Traffic and Parking Impact Study
St. James Parish Expansion

Arlington Heights, Illinois

Prepared For:

SAINT JAMES PARISH
ARLINGTON HEIGHTS

Prepared By:

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

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1. Introduction

This report summarizes the methodologies, results, and findings of a traffic and parking impact study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for the proposed expansion of the St. James Parish located in Arlington Heights, Illinois. The existing campus is bisected by Arlington Heights Road with the church building located on the east side of Arlington Road south of Frederick Street and the Parish Center and school building is located on the west side of Arlington Heights Road. As proposed, the existing three-level school building located south of the church will be razed and the church will be expanded to increase its capacity from approximately 679 seats to approximately 916 seats. Access to the church will continue to be provided via the existing access system serving the campus and via a proposed a right-in/right-out access drive off Arlington Heights Road.

The purpose of this study was to examine background traffic conditions, assess the impact that the proposed development will have on traffic conditions in the area, determine if any roadway or access improvements are necessary to accommodate traffic generated by the proposed expansion and evaluate the adequacy of the parking supply in accommodating the projected parking demand.

Figure 1 shows the location of the site in relation to the area roadway system. **Figure 2** shows an aerial view of the site area.

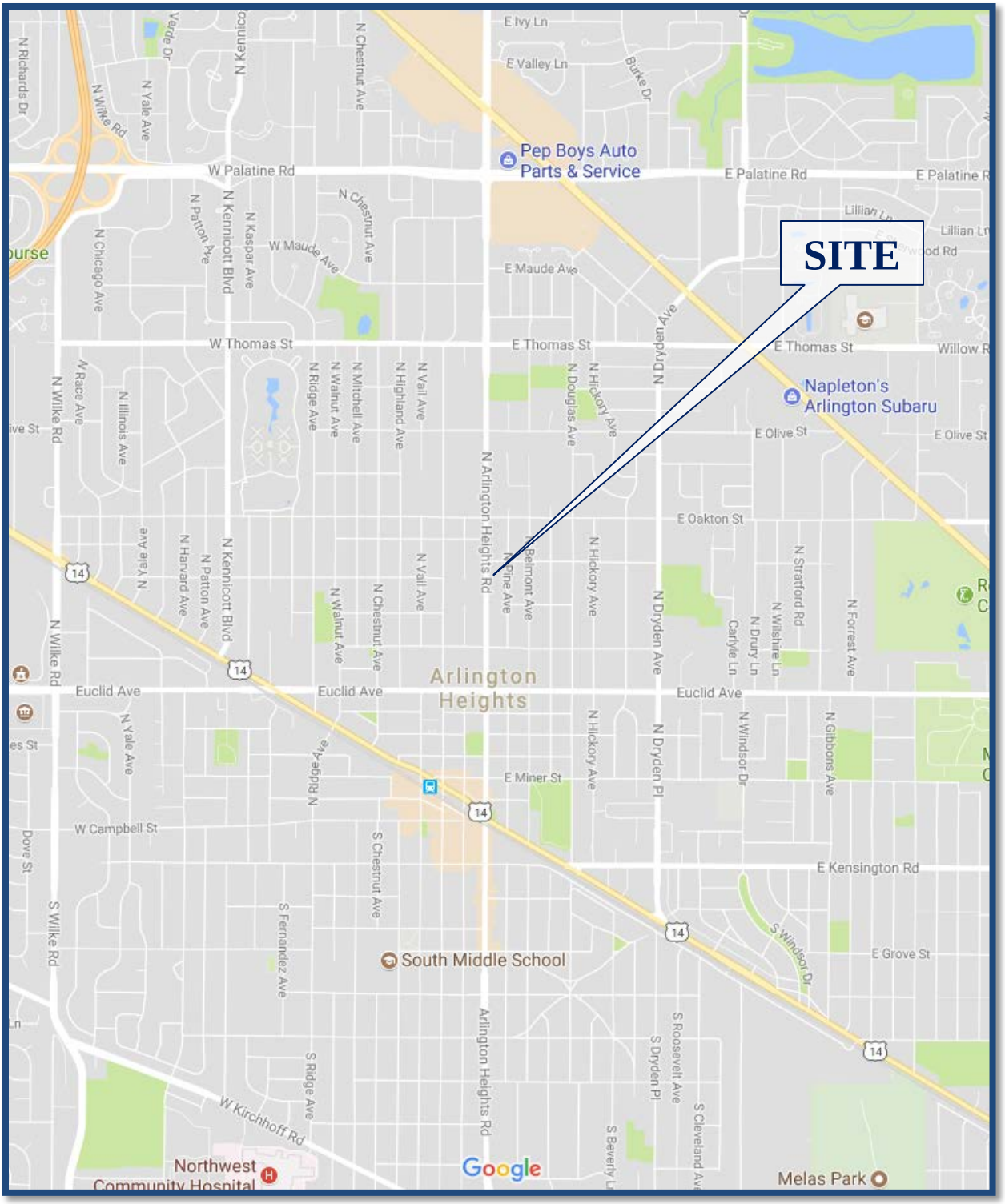
The sections of this report present the following:

- Existing roadway conditions
- A description of the proposed expansion
- Directional distribution of the expansion generated traffic
- Vehicle trip generation for the expansion
- Future traffic conditions including access to the church
- Traffic analyses for the Sunday morning, weekday morning and weekday afternoon peak hours.
- Recommendations with respect to adequacy of the site access and adjacent roadway system.
- Parking Evaluation

Traffic capacity analyses were conducted for the Sunday morning, weekday morning and weekday afternoon peak hours for the following conditions:

1. Existing Conditions - Analyze the capacity of the existing roadway system using existing peak hour traffic volumes in the surrounding area.

2. Projected Conditions – Analyze the capacity of the future roadway system using the projected traffic volumes that include the existing traffic volumes, ambient area growth not attributable to any particular development, and the traffic estimated to be generated by the full buildout of the church expansion.



Site Location **Figure 1**

Aerial View of Site Location **Figure 2**

2. Existing Conditions

Existing transportation conditions in the vicinity of the site were documented based on field visits conducted by KLOA, Inc. in order to obtain a database for projecting future conditions. The following provides a description of the geographical location of the site, physical characteristics of the area roadway system including lane usage and traffic control devices, and existing peak hour traffic volumes.

Site Location

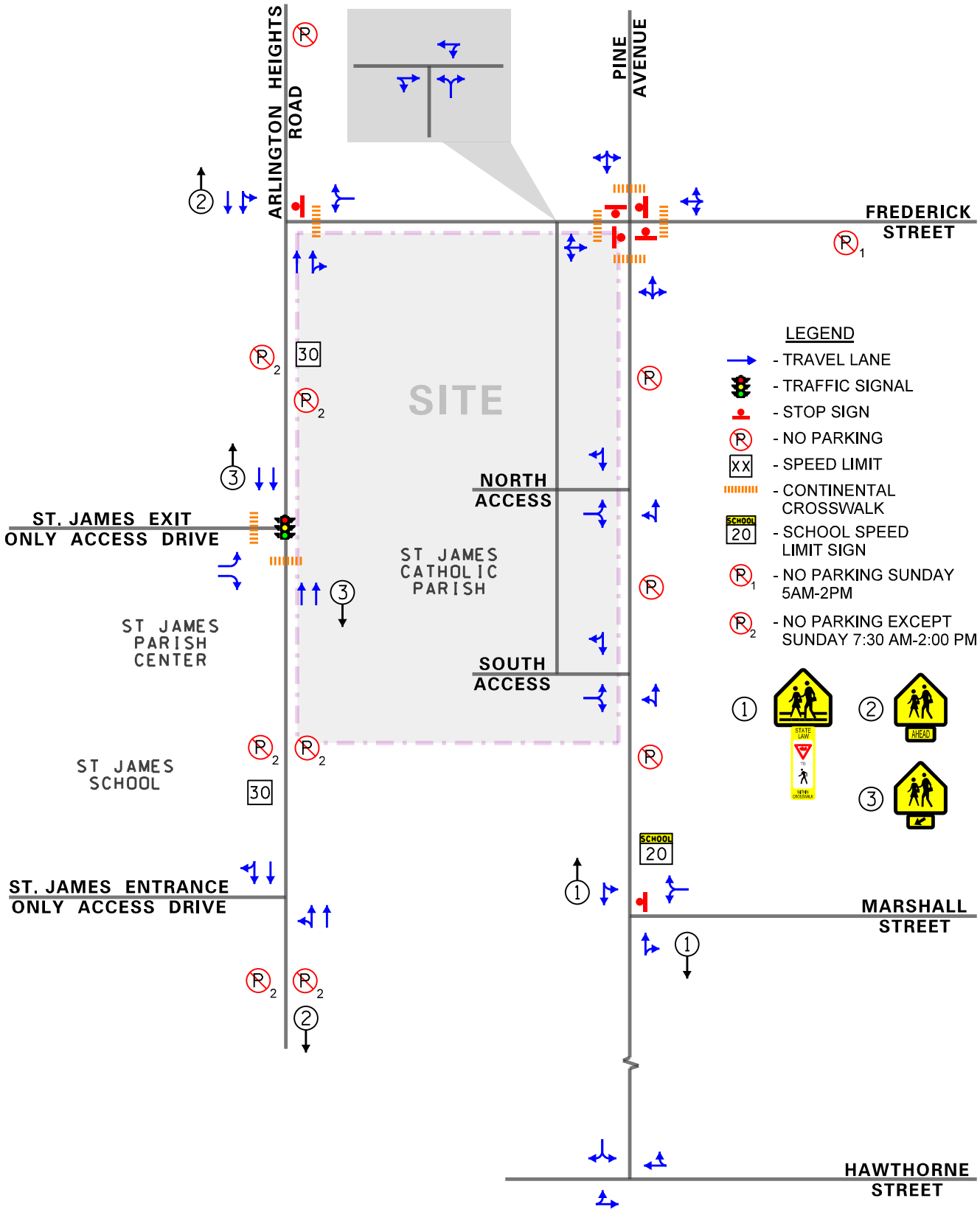
The site, which is currently occupied by an existing church building and three-story school building is located in the southeast quadrant of the intersection of Arlington Heights Road with Frederick Street. The St. James Campus is bisected by Arlington Heights Road with the Church and a seldom used school building located on the east side of Arlington Heights Road and the St. James School and Parish Center are located on the west side of Arlington Heights Road. Land uses in the vicinity of the site are primarily residential in all directions and the St. James Campus is located approximately two-thirds of a mile north of Downtown Arlington Heights.

Existing Roadway System Characteristics

The characteristics of the existing roadways near the development are described below and illustrated in **Figure 3**.

Arlington Heights Road is a north-south arterial roadway that in the vicinity of the site provides two through lanes in each direction. At its signalized intersection with the St. James exit only access drive, Arlington Heights Road provides two through lanes and a high visibility crosswalk on the northbound approach and two through lanes on the southbound approach. At its unsignalized intersection with Frederick Street, Arlington Heights Road provides a through lane and a shared through/right-turn lane on the northbound approach and a shared left-turn/through lane and a through lane on the southbound approach. At its unsignalized intersection with the St. James entrance only access drive, Arlington Heights Road provides a shared left-turn/through lane and a through lane on the northbound approach and a through lane and a shared through/right-turn lane on the southbound approach. Arlington Heights Road is under the jurisdiction of the Illinois Department of Transportation, is not classified as a Strategic Regional Arterial, carries an annual average daily traffic (AADT) volume of 22,000 vehicles (IDOT AADT 2014) and has a posted speed limit of 30 miles per hour.

Frederick Street is an east-west local roadway that provides one lane in each direction and extends from Arlington Heights Road east to its terminus at Dryden Avenue. At its unsignalized intersection with Arlington Heights Road, Frederick Street provides a shared left/right-turn lane under stop-sign control and a high visibility crosswalk. At its all-way stop-sign controlled intersection with Pine Avenue, Frederick Street provides a shared left/through/right-turn lane and a high visibility crosswalk on both approaches. Frederick Street is under the jurisdiction of the Village of Arlington Heights.



St. James Parish Expansion
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Existing Roadway Characteristics

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Pine Avenue is a north-south local roadway that provides one lane in each direction and extends from Hawthorne Avenue north to its terminus 175 feet north of Oakton Street. At its all-way stop-sign controlled intersection with Frederick Street, Pine Avenue provides a shared left/through/right-turn lane and a high visibility crosswalk. At its unsignalized intersection with Marshall Street, Pine Avenue provides a shared through/right-turn lane on the northbound approach and a shared left-turn/through lane and a high visibility crosswalk on the southbound approach. At its unsignalized intersection with Hawthorne Street, Pine Avenue provides a shared left/right-turn lane. Pine Avenue is under the jurisdiction of the Village of Arlington Heights.

