2:00PM



**Meeting Agenda**

- I. Introductions (CV)
- II. Agenda Overview (CV)
- III. CDTC Linkage Program & New Visions Overview (SM)
- IV. Review Scope of Work & Project Schedule (CV)
  - Existing Materials/Studies Discussion
  - Goals & Objectives
- V. Issues Identification Discussion (CV)
  - What are some of the best qualities of the corridor? What's working? What aspects of the corridor should be preserved/enhanced?
  - What are some of the problems with the corridor that should be address in the Study? What's not working?
- VI. Next Steps (CV)
  - Existing Conditions Assessment
  - Next SAC Meeting
  - Public Workshop
- VII. Adjourn

Wilton Exit 16 Linkage Study  
SAC Mtg #1 – March 17, 2011

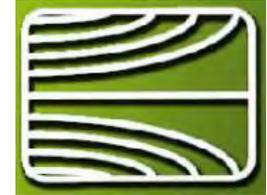
Internal summary

1. Email is preferred for communication and coordination.
2. Does it make sense to extend study area further east to the railroad tracks (not for commuter rail, though?) Mechanicville's intermodal center and the possibility of water/sewer east of I-87 could induce the need for rail sidings. Action: This area will be added as a secondary study area.
3. Schedule is about 8 months long. SAC Meeting #5 should occur before the Final Plan.
4. Study's plan of actions should be practical and implementable. It is not the intent to revise the Comprehensive Plan's goals/objectives except for revisiting the zoning and appropriateness of the Hamlet zone along Traver Road. Access management will be included in the plan as needed.
5. Issues/Constraints:
  - a. Corridor is trying to be all things to all people – this potentially opens up conflicts with users.
  - b. No defined pedestrian/bicycle connections
    - i. Exit 16 bridge not built for pedestrians
    - ii. No “back-way in” from residential properties to commercial/industrial uses (now or potential future uses)
  - c. Limited light retail support services for employees of the area.
  - d. Lack of turn lanes; people consistently using shoulders.
  - e. Park and Ride lot not formalized but heavily used.
6. Positives:
  - a. Parcel of land on SE quadrant of I-87 is largest piece of contiguous property in study area.
  - b. Zoning has limited the need for access management improvements
  - c. Ballard Road between Target and Wilton Global was designated by the SEDC as a priority zone for development.
  - d. Light industrial seems appropriate for the growth of the area.
  - e. The study could provide initial ideas of improvements to the Exit 16 bridge.
  - f. Target and Ace truck deliveries are strictly controlled which reduces truck impacts.
7. Next steps:
  - a. Prepare summary of existing conditions.
  - b. Reach out to major employers.
  - c. Next SAC meeting in May (to be scheduled).



**Town of Wilton  
Exit 16 Linkage Study**

Study Advisory Committee (SAC)  
**Meeting #2** – Tuesday, May 17<sup>th</sup>, 2011  
Wilton Town Hall – 3:00PM



**Meeting Agenda**

- I. Welcome (SM)
- II. Agenda Overview (SM)
- III. Review of Existing Conditions Profiles (CV & TJ)
- IV. Review of Corridor Photo Inventory (CV & TJ)
- V. Review/Revise Major Employer List (CV)
- VI. Public Information Workshop Format & Notification Discussion
- VII. Next Steps (CV)
  - Prep for Public Information Workshop (Set date/time/location)
  - “Park & Ride” User Survey (CDTC Inters to distribute and collate)
  - Set Next SAC Meeting (After Public Workshop)
- VIII. Adjourn

Wilton Exit 16 Linkage Study  
SAC Mtg #2 – May 17, 2011

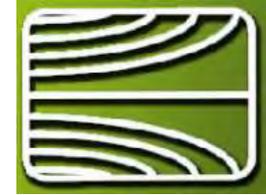
Internal summary

1. Review of Existing Conditions Profiles:
  - a. Maps of existing conditions need to have a summary of what each is representing.
  - b. CDTC to identify which crashes involved trucks.
  - c. Topographic map does not show Target and wetland changes – show on a more current map if available.
  - d. Align traffic movements on Volume map to match ramp orientation. Recent counts from CDTC indicate that not much traffic growth has occurred since 2003 traffic counts.
  - e. On Land Use map, show properties west of school.
  - f. For Pathways/Trails map, some of the proposed trails are now built as dirt paths – adjust figure.
  - g. Remove future capacity needs from the Existing Conditions map. Lack of pedestrian crossings should be added.
  - h. An Infrastructure map should be provided.
2. A few sample pictures of the corridor were reviewed. A catalog will be available to the public at the information workshop.
3. A total reconstruction of North Road is needed and there are drainage issues. A fund is being created with private and Town resources for the reconstruction. The Town may reconstruct a portion of the road next year.
4. A user survey of the informal Park and Ride lot was reviewed. CDTC interns will distribute the survey on two different days of the week to solicit feedback on the use of the lot. Need to make sure people don't get the idea a formal lot is being proposed. A question to add: Would you pay to park in the lot? The survey will need to get Frank Parillo's sign-off. CDTA is conducting a regional Park and Ride lot study and this location has received CDTA's interest due to the significant use of the lot.
5. Public Information Workshop:
  - a. Envisioned as an hour long with a brief PowerPoint presentation followed by roundtable discussions of strengths, weaknesses, opportunities, and threats.
  - b. Scheduled for Wednesday, June 8 at 6:30 pm at the Town Hall. Sandy will not be available but will send someone in her place.
  - c. Draft outline of the workshop and flyer will be prepared by B&L for review.
6. Other issues: On behalf of Susan Olsen, Sandy noted that NYSDOT is interested in this area as it relates to trucking. The truck plaza is the first stop for I-87 southbound and as such, would the owner be interested in a public/private relationship to serve the needs of truckers? A discussion with Frank Parillo is needed.
7. Next Steps:
  - a. B&L to prepare material for Public workshop. CDTC/Town to notify the public.
  - b. Revise User Survey and get sign-off from Frank Parillo.
  - c. Next SAC meeting scheduled for Wednesday, June 22 at 3:00 at Town Hall.



**Town of Wilton**  
**EXIT 16 CORRIDOR LINKAGE STUDY**

Study Advisory Committee (SAC)  
**Meeting #3** – Wednesday, July 20<sup>th</sup>, 2011  
Wilton Town Hall – 3:00PM



**Meeting Agenda**

- I. Welcome (SM)
- II. Public Information Workshop – Discussion of Comments (CV)
- III. Review/Discussion of Park & Ride Survey Findings (SM)
- IV. Review of CDTC Land Use Forecasts (SM)
- V. Stakeholder Meeting Overview (CV)
- VI. Review of Preliminary Concept Plans (CV)
- VII. Next Steps (CV)
  - Schedule DOT Meeting
  - Schedule Public Presentation of Draft Concept Plans
  - Set Next SAC Meeting?
- VIII. Adjourn



## Appendix B      Public Park & Ride User Survey Questionnaire & Results

*This windshield survey is sponsored by the Capital District Transportation Committee (CDTC) and the Town of Wilton to evaluate the use of this informal "park & ride" lot. The feedback from this survey will be used by the CDTC and the Town of Wilton to evaluate existing transit services in the Northway Exit 16 area, and potentially improve the level of service provided. Please take a moment to fill out the questions below and drop your completed survey in the mail. Your participation is greatly appreciated. Thank You!*

**1.) How often do you use this informal parking lot?**

- Daily    Weekly (Number of times per week: \_\_\_\_\_)    Weekends    Monthly

**2.) How long is your trip to/from this parking area? (Make two questions?)**

- < 5 miles    5-9 miles    10-19 miles    > 20 miles

**3.) How do you usually get from the parking area to your destination?**

- Carpool    Bus    Other: \_\_\_\_\_

**4.) What is your destination?**

- Work    Shopping    School/College    Home    Other: \_\_\_\_\_

**5.) Where do you generally start your trip from?**

\_\_\_\_\_ (town name) \_\_\_\_\_ (Zip code)

**6.) Where do you usually travel to when using this parking area?**

\_\_\_\_\_ (town name) \_\_\_\_\_ (Zip code)

**7.) What improvements would you like to see with this parking area? (Check all that apply)**

- Improved Pavement    Better Lighting    Access to Bus/Transit    Pedestrian Shelter  
 Connection to Sidewalks    Bicycle Amenities    Security/Gated Access  
 Connection to Ballard Rd Businesses    Other: \_\_\_\_\_

*Questions and or comments on this survey should be directed to Ms. Sandy Misiewicz, Senior Transportation Planner, Capital District Transportation Committee, One Park Place, Albany, NY 12205, 518-458-2161 (phone), 518-459-2155 (fax), [www.cdtcrmpo.org](http://www.cdtcrmpo.org)*





## Appendix C      Public Workshop Summary

# Wilton Exit 16 Linkage

The purpose of the Study is to further evaluate the Exit 16 study area to develop recommendations that can be implemented to ensure a true center of the community is created, capitalizing on the Hamlet zoning district, with a strong sense of identity and adequately provides for the multi-modal needs of residents, businesses and other stakeholders.

## PROJECT OBJECTIVES:

- Support revitalization and redevelopment of existing commercial/residential areas
- Improve street connectivity and reduce driveway conflicts
- Enhance and develop potential nodes of activity within the study area
- Provide opportunities for public gathering areas
- Enhance and develop transit corridors and transit supportive built environments
- Encourage a greater mix and intensity of land uses as part of the hamlet zone
- Develop bicycle and pedestrian friendly visually based design standards
- Create an integrated multi-modal transportation network considering connections to adjacent neighborhoods and areas
- Identify and formalize a park and ride lot

## PROJECT SCHEDULE:

Public Workshop I	June 2011
Focus Group Meeting	June 2011
Draft Plan	Aug. 2011
Public Workshop II	Sept. 2011
Final Plan	Oct. 2011



## Barton & Loguidice, PC

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Suite 200  
Albany, New York 12205

Phone (518) 218-1801  
Fax (518) 218-1805

THE CAPITAL DISTRICT  
TRANSPORTATION COMMITTEE  
(CDTC)  
AND  
THE TOWN OF WILTON

Welcome You  
to a  
Public Information  
Meeting  
for the

# Wilton Exit 16 Linkage Study



**Barton & Loguidice, P.C.**

Engineers • Environmental Scientists • Planners • Landscape Architects





Wilton Exit 16 Linkage Study  
Community Workshop #1



June 8<sup>th</sup>, 2011

### Project Purpose

- Further evaluate the Exit 16 study area
- Develop recommendations that can be implemented to ensure a true center of the community is created
- Capitalize on the Hamlet zoning district
- Foster a strong sense of identity
- Adequately provide for the multi-modal needs of residents, businesses and other stakeholders



### Agenda

- Introductions
- Project Purpose and Overview
- Existing Conditions / Study Area Issues
- Discussion Questions & Breakout Groups
- Next Steps & Schedule
- Comments & Questions



### Project Overview

- Funded through CDTC's Linkage Program
- Part of CDTC's 2030 New Visions regional transportation plan
- Program provides assistance to local communities undertaking planning initiatives that link transportation and land use
- Project is focused on Exit 16 area and the Ballard Road corridor
- Project is a recommendation of the Town's Comprehensive Plan



## Project Committee

Project Committee includes representatives from:

- Town of Wilton
- Capital District Transportation Committee
- Saratoga County Planning Department
- Saratoga Economic Development Corporation
- Wilton Water and Sewer Authority
- NYS Department of Transportation
- Capital District Regional Planning Commission
- Capital District Transit Authority
- Resident and Business Representatives



## Project Objectives

- Encourage a greater mix and intensity of land uses as part of the hamlet zone
- Develop bicycle and pedestrian friendly visually based design standards
- Create an integrated multi-modal transportation network considering connections to adjacent neighborhoods and areas
- Identify and formalize a park and ride lot



## Project Objectives

- Support revitalization and redevelopment of existing commercial/residential areas
- Improve street connectivity and reduce driveway conflicts
- Enhance and develop potential nodes of activity within the study area
- Provide opportunities for public gathering areas
- Enhance and develop transit corridors and transit supportive built environments



## Project Tasks

- ✓ Project Kick-off
- ✓ Inventory and Analysis
- Community Workshop
  - ❑ Preliminary Land Use and Transportation System Concepts
  - ❑ Transportation & Land Use Concept Meeting with NYSDOT
  - ❑ Draft Exit 16 Land Use and Transportation Plan
  - ❑ Community Workshop
  - ❑ Final Exit 16 Land Use and Transportation Plan



## Existing Studies and Materials

- Town of Wilton Comprehensive Plan (updated 2005)
- Open Space, Recreation and Pathways Plan (2007)
- Town Zoning Ordinance
- Blueprint for Economic and Job Growth (2009)
- Town of Wilton 2009 Update to Traffic Planning Study
- Wilton Global Development Campus Traffic Study (2003)



## Existing Conditions

- Fastest growing community in the region:
  - 29% population increase from 2000 to 2010 Census
- Primarily a light industrial area
- Significant growth potential (4 to 6 million SF of building area)
- Generous roadway shoulder widths west of Exit 16
- No pedestrian accommodations at intersections; no sidewalks



## Project Study Area

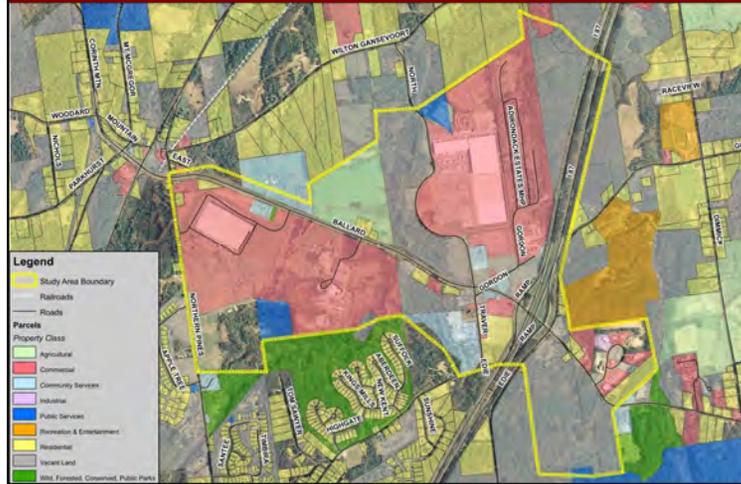


## Existing Conditions

- Generally free of traffic backups
- Highly used informal park and ride lot; user survey underway
- High percentage of trucks using Ballard Road
- High number of crashes between Traver Road/North Road and Edie Road
- Predominant crash types are rear-end and right angle
- Deteriorated pavement on North Road



## Existing Conditions – Land Use

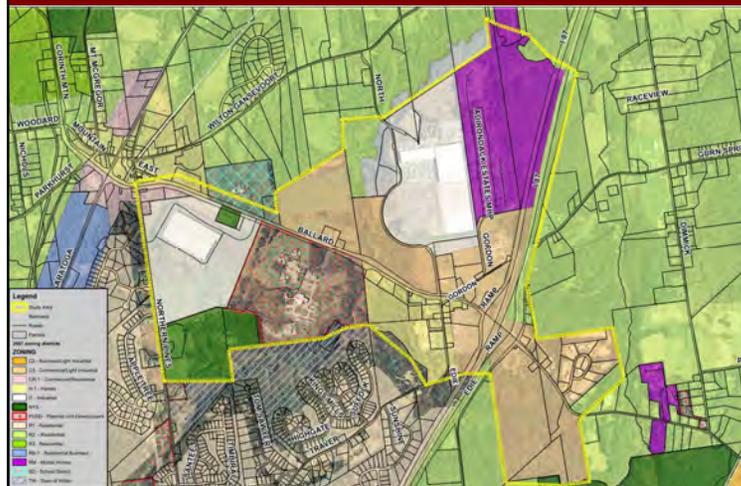


## Hamlet Zone

- Encourages increased pedestrian oriented residential, commercial and retail activity
- Creates a location where greater land use flexibility is permitted
- Examples of Permitted Uses:
  - 1-2 Family Dwellings, Restaurants, Business offices, Convenience stores, Banks, Retail, Public libraries, Bed and breakfasts, Health services, Laundromats, Places of Worship, Day-care, Mixed use buildings



## Existing Conditions – Zoning



*Illustration of an appropriate public space that reflects a sense of community and provides an aesthetically pleasing gathering place for residents and visitors.*

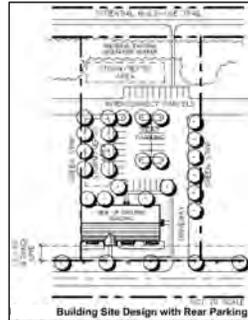
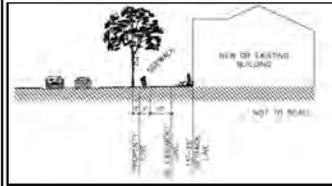


*Two story building illustrating appropriate site layout, treatment and fenestration. Includes vertical alignment of windows.*



## Site Design

- Site Design
  - Town Site Design Guidelines and Architectural Design Standards
- Access Management
  - Practice of improving the design and placement of driveways and medians.
  - Enables access to land uses while maintaining roadway safety and mobility through controlling access location, design, spacing and operation.



## Existing Conditions – Major Employers



## Existing Conditions – Sewer & Water



## Existing Conditions – Major Employers

	Business	Address	# of Employees
1	Target Distribution Center	129 North Rd.	700
2	Ace Hardware Distribution Center	55 CR 34	345
3	JA Collins	265 Ballard Rd.	100
4	Parillo - Wilton Travel Plaza	215 Ballard Rd.	71
5	Ballard Elementary	300 Ballard Rd.	49
6	Granite & Marble Works	8 Commerce Park Dr.	18
7	Ernst Repair Garage	9 Commerce Park Dr.	2
8	Adirondack Mechanical Services / Eagle Construction	1 Commerce Park Dr.	18
9	Redbud Development	2 Commerce Park Dr.	3
10	Affordable Storage	3 Commerce Park Dr.	6
11	Highland & Company	10 Commerce Park Dr.	25
12	Saratoga / Titan Propane	4 Commerce Park Dr.	9
13	KLN LLC / Premium Provisions	12 Commerce Park Dr.	8
14	Rodney Powers - Contractor	14 Commerce Park Dr.	2
15	Town of Wilton	22 Traver Rd.	71
16	Alpin Haus	30 Gordon Lane	
17	Stewart's	225 Ballard Rd.	
18	NYS Police	301 Ballard Rd.	
19	Wilton Fire Department	270 Ballard Rd.	
<b>TOTAL:</b>			<b>1427</b>



### Existing Conditions – Traffic Volumes



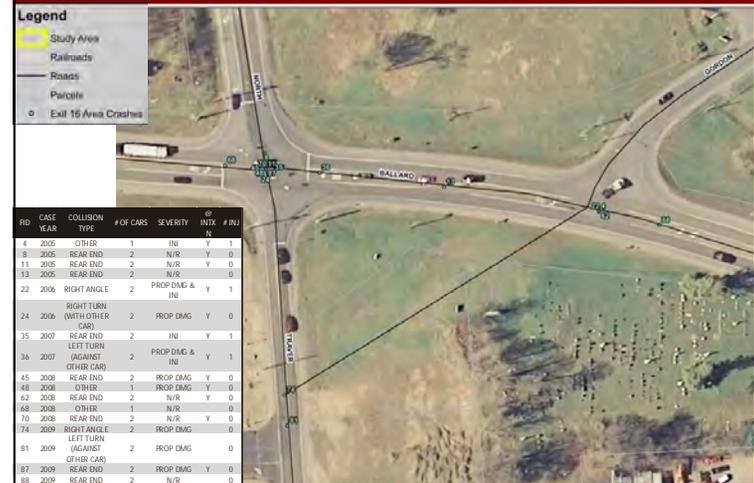
### Existing Conditions – Crash Data



### Existing Conditions – Crash Data

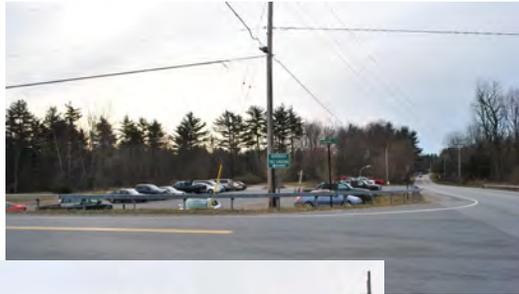


### Existing Conditions – Crash Data



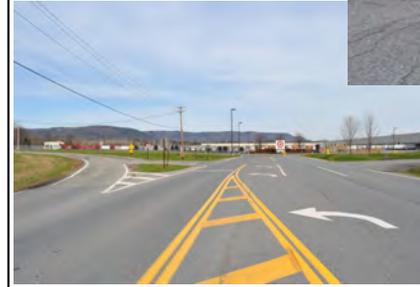
### Existing Conditions

Informal Park  
& Ride



### Existing Conditions

Pavement  
Deterioration &  
Awkward Intersection  
Along North Road



### Existing Conditions

Lack of Sidewalks  
& Bicycle Facilities



### Existing Conditions

Lack of Sidewalk  
Along Bridge &  
Wide Shoulders Along  
Ballard Rd



## Existing Conditions



## Break Out Into Groups



## Questions

- Question 1: What issues or concerns do you have within the study area? Are trucks or the lack of pedestrian facilities issues?
- Question 2: Do you believe the Hamlet Zone is beneficial and appropriate for this area?
- Question 3: This area is intended to be developed for Light Industrial/Commercial uses. How should these land uses be designed? What would you like to see as the character of the corridor (an area that looks developed like at Exit 15 or more rural)?
- Question 4: Can or should the corridor be more pedestrian friendly? Do you feel the area offers adequate transportation choices or adequate housing choices? If not, what would you suggest adding?
- Questions 5: Are you aware of the park and ride lot that has been informally used at Exit 16? Would you like to see a park and ride lot formalized and maintained in the study area?



