

APPENDIX H

TRAFFIC IMPACT STUDY

TRAFFIC IMPACT STUDY

251 SEARINGTOWN ROAD

**Incorporated Village of North Hills
Manhasset, New York**

**June 2014
Revised September 2015**

N & P JOB NO. 13008

NELSON & POPE
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APPENDIX

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PURPOSE OF REPORT

Nelson & Pope has investigated the potential traffic impacts associated with the proposed residential subdivision to be located on the west side of Searingtown Road between Estates Terrace North and Estates Terrace South in the Incorporated Village of North Hills, New York. The residential development will be comprised of 47 single family homes. Access to the proposed residential development will be provided via one full movement driveway along Searingtown Road.

This report summarizes the results of a detailed investigation of the traffic impacts of the proposed residential development by reviewing the area's existing roadway characteristics and traffic conditions, estimating the vehicular volume and pattern that the development will generate during peak hours, and analyzing the effect of the additional volume on the surrounding roadway network.

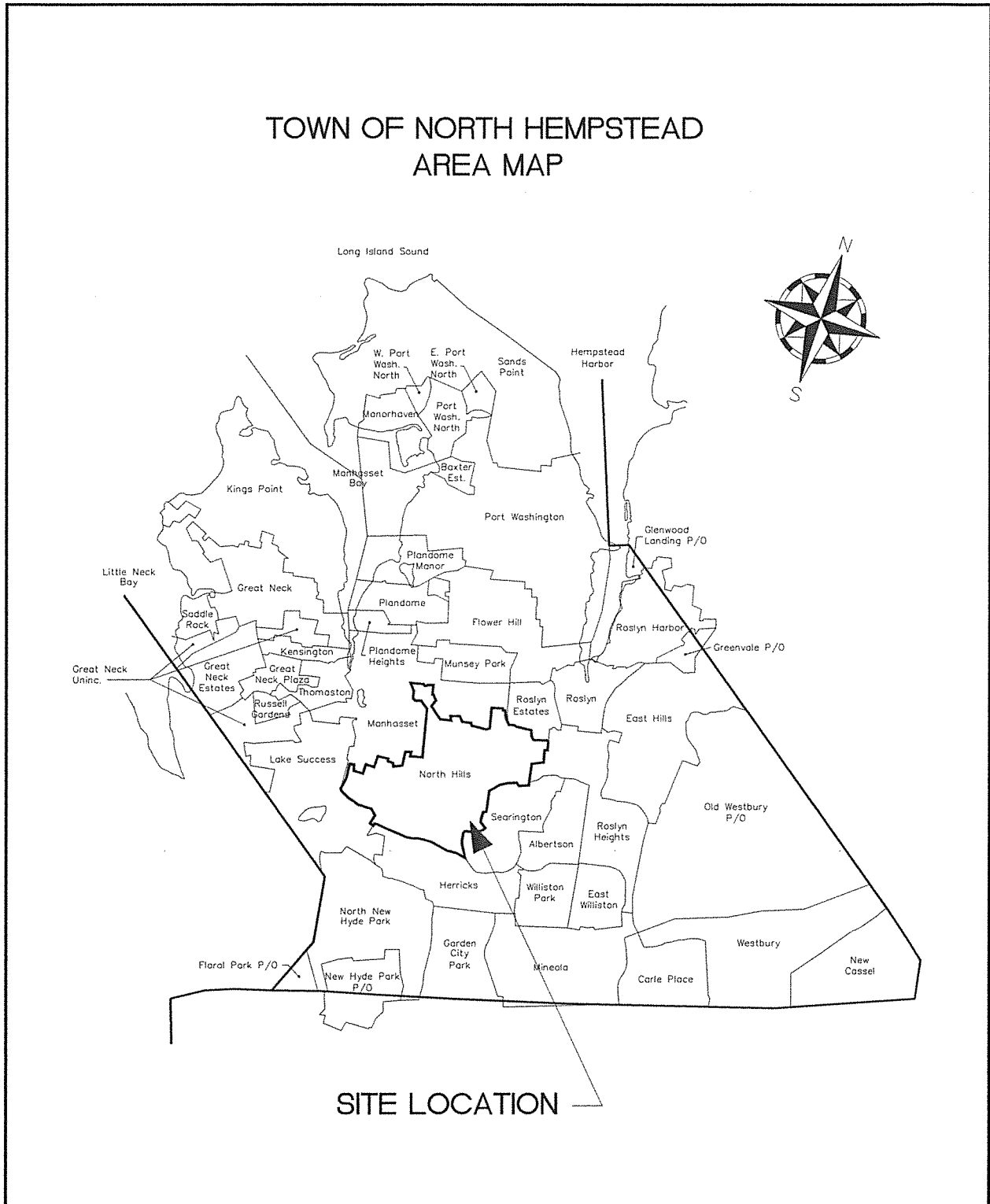
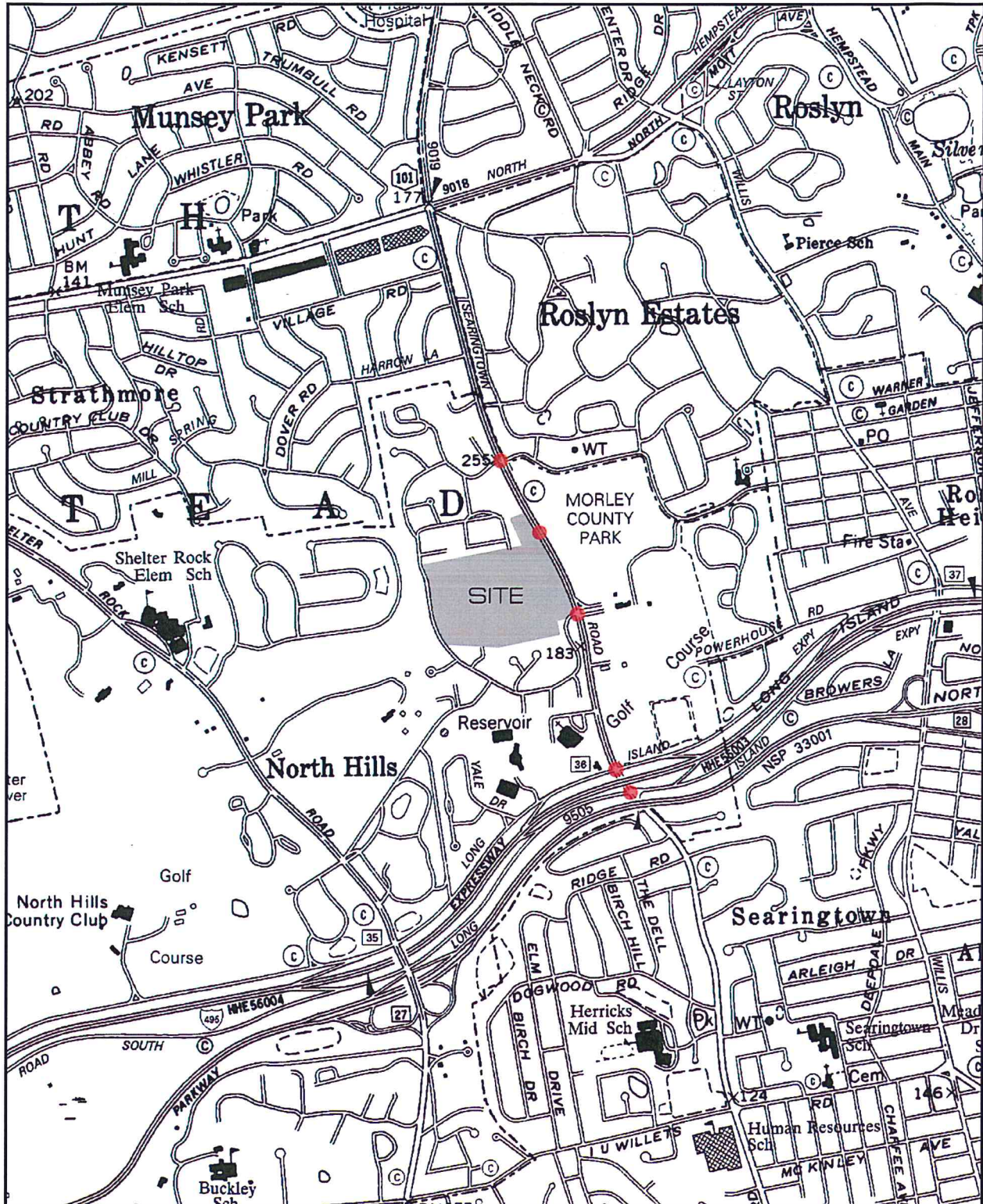


Figure 1: Area Map



SOURCE: USGS SEA CLIFF 1991

● STUDY INTERSECTIONS

Figure 2: Location Map

STUDY METHODOLOGY

The study assesses the traffic impact associated with the proposed residential development and identifies mitigation measures if necessary. In executing the scope of work, the following steps were undertaken:

- A detailed field inspection was conducted to obtain an inventory of existing roadway geometry, location/geometry of existing driveways and intersections along with signing, signal timings, phasings and cycle lengths.
- Turning movement volume counts were conducted during the weekday AM (7-9AM), PM (4-7PM) and Saturday Midday (11AM-2PM) peak periods at the following intersections:
 - Searingtown Road and LIE South Service Road
 - Searingtown Road and LIE North Service Road
 - Searingtown Road and Estates Terrace South
 - Searingtown Road and Estates Terrace North
- Accident data for the study intersections and roadways in the vicinity of the site was obtained from NYSDOT.
- Existing traffic volumes were adjusted to reflect seasonal fluctuations that occur during peak summer months. A seasonal factor was obtained from NYSDOT.
- An annual growth factor, obtained from the NYSDOT, was applied to the existing volumes to estimate the increase in background traffic that would occur in 2016 (Ambient Traffic Volumes).
- The Town of North Hempstead Planning Department and the Village of North Hills was contacted to obtain information on other planned developments that might impact traffic flow in the study area.
- Traffic volumes from the other planned projects in the study area were added to the Ambient Traffic Volumes to generate the 2016 No Build Volumes.

- Estimates of traffic that would be generated by the proposed residential development were prepared utilizing trip generation data published by the Institute of Transportation Engineers (ITE) publication, *Trip Generation, Ninth Edition*. The site-generated traffic volumes were assigned to the adjacent street system based upon the anticipated directional trip distribution forecasted by Nelson & Pope.
- The 2016 Build Condition volumes for the proposed residential development were developed by adding the site generated traffic volumes to the 2016 No Build Condition volumes.
- Capacity analyses were performed at the study intersections identified above for the Existing Condition, No Build Condition and Build Condition for weekday AM, PM and Saturday midday peak hours. Capacity analyses were also conducted at the site driveways for the Build Condition during the weekday AM, PM and Saturday midday peak hours.
- The results of the analyses for the 2016 No Build Condition and 2016 Build Condition were compared to identify any significant impact associated with the proposed residential development.

EXISTING CONDITION

Land Use

As previously discussed the site consists of a 30.43 acre parcel of land on the west side of Searingtown Road between Estates Terrace North and Estates Terrace South in the Incorporated Village of North Hills, New York. The surrounding properties in the vicinity of the site consist of a mix of residential and recreational uses.

Roadway Conditions

Searingtown Road is an arterial roadway under the jurisdiction of the County of Nassau with a general north/south orientation. In the vicinity of the site, Searingtown Road provides two lanes per travel direction. This section of roadway is relatively flat and straight with a posted speed limit of 35 mph and carries an average annual daily traffic (AADT) volume of approximately 34,807 vehicles per day (source: NYSDOT Traffic Volume Report 2011). The land uses along Searingtown Road in the vicinity of the site are a mix of residential, recreational and vacant lands.

Estates Terrace North/South is a local roadway which provides access to a gated residential development. This roadway extends west from Searingtown Road and provides one lane per travel direction. Estates Terrace South intersects Searingtown Road opposite the entrance to Christopher Morley County Park. Estates Terrace North intersects Searingtown Road opposite Dianas Trail.

LIE North Service Road is a westbound arterial roadway owned by New York State and maintained by Nassau County. In the vicinity of the study area it provides three westbound lanes with exclusive turn lanes at key intersections. The posted speed limit is 45 mph.

LIE South Service Road is an eastbound arterial roadway by New York State and maintained by Nassau County. In the vicinity of the study area it provides three eastbound lanes with exclusive turn lanes at key intersections. The posted speed limit is 45 mph.

Table 1 summarizes the lane configurations and traffic controls at the study intersections.

Table 1: Intersection Geometry

Intersection	Approach	Lane Designation*	Traffic Control
Searingtown Road and LIE South Service Road	EB	L-LT-T-TR	Signal Controlled; (channelized right-turn lane on northbound approach not controlled by signal)
	NB	2T-R	
	SB	2L-T	
Searingtown Road and LIE North Service Road	WB	LT-T-TR-R	Signal Controlled
	NB	L-2T	
	SB	3T-R	
Searingtown Road and Estates Terrace South/ Christopher Morley Park	EB	LT-R	Signal Controlled; (channelized right-turn lane on westbound stop controlled – separate from signal)
	WB	L-LT-R	
	NB	L-T-TR	
	SB	L-T-TR	
Searingtown Road and Estates Terrace North/ Dianas Trail	EB	LT-R	Signal Controlled
	WB	LTR	
	NB	L-T-TR	
	SB	L-T-TR	

* L = Left turn lane; T = through lane; R = Right turn lane

Traffic Volume Data

Turning movement counts were collected at the following study intersections on Thursday, May 1, 2014 during the weekday AM (7:00-9:00 AM) and PM (4:00-6:00 PM) peak periods and on Saturday, May 3, 2014 during the Saturday midday peak period (11:00 AM – 2:00 PM).

- Searingtown Road at LIE North Service Road
- Searingtown Road at LIE South Service Road
- Searingtown Road at Estates Terrace South/Christopher Morley County Park
- Searingtown Road at Estates Terrace North/Dianas Trail

Seasonal adjustment factors of 1.078 and 0.960 were obtained from the 2013 NYSDOT Traffic Data Report for the weekday and weekend counts respectively during the month of May. These seasonal adjustment factors were developed from NYSDOT continuous data collected for a three year period. Applying the weekend normalization factor will increase the existing weekend

traffic volumes, therefore the weekend counts were normalized to account for seasonal fluctuation. Since the weekday seasonal adjustment factor for May was greater than 1, normalizing the weekday counts will result in a decrease in the existing traffic volumes. Therefore, to maintain a conservative analysis, the weekday counts were not normalized. The existing intersection peak hour volumes are shown on Figures 3, 4, and 5 and detailed data are contained in Appendix A.

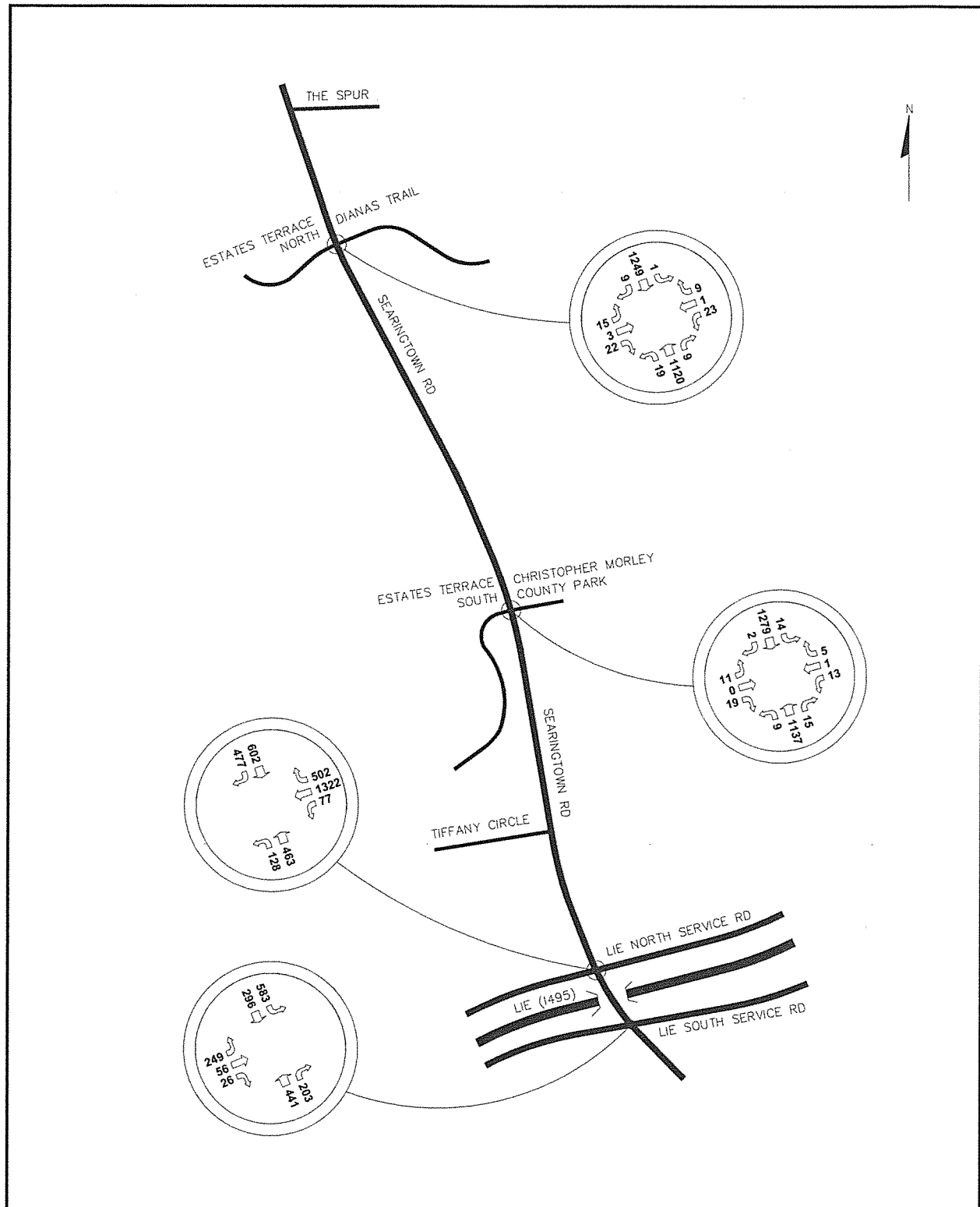


Figure 3: 2014 AM Peak Hour Traffic Volumes

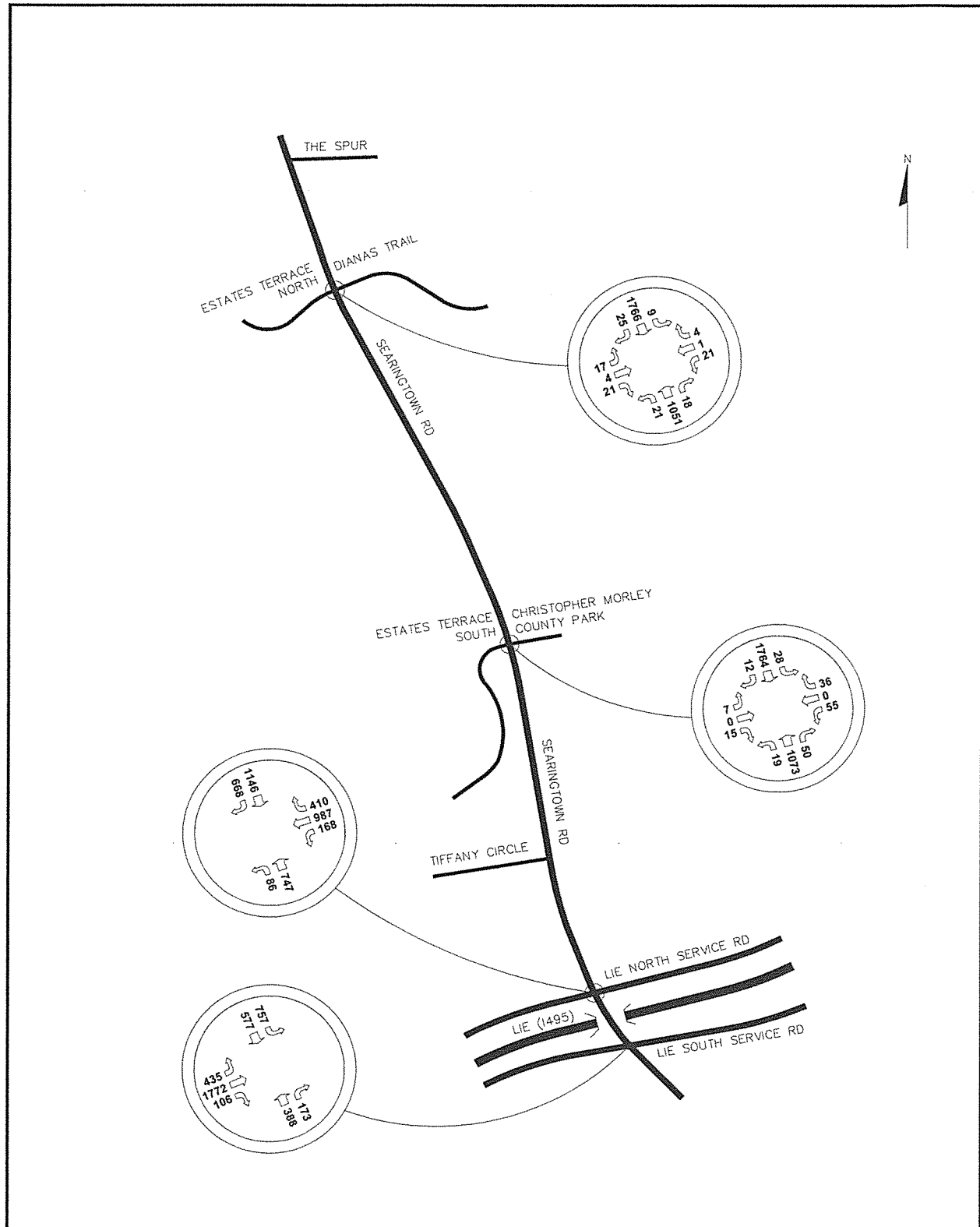


Figure 4: 2014 PM Peak Hour Traffic Volumes

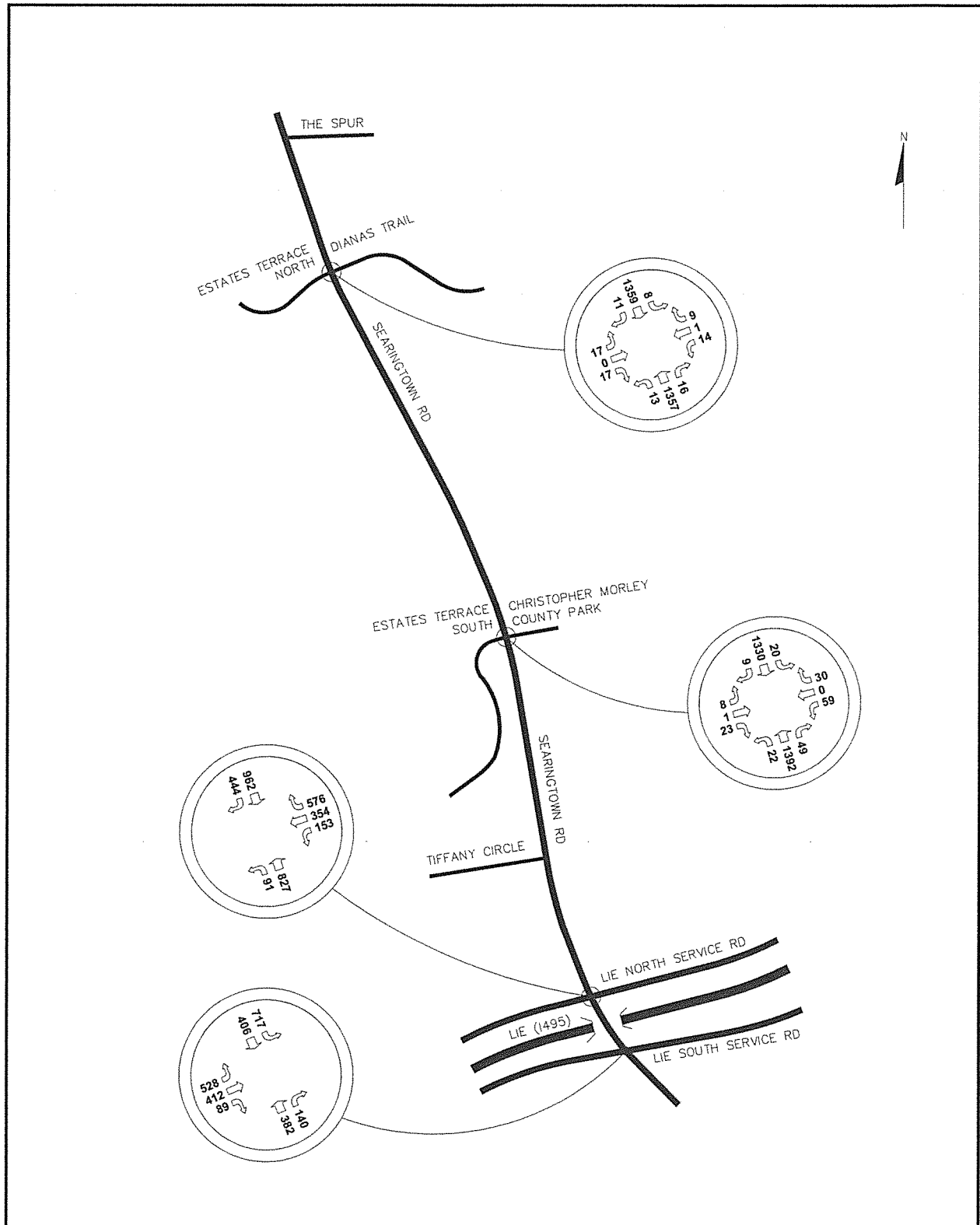


Figure 5: 2014 Saturday Midday Peak Hour Traffic Volumes

Accident History

Accident data for the sections of roadways and intersections in the vicinity of the site was obtained from the NYSDOT. The NYSDOT provided the most recent data available (from October 2010 to September 2013). The available data was reviewed and summarized in the following tables.

Table 2: Accident Summary by Severity

Location	Accident Severity			
	Fatality	Injury	Property Damage	TOTAL
Searingtown Rd and Estates Terrace North/Diana's Trail	-	5	12	17
Searingtown Rd between Estates Terrace North and Site Access	1	1	1	3
Searingtown Rd and Site Access	-	-	-	0
Searingtown Rd between Site Access and Estates Terrace South	-	2	-	2
Searingtown Rd and Estates Terrace South	-	6	6	12
Searingtown Rd between Estates Terrace South and Tiffany Circle	-	-	4	4
Searingtown Rd and Tiffany Circle	-	-	1	1
Searingtown Rd between Tiffany Circle and LIE North Service Rd	-	3	3	6
LIE North Service Rd and Searingtown Rd	-	13	14	27
Searingtown Rd between LIE North Service Rd and LIE South Service Rd	-	-	1	1
LIE South Service Rd and Searingtown Rd	-	4	19	23
Total	1 1%	34 35%	61 64%	96 100%

Table 2 indicates a total of 96 accidents occurred at or in the vicinity of the study area during the analysis period. The majority of accidents, 64%, involved property damage only. There was one fatal accident during the study period, which occurred between Estates Terrace North and the Site Access on southbound Searingtown Road. This accident involved a motorist striking a tree while travelling at an unsafe speed.

Table 3: Accident Summary by Type of Collision

Location	Accident Type										Total
	Right Angle	Rear End	Head On	Left Turn	Right Turn	Fixed Object	Ped/ Bicycle	Overtk	Side swipe	Other/ Unknown	
Searingtown Rd and Estates Terrace North/Diana's Trail	2	11	-	-	-	2	-	-	-	2	17
Searingtown Rd between Estates Terrace North and Site Access	-	-	1	-	-	1*	-	1	-	-	3
Searingtown Rd and Site Access	-	-	-	-	-	-	-	-	-	-	0
Searingtown Rd between Site Access and Estates Terrace South	-	1	1	-	-	-	-	-	-	-	2
Searingtown Rd and Estates Terrace South	1	6	-	1	-	-	-	1	-	3	12
Searingtown Rd between Estates Terrace South and Tiffany Circle	-	2	-	-	-	-	-	2	-	-	4
Searingtown Rd and Tiffany Circle	1	-	-	-	-	-	-	-	-	-	1
Searingtown Rd between Tiffany Circle and LIE North Service Rd	-	4	-	-	-	1	-	-	-	1	6
LIE North Service Rd and Searingtown Rd	7	10	-	4	2	-	-	2	-	2	27
Searingtown Rd between LIE North Service Rd and LIE South Service Rd	-	-	-	-	-	-	-	1	-	-	1
LIE South Service Rd and Searingtown Rd	-	9	-	2	-	1	-	9	-	2	23
Total	11 12%	43 45%	2 2%	7 7%	2 2%	5 5%	0 0%	16 17%	0 0%	10 10%	96 100%

Note: * denotes fatal accident

A review of Table 3 indicates that a majority of the reported or known accidents involved rear-end collisions at 45%, followed by overtaking accidents at 17%.

Table 4: Accident Rates

Location	Accident Rates	
	NYS Average	Calculated Rate
Searingtown Rd and Estates Terrace North/Diana's Trail	0.23	0.44
Searingtown Rd between Estates Terrace North and Site Access	1.38	0.44
Searingtown Rd and Site Access	0.14	0
Searingtown Rd between Site Access and Estates Terrace South	1.38	0.33
Searingtown Rd and Estates Terrace South	0.23	0.30
Searingtown Rd between Estates Terrace South and Tiffany Circle	1.38	0.55
Searingtown Rd and Tiffany Circle	0.06	0.03
Searingtown Rd between Tiffany Circle and LIE North Service Rd	1.38	1.31
LIE North Service Rd and Searingtown Rd	0.23	0.60
Searingtown Rd between LIE North Service Rd and LIE South Service Rd	1.38	0.87
LIE South Service Rd and Searingtown Rd	0.23	0.46

Note: rates are calculated per million entering vehicles

Upon review of Table 4 above, it can be seen that the intersection of Searingtown Road at Estates Terrace North/Diana's Trail, Searingtown Road at Estates Terrace South, Searingtown Road at LIE North Service Road, and Searingtown Road at LIE South Service Road experience accident rates above the New York State average for similarly configured intersections. The majority of collisions at these locations are rear end and overtaking accidents and have contributing factors that are related to driver behavior, such as following too closely, traffic control device disregarded, failure to yield right of way, passing/lane use improper, etc.

LEVEL OF SERVICE DESCRIPTION

While traffic volumes provide an important measure of activity on the adjacent roadway network, evaluating how well that network accommodates those volumes is also important. Therefore, a comparison of peak hour traffic volumes with available roadway capacity is prepared. Capacity, by definition, represents the maximum number of vehicles that can be accommodated given the constraints of roadway geometry, traffic characteristics and controls. Intersections primarily control capacity in roadway networks, since conflicts exist at these points between through, crossing and turning traffic. Because of these conflicts, congestion is most likely to occur at intersections. Therefore, intersections are studied most often when determining the quality of traffic flow.

In order to identify the operational characteristics of the study intersections, LOS and capacity analyses and arterial network analyses for the study intersections were performed using *SYNCHRO Version 8* Software. *SYNCHRO*, in conjunction with *SimTraffic*, is a software package that allows for an interactive analysis of a single intersection or a network of intersections and can also be used for modeling and optimizing traffic signal timings. The *SimTraffic* component provides simulations of operations with animation features. *SYNCHRO* implements the Intersection Capacity Utilization (ICU) 2003 method for determining intersection capacity. This method compares the current volume to the intersections ultimate capacity. *SYNCHRO* also implements the methods of the 2010 Highway Capacity Manual (HCM) for Urban Streets, Signalized intersections, and unsignalized intersections for determining intersection capacity analyses. The *HCM* contains procedures and methodologies for estimating capacity and determining LOS for many transportation facilities and modes including signalized and unsignalized intersections.

An intersection's LOS (LOS) describes its quality of traffic flow. It ranges in grade from LOS "A" (relatively congestion-free) to LOS "F" (very congested). The LOS definition, as well as the threshold values for each level, varies according to whether the intersection is controlled by a signal or a stop sign. A brief description is given here and a more detailed definition is found in Appendix D.

The capacity of a signalized intersection is evaluated in terms of the ratio of demand flow rate to capacity (V/C ratio). The capacity for each approach represents the maximum rate of flow (for the subject approach) which may pass through the intersection under prevailing traffic, roadway and signal conditions. The LOS of a signalized intersection is evaluated on the basis of average control-delay measured in seconds per vehicle (sec/veh). The control-delay is calculated using an equation that combines the stopped-delay with the vehicle acceleration/deceleration delay that is caused by the signalized intersection. At the signalized intersections, factors that affect the various approach capacities include width of approach, number of lanes, signal “green time”, turning percentages, truck volumes, etc. However, delay cannot be related to capacity in a simple one-to-one fashion. For example, it is possible to have delays in the LOS “F” range without exceeding roadway capacity. Substantial delays can exist without exceeding capacity if one or more of the following conditions exist: long signal cycle length; a particular traffic movement experience a long red time; or progressive movements for a particular lane is poor.

The flow at a two-way stop-controlled (TWSC) intersection is gauged in terms of LOS and capacity. The capacity of a stop-controlled leg is based on the distribution of gaps in the major street traffic, driver judgment in selecting a gap, and the follow-up time required by each driver in a queue. The LOS for a TWSC intersection is determined by the control-delay, and is defined for each movement rather than for the overall intersection. As with signalized intersections, HCS quantifies only the average control-delay, which is a function of the approach and the degree of saturation for any particular minor movement.

EXISTING CONDITION

The peak hour traffic volumes depicted in Figures 3, 4 and 5 were used to determine the existing capacity and LOS of the study intersections. Tables 5 contains the LOS summary for the Existing Condition calculated through the Synchro software described previously. The detailed analysis worksheets are in Appendix E.