Marshall Street is an east-west local roadway that provides one lane in each direction and extends from Pine Avenue east to its terminus at Douglas Avenue. At its unsignalized intersection with Pine Avenue, Marshall Street provides a shared left/right-turn lane under stop-sign control and a high visibility crosswalk. Marshall Street is under the jurisdiction of the Village of Arlington Heights.

Hawthorne Street is an east-west local roadway that provides one lane in each direction and extends from Walnut Avenue (one-half mile west of Arlington Heights Road) east to its terminus at Dryden Avenue (one-half mile east of Arlington Heights Road). At its unsignalized intersection with Pine Avenue, Hawthorne Street provides a shared left-turn/through lane on the eastbound approach and a shared through/right-turn lane on the westbound approach.

Existing St. James Parish Operations

On Sunday morning, St. James offers two services in the church building with the first service at 7:00 A.M. and the second service is at 8:30 A.M. The other two services are held in the parish center with the third service at 10:00 A.M. and the fourth service at 11:30 P.M. An additional service is held at 5:00 P.M. on Saturday and Sunday evenings. For the Sunday services, parishioners park within the off-street parking lots on the east and west side of Arlington Heights Road as well as the on-street parking locations, including Arlington Heights Road, within the vicinity of the St. James Campus.

Existing St. James School Operations

St. James School enrolls approximately 500 students and a typical school day begins at 8:45 A.M. and ends at 3:35 P.M. St. James School also offers before and after school care programs that start at 7:00 A.M. and end at 6:00 P.M. There are two buses that serve the school. Buses loading occurs along the west side of Pine Avenue during morning drop-off morning and stage within the church parking lot during afternoon pick-up. Students that are bused cross Arlington Heights Road at its signalized intersection with the exit only access drive with the assistance of a crossing guard.

During morning drop-off activities, parents begin dropping off students within the school's parking lot at 8:00 A.M. with the majority drop-off activity ending by 8:40 A.M. Field observations conducted during morning drop-off showed that four faculty members advance vehicles to the northeast side of the school building and help unload students from vehicles. The morning drop-off queues were a maximum of eleven vehicles and queues did not extend to Arlington Heights Road.

During afternoon pick-up activity, parents begin arriving at approximately 3:00 PM and stack stadium style in approximately five rows of twelve vehicles with all vehicles located on the west side of the school building facing north. Additionally, similar pick-up stacking occurs on the east side of the church building with all vehicles facing south. All parents are required to park their vehicles and go to the main entrance of the school to pick up their students. Once all students are loaded into their vehicles, each row is released at a time. All pick-up activity ends by 3:45 P.M.

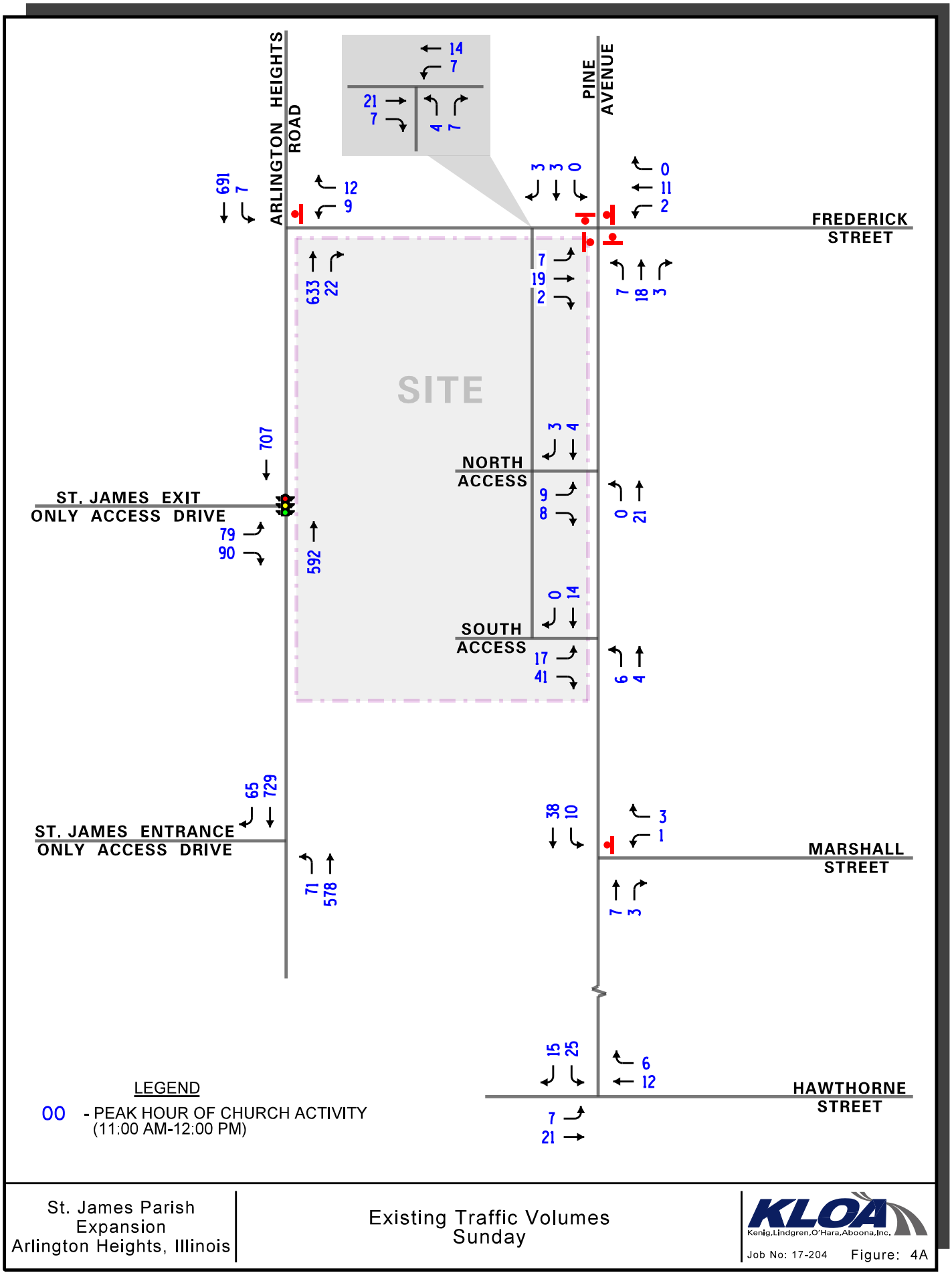
Existing Traffic Volumes

In order to determine current traffic conditions on the existing roads, KLOA, Inc. conducted peak period traffic counts utilizing Miovision Scout Collection Units at the following intersections:

- Arlington Heights Road with Frederick Street
- Arlington Heights Road with the Signalized St. James Exit Only Access Drive
- Arlington Heights Road with the Unsignalized St. James Entrance Only Access Drive
- Frederick Street with Pine Avenue
- Pine Avenue with Marshall Street
- Pine Avenue with Hawthorne Street
- Pine Avenue with the Northerly St. James Access Drive
- Pine Avenue with the Southerly St. James Access Drive
- Frederick Street with the St. James Access Drive

The traffic counts were conducted on Sunday, August 27, 2017 during the Sunday morning (9:00 A.M. to 12:00 Noon) peak period and on Tuesday, August 29, 2017 during the weekday morning (7:30 A.M. to 9:30 A.M.) and weekday afternoon (2:30 P.M. to 4:30 P.M.) peak periods. The results of the traffic counts showed that the Sunday morning peak hour of traffic occurred from 11:00 A.M. to 12:00 Noon, the weekday morning peak hour of traffic occurred from 7:45 A.M. to 8:45 A.M. and the weekday afternoon peak hour of traffic occurs from 3:00 P.M. to 4:00 P.M.

It should be noted that these peak periods and peak hours were chosen to correspond to the peak church and school activity on a Sunday and weekday, respectively. On Sunday, the 11:00 A.M. to 12:00 Noon peak hour captures the overlap of the departing traffic from the 10:00 A.M. service and the arriving traffic for the 11:30 A.M. service. This peak hour also carries the highest volume of traffic along Arlington Heights Road during the period. On a weekday, the 7:45 A.M. to 8:45 A.M. peak hour captures the majority of drop-off traffic and the 3:00 P.M. to 4:00 P.M. peak hour captures the majority of pick-up traffic for St. James School. **Figure 4A** illustrates the existing Sunday morning peak hour traffic volumes and **Figure 4B** illustrates the existing weekday morning and afternoon traffic volumes. **Figure 5A** illustrates the existing Sunday morning pedestrian volumes and **Figure 5B** illustrates the existing weekday morning and evening pedestrian volumes.



St. James Parish Expansion
Arlington Heights, Illinois

Existing Traffic Volumes
Sunday

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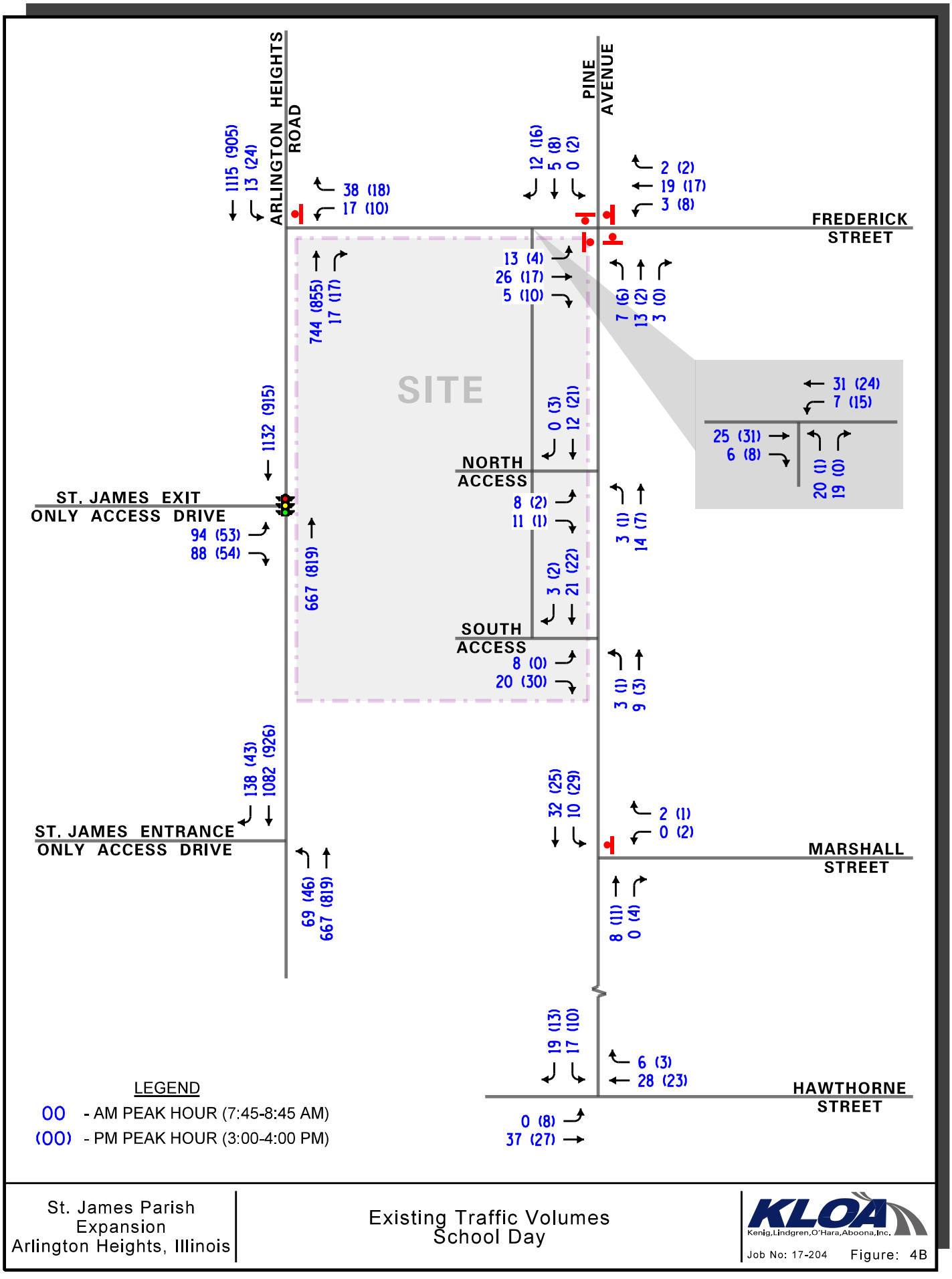

St. James Parish Expansion
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Existing Traffic Volumes
School Day