FIFTEEN MINUTE WARNING!!

TWO MINUTE WARNING!!

33

THANK YOU  
AND  
GOOD NIGHT!!



35

## Project Schedule

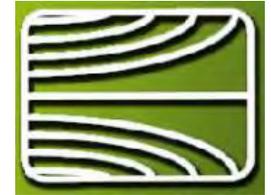
- ❑ Community Workshop I      June 2011
- ❑ Focus Group Meeting      June 2011
- ❑ Draft Plan      Aug. 2011
- ❑ Community Workshop II      Sept. 2011
- ❑ Final Plan      Oct. 2011





Town of Wilton  
EXIT 16 CORRIDOR LINKAGE STUDY

Community Workshop #1  
Wednesday, June 8<sup>th</sup>, 2011  
Wilton Town Hall – 6:30PM



Attendees:

Ray O'Conor  
Mike Valentine  
Keith Manz  
Shelby Schneider

Bill Yasment  
Deb Zellan  
Jared Dinsmore  
Dan Schectner

Deb Stacey  
Chuck Voss  
Tom Johnson  
Sarah Quandt

Meeting Purpose & Overview:

The primary purpose of this public workshop was to introduce the Linkage study to the general public, provide an overview of the data collected and existing conditions within the study area, and solicit public input and/or feedback on several questions about the study area. The information gained as a result of this workshop will be used to help the consultants gain a deeper understanding of issues and opportunities that may exist within and near the primary study area. All of the information obtained from this meeting will be synthesized and presented to the Exit 16 Linkage Study advisory committee for their consideration, and will be incorporated into the draft and final Linkage study for consideration by the Town of Wilton and CDTC.

The format of the meeting was centered around a brief Power Point presentation given by B&L that illustrated much of the data collected about the corridor to date as well as the project goals, tasks and general timeline. The second half of the workshop was a facilitated question and answer session with the attendees that focused on addressing five primary questions about the study area. The questions and responses are presented below.

Upon concluding the Q&A portion of the workshop, attendees were encouraged to continue to monitor the development of the linkage study, informed about future project activities and mile stones, and thanked for their interest and attendance. In addition, several local newspaper reporters were present at the workshop and offered to continue to keep their readers abreast of all future developments with the Exit 16 linkage study.

Question 1: What issues or concerns do you have within the study area? Are trucks or the lack of pedestrian facilities issues?

- Northway bridge at interchange gets congested due to truck traffic and the ramps being so close together
- Cars heading west can't get around trucks turning south (same with cars heading east and trucks turning north)
- No center turn lane is an issue, trucks don't use the center lane near plaza for turning
- Certain times worse than others (shift changes at Target)
- Comparing Exits 15/16
  - Exit 16 is less dense which is reflected in land values
  - This also effects who/what comes in for development
- Need commercial/industrial development to be catalyst for Hamlet
- Zoning ordinance should include standards that reflect what the Town would like to be like in 10-15 years
- Question: Are there other examples of exits like this, with mix of land use, 2 lane bridge?
  - Clifton Park 25 years ago
  - Usher's Road –Stacking problem when Sysco came in. Interchange built to expect redevelopment.
  - Exit 8
  - Exit 15 used to be 2 lane bridge; in 1990 Wilton Mall paid for 4 lane expansion
  - Back to question, what about industrial mixed with Hamlet, has that been done before?
  - Somewhat in Malta
  - Valatie – State highway going through
- Target's reason for locating at Exit 16 – purely location, right off northway, easy truck access. Wanted to be less than half mile from major highway
- How to make people want to live near heavy industry (trucks, construction)?
- Should 4-5 lane bridge be a priority?
  - Various options/alternatives for bridge design but priority bridges will receive money first (ones that are dangerously unsafe)
  - Would need a "Global Foundries" situation where private investment was given in order to get it done soon

Question 2: Do you believe the Hamlet Zone is beneficial and appropriate for this area?

- Question: How does rural seal represent Town now that it has become more industrialized?
  - What does the Town want to be characterized by? Identifiers?
    - Rural?
    - Urban?
    - Like Clifton Park?
  - Historic Preservation Board and law in place to protect lands
  - Would existing cemeteries, residents be put out of place?
- Question: How do areas immediately outside of study boundary fit into the study? They'll still be affected
  - Can be looked at on a larger aerial to see overall dynamic, but the line had to be drawn somewhere
  - CDTC wants a concentrated study area, Ballard Road was of main concern
- Question: What was Town's intent with Hamlet Zone?
  - Wanted to have an area(s) in certain parts of Town where one could get fundamental services (don't have to go to Exit 15)
  - Used to be grocery store, Town Offices were natural draw
  - Thought might happen here as well but haven't had the residential growth to match
  - Now have mostly industrial uses

Question 3: This area is intended to be developed for Light Industrial/Commercial uses. How should these land uses be designed? What would you like to see as the character of the corridor (an area that looks developed like at Exit 15 or more rural)?

- Corridor currently still has rural feel
- Residents would like to maintain that rural-ness
- *CDTC*: Target being set so far back prevents them from providing mass transit to it, not efficient to have to go that far off a main route
- Could make Target more connected to Ballard via pedestrian amenities
- Can have businesses develop closer to road but maintain rural atmosphere through design guidelines and standards (buffers – trees, berms)
- *SEDC*: Companies probably not looking for pedestrian amenities, don't mind being set back
- Question: How many people in Adirondack Estates work in facilities along Ballard? Do they walk?
- There are existing planning docs suggesting proper site design
  - Parking in rear, storefronts close to road

- Gateway – Give off a “Welcome to Ballard Road” feeling, hamlet style is more welcoming

Question 4: Can or should the corridor be more pedestrian friendly? Do you feel the area offers adequate transportation choices or adequate housing choices? If not, what would you suggest adding?

- Need for sidewalks, crosswalks
- “Nobody dares to walk”
- Traver Road – traffic headed north (toward Stewart’s) is much heavier
  - Much more traffic to/from King’s Mills the last few years
  - King’s Mills sight distance issue, can’t see over crest
- Traver VERY narrow
  - Cyclists don’t have room to share with cars
- Need sidewalks on Traver more than Ballard, at least there’s space on Ballard
- More pedestrian connectivity from residences south to north

Question 5: Are you aware of the park and ride lot that has been informally used at Exit 16? Would you like to see a park and ride lot formalized and maintained in the study area?

- No users in room
- Not an issue for property owner, plows in winter but IS private property
- 20% of surveys returned so far, more expected. No pattern has emerged yet



## Appendix D      CDTC Summary of Crash Data

**Wilton Exit 16 Linkage Study Crash Data (2005 - 2009)**

**Ballard Road: Northern Pines Road to Commerce Plaza Drive**

<b>Link Crashes</b>	<b>Total Crashes</b>	<b>Reportable</b>	<b>Injury</b>	<b>Fatal</b>	<b>Crash Type</b>	<b>Collision Type</b>
Northern Pines Road to North/Traver Roads	13	6	1	0	1 MV, 5 GR, 2 DR, 1 AN, 1 SP, 1 ERD, 2 OTH	1 HO, 12 OTH
North/Traver Roads to I-87 SB Ramps	1	0	0	0	1 OTH	1 OTH
I-87 SB Ramps to NB Ramps	2	1	0	0	2 MV	1 RE, 1 UNK
I-87 NB Ramps to Edie Road	0	0	0	0	---	---
Edie Road to Commerce Plaza Drive	5	3	1	0	3 MV, 1 DR, 1 ERD	2 RE, 1 HO, 2 OTH
<b>Total Non-Intersection Crashes</b>	<b>21</b>	<b>10</b>	<b>2</b>	<b>0</b>	<b>6 MV, 5 GR, 3 DR, 1 AN, 1 SP, 2 ERD, 3 OTH</b>	<b>2 HO, 3 RE, 1 UNK, 15 OTH</b>
<b>Intersection Crashes</b>	<b>Total Crashes</b>	<b>Reportable</b>	<b>Injury</b>	<b>Fatal</b>	<b>Crash Type</b>	<b>Collision Type</b>
Ballard Road @ Northern Pines Road	8	4	2	0	8 MV	1 RE, 7 RA
Ballard Road @ North/Traver Roads	10	4	2	0	8 MV, 1 DR, 1 CLHD	6 RE, 1 RTW, 1 LTA, 2 OTH
Ballard Road @ Gordon Road	5	0	2	0	4 MV, 1 OTHNC	3 RE, 1 RA, 1 OTH
Ballard Road @ I-87 SB Ramps	9	2	2	0	6 MV, 1 OTHNC, 2 OTH	4 RE, 1 RA, 1 OVR, 3 OTH
Ballard Road @ I-87 NB Ramps	15	5	3	0	11 MV, 3 LSUP, 1 OVRT	5 RE, 3 LTA, 1 SDSW, 6 OTH
Ballard Road @ Edie Road	7	4	3	0	6 MV, 1 OTH	2 RA, 1 RTA, 2 LTA, 1 UNK, 1 OTH
Ballard Road @ Commerce Park Drive	0	0	0	0	---	---
<b>Total Intersection Crashes</b>	<b>54</b>	<b>19</b>	<b>14</b>	<b>0</b>	<b>43 MV, 1 DR, 3 LSUP, 1 CLHD, 1 OVRT, 2 OTHNC, 3 OTH</b>	<b>19 RE, 11 RA, 1 RTW, 1 RTA, 6 LTA, 1 OVR, 1 SDSW, 1 UNK, 13 OTH</b>
<b>Total All Crashes</b>	<b>75</b>	<b>29</b>	<b>16</b>	<b>0</b>	<b>49 MV, 5 GR, 4 DR, 1 AN, 3 LSUP, 1 SP, 2 ERD, 1 CLHD, 1 OVRT, 2 OTHNC, 6 OTH</b>	<b>2 HO, 22 RE, 11 RA, 1 RTW, 1 RTA, 6 LTA, 1 OVR, 1 SDSW, 2 UNK, 28 OTH</b>

**Traver Road: Ballard Road to Study Area Limits**

<b>Link Crashes</b>	<b>Total Crashes</b>	<b>Reportable</b>	<b>Injury</b>	<b>Fatal</b>	<b>Crash Type</b>	<b>Collision Type</b>
Traver Road: Ballard Road to Study Area Limits	9	4	1	0	4 MV, 2 GR, 1 LSUP, 2 DR	1 RA, 1 LTA, 2 SDSW, 1 RE, 4 OTH
<b>Total Non-Intersection Crashes</b>	<b>9</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>4 MV, 2 GR, 1 LSUP, 2 DR</b>	<b>1 RA, 1 LTA, 2 SDSW, 1 RE, 4 OTH</b>
<b>Total All Crashes</b>	<b>9</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>4 MV, 2 GR, 1 LSUP, 2 DR</b>	<b>1 RA, 1 LTA, 2 SDSW, 1 RE, 4 OTH</b>

**North Road: Ballard Road to Study Area Limits**

<b>Link Crashes</b>	<b>Total Crashes</b>	<b>Reportable</b>	<b>Injury</b>	<b>Fatal</b>	<b>Crash Type</b>	<b>Collision Type</b>
North Road: Ballard Road to Study Area Limits	4	2	0	0	1 MV, 1 GR, 1 LSUP, 1 SP	1 SDSW, 3 OTH
<b>Total Non-Intersection Crashes</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>1 MV, 1 GR, 1 LSUP, 1 SP</b>	<b>1 SDSW, 3 OTH</b>
<b>Total All Crashes</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>1 MV, 1 GR, 1 LSUP, 1 SP</b>	<b>1 SDSW, 3 OTH</b>

**Gordon Road: Ballard Road to Study Area Limits**

<b>Link Crashes</b>	<b>Total Crashes</b>	<b>Reportable</b>	<b>Injury</b>	<b>Fatal</b>	<b>Crash Type</b>	<b>Collision Type</b>
Gordon Road: Ballard Road to Study Area Limits	2	0	0	0	1 MV, 1 LSUP	1 SDSW, 1 OTH
<b>Total Non-Intersection Crashes</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1 MV, 1 LSUP</b>	<b>1 SDSW, 1 OTH</b>
<b>Total All Crashes</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1 MV, 1 LSUP</b>	<b>1 SDSW, 1 OTH</b>

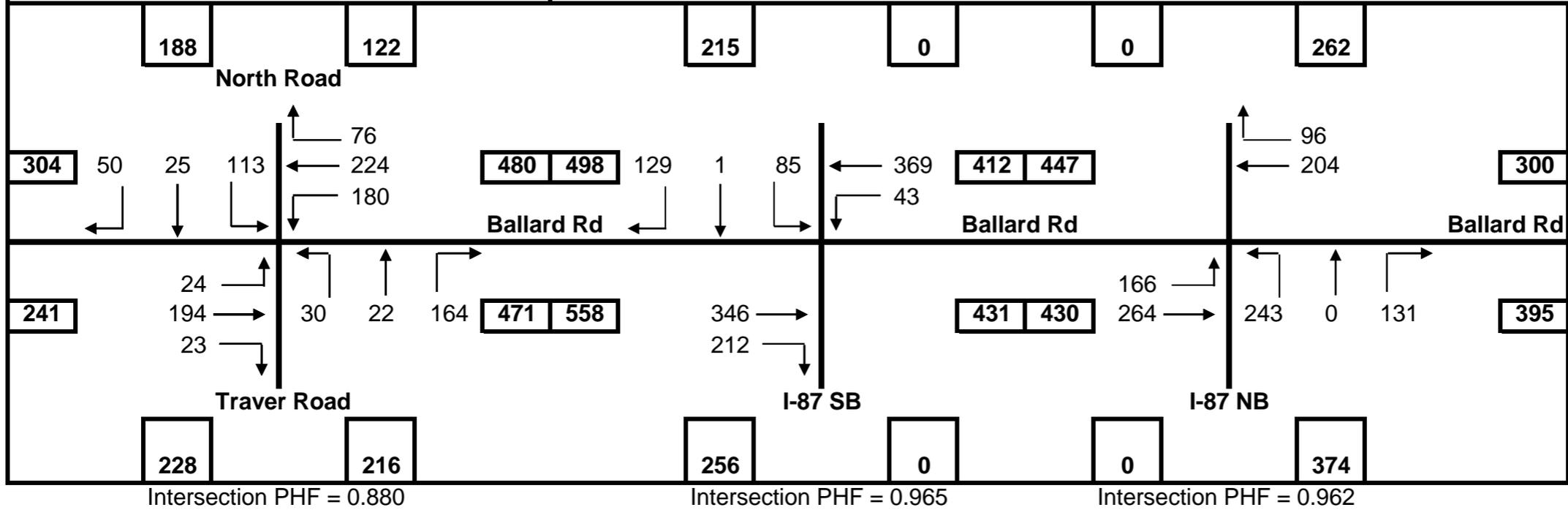
**Crash Type Codes:** AN - Animal; CLHD - Culvert/Headwall; DR - Deer; ERD - Earth Element/Rock Cut/Ditch; GR - guide Rail; LSUP - Light Support/Utility Pole; MV - Motor Vehicle; OTH- Other; OTHNC - Other Non-Collision; OVRT - Overtured; SP - Sign Post

**Collision Type Codes:** HO - Head On; LTA - Left turn Against; OTH - Other; OVR - Overtaking; RA - Right Angle; RE - Rear End; RTA - Right Turn Against; RTW - Right Turn With; SDSW - Sideswipe; UNK - Unknown

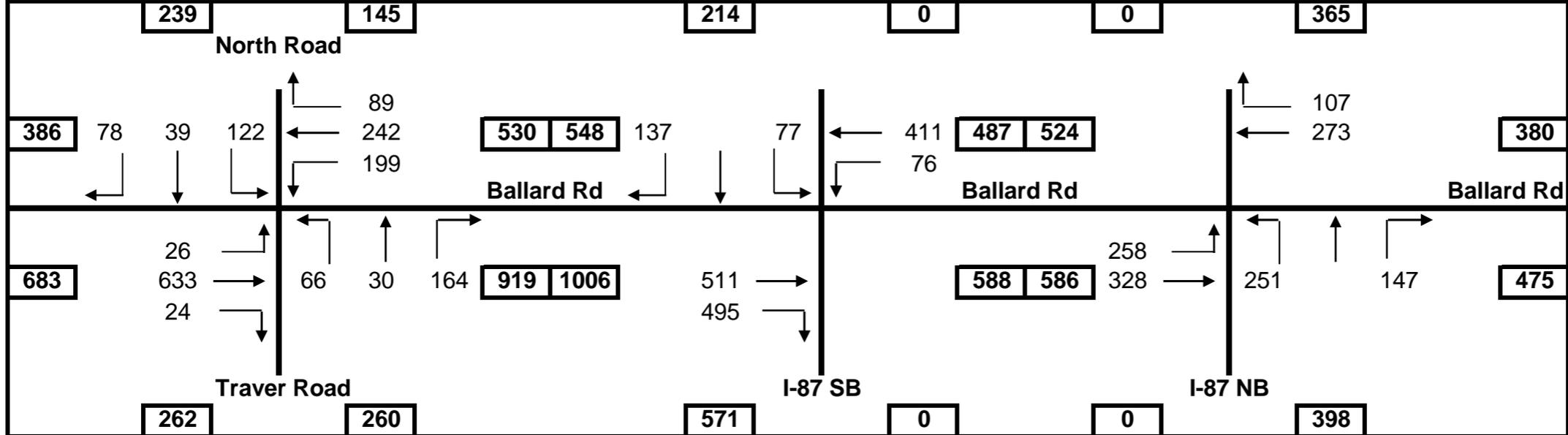


## Appendix E CDTC Level of Service (LOS) Analysis

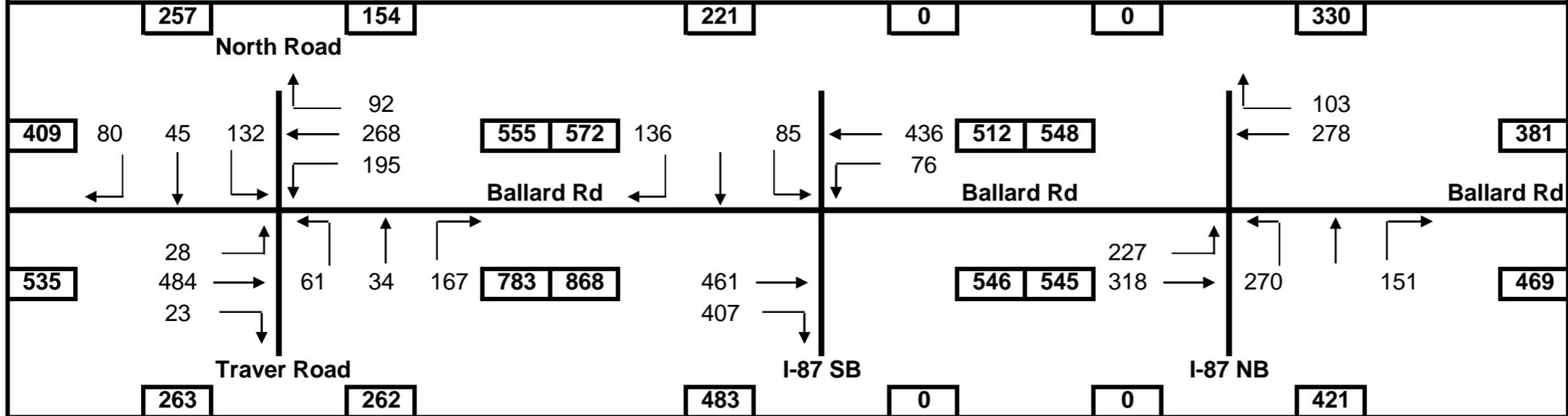
**Year 2010-11 Existing Traffic Volumes  
PM Peak Hour**



