Saratoga Road
Corridor Access Study

Grundy County, Illinois

Prepared for

Grundy County Highway Department

Prepared by

KLOA
Kenig, Lindgren, O'Hara, Aboona, Inc.

July 2013

Contents

List of Figures and Tables

Figures

Tables

1.
Introduction

The Grundy County Highway Department retained the services of Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) to develop a corridor access plan for Saratoga Road in the City of Morris and unincorporated Grundy County, Illinois.

The study limits for Saratoga Road extend over a 1.6-mile section from U.S. Route 6 on the north to Old Stage Road on the south. This section of Saratoga Road is presently a two-lane roadway with a rural cross-section (i.e., shoulders and drainage ditch) and is under the jurisdiction of the Grundy County Highway Department.

Saratoga Road is an important County highway as it is the only continuous north-south roadway between IL Route 47 in Morris, three miles to the east, and IL Route 170/LaSalle County Highway 25 in Seneca, seven miles to the west, that extends from the Illinois River north to U.S. Route 52 in Kendall County (via Lisbon Road).

The northern portion of Saratoga Road (U.S. Route 6 to the CSX Railroad) is located within the municipal limits of the City of Morris. The southern portion of Saratoga Road (CSX Railroad to Old Stage Road) is located within the City of Morris' 1.5-mile planning area. The Morris Comprehensive Plan identifies Saratoga Road as an arterial roadway and envisions the corridor developing with commercial uses between I-80 and U.S. Route 6, residential uses and open space between U.S. Route 6 and Old Stage Road, and commercial uses at the Old Stage Road intersection. The Grundy County 2020 Land Use Plan Map depicts a similar development scenario but envisions more industrial land uses to the south of the CSX Railroad.

The Morris Comprehensive Plan also features a new interchange on I-80 at Saratoga Road. While this improvement is not presently included in IDOT's 2013-2018 Proposed Multi-Modal Transportation Improvement Program, the construction of this interchange could be the impetus for larger-scale development growth within the Saratoga Road corridor.

Prior to the Saratoga Road corridor becoming more developed, access and design guidelines are needed. As such, the purpose of this Corridor Access Study is to develop a roadway improvement plan that (1) accommodates the projected traffic levels generated by development growth that may occur along the corridor, (2) establishes future access points along the roadway, (3) defines the ultimate roadway cross-section, right-of-way requirements, intersection geometrics and traffic controls, (4) achieves the County's functional and aesthetic vision of the roadway, and (5) attains consensus with the City of Morris on an acceptable roadway design.

Access management elements have been incorporated into the plan to balance mobility and access, so as to maintain an efficient movement of traffic while enhancing safe and efficient access to and from abutting properties. Since the current roadway grid along Saratoga Road is incomplete and to some degree spaced along the section lines at near one-mile intervals, the plan includes the locations of future connector roadways that will improve local traffic circulation, provide alternate means of property access, and can be constructed, in part or in total, by private developers as a condition of approval at the time that a subdivision or site plan is submitted to the governing agency for review.

2.
What Is Access Management?

"Access management is the systematic control of the location, spacing, design, and operations of driveways, median openings, interchanges, and street connections to a roadway."[1] Along busy commercial corridors, as Saratoga Road will eventually be, a well conceived access management plan serves to improve the efficient movement of traffic while enhancing the safe and efficient access to and from abutting properties. Some specific benefits of access management include:

- Safer and more efficient access to properties
- Fewer and less severe vehicle crashes
- Fewer vehicle/pedestrian conflicts
- Less traffic congestion
- Reduced travel delays
- Reduced fuel consumption and vehicle emissions
- Increased and preserved traffic capacity
- Enhanced corridor aesthetics

Access Management Elements

There are many access management techniques that can be used to improve traffic flow and enhance safety along a corridor. The primary elements of this corridor access study include: well-spaced and coordinated traffic signals and full access intersections, location of future connector roadways, landscaped medians, and auxiliary lanes. The objective is to accommodate most, if not all, left-turn movements at the signalized intersections along the corridor.

Traffic Signal Spacing/Coordination and Connector Roads

The spacing of full access signalized and unsignalized intersections can have a dramatic influence on the safe and efficient movement of traffic along a corridor. Management of signal spacing includes planning for the frequency of signals, as well as the uniformity of their spacing.

[1] *Access Management Manual*, Transportation Research Board, Washington, D.C. 2003

The Grundy County Highway Access Regulation Ordinance (GCHARO) classifies Saratoga Road as an Access 3 roadway when defining access control standards. The minimum spacing of full access unsignalized intersections on Access 3 roadways is ¼-mile (1,320 feet) and the minimum spacing of signal-controlled intersections is 1/3-mile (1,760 feet).

The Grundy County access standards are consistent with the standards of the adjoining counties of Kendall and LaSalle. However, these standards are more conservative than those of Will County and Kane County, where minimum spacing standards for signal-controlled intersections along suburban arterials and collectors are ¼-mile.

The most efficient location for the future infill of connector roadways and property access drives within the existing roadway grid along Saratoga Road is likely to occur opposite the existing roadways (i.e., Nettle Creek Drive, Country Club Lane) or at the ¼-mile point to maintain a proportional roadway grid. A minimum signalized intersection spacing standard of 1/3-mile is more appropriate in a rural, residential or other relatively low-density environment. Restricting signalized access to 1/3-mile spacing in areas of denser traffic generators can lead to less efficient signal operation, poorer signal coordination, dual turn lanes and/or longer turn lane stacking requirements at intersections, higher vehicle delays, lower levels of service, and unsafe travel conditions on arterial or major collector roadways.

For these reasons, the minimum spacing standards for signal-controlled intersections along Saratoga Road is recommended to be ¼-mile, consistent with Grundy County's minimum spacing standards for full access unsignalized intersections along these roadways.

To maintain efficient traffic signal operations and traffic flow progression at this spacing standard, all future signals within the Saratoga Road corridor should be interconnected into a coordinated signal system.

Landscaped Center Median

A landscaped center median can be a very effective access management tool because it separates directional traffic flow, limits the locations of left-turn movements, provides a refuge area for pedestrians crossing the roadway, and enhances community appearance. Left-turn movements adversely impact traffic flow and are far more likely to be involved in vehicular crashes than right-turn movements. The installation of a landscaped median has the effect of restricting driveway and minor cross-street turning movements to right-turn movements only. In addition, vehicular-pedestrian crash rates are typically less than one-half that on roadways with a two-way left-turn lane.

Auxiliary Lanes

Deceleration lanes for left- and right-turns provide an effective way to limit the speed differential between turning vehicles and through vehicles. Left- and right-turn lanes are needed to maintain traffic progression on major signalized collector or arterial roadways. The GCHARO indicates that left-turn lanes "are mandatory for all major and minor use generators", which would include intersections with significant collector and arterial roadways. The GCHARO further specifies that right-turn lanes "should be installed at an access on a County highway if the average daily two-way volume at the access is at least 1,000 vehicles and the average peak hour entering right-turn volume is at least 40 vehicles. Other factors such as the highway design speed, the number of highway approach lanes, composition of access traffic, and adjacent highway alignment should influence the need for a deceleration lane regardless of whether the volumes mentioned above are or are not met."

3.
Existing Traffic Conditions

Transportation conditions in the Saratoga Road corridor were inventoried to create a database for analyzing existing and projected future conditions. Three general components of existing conditions were considered, including:

1. Characteristics of the roadways, including lane configuration, intersection traffic controls, and speed limits
2. Existing weekday traffic volumes
3. Intersection operations

Corridor Study Limits

The study limits for the Saratoga Road corridor extend over a 1.6-mile section from U.S. Route 6 on the north to Old Stage Road on the south. Five (5) intersections were evaluated and analyzed within the study limits, as follows:

1. Saratoga Road / U.S. Route 6
2. Saratoga Road / Nettle Creek Drive
3. Saratoga Road / Country Club Lane
4. Saratoga Road / Stockdale Road
5. Saratoga Road / Old Stage Road

Figure 1 shows the Saratoga Road corridor study area with respect to the surrounding roadway system. Figure 2 shows an aerial view of the corridor study area with the study intersections highlighted.

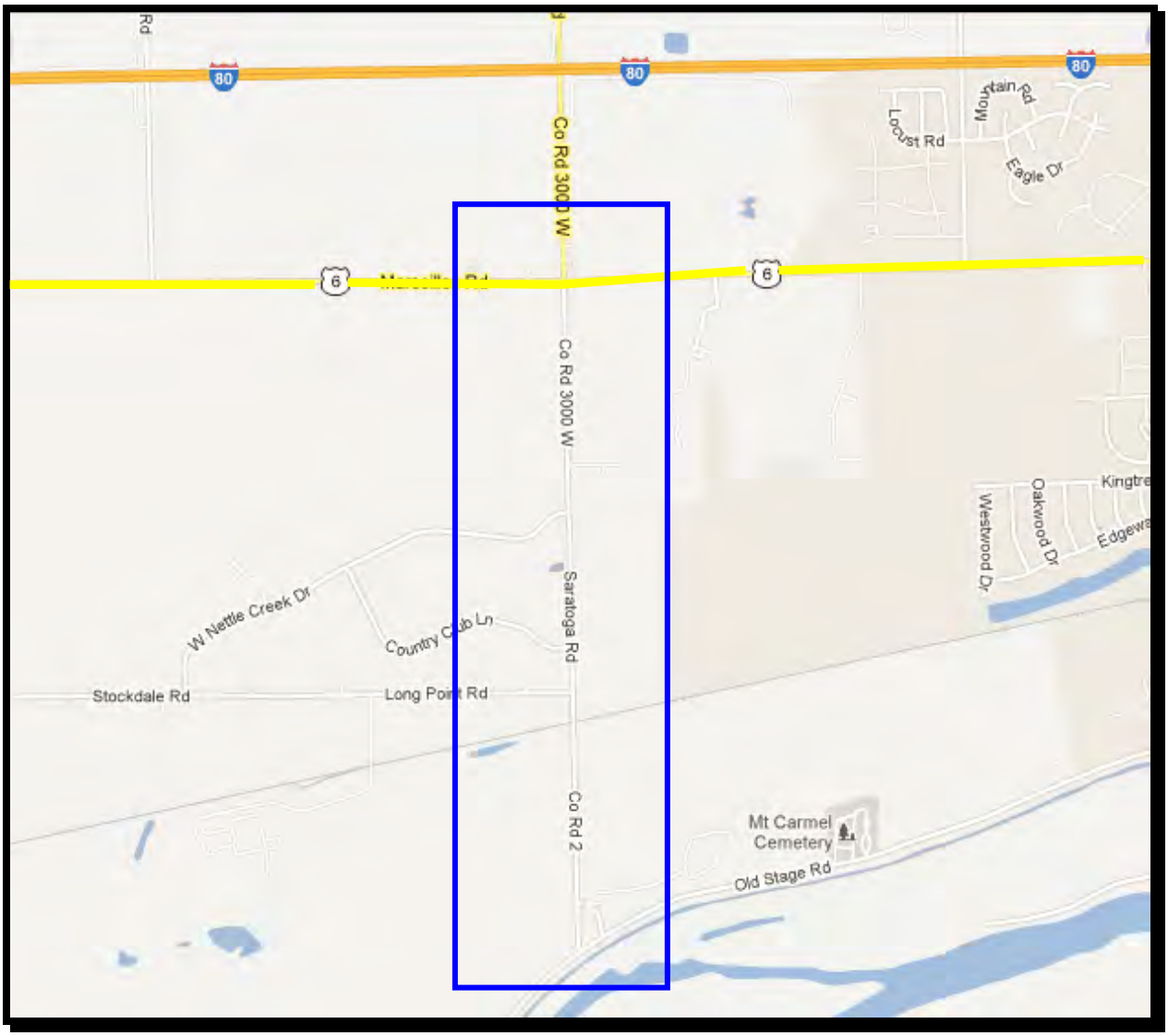


Figure 1
CORRIDOR STUDY LIMITS

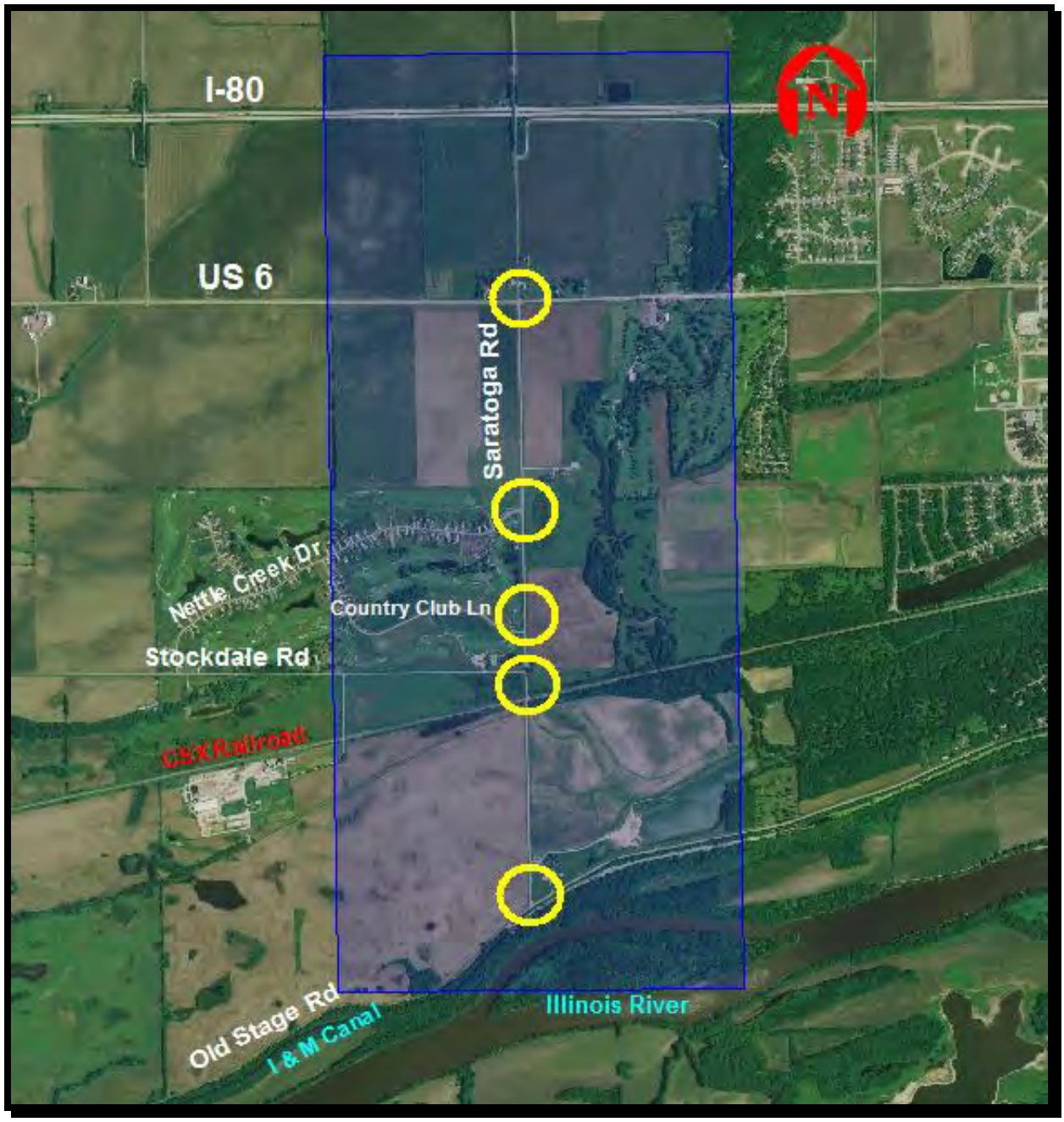


Figure 2
AERIAL VIEW OF CORRIDOR STUDY AREA

Existing Traffic Volumes

Traffic volume and vehicle classification data was collected or obtained by KLOA, Inc. as part of the corridor access study. The data was summarized on a 24-hour basis and for the weekday peak hours.

Average Daily (24-Hour) Traffic Volumes

Average daily traffic volume and vehicle classification data for the study area roadways was obtained from the Illinois Department of Transportation (IDOT). The data was collected by IDOT in 2010. The traffic count data indicates that Saratoga Road presently carries from approximately 450 to 1,350 vehicles per day (vpd), as shown in Table 1. While vehicle classification data for Saratoga Road was not available from IDOT, data collected by KLOA, Inc. during the peak periods hours (see below) indicated that approximately 3.6 to 7.6 percent of the traffic volume on the roadway is comprised of single unit and multi-unit trucks.

Table 1
EXISTING DAILY (24-HOUR) TRAFFIC VOLUMES

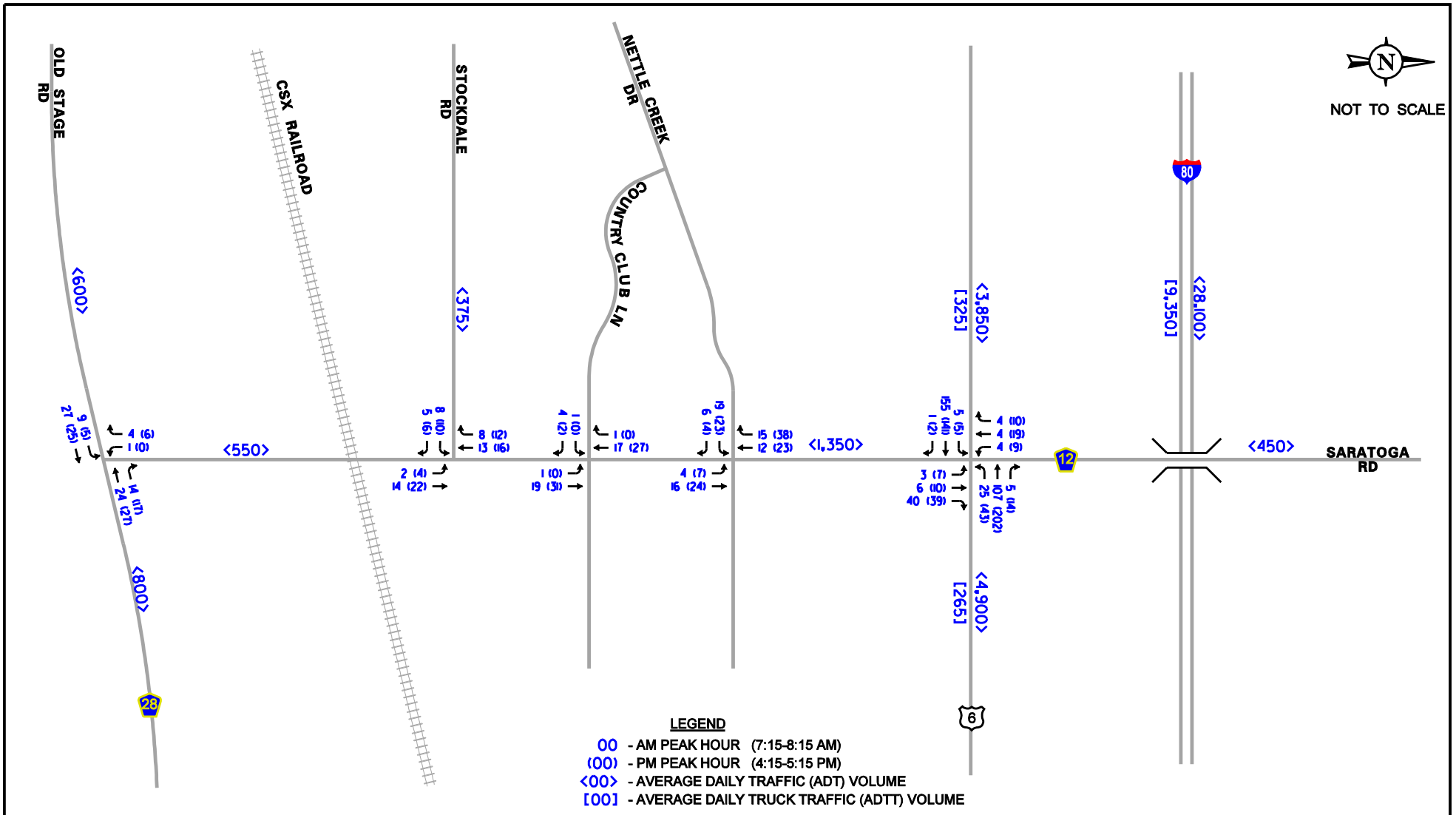
Section	Two-Way Traffic Volume (Total Vehicles)	Percent Trucks[1]
Saratoga Road (North of U.S. Route 6)	450	5.9 %
Saratoga Road (U.S. Route 6 to Stockdale Road)	1,350	7.6 %
Saratoga Road (Stockdale Road to Old Stage Road)	550	3.6 %

[1] Estimate based on peak period intersection counts conducted by KLOA, Inc.

Peak Hour Intersection Traffic Volumes

Manual intersection turning-movement traffic counts and vehicle classification data were collected at the five intersections along Saratoga Road noted above on Thursday, September 6, 2012 during the weekday morning and afternoon commuter peak periods. From the traffic count data, the peak hours of traffic activity were determined to be 7:15-8:15 A.M. in the morning and 4:15-5:15 P.M. in the evening.

The existing peak hour traffic volumes and 24-hour volumes are shown in Figure 3.



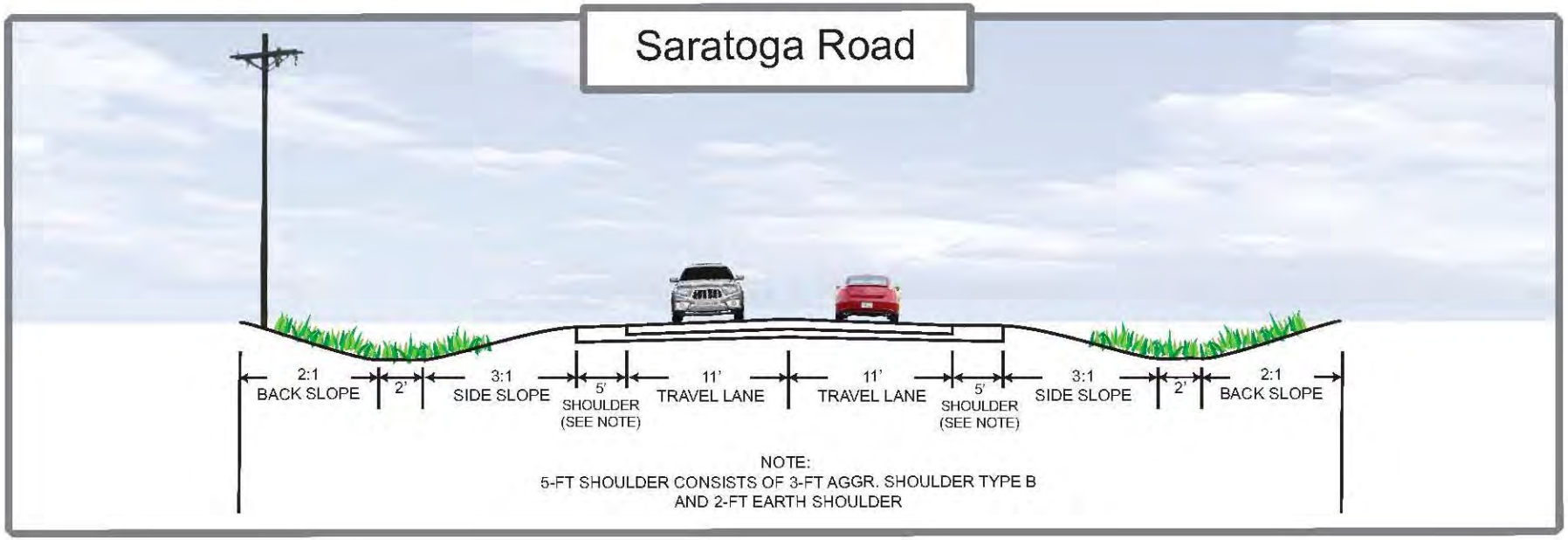
PROJECT:	TITLE:	
Saratoga Road Corridor Access Study Grundy County, Illinois	Existing Traffic Volumes	KLOA Job No: 12-095 Figure: 3

Existing Roadway Conditions

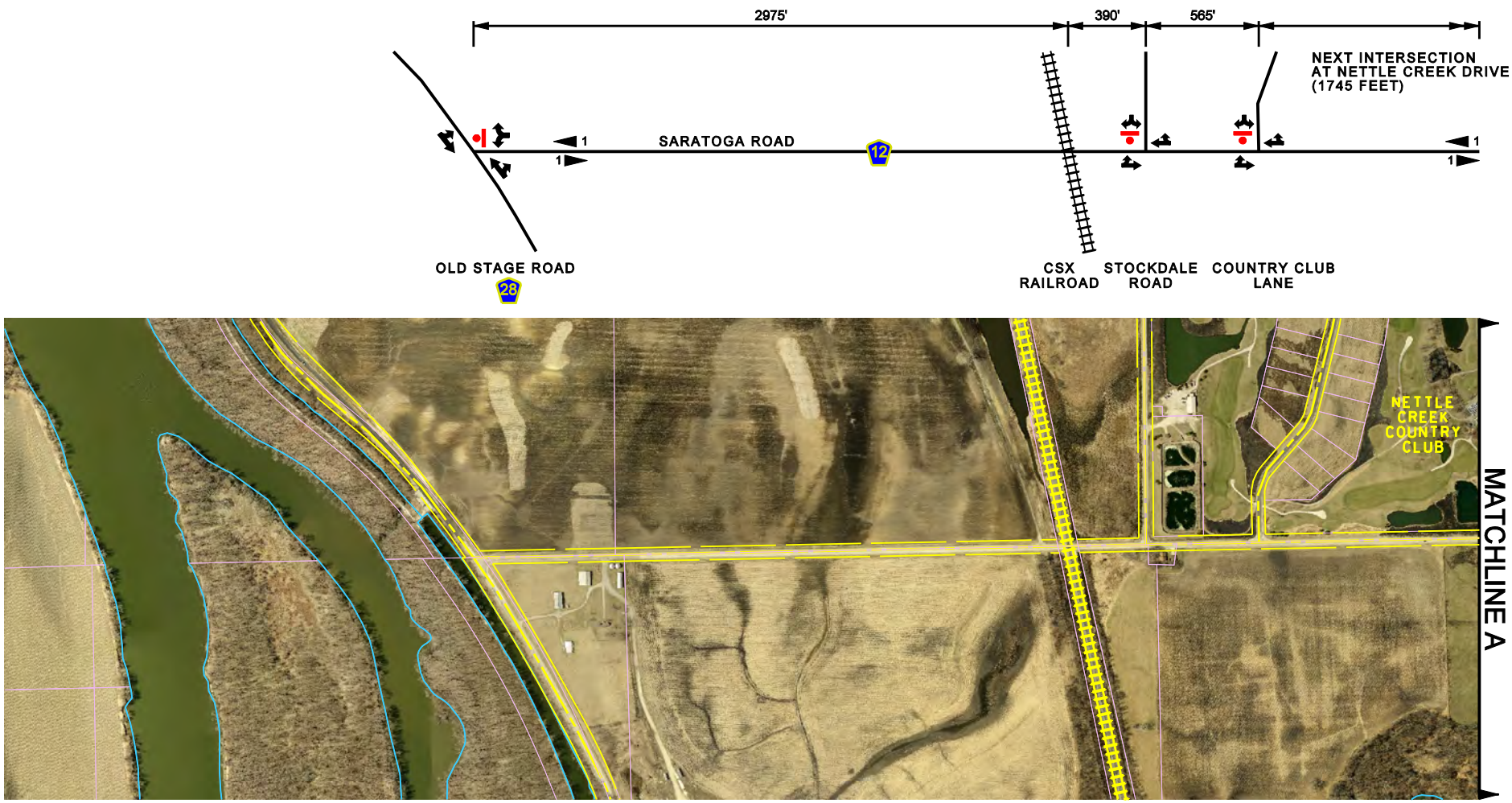
KLOA, Inc. obtained roadway design plans of the recent Saratoga Road resurfacing project from the Grundy County Highway Department. KLOA then conducted an extensive field review of the corridor and the intersections in the study area to identify the physical and operational aspects of the roadway system. Figure 4 illustrates the existing typical cross section of Saratoga Road. As shown, the roadway is designed to rural standards with aggregate/earth shoulders and open drainage swales. Grundy County has a prescriptive easement for Saratoga Road with no recorded public right-of-way as the private property lines extend to the centerline of the roadway, except adjacent to the Nettle Creek Country Club subdivision where there is a 40-foot public right-of-way from the center of Saratoga Road. Figures 5 and 6 illustrate the existing property lines, right-of-way, lane geometrics, traffic controls, and intersection spacing along Saratoga Road. The following paragraphs describe Saratoga Road and the roadways that intersect Saratoga Road within the corridor.

Saratoga Road (County Highway V12) is a two-lane, undivided, north-south roadway that extends approximately 6.6 miles from Old Stage Road on the south to Minooka Road/Lisbon Road on the north. The section of Saratoga Road under study (U.S. Route 6 to Old Stage Road) is under the jurisdiction of the Grundy County Highway Department (GCHD) and has a rural cross-section (i.e., shoulders and drainage ditch). Saratoga Road is functionally classified by IDOT as a minor arterial road while the Morris Comprehensive Plan classifies Saratoga Road as an arterial road to the north of U.S. Route 6 and a collector road to the south of U.S. Route 6. Saratoga Road is also classified in the Grundy County Highway Access Regulation Ordinance (GCHARO) as an Access 3 roadway when defining intersection spacing and traffic control standards. Saratoga Road is designated by the GCHD as a Class III truck route between U.S. Route 6 and Old Stage Road. Saratoga Road is also a Federal Aid Urban Route (FAU 5958) between U.S. Route 6 and Old Stage Road, making it eligible for Federal-aid through the Surface Transportation Program to fund resurfacing, reconstruction, traffic management, bicycle/ pedestrian, and operational improvement projects. There are no posted speed limits on Saratoga Road and the roadway was observed to operate within the Illinois statutory maximum speed limit of 55 mph.

U.S. Route 6 is a two-lane, undivided, east-west roadway that extends from IL Route 47 in the City of Morris on the east to Seneca Road on the west, where it continues south then west through the cities of Seneca, Marseilles, Ottawa, LaSalle and Peru. U.S. Route 6, also known as is under IDOT jurisdiction and has a rural cross-section. It is functionally classified by IDOT as a minor arterial roadway and as an arterial roadway by the City of Morris. U.S. Route 6 is also a Federal Aid Urban Route (FAU 392) and is designated by IDOT as a Class II truck route. The intersection of U.S. Route 6 and Saratoga Road is under stop control on Saratoga Road. U.S. Route 6 carries approximately 3,850-4,900 vehicles per day and 265-325 trucks per day in the vicinity of Saratoga Road. The posted speed limit on U.S. Route 6 is 55 mph.



PROJECT:	TITLE:	
CORRIDOR ACCESS STUDY SARATOGA ROAD GRUNDY COUNTY, ILLINOIS	EXISTING TYPICAL CROSS SECTION	KLOA Job No: 12-095 Figure: 4



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PROJECT # 12-095

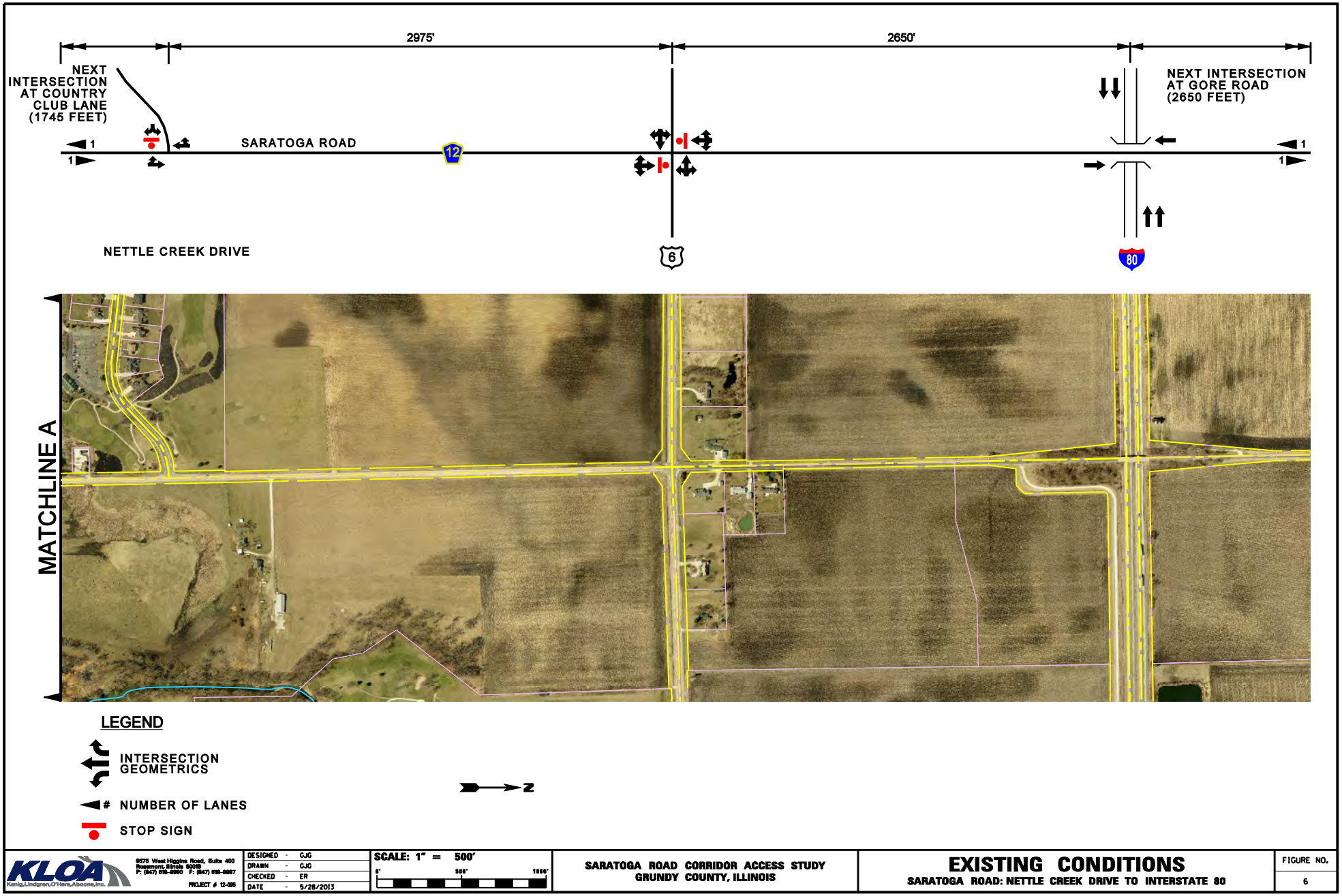
DESIGNED	-	GJC
DRAWN	-	GJC
CHECKED	-	ER
DATE	-	5/29/2013

SCALE: 1" = 500'
0' 500' 1000'

SARATOGA ROAD CORRIDOR ACCESS STUDY
GRUNDY COUNTY, ILLINOIS

EXISTING CONDITIONS
SARATOGA ROAD: OLD STAGE ROAD TO COUNTRY CLUB LANE

FIGURE NO. 5


2975'
2650'
NEXT INTERSECTION AT COUNTRY CLUB LANE (1745 FEET)
SARATOGA ROAD
NEXT INTERSECTION AT GORE ROAD (2650 FEET)
NETTLE CREEK DRIVE
12
6
80
MATCHLINE A
LEGEND
INTERSECTION GEOMETRICS
NUMBER OF LANES
STOP SIGN
N
KLOA
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P: (847) 518-9990 F: (847) 518-9987
PROJECT # 12-095
DESIGNED - GJG
DRAWN - GJG
CHECKED - ER
DATE - 5/28/2013
SCALE: 1" = 500'
0'
500'
1000'
SARATOGA ROAD CORRIDOR ACCESS STUDY
GRUNDY COUNTY, ILLINOIS
EXISTING CONDITIONS
SARATOGA ROAD: NETTLE CREEK DRIVE TO INTERSTATE 80
FIGURE NO.
6

Old Stage Road (County Highway V28) is a two-lane, undivided, east-west roadway that extends from Fremont Avenue on the east in the City of Morris to the City of Seneca. Old Stage Road is under the jurisdiction of the GCHD from the Morris city limits to the Seneca city limits. Old Stage Road is classified by IDOT as a minor arterial roadway between Fremont Avenue and Saratoga Road, and a local street to the west of Saratoga Road. The City of Morris classifies Old Stage Road as a collector road. The ¼-mile section of Old Stage Road from Saratoga Road east to the sand pit entrance is designated by the GCHD as a Class III truck route. Old Stage Road has a rural cross-section and carries approximately 600-800 vehicles per day. The intersection of Old Stage Road with Saratoga Road in under stop control on Saratoga Road. There are no posted speed limits on Old Stage Road in the vicinity of Saratoga Road.