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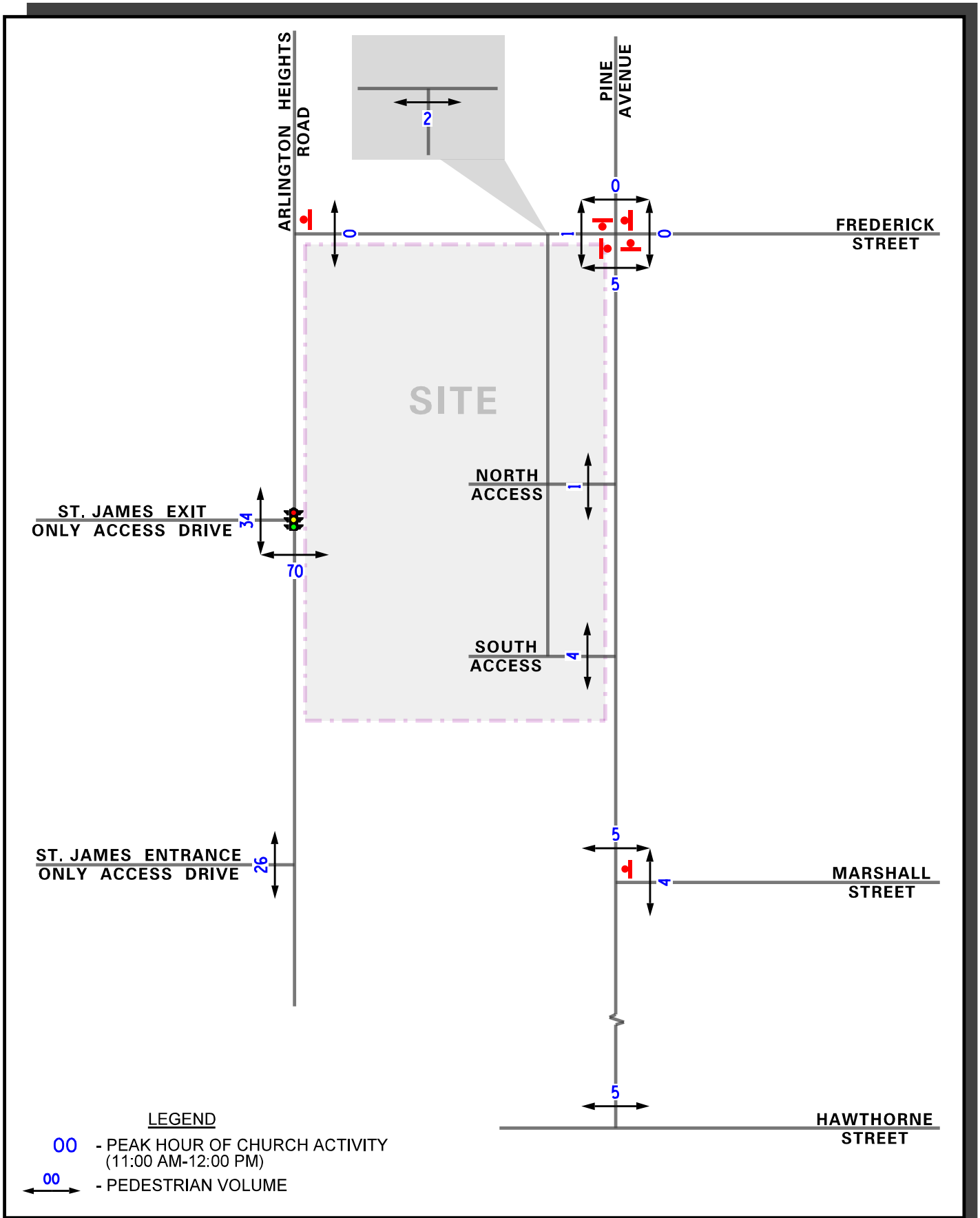

St. James Parish Expansion
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Existing Pedestrian Volumes
Sunday

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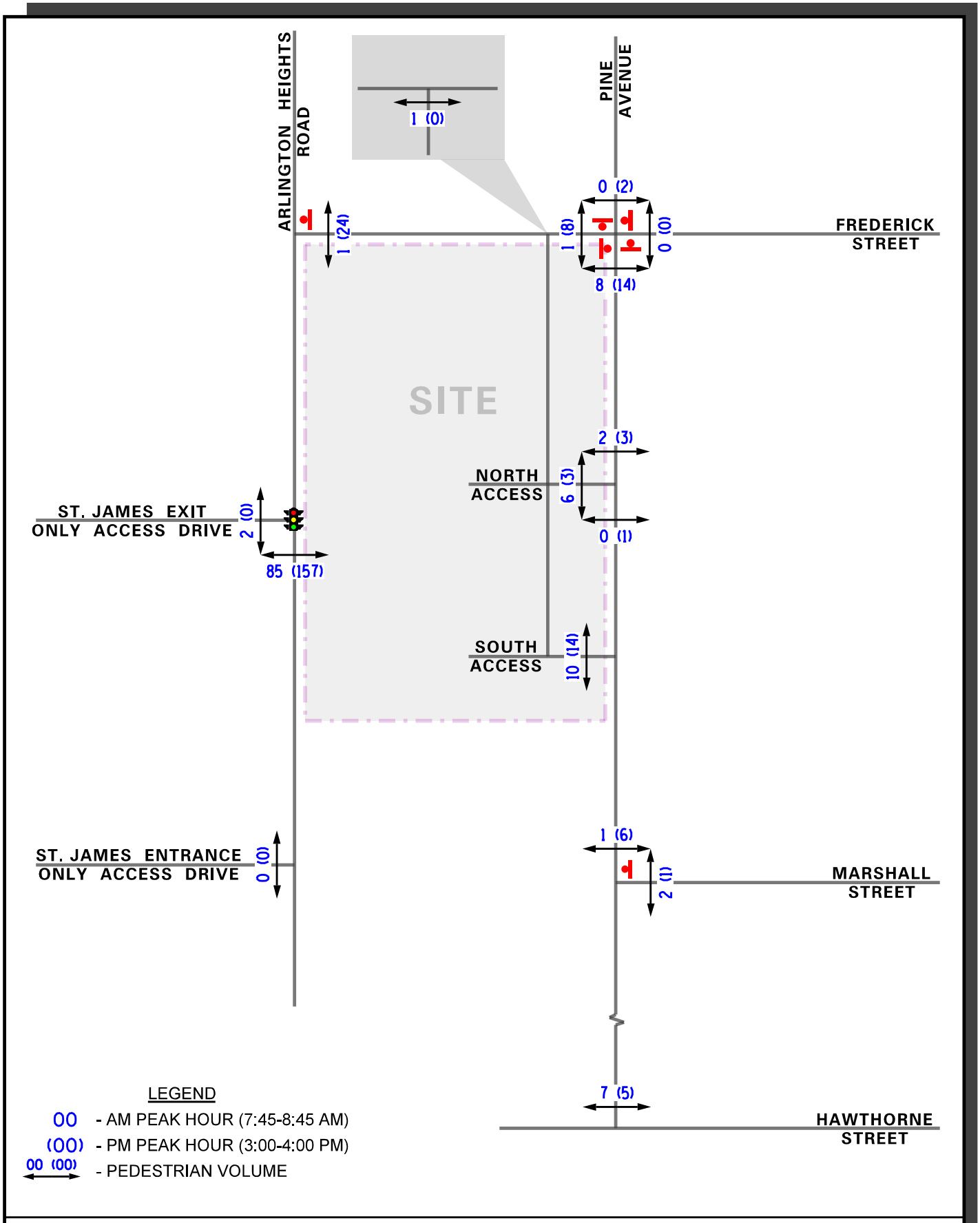

St. James Parish Expansion
Arlington Heights, Illinois

Existing Pedestrian Volumes
School Day

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Job No: 17-204 Figure: 5B

3. Traffic Characteristics of the Proposed Development

In order to properly evaluate future traffic conditions in the surrounding area, it was necessary to determine the traffic characteristics of the proposed development, including the directional distribution and volumes of traffic that it will generate.

Proposed Site and Development Plan

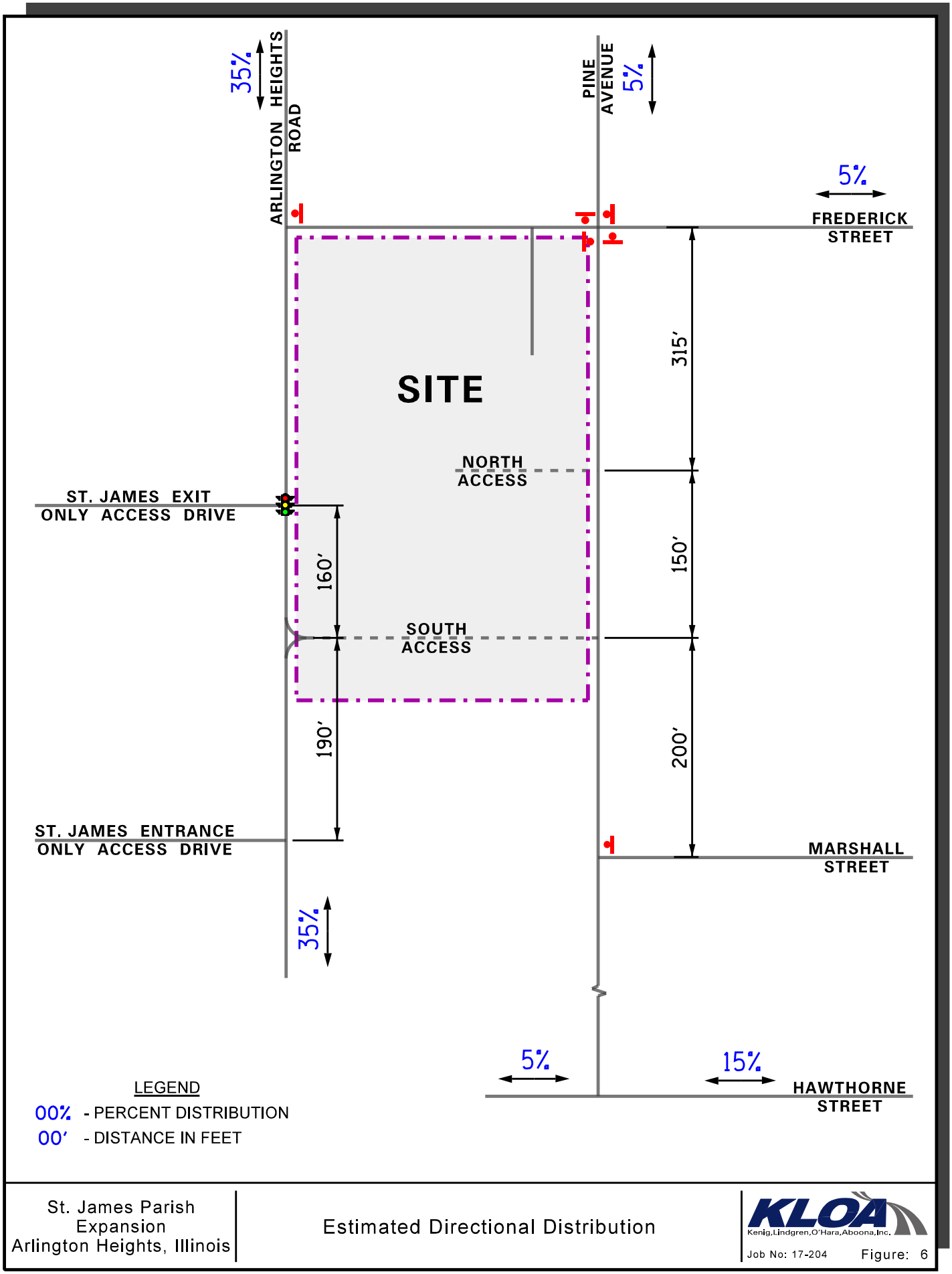
As proposed, the existing three-story school building on the east side of Arlington Heights Road will be razed and the existing church building will be expanded by a total of 12,282 square-feet to increase the church capacity from approximately 679 seats to approximately 916 seats. Additionally, the parking lot on the east side of Arlington Heights Road will be expanded by 49 parking spaces increasing the capacity form 136 parking spaces to 185 parking spaces. The purpose of this expansion is to enhance the handicap accessibility of the existing church so that the expanded church can hold all services on Saturday evening and Sunday and to better distribute the attendance among the four Sunday services.

Access to the church will continue to be provided via the full movement access drive off Frederick Street and via the two full movement access drives off Pine Avenue. With the parking lot reconfiguration, the both access drives off Pine Avenue will be relocated approximately 50 feet south of their existing location. Access will also be provided via a proposed right-in/right-out access drive off Arlington Heights Road that will be located approximately 160 feet south of the exit only access drive and 190 feet north of the entrance only access drive. It should be noted that this access drive will replace an existing full movement curb cut provided at this location.

It should be noted that the proposed church expansion will not result in a modification to the operations of St. James School nor will result in an increase/decrease in enrollment. The pick-up/drop-off activity will remain the same for passenger vehicles and school buses, as previously described, and access to the school will continue to be provided via the two access drives off Arlington Heights Road.