**2025 PM Mix A 50% Build Out Forecast**

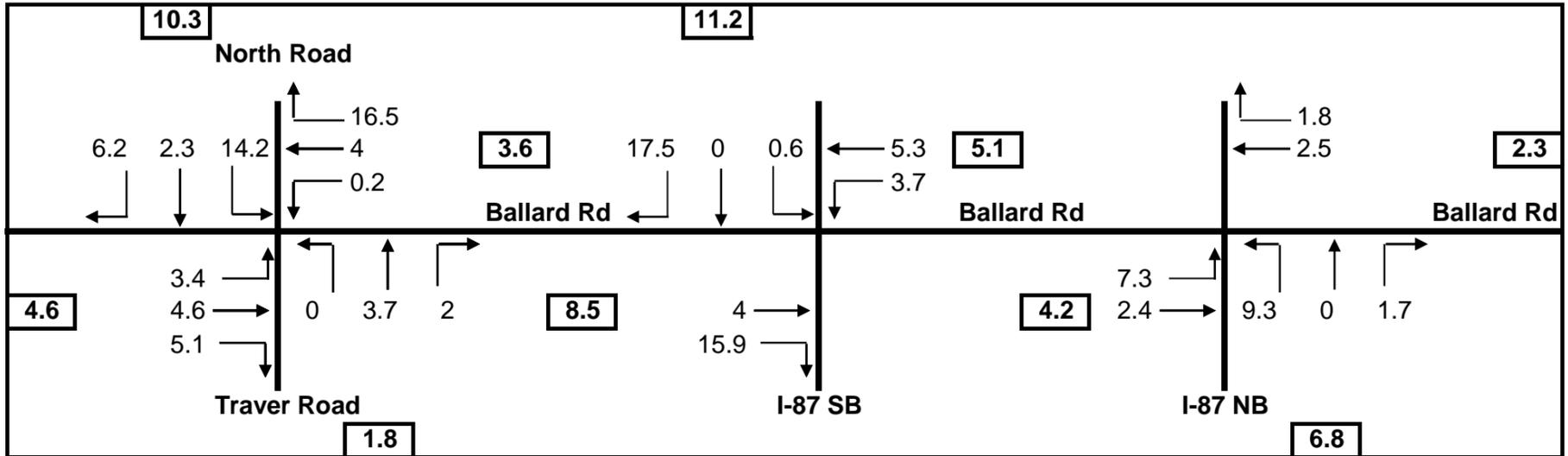


## 2025 PM Mix B 50% Build Out Forecast



Key:  = Approach Total

2010-2011 Percent Trucks by Turn Movement



Key: x.x = Approach Total Percentage

<b>HCS2000™ DETAILED REPORT</b>												
<b>General Information</b>						<b>Site Information</b>						
Analyst	Sree					Intersection	Ballard & 87NB					
Agency or Co.	CDTC					Area Type	All other areas					
Date Performed	9/13/2011					Jurisdiction	Town of Wilton					
Time Period	PM Peak					Analysis Year	2010					
						Project ID	Wilton Linkage					
<b>Volume and Timing Input</b>												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N <sub>1</sub>	0	1	0	0	1	0	0	1	0	0	0	0
Lane group		LT			TR			LTR				
Volume, V (vph)	166	264			204	96	243	0	131			
% Heavy vehicles, %HV	0	0			0	0	0	0	0			
Peak-hour factor, PHF	0.96	0.96			0.96	0.96	0.96	0.96	0.96			
Pretimed (P) or actuated (A)	A	A			A	A	A	A	A			
Start-up lost time, I <sub>1</sub>		2.0			2.0			2.0				
Extension of effective green, e		2.0			2.0			2.0				
Arrival type, AT		3			3			3				
Unit extension, UE		3.0			3.0			3.0				
Filtering/metering, I		1.000			1.000			1.000				
Initial unmet demand, Q <sub>b</sub>		0.0			0.0			0.0				
Ped / Bike / RTOR volumes				0		0	0		0	0		
Lane width		12.0			12.0			12.0				
Parking / Grade / Parking	N	0	N	N	0	N	N	0	N	N		N
Parking maneuvers, N <sub>m</sub>												
Buses stopping, N <sub>B</sub>		0			0			0				
Min. time for pedestrians, G <sub>p</sub>				3.2			3.2			3.2		
Phasing	EW Perm	02	03	04	NB Only	06	07	08				
Timing	G = 32.0	G =	G =	G =	G = 15.0	G =	G =	G =				
	Y = 5	Y =	Y =	Y =	Y = 5	Y =	Y =	Y =				
Duration of Analysis, T = 0.25							Cycle Length, C = 57.0					
<b>Lane Group Capacity, Control Delay, and LOS Determination</b>												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v		448			313			389				
Lane group capacity, c		785			1021			461				
v/c ratio, X		0.57			0.31			0.84				
Total green ratio, g/C		0.56			0.56			0.26				
Uniform delay, d <sub>1</sub>		8.1			6.6			19.9				
		1.000			1.000			1.000				

Progression factor, PF											
Delay calibration, k		0.17			0.11			0.38			
Incremental delay, $d_2$		1.0			0.2			13.4			
Initial queue delay, $d_3$											
Control delay		9.1			6.8			33.3			
Lane group LOS		A			A			C			
Approach delay		9.1			6.8			33.3			
Approach LOS		A			A			C			
Intersection delay		16.6			$X_c = 0.66$			Intersection LOS			B

<b>HCS2000™ DETAILED REPORT</b>												
<b>General Information</b>						<b>Site Information</b>						
Analyst	Sree					Intersection	Ballard & 87NB Mix A					
Agency or Co.	CDTC					Area Type	All other areas					
Date Performed	9/13/2011					Jurisdiction	Town of Wilton					
Time Period	PM Peak					Analysis Year	2025					
						Project ID	Wilton Linkage					
<b>Volume and Timing Input</b>												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, $N_1$	0	1	0	0	1	0	0	1	0	0	0	0
Lane group		LT			TR			LTR				
Volume, V (vph)	258	328			273	107	251	0	147			
% Heavy vehicles, %HV	0	0			0	0	0	0	0			
Peak-hour factor, PHF	0.96	0.96			0.96	0.96	0.96	0.96	0.96			
Pretimed (P) or actuated (A)	A	A			A	A	A	A	A			
Start-up lost time, $I_1$		2.0			2.0			2.0				
Extension of effective green, $e$		2.0			2.0			2.0				
Arrival type, AT		3			3			3				
Unit extension, UE		3.0			3.0			3.0				
Filtering/metering, I		1.000			1.000			1.000				
Initial unmet demand, $Q_b$		0.0			0.0			0.0				
Ped / Bike / RTOR volumes				0		0	0		0	0		
Lane width		12.0			12.0			12.0				
Parking / Grade / Parking	N	0	N	N	0	N	N	0	N	N		N
Parking maneuvers, $N_m$												
Buses stopping, $N_B$		0			0			0				
Min. time for pedestrians, $G_p$					3.2			3.2				3.2
Phasing	EW Perm	02	03	04	NB Only	06	07	08				
Timing	G = 32.0	G =	G =	G =	G = 15.0	G =	G =	G =				
	Y = 5	Y =	Y =	Y =	Y = 5	Y =	Y =	Y =				
Duration of Analysis, T = 0.25							Cycle Length, C = 57.0					
<b>Lane Group Capacity, Control Delay, and LOS Determination</b>												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v		611			395			414				
Lane group capacity, c		650			1026			461				
v/c ratio, X		0.94			0.38			0.90				
Total green ratio, g/C		0.56			0.56			0.26				
Uniform delay, $d_1$		11.6			7.0			20.3				
		1.000			1.000			1.000				

Progression factor, PF											
Delay calibration, k		0.45			0.11			0.42			
Incremental delay, $d_2$		21.8			0.2			20.1			
Initial queue delay, $d_3$											
Control delay		33.4			7.2			40.4			
Lane group LOS		C			A			D			
Approach delay		33.4			7.2			40.4			
Approach LOS		C			A			D			
Intersection delay		28.1			$X_c = 0.93$			Intersection LOS			C

<b>HCS2000™ DETAILED REPORT</b>												
<b>General Information</b>						<b>Site Information</b>						
Analyst	Sree					Intersection	Ballard & 87NB Mix B					
Agency or Co.	CDTC					Area Type	All other areas					
Date Performed	9/13/2011					Jurisdiction	Town of Wilton					
Time Period	PM Peak					Analysis Year	2025					
						Project ID	Wilton Linkage					
<b>Volume and Timing Input</b>												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, $N_1$	0	1	0	0	1	0	0	1	0	0	0	0
Lane group		LT			TR			LTR				
Volume, V (vph)	227	318			278	103	270	0	151			
% Heavy vehicles, %HV	0	0			0	0	0	0	0			
Peak-hour factor, PHF	0.96	0.96			0.96	0.96	0.96	0.96	0.96			
Pretimed (P) or actuated (A)	A	A			A	A	A	A	A			
Start-up lost time, $I_1$		2.0			2.0			2.0				
Extension of effective green, $e$		2.0			2.0			2.0				
Arrival type, AT		3			3			3				
Unit extension, UE		3.0			3.0			3.0				
Filtering/metering, I		1.000			1.000			1.000				
Initial unmet demand, $Q_b$		0.0			0.0			0.0				
Ped / Bike / RTOR volumes				0		0	0		0	0		
Lane width		12.0			12.0			12.0				
Parking / Grade / Parking	N	0	N	N	0	N	N	0	N	N		N
Parking maneuvers, $N_m$												
Buses stopping, $N_B$		0			0			0				
Min. time for pedestrians, $G_p$				3.2			3.2			3.2		
Phasing	EW Perm	02	03	04	NB Only	06	07	08				
Timing	G = 32.0	G =	G =	G =	G = 15.0	G =	G =	G =				
	Y = 5	Y =	Y =	Y =	Y = 5	Y =	Y =	Y =				
Duration of Analysis, T = 0.25							Cycle Length, C = 57.0					
<b>Lane Group Capacity, Control Delay, and LOS Determination</b>												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v		567			397			438				
Lane group capacity, c		659			1028			461				
v/c ratio, X		0.86			0.39			0.95				
Total green ratio, g/C		0.56			0.56			0.26				
Uniform delay, $d_1$		10.6			7.0			20.6				
		1.000			1.000			1.000				

Progression factor, PF											
Delay calibration, k		0.39			0.11			0.46			
Incremental delay, $d_2$		11.2			0.2			29.6			
Initial queue delay, $d_3$											
Control delay		21.8			7.2			50.2			
Lane group LOS		C			A			D			
Approach delay		21.8			7.2			50.2			
Approach LOS		C			A			D			
Intersection delay		26.5			$X_c = 0.89$			Intersection LOS			C

<b>HCS2000™ DETAILED REPORT</b>												
<b>General Information</b>						<b>Site Information</b>						
Analyst	Sree					Intersection	Ballard & 87SB					
Agency or Co.	CDTC					Area Type	All other areas					
Date Performed	9/13/2011					Jurisdiction	Town of Wilton					
Time Period	PM Peak					Analysis Year	2010					
						Project ID	Wilton Linkage					
<b>Volume and Timing Input</b>												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N <sub>1</sub>	0	1	0	0	1	0	0	0	0	0	1	0
Lane group		TR			LT						LTR	
Volume, V (vph)		346	212	43	369					129	1	85
% Heavy vehicles, %HV		0	0	0	0					0	0	0
Peak-hour factor, PHF		0.96	0.96	0.96	0.96					0.96	0.96	0.96
Pretimed (P) or actuated (A)		A	A	A	A					A	A	A
Start-up lost time, I <sub>1</sub>		2.0			2.0						2.0	
Extension of effective green, e		2.0			2.0						2.0	
Arrival type, AT		3			3						3	
Unit extension, UE		3.0			3.0						3.0	
Filtering/metering, I		1.000			1.000						1.000	
Initial unmet demand, Q <sub>b</sub>		0.0			0.0						0.0	
Ped / Bike / RTOR volumes	0		0				0			0		0
Lane width		12.0			12.0						12.0	
Parking / Grade / Parking	N	0	N	N	0	N	N		N	N	0	N
Parking maneuvers, N <sub>m</sub>												
Buses stopping, N <sub>B</sub>		0			0						0	
Min. time for pedestrians, G <sub>p</sub>		3.2					3.2				3.2	
Phasing	EW Perm	02	03	04	SB Only	06	07	08				
Timing	G = 32.0	G =	G =	G =	G = 15.0	G =	G =	G =				
	Y = 5	Y =	Y =	Y =	Y = 5	Y =	Y =	Y =				
Duration of Analysis, T = 0.25							Cycle Length, C = 57.0					
<b>Lane Group Capacity, Control Delay, and LOS Determination</b>												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v		581			429						224	
Lane group capacity, c		1012			972						459	
v/c ratio, X		0.57			0.44						0.49	
Total green ratio, g/C		0.56			0.56						0.26	
Uniform delay, d <sub>1</sub>		8.1			7.3						17.8	
		1.000			1.000						1.000	

Progression factor, PF												
Delay calibration, k		0.17			0.11						0.11	
Incremental delay, $d_2$		0.8			0.3						0.8	
Initial queue delay, $d_3$												
Control delay		8.9			7.6						18.6	
Lane group LOS		A			A						B	
Approach delay		8.9			7.6						18.6	
Approach LOS		A			A						B	
Intersection delay		10.2			$X_c = 0.55$			Intersection LOS			B	

<b>HCS2000™ DETAILED REPORT</b>												
<b>General Information</b>						<b>Site Information</b>						
Analyst	Sree					Intersection	Ballard & 87SB Mix A					
Agency or Co.	CDTC					Area Type	All other areas					
Date Performed	9/13/2011					Jurisdiction	Town of Wilton					
Time Period	PM Peak					Analysis Year	2025					
						Project ID	Wilton Linkage					
<b>Volume and Timing Input</b>												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, $N_1$	0	1	0	0	1	0	0	0	0	0	1	0
Lane group		TR			LT						LTR	
Volume, V (vph)		511	495	76	411					77	0	137
% Heavy vehicles, %HV		0	0	0	0					0	0	0
Peak-hour factor, PHF		0.96	0.96	0.96	0.96					0.96	0.96	0.96
Pretimed (P) or actuated (A)		A	A	A	A					A	A	A
Start-up lost time, $l_1$		2.0			2.0						2.0	
Extension of effective green, $e$		2.0			2.0						2.0	
Arrival type, AT		3			3						3	
Unit extension, UE		3.0			3.0						3.0	
Filtering/metering, I		1.000			1.000						1.000	
Initial unmet demand, $Q_b$		0.0			0.0						0.0	
Ped / Bike / RTOR volumes	0		0				0			0		0
Lane width		12.0			12.0						12.0	
Parking / Grade / Parking	N	0	N	N	0	N	N		N	N	0	N
Parking maneuvers, $N_m$												
Buses stopping, $N_B$		0			0						0	
Min. time for pedestrians, $G_p$		3.2					3.2				3.2	
Phasing	EW Perm	02	03	04	SB Only	06	07	08				
Timing	G = 42.0	G =	G =	G =	G = 15.0	G =	G =	G =				
	Y = 5	Y =	Y =	Y =	Y = 5	Y =	Y =	Y =				
Duration of Analysis, T = 0.25						Cycle Length, C = 67.0						
<b>Lane Group Capacity, Control Delay, and LOS Determination</b>												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v		1048			507						223	
Lane group capacity, c		1112			848						382	
v/c ratio, X		0.94			0.60						0.58	
Total green ratio, g/C		0.63			0.63						0.22	
Uniform delay, $d_1$		11.4			7.5						23.2	
		1.000			1.000						1.000	

Progression factor, PF												
Delay calibration, k		0.46			0.19						0.18	
Incremental delay, $d_2$		15.2			1.2						2.3	
Initial queue delay, $d_3$												
Control delay		26.6			8.6						25.5	
Lane group LOS		C			A						C	
Approach delay		26.6			8.6						25.5	
Approach LOS		C			A						C	
Intersection delay		21.3			$X_c = 0.85$			Intersection LOS			C	

<b>HCS2000™ DETAILED REPORT</b>												
<b>General Information</b>						<b>Site Information</b>						
Analyst	Sree					Intersection	Ballard & 87SB Mix B					
Agency or Co.	CDTC					Area Type	All other areas					
Date Performed	9/13/2011					Jurisdiction	Town of Wilton					
Time Period	PM Peak					Analysis Year	2025					
						Project ID	Wilton Linkage					
<b>Volume and Timing Input</b>												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, $N_1$	0	1	0	0	1	0	0	0	0	0	1	0
Lane group		TR			LT						LTR	
Volume, V (vph)		461	407	76	436					85	0	136
% Heavy vehicles, %HV		0	0	0	0					0	0	0
Peak-hour factor, PHF		0.96	0.96	0.96	0.96					0.96	0.96	0.96
Pretimed (P) or actuated (A)		A	A	A	A					A	A	A
Start-up lost time, $l_1$		2.0			2.0						2.0	
Extension of effective green, $e$		2.0			2.0						2.0	
Arrival type, AT		3			3						3	
Unit extension, UE		3.0			3.0						3.0	
Filtering/metering, I		1.000			1.000						1.000	
Initial unmet demand, $Q_b$		0.0			0.0						0.0	
Ped / Bike / RTOR volumes	0		0				0			0		0
Lane width		12.0			12.0						12.0	
Parking / Grade / Parking	N	0	N	N	0	N	N		N	N	0	N
Parking maneuvers, $N_m$												
Buses stopping, $N_B$		0			0						0	
Min. time for pedestrians, $G_p$		3.2					3.2				3.2	
Phasing	EW Perm	02	03	04	SB Only	06	07	08				
Timing	G = 42.0	G =	G =	G =	G = 15.0	G =	G =	G =				
	Y = 5	Y =	Y =	Y =	Y = 5	Y =	Y =	Y =				
Duration of Analysis, T = 0.25							Cycle Length, C = 67.0					
<b>Lane Group Capacity, Control Delay, and LOS Determination</b>												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v		904			533						231	
Lane group capacity, c		1116			927						383	
v/c ratio, X		0.81			0.57						0.60	
Total green ratio, g/C		0.63			0.63						0.22	
Uniform delay, $d_1$		9.5			7.3						23.3	
		1.000			1.000						1.000	

Progression factor, PF												
Delay calibration, k		0.35			0.17						0.19	
Incremental delay, $d_2$		4.6			0.9						2.7	
Initial queue delay, $d_3$												
Control delay		14.1			8.2						26.0	
Lane group LOS		B			A						C	
Approach delay		14.1			8.2						26.0	
Approach LOS		B			A						C	
Intersection delay		13.8			$X_c = 0.76$			Intersection LOS			B	