Table 5: Existing Condition LOS Summary

Intersection	Approach	Movement	AM Peak Hour		PM Peak Hour		Saturday Midday Peak Hour	
			LOS	Delay (sec.)	LOS	Delay (sec.)	LOS	Delay (sec.)
Searingtown Road at LIE South Service Road	EB	L	C	34.0	C	33.1	D	35.4
		LTR	C	24.6	F	105.4	C	27.2
	SB	L	E	76.6	F	177.6	E	74.8
		T	A	3.8	B	13.2	A	4.8
	NB	T	C	28.1	D	35.0	C	27.3
		R	A	5.6	B	16.1	A	8.4
	Overall		D	37.3	F	88.8	D	36.7
Searingtown Road at LIE South Service Road	WB	LTR	F	87.5	D	39.3	C	24.5
		R	C	20.5	C	25.8	C	23.2
	NB	L	F	82.2	E	56.8	D	44.9
		T	B	16.1	C	20.1	B	16.2
	SB	T	C	24.1	C	25.0	C	20.8
		R	D	54.2	E	73.0	B	14.6
	Overall		D	53.9	D	36.6	C	20.6
Searingtown Road at Estates Terrace South/ Christopher Morley County Park	EB	LT	B	19.3	C	21.9	C	20.3
		R	A	0.4	A	0.3	A	0.5
	WB	L	B	19.2	C	22.7	C	21.1
		LT	B	19.1	C	22.7	C	21.1
	NB	R	A	0.0	A	3.0	A	1.8
		L	A	2.9	A	3.4	A	3.6
	SB	TR	A	6.1	A	8.6	A	9.8
		L	A	2.8	A	3.3	A	3.5
	Overall		A	6.6	B	11.3	A	9.4
Searingtown Road at Estates Terrace North/ Dianas Trail	EB	LT	C	34.4	C	35.0	C	33.5
		R	A	6.1	A	8.9	A	6.6
	WB	LTR	C	28.9	C	31.4	C	25.5
		L	A	3.7	A	6.4	A	3.4
	NB	TR	A	3.6	A	3.1	A	3.6
		L	A	3.0	A	3.0	A	3.0
	Overall		A	4.4	A	5.1	A	4.2

Notes: LOS = Level of Service, V/C = Volume/Capacity Ratio, Delay = seconds/vehicle

Searingtown Road and LIE South Service Road

The signalized intersection of Searingtown Road and LIE South Service Road from an overall perspective operates at LOS D, F and D during the AM, PM and Saturday peak periods, respectively.

Searingtown Road and LIE North Service Road

The signalized intersection of Searingtown Road and LIE North Service Road from an overall perspective operates at LOS D, D and C during the AM, PM and Saturday peak periods, respectively.

Searingtown Road and Estates Terrace South/Christopher Morley County Park

The signalized intersection of Searingtown Road and Estates Terrace North/Christopher Morley County Park from an overall perspective operates at LOS A during the AM and Saturday peak periods and at LOS B during the PM peak period.

Searingtown Road and Estates Terrace North/Dianas Trail

The signalized intersection of Searingtown Road and Estates Terrace North/Dianas Trail from an overall perspective operates at LOS A during the AM, PM and Saturday peak periods.

NO BUILD CONDITION

The No Build Condition represents traffic conditions expected at the study intersections in the future year 2016 without the construction of the proposed project. The No Build Condition traffic volumes are estimated based on two factors as follows:

- Increases in traffic due to general population growth and developments outside of the immediate project area. This traffic increase is referred to as ambient growth.
- Other planned projects located near the project site that may affect traffic levels and patterns at the study intersections in this report.

Traffic Growth

A 0.5% annual growth factor was obtained from the New York State Department of Transportation (NYSDOT) Long Island Transportation Plan 2000 Study (LITP2000) for the Town of North Hempstead. The existing traffic volumes were increased by this factor for a period of 2 years to project volumes to the year 2016.

Other Planned Projects

“Other Planned Projects” is a term that refers to developments located near the project site that are currently under construction or in the planning stages. Traffic generated by these projects may significantly influence the operations of the study intersections and would not be represented in the field data collected. The Town of North Hempstead and the Village of North Hills was contacted to obtain information on any planned projects in the area. At the time this study was conducted, it was determined that there were no significant planned projects in the vicinity of the proposed project.

The No Build traffic volumes are shown in Figures 6, 7 and 8.

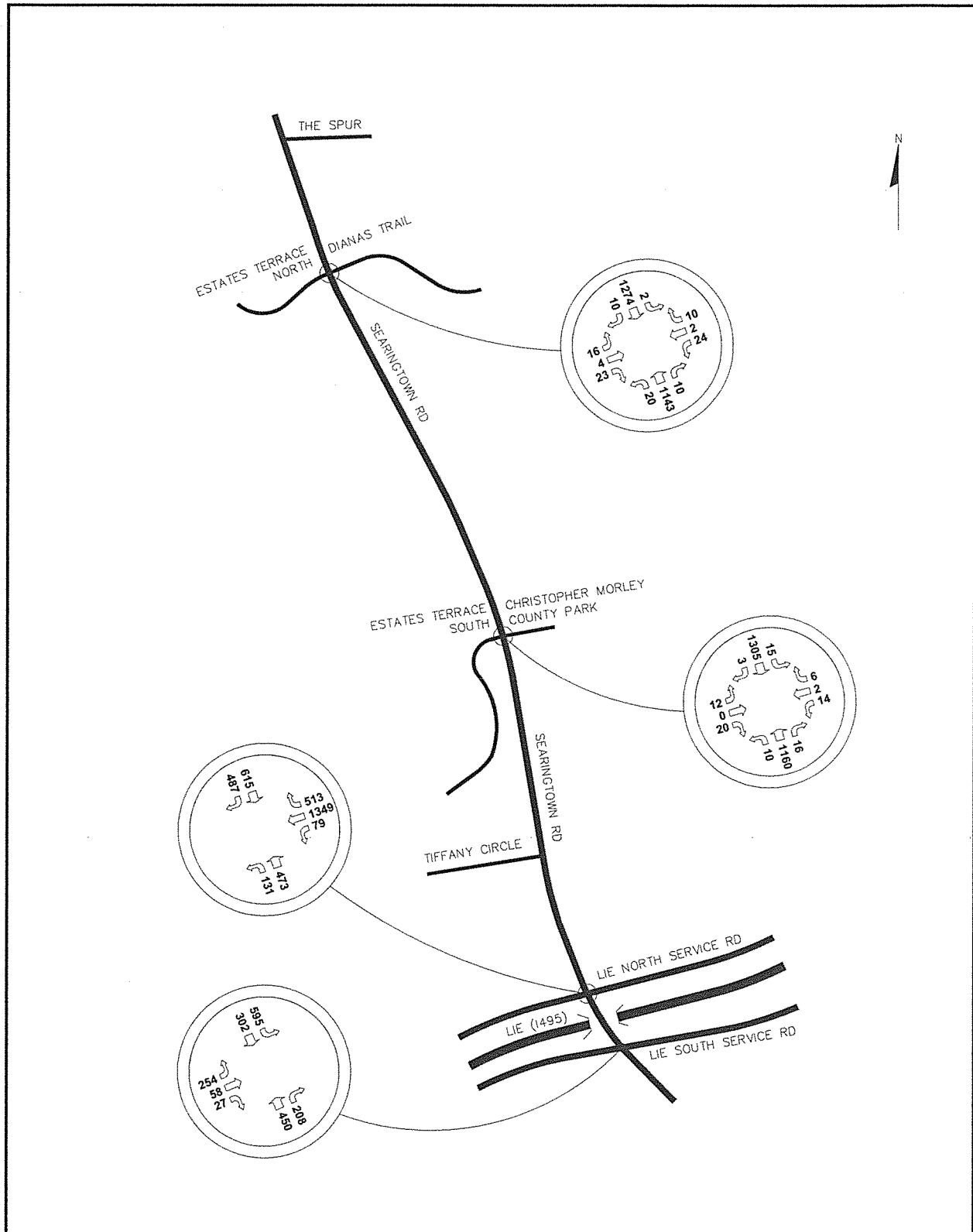


Figure 6: 2016 AM Peak Hour No Build Traffic Volumes

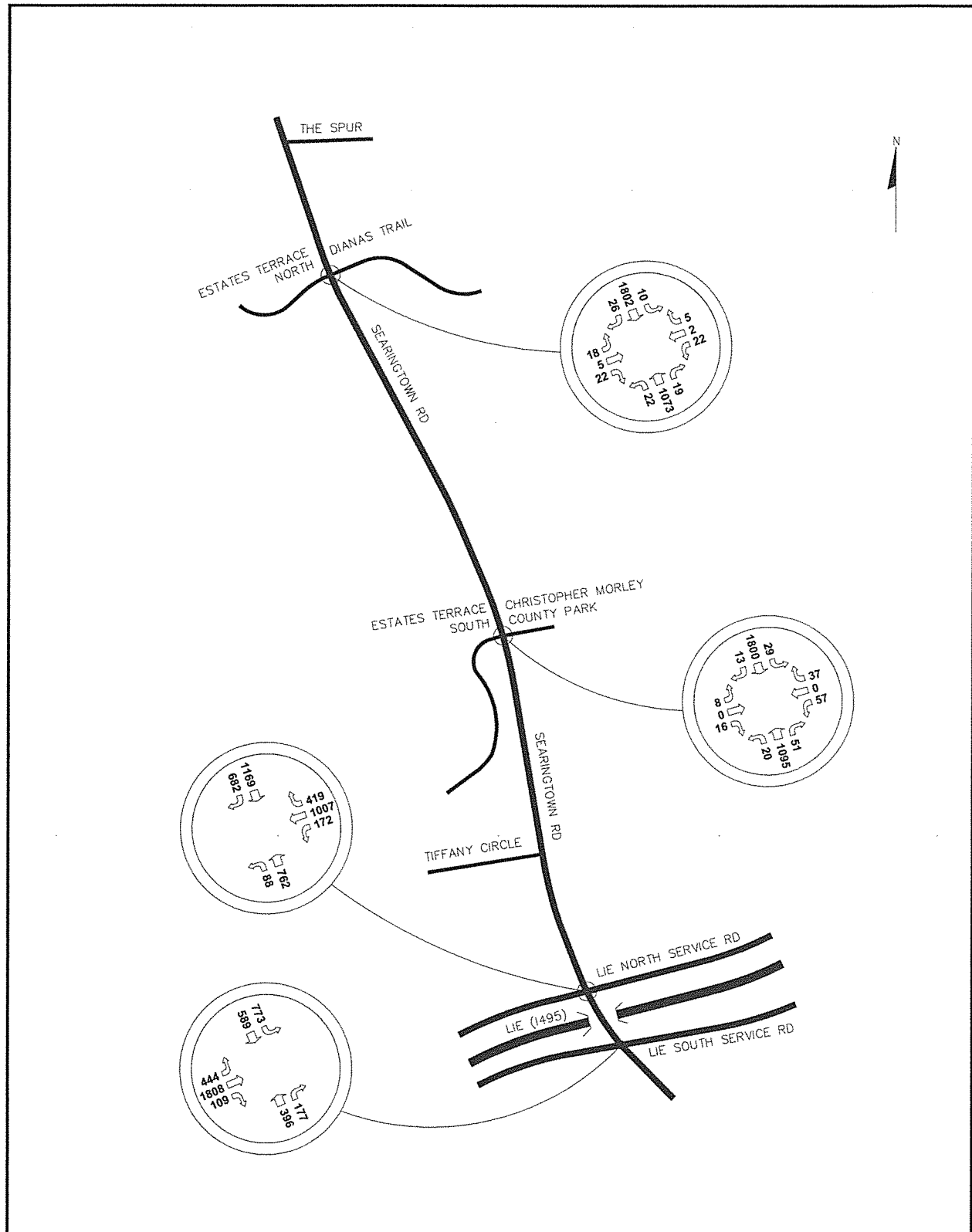


Figure 7: 2016 PM Peak Hour No Build Traffic Volumes

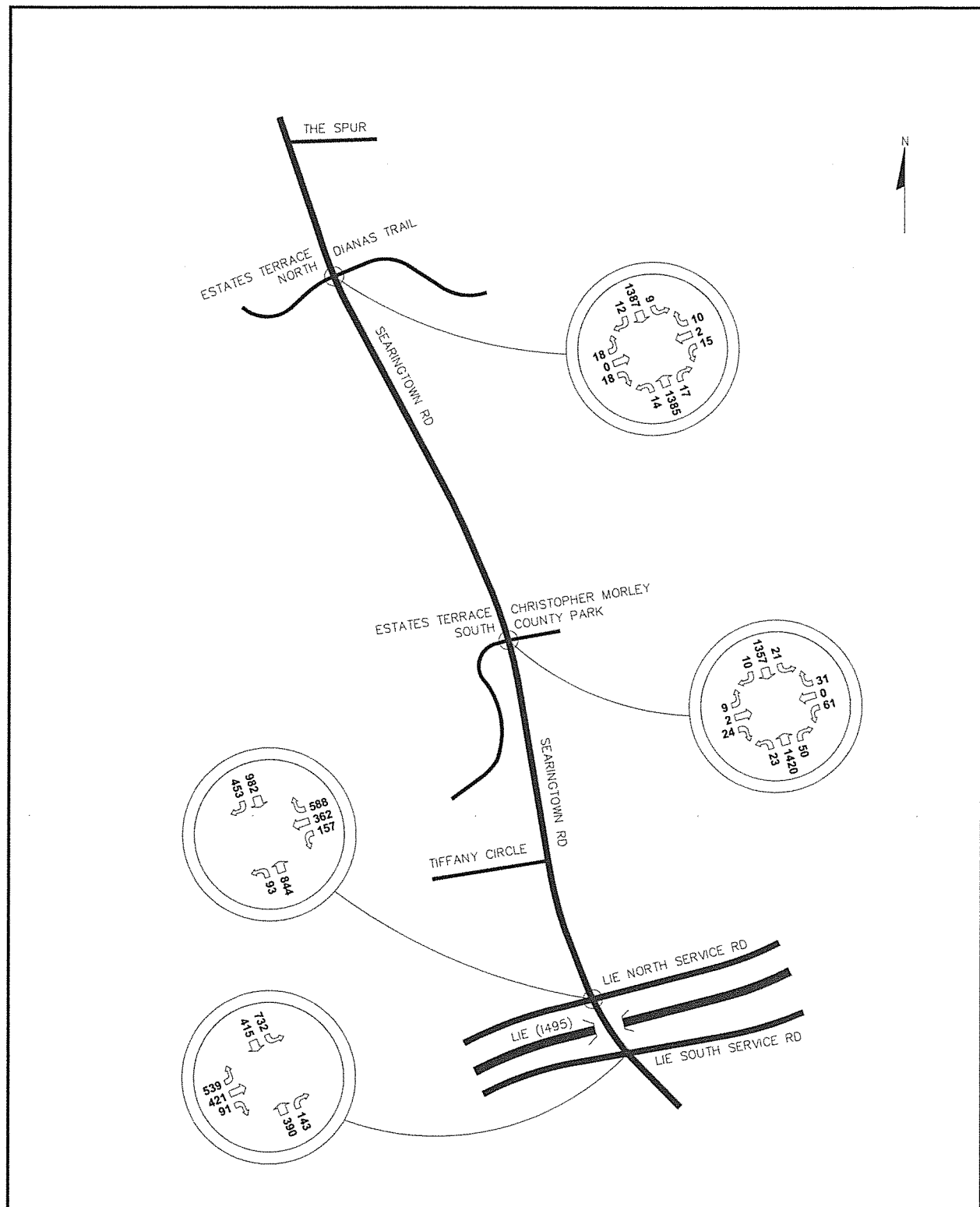


Figure 8: 2016 Saturday Midday Peak Hour No Build Traffic Volumes

PROPOSED DEVELOPMENT

Site Access

As depicted on the site plan, access to the site will be provided via one unsignalized full movement driveway on Searingtown Road.

Sight Distance

Sight distance measurements were performed on Searingtown Road at the location of the site access, to ensure sufficient sight distance is available based on the posted speed limit (35mph) for Searingtown Road. The available sight distance was recorded and compared with the recommendations contained in the reference, A Policy on Geometric Design of Highways and Streets published in 2011 by the American Association of State Highway and Transportation Officials (AASHTO). The following table presents a summary of the sight distance data.

Table 6: Sight Distance Requirement

Roadway	Recommended Sight Distance (FT)		Recorded Sight Distance (FT)	
	Left turn	Right Turn	Looking Left	Looking Right
Roger's Lane	390	335	420	580

As can be seen from the review of the Table 6 above, the available sight distance from the site access will exceed the recommended sight distance criteria for vehicles turning left and right onto Searingtown Road. Although the sight distance is adequate, it can be improved in both directions by trimming foliage back to the property line of the site and trimming trees located in the utility strip along Searingtown Road.

Trip Generation

In order to identify the impacts the proposed residential development will have on the adjacent street system, it is necessary to estimate the magnitude of traffic volume generated during the peak hours and to estimate the directional distribution of the site traffic when entering and exiting the subject property. The trip generation estimates for the proposed residential development were prepared utilizing data found under Land Use Code 210-Single Family Detached Housing within the Institute of Transportation Engineers' publication, *Trip Generation, Eighth Edition*. This publication sets forth trip generation data obtained by traffic counts

conducted at sites throughout the country. The following Table summarizes the trip generation estimates for the proposed residential development. Appendix C contains the trip generation worksheets.

Table 7: Trip Generation (Proposed Project)

Time Period	Distribution	Single Family Homes 47 Units
Weekday AM Peak Hour	Enter	9
	Exit	26
	Total	35
Weekday PM Peak Hour	Enter	30
	Exit	17
	Total	47
Saturday Midday Peak Hour	Enter	24
	Exit	20
	Total	44

Source: Trip Generation, 9th Edition, published by ITE

As can be seen from Table 7 above, the proposed residential development is projected to generate 35 trips (9 entering and 26 exiting) during the weekday AM peak hour, 47 trips (30 entering and 17 exiting) during the weekday PM peak hour and 44 trips (24 entering and 20 exiting) during the Saturday midday peak hour.

Gap Analyses

A gap study was conducted on the northbound and southbound Seatingtown Road approaches at the intersection of Searingtown Road and the site access driveway for a period of one week using an ATR machine. The study recorded the number of gaps in the traffic flow along northbound and southbound Searingtown Road at the site access driveway and the length of time (in seconds) of each gap. According to the Highway Capacity Manual, the critical gaps required to make a left turn and a right turn out of a minor street onto a four lane major street are 7.5 seconds and 6.9 seconds respectively. The following table summarizes the number of gaps greater than 7.5 seconds recorded on Searingtown Road during the weekday AM, PM and Saturday midday peak hours.

Table 8: Number of gaps recorded during peak hours

Length of Gap (sec.)	Number of Gaps Recorded		
	AM Peak Hour (8:00am-9:00pm)	PM Peak Hour (4:45pm– 5:45pm)	Saturday Peak Hour (1:00pm-2:00pm)
>7.5	259	264	272

From the review of Table 8 above and the estimated traffic volumes that will be entering and exiting the proposed project during the AM and PM peak hours, it would appear that there are a sufficient number of gaps greater than 7.5 seconds on Searingtown Road to accommodate the traffic exiting the site access, summarized in the Trip Generation section.

Trip Distribution and Assignment

The volume of site traffic that would travel through the study intersections during peak hours was distributed and assigned to each movement based on the existing roadway and travel patterns. The nature of the proposed land use and its associated travel patterns were considered as well. Figure 9 presents the trip distribution for the site-generated traffic and Figures 10, 11 and 12 depict the site generated volumes for the weekday AM, weekday PM and Saturday midday peak hours. The site generated volumes were then added to the corresponding No Build Condition volumes resulting in the Build Condition volumes shown in Figures 13, 14 and 15.