Directional Distribution

The directions from which parishioners of the church will approach and depart the site were estimated based on the existing travel patterns, as determined from the traffic counts. **Figure 6** illustrates the directional distribution of traffic.



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Estimated Directional Distribution

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Peak Hour Traffic Volumes

The volume of traffic generated by a development is based on the type of land use and the size of the development. The number of new peak hour vehicle trips estimated to be generated by the expansion of the church was based on vehicle trip generation rates contained in *Trip Generation*, 9th Edition, published by the Institute of Transportation Engineers (ITE). The "Church" (Land-Use Code 860) rate was used. While the majority of new trips will occur on Sundays, in order to provide conservative analyses, weekday morning and afternoon trips were also estimated based on ITE's trip rates. **Table 1** shows the estimated number of new peak hour trips to be generated by the proposed development and the existing trip generation based on the results of the turning movement counts. As shown in Table 1, the development is estimated to generate approximately 145 two-way vehicle trips during the Sunday morning peak hour, 11 two-way vehicle trips during the weekday morning peak hour and 12 two-way vehicle trips during the weekday afternoon peak hour.

Table 1
PROJECTED SITE-GENERATED TRAFFIC VOLUMES

ITE Land Use Code	Type/Size	Sunday Morning Peak Hour			Weekday Morning Peak Hour			Weekday Afternoon Peak Hour		
		In	Out	Total	In	Out	Total	In	Out	Total
560	St. James Expansion (12,282 s.f./237 Seats)	73	72	145	6	5	11	6	6	12
	Existing Trip Generation	159	255	414	22	86	108	30	34	64
	Total Trip Generation	**232**	**327**	**559**	**28**	**91**	**119**	**36**	**40**	**76**

4. Projected Traffic Conditions

The total projected traffic volumes include the existing traffic volumes, increase in background traffic due to growth, and the traffic estimated to be generated by the proposed subject development.

Development Traffic Assignment

The estimated Sunday morning peak hour traffic volumes that will be generated by the proposed church expansion were combined to the existing trip generation for the Church. This total estimated site generated traffic was reassigned to the roadway system in accordance with the previously described directional distribution (Figure 6) and reflected that approximately 60 percent of the on-site parking spaces are provided on the east-campus. **Figure 7A** illustrates the traffic assignment for a typical Sunday morning peak hour.

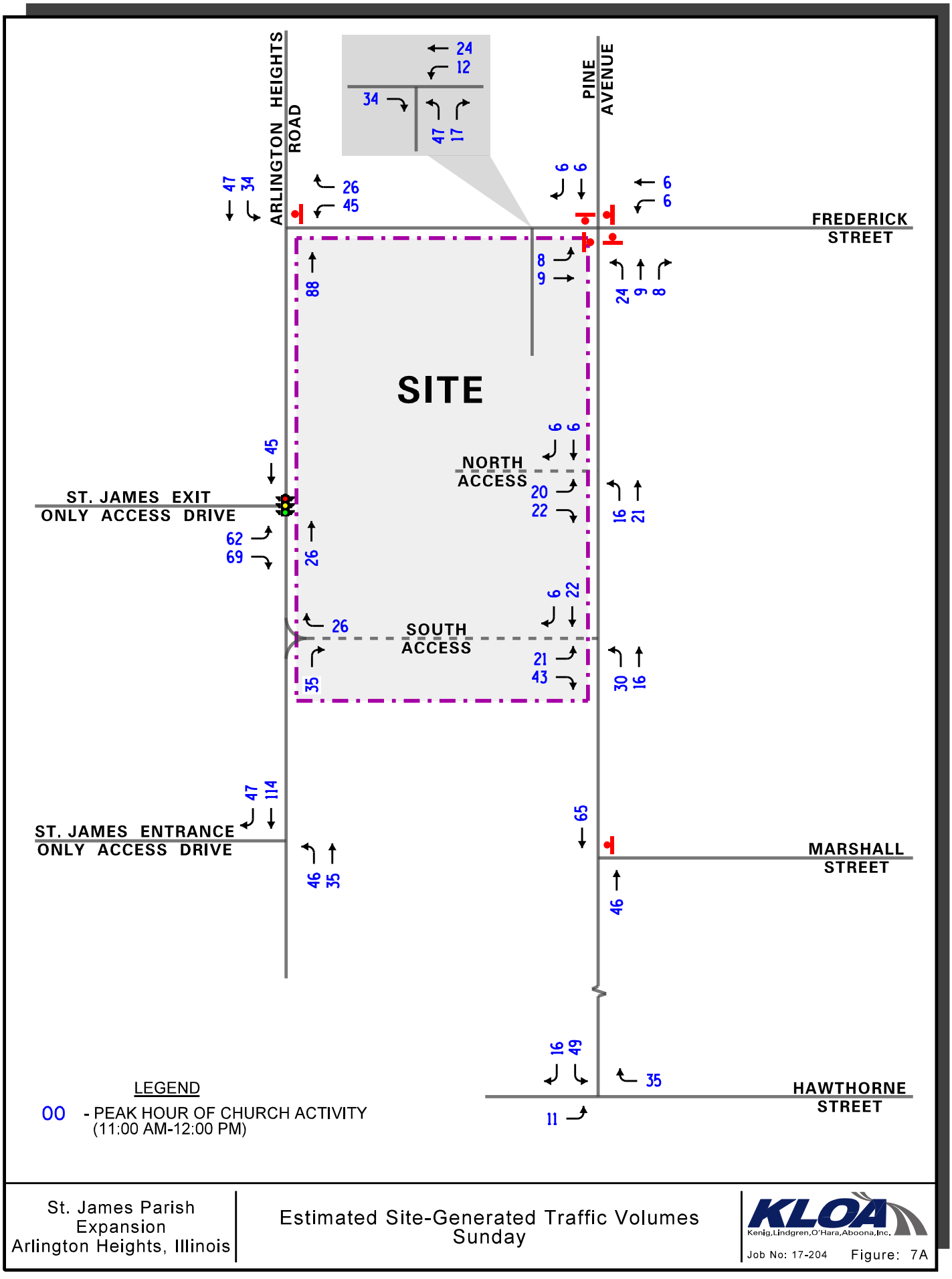
As previously indicated, the proposed church expansion will not result in a modification to the operations of St. James School nor will result in an increase/decrease in enrollment. Therefore, the existing traffic volumes generated by St. James on a typical school day were not reassigned or modified. The estimated weekday morning and weekday afternoon peak hour traffic volumes that will be generated by the church expansion were assigned to the roadway system and to the access drives serving the east campus in accordance with the previously described directional distribution (Figure 6) taking into consideration that all of the expansion generated traffic will be arriving to and departing from the east campus. **Figure 7B** illustrates the traffic assignment for the weekday morning and afternoon peak hours.

Background Traffic Conditions

The existing traffic volumes (Figure 4) that do not turn to/from the St. James Parish access drives were increased by a regional growth factor to account for the increase in existing traffic related to regional growth in the area (i.e., not attributable to any particular planned development). Based on the Chicago Metropolitan Agency for Planning (CMAP) Year 2040 population and employment projections, in a letter dated September 20, 2017, the area traffic is projected to increase by approximately one-half percent per year. As such, the existing traffic volumes (that are not generated by St. James Parish) were increased by three percent total to project the Year 2023 background traffic volumes (buildout year plus five-year analysis). This background traffic growth was not applied to the church generated traffic volumes as these values already take into consideration the increased attendance from the expansion and no change in school enrolment or operations is projected to occur. The CMAP 2040 projections letter is included in the Appendix.

Total Projected Traffic Volumes

The existing traffic volumes accounting for growth were combined with the peak hour traffic volumes generated by the development (Figure 7A/7B) to determine the Year 2023 total projected traffic volumes. The Year 2023 total projected traffic volumes on Sunday are shown in **Figure 8A** and the Year 2023 total projected traffic volumes on a weekday morning and evening are shown in **Figure 8B**.



St. James Parish Expansion
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Estimated Site-Generated Traffic Volumes
Sunday

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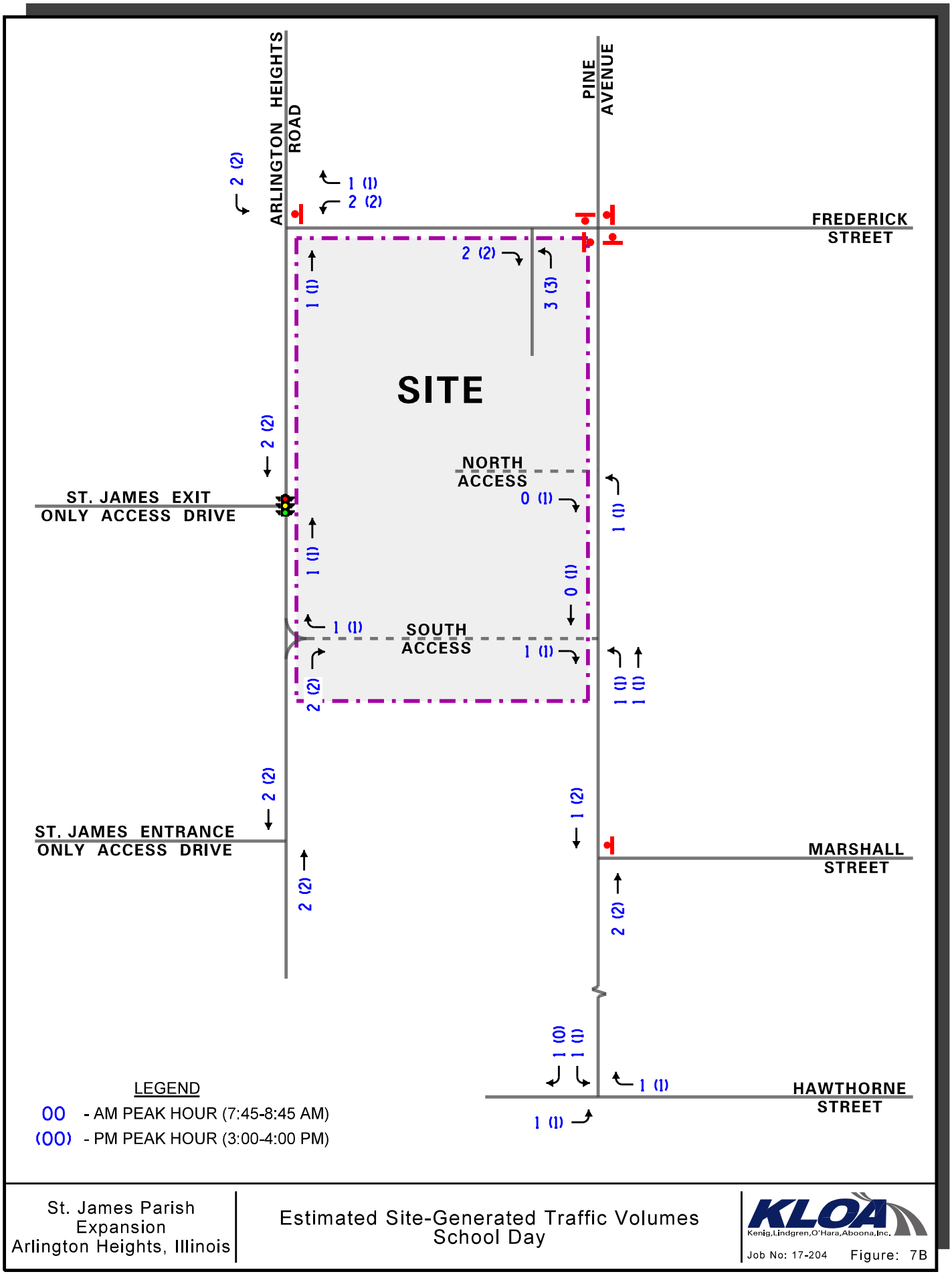

St. James Parish Expansion
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Estimated Site-Generated Traffic Volumes
School Day