<b>HCS2000™ DETAILED REPORT</b>													
<b>General Information</b>							<b>Site Information</b>						
Analyst	Sree						Intersection	Ballard & North/Traver					
Agency or Co.	CDTC						Area Type	All other areas					
Date Performed	9/13/2011						Jurisdiction	Town of Wilton					
Time Period	PM Peak						Analysis Year	2010					
							Project ID	Wilton Linkage					
<b>Volume and Timing Input</b>													
	EB			WB			NB			SB			
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
Number of lanes, $N_1$	1	1	0	1	1	0	0	1	0	0	1	1	
Lane group	L	TR		L	TR			LTR			LT	R	
Volume, V (vph)	24	194	23	180	224	76	30	22	164	113	25	50	
% Heavy vehicles, %HV	0	0	0	0	0	0	0	0	0	0	0	0	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	
Pretimed (P) or actuated (A)	A	A	A	A	A	A	A	A	A	A	A	A	
Start-up lost time, $l_1$	2.0	2.0		2.0	2.0			2.0			2.0	2.0	
Extension of effective green, e	2.0	2.0		2.0	2.0			2.0			2.0	2.0	
Arrival type, AT	3	3		3	3			3			3	3	
Unit extension, UE	3.0	3.0		3.0	3.0			3.0			3.0	3.0	
Filtering/metering, I	1.000	1.000		1.000	1.000			1.000			1.000	1.000	
Initial unmet demand, $Q_b$	0.0	0.0		0.0	0.0			0.0			0.0	0.0	
Ped / Bike / RTOR volumes	0		0	0		0	0		0	0		0	
Lane width	12.0	12.0		12.0	12.0			12.0			12.0	12.0	
Parking / Grade / Parking	N	0	N	N	0	N	N	0	N	N	0	N	
Parking maneuvers, $N_m$													
Buses stopping, $N_B$	0	0		0	0			0			0	0	
Min. time for pedestrians, $G_p$	3.2			3.2			3.2			3.2			
Phasing	Excl. Left	Thru & RT	03	04	NS Perm	06	07	08					
Timing	G = 20.0	G = 30.0	G =	G =	G = 20.0	G =	G =	G =					
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =					
Duration of Analysis, T = 0.25							Cycle Length, C = 79.0						
<b>Lane Group Capacity, Control Delay, and LOS Determination</b>													
	EB			WB			NB			SB			
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
Adjusted flow rate, v	27	246		205	341			245			156	57	
Lane group capacity, c	457	710		457	694			409			237	879	
v/c ratio, X	0.06	0.35		0.45	0.49			0.60			0.66	0.06	
	0.25	0.38		0.25	0.38			0.25			0.25	0.54	

Total green ratio, g/C												
Uniform delay, $d_1$	22.4	17.5		24.9	18.7			26.0			26.4	8.5
Progression factor, PF	1.000	1.000		1.000	1.000			1.000			1.000	1.000
Delay calibration, k	0.11	0.11		0.11	0.11			0.19			0.23	0.11
Incremental delay, $d_2$	0.1	0.3		0.7	0.5			2.4			6.5	0.0
Initial queue delay, $d_3$												
Control delay	22.4	17.8		25.6	19.2			28.4			33.0	8.5
Lane group LOS	C	B		C	B			C			C	A
Approach delay	18.3			21.6			28.4			26.4		
Approach LOS	B			C			C			C		
Intersection delay	23.0			$X_c = 0.53$			Intersection LOS			C		

<b>HCS2000™ DETAILED REPORT</b>												
<b>General Information</b>						<b>Site Information</b>						
Analyst	Sree					Intersection	Ballard & North/Traver Mix A					
Agency or Co.	CDTC					Area Type	All other areas					
Date Performed	9/13/2011					Jurisdiction	Town of Wilton					
Time Period	PM Peak					Analysis Year	2025					
						Project ID	Wilton Linkage					
<b>Volume and Timing Input</b>												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N <sub>1</sub>	1	1	0	1	1	0	0	1	0	0	1	1
Lane group	L	TR		L	TR			LTR			LT	R
Volume, V (vph)	26	633	24	199	242	89	66	30	164	122	39	78
% Heavy vehicles, %HV	0	0	0	0	0	0	0	0	0	0	0	0
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Pretimed (P) or actuated (A)	A	A	A	A	A	A	A	A	A	A	A	A
Start-up lost time, I <sub>1</sub>	2.0	2.0		2.0	2.0			2.0			2.0	2.0
Extension of effective green, e	2.0	2.0		2.0	2.0			2.0			2.0	2.0
Arrival type, AT	3	3		3	3			3			3	3
Unit extension, UE	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Filtering/metering, I	1.000	1.000		1.000	1.000			1.000			1.000	1.000
Initial unmet demand, Q <sub>b</sub>	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Ped / Bike / RTOR volumes	0		0	0		0	0		0	0		0
Lane width	12.0	12.0		12.0	12.0			12.0			12.0	12.0
Parking / Grade / Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking maneuvers, N <sub>m</sub>												
Buses stopping, N <sub>B</sub>	0	0		0	0			0			0	0
Min. time for pedestrians, G <sub>p</sub>	3.2			3.2			3.2			3.2		
Phasing	Excl. Left	Thru & RT	03	04	NS Perm	06	07	08				
Timing	G = 16.0	G = 42.0	G =	G =	G = 28.0	G =	G =	G =				
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =				
Duration of Analysis, T = 0.25							Cycle Length, C = 95.0					
<b>Lane Group Capacity, Control Delay, and LOS Determination</b>												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	30	746		226	376			295			183	89
Lane group capacity, c	304	836		304	806			374			287	799
v/c ratio, X	0.10	0.89		0.74	0.47			0.79			0.64	0.11
	0.17	0.44		0.17	0.44			0.29			0.29	0.49

Total green ratio, $g/C$												
Uniform delay, $d_1$	33.4	24.4		37.5	18.6			30.8			29.1	12.8
Progression factor, PF	1.000	1.000		1.000	1.000			1.000			1.000	1.000
Delay calibration, $k$	0.11	0.42		0.30	0.11			0.34			0.22	0.11
Incremental delay, $d_2$	0.1	11.9		9.5	0.4			10.8			4.7	0.1
Initial queue delay, $d_3$												
Control delay	33.5	36.3		47.1	19.1			41.6			33.8	12.9
Lane group LOS	C	D		D	B			D			C	B
Approach delay	36.2			29.6			41.6			26.9		
Approach LOS	D			C			D			C		
Intersection delay	33.7			$X_c = 0.83$			Intersection LOS			C		

<b>HCS2000™ DETAILED REPORT</b>												
<b>General Information</b>						<b>Site Information</b>						
Analyst	Sree					Intersection	Ballard & North/Traver Mix B					
Agency or Co.	CDTC					Area Type	All other areas					
Date Performed	9/13/2011					Jurisdiction	Town of Wilton					
Time Period	PM Peak					Analysis Year	2025					
						Project ID	Wilton Linkage					
<b>Volume and Timing Input</b>												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N <sub>1</sub>	1	1	0	1	1	0	0	1	0	0	1	1
Lane group	L	TR		L	TR			LTR			LT	R
Volume, V (vph)	28	484	23	195	268	92	61	34	167	132	45	80
% Heavy vehicles, %HV	0	0	0	0	0	0	0	0	0	0	0	0
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Pretimed (P) or actuated (A)	A	A	A	A	A	A	A	A	A	A	A	A
Start-up lost time, I <sub>1</sub>	2.0	2.0		2.0	2.0			2.0			2.0	2.0
Extension of effective green, e	2.0	2.0		2.0	2.0			2.0			2.0	2.0
Arrival type, AT	3	3		3	3			3			3	3
Unit extension, UE	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Filtering/metering, I	1.000	1.000		1.000	1.000			1.000			1.000	1.000
Initial unmet demand, Q <sub>b</sub>	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Ped / Bike / RTOR volumes	0		0	0		0	0		0	0		0
Lane width	12.0	12.0		12.0	12.0			12.0			12.0	12.0
Parking / Grade / Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking maneuvers, N <sub>m</sub>												
Buses stopping, N <sub>B</sub>	0	0		0	0			0			0	0
Min. time for pedestrians, G <sub>p</sub>	3.2			3.2			3.2			3.2		
Phasing	Excl. Left	Thru & RT	03	04	NS Perm	06	07	08				
Timing	G = 16.0	G = 42.0	G =	G =	G = 28.0	G =	G =	G =				
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =				
Duration of Analysis, T = 0.25						Cycle Length, C = 95.0						
<b>Lane Group Capacity, Control Delay, and LOS Determination</b>												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	32	576		222	410			298			201	91
Lane group capacity, c	304	834		304	808			373			278	799
v/c ratio, X	0.11	0.69		0.73	0.51			0.80			0.72	0.11
	0.17	0.44		0.17	0.44			0.29			0.29	0.49

Total green ratio, $g/C$												
Uniform delay, $d_1$	33.4	21.3		37.5	19.1			30.9			30.0	12.9
Progression factor, PF	1.000	1.000		1.000	1.000			1.000			1.000	1.000
Delay calibration, $k$	0.11	0.26		0.29	0.12			0.34			0.28	0.11
Incremental delay, $d_2$	0.2	2.5		8.7	0.5			11.7			9.0	0.1
Initial queue delay, $d_3$												
Control delay	33.6	23.7		46.1	19.6			42.6			39.0	12.9
Lane group LOS	C	C		D	B			D			D	B
Approach delay	24.3			28.9			42.6			30.9		
Approach LOS	C			C			D			C		
Intersection delay	29.9			$X_c = 0.73$			Intersection LOS			C		

**\*\*Taken from the 2009 UPDATE to the TRAFFIC PLANNING STUDY for the TOWN OF WILTON**

**LEVEL OF SERVICE SUMMARY  
2009 EXISTING CONDITIONS**

<b>Intersection</b>	<b>Traffic Control*</b>	<b>Approach</b>	<b>PM Peak Hour LOS</b>
Weibel Ave/Old Gick Rd & NYS Route 50	S	Eastbound Westbound Northbound Southbound <b>Overall</b>	C C C C <b>C</b>
Perry Road & NYS Route 50	SC	Eastbound Left-Turn Southbound	A C
Old Gick Road/Ingersoll Road & NYS Route 50	S	Eastbound Westbound Northbound Southbound <b>Overall</b>	A B D C <b>B</b>
Jones Road & NYS Route 50	SC	Eastbound Left-Turn Southbound Right Southbound Left	A C F
Jones Road & Carr Road	SC	Eastbound Left-Turn Southbound Right Southbound Left	A B D
Carr Road & Northern Pines Road	SC	Westbound Left-Turn Northbound Right Northbound Left	A D B
Ballard Road & Traver Road/North Road	S	Eastbound Westbound Northbound Southbound <b>Overall</b>	A A A A <b>A</b>
Edie Road & NYS Route 50	SC	Eastbound Left-Turn Westbound Left-Turn Northbound Southbound	A A E C
Northern Pines Road & Worth Road	SC	Eastbound Northbound Left	B A
Jones Road & Smith Bridge Road	SC	Eastbound Northbound Left	B A

\* S - Signalized, SC - STOP-Controlled

**\*\*Taken from the 2009 UPDATE to the TRAFFIC PLANNING STUDY for the TOWN OF WILTON**

**INTERSECTION LEVEL OF SERVICE SUMMARY  
2020 PROJECTED CONDITIONS**

<b>Intersection</b>	<b>Traffic Control*</b>	<b>Approach</b>	<b>PM Peak Hour LOS</b>
Weibel Ave/Old Gick Rd & NYS Route 50	S	Eastbound Westbound Northbound Southbound <b>Overall</b>	D D D C <b>D</b>
Perry Road & NYS Route 50	U	Eastbound Left-Turn Southbound	A F
Old Gick Road/Ingersoll Road & NYS Route 50	S	Eastbound Westbound Northbound Southbound <b>Overall</b>	E B D E <b>D</b>
Jones Road & NYS Route 50	U	Eastbound Left-Turn Southbound	B F
Jones Road & Carr Road	U	Eastbound Left-Turn Southbound	A F
Carr Road & Northern Pines Road	U	Westbound Left-Turn Northbound	A F
Ballard Road & Traver Road/North Road	S	Eastbound Westbound Northbound Southbound <b>Overall</b>	A B B B <b>B</b>
Edie Road & NYS Route 50	U	Eastbound Left-Turn Westbound Left-Turn Northbound Southbound	A A F F

\* S - Signalized, SC - STOP-Controlled

**\*\*Taken from the TRAFFIC IMPACT STUDY for the WILTON GLOBAL CAMPUS (2003)**

**2013 Build-out Level of Service Summary**

Intersection	Control	AM Peak Hour				PM Peak Hour			
		2003 Existing	2013 No-Build	2013 Build	2013 Build w/ Imp	2003 Existing	2013 No-Build	2013 Build	2013 Build w/ Imp
<b>Ballard Rd/US Rt 9</b>	S								
EB LTR		B (18.3)	B (18.8)	B (18.8)	--	B (10.7)	B (10.8)	B (10.8)	--
WB LTR		B (18.4)	B (18.9)	B (19.3)	--	B (11.9)	B (12.4)	B (15.0)	--
NB LTR		A (6.4)	A (6.9)	A (8.7)	--	B (12.7)	B (13.5)	B (14.0)	--
SB LTR		A (6.7)	A (7.1)	A (8.7)	--	B (11.8)	B (12.2)	B (12.4)	--
Overall		B (11.2)	B (11.7)	B (12.2)	--	B (11.9)	B (12.5)	B (13.8)	--
<b>Ballard Rd/ Northern Pines Rd</b>	U								
EB LTR		A (7.7)	A (7.7)	A (7.8)	--	A (8.0)	A (8.2)	A (8.9)	--
WB LTR		A (7.9)	A (8.1)	A (8.9)	--	A (7.7)	A (7.9)	A (8.0)	--
NB LTR		B (13.1)	C (15.3)	C (24.1)	--	C (17.3)	C (24.1)	F (59.6)	--
SB LTR		B (13.8)	C (16.4)	D (29.5)	--	C (15.9)	C (20.4)	E (39.1)	--
<b>Ballard Rd/Traver Rd/ North Rd</b>	S								
EB L		A (4.7)	A (4.7)	A (7.3)	A (6.8)	C (20.6)	C (21.9)	C (23.5)	C (21.3)
TR		A (9.4)	A (9.9)	B (10.4)	--	C (34.0)	D (35.9)	F (279.6)	--
(2TR)		--	--	--	A (8.9)	--	--	--	D (42.3)
WB L		A (5.0)	A (5.3)	A (5.6)	A (5.0)	C (21.2)	C (23.3)	D (49.2)	D (40.8)
TR		A (8.8)	A (9.0)	B (15.1)	--	D (43.7)	D (54.6)	F (80.9)	--
(T)		--	--	--	B (13.5)	--	--	--	D (45.1)
(R)		--	--	--	A (8.1)	--	--	--	C (31.1)
NB LTR		C (23.8)	C (25.7)	C (31.8)	C (31.8)	B (20.0)	C (20.9)	C (21.2)	C (21.2)
SB LT		C (22.7)	C (22.7)	C (22.7)	C (22.7)	D (37.9)	D (46.9)	D (47.9)	D (47.9)
R	C (21.6)	C (21.6)	C (21.6)	C (21.6)	A (8.9)	B (18.5)	B (18.5)	B (18.5)	
Overall		B (11.7)	B (12.7)	B (15.7)	B (14.3)	C (33.3)	D (39.4)	F (135.0)	D (40.3)
<b>Ballard Rd/ I-87 Exit 16 SB Ramp</b>	S								
SB LR		A (6.3)	A (8.7)	A (6.1)	A (5.8)	B (18.6)	B (10.4)	B (10.5)	C (33.7)
EB TR		A (4.6)	A (5.3)	A (6.4)	--	C (21.8)	C (28.0)	F (153.8)	--
(T)		--	--	--	A (6.4)	--	--	--	B (11.8)
(R)		--	--	--	A (0.0)	--	--	--	A (0.0)
WB LT	A (4.5)	A (4.7)	A (7.4)	A (8.6)	B (18.7)	F (138.1)	F (248.3)	B (19.0)	
<b>Ballard Rd/ I-87 Exit 16 NB Ramp</b>	S								
NB LR		B (13.0)	B (18.9)	F (89.0)	--	B (19.4)	B (18.1)	B (18.6)	--
(L)		--	--	--	D (39.7)	--	--	--	D (39.6)
(R)		--	--	--	A (8.5)	--	--	--	A (5.7)
EB LT		A (6.5)	A (7.4)	B (11.3)	D (47.2)	C (26.9)	F (103.7)	F (224.4)	F (134.9)
WB TR	A (3.4)	A (3.5)	A (5.0)	A (8.6)	A (8.3)	A (9.0)	A (9.6)	C (25.8)	
Overall Interchange LOS		A (5.5)	A (8.3)	B (17.5)	B (16.8)	C (20.1)	E (57.9)	F (140.6)	D (43.6)
<b>Ballard Rd/West Site Drwy</b>	U								
WB L		--	--	B (10.1)	--	--	--	A (8.0)	--
NB L		--	--	C (20.4)	--	--	--	C (18.2)	--
R	--	--	B (11.8)	--	--	--	B (12.0)	--	
<b>Ballard Rd/East Site Drwy</b>	U								
WB L		--	--	A (9.1)	--	--	--	A (8.5)	--
NB LR	--	--	B (13.3)	--	--	--	C (19.3)	--	

Key: U= Unsignalized Intersection, S= Signalized Intersection  
 NB= Northbound, SB= Southbound, EB= Eastbound, WB= Westbound  
 L= Left, T= Through, R= Right, (LTR) = Proposed Geometry  
 X (Y.Y) = Level of Service (Delay, seconds per vehicle)



## Appendix F Environmental Justice Implementation & Funding

## **Environmental Justice**

Increased attention has been given to the National Environmental Policy Act (NEPA) related to its ability to balance overall mobility benefits of transportation projects against protecting quality of life of low-income and minority residents of a community.

President Clinton issued Executive Order 12898 to bring attention to environmental and human health impacts of low-income and minority communities – referred to as environmental justice – when federal funding is involved. The goal of environmental justice review is to ensure that any adverse human health or environmental effects of a government action, such as federally-supported roadway or transit project, does not disproportionately affect minority or low-income residents of a community or neighborhood. Environmental justice is a public policy objective that can help improve the quality of life for those whose interests have traditionally been overlooked.

The CDTC staff has completed a review of civil rights/environmental justice impacts of transportation actions proposed under this study. Based on a review of the latest socioeconomic data available, the CDTC staff has determined that there is one Traffic Analysis Zone (TAZ) in the Wilton Exit 16 Linkage Project Study Area that is identified as an Environmental Justice Target Population Area. All of the transportation recommendations for the study would provide fair access and do not result in negative impacts to any minority or low-income residents. However, additional information gathered through the public review process could suggest a different outcome. In addition, examination of regional equity impacts would be necessary if any transportation action is considered for inclusion in CDTC's *Transportation Improvement Program*.

Equitable access to, consideration within, and effects of the design and implementation of federally assisted projects is also a key aspect of environmental justice. However, design and construction is the responsibility of implementing agencies in the region. For projects identified in this study, implementing agencies would either be the New York State Department of Transportation, Capital District Transportation Authority, Saratoga County, or the Town of Wilton.

EJ Target Population Areas are defined as any TAZ with low income, minority, or Hispanic populations equal to or greater than the regional average.