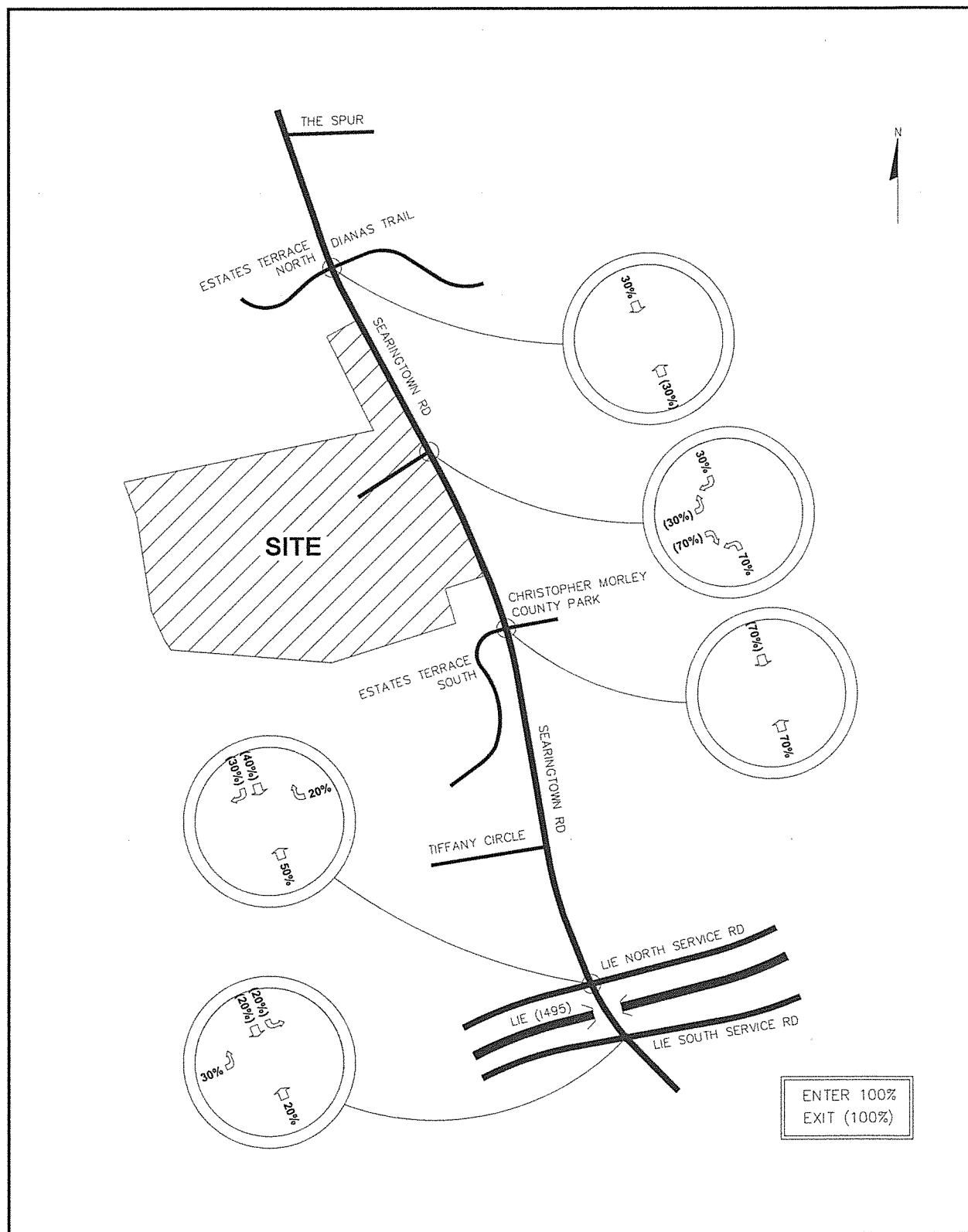


Figure 9: Site Generated Trip Distribution

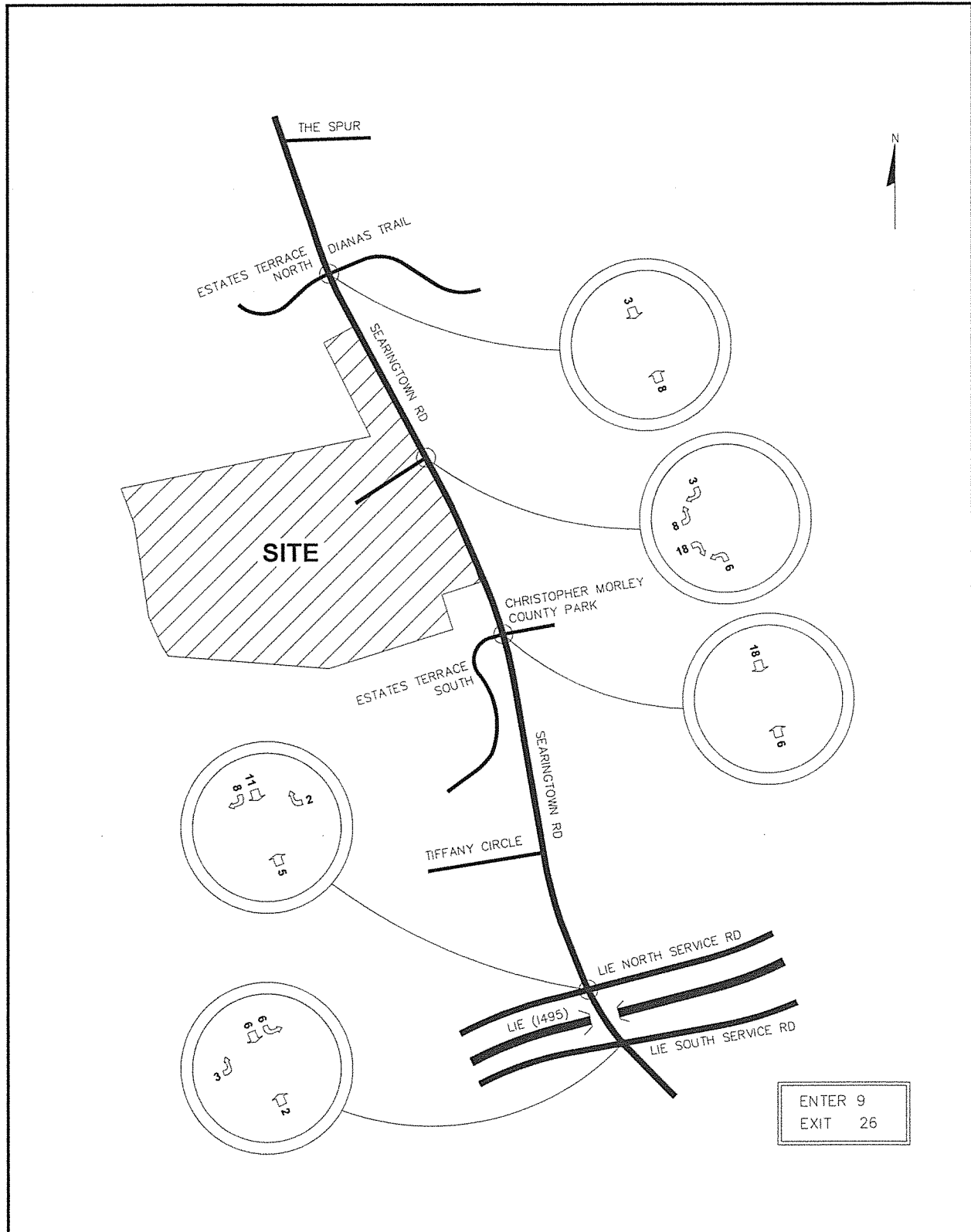


Figure 10: Site Generated Weekday AM Traffic Volumes

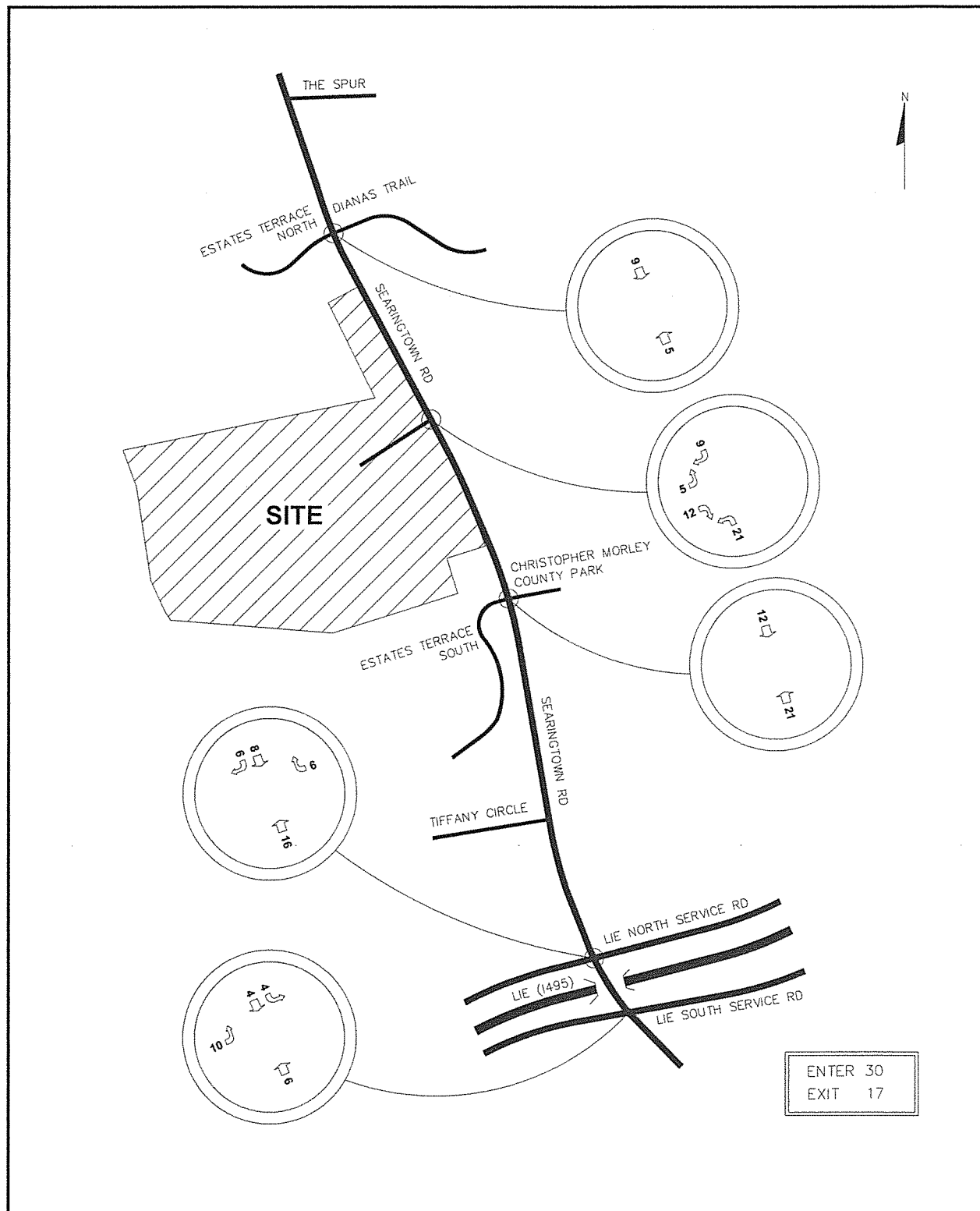


Figure 11: Site Generated Weekday PM Traffic Volumes

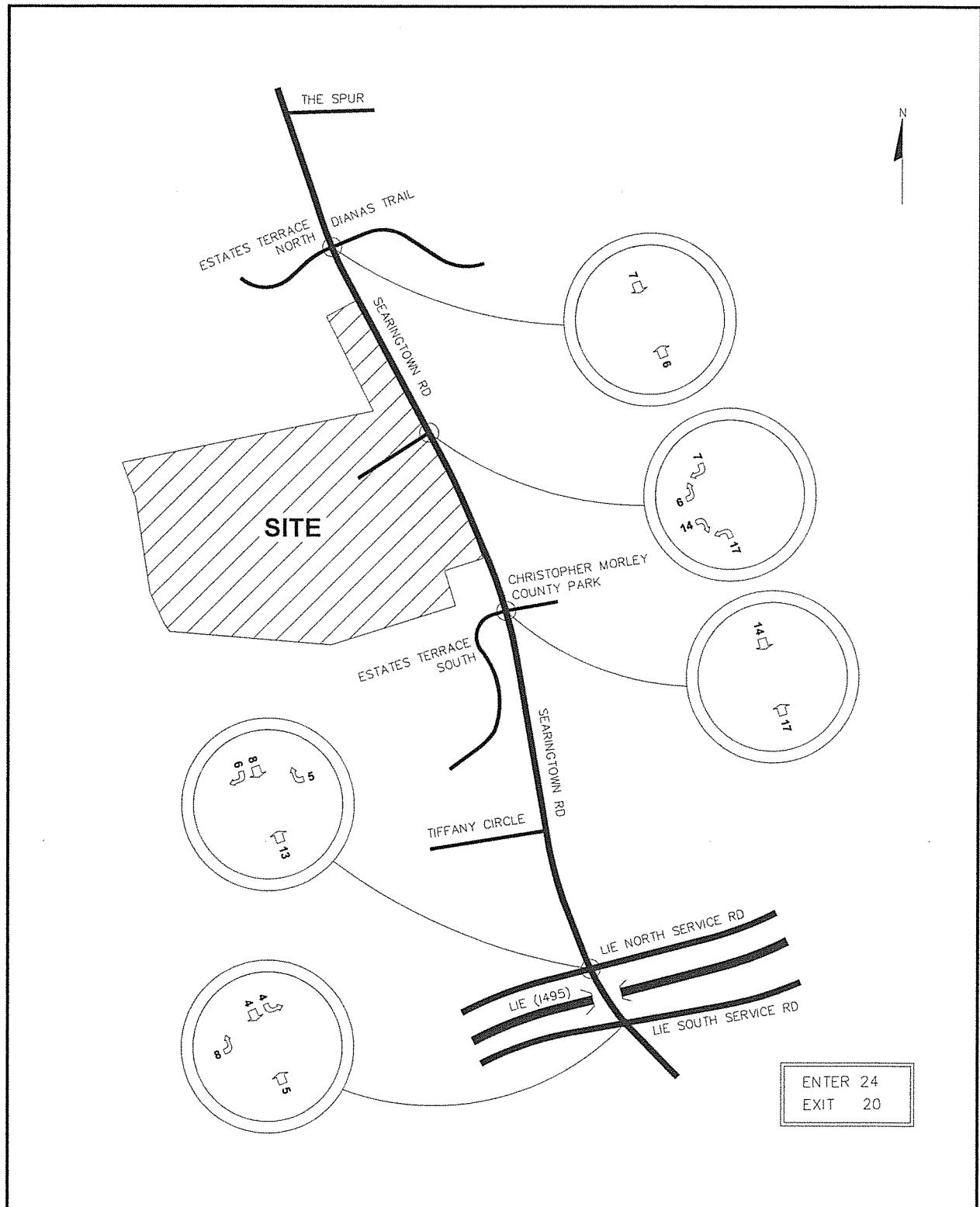


Figure 12: Site Generated Saturday Midday Traffic Volumes

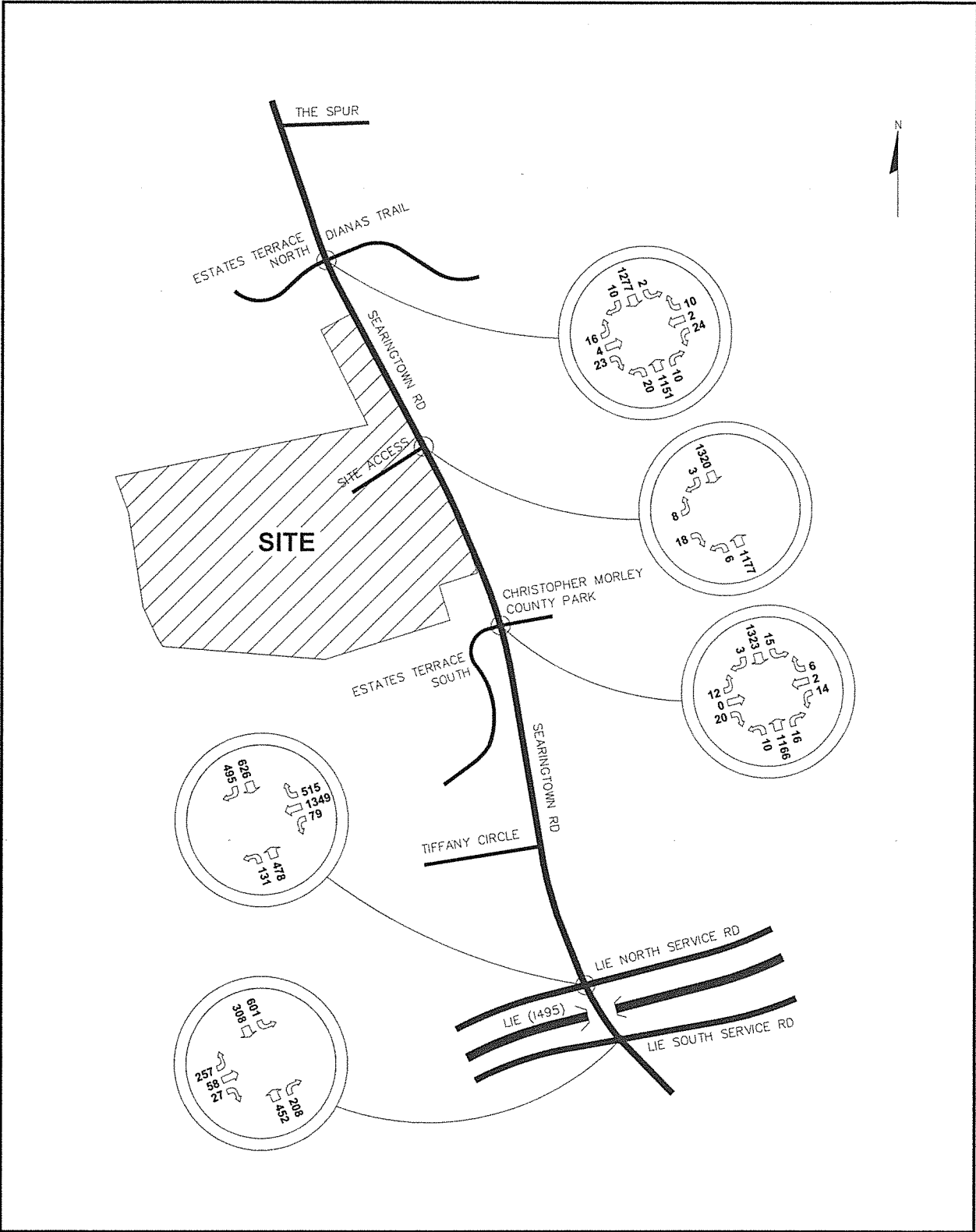


Figure 13: 2016 Build Weekday AM Traffic Volumes

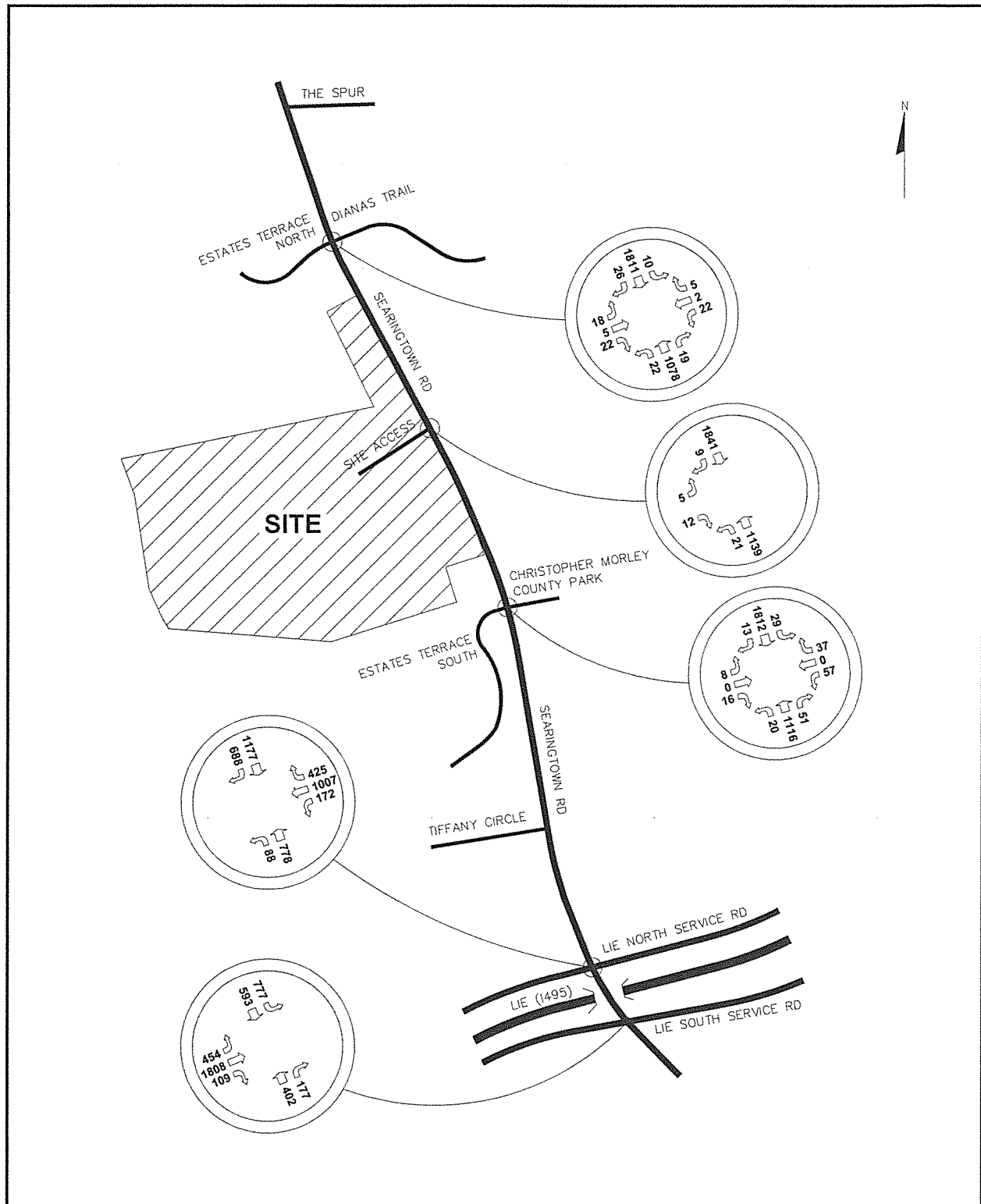


Figure 14: 2016 Build Weekday PM Traffic Volumes

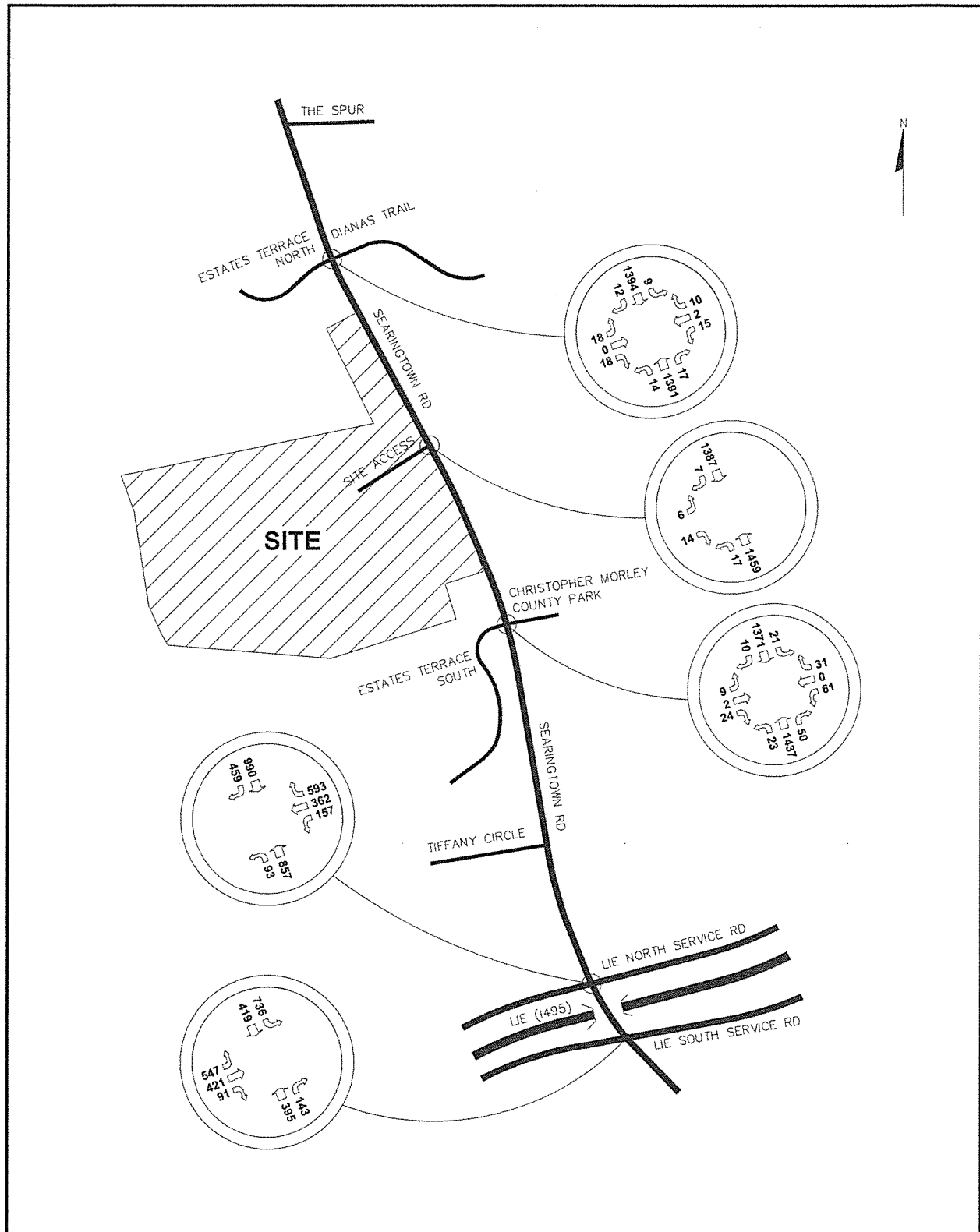


Figure 15: 2016 Build Saturday Midday Traffic Volumes

TRAFFIC IMPACT ANALYSIS

As stated previously, the intersection capacity and level-of-service (LOS) analyses were based on the procedures and guidelines presented in the *Highway Capacity Manual (2010)*, published by the *Transportation Research Board*. The Synchro Version 8 software was used to analyze the study intersections and provide a LOS measurement of the intersection operations. The six classes of LOS, ranging from LOS A (excellent) to F (worst), are defined in Appendix E.

Tables 9 through 14 illustrate the LOS summaries for the study intersections.

Table 9: LOS Summary – AM Peak

Intersection	Approach	Movement	No Build		Build	
			LOS	Delay (sec.)	LOS	Delay (sec.)
Searingtown Road at LIE South Service Road	EB	L	C	34.2	C	34.3
		LTR	C	24.6	C	24.6
	SB	L	F	82.8	F	88.0
		T	A	3.8	A	3.9
	NB	T	C	28.7	C	28.9
		R	A	5.6	A	5.7
	Overall		D	39.5	D	41.2
Searingtown Road at LIE North Service Road	WB	LTR	F	86.9	F	86.9
		R	C	22.7	C	23.4
	NB	L	F	85.6	F	85.3
		T	B	16.5	B	16.6
	SB	T	C	24.2	C	24.4
		R	E	59.0	E	62.9
	Overall		D	54.8	E	55.3
Searingtown Road at Estates Terrace South/ Christopher Morley County Park	EB	LT	B	19.3	B	19.3
		R	A	0.5	A	0.5
	WB	L	B	19.1	B	19.1
		LT	B	19.1	B	19.1
	NB	R	A	0.2	A	0.2
		L	A	2.9	A	2.9
	SB	TR	A	6.4	A	6.4
		L	A	2.8	A	2.8
	Overall		A	7.1	A	7.3
Searingtown Road at Estates Terrace North/ Dianas Trail	EB	LT	C	34.4	C	34.4
		R	A	6.4	A	6.4
	WB	LTR	C	28.7	C	28.7
		L	A	4.0	A	4.0
	NB	TR	A	3.7	A	3.8
		L	A	3.0	A	3.0
	SB	TR	A	3.9	A	3.9
	Overall		A	4.5	A	4.5

Notes: LOS = Level of Service, V/C = Volume/Capacity Ratio, Delay = seconds/vehicle

Table 10: Level of Service Summary (Unsignalized) – AM Peak

Unsignalized Intersections	Approach/ Movement.	Build	
		LOS	Delay
Searingtown Road and Site Access	EB-L	D	28.9
	EB-R	B	11.5
	NB-L	B	12.2

Table 11: LOS Summary – PM Peak

Intersection	Approach	Movement	No Build		Build	
			LOS	Delay (sec.)	LOS	Delay (sec.)
Searingtown Road at LIE South Service Road	EB	L	C	34.1	D	35.3
		LTR	F	115.3	F	115.6
	SB	L	F	189.9	F	192.5
		T	B	12.9	B	13.1
	NB	T	D	35.2	D	35.4
		R	B	16.5	B	16.5
	Overall		F	95.7	F	96.2
Searingtown Road at LIE North Service Road	WB	LTR	D	42.9	D	43.8
		R	C	27.5	C	28.5
	NB	L	E	57.6	E	57.2
		T	C	20.8	C	21.6
	SB	T	C	28.1	C	28.4
		R	F	104.0	F	108.0
	Overall		D	43.6	D	44.8
Searingtown Road at Estates Terrace South/ Christopher Morley County Park	EB	LT	C	22.0	C	22.0
		R	A	0.4	A	0.4
	WB	L	C	23.3	C	23.3
		LT	C	23.3	C	23.3
	NB	R	A	3.1	A	3.1
		L	A	3.5	A	3.5
	SB	TR	B	10.1	B	10.3
		L	A	3.6	A	3.6
	Overall		B	17.8	B	18.1
Searingtown Road at Estates Terrace North/ Dianas Trail	EB	LT	C	34.8	C	34.8
		R	A	9.2	A	9.2
	WB	LTR	C	30.5	C	30.5
		L	A	7.3	A	7.4
	NB	TR	A	3.2	A	3.2
		L	A	3.1	A	3.1
	SB	TR	A	5.6	A	5.7
		L	A	5.4	A	5.4

Notes: LOS = Level of Service, V/C = Volume/Capacity Ratio, Delay = seconds/vehicle

Table 12: Level of Service Summary (Unsignalized) – PM Peak

Unsignalized Intersections	Approach/ Movement.	Build	
		LOS	Delay
Searingtown Road and Site Access	EB-L	D	32.0
	EB-R	B	10.6
	NB-L	C	17.9

Table 13: LOS Summary – Saturday Peak

Intersection	Approach	Movement	No Build		Build	
			LOS	Delay (sec.)	LOS	Delay (sec.)
Searingtown Road at LIE South Service Road	EB	L	D	36.2	D	36.7
		LTR	C	27.4	C	27.5
	SB	L	E	79.8	F	81.9
		T	A	4.9	A	4.9
	NB	T	C	27.5	C	27.6
		R	A	8.7	A	8.7
	Overall		D	38.2	D	38.9
Searingtown Road at LIE North Service Road	WB	LTR	C	24.9	C	25.0
		R	C	23.5	C	23.5
	NB	L	D	47.0	D	47.2
		T	B	16.5	B	16.9
	SB	T	C	21.1	C	21.3
		R	B	15.6	B	16.0
	Overall		C	21.1	C	21.3
Searingtown Road at Estates Terrace South/ Christopher Morley County Park	EB	LT	C	20.5	C	20.5
		R	A	0.5	A	0.5
	WB	L	C	21.1	C	21.1
		LT	C	21.1	C	21.1
	NB	R	A	1.8	A	1.8
		L	A	3.6	A	3.6
	SB	TR	B	10.1	B	10.3
		L	A	3.6	A	3.6
Searingtown Road at Estates Terrace North/ Dianas Trail	EB	TR	A	9.3	A	9.4
		L	A	3.6	A	3.6
	Overall		A	9.7	A	9.9
	WB	LT	C	33.6	C	33.6
		R	A	7.1	A	7.1
	NB	LTR	C	26.0	C	26.0
		L	A	3.5	A	3.5
	SB	TR	A	3.7	A	3.7
		L	A	3.2	A	3.2
	Overall		A	3.8	A	3.8
	Overall		A	4.3	A	4.3

Notes: LOS = Level of Service, V/C = Volume/Capacity Ratio, Delay = seconds/vehicle

Table 14: Level of Service Summary (Unsignalized) – Saturday Peak

Unsignalized Intersections	Approach/ Movement.	Build	
		LOS	Delay
Searingtown Road and Site Access	EB-L	D	28.2
	EB-R	B	11.4
	NB-L	B	12.9

Searingtown Road and LIE South Service Road

In the No Build Condition, the signalized intersection of Searingtown Road and LIE South Service Road is projected to operate at LOS D during the AM peak period, LOS F during the PM peak period and LOS D during the Saturday midday peak period. With the construction of the proposed project, the intersection will continue to operate at No Build conditions during the analyzed peak periods with minimal increase in delay. Although this intersection operates at LOS F during the PM peak period, it can be seen that the overall delay is only projected to increase by 0.5 seconds. During the PM peak period the eastbound left-turn movement experiences a change in LOS, from C to D. However, the increase in delay is minimal at only 1.2 seconds. During the Saturday peak period the southbound left-turn movement experiences a change in LOS from E to F. However the increase in delay is minimal at only 2.1 seconds. Therefore, no significant impacts are created and no mitigation measures are proposed at this intersection.

Searingtown Road and LIE North Service Road

In the No Build Condition, the signalized intersection of Searingtown Road and LIE North Service Road is projected to operate at LOS D during the AM and PM peak periods and at LOS C during the Saturday midday peak period. With the construction of the proposed project, the intersection will continue to operate at No Build conditions during the PM and Saturday peak periods with minimal increase in delay. During the AM peak period the overall LOS of the intersection changes from D to E. However, the increase in delay is minimal at only 0.5 seconds. There is no change in LOS to individual movements. Therefore, no significant impacts are created and no mitigation measures are proposed at this intersection.

Searingtown Road and Estates Terrace South/Christopher Morley County Park

In the No Build Condition, the signalized intersection of Searingtown Road and Estates Terrace North/Christopher Morley County Park is projected to operate at LOS A during the AM and Saturday peak periods and at LOS B during the PM peak period. With the construction of the proposed project, the intersection will continue to operate at No Build conditions during the

analyzed peak periods with minimal increase in delay. Therefore, no significant impacts are created and no mitigation measures are proposed at this intersection.

Searingtown Road and Estates Terrace North/Dianas Trail

In the No Build Condition, the signalized intersection of Searingtown Road and Estates Terrace North/Dianas Trail is projected to operate at LOS A during the AM, PM and Saturday midday peak periods. With the construction of the proposed project, the intersection will continue to operate at No Build conditions during the analyzed peak periods with minimal increase in delay. Therefore, no significant impacts are created and no mitigation measures are proposed at this intersection.

Searingtown Road and Site Access

During the Build Condition, the eastbound left-turn movement is projected to operate at LOS D during the AM, PM and Saturday midday peak periods. The eastbound right-turn movement is projected to operate at LOS B during the AM, PM and Saturday midday peak periods. The northbound left-turn movement is projected to operate at LOS B during the AM and Saturday midday peak periods and at LOS C during the PM peak period.

CONCLUSION

Nelson & Pope has investigated the potential traffic impacts associated with the proposed residential subdivision to be located on the west side of Searingtown Road between Estates Terrace North and Estates Terrace South in the Incorporated Village of North Hills, New York. The following is a summary of this investigation and the findings thereof:

1. The following intersections were included in this study:
 - Searingtown Road and LIE South Service Road
 - Searingtown Road and LIE North Service Road
 - Searingtown Road and Estates Terrace South
 - Searingtown Road and Estates Terrace North
2. Existing volumes were counted in May 2014 during the weekday AM, weekday PM and Saturday midday peak periods and seasonally adjusted to reflect the highest seasonal volume.
3. Future No Build traffic volumes were determined by applying a 0.5% annual growth factor to the seasonal volumes and then adding the traffic generated by the other planned developments in the vicinity of the site.
4. The trip generation for the proposed residential development was prepared utilizing trip generation data published by the Institute of Transportation Engineers (ITE) publication, *Trip Generation, Ninth Edition*.
5. The proposed residential development is projected to generate 35 trips (9 entering and 26 exiting) during the weekday AM peak hour, 47 trips (30 entering and 17 exiting) during the weekday PM peak hour and 44 trips (24 entering and 20 exiting) during the Saturday midday peak hour.
6. The gap analysis performed along Searingtown Road at the site access shows that sufficient gaps are available to accommodate exiting site-generated traffic.
7. The site-generated traffic was distributed to the study intersections and incorporated into the Future Build Condition.

8. As depicted on the site plan, access to the site will be provided via one unsignalized full movement driveway along Searingtown Road.
9. After the completion of the project, the signalized intersection of Searingtown Road and LIE South Service Road is projected to operate at LOS D during the AM peak period, LOS F during the PM peak period and LOS D during the Saturday midday peak period. Although this intersection operates at LOS F during the PM peak period, it can be seen that the overall delay is projected to increase by only 0.5 seconds. During the PM peak period the eastbound left-turn movement experiences a change in LOS, from C to D. However, the increase in delay is minimal at only 1.2 seconds. During the Saturday peak period the southbound left-turn movement experiences a change in LOS from E to F. However the increase in delay is minimal at only 2.1 seconds.
10. After the completion of the project, the signalized intersection of Searingtown Road and LIE North Service Road is projected to operate at LOS E during the AM peak period LOS D during the PM peak period and at LOS C during the Saturday midday peak period. During the AM peak period the overall LOS of the intersection changes from D during the No Build Condition to E during the Build Condition. However, the increase in delay is minimal at only 0.5 seconds. There is no change in LOS to individual movements.
11. After the completion of the project, the signalized intersection of Searingtown Road and Estates Terrace South/Christopher Morley County Park is projected to operate at LOS A during the AM and Saturday peak periods and at LOS B during the PM peak period. With the construction of the proposed project, the intersection will continue to operate at No Build conditions during the analyzed peak periods with minimal increase in delay.
12. After the completion of the project, the signalized intersection of Searingtown Road and Estates Terrace North/Dianas Trail is projected to operate at LOS A during the AM, PM and Saturday midday peak periods. With the construction of the proposed project, the intersection will continue to operate at No Build conditions during the analyzed peak periods with minimal increase in delay.
13. After the completion of the project, the eastbound left-turn movement is projected to operate at LOS D during the AM, PM and Saturday midday peak periods. The eastbound

right-turn movement is projected to operate at LOS B during the AM, PM and Saturday midday peak periods. The northbound left-turn movement is projected to operate at LOS B during the AM and Saturday midday peak periods and at LOS C during the PM peak period.

Based on the results of the Traffic Impact Study as detailed in the body of this report, it is the professional opinion of Nelson & Pope that, constructing the proposed residential development will not result in significant traffic impacts in the study area.

251 SEARINGTOWN ROAD

Manhasset

Inc. Village of North Hills

APPENDIX

June 2014

Revised September 2015

N & P JOB NO. 13008

Appendix A: Existing Traffic Volumes

NELSON AND POPE

572 Walt Whitman Road
Melville, NY 11747

File Name : Searingtown_Rd_at_LIE SSR_162147_05-01-2014

Site Code :

Start Date : 5/1/2014

Page No : 1

Groups Printed- Lights - Buses - Trucks

Start Time	Searingtown Rd Southbound					Westbound St. Westbound					Searingtown Rd Northbound					LIE SSR Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
07:00 AM	79	42	0	0	121	0	0	0	0	0	0	57	11	0	68	39	2	4	0	45	234
07:15 AM	95	66	0	0	161	0	0	0	0	0	0	83	37	0	120	59	3	6	0	68	349
07:30 AM	125	77	0	0	202	0	0	0	0	0	0	119	58	0	177	65	9	16	0	90	469
07:45 AM	144	59	0	0	203	0	0	0	0	0	0	114	49	0	163	56	6	7	0	69	435
Total	443	244	0	0	687	0	0	0	0	0	0	373	155	0	528	219	20	33	0	272	1487
08:00 AM	136	59	0	0	195	0	0	0	0	0	0	93	55	0	148	54	12	8	0	74	417
08:15 AM	174	81	0	1	256	0	0	0	0	0	0	95	49	0	144	61	10	5	0	76	476
08:30 AM	150	77	0	0	227	0	0	0	0	0	0	121	57	0	178	68	13	8	0	89	494
08:45 AM	123	79	0	0	202	0	0	0	0	0	0	132	42	0	174	66	21	5	0	92	468
Total	583	296	0	1	880	0	0	0	0	0	0	441	203	0	644	249	56	26	0	331	1855
04:00 PM	165	118	0	1	284	0	0	0	0	0	0	70	32	0	102	84	387	21	0	492	878
04:15 PM	177	135	0	0	312	0	0	0	0	0	0	71	29	0	100	103	405	18	0	526	938
04:30 PM	170	119	0	0	289	0	0	0	0	0	0	73	34	0	107	94	427	15	0	536	932
04:45 PM	163	140	0	0	303	0	0	0	0	0	0	84	34	0	118	102	451	20	0	573	994
Total	675	512	0	1	1188	0	0	0	0	0	0	298	129	0	427	383	1670	74	0	2127	3742
05:00 PM	190	129	0	0	319	0	0	0	0	0	0	107	40	0	147	105	419	27	0	551	1017
05:15 PM	200	172	0	0	372	0	0	0	0	0	0	93	43	0	136	96	460	26	0	582	1090
05:30 PM	187	159	0	0	346	0	0	0	0	0	0	80	45	0	125	111	455	28	0	594	1065
05:45 PM	180	117	0	0	297	0	0	0	0	0	0	108	45	0	153	123	438	25	0	586	1036
Total	757	577	0	0	1334	0	0	0	0	0	0	388	173	0	561	435	1772	106	0	2313	4208
Grand Total	2458	1629	0	2	4089	0	0	0	0	0	0	1500	660	0	2160	1286	3518	239	0	5043	11292
Apprch %	60.1	39.8	0	0		0	0	0	0	0	0	69.4	30.6	0		25.5	69.8	4.7	0		
Total %	21.8	14.4	0	0	36.2	0	0	0	0	0	0	13.3	5.8	0	19.1	11.4	31.2	2.1	0	44.7	
Lights	2343	1555	0	2	3900	0	0	0	0	0	0	1446	625	0	2071	1243	3361	228	0	4832	10803
% Lights	95.3	95.5	0	100	95.4	0	0	0	0	0	0	96.4	94.7	0	95.9	96.7	95.5	95.4	0	95.8	95.7
Buses	38	30	0	0	68	0	0	0	0	0	0	22	26	0	48	13	18	3	0	34	150
% Buses	1.5	1.8	0	0	1.7	0	0	0	0	0	0	1.5	3.9	0	2.2	1	0.5	1.3	0	0.7	1.3
Trucks	77	44	0	0	121	0	0	0	0	0	0	32	9	0	41	30	139	8	0	177	339
% Trucks	3.1	2.7	0	0	3	0	0	0	0	0	0	2.1	1.4	0	1.9	2.3	4	3.3	0	3.5	3

NELSON AND POPE

572 Walt Whitman Road
Melville, NY 11747

File Name : Searingtown_Rd_at_LIE SSR_162148_05-03-2014

Site Code :

Start Date : 5/3/2014

Page No : 1

Groups Printed- Lights - Buses - Trucks

Start Time	Searingtown Rd Southbound					Westbound St. Westbound					Searingtown Rd Northbound					LIE SSR Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
11:00 AM	123	69	0	0	192	0	0	0	0	0	0	72	29	0	101	111	86	14	0	211	504
11:15 AM	158	73	0	0	231	0	0	0	0	0	0	72	29	0	101	136	93	23	0	252	584
11:30 AM	166	111	0	0	277	0	0	0	0	0	0	100	26	0	126	133	76	14	0	223	626
11:45 AM	139	90	0	1	230	0	0	0	0	0	0	85	34	0	119	145	102	22	0	269	618
Total	586	343	0	1	930	0	0	0	0	0	0	329	118	0	447	525	357	73	0	955	2332
12:00 PM	176	86	0	0	262	0	0	0	0	0	0	83	33	0	116	148	100	21	0	269	647
12:15 PM	154	89	0	2	245	0	0	0	0	0	0	77	35	0	112	142	118	20	0	280	637
12:30 PM	149	95	0	0	244	0	0	0	0	0	0	85	37	0	122	117	112	18	0	247	613
12:45 PM	180	107	0	0	287	0	0	0	0	0	0	100	37	0	137	138	95	22	0	255	679
Total	659	377	0	2	1038	0	0	0	0	0	0	345	142	0	487	545	425	81	0	1051	2576
01:00 PM	183	108	0	0	291	0	0	0	0	0	0	100	35	0	135	130	112	27	0	269	695
01:15 PM	162	93	0	0	255	0	0	0	0	0	0	85	31	0	116	120	106	19	0	245	616
01:30 PM	192	98	0	0	290	0	0	0	0	0	0	97	37	0	134	140	99	21	0	260	684
01:45 PM	179	86	0	0	265	0	0	0	0	0	0	101	35	0	136	139	105	24	0	268	669
Total	716	385	0	0	1101	0	0	0	0	0	0	383	138	0	521	529	422	91	0	1042	2664
Grand Total	1961	1105	0	3	3069	0	0	0	0	0	0	1057	398	0	1455	1599	1204	245	0	3048	7572
Apprch %	63.9	36	0	0.1		0	0	0	0		0	72.6	27.4	0		52.5	39.5	8	0		
Total %	25.9	14.6	0	0	40.5	0	0	0	0	0	0	14	5.3	0	19.2	21.1	15.9	3.2	0	40.3	
Lights	1910	1090	0	3	3003	0	0	0	0	0	0	1046	385	0	1431	1584	1170	242	0	2996	7430
% Lights	97.4	98.6	0	100	97.8	0	0	0	0	0	0	99	96.7	0	98.4	99.1	97.2	98.8	0	98.3	98.1
Buses	5	0	0	0	5	0	0	0	0	0	0	3	0	0	3	0	2	0	0	2	10
% Buses	0.3	0	0	0	0.2	0	0	0	0	0	0	0.3	0	0	0.2	0	0.2	0	0	0.1	0.1
Trucks	46	15	0	0	61	0	0	0	0	0	0	8	13	0	21	15	32	3	0	50	132
% Trucks	2.3	1.4	0	0	2	0	0	0	0	0	0	0.8	3.3	0	1.4	0.9	2.7	1.2	0	1.6	1.7

NELSON AND POPE

572 Walt Whitman Road
Melville, NY 11747

File Name : Searingtown_Rd_at_LIE NSR_162149_05-01-2014

Site Code :

Start Date : 5/1/2014

Page No : 1

Groups Printed- Lights - Buses - Trucks

Searingtown Rd Southbound						LIE NSR Westbound					Searingtown Rd Northbound					Eastbound St. Eastbound					Int. Total
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
07:00 AM	0	101	110	0	211	20	409	67	0	496	28	73	0	0	101	0	0	0	0	0	808
07:15 AM	0	139	115	0	254	16	365	123	0	504	35	105	0	0	140	0	0	0	0	0	898
07:30 AM	0	176	119	0	295	25	299	160	0	484	37	146	0	0	183	0	0	0	0	0	962
07:45 AM	0	186	133	0	319	16	249	152	0	417	28	139	0	0	167	0	0	0	0	0	903
Total	0	602	477	0	1079	77	1322	502	0	1901	128	463	0	0	591	0	0	0	0	0	3571
08:00 AM	0	157	121	0	278	30	199	139	0	368	31	125	0	0	156	0	0	0	0	0	802
08:15 AM	0	240	150	0	390	23	189	138	0	350	32	127	0	0	159	0	0	0	0	0	899
08:30 AM	0	184	131	0	315	27	181	175	0	383	40	141	0	0	181	0	0	0	0	0	879
08:45 AM	0	177	137	0	314	22	181	166	0	369	45	161	0	0	206	0	0	0	0	0	889
Total	0	758	539	0	1297	102	750	618	0	1470	148	554	0	0	702	0	0	0	0	0	3469
04:00 PM	0	252	142	0	394	35	119	115	0	269	12	149	0	0	161	0	0	0	0	0	824
04:15 PM	0	259	155	0	414	44	134	103	0	281	21	154	0	0	175	0	0	0	0	0	870
04:30 PM	0	265	163	0	428	23	101	96	0	220	19	146	0	0	165	0	0	0	0	0	813
04:45 PM	0	260	149	0	409	40	167	123	0	330	19	169	0	0	188	0	0	0	0	0	927
Total	0	1036	609	0	1645	142	521	437	0	1100	71	618	0	0	689	0	0	0	0	0	3434
05:00 PM	0	271	153	0	424	36	181	92	0	309	25	189	0	0	214	0	0	0	0	0	947
05:15 PM	0	321	180	0	501	51	297	99	0	447	15	181	0	0	196	0	0	0	0	0	1144
05:30 PM	0	298	164	0	462	43	253	109	0	405	19	174	0	0	193	0	0	0	0	0	1060
05:45 PM	0	256	171	0	427	38	256	110	0	404	27	203	0	0	230	0	0	0	0	0	1061
Total	0	1146	668	0	1814	168	987	410	0	1565	86	747	0	0	833	0	0	0	0	0	4212
Grand Total	0	3542	2293	0	5835	489	3580	1967	0	6036	433	2382	0	0	2815	0	0	0	0	0	14686
Apprch %	0	60.7	39.3	0		8.1	59.3	32.6	0		15.4	84.6	0	0		0	0	0	0		
Total %	0	24.1	15.6	0	39.7	3.3	24.4	13.4	0	41.1	2.9	16.2	0	0	19.2	0	0	0	0	0	
Lights	0	3402	2231	0	5633	441	3425	1843	0	5709	416	2307	0	0	2723	0	0	0	0	0	14065
% Lights	0	96	97.3	0	96.5	90.2	95.7	93.7	0	94.6	96.1	96.9	0	0	96.7	0	0	0	0	0	95.8
Buses	0	51	23	0	74	19	30	31	0	80	8	26	0	0	34	0	0	0	0	0	188
% Buses	0	1.4	1	0	1.3	3.9	0.8	1.6	0	1.3	1.8	1.1	0	0	1.2	0	0	0	0	0	1.3
Trucks	0	89	39	0	128	29	125	93	0	247	9	49	0	0	58	0	0	0	0	0	433
% Trucks	0	2.5	1.7	0	2.2	5.9	3.5	4.7	0	4.1	2.1	2.1	0	0	2.1	0	0	0	0	0	2.9