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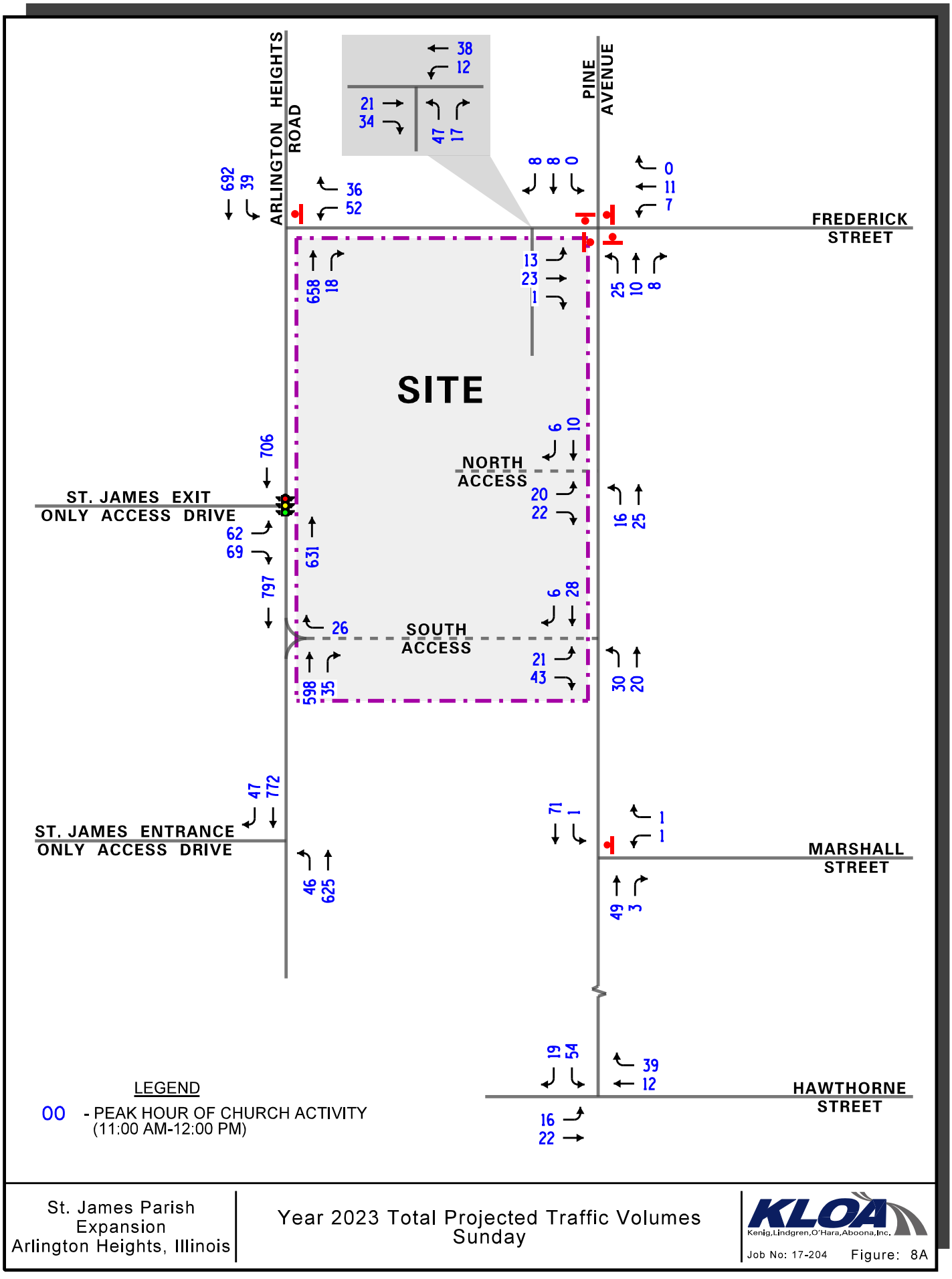

St. James Parish Expansion
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Year 2023 Total Projected Traffic Volumes
Sunday

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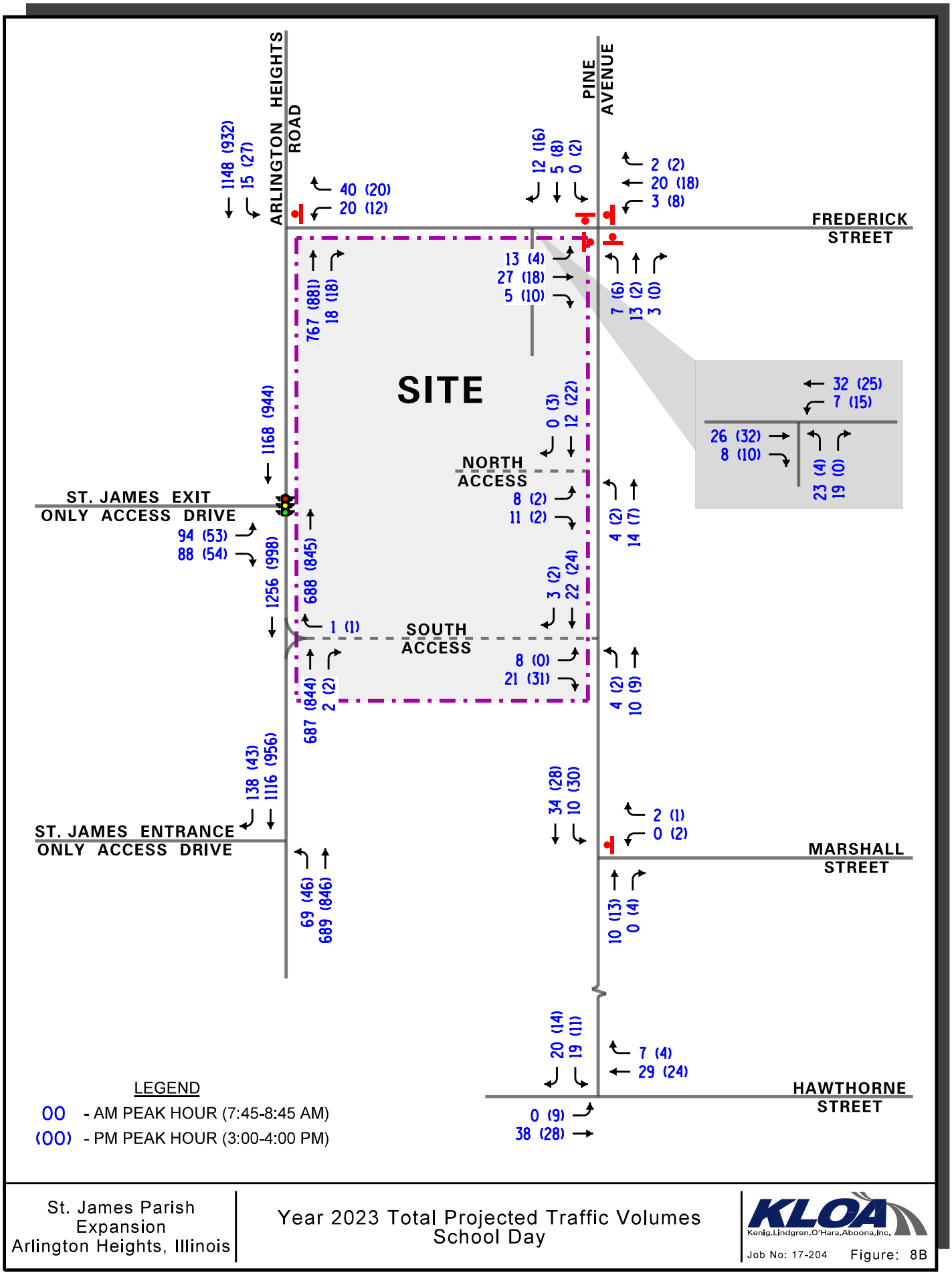

St. James Parish Expansion
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Year 2023 Total Projected Traffic Volumes
School Day

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Job No: 17-204 Figure: 8B

5. Traffic Analysis and Recommendations

The following provides an evaluation conducted for the Sunday morning, weekday morning and weekday evening peak hours. The analysis includes conducting capacity analyses to determine how well the roadway system and access drives are projected to operate and whether any roadway improvements or modification are required.

Traffic Analyses

Roadway and adjacent or nearby intersection analyses were performed for the Sunday morning, weekday morning, and weekday evening peak hours for the existing (Year 2017) and future projected (Year 2023) traffic volumes.

The traffic analyses were performed using the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM), 2010* and analyzed using the Synchro/SimTraffic 9 computer software. The analysis for the traffic-signal controlled intersections were accomplished using field measured cycle lengths and phasings to determine the average overall vehicle delay and levels of service.

The analyses for the unsignalized intersections determine the average control delay to vehicles at an intersection. Control delay is the elapsed time from a vehicle joining the queue at a stop sign (includes the time required to decelerate to a stop) until its departure from the stop sign and resumption of free flow speed. The methodology analyzes each intersection approach controlled by a stop sign and considers traffic volumes on all approaches and lane characteristics.

The ability of an intersection to accommodate traffic flow is expressed in terms of level of service, which is assigned a letter from A to F based on the average control delay experienced by vehicles passing through the intersection. The *Highway Capacity Manual* definitions for levels of service and the corresponding control delay for signalized intersections and unsignalized intersections are included in the Appendix of this report.

Summaries of the traffic analysis results showing the level of service and overall intersection delay (measured in seconds) for the existing and Year 2023 total projected conditions are presented in **Tables 2** through **4**. A discussion of the intersections follows. Summary sheets for the capacity analyses are included in the Appendix.

Table 2
CAPACITY ANALYSIS RESULTS – SIGNALIZED
ARLINGTON HEIGHTS ROAD WITH ST. JAMES EXIT ONLY ACCESS DRIVE

Intersection	Sunday Morning Peak Hour		Weekday Morning Peak Hour		Weekday Afternoon Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Year 2017 Existing Conditions						
• Overall	C	30.6	B	17.2	B	12.3
• Eastbound Approach	E	57.6	D	50.8	D	53.1
• Northbound Approach	B	14.8	A	8.4	A	7.2
• Southbound Approach	C	21.9	B	11.3	A	7.6
Year 2023 Projected Conditions						
• Overall	C	24.9	B	17.2	B	12.3
• Eastbound Approach	D	48.9	D	50.8	D	53.7
• Northbound Approach	B	14.1	A	8.4	A	7.3
• Southbound Approach	B	19.4	B	11.6	A	7.7

LOS = Level of Service
Delay is measured in seconds.

Table 3
CAPACITY ANALYSIS RESULTS – EXISTING CONDITIONS – UNSIGNALIZED

Intersection	Sunday Morning Peak Hour		Weekday Morning Peak Hour		Weekday Afternoon Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Arlington Heights Road with Frederick Street						
• Westbound Approach	C	19.3	C	22.7	C	19.7
• Southbound Left-Turns	A	0.4	A	0.5	A	1.1
Arlington Heights Road with Entrance Only Access Drive						
• Northbound Left-Turns	B	10.5	A	9.0	A	4.2
Frederick Street with Pine Avenue						
• Overall	A	7.4	A	7.2	A	7.0
• Eastbound Approach	A	7.5	A	7.3	A	7.1
• Westbound Approach	A	7.3	A	7.3	A	7.2
• Northbound Approach	A	7.5	A	7.3	A	7.3
• Southbound Approach	A	6.9	A	6.9	A	6.8
Pine Avenue with Marshall Street						
• Westbound Approach	A	8.8	A	8.8	A	9.6
• Southbound Left-Turns	A	1.6	A	1.8	A	4.1
Pine Avenue with Hawthorne Street						
• Southbound Approach	A	9.3	A	9.0	A	8.9
• Eastbound Left-Turns	A	1.9	--	--	A	1.7
Pine Avenue with Northerly St. James Access Drive						
• Eastbound Approach	A	8.9	A	8.7	A	8.7
• Northbound Left-Turns	--	--	A	1.4	A	0.7
Pine Avenue with Southerly St. James Access Drive						
• Eastbound Approach	A	9.6	A	8.8	A	9.1
• Northbound Left-Turns	A	4.5	A	1.8	A	0.9
Frederick Street with St. James Access Drive						
• Northbound Approach	A	8.9	A	9.0	A	9.0
• Westbound Left-Turns	A	2.5	A	1.4	A	2.9

LOS = Level of Service
Delay is measured in seconds.

Table 4
CAPACITY ANALYSIS RESULTS – PROJECTED CONDITIONS – UNSIGNALIZED

Intersection	Sunday Morning Peak Hour		Weekday Morning Peak Hour		Weekday Afternoon Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Arlington Heights Road with Frederick Street						
• Westbound Approach	E	48.0	D	25.7	C	21.6
• Southbound Left-Turns	A	2.0	A	0.6	A	1.3
Arlington Heights Road with Entrance Only Access Drive						
• Northbound Left-Turns	A	6.1	A	9.3	A	4.3
Frederick Street with Pine Avenue						
• Overall	A	7.7	A	7.2	A	7.0
• Eastbound Approach	A	7.9	A	7.3	A	7.1
• Westbound Approach	A	7.6	A	7.3	A	7.2
• Northbound Approach	A	7.9	A	7.3	A	7.3
• Southbound Approach	A	7.2	A	6.9	A	6.8
Pine Avenue with Marshall Street						
• Westbound Approach	A	9.9	A	8.9	A	9.7
• Southbound Left-Turns	A	0.1	A	1.7	A	4.0
Pine Avenue with Hawthorne Street						
• Southbound Approach	B	10.5	A	9.1	A	8.9
• Eastbound Left-Turns	A	3.3	--	--	A	1.8
Pine Avenue with Northerly St. James Access Drive						
• Eastbound Approach	A	9.8	A	8.7	A	8.7
• Northbound Left-Turns	A	3.0	A	1.6	A	1.7
Pine Avenue with Southerly St. James Access Drive						
• Eastbound Approach	B	11.2	A	8.9	A	9.2
• Northbound Left-Turns	A	4.8	A	2.1	A	1.4
Frederick Street with St. James Access Drive						
• Northbound Approach	A	10.8	A	9.0	A	9.1
• Westbound Left-Turns	A	1.9	A	1.4	A	2.8
Arlington Heights Road with Proposed Right-In/Right-Out Access Drive						
• Westbound Approach	B	14.7	B	10.8	B	11.6

LOS = Level of Service
Delay is measured in seconds.