The regional averages are as follows:

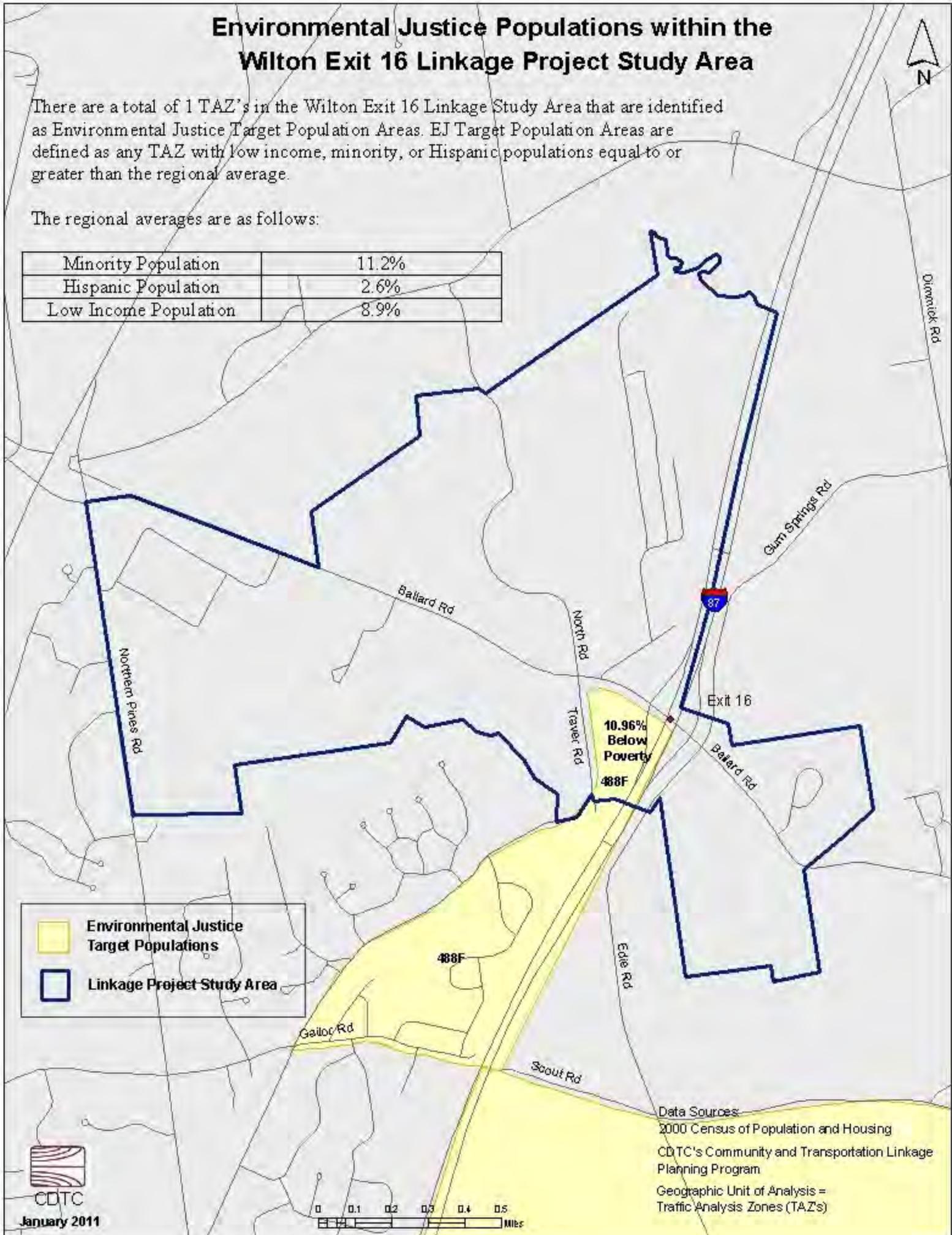
Minority Population	11.2%
Hispanic Population	2.6%
Low Income Population	8.9%

# Environmental Justice Populations within the Wilton Exit 16 Linkage Project Study Area

There are a total of 1 TAZ's in the Wilton Exit 16 Linkage Study Area that are identified as Environmental Justice Target Population Areas. EJ Target Population Areas are defined as any TAZ with low income, minority, or Hispanic populations equal to or greater than the regional average.

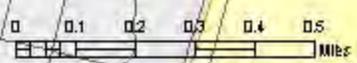
The regional averages are as follows:

Minority Population	11.2%
Hispanic Population	2.6%
Low Income Population	8.9%

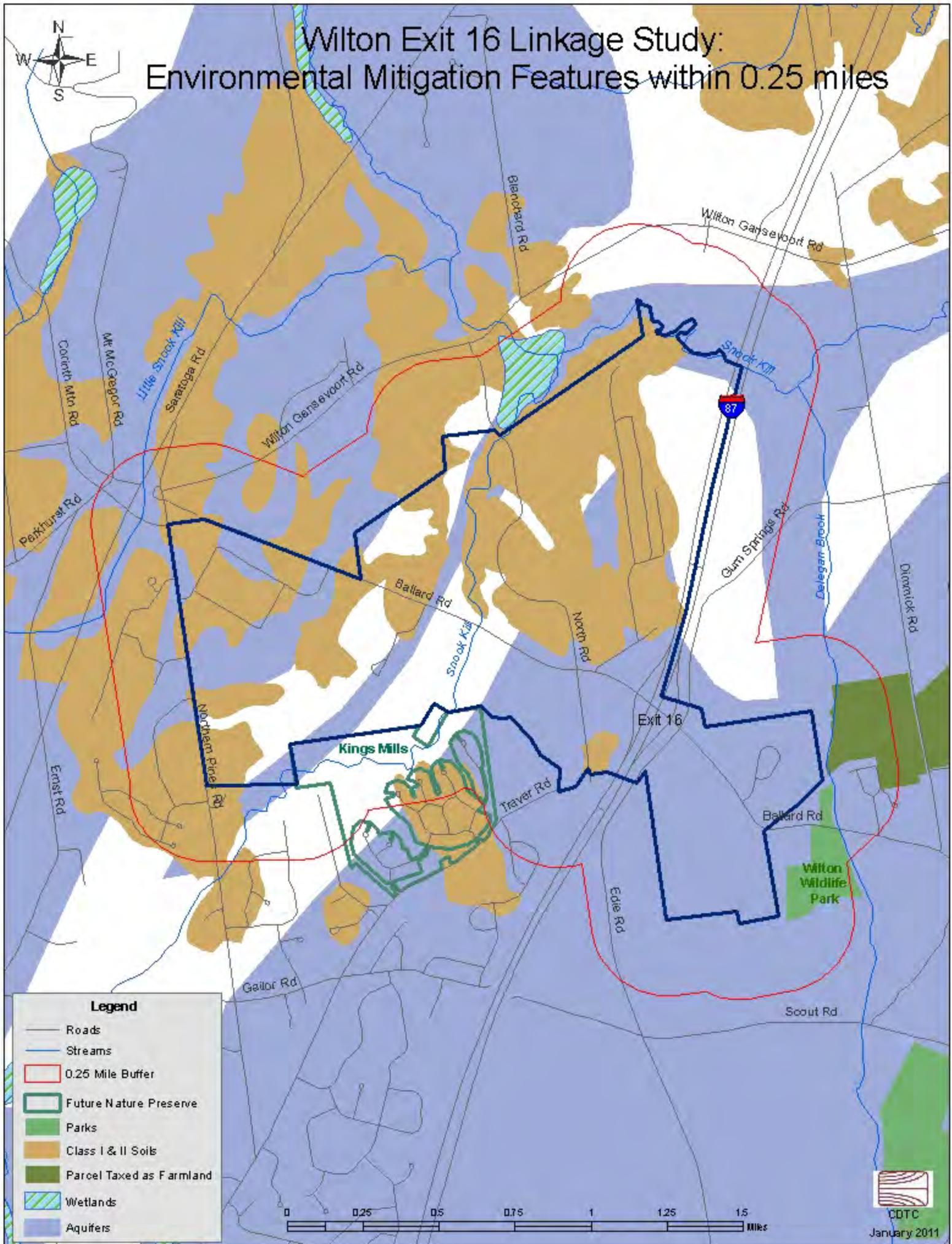


Environmental Justice Target Populations  
 Linkage Project Study Area

Data Sources:  
 2000 Census of Population and Housing  
 CDTC's Community and Transportation Linkage Planning Program  
 Geographic Unit of Analysis = Traffic Analysis Zones (TAZ's)



# Wilton Exit 16 Linkage Study: Environmental Mitigation Features within 0.25 miles



### Legend

- Roads
- Streams
- 0.25 Mile Buffer
- Future Nature Preserve
- Parks
- Class I & II Soils
- Parcel Taxed as Farmland
- ▨ Wetlands
- Aquifers

0 0.25 0.5 0.75 1 1.25 1.5 Miles



CDTC  
January 2011



## Appendix G Study Area Map Atlas

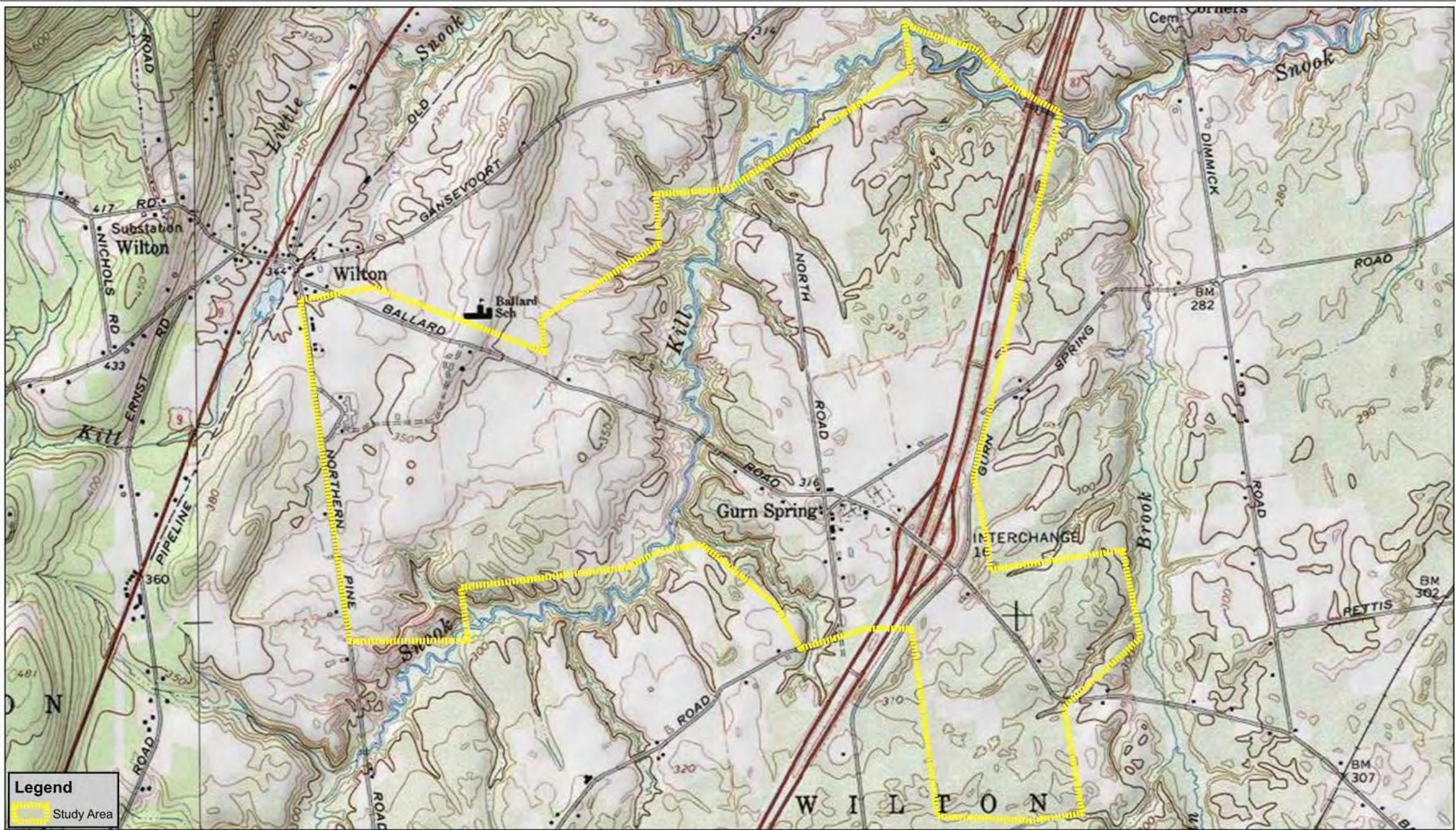


**Legend**

- Study Area
- Railroads
- Roads
- Parcels



1 inch = 1,600 feet



**Legend**  
 Study Area

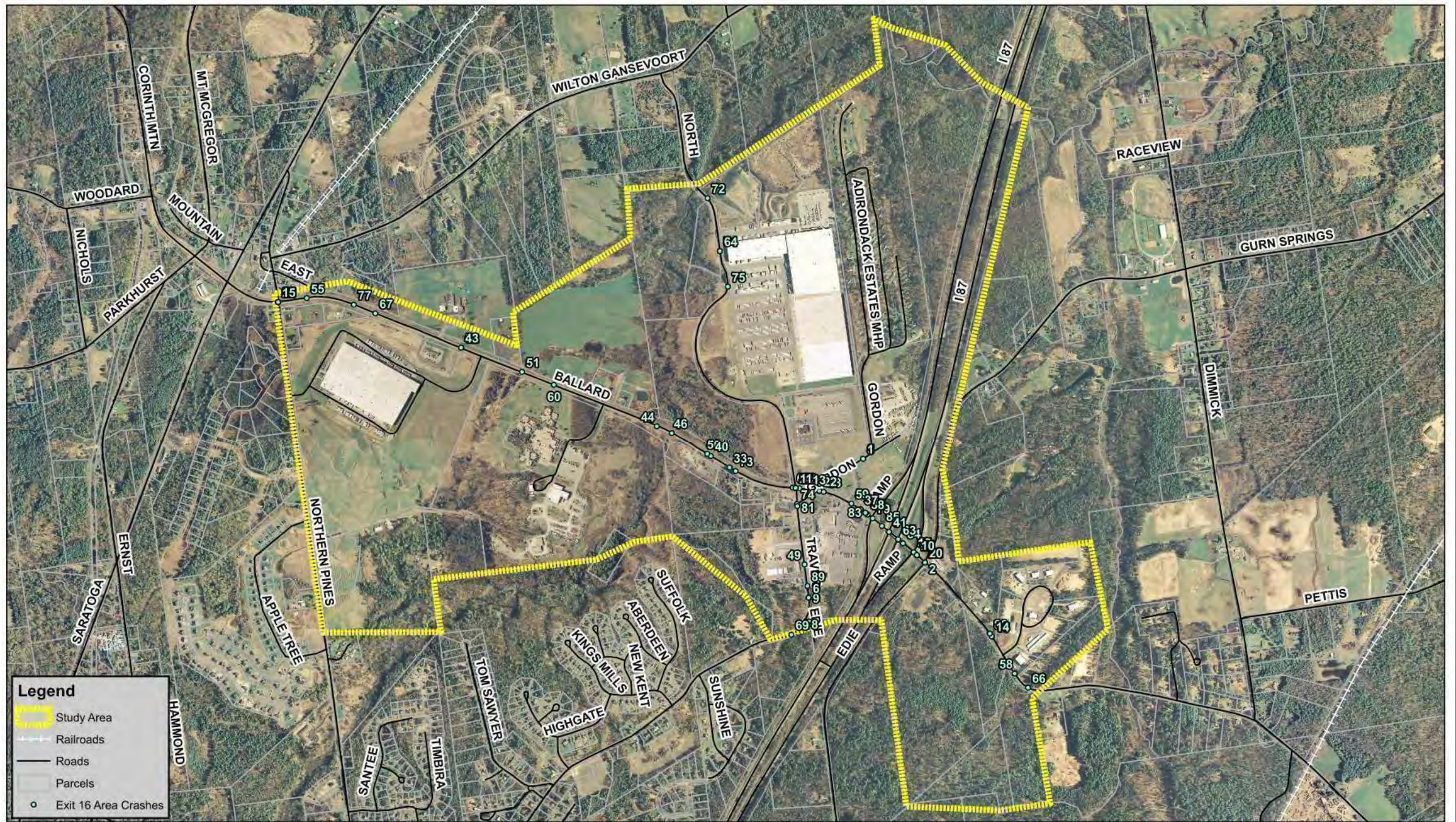
**Barton**  
 & **Loguidice, P.C.**



1 inch = 1,600 feet

Town of Wilton  
 Capital District Transportation Committee  
**Wilton Exit 16 Linkage Study  
 Area Topography**  
 Saratoga County 5/19/11 New York

Figure  
 2  
 Project No.  
 1315.002



1 inch = 1,600 feet



FID	CASE YEAR	COLLISION TYPE	# OF CARS	SEVERITY	@ INTXN	# INJ
0	2005	REAR END	2	INJ		1
2	2005	RIGHT ANGLE	2	INJ	Y	1
3	2005	OTHER	3	PROP DMG	Y	0
10	2005	REAR END	2	N/R		0
12	2005	LEFT TURN (AGAINST OTHER CAR)	2	N/R	Y	0
17	2006	LEFT TURN (AGAINST OTHER CAR)	2	N/R	Y	0
18	2006	REAR END	2	N/R		0
19	2006	REAR END	2	PROP DMG		0
20	2006	LEFT TURN (AGAINST OTHER CAR)	2	PROP DMG & INJ	Y	1
23	2006	OTHER	1	N/R		0
25	2006	OTHER	2	PROP DMG & INJ	Y	1
26	2006	OTHER	1	N/R		0
27	2007	SIDESWIPE	2	PROP DMG		0
28	2006	LEFT TURN (AGAINST OTHER CAR)	2	PROP DMG	Y	0
29	2007	RIGHT ANGLE	2	PROP DMG	Y	0
30	2007	OTHER	1	PROP DMG & INJ		1
32	2007	OTHER	1	PROP DMG & INJ		1
37	2007	OTHER	1	N/R		0
38	2007	REAR END	2	PROP DMG		0
39	2007	RIGHT ANGLE	2	PROP DMG		0
41	2007	OTHER	2	PROP DMG		0
42	2007	OTHER	1	PROP DMG	Y	0
47	2008	RIGHT TURN (AGAINST OTHER CAR)	2	PROP. DMG	Y	0
54	2008	REAR END	2	N/R		0
56	2008	REAR END	2	PROP DMG & INJ		1
59	2008	OTHER	1	N/R		0
61	2008	REAR END	2	N/R		0
63	2008	OTHER	3	PROP DMG		0
65	2008	LEFT TURN (AGAINST OTHER CAR)	2	N/R		0
76	2009	OVERTAKING	2	N/R		0
79	2008	REAR END	2	N/R		0
83	2009	OTHER	1	INJ		1
84	2009	REAR END	2	PROP DMG		0
85	2009	OTHER	1	N/R		0

**Legend**

- Study Area
- Railroads
- Roads
- Parcels
- Exit 16 Area Crashes

FID	CASE YEAR	COLLISION TYPE	# OF CARS	SEVERITY	@ INTX	# INJ
4	2005	OTHER	1	INJ	Y	1
8	2005	REAR END	2	N/R	Y	0
11	2005	REAR END	2	N/R	Y	0
13	2005	REAR END	2	N/R	Y	0
22	2006	RIGHT ANGLE	2	PROP DMG & INJ	Y	1
24	2006	RIGHT TURN (WITH OTHER CAR)	2	PROP DMG	Y	0
35	2007	REAR END	2	INJ	Y	1
36	2007	LEFT TURN (AGAINST OTHER CAR)	2	PROP DMG & INJ	Y	1
45	2008	REAR END	2	PROP DMG	Y	0
48	2008	OTHER	1	PROP DMG	Y	0
62	2008	REAR END	2	N/R	Y	0
68	2008	OTHER	1	N/R	Y	0
70	2008	REAR END	2	N/R	Y	0
74	2009	RIGHT ANGLE	2	PROP DMG	Y	0
81	2009	LEFT TURN (AGAINST OTHER CAR)	2	PROP DMG	Y	0
87	2009	REAR END	2	PROP DMG	Y	0
88	2009	REAR END	2	N/R	Y	0



**Legend**

- Study Area
- Railroads
- Roads
- Parcels
- Exit 16 Area Crashes

April 2011  
(3-5 p.m.)



Oct 2011  
(4-6 p.m.)