NELSON AND POPE

572 Walt Whitman Road
Melville, NY 11747

File Name : Searingtown_Rd_at_LIE NSR_162150_05-03-2014

Site Code :

Start Date : 5/3/2014

Page No : 1

Groups Printed- Lights - Buses - Trucks

	Searingtown Rd Southbound					LIE NSR Westbound					Searingtown Rd Northbound					Eastbound St. Eastbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
11:00 AM	0	164	106	0	270	26	66	113	0	205	21	157	0	0	178	0	0	0	0	0	653
11:15 AM	0	203	145	0	348	15	86	136	0	237	17	180	0	0	197	0	0	0	0	0	782
11:30 AM	0	244	144	0	388	23	75	146	0	244	34	193	0	1	228	0	0	0	0	0	860
11:45 AM	0	195	122	0	317	34	82	134	0	250	18	228	0	0	246	0	0	0	0	0	813
Total	0	806	517	0	1323	98	309	529	0	936	90	758	0	1	849	0	0	0	0	0	3108
12:00 PM	0	214	131	0	345	35	85	147	0	267	25	207	0	0	232	0	0	0	0	0	844
12:15 PM	0	201	105	0	306	41	87	128	0	256	26	191	0	0	217	0	0	0	0	0	779
12:30 PM	0	228	126	0	354	25	77	149	0	251	26	166	0	0	192	0	0	0	0	0	797
12:45 PM	0	239	93	0	332	41	100	145	0	286	30	229	0	0	259	0	0	0	0	0	877
Total	0	882	455	0	1337	142	349	569	0	1060	107	793	0	0	900	0	0	0	0	0	3297
01:00 PM	0	242	126	0	368	44	90	143	0	277	29	204	0	0	233	0	0	0	0	0	878
01:15 PM	0	222	126	0	348	32	82	150	0	264	18	178	0	0	196	0	0	0	0	0	808
01:30 PM	0	259	99	0	358	36	73	138	0	247	14	216	0	0	230	0	0	0	0	0	835
01:45 PM	0	227	136	0	363	35	60	163	0	258	21	230	0	0	251	0	0	0	0	0	872
Total	0	950	487	0	1437	147	305	594	0	1046	82	828	0	0	910	0	0	0	0	0	3393
Grand Total	0	2638	1459	0	4097	387	963	1692	0	3042	279	2379	0	1	2659	0	0	0	0	0	9798
Apprch %	0	64.4	35.6	0		12.7	31.7	55.6	0		10.5	89.5	0	0		0	0	0	0		
Total %	0	26.9	14.9	0	41.8	3.9	9.8	17.3	0	31	2.8	24.3	0	0	27.1	0	0	0	0	0	
Lights	0	2568	1434	0	4002	378	940	1671	0	2989	278	2354	0	1	2633	0	0	0	0	0	9624
% Lights	0	97.3	98.3	0	97.7	97.7	97.6	98.8	0	98.3	99.6	98.9	0	100	99	0	0	0	0	0	98.2
Buses	0	4	1	0	5	0	2	3	0	5	1	1	0	0	2	0	0	0	0	0	12
% Buses	0	0.2	0.1	0	0.1	0	0.2	0.2	0	0.2	0.4	0	0	0	0.1	0	0	0	0	0	0.1
Trucks	0	66	24	0	90	9	21	18	0	48	0	24	0	0	24	0	0	0	0	0	162
% Trucks	0	2.5	1.6	0	2.2	2.3	2.2	1.1	0	1.6	0	1	0	0	0.9	0	0	0	0	0	1.7

NELSON AND POPE

572 Walt Whitman Road
Melville, NY 11747

File Name : Searingtown_Rd_at_Estate Terr S_162151_05-01-2014

Site Code :

Start Date : 5/1/2014

Page No : 1

Groups Printed- Lights - Buses - Trucks

Start Time	Searingtown Rd Southbound					Estate Terrace S Westbound					Searingtown Rd Northbound					Estate Terrace S Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
07:00 AM	7	202	0	0	209	1	0	0	0	1	1	136	7	0	144	1	0	1	1	3	357
07:15 AM	8	275	0	0	283	3	0	2	0	5	0	213	18	0	231	0	0	1	0	1	520
07:30 AM	5	256	0	0	261	5	0	6	0	11	6	286	14	0	306	2	0	4	0	6	584
07:45 AM	15	312	2	0	329	4	0	1	0	5	1	281	7	0	289	0	0	4	0	4	627
Total	35	1045	2	0	1082	13	0	9	0	22	8	916	46	0	970	3	0	10	1	14	2088
08:00 AM	6	293	1	0	300	5	0	2	0	7	2	257	2	0	261	5	0	3	0	8	576
08:15 AM	4	360	0	0	364	3	0	2	0	5	2	254	4	1	261	3	0	8	0	11	641
08:30 AM	0	321	0	0	321	3	0	0	0	3	4	310	2	0	316	2	0	4	0	6	646
08:45 AM	4	305	1	0	310	2	1	1	0	4	1	316	7	0	324	1	0	4	0	5	643
Total	14	1279	2	0	1295	13	1	5	0	19	9	1137	15	1	1162	11	0	19	0	30	2506
04:00 PM	12	391	0	0	403	0	0	8	0	8	0	243	10	0	253	2	0	5	0	7	671
04:15 PM	10	402	2	0	414	8	0	7	1	16	6	242	5	0	253	4	0	12	0	16	699
04:30 PM	4	391	1	0	396	5	0	4	0	9	6	223	11	0	240	4	0	5	0	9	654
04:45 PM	12	403	5	0	420	11	0	8	0	19	5	276	14	0	295	1	0	2	0	3	737
Total	38	1587	8	0	1633	24	0	27	1	52	17	984	40	0	1041	11	0	24	0	35	2761
05:00 PM	4	431	3	0	438	19	0	15	0	34	5	269	13	0	287	2	0	4	0	6	765
05:15 PM	5	501	3	0	509	15	0	5	0	20	6	256	16	0	278	1	0	3	0	4	811
05:30 PM	7	429	1	0	437	10	0	8	0	18	3	272	7	0	282	3	0	6	0	9	746
05:45 PM	8	384	4	0	396	16	0	5	0	21	6	293	8	0	307	3	0	6	0	9	733
Total	24	1745	11	0	1780	60	0	33	0	93	20	1090	44	0	1154	9	0	19	0	28	3055
Grand Total	111	5656	23	0	5790	110	1	74	1	186	54	4127	145	1	4327	34	0	72	1	107	10410
Apprch %	1.9	97.7	0.4	0		59.1	0.5	39.8	0.5		1.2	95.4	3.4	0		31.8	0	67.3	0.9		
Total %	1.1	54.3	0.2	0	55.6	1.1	0	0.7	0	1.8	0.5	39.6	1.4	0	41.6	0.3	0	0.7	0	1	
Lights	110	5458	23	0	5591	107	1	73	1	182	53	3935	140	1	4129	31	0	71	1	103	10005
% Lights	99.1	96.5	100	0	96.6	97.3	100	98.6	100	97.8	98.1	95.3	96.6	100	95.4	91.2	0	98.6	100	96.3	96.1
Buses	1	71	0	0	72	3	0	1	0	4	0	58	5	0	63	2	0	0	0	2	141
% Buses	0.9	1.3	0	0	1.2	2.7	0	1.4	0	2.2	0	1.4	3.4	0	1.5	5.9	0	0	0	1.9	1.4
Trucks	0	127	0	0	127	0	0	0	0	0	1	134	0	0	135	1	0	1	0	2	264
% Trucks	0	2.2	0	0	2.2	0	0	0	0	0	1.9	3.2	0	0	3.1	2.9	0	1.4	0	1.9	2.5

NELSON AND POPE

572 Walt Whitman Road
Melville, NY 11747

File Name : Searingtown_Rd_at_Estate Terr S_162152_05-03-2014

Site Code :

Start Date : 5/3/2014

Page No : 1

Groups Printed- Lights - Buses - Trucks

Start Time	Searingtown Rd Southbound					Estate Terrace S Westbound					Searingtown Rd Northbound					Estate Terrace S Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
11:00 AM	2	266	4	0	272	18	0	12	0	30	1	267	8	0	276	10	0	3	0	13	591
11:15 AM	8	341	1	0	350	17	0	6	0	23	2	292	22	0	316	2	0	8	0	10	699
11:30 AM	5	348	1	0	354	31	0	9	0	40	5	314	20	0	339	5	0	3	0	8	741
11:45 AM	6	302	1	0	309	13	0	11	0	24	5	328	14	0	347	2	0	2	0	4	684
Total	21	1257	7	0	1285	79	0	38	0	117	13	1201	64	0	1278	19	0	16	0	35	2715
12:00 PM	7	326	4	0	337	18	0	12	0	30	7	339	14	0	360	1	0	7	0	8	735
12:15 PM	4	314	2	0	320	10	0	5	0	15	1	302	7	0	310	4	0	2	0	6	651
12:30 PM	13	344	2	0	359	9	0	5	0	14	2	306	14	0	322	2	0	4	0	6	701
12:45 PM	7	319	5	0	331	14	0	7	0	21	5	351	12	0	368	2	0	4	0	6	726
Total	31	1303	13	0	1347	51	0	29	0	80	15	1298	47	0	1360	9	0	17	0	26	2813
01:00 PM	4	330	4	0	338	26	0	12	0	38	6	338	14	0	358	3	1	9	0	13	747
01:15 PM	4	340	0	0	344	17	0	8	0	25	3	323	7	0	333	1	0	8	0	9	711
01:30 PM	9	327	1	0	337	8	0	7	0	15	10	352	13	0	375	1	0	3	0	4	731
01:45 PM	3	333	4	0	340	8	0	3	0	11	3	379	15	0	397	3	0	3	0	6	754
Total	20	1330	9	0	1359	59	0	30	0	89	22	1392	49	0	1463	8	1	23	0	32	2943
Grand Total	72	3890	29	0	3991	189	0	97	0	286	50	3891	160	0	4101	36	1	56	0	93	8471
Apprch %	1.8	97.5	0.7	0		66.1	0	33.9	0		1.2	94.9	3.9	0		38.7	1.1	60.2	0		
Total %	0.8	45.9	0.3	0	47.1	2.2	0	1.1	0	3.4	0.6	45.9	1.9	0	48.4	0.4	0	0.7	0	1.1	
Lights	72	3815	29	0	3916	188	0	97	0	285	50	3846	160	0	4056	36	1	56	0	93	8350
% Lights	100	98.1	100	0	98.1	99.5	0	100	0	99.7	100	98.8	100	0	98.9	100	100	100	0	100	98.6
Buses	0	3	0	0	3	1	0	0	0	1	0	4	0	0	4	0	0	0	0	0	8
% Buses	0	0.1	0	0	0.1	0.5	0	0	0	0.3	0	0.1	0	0	0.1	0	0	0	0	0	0.1
Trucks	0	72	0	0	72	0	0	0	0	0	0	41	0	0	41	0	0	0	0	0	113
% Trucks	0	1.9	0	0	1.8	0	0	0	0	0	0	1.1	0	0	1	0	0	0	0	0	1.3

NELSON AND POPE

572 Walt Whitman Road
Melville, NY 11747

File Name : Searingtown_Rd_at_Estate Terr N_162153_05-01-2014

Site Code :

Start Date : 5/1/2014

Page No : 1

Groups Printed- Lights - Buses - Trucks

	Searingtown Rd Southbound					Estate Terrace N Westbound					Searingtown Rd Northbound					Estate Terrace N Eastbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
07:00 AM	0	225	3	0	228	4	0	0	0	4	2	132	0	0	134	2	0	4	0	6	372
07:15 AM	3	289	1	0	293	2	1	6	0	9	0	209	3	0	212	3	0	3	0	6	520
07:30 AM	0	241	4	0	245	1	1	0	0	2	4	277	3	0	284	5	0	5	0	10	541
07:45 AM	1	338	2	0	341	6	1	0	0	7	2	281	2	0	285	3	0	4	0	7	640
Total	4	1093	10	0	1107	13	3	6	0	22	8	899	8	0	915	13	0	16	0	29	2073
08:00 AM	0	303	2	0	305	3	0	4	0	7	5	260	1	0	266	2	0	6	0	8	586
08:15 AM	0	341	2	0	343	5	0	0	0	5	3	252	3	0	258	5	0	4	0	9	615
08:30 AM	1	291	0	0	292	9	1	2	0	12	6	295	2	0	303	7	0	6	0	13	620
08:45 AM	0	314	5	0	319	6	0	3	0	9	5	313	3	0	321	1	3	6	0	10	659
Total	1	1249	9	0	1259	23	1	9	0	33	19	1120	9	0	1148	15	3	22	0	40	2480
04:00 PM	1	380	3	0	384	1	0	2	0	3	6	241	3	0	250	6	2	10	0	18	655
04:15 PM	2	405	7	0	414	4	0	2	0	6	5	245	2	0	252	2	0	2	0	4	676
04:30 PM	2	405	7	0	414	3	0	3	0	6	2	224	2	0	228	3	1	6	0	10	658
04:45 PM	4	418	5	0	427	4	1	3	0	8	5	276	2	0	283	3	1	10	0	14	732
Total	9	1608	22	0	1639	12	1	10	0	23	18	986	9	0	1013	14	4	28	0	46	2721
05:00 PM	2	441	7	0	450	6	0	1	0	7	5	267	7	0	279	3	1	4	0	8	744
05:15 PM	2	470	4	0	476	10	0	0	0	10	6	252	3	0	261	5	0	5	0	10	757
05:30 PM	1	437	9	0	447	1	0	0	0	1	5	256	6	0	267	6	2	2	0	10	725
05:45 PM	4	402	6	0	412	3	1	1	0	5	6	290	6	0	302	4	1	2	0	7	726
Total	9	1750	26	0	1785	20	1	2	0	23	22	1065	22	0	1109	18	4	13	0	35	2952
Grand Total	23	5700	67	0	5790	68	6	27	0	101	67	4070	48	0	4185	60	11	79	0	150	10226
Apprch %	0.4	98.4	1.2	0		67.3	5.9	26.7	0		1.6	97.3	1.1	0		40	7.3	52.7	0		
Total %	0.2	55.7	0.7	0	56.6	0.7	0.1	0.3	0	1	0.7	39.8	0.5	0	40.9	0.6	0.1	0.8	0	1.5	
Lights	23	5505	63	0	5591	67	6	27	0	100	65	3890	47	0	4002	55	11	79	0	145	9838
% Lights	100	96.6	94	0	96.6	98.5	100	100	0	99	97	95.6	97.9	0	95.6	91.7	100	100	0	96.7	96.2
Buses	0	67	4	0	71	1	0	0	0	1	0	49	1	0	50	3	0	0	0	3	125
% Buses	0	1.2	6	0	1.2	1.5	0	0	0	1	0	1.2	2.1	0	1.2	5	0	0	0	2	1.2
Trucks	0	128	0	0	128	0	0	0	0	0	2	131	0	0	133	2	0	0	0	2	263
% Trucks	0	2.2	0	0	2.2	0	0	0	0	0	3	3.2	0	0	3.2	3.3	0	0	0	1.3	2.6

NELSON AND POPE

572 Walt Whitman Road
Melville, NY 11747

File Name : Searingtown_Rd_at_Estate Terr N_162154_05-03-2014

Site Code :

Start Date : 5/3/2014

Page No : 1

Groups Printed- Lights - Buses - Trucks

	Searingtown Rd Southbound					Estate Terrace N Westbound					Searingtown Rd Northbound					Estate Terrace N Eastbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
11:00 AM	4	271	3	0	278	3	0	2	0	5	7	275	1	0	283	2	0	1	0	3	569
11:15 AM	2	354	4	1	361	4	0	3	0	7	7	291	2	0	300	5	1	9	0	15	683
11:30 AM	1	324	5	0	330	6	0	2	0	8	5	319	3	0	327	6	0	9	1	16	681
11:45 AM	1	306	1	0	308	6	0	6	0	12	2	346	6	0	354	4	0	5	0	9	683
Total	8	1255	13	1	1277	19	0	13	0	32	21	1231	12	0	1264	17	1	24	1	43	2616
12:00 PM	3	317	9	0	329	3	0	0	0	3	3	339	4	0	346	7	0	8	0	15	693
12:15 PM	0	334	8	0	342	1	0	4	0	5	7	308	1	0	316	4	0	5	0	9	672
12:30 PM	2	338	5	0	345	4	2	1	0	7	6	298	3	0	307	8	0	6	0	14	673
12:45 PM	0	313	5	0	318	2	0	5	0	7	3	362	3	1	369	3	1	6	0	10	704
Total	5	1302	27	0	1334	10	2	10	0	22	19	1307	11	1	1338	22	1	25	0	48	2742
01:00 PM	2	356	4	0	362	1	1	3	0	5	4	339	2	0	345	3	0	4	0	7	719
01:15 PM	0	313	4	0	317	7	0	2	0	9	2	314	7	0	323	5	0	8	0	13	662
01:30 PM	3	352	2	0	357	2	0	2	0	4	3	332	6	0	341	5	0	3	0	8	710
01:45 PM	3	338	1	0	342	4	0	2	0	6	4	372	1	0	377	4	0	2	0	6	731
Total	8	1359	11	0	1378	14	1	9	0	24	13	1357	16	0	1386	17	0	17	0	34	2822
Grand Total	21	3916	51	1	3989	43	3	32	0	78	53	3895	39	1	3988	56	2	66	1	125	8180
Apprch %	0.5	98.2	1.3	0		55.1	3.8	41	0		1.3	97.7	1	0		44.8	1.6	52.8	0.8		
Total %	0.3	47.9	0.6	0	48.8	0.5	0	0.4	0	1	0.6	47.6	0.5	0	48.8	0.7	0	0.8	0	1.5	
Lights	21	3845	50	1	3917	43	3	32	0	78	53	3851	39	1	3944	56	2	66	1	125	8064
% Lights	100	98.2	98	100	98.2	100	100	100	0	100	100	98.9	100	100	98.9	100	100	100	100	100	98.6
Buses	0	3	0	0	3	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	7
% Buses	0	0.1	0	0	0.1	0	0	0	0	0	0	0.1	0	0	0.1	0	0	0	0	0	0.1
Trucks	0	68	1	0	69	0	0	0	0	0	0	40	0	0	40	0	0	0	0	0	109
% Trucks	0	1.7	2	0	1.7	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1.3

Combined
 Start Date: 7/7/2015
 Start Time: 5:15:00 AM
 Location 1: Searingtown Rd
 Location 2:

Date	Time	1-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-999
7/7/2015	05:15 AM	91	11	20	6	11	8	7	2	1	2	0	2	0	29
7/7/2015	05:30 AM	168	20	7	12	3	6	6	5	7	3	6	3	1	27
7/7/2015	05:45 AM	264	29	20	19	12	8	13	5	4	1	2	3	3	21
7/7/2015	06:00 AM	202	29	20	14	13	10	5	12	6	3	3	6	1	20
7/7/2015	06:15 AM	381	43	21	13	5	3	3	5	4	7	1	0	1	23
7/7/2015	06:30 AM	584	57	20	17	11	11	7	7	3	2	2	1	1	9
7/7/2015	06:45 AM	660	58	14	14	10	12	5	1	1	3	1	4	2	13
7/7/2015	07:00 AM	531	48	25	20	13	10	8	6	5	3	3	6	1	9
7/7/2015	07:15 AM	726	48	21	9	10	8	5	6	0	4	6	3	1	9
7/7/2015	07:30 AM	814	58	15	3	12	9	6	1	3	0	3	7	3	10
7/7/2015	07:45 AM	847	59	25	18	3	3	3	3	5	3	1	3	3	10
7/7/2015	08:00 AM	762	48	28	12	17	9	4	5	4	5	0	2	0	12
7/7/2015	08:15 AM	816	51	26	19	15	5	1	12	2	2	3	2	0	6
7/7/2015	08:30 AM	874	58	28	18	10	5	6	4	1	2	2	2	2	6
7/7/2015	08:45 AM	844	61	23	16	11	11	4	1	8	4	2	3	1	3
7/7/2015	09:00 AM	821	47	18	14	9	4	7	3	3	5	2	3	5	7
7/7/2015	09:15 AM	838	55	35	14	8	3	8	2	3	2	3	2	2	7
7/7/2015	09:30 AM	849	41	20	24	13	8	4	8	1	5	2	0	0	5
7/7/2015	09:45 AM	821	49	23	20	17	13	1	2	3	3	1	3	1	3
7/7/2015	10:00 AM	749	52	20	17	15	10	4	5	0	3	1	3	1	10
7/7/2015	10:15 AM	675	53	19	19	11	16	8	4	1	2	3	2	2	9
7/7/2015	10:30 AM	842	59	21	18	16	3	4	6	1	2	1	2	0	7
7/7/2015	10:45 AM	783	51	24	16	9	4	6	2	5	8	0	2	2	8
7/7/2015	11:00 AM	678	58	33	14	12	12	5	2	3	2	4	3	0	8
7/7/2015	11:15 AM	829	52	16	21	9	6	4	5	2	4	4	1	0	5
7/7/2015	11:30 AM	757	55	9	17	14	6	2	7	1	6	3	1	1	11
7/7/2015	11:45 AM	700	50	41	18	7	4	7	2	1	7	2	1	2	10
7/7/2015	12:00 PM	789	56	27	13	17	2	4	6	0	5	4	2	0	5
7/7/2015	12:15 PM	817	58	31	15	11	8	7	4	8	1	1	1	1	3
7/7/2015	12:30 PM	724	60	30	23	9	5	3	6	4	5	4	1	1	5
7/7/2015	12:45 PM	782	63	20	28	11	5	6	6	2	4	1	1	1	4
7/7/2015	01:00 PM	793	46	16	18	11	5	6	3	1	4	4	4	1	8
7/7/2015	01:15 PM	662	57	30	16	14	6	4	3	0	4	3	6	2	9
7/7/2015	01:30 PM	803	59	26	17	8	7	6	1	0	1	6	5	1	4
7/7/2015	01:45 PM	751	69	35	24	4	15	7	1	5	2	1	0	1	3
7/7/2015	02:00 PM	666	48	33	19	13	12	9	4	3	0	4	2	2	7
7/7/2015	02:15 PM	795	43	20	11	21	4	8	1	0	5	2	5	2	5
7/7/2015	02:30 PM	744	74	24	27	14	5	1	6	4	4	2	1	0	6
7/7/2015	02:45 PM	721	58	24	9	9	10	5	5	1	4	2	3	4	5
7/7/2015	03:00 PM	782	53	27	9	8	10	5	1	4	3	4	3	1	6
7/7/2015	03:15 PM	824	44	41	8	9	4	4	3	6	3	3	1	1	5
7/7/2015	03:30 PM	787	58	30	11	14	7	7	2	5	3	2	1	2	5
7/7/2015	03:45 PM	773	53	26	12	16	13	4	2	0	3	1	3	3	3
7/7/2015	04:00 PM	765	78	33	7	11	6	8	3	5	3	1	4	1	5
7/7/2015	04:15 PM	848	61	29	14	9	5	2	10	6	4	4	2	0	2
7/7/2015	04:30 PM	753	43	19	16	13	15	7	2	0	3	2	2	2	9
7/7/2015	04:45 PM	778	66	25	25	12	4	9	5	5	2	1	1	1	4
7/7/2015	05:00 PM	795	65	30	19	16	9	3	0	7	5	2	1	1	3
7/7/2015	05:15 PM	750	47	30	15	14	8	6	7	2	3	4	2	2	6
7/7/2015	05:30 PM	725	57	40	20	5	7	4	2	5	5	1	2	2	7
7/7/2015	05:45 PM	822	55	26	12	19	11	2	2	2	3	4	0	4	2
7/7/2015	06:00 PM	825	48	29	14	13	5	7	3	5	4	4	1	3	3
7/7/2015	06:15 PM	798	65	17	14	14	8	1	12	0	2	2	3	3	5
7/7/2015	06:30 PM	772	45	35	18	10	6	7	3	2	6	3	3	3	9
7/7/2015	06:45 PM	662	57	34	11	12	9	2	5	0	4	7	1	3	7
7/7/2015	07:00 PM	673	45	27	9	16	9	6	10	1	1	3	4	5	5
7/7/2015	07:15 PM	553	32	26	18	11	12	4	4	7	3	4	3	3	10
7/7/2015	07:30 PM	596	48	12	19	9	13	5	5	5	5	5	7	1	8
7/7/2015	07:45 PM	576	50	23	20	12	9	6	9	2	4	0	0	2	11
7/7/2015	08:00 PM	490	40	31	17	11	7	6	5	3	7	2	3	3	9
7/7/2015	08:15 PM	550	51	20	23	9	6	1	10	4	2	0	5	0	15
7/7/2015	08:30 PM	494	46	32	13	12	15	5	4	4	5	7	3	0	14
7/7/2015	08:45 PM	409	52	30	13	14	10	6	7	6	4	1	0	4	12
7/7/2015	09:00 PM	393	35	24	16	13	10	6	3	6	3	4	5	4	14
7/7/2015	09:15 PM	337	46	24	20	13	8	6	3	3	2	5	5	3	15
7/7/2015	09:30 PM	362	40	19	8	12	5	7	7	5	3	7	1	0	18
7/7/2015	09:45 PM	312	23	23	13	9	6	5	4	6	1	4	3	0	25
7/7/2015	10:00 PM	331	27	23	16	6	5	9	5	6	3	3	3	2	23
7/7/2015	10:15 PM	245	42	25	14	9	1	4	3	8	8	3	6	3	23
7/7/2015	10:30 PM	197	17	25	13	9	9	6	8	5	3	3	2	1	28
7/7/2015	10:45 PM	222	21	17	12	4	11	8	3	0	4	2	7	3	22
7/7/2015	11:00 PM	207	20	14	8	10	5	1	4	1	0	6	2	6	26
7/7/2015	11:15 PM	131	27	8	8	3	6	8	3	2	0	4	3	0	33
7/7/2015	11:30 PM	109	14	11	16	3	4	4	3	1	2	2	1	4	28
7/7/2015	11:45 PM	119	25	6	6	5	6	1	4	1	2	3	2	3	31
7/8/2015	12:00 AM	93	22	12	10	7	7	4	5	0	5	2	3	0	28
7/8/2015	12:15 AM	56	12	6	8	11	4	2	5	1	0	0	0	0	33
7/8/2015	12:30 AM	27	2	0	2	5	4	0	5	2	1	0	1	1	30
7/8/2015	12:45 AM	35	7	6	4	0	1	3	1	0	1	0	3	0	29
7/8/2015	01:00 AM	14	1	0	1	0	2	1	2	2	0	2	0	0	31
7/8/2015	01:15 AM	17	2	2	1	3	3	2	3	1	0	2	1	0	25
7/8/2015	01:30 AM	13	2	0	4	1	0	0	0	0	0	1	1	0	20

259

264

7/8/2015	01:45 AM	7	3	1	0	1	0	2	4	0	0	0	0	0	22
7/8/2015	02:00 AM	11	3	2	0	3	1	4	0	0	0	0	0	0	24
7/8/2015	02:15 AM	4	0	0	2	1	0	0	0	0	0	0	0	0	19
7/8/2015	02:30 AM	0	2	0	1	0	0	0	0	0	0	0	0	0	15
7/8/2015	02:45 AM	4	2	2	2	3	4	0	1	0	2	0	0	0	28
7/8/2015	03:00 AM	8	1	2	0	0	0	0	1	0	1	1	0	2	22
7/8/2015	03:15 AM	5	0	0	3	2	4	0	0	0	0	2	1	3	20
7/8/2015	03:30 AM	8	1	1	1	3	0	0	1	1	2	2	0	0	20
7/8/2015	03:45 AM	9	0	3	5	2	0	3	1	2	0	0	0	0	17
7/8/2015	04:00 AM	7	2	0	6	0	0	0	1	0	1	3	0	0	30
7/8/2015	04:15 AM	21	4	2	1	3	3	1	0	1	4	3	4	1	28
7/8/2015	04:30 AM	18	9	0	3	3	1	1	5	2	1	0	0	6	29
7/8/2015	04:45 AM	44	9	6	2	4	5	5	1	2	8	0	0	2	28
7/8/2015	05:00 AM	75	10	10	8	9	11	8	1	7	0	0	0	3	30
7/8/2015	05:15 AM	92	14	5	4	6	2	6	4	0	2	3	1	2	31
7/8/2015	05:30 AM	183	22	13	15	10	12	6	1	4	3	7	3	2	21
7/8/2015	05:45 AM	217	21	17	5	4	5	2	8	3	1	3	3	6	29
7/8/2015	06:00 AM	178	35	18	9	7	5	8	8	6	2	3	3	2	24
7/8/2015	06:15 AM	335	26	23	18	17	6	8	11	2	4	2	0	1	25
7/8/2015	06:30 AM	554	44	33	4	18	7	9	1	2	6	1	3	0	14
7/8/2015	06:45 AM	641	54	20	5	14	9	6	4	3	3	1	5	0	13
7/8/2015	07:00 AM	690	48	22	11	9	4	6	3	2	3	1	3	3	9
7/8/2015	07:15 AM	769	55	26	11	17	8	7	1	5	2	2	1	0	8
7/8/2015	07:30 AM	859	24	16	11	5	8	8	1	2	3	4	4	2	13
7/8/2015	07:45 AM	987	38	12	12	10	13	1	2	4	2	1	0	8	4
7/8/2015	08:00 AM	837	50	29	15	5	8	3	2	5	1	4	2	3	6
7/8/2015	08:15 AM	804	73	33	16	8	10	6	2	4	1	3	0	0	6
7/8/2015	08:30 AM	825	39	29	23	12	4	0	2	6	4	3	0	3	4
7/8/2015	08:45 AM	440	79	26	34	9	18	9	8	5	4	2	1	3	6
7/8/2015	09:00 AM	869	45	29	16	8	10	4	1	2	3	2	3	4	4
7/8/2015	09:15 AM	808	39	29	17	9	8	7	5	4	2	1	2	2	5
7/8/2015	09:30 AM	832	44	23	20	11	5	7	2	5	3	2	3	0	7
7/8/2015	09:45 AM	770	46	36	17	6	8	4	5	1	4	4	2	1	6
7/8/2015	10:00 AM	834	52	25	18	6	9	4	3	2	2	2	3	1	7
7/8/2015	10:15 AM	790	74	22	20	16	9	3	0	3	1	5	3	2	2
7/8/2015	10:30 AM	844	57	23	13	14	1	2	2	2	4	2	2	2	4
7/8/2015	10:45 AM	775	61	30	22	13	6	4	0	2	1	5	2	1	6
7/8/2015	11:00 AM	756	50	23	10	9	3	5	4	1	10	2	3	1	7
7/8/2015	11:15 AM	665	64	33	17	6	7	8	5	4	3	3	4	2	3
7/8/2015	11:30 AM	743	48	30	16	12	7	1	5	1	2	3	3	1	8
7/8/2015	11:45 AM	808	50	24	8	14	9	6	4	3	2	5	1	0	8
7/8/2015	12:00 PM	726	69	19	18	17	9	5	6	3	1	5	3	0	5
7/8/2015	12:15 PM	804	59	19	15	12	6	4	6	1	1	5	2	2	4
7/8/2015	12:30 PM	880	49	28	16	9	4	7	4	3	3	4	1	3	5
7/8/2015	12:45 PM	859	62	38	12	10	10	4	2	1	2	2	3	0	3
7/8/2015	01:00 PM	756	47	16	13	9	11	1	1	3	5	5	2	2	7
7/8/2015	01:15 PM	694	47	19	14	14	12	4	5	0	3	2	0	3	9
7/8/2015	01:30 PM	801	60	23	15	10	7	3	6	5	4	2	1	0	5
7/8/2015	01:45 PM	737	68	26	9	9	4	3	4	7	1	6	3	3	6
7/8/2015	02:00 PM	733	53	29	23	17	5	5	1	3	3	4	3	0	5
7/8/2015	02:15 PM	768	65	28	10	13	3	5	5	2	4	8	3	1	3
7/8/2015	02:30 PM	777	55	26	24	17	6	5	3	2	1	3	1	1	5
7/8/2015	02:45 PM	777	52	19	16	15	8	5	3	1	4	0	3	1	8
7/8/2015	03:00 PM	847	64	34	8	9	4	0	5	2	6	4	1	0	4
7/8/2015	03:15 PM	746	74	30	10	7	8	7	4	5	2	1	2	4	2
7/8/2015	03:30 PM	791	56	31	14	8	11	2	4	6	4	4	1	3	3
7/8/2015	03:45 PM	645	64	41	15	6	18	5	1	4	3	4	1	1	4
7/8/2015	04:00 PM	770	47	27	17	17	4	5	2	4	5	4	6	3	3
7/8/2015	04:15 PM	754	70	18	20	8	8	4	5	3	5	0	2	1	6
7/8/2015	04:30 PM	763	59	20	14	7	6	4	2	7	4	4	0	2	8
7/8/2015	04:45 PM	736	49	27	7	12	6	9	1	2	3	6	1	5	8
7/8/2015	05:00 PM	764	42	26	20	11	1	3	8	7	2	5	1	1	9
7/8/2015	05:15 PM	810	49	29	19	9	3	9	5	3	8	3	0	1	2
7/8/2015	05:30 PM	767	57	30	19	16	20	6	2	1	6	3	1	0	4
7/8/2015	05:45 PM	819	46	25	6	16	7	5	2	1	5	3	1	2	6
7/8/2015	06:00 PM	799	44	21	21	18	13	3	0	6	3	1	2	4	3
7/8/2015	06:15 PM	831	37	18	26	13	7	10	7	1	2	3	5	2	0
7/8/2015	06:30 PM	752	67	32	17	7	9	7	5	6	3	1	3	1	4
7/8/2015	06:45 PM	665	56	23	12	16	10	3	6	5	4	6	4	1	7
7/8/2015	07:00 PM	691	45	39	15	16	9	3	4	2	4	3	2	1	6
7/8/2015	07:15 PM	707	45	25	17	13	4	0	3	5	2	2	6	4	7
7/8/2015	07:30 PM	505	63	26	12	18	13	7	5	9	2	2	3	1	8
7/8/2015	07:45 PM	492	55	16	15	13	6	2	4	4	4	1	3	1	16
7/8/2015	08:00 PM	463	51	27	18	7	6	4	2	4	6	4	4	3	11
7/8/2015	08:15 PM	502	46	18	22	8	10	10	5	4	1	4	2	2	16
7/8/2015	08:30 PM	358	28	21	16	6	7	7	6	5	0	2	4	6	26
7/8/2015	08:45 PM	359	47	20	13	16	4	9	2	3	6	9	3	3	10
7/8/2015	09:00 PM	358	36	16	14	7	9	9	4	4	4	1	3	11	18
7/8/2015	09:15 PM	337	40	14	20	8	8	4	6	3	1	5	5	2	19
7/8/2015	09:30 PM	318	41	17	20	11	9	8	7	4	4	7	10	0	16
7/8/2015	09:45 PM	359	31	31	13	7	6	6	4	6	7	5	2	2	17
7/8/2015	10:00 PM	260	29	15	12	11	6	9	6	5	4	7	3	1	22
7/8/2015	10:15 PM	278	33	7	9	9	6	6	2	4	6	7	1	1	19
7/8/2015	10:30 PM	235	24	14	14	5	10	2	4	5	0	3	1	4	25
7/8/2015	10:45 PM	190	28	25	16	11	9	6	9	5	3	2	2	3	21
7/8/2015	11:00 PM	190	26	19	5	7	5	4	4	3	2	6	1	3	29
7/8/2015	11:15 PM	185	21	14	4	9	5	3	6	6	2	1	2	4	28
7/8/2015	11:30 PM	128	16	6	3	2	7	4	7	1	0	4	3	5	32
7/8/2015	11:45 PM	89	19	15	10	0	4	2	6	4	7	3	3	0	26
7/9/2015	12:00 AM	85	13	14	8	7	4	1	2	2	4	4	3	0	31
7/9/2015	12:15 AM	39	3	7	4	4	5	4	1	2	6	5	4	1	31