Stockdale Road is a two-lane, undivided, east-west roadway that extends from Saratoga Road west two miles to Nettle School Road. Stockdale Road, also known as Long Point Road, has a rural cross-section and is under the jurisdiction of Erienna Township. Stockdale Road is classified as a local street by IDOT and as a collector road by the City of Morris. The intersection of Stockdale Road with Saratoga Road is under stop control on Stockdale Road. Stockdale Road carries approximately 375 vpd and there are no posted speed limits on the roadway.

Nettle Creek Drive is a two-lane, undivided, east-west local roadway that extends through the Nettle Creek Country Club from Saratoga Road to Stockdale Road. Nettle Creek Drive has a rural cross-section with sidewalk generally located on both sides of the roadway adjoining developed residential parcels. The intersection of Nettle Creek Drive with Saratoga Road is stop controlled on Nettle Creek Drive. Nettle Creek Drive is under the jurisdiction of Erienna Township and has a posted speed limit that ranges from 20-25 mph.

Country Club Lane is a two-lane, undivided, east-west local roadway that extends through the Nettle Creek Country Club from Saratoga Road to Nettle Creek Drive. Country Club Lane has a rural cross-section with sidewalk generally located on both sides of the roadway adjoining developed residential parcels. The intersection of Country Club Lane with Saratoga Road is stop controlled on Country Club Lane. Country Club Lane is under the jurisdiction of Erienna Township and has a posted speed limit of 25 mph.

Interstate 80 (I-80) is a limited access east-west expressway that spans the United States from New Jersey on the east to California on the west. Within Illinois, I-80 is under IDOT jurisdiction. In the vicinity of Saratoga Road, I-80 has two lanes in each direction and a posted speed limit of 65 mph. The nearest interchanges on I-80 are approximately three miles to the east at IL Route 47 in Morris and approximately four miles to the west at Seneca Road. I-80 is a Federal Aid Interstate Route (FAI 80) making it part of the National Highway System. I-80 is also designated by IDOT as a Class I truck route.

CSX Railroad Grade Crossing

The CSX Railroad's New Rock east-west subdivision extends for 60 miles from Joliet to LaSalle and connects with the Burlington Northern Sante Fe (BNSF), Iowa Interstate (IAIS), and Union Pacific (UP) railroads. This freight line has a single track through Morris that crosses Saratoga Road at-grade and on an 80-degree skew approximately 375 feet south of Stockdale Road. The grade crossing has an asphalt surface with advance railroad warning signs, pavement markings, and train activated warning devices with flashers and gates. This rail line generally carries two eastbound trains and two westbound trains daily at a maximum speed of 40 mph.

A Phase I feasibility study of a potential commuter rail service on the CSX line was completed in 2003 and a follow-up Phase II feasibility study has been funded and will be performed by the Illinois Department of Transportation. The proposed service would be known as the Illinois Valley Commuter Rail service and would extend from Joliet's Union Station to La Salle with stations located in Channahon, Minooka, Morris, Seneca, Marseilles, Ottawa, Utica and LaSalle/Peru.

Public Transportation

There are presently no fixed-route transit services operating in the vicinity of the City of Morris. The only public transportation currently available in the area is dial-a-ride transit service provided by the Grundy Transit System (GTS) on weekdays between 7:30 A.M. and 4:00 P.M.

Existing Intersection Operations

To evaluate existing traffic operations in the Saratoga Road corridor during the peak weekday time periods, capacity analyses were conducted at all study intersections utilizing Synchro 8.0/Simtraffic computer software, which implements the Intersection Capacity Utilization (ICU) 2003 method and the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM), 2010*. This software allows for the analysis of multiple interconnected traffic signal systems as well as independent signalized or unsignalized intersections. The methodologies utilize traffic controls, traffic volumes, heavy vehicle percentages, parking conditions, and other street characteristics to determine the average control delay, levels of service, and queuing of vehicles at an intersection.

The ability of an intersection to accommodate traffic flow is expressed in terms of Level of Service, which is assigned a letter grade from A to F based on the average control delay experienced by vehicles passing through the intersection. Control delay is that portion of the total delay attributed to the traffic signal or stop sign control operation, and includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Level of Service A is the highest grade (best traffic flow and least delay), Level of Service E represents saturated or at-capacity conditions, and Level of Service F is the lowest grade (oversaturated conditions, extensive delays). As indicated in the GCHARO, Level of Service C is the desired peak-hour service level for projected 20-year future traffic conditions.

For signal-controlled intersections, levels of service are calculated for lane groups, intersection approaches, and the intersection as a whole. For all-way stop controlled (AWSC) intersections, levels of service are calculated based on the weighted average of the delay on each of the approaches (the approach delay consists of the weighted average of the delay on each lane of the approach). For two-way stop controlled (TWSC) intersections, levels of service are only calculated for the approaches controlled by a stop sign (not for the intersection as a whole). Level of Service F at TWSC intersections occurs when there are not enough suitable gaps in the flow of traffic on the major (uncontrolled) street to allow minor-street traffic to safely enter the major street flow or cross the major street in a reasonable amount of time. The *Highway Capacity Manual* definitions for levels of service and the corresponding control delay for signalized and unsignalized intersections are shown in Table 2.

Table 2
LEVEL OF SERVICE CRITERIA

Signalized Intersections

Level of Service	Interpretation	Average Control Delay (seconds per vehicle)
A	Very short delay, with extremely favorable progression. Most vehicles arrive during the green phase and do not stop at all.	≤10
B	Good progression, with more vehicles stopping than for Level of Service A, causing higher levels of average delay.	>10-20
C	Light congestion, with individual cycle failures beginning to appear. Number of vehicles stopping is significant at this level.	>20-35
D	Congestion is more noticeable, with longer delays resulting from combinations of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop, and the proportion of vehicles not stopping declines.	>35-55
E	Limit of acceptable delay. High delays result from poor progression, high cycle lengths, and high V/C ratios.	>55-80
F	Unacceptable delays occurring, with oversaturation.	>80.0

Unsignalized Intersections

Level of Service	Average Control Delay (seconds per vehicle)
A	0-10
B	>10-15
C	>15-25
D	>25-35
E	>35-50
F	>50

Source: Highway Capacity Manual, 2010.

Table 3 summarizes the results of the capacity analyses for the existing weekday morning and afternoon peak-hour conditions, indicating the level service and delay for the critical minor street movement at all TWSC intersections. The capacity analysis worksheets are contained in the Appendix. The results indicate that all study area intersections along the Saratoga Road corridor presently operate at very good levels of service under existing traffic controls.

Table 3
CAPACITY ANALYSIS RESULTS – EXISTING TRAFFIC CONDITIONS

	Weekday AM Peak Hour		Weekday PM Peak Hour	
Intersection	LOS	Delay	LOS	Delay
Saratoga Road / U.S. Route 6[1]	B	10.3	B	11.6
Saratoga Road / Nettle Creek Drive[1]	A	8.8	A	9.0
Saratoga Road / Country Club Lane[1]	A	8.5	A	8.4
Saratoga Road / Stockdale Road[1]	A	8.6	A	8.7
Saratoga Road / Old Stage Road[1]	A	8.6	A	8.5

Note: LOS = level of service Delay = seconds/vehicle
[2] Unsignalized TWSC intersection. LOS and delay representative of average of stop controlled approaches.

4.
Future Land Use and Traffic Conditions

An assessment of future traffic conditions in the Saratoga Road corridor is an essential step in determining the ultimate design requirements for the roadway. The assessment was based on three key components: (1) the types and densities of land use anticipated to develop in the corridor with and without a future new interchange at I-80/Saratoga Road, (2) the roadway system that will be developed to accommodate these land uses, and (3) the generation, distribution and assignment of the resulting traffic volumes from these land uses.

Based on a comparison of daily traffic volumes between that published by IDOT in 2010 and that published by IDOT in 1996, Saratoga Road has experienced a modest but steady increase in volume of approximately 3.6 percent per year (50% total) to the south of U.S. Route 6 and approximately 18.6 percent per year (260% total) to the north of U.S. Route 6. This trend may be reflective of the collector/arterial classification of Saratoga Road, the gradual development of the Nettle Creek Country Club subdivision, and development growth to the north of the corridor.

As land is developed along Saratoga Road over the next 20 years or more, the traffic volumes on the roadway and intersecting cross streets will increase. The aggregation of the traffic generated by these future developments with the existing traffic volumes comprise the projected traffic volumes utilized in this analysis. For the purpose of this study, a planning horizon of 27 years (i.e., Year 2040) was selected to coincide with the regional planning efforts of the Chicago Metropolitan Agency for Planning (CMAP) and with the anticipated development of the developable land area in the corridor. In actuality, full buildout of the developable land in the Saratoga Road corridor may not occur for many years beyond 2040.

Future Development and Traffic Generation

Estimates of future development to the 2040 planning horizon were prepared by the City of Morris based on the future land uses contained in the Morris Comprehensive Plan, with consideration given to the land use changes that might occur if a new interchange is constructed at I-80/Saratoga Road.

First the number of developable acres by land-use type was estimated based on an analysis of aerial mapping of the study area, existing land uses, existing property lines and rights-of-way, and natural (undevelopable) features. Next development ratios were determined based on development trends in the three communities. The development ratios are in units-per-acre for residential developments and floor-area-ratios (FAR) for retail and institutional developments. Development ratios range from 3.0 to 6.0 units per acre for residential uses and 0.2 to 0.25 FAR for retail and institutional uses. Next, development densities were estimated by multiplying the developable acreage by the development ratios.

The future development densities were then utilized to calculate weekday peak-hour traffic volumes that would be generated by these developments using trip generation equations published by the Institute of Transportation Engineers (ITE) in the *Trip Generation Manual*, 9th Edition, 2012. Average daily (24-hour) traffic volumes were also calculated by dividing the peak-hour volumes by a 12 percent peak-hour factor.

Due to the length of the Saratoga Road corridor (1.6 miles), the corridor was subdivided into 10 zones for traffic analysis purposes. Each zone has frontage on Saratoga Road, is equivalent in size (½-mile by ½-mile square), and is generally projected to contain parcels of similar land use. Figure 7 illustrates the boundaries of the traffic analysis zones (TAZs). A summary table of the future land-uses, developable acreage and ratios, projected development densities, and weekday peak-hour traffic generation for each of the TAZ's is contained in the Appendix.

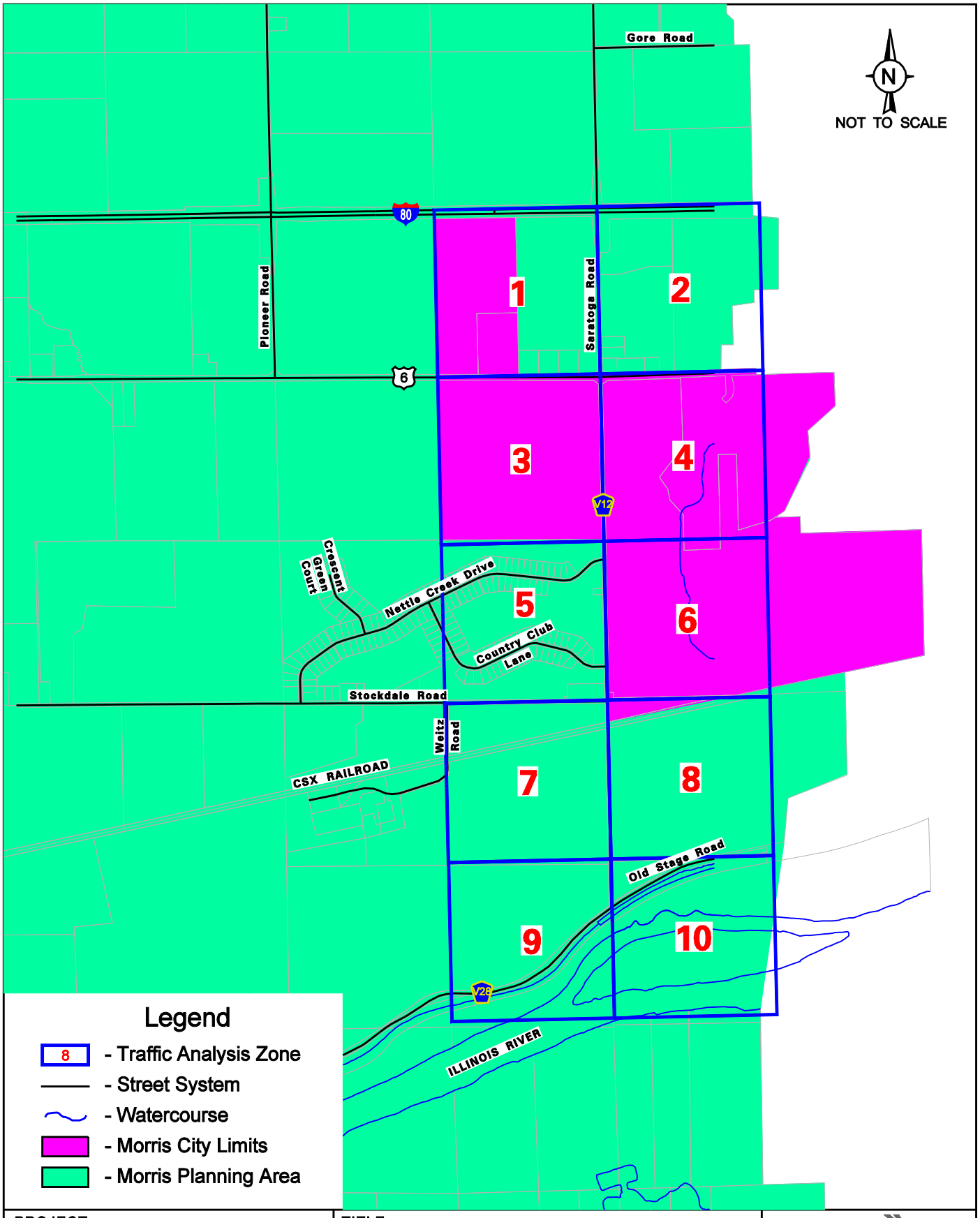
Figures 8 illustrates where residential growth is anticipated to occur with no new interchange at I-80. While residential growth is anticipated throughout the corridor, the largest numbers of new units are concentrated around the U.S. Route 6 intersection. Approximately 2,451 dwelling units are projected to be built within the study area if no I-80 interchange is constructed.

Figures 9 illustrates where residential growth is anticipated if a new interchange at I-80 is constructed. Approximately 2,091 dwelling units are projected to be built within the study area, which is 360 fewer units than shown in Figure 8, all of which are located north of U.S. Route 6.

Figure 10 illustrates where retail growth is anticipated with no new interchange at I-80. Retail growth will occur in the form of neighborhood level centers, community level centers, and regional level centers. Regional retail growth will occur around the U.S. Route 6 intersection. Neighborhood or community level retail will occur around the Old Stage Road intersection. Approximately 958,000 square feet of retail space is projected to develop in the future.

Figures 11 illustrates where retail growth is anticipated with an interchange at I-80. Approximately 1.655 million square feet of retail space is projected to develop, which is 697,000 square feet more space than shown in Figure 10, all of which is located north of U.S. Route 6.

Figure 12 illustrates where institutional growth is anticipated. Approximately 240,000 square feet of space is projected to develop in the northwest quadrant of Saratoga Road/U.S. Route 6, irrespective of whether a new interchange is developed at I-80.

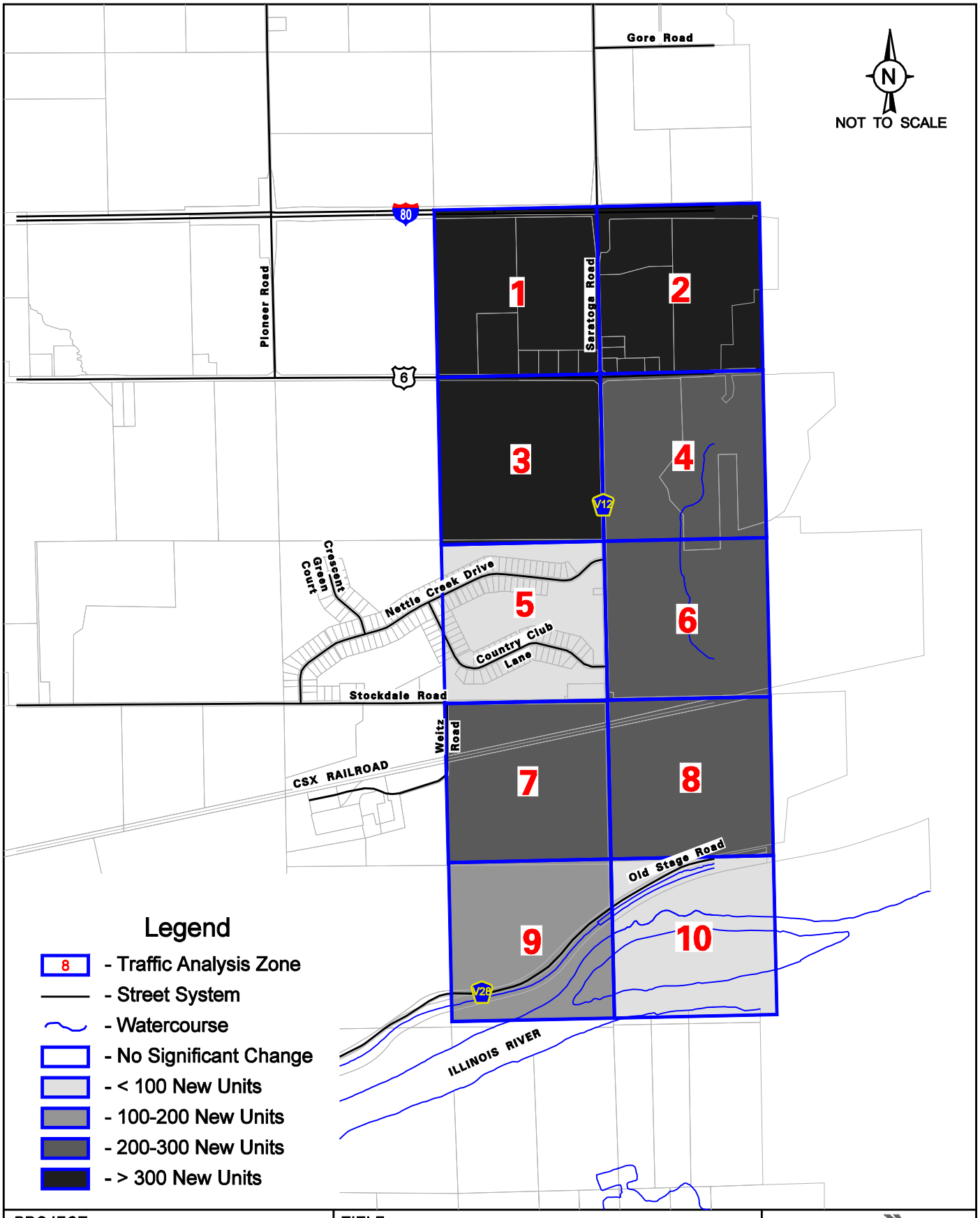


PROJECT:
Saratoga Road
Corridor Access Study
Grundy County, Illinois

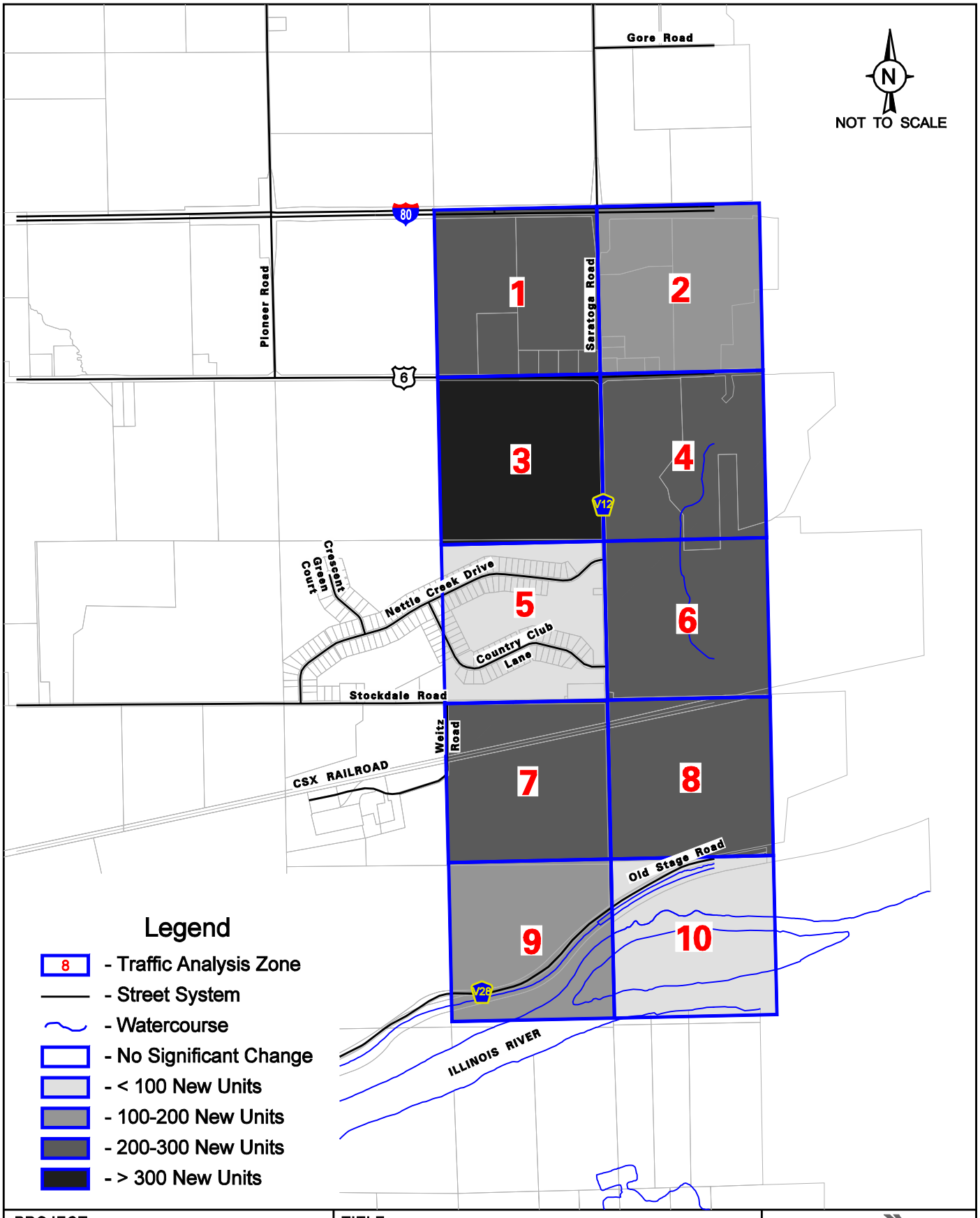
TITLE:
Traffic Analysis Zones

KLOA
Job No: 12-095

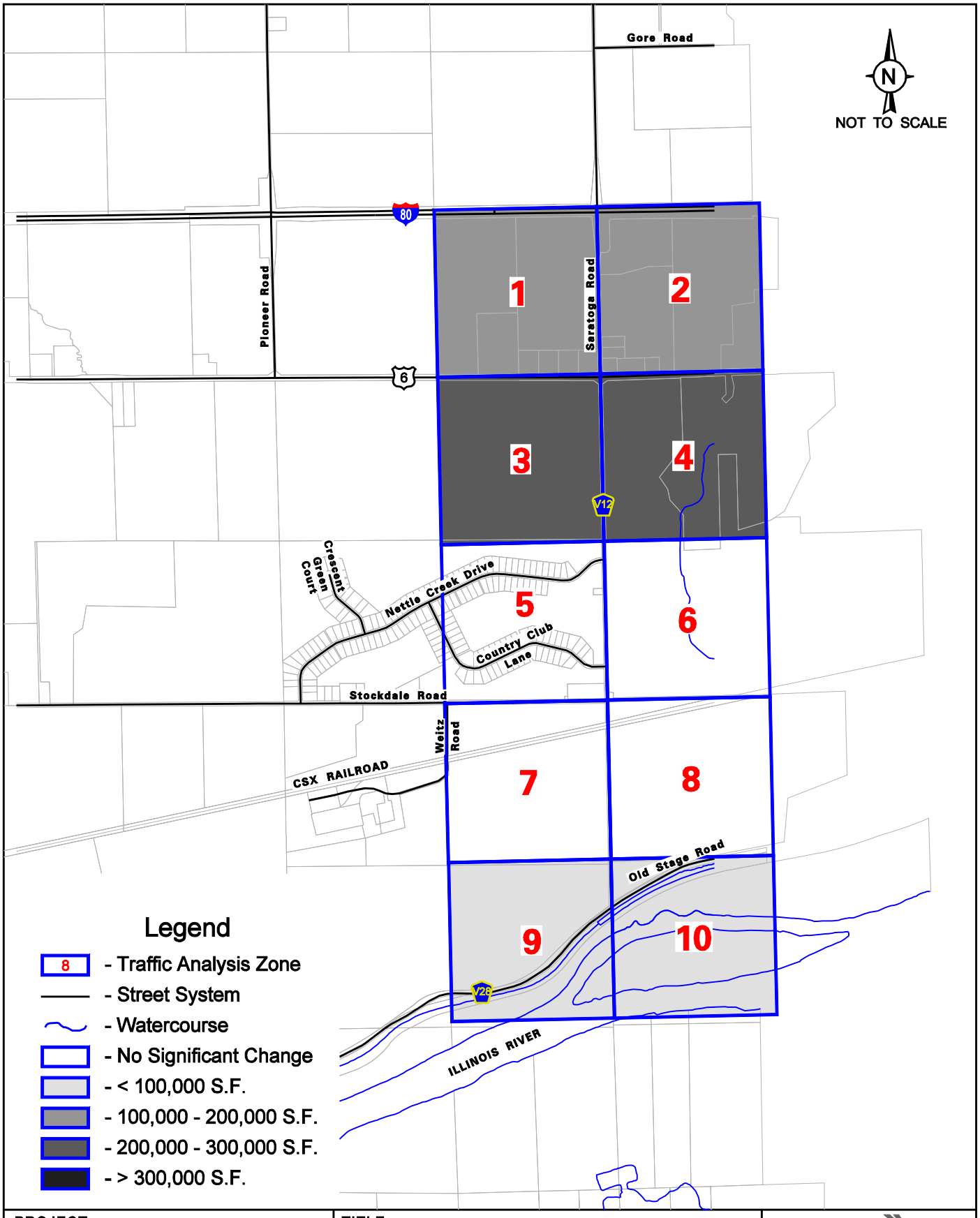
Figure: 7



PROJECT:	TITLE:	
Saratoga Road Corridor Access Study Grundy County, Illinois	Residential Growth to 2040 (No I-80 Interchange)	KLOA Job No: 12-095 Figure: 8



PROJECT:	TITLE:	
Saratoga Road Corridor Access Study Grundy County, Illinois	Residential Growth to 2040 (With I-80 Interchange)	KLOA Job No: 12-095 Figure: 9

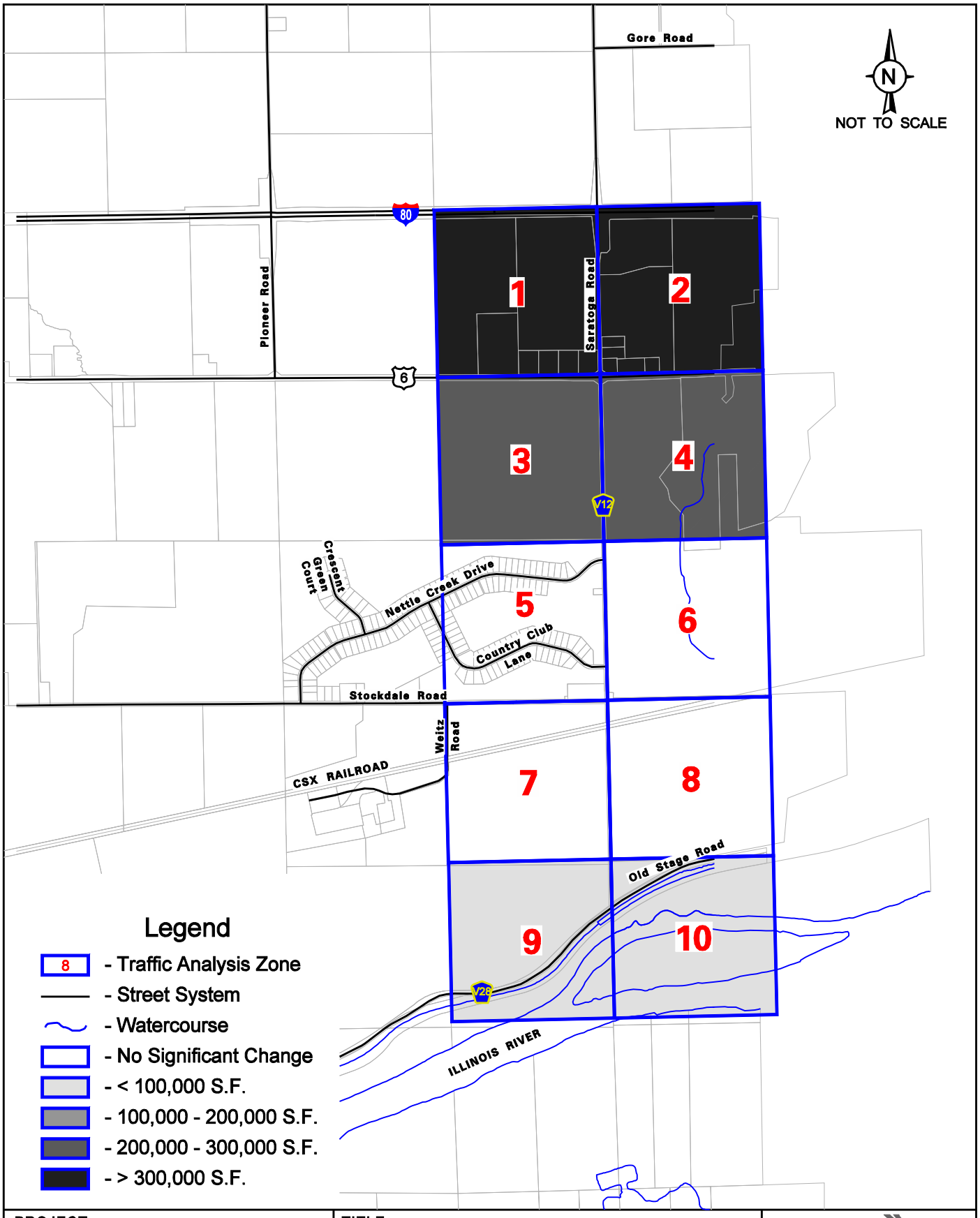


PROJECT:
Saratoga Road
Corridor Access Study
Grundy County, Illinois

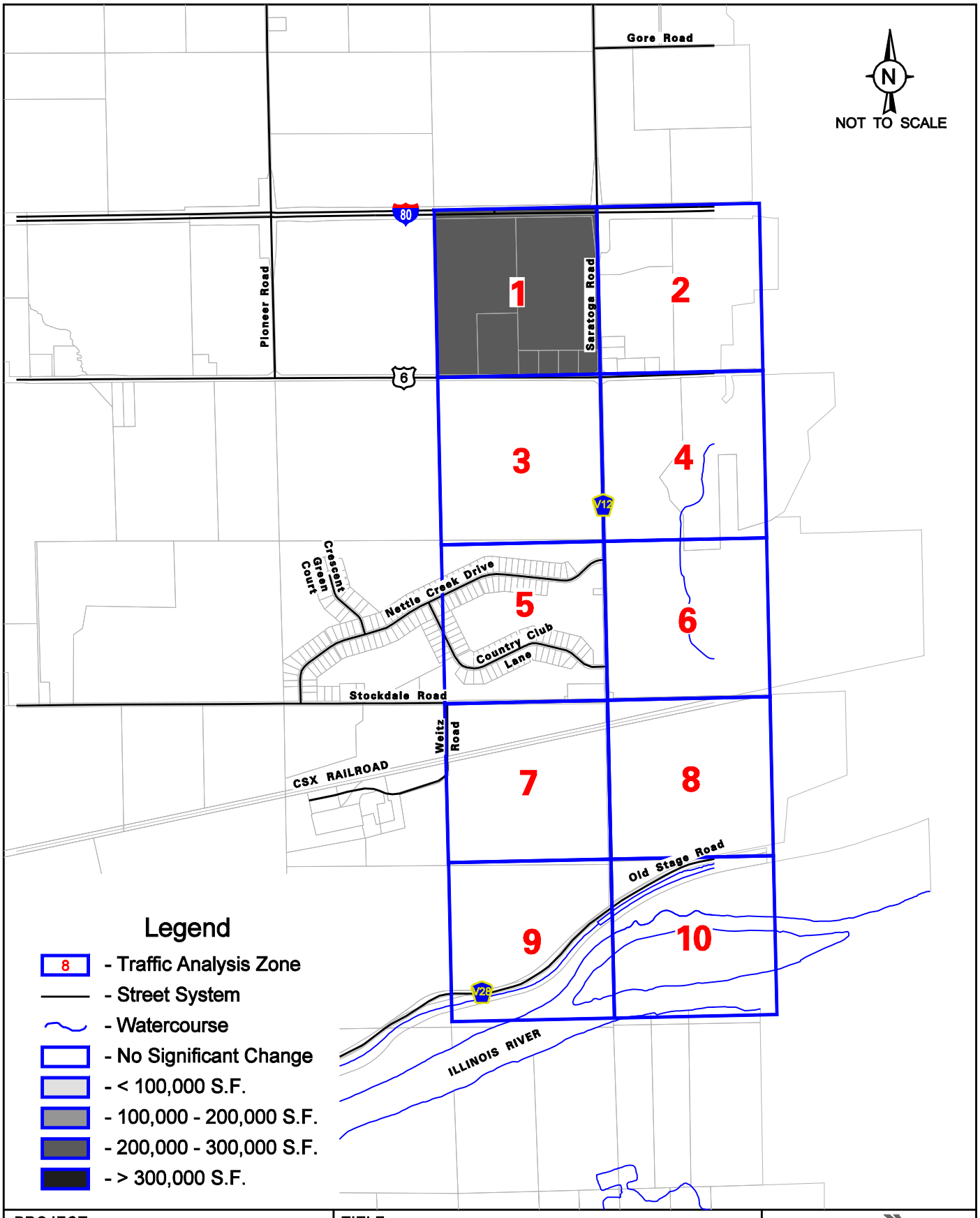
TITLE:
Retail Growth to 2040
(No I-80 Interchange)

KLOA
Job No: 12-095

Figure: 10



PROJECT:	TITLE:	
Saratoga Road Corridor Access Study Grundy County, Illinois	Retail Growth to 2040 (With I-80 Interchange)	KLOA Job No: 12-095 Figure: 11



PROJECT:
Saratoga Road
Corridor Access Study
Grundy County, Illinois

TITLE:
Institutional Growth to 2040
(With or W/O I-80 Interchange)

KLOA
Job No: 12-095

Figure: 12

Future Roadway System

The roadway system that will serve future development in the Saratoga Road corridor will be an improvement over the current system with respect to local circulation within the study area and, potentially, from the perspective of access to the regional roadway system.