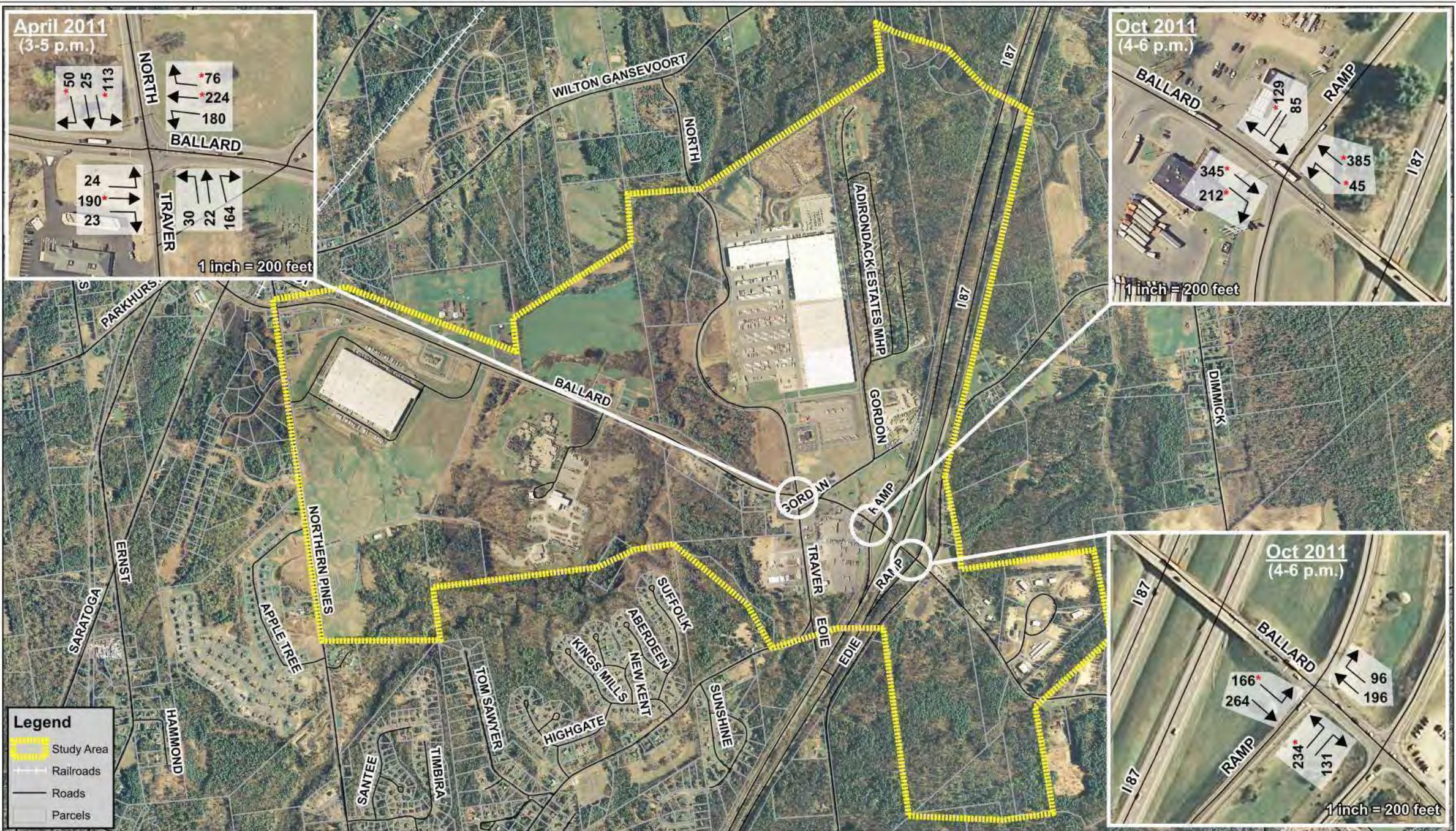


Oct 2011  
(4-6 p.m.)

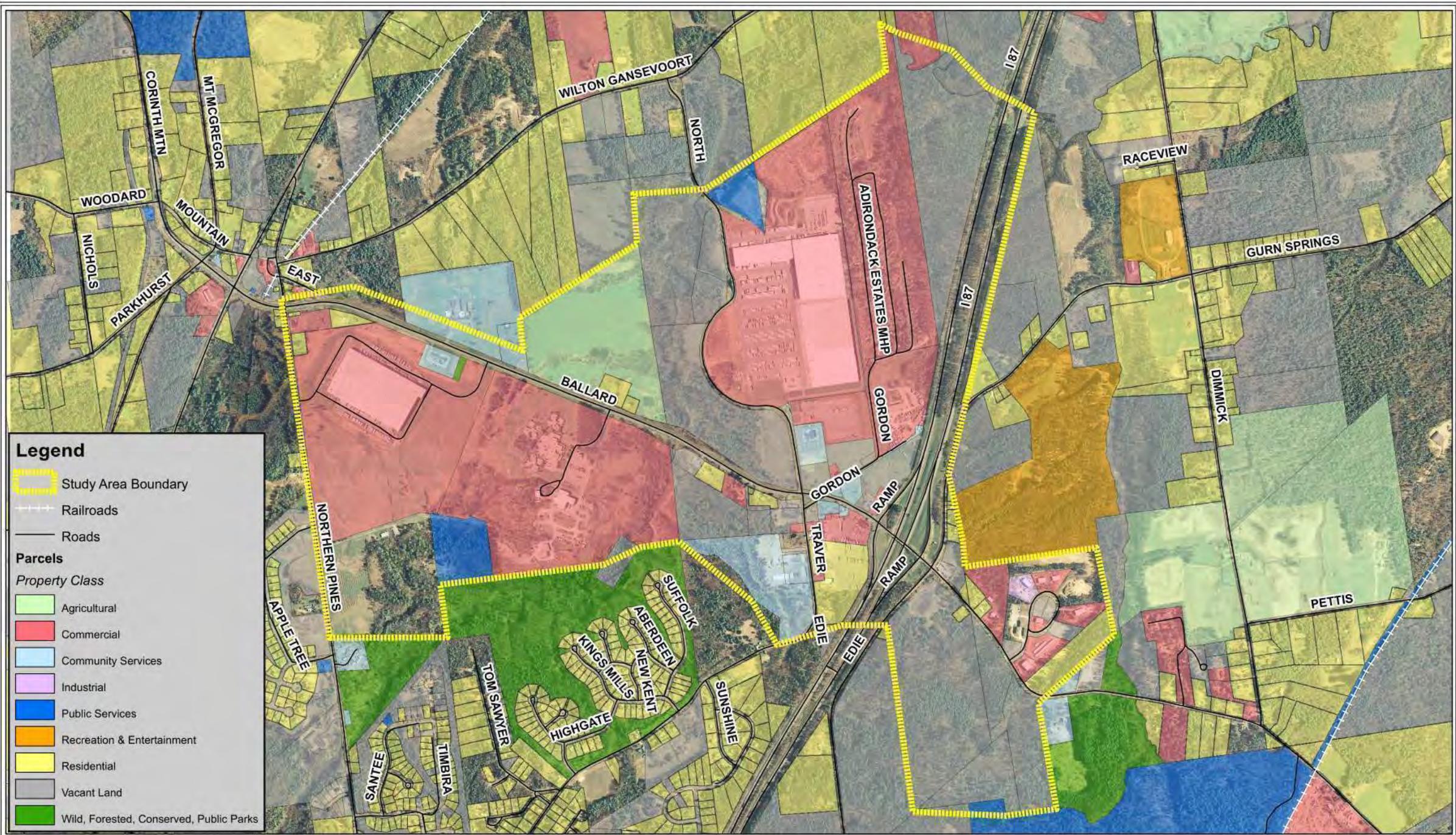


**Legend**

- Study Area
- Railroads
- Roads
- Parcels



1 inch = 1,600 feet



**Legend**

- Study Area Boundary
- Railroads
- Roads

**Parcels**

*Property Class*

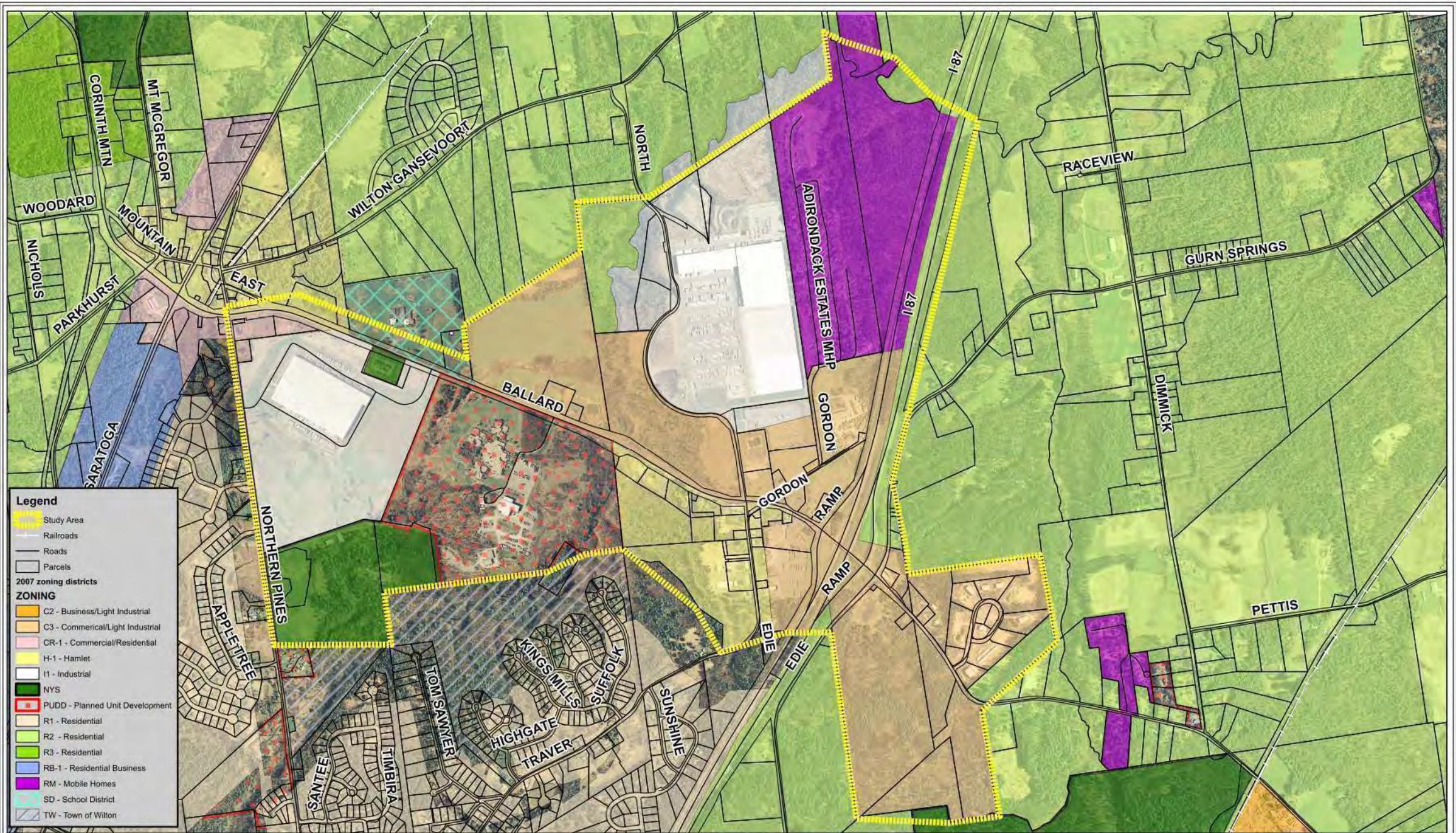
- Agricultural
- Commercial
- Community Services
- Industrial
- Public Services
- Recreation & Entertainment
- Residential
- Vacant Land
- Wild, Forested, Conserved, Public Parks



1 inch = 1,600 feet

Town of Wilton  
 Capital District Transportation Committee  
**Wilton Exit 16 Linkage Study  
 Land Use**

Figure  
 5  
 Project No.  
 1315.002



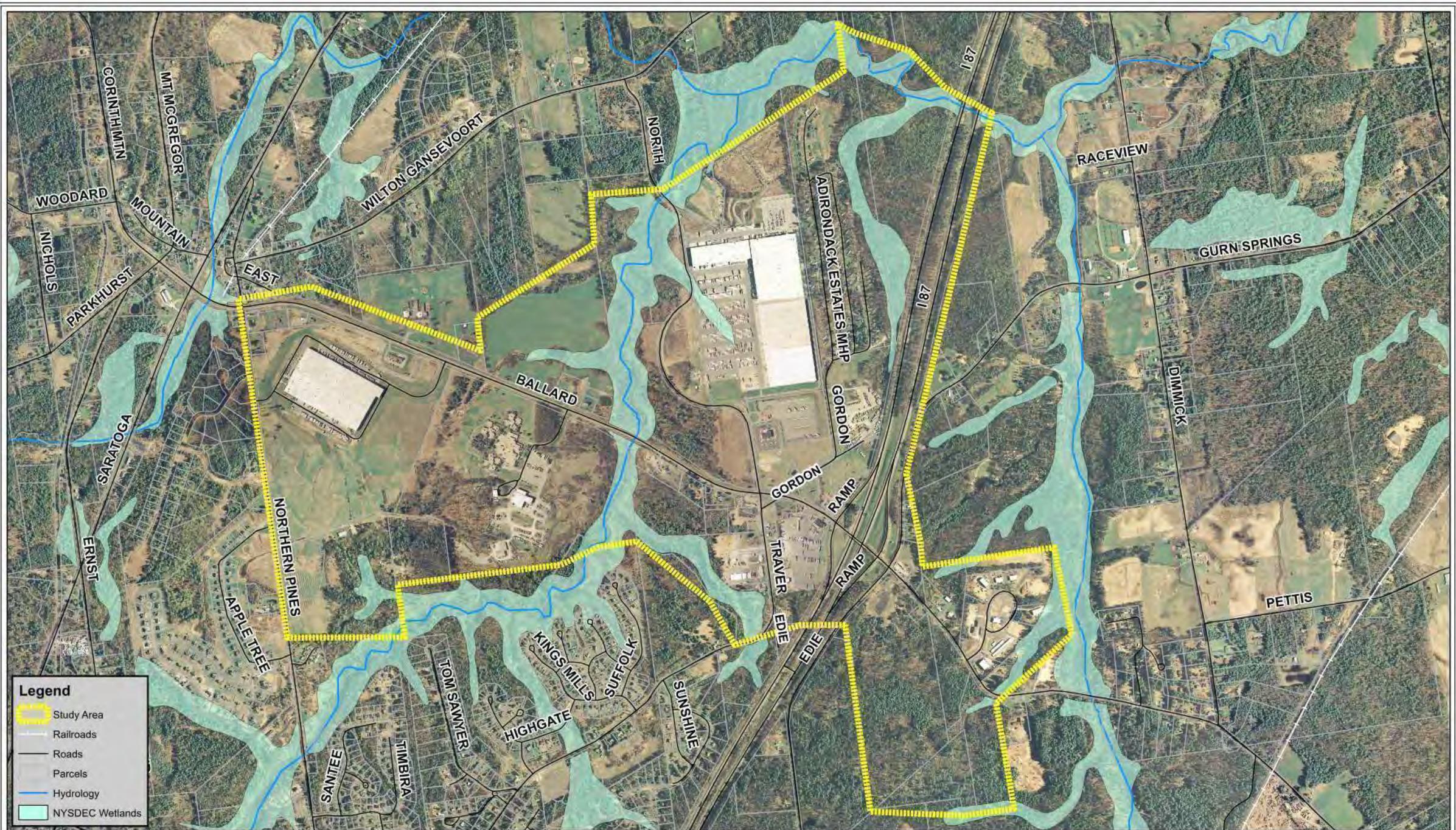
**Legend**

- Study Area
- Railroads
- Roads
- Parcels

**2007 zoning districts**

**ZONING**

- C2 - Business/Light Industrial
- C3 - Commercial/Light Industrial
- CR-1 - Commercial/Residential
- H-1 - Hamlet
- I1 - Industrial
- NYS
- PUDD - Planned Unit Development
- R1 - Residential
- R2 - Residential
- R3 - Residential
- RB-1 - Residential Business
- RM - Mobile Homes
- SD - School District
- TW - Town of Wilton



**Legend**

- Study Area
- Railroads
- Roads
- Parcels
- Hydrology
- NYSDEC Wetlands



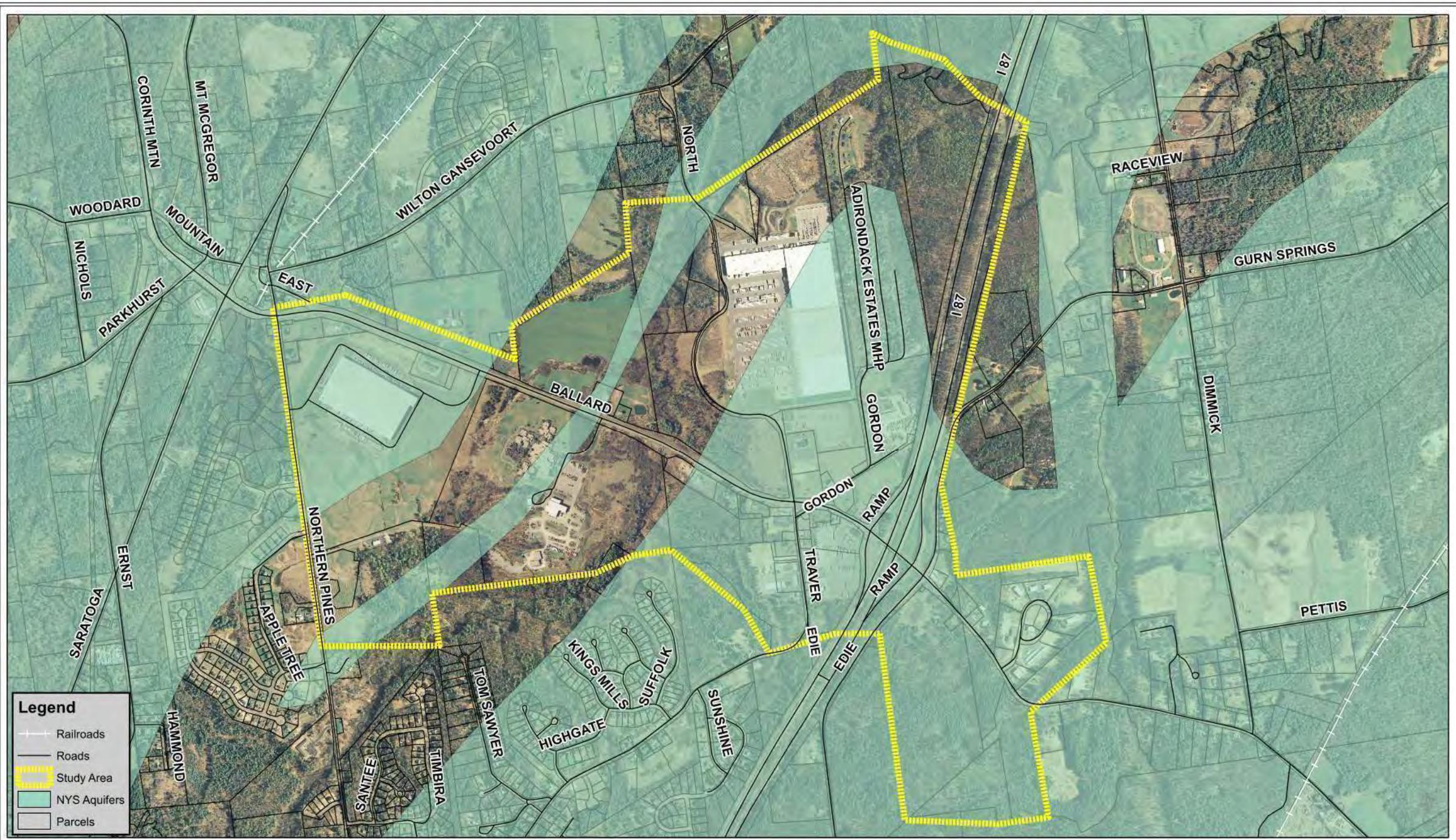
1 inch = 1,600 feet

**Barton & Loguidice, P.C.**  
 Engineers, Environmental Scientists, Planners, Landscape Architects

Town of Wilton  
 Capital District Transportation Committee  
**Wilton Exit 16 Linkage Study  
 Wetland Areas & Hydrology**