7/9/2015	12:30 AM	33	9	5	4	3	0	1	1	1	0	1	0	0	30
7/9/2015	12:45 AM	21	7	1	5	0	6	1	3	0	1	0	1	2	34
7/9/2015	01:00 AM	20	11	5	3	2	0	4	0	0	1	2	0	0	32
7/9/2015	01:15 AM	12	8	3	1	2	2	0	0	0	0	0	0	2	30
7/9/2015	01:30 AM	11	0	3	4	0	1	0	2	0	1	0	2	2	20
7/9/2015	01:45 AM	9	0	2	2	3	1	0	0	0	0	3	0	0	28
7/9/2015	02:00 AM	8	3	1	3	0	2	0	0	1	1	0	0	0	21
7/9/2015	02:15 AM	6	3	6	2	2	1	0	0	0	0	3	0	0	21
7/9/2015	02:30 AM	1	0	0	0	0	0	0	2	1	0	0	1	0	21
7/9/2015	02:45 AM	6	0	1	1	0	1	1	1	0	0	0	0	0	15
7/9/2015	03:00 AM	4	1	2	0	0	0	0	0	0	2	0	0	0	21
7/9/2015	03:15 AM	2	0	0	0	0	0	0	0	0	0	0	0	0	18
7/9/2015	03:30 AM	11	4	6	2	1	2	1	1	0	0	0	0	0	28
7/9/2015	03:45 AM	12	7	2	2	1	0	1	0	0	6	0	0	0	29
7/9/2015	04:00 AM	11	5	3	4	2	1	0	0	5	1	0	0	0	30
7/9/2015	04:15 AM	10	6	1	5	3	3	1	1	2	5	0	1	0	26
7/9/2015	04:30 AM	40	7	13	12	5	2	1	1	1	1	1	1	4	33
7/9/2015	04:45 AM	25	6	3	1	1	5	5	3	3	2	3	1	5	33
7/9/2015	05:00 AM	41	14	9	5	6	7	4	1	5	2	1	3	0	28
7/9/2015	05:15 AM	109	22	14	12	5	8	8	2	6	6	1	0	3	26
7/9/2015	05:30 AM	147	20	14	14	11	7	8	9	7	1	3	2	1	24
7/9/2015	05:45 AM	212	22	26	14	10	10	4	5	7	4	1	3	0	32
7/9/2015	06:00 AM	183	37	12	8	14	12	3	9	6	3	3	2	3	23
7/9/2015	06:15 AM	374	44	31	4	16	10	3	2	4	5	3	4	5	15
7/9/2015	06:30 AM	564	52	37	14	10	9	9	6	5	1	0	5	2	10
7/9/2015	06:45 AM	613	38	20	16	5	12	8	4	4	3	4	3	2	14
7/9/2015	07:00 AM	591	37	24	23	9	4	6	2	4	3	2	4	2	13
7/9/2015	07:15 AM	758	39	25	13	13	5	8	6	4	4	6	2	0	9
7/9/2015	07:30 AM	780	46	25	21	7	7	1	7	4	6	2	1	0	9
7/9/2015	07:45 AM	754	48	24	24	6	11	1	6	8	1	1	0	5	5
7/9/2015	08:00 AM	429	51	50	20	23	11	7	2	2	5	3	2	7	8
7/9/2015	08:15 AM	817	48	20	17	6	5	3	2	8	5	1	2	3	5
7/9/2015	08:30 AM	842	50	30	17	10	5	4	3	1	3	1	3	3	8
7/9/2015	08:45 AM	662	79	22	25	26	11	5	5	1	4	1	0	0	5
7/9/2015	09:00 AM	733	42	28	24	12	7	7	0	1	6	4	5	4	3
7/9/2015	09:15 AM	781	45	27	13	14	12	7	4	1	5	4	1	0	8
7/9/2015	09:30 AM	813	49	36	17	4	2	3	8	3	1	2	1	3	10
7/9/2015	09:45 AM	852	59	27	11	15	7	6	3	0	1	2	2	2	7
7/9/2015	10:00 AM	748	46	20	14	8	12	2	4	2	5	5	2	1	9
7/9/2015	10:15 AM	669	70	28	15	13	14	2	8	1	3	5	1	3	4
7/9/2015	10:30 AM	626	46	39	14	16	8	5	4	4	3	3	2	1	7
7/9/2015	10:45 AM	825	72	21	11	8	8	2	8	2	4	1	1	4	7
7/9/2015	11:00 AM	762	62	24	18	8	9	10	3	1	0	3	1	2	7
7/9/2015	11:15 AM	784	48	28	18	7	7	3	9	1	5	2	0	3	5
7/9/2015	11:30 AM	724	68	19	16	18	2	9	2	5	5	1	0	4	5
7/9/2015	11:45 AM	793	50	30	19	11	5	4	4	4	3	5	1	3	2
7/9/2015	12:00 PM	812	57	33	25	9	9	4	1	2	1	1	4	0	8
7/9/2015	12:15 PM	819	66	22	15	14	10	2	1	5	3	1	3	3	4
7/9/2015	12:30 PM	732	61	24	19	19	6	5	5	1	1	1	1	2	5
7/9/2015	12:45 PM	690	47	33	17	11	8	1	0	6	2	6	0	1	8
7/9/2015	01:00 PM	709	51	16	25	10	7	6	6	1	4	2	2	4	7
7/9/2015	01:15 PM	726	44	34	22	12	5	6	3	4	4	4	4	2	2
7/9/2015	01:30 PM	671	54	20	15	20	4	5	2	6	6	3	3	5	6
7/9/2015	01:45 PM	754	50	19	18	15	4	5	2	6	1	3	1	3	7
7/9/2015	02:00 PM	769	50	39	21	5	6	6	1	4	3	7	1	3	3
7/9/2015	02:15 PM	787	58	28	12	7	5	9	4	2	0	2	3	1	10
7/9/2015	02:30 PM	782	74	31	20	13	3	5	3	4	6	2	4	3	0
7/9/2015	02:45 PM	682	51	25	23	10	11	12	4	7	2	3	0	2	6
7/9/2015	03:00 PM	754	69	30	17	12	3	2	1	2	4	2	6	4	6
7/9/2015	03:15 PM	790	59	26	17	9	6	8	3	3	6	3	2	3	3
7/9/2015	03:30 PM	659	67	35	16	12	8	3	8	3	2	4	2	1	4
7/9/2015	03:45 PM	734	60	25	20	11	6	4	6	2	5	5	0	4	4
7/9/2015	04:00 PM	671	57	26	23	8	12	8	3	2	4	2	2	2	6
7/9/2015	04:15 PM	774	59	27	10	20	8	8	2	4	4	0	2	0	2
7/9/2015	04:30 PM	843	58	28	11	6	5	5	4	1	5	7	6	0	3
7/9/2015	04:45 PM	730	67	39	17	8	7	4	4	3	1	3	3	1	5
7/9/2015	05:00 PM	767	55	24	15	18	8	4	0	5	2	2	0	2	4
7/9/2015	05:15 PM	865	69	23	11	9	9	5	1	1	3	2	1	1	8
7/9/2015	05:30 PM	822	49	30	8	10	6	1	2	9	3	0	1	1	10
7/9/2015	05:45 PM	746	65	25	21	10	5	5	0	2	4	4	3	3	5
7/9/2015	06:00 PM	804	52	26	18	13	4	3	3	4	4	2	3	5	5
7/9/2015	06:15 PM	849	51	26	25	13	11	5	1	1	3	1	1	5	2
7/9/2015	06:30 PM	656	65	38	18	10	9	7	2	5	1	5	2	0	8
7/9/2015	06:45 PM	716	51	20	16	5	11	8	2	4	2	3	1	1	10
7/9/2015	07:00 PM	660	59	45	15	14	13	4	5	3	3	3	1	3	4
7/9/2015	07:15 PM	715	56	33	11	4	11	6	2	1	7	1	2	2	9
7/9/2015	07:30 PM	604	65	25	14	6	12	6	9	5	1	4	1	1	5
7/9/2015	07:45 PM	617	59	33	19	12	6	9	3	7	0	3	1	5	4
7/9/2015	08:00 PM	575	53	29	26	12	6	7	5	2	4	4	3	3	9
7/9/2015	08:15 PM	581	57	30	12	14	7	9	6	5	3	4	5	1	4
7/9/2015	08:30 PM	485	53	31	16	10	13	6	10	2	5	2	1	4	8
7/9/2015	08:45 PM	425	56	28	15	13	7	11	4	5	4	2	6	3	9
7/9/2015	09:00 PM	467	37	22	9	15	5	1	1	5	5	5	2	2	16
7/9/2015	09:15 PM	383	41	16	12	12	9	2	5	4	2	4	1	2	19
7/9/2015	09:30 PM	372	49	27	12	6	8	10	8	3	4	8	4	1	14
7/9/2015	09:45 PM	290	34	22	8	13	9	1	4	2	6	4	1	2	22
7/9/2015	10:00 PM	308	57	31	13	9	10	3	1	5	4	3	7	1	20
7/9/2015	10:15 PM	327	44	19	9	12	5	5	3	5	2	4	2	4	23
7/9/2015	10:30 PM	321	41	21	23	10	11	6	5	6	2	3	2	3	14
7/9/2015	10:45 PM	242	32	21	15	10	13	4	2	5	2	0	2	6	22
7/9/2015	11:00 PM	252	44	14	6	9	6	10	5	3	3	1	4	7	22

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7/9/2015 11:15 PM	236	29	17	12	18	12	8	6	2	2	0	1	3	26
7/9/2015 11:30 PM	144	17	21	14	8	4	11	4	3	2	8	4	5	25
7/9/2015 11:45 PM	144	30	15	9	9	9	1	3	4	2	1	4	2	25
7/10/2015 12:00 AM	91	16	9	12	7	9	0	5	5	2	2	3	3	34
7/10/2015 12:15 AM	66	21	8	11	2	5	5	5	0	2	1	4	4	30
7/10/2015 12:30 AM	64	7	3	5	7	3	2	2	3	5	3	6	1	31
7/10/2015 12:45 AM	30	11	2	4	2	3	1	4	2	0	2	2	1	36
7/10/2015 01:00 AM	27	8	3	0	7	0	3	0	2	1	2	1	1	35
7/10/2015 01:15 AM	19	9	1	0	2	3	3	1	0	0	0	0	0	36
7/10/2015 01:30 AM	13	5	3	4	1	3	2	0	3	0	2	0	2	28
7/10/2015 01:45 AM	9	4	3	4	0	6	1	4	1	0	0	3	0	35
7/10/2015 02:00 AM	6	1	3	0	2	0	3	1	1	2	0	0	0	27
7/10/2015 02:15 AM	14	0	0	0	3	1	2	0	0	0	0	0	0	22
7/10/2015 02:30 AM	6	1	0	5	0	1	2	2	0	0	0	0	0	25
7/10/2015 02:45 AM	0	0	1	0	0	1	1	2	2	1	0	1	0	19
7/10/2015 03:00 AM	14	2	3	1	2	0	1	0	0	1	2	2	3	29
7/10/2015 03:15 AM	14	0	2	1	1	2	2	1	4	0	1	1	0	25
7/10/2015 03:30 AM	5	2	0	0	1	0	2	2	0	0	0	1	1	28
7/10/2015 03:45 AM	6	1	2	8	2	0	0	0	2	2	2	0	1	28
7/10/2015 04:00 AM	11	3	4	6	0	0	0	0	3	2	0	0	1	34
7/10/2015 04:15 AM	34	2	2	2	2	3	4	2	0	0	0	2	0	29
7/10/2015 04:30 AM	32	7	8	9	4	2	7	6	2	3	2	4	4	32
7/10/2015 04:45 AM	27	10	9	9	4	7	5	7	2	1	0	4	2	31
7/10/2015 05:00 AM	62	14	11	5	4	2	4	1	6	3	6	6	2	30
7/10/2015 05:15 AM	101	26	16	9	5	5	6	11	4	5	10	2	3	25
7/10/2015 05:30 AM	156	28	21	13	8	16	3	7	7	6	6	4	3	18
7/10/2015 05:45 AM	179	32	22	20	8	7	4	6	8	4	11	6	4	15
7/10/2015 06:00 AM	209	30	21	11	15	5	8	7	6	2	10	8	1	17
7/10/2015 06:15 AM	387	30	28	23	16	4	5	6	4	3	2	2	2	16
7/10/2015 06:30 AM	588	46	20	12	10	13	9	2	1	5	3	2	2	11
7/10/2015 06:45 AM	592	37	32	18	12	11	6	2	0	2	3	1	1	13
7/10/2015 07:00 AM	618	58	28	16	12	7	5	4	4	7	3	2	0	10
7/10/2015 07:15 AM	692	47	23	14	6	10	3	6	4	1	4	2	2	10
7/10/2015 07:30 AM	830	45	19	20	8	9	7	6	2	4	0	2	0	10
7/10/2015 07:45 AM	834	58	26	17	5	9	0	8	1	3	1	1	5	8
7/10/2015 08:00 AM	771	55	25	16	12	6	6	10	5	1	0	4	1	6
7/10/2015 08:15 AM	915	56	35	10	6	4	6	6	1	0	1	1	1	6
7/10/2015 08:30 AM	898	53	21	18	4	8	5	1	3	4	1	1	2	7
7/10/2015 08:45 AM	779	49	27	15	13	9	5	7	3	2	4	2	1	8
7/10/2015 09:00 AM	819	35	26	20	6	4	3	4	2	1	4	9	2	9
7/10/2015 09:15 AM	751	45	28	18	15	18	8	1	2	3	0	2	3	6
7/10/2015 09:30 AM	728	51	22	16	10	9	9	5	3	3	1	1	3	7
7/10/2015 09:45 AM	732	46	25	22	15	5	3	3	10	2	6	2	1	4
7/10/2015 10:00 AM	755	46	22	16	11	10	5	2	5	2	2	8	4	6
7/10/2015 10:15 AM	777	54	14	15	13	6	8	0	2	3	3	2	7	4
7/10/2015 10:30 AM	730	48	31	14	14	10	2	5	2	5	0	4	2	5
7/10/2015 10:45 AM	736	58	39	18	10	17	4	4	2	1	2	1	0	6
7/10/2015 11:00 AM	743	60	22	12	9	3	4	3	1	6	3	4	1	9
7/10/2015 11:15 AM	728	60	38	19	16	2	7	7	8	1	1	1	2	4
7/10/2015 11:30 AM	774	45	19	20	10	5	10	5	2	3	6	0	0	7
7/10/2015 11:45 AM	863	64	34	15	14	10	1	6	5	1	2	2	3	2
7/10/2015 12:00 PM	799	57	20	21	11	8	4	6	2	4	4	2	1	5
7/10/2015 12:15 PM	799	54	22	19	9	11	4	5	1	4	1	2	1	8
7/10/2015 12:30 PM	868	34	27	23	8	3	7	2	1	3	5	2	1	6
7/10/2015 12:45 PM	743	46	30	23	11	7	2	7	4	2	2	2	2	5
7/10/2015 01:00 PM	822	43	25	17	10	8	7	3	5	3	4	1	1	7
7/10/2015 01:15 PM	799	57	23	15	12	6	6	2	4	3	1	3	5	6
7/10/2015 01:30 PM	801	47	40	13	10	5	2	3	5	3	6	2	4	5
7/10/2015 01:45 PM	775	63	21	21	6	11	2	6	4	4	3	3	2	5
7/10/2015 02:00 PM	680	43	26	16	20	12	7	3	4	2	2	3	1	7
7/10/2015 02:15 PM	826	56	24	12	10	10	5	5	0	1	4	5	0	6
7/10/2015 02:30 PM	876	69	15	20	11	7	4	6	4	2	3	0	1	2
7/10/2015 02:45 PM	768	58	23	15	9	6	7	4	2	3	6	3	0	10
7/10/2015 03:00 PM	815	61	27	13	16	12	3	4	2	4	1	2	5	5
7/10/2015 03:15 PM	792	45	27	17	11	9	4	5	2	4	5	3	3	5
7/10/2015 03:30 PM	772	58	22	19	13	5	4	3	3	3	1	5	1	9
7/10/2015 03:45 PM	914	52	26	17	15	8	6	1	1	5	8	2	0	1
7/10/2015 04:00 PM	820	54	32	21	14	6	5	2	3	1	12	3	0	3
7/10/2015 04:15 PM	882	59	32	16	16	8	5	3	0	4	1	3	1	2
7/10/2015 04:30 PM	834	39	26	19	18	12	4	3	3	5	3	0	1	5
7/10/2015 04:45 PM	873	55	19	11	10	2	4	2	7	1	5	1	4	10
7/10/2015 05:00 PM	824	47	26	14	14	10	3	3	3	3	2	1	3	7
7/10/2015 05:15 PM	975	51	23	15	8	6	5	6	8	1	2	4	0	6
7/10/2015 05:30 PM	880	58	26	19	9	9	6	4	5	3	4	1	1	5
7/10/2015 05:45 PM	788	59	18	17	12	10	4	2	8	3	3	0	1	7
7/10/2015 06:00 PM	702	52	29	19	14	20	5	5	7	3	5	0	0	5
7/10/2015 06:15 PM	647	55	44	30	17	12	15	4	5	6	4	0	0	3
7/10/2015 06:30 PM	506	77	30	17	12	10	13	4	2	5	4	7	2	9
7/10/2015 06:45 PM	548	45	24	26	13	9	8	6	3	8	2	6	4	12
7/10/2015 07:00 PM	506	45	36	11	10	6	6	8	7	14	6	2	4	11
7/10/2015 07:15 PM	526	32	33	28	11	5	13	14	6	2	5	1	2	10
7/10/2015 07:30 PM	450	48	25	18	9	9	7	10	3	3	8	1	2	17
7/10/2015 07:45 PM	443	38	24	19	11	8	6	5	0	3	4	3	2	24
7/10/2015 08:00 PM	484	33	39	21	7	6	10	3	5	6	2	1	3	18
7/10/2015 08:15 PM	385	33	28	13	18	4	2	3	2	2	8	6	2	22
7/10/2015 08:30 PM	387	37	20	16	12	10	9	2	4	5	2	7	6	15
7/10/2015 08:45 PM	368	38	22	12	14	5	8	3	4	2	1	1	5	21
7/10/2015 09:00 PM	354	49	26	17	13	6	8	3	4	6	3	4	6	17
7/10/2015 09:15 PM	326	32	31	16	10	16	6	5	1	5	3	3	4	18
7/10/2015 09:30 PM	232	38	25	24	10	20	7	9	1	2	2	5	0	25
7/10/2015 09:45 PM	293	51	21	17	13	4	8	7	6	4	5	9	1	15

7/10/2015	10:00 PM	301	35	21	15	6	8	2	4	9	6	3	2	4	24
7/10/2015	10:15 PM	282	25	32	10	14	4	3	3	4	1	2	2	3	21
7/10/2015	10:30 PM	248	44	22	13	8	11	11	4	5	3	5	0	5	21
7/10/2015	10:45 PM	277	33	25	11	10	6	4	9	1	5	3	4	2	24
7/10/2015	11:00 PM	249	30	17	13	7	2	6	4	5	6	3	0	3	29
7/10/2015	11:15 PM	265	33	20	14	8	9	9	6	6	1	4	4	6	13
7/10/2015	11:30 PM	178	20	10	8	10	4	6	4	2	4	3	4	2	25
7/10/2015	11:45 PM	164	26	8	6	13	6	4	5	5	6	0	2	6	23
7/11/2015	12:00 AM	152	22	18	10	6	2	6	7	4	9	4	1	2	29
7/11/2015	12:15 AM	98	15	9	3	5	7	1	5	6	7	1	1	0	26
7/11/2015	12:30 AM	96	15	4	7	2	3	2	2	0	0	1	3	5	30
7/11/2015	12:45 AM	46	14	4	4	1	4	4	1	1	1	3	4	1	32
7/11/2015	01:00 AM	58	6	5	10	3	3	3	2	0	1	0	1	2	34
7/11/2015	01:15 AM	50	9	4	1	2	2	2	4	3	5	3	0	1	32
7/11/2015	01:30 AM	47	7	2	6	1	2	3	3	0	2	1	2	2	30
7/11/2015	01:45 AM	45	2	6	0	3	1	3	4	0	2	2	2	1	33
7/11/2015	02:00 AM	30	3	2	2	3	3	3	0	1	1	0	0	1	31
7/11/2015	02:15 AM	24	4	2	4	2	0	2	1	2	2	2	0	0	25
7/11/2015	02:30 AM	35	2	7	1	5	3	5	2	1	2	2	0	0	25
7/11/2015	02:45 AM	24	3	4	3	0	3	1	0	1	1	3	1	0	26
7/11/2015	03:00 AM	21	5	3	5	4	1	2	3	2	1	0	3	0	30
7/11/2015	03:15 AM	30	2	5	9	3	0	1	0	0	2	0	1	0	21
7/11/2015	03:30 AM	21	1	5	2	3	1	5	0	1	0	0	3	0	28
7/11/2015	03:45 AM	25	1	3	1	2	1	0	0	0	2	0	0	0	37
7/11/2015	04:00 AM	30	0	3	5	1	3	2	0	2	4	2	1	0	21
7/11/2015	04:15 AM	37	4	3	2	8	8	2	1	3	1	2	4	0	31
7/11/2015	04:30 AM	22	5	3	1	0	2	0	4	1	1	1	0	0	32
7/11/2015	04:45 AM	20	2	5	3	1	4	1	1	2	0	3	1	0	29
7/11/2015	05:00 AM	44	6	7	5	4	0	2	1	2	3	3	2	2	35
7/11/2015	05:15 AM	68	5	10	3	9	5	3	4	1	1	5	2	0	30
7/11/2015	05:30 AM	94	9	12	9	4	5	4	1	1	3	3	6	3	28
7/11/2015	05:45 AM	83	12	13	5	6	6	2	8	4	2	1	3	0	27
7/11/2015	06:00 AM	141	18	13	9	4	6	4	1	0	4	1	3	3	21
7/11/2015	06:15 AM	194	21	16	9	8	4	3	4	0	6	3	2	2	28
7/11/2015	06:30 AM	274	25	17	14	4	6	6	7	8	2	3	1	3	18
7/11/2015	06:45 AM	273	34	17	21	9	9	6	3	7	4	3	4	1	29
7/11/2015	07:00 AM	238	38	20	14	7	8	5	8	4	1	1	3	1	22
7/11/2015	07:15 AM	329	33	20	10	10	6	7	3	6	3	0	3	2	26
7/11/2015	07:30 AM	409	30	21	12	9	7	6	9	1	3	0	3	3	19
7/11/2015	07:45 AM	383	42	21	17	16	10	10	5	4	4	2	8	16	16
7/11/2015	08:00 AM	372	42	13	20	13	6	10	10	4	2	4	3	0	15
7/11/2015	08:15 AM	455	40	29	10	9	11	7	11	3	2	2	0	1	18
7/11/2015	08:30 AM	444	41	22	8	9	9	7	2	6	0	6	8	0	22
7/11/2015	08:45 AM	448	41	16	10	16	15	10	5	6	6	0	4	3	20
7/11/2015	09:00 AM	446	54	25	18	12	11	5	1	1	2	2	2	5	16
7/11/2015	09:15 AM	489	43	27	13	12	8	3	4	3	6	3	4	2	17
7/11/2015	09:30 AM	539	37	15	7	16	3	6	7	6	2	6	4	4	16
7/11/2015	09:45 AM	539	48	31	3	10	5	10	2	4	4	2	3	1	24
7/11/2015	10:00 AM	541	39	12	22	11	7	6	6	5	2	0	6	2	15
7/11/2015	10:15 AM	486	46	28	16	17	14	6	5	5	5	1	1	1	19
7/11/2015	10:30 AM	562	52	40	24	11	15	4	6	7	2	3	5	3	8
7/11/2015	10:45 AM	555	44	16	20	15	14	6	7	2	4	4	5	4	14
7/11/2015	11:00 AM	526	42	18	23	14	8	12	5	3	1	11	3	3	15
7/11/2015	11:15 AM	528	37	28	10	19	11	12	13	7	4	3	1	4	9
7/11/2015	11:30 AM	546	46	20	15	5	9	5	4	1	5	5	2	2	9
7/11/2015	11:45 AM	600	19	11	6	3	0	1	1	0	1	0	0	0	0
7/11/2015	12:00 PM	655	41	22	17	12	5	3	4	1	3	1	0	5	11
7/11/2015	12:15 PM	698	56	19	10	14	6	4	8	4	0	3	1	3	10
7/11/2015	12:30 PM	762	51	20	17	10	12	1	6	6	0	3	1	5	6
7/11/2015	12:45 PM	629	72	33	18	13	14	4	0	9	1	1	5	0	5
7/11/2015	01:00 PM	638	62	28	21	10	5	4	3	2	5	5	0	4	7
7/11/2015	01:15 PM	738	60	29	18	11	12	6	4	4	3	2	0	1	6
7/11/2015	01:30 PM	774	54	18	18	16	6	5	4	3	1	5	2	2	6
7/11/2015	01:45 PM	677	58	28	29	8	12	5	2	3	1	5	0	0	6
7/11/2015	02:00 PM	731	64	18	20	13	2	8	3	4	8	2	1	0	4
7/11/2015	02:15 PM	777	49	24	19	9	11	8	4	4	1	0	3	2	5
7/11/2015	02:30 PM	715	64	26	8	15	7	6	5	2	4	4	2	0	4
7/11/2015	02:45 PM	758	60	22	16	15	8	5	0	2	3	2	2	1	8
7/11/2015	03:00 PM	717	47	27	23	8	1	4	7	2	1	4	5	1	11
7/11/2015	03:15 PM	749	67	27	19	10	7	6	0	3	2	2	2	3	5
7/11/2015	03:30 PM	783	51	32	16	6	4	3	3	2	6	0	4	1	7
7/11/2015	03:45 PM	835	58	30	19	15	3	6	0	0	1	5	0	3	5
7/11/2015	04:00 PM	761	46	16	14	13	5	4	1	5	5	5	3	0	8
7/11/2015	04:15 PM	814	46	37	16	5	4	3	9	4	2	4	1	2	7
7/11/2015	04:30 PM	662	65	34	18	13	7	6	2	6	2	3	2	1	7
7/11/2015	04:45 PM	728	39	31	21	12	1	4	3	2	4	4	5	3	7
7/11/2015	05:00 PM	779	39	24	10	16	10	8	6	3	5	2	3	2	9
7/11/2015	05:15 PM	714	67	28	16	22	5	8	3	5	4	1	2	2	7
7/11/2015	05:30 PM	674	50	31	19	12	5	2	6	2	6	1	5	1	12
7/11/2015	05:45 PM	765	60	18	8	14	13	8	2	2	3	3	3	3	6
7/11/2015	06:00 PM	819	59	24	27	14	7	5	3	0	4	2	0	2	8
7/11/2015	06:15 PM	803	60	17	15	11	11	6	1	3	2	3	4	4	6
7/11/2015	06:30 PM	770	37	17	22	7	8	7	5	4	7	3	0	4	7
7/11/2015	06:45 PM	642	63	24	11	21	10	7	3	3	8	6	1	1	4
7/11/2015	07:00 PM	581	59	43	11	13	6	4	5	4	4	3	1	2	12
7/11/2015	07:15 PM	562	57	25	19	17	9	6	4	3	2	4	7	0	11
7/11/2015	07:30 PM	571	48	14	21	18	10	8	2	1	9	3	3	1	11
7/11/2015	07:45 PM	582	49	33	12	12	9	7	2	3	0	1	2	1	15
7/11/2015	08:00 PM	532	51	38	15	12	7	11	12	3	4	2	4	2	7
7/11/2015	08:15 PM	492	36	19	25	17	5	6	6	7	3	5	4	1	12
7/11/2015	08:30 PM	460	57	22	28	18	10	10	5	3	4	8	5	0	8

7/11/2015 08:45 PM	331	65	20	18	5	4	10	5	1	3	2	2	3	21
7/11/2015 09:00 PM	371	38	23	18	17	5	18	6	6	5	2	4	2	19
7/11/2015 09:15 PM	439	48	30	15	14	11	9	10	4	2	0	5	1	10
7/11/2015 09:30 PM	416	35	22	20	12	7	10	5	2	2	2	2	4	25
7/11/2015 09:45 PM	338	38	32	30	21	11	7	8	5	5	4	5	1	9
7/11/2015 10:00 PM	412	38	29	12	6	14	6	6	5	4	2	4	4	18
7/11/2015 10:15 PM	373	48	24	14	15	8	11	3	10	5	8	6	1	10
7/11/2015 10:30 PM	432	44	27	22	16	10	7	7	5	3	5	2	3	11
7/11/2015 10:45 PM	378	43	21	9	18	8	1	5	6	6	6	1	3	11
7/11/2015 11:00 PM	336	39	20	19	18	7	3	3	3	8	5	2	5	16
7/11/2015 11:15 PM	343	36	17	10	8	10	5	4	5	5	1	2	0	22
7/11/2015 11:30 PM	310	41	19	10	7	7	4	6	4	0	6	3	2	23
7/11/2015 11:45 PM	244	29	29	12	8	10	6	10	6	4	7	1	3	21
7/12/2015 12:00 AM	195	36	14	15	5	13	5	4	9	5	9	4	2	20
7/12/2015 12:15 AM	170	29	20	11	5	7	10	2	5	6	8	2	6	25
7/12/2015 12:30 AM	113	24	18	11	9	9	6	7	8	5	2	3	3	26
7/12/2015 12:45 AM	102	9	8	12	11	7	2	6	6	2	4	2	7	26
7/12/2015 01:00 AM	69	11	13	11	7	3	3	7	5	3	5	4	4	33
7/12/2015 01:15 AM	51	12	5	8	3	3	4	5	3	1	2	0	5	36
7/12/2015 01:30 AM	18	12	5	4	1	0	5	1	0	5	0	0	5	30
7/12/2015 01:45 AM	51	12	7	7	2	6	3	4	2	8	1	4	1	32
7/12/2015 02:00 AM	38	6	6	9	2	2	1	8	2	1	3	2	2	36
7/12/2015 02:15 AM	12	5	3	1	4	3	0	0	1	0	2	0	0	31
7/12/2015 02:30 AM	3	5	11	3	4	2	3	2	2	1	2	5	2	35
7/12/2015 02:45 AM	15	5	2	6	0	0	0	0	4	0	0	0	2	24
7/12/2015 03:00 AM	6	7	0	2	2	2	1	1	0	0	0	0	1	28
7/12/2015 03:15 AM	11	2	5	7	3	1	0	0	1	2	1	1	0	32
7/12/2015 03:30 AM	10	0	4	0	3	2	2	1	0	0	1	4	0	29
7/12/2015 03:45 AM	12	4	1	0	2	1	0	4	0	0	0	1	2	27
7/12/2015 04:00 AM	10	2	2	4	3	2	2	3	1	0	1	2	2	26
7/12/2015 04:15 AM	10	1	1	0	3	2	0	0	0	2	6	2	0	25
7/12/2015 04:30 AM	7	3	2	1	4	2	2	0	1	1	0	2	1	28
7/12/2015 04:45 AM	5	6	1	2	2	2	0	2	0	1	2	0	3	28
7/12/2015 05:00 AM	10	2	7	3	3	0	3	2	2	0	0	1	0	33
7/12/2015 05:15 AM	10	5	3	6	3	3	0	0	1	0	1	1	1	30
7/12/2015 05:30 AM	27	10	11	0	4	3	3	0	0	1	1	7	3	28
7/12/2015 05:45 AM	31	11	6	6	8	2	2	4	1	3	1	2	1	32
7/12/2015 06:00 AM	41	15	6	10	1	5	3	5	0	1	2	2	1	32
7/12/2015 06:15 AM	87	16	12	3	9	7	2	2	4	4	1	4	2	31
7/12/2015 06:30 AM	197	27	19	11	10	9	14	6	2	2	2	1	4	20
7/12/2015 06:45 AM	229	33	15	16	6	7	10	2	13	1	7	5	4	18
7/12/2015 07:00 AM	120	21	11	14	8	3	5	2	6	0	5	2	1	26
7/12/2015 07:15 AM	150	20	17	10	8	5	0	6	5	6	3	3	2	25
7/12/2015 07:30 AM	202	22	12	11	8	5	4	4	2	4	2	3	7	28
7/12/2015 07:45 AM	207	32	14	10	10	9	11	4	3	1	2	8	2	29
7/12/2015 08:00 AM	219	22	21	11	7	3	1	8	6	4	4	4	5	25
7/12/2015 08:15 AM	279	30	13	18	12	5	7	3	3	6	5	2	1	24
7/12/2015 08:30 AM	281	43	25	14	15	14	5	1	6	3	2	3	1	21
7/12/2015 08:45 AM	268	32	20	19	11	12	6	3	5	5	2	6	3	20
7/12/2015 09:00 AM	315	26	24	12	10	11	4	10	2	6	3	2	7	16
7/12/2015 09:15 AM	408	43	34	9	15	7	3	4	5	5	0	5	6	18
7/12/2015 09:30 AM	421	39	20	15	14	13	7	5	5	3	1	5	1	13
7/12/2015 09:45 AM	573	36	14	10	15	6	7	4	1	9	7	4	1	11
7/12/2015 10:00 AM	496	43	37	11	12	13	5	5	7	3	0	1	2	11
7/12/2015 10:15 AM	553	45	21	23	14	9	2	4	1	7	0	3	4	18
7/12/2015 10:30 AM	582	46	33	22	15	11	5	7	2	6	2	0	2	9
7/12/2015 10:45 AM	661	41	17	16	15	6	6	4	5	4	2	2	4	13
7/12/2015 11:00 AM	574	42	18	18	16	5	4	3	5	9	0	2	2	12
7/12/2015 11:15 AM	559	50	30	17	14	7	5	2	8	2	2	3	0	15
7/12/2015 11:30 AM	648	56	32	13	7	6	7	2	1	2	2	1	0	13
7/12/2015 11:45 AM	657	57	34	4	15	7	12	5	5	2	6	3	1	4
7/12/2015 12:00 PM	645	45	30	25	18	7	6	3	1	5	3	2	2	6
7/12/2015 12:15 PM	662	50	23	24	6	14	8	7	3	1	3	4	1	6
7/12/2015 12:30 PM	743	38	25	14	13	3	3	6	5	4	3	1	0	14
7/12/2015 12:45 PM	676	57	27	14	17	6	7	7	5	2	4	2	1	7
7/12/2015 01:00 PM	625	52	37	19	11	3	9	13	1	1	0	3	3	9
7/12/2015 01:15 PM	728	71	34	15	17	8	2	5	2	2	0	3	2	5
7/12/2015 01:30 PM	636	69	32	18	5	10	9	5	2	7	2	2	2	5
7/12/2015 01:45 PM	632	58	30	16	16	14	10	3	5	0	0	5	1	6
7/12/2015 02:00 PM	718	56	24	14	18	5	7	6	2	5	2	4	0	5
7/12/2015 02:15 PM	652	56	37	18	6	16	4	3	3	5	3	1	0	6
7/12/2015 02:30 PM	758	60	36	22	11	6	9	1	2	1	0	1	2	7
7/12/2015 02:45 PM	614	62	33	11	20	5	9	6	4	4	3	3	0	8
7/12/2015 03:00 PM	653	47	33	19	11	4	10	5	2	4	1	2	2	9
7/12/2015 03:15 PM	743	59	22	19	10	11	4	2	9	2	0	5	4	2
7/12/2015 03:30 PM	673	50	23	23	17	6	9	9	8	3	0	0	1	8
7/12/2015 03:45 PM	765	63	32	17	11	12	3	1	6	1	2	1	1	5
7/12/2015 04:00 PM	593	55	28	17	9	5	3	15	4	8	3	2	3	9
7/12/2015 04:15 PM	786	52	23	17	5	8	7	3	1	2	2	2	1	9
7/12/2015 04:30 PM	760	54	19	20	8	10	3	3	5	5	3	3	0	9
7/12/2015 04:45 PM	608	49	32	24	13	8	4	10	2	2	1	0	2	7
7/12/2015 05:00 PM	623	54	24	11	15	8	9	2	2	7	1	5	4	7
7/12/2015 05:15 PM	573	55	34	21	7	3	3	9	3	6	4	2	1	9
7/12/2015 05:30 PM	598	56	32	14	15	7	1	2	7	1	9	1	3	10
7/12/2015 05:45 PM	668	51	38	15	15	6	7	3	2	3	3	3	2	8
7/12/2015 06:00 PM	709	54	23	13	9	8	5	4	6	3	4	1	1	6
7/12/2015 06:15 PM	585	38	33	22	12	9	5	4	3	5	2	5	3	10
7/12/2015 06:30 PM	581	39	26	18	15	8	10	6	4	1	5	4	1	10
7/12/2015 06:45 PM	550	52	28	19	10	7	1	2	2	8	2	3	2	12
7/12/2015 07:00 PM	517	45	24	11	9	6	10	2	7	3	2	1	2	17
7/12/2015 07:15 PM	429	39	30	13	15	7	6	3	9	3	0	6	0	16