Locally, access to the Saratoga Road corridor may be improved in the future with the extensions of existing roadways, as documented in the Morris Comprehensive Plan. Potential roadway extensions include Pioneer Road south to Stockdale Road with an easterly extension to Saratoga Road (north of Nettle Creek Drive), and Ashton Road south to Kingtree Drive then west to Saratoga Road (opposite Nettle Creek Drive). Regionally, the Saratoga Road corridor could be directly connected to I-80 (eastbound and westbound) if a new interchange is constructed north of U.S. Route 6, also noted in the Morris Comprehensive Plan.

Distribution of Future Development Traffic

The distribution of traffic generated by future development within the traffic analysis zones was based on several factors. The first was existing traffic patterns on the roadways in the planning area. The second was an analysis of the distribution of existing households in the planning area as well as planned households, as noted in the Morris Comprehensive Plan. Lastly, consideration was given to the potential extensions of existing local roadways (i.e., Pioneer Road and Ashton Road) and the potential new interchange with I-80 at Saratoga Road.

Based on these factors, the directions from which future development traffic will approach and depart the study area were estimated. The directional distribution will vary by land use and the presence of a new I-80 interchange. Traffic generated by residential developments are more associated with the major travel corridors and regional roadway system. Traffic generated by retail and institutional developments will originate from the residential neighborhoods within the developments market area. The market areas for neighborhood and community scale retail centers will be smaller and draw more local traffic whereas the market area for regional scale retail centers will be larger and draw more traffic from I-80.

Tables 4 summarizes the estimated directional distribution of traffic for the various land uses assuming no new I-80 interchange is constructed at Saratoga Road. Table 5 summarizes the estimated directional distribution of traffic for the various land uses assuming construction of a new I-80 interchange at Saratoga Road.

Table 4
DIRECTIONAL DISTRIBUTION OF FUTURE STUDY AREA TRAFFIC–No I-80 Interchange

	Percentage of Traffic		
Direction To/From	Residential	Neighborhood/Community Retail & Institutional	Regional Retail
North via Saratoga Rd	10%	15%	20%
East via US Route 6, Old Stage Rd	65%	55%	45%
West via US Route 6, Stockdale Rd, Old Stage Rd	25%	30%	35%
Total	100%	100%	100%

Table 5
DIRECTIONAL DISTRIBUTION OF FUTURE STUDY AREA TRAFFIC- w/ I-80 Interchange

	Percentage of Traffic		
Direction To/From	Residential	Neighborhood/Community Retail & Institutional	Regional Retail
North via Saratoga Rd	30%	35%	40%
East via US Route 6, Old Stage Rd	55%	45%	35%
West via US Route 6, Stockdale Rd, Old Stage Rd	15%	20%	25%
Total	100%	100%	100%

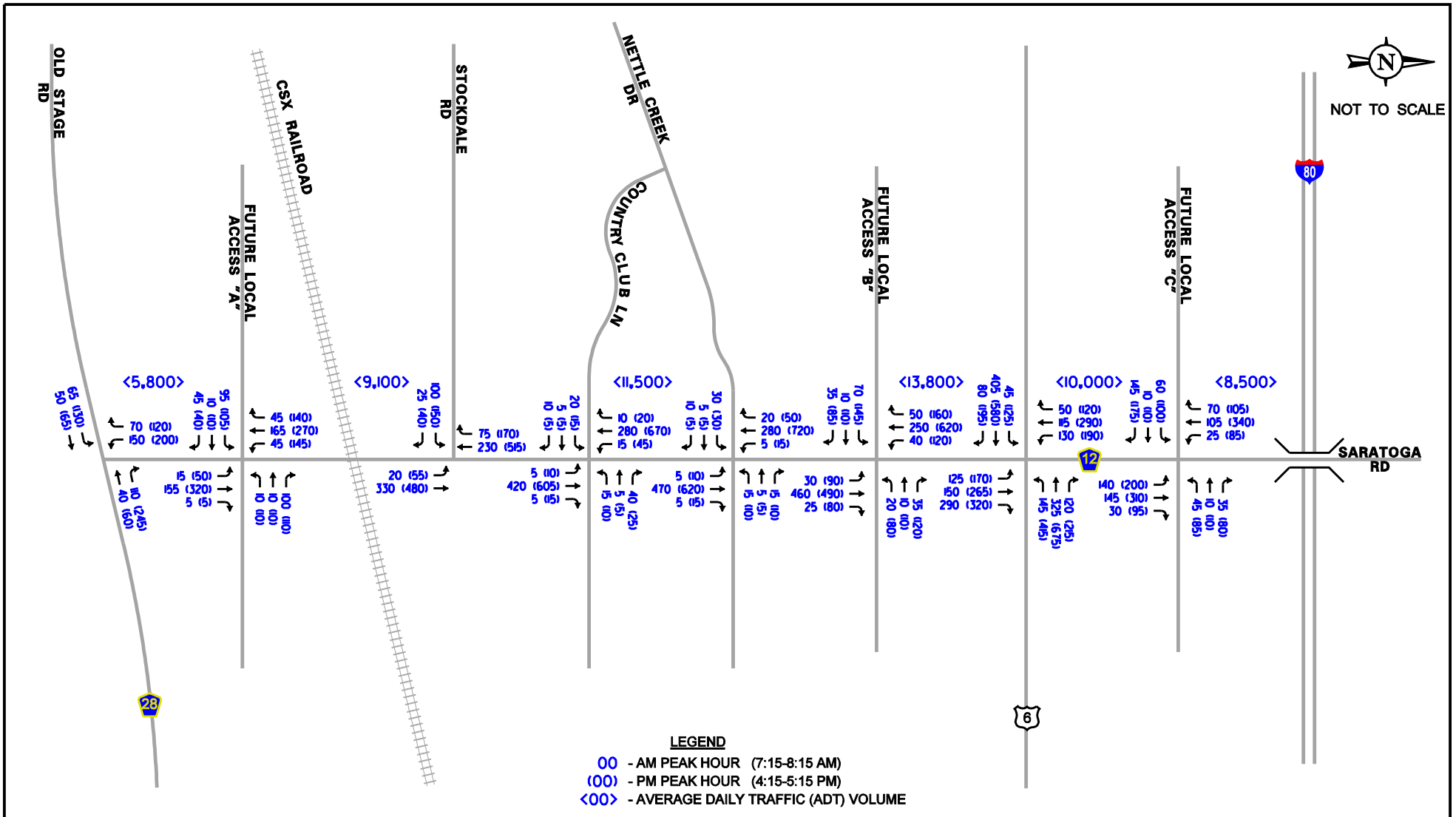
Assignment of Future Development Traffic

The weekday peak hour traffic generated by future development within the TAZ's was assigned to the roadway system based on the directional distributions shown in Tables 4 and 5. The traffic assignment process was performed manually based on a modified gravity model methodology that considered all network roadway options and functional classifications.

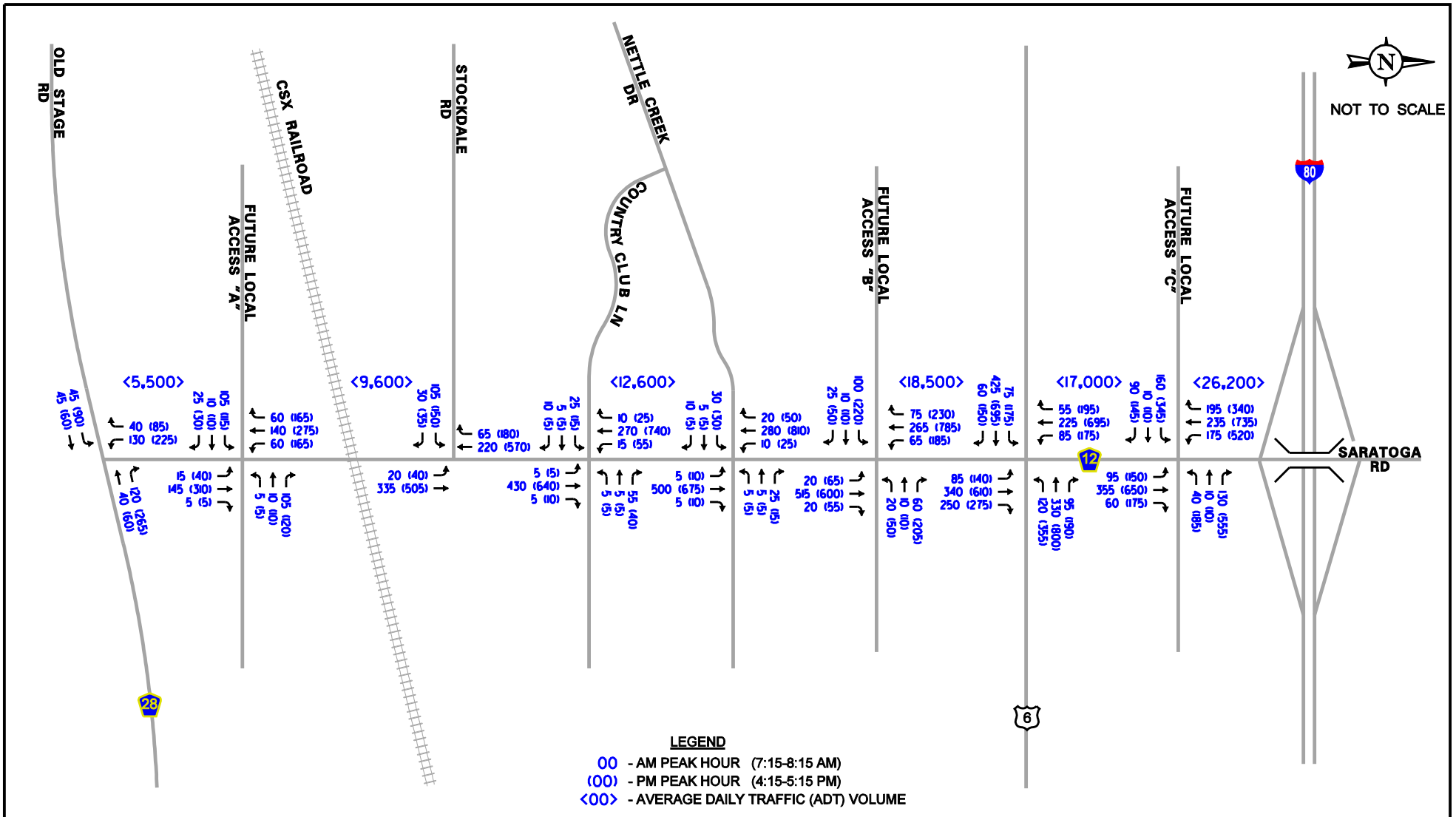
For future developments with Saratoga Road frontage, access was assumed from Saratoga Road as well as from the adjacent existing roadways and/or future connector roads that may be built to support these developments. Consequently, only a portion of the traffic generated by these developments will travel on Saratoga Road. Traffic assignments were made for trips both originating in and destined to the study area and reflect the fact that a portion of the retail development traffic will be generated internal to the study area from existing and future residential subdivisions.

Year 2040 Projected Traffic Volumes

The assignment of future development peak hour traffic was combined with the existing peak hour traffic volumes (Figure 3) to obtain the projected 2040 peak hour traffic volumes, which are shown in Figure 13 for the scenario that does not include a new I-80 interchange at Saratoga Road, and in Figure 14 for the scenario that includes the construction of a new I-80 interchange at Saratoga Road. Projected 2040 daily (24-hour) traffic volumes were also calculated utilizing the peak hour factor and are also shown in Figures 13 and 14. To plan for the ultimate design of Saratoga Road, it was assumed that all planned development would be completed by 2040. The KLOA projections for Saratoga Road range from 5,800-13,800 vpd for the scenario that does not include a new I-80 interchange at Saratoga Road, and 5,500-26,200 vpd for the scenario that includes the construction of a new I-80 interchange at Saratoga Road.



PROJECT:	TITLE:	
Saratoga Road Corridor Access Study Grundy County, Illinois	Projected 2040 Traffic Volumes (No Interchange Scenario)	KLOA Job No: 12-095 Figure: 13



PROJECT:	TITLE:	
Saratoga Road Corridor Access Study Grundy County, Illinois	Projected 2040 Traffic Volumes (With Interchange Scenario)	KLOA Job No: 12-095 Figure: 14

5.
Recommended Roadway Design

This chapter summarizes the recommended design of Saratoga Road within the corridor study area. The first step in this process is to understand the function that the roadway provides within the hierarchy of the Grundy County and City of Morris roadway system. The next step is to develop a roadway design that sustains that function and operates at the desired level of service given the volume of traffic it may ultimately carry. Recommendations and/or policies developed in this chapter address the roadway cross-section, geometric characteristics (right-of-way requirements, number of lanes), access control, traffic signal spacing, intersection geometrics, traffic controls, and intersection operations.

Roadway Classification and Function

Saratoga Road is functionally classified by IDOT as a minor arterial road and by the City of Morris as an arterial road to the north of U.S. Route 6 and a collector road to the south of U.S. Route 6. Arterial roadways and major collector roads serve a similar function to promote a high degree of mobility with limited direct land access. They serve as the primary routes through urbanized areas connecting residential, employment, institutional, retail and recreational activities at the community level via the minor collector and local roadway system.

As such, the recommended Saratoga Road cross-sections and geometric characteristics were developed to meet the following criteria:

1. To provide sufficient capacity to accommodate the projected 2040 traffic volumes safely and efficiently, particularly regarding turning movements at major intersections.
2. To provide adequate right-of-way to accommodate potential future capacity improvements (additional through lanes or turn lanes) beyond the 27-year planning period.
3. To control access to the facility while maintaining sufficient spacing between traffic signals and full-access intersections.
4. To minimize "side friction" by prohibiting parking or loading on Saratoga Road.

5. To achieve an urban design standard (i.e., curb and gutter, sidewalks).

6. To develop an aesthetically-pleasing design that allows for streetscaping/landscaping opportunities within the median and/or parkways.

7. To encourage multimodal travel on separated off-street sidewalks and/or multi-use trails, which is a goal of the Grundy County 2020 Comprehensive Plan and is consistent with the Morris Comprehensive Plan, which includes a bike path along the southern portion of Saratoga Road connecting to the I&M Canal State Trail.

Cross-Section and Geometric Characteristics

No Interchange Scenario

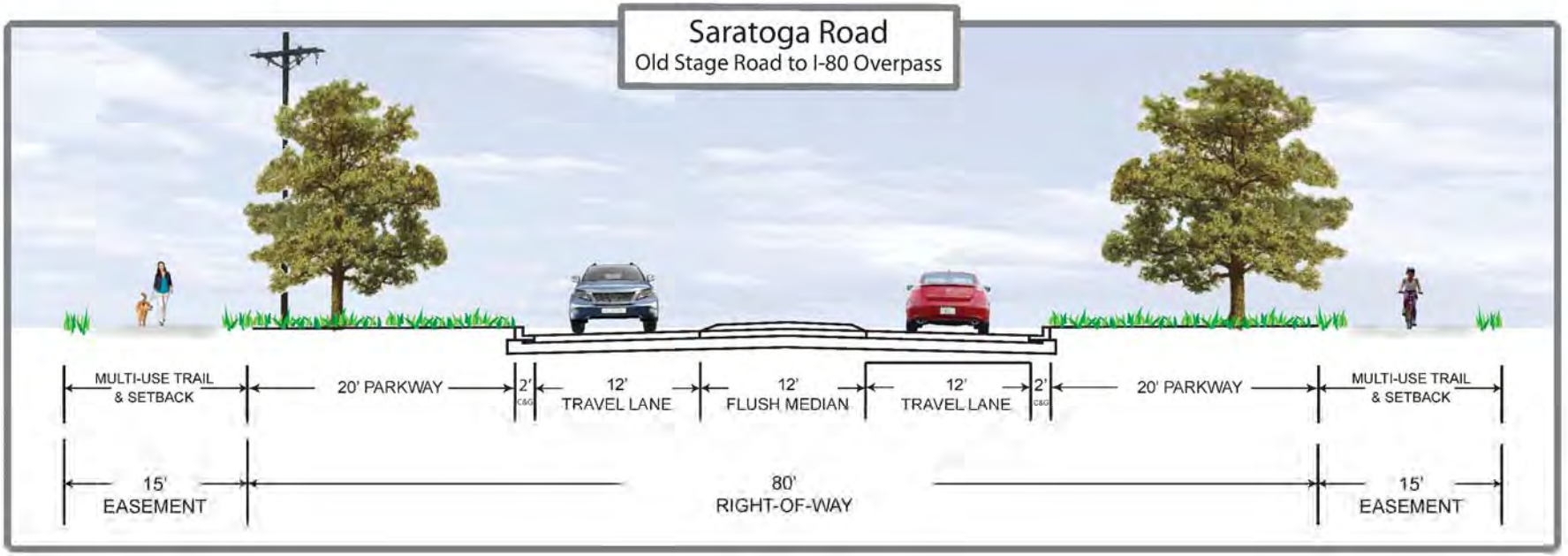
Old Stage Road to I-80 Overpass

This section of Saratoga Road, which represents the full 1.6-mile length of the study corridor, is presently adjoined by agricultural land on both sides of the roadway, with the exception of the Nettle Creek Country Club golf course and subdivision, located along the west side of Saratoga Road immediately north of Stockdale Road. It is anticipated that this corridor will eventually develop with retail land uses around the U.S. Route 6 and Old Stage Road intersections, institutional uses at the U.S. Route 6 intersection, and residential uses throughout the corridor.

The road capacity necessary to accommodate the projected 2040 traffic volumes along this section of Saratoga Road will require a three-lane cross-section, with one through lane in each direction plus a median accommodating a single left-turn lane at key intersections. Right-turn deceleration lanes are also recommended at the key intersections per GCHARO guidelines. The desired design for the three-lane roadway is an urban cross-section with a flush or traversable median and curb and gutter, built within an 80-foot right-of-way, which would be established through a roadway dedication easement of 40 feet of land on each side of the roadway as development occurs.

The recommended design for Saratoga Road between Old Stage Road and the I-80 overpass is shown in Figure 15 and is described below:

- One 12-foot wide through lane in the northbound and southbound directions.
- Curb and gutter on both sides of the roadway.
- A 12-foot wide flush (i.e., painted) or traversable (i.e., mountable) median. The median would accommodate a single 12-foot wide left-turn lane at key intersections.
- A 20-foot wide landscaped parkway on both sides of the road. The parkway would accommodate a 12-foot wide right-turn lane at key intersections.
- A 6-foot wide sidewalk or 10-foot wide multi-use path within a 15-foot wide easement on both sides of the roadway.



PROJECT:	TITLE:	
CORRIDOR ACCESS STUDY SARATOGA ROAD GRUNDY COUNTY, ILLINOIS	RECOMMENDED TYPICAL CROSS SECTION URBAN DESIGN ALTERNATIVE (NO INTERCHANGE SCENARIO)	KLOA Job No: 12-095 Figure: 15

With Interchange Scenario

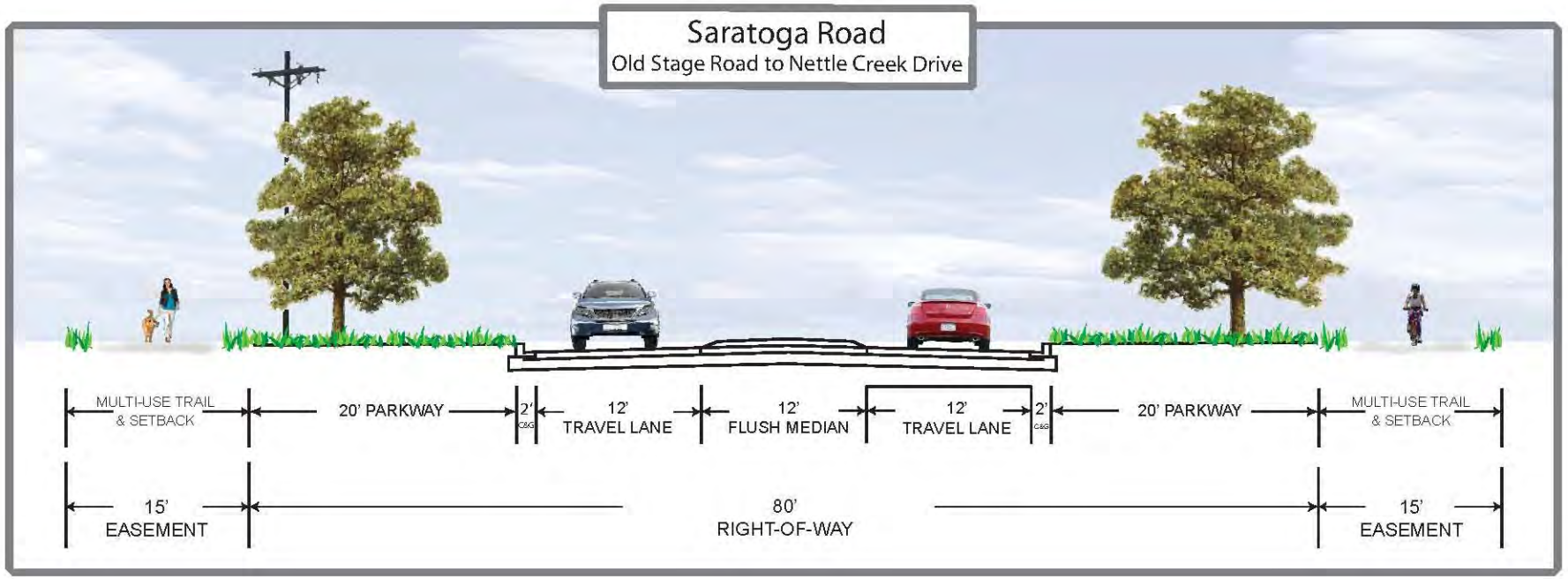
Old Stage Road to Nettle Creek Drive

This section of Saratoga Road is presently adjoined by agricultural land and the Nettle Creek Country Club golf course and subdivision. It is anticipated that this section of Saratoga Road will eventually develop with additional residential uses, and with retail uses focused around the Old Stage Road intersection.

The road capacity necessary to accommodate the projected 2040 traffic volumes along this section of Saratoga Road will require a three-lane cross-section, with one through lane in each direction plus a median accommodating a single left-turn lane at key intersections. Right-turn deceleration lanes are also recommended at the key intersections per GCHARO guidelines. The desired design for the three-lane roadway is identical to that shown in Figure 15 and consists of an urban cross-section with a flush or traversable median and curb and gutter, built within an 80-foot right-of-way, which would be established through a roadway dedication easement of 40 feet of land on each side of the roadway as development occurs.

The recommended design for Saratoga Road between Old Stage Road and Nettle Creek Drive is shown in Figure 16 and is described below:

- One 12-foot wide through lane in the northbound and southbound directions.
- Curb and gutter on both sides of the roadway.
- A 12-foot wide flush or traversable median. The median would accommodate a single 12-foot wide left-turn lane at key intersections.
- A 20-foot wide landscaped parkway on both sides of the road. The parkway would accommodate a 12-foot wide right-turn lane at key intersections.
- A 6-foot wide sidewalk or 10-foot wide multi-use path within a 15-foot wide easement on both sides of the roadway.



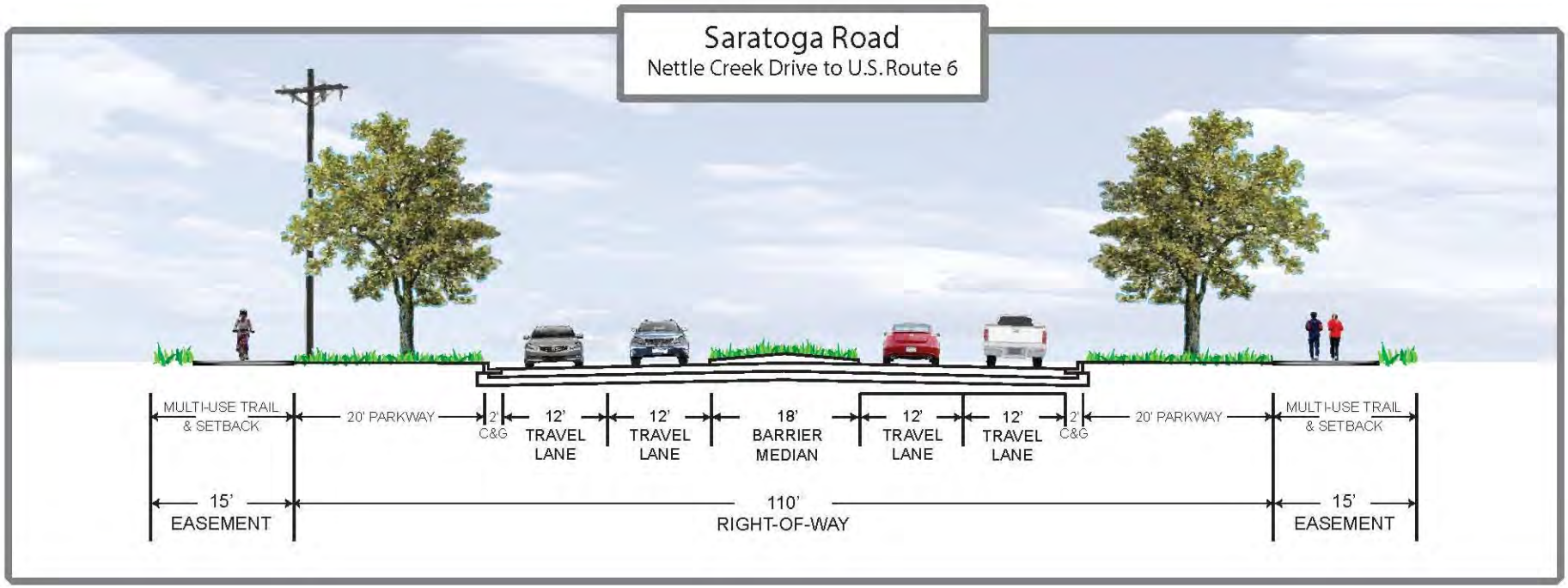
PROJECT:	TITLE:	
CORRIDOR ACCESS STUDY SARATOGA ROAD GRUNDY COUNTY, ILLINOIS	RECOMMENDED TYPICAL CROSS SECTION URBAN DESIGN ALTERNATIVE (WITH INTERCHANGE SCENARIO)	KLOA Job No: 12-095 Figure: 16

Nettle Creek Drive to U.S. Route 6

This section of Saratoga Road is presently adjoined by agricultural land and is anticipated to eventually develop with residential and retail uses. The road capacity necessary to accommodate the projected 2040 traffic volumes along this section of Saratoga Road will require a four-lane roadway with two through lanes in each direction plus a median accommodating a single left-turn lane at key intersections. Right-turn deceleration lanes are also recommended at the key intersections per GCHARO guidelines. The desired design for the four-lane roadway consists of an urban cross-section with a raised barrier median and curb and gutter, built within a 110-foot right-of-way, which would be established through a roadway dedication easement of 55 feet of land on each side of the roadway as development occurs. This four-lane cross-section would transition to a three-lane cross-section to the north of Nettle Creek Drive, and the 110-foot right-of-way required for the four-lane roadway could be narrowed to 80-feet at Nettle Creek Drive.

The recommended design for Saratoga Road between Nettle Creek Drive and U.S. Route 6 is shown in Figure 17 and is described below:

- Two 12-foot wide through lanes in both the northbound and southbound directions.
- Curb and gutter on both sides of the roadway.
- An 18-foot wide raised barrier median, which can be turf or landscaped with shade trees and/or low-lying shrubs/flowers. The median would accommodate one 12-foot wide left-turn lane at key intersections. The median would not be opened at right-in/right-out driveways.
- A 20-foot wide landscaped parkway on both sides of the road. The parkway would accommodate a 12-foot wide right-turn lane at key intersections.
- A 6-foot wide sidewalk or 10-foot wide multi-use path within a 15-foot wide easement on both sides of the roadway.



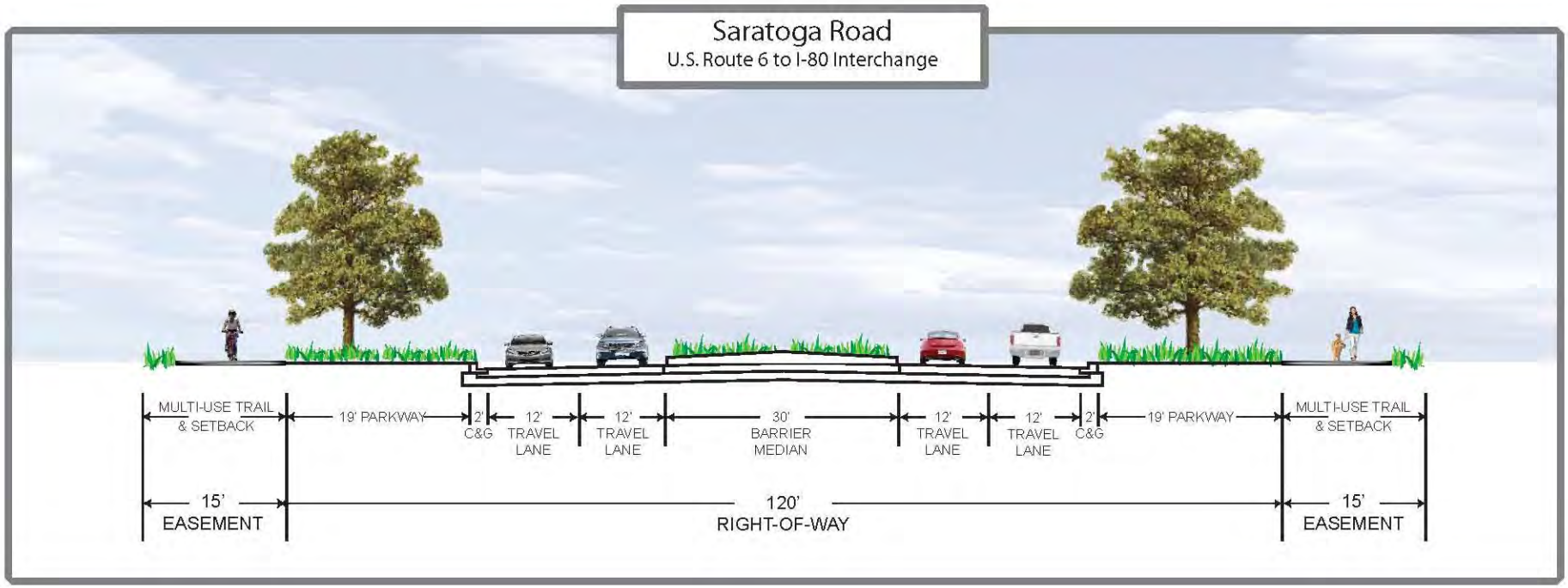
PROJECT:	TITLE:	
CORRIDOR ACCESS STUDY SARATOGA ROAD GRUNDY COUNTY, ILLINOIS	RECOMMENDED TYPICAL CROSS SECTION URBAN DESIGN ALTERNATIVE (WITH INTERCHANGE SCENARIO)	KLOA Job No: 12-095 Figure: 17

U.S. Route 6 to I-80 Interchange

This section of Saratoga Road is presently adjoined by agricultural land and is anticipated to eventually develop with retail, institutional and residential uses. The road capacity necessary to accommodate the projected 2040 traffic volumes along this section of Saratoga Road will require a four-lane roadway with two through lanes in each direction plus a median capable of accommodating single or dual left-turn lanes at key intersections. Right-turn deceleration lanes are also recommended at the key intersections per GCHARO guidelines. The desired design for the four-lane roadway consists of an urban cross-section with a raised barrier median and curb and gutter, built within a 120-foot right-of-way, which would be established through a roadway dedication easement of 60 feet of land on each side of the roadway as development occurs. The right-of-way would be expanded further in the vicinity of the interchange and would be controlled by IDOT.

The recommended design for Saratoga Road between U.S. Route 6 and the proposed I-80 interchange is shown in Figure 18 and is described below:

- Two 12-foot wide through lanes in both the northbound and southbound directions.
- Curb and gutter on both sides of the roadway.
- A 30-foot wide raised barrier median, which can be landscaped on the non-bridge sections and paved on the bridge section. The median would accommodate up to two 12-foot wide left-turn lanes at key intersections.
- A 19-foot wide landscaped parkway on both sides of the road. The parkway would accommodate a 12-foot wide right-turn lane at key intersections.
- A 6-foot wide sidewalk or 10-foot wide multi-use path within a 15-foot wide easement on both sides of the roadway.