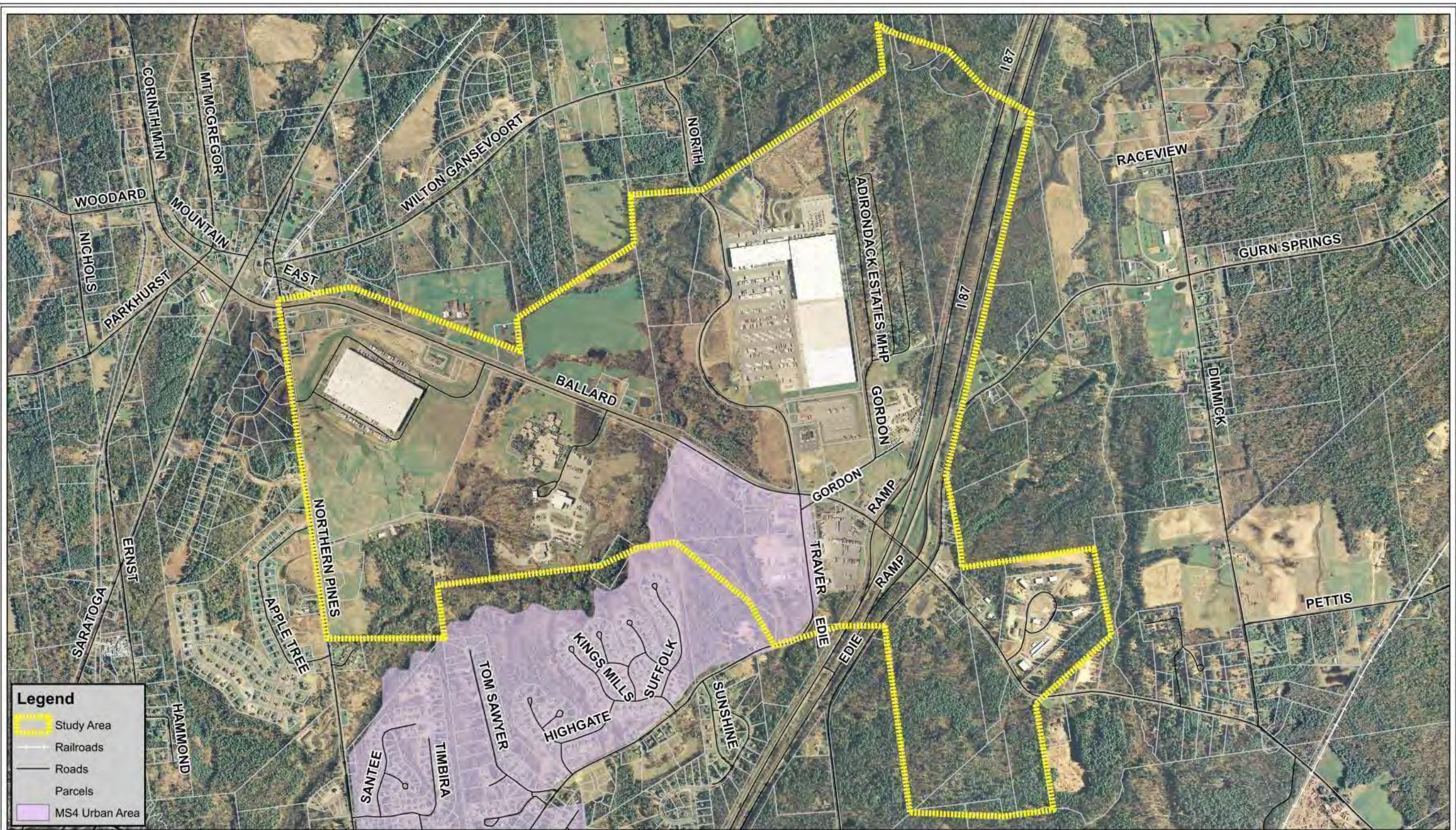
Figure  
 7  
 Project No.  
 1315.002

Saratoga County 5/19/11 New York



**Legend**

- Railroads
- Roads
- Study Area
- NYS Aquifers
- Parcels



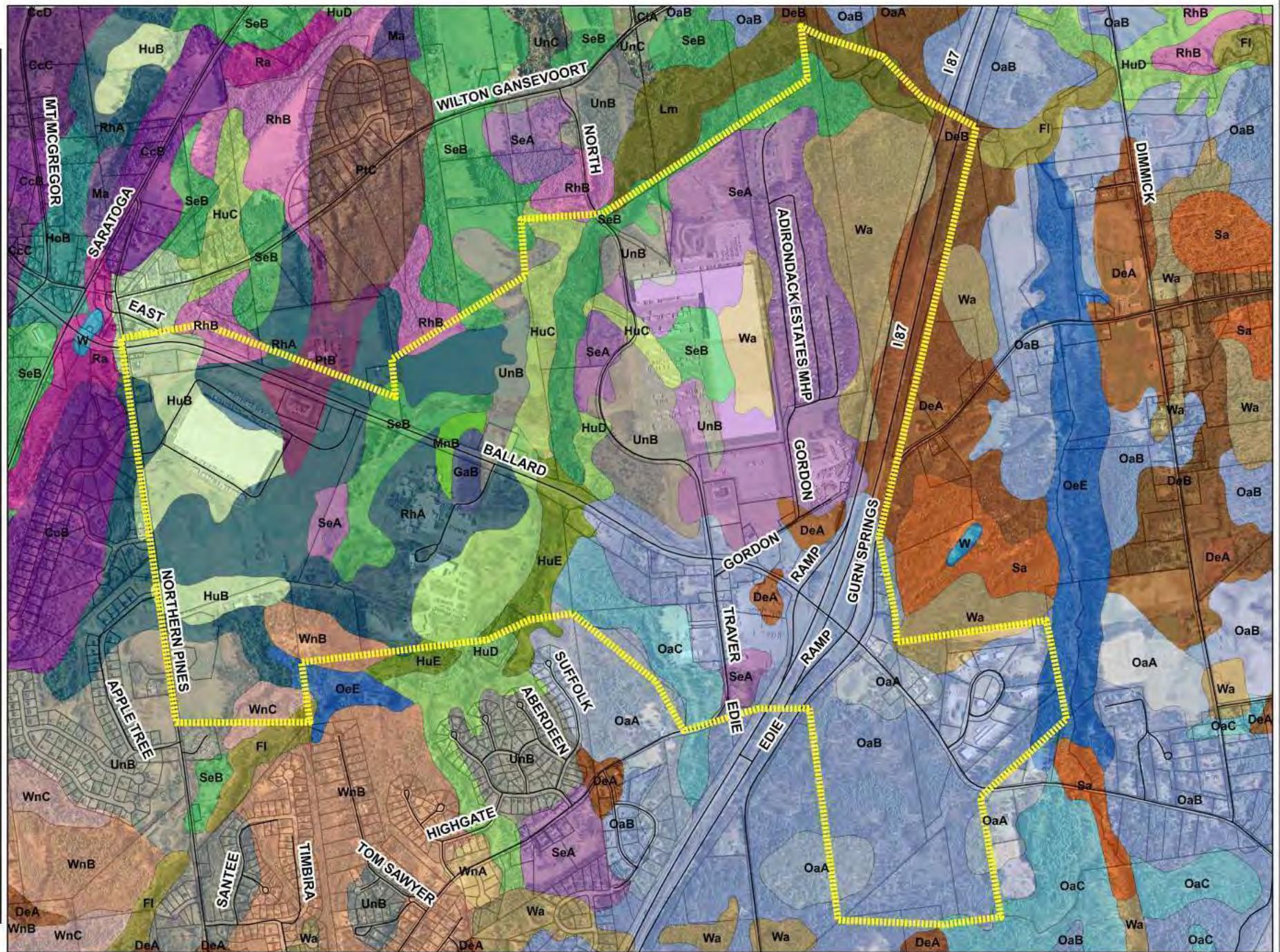
**Legend**

-  Study Area
-  Railroads
-  Roads
-  Parcels
-  MS4 Urban Area

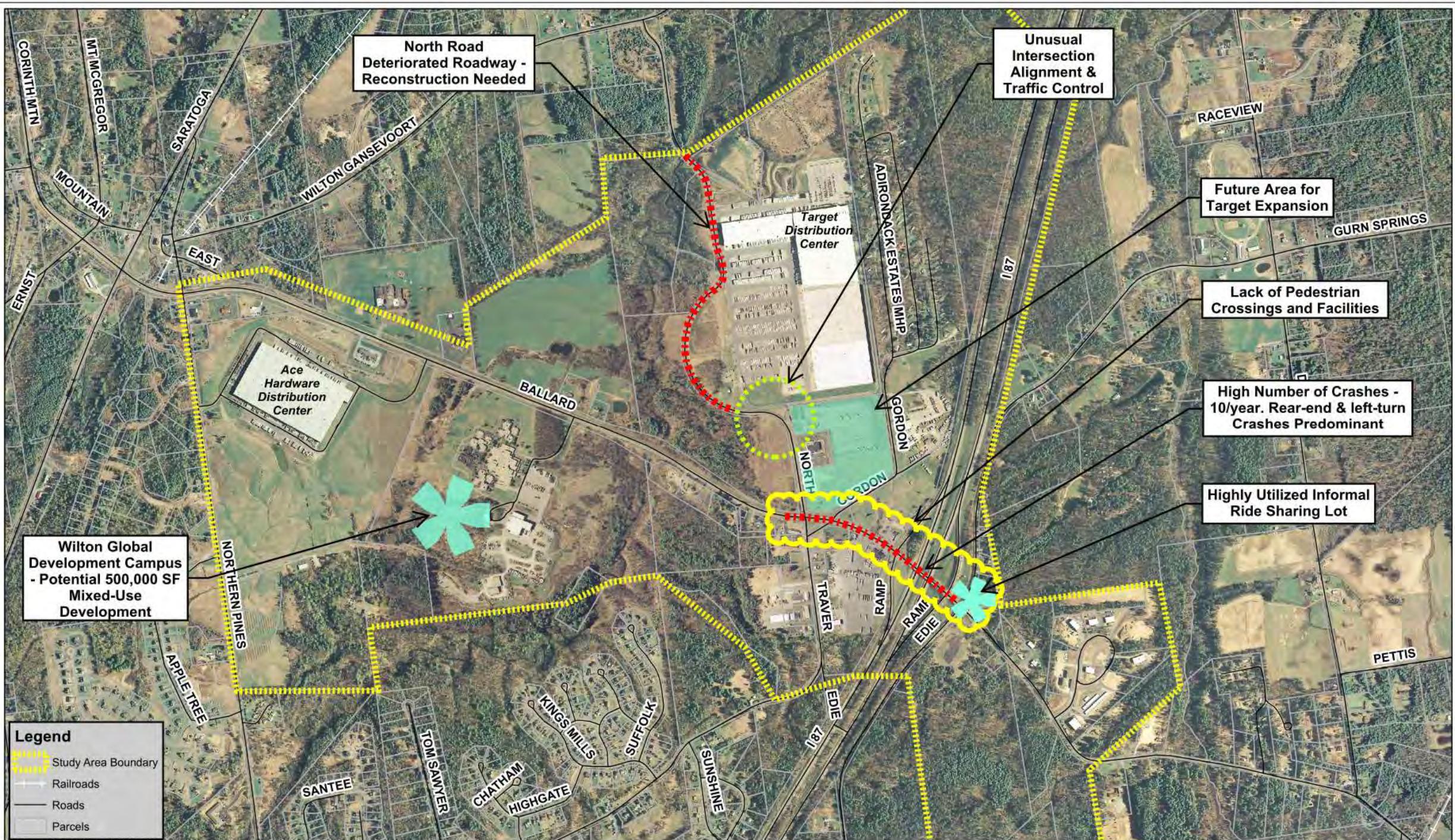
  
 1 inch = 1,600 feet

**Legend**

-  Study Area
-  Roads
-  Parcels
- Soils**
- Type**
-  CcB - Charlton loam, 3-8%
-  CcC - Charlton loam, 8-15%
-  DeA - Deerfield loamy fine sand, nearly level
-  DeB - Deerfield loamy fine sand, undulating
-  Fl - Fluvaquents frequently flooded
-  GaB - Galway loam, 3-8%
-  HcC - Hinckley gravelly loamy sand, rolling
-  HoA - Hoosic gravelly sandy loam, nearly level
-  HoB - Hoosic gravelly sandy loam, undulating
-  HuB - Hudson silt loam, 3-8%
-  HuC - Hudson silt loam, 8-15%
-  HuD - Hudson silt loam, hilly
-  HuE - Hudson silt loam, 25-35%
-  Lm - Limerick-saco complex
-  Ma - Madalin mucky silty clay loam
-  MnB - Manlius-Nassau complex, undulating, rocky
-  OaA - Oakville loamy fine sand, nearly level
-  OaB - Oakville loamy fine sand, undulating
-  OaC - Oakville loamy fine sand, hilly
-  OeE - Oakville and Windsor soils, 25-35%
-  Sa - Scarboro mucky loamy sand
-  RhA - Rhinebeck silt loam, 0-3%
-  PtB - Paxton gravelly sandy loam, 3-8%
-  PtC - Paxton gravelly sandy loam, 8-15%
-  Ra - Raynham silt loam
-  RhB - Rhinebeck silt loam, 3-8%
-  SeA - Scio silt loam, 0-3%
-  SeB - Scio silt loam, 3-8%
-  StA - Sutton loam, 0-3%
-  UnB - Unadilla very fine sandy loam, 3-8%
-  W - Water
-  Wa - Wareham loamy sand
-  WnA - Windsor loamy sand, nearly level
-  WnB - Windsor loamy sand, undulating
-  WnC - Windsor loamy sand, rolling







**Wilton Global Development Campus - Potential 500,000 SF Mixed-Use Development**

**North Road Deteriorated Roadway - Reconstruction Needed**

**Unusual Intersection Alignment & Traffic Control**

**Future Area for Target Expansion**

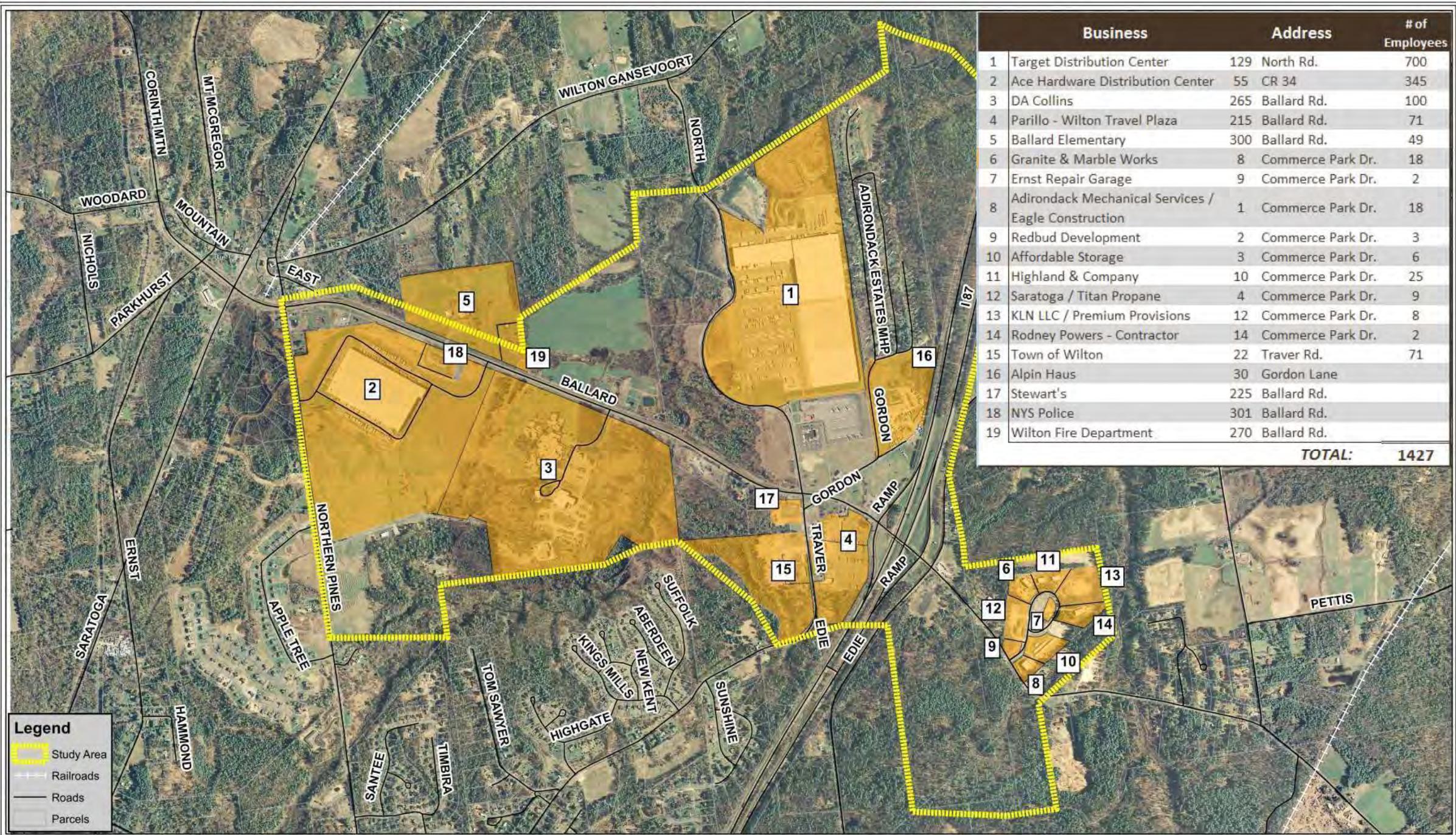
**Lack of Pedestrian Crossings and Facilities**