7/12/2015 07:30 PM	462	46	25	16	16	9	4	2	5	6	5	7	1	8
7/12/2015 07:45 PM	401	35	27	21	13	9	4	3	2	5	4	5	4	13
7/12/2015 08:00 PM	407	52	28	16	13	8	9	5	6	2	4	3	2	13
7/12/2015 08:15 PM	462	57	23	9	11	14	8	8	5	3	3	3	1	11
7/12/2015 08:30 PM	366	39	23	8	3	8	4	3	4	6	5	4	2	19
7/12/2015 08:45 PM	358	49	26	4	17	14	5	4	8	5	8	3	4	11
7/12/2015 09:00 PM	374	33	21	22	14	9	6	7	6	1	4	3	2	16
7/12/2015 09:15 PM	338	41	32	21	9	5	4	7	3	3	4	3	2	14
7/12/2015 09:30 PM	328	40	33	13	13	11	6	4	5	2	3	3	2	21
7/12/2015 09:45 PM	327	36	21	17	12	10	6	4	5	8	3	3	2	18
7/12/2015 10:00 PM	246	25	10	28	11	10	5	9	6	4	1	6	7	14
7/12/2015 10:15 PM	292	32	26	8	11	4	10	9	6	2	6	1	6	17
7/12/2015 10:30 PM	221	30	26	16	14	10	7	9	1	2	3	1	3	23
7/12/2015 10:45 PM	166	26	28	10	10	7	11	3	6	1	3	5	3	21
7/12/2015 11:00 PM	131	15	10	9	9	8	10	4	1	4	3	4	4	28
7/12/2015 11:15 PM	160	23	19	7	7	11	5	3	5	3	3	4	1	25
7/12/2015 11:30 PM	130	7	15	5	7	5	6	5	4	4	5	1	7	25
7/12/2015 11:45 PM	84	15	14	2	4	4	1	5	0	3	3	3	0	34
7/13/2015 12:00 AM	78	16	15	17	1	2	9	0	0	5	6	0	6	29
7/13/2015 12:15 AM	60	15	3	7	6	2	6	7	4	2	2	1	0	35
7/13/2015 12:30 AM	35	6	6	5	9	3	0	4	1	3	2	0	1	37
7/13/2015 12:45 AM	28	8	8	3	2	5	5	2	1	4	0	0	3	33
7/13/2015 01:00 AM	16	6	7	4	5	2	2	2	1	0	1	2	1	31
7/13/2015 01:15 AM	20	3	2	0	0	0	0	0	0	1	0	0	0	26
7/13/2015 01:30 AM	7	2	2	0	0	0	4	0	1	0	1	0	0	27
7/13/2015 01:45 AM	3	0	0	0	3	2	1	2	0	0	1	0	2	28
7/13/2015 02:00 AM	6	4	4	2	2	1	0	2	0	0	0	0	0	23
7/13/2015 02:15 AM	2	0	0	0	2	1	1	0	0	0	1	2	0	21
7/13/2015 02:30 AM	8	0	0	0	0	0	0	0	0	2	0	0	0	18
7/13/2015 02:45 AM	2	0	0	0	0	2	0	0	0	0	0	1	0	21
7/13/2015 03:00 AM	8	0	0	0	2	0	2	0	0	0	2	0	0	22
7/13/2015 03:15 AM	7	0	1	1	0	4	0	0	2	0	0	2	0	25
7/13/2015 03:30 AM	8	0	0	0	0	0	0	1	1	2	0	0	0	26
7/13/2015 03:45 AM	9	3	0	0	2	0	0	2	2	1	0	5	0	20
7/13/2015 04:00 AM	15	2	1	1	3	4	1	0	0	1	1	0	3	37
7/13/2015 04:15 AM	7	2	3	1	0	4	0	0	3	0	2	0	1	33
7/13/2015 04:30 AM	43	21	6	3	8	4	6	5	5	1	6	1	0	33
7/13/2015 04:45 AM	45	4	12	4	6	8	3	3	2	1	8	1	0	29
7/13/2015 05:00 AM	69	11	11	7	3	3	6	3	1	4	2	3	2	33
7/13/2015 05:15 AM	106	19	23	18	9	4	5	3	2	4	4	4	0	25
7/13/2015 05:30 AM	160	19	16	12	12	1	12	6	3	10	2	2	4	27
7/13/2015 05:45 AM	259	41	27	5	10	8	5	5	4	4	5	5	2	22
7/13/2015 06:00 AM	236	46	31	11	15	12	2	7	8	4	2	5	1	16
7/13/2015 06:15 AM	476	47	21	9	13	8	7	4	4	3	4	3	6	15
7/13/2015 06:30 AM	510	29	26	23	9	3	8	3	7	6	3	0	2	15
7/13/2015 06:45 AM	584	47	21	13	11	4	6	4	6	3	2	3	0	14
7/13/2015 07:00 AM	532	55	20	13	7	7	3	4	3	5	5	1	0	17
7/13/2015 07:15 AM	739	28	16	11	16	10	6	6	2	4	4	3	1	8
7/13/2015 07:30 AM	820	47	30	13	11	8	3	4	5	1	3	2	2	7
7/13/2015 07:45 AM	832	51	20	16	4	9	7	5	2	2	3	0	2	9
7/13/2015 08:00 AM	662	49	31	28	5	8	6	7	6	1	1	0	3	9
7/13/2015 08:15 AM	899	49	12	15	13	8	8	0	1	3	1	1	0	10
7/13/2015 08:30 AM	856	45	24	12	8	6	9	2	2	2	1	3	3	9
7/13/2015 08:45 AM	888	46	24	16	8	10	4	5	5	1	1	1	2	7
7/13/2015 09:00 AM	820	66	18	19	5	10	10	4	2	2	5	1	0	6
7/13/2015 09:15 AM	866	36	20	23	6	6	7	5	2	2	1	1	5	6
7/13/2015 09:30 AM	768	59	31	17	16	6	9	5	5	1	0	2	3	2
7/13/2015 09:45 AM	783	53	21	17	3	5	2	5	5	4	7	4	0	7
7/13/2015 10:00 AM	667	58	16	21	8	12	5	4	4	2	0	4	1	12
7/13/2015 10:15 AM	704	51	23	14	16	6	10	1	4	5	6	0	2	6
7/13/2015 10:30 AM	616	45	25	15	10	6	8	4	5	3	5	5	4	7
7/13/2015 10:45 AM	655	64	43	23	16	7	2	1	4	3	4	1	3	6
7/13/2015 11:00 AM	596	45	23	16	15	15	6	1	7	5	2	2	0	7
7/13/2015 11:15 AM	788	50	21	17	12	12	1	2	4	3	3	4	1	6
7/13/2015 11:30 AM	685	71	37	23	10	5	4	4	4	2	3	2	3	5
7/13/2015 11:45 AM	757	61	20	11	10	8	10	5	1	4	4	1	1	7
7/13/2015 12:00 PM	731	45	22	17	14	5	10	4	5	1	2	1	3	10
7/13/2015 12:15 PM	749	47	35	17	12	12	9	3	1	1	2	4	3	3
7/13/2015 12:30 PM	698	74	29	19	18	4	5	4	6	2	1	0	0	6
7/13/2015 12:45 PM	617	56	24	19	21	10	8	4	0	2	5	2	1	9
7/13/2015 01:00 PM	697	60	27	16	9	8	4	6	4	4	2	0	1	8
7/13/2015 01:15 PM	687	71	25	14	7	10	5	7	3	7	3	1	0	4
7/13/2015 01:30 PM	724	55	26	19	12	5	5	3	3	2	7	1	4	6
7/13/2015 01:45 PM	770	69	21	12	11	5	5	4	3	2	2	0	3	9
7/13/2015 02:00 PM	767	59	28	24	9	7	7	3	1	4	0	4	3	2
7/13/2015 02:15 PM	702	61	29	14	13	5	10	1	3	4	0	2	0	8
7/13/2015 02:30 PM	820	63	33	16	22	11	3	3	1	6	1	1	0	4
7/13/2015 02:45 PM	765	80	35	17	11	9	1	1	1	3	2	2	1	8
7/13/2015 03:00 PM	754	60	25	21	14	9	4	8	2	2	1	1	1	12
7/13/2015 03:15 PM	888	49	25	23	11	7	4	6	6	3	0	2	0	4
7/13/2015 03:30 PM	710	69	31	20	9	9	2	7	1	4	2	3	4	7
7/13/2015 03:45 PM	812	81	21	22	11	8	8	4	5	2	0	1	0	7
7/13/2015 04:00 PM	862	75	39	8	9	10	4	4	7	6	3	0	0	5
7/13/2015 04:15 PM	954	49	23	20	7	4	2	6	6	3	4	2	0	6
7/13/2015 04:30 PM	837	61	16	23	13	6	8	3	3	2	1	7	1	3
7/13/2015 04:45 PM	897	49	24	20	12	9	15	2	0	2	4	2	0	4
7/13/2015 05:00 PM	887	72	22	12	16	8	4	2	1	6	5	0	2	7
7/13/2015 05:15 PM	814	77	37	18	17	6	8	7	5	3	1	2	3	2
7/13/2015 05:30 PM	863	78	32	17	16	4	4	2	1	7	2	2	0	6
7/13/2015 05:45 PM	814	73	28	17	15	5	4	5	5	2	1	5	1	5
7/13/2015 06:00 PM	767	64	23	28	17	4	8	2	5	5	3	8	2	6

7/13/2015 06:15 PM	958	54	26	16	19	5	7	2	5	4	6	1	0	7
7/13/2015 06:30 PM	837	66	33	12	12	14	3	4	4	4	2	3	0	4
7/13/2015 06:45 PM	701	64	25	30	12	8	6	3	5	1	2	3	4	4
7/13/2015 07:00 PM	688	60	28	16	15	6	12	3	1	3	4	3	1	6
7/13/2015 07:15 PM	693	58	24	17	10	15	5	4	4	6	3	1	3	5
7/13/2015 07:30 PM	615	58	17	13	12	10	7	6	4	9	2	3	4	8
7/13/2015 07:45 PM	529	36	27	25	9	5	9	8	1	6	3	3	1	18
7/13/2015 08:00 PM	539	40	22	14	14	13	7	6	6	1	3	2	1	16
7/13/2015 08:15 PM	483	53	26	23	16	5	7	4	5	6	3	2	2	11
7/13/2015 08:30 PM	481	34	24	14	11	9	9	10	4	8	1	4	4	11
7/13/2015 08:45 PM	492	49	22	15	18	6	4	5	4	1	1	4	2	13
7/13/2015 09:00 PM	382	26	16	18	13	9	6	11	3	4	3	3	2	16
7/13/2015 09:15 PM	356	32	24	11	12	6	7	11	4	3	7	2	2	17
7/13/2015 09:30 PM	305	51	16	17	9	9	4	9	4	3	7	0	1	23
7/13/2015 09:45 PM	275	33	25	8	2	8	6	4	8	8	0	8	1	18
7/13/2015 10:00 PM	239	24	13	16	12	6	6	7	2	7	7	2	4	21
7/13/2015 10:15 PM	226	30	24	17	11	4	9	8	1	3	5	3	4	21
7/13/2015 10:30 PM	190	38	16	12	4	11	8	5	5	3	8	4	2	24
7/13/2015 10:45 PM	193	27	14	23	15	9	6	6	7	1	5	5	4	21
7/13/2015 11:00 PM	188	24	14	11	11	2	6	6	2	2	8	6	2	22
7/13/2015 11:15 PM	131	21	21	10	9	4	4	5	3	4	5	1	3	33
7/13/2015 11:30 PM	63	7	16	5	2	5	4	3	6	5	2	0	5	33
7/13/2015 11:45 PM	103	18	8	5	3	3	2	2	8	3	1	0	5	31
7/14/2015 12:00 AM	85	13	12	10	6	1	2	7	7	7	3	4	1	28
7/14/2015 12:15 AM	27	3	9	8	5	2	0	3	2	0	3	0	1	29
7/14/2015 12:30 AM	32	11	6	9	3	0	0	2	6	1	0	0	1	31
7/14/2015 12:45 AM	28	14	6	3	3	2	1	1	2	4	1	1	1	29
7/14/2015 01:00 AM	21	4	3	1	2	1	0	2	6	0	0	0	1	29
7/14/2015 01:15 AM	15	3	1	0	7	2	0	0	1	0	1	3	0	31
7/14/2015 01:30 AM	15	4	1	0	0	3	2	0	1	0	0	0	0	32
7/14/2015 01:45 AM	10	1	2	0	1	3	1	1	0	0	1	1	0	27
7/14/2015 02:00 AM	2	0	0	0	4	6	0	0	0	0	0	0	0	22
7/14/2015 02:15 AM	9	2	0	0	0	3	1	0	2	0	0	1	0	28
7/14/2015 02:30 AM	3	0	0	0	0	0	0	0	0	0	0	0	0	21
7/14/2015 02:45 AM	7	4	0	0	0	0	1	0	0	2	3	1	1	27
7/14/2015 03:00 AM	7	1	6	1	0	0	1	0	0	0	0	3	1	

Appendix B: Trip Generation

Detailed Average Rate Trip Calculations
For 47 Dwelling Units of Single Family Detached Housing(210) - [R]

Project:

Open Date:

Phase:

Analysis Date:

Description:

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
<hr/>				
Avg. Weekday 2-Way Volume	9.52	3.70	1.00	447
7-9 AM Peak Hour Enter	0.19	0.00	1.00	9
7-9 AM Peak Hour Exit	0.56	0.00	1.00	26
7-9 AM Peak Hour Total	0.75	0.90	1.00	35
4-6 PM Peak Hour Enter	0.63	0.00	1.00	30
4-6 PM Peak Hour Exit	0.37	0.00	1.00	17
4-6 PM Peak Hour Total	1.00	1.05	1.00	47
AM Pk Hr, Generator, Enter	0.20	0.00	1.00	9
AM Pk Hr, Generator, Exit	0.57	0.00	1.00	27
AM Pk Hr, Generator, Total	0.77	0.91	1.00	36
PM Pk Hr, Generator, Enter	0.65	0.00	1.00	31
PM Pk Hr, Generator, Exit	0.37	0.00	1.00	17
PM Pk Hr, Generator, Total	1.02	1.05	1.00	48
Saturday 2-Way Volume	9.91	3.72	1.00	466
Saturday Peak Hour Enter	0.50	0.00	1.00	24
Saturday Peak Hour Exit	0.43	0.00	1.00	20
Saturday Peak Hour Total	0.93	0.99	1.00	44
Sunday 2-Way Volume	8.62	3.36	1.00	405
Sunday Peak Hour Enter	0.46	0.00	1.00	22
Sunday Peak Hour Exit	0.40	0.00	1.00	18
Sunday Peak Hour Total	0.86	0.95	1.00	40

Note: A zero indicates no data available.

Source: Institute of Transportation Engineers

Trip Generation Manual, 9th Edition, 2012

TRIP GENERATION 2013, TRAFFICWARE, LLC

Appendix C: Level of Service Definitions

LEVEL OF SERVICE: SIGNALIZED INTERSECTIONS

Level of service for signalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. The levels of service range between level of service A (relatively congestion-free) and level of service F (congested).

The delay experienced by a motorist is made up of a number of factors that relate to control, geometry, traffic, and incidents at an intersection. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during ideal conditions: in the absence of traffic control, in the absence of geometric delay, in the absence of any incidents, and when there are no other vehicles on the road. The portion of the total delay attributed to the control facility is called the control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Control delay may also be referred to as signal delay for signalized intersections.

Level of service criteria for signalized intersections is determined in terms of the average control delay per vehicle. The following average control delays are used to determine approach levels of service:

Control Delay (s/veh)	LOS by Volume-to-Capacity Ratio*	
	≤1.0	>1.0
≤ 10	A	F
> 10 – 20	B	F
> 20-35	C	F
> 35-55	D	F
> 55 – 80	E	F
> 80	F	F

Note: *For approach-based and intersectionwide assessments, LOS is defined solely by control delay.

Level of Service A describes operations with very low control delay. This occurs when progression is extremely favorable; most vehicles arrive during the green phase and do not stop at all. Short traffic signal cycles may contribute to low delay.

Level of Service B generally occurs with good progression and/or short traffic signal cycle lengths. More vehicles stop than for level of service A, causing higher average delays.

Level of Service C has higher delays than level of service B. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures, where motorists are required to wait through an entire signal cycle, may begin to appear at this level. The number of vehicles stopping is significant, although many still pass through the intersection without stopping.

Level of Service D At this level, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths or high volume-to-capacity ratios. The proportion of stopping vehicles increases. Individual cycle failures are noticeable.

Level of Service E is considered the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths and high volume-to-capacity ratios. Individual cycle failures occur frequently.

Level of Service F is considered unacceptable to most drivers. This condition often occurs with over saturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may occur at volume to capacity ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

LEVEL OF SERVICE: TWO WAY STOP CONTROLLED INTERSECTIONS

The quality of traffic service at a two-way stop controlled, or "TWSC," intersection is measured according to the level of service and capacity of individual legs. The level of service ranges from LOS A to LOS F, just as with signalized intersections.

The right of way at the TWSC intersection is controlled by stop signs on two opposing legs of an intersection (on one leg of a "T"-type intersection). The capacity of a controlled leg is based on the distribution of gaps in the major street traffic flow, driver judgment in selecting a gap through which to execute the desired maneuver and the follow up time required by each driver in a queue.

The level of service for a TWSC intersection is determined by the computed or measured control delay and is defined for each minor movement. Level of service is not defined for the intersection as a whole. The delay experienced by a motorist is made up of a number of factors that relate to control, geometry, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during conditions with ideal geometry and in the absence of incidents, control, and traffic. This program only quantifies that portion of the total delay attributed to traffic control measures, either traffic signals or stop signs. This delay is called control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration. Average control delay for any particular minor movement is a function of the approach and the degree of saturation.

The expectation is that TWSC intersections are designed to carry smaller traffic volumes than signalized intersections. Therefore, the delay threshold times are lower for the same LOS grades. The following average control delays are used to determine approach levels of service:

Level of Service A	≤ 10 seconds per vehicle
Level of Service B	> 10 and ≤ 15 seconds per vehicle
Level of Service C	> 15 and ≤ 25 seconds per vehicle
Level of Service D	> 25 and ≤ 35 seconds per vehicle
Level of Service E	> 35 and ≤ 50 seconds per vehicle
Level of Service F	> 50 seconds per vehicle

Appendix D: Capacity Analysis/Level of Service Worksheets & Summary Tables

Existing Capacity Analyses

Timings

1: Searingtown Rd & LIE South Service Rd

9/29/2015



Lane Group	EBL	EBT	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (vph)	249	56	583	296	441	203
Future Volume (vph)	249	56	583	296	441	203
Turn Type	Perm	NA	Prot	NA	NA	Perm
Protected Phases		4	1	6	2	
Permitted Phases	4					2
Detector Phase	4	4	1	6	2	2
Switch Phase						
Minimum Initial (s)	18.0	18.0	5.0	15.0	15.0	15.0
Minimum Split (s)	31.0	31.0	27.0	54.0	27.0	27.0
Total Split (s)	31.0	31.0	27.0	54.0	27.0	27.0
Total Split (%)	36.5%	36.5%	31.8%	63.5%	31.8%	31.8%
Yellow Time (s)	4.7	4.7	3.6	3.6	3.6	3.6
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	5.6	5.6	5.6	5.6
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	18.4	18.4	23.6	54.3	25.1	25.1
Actuated g/C Ratio	0.22	0.22	0.28	0.64	0.30	0.30
v/c Ratio	0.45	0.24	0.79	0.33	0.51	0.36
Control Delay	34.0	24.6	56.2	3.6	28.1	5.6
Queue Delay	0.0	0.0	20.4	0.2	0.0	0.0
Total Delay	34.0	24.6	76.6	3.8	28.1	5.6
LOS	C	C	E	A	C	A
Approach Delay		28.1		52.1	21.0	
Approach LOS		C		D	C	

Intersection Summary

Cycle Length: 85

Actuated Cycle Length: 85

Offset: 0 (0%), Referenced to phase 2:NWT and 6:SET, Start of Yellow

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 37.3

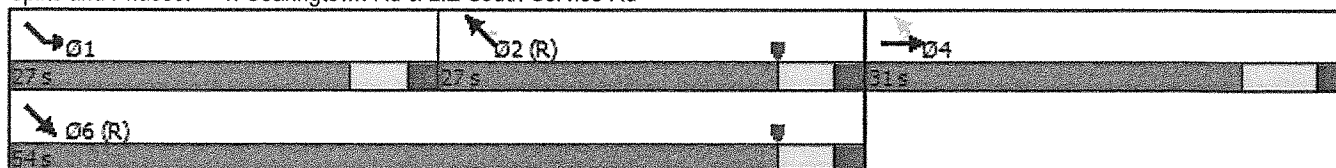
Intersection LOS: D

Intersection Capacity Utilization 82.4%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 1: Searingtown Rd & LIE South Service Rd



Timings

2: Searingtown Rd & LIE North Service Rd

9/29/2015



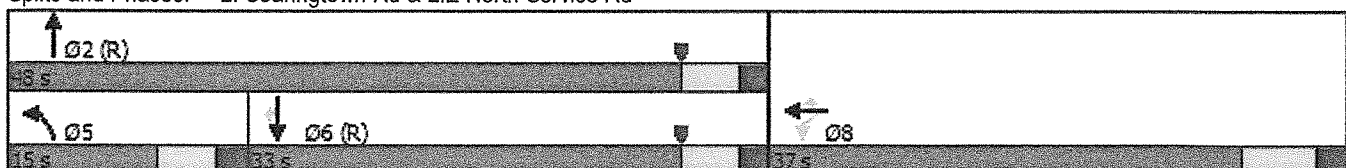
Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations	↑↑↑	↑	↑	↑↑	↑↑↑	↑
Traffic Volume (vph)	1322	502	128	463	602	477
Future Volume (vph)	1322	502	128	463	602	477
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		8				6
Detector Phase	8	8	5	2	6	6
Switch Phase						
Minimum Initial (s)	18.0	18.0	5.0	15.0	15.0	15.0
Minimum Split (s)	37.0	37.0	15.0	48.0	33.0	33.0
Total Split (s)	37.0	37.0	15.0	48.0	33.0	33.0
Total Split (%)	43.5%	43.5%	17.6%	56.5%	38.8%	38.8%
Yellow Time (s)	4.7	4.7	3.6	3.6	3.6	3.6
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	5.6	5.6	5.6	5.6
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	30.3	30.3	9.4	42.4	27.4	27.4
Actuated g/C Ratio	0.36	0.36	0.11	0.50	0.32	0.32
v/c Ratio	1.01	0.76	0.87	0.34	0.46	0.97
Control Delay	52.6	20.5	82.2	15.6	24.1	54.2
Queue Delay	34.9	0.0	0.0	0.4	0.0	0.0
Total Delay	87.5	20.5	82.2	16.1	24.1	54.2
LOS	F	C	F	B	C	D
Approach Delay	72.6			30.4	37.4	
Approach LOS	E			C	D	

Intersection Summary

Cycle Length: 85
 Actuated Cycle Length: 85
 Offset: 80 (94%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 85
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.01
 Intersection Signal Delay: 53.9
 Intersection Capacity Utilization 82.4%
 Analysis Period (min) 15

Intersection LOS: D
 ICU Level of Service E

Splits and Phases: 2: Searingtown Rd & LIE North Service Rd



Timings

3: Searingtown Rd & Estates Terrace S/Christopher Morley Park

9/29/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations		↰	↱	↰	↰	↱	↰	↰↱	↰	↰↱
Traffic Volume (vph)	11	0	19	13	1	5	9	1137	14	1279
Future Volume (vph)	11	0	19	13	1	5	9	1137	14	1279
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases		4			8		5	2	1	6
Permitted Phases	4		4	8		8	2		6	
Detector Phase	4	4	4	8	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	8.0	8.0	8.0	9.0	9.0	9.0	4.0	15.0	4.0	15.0
Minimum Split (s)	13.0	13.0	13.0	14.0	14.0	14.0	8.0	21.5	8.0	21.5
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	24.0	36.0	24.0	36.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	26.7%	40.0%	26.7%	40.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	4.0	3.0	4.0
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.0	2.5	1.0	2.5
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0	5.0	5.0	5.0	4.0	6.5	4.0	6.5
Lead/Lag							Lead	Lag	Lead	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	None	Max
Act Effct Green (s)		8.6	8.6	9.3	9.3	9.3	39.7	40.5	39.7	40.5
Actuated g/C Ratio		0.17	0.17	0.19	0.19	0.19	0.80	0.82	0.80	0.82
v/c Ratio		0.05	0.07	0.03	0.03	0.02	0.03	0.47	0.04	0.51
Control Delay		19.3	0.4	19.2	19.1	0.0	2.9	6.1	2.8	6.9
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		19.3	0.4	19.2	19.1	0.0	2.9	6.1	2.8	6.9
LOS		B	A	B	B	A	A	A	A	A
Approach Delay		7.5			13.6			6.1		6.9
Approach LOS		A			B			A		A

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 49.6

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.51

Intersection Signal Delay: 6.6

Intersection LOS: A

Intersection Capacity Utilization 63.3%

ICU Level of Service B

Analysis Period (min) 15

















Splits and Phases: 3: Searingtown Rd & Estates Terrace S/Christopher Morley Park

↰ Ø1 24 s	↰ Ø2 36 s	↰ Ø4 30 s
↰ Ø5 24 s	↰ Ø6 36 s	↰ Ø8 30 s

Timings

4: Searingtown Rd & Estate Terrace N/Dianas Trail

9/29/2015

									
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	15	3	22	23	1	19	1120	1	1249
Future Volume (vph)	15	3	22	23	1	19	1120	1	1249
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4			8		2		6
Permitted Phases	4		4	8		2		6	
Detector Phase	4	4	4	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	20.0	20.0	20.0	20.0
Minimum Split (s)	13.5	13.5	13.5	13.5	13.5	26.0	26.0	26.0	26.0
Total Split (s)	17.0	17.0	17.0	17.0	17.0	63.0	63.0	63.0	63.0
Total Split (%)	21.3%	21.3%	21.3%	21.3%	21.3%	78.8%	78.8%	78.8%	78.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5	5.5		5.5	6.0	6.0	6.0	6.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		8.4	8.4		8.4	65.3	65.3	65.3	65.3
Actuated g/C Ratio		0.11	0.11		0.11	0.84	0.84	0.84	0.84
v/c Ratio		0.17	0.10		0.26	0.08	0.45	0.00	0.47
Control Delay		34.4	6.1		28.9	3.7	3.6	3.0	3.7
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		34.4	6.1		28.9	3.7	3.6	3.0	3.7
LOS		C	A		C	A	A	A	A
Approach Delay		20.6			28.9		3.6		3.7
Approach LOS		C			C		A		A

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 77.5

Natural Cycle: 40

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.47

Intersection Signal Delay: 4.4













Intersection LOS: A

Intersection Capacity Utilization 62.3%

ICU Level of Service B

Analysis Period (min) 15











Splits and Phases: 4: Searingtown Rd & Estate Terrace N/Dianas Trail

					
63 s			17 s		
					
63 s			17 s		

HCM Unsignalized Intersection Capacity Analysis

5: Searingtown Rd & Site Access

9/29/2015

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	1153	1294	0
Future Volume (Veh/h)	0	0	0	1153	1294	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	1253	1407	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)				918	1013	
pX, platoon unblocked	0.87	0.86	0.86			
vC, conflicting volume	2034	704	1407			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1162	332	1149			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	163	571	520			
Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	0	0	626	626	938	469
Volume Left	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.00	0.00	0.37	0.37	0.55	0.28
Queue Length 95th (ft)	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A					
Approach Delay (s)	0.0	0.0			0.0	
Approach LOS	A					
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			39.1%		ICU Level of Service	A
Analysis Period (min)			15			

Timings

1: Searingtown Rd & LIE South Service Rd

9/29/2015



Lane Group	EBL	EBT	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (vph)	435	1772	757	577	388	173
Future Volume (vph)	435	1772	757	577	388	173
Turn Type	Perm	NA	Prot	NA	NA	Perm
Protected Phases		4	1	6	2	
Permitted Phases	4					2
Detector Phase	4	4	1	6	2	2
Switch Phase						
Minimum Initial (s)	18.0	18.0	5.0	15.0	15.0	15.0
Minimum Split (s)	41.0	41.0	24.0	49.0	25.0	25.0
Total Split (s)	41.0	41.0	24.0	49.0	25.0	25.0
Total Split (%)	45.6%	45.6%	26.7%	54.4%	27.8%	27.8%
Yellow Time (s)	4.7	4.7	3.6	3.6	3.6	3.6
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	5.6	5.6	5.6	5.6
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	34.3	34.3	18.4	43.4	19.4	19.4
Actuated g/C Ratio	0.38	0.38	0.20	0.48	0.22	0.22
v/c Ratio	0.72	1.16	1.30	0.76	0.57	0.42
Control Delay	32.5	105.3	177.6	13.2	35.0	16.1
Queue Delay	0.6	0.1	0.0	0.0	0.0	0.0
Total Delay	33.1	105.4	177.6	13.2	35.0	16.1
LOS	C	F	F	B	D	B
Approach Delay		93.1		106.5	29.2	
Approach LOS		F		F	C	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 66 (73%), Referenced to phase 2:NWT and 6:SET, Start of Yellow

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.30

Intersection Signal Delay: 88.8

Intersection LOS: F

Intersection Capacity Utilization 124.8%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 1: Searingtown Rd & LIE South Service Rd

Ø1	Ø2 (R)	Ø4
24 s	25 s	41 s
Ø6 (R)		
29 s		

Timings

2: Searingtown Rd & LIE North Service Rd

9/29/2015



Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations	↑↑↑	↑	↑	↑↑	↑↑↑	↑
Traffic Volume (vph)	987	410	86	747	1146	668
Future Volume (vph)	987	410	86	747	1146	668
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		8				6
Detector Phase	8	8	5	2	6	6
Switch Phase						
Minimum Initial (s)	18.0	18.0	5.0	15.0	15.0	15.0
Minimum Split (s)	38.0	38.0	13.0	52.0	39.0	39.0
Total Split (s)	38.0	38.0	13.0	52.0	39.0	39.0
Total Split (%)	42.2%	42.2%	14.4%	57.8%	43.3%	43.3%
Yellow Time (s)	4.7	4.7	3.6	3.6	3.6	3.6
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	5.6	5.6	5.6	5.6
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	31.3	31.3	7.3	46.4	36.0	36.0
Actuated g/C Ratio	0.35	0.35	0.08	0.52	0.40	0.40
v/c Ratio	0.86	0.73	0.71	0.46	0.65	1.05
Control Delay	33.9	25.8	56.8	17.0	24.6	73.0
Queue Delay	5.4	0.0	0.0	3.1	0.5	0.0
Total Delay	39.3	25.8	56.8	20.1	25.0	73.0
LOS	D	C	E	C	C	E
Approach Delay	36.3			23.9	42.7	
Approach LOS	D			C	D	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 61 (68%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.05