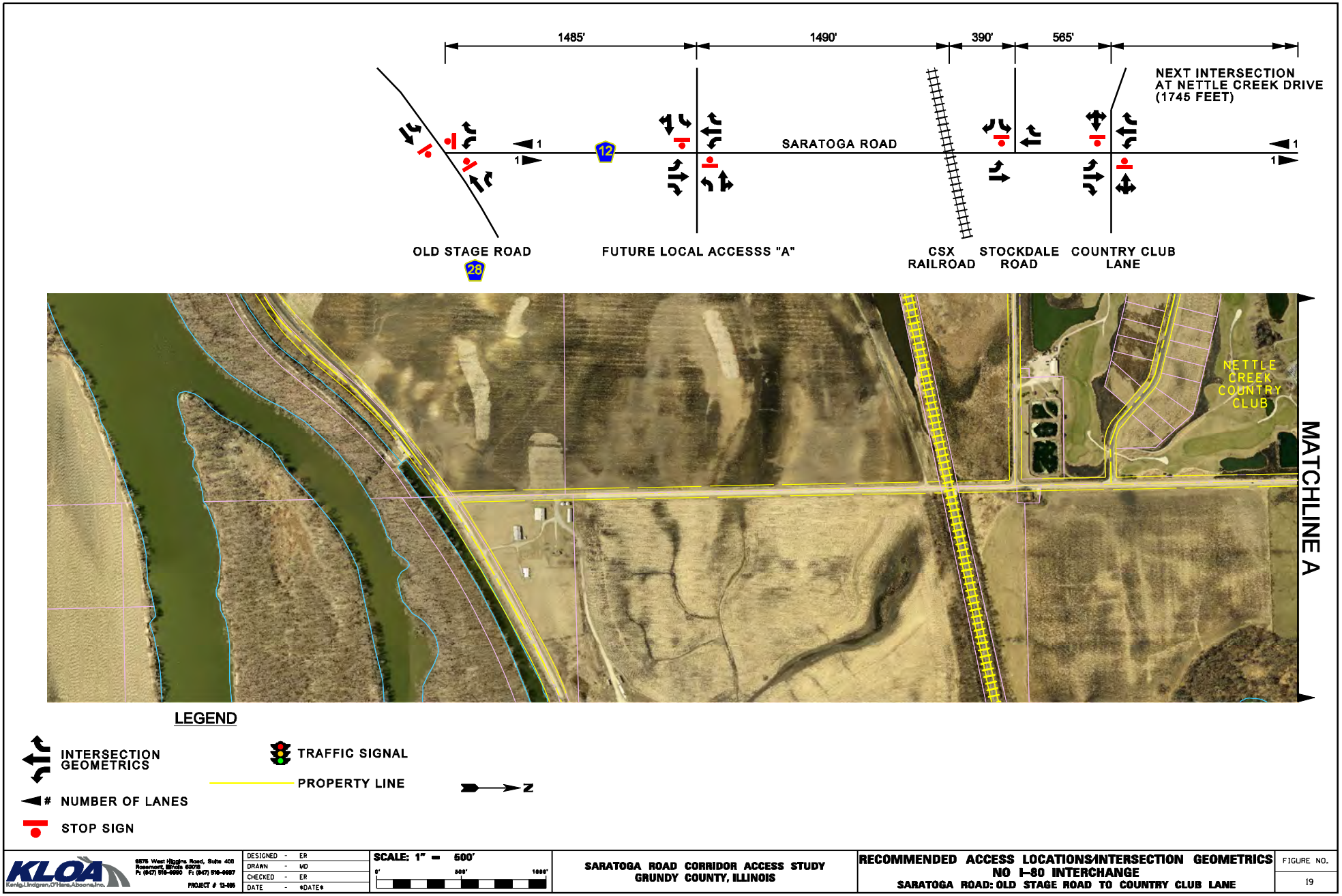
PROJECT:	TITLE:	
CORRIDOR ACCESS STUDY SARATOGA ROAD GRUNDY COUNTY, ILLINOIS	RECOMMENDED TYPICAL CROSS SECTION URBAN DESIGN ALTERNATIVE (WITH INTERCHANGE SCENARIO)	KLOA Job No: 12-095 Figure: 18

Access Control and Traffic Signals

As noted above and discussed in Chapter 2, access control standards should be established and adhered to in order to maximize roadway capacity, maintain traffic flow efficiency and enhance safety. Saratoga Road is classified in the Grundy County Highway Access Regulation Ordinance (GCHARO) as an Access 3 roadway, which is defined as a locally-significant facility where direct access to abutting land is controlled to maximize the through movement of traffic. The following access control standards are recommended for Saratoga Road:

- Access should be limited along Saratoga Road as defined by its Access 3 roadway status. Currently, the minimum spacing of full access unsignalized intersections on Access 3 roadways is ¼-mile (1,320 feet) and the minimum spacing of signal-controlled intersections is 1/3-mile (1,760 feet). For reasons discussed in Chapter 2, the minimum spacing standards for signal-controlled intersections along Saratoga Road should be adjusted to ¼-mile, consistent with the spacing standard for suburban arterials and collectors in the urbanizing counties of Will and Kane.
- Restricted right-in/right-out (RIRO) access driveways should be spaced at a minimum of 500 feet with a desirable spacing of 1/8-mile (660 feet).
- As parcels are developed, consideration should be given to closing, relocating or consolidating existing driveways and/or limiting access at existing driveways to adhere to the minimum spacing guidelines.
- Access to adjoining parcels should be consolidated whenever possible.
- The raised barrier median should be extended across all RIRO driveways to reinforce the access restrictions by physically preventing left-turn entering and exiting movements.
- New full access driveways should be aligned opposite an existing full access driveway if it is reasonably close to meeting the minimum spacing requirements.
- The creation of offset intersections should be avoided.
- To promote development access flexibility, encourage a more uniform distribution of development traffic, and reduce traffic volumes on Saratoga Road, development access should also be provided from the adjoining cross streets.
- To maintain efficient traffic signal operations and traffic flow progression, all future signals within the Saratoga Road corridor that are located within ½-mile of each other should be interconnected into a coordinated signal system.

Figures 19 and 20 illustrate the recommended future access locations along Saratoga Road for the scenario that does not include a new interchange on I-80. Figures 21 and 22 illustrate the recommended future access locations along Saratoga Road for the scenario that includes a new I-80 interchange.



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PROJECT # 12-086

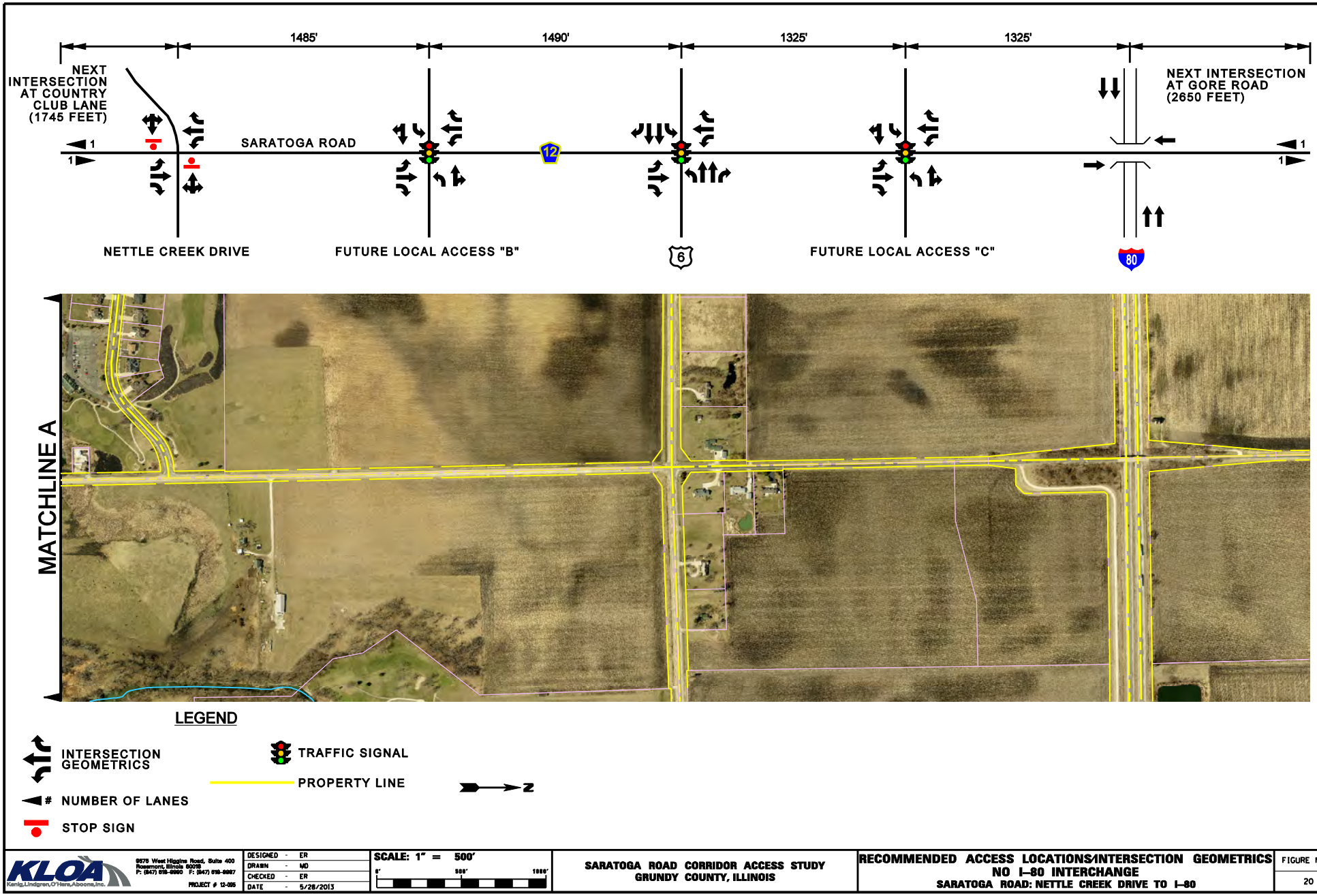
DESIGNED - ER
DRAWN - MD
CHECKED - ER
DATE - #DATE#

SCALE: 1" = 500'
0' 500' 1000'

SARATOGA ROAD CORRIDOR ACCESS STUDY
GRUNDY COUNTY, ILLINOIS

RECOMMENDED ACCESS LOCATIONS/INTERSECTION GEOMETRICS
NO I-80 INTERCHANGE
SARATOGA ROAD: OLD STAGE ROAD TO COUNTRY CLUB LANE

FIGURE NO.
19


1485'
1490'
1325'
1325'
NEXT INTERSECTION AT COUNTRY CLUB LANE (1745 FEET)
SARATOGA ROAD
NEXT INTERSECTION AT GORE ROAD (2650 FEET)
NETTLE CREEK DRIVE
FUTURE LOCAL ACCESS "B"
FUTURE LOCAL ACCESS "C"
MATCHLINE A
LEGEND
INTERSECTION GEOMETRICS
TRAFFIC SIGNAL
PROPERTY LINE
NUMBER OF LANES
STOP SIGN
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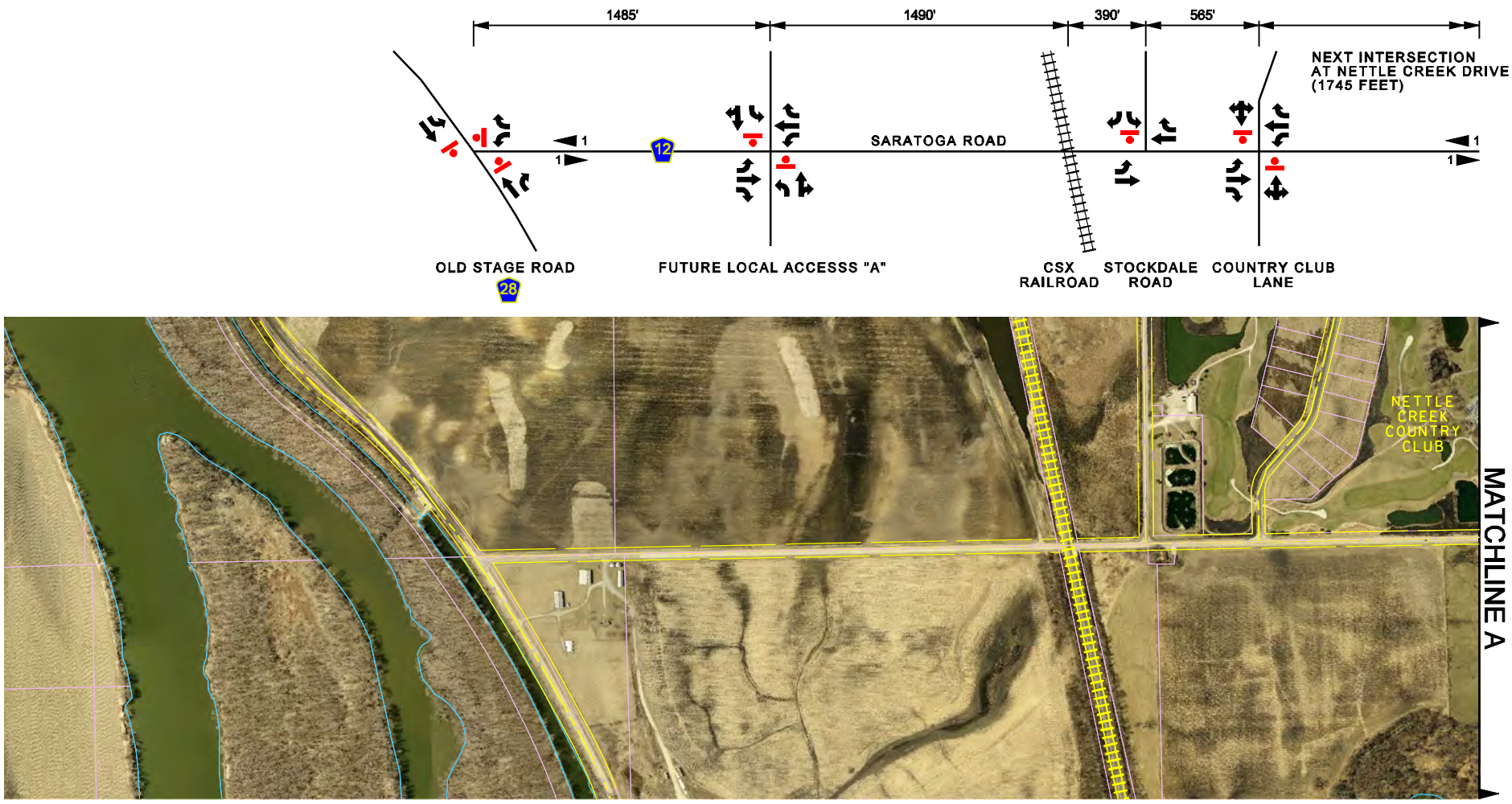
CHECKED - ER
DATE - 5/28/2013
SCALE: 1" = 500'
SARATOGA ROAD CORRIDOR ACCESS STUDY
GRUNDY COUNTY, ILLINOIS
RECOMMENDED ACCESS LOCATIONS/INTERSECTION GEOMETRICS
NO I-80 INTERCHANGE
SARATOGA ROAD: NETTLE CREEK DRIVE TO I-80
FIGURE NO.
20



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DATE - #DATE#

SCALE: 1" = 500'
0' 500' 1000'

SARATOGA ROAD CORRIDOR ACCESS STUDY
GRUNDY COUNTY, ILLINOIS

RECOMMENDED ACCESS LOCATIONS/INTERSECTION GEOMETRICS
WITH I-80 INTERCHANGE
SARATOGA ROAD: OLD STAGE ROAD TO COUNTRY CLUB LANE

FIGURE NO.
21


1485'
1490'
1325'
1325'
NEXT INTERSECTION AT COUNTRY CLUB LANE (1745 FEET)
SARATOGA ROAD
NEXT INTERSECTION AT GORE ROAD (2650 FEET)
NETTLE CREEK DRIVE
FUTURE LOCAL ACCESS "B"
FUTURE LOCAL ACCESS "C"
MATCHLINE A
LEGEND
INTERSECTION GEOMETRICS
TRAFFIC SIGNAL
PROPERTY LINE
NUMBER OF LANES
STOP SIGN
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PROJECT # 12-095
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DRAWN - MD
CHECKED - ER
DATE - 5/28/2013
SCALE: 1" = 500'
0'
500'
1000'
SARATOGA ROAD CORRIDOR ACCESS STUDY
GRUNDY COUNTY, ILLINOIS
RECOMMENDED ACCESS LOCATIONS/INTERSECTION GEOMETRICS
WITH I-80 INTERCHANGE
SARATOGA ROAD: NETTLE CREEK DRIVE TO I-80
FIGURE NO.
22

Intersection Geometrics and Traffic Control

Figures 19-22 also illustrate the recommended geometrics for each intersection within the Saratoga Road corridor for the ultimate design condition for the two evaluation scenarios (i.e., with and without a new I-80 interchange at Saratoga Road).

Where a three-lane cross-section is recommended, the roadway would consist of one through lane in each direction and a painted median. At key intersections, the median would be restriped to provide a dedicated left-turn lane, and a separate right-turn lane would also be provided.

Where a four-lane cross-section is recommended, the roadway would consist of two through lanes in each direction and a raised barrier median. At key intersections, the median would be reconstructed to accommodate single- or dual-left turn lanes, and a separate right-turn lane would also be provided.

It should be noted that the purpose of the corridor access study is to identify general geometric requirements for Saratoga Road to accommodate the projected 2040 traffic demands. The actual design of the intersections (i.e., length of turn lanes and tapers, intersection radii, signal equipment locations, etc.) will be determined when Phase I Intersection Design Studies (IDS) are prepared for the future signalized intersections or when Phase II engineering plans are developed. The following describes the recommended roadway improvements that will be required at each of the intersections in the corridor for the two evaluation scenarios.

Saratoga Road with Old Stage Road

No Interchange Scenario

This T-type intersection is the southern terminus of the Saratoga Road corridor and the projected 2040 traffic volumes do not warrant traffic signal control. However, the traffic volumes on Saratoga Road and Old Stage Road will be more balanced than current conditions and all-way stop control is recommended to maximize safety for turning movements to and from the roadways and for pedestrian/bicycle crossings to and from the I&M Canal State Trail. The three-lane cross-section of Saratoga Road will allow the Saratoga Road approach to be channelized to provide a dedicated left-turn lane and a separate right-turn lane, which can be accommodated with an urban design within the recommended 80-foot right-of-way. The east approach of Old Stage Road would be widened to provide a separate through lane and right-turn lane, and the west approach of Old Stage Road would be widened to provide a separate through lane and left-turn lane. Crosswalks should be installed on all three approaches to the intersection and a multi-use path should be extended along the south side of Old Stage Road to connect this intersection with the I&M Canal State Trail parking lot/trail access point approximately 400 feet to the west.

With Interchange Scenario

The projected traffic volumes through this intersection under this scenario are comparable to the "no interchange" scenario. As such, the lane configuration and traffic control under this scenario will be identical to the "no interchange" scenario.

Saratoga Road with Future Intersection between Old Stage Road and Stockdale Road

No Interchange Scenario

The intersection of Saratoga Road with a new local access road (referred to as Future Local Access "A") may develop at the approximate midpoint between Old Stage Road and the CSX Railroad to provide access to future development on both sides of the roadway. The projected 2040 traffic volumes through this intersection do not warrant traffic signal control and the access road approaches should be under stop sign control. The three-lane cross-section of Saratoga Road will allow the Saratoga Road approaches to be channelized to provide a dedicated left-turn lane and a single through lane. A separate right-turn deceleration lane should also be provided on the Saratoga Road approaches to maximize traffic flow efficiency. This cross-section can be adequately provided with an urban design within the recommended 80-foot right-of-way. The east and west approaches of the new local access road will likely require a dedicated left-turn lane and a combined through/right-turn lane, with a crosswalk across both approaches.

With Interchange Scenario

The projected traffic volumes through this intersection under this scenario are comparable to the "no interchange" scenario. As such, the lane configuration and traffic control under this scenario will be identical to the "no interchange" scenario.

Saratoga Road with Stockdale Road

No Interchange Scenario

The projected 2040 traffic volumes through this T-type intersection do not warrant traffic signal control and the Stockdale Road approach should remain under stop sign control. The north approach of Saratoga Road should provide one through lane and a separate right-turn lane. The south approach of Saratoga Road should provide one through lane and a separate left-turn lane. This cross-section can be adequately provided with an urban design within the recommended 80-foot right-of-way. Due to the proximity to the CSX Railroad approximately 390 feet to the south, creating a fourth leg to this intersection to access property on the east side of Saratoga Road is not recommended at this location. The Stockdale Road approach should be widened to provide a separate left-turn lane and right-turn lane to minimize delays to turning traffic. A crosswalk should be provided on Stockdale Road as well.

With Interchange Scenario

The projected traffic volumes through this intersection under this scenario are comparable to the "no interchange" scenario. As such, the lane configuration and traffic control under this scenario will be identical to the "no interchange" scenario.

Saratoga Road with Country Club Lane

No Interchange Scenario

This T-type intersection will become a four-leg intersection in the future if the access drive to the developable land on the east side of Saratoga Road is aligned with Country Club Lane. The projected 2040 traffic volumes through this intersection do not warrant traffic signal control and

the Country Club Lane approaches should be under stop sign control. The three-lane cross-section of Saratoga Road will allow the Saratoga Road approaches to be channelized to provide a dedicated left-turn lane and a single through lane. A separate right-turn deceleration lane should also be provided on the Saratoga Road approaches to maximize traffic flow efficiency. This cross-section can be adequately provided with an urban design within the recommended 80-foot right-of-way. A single combined through/left/right lane should be adequate on the existing (west) and future (east) approaches of Country Club Lane. A crosswalk should be extended across both Country Club Lane approaches.

With Interchange Scenario

The projected traffic volumes through this intersection under this scenario are comparable to the "no interchange" scenario. As such, the lane configuration and traffic control under this scenario will be identical to the "no interchange" scenario.

Saratoga Road with Nettle Creek Drive

No Interchange Scenario

This T-type intersection will become a four-leg intersection in the future if the access drive to the developable land on the east side of Saratoga Road is aligned with Nettle Creek Drive. The projected 2040 traffic volumes through this intersection do not warrant traffic signal control and the Nettle Creek Drive approaches should be under stop sign control. The three-lane cross-section of Saratoga Road will allow the Saratoga Road approaches to be channelized to provide a dedicated left-turn lane and a single through lane. A separate right-turn deceleration lane should also be provided on the Saratoga Road approaches to maximize traffic flow efficiency. This cross-section can be adequately provided with an urban design within the recommended 80-foot right-of-way. A single combined through/left/right lane should be adequate on the existing (west) and future (east) approaches of Nettle Creek Drive. A crosswalk should be extended across both Nettle Creek Drive approaches.

With Interchange Scenario

The projected traffic volumes through this intersection under this scenario are comparable to the "no interchange" scenario. As such, the lane configuration and traffic control under this scenario will be identical to the "no interchange" scenario.

Saratoga Road with Future Intersection between Nettle Creek Drive and U.S. Route 6

No Interchange Scenario

The intersection of Saratoga Road with a new local access road (referred to as Future Local Access "B") may develop at the approximate midpoint between Nettle Creek Drive and U.S. Route 6 to provide access to future development on both sides of the roadway. This intersection will require signalization to accommodate the projected 2040 traffic volumes. The signal should be installed when traffic volumes reach the level that signal warrants are satisfied. The three-lane cross-section of Saratoga Road will allow the Saratoga Road approaches to be channelized to provide a dedicated left-turn lane and a single through lane. A separate right-turn deceleration lane should also be provided on the Saratoga Road approaches to maximize traffic flow

efficiency. This cross-section can be adequately provided with an urban design within the recommended 80-foot right-of-way. The east and west approaches of the new local access road will likely require a dedicated left-turn lane and a combined through/right-turn lane. Crosswalks and pedestrian signals should be provided on all intersection approaches.

With Interchange Scenario

The projected 2040 traffic volumes to and from the development areas on both sides of the roadway will be higher under this scenario than under the "no interchange" scenario as more site traffic may be oriented to and from the I-80 interchange and may access the property from Saratoga Road rather than U.S. Route 6. While the intersection will still require traffic signal control, similar to the "no interchange" scenario, the design of Saratoga Road will require a higher capacity by providing a divided, four-lane cross-section with two through lanes in each direction, an 18-foot wide barrier median accommodating a single left-turn lane, and a separate right-turn lane on both the north and south approaches of Saratoga. This cross-section can be adequately provided with an urban design within the recommended 110-foot right-of-way. The four-lane divided cross-section of Saratoga Road (110-foot right-of-way) would transition to a three-lane undivided cross-section (80-foot right-of-way) between this intersection and Nettle Creek Drive to the south. The design of the east and west approaches would be similar to the "no interchange" scenario.

Saratoga Road with U.S. Route 6

No Interchange Scenario

The projected 2040 traffic volumes through this intersection will require traffic signal control. The signal should be installed when traffic volumes reach the level that signal warrants are satisfied. The three-lane cross-section of Saratoga Road will allow the Saratoga Road approaches to be channelized to provide a dedicated left-turn lane and a single through lane. A separate right-turn deceleration lane should also be provided on the Saratoga Road approaches to maximize traffic flow efficiency. This cross-section can be adequately provided with an urban design within the recommended 80-foot right-of-way. The east and west approaches of U.S. Route 6 are projected to carry higher volumes than Saratoga Road and will require a four-lane cross-section through the intersection with two through lanes in each direction, a dedicated left-turn lane and a separate right-turn lane. Crosswalks and pedestrian signals should be provided on all intersection approaches.

With Interchange Scenario

The projected 2040 traffic volumes under this scenario will be considerably higher as more traffic will utilize Saratoga Road to reach the new I-80 interchange and higher densities of retail space are projected between U.S. Route 6 and the interchange. While the intersection will still require traffic signal control, similar to the "no interchange" scenario, the design of Saratoga Road will require a higher capacity by providing a divided, four-lane cross-section with two through lanes in each direction, an 18-foot wide barrier median accommodating a single left-turn lane, and a separate right-turn lane on both the north and south approaches of Saratoga. This cross-section can be adequately provided with an urban design within the recommended 110-foot

right-of-way. The design of the east and west approaches would be similar to the "no interchange" scenario.

Saratoga Road with Future Intersection between U.S. Route 6 and I-80

No Interchange Scenario

The intersection of Saratoga Road with a new local access road (referred to as Future Local Access "C") may develop at the approximate midpoint between U.S. Route 6 and I-80 to provide access to future development on both sides of the roadway. This intersection will require signalization to accommodate the projected 2040 traffic volumes and the signal should be installed when traffic volumes reach the level that signal warrants are satisfied. The three-lane cross-section of Saratoga Road will allow the Saratoga Road approaches to be channelized to provide a dedicated left-turn lane and a single through lane. A separate right-turn deceleration lane should also be provided on the Saratoga Road approaches to maximize traffic flow efficiency. This cross-section can be adequately provided with an urban design within the recommended 80-foot right-of-way. The east and west approaches of the new local access road will likely require a dedicated left-turn lane and a combined through/right-turn lane. Crosswalks and pedestrian signals should be provided on all intersection approaches.

With Interchange Scenario

The projected 2040 traffic volumes to and from the development areas on both sides of the roadway will be considerably higher under this scenario than under the "no interchange" scenario as more traffic will utilize Saratoga Road to reach the new I-80 interchange and higher densities of retail space are projected between U.S. Route 6 and the interchange. While the intersection will still require traffic signal control, similar to the "no interchange" scenario, the design of Saratoga Road will require a higher capacity by providing a divided, four-lane cross-section with two through lanes in each direction, a 30-foot wide barrier median capable of accommodating single- or dual-left turn lanes, and a separate right-turn lane on both the north and south approaches of Saratoga. This cross-section can be adequately provided with an urban design within the recommended 120-foot right-of-way. The 30-foot median and 120-foot right-of-way could transition to an 18-foot median and 110-foot right-of-way between this intersection and U.S. Route 6. The higher retail densities will require more capacity on the east and west approaches as well. The east approach is projected to need dual left-turn lanes, a single through lane, and dual right-turn lanes. The west approach is projected to need dual left-turn lanes, a single through lane, and a single right-turn lane.

Projected Intersection Operations

Intersection capacity analyses were performed for the projected 2040 weekday peak hour traffic conditions for the ultimate design condition for the two evaluation scenarios (i.e., with and without a new I-80 interchange at Saratoga Road). The recommended intersection geometrics for the major traffic signal controlled intersections were developed with the desire to maintain a Level of Service C or better for the overall intersection and all traffic movements on Saratoga Road, per the GCHARO.

Table 6 summarizes the results of the capacity analyses for the projected 2040 weekday peak hour traffic conditions with no new I-80 interchange, including the average level of service and delay for vehicles under traffic signal or stop sign control. Table 7 summarizes the results of the capacity analyses for the projected 2040 weekday peak hour traffic conditions with the new I-80 interchange at Saratoga Road. The capacity analysis worksheets are contained in the Appendix.

Table 6
CAPACITY ANALYSIS RESULTS – PROJECTED 2040 TRAFFIC CONDITIONS
No I-80 Interchange

	Weekday AM Peak Hour		Weekday PM Peak Hour	
Intersection	LOS	Delay	LOS	Delay
Saratoga Road / Future Local Access "C"[1]	B	16.2	B	13.9
Saratoga Road / U.S. Route 6[1]	C	26.2	C	31.7
Saratoga Road / Future Local Access "B"[1]	B	12.7	B	15.7
Saratoga Road / Nettle Creek Drive[2]	C	16.9	E	45.6
Saratoga Road / Country Club Lane[2]	C	15.7	E	37.0
Saratoga Road / Stockdale Road[2]	B	14.6	C	17.6
Saratoga Road / Future Local Access "A"[2]	B	13.1	C	19.9
Saratoga Road / Old Stage Road[3]	A	8.0	A	9.9

Note: LOS = level of service Delay = seconds/vehicle
[1] Traffic signal controlled intersection
[2] Unsignalized two-way stop controlled (TWSC) intersection. LOS and delay represents average of stop controlled approaches.
[3] Unsignalized all-way stop controlled (AWSC) intersection.

Table 7
CAPACITY ANALYSIS RESULTS – PROJECTED 2040 TRAFFIC CONDITIONS
With I-80 Interchange

	Weekday AM Peak Hour		Weekday PM Peak Hour	
Intersection	LOS	Delay	LOS	Delay
Saratoga Road / Future Local Access "C"[1]	C	25.4	C	29.4
Saratoga Road / U.S. Route 6[1]	C	25.7	C	34.6
Saratoga Road / Future Local Access "B"[1]	B	13.0	B	14.8
Saratoga Road / Nettle Creek Drive[2]	C	16.8	F	61.8
Saratoga Road / Country Club Lane[2]	C	15.6	E	43.0
Saratoga Road / Stockdale Road[2]	B	11.6	C	18.2
Saratoga Road / Future Local Access "A"[2]	B	11.6	C	23.0
Saratoga Road / Old Stage Road[3]	A	7.7	B	10.1

Note: LOS = level of service Delay = seconds/vehicle
[1] Traffic signal controlled intersection
[2] Unsignalized two-way stop controlled (TWSC) intersection. LOS and delay represents average of stop controlled approaches.
[3] Unsignalized all-way stop controlled (AWSC) intersection.

As the capacity analysis indicates, all intersection geometric design recommendations will be able to accommodate the projected 2040 traffic levels at Level of Service C or better, under either interchange scenario, with the exception of the Saratoga Road intersections with Nettle Creek Drive and Country Club Lane in the PM peak hour. At these intersections, the Nettle Creek Drive and Country Club Lane approaches to Saratoga Road will be under stop sign control and traffic on these approaches may experience longer delays and lower levels of service (i.e., E or F) than desirable. This is not an uncommon peak hour situation in an urbanized area for a stop-controlled local roadway along a more heavily travelled arterial or collector roadway like Saratoga Road may become. During the off-peak hours and on weekends, these motorists will experience considerably less delay accessing Saratoga Road.

Vehicle queuing and the overall progression of traffic along Saratoga Road can be managed efficiently through a system of signal interconnects that coordinate the signals along the corridor to create a platooning effect. It should be noted that the recommendations produced in this report are contingent upon the development of a parallel north-south collector road system located to the east and west of Saratoga Road, along with connectivity to the existing east-west local road system (i.e., Kingtree Drive, Edgewater Drive, Pioneer Road extension, Ashton Road extension) that would effectively divert some of the traffic burden away from Saratoga Road.

6.
Project Funding Options

The Illinois Road Improvement Impact Fee Law creates the authority for counties with a population over 400,000 and all home-rule municipalities to adopt and implement Road Improvement Impact Fee ordinances and resolutions designed to supplement other funding sources (i.e., Motor Fuel Taxes, Surface Transportation Program, Congestion Mitigation & Air Quality Program, Transportation Alternatives Program) so that the burden of paying for road improvements needed to accommodate new development can be allocated in a fair and equitable manner. These fees are levied or imposed by qualifying counties and municipalities as a condition to the issuance of a building permit or a certificate of occupancy and are pooled into an interest-bearing fund allowing for the corridor roadway improvements to be completed in a coordinated manner for efficiencies of scale and to minimize disruptions to the travelling public.

Presently DuPage County, Kane County and Lake County collect road impact fees to help fund roadway projects. Grundy County currently has a population of approximately 50,000 and does not presently meet the state statutes to impose road impact fees. However, as development growth occurs in the County and the residential population increases, the County will eventually be in a position to enact a Road Impact Fee Ordinance, which might be utilized for future improvements to Saratoga Road.

In the interim, Grundy County should work with the local municipalities that annex land along the Saratoga Road corridor, namely the City of Morris, to insure that road impact fees or development impact fees are imposed on private development in the corridor (via annexation agreements, development agreements, etc.) to insure that funds are set aside to improve Saratoga Road in a coordinated manner when traffic conditions warrant such improvements. These fees can be used for engineering and construction of "add-capacity" projects, including lane additions, turning lanes at intersections, acquisition of land or real property for the expansion of the roadway, and relocation of existing utilities or drainage in advance of new road capacity. They can also used for the design of new roadways, traffic signal interconnection, railroad grade crossing improvements, and bridge widening to accommodate new roadway capacity. Impact fee revenues must be encumbered for use within 5 years of payment.

7.
Conclusions

This Corridor Access Study serves many functions in the evaluation of Saratoga Road, the primary north-south travel corridor through the western planning area of the City of Morris. Firstly, it serves to identify the ultimate right-of-way, roadway cross-section and intersection geometrics that will be required to accommodate projected traffic volumes over the next 27 years (Year 2040) when approximately 764 acres of land will potentially be developed with approximately 2,451 dwelling units, 958,000 square feet of retail space, and 240,000 square feet of institutional space, assuming no new interchange is built on I-80 at Saratoga Road, or approximately 2,091 dwelling units, 1.655 million square feet of retail space, and 240,000 square feet of institutional space, assuming a new interchange is built. Secondly, this study establishes guidelines pertaining to access control and traffic signal spacing with consideration given to the location of future land uses that may develop in the corridor. Lastly, this study identifies potential funding mechanisms that Grundy County can utilize to enact an equitable public-private cost-sharing arrangement with private developers so that the Saratoga Road improvements can be constructed in a coordinated manner for efficiencies of scale and to minimize disruptions to the travelling public.

The Corridor Access Study is intended to serve as a guide for future decisions affecting Saratoga Road. Key findings from the study follow below:

- All study area intersections along Saratoga Road presently operate at very good levels of service (A or B) under existing traffic controls.

- The traffic volumes on Saratoga Road presently range from 450-1,350 vehicles per day (vpd) and are projected to increase to 5,800-13,800 vpd upon buildout of the developable land in the corridor if no new interchange is built on I-80 at Saratoga Road, and projected to increase to 5,500-26,200 vpd upon buildout of the developable land with a new I-80 interchange.