Discussion and Recommendations

The following summarizes how the intersections are projected to operate and identifies any roadway and traffic control improvements necessary to accommodate the development-generated traffic.

Intersection Operations on a Typical Sunday

The results of the capacity analysis indicate that on Sunday, the signalized intersection of Arlington Heights Road with the exit only access drive overall is projected to continue operating at existing level of service (LOS) C with a decrease in delay of approximately six seconds. Additionally, all of the approaches are projected to operate at LOS D or better with no increase in delay.

The westbound Frederick Street approach at Arlington Heights currently operates at LOS C during and is projected to operate at LOS E with increases in delay of approximately 29 seconds and projected 95th percentile queues of three to four vehicles. Southbound left-turns form Arlington Heights Road onto Frederick Street are projected to continue operating at LOS A with increases in delay of approximately two seconds and 95th percentile queues of one to two vehicles.

Northbound left-turn movements from Arlington Heights Road onto the St. James entrance only access drive are projected to continue operating at LOS A with 95th percentile queues of one to two vehicles.

All of the unsignalized intersections along Frederick Street and Pine Avenue are generally projected to continue operate at LOS B or better with increases in delay of less than two seconds. As such, the proposed church expansion and the relocation of all services to the east campus will have a limited impact on the operations of the study area intersections and no roadway or traffic control improvements will be required.

Intersection Operations on a Typical School Day

As previously indicated, while the majority of new trips will occur on Sundays, in order to provide conservative analyses, weekday morning and afternoon trips were also estimated for the church expansion based on ITE's trip rates. The trips rates resulted projection of 11 total trips during the weekday morning peak hour and 12 total trips during the weekday afternoon peak hour. The results of the capacity analyses indicated that all of the study area intersections are projected to continue operating at existing level of service with increases in delay of less than one second with the exception of the westbound approach of Frederick Street at Arlington Heights Road. This approach is projected to operate at LOS D during the weekday morning peak hour and is projected to continue operating at LOS C during the weekday afternoon peak hour with increases in delay three and two seconds, respectively. It should be noted that this increase in delay is attributed to the three percent background growth as the proposed expansion is projected to only increase the total traffic through this intersection by less than one-half percent. As such, the proposed church expansion will have a limited impact on the operations of the study area intersections on a typical school day and no roadway or traffic control improvements will be required.

Arlington Heights Road with Proposed Right-In/Right-Out Access Drive

The results of the capacity analysis indicate that the proposed right-in/right-out access drive is projected to operate at LOS B during the Sunday morning, weekday morning and weekday afternoon peak hours. The provision of this access drive will allow for vehicles to access the church parking lot without having to utilize the local roadway system. When the projected traffic volumes are compared to the turn lane warrant guidelines published in Chapter 36 of the IDOT Bureau of Design and Environment, an exclusive northbound right-turn lane serving this access drive will not be warranted during either peak hour. This access drive should be monitored in the future to determine if cut-through traffic occurs between Arlington Heights Road and Pine Avenue and if necessary, barricades could be used to block the southernmost access drive on Pine Avenue during the week (Monday through Friday) to prohibit movements to/from this access drive when vehicle traffic utilizing the church is minimal.

6. Parking Evaluation

As part of the proposed church expansion the existing parking lot serving the church building will also be expanded to provide 49 additional parking spaces for a total of 185 parking spaces combined with the 149 parking spaces provided on the school site, the campus will provide a total of 334 parking spaces.

Parking Occupancy Surveys

In order to determine the adequacy of the existing and proposed parking supply, parking occupancy surveys were conducted on Sunday, August 27, 2017 and on Sunday September 3, 2017. These surveys were conducted in half-hour intervals from 8:00 A.M. to 11:30 A.M. to determine the parking demand during each of the Sunday morning services. Additionally, the church parking lot on the east side of Arlington Heights Road and the parish center parking lot on the west side of Arlington Heights Road were counted separately and the surveys included the following on-street parking locations:

- Arlington Heights Road between Frederick Street and Hawthorne Street.
- Frederick Street between Arlington Heights Road and Haddow Avenue.
- Pine Street between Oakton Street and Hawthorne Street.
- Marshall Street between Pine Avenue and Haddow Avenue.
- Evergreen Avenue north of the St. James Parish Center.
- Evergreen Avenue south of the St. James Parish Center.

It should be noted that parking is permitted on Arlington Heights Road between Frederick Street and Hawthorne Avenue during Sunday's services. Furthermore, parking is prohibited at the following locations:

- The east side of Pine Avenue between Marshall Street and Frederick Street at all times.
- The east side of Evergreen Avenue south of the St. James Parish Center.
- The west side of Evergreen Avenue north of the St. James Parish Center.
- The south side of Frederick Street between Pine Avenue and Belmont Avenue on Sunday's between 5:00 A.M. and 2:00 P.M.

Tables 5 and **6** summarize the results of the parking occupancy surveys on August 27th and September 3rd, respectively.

Table 5
PARKING OCCUPANCY SURVEY RESULTS – SUNDAY, AUGUST 27, 2017

Time	St. James Church Parking Lot (East Side)	St. James Parish Center Parking Lot (West Side)	Arlington Heights Road	Frederick Street	Pine Avenue	Marshall Street	Evergreen Avenue	Total Off Street Parking	Total On Street Parking	Grand Total
8:00 AM	42	2	2	2	4	1	1	**44**	**10**	**54**
8:30 AM	133	2	23	14	31	1	1	**135**	**70**	**205**
9:00 AM	106	9	23	14	28	2	1	**115**	**68**	**183**
9:30 AM	14	38	2	1	2	2	5	**52**	**12**	**64**
10:00 AM	82	171	54	2	2	2	34	**253**	**94**	**347**
10:30 AM	92	171	54	2	2	2	36	**263**	**96**	**359**
11:00 AM	18	132	3	2	2	2	27	**150**	**36**	**186**
11:30 AM	26	118	19	2	2	2	12	**144**	**37**	**181**
St. James Parish Center Parking Inventory – 136 spaces (east side), 149 spaces (west side) = 285 Parking Spaces										

Table 6
PARKING OCCUPANCY SURVEY RESULTS – SUNDAY, SEPTEMBER 3, 2017

Time	St. James Church Parking Lot (East Side)	St. James Parish Center Parking Lot (West Side)	Arlington Heights Road	Frederick Street	Pine Avenue	Marshall Street	Evergreen Avenue	Total Off Street Parking	Total On Street Parking	Grand Total
8:00 AM	47	3	4	2	3	0	2	**50**	**11**	**61**
8:30 AM	132	5	21	15	20	0	3	**137**	**59**	**196**
9:00 AM	123	12	24	15	20	0	3	**135**	**62**	**197**
9:30 AM	12	42	4	1	2	0	5	**54**	**12**	**66**
10:00 AM	54	147	42	1	2	0	18	**201**	**63**	**264**
10:30 AM	64	147	45	1	3	0	17	**211**	**66**	**277**
11:00 AM	21	34	2	1	2	0	5	**55**	**10**	**65**
11:30 AM	37	108	10	1	4	0	14	**145**	**29**	**174**
St. James Parish Center Parking Inventory – 136 spaces (east side), 149 spaces (west side) = 285 Parking Spaces										

As shown in Tables 5 and 6, the results of the parking occupancy surveys indicated that the peak parking demand on August 27th occurred at 10:30 A.M. with a parking demand of 359 spaces. At this time, the west parking lot was 115 percent occupied (with cars parked along the south side of the entrance only access drive which is 20-feet wide), the east parking lot was 68 percent occupied and 96 vehicles were parking on-street. Of the vehicle parked on-street, 54 vehicles were parked on Arlington Heights Road and 36 vehicles were parked on Evergreen Avenue.

The peak parking demand on September 3rd occurred at 10:30 A.M. with a parking demand of 277 spaces of which 211 vehicles were parked within the off-street parking lots and 66 were parked on-street. At this time the west parking lot was 98 percent occupied, the east parking lot was 47 percent occupied and 66 vehicles were parked on-street. Of the vehicles parked on-street, 45 vehicles were parked on Arlington Heights Road and 17 vehicles were parked on Evergreen Avenue.

Tables 5 and 6 also indicate that during the Sunday morning services that are held at the church (east side) any overflow parking was accommodated by the on-street parking locations along Arlington Heights Road, Frederick Street and Pine Avenue with few vehicles utilizing the Parish Center parking lot during these services with a range of 59 to 70 vehicles parked on the streets.

Parking Evaluation

As previously indicated, as part of the church expansion, all services will be held in the expanded church building and no services will be held in the parish center/school building. Additionally, the expanded church will be handicap accessible which will result in a more evenly distributed attendance among the four Sunday services. The parking projected to be generated by the proposed church expansion, which will result in an increase of 237 seats (assuming 18-inches per person), was determined based on the following:

- Village of Arlington Heights Code: Parking for churches is required to be provided at one space for every five seats. This results in a projected parking demand of 47 spaces.

- The ITE *Parking Generation Manual* 9th Edition: The average parking demand for churches on a Sunday is 0.2 spaces per seat (one space for every five seats) spaces per seat resulting in a projected average parking demand of 47 spaces.

Combining the existing peak parking demand of 359 parking spaces with the projected parking demand of 47 parking spaces results in a total projected parking demand of 406 parking spaces.

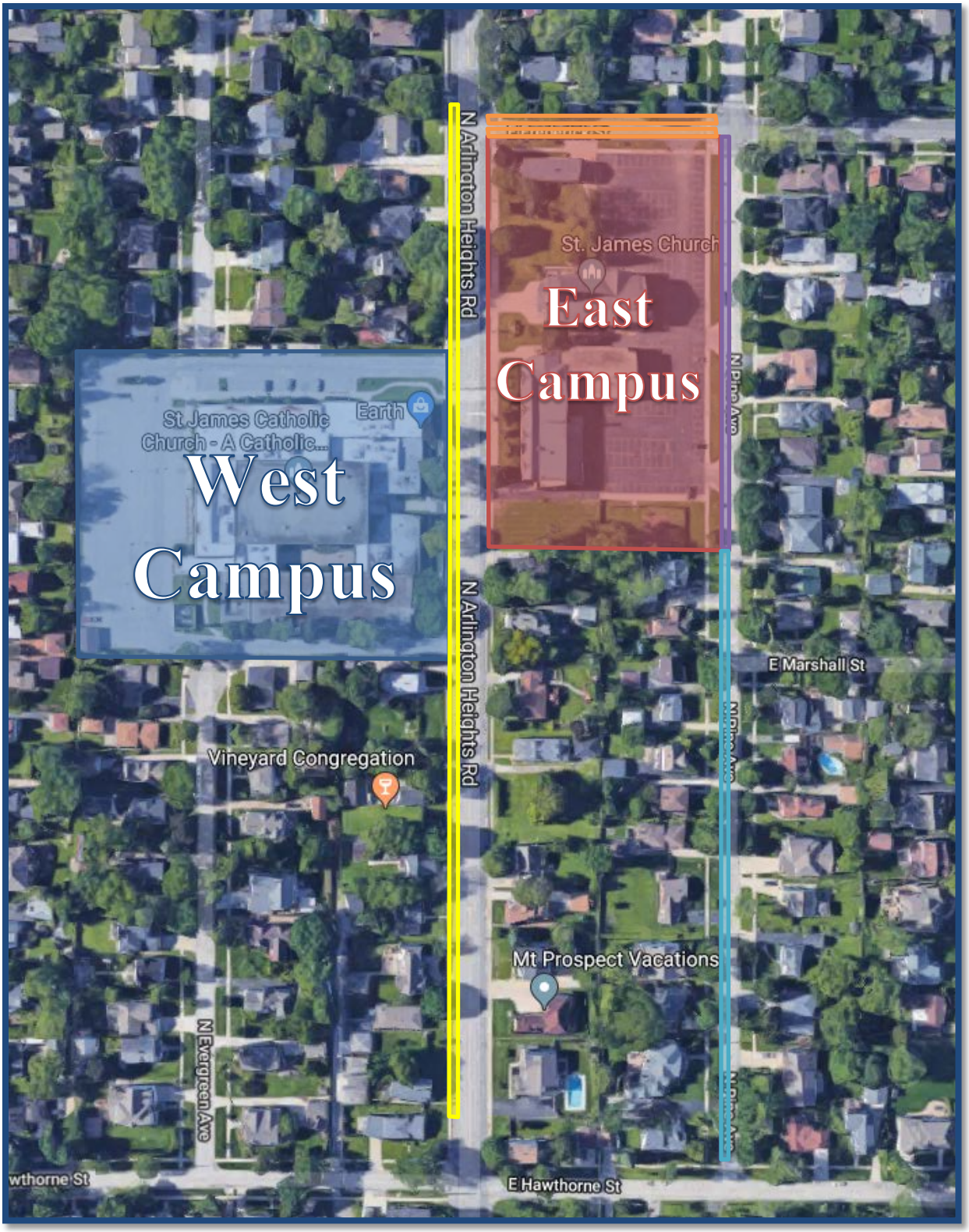
As previously indicted, the proposed church expansion will result in a total of 334 on-site parking spaces. Furthermore, the south side of Frederick Street between Arlington Heights Road and Pine Avenue can accommodate five on-street parking spaces and the west side of Pine Avenue along the St. James frontage can accommodate approximately 20 on-street parking spaces. Additionally, on-street parking on the west side of Arlington Heights Road will be maintained on Sundays providing approximately 35 parking spaces. This results in a total of 394 total parking spaces. With a projected parking demand of 406 parking spaces on a typical Sunday, a deficit of approximately 12 spaces will result which can be accommodated by the available parking spaces on the west side of Pine Avenue south of the church. **Figure 9** illustrates the on-site parking lots and the on-street parking locations which can accommodate the following:

- West Campus: 149 Spaces
- East Campus: 185 Spaces
- Frederick Street (south side along church frontage): 5 Spaces
- Frederick Street (north side): 5 spaces
- Pine Avenue (west side along church frontage): 20 Spaces
- Pine Avenue (west side south of church): 20 Spaces
- Arlington Heights Road (west side):70 spaces
- **Total: 454 spaces**

However, in conjunction with all the services occurring within the church building, it is recommended that parishioners be encouraged to utilize both parking lots on campus before utilizing on-street parking. As it currently occurs, parishioners that park on the west side of Arlington Heights Road will be able to utilize the signalized intersection at the exit only access drive, which provides pedestrian countdown timers and a 15-foot wide high visibility crosswalk, to safely cross Arlington Heights Road.

Assuming a 15 percent higher parking demand on holidays, the projected parking demand increases to 467 spaces resulting in a parking deficit of 73 parking spaces. However, this parking demand is only projected to occur twice per year and this projected parking demand is conservative as it does not take into consideration the increase in vehicle occupancy that occurs on holidays.

As can be seen from the results of the parking evaluation, the projected off-street parking supply of 334 parking spaces combined with the on-street parking that can be accommodated on Frederick Street, Pine Avenue and Arlington Heights Road will be adequate in accommodating the projected parking demand on a typical Sunday generated by St. James Parish. It should be noted that this projected parking demand is conservative as it does not take into consideration that the proposed expansion will increase accessibility and help distribute service attendance and reduce the peak parking demand experienced at the 10:00 A.M. service.



St. James Parish Parking Locations **Figure 9**

7. Conclusion

Based on the preceding analyses and recommendations, the following conclusions have been made:

- The proposed expansion generated traffic will have a limited impact on the operations of the study area intersections and no roadway or traffic control improvements will be required.

- The proposed expansion will not impact the existing pick-up/drop-off operations or access for St. James School.

- The existing access system and proposed right-in/right-out access drive serving the church and parish center will be adequate in accommodating the traffic projected to be generated by the buildout of the church expansion and will ensure that efficient and flexible access is provided.

- The proposed right-in/right-out access drive off Arlington Heights Road will replace an existing full movement curb cut at this location.

- If determined in the future that cut-through traffic utilizes the proposed right-in/right-out between Arlington Heights Road and Pine Avenue, consideration should be given to barricading the southernmost access drive off Pine Avenue during the week (Monday through Friday) when vehicle traffic utilizing the church is minimal.

- The provision of 50 additional parking spaces will be adequate in accommodating the projected parking demand generated by the expansion.

- The parking demand will continue to be accommodated by the two off-street parking lots serving the campus with any overflow parking accommodated by the on-street parking locations along Arlington Heights Road (west side only), Frederick Street and Pine Avenue.

- As it currently occurs, parishioners that park on the west side of Arlington Heights Road will be able to utilize the signalized intersection at the exit only access drive, which provides pedestrian countdown timers and a 15-foot wide high visibility crosswalk, to safely cross Arlington Heights Road.

Appendix

Traffic Count Summary Sheets
Preliminary Site Plan
CMAP 2040 Projections Letter
Level of Service Criteria
Capacity Analysis Summary Sheets

Traffic Count Summary Sheets

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Arlington Heights School with Signalized Access Drive
Site Code:
Start Date: 08/27/2017

Turning Movement Data

Start Time	Arlington Heights Road Eastbound					Outbound Access Drive Northbound					Arlington Heights Road Southbound					Int. Total
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	
9:00 AM	0	0	0	0	0	0	0	78	1	78	0	90	0	0	90	168
9:15 AM	0	0	2	0	2	0	0	103	3	103	0	136	0	0	136	241
9:30 AM	0	1	0	0	1	0	0	79	11	79	0	132	0	0	132	212
9:45 AM	0	5	7	32	12	0	0	91	52	91	0	168	0	0	168	271
Hourly Total	0	6	9	32	15	0	0	351	67	351	0	526	0	0	526	892
10:00 AM	0	4	5	5	9	0	0	103	14	103	0	152	0	1	152	264
10:15 AM	0	2	1	1	3	0	0	114	4	114	0	115	0	1	115	232
10:30 AM	0	1	0	0	1	0	0	157	0	157	0	130	0	0	130	288
10:45 AM	0	5	12	15	17	0	0	130	29	130	0	151	0	0	151	298
Hourly Total	0	12	18	21	30	0	0	504	47	504	0	548	0	2	548	1082
11:00 AM	0	75	78	19	153	0	0	156	57	156	0	205	0	0	205	514
11:15 AM	0	1	9	6	10	0	0	139	4	139	0	179	0	0	179	328
11:30 AM	0	2	2	9	4	0	0	134	8	134	0	146	0	0	146	284
11:45 AM	0	1	1	0	2	0	0	163	1	163	0	177	0	0	177	342
Hourly Total	0	79	90	34	169	0	0	592	70	592	0	707	0	0	707	1468
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7:30 AM	0	0	0	0	0	0	0	179	0	179	0	240	0	0	240	419
7:45 AM	0	0	0	0	0	0	0	162	3	162	1	291	0	0	292	454
Hourly Total	0	0	0	0	0	0	0	341	3	341	1	531	0	0	532	873
8:00 AM	0	5	2	0	7	0	0	139	11	139	0	256	0	0	256	402
8:15 AM	0	52	31	0	83	0	0	169	64	169	0	339	0	0	339	591
8:30 AM	0	37	55	2	92	0	0	180	7	180	0	246	0	0	246	518
8:45 AM	0	0	1	0	1	0	0	167	2	167	0	240	0	0	240	408
Hourly Total	0	94	89	2	183	0	0	655	84	655	0	1081	0	0	1081	1919
9:00 AM	0	2	2	3	4	0	0	154	2	154	0	230	0	0	230	388
9:15 AM	0	2	1	0	3	1	0	157	3	158	0	175	0	0	175	336
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	4	3	3	7	1	0	311	5	312	0	405	0	0	405	724
2:30 PM	0	0	1	0	1	0	0	178	0	178	0	200	0	0	200	379
2:45 PM	0	3	2	0	5	0	0	205	0	205	0	203	0	0	203	413
Hourly Total	0	3	3	0	6	0	0	383	0	383	0	403	0	0	403	792
3:00 PM	0	1	4	0	5	0	0	183	4	183	0	228	0	0	228	416
3:15 PM	0	8	3	0	11	0	0	199	12	199	0	245	0	0	245	455
3:30 PM	0	24	33	0	57	0	0	212	136	212	0	230	0	0	230	499
3:45 PM	0	20	14	0	34	0	0	225	5	225	0	212	0	0	212	471
Hourly Total	0	53	54	0	107	0	0	819	157	819	0	915	0	0	915	1841
4:00 PM	0	3	5	0	8	0	0	225	5	225	0	236	0	0	236	469
4:15 PM	0	1	5	0	6	0	0	218	1	218	0	239	0	0	239	463

Grand Total	0	255	276	92	531	1	0	4399	439	4400	1	5591	0	2	5592	10523
Approach %	0.0	48.0	52.0	-	-	0.0	0.0	100.0	-	-	0.0	100.0	0.0	-	-	-
Total %	0.0	2.4	2.6	-	5.0	0.0	0.0	41.8	-	41.8	0.0	53.1	0.0	-	53.1	-
Lights	0	255	276	-	531	1	0	4270	-	4271	1	5426	0	-	5427	10229
% Lights	-	100.0	100.0	-	100.0	100.0	-	97.1	-	97.1	100.0	97.0	-	-	97.0	97.2
Buses	0	0	0	-	0	0	0	37	-	37	0	38	0	-	38	75
% Buses	-	0.0	0.0	-	0.0	0.0	-	0.8	-	0.8	0.0	0.7	-	-	0.7	0.7
Single-Unit Trucks	0	0	0	-	0	0	0	85	-	85	0	107	0	-	107	192
% Single-Unit Trucks	-	0.0	0.0	-	0.0	0.0	-	1.9	-	1.9	0.0	1.9	-	-	1.9	1.8
Articulated Trucks	0	0	0	-	0	0	0	7	-	7	0	20	0	-	20	27
% Articulated Trucks	-	0.0	0.0	-	0.0	0.0	-	0.2	-	0.2	0.0	0.4	-	-	0.4	0.3
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	-	0.0	0.0
Pedestrians	-	-	-	92	-	-	-	-	439	-	-	-	-	2	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Arlington Heights School with Signalized Access Drive
Site Code:
Start Date: 08/27/2017

Turning Movement Peak Hour Data (11:00 AM)

Start Time	Arlington Heights Road Eastbound					Outbound Access Drive Northbound					Arlington Heights Road Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
11:00 AM	0	75	78	19	153	0	0	156	57	156	0	205	0	0	205	514
11:15 AM	0	1	9	6	10	0	0	139	4	139	0	179	0	0	179	328
11:30 AM	0	2	2	9	4	0	0	134	8	134	0	146	0	0	146	284
11:45 AM	0	1	1	0	2	0	0	163	1	163	0	177	0	0	177	342
Total	0	79	90	34	169	0	0	592	70	592	0	707	0	0	707	1468
Approach %	0.0	46.7	53.3	-	-	0.0	0.0	100.0	-	-	0.0	100.0	0.0	-	-	-
Total %	0.0	5.4	6.1	-	11.5	0.0	0.0	40.3	-	40.3	0.0	48.2	0.0	-	48.2	-
PHF	0.000	0.263	0.288	-	0.276	0.000	0.000	0.908	-	0.908	0.000	0.862	0.000	-	0.862	0.714
Lights	0	79	90	-	169	0	0	590	-	590	0	707	0	-	707	1466
% Lights	-	100.0	100.0	-	100.0	-	-	99.7	-	99.7	-	100.0	-	-	100.0	99.9
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	-	0.0	-	-	0.0	0.0
Single-Unit Trucks	0	0	0	-	0	0	0	2	-	2	0	0	0	-	0	2
% Single-Unit Trucks	-	0.0	0.0	-	0.0	-	-	0.3	-	0.3	-	0.0	-	-	0.0	0.1
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	-	0.0	-	-	0.0	0.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	-	0.0	-	-	0.0	0.0
Pedestrians	-	-	-	34	-	-	-	-	70	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Arlington Heights School with Signalized Access Drive
Site Code:
Start Date: 08/27/2017

Turning Movement Peak Hour Data (7:45 AM)