Intersection Signal Delay: 36.6

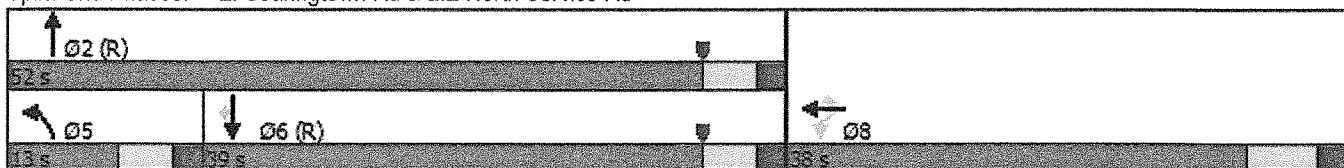
Intersection LOS: D

Intersection Capacity Utilization 124.8%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 2: Searingtown Rd & LIE North Service Rd



Timings

3: Searingtown Rd & Estates Terrace S/Christopher Morley Park

9/29/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations		↕	↗	↖	↕	↗	↖	↕	↖	↕
Traffic Volume (vph)	7	0	15	55	0	36	19	1073	28	1764
Future Volume (vph)	7	0	15	55	0	36	19	1073	28	1764
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases		4			8		5	2	1	6
Permitted Phases	4		4	8		8	2		6	
Detector Phase	4	4	4	8	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	8.0	8.0	8.0	9.0	9.0	9.0	4.0	15.0	4.0	15.0
Minimum Split (s)	13.0	13.0	13.0	14.0	14.0	14.0	8.0	21.5	8.0	21.5
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	24.0	36.0	24.0	36.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	26.7%	40.0%	26.7%	40.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	4.0	3.0	4.0
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.0	2.5	1.0	2.5
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0	5.0	5.0	5.0	4.0	6.5	4.0	6.5
Lead/Lag							Lead	Lag	Lead	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	None	Max
Act Effct Green (s)		8.8	8.8	9.3	9.3	9.3	38.4	36.9	39.2	38.7
Actuated g/C Ratio		0.17	0.17	0.18	0.18	0.18	0.74	0.71	0.76	0.75
v/c Ratio		0.04	0.06	0.14	0.14	0.13	0.07	0.50	0.08	0.76
Control Delay		21.9	0.3	22.7	22.7	3.0	3.4	8.6	3.3	13.1
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		21.9	0.3	22.7	22.7	3.0	3.4	8.6	3.3	13.1
LOS		C	A	C	C	A	A	A	A	B
Approach Delay		7.0			14.7			8.5		13.0
Approach LOS		A			B			A		B

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 51.7

Natural Cycle: 75

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 11.3

Intersection LOS: B

Intersection Capacity Utilization 77.1%

ICU Level of Service D

Analysis Period (min) 15

















Splits and Phases: 3: Searingtown Rd & Estates Terrace S/Christopher Morley Park

↙ Ø1	↕ Ø2	↗ Ø4
24 s	36 s	30 s
↖ Ø5	↓ Ø6	↖ Ø8
24 s	36 s	30 s

Timings

4: Searingtown Rd & Estate Terrace N/Dianas Trail

9/29/2015

									
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	17	4	21	21	1	21	1051	9	1766
Future Volume (vph)	17	4	21	21	1	21	1051	9	1766
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4			8		2		6
Permitted Phases	4		4	8		2		6	
Detector Phase	4	4	4	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	20.0	20.0	20.0	20.0
Minimum Split (s)	13.5	13.5	13.5	13.5	13.5	26.0	26.0	26.0	26.0
Total Split (s)	17.0	17.0	17.0	17.0	17.0	63.0	63.0	63.0	63.0
Total Split (%)	21.3%	21.3%	21.3%	21.3%	21.3%	78.8%	78.8%	78.8%	78.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5	5.5		5.5	6.0	6.0	6.0	6.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		8.3	8.3		8.3	65.3	65.3	65.3	65.3
Actuated g/C Ratio		0.11	0.11		0.11	0.84	0.84	0.84	0.84
v/c Ratio		0.20	0.13		0.22	0.16	0.37	0.02	0.64
Control Delay		35.0	8.9		31.4	6.4	3.1	3.0	5.4
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		35.0	8.9		31.4	6.4	3.1	3.0	5.4
LOS		C	A		C	A	A	A	A
Approach Delay		21.9			31.4		3.2		5.4
Approach LOS		C			C		A		A

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 77.4

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.64

Intersection Signal Delay: 5.1













Intersection LOS: A

Intersection Capacity Utilization 77.1%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 4: Searingtown Rd & Estate Terrace N/Dianas Trail

					
63 s	17 s	17 s	63 s	17 s	17 s
					
63 s	17 s	17 s	63 s	17 s	17 s

HCM Unsignalized Intersection Capacity Analysis

5: Searingtown Rd & Site Access

9/29/2015



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	1116	1804	0
Future Volume (Veh/h)	0	0	0	1116	1804	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	1213	1961	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)				918	1013	
pX, platoon unblocked	0.75	0.65	0.65			
vC, conflicting volume	2568	980	1961			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1219	0	1406			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	130	707	314			
Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	0	0	606	606	1307	654
Volume Left	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.00	0.00	0.36	0.36	0.77	0.38
Queue Length 95th (ft)	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A					
Approach Delay (s)	0.0	0.0			0.0	
Approach LOS	A					
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			53.2%		ICU Level of Service	A
Analysis Period (min)			15			

Timings

1: Searingtown Rd & LIE South Service Rd

9/29/2015



Lane Group	EBL	EBT	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (vph)	528	412	717	406	382	140
Future Volume (vph)	528	412	717	406	382	140
Turn Type	Perm	NA	Prot	NA	NA	Perm
Protected Phases		4	1	6	2	
Permitted Phases	4					2
Detector Phase	4	4	1	6	2	2
Switch Phase						
Minimum Initial (s)	18.0	18.0	5.0	15.0	15.0	15.0
Minimum Split (s)	30.0	30.0	24.0	50.0	26.0	26.0
Total Split (s)	30.0	30.0	24.0	50.0	26.0	26.0
Total Split (%)	37.5%	37.5%	30.0%	62.5%	32.5%	32.5%
Yellow Time (s)	4.7	4.7	3.6	3.6	3.6	3.6
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	5.6	5.6	5.6	5.6
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	21.7	21.7	20.0	46.0	20.4	20.4
Actuated g/C Ratio	0.27	0.27	0.25	0.58	0.26	0.26
v/c Ratio	0.68	0.64	0.99	0.45	0.47	0.29
Control Delay	35.1	27.1	74.8	4.8	27.3	8.4
Queue Delay	0.3	0.0	0.0	0.0	0.0	0.0
Total Delay	35.4	27.2	74.8	4.8	27.3	8.4
LOS	D	C	E	A	C	A
Approach Delay		29.3		49.5	22.3	
Approach LOS		C		D	C	

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 76 (95%), Referenced to phase 2:NWT and 6:SET, Start of Yellow

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.99

Intersection Signal Delay: 36.7

Intersection LOS: D

Intersection Capacity Utilization 90.6%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 1: Searingtown Rd & LIE South Service Rd

Ø1	Ø2 (R)	Ø4
24 s	25 s	30 s
Ø6 (R)		
50 s		

Timings

2: Searingtown Rd & LIE North Service Rd

9/29/2015



Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations	←↑↑↑	↑	↑	↑↑↑	↑↑↑	↑
Traffic Volume (vph)	354	576	91	827	962	444
Future Volume (vph)	354	576	91	827	962	444
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		8				6
Detector Phase	8	8	5	2	6	6
Switch Phase						
Minimum Initial (s)	18.0	18.0	5.0	15.0	15.0	15.0
Minimum Split (s)	34.0	34.0	13.0	46.0	33.0	33.0
Total Split (s)	34.0	34.0	13.0	46.0	33.0	33.0
Total Split (%)	42.5%	42.5%	16.3%	57.5%	41.3%	41.3%
Yellow Time (s)	4.7	4.7	3.6	3.6	3.6	3.6
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	5.6	5.6	5.6	5.6
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	24.1	24.1	7.8	43.6	32.6	32.6
Actuated g/C Ratio	0.30	0.30	0.10	0.54	0.41	0.41
v/c Ratio	0.65	0.68	0.61	0.48	0.53	0.62
Control Delay	23.4	23.2	44.9	15.0	20.8	14.6
Queue Delay	1.0	0.0	0.0	1.2	0.1	0.0
Total Delay	24.5	23.2	44.9	16.2	20.8	14.6
LOS	C	C	D	B	C	B
Approach Delay	24.1			19.0	18.9	
Approach LOS	C			B	B	

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 71 (89%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 20.6

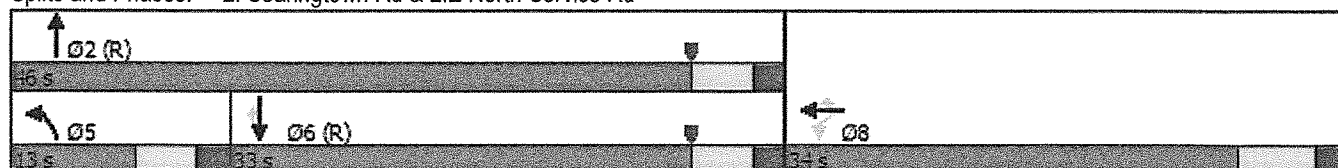
Intersection LOS: C

Intersection Capacity Utilization 90.6%

ICU Level of Service E

Analysis Period (min) 15




















Splits and Phases: 2: Searingtown Rd & LIE North Service Rd



Timings

3: Searingtown Rd & Estates Terrace S/Christopher Morley Park

9/29/2015

										
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	8	1	23	59	0	30	22	1392	20	1330
Future Volume (vph)	8	1	23	59	0	30	22	1392	20	1330
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases		4			8		5	2	1	6
Permitted Phases	4		4	8		8	2		6	
Detector Phase	4	4	4	8	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	8.0	8.0	8.0	9.0	9.0	9.0	4.0	15.0	4.0	15.0
Minimum Split (s)	13.0	13.0	13.0	14.0	14.0	14.0	8.0	21.5	8.0	21.5
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	24.0	36.0	24.0	36.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	26.7%	40.0%	26.7%	40.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	4.0	3.0	4.0
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.0	2.5	1.0	2.5
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0	5.0	5.0	5.0	4.0	6.5	4.0	6.5
Lead/Lag							Lead	Lag	Lead	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	None	Max
Act Effct Green (s)		8.8	8.8	9.3	9.3	9.3	36.9	36.3	36.9	36.3
Actuated g/C Ratio		0.18	0.18	0.19	0.19	0.19	0.75	0.73	0.75	0.73
v/c Ratio		0.05	0.09	0.14	0.14	0.11	0.07	0.61	0.07	0.57
Control Delay		20.3	0.5	21.1	21.1	1.8	3.6	9.8	3.5	8.9
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		20.3	0.5	21.1	21.1	1.8	3.6	9.8	3.5	8.9
LOS		C	A	C	C	A	A	A	A	A
Approach Delay		6.0			14.4			9.7		8.8
Approach LOS		A			B			A		A

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 49.5

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.61

Intersection Signal Delay: 9.4







Intersection LOS: A

Intersection Capacity Utilization 68.0%

ICU Level of Service C

Analysis Period (min) 15

















Splits and Phases: 3: Searingtown Rd & Estates Terrace S/Christopher Morley Park

 Ø1	 Ø2	 Ø4
24 s	36 s	30 s
 Ø5	 Ø6	 Ø8
24 s	36 s	30 s

Timings

4: Searingtown Rd & Estate Terrace N/Dianas Trail

9/29/2015

									
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	17	0	17	14	1	13	1357	8	1359
Future Volume (vph)	17	0	17	14	1	13	1357	8	1359
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4			8		2		6
Permitted Phases	4		4	8		2		6	
Detector Phase	4	4	4	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	20.0	20.0	20.0	20.0
Minimum Split (s)	13.5	13.5	13.5	13.5	13.5	26.0	26.0	26.0	26.0
Total Split (s)	17.0	17.0	17.0	17.0	17.0	63.0	63.0	63.0	63.0
Total Split (%)	21.3%	21.3%	21.3%	21.3%	21.3%	78.8%	78.8%	78.8%	78.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5	5.5		5.5	6.0	6.0	6.0	6.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		8.2	8.2		8.2	65.3	65.3	65.3	65.3
Actuated g/C Ratio		0.11	0.11		0.11	0.84	0.84	0.84	0.84
v/c Ratio		0.15	0.11		0.19	0.06	0.47	0.03	0.48
Control Delay		33.5	6.6		25.5	3.4	3.6	3.0	3.7
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		33.5	6.6		25.5	3.4	3.6	3.0	3.7
LOS		C	A		C	A	A	A	A
Approach Delay		20.1			25.5		3.6		3.7
Approach LOS		C			C		A		A

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 77.3

Natural Cycle: 40

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.48

Intersection Signal Delay: 4.2













Intersection LOS: A

Intersection Capacity Utilization 65.4%

ICU Level of Service C

Analysis Period (min) 15











Splits and Phases: 4: Searingtown Rd & Estate Terrace N/Dianas Trail

					
63 s			17 s		
					
63 s			17 s		

HCM Unsignalized Intersection Capacity Analysis

5: Searingtown Rd & Site Access

9/29/2015

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	1430	1359	0
Future Volume (Veh/h)	0	0	0	1430	1359	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	1554	1477	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)				918	1013	
pX, platoon unblocked	0.72	0.84	0.84			
vC, conflicting volume	2254	738	1477			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	996	317	1193			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	175	572	490			
Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	0	0	777	777	985	492
Volume Left	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.00	0.00	0.46	0.46	0.58	0.29
Queue Length 95th (ft)	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A					
Approach Delay (s)	0.0	0.0			0.0	
Approach LOS	A					
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			42.9%	ICU Level of Service		A
Analysis Period (min)			15			

No Build Capacity Analyses

Timings

1: Searingtown Rd & LIE South Service Rd

9/29/2015



Lane Group	EBL	EBT	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (vph)	254	58	595	302	450	208
Future Volume (vph)	254	58	595	302	450	208
Turn Type	Perm	NA	Prot	NA	NA	Perm
Protected Phases		4	1	6	2	
Permitted Phases	4					2
Detector Phase	4	4	1	6	2	2
Switch Phase						
Minimum Initial (s)	18.0	18.0	5.0	15.0	15.0	15.0
Minimum Split (s)	31.0	31.0	27.0	54.0	27.0	27.0
Total Split (s)	31.0	31.0	27.0	54.0	27.0	27.0
Total Split (%)	36.5%	36.5%	31.8%	63.5%	31.8%	31.8%
Yellow Time (s)	4.7	4.7	3.6	3.6	3.6	3.6
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	5.6	5.6	5.6	5.6
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	18.4	18.4	24.0	54.3	24.6	24.6
Actuated g/C Ratio	0.22	0.22	0.28	0.64	0.29	0.29
v/c Ratio	0.46	0.25	0.79	0.34	0.53	0.37
Control Delay	34.2	24.6	56.3	3.7	28.7	5.6
Queue Delay	0.0	0.0	26.5	0.2	0.0	0.0
Total Delay	34.2	24.6	82.8	3.8	28.7	5.6
LOS	C	C	F	A	C	A
Approach Delay		28.2		56.2	21.4	
Approach LOS		C		E	C	

Intersection Summary

Cycle Length: 85

Actuated Cycle Length: 85

Offset: 0 (0%), Referenced to phase 2:NWT and 6:SET, Start of Yellow

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 39.5

Intersection LOS: D

Intersection Capacity Utilization 83.8%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 1: Searingtown Rd & LIE South Service Rd

Ø1	Ø2 (R)	Ø4
27 s	27 s	31 s
Ø6 (R)		
54 s		

Timings

2: Searingtown Rd & LIE North Service Rd

9/29/2015



Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations	←↑↑→	↗	↖	↑↑	↑↑↑	↗
Traffic Volume (vph)	1349	513	131	473	615	487
Future Volume (vph)	1349	513	131	473	615	487
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		8				6
Detector Phase	8	8	5	2	6	6
Switch Phase						
Minimum Initial (s)	18.0	18.0	5.0	15.0	15.0	15.0
Minimum Split (s)	37.0	37.0	15.0	48.0	33.0	33.0
Total Split (s)	37.0	37.0	15.0	48.0	33.0	33.0
Total Split (%)	43.5%	43.5%	17.6%	56.5%	38.8%	38.8%
Yellow Time (s)	4.7	4.7	3.6	3.6	3.6	3.6
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	5.6	5.6	5.6	5.6
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	30.3	30.3	9.4	42.4	27.4	27.4
Actuated g/C Ratio	0.36	0.36	0.11	0.50	0.32	0.32
v/c Ratio	1.03	0.78	0.89	0.35	0.47	0.99
Control Delay	58.2	22.7	85.6	16.0	24.2	59.0
Queue Delay	28.7	0.0	0.0	0.5	0.0	0.0
Total Delay	86.9	22.7	85.6	16.5	24.2	59.0
LOS	F	C	F	B	C	E
Approach Delay	72.6			31.5	39.6	
Approach LOS	E			C	D	

Intersection Summary

Cycle Length: 85

Actuated Cycle Length: 85

Offset: 80 (94%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.03

Intersection Signal Delay: 54.8

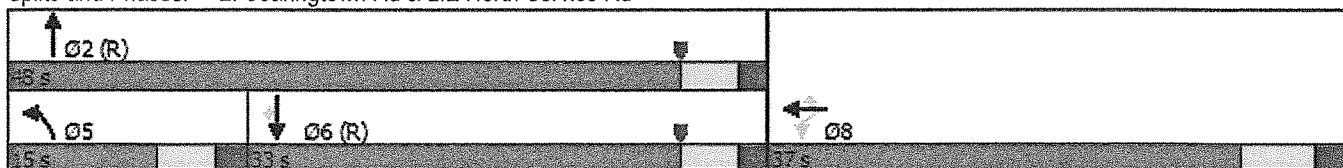
Intersection LOS: D

Intersection Capacity Utilization 83.8%

ICU Level of Service E

Analysis Period (min) 15






















Splits and Phases: 2: Searingtown Rd & LIE North Service Rd



Timings

3: Searingtown Rd & Estates Terrace S/Christopher Morley Park

9/29/2015

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	
Lane Configurations											
Traffic Volume (vph)	12	0	20	14	2	6	10	1160	15	1305	
Future Volume (vph)	12	0	20	14	2	6	10	1160	15	1305	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	pm+pt	NA	
Protected Phases		4			8		5	2	1	6	
Permitted Phases	4		4	8		8	2		6		
Detector Phase	4	4	4	8	8	8	5	2	1	6	
Switch Phase											
Minimum Initial (s)	8.0	8.0	8.0	9.0	9.0	9.0	4.0	15.0	4.0	15.0	
Minimum Split (s)	13.0	13.0	13.0	14.0	14.0	14.0	8.0	21.5	8.0	21.5	
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	24.0	36.0	24.0	36.0	
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	26.7%	40.0%	26.7%	40.0%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	4.0	3.0	4.0	
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.0	2.5	1.0	2.5	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		5.0	5.0	5.0	5.0	5.0	4.0	6.5	4.0	6.5	
Lead/Lag							Lead	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	Max	None	Max	
Act Effct Green (s)		8.6	8.6	9.3	9.3	9.3	39.7	40.5	39.7	40.5	
Actuated g/C Ratio		0.17	0.17	0.19	0.19	0.19	0.80	0.82	0.80	0.82	
v/c Ratio		0.05	0.08	0.03	0.03	0.02	0.03	0.48	0.04	0.52	
Control Delay		19.3	0.5	19.1	19.1	0.2	2.9	6.4	2.8	7.1	
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay		19.3	0.5	19.1	19.1	0.2	2.9	6.4	2.8	7.1	
LOS		B	A	B	B	A	A	A	A	A	
Approach Delay		7.5			13.9			6.3		7.1	
Approach LOS		A			B			A		A	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 49.6

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.52

Intersection Signal Delay: 6.8







Intersection LOS: A

Intersection Capacity Utilization 64.1%

ICU Level of Service C

Analysis Period (min) 15

















Splits and Phases: 3: Searingtown Rd & Estates Terrace S/Christopher Morley Park

 Ø1	 Ø2	 Ø4
24 s	36 s	30 s
 Ø5	 Ø6	 Ø8
24 s	36 s	30 s

Timings

4: Searingtown Rd & Estate Terrace N/Dianas Trail

9/29/2015

									
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	16	4	23	24	2	20	1143	2	1274
Future Volume (vph)	16	4	23	24	2	20	1143	2	1274
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4			8		2		6
Permitted Phases	4		4	8		2		6	
Detector Phase	4	4	4	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	20.0	20.0	20.0	20.0
Minimum Split (s)	13.5	13.5	13.5	13.5	13.5	26.0	26.0	26.0	26.0
Total Split (s)	17.0	17.0	17.0	17.0	17.0	63.0	63.0	63.0	63.0
Total Split (%)	21.3%	21.3%	21.3%	21.3%	21.3%	78.8%	78.8%	78.8%	78.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5	5.5		5.5	6.0	6.0	6.0	6.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		8.5	8.5		8.5	63.9	63.9	63.9	63.9
Actuated g/C Ratio		0.11	0.11		0.11	0.84	0.84	0.84	0.84
v/c Ratio		0.19	0.11		0.27	0.09	0.46	0.01	0.48
Control Delay		34.4	6.4		28.7	4.0	3.7	3.0	3.9
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		34.4	6.4		28.7	4.0	3.7	3.0	3.9
LOS		C	A		C	A	A	A	A
Approach Delay		21.3			28.7		3.7		3.9
Approach LOS		C			C		A		A

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 75.9

Natural Cycle: 40

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.48

Intersection Signal Delay: 4.5





Intersection LOS: A

Intersection Capacity Utilization 63.0%

ICU Level of Service B

Analysis Period (min) 15











Splits and Phases: 4: Searingtown Rd & Estate Terrace N/Dianas Trail

	Ø2				Ø4
63 s				17 s	
	Ø6				Ø8
63 s				17 s	

HCM Unsignalized Intersection Capacity Analysis

5: Searingtown Rd & Site Access

9/29/2015

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	1177	1320	0
Future Volume (Veh/h)	0	0	0	1177	1320	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	1279	1435	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)				918	1013	
pX, platoon unblocked	0.86	0.85	0.85			
vC, conflicting volume	2074	718	1435			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1148	318	1161			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	165	576	508			
Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	0	0	640	640	957	478
Volume Left	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.00	0.00	0.38	0.38	0.56	0.28
Queue Length 95th (ft)	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A					
Approach Delay (s)	0.0	0.0			0.0	
Approach LOS	A					
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			39.8%	ICU Level of Service		A
Analysis Period (min)			15			

Timings

1: Searingtown Rd & LIE South Service Rd

9/29/2015



Lane Group	EBL	EBT	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (vph)	444	1808	773	589	396	177
Future Volume (vph)	444	1808	773	589	396	177
Turn Type	Perm	NA	Prot	NA	NA	Perm
Protected Phases		4	1	6	2	
Permitted Phases	4					2
Detector Phase	4	4	1	6	2	2
Switch Phase						
Minimum Initial (s)	18.0	18.0	5.0	15.0	15.0	15.0
Minimum Split (s)	41.0	41.0	24.0	49.0	25.0	25.0
Total Split (s)	41.0	41.0	24.0	49.0	25.0	25.0
Total Split (%)	45.6%	45.6%	26.7%	54.4%	27.8%	27.8%
Yellow Time (s)	4.7	4.7	3.6	3.6	3.6	3.6
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	5.6	5.6	5.6	5.6
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	34.3	34.3	18.4	43.4	19.4	19.4
Actuated g/C Ratio	0.38	0.38	0.20	0.48	0.22	0.22
v/c Ratio	0.74	1.18	1.33	0.78	0.58	0.42
Control Delay	33.4	115.2	189.9	12.9	35.2	16.5
Queue Delay	0.7	0.1	0.0	0.0	0.0	0.0
Total Delay	34.1	115.3	189.9	12.9	35.2	16.5
LOS	C	F	F	B	D	B
Approach Delay		101.6		113.4	29.4	
Approach LOS		F		F	C	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 66 (73%), Referenced to phase 2:NWT and 6:SET, Start of Yellow

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.33

Intersection Signal Delay: 95.7

Intersection LOS: F

Intersection Capacity Utilization 126.9%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 1: Searingtown Rd & LIE South Service Rd

24 s	25 s	41 s
19 s		

Timings

2: Searingtown Rd & LIE North Service Rd

9/29/2015

	←	↖	↗	↑	↓	↘
Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations	↕↕↕	↗	↖	↕↕	↕↕↕	↗
Traffic Volume (vph)	1007	419	88	762	1169	682
Future Volume (vph)	1007	419	88	762	1169	682
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		8				6
Detector Phase	8	8	5	2	6	6
Switch Phase						
Minimum Initial (s)	18.0	18.0	5.0	15.0	15.0	15.0
Minimum Split (s)	38.0	38.0	13.0	52.0	39.0	39.0
Total Split (s)	38.0	38.0	13.0	52.0	39.0	39.0
Total Split (%)	42.2%	42.2%	14.4%	57.8%	43.3%	43.3%
Yellow Time (s)	4.7	4.7	3.6	3.6	3.6	3.6
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	5.6	5.6	5.6	5.6
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	31.3	31.3	7.3	46.4	33.5	33.5
Actuated g/C Ratio	0.35	0.35	0.08	0.52	0.37	0.37
v/c Ratio	0.88	0.75	0.72	0.47	0.71	1.14
Control Delay	35.0	27.5	57.6	17.3	26.8	104.0
Queue Delay	7.9	0.0	0.0	3.5	1.3	0.0
Total Delay	42.9	27.5	57.6	20.8	28.1	104.0
LOS	D	C	E	C	C	F
Approach Delay	39.4			24.6	56.1	
Approach LOS	D			C	E	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 61 (68%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.14

Intersection Signal Delay: 43.6

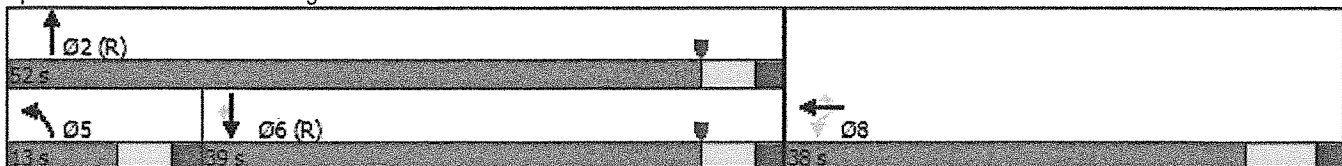
Intersection LOS: D

Intersection Capacity Utilization 126.9%

ICU Level of Service H

Analysis Period (min) 15





















Splits and Phases: 2: Searingtown Rd & LIE North Service Rd



Timings

3: Searingtown Rd & Estates Terrace S/Christopher Morley Park

9/29/2015

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	
Lane Configurations											
Traffic Volume (vph)	8	0	16	57	0	37	20	1095	29	1800	
Future Volume (vph)	8	0	16	57	0	37	20	1095	29	1800	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	pm+pt	NA	
Protected Phases		4			8		5	2	1	6	
Permitted Phases	4		4	8		8	2		6		
Detector Phase	4	4	4	8	8	8	5	2	1	6	
Switch Phase											
Minimum Initial (s)	8.0	8.0	8.0	9.0	9.0	9.0	4.0	15.0	4.0	15.0	
Minimum Split (s)	13.0	13.0	13.0	14.0	14.0	14.0	8.0	21.5	8.0	21.5	
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	24.0	36.0	24.0	36.0	
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	26.7%	40.0%	26.7%	40.0%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	4.0	3.0	4.0	
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.0	2.5	1.0	2.5	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		5.0	5.0	5.0	5.0	5.0	4.0	6.5	4.0	6.5	
Lead/Lag							Lead	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	Max	None	Max	
Act Effct Green (s)		8.9	8.9	9.1	9.1	9.1	37.6	34.3	38.4	36.2	
Actuated g/C Ratio		0.16	0.16	0.17	0.17	0.17	0.69	0.63	0.71	0.67	
v/c Ratio		0.05	0.06	0.16	0.16	0.14	0.07	0.57	0.09	0.87	
Control Delay		22.0	0.4	23.3	23.3	3.1	3.5	10.1	3.6	17.8	
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay		22.0	0.4	23.3	23.3	3.1	3.5	10.1	3.6	17.8	
LOS		C	A	C	C	A	A	B	A	B	
Approach Delay		7.8			15.1			10.0		17.5	
Approach LOS		A			B			B		B	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 54.3

Natural Cycle: 75

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 14.6







Intersection LOS: B

Intersection Capacity Utilization 78.1%

ICU Level of Service D

Analysis Period (min) 15

















Splits and Phases: 3: Searingtown Rd & Estates Terrace S/Christopher Morley Park

 Ø1	 Ø2	 Ø4
24 s	36 s	30 s
 Ø5	 Ø6	 Ø8
24 s	36 s	30 s

Timings

4: Searingtown Rd & Estate Terrace N/Dianas Trail

9/29/2015

									
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	18	5	22	22	2	22	1073	10	1802
Future Volume (vph)	18	5	22	22	2	22	1073	10	1802
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4			8		2		6
Permitted Phases	4		4	8		2		6	
Detector Phase	4	4	4	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	20.0	20.0	20.0	20.0
Minimum Split (s)	13.5	13.5	13.5	13.5	13.5	26.0	26.0	26.0	26.0
Total Split (s)	17.0	17.0	17.0	17.0	17.0	63.0	63.0	63.0	63.0
Total Split (%)	21.3%	21.3%	21.3%	21.3%	21.3%	78.8%	78.8%	78.8%	78.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5	5.5		5.5	6.0	6.0	6.0	6.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		8.4	8.4		8.4	63.9	63.9	63.9	63.9
Actuated g/C Ratio		0.11	0.11		0.11	0.84	0.84	0.84	0.84
v/c Ratio		0.21	0.13		0.23	0.18	0.38	0.03	0.65
Control Delay		34.8	9.2		30.5	7.3	3.2	3.1	5.6
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		34.8	9.2		30.5	7.3	3.2	3.1	5.6
LOS		C	A		C	A	A	A	A
Approach Delay		22.4			30.5		3.3		5.6
Approach LOS		C			C		A		A

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 75.8

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 5.4













Intersection LOS: A

Intersection Capacity Utilization 78.1%

ICU Level of Service D

Analysis Period (min) 15











Splits and Phases: 4: Searingtown Rd & Estate Terrace N/Dianas Trail

					
63 s	17 s	17 s	63 s	17 s	17 s
					
63 s	17 s	17 s	63 s	17 s	17 s

HCM Unsignalized Intersection Capacity Analysis

5: Searingtown Rd & Site Access

9/29/2015

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	1139	1841	0
Future Volume (Veh/h)	0	0	0	1139	1841	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	1238	2001	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)				918	1013	
pX, platoon unblocked	0.73	0.61	0.61			
vC, conflicting volume	2620	1000	2001			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1052	0	1367			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	161	663	305			
Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	0	0	619	619	1334	667
Volume Left	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.00	0.00	0.36	0.36	0.78	0.39
Queue Length 95th (ft)	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A					
Approach Delay (s)	0.0	0.0			0.0	
Approach LOS	A					
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			54.2%	ICU Level of Service		A
Analysis Period (min)			15			

Timings

1: Searingtown Rd & LIE South Service Rd

9/29/2015



Lane Group	EBL	EBT	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (vph)	539	421	732	415	390	143
Future Volume (vph)	539	421	732	415	390	143
Turn Type	Perm	NA	Prot	NA	NA	Perm
Protected Phases		4	1	6	2	
Permitted Phases	4					2
Detector Phase	4	4	1	6	2	2
Switch Phase						
Minimum Initial (s)	18.0	18.0	5.0	15.0	15.0	15.0
Minimum Split (s)	30.0	30.0	24.0	50.0	26.0	26.0
Total Split (s)	30.0	30.0	24.0	50.0	26.0	26.0
Total Split (%)	37.5%	37.5%	30.0%	62.5%	32.5%	32.5%
Yellow Time (s)	4.7	4.7	3.6	3.6	3.6	3.6
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	5.6	5.6	5.6	5.6
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	21.7	21.7	20.0	46.0	20.4	20.4
Actuated g/C Ratio	0.27	0.27	0.25	0.58	0.26	0.26
v/c Ratio	0.69	0.65	1.02	0.46	0.48	0.30
Control Delay	35.7	27.4	79.8	4.8	27.5	8.7
Queue Delay	0.5	0.1	0.0	0.0	0.0	0.0
Total Delay	36.2	27.4	79.8	4.9	27.5	8.7
LOS	D	C	E	A	C	A
Approach Delay		29.7		52.7	22.5	
Approach LOS		C		D	C	

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 76 (95%), Referenced to phase 2:NWT and 6:SET, Start of Yellow

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.02

Intersection Signal Delay: 38.2

Intersection LOS: D

Intersection Capacity Utilization 92.0%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 1: Searingtown Rd & LIE South Service Rd

Ø1	Ø2 (R)	Ø4
24 s	26 s	30 s
Ø6 (R)		
50 s		

Timings

2: Searingtown Rd & LIE North Service Rd

9/29/2015



Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations	←←←	↰	↰	↑↑↑	↑↑↑	↰
Traffic Volume (vph)	362	588	93	844	982	453
Future Volume (vph)	362	588	93	844	982	453
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		8				6
Detector Phase	8	8	5	2	6	6
Switch Phase						
Minimum Initial (s)	18.0	18.0	5.0	15.0	15.0	15.0
Minimum Split (s)	34.0	34.0	13.0	46.0	33.0	33.0
Total Split (s)	34.0	34.0	13.0	46.0	33.0	33.0
Total Split (%)	42.5%	42.5%	16.3%	57.5%	41.3%	41.3%
Yellow Time (s)	4.7	4.7	3.6	3.6	3.6	3.6
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	5.6	5.6	5.6	5.6
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effect Green (s)	24.5	24.5	7.6	43.2	32.4	32.4
Actuated g/C Ratio	0.31	0.31	0.10	0.54	0.40	0.40
v/c Ratio	0.66	0.69	0.64	0.50	0.54	0.63
Control Delay	23.5	23.5	47.0	15.3	21.0	15.6
Queue Delay	1.4	0.0	0.0	1.2	0.1	0.0
Total Delay	24.9	23.5	47.0	16.5	21.1	15.6
LOS	C	C	D	B	C	B
Approach Delay	24.5			19.6	19.4	
Approach LOS	C			B	B	