- To accommodate the projected 2040 traffic volumes at satisfactory levels of service, road capacity improvements will be required along Saratoga Road, which will require the dedication of sufficient public right-of-way in place of the existing prescriptive easement, except adjacent to the Nettle Creek Country Club subdivision where there is already a 40-foot public right-of-way from the center of road.

- Under the "no new interchange" scenario, the ultimate design of Saratoga Road for the full length of the corridor, from Old Stage Road north to the I-80 overpass, is an urban three-lane cross section with one through lane in each direction, a flush or mountable median accommodating a single left-turn lane at intersections, curb and gutter on both sides of the roadway, a 20-foot parkway that would accommodate right-turn lanes at key intersections, and a 6-foot sidewalk or 10-foot multi-use path within a 15-foot easement on both sides of the road. This design would be built within an 80-foot right-of-way, which would be established through a roadway dedication easement of 40 feet of land on each side of the roadway as development occurs.

- Under the "with I-80 interchange" scenario, the ultimate design of Saratoga Road for the segment of Saratoga Road between Old State and Nettle Creek Drive is the same three-lane cross section within an 80-foot right-of-way as described above under the "no new interchange" scenario.

- Under the "with I-80 interchange" scenario, the ultimate design of Saratoga Road for the segment of Saratoga Road between Nettle Creek Drive and U.S. Route 6 is an urban four-lane cross section with two through lanes in each direction, a raised 18-foot barrier median accommodating a single left-turn lane at intersections, curb and gutter on both sides of the roadway, a 20-foot parkway that would accommodate right-turn lanes at key intersections, and a 6-foot sidewalk or 10-foot multi-use path within a 15-foot easement on both sides of the road. This design would be built within a 110-foot right-of-way, which would be established through a roadway dedication easement of 55 feet of land on each side of the roadway as development occurs.

- Under the "with I-80 interchange" scenario, the ultimate design of Saratoga Road for the segment of Saratoga Road between U.S. Route 6 and the potential new interchange is an urban four-lane cross section with two through lanes in each direction, a raised 30-foot barrier median accommodating a single or dual left-turn lanes at intersections, curb and gutter on both sides of the roadway, a 19-foot parkway that would accommodate right-turn lanes at key intersections, and a 6-foot sidewalk or 10-foot multi-use path within a 15-foot easement on both sides of the road. This design would be built within a 120-foot right-of-way, which would be established through a roadway dedication easement of 60 feet of land on each side of the roadway as development occurs. The right-of-way would be expanded further in the vicinity of the interchange and would be controlled by IDOT.

- The public right-of-way needed along Saratoga Road should be dedicated as a contingency of development or acquired through other means to preserve the needed land area for the ultimate expansion of the roadway.

- Access control standards should be established for Saratoga Road to maximize road capacity and maintain traffic flow efficiency and safety. The following standards are recommended:

  - The minimum spacing between full access intersections, traffic-signal controlled or unsignalized, should be ¼-mile (1,320 feet) wherever possible.
  - Restricted right-in/right-out (RIRO) access driveways should be spaced at a minimum of 500 feet with a desirable spacing of 1/8-mile (660 feet).
  - As parcels are developed, existing driveways should be closed, relocated, consolidated or converted to RIRO to adhere to the minimum spacing standards.
  - Access to adjoining parcels should be consolidated whenever possible.
  - The raised barrier median should be extended across all RIRO driveways.
  - New full access driveways should be aligned opposite an existing full access driveway if it is reasonably close to meeting the minimum spacing requirements.
  - The creation of offset intersections should be avoided.
  - Development access should also be provided from the adjoining cross streets.
  - A parallel collector or local road system should be developed to distribute local traffic, serve new land uses, and divert some of the traffic burden away from Saratoga Road.
  - Future traffic signals located within ½-mile of each other should be interconnected into a coordinated signal system.
  - Left- and right-turn lanes should be provided at all full access intersections.
  - Parking should be prohibited at all times on the roadway.
  - Off-street pedestrian paths and/or multi-use trails should be provided within the corridor along both sides of the roadway.

- The actual design of the intersections (i.e., length of turn lanes and tapers, intersection radii, signal equipment locations, etc.) will be determined when Phase I Intersection Design Studies (IDS) are prepared for the future signalized intersections or when Phase II engineering plans are developed for the roadway.

- Funding for future capacity improvements to Saratoga Road should be borne, in part, by the developers of land that contribute significant volumes of traffic onto the roadway.

- Initially, Grundy County should work with the local municipalities that annex land along the Saratoga Road corridor, namely the City of Morris, to insure that road impact fees or development impact fees are imposed on private development in the corridor (via annexation agreements, development agreements, etc.) to insure that funds are set aside to improve Saratoga Road in an equitable and coordinated manner when traffic conditions warrant such improvements. These fees would be used for engineering and construction of "add-capacity" projects, including lane additions, turning lanes, land acquisition, utility relocation, signal installations/interconnect, railroad grade crossing improvements, and bridge widening.

- In addition, land developers along Saratoga Road should be required to dedicate the necessary right-of-way for the County to construct the ultimately roadway improvements described in this report.

- Eventually, as development growth occurs in Grundy County and the residential population reaches 400,000, the County should consider enacting a Road Improvement Impact Fee ordinance, which might be applied to future improvements of Saratoga Road.

Appendix

Traffic Counts

Morris, IL Weather: Sunny and Warm 09/11/12
US Route 6 and Saratoga Rd 11:08:20
Thursday September 6, 2012 Passenger Vehicles Only

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: by Movement

Intersection # 5 6/saratoga/cars

Begin	N-Approach			E-Approach			S-Approach			W-Approach			Int
Time	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
700	4	3	5	4	110	14	38	6	1	1	139	2	327
715	4	4	4	4	102	19	37	5	2	1	150	3	335
730	3	4	4	4	88	19	31	2	4	2	144	2	307
745	4	4	4	4	86	26	27	3	4	3	135	3	303
800	4	4	5	3	80	35	19	3	3	3	117	4	280
815	4	2	4	1	63	27	13	2	2	3	84	2	207*
830	2	2	3	1	45	22	10	2	0	2	58	2	149*
845	1	1	1	1	18	14	6	1	0	0	30	1	74*
1600	5	15	11	13	190	36	42	7	3	2	140	4	468
1615	10	17	9	13	196	41	39	8	5	2	140	5	485
1630	9	15	7	12	193	46	38	5	4	3	133	6	471
1645	8	8	6	10	186	47	36	2	2	3	129	8	445
1700	10	8	4	9	170	48	29	3	3	2	122	8	416
1715	4	2	2	6	118	34	22	1	1	2	86	4	282*
1730	3	1	2	2	73	19	17	1	1	1	60	3	183*
1745	3	1	1	2	30	11	4	1	1	0	31	1	86*

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: Appr/Exit Totals

Intersection # 5 6/saratoga/cars

Begin	Approach Totals				Exit Totals				Int
Time	N	E	S	W	N	E	S	W	Total
700	12	128	45	142	12	182	18	115	327
715	12	125	44	154	12	191	24	108	335
730	11	111	37	148	8	179	25	95	307
745	12	116	34	141	10	166	33	94	303
800	13	118	25	124	10	141	42	87	280
815	10	91	17	89	5	101	32	69	207*
830	7	68	12	62	5	71	26	47	149*
845	3	33	7	31	3	37	15	19	74*
1600	31	239	52	146	24	193	53	198	468
1615	36	250	52	147	26	188	60	211	485
1630	31	251	47	142	23	178	64	206	471
1645	22	243	40	140	20	171	58	196	445
1700	22	227	35	132	20	155	58	183	416
1715	8	158	24	92	11	110	38	123	282*
1730	6	94	19	64	6	79	21	77	183*
1745	5	43	6	32	4	36	12	34	86*

Morris, IL Weather: Sunny and Warm 09/11/12
US Route 6 and Saratoga Rd 11:11:00
Thursday September 6, 2012 Trucks Only

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: by Movement

Intersection # 6 6/saratoga/trucks

Begin	N-Approach			E-Approach			S-Approach			W-Approach			Int
Time	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
700	0	0	0	0	4	3	1	0	0	1	2	0	11
715	0	0	0	0	5	4	1	0	0	0	4	1	15
730	0	0	0	0	5	4	3	0	0	1	6	1	20
745	0	0	1	0	5	3	4	1	0	1	5	1	21
800	0	0	1	1	7	2	3	1	0	1	7	1	24
815	0	0	1	1	5	1	3	1	0	1	5	0	18*
830	0	0	1	1	4	0	1	1	0	0	2	0	10*
845	0	0	0	1	2	0	0	0	0	0	2	0	5*
1600	0	0	0	0	8	1	0	1	1	0	1	0	12
1615	0	2	0	0	5	2	0	1	2	0	1	0	13
1630	0	2	0	0	4	2	0	0	3	0	2	0	13
1645	1	2	0	0	3	2	0	0	2	0	2	0	12
1700	1	2	0	0	2	1	0	1	2	0	1	0	10
1715	1	0	0	0	2	0	0	1	1	0	1	0	6*
1730	1	0	0	0	1	0	0	1	0	0	0	0	3*
1745	0	0	0	0	1	0	0	1	0	0	0	0	2*

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: Appr/Exit Totals

Intersection # 6 6/saratoga/trucks

Begin	Approach Totals				Exit Totals				Int
Time	N	E	S	W	N	E	S	W	Total
700	0	7	1	3	0	3	4	4	11
715	0	9	1	5	1	5	4	5	15
730	0	9	3	8	1	9	5	5	20
745	1	8	5	7	2	10	4	5	21
800	1	10	4	9	3	11	3	7	24
815	1	7	4	6	2	9	2	5	18*
830	1	5	2	2	2	4	0	4	10*
845	0	3	0	2	1	2	0	2	5*
1600	0	9	2	1	1	1	1	9	12
1615	2	7	3	1	1	1	4	7	13
1630	2	6	3	2	0	2	4	7	13
1645	3	5	2	2	0	2	4	6	12
1700	3	3	3	1	1	1	3	5	10
1715	1	2	2	1	1	1	0	4	6*
1730	1	1	1	0	1	0	0	2	3*
1745	0	1	1	0	1	0	0	1	2*

Morris, IL Weather: Sunny and Warm 09/11/12
US Route 6 and Saratoga Rd 11:13:41
Thursday September 6, 2012 Buses Only

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: by Movement

Intersection # 7 6/saratoga/buses

Begin	N-Approach			E-Approach			S-Approach			W-Approach			Int
Time	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
700	0	0	0	1	0	1	1	1	1	0	1	0	6
715	0	0	0	1	0	1	2	1	1	0	1	0	7
730	0	0	0	1	0	1	1	1	1	0	2	0	7
745	0	1	0	1	0	0	1	1	1	0	2	0	7
800	0	1	0	1	0	0	1	0	0	0	1	0	4
815	0	1	0	1	0	0	0	0	0	0	1	0	3*
830	0	1	0	1	0	0	0	0	0	0	0	0	2*
845	0	0	0	1	0	0	0	0	0	0	0	0	1*
1600	0	0	0	0	1	0	0	0	0	0	1	0	2
1615	0	0	0	0	1	0	0	0	0	0	0	0	1
1630	0	0	0	0	1	0	0	0	0	0	0	0	1
1645	0	0	0	0	0	0	0	0	0	0	0	0	0
1700	1	0	0	0	0	0	0	0	0	0	0	0	1
1715	1	0	0	0	0	0	0	0	0	0	0	0	1*
1730	1	0	0	0	0	0	0	0	0	0	0	0	1*
1745	1	0	0	0	0	0	0	0	0	0	0	0	1*

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: Appr/Exit Totals

Intersection # 7 6/saratoga/buses

Begin	Approach Totals				Exit Totals				Int
Time	N	E	S	W	N	E	S	W	Total
700	0	2	3	1	2	2	1	1	6
715	0	2	4	1	2	3	1	1	7
730	0	2	3	2	2	3	1	1	7
745	1	1	3	2	2	3	1	1	7
800	1	1	1	1	1	2	1	0	4
815	1	1	0	1	1	1	1	0	3*
830	1	1	0	0	1	0	1	0	2*
845	0	1	0	0	1	0	0	0	1*
1600	0	1	0	1	0	1	0	1	2
1615	0	1	0	0	0	0	0	1	1
1630	0	1	0	0	0	0	0	1	1
1645	0	0	0	0	0	0	0	0	0
1700	1	0	0	0	0	0	0	1	1
1715	1	0	0	0	0	0	0	1	1*
1730	1	0	0	0	0	0	0	1	1*
1745	1	0	0	0	0	0	0	1	1*

Morris, IL Weather: Sunny and Warm 09/11/12
US Route 6 and Saratoga Rd 11:15:34
Thursday September 6, 2012 Farm Tractors Only

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: by Movement

Intersection # 8 6/saratoga/tractors

Begin	N-Approach			E-Approach			S-Approach			W-Approach			Int
Time	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
700	0	0	0	0	2	1	0	0	0	0	0	1	4
715	0	0	0	0	0	1	0	0	0	0	0	1	2
730	0	0	0	0	0	1	0	0	0	0	0	1	2
745	0	0	0	0	0	1	0	0	0	0	0	0	1
800	0	0	0	0	1	0	0	0	0	0	0	0	1
815	0	0	0	0	1	0	0	0	0	0	0	0	1*
830	0	0	0	0	1	0	0	0	0	0	0	0	1*
845	0	0	0	0	1	0	0	0	0	0	0	0	1*
1600	0	0	0	0	0	0	0	1	0	0	0	0	1
1615	0	0	0	1	0	0	0	1	0	0	0	0	2
1630	0	0	0	1	0	0	0	1	0	0	0	0	2
1645	0	0	0	1	0	0	0	0	0	1	1	0	3
1700	0	0	0	1	0	0	0	0	0	1	1	0	3
1715	0	0	0	0	0	0	0	0	0	1	1	0	2*
1730	0	0	0	0	0	0	0	0	0	1	1	0	2*
1745	0	0	0	0	0	0	0	0	0	0	0	0	0*

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: Appr/Exit Totals

Intersection # 8 6/saratoga/tractors

Begin	Approach Totals				Exit Totals				Int
Time	N	E	S	W	N	E	S	W	Total
700	0	3	0	1	1	0	1	2	4
715	0	1	0	1	1	0	1	0	2
730	0	1	0	1	1	0	1	0	2
745	0	1	0	0	0	0	1	0	1
800	0	1	0	0	0	0	0	1	1
815	0	1	0	0	0	0	0	1	1*
830	0	1	0	0	0	0	0	1	1*
845	0	1	0	0	0	0	0	1	1*
1600	0	0	1	0	1	0	0	0	1
1615	0	1	1	0	2	0	0	0	2
1630	0	1	1	0	2	0	0	0	2
1645	0	1	0	2	1	1	1	0	3
1700	0	1	0	2	1	1	1	0	3
1715	0	0	0	2	0	1	1	0	2*
1730	0	0	0	2	0	1	1	0	2*
1745	0	0	0	0	0	0	0	0	0*

Morris, IL Weather: Sunny and Warm 09/11/12
Saratoga Rd and Nettlecreek Dr Passenger Vehicles Only 10:33:14
Thursday September 6, 2012

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: by Movement

Intersection # 1 saratoga/nettlecreek

Begin	N-Approach			E-Approach			S-Approach			W-Approach			Int
Time	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
700	12	8	0	0	0	0	0	16	3	5	0	26	70
715	14	9	0	0	0	0	0	15	4	6	0	19	67
730	15	9	0	0	0	0	0	19	5	5	0	16	69
745	17	15	0	0	0	0	0	16	5	6	0	13	72
800	19	22	0	0	0	0	0	10	5	3	0	19	78
815	14	18	0	0	0	0	0	8	4	2	0	15	61*
830	10	16	0	0	0	0	0	3	3	1	0	13	46*
845	6	9	0	0	0	0	0	1	1	0	0	11	28*
1600	33	20	0	0	0	0	0	25	8	5	0	27	118
1615	38	19	0	0	0	0	0	23	7	4	0	23	114
1630	42	22	0	0	0	0	0	20	7	4	0	26	121
1645	43	17	0	0	0	0	0	18	5	5	0	19	107
1700	40	17	0	0	0	0	0	17	2	5	0	22	103
1715	26	14	0	0	0	0	0	12	1	5	0	20	78*
1730	16	6	0	0	0	0	0	9	1	4	0	14	50*
1745	8	4	0	0	0	0	0	4	0	2	0	7	25*

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: Appr/Exit Totals

Intersection # 1 saratoga/nettlecreek

Begin	Approach Totals				Exit Totals				Int
Time	N	E	S	W	N	E	S	W	Total
700	20	0	19	31	42	0	13	15	70
715	23	0	19	25	34	0	15	18	67
730	24	0	24	21	35	0	14	20	69
745	32	0	21	19	29	0	21	22	72
800	41	0	15	22	29	0	25	24	78
815	32	0	12	17	23	0	20	18	61*
830	26	0	6	14	16	0	17	13	46*
845	15	0	2	11	12	0	9	7	28*
1600	53	0	33	32	52	0	25	41	118
1615	57	0	30	27	46	0	23	45	114
1630	64	0	27	30	46	0	26	49	121
1645	60	0	23	24	37	0	22	48	107
1700	57	0	19	27	39	0	22	42	103
1715	40	0	13	25	32	0	19	27	78*
1730	22	0	10	18	23	0	10	17	50*
1745	12	0	4	9	11	0	6	8	25*

Morris, IL Weather: Sunny and Warm 09/11/12
Saratoga Rd and Nettlecreek Dr Trucks Only 10:35:31
Thursday September 6, 2012

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: by Movement

Intersection # 2 saratoga/nettlecreek/trucks

Begin	N-Approach			E-Approach			S-Approach			W-Approach			Int
Time	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
700	0	5	0	0	0	0	0	1	0	0	0	0	6
715	0	3	0	0	0	0	0	1	0	0	0	0	4
730	0	4	0	0	0	0	0	3	0	0	0	0	7
745	0	3	0	0	0	0	0	5	0	0	0	0	8
800	0	2	0	0	0	0	0	4	0	0	0	0	6
815	0	1	0	0	0	0	0	4	0	0	0	0	5*
830	0	0	0	0	0	0	0	2	0	0	0	0	2*
845	0	0	0	0	0	0	0	0	0	0	0	0	0*
1600	0	1	0	0	0	0	0	1	0	0	0	0	2
1615	0	4	0	0	0	0	0	1	0	0	0	0	5
1630	0	4	0	0	0	0	0	1	0	0	0	1	6
1645	0	4	0	0	0	0	0	1	0	0	0	1	6
1700	0	3	0	0	0	0	0	2	0	0	0	1	6
1715	0	0	0	0	0	0	0	2	0	0	0	1	3*
1730	0	0	0	0	0	0	0	1	0	0	0	0	1*
1745	0	0	0	0	0	0	0	1	0	0	0	0	1*

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: Appr/Exit Totals

Intersection # 2 saratoga/nettlecreek/trucks

Begin	Approach Totals				Exit Totals				Int
Time	N	E	S	W	N	E	S	W	Total
700	5	0	1	0	1	0	5	0	6
715	3	0	1	0	1	0	3	0	4
730	4	0	3	0	3	0	4	0	7
745	3	0	5	0	5	0	3	0	8
800	2	0	4	0	4	0	2	0	6
815	1	0	4	0	4	0	1	0	5*
830	0	0	2	0	2	0	0	0	2*
845	0	0	0	0	0	0	0	0	0*
1600	1	0	1	0	1	0	1	0	2
1615	4	0	1	0	1	0	4	0	5
1630	4	0	1	1	2	0	4	0	6
1645	4	0	1	1	2	0	4	0	6
1700	3	0	2	1	3	0	3	0	6
1715	0	0	2	1	3	0	0	0	3*
1730	0	0	1	0	1	0	0	0	1*
1745	0	0	1	0	1	0	0	0	1*

Morris, IL Weather: Sunny and Warm 09/11/12
Saratoga Rd and Nettlecreek Dr Buses Only 10:37:08
Thursday September 6, 2012

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: by Movement

Intersection # 3 saratoga/nettlecreek/bus

Begin	N-Approach			E-Approach			S-Approach			W-Approach			Int
Time	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
700	1	0	0	0	0	0	0	1	0	0	0	1	3
715	1	0	0	0	0	0	0	1	0	0	0	1	3
730	1	0	0	0	0	0	0	1	0	0	0	1	3
745	0	0	0	0	0	0	0	1	0	0	0	1	2
800	0	0	0	0	0	0	0	0	0	0	0	0	0
815	0	0	0	0	0	0	0	0	0	0	0	0	0*
830	0	0	0	0	0	0	0	0	0	0	0	0	0*
845	0	0	0	0	0	0	0	0	0	0	0	0	0*
1600	0	0	0	0	0	0	0	0	0	0	0	0	0
1615	0	0	0	0	0	0	0	0	0	0	0	0	0
1630	0	0	0	0	0	0	0	0	0	0	0	0	0
1645	0	0	0	0	0	0	0	0	0	0	0	0	0
1700	0	0	0	0	0	0	0	0	0	0	0	0	0
1715	0	0	0	0	0	0	0	0	0	0	0	0	0*
1730	0	0	0	0	0	0	0	0	0	0	0	0	0*
1745	0	0	0	0	0	0	0	0	0	0	0	0	0*

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: Appr/Exit Totals

Intersection # 3 saratoga/nettlecreek/bus

Begin	Approach Totals				Exit Totals				Int
Time	N	E	S	W	N	E	S	W	Total
700	1	0	1	1	2	0	0	1	3
715	1	0	1	1	2	0	0	1	3
730	1	0	1	1	2	0	0	1	3
745	0	0	1	1	2	0	0	0	2
800	0	0	0	0	0	0	0	0	0
815	0	0	0	0	0	0	0	0	0*
830	0	0	0	0	0	0	0	0	0*
845	0	0	0	0	0	0	0	0	0*
1600	0	0	0	0	0	0	0	0	0
1615	0	0	0	0	0	0	0	0	0
1630	0	0	0	0	0	0	0	0	0
1645	0	0	0	0	0	0	0	0	0
1700	0	0	0	0	0	0	0	0	0
1715	0	0	0	0	0	0	0	0	0*
1730	0	0	0	0	0	0	0	0	0*
1745	0	0	0	0	0	0	0	0	0*

Morris, IL Weather: Sunny and Warm 09/11/12
Saratoga Rd and Nettlecreek Dr Farm Tractors Only 10:38:22
Thursday September 6, 2012

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: by Movement

Intersection # 4 saratoga/nettlecreek/tractors

Begin	N-Approach			E-Approach			S-Approach			W-Approach			Int
Time	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
700	0	0	0	0	0	0	0	0	0	0	0	0	0
715	0	0	0	0	0	0	0	0	0	0	0	0	0
730	0	0	0	0	0	0	0	0	0	0	0	0	0
745	0	0	0	0	0	0	0	0	0	0	0	0	0
800	0	0	0	0	0	0	0	0	0	0	0	0	0
815	0	0	0	0	0	0	0	0	0	0	0	0	0*
830	0	0	0	0	0	0	0	0	0	0	0	0	0*
845	0	0	0	0	0	0	0	0	0	0	0	0	0*
1600	0	0	0	0	0	0	0	0	0	0	0	0	0
1615	0	0	0	0	0	0	0	0	0	0	0	0	0
1630	0	0	0	0	0	0	0	0	0	0	0	0	0
1645	0	0	0	0	0	0	0	0	0	0	0	0	0
1700	0	0	0	0	0	0	0	0	0	0	0	0	0
1715	0	0	0	0	0	0	0	0	0	0	0	0	0*
1730	0	0	0	0	0	0	0	0	0	0	0	0	0*
1745	0	0	0	0	0	0	0	0	0	0	0	0	0*

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: Appr/Exit Totals

Intersection # 4 saratoga/nettlecreek/tractors

Begin	Approach Totals				Exit Totals				Int
Time	N	E	S	W	N	E	S	W	Total
700	0	0	0	0	0	0	0	0	0
715	0	0	0	0	0	0	0	0	0
730	0	0	0	0	0	0	0	0	0
745	0	0	0	0	0	0	0	0	0
800	0	0	0	0	0	0	0	0	0
815	0	0	0	0	0	0	0	0	0*
830	0	0	0	0	0	0	0	0	0*
845	0	0	0	0	0	0	0	0	0*
1600	0	0	0	0	0	0	0	0	0
1615	0	0	0	0	0	0	0	0	0
1630	0	0	0	0	0	0	0	0	0
1645	0	0	0	0	0	0	0	0	0
1700	0	0	0	0	0	0	0	0	0
1715	0	0	0	0	0	0	0	0	0*
1730	0	0	0	0	0	0	0	0	0*
1745	0	0	0	0	0	0	0	0	0*

Morris, IL Weather: Sunny and Warm 09/11/12
Saratoga Rd and Country Club Lane 10:56:00
Thursday September 6, 2012 Passenger Vehicles Only

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: by Movement

Intersection # 1 saratoga/countryclub/cars

Begin	N-Approach			E-Approach			S-Approach			W-Approach			Int
Time	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
700	0	0	0	0	0	0	0	0	1	2	0	0	3
715	1	0	0	0	0	0	0	0	1	3	0	0	5
730	1	0	0	0	0	0	0	0	1	2	0	0	4
745	1	0	0	0	0	0	0	0	0	2	0	0	3
800	1	0	0	0	0	0	0	0	0	2	0	0	3
815	0	0	0	0	0	0	0	0	0	1	0	0	1*
830	0	0	0	0	0	0	0	0	0	1	0	0	1*
845	0	0	0	0	0	0	0	0	0	0	0	0	0*
1600	0	0	0	0	0	0	0	0	0	2	0	0	2
1615	0	0	0	0	0	0	0	0	0	2	0	0	2
1630	1	0	0	0	0	0	0	0	0	1	0	0	2
1645	1	0	0	0	0	0	0	0	0	2	0	0	3
1700	1	0	0	0	0	0	0	0	0	1	0	0	2
1715	1	0	0	0	0	0	0	0	0	1	0	0	2*
1730	0	0	0	0	0	0	0	0	0	1	0	0	1*
1745	0	0	0	0	0	0	0	0	0	0	0	0	0*

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: Appr/Exit Totals

Intersection # 1 saratoga/countryclub/cars

Begin	Approach Totals				Exit Totals				Int
Time	N	E	S	W	N	E	S	W	Total
700	0	0	1	2	0	0	2	1	3
715	1	0	1	3	0	0	3	2	5
730	1	0	1	2	0	0	2	2	4
745	1	0	0	2	0	0	2	1	3
800	1	0	0	2	0	0	2	1	3
815	0	0	0	1	0	0	1	0	1*
830	0	0	0	1	0	0	1	0	1*
845	0	0	0	0	0	0	0	0	0*
1600	0	0	0	2	0	0	2	0	2
1615	0	0	0	2	0	0	2	0	2
1630	1	0	0	1	0	0	1	1	2
1645	1	0	0	2	0	0	2	1	3
1700	1	0	0	1	0	0	1	1	2
1715	1	0	0	1	0	0	1	1	2*
1730	0	0	0	1	0	0	1	0	1*
1745	0	0	0	0	0	0	0	0	0*

Morris, IL Weather: Sunny and Warm 09/11/12
Saratoga Rd and Country Club Lane 10:57:48
Thursday September 6, 2012 Trucks Only

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: by Movement

Intersection # 2 saratoga/countryclub/trucks

Begin	N-Approach			E-Approach			S-Approach			W-Approach			Int
Time	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
700	0	0	0	0	0	0	0	0	0	0	0	1	1
715	0	0	0	0	0	0	0	0	0	0	0	1	1
730	0	0	0	0	0	0	0	0	0	0	0	1	1
745	0	0	0	0	0	0	0	0	0	0	0	0	0
800	0	0	0	0	0	0	0	0	0	0	0	0	0
815	0	0	0	0	0	0	0	0	0	0	0	0	0*
830	0	0	0	0	0	0	0	0	0	0	0	0	0*
845	0	0	0	0	0	0	0	0	0	0	0	0	0*
1600	0	0	0	0	0	0	0	0	0	0	0	0	0
1615	0	0	0	0	0	0	0	0	0	0	0	0	0
1630	0	0	0	0	0	0	0	0	0	0	0	0	0
1645	0	0	0	0	0	0	0	0	0	0	0	0	0
1700	0	0	0	0	0	0	0	0	0	0	0	0	0
1715	0	0	0	0	0	0	0	0	0	0	0	0	0*
1730	0	0	0	0	0	0	0	0	0	0	0	0	0*
1745	0	0	0	0	0	0	0	0	0	0	0	0	0*

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: Appr/Exit Totals

Intersection # 2 saratoga/countryclub/trucks

Begin	Approach Totals				Exit Totals				Int
Time	N	E	S	W	N	E	S	W	Total
700	0	0	0	1	1	0	0	0	1
715	0	0	0	1	1	0	0	0	1
730	0	0	0	1	1	0	0	0	1
745	0	0	0	0	0	0	0	0	0
800	0	0	0	0	0	0	0	0	0
815	0	0	0	0	0	0	0	0	0*
830	0	0	0	0	0	0	0	0	0*
845	0	0	0	0	0	0	0	0	0*
1600	0	0	0	0	0	0	0	0	0
1615	0	0	0	0	0	0	0	0	0
1630	0	0	0	0	0	0	0	0	0
1645	0	0	0	0	0	0	0	0	0
1700	0	0	0	0	0	0	0	0	0
1715	0	0	0	0	0	0	0	0	0*
1730	0	0	0	0	0	0	0	0	0*
1745	0	0	0	0	0	0	0	0	0*

Morris, IL Weather: Sunny and Warm 09/11/12
Saratoga Rd and Country Club Lane 10:59:16
Thursday September 6, 2012 Buses Only

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: by Movement

Intersection # 3 saratoga/countryclub/bus

Begin	N-Approach			E-Approach			S-Approach			W-Approach			Int
Time	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
700	0	0	0	0	0	0	0	0	0	1	0	0	1
715	0	0	0	0	0	0	0	0	0	1	0	0	1
730	0	0	0	0	0	0	0	0	0	1	0	0	1
745	0	0	0	0	0	0	0	0	0	0	0	0	0
800	0	0	0	0	0	0	0	0	0	0	0	0	0
815	0	0	0	0	0	0	0	0	0	0	0	0	0*
830	0	0	0	0	0	0	0	0	0	0	0	0	0*
845	0	0	0	0	0	0	0	0	0	0	0	0	0*
1600	0	0	0	0	0	0	0	0	0	0	0	0	0
1615	0	0	0	0	0	0	0	0	0	0	0	0	0
1630	0	0	0	0	0	0	0	0	0	0	0	0	0
1645	0	0	0	0	0	0	0	0	0	0	0	0	0
1700	0	0	0	0	0	0	0	0	0	0	0	0	0
1715	0	0	0	0	0	0	0	0	0	0	0	0	0*
1730	0	0	0	0	0	0	0	0	0	0	0	0	0*
1745	0	0	0	0	0	0	0	0	0	0	0	0	0*

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: Appr/Exit Totals

Intersection # 3 saratoga/countryclub/bus

Begin	Approach Totals				Exit Totals				Int
Time	N	E	S	W	N	E	S	W	Total
700	0	0	0	1	0	0	1	0	1
715	0	0	0	1	0	0	1	0	1
730	0	0	0	1	0	0	1	0	1
745	0	0	0	0	0	0	0	0	0
800	0	0	0	0	0	0	0	0	0
815	0	0	0	0	0	0	0	0	0*
830	0	0	0	0	0	0	0	0	0*
845	0	0	0	0	0	0	0	0	0*
1600	0	0	0	0	0	0	0	0	0
1615	0	0	0	0	0	0	0	0	0
1630	0	0	0	0	0	0	0	0	0
1645	0	0	0	0	0	0	0	0	0
1700	0	0	0	0	0	0	0	0	0
1715	0	0	0	0	0	0	0	0	0*
1730	0	0	0	0	0	0	0	0	0*
1745	0	0	0	0	0	0	0	0	0*

Morris, IL Weather: Sunny and Warm 09/11/12
Saratoga Rd and Country Club Lane 11:00:39
Thursday September 6, 2012 Farm Tractors Only

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: by Movement

Intersection # 4 saratoga/countryclub/tractor

Begin	N-Approach			E-Approach			S-Approach			W-Approach			Int
Time	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
700	0	0	0	0	0	0	0	0	0	0	0	0	0
715	0	0	0	0	0	0	0	0	0	0	0	0	0
730	0	0	0	0	0	0	0	0	0	0	0	0	0
745	0	0	0	0	0	0	0	0	0	0	0	0	0
800	0	0	0	0	0	0	0	0	0	0	0	0	0
815	0	0	0	0	0	0	0	0	0	0	0	0	0*
830	0	0	0	0	0	0	0	0	0	0	0	0	0*
845	0	0	0	0	0	0	0	0	0	0	0	0	0*
1600	0	0	0	0	0	0	0	0	0	0	0	0	0
1615	0	0	0	0	0	0	0	0	0	0	0	0	0
1630	0	0	0	0	0	0	0	0	0	0	0	0	0
1645	0	0	0	0	0	0	0	0	0	0	0	0	0
1700	0	0	0	0	0	0	0	0	0	0	0	0	0
1715	0	0	0	0	0	0	0	0	0	0	0	0	0*
1730	0	0	0	0	0	0	0	0	0	0	0	0	0*
1745	0	0	0	0	0	0	0	0	0	0	0	0	0*

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: Appr/Exit Totals

Intersection # 4 saratoga/countryclub/tractor

Begin	Approach Totals				Exit Totals				Int
Time	N	E	S	W	N	E	S	W	Total
700	0	0	0	0	0	0	0	0	0
715	0	0	0	0	0	0	0	0	0
730	0	0	0	0	0	0	0	0	0
745	0	0	0	0	0	0	0	0	0
800	0	0	0	0	0	0	0	0	0
815	0	0	0	0	0	0	0	0	0*
830	0	0	0	0	0	0	0	0	0*
845	0	0	0	0	0	0	0	0	0*
1600	0	0	0	0	0	0	0	0	0
1615	0	0	0	0	0	0	0	0	0
1630	0	0	0	0	0	0	0	0	0
1645	0	0	0	0	0	0	0	0	0
1700	0	0	0	0	0	0	0	0	0
1715	0	0	0	0	0	0	0	0	0*
1730	0	0	0	0	0	0	0	0	0*
1745	0	0	0	0	0	0	0	0	0*

Morris, IL Weather: Sunny and Warm 09/11/12
Saratoga Rd and Stockdale Rd Passenger Vehicles Only 10:47:53
Thursday September 6, 2012