**High Number of Crashes - 10/year. Rear-end & left-turn Crashes Predominant**

**Highly Utilized Informal Ride Sharing Lot**

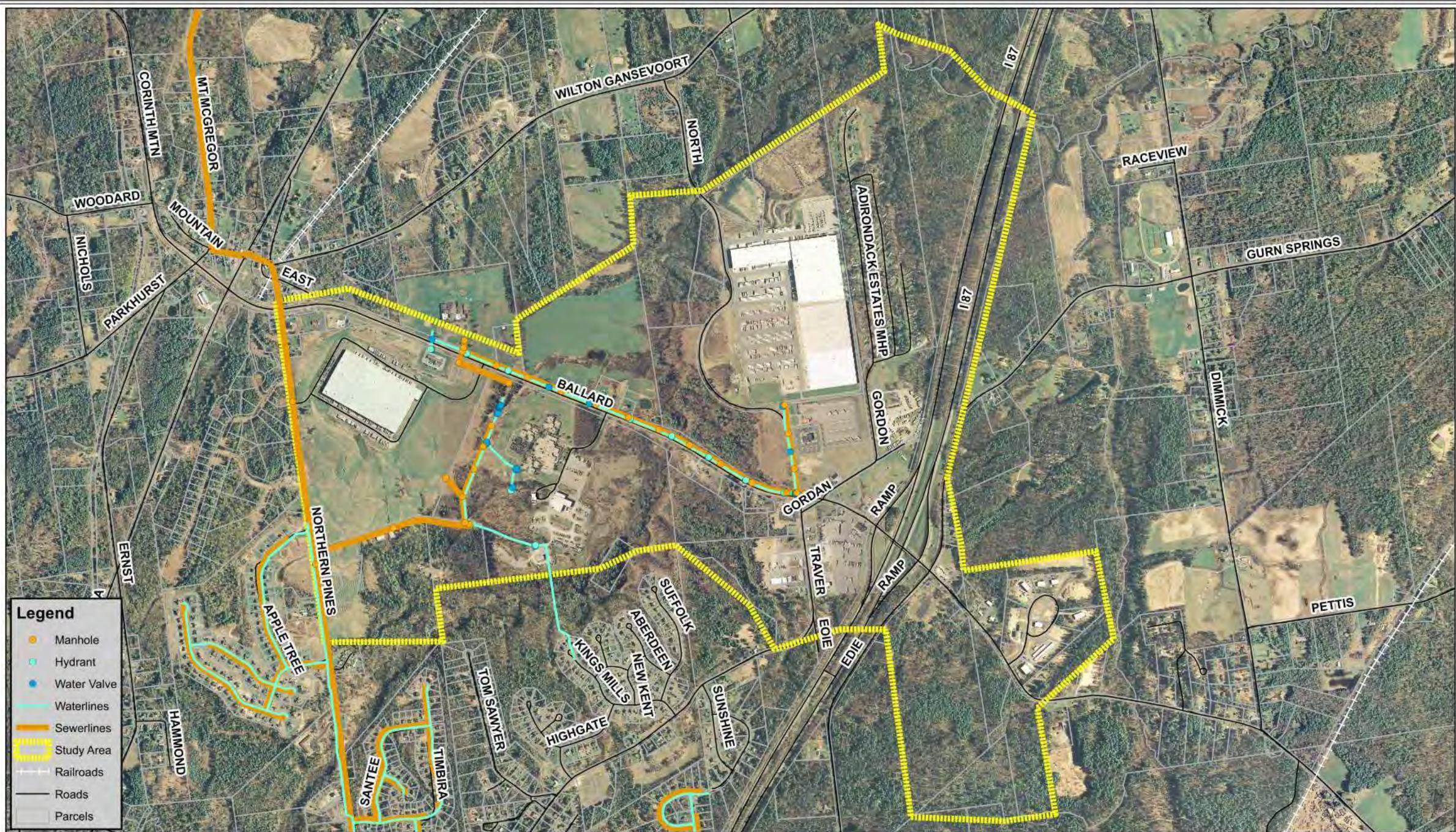
**Legend**

- Study Area Boundary
- Railroads
- Roads
- Parcels



**Legend**

- Study Area
- Railroads
- Roads
- Parcels



**Legend**

- Manhole
- Hydrant
- Water Valve
- Waterlines
- Sewerlines
- Study Area
- Railroads
- Roads
- Parcels



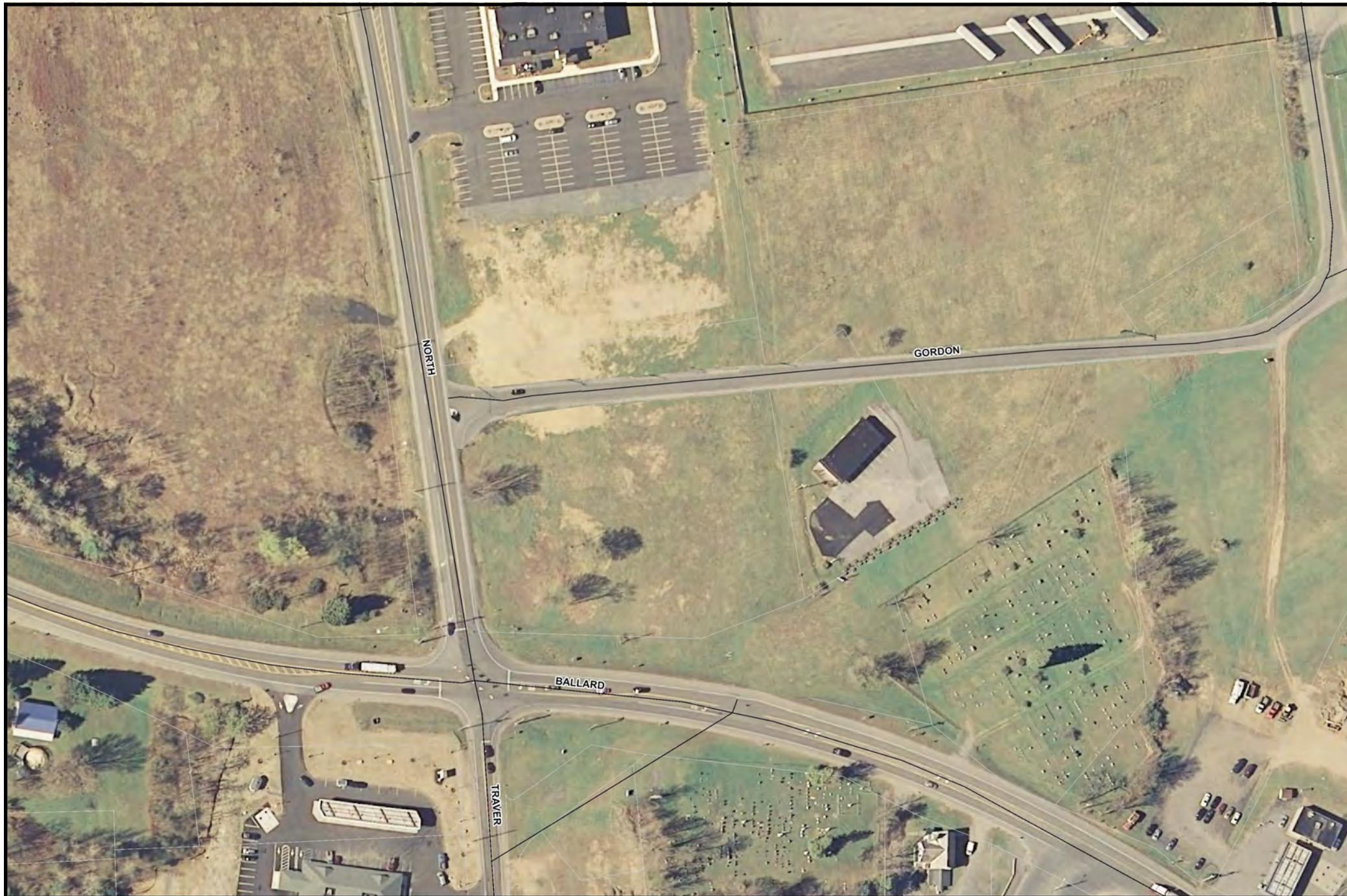
1 inch = 1,600 feet



**Figure 16a -  
Existing  
Conditions**

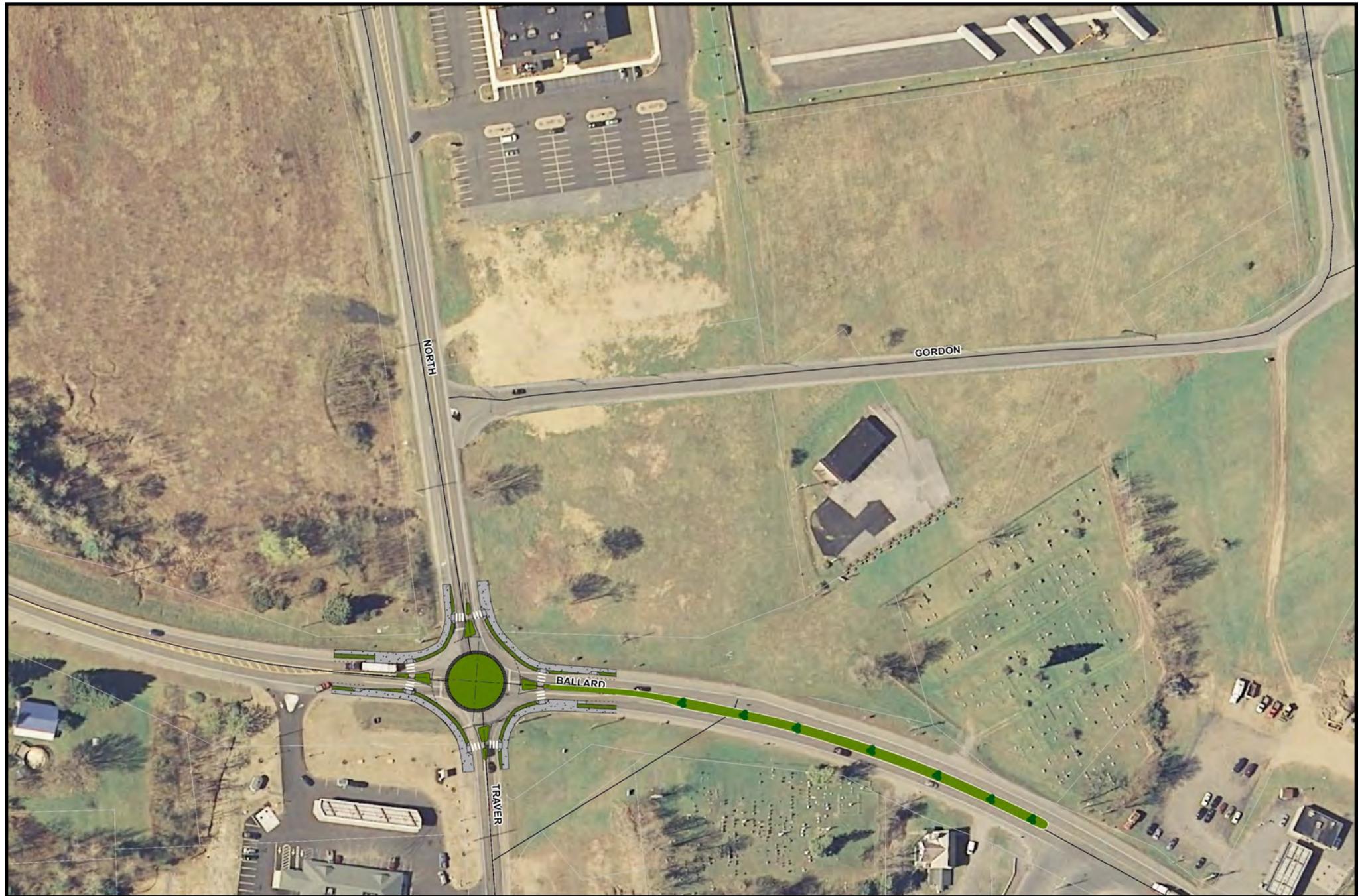


**Figure 16b -  
Gordon  
Road  
Realignment**



**Figure 16c -**

**Ballard  
Road Circle  
with  
Gordon  
Road  
Realignment**





## Appendix H      **Access Management Toolkit**

## Access Management Toolbox Table

Access Management Tools		
Tool and Description	Advantages	Concerns
<b>Site Design</b>		
<p><b><u>Pedestrian Connections</u></b> Sidewalks, crosswalks, or multi-use paths provided for use by pedestrians</p>	<ul style="list-style-type: none"> <li>- Known pedestrian routes</li> <li>- Greater visibility for pedestrians</li> </ul>	<ul style="list-style-type: none"> <li>- Termination points</li> <li>- Opposing vehicle volume</li> <li>- Construction schedule</li> </ul>
<p><b><u>Shared Driveway</u></b> A single driveway serving two or more adjacent sites with joint ownership or a permanent access easement</p>	<ul style="list-style-type: none"> <li>- Minimizes access points to the mainline</li> <li>- Decreases conflict points</li> <li>- Can encourage pedestrian movement</li> </ul>	<ul style="list-style-type: none"> <li>- Land owner agreement needed</li> <li>- On-site vehicle storage</li> <li>- Traffic volume at driveway</li> </ul>
<p><b><u>Cross Access Connections</u></b> Formal or informal connections between parcels that allow movement between sites without traveling on the mainline</p>	<ul style="list-style-type: none"> <li>- Minimizes turns to and from the mainline</li> <li>- Can encourage pedestrian movement</li> </ul>	<ul style="list-style-type: none"> <li>- Land owner agreement needed</li> <li>- Connection to adjacent signal controlled intersection</li> </ul>
<p><b><u>Access and Turn Restrictions</u></b> Restricting turning movements at a driveway or to a high volume roadway</p>	<ul style="list-style-type: none"> <li>- Decreases conflict points</li> <li>- Minimizes driver confusion</li> </ul>	<ul style="list-style-type: none"> <li>- Perceived reduction in business activity</li> </ul>
<p><b><u>Align Driveways/Roadways</u></b> Locate driveways directly opposite each other to create a typical four-leg intersection</p>	<ul style="list-style-type: none"> <li>- Reduces driver confusion</li> <li>- Minimizes potential conflicts</li> </ul>	<ul style="list-style-type: none"> <li>- Site layout constraints</li> <li>- Traffic volume</li> </ul>
<p><b><u>Rear or Side Parking</u></b> Parking that is situated behind or beside a building footprint</p>	<ul style="list-style-type: none"> <li>- More pedestrian friendly corridor</li> <li>- Increases visibility for building fronts</li> </ul>	
<b>Roadway Design</b>		
<p><b><u>On-street Parking</u></b> Parallel, angled, or perpendicular parking in dedicated parking lanes located adjacent to the traveled way</p>	<ul style="list-style-type: none"> <li>- Narrows the street and calms traffic</li> <li>- Creates a buffer between vehicles and pedestrians</li> </ul>	<ul style="list-style-type: none"> <li>- Not appropriate for high speed locations</li> </ul>
<p><b><u>Dedicated Turn Lane</u></b> Lane reserved for the use of a single travel movement like a left or right-turn at an intersection or driveway</p>	<ul style="list-style-type: none"> <li>- Increases roadway capacity</li> <li>- Reduces potential for rear end accidents</li> <li>- Increases mobility for through traffic</li> </ul>	<ul style="list-style-type: none"> <li>- Potential right-of-way impacts</li> <li>- Can increase size of intersection resulting in increased walking/crossing distance</li> </ul>
<p><b><u>Service Road</u></b> A roadway that is constructed parallel to the mainline with the intention of relieving mainline vehicular traffic and minimizing access</p>	<ul style="list-style-type: none"> <li>- Decreases mainline traffic</li> <li>- Minimizes turns to and from the mainline</li> <li>- Reduces delay to through traffic</li> </ul>	<ul style="list-style-type: none"> <li>- Potential right-of-way impacts</li> <li>- Municipal responsibility</li> <li>- Stakeholder cooperation</li> </ul>
<p><b><u>Raised Median</u></b> A barrier separating opposing traffic that restricts turns across the barrier</p>	<ul style="list-style-type: none"> <li>- Decreases conflict points</li> <li>- Reduces crashes</li> <li>- Can provide refuge for pedestrians</li> </ul>	<ul style="list-style-type: none"> <li>- Perceived reduction in business activity</li> </ul>

**SITE PLAN REVIEW ACCESS MANAGEMENT CHECKLIST**

TOPIC	QUESTION	REVIEW STAGE			ANSWER		
		CONCEPT	SITE PLAN	DESIGN	YES	NO	NA
VEHICLE ACCESS	V1	Is there an opportunity to reduce the number of site driveways?	√	√			
	V2	Can the proposed site provide a cross access connection to an abutting parcel?	√	√			
	V3	Can the proposed site accommodate joint or shared access with an adjacent parcel?	√	√			
	V4	Can the site be designed to provide an opportunity to allow joint access in the future?	√	√			
	V5	Can the proposed project include a cross-access easement for future shared access or cross access?	√	√	√		
	V6	Can you achieve access from this parcel to an adjacent traffic signal?	√	√			
	V7	Is the site driveway located within the influence area of an adjacent intersection?	√	√	√		
	V8	Are turning or access restrictions desirable for a proposed driveway located within the influence zone of an adjacent intersection?	√	√	√		
	V9	Is the site driveway located directly across from an existing driveway or at a location allowing for future shared use?	√	√	√		
	V10	Does the site plan show the property lines for properties to the rear, both sides, and across the street?	√	√	√		
	V11	Does the proposed project connect with the surrounding street system?	√	√	√		
PEDESTRIAN AND TRANSIT ACCOMMODATIONS	P1	Does the site plan include a sidewalk connecting to adjacent properties, the adjacent roadway network, and ending at a logical terminus?	√	√	√		
	P2	Do sidewalks extend across the driveway opening?	√	√	√		
	P3	Is there an adequate pedestrian connection to a transit stop on both sides of the roadway?	√	√	√		
	P4	Is there an internal pedestrian connection to connect the building with the parking area?	√	√	√		
	P5	Are building entrances located and designed to be obvious and easily accessible to pedestrians?	√	√	√		
	P6	If there are multiple buildings on the parcel, is there an adequate pedestrian connection between the buildings?	√	√	√		
	P7	Are pedestrian accommodations sited along logical pedestrian routes?	√	√	√		
	P8	Does the site include pedestrian lighting where appropriate?		√	√		
	P9	Will snow storage disrupt pedestrian access or visibility?		√	√		
	P10	Is the path clear from both temporary and permanent obstructions?		√	√		
	P11	Are measures needed to direct pedestrians to safe crossing points and pedestrian access ways?		√	√		
	P12	Are there any conflicts between bicycles and pedestrians?		√	√		
	P13	Are pedestrian travel zones clearly delineated from other modes of traffic through the use of striping, colored and/or textured pavement, signing, and other methods?	√	√	√		

TOPIC	QUESTION	REVIEW STAGE			ANSWER			
		CONCEPT	SITE PLAN	DESIGN	YES	NO	NA	
GENERAL INFORMATION AND AGENCY COORDINATION	G1	Has NYSDOT been identified as an interested or involved agency? If so, has NYSDOT been contacted?	√	√	√			
	G2	Has CDTA been identified as an interested or involved agency? If so, has CDTA been contacted?	√	√	√			
	G3	Has the county been identified as an interested or involved agency? If so, has the county been contacted?	√	√	√			
	G4	Has the Highway Work Permit application process been started?	√	√	√			

## Sample Zoning Text

### Nonconforming Access Retrofit.

Driveways and other access conditions along State Route 5 do not generally conform to modern access requirements. Driveways and other access conditions in place prior to the effective date of these regulations shall be treated as pre-existing nonconforming access features.

- A. The feasibility of bringing nonconforming access connections into compliance shall be evaluated when:
  - i. Redevelopment is proposed; or
  - ii. A new driveway access permit is requested; or
  - iii. Proposed upgrades or changes increase the square footage of a building or accessory use by 1000 square feet (sf) percent or more or increase peak hour trip generation by 50 or more trips; or
  - iv. A State or local improvement project is proposed for State Route 5.
- B. When a property owner of a property with non-conforming access features applies for a permit to redevelop, upgrade or change the use of the property, the TOWN Planning Board will determine whether it is necessary and appropriate to retrofit the existing driveway or driveways.
- C. If the Town Board determines that it is necessary and appropriate to retrofit the existing driveway or driveways it may require the property owner to establish an access retrofit plan. The objectives of the retrofit plan shall be to reduce the traffic and safety impacts of development by bringing the number, spacing, location, and design of driveways and other access conditions into conformance with modern access management practices, to the extent possible without imposing undue or inequitable hardship on the property owner. The retrofit plan may include:
  - i. The elimination of driveways,
  - ii. The realignment or relocation of driveways,
  - iii. The provision of shared driveways and/or cross access driveways,
  - iv. Reverse access,
  - v. The restriction of vehicle turning movements,
  - vi. The relocation of parking,
  - vii. A reduction of peak hour trip generation,
  - viii. Signalization, or

- ix. Such other changes as may enhance traffic safety.
- D. The requirements of the retrofit plan will be incorporated as conditions to the permit for the redevelopment, change or upgrade of use of the property and the property owner will be responsible for the retrofit.
- E. Incentives
- i. In order to ensure the safe and efficient movement of traffic along a road and between the road and properties abutting the road, shared driveways, cross access driveways, access and service roads, internal circulation systems, and interconnected parking are encouraged.
  - ii. The TOWN Planning Board may grant a property owner adjustments to the permissible bulk, area and coverage requirements including setbacks, density, area, height, or open space otherwise required in the zoning district when such property owner elects to provide and maintain shared driveways, cross access driveways, access and service roads, internal circulation systems, or interconnected parking.
  - iii. The TOWN Planning Board reserves the authority to determine, in its discretion, the adequacy of the access management amenities to be accepted and the particular bonus or incentive to be provided to a property owner.