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 71 (89%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 21.1

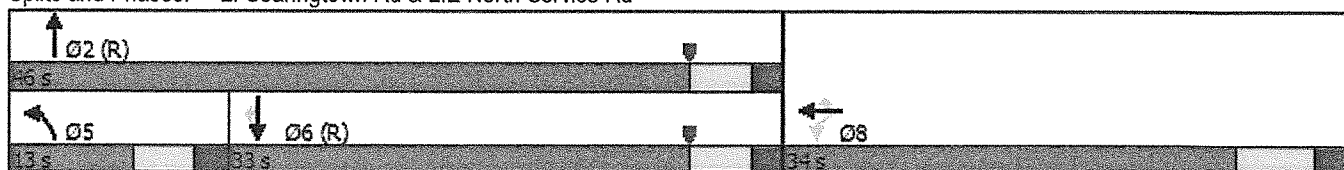
Intersection LOS: C

Intersection Capacity Utilization 92.0%

ICU Level of Service F

Analysis Period (min) 15






















Splits and Phases: 2: Searingtown Rd & LIE North Service Rd



Timings

3: Searingtown Rd & Estates Terrace S/Christopher Morley Park







9/29/2015

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	
Lane Configurations											
Traffic Volume (vph)	9	2	24	61	0	31	23	1420	21	1357	
Future Volume (vph)	9	2	24	61	0	31	23	1420	21	1357	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	pm+pt	NA	
Protected Phases		4			8		5	2	1	6	
Permitted Phases	4		4	8		8	2		6		
Detector Phase	4	4	4	8	8	8	5	2	1	6	
Switch Phase											
Minimum Initial (s)	8.0	8.0	8.0	9.0	9.0	9.0	4.0	15.0	4.0	15.0	
Minimum Split (s)	13.0	13.0	13.0	14.0	14.0	14.0	8.0	21.5	8.0	21.5	
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	24.0	36.0	24.0	36.0	
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	26.7%	40.0%	26.7%	40.0%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	4.0	3.0	4.0	
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.0	2.5	1.0	2.5	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		5.0	5.0	5.0	5.0	5.0	4.0	6.5	4.0	6.5	
Lead/Lag							Lead	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	Max	None	Max	
Act Effct Green (s)		8.8	8.8	9.3	9.3	9.3	36.9	36.3	36.8	36.3	
Actuated g/C Ratio		0.18	0.18	0.19	0.19	0.19	0.75	0.73	0.74	0.73	
v/c Ratio		0.06	0.09	0.14	0.15	0.11	0.08	0.63	0.07	0.59	
Control Delay		20.5	0.5	21.1	21.1	1.8	3.6	10.1	3.6	9.3	
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay		20.5	0.5	21.1	21.1	1.8	3.6	10.1	3.6	9.3	
LOS		C	A	C	C	A	A	B	A	A	
Approach Delay		6.9			14.4			10.0		9.2	
Approach LOS		A			B			A		A	

Intersection Summary

Cycle Length: 90	
Actuated Cycle Length: 49.5	
Natural Cycle: 60	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 9.7	Intersection LOS: A
Intersection Capacity Utilization 68.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 3: Searingtown Rd & Estates Terrace S/Christopher Morley Park

 Ø1	 Ø2	 Ø4
24 s	35 s	30 s
 Ø5	 Ø6	 Ø8
24 s	35 s	30 s

Timings

4: Searingtown Rd & Estate Terrace N/Dianas Trail

9/29/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↰	↱		↰	↱	↰	↱	↰
Traffic Volume (vph)	18	0	18	15	2	14	1385	9	1387
Future Volume (vph)	18	0	18	15	2	14	1385	9	1387
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4			8		2		6
Permitted Phases	4		4	8		2		6	
Detector Phase	4	4	4	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	20.0	20.0	20.0	20.0
Minimum Split (s)	13.5	13.5	13.5	13.5	13.5	26.0	26.0	26.0	26.0
Total Split (s)	17.0	17.0	17.0	17.0	17.0	63.0	63.0	63.0	63.0
Total Split (%)	21.3%	21.3%	21.3%	21.3%	21.3%	78.8%	78.8%	78.8%	78.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5	5.5		5.5	6.0	6.0	6.0	6.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		8.2	8.2		8.2	65.3	65.3	65.3	65.3
Actuated g/C Ratio		0.11	0.11		0.11	0.84	0.84	0.84	0.84
v/c Ratio		0.15	0.12		0.21	0.06	0.48	0.04	0.49
Control Delay		33.6	7.1		26.0	3.5	3.7	3.2	3.8
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		33.6	7.1		26.0	3.5	3.7	3.2	3.8
LOS		C	A		C	A	A	A	A
Approach Delay		20.3			26.0		3.7		3.8
Approach LOS		C			C		A		A

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 77.3

Natural Cycle: 45

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.49

Intersection Signal Delay: 4.3

Intersection LOS: A

Intersection Capacity Utilization 66.2%

ICU Level of Service C

Analysis Period (min) 15











Splits and Phases: 4: Searingtown Rd & Estate Terrace N/Dianas Trail

↰ Ø2	↱ Ø4
63 s	17 s
↰ Ø6	↱ Ø8
63 s	17 s

HCM Unsignalized Intersection Capacity Analysis

5: Searingtown Rd & Site Access

9/29/2015

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	1459	1387	0
Future Volume (Veh/h)	0	0	0	1459	1387	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	1586	1508	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)				918	1013	
pX, platoon unblocked	0.71	0.83	0.83			
vC, conflicting volume	2301	754	1508			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	971	307	1211			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	178	574	477			
Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	0	0	793	793	1005	503
Volume Left	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.00	0.00	0.47	0.47	0.59	0.30
Queue Length 95th (ft)	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A					
Approach Delay (s)	0.0	0.0			0.0	
Approach LOS	A					
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			43.7%	ICU Level of Service		A
Analysis Period (min)			15			

Build Capacity Analyses

Timings

1: Searingtown Rd & LIE South Service Rd

9/29/2015



Lane Group	EBL	EBT	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (vph)	257	58	601	308	452	208
Future Volume (vph)	257	58	601	308	452	208
Turn Type	Perm	NA	Prot	NA	NA	Perm
Protected Phases		4	1	6	2	
Permitted Phases	4					2
Detector Phase	4	4	1	6	2	2
Switch Phase						
Minimum Initial (s)	18.0	18.0	5.0	15.0	15.0	15.0
Minimum Split (s)	31.0	31.0	27.0	54.0	27.0	27.0
Total Split (s)	31.0	31.0	27.0	54.0	27.0	27.0
Total Split (%)	36.5%	36.5%	31.8%	63.5%	31.8%	31.8%
Yellow Time (s)	4.7	4.7	3.6	3.6	3.6	3.6
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	5.6	5.6	5.6	5.6
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	18.5	18.5	24.2	54.2	24.5	24.5
Actuated g/C Ratio	0.22	0.22	0.28	0.64	0.29	0.29
v/c Ratio	0.46	0.25	0.80	0.34	0.54	0.37
Control Delay	34.3	24.6	56.5	3.7	28.9	5.7
Queue Delay	0.0	0.0	31.5	0.2	0.0	0.0
Total Delay	34.3	24.6	88.0	3.9	28.9	5.7
LOS	C	C	F	A	C	A
Approach Delay		28.3		59.5	21.6	
Approach LOS		C		E	C	

Intersection Summary

Cycle Length: 85

Actuated Cycle Length: 85

Offset: 0 (0%), Referenced to phase 2:NWT and 6:SET, Start of Yellow

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 41.2

Intersection LOS: D

Intersection Capacity Utilization 84.3%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 1: Searingtown Rd & LIE South Service Rd

Ø1	Ø2 (R)	Ø4
27 s	27 s	31 s
Ø6 (R)		
54 s		

Timings

2: Searingtown Rd & LIE North Service Rd

9/29/2015



Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations	↑↑↑	↑	↑	↑↑	↑↑↑	↑
Traffic Volume (vph)	1349	515	131	478	626	495
Future Volume (vph)	1349	515	131	478	626	495
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		8				6
Detector Phase	8	8	5	2	6	6
Switch Phase						
Minimum Initial (s)	18.0	18.0	5.0	15.0	15.0	15.0
Minimum Split (s)	37.0	37.0	15.0	48.0	33.0	33.0
Total Split (s)	37.0	37.0	15.0	48.0	33.0	33.0
Total Split (%)	43.5%	43.5%	17.6%	56.5%	38.8%	38.8%
Yellow Time (s)	4.7	4.7	3.6	3.6	3.6	3.6
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	5.6	5.6	5.6	5.6
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	30.3	30.3	9.4	42.4	27.4	27.4
Actuated g/C Ratio	0.36	0.36	0.11	0.50	0.32	0.32
v/c Ratio	1.03	0.79	0.89	0.35	0.48	1.00
Control Delay	58.2	23.4	85.3	16.1	24.3	62.9
Queue Delay	28.7	0.0	0.0	0.5	0.0	0.0
Total Delay	86.9	23.4	85.3	16.6	24.4	62.9
LOS	F	C	F	B	C	E
Approach Delay	72.7			31.4	41.4	
Approach LOS	E			C	D	

Intersection Summary

Cycle Length: 85

Actuated Cycle Length: 85

Offset: 80 (94%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.03

Intersection Signal Delay: 55.3

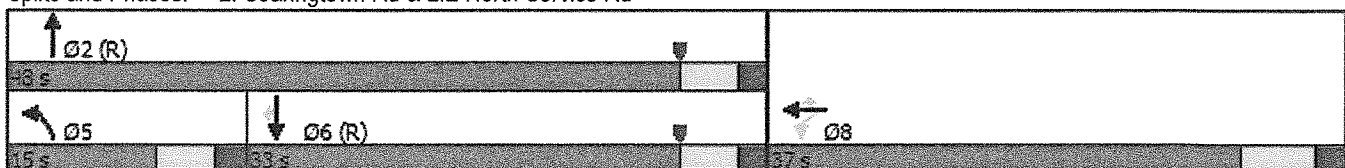
Intersection LOS: E

Intersection Capacity Utilization 84.3%

ICU Level of Service E

Analysis Period (min) 15






















Splits and Phases: 2: Searingtown Rd & LIE North Service Rd



Timings

3: Searingtown Rd & Estates Terrace S/Christopher Morley Park

9/29/2015

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT		
Lane Configurations												
Traffic Volume (vph)	12	0	20	14	2	6	10	1167	15	1325		
Future Volume (vph)	12	0	20	14	2	6	10	1167	15	1325		
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	pm+pt	NA		
Protected Phases		4			8		5	2	1	6		
Permitted Phases	4		4	8		8	2		6			
Detector Phase	4	4	4	8	8	8	5	2	1	6		
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	9.0	9.0	9.0	4.0	15.0	4.0	15.0		
Minimum Split (s)	13.0	13.0	13.0	14.0	14.0	14.0	8.0	21.5	8.0	21.5		
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	24.0	36.0	24.0	36.0		
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	26.7%	40.0%	26.7%	40.0%		
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	4.0	3.0	4.0		
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.0	2.5	1.0	2.5		
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)		5.0	5.0	5.0	5.0	5.0	4.0	6.5	4.0	6.5		
Lead/Lag							Lead	Lag	Lead	Lag		
Lead-Lag Optimize?							Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	None	None	Max	None	Max		
Act Effct Green (s)		8.6	8.6	9.3	9.3	9.3	39.7	40.5	39.7	40.5		
Actuated g/C Ratio		0.17	0.17	0.19	0.19	0.19	0.80	0.82	0.80	0.82		
v/c Ratio		0.05	0.08	0.03	0.03	0.02	0.03	0.48	0.04	0.53		
Control Delay		19.3	0.5	19.1	19.1	0.2	2.9	6.4	2.8	7.3		
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay		19.3	0.5	19.1	19.1	0.2	2.9	6.4	2.8	7.3		
LOS		B	A	B	B	A	A	A	A	A		
Approach Delay		7.5			13.9			6.4		7.3		
Approach LOS		A			B			A		A		

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 49.6

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.53

Intersection Signal Delay: 6.9







Intersection LOS: A

Intersection Capacity Utilization 64.6%

ICU Level of Service C

Analysis Period (min) 15

















Splits and Phases: 3: Searingtown Rd & Estates Terrace S/Christopher Morley Park

 Ø1	 Ø2	 Ø4
24 s	36 s	30 s
 Ø5	 Ø6	 Ø8
24 s	36 s	30 s

Timings

4: Searingtown Rd & Estate Terrace N/Dianas Trail

9/29/2015

									
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	16	4	23	24	2	20	1151	2	1277
Future Volume (vph)	16	4	23	24	2	20	1151	2	1277
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4			8		2		6
Permitted Phases	4		4	8		2		6	
Detector Phase	4	4	4	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	20.0	20.0	20.0	20.0
Minimum Split (s)	13.5	13.5	13.5	13.5	13.5	26.0	26.0	26.0	26.0
Total Split (s)	17.0	17.0	17.0	17.0	17.0	63.0	63.0	63.0	63.0
Total Split (%)	21.3%	21.3%	21.3%	21.3%	21.3%	78.8%	78.8%	78.8%	78.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5	5.5		5.5	6.0	6.0	6.0	6.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		8.5	8.5		8.5	63.9	63.9	63.9	63.9
Actuated g/C Ratio		0.11	0.11		0.11	0.84	0.84	0.84	0.84
v/c Ratio		0.19	0.11		0.27	0.09	0.46	0.01	0.48
Control Delay		34.4	6.4		28.7	4.0	3.8	3.0	3.9
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		34.4	6.4		28.7	4.0	3.8	3.0	3.9
LOS		C	A		C	A	A	A	A
Approach Delay		21.3			28.7		3.8		3.9
Approach LOS		C			C		A		A

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 75.9

Natural Cycle: 40

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.48

Intersection Signal Delay: 4.5









Intersection LOS: A

Intersection Capacity Utilization 63.1%

ICU Level of Service B

Analysis Period (min) 15













Splits and Phases: 4: Searingtown Rd & Estate Terrace N/Dianas Trail

			
63 s	17 s	17 s	17 s
			
63 s	17 s	17 s	17 s

HCM Unsignalized Intersection Capacity Analysis

5: Searingtown Rd & Site Access

9/29/2015

							
Movement	EBL	EBR	NBL	NBT	SBT	SBR	
Lane Configurations							
Traffic Volume (veh/h)	8	20	7	1177	1320	3	
Future Volume (Veh/h)	8	20	7	1177	1320	3	
Sign Control	Stop			Free	Free		
Grade	0%			0%	0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	9	22	8	1279	1435	3	
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type				None	None		
Median storage (veh)							
Upstream signal (ft)				918	1013		
pX, platoon unblocked	0.86	0.85	0.85				
vC, conflicting volume	2092	719	1438				
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	1163	317	1163				
tC, single (s)	6.8	6.9	4.1				
tC, 2 stage (s)							
tF (s)	3.5	3.3	2.2				
p0 queue free %	94	96	98				
cM capacity (veh/h)	159	577	507				
Direction, Lane #	EB 1	EB 2	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	9	22	8	640	640	957	481
Volume Left	9	0	8	0	0	0	0
Volume Right	0	22	0	0	0	0	3
cSH	159	577	507	1700	1700	1700	1700
Volume to Capacity	0.06	0.04	0.02	0.38	0.38	0.56	0.28
Queue Length 95th (ft)	4	3	1	0	0	0	0
Control Delay (s)	29.0	11.5	12.2	0.0	0.0	0.0	0.0
Lane LOS	D	B	B				
Approach Delay (s)	16.6		0.1			0.0	
Approach LOS	C						
Intersection Summary							
Average Delay			0.2				
Intersection Capacity Utilization			46.6%		ICU Level of Service		A
Analysis Period (min)			15				

Timings

1: Searingtown Rd & LIE South Service Rd

9/29/2015



Lane Group	EBL	EBT	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (vph)	454	1808	777	593	402	177
Future Volume (vph)	454	1808	777	593	402	177
Turn Type	Perm	NA	Prot	NA	NA	Perm
Protected Phases		4	1	6	2	
Permitted Phases	4					2
Detector Phase	4	4	1	6	2	2
Switch Phase						
Minimum Initial (s)	18.0	18.0	5.0	15.0	15.0	15.0
Minimum Split (s)	41.0	41.0	24.0	49.0	25.0	25.0
Total Split (s)	41.0	41.0	24.0	49.0	25.0	25.0
Total Split (%)	45.6%	45.6%	26.7%	54.4%	27.8%	27.8%
Yellow Time (s)	4.7	4.7	3.6	3.6	3.6	3.6
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	5.6	5.6	5.6	5.6
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	34.3	34.3	18.4	43.4	19.4	19.4
Actuated g/C Ratio	0.38	0.38	0.20	0.48	0.22	0.22
v/c Ratio	0.75	1.18	1.33	0.79	0.59	0.42
Control Delay	34.3	115.5	192.5	13.1	35.4	16.5
Queue Delay	1.0	0.1	0.0	0.0	0.0	0.0
Total Delay	35.3	115.6	192.5	13.1	35.4	16.5
LOS	D	F	F	B	D	B
Approach Delay		101.7		114.8	29.6	
Approach LOS		F		F	C	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 66 (73%), Referenced to phase 2:NWT and 6:SET, Start of Yellow

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.33

Intersection Signal Delay: 96.2

Intersection LOS: F

Intersection Capacity Utilization 127.5%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 1: Searingtown Rd & LIE South Service Rd

Ø1	Ø2 (R)	Ø4
24 s	25 s	11 s
Ø6 (R)		
19 s		

Timings

2: Searingtown Rd & LIE North Service Rd

9/29/2015

	←	↖	↗	↑	↓	↘
Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations	↔↔↔	↗	↖	↔↔	↔↔↔	↗
Traffic Volume (vph)	1007	425	88	778	1177	688
Future Volume (vph)	1007	425	88	778	1177	688
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		8				6
Detector Phase	8	8	5	2	6	6
Switch Phase						
Minimum Initial (s)	18.0	18.0	5.0	15.0	15.0	15.0
Minimum Split (s)	38.0	38.0	13.0	52.0	39.0	39.0
Total Split (s)	38.0	38.0	13.0	52.0	39.0	39.0
Total Split (%)	42.2%	42.2%	14.4%	57.8%	43.3%	43.3%
Yellow Time (s)	4.7	4.7	3.6	3.6	3.6	3.6
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	5.6	5.6	5.6	5.6
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effect Green (s)	31.3	31.3	7.3	46.4	33.5	33.5
Actuated g/C Ratio	0.35	0.35	0.08	0.52	0.37	0.37
v/c Ratio	0.88	0.76	0.72	0.48	0.71	1.15
Control Delay	35.2	28.5	57.2	17.5	26.9	108.0
Queue Delay	8.6	0.0	0.0	4.1	1.5	0.0
Total Delay	43.8	28.5	57.2	21.6	28.4	108.0
LOS	D	C	E	C	C	F
Approach Delay	40.4			25.3	57.8	
Approach LOS	D			C	E	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 61 (68%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.15

Intersection Signal Delay: 44.8

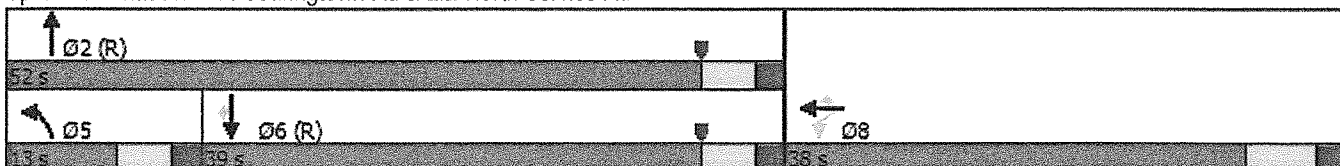
Intersection LOS: D

Intersection Capacity Utilization 127.5%

ICU Level of Service H

Analysis Period (min) 15




















Splits and Phases: 2: Searingtown Rd & LIE North Service Rd



Timings

3: Searingtown Rd & Estates Terrace S/Christopher Morley Park

9/29/2015

										
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	8	0	16	57	0	37	20	1117	29	1813
Future Volume (vph)	8	0	16	57	0	37	20	1117	29	1813
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases		4			8		5	2	1	6
Permitted Phases	4		4	8		8	2		6	
Detector Phase	4	4	4	8	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	8.0	8.0	8.0	9.0	9.0	9.0	4.0	15.0	4.0	15.0
Minimum Split (s)	13.0	13.0	13.0	14.0	14.0	14.0	8.0	21.5	8.0	21.5
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	24.0	36.0	24.0	36.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	26.7%	40.0%	26.7%	40.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	4.0	3.0	4.0
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.0	2.5	1.0	2.5
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0	5.0	5.0	5.0	4.0	6.5	4.0	6.5
Lead/Lag							Lead	Lag	Lead	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	None	Max
Act Effect Green (s)		8.9	8.9	9.1	9.1	9.1	37.6	34.3	38.4	36.2
Actuated g/C Ratio		0.16	0.16	0.17	0.17	0.17	0.69	0.63	0.71	0.67
v/c Ratio		0.05	0.06	0.16	0.16	0.14	0.07	0.58	0.10	0.88
Control Delay		22.0	0.4	23.3	23.3	3.1	3.5	10.3	3.6	18.1
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		22.0	0.4	23.3	23.3	3.1	3.5	10.3	3.6	18.1
LOS		C	A	C	C	A	A	B	A	B
Approach Delay		7.8			15.1			10.2		17.9
Approach LOS		A			B			B		B

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 54.3

Natural Cycle: 80

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 14.8







Intersection LOS: B

Intersection Capacity Utilization 78.4%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 3: Searingtown Rd & Estates Terrace S/Christopher Morley Park

 Ø1	 Ø2	 Ø4
24 s	36 s	30 s
 Ø5	 Ø6	 Ø8
24 s	36 s	30 s

Timings

4: Searingtown Rd & Estate Terrace N/Dianas Trail

9/29/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↰	↱		↰	↱	↰	↱	↰
Traffic Volume (vph)	18	5	22	22	2	22	1079	10	1812
Future Volume (vph)	18	5	22	22	2	22	1079	10	1812
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4			8		2		6
Permitted Phases	4		4	8		2		6	
Detector Phase	4	4	4	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	20.0	20.0	20.0	20.0
Minimum Split (s)	13.5	13.5	13.5	13.5	13.5	26.0	26.0	26.0	26.0
Total Split (s)	17.0	17.0	17.0	17.0	17.0	63.0	63.0	63.0	63.0
Total Split (%)	21.3%	21.3%	21.3%	21.3%	21.3%	78.8%	78.8%	78.8%	78.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5	5.5		5.5	6.0	6.0	6.0	6.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		8.4	8.4		8.4	63.9	63.9	63.9	63.9
Actuated g/C Ratio		0.11	0.11		0.11	0.84	0.84	0.84	0.84
v/c Ratio		0.21	0.13		0.23	0.19	0.38	0.03	0.66
Control Delay		34.8	9.2		30.5	7.4	3.2	3.1	5.7
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		34.8	9.2		30.5	7.4	3.2	3.1	5.7
LOS		C	A		C	A	A	A	A
Approach Delay		22.4			30.5		3.3		5.7
Approach LOS		C			C		A		A

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 75.8

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 5.4

Intersection LOS: A

Intersection Capacity Utilization 78.4%

ICU Level of Service D

Analysis Period (min) 15












Splits and Phases: 4: Searingtown Rd & Estate Terrace N/Dianas Trail

<p>2</p>	<p>4</p>
63 s	17 s
<p>6</p>	<p>8</p>
63 s	17 s

HCM Unsignalized Intersection Capacity Analysis

5: Searingtown Rd & Site Access

9/29/2015

							
Movement	EBL	EBR	NBL	NBT	SBT	SBR	
Lane Configurations							
Traffic Volume (veh/h)	6	13	22	1139	1841	10	
Future Volume (Veh/h)	6	13	22	1139	1841	10	
Sign Control	Stop			Free	Free		
Grade	0%			0%	0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	7	14	24	1238	2001	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)				918	1013		
pX, platoon unblocked	0.72	0.60	0.60				
vC, conflicting volume	2674	1006	2012				
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	1085	0	1358				
tC, single (s)	6.8	6.9	4.1				
tC, 2 stage (s)							
tF (s)	3.5	3.3	2.2				
p0 queue free %	95	98	92				
cM capacity (veh/h)	140	653	302				
Direction, Lane #	EB 1	EB 2	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	7	14	24	619	619	1334	678
Volume Left	7	0	24	0	0	0	0
Volume Right	0	14	0	0	0	0	11
cSH	140	653	302	1700	1700	1700	1700
Volume to Capacity	0.05	0.02	0.08	0.36	0.36	0.78	0.40
Queue Length 95th (ft)	4	2	6	0	0	0	0
Control Delay (s)	32.1	10.6	17.9	0.0	0.0	0.0	0.0
Lane LOS	D	B	C				
Approach Delay (s)	17.8		0.3			0.0	
Approach LOS	C						
Intersection Summary							
Average Delay			0.2				
Intersection Capacity Utilization			61.2%		ICU Level of Service		B
Analysis Period (min)			15				

Timings

1: Searingtown Rd & LIE South Service Rd

9/29/2015



Lane Group	EBL	EBT	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (vph)	547	421	736	419	395	143
Future Volume (vph)	547	421	736	419	395	143
Turn Type	Perm	NA	Prot	NA	NA	Perm
Protected Phases		4	1	6	2	
Permitted Phases	4					2
Detector Phase	4	4	1	6	2	2
Switch Phase						
Minimum Initial (s)	18.0	18.0	5.0	15.0	15.0	15.0
Minimum Split (s)	30.0	30.0	24.0	50.0	26.0	26.0
Total Split (s)	30.0	30.0	24.0	50.0	26.0	26.0
Total Split (%)	37.5%	37.5%	30.0%	62.5%	32.5%	32.5%
Yellow Time (s)	4.7	4.7	3.6	3.6	3.6	3.6
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	5.6	5.6	5.6	5.6
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	21.7	21.7	20.0	46.0	20.4	20.4
Actuated g/C Ratio	0.27	0.27	0.25	0.58	0.26	0.26
v/c Ratio	0.70	0.65	1.02	0.46	0.49	0.30
Control Delay	36.2	27.4	81.9	4.8	27.6	8.7
Queue Delay	0.6	0.1	0.0	0.0	0.0	0.0
Total Delay	36.7	27.5	81.9	4.9	27.6	8.7
LOS	D	C	F	A	C	A
Approach Delay		29.9		54.0	22.6	
Approach LOS		C		D	C	

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 76 (95%), Referenced to phase 2:NWT and 6:SET, Start of Yellow

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.02

Intersection Signal Delay: 38.9

Intersection LOS: D

Intersection Capacity Utilization 92.7%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 1: Searingtown Rd & LIE South Service Rd

Ø1	Ø2 (R)	Ø4
24 s	25 s	30 s
Ø6 (R)		
50 s		

Timings

2: Searingtown Rd & LIE North Service Rd

9/29/2015



Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations	↑↑↑	↑	↑	↑↑	↑↑↑	↑
Traffic Volume (vph)	362	593	93	857	990	459
Future Volume (vph)	362	593	93	857	990	459
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		8				6
Detector Phase	8	8	5	2	6	6
Switch Phase						
Minimum Initial (s)	18.0	18.0	5.0	15.0	15.0	15.0
Minimum Split (s)	34.0	34.0	13.0	46.0	33.0	33.0
Total Split (s)	34.0	34.0	13.0	46.0	33.0	33.0
Total Split (%)	42.5%	42.5%	16.3%	57.5%	41.3%	41.3%
Yellow Time (s)	4.7	4.7	3.6	3.6	3.6	3.6
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	5.6	5.6	5.6	5.6
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	24.7	24.7	7.6	43.0	32.2	32.2
Actuated g/C Ratio	0.31	0.31	0.10	0.54	0.40	0.40
v/c Ratio	0.66	0.69	0.64	0.51	0.55	0.64
Control Delay	23.5	23.5	47.2	15.6	21.2	16.0
Queue Delay	1.5	0.0	0.0	1.3	0.1	0.0
Total Delay	25.0	23.5	47.2	16.9	21.3	16.0
LOS	C	C	D	B	C	B
Approach Delay	24.6			19.9	19.7	
Approach LOS	C			B	B	

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 71 (89%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 21.3

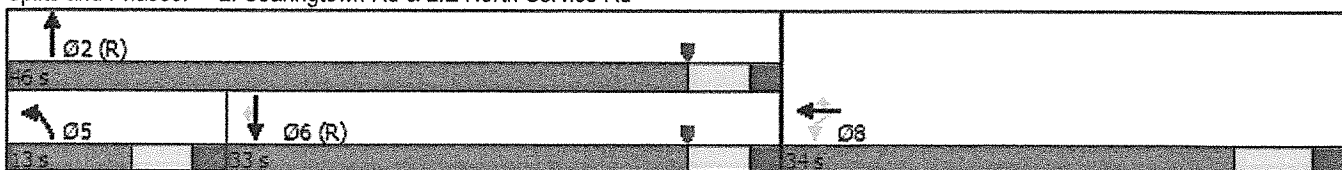
Intersection LOS: C

Intersection Capacity Utilization 92.7%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 2: Searingtown Rd & LIE North Service Rd



Timings

3: Searingtown Rd & Estates Terrace S/Christopher Morley Park

9/29/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations		↰	↱	↰	↰	↱	↰	↰↱	↰	↰↱
Traffic Volume (vph)	9	2	24	61	0	31	23	1438	21	1372
Future Volume (vph)	9	2	24	61	0	31	23	1438	21	1372
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases		4			8		5	2	1	6
Permitted Phases	4		4	8		8	2		6	
Detector Phase	4	4	4	8	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	8.0	8.0	8.0	9.0	9.0	9.0	4.0	15.0	4.0	15.0
Minimum Split (s)	13.0	13.0	13.0	14.0	14.0	14.0	8.0	21.5	8.0	21.5
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	24.0	36.0	24.0	36.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	26.7%	40.0%	26.7%	40.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	4.0	3.0	4.0
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.0	2.5	1.0	2.5
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0	5.0	5.0	5.0	4.0	6.5	4.0	6.5
Lead/Lag							Lead	Lag	Lead	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	None	Max
Act Effct Green (s)		8.8	8.8	9.3	9.3	9.3	36.9	36.3	36.8	36.3
Actuated g/C Ratio		0.18	0.18	0.19	0.19	0.19	0.75	0.73	0.74	0.73
v/c Ratio		0.06	0.09	0.14	0.15	0.11	0.08	0.63	0.07	0.59
Control Delay		20.5	0.5	21.1	21.1	1.8	3.6	10.3	3.6	9.4
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		20.5	0.5	21.1	21.1	1.8	3.6	10.3	3.6	9.4
LOS		C	A	C	C	A	A	B	A	A
Approach Delay		6.9			14.4			10.2		9.3
Approach LOS		A			B			B		A

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 49.5

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.63

Intersection Signal Delay: 9.9

Intersection LOS: A

Intersection Capacity Utilization 69.3%

ICU Level of Service C

Analysis Period (min) 15

















Splits and Phases: 3: Searingtown Rd & Estates Terrace S/Christopher Morley Park

↰ Ø1	↰ Ø2	↰ Ø4
24 s	36 s	30 s
↰ Ø5	↰ Ø6	↰ Ø8
24 s	36 s	30 s

Timings

4: Searingtown Rd & Estate Terrace N/Dianas Trail

9/29/2015

									
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	18	0	18	15	2	14	1391	9	1395
Future Volume (vph)	18	0	18	15	2	14	1391	9	1395
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4			8		2		6
Permitted Phases	4		4	8		2		6	
Detector Phase	4	4	4	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	20.0	20.0	20.0	20.0
Minimum Split (s)	13.5	13.5	13.5	13.5	13.5	26.0	26.0	26.0	26.0
Total Split (s)	17.0	17.0	17.0	17.0	17.0	63.0	63.0	63.0	63.0
Total Split (%)	21.3%	21.3%	21.3%	21.3%	21.3%	78.8%	78.8%	78.8%	78.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5	5.5		5.5	6.0	6.0	6.0	6.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		8.2	8.2		8.2	65.3	65.3	65.3	65.3
Actuated g/C Ratio		0.11	0.11		0.11	0.84	0.84	0.84	0.84
v/c Ratio		0.15	0.12		0.21	0.06	0.49	0.04	0.50
Control Delay		33.6	7.1		26.0	3.5	3.7	3.2	3.8
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		33.6	7.1		26.0	3.5	3.7	3.2	3.8
LOS		C	A		C	A	A	A	A
Approach Delay		20.3			26.0		3.7		3.8
Approach LOS		C			C		A		A

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 77.3

Natural Cycle: 45

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.50

Intersection Signal Delay: 4.3





Intersection LOS: A

Intersection Capacity Utilization 66.4%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 4: Searingtown Rd & Estate Terrace N/Dianas Trail

	Ø2										Ø4
63 s										17 s	
	Ø6										Ø8
63 s										17 s	

HCM Unsignalized Intersection Capacity Analysis

5: Searingtown Rd & Site Access

9/29/2015



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	6	15	18	1459	1387	8
Future Volume (Veh/h)	6	15	18	1459	1387	8
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	7	16	20	1586	1508	9
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				918	1013	
pX, platoon unblocked	0.71	0.83	0.83			
vC, conflicting volume	2346	758	1517			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1009	305	1217			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	96	97	96			
cM capacity (veh/h)	161	575	473			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	7	16	20	793	793	1005	512
Volume Left	7	0	20	0	0	0	0
Volume Right	0	16	0	0	0	0	9
cSH	161	575	473	1700	1700	1700	1700
Volume to Capacity	0.04	0.03	0.04	0.47	0.47	0.59	0.30
Queue Length 95th (ft)	3	2	3	0	0	0	0
Control Delay (s)	28.4	11.4	12.9	0.0	0.0	0.0	0.0
Lane LOS	D	B	B				
Approach Delay (s)	16.6		0.2			0.0	
Approach LOS	C						

Intersection Summary							
Average Delay			0.2				
Intersection Capacity Utilization			50.3%	ICU Level of Service		A	
Analysis Period (min)			15				