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: by Movement

Intersection # 9 saratoga/stockdale/cars

Begin	N-Approach			E-Approach			S-Approach			W-Approach			Int
Time	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
700	5	9	0	0	0	0	0	12	3	7	0	7	43
715	5	11	0	0	0	0	0	12	2	5	0	7	42
730	4	10	0	0	0	0	0	18	1	2	0	6	41
745	4	16	0	0	0	0	0	17	0	3	0	4	44
800	7	17	0	0	0	0	0	16	0	2	0	0	42
815	5	13	0	0	0	0	0	13	0	2	0	0	33*
830	4	11	0	0	0	0	0	7	0	2	0	0	24*
845	3	5	0	0	0	0	0	3	0	0	0	0	11*
1600	8	15	0	0	0	0	0	25	3	4	0	10	65
1615	9	15	0	0	0	0	0	22	4	6	0	8	64
1630	7	19	0	0	0	0	0	20	8	5	0	6	65
1645	4	20	0	0	0	0	0	15	7	5	0	8	59
1700	3	21	0	0	0	0	0	14	8	7	0	7	60
1715	1	18	0	0	0	0	0	9	6	5	0	7	46*
1730	1	10	0	0	0	0	0	5	2	4	0	6	28*
1745	1	5	0	0	0	0	0	3	1	2	0	2	14*

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: Appr/Exit Totals

Intersection # 9 saratoga/stockdale/cars

Begin	Approach Totals				Exit Totals				Int
Time	N	E	S	W	N	E	S	W	Total
700	14	0	15	14	19	0	16	8	43
715	16	0	14	12	19	0	16	7	42
730	14	0	19	8	24	0	12	5	41
745	20	0	17	7	21	0	19	4	44
800	24	0	16	2	16	0	19	7	42
815	18	0	13	2	13	0	15	5	33*
830	15	0	7	2	7	0	13	4	24*
845	8	0	3	0	3	0	5	3	11*
1600	23	0	28	14	35	0	19	11	65
1615	24	0	26	14	30	0	21	13	64
1630	26	0	28	11	26	0	24	15	65
1645	24	0	22	13	23	0	25	11	59
1700	24	0	22	14	21	0	28	11	60
1715	19	0	15	12	16	0	23	7	46*
1730	11	0	7	10	11	0	14	3	28*
1745	6	0	4	4	5	0	7	2	14*

Morris, IL Weather: Sunny and Warm 09/11/12
Saratoga Rd and Stockdale Rd Trucks Only 10:49:56
Thursday September 6, 2012

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: by Movement

Intersection # 10 saratoga/stockdale/trucks

Begin Time	N-Approach RT	N-Approach TH	N-Approach LT	E-Approach RT	E-Approach TH	E-Approach LT	S-Approach RT	S-Approach TH	S-Approach LT	W-Approach RT	W-Approach TH	W-Approach LT	Int Total
700	4	1	0	0	0	0	0	1	0	0	0	1	7
715	2	2	0	0	0	0	0	1	0	0	0	1	6
730	2	2	0	0	0	0	0	2	0	0	0	2	8
745	2	2	0	0	0	0	0	2	0	0	0	4	10
800	2	1	0	0	0	0	0	1	0	0	0	3	7
815	2	0	0	0	0	0	0	1	0	0	0	3	6*
830	1	0	0	0	0	0	0	0	0	0	0	2	3*
845	0	0	0	0	0	0	0	0	0	0	0	0	0*
1600	1	0	0	0	0	0	0	0	0	0	0	1	2
1615	3	1	0	0	0	0	0	0	0	0	0	2	6
1630	3	1	0	0	0	0	0	0	0	0	0	1	5
1645	3	1	0	0	0	0	0	0	0	0	0	1	5
1700	2	1	0	0	0	0	0	0	0	0	0	2	5
1715	0	0	0	0	0	0	0	0	0	0	0	1	1*
1730	0	0	0	0	0	0	0	0	0	0	0	1	1*
1745	0	0	0	0	0	0	0	0	0	0	0	1	1*

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: Appr/Exit Totals

Intersection # 10 saratoga/stockdale/trucks

Begin Time	Approach Totals N	Approach Totals E	Approach Totals S	Approach Totals W	Exit Totals N	Exit Totals E	Exit Totals S	Exit Totals W	Int Total
700	5	0	1	1	2	0	1	4	7
715	4	0	1	1	2	0	2	2	6
730	4	0	2	2	4	0	2	2	8
745	4	0	2	4	6	0	2	2	10
800	3	0	1	3	4	0	1	2	7
815	2	0	1	3	4	0	0	2	6*
830	1	0	0	2	2	0	0	1	3*
845	0	0	0	0	0	0	0	0	0*
1600	1	0	0	1	1	0	0	1	2
1615	4	0	0	2	2	0	1	3	6
1630	4	0	0	1	1	0	1	3	5
1645	4	0	0	1	1	0	1	3	5
1700	3	0	0	2	2	0	1	2	5
1715	0	0	0	1	1	0	0	0	1*
1730	0	0	0	1	1	0	0	0	1*
1745	0	0	0	1	1	0	0	0	1*

Morris, IL Weather: Sunny and Warm 09/11/12
Saratoga Rd and Stockdale Rd Buses Only 10:51:45
Thursday September 6, 2012

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: by Movement

Intersection # 11 saratoga/stockdale/buses

Begin	N-Approach			E-Approach			S-Approach			W-Approach			Int
Time	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
700	1	0	0	0	0	0	0	1	0	1	0	0	3
715	1	0	0	0	0	0	0	1	0	0	0	0	2
730	1	0	0	0	0	0	0	1	0	0	0	0	2
745	0	0	0	0	0	0	0	1	0	0	0	0	1
800	0	0	0	0	0	0	0	0	0	0	0	0	0
815	0	0	0	0	0	0	0	0	0	0	0	0	0*
830	0	0	0	0	0	0	0	0	0	0	0	0	0*
845	0	0	0	0	0	0	0	0	0	0	0	0	0*
1600	0	0	0	0	0	0	0	0	0	0	0	0	0
1615	0	0	0	0	0	0	0	0	0	0	0	0	0
1630	0	0	0	0	0	0	0	0	0	0	0	0	0
1645	0	0	0	0	0	0	0	0	0	0	0	0	0
1700	0	0	0	0	0	0	0	0	0	0	0	0	0
1715	0	0	0	0	0	0	0	0	0	0	0	0	0*
1730	0	0	0	0	0	0	0	0	0	0	0	0	0*
1745	0	0	0	0	0	0	0	0	0	0	0	0	0*

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: Appr/Exit Totals

Intersection # 11 saratoga/stockdale/buses

Begin	Approach Totals				Exit Totals				Int
Time	N	E	S	W	N	E	S	W	Total
700	1	0	1	1	1	0	1	1	3
715	1	0	1	0	1	0	0	1	2
730	1	0	1	0	1	0	0	1	2
745	0	0	1	0	1	0	0	0	1
800	0	0	0	0	0	0	0	0	0
815	0	0	0	0	0	0	0	0	0*
830	0	0	0	0	0	0	0	0	0*
845	0	0	0	0	0	0	0	0	0*
1600	0	0	0	0	0	0	0	0	0
1615	0	0	0	0	0	0	0	0	0
1630	0	0	0	0	0	0	0	0	0
1645	0	0	0	0	0	0	0	0	0
1700	0	0	0	0	0	0	0	0	0
1715	0	0	0	0	0	0	0	0	0*
1730	0	0	0	0	0	0	0	0	0*
1745	0	0	0	0	0	0	0	0	0*

Morris, IL Weather: Sunny and Warm 09/11/12
Saratoga Rd and Stockdale Rd Farm Tractors Only 10:52:58
Thursday September 6, 2012

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: by Movement

Intersection # 12 saratoga/stockdale/tractor

Begin Time	N-Approach RT	N-Approach TH	N-Approach LT	E-Approach RT	E-Approach TH	E-Approach LT	S-Approach RT	S-Approach TH	S-Approach LT	W-Approach RT	W-Approach TH	W-Approach LT	Int Total
700	0	0	0	0	0	0	0	0	0	0	0	0	0
715	0	0	0	0	0	0	0	0	0	0	0	0	0
730	0	0	0	0	0	0	0	0	0	0	0	0	0
745	0	0	0	0	0	0	0	0	0	0	0	0	0
800	0	0	0	0	0	0	0	0	0	0	0	0	0
815	0	0	0	0	0	0	0	0	0	0	0	0	0*
830	0	0	0	0	0	0	0	0	0	0	0	0	0*
845	0	0	0	0	0	0	0	0	0	0	0	0	0*
1600	0	0	0	0	0	0	0	0	0	0	0	0	0
1615	0	0	0	0	0	0	0	0	0	0	0	0	0
1630	0	0	0	0	0	0	0	0	0	0	0	0	0
1645	0	0	0	0	0	0	0	0	0	0	0	0	0
1700	0	0	0	0	0	0	0	0	0	0	0	0	0
1715	0	0	0	0	0	0	0	0	0	0	0	0	0*
1730	0	0	0	0	0	0	0	0	0	0	0	0	0*
1745	0	0	0	0	0	0	0	0	0	0	0	0	0*

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: Appr/Exit Totals

Intersection # 12 saratoga/stockdale/tractor

Begin Time	Approach Totals N	Approach Totals E	Approach Totals S	Approach Totals W	Exit Totals N	Exit Totals E	Exit Totals S	Exit Totals W	Int Total
700	0	0	0	0	0	0	0	0	0
715	0	0	0	0	0	0	0	0	0
730	0	0	0	0	0	0	0	0	0
745	0	0	0	0	0	0	0	0	0
800	0	0	0	0	0	0	0	0	0
815	0	0	0	0	0	0	0	0	0*
830	0	0	0	0	0	0	0	0	0*
845	0	0	0	0	0	0	0	0	0*
1600	0	0	0	0	0	0	0	0	0
1615	0	0	0	0	0	0	0	0	0
1630	0	0	0	0	0	0	0	0	0
1645	0	0	0	0	0	0	0	0	0
1700	0	0	0	0	0	0	0	0	0
1715	0	0	0	0	0	0	0	0	0*
1730	0	0	0	0	0	0	0	0	0*
1745	0	0	0	0	0	0	0	0	0*

Morris, IL Weather: Sunny and Warm 09/11/12
Old Stage Rd and Saratoga Rd Passenger Vehicles Only 10:41:36
Thursday September 6, 2012

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: by Movement

Intersection # 5 oldstage/saratoga/cars

Begin Time	N-Approach RT	N-Approach TH	N-Approach LT	E-Approach RT	E-Approach TH	E-Approach LT	S-Approach RT	S-Approach TH	S-Approach LT	W-Approach RT	W-Approach TH	W-Approach LT	Int Total
700	1	0	0	17	24	0	0	0	0	0	27	7	76
715	3	0	0	14	24	0	0	0	0	0	27	8	76
730	4	0	0	8	22	0	0	0	0	0	26	8	68
745	8	0	0	11	20	0	0	0	0	0	21	7	67
800	9	0	0	7	14	0	0	0	0	0	15	5	50
815	7	0	0	6	9	0	0	0	0	0	9	3	34*
830	6	0	0	5	6	0	0	0	0	0	2	2	21*
845	2	0	0	0	1	0	0	0	0	0	0	0	3*
1600	6	0	0	17	27	0	0	0	0	0	27	5	82
1615	5	0	0	17	27	0	0	0	0	0	25	5	79
1630	7	0	0	17	23	0	0	0	0	0	24	6	77
1645	7	0	0	16	26	0	0	0	0	0	23	6	78
1700	6	0	0	20	26	0	0	0	0	0	21	7	80
1715	5	0	0	17	18	0	0	0	0	0	15	4	59*
1730	2	0	0	11	12	0	0	0	0	0	9	2	36*
1745	1	0	0	7	5	0	0	0	0	0	4	1	18*

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: Appr/Exit Totals

Intersection # 5 oldstage/saratoga/cars

Begin Time	Approach Totals N	Approach Totals E	Approach Totals S	Approach Totals W	Exit Totals N	Exit Totals E	Exit Totals S	Exit Totals W	Int Total
700	1	41	0	34	24	27	0	25	76
715	3	38	0	35	22	27	0	27	76
730	4	30	0	34	16	26	0	26	68
745	8	31	0	28	18	21	0	28	67
800	9	21	0	20	12	15	0	23	50
815	7	15	0	12	9	9	0	16	34*
830	6	11	0	4	7	2	0	12	21*
845	2	1	0	0	0	0	0	3	3*
1600	6	44	0	32	22	27	0	33	82
1615	5	44	0	30	22	25	0	32	79
1630	7	40	0	30	23	24	0	30	77
1645	7	42	0	29	22	23	0	33	78
1700	6	46	0	28	27	21	0	32	80
1715	5	35	0	19	21	15	0	23	59*
1730	2	23	0	11	13	9	0	14	36*
1745	1	12	0	5	8	4	0	6	18*

Morris, IL Weather: Sunny and Warm 09/11/12
Old Stage Rd and Saratoga Rd Trucks Only 10:43:06
Thursday September 6, 2012

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: by Movement

Intersection # 6 oldstage/saratoga/trucks

Begin	N-Approach			E-Approach			S-Approach			W-Approach			Int
Time	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
700	1	0	0	0	0	0	0	0	0	0	0	0	1
715	1	0	1	0	0	0	0	0	0	0	0	0	2
730	1	0	1	1	0	0	0	0	0	0	0	0	3
745	1	0	1	1	0	0	0	0	0	0	0	0	3
800	0	0	1	1	0	0	0	0	0	0	0	0	2
815	0	0	0	1	0	0	0	0	0	0	0	0	1*
830	0	0	0	0	0	0	0	0	0	0	0	0	0*
845	0	0	0	0	0	0	0	0	0	0	0	0	0*
1600	0	0	0	0	0	0	0	0	0	0	0	0	0
1615	1	0	0	0	0	0	0	0	0	0	0	0	1
1630	1	0	0	0	0	0	0	0	0	0	0	0	1
1645	1	0	0	0	0	0	0	0	0	0	0	0	1
1700	1	0	0	0	0	0	0	0	0	0	0	0	1
1715	0	0	0	0	0	0	0	0	0	0	0	0	0*
1730	0	0	0	0	0	0	0	0	0	0	0	0	0*
1745	0	0	0	0	0	0	0	0	0	0	0	0	0*

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: Appr/Exit Totals

Intersection # 6 oldstage/saratoga/trucks

Begin	Approach Totals				Exit Totals				Int
Time	N	E	S	W	N	E	S	W	Total
700	1	0	0	0	0	0	0	1	1
715	2	0	0	0	0	1	0	1	2
730	2	1	0	0	1	1	0	1	3
745	2	1	0	0	1	1	0	1	3
800	1	1	0	0	1	1	0	0	2
815	0	1	0	0	1	0	0	0	1*
830	0	0	0	0	0	0	0	0	0*
845	0	0	0	0	0	0	0	0	0*
1600	0	0	0	0	0	0	0	0	0
1615	1	0	0	0	0	0	0	1	1
1630	1	0	0	0	0	0	0	1	1
1645	1	0	0	0	0	0	0	1	1
1700	1	0	0	0	0	0	0	1	1
1715	0	0	0	0	0	0	0	0	0*
1730	0	0	0	0	0	0	0	0	0*
1745	0	0	0	0	0	0	0	0	0*

Morris, IL Weather: Sunny and Warm 09/11/12
Old Stage Rd and Saratoga Rd Buses Only 10:44:20
Thursday September 6, 2012

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: by Movement

Intersection # 7 oldstage/saratoga/buses

Begin	N-Approach			E-Approach			S-Approach			W-Approach			Int
Time	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
700	0	0	1	0	0	0	0	0	0	0	0	1	2
715	0	0	0	0	0	0	0	0	0	0	0	1	1
730	0	0	0	0	0	0	0	0	0	0	0	1	1
745	0	0	0	0	0	0	0	0	0	0	0	1	1
800	0	0	0	0	0	0	0	0	0	0	0	0	0
815	0	0	0	0	0	0	0	0	0	0	0	0	0*
830	0	0	0	0	0	0	0	0	0	0	0	0	0*
845	0	0	0	0	0	0	0	0	0	0	0	0	0*
1600	0	0	0	0	0	0	0	0	0	0	0	0	0
1615	0	0	0	0	0	0	0	0	0	0	0	0	0
1630	0	0	0	0	0	0	0	0	0	0	0	0	0
1645	0	0	0	0	0	0	0	0	0	0	0	0	0
1700	0	0	0	0	0	0	0	0	0	0	0	0	0
1715	0	0	0	0	0	0	0	0	0	0	0	0	0*
1730	0	0	0	0	0	0	0	0	0	0	0	0	0*
1745	0	0	0	0	0	0	0	0	0	0	0	0	0*

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: Appr/Exit Totals

Intersection # 7 oldstage/saratoga/buses

Begin	Approach Totals				Exit Totals				Int
Time	N	E	S	W	N	E	S	W	Total
700	1	0	0	1	1	1	0	0	2
715	0	0	0	1	1	0	0	0	1
730	0	0	0	1	1	0	0	0	1
745	0	0	0	1	1	0	0	0	1
800	0	0	0	0	0	0	0	0	0
815	0	0	0	0	0	0	0	0	0*
830	0	0	0	0	0	0	0	0	0*
845	0	0	0	0	0	0	0	0	0*
1600	0	0	0	0	0	0	0	0	0
1615	0	0	0	0	0	0	0	0	0
1630	0	0	0	0	0	0	0	0	0
1645	0	0	0	0	0	0	0	0	0
1700	0	0	0	0	0	0	0	0	0
1715	0	0	0	0	0	0	0	0	0*
1730	0	0	0	0	0	0	0	0	0*
1745	0	0	0	0	0	0	0	0	0*

Morris, IL Weather: Sunny and Warm 09/11/12
Old Stage Rd and Saratoga Rd Farm Tractors Only 10:45:26
Thursday September 6, 2012

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: by Movement

Intersection # 8 oldstage/saratoga/tractor

Begin	N-Approach			E-Approach			S-Approach			W-Approach			Int
Time	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
700	0	0	0	0	0	0	0	0	0	0	0	0	0
715	0	0	0	0	0	0	0	0	0	0	0	0	0
730	0	0	0	0	0	0	0	0	0	0	0	0	0
745	0	0	0	0	0	0	0	0	0	0	0	0	0
800	0	0	0	0	0	0	0	0	0	0	0	0	0
815	0	0	0	0	0	0	0	0	0	0	0	0	0*
830	0	0	0	0	0	0	0	0	0	0	0	0	0*
845	0	0	0	0	0	0	0	0	0	0	0	0	0*
1600	0	0	0	0	0	0	0	0	0	0	0	0	0
1615	0	0	0	0	0	0	0	0	0	0	0	0	0
1630	0	0	0	0	0	0	0	0	0	0	0	0	0
1645	0	0	0	0	0	0	0	0	0	0	0	0	0
1700	0	0	0	0	0	0	0	0	0	0	0	0	0
1715	0	0	0	0	0	0	0	0	0	0	0	0	0*
1730	0	0	0	0	0	0	0	0	0	0	0	0	0*
1745	0	0	0	0	0	0	0	0	0	0	0	0	0*

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: Appr/Exit Totals

Intersection # 8 oldstage/saratoga/tractor

Begin	Approach Totals				Exit Totals				Int
Time	N	E	S	W	N	E	S	W	Total
700	0	0	0	0	0	0	0	0	0
715	0	0	0	0	0	0	0	0	0
730	0	0	0	0	0	0	0	0	0
745	0	0	0	0	0	0	0	0	0
800	0	0	0	0	0	0	0	0	0
815	0	0	0	0	0	0	0	0	0*
830	0	0	0	0	0	0	0	0	0*
845	0	0	0	0	0	0	0	0	0*
1600	0	0	0	0	0	0	0	0	0
1615	0	0	0	0	0	0	0	0	0
1630	0	0	0	0	0	0	0	0	0
1645	0	0	0	0	0	0	0	0	0
1700	0	0	0	0	0	0	0	0	0
1715	0	0	0	0	0	0	0	0	0*
1730	0	0	0	0	0	0	0	0	0*
1745	0	0	0	0	0	0	0	0	0*

Future Land Use & Trip Generation

FUTURE LAND USE AND TRIP GENERATION **NO I-80 INTERCHANGE**

Zone #	Land Use (a)	Land Use Size						AM Peak Hour Trip Generation								PM Peak Hour Trip Generation							
			Residential		Industrial/Office/Retail/Other			Residential 1		Residential 2		Institutional 3		Retail		Residential 1		Residential 2		Institutional		Retail	
		(A) Developable Acres	(B) Units/Acre	(C) '=(A)*(B) Total No. Units	(D) '=(A)*43560/1000 Square Footage (,000 sf)	(E) Floor Area Ratio	(F) =(D)*(E) Floor Area (,000 sf)	(G) '=(C)*.75*.25 Inbound Trips	(H) '=(C)*.75*.75 Outbound Trips	(I) '=(C)*.51*.2 Inbound Trips	(J) '=(C)*.51*.8 Outbound Trips	(K) '(F)*.33*4.35*.55 Inbound Trips	(L) [(F)*.33*4.35*.4 Outbound Trips	(M) =(F)*.96*.62 Inbound Trips	(N) =(F)*.96*.38 Outbound Trips	(O) =(C)*1.0*.63 Inbound Trips	(P) =(C)*1.0*.37 Outbound Trips	(Q) =(C)*.62*.65 Inbound Trips	(R) =(C)*.62*.35 Outbound Trips	(S) '=(F)*.33*1.19 Inbound Trips	(T) '(F)*.33*1.19* Outbound Trips	(U) =(F)*3.71*.48 Inbound Trips	(V) =(F)*3.71*.52 Outbound Trips
1	Residential 1	28	3.0	84				16	47							53	31						
	Residential 2	50	6.0	300						31	122							121	65				
	Institutional	22			958	0.25	240					296	210							155	156		
	Retail	20			871	0.2	174							104	64							310	336
	SUBTOTAL	120		384	1,830		414	16	47	31	122	296	210	104	64	53	31	121	65	155	156	310	336
2	Residential 1	45	3.0	135				25	76							85	50						
	Residential 2	55	6.0	330						34	135							133	72				
	Institutional	0			0	0.25	0					0	0							0	0		
	Retail	20			871	0.2	174							104	64							310	336
	SUBTOTAL	120		465	871		174	25	76	34	135	0	0	104	64	85	50	133	72	0	0	310	336
3	Residential 1	45	3.0	135				25	76							85	50						
	Residential 2	45	6.0	270						28	110							109	59				
	Institutional	0			0	0.25	0					0	0							0	0		
	Retail	30			1,307	0.2	261							156	95							465	504
	SUBTOTAL	120		405	1,307		261	25	76	28	110	0	0	156	95	85	50	109	59	0	0	465	504
4	Residential 1	0	3.0	0				0	0							0	0						
	Residential 2	35	6.0	210						21	86							85	46				
	Institutional	0			0	0.25	0					0	0							0	0		
	Retail	30			1,307	0.2	261							156	95							465	504
	SUBTOTAL	65		210	1,307		261	0	0	21	86	0	0	156	95	0	0	85	46	0	0	465	504
5	Residential 1	29	3.0	87				16	49							55	32						
	Residential 2	0	6.0	0						0	0							0	0				
	Institutional	0			0	0.25	0					0	0							0	0		
	Retail	0			0	0.2	0							0	0							0	0
	SUBTOTAL	29		87	0		0	16	49	0	0	0	0	0	0	55	32	0	0	0	0	0	0
6	Residential 1	80	3.0	240				45	135							151	89						
	Residential 2	0	6.0	0						0	0							0	0				
	Institutional	0			0	0.25	0					0	0							0	0		
	Retail	0			0	0.2	0							0	0							0	0
	SUBTOTAL	80		240	0		0	45	135	0	0	0	0	0	0	151	89	0	0	0	0	0	0
7	Residential 1	90	3.0	270				51	152							170	100						
	Residential 2	0	6.0	0						0	0							0	0				
	Institutional	0			0	0.25	0					0	0							0	0		
	Retail	0			0	0.2	0							0	0							0	0
	SUBTOTAL	90		270	0		0	51	152	0	0	0	0	0	0	170	100	0	0	0	0	0	0
8	Residential 1	85	3.0	255				48	143							161	94						
	Residential 2	0	6.0	0						0	0							0	0				
	Institutional	0			0	0.25	0					0	0							0	0		
	Retail	0			0	0.2	0							0	0							0	0
	SUBTOTAL	85		255	0		0	48	143	0	0	0	0	0	0	161	94	0	0	0	0	0	0
9	Residential 1	40	3.0	120				23	68							76	44						
	Residential 2	0	6.0	0						0	0							0	0				
	Institutional	0			0	0.25	0					0	0							0	0		
	Retail	5			218	0.2	44							26	16							78	84
	SUBTOTAL	45		120	218		44	23	68	0	0	0	0	26	16	76	44	0	0	0	0	78	84
10	Residential 1	5	3.0	15				3	8							9	6						
	Residential 2	0	6.0	0						0	0							0	0				
	Institutional	0			0	0.25	0					0	0							0	0		
	Retail	5			218	0.2	44							26	16							78	84
	SUBTOTAL	10		15	218		44	3	8	0	0	0	0	26	16	9	6	0	0	0	0	78	84
	TOTAL	**764**		**2,451**	**5,750**		**1,198**	**251**	**754**	**113**	**453**	**296**	**210**	**570**	**350**	**845**	**496**	**447**	**241**	**155**	**156**	**1,707**	**1,849**

Note: See Figure 1 for zone locations.

(a) - Residential 1 generally contains single-family detached units as defined by ITE Land Use Code 210.
Residential 2 generally contains multi-family apartment units as defined by ITE Land Use Code 220.
Institutional in this study consists of 1/3 recreational community center (ITE Land Use Code 495), 1/3 public school (ITE Land Use Code 522), and 1/3 public park (ITE Land Use Code 412).
Retail generally consists of shopping center development as defined by ITE Land Use Code 820

FUTURE LAND USE AND TRIP GENERATION **With I-80 Interchange**

Zone #	Land Use (a)	Developable Acres	Land Use Size: Residential Units/Acre	Land Use Size: Residential Total No. Units	Land Use Size: Industrial/Office/Retail/Other Square Footage (,000 sf)	Land Use Size: Industrial/Office/Retail/Other Floor Area Ratio	Land Use Size: Industrial/Office/Retail/Other Floor Area (,000 sf)	AM Peak Hour Trip Generation: Residential 1 Inbound Trips	AM Peak Hour Trip Generation: Residential 1 Outbound Trips	AM Peak Hour Trip Generation: Residential 2 Inbound Trips	AM Peak Hour Trip Generation: Residential 2 Outbound Trips	AM Peak Hour Trip Generation: Institutional 3 Inbound Trips	AM Peak Hour Trip Generation: Institutional 3 Outbound Trips	AM Peak Hour Trip Generation: Retail Inbound Trips	AM Peak Hour Trip Generation: Retail Outbound Trips	PM Peak Hour Trip Generation: Residential 1 Inbound Trips	PM Peak Hour Trip Generation: Residential 1 Outbound Trips	PM Peak Hour Trip Generation: Residential 2 Inbound Trips	PM Peak Hour Trip Generation: Residential 2 Outbound Trips	PM Peak Hour Trip Generation: Institutional Inbound Trips	PM Peak Hour Trip Generation: Institutional Outbound Trips	PM Peak Hour Trip Generation: Retail Inbound Trips	PM Peak Hour Trip Generation: Retail Outbound Trips
		(A)	(B)	(C) =(A)*(B)	(D) =(A)*43560/1000	(E)	(F) =(D)*(E)	(G) =(C)*.75*.25	(H) =(C)*.75*.75	(I) =(C)*.51*.2	(J) =(C)*.51*.8	(K) +[(F)*.33*4.35*.5	(L) +[(F)*.33*4.35*.4	(M) =(F)*.96*.62	(N) =(F)*.96*.38	(O) =(C)*1.0*.63	(P) =(C)*1.0*.37	(Q) =(C)*.62*.65	(R) =(C)*.62*.35	(S) +[(F)*.33*1.19*.5	(T) +[(F)*.33*1.19*.4	(U) =(F)*3.71*.48	(V) =(F)*3.71*.52
								Residential 1		Residential 2		Institutional 3		Retail		Residential 1		Residential 2		Institutional		Retail	
								Inbound Trips	Outbound Trips	Inbound Trips	Outbound Trips	Inbound Trips	Outbound Trips	Inbound Trips	Outbound Trips	Inbound Trips	Outbound Trips	Inbound Trips	Outbound Trips	Inbound Trips	Outbound Trips	Inbound Trips	Outbound Trips
1	Residential 1	18	3.0	54				10	30							34	20						
	Residential 2	40	6.0	240						24	98							97	52				
	Institutional	22			958	0.25	240					296	210							155	156		
	Retail	40			1,742	0.2	348							207	127							621	672
	SUBTOTAL	120		294	2,701		588	10	30	24	98	296	210	207	127	34	20	97	52	155	156	621	672
2	Residential 1	15	3.0	45				8	25							28	17						
	Residential 2	25	6.0	150						15	61							60	33				
	Institutional	0			0	0.25	0					0	0							0	0		
	Retail	80			3,485	0.2	697							415	254							1,241	1,345
	SUBTOTAL	120		195	3,485		697	8	25	15	61	0	0	415	254	28	17	60	33	0	0	1,241	1,345
3	Residential 1	45	3.0	135				25	76							85	50						
	Residential 2	45	6.0	270						28	110							109	59				
	Institutional	0			0	0.25	0					0	0							0	0		
	Retail	30			1,307	0.2	261							156	95							465	504
	SUBTOTAL	120		405	1,307		261	25	76	28	110	0	0	156	95	85	50	109	59	0	0	465	504
4	Residential 1	0	3.0	0				0	0							0	0						
	Residential 2	35	6.0	210						21	86							85	46				
	Institutional	0			0	0.25	0					0	0							0	0		
	Retail	30			1,307	0.2	261							156	95							465	504
	SUBTOTAL	65		210	1,307		261	0	0	21	86	0	0	156	95	0	0	85	46	0	0	465	504
5	Residential 1	29	3.0	87				16	49							55	32						
	Residential 2	0	6.0	0						0	0							0	0				
	Institutional	0			0	0.25	0					0	0							0	0		
	Retail	0			0	0.2	0							0	0							0	0
	SUBTOTAL	29		87	0		0	16	49	0	0	0	0	0	0	55	32	0	0	0	0	0	0
6	Residential 1	80	3.0	240				45	135							151	89						
	Residential 2	0	6.0	0						0	0							0	0				
	Institutional	0			0	0.25	0					0	0							0	0		
	Retail	0			0	0.2	0							0	0							0	0
	SUBTOTAL	80		240	0		0	45	135	0	0	0	0	0	0	151	89	0	0	0	0	0	0
7	Residential 1	90	3.0	270				51	152							170	100						
	Residential 2	0	6.0	0						0	0							0	0				
	Institutional	0			0	0.25	0					0	0							0	0		
	Retail	0			0	0.2	0							0	0							0	0
	SUBTOTAL	90		270	0		0	51	152	0	0	0	0	0	0	170	100	0	0	0	0	0	0
8	Residential 1	85	3.0	255				48	143							161	94						
	Residential 2	0	6.0	0						0	0							0	0				
	Institutional	0			0	0.25	0					0	0							0	0		
	Retail	0			0	0.2	0							0	0							0	0
	SUBTOTAL	85		255	0		0	48	143	0	0	0	0	0	0	161	94	0	0	0	0	0	0
9	Residential 1	40	3.0	120				23	68							76	44						
	Residential 2	0	6.0	0						0	0							0	0				
	Institutional	0			0	0.25	0					0	0							0	0		
	Retail	5			218	0.2	44							26	16							78	84
	SUBTOTAL	45		120	218		44	23	68	0	0	0	0	26	16	76	44	0	0	0	0	78	84
10	Residential 1	5	3.0	15				3	8							9	6						
	Residential 2	0	6.0	0						0	0							0	0				
	Institutional	0			0	0.25	0					0	0							0	0		
	Retail	5			218	0.2	44							26	16							78	84
	SUBTOTAL	10		15	218		44	3	8	0	0	0	0	26	16	9	6	0	0	0	0	78	84
	TOTAL	**764**		**2,091**	**9,235**		**1,895**	**229**	**687**	**89**	**355**	**296**	**210**	**985**	**604**	**769**	**452**	**351**	**189**	**155**	**156**	**2,948**	**3,193**

Note: See Figure 1 for zone locations.

(a) - Residential 1 generally contains single-family detached units as defined by ITE Land Use Code 210.
Residential 2 generally contains multi-family apartment units as defined by ITE Land Use Code 220.
Institutional in this study consists of 1/3 recreational community center (ITE Land Use Code 495), 1/3 public school (ITE Land Use Code 522), and 1/3 public park (ITE Land Use Code 412).
Retail generally consists of shopping center development as defined by ITE Land Use Code 820.

Capacity Analysis Worksheets
Existing Traffic Conditions

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Volume (veh/h)	1	4	9	27	24	14
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1	4	9	28	25	15
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	80	33	40			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	80	33	40			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	99			
cM capacity (veh/h)	917	1041	1570			

Direction, Lane #	SB 1	NE 1	SW 1
Volume Total	5	38	40
Volume Left	1	9	0
Volume Right	4	0	15
cSH	1014	1570	1700
Volume to Capacity	0.01	0.01	0.02
Queue Length 95th (ft)	0	0	0
Control Delay (s)	8.6	1.9	0.0
Lane LOS	A	A	
Approach Delay (s)	8.6	1.9	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	18.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Volume (veh/h)	0	6	5	25	27	17
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	6	5	26	28	18
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	74	37	46			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	74	37	46			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	99	100			
cM capacity (veh/h)	926	1035	1561			

Direction, Lane #	SB 1	NE 1	SW 1
Volume Total	6	32	46
Volume Left	0	5	0
Volume Right	6	0	18
cSH	1035	1561	1700
Volume to Capacity	0.01	0.00	0.03
Queue Length 95th (ft)	0	0	0
Control Delay (s)	8.5	1.2	0.0
Lane LOS	A	A	
Approach Delay (s)	8.5	1.2	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	15.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	8	5	2	14	13	8
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	8	5	2	15	14	8
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	37	18	22			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	37	18	22			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	100	100			
cM capacity (veh/h)	974	1061	1593			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	14	17	22
Volume Left	8	2	0
Volume Right	5	0	8
cSH	1006	1593	1700
Volume to Capacity	0.01	0.00	0.01
Queue Length 95th (ft)	1	0	0
Control Delay (s)	8.6	0.9	0.0
Lane LOS	A	A	
Approach Delay (s)	8.6	0.9	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	2.5		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	10	6	4	22	16	12
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	11	6	4	23	17	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	55	23	29			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	55	23	29			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	99	100			
cM capacity (veh/h)	951	1054	1584			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	17	27	29
Volume Left	11	4	0
Volume Right	6	0	13
cSH	987	1584	1700
Volume to Capacity	0.02	0.00	0.02
Queue Length 95th (ft)	1	0	0
Control Delay (s)	8.7	1.1	0.0
Lane LOS	A	A	
Approach Delay (s)	8.7	1.1	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	14.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	1	4	1	19	17	1
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1	4	1	20	18	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	41	18	19			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	41	18	19			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	970	1060	1598			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	5	21	19
Volume Left	1	1	0
Volume Right	4	0	1
cSH	1041	1598	1700
Volume to Capacity	0.01	0.00	0.01
Queue Length 95th (ft)	0	0	0
Control Delay (s)	8.5	0.4	0.0
Lane LOS	A	A	
Approach Delay (s)	8.5	0.4	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	2	0	31	27	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	2	0	33	28	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	61	28	28			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	61	28	28			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	945	1047	1585			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	2	33	28
Volume Left	0	0	0
Volume Right	2	0	0
cSH	1047	1585	1700
Volume to Capacity	0.00	0.00	0.02
Queue Length 95th (ft)	0	0	0
Control Delay (s)	8.4	0.0	0.0
Lane LOS	A		
Approach Delay (s)	8.4	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	19	6	4	16	12	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	20	6	4	17	13	16
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	46	21	28			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	46	21	28			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	99	100			
cM capacity (veh/h)	962	1057	1585			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	26	21	28
Volume Left	20	4	0
Volume Right	6	0	16
cSH	983	1585	1700
Volume to Capacity	0.03	0.00	0.02
Queue Length 95th (ft)	2	0	0
Control Delay (s)	8.8	1.5	0.0
Lane LOS	A	A	
Approach Delay (s)	8.8	1.5	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	3.5		
Intersection Capacity Utilization	14.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	23	4	7	24	23	38
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	24	4	7	25	24	40
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	84	44	64			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	84	44	64			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	100	100			
cM capacity (veh/h)	913	1026	1538			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	28	33	64
Volume Left	24	7	0
Volume Right	4	0	40
cSH	928	1538	1700
Volume to Capacity	0.03	0.00	0.04
Queue Length 95th (ft)	2	0	0
Control Delay (s)	9.0	1.7	0.0
Lane LOS	A	A	
Approach Delay (s)	9.0	1.7	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	2.5		
Intersection Capacity Utilization	17.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	5	155	1	25	107	5	3	6	40	4	4	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	5	163	1	26	113	5	3	6	42	4	4	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	118			164			348	345	164	387	343	115
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	118			164			348	345	164	387	343	115
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			99	99	95	99	99	100
cM capacity (veh/h)	1470			1414			590	565	881	530	567	937

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	169	144	52	13
Volume Left	5	26	3	4
Volume Right	1	5	42	4
cSH	1470	1414	802	636
Volume to Capacity	0.00	0.02	0.06	0.02
Queue Length 95th (ft)	0	1	5	2
Control Delay (s)	0.3	1.5	9.8	10.8
Lane LOS	A	A	A	B
Approach Delay (s)	0.3	1.5	9.8	10.8
Approach LOS			A	B

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	28.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	5	141	2	43	202	14	7	10	39	9	19	10
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	5	148	2	45	213	15	7	11	41	9	20	11
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	227			151			491	478	149	517	472	220
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	227			151			491	478	149	517	472	220
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			98	98	95	98	96	99
cM capacity (veh/h)	1341			1431			453	469	897	428	473	820

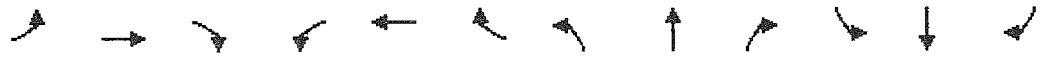
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	156	273	59	40
Volume Left	5	45	7	9
Volume Right	2	15	41	11
cSH	1341	1431	698	518
Volume to Capacity	0.00	0.03	0.08	0.08
Queue Length 95th (ft)	0	2	7	6
Control Delay (s)	0.3	1.5	10.6	12.5
Lane LOS	A	A	B	B
Approach Delay (s)	0.3	1.5	10.6	12.5
Approach LOS			B	B

Intersection Summary			
Average Delay	3.0		
Intersection Capacity Utilization	35.5%	ICU Level of Service	A
Analysis Period (min)	15		

Capacity Analysis Worksheets

Projected 2040 Traffic Conditions

No I-80 Interchange Scenario



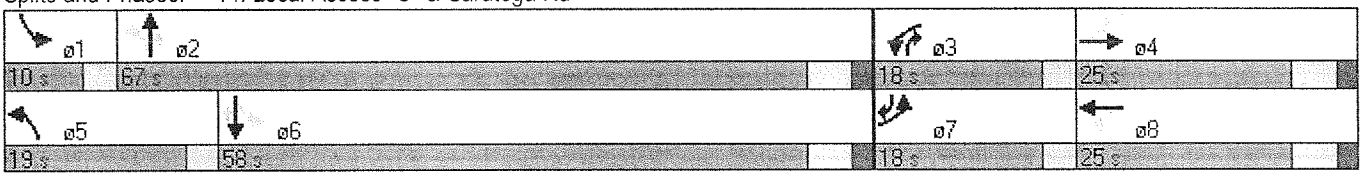
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	10	145	45	10	35	140	145	30	25	105	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	150		150	150		150
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.860			0.884				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1602	0	1770	1647	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.657			0.526			0.660			0.660		
Satd. Flow (perm)	1224	1602	0	980	1647	0	1229	1863	1583	1229	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		153			37				32			74
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1715			1890			1365			1356	
Travel Time (s)		39.0			43.0			31.0			30.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	11	153	47	11	37	147	153	32	26	111	74
Shared Lane Traffic (%)												
Lane Group Flow (vph)	63	164	0	47	48	0	147	153	32	26	111	74
Turn Type	pm+pt			pm+pt			pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	22.0		8.0	22.0		8.0	22.0	8.0	8.0	22.0	8.0
Total Split (s)	18.0	25.0	0.0	18.0	25.0	0.0	19.0	67.0	18.0	10.0	58.0	18.0
Total Split (%)	15.0%	20.8%	0.0%	15.0%	20.8%	0.0%	15.8%	55.8%	15.0%	8.3%	48.3%	15.0%
Maximum Green (s)	15.0	19.0		15.0	19.0		16.0	61.0	15.0	7.0	52.0	15.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0	3.0	3.0	4.0	3.0
All-Red Time (s)	0.0	2.0		0.0	2.0		0.0	2.0	0.0	0.0	2.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	4.0	3.0	6.0	4.0	3.0	6.0	3.0	3.0	6.0	3.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max	None	None	C-Max	None
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	19.2	8.4		17.6	7.6		93.0	84.6	98.7	88.0	79.0	94.0
Actuated g/C Ratio	0.16	0.07		0.15	0.06		0.78	0.70	0.82	0.73	0.66	0.78
v/c Ratio	0.27	0.65		0.24	0.35		0.15	0.12	0.02	0.03	0.09	0.06
Control Delay	42.3	22.1		41.6	28.5		7.8	12.0	5.0	4.7	9.5	1.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.3	22.1		41.6	28.5		7.8	12.0	5.0	4.7	9.5	1.2
LOS	D	C		D	C		A	B	A	A	A	A

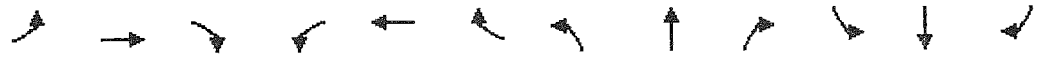
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		27.7			35.0			9.5			6.0	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)	42	8		31	8		52	64	0	4	29	0
Queue Length 95th (ft)	76	74		60	46		94	111	23	14	67	13
Internal Link Dist (ft)		1635			1810			1285			1276	
Turn Bay Length (ft)	150			150			150		150	150		150
Base Capacity (vph)	293	382		279	292		1027	1314	1388	944	1227	1332
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.43		0.17	0.16		0.14	0.12	0.02	0.03	0.09	0.06

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.65
Intersection Signal Delay: 16.2 Intersection LOS: B
Intersection Capacity Utilization 42.8% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 14: Local Access "C" & Saratoga Rd





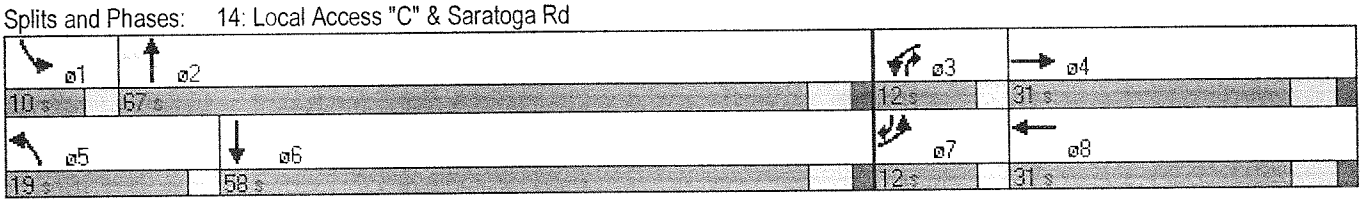
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	10	175	85	10	80	200	310	95	85	340	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	150		150	150		150
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.858			0.867				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1598	0	1770	1615	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.669			0.482			0.494			0.557		
Satd. Flow (perm)	1246	1598	0	898	1615	0	920	1863	1583	1038	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		184			84				100			111
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1715			1890			1365			813	
Travel Time (s)		39.0			43.0			31.0			18.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	105	11	184	89	11	84	211	326	100	89	358	111
Shared Lane Traffic (%)												
Lane Group Flow (vph)	105	195	0	89	95	0	211	326	100	89	358	111
Turn Type	pm+pt			pm+pt			pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	22.0		8.0	22.0		8.0	22.0	8.0	8.0	22.0	8.0
Total Split (s)	12.0	31.0	0.0	12.0	31.0	0.0	19.0	67.0	12.0	10.0	58.0	12.0
Total Split (%)	10.0%	25.8%	0.0%	10.0%	25.8%	0.0%	15.8%	55.8%	10.0%	8.3%	48.3%	10.0%
Maximum Green (s)	9.0	25.0		9.0	25.0		16.0	61.0	9.0	7.0	52.0	9.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0	3.0	3.0	4.0	3.0
All-Red Time (s)	0.0	2.0		0.0	2.0		0.0	2.0	0.0	0.0	2.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	4.0	3.0	6.0	4.0	3.0	6.0	3.0	3.0	6.0	3.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max	None	None	C-Max	None
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	20.1	8.4		19.9	8.3		90.3	77.9	92.4	85.5	75.4	90.0
Actuated g/C Ratio	0.17	0.07		0.17	0.07		0.75	0.65	0.77	0.71	0.63	0.75
v/c Ratio	0.43	0.69		0.42	0.50		0.28	0.27	0.08	0.11	0.31	0.09
Control Delay	46.2	21.8		46.4	22.7		3.7	7.0	0.2	4.8	12.2	1.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.2	21.8		46.4	22.7		3.7	7.0	0.2	4.8	12.2	1.3
LOS	D	C		D	C		A	A	A	A	B	A

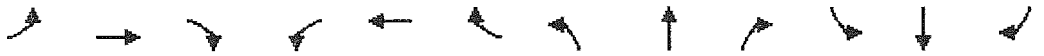
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		30.4			34.2			4.8			8.8	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)	72	8		60	8		19	42	0	14	113	0
Queue Length 95th (ft)	116	79		101	59		48	125	0	35	215	18
Internal Link Dist (ft)		1635			1810			1285			733	
Turn Bay Length (ft)	150			150			150		150	150		150
Base Capacity (vph)	251	479		217	403		811	1209	1248	789	1170	1219
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.41		0.41	0.24		0.26	0.27	0.08	0.11	0.31	0.09

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 8 (7%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 13.9 Intersection LOS: B
Intersection Capacity Utilization 61.7% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 14: Local Access "C" & Saratoga Rd





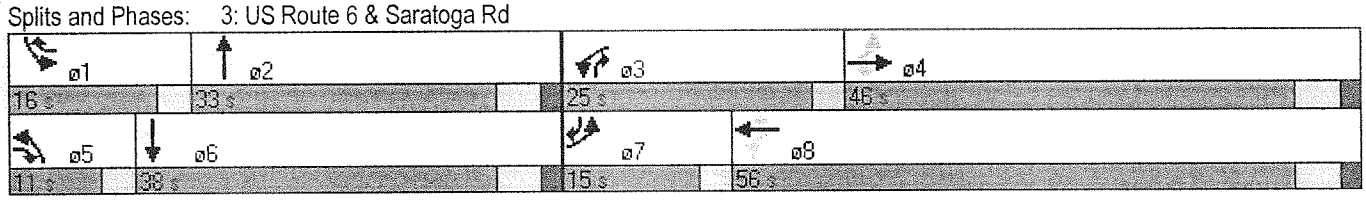
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	405	80	145	325	120	125	150	290	130	115	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	350		150	200		200	200		150
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3343	1583	1770	3343	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.546			0.275			0.679			0.655		
Satd. Flow (perm)	1017	3343	1583	512	3343	1583	1265	1863	1583	1220	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			84			126			285			53
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2828			2772			1490			1365	
Travel Time (s)		64.3			63.0			33.9			31.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	8%	2%	2%	8%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	47	426	84	153	342	126	132	158	305	137	121	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	47	426	84	153	342	126	132	158	305	137	121	53
Turn Type	pm+pt		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	22.0	8.0	8.0	22.0	8.0	8.0	22.0	8.0	8.0	22.0	8.0
Total Split (s)	15.0	46.0	11.0	25.0	56.0	16.0	11.0	33.0	25.0	16.0	38.0	15.0
Total Split (%)	12.5%	38.3%	9.2%	20.8%	46.7%	13.3%	9.2%	27.5%	20.8%	13.3%	31.7%	12.5%
Maximum Green (s)	12.0	40.0	8.0	22.0	50.0	13.0	8.0	27.0	22.0	13.0	32.0	12.0
Yellow Time (s)	3.0	4.0	3.0	3.0	4.0	3.0	3.0	4.0	3.0	3.0	4.0	3.0
All-Red Time (s)	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	3.0	3.0	6.0	3.0	3.0	6.0	3.0	3.0	6.0	3.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	None	None	C-Max	None
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	31.3	20.8	36.3	40.4	28.6	44.3	70.4	57.9	77.6	70.7	58.1	71.6
Actuated g/C Ratio	0.26	0.17	0.30	0.34	0.24	0.37	0.59	0.48	0.65	0.59	0.48	0.60
v/c Ratio	0.15	0.74	0.16	0.48	0.43	0.19	0.17	0.18	0.27	0.18	0.13	0.05
Control Delay	25.9	54.7	6.0	32.7	40.1	4.2	7.9	15.5	3.0	16.2	27.6	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.9	54.7	6.0	32.7	40.1	4.2	7.9	15.5	3.0	16.2	27.6	8.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	C	D	A	C	D	A	A	B	A	B	C	A
Approach Delay		44.9			31.0			7.4			19.3	
Approach LOS		D			C			A			B	
Queue Length 50th (ft)	25	166	0	86	121	0	22	60	34	52	61	1
Queue Length 95th (ft)	46	212	33	121	153	34	39	126	94	122	131	32
Internal Link Dist (ft)		2748			2692			1410			1285	
Turn Bay Length (ft)	150		150	350		150	200		200	200		150
Base Capacity (vph)	379	1114	541	403	1393	705	787	899	1214	801	901	1023
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.38	0.16	0.38	0.25	0.18	0.17	0.18	0.25	0.17	0.13	0.05

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 60 (50%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 26.2 Intersection LOS: C
Intersection Capacity Utilization 51.0% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: US Route 6 & Saratoga Rd



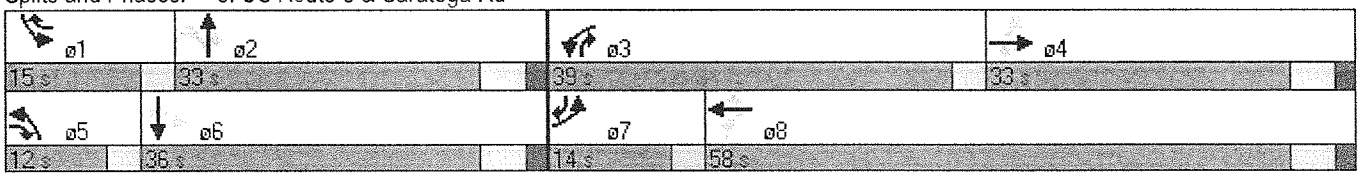
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	125	580	195	415	675	215	170	265	320	190	290	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	350		150	200		200	200		150
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3343	1583	1770	3343	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.381			0.170			0.423			0.408		
Satd. Flow (perm)	710	3343	1583	317	3343	1583	788	1863	1583	760	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			205			226			104			126
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2828			2772			1490			1365	
Travel Time (s)		64.3			63.0			33.9			31.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	8%	2%	2%	8%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	132	611	205	437	711	226	179	279	337	200	305	126
Shared Lane Traffic (%)												
Lane Group Flow (vph)	132	611	205	437	711	226	179	279	337	200	305	126
Turn Type	pm+pt		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	22.0	8.0	8.0	22.0	8.0	8.0	22.0	8.0	8.0	22.0	8.0
Total Split (s)	14.0	33.0	12.0	39.0	58.0	15.0	12.0	33.0	39.0	15.0	36.0	14.0
Total Split (%)	11.7%	27.5%	10.0%	32.5%	48.3%	12.5%	10.0%	27.5%	32.5%	12.5%	30.0%	11.7%
Maximum Green (s)	11.0	27.0	9.0	36.0	52.0	12.0	9.0	27.0	36.0	12.0	30.0	11.0
Yellow Time (s)	3.0	4.0	3.0	3.0	4.0	3.0	3.0	4.0	3.0	3.0	4.0	3.0
All-Red Time (s)	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	3.0	3.0	6.0	3.0	3.0	6.0	3.0	3.0	6.0	3.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	None	None	C-Max	None
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	38.9	26.2	42.3	61.1	45.3	63.1	48.3	35.2	70.0	51.6	36.8	52.5
Actuated g/C Ratio	0.32	0.22	0.35	0.51	0.38	0.53	0.40	0.29	0.58	0.43	0.31	0.44
v/c Ratio	0.42	0.84	0.30	0.86	0.56	0.24	0.45	0.51	0.35	0.47	0.53	0.16
Control Delay	21.5	55.8	4.7	42.8	30.7	2.1	27.8	42.0	12.5	27.8	39.7	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.5	55.8	4.7	42.8	30.7	2.1	27.8	42.0	12.5	27.8	39.7	9.7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	C	E	A	D	C	A	C	D	B	C	D	A
Approach Delay		40.0			29.8			26.3			29.9	
Approach LOS		D			C			C			C	
Queue Length 50th (ft)	51	235	0	244	221	0	94	181	80	101	198	10
Queue Length 95th (ft)	75	307	51	341	261	32	160	301	183	181	302	53
Internal Link Dist (ft)		2748			2692			1410			1285	
Turn Bay Length (ft)	150		150	350		150	200		200	200		150
Base Capacity (vph)	335	775	693	597	1449	948	402	546	1055	435	572	780
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.79	0.30	0.73	0.49	0.24	0.45	0.51	0.32	0.46	0.53	0.16

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 78 (65%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 31.7 Intersection LOS: C
Intersection Capacity Utilization 80.4% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 3: US Route 6 & Saratoga Rd



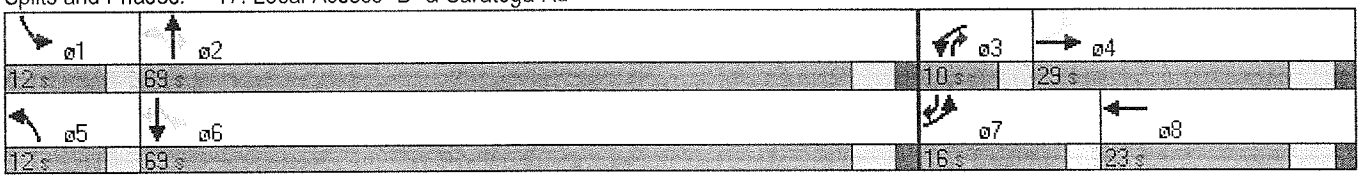
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	10	35	20	10	35	30	460	25	120	620	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	150		150	150		150
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.884			0.884				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1647	0	1770	1647	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.481			0.726			0.355			0.412		
Satd. Flow (perm)	896	1647	0	1352	1647	0	661	1863	1583	767	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		37			37				26			168
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		773			834			1493			1490	
Travel Time (s)		17.6			19.0			33.9			33.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	74	11	37	21	11	37	32	484	26	126	653	168
Shared Lane Traffic (%)												
Lane Group Flow (vph)	74	48	0	21	48	0	32	484	26	126	653	168
Turn Type	pm+pt			pm+pt			pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	22.0		8.0	22.0		8.0	22.0	8.0	8.0	22.0	8.0
Total Split (s)	16.0	29.0	0.0	10.0	23.0	0.0	12.0	69.0	10.0	12.0	69.0	16.0
Total Split (%)	13.3%	24.2%	0.0%	8.3%	19.2%	0.0%	10.0%	57.5%	8.3%	10.0%	57.5%	13.3%
Maximum Green (s)	13.0	23.0		7.0	17.0		9.0	63.0	7.0	9.0	63.0	13.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0	3.0	3.0	4.0	3.0
All-Red Time (s)	0.0	2.0		0.0	2.0		0.0	2.0	0.0	0.0	2.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	4.0	3.0	6.0	4.0	3.0	6.0	3.0	3.0	6.0	3.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max	None	None	C-Max	None
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	20.9	12.0		14.7	7.0		88.4	79.3	91.7	92.6	84.4	101.3
Actuated g/C Ratio	0.17	0.10		0.12	0.06		0.74	0.66	0.76	0.77	0.70	0.84
v/c Ratio	0.32	0.24		0.11	0.37		0.06	0.39	0.02	0.19	0.50	0.12
Control Delay	43.8	23.3		39.2	30.3		4.7	11.9	2.1	5.3	12.1	0.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.8	23.3		39.2	30.3		4.7	11.9	2.1	5.3	12.1	0.7
LOS	D	C		D	C		A	B	A	A	B	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		35.7			33.0			11.0			9.2	
Approach LOS		D			C			B			A	
Queue Length 50th (ft)	49	8		14	8		5	163	0	19	231	0
Queue Length 95th (ft)	88	44		34	47		16	285	9	51	440	15
Internal Link Dist (ft)		693			754			1413			1410	
Turn Bay Length (ft)	150			150			150		150	150		150
Base Capacity (vph)	258	346		196	265		586	1232	1224	671	1311	1384
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.14		0.11	0.18		0.05	0.39	0.02	0.19	0.50	0.12

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.50
Intersection Signal Delay: 12.7 Intersection LOS: B
Intersection Capacity Utilization 59.8% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 17: Local Access "B" & Saratoga Rd



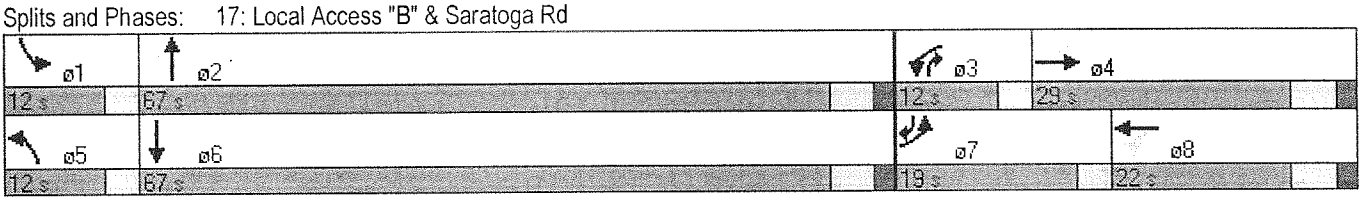
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	145	10	85	80	10	120	90	490	80	120	620	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	150		150	150		150
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.866			0.862				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1613	0	1770	1606	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.367			0.692			0.301			0.383		
Satd. Flow (perm)	684	1613	0	1289	1606	0	561	1863	1583	713	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		89			126				84			168
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		773			834			1493			1490	
Travel Time (s)		17.6			19.0			33.9			33.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	153	11	89	84	11	126	95	516	84	126	653	168
Shared Lane Traffic (%)												
Lane Group Flow (vph)	153	100	0	84	137	0	95	516	84	126	653	168
Turn Type	pm+pt			pm+pt			pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	22.0		8.0	22.0		8.0	22.0	8.0	8.0	22.0	8.0
Total Split (s)	19.0	29.0	0.0	12.0	22.0	0.0	12.0	67.0	12.0	12.0	67.0	19.0
Total Split (%)	15.8%	24.2%	0.0%	10.0%	18.3%	0.0%	10.0%	55.8%	10.0%	10.0%	55.8%	15.8%
Maximum Green (s)	16.0	23.0		9.0	16.0		9.0	61.0	9.0	9.0	61.0	16.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0	3.0	3.0	4.0	3.0
All-Red Time (s)	0.0	2.0		0.0	2.0		0.0	2.0	0.0	0.0	2.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	4.0	3.0	6.0	4.0	3.0	6.0	3.0	3.0	6.0	3.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max	None	None	C-Max	None
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	27.5	13.1		19.3	7.8		82.7	72.2	86.7	84.2	72.9	92.7
Actuated g/C Ratio	0.23	0.11		0.16	0.06		0.69	0.60	0.72	0.70	0.61	0.77
v/c Ratio	0.54	0.39		0.35	0.61		0.21	0.46	0.07	0.22	0.58	0.13
Control Delay	45.3	16.4		40.1	23.4		7.0	16.2	1.7	5.6	12.7	0.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.3	16.4		40.1	23.4		7.0	16.2	1.7	5.6	12.7	0.2
LOS	D	B		D	C		A	B	A	A	B	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		33.9			29.8			13.2			9.5	
Approach LOS		C			C			B			A	
Queue Length 50th (ft)	101	8		53	8		19	204	0	14	130	0
Queue Length 95th (ft)	151	57		90	69		44	357	18	m44	393	m0
Internal Link Dist (ft)		693			754			1413			1410	
Turn Bay Length (ft)	150			150			150		150	150		150
Base Capacity (vph)	302	381		249	323		486	1121	1173	589	1132	1287
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.26		0.34	0.42		0.20	0.46	0.07	0.21	0.58	0.13

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 104 (87%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 15.7 Intersection LOS: B
Intersection Capacity Utilization 70.3% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

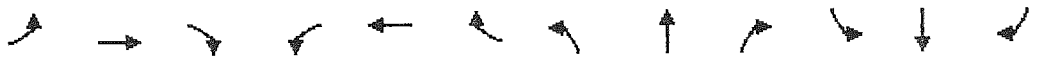
Splits and Phases: 17: Local Access "B" & Saratoga Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	5	10	15	5	15	4	470	5	5	280	20
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	32	5	11	16	5	16	4	495	5	5	295	21
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	827	814	295	822	829	495	316			500		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	827	814	295	822	829	495	316			500		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	89	98	99	94	98	97	100			100		
cM capacity (veh/h)	277	310	745	283	303	575	1244			1064		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	47	37	4	495	5	5	295	21
Volume Left	32	16	4	0	0	5	0	0
Volume Right	11	16	0	0	5	0	0	21
cSH	327	366	1244	1700	1700	1064	1700	1700
Volume to Capacity	0.15	0.10	0.00	0.29	0.00	0.00	0.17	0.01
Queue Length 95th (ft)	13	8	0	0	0	0	0	0
Control Delay (s)	17.9	15.9	7.9	0.0	0.0	8.4	0.0	0.0
Lane LOS	C	C	A			A		
Approach Delay (s)	17.9	15.9	0.1			0.1		
Approach LOS	C	C						

Intersection Summary				
Average Delay	1.7			
Intersection Capacity Utilization	35.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	5	5	10	5	10	10	620	15	15	720	50
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	32	5	5	11	5	11	11	653	16	16	758	53
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1476	1479	758	1471	1516	653	811			668		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1476	1479	758	1471	1516	653	811			668		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	67	96	99	89	95	98	99			98		
cM capacity (veh/h)	96	122	407	98	116	468	815			921		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	42	26	11	653	16	16	758	53
Volume Left	32	11	11	0	0	16	0	0
Volume Right	5	11	0	0	16	0	0	53
cSH	110	150	815	1700	1700	921	1700	1700
Volume to Capacity	0.38	0.18	0.01	0.38	0.01	0.02	0.45	0.03
Queue Length 95th (ft)	39	15	1	0	0	1	0	0
Control Delay (s)	57.1	34.0	9.5	0.0	0.0	9.0	0.0	0.0
Lane LOS	F	D	A			A		
Approach Delay (s)	57.1	34.0	0.1			0.2		
Approach LOS	F	D						

Intersection Summary				
Average Delay	2.2			
Intersection Capacity Utilization	48.5%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	5	10	15	5	40	5	420	5	15	280	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	21	5	11	16	5	42	5	442	5	16	295	11
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	824	784	295	792	789	442	305			447		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	824	784	295	792	789	442	305			447		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	92	98	99	95	98	93	100			99		
cM capacity (veh/h)	265	319	745	295	317	615	1256			1113		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	37	63	5	442	5	16	295	11
Volume Left	21	16	5	0	0	16	0	0
Volume Right	11	42	0	0	5	0	0	11
cSH	335	456	1256	1700	1700	1113	1700	1700
Volume to Capacity	0.11	0.14	0.00	0.26	0.00	0.01	0.17	0.01
Queue Length 95th (ft)	9	12	0	0	0	1	0	0
Control Delay (s)	17.1	14.2	7.9	0.0	0.0	8.3	0.0	0.0
Lane LOS	C	B	A			A		
Approach Delay (s)	17.1	14.2	0.1			0.4		
Approach LOS	C	B						

Intersection Summary				
Average Delay	1.9			
Intersection Capacity Utilization	32.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	15	5	5	10	5	25	10	605	15	45	670	20
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	16	5	5	11	5	26	11	637	16	47	705	21
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1487	1474	705	1466	1479	637	726			653		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1487	1474	705	1466	1479	637	726			653		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	82	96	99	89	96	94	99			95		
cM capacity (veh/h)	89	119	436	96	118	477	877			934		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	26	42	11	637	16	47	705	21
Volume Left	16	11	11	0	0	47	0	0
Volume Right	5	26	0	0	16	0	0	21
cSH	113	202	877	1700	1700	934	1700	1700
Volume to Capacity	0.23	0.21	0.01	0.37	0.01	0.05	0.41	0.01
Queue Length 95th (ft)	21	19	1	0	0	4	0	0
Control Delay (s)	46.4	27.5	9.2	0.0	0.0	9.1	0.0	0.0
Lane LOS	E	D	A			A		
Approach Delay (s)	46.4	27.5	0.1			0.6		
Approach LOS	E	D						

Intersection Summary				
Average Delay	1.9			
Intersection Capacity Utilization	47.4%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	100	25	20	330	230	75
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	105	26	21	347	242	79
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	632	242	321			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	632	242	321			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	76	97	98			
cM capacity (veh/h)	437	797	1239			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	105	26	21	347	242	79
Volume Left	105	0	21	0	0	0
Volume Right	0	26	0	0	0	79
cSH	437	797	1239	1700	1700	1700
Volume to Capacity	0.24	0.03	0.02	0.20	0.14	0.05
Queue Length 95th (ft)	23	3	1	0	0	0
Control Delay (s)	15.8	9.7	8.0	0.0	0.0	0.0
Lane LOS	C	A	A			
Approach Delay (s)	14.6		0.5		0.0	
Approach LOS	B					

Intersection Summary			
Average Delay	2.5		
Intersection Capacity Utilization	29.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	150	40	55	480	515	170
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	158	42	58	505	542	179
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				TWLTL	None	
Median storage veh)				2		
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1163	542	721			
vC1, stage 1 conf vol	542					
vC2, stage 2 conf vol	621					
vCu, unblocked vol	1163	542	721			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3	2.2			
p0 queue free %	62	92	93			
cM capacity (veh/h)	414	540	881			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	158	42	58	505	542	179
Volume Left	158	0	58	0	0	0
Volume Right	0	42	0	0	0	179
cSH	414	540	881	1700	1700	1700
Volume to Capacity	0.38	0.08	0.07	0.30	0.32	0.11
Queue Length 95th (ft)	44	6	5	0	0	0
Control Delay (s)	19.0	12.2	9.4	0.0	0.0	0.0
Lane LOS	C	B	A			
Approach Delay (s)	17.6		1.0		0.0	
Approach LOS	C					

Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	95	10	45	10	10	100	15	155	5	45	165	45
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	100	11	47	11	11	105	16	163	5	47	174	47
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	574	468	174	516	511	163	221			168		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	574	468	174	516	511	163	221			168		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	72	98	95	98	98	88	99			97		
cM capacity (veh/h)	359	470	870	422	445	882	1348			1409		

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	100	58	11	116	16	163	5	47	174	47
Volume Left	100	0	11	0	16	0	0	47	0	0
Volume Right	0	47	0	105	0	0	5	0	0	47
cSH	359	753	422	809	1348	1700	1700	1409	1700	1700
Volume to Capacity	0.28	0.08	0.02	0.14	0.01	0.10	0.00	0.03	0.10	0.03
Queue Length 95th (ft)	28	6	2	12	1	0	0	3	0	0
Control Delay (s)	18.9	10.2	13.8	10.2	7.7	0.0	0.0	7.6	0.0	0.0
Lane LOS	C	B	B	B	A			A		
Approach Delay (s)	15.7		10.5		0.7			1.3		
Approach LOS	C		B							

Intersection Summary			
Average Delay	5.8		
Intersection Capacity Utilization	33.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	105	10	40	10	10	110	50	320	5	145	270	140
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	111	11	42	11	11	116	53	337	5	153	284	147
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			TWLTL	
Median storage veh)											2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1153	1037	284	1079	1179	337	432			342		
vC1, stage 1 conf vol	589	589		442	442							
vC2, stage 2 conf vol	563	447		637	737							
vCu, unblocked vol	1153	1037	284	1079	1179	337	432			342		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	52	97	94	96	96	84	95			87		
cM capacity (veh/h)	229	330	755	298	295	705	1128			1217		

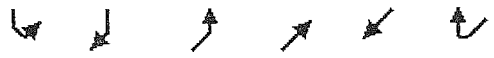
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	111	53	11	126	53	337	5	153	284	147
Volume Left	111	0	11	0	53	0	0	153	0	0
Volume Right	0	42	0	116	0	0	5	0	0	147
cSH	229	600	298	632	1128	1700	1700	1217	1700	1700
Volume to Capacity	0.48	0.09	0.04	0.20	0.05	0.20	0.00	0.13	0.17	0.09
Queue Length 95th (ft)	60	7	3	19	4	0	0	11	0	0
Control Delay (s)	34.7	11.6	17.5	12.1	8.3	0.0	0.0	8.4	0.0	0.0
Lane LOS	D	B	C	B	A			A		
Approach Delay (s)	27.2		12.5		1.1			2.2		
Approach LOS	D		B							

Intersection Summary				
Average Delay	6.2			
Intersection Capacity Utilization	47.4%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	150	70	65	50	40	110
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	158	74	68	53	42	116

Direction, Lane #	SB 1	SB 2	NE 1	NE 2	SW 1	SW 2
Volume Total (vph)	158	74	68	53	42	116
Volume Left (vph)	158	0	68	0	0	0
Volume Right (vph)	0	74	0	0	0	116
Hadj (s)	0.53	-0.67	0.53	0.03	0.03	-0.67
Departure Headway (s)	5.7	4.5	5.8	5.3	5.3	4.6
Degree Utilization, x	0.25	0.09	0.11	0.08	0.06	0.15
Capacity (veh/h)	606	756	586	643	643	743
Control Delay (s)	9.4	6.8	8.4	7.6	7.5	7.2
Approach Delay (s)	8.6		8.0		7.3	
Approach LOS	A		A		A	

Intersection Summary			
Delay	8.0		
HCM Level of Service	A		
Intersection Capacity Utilization	25.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	200	120	130	65	60	245
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	211	126	137	68	63	258

Direction, Lane #	SB 1	SB 2	NE 1	NE 2	SW 1	SW 2
Volume Total (vph)	211	126	137	68	63	258
Volume Left (vph)	211	0	137	0	0	0
Volume Right (vph)	0	126	0	0	0	258
Hadj (s)	0.53	-0.67	0.53	0.03	0.03	-0.67
Departure Headway (s)	6.4	5.2	6.4	5.9	5.8	5.1
Degree Utilization, x	0.37	0.18	0.24	0.11	0.10	0.37
Capacity (veh/h)	541	655	532	576	586	674
Control Delay (s)	11.9	8.1	10.3	8.5	8.3	9.8
Approach Delay (s)	10.5		9.7		9.5	
Approach LOS	B		A		A	

Intersection Summary			
Delay	9.9		
HCM Level of Service	A		
Intersection Capacity Utilization	31.6%	ICU Level of Service	A
Analysis Period (min)	15		

Capacity Analysis Worksheets

Projected 2040 Traffic Conditions

With I-80 Interchange Scenario

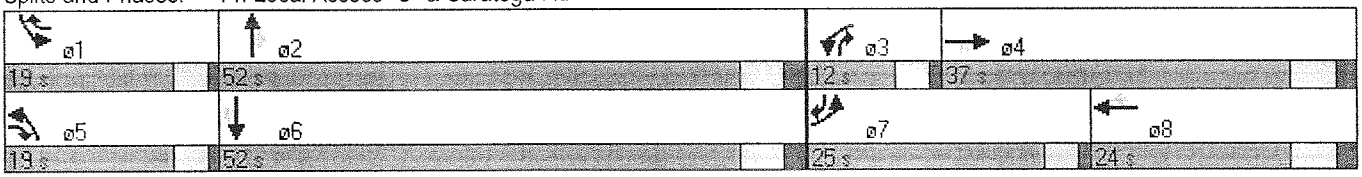
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	160	10	90	40	10	130	95	355	60	175	235	195
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		200	150		200	150		150	250		150
Storage Lanes	2		1	2		2	2		1	2		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	1863	1583	3433	1863	2787	3433	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	1863	1583	3433	1863	2787	3433	3539	1583	3433	3539	1583
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			95						63			205
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1715			1890			1365			813	
Travel Time (s)		39.0			43.0			31.0			18.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	168	11	95	42	11	137	100	374	63	184	247	205
Shared Lane Traffic (%)												
Lane Group Flow (vph)	168	11	95	42	11	137	100	374	63	184	247	205
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	22.0	8.0	8.0	22.0	8.0	8.0	22.0	8.0	8.0	22.0	8.0
Total Split (s)	25.0	37.0	19.0	12.0	24.0	19.0	19.0	52.0	12.0	19.0	52.0	25.0
Total Split (%)	20.8%	30.8%	15.8%	10.0%	20.0%	15.8%	15.8%	43.3%	10.0%	15.8%	43.3%	20.8%
Maximum Green (s)	21.0	31.0	15.0	8.0	18.0	15.0	15.0	46.0	8.0	15.0	46.0	21.0
Yellow Time (s)	3.0	4.0	3.0	3.0	4.0	3.0	3.0	4.0	3.0	3.0	4.0	3.0
All-Red Time (s)	1.0	2.0	1.0	1.0	2.0	1.0	1.0	2.0	1.0	1.0	2.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	None	None	C-Max	None
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	11.2	7.7	15.3	9.4	6.3	14.5	8.9	80.3	95.8	11.7	83.2	100.4
Actuated g/C Ratio	0.09	0.06	0.13	0.08	0.05	0.12	0.07	0.67	0.80	0.10	0.69	0.84
v/c Ratio	0.53	0.09	0.33	0.16	0.11	0.41	0.39	0.16	0.05	0.55	0.10	0.15
Control Delay	57.5	52.4	11.1	52.5	56.2	50.7	54.6	6.5	1.5	57.5	7.5	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.5	52.4	11.1	52.5	56.2	50.7	54.6	6.5	1.5	57.5	7.5	0.8
LOS	E	D	B	D	E	D	D	A	A	E	A	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		41.2			51.4			14.9			19.8	
Approach LOS		D			D			B			B	
Queue Length 50th (ft)	64	8	0	15	8	57	37	38	1	71	27	0
Queue Length 95th (ft)	98	26	42	35	28	79	69	67	0	106	67	19
Internal Link Dist (ft)		1635			1810			1285			733	
Turn Bay Length (ft)	150		200	150		200	150		150	250		150
Base Capacity (vph)	601	481	360	284	279	411	429	2369	1282	429	2453	1470
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.02	0.26	0.15	0.04	0.33	0.23	0.16	0.05	0.43	0.10	0.14

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 37 (31%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.55
Intersection Signal Delay: 25.4 Intersection LOS: C
Intersection Capacity Utilization 39.4% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 14: Local Access "C" & Saratoga Rd



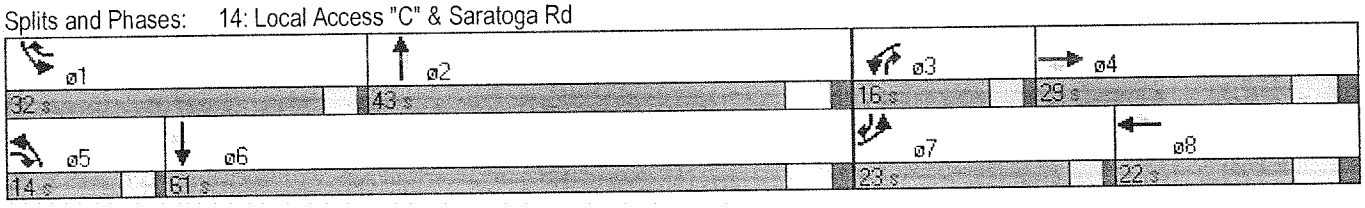
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	345	10	145	185	10	555	150	650	175	520	735	340
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		200	150		200	150		150	250		150
Storage Lanes	2		1	2		2	2		1	2		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	1863	1583	3433	1863	2787	3433	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	1863	1583	3433	1863	2787	3433	3539	1583	3433	3539	1583
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			110						184			358
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1715			1890			1365			813	
Travel Time (s)		39.0			43.0			31.0			18.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	363	11	153	195	11	584	158	684	184	547	774	358
Shared Lane Traffic (%)												
Lane Group Flow (vph)	363	11	153	195	11	584	158	684	184	547	774	358
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	22.0	8.0	8.0	22.0	8.0	8.0	22.0	8.0	8.0	22.0	8.0
Total Split (s)	23.0	29.0	14.0	16.0	22.0	32.0	14.0	43.0	16.0	32.0	61.0	23.0
Total Split (%)	19.2%	24.2%	11.7%	13.3%	18.3%	26.7%	11.7%	35.8%	13.3%	26.7%	50.8%	19.2%
Maximum Green (s)	19.0	23.0	10.0	12.0	16.0	28.0	10.0	37.0	12.0	28.0	55.0	19.0
Yellow Time (s)	3.0	4.0	3.0	3.0	4.0	3.0	3.0	4.0	3.0	3.0	4.0	3.0
All-Red Time (s)	1.0	2.0	1.0	1.0	2.0	1.0	1.0	2.0	1.0	1.0	2.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	None	None	C-Max	None
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	17.2	7.7	14.9	15.8	6.3	32.9	10.8	55.9	77.7	30.2	75.3	98.5
Actuated g/C Ratio	0.14	0.06	0.12	0.13	0.05	0.27	0.09	0.47	0.65	0.25	0.63	0.82
v/c Ratio	0.74	0.09	0.52	0.43	0.11	0.76	0.51	0.41	0.17	0.63	0.35	0.26
Control Delay	58.6	52.1	20.8	51.4	56.2	46.3	50.5	19.9	0.6	43.3	12.5	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.6	52.1	20.8	51.4	56.2	46.3	50.5	19.9	0.6	43.3	12.5	1.0
LOS	E	D	C	D	E	D	D	B	A	D	B	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		47.5			47.7			21.1			20.1	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)	138	8	32	70	8	240	64	117	0	192	135	0
Queue Length 95th (ft)	190	26	78	115	28	261	99	185	5	247	248	26
Internal Link Dist (ft)		1635			1810			1285			733	
Turn Bay Length (ft)	150		200	150		200	150		150	250		150
Base Capacity (vph)	544	357	300	452	248	783	324	1649	1090	887	2220	1382
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.03	0.51	0.43	0.04	0.75	0.49	0.41	0.17	0.62	0.35	0.26

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 81 (68%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 29.4 Intersection LOS: C
Intersection Capacity Utilization 62.6% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 14: Local Access "C" & Saratoga Rd



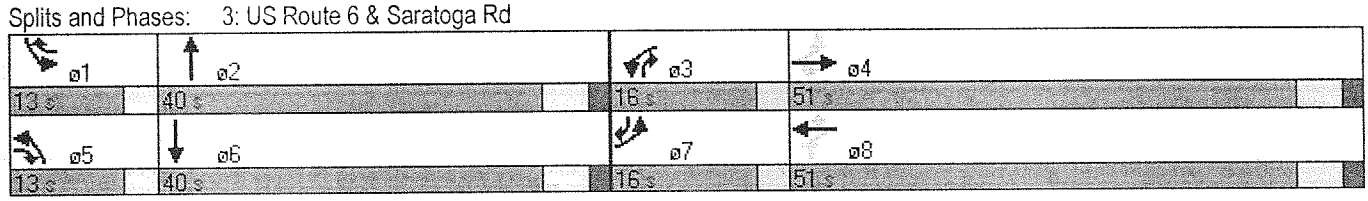
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	425	60	120	330	95	85	340	250	85	225	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	300		150	200		200	250		150
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3343	1583	1770	3343	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.477			0.267			0.604			0.530		
Satd. Flow (perm)	889	3343	1583	497	3343	1583	1125	3539	1583	987	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			63			100			263			58
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2828			2772			1490			1365	
Travel Time (s)		64.3			63.0			33.9			31.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	8%	2%	2%	8%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	79	447	63	126	347	100	89	358	263	89	237	58
Shared Lane Traffic (%)												
Lane Group Flow (vph)	79	447	63	126	347	100	89	358	263	89	237	58
Turn Type	pm+pt		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	22.0	8.0	8.0	22.0	8.0	8.0	22.0	8.0	8.0	22.0	8.0
Total Split (s)	16.0	51.0	13.0	16.0	51.0	13.0	13.0	40.0	16.0	13.0	40.0	16.0
Total Split (%)	13.3%	42.5%	10.8%	13.3%	42.5%	10.8%	10.8%	33.3%	13.3%	10.8%	33.3%	13.3%
Maximum Green (s)	13.0	45.0	10.0	13.0	45.0	10.0	10.0	34.0	13.0	10.0	34.0	13.0
Yellow Time (s)	3.0	4.0	3.0	3.0	4.0	3.0	3.0	4.0	3.0	3.0	4.0	3.0
All-Red Time (s)	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	3.0	3.0	6.0	3.0	3.0	6.0	3.0	3.0	6.0	3.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	None	None	C-Max	None
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	33.8	21.7	35.7	38.2	23.9	37.9	72.0	61.0	78.3	72.0	61.0	76.1
Actuated g/C Ratio	0.28	0.18	0.30	0.32	0.20	0.32	0.60	0.51	0.65	0.60	0.51	0.63
v/c Ratio	0.25	0.74	0.12	0.45	0.52	0.18	0.12	0.20	0.23	0.14	0.13	0.06
Control Delay	28.9	54.0	7.0	33.4	45.3	5.6	8.7	13.9	1.4	9.0	14.9	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.9	54.0	7.0	33.4	45.3	5.6	8.7	13.9	1.4	9.0	14.9	1.9

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	C	D	A	C	D	A	A	B	A	A	B	A
Approach Delay		45.6			35.8			8.7			11.6	
Approach LOS		D			D			A			B	
Queue Length 50th (ft)	43	174	0	70	126	0	23	56	0	23	49	0
Queue Length 95th (ft)	73	219	30	109	168	36	41	80	9	39	75	5
Internal Link Dist (ft)		2748			2692			1410			1285	
Turn Bay Length (ft)	150		150	300		150	200		200	250		150
Base Capacity (vph)	372	1254	542	298	1254	594	747	1798	1142	673	1798	1074
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.36	0.12	0.42	0.28	0.17	0.12	0.20	0.23	0.13	0.13	0.05

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 33 (28%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 25.7 Intersection LOS: C
Intersection Capacity Utilization 49.2% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: US Route 6 & Saratoga Rd



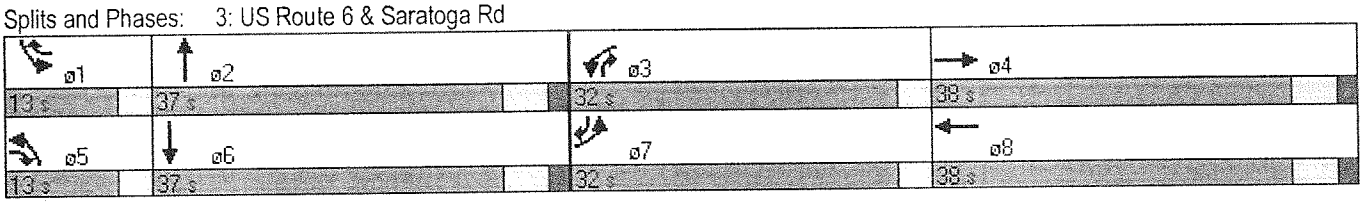
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	175	695	150	355	800	190	140	610	275	175	695	195
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Storage Length (ft)	150		150	300		150	200		200	250		150
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3519	1583	1770	3519	1583	1770	3725	1583	1770	3725	1583
Flt Permitted	0.218			0.126			0.224			0.262		
Satd. Flow (perm)	406	3519	1583	235	3519	1583	417	3725	1583	488	3725	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			104			158			79			84
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2828			2772			1490			1365	
Travel Time (s)		64.3			63.0			33.9			31.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	8%	2%	2%	8%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	184	732	158	374	842	200	147	642	289	184	732	205
Shared Lane Traffic (%)												
Lane Group Flow (vph)	184	732	158	374	842	200	147	642	289	184	732	205
Turn Type	pm+pt		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	22.0	8.0	8.0	22.0	8.0	8.0	22.0	8.0	8.0	22.0	8.0
Total Split (s)	32.0	38.0	13.0	32.0	38.0	13.0	13.0	37.0	32.0	13.0	37.0	32.0
Total Split (%)	26.7%	31.7%	10.8%	26.7%	31.7%	10.8%	10.8%	30.8%	26.7%	10.8%	30.8%	26.7%
Maximum Green (s)	29.0	32.0	10.0	29.0	32.0	10.0	10.0	31.0	29.0	10.0	31.0	29.0
Yellow Time (s)	3.0	4.0	3.0	3.0	4.0	3.0	3.0	4.0	3.0	3.0	4.0	3.0
All-Red Time (s)	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	3.0	3.0	6.0	3.0	3.0	6.0	3.0	3.0	6.0	3.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	None	None	C-Max	None
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	46.5	29.6	45.4	59.4	39.5	56.3	50.6	37.9	67.7	52.6	38.8	58.7
Actuated g/C Ratio	0.39	0.25	0.38	0.50	0.33	0.47	0.42	0.32	0.56	0.44	0.32	0.49
v/c Ratio	0.58	0.84	0.24	0.89	0.73	0.24	0.51	0.55	0.31	0.56	0.61	0.25
Control Delay	25.3	52.7	9.7	53.1	39.2	5.1	24.2	33.6	17.8	31.3	35.5	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.3	52.7	9.7	53.1	39.2	5.1	24.2	33.6	17.8	31.3	35.5	8.7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	C	D	A	D	D	A	C	C	B	C	D	A
Approach Delay		41.7			38.1			28.1			29.9	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)	75	281	26	219	292	16	71	214	124	76	184	14
Queue Length 95th (ft)	106	350	71	318	367	59	136	295	191	181	304	69
Internal Link Dist (ft)		2748			2692			1410			1285	
Turn Bay Length (ft)	150		150	300		150	200		200	250		150
Base Capacity (vph)	528	946	671	487	1160	830	295	1175	992	332	1205	1006
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.77	0.24	0.77	0.73	0.24	0.50	0.55	0.29	0.55	0.61	0.20

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 68 (57%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 34.6 Intersection LOS: C
Intersection Capacity Utilization 80.6% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 3: US Route 6 & Saratoga Rd



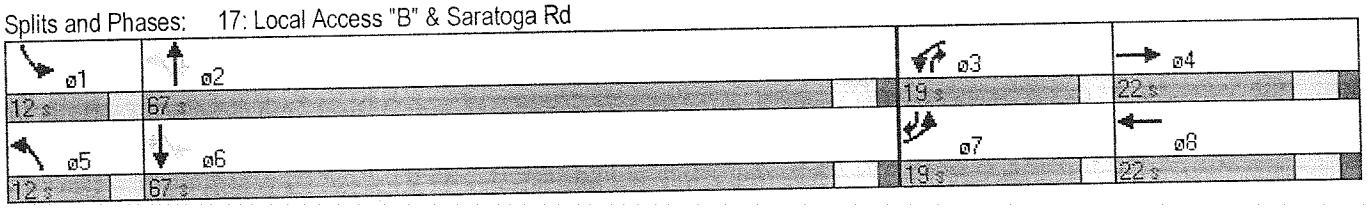
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	10	25	20	10	60	20	515	20	65	265	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	150		0	150		150	150		150
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.895			0.872				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1667	0	1770	1624	0	1770	3539	1583	1770	3539	1583
Flt Permitted	0.478			0.733			0.580			0.423		
Satd. Flow (perm)	890	1667	0	1365	1624	0	1080	3539	1583	788	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26			63				21			79
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		773			834			338			1490	
Travel Time (s)		17.6			19.0			7.7			33.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	105	11	26	21	11	63	21	542	21	68	279	79
Shared Lane Traffic (%)												
Lane Group Flow (vph)	105	37	0	21	74	0	21	542	21	68	279	79
Turn Type	pm+pt			pm+pt			pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	22.0		8.0	22.0		8.0	22.0	8.0	8.0	22.0	8.0
Total Split (s)	19.0	22.0	0.0	19.0	22.0	0.0	12.0	67.0	19.0	12.0	67.0	19.0
Total Split (%)	15.8%	18.3%	0.0%	15.8%	18.3%	0.0%	10.0%	55.8%	15.8%	10.0%	55.8%	15.8%
Maximum Green (s)	16.0	16.0		16.0	16.0		9.0	61.0	16.0	9.0	61.0	16.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0	3.0	3.0	4.0	3.0
All-Red Time (s)	0.0	2.0		0.0	2.0		0.0	2.0	0.0	0.0	2.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	4.0	3.0	6.0	4.0	3.0	6.0	3.0	3.0	6.0	3.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max	None	None	C-Max	None
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	23.0	13.8		15.3	7.3		87.7	79.8	92.5	90.4	84.2	102.9
Actuated g/C Ratio	0.19	0.12		0.13	0.06		0.73	0.66	0.77	0.75	0.70	0.86
v/c Ratio	0.41	0.17		0.11	0.47		0.03	0.23	0.02	0.10	0.11	0.06
Control Delay	43.8	24.0		36.8	26.5		5.4	9.9	2.4	5.1	7.0	1.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.8	24.0		36.8	26.5		5.4	9.9	2.4	5.1	7.0	1.6
LOS	D	C		D	C		A	A	A	A	A	A

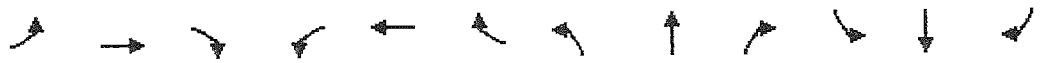
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		38.6			28.8			9.5			5.7	
Approach LOS		D			C			A			A	
Queue Length 50th (ft)	70	8		13	8		4	86	0	13	31	0
Queue Length 95th (ft)	111	39		33	56		13	144	8	28	55	0
Internal Link Dist (ft)		693			754			258			1410	
Turn Bay Length (ft)	200			150			150		150	150		150
Base Capacity (vph)	300	260		325	271		862	2355	1335	670	2484	1399
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.14		0.06	0.27		0.02	0.23	0.02	0.10	0.11	0.06

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 118 (98%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.47
Intersection Signal Delay: 13.0 Intersection LOS: B
Intersection Capacity Utilization 43.4% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 17: Local Access "B" & Saratoga Rd





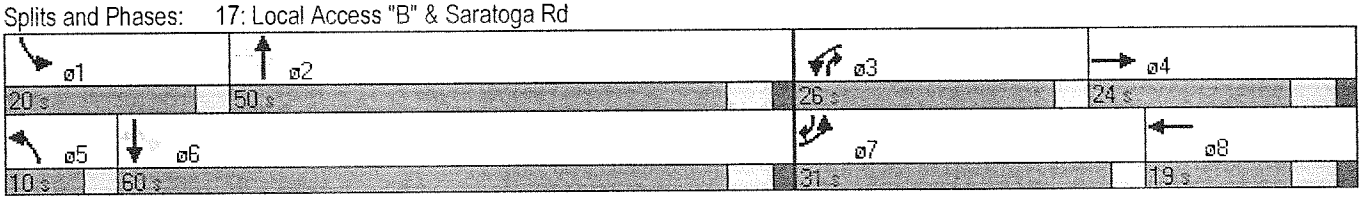
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	220	10	50	50	10	205	65	600	55	185	785	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	150		0	150		150	150		150
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.876			0.857				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1632	0	1770	1596	0	1770	3539	1583	1770	3539	1583
Flt Permitted	0.339			0.715			0.310			0.347		
Satd. Flow (perm)	631	1632	0	1332	1596	0	577	3539	1583	646	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		53			216				58			242
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		773			834			338			1490	
Travel Time (s)		17.6			19.0			7.7			33.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	232	11	53	53	11	216	68	632	58	195	826	242
Shared Lane Traffic (%)												
Lane Group Flow (vph)	232	64	0	53	227	0	68	632	58	195	826	242
Turn Type	pm+pt			pm+pt			pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	22.0		8.0	22.0		8.0	22.0	8.0	8.0	22.0	8.0
Total Split (s)	31.0	24.0	0.0	26.0	19.0	0.0	10.0	50.0	26.0	20.0	60.0	31.0
Total Split (%)	25.8%	20.0%	0.0%	21.7%	15.8%	0.0%	8.3%	41.7%	21.7%	16.7%	50.0%	25.8%
Maximum Green (s)	28.0	18.0		23.0	13.0		7.0	44.0	23.0	17.0	54.0	28.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0	3.0	3.0	4.0	3.0
All-Red Time (s)	0.0	2.0		0.0	2.0		0.0	2.0	0.0	0.0	2.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	4.0	3.0	6.0	4.0	3.0	6.0	3.0	3.0	6.0	3.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max	None	None	C-Max	None
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	34.7	22.4		19.2	8.1		72.1	62.3	76.4	79.2	68.2	94.8
Actuated g/C Ratio	0.29	0.19		0.16	0.07		0.60	0.52	0.64	0.66	0.57	0.79
v/c Ratio	0.61	0.18		0.22	0.73		0.16	0.34	0.06	0.37	0.41	0.19
Control Delay	40.7	14.0		31.6	22.7		10.5	19.6	3.6	5.0	8.2	0.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.7	14.0		31.6	22.7		10.5	19.6	3.6	5.0	8.2	0.7
LOS	D	B		C	C		B	B	A	A	A	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		35.0			24.4			17.6			6.3	
Approach LOS		C			C			B			A	
Queue Length 50th (ft)	150	7		31	8		16	138	0	13	46	0
Queue Length 95th (ft)	190	42		53	87		45	249	21	m32	302	m25
Internal Link Dist (ft)		693			754			258			1410	
Turn Bay Length (ft)	200			150			150		150	150		150
Base Capacity (vph)	451	353		444	366		420	1837	1218	586	2012	1384
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.18		0.12	0.62		0.16	0.34	0.05	0.33	0.41	0.17

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 2 (2%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 14.8 Intersection LOS: B
Intersection Capacity Utilization 68.9% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 17: Local Access "B" & Saratoga Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	5	10	5	5	25	5	500	5	10	280	20
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	32	5	11	5	5	26	5	526	5	11	295	21
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	882	858	295	866	874	526	316			532		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	882	858	295	866	874	526	316			532		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	87	98	99	98	98	95	100			99		
cM capacity (veh/h)	248	290	745	263	284	552	1244			1036		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	47	37	5	526	5	11	295	21
Volume Left	32	5	5	0	0	11	0	0
Volume Right	11	26	0	0	5	0	0	21
cSH	297	427	1244	1700	1700	1036	1700	1700
Volume to Capacity	0.16	0.09	0.00	0.31	0.00	0.01	0.17	0.01
Queue Length 95th (ft)	14	7	0	0	0	1	0	0
Control Delay (s)	19.4	14.2	7.9	0.0	0.0	8.5	0.0	0.0
Lane LOS	C	B	A			A		
Approach Delay (s)	19.4	14.2	0.1			0.3		
Approach LOS	C	B						

Intersection Summary				
Average Delay	1.7			
Intersection Capacity Utilization	41.5%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	5	5	5	5	15	10	675	10	25	810	50
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	32	5	5	5	5	16	11	711	11	26	853	53
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1655	1647	853	1645	1689	711	905			721		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1655	1647	853	1645	1689	711	905			721		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	55	94	99	93	94	96	99			97		
cM capacity (veh/h)	70	95	359	73	89	433	751			881		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	42	26	11	711	11	26	853	53
Volume Left	32	5	11	0	0	26	0	0
Volume Right	5	16	0	0	11	0	0	53
cSH	80	157	751	1700	1700	881	1700	1700
Volume to Capacity	0.52	0.17	0.01	0.42	0.01	0.03	0.50	0.03
Queue Length 95th (ft)	56	15	1	0	0	2	0	0
Control Delay (s)	91.1	32.5	9.9	0.0	0.0	9.2	0.0	0.0
Lane LOS	F	D	A			A		
Approach Delay (s)	91.1	32.5	0.1			0.3		
Approach LOS	F	D						

Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	55.9%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑	↱	↰	↑	↱
Volume (veh/h)	25	5	10	5	5	55	5	430	5	15	270	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	26	5	11	5	5	58	5	453	5	16	284	11
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	839	784	284	792	789	453	295			458		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	839	784	284	792	789	453	295			458		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	90	98	99	98	98	90	100			99		
cM capacity (veh/h)	251	319	755	295	317	607	1267			1103		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	42	68	5	453	5	16	284	11
Volume Left	26	5	5	0	0	16	0	0
Volume Right	11	58	0	0	5	0	0	11
cSH	311	527	1267	1700	1700	1103	1700	1700
Volume to Capacity	0.14	0.13	0.00	0.27	0.00	0.01	0.17	0.01
Queue Length 95th (ft)	12	11	0	0	0	1	0	0
Control Delay (s)	18.4	12.8	7.9	0.0	0.0	8.3	0.0	0.0
Lane LOS	C	B	A			A		
Approach Delay (s)	18.4	12.8	0.1			0.4		
Approach LOS	C	B						

Intersection Summary				
Average Delay	2.1			
Intersection Capacity Utilization	38.2%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	15	5	5	5	5	40	5	640	10	55	740	25
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	16	5	5	5	5	42	5	674	11	58	779	26
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1624	1589	779	1587	1605	674	805			684		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1624	1589	779	1587	1605	674	805			684		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	77	95	99	93	95	91	99			94		
cM capacity (veh/h)	68	100	396	78	98	455	819			909		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	26	53	5	674	11	58	779	26
Volume Left	16	5	5	0	0	58	0	0
Volume Right	5	42	0	0	11	0	0	26
cSH	88	246	819	1700	1700	909	1700	1700
Volume to Capacity	0.30	0.21	0.01	0.40	0.01	0.06	0.46	0.02
Queue Length 95th (ft)	28	20	0	0	0	5	0	0
Control Delay (s)	62.4	23.5	9.4	0.0	0.0	9.2	0.0	0.0
Lane LOS	F	C	A			A		
Approach Delay (s)	62.4	23.5	0.1			0.6		
Approach LOS	F	C						

Intersection Summary				
Average Delay	2.1			
Intersection Capacity Utilization	57.6%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	105	30	20	335	220	65
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	111	32	21	353	232	68
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				TWLTL	None	
Median storage veh)				2		
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	626	232	300			
vC1, stage 1 conf vol	232					
vC2, stage 2 conf vol	395					
vCu, unblocked vol	626	232	300			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3	2.2			
p0 queue free %	82	96	98			
cM capacity (veh/h)	610	808	1261			

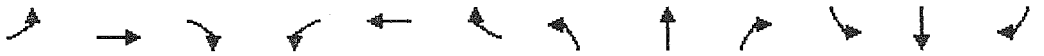
Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	111	32	21	353	232	68
Volume Left	111	0	21	0	0	0
Volume Right	0	32	0	0	0	68
cSH	610	808	1261	1700	1700	1700
Volume to Capacity	0.18	0.04	0.02	0.21	0.14	0.04
Queue Length 95th (ft)	16	3	1	0	0	0
Control Delay (s)	12.2	9.6	7.9	0.0	0.0	0.0
Lane LOS	B	A	A			
Approach Delay (s)	11.6		0.4		0.0	
Approach LOS	B					

Intersection Summary				
Average Delay	2.2			
Intersection Capacity Utilization	30.1%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	150	35	40	505	570	180
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	158	37	42	532	600	189
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				TWLTL	None	
Median storage veh)				2		
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1216	600	789			
vC1, stage 1 conf vol	600					
vC2, stage 2 conf vol	616					
vCu, unblocked vol	1216	600	789			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3	2.2			
p0 queue free %	61	93	95			
cM capacity (veh/h)	406	501	830			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	158	37	42	532	600	189
Volume Left	158	0	42	0	0	0
Volume Right	0	37	0	0	0	189
cSH	406	501	830	1700	1700	1700
Volume to Capacity	0.39	0.07	0.05	0.31	0.35	0.11
Queue Length 95th (ft)	45	6	4	0	0	0
Control Delay (s)	19.4	12.8	9.6	0.0	0.0	0.0
Lane LOS	C	B	A			
Approach Delay (s)	18.2		0.7		0.0	
Approach LOS	C					

Intersection Summary			
Average Delay	2.5		
Intersection Capacity Utilization	48.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	105	10	25	5	10	105	15	145	5	60	140	60
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	111	11	26	5	11	111	16	153	5	63	147	63
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			TWLTL	
Median storage veh)											2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	574	463	147	489	521	153	211			158		
vC1, stage 1 conf vol	274	274		184	184							
vC2, stage 2 conf vol	300	189		305	337							
vCu, unblocked vol	574	463	147	489	521	153	211			158		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	78	98	97	99	98	88	99			96		
cM capacity (veh/h)	500	583	900	587	558	893	1360			1422		

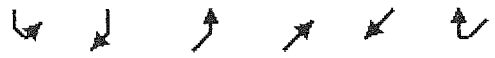
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	111	37	5	121	16	153	5	63	147	63
Volume Left	111	0	5	0	16	0	0	63	0	0
Volume Right	0	26	0	111	0	0	5	0	0	63
cSH	500	779	587	849	1360	1700	1700	1422	1700	1700
Volume to Capacity	0.22	0.05	0.01	0.14	0.01	0.09	0.00	0.04	0.09	0.04
Queue Length 95th (ft)	21	4	1	12	1	0	0	3	0	0
Control Delay (s)	14.2	9.9	11.2	9.9	7.7	0.0	0.0	7.6	0.0	0.0
Lane LOS	B	A	B	A	A			A		
Approach Delay (s)	13.1		10.0		0.7			1.8		
Approach LOS	B		A							

Intersection Summary				
Average Delay	5.3			
Intersection Capacity Utilization	33.4%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	115	10	30	5	10	120	40	310	5	165	275	165
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	121	11	32	5	11	126	42	326	5	174	289	174
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			TWLTL	
Median storage veh)											2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1179	1053	289	1084	1221	326	463			332		
vC1, stage 1 conf vol	637	637		411	411							
vC2, stage 2 conf vol	542	416		674	811							
vCu, unblocked vol	1179	1053	289	1084	1221	326	463			332		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	44	97	96	98	96	82	96			86		
cM capacity (veh/h)	216	321	750	293	276	715	1098			1228		

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	121	42	5	137	42	326	5	174	289	174
Volume Left	121	0	5	0	42	0	0	174	0	0
Volume Right	0	32	0	126	0	0	5	0	0	174
cSH	216	562	293	637	1098	1700	1700	1228	1700	1700
Volume to Capacity	0.56	0.07	0.02	0.21	0.04	0.19	0.00	0.14	0.17	0.10
Queue Length 95th (ft)	76	6	1	20	3	0	0	12	0	0
Control Delay (s)	41.1	11.9	17.5	12.2	8.4	0.0	0.0	8.4	0.0	0.0
Lane LOS	E	B	C	B	A			A		
Approach Delay (s)	33.5		12.4		0.9			2.3		
Approach LOS	D		B							

Intersection Summary				
Average Delay	6.9			
Intersection Capacity Utilization	53.1%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	130	40	45	45	40	120
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	137	42	47	47	42	126

Direction, Lane #	SB 1	SB 2	NE 1	NE 2	SW 1	SW 2
Volume Total (vph)	137	42	47	47	42	126
Volume Left (vph)	137	0	47	0	0	0
Volume Right (vph)	0	42	0	0	0	126
Hadj (s)	0.53	-0.67	0.53	0.03	0.03	-0.67
Departure Headway (s)	5.6	4.4	5.7	5.2	5.1	4.4
Degree Utilization, x	0.21	0.05	0.07	0.07	0.06	0.16
Capacity (veh/h)	612	766	602	663	669	777
Control Delay (s)	9.0	6.5	7.9	7.4	7.3	7.0
Approach Delay (s)	8.4		7.7		7.1	
Approach LOS	A		A		A	

Intersection Summary			
Delay	7.7		
HCM Level of Service	A		
Intersection Capacity Utilization	23.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	225	85	90	60	60	265
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	237	89	95	63	63	279

Direction, Lane #	SB 1	SB 2	NE 1	NE 2	SW 1	SW 2
Volume Total (vph)	237	89	95	63	63	279
Volume Left (vph)	237	0	95	0	0	0
Volume Right (vph)	0	89	0	0	0	279
Hadj (s)	0.53	-0.67	0.53	0.03	0.03	-0.67
Departure Headway (s)	6.3	5.1	6.4	5.9	5.7	5.0
Degree Utilization, x	0.41	0.13	0.17	0.10	0.10	0.39
Capacity (veh/h)	550	666	528	573	594	685
Control Delay (s)	12.4	7.6	9.5	8.4	8.2	10.0
Approach Delay (s)	11.1		9.1		9.7	
Approach LOS	B		A		A	

Intersection Summary			
Delay	10.1		
HCM Level of Service	B		
Intersection Capacity Utilization	30.8%	ICU Level of Service	A
Analysis Period (min)	15		