Start Time	Arlington Heights Road Eastbound					Outbound Access Drive Northbound					Arlington Heights Road Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
7:45 AM	0	0	0	0	0	0	0	162	3	162	1	291	0	0	292	454
8:00 AM	0	5	2	0	7	0	0	139	11	139	0	256	0	0	256	402
8:15 AM	0	52	31	0	83	0	0	169	64	169	0	339	0	0	339	591
8:30 AM	0	37	55	2	92	0	0	180	7	180	0	246	0	0	246	518
Total	0	94	88	2	182	0	0	650	85	650	1	1132	0	0	1133	1965
Approach %	0.0	51.6	48.4	-	-	0.0	0.0	100.0	-	-	0.1	99.9	0.0	-	-	-
Total %	0.0	4.8	4.5	-	9.3	0.0	0.0	33.1	-	33.1	0.1	57.6	0.0	-	57.7	-
PHF	0.000	0.452	0.400	-	0.495	0.000	0.000	0.903	-	0.903	0.250	0.835	0.000	-	0.836	0.831
Lights	0	94	88	-	182	0	0	614	-	614	1	1085	0	-	1086	1882
% Lights	-	100.0	100.0	-	100.0	-	-	94.5	-	94.5	100.0	95.8	-	-	95.9	95.8
Buses	0	0	0	-	0	0	0	8	-	8	0	9	0	-	9	17
% Buses	-	0.0	0.0	-	0.0	-	-	1.2	-	1.2	0.0	0.8	-	-	0.8	0.9
Single-Unit Trucks	0	0	0	-	0	0	0	26	-	26	0	32	0	-	32	58
% Single-Unit Trucks	-	0.0	0.0	-	0.0	-	-	4.0	-	4.0	0.0	2.8	-	-	2.8	3.0
Articulated Trucks	0	0	0	-	0	0	0	2	-	2	0	6	0	-	6	8
% Articulated Trucks	-	0.0	0.0	-	0.0	-	-	0.3	-	0.3	0.0	0.5	-	-	0.5	0.4
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	0.0	0.0	-	-	0.0	0.0
Pedestrians	-	-	-	2	-	-	-	-	85	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Arlington Heights School with Signalized Access Drive
Site Code:
Start Date: 08/27/2017

Turning Movement Peak Hour Data (3:00 PM)

Start Time	Arlington Heights Road Eastbound					Outbound Access Drive Northbound					Arlington Heights Road Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
3:00 PM	0	1	4	0	5	0	0	183	4	183	0	228	0	0	228	416
3:15 PM	0	8	3	0	11	0	0	199	12	199	0	245	0	0	245	455
3:30 PM	0	24	33	0	57	0	0	212	136	212	0	230	0	0	230	499
3:45 PM	0	20	14	0	34	0	0	225	5	225	0	212	0	0	212	471
Total	0	53	54	0	107	0	0	819	157	819	0	915	0	0	915	1841
Approach %	0.0	49.5	50.5	-	-	0.0	0.0	100.0	-	-	0.0	100.0	0.0	-	-	-
Total %	0.0	2.9	2.9	-	5.8	0.0	0.0	44.5	-	44.5	0.0	49.7	0.0	-	49.7	-
PHF	0.000	0.552	0.409	-	0.469	0.000	0.000	0.910	-	0.910	0.000	0.934	0.000	-	0.934	0.922
Lights	0	53	54	-	107	0	0	799	-	799	0	876	0	-	876	1782
% Lights	-	100.0	100.0	-	100.0	-	-	97.6	-	97.6	-	95.7	-	-	95.7	96.8
Buses	0	0	0	-	0	0	0	8	-	8	0	13	0	-	13	21
% Buses	-	0.0	0.0	-	0.0	-	-	1.0	-	1.0	-	1.4	-	-	1.4	1.1
Single-Unit Trucks	0	0	0	-	0	0	0	12	-	12	0	20	0	-	20	32
% Single-Unit Trucks	-	0.0	0.0	-	0.0	-	-	1.5	-	1.5	-	2.2	-	-	2.2	1.7
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	6	0	-	6	6
% Articulated Trucks	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	-	0.7	-	-	0.7	0.3
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	-	0.0	-	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	157	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Arlington Heights Road with Frederick Street
Site Code:
Start Date: 08/27/2017

Turning Movement Data

Start Time	Frederick Street Westbound					Arlington Heights Road Northbound					Arlington Heights Road Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	Int. Total
9:00 AM	0	1	0	0	1	0	77	1	0	78	0	0	91	0	91	170
9:15 AM	0	6	23	3	29	0	106	5	2	111	0	1	123	0	124	264
9:30 AM	0	4	10	0	14	0	86	0	0	86	0	3	127	0	130	230
9:45 AM	0	5	3	3	8	0	87	6	0	93	0	9	166	0	175	276
Hourly Total	0	16	36	6	52	0	356	12	2	368	0	13	507	0	520	940
10:00 AM	0	0	4	0	4	0	103	3	0	106	0	5	142	0	147	257
10:15 AM	0	1	1	0	2	0	103	1	0	104	0	6	123	0	129	235
10:30 AM	0	1	1	0	2	0	145	3	0	148	0	2	127	0	129	279
10:45 AM	0	2	5	1	7	0	151	5	0	156	0	2	149	0	151	314
Hourly Total	0	4	11	1	15	0	502	12	0	514	0	15	541	0	556	1085
11:00 AM	0	2	6	0	8	0	215	15	0	230	0	2	196	0	198	436
11:15 AM	0	3	2	0	5	0	126	2	0	128	0	2	176	0	178	311
11:30 AM	0	3	3	0	6	0	133	2	0	135	0	2	149	0	151	292
11:45 AM	0	1	1	0	2	0	159	3	0	162	0	1	170	0	171	335
Hourly Total	0	9	12	0	21	0	633	22	0	655	0	7	691	0	698	1374
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7:30 AM	0	1	5	0	6	0	157	2	0	159	0	7	253	0	260	425
7:45 AM	0	3	9	0	12	0	171	2	0	173	0	4	288	0	292	477
Hourly Total	0	4	14	0	18	0	328	4	0	332	0	11	541	0	552	902
8:00 AM	0	2	21	1	23	0	150	0	0	150	0	5	253	0	258	431
8:15 AM	0	7	6	0	13	0	212	9	0	221	0	2	326	0	328	562
8:30 AM	0	5	2	0	7	0	211	6	0	217	0	2	236	0	238	462
8:45 AM	0	3	4	0	7	0	161	0	0	161	0	1	242	0	243	411
Hourly Total	0	17	33	1	50	0	734	15	0	749	0	10	1057	0	1067	1866
9:00 AM	0	4	2	0	6	0	160	0	0	160	0	2	232	0	234	400
9:15 AM	0	1	2	0	3	0	163	3	0	166	0	0	182	0	182	351
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	5	4	0	9	0	323	3	0	326	0	2	414	0	416	751
2:30 PM	0	1	4	0	5	0	180	3	0	183	0	0	182	0	182	370
2:45 PM	0	1	4	0	5	0	195	2	0	197	0	1	205	0	206	408
Hourly Total	0	2	8	0	10	0	375	5	0	380	0	1	387	0	388	778
3:00 PM	0	5	3	0	8	0	185	2	0	187	0	5	218	0	223	418
3:15 PM	0	1	1	0	2	0	189	6	0	195	0	8	237	0	245	442
3:30 PM	0	3	6	23	9	0	228	5	0	233	0	5	224	0	229	471
3:45 PM	0	1	8	1	9	0	237	4	0	241	0	6	222	0	228	478
Hourly Total	0	10	18	24	28	0	839	17	0	856	0	24	901	0	925	1809
4:00 PM	0	0	2	0	2	0	234	3	0	237	0	1	231	0	232	471
4:15 PM	0	1	3	0	4	0	220	0	0	220	0	1	237	0	238	462

Grand Total	0	68	141	32	209	0	4544	93	2	4637	0	85	5507	0	5592	10438
Approach %	0.0	32.5	67.5	-	-	0.0	98.0	2.0	-	-	0.0	1.5	98.5	-	-	-
Total %	0.0	0.7	1.4	-	2.0	0.0	43.5	0.9	-	44.4	0.0	0.8	52.8	-	53.6	-
Lights	0	67	139	-	206	0	4410	93	-	4503	0	83	5344	-	5427	10136
% Lights	-	98.5	98.6	-	98.6	-	97.1	100.0	-	97.1	-	97.6	97.0	-	97.0	97.1
Buses	0	0	1	-	1	0	40	0	-	40	0	2	39	-	41	82
% Buses	-	0.0	0.7	-	0.5	-	0.9	0.0	-	0.9	-	2.4	0.7	-	0.7	0.8
Single-Unit Trucks	0	1	1	-	2	0	86	0	-	86	0	0	102	-	102	190
% Single-Unit Trucks	-	1.5	0.7	-	1.0	-	1.9	0.0	-	1.9	-	0.0	1.9	-	1.8	1.8
Articulated Trucks	0	0	0	-	0	0	8	0	-	8	0	0	21	-	21	29
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.2	0.0	-	0.2	-	0.0	0.4	-	0.4	0.3
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	1	-	1	1
% Bicycles on Road	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	32	-	-	-	-	2	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Arlington Heights Road with Frederick Street
Site Code:
Start Date: 08/27/2017

Turning Movement Peak Hour Data (11:00 AM)

Start Time	Frederick Street Westbound					Arlington Heights Road Northbound					Arlington Heights Road Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	Int. Total
11:00 AM	0	2	6	0	8	0	215	15	0	230	0	2	196	0	198	436
11:15 AM	0	3	2	0	5	0	126	2	0	128	0	2	176	0	178	311
11:30 AM	0	3	3	0	6	0	133	2	0	135	0	2	149	0	151	292
11:45 AM	0	1	1	0	2	0	159	3	0	162	0	1	170	0	171	335
Total	0	9	12	0	21	0	633	22	0	655	0	7	691	0	698	1374
Approach %	0.0	42.9	57.1	-	-	0.0	96.6	3.4	-	-	0.0	1.0	99.0	-	-	-
Total %	0.0	0.7	0.9	-	1.5	0.0	46.1	1.6	-	47.7	0.0	0.5	50.3	-	50.8	-
PHF	0.000	0.750	0.500	-	0.656	0.000	0.736	0.367	-	0.712	0.000	0.875	0.881	-	0.881	0.788
Lights	0	9	12	-	21	0	629	22	-	651	0	7	691	-	698	1370
% Lights	-	100.0	100.0	-	100.0	-	99.4	100.0	-	99.4	-	100.0	100.0	-	100.0	99.7
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	0	-	0	0	4	0	-	4	0	0	0	-	0	4
% Single-Unit Trucks	-	0.0	0.0	-	0.0	-	0.6	0.0	-	0.6	-	0.0	0.0	-	0.0	0.3
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Arlington Heights Road with Frederick Street
Site Code:
Start Date: 08/27/2017

Turning Movement Peak Hour Data (7:45 AM)

Start Time	Frederick Street Westbound					Arlington Heights Road Northbound					Arlington Heights Road Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	Int. Total
7:45 AM	0	3	9	0	12	0	171	2	0	173	0	4	288	0	292	477
8:00 AM	0	2	21	1	23	0	150	0	0	150	0	5	253	0	258	431
8:15 AM	0	7	6	0	13	0	212	9	0	221	0	2	326	0	328	562
8:30 AM	0	5	2	0	7	0	211	6	0	217	0	2	236	0	238	462
Total	0	17	38	1	55	0	744	17	0	761	0	13	1103	0	1116	1932
Approach %	0.0	30.9	69.1	-	-	0.0	97.8	2.2	-	-	0.0	1.2	98.8	-	-	-
Total %	0.0	0.9	2.0	-	2.8	0.0	38.5	0.9	-	39.4	0.0	0.7	57.1	-	57.8	-
PHF	0.000	0.607	0.452	-	0.598	0.000	0.877	0.472	-	0.861	0.000	0.650	0.846	-	0.851	0.859
Lights	0	17	37	-	54	0	707	17	-	724	0	13	1057	-	1070	1848
% Lights	-	100.0	97.4	-	98.2	-	95.0	100.0	-	95.1	-	100.0	95.8	-	95.9	95.7
Buses	0	0	0	-	0	0	9	0	-	9	0	0	9	-	9	18
% Buses	-	0.0	0.0	-	0.0	-	1.2	0.0	-	1.2	-	0.0	0.8	-	0.8	0.9
Single-Unit Trucks	0	0	1	-	1	0	26	0	-	26	0	0	29	-	29	56
% Single-Unit Trucks	-	0.0	2.6	-	1.8	-	3.5	0.0	-	3.4	-	0.0	2.6	-	2.6	2.9
Articulated Trucks	0	0	0	-	0	0	2	0	-	2	0	0	8	-	8	10
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.3	0.0	-	0.3	-	0.0	0.7	-	0.7	0.5
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	1	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-

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9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
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Count Name: Arlington Heights Road with Frederick Street
Site Code:
Start Date: 08/27/2017

Turning Movement Peak Hour Data (3:00 PM)

Start Time	Frederick Street Westbound					Arlington Heights Road Northbound					Arlington Heights Road Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	Int. Total
3:00 PM	0	5	3	0	8	0	185	2	0	187	0	5	218	0	223	418
3:15 PM	0	1	1	0	2	0	189	6	0	195	0	8	237	0	245	442
3:30 PM	0	3	6	23	9	0	228	5	0	233	0	5	224	0	229	471
3:45 PM	0	1	8	1	9	0	237	4	0	241	0	6	222	0	228	478
Total	0	10	18	24	28	0	839	17	0	856	0	24	901	0	925	1809
Approach %	0.0	35.7	64.3	-	-	0.0	98.0	2.0	-	-	0.0	2.6	97.4	-	-	-
Total %	0.0	0.6	1.0	-	1.5	0.0	46.4	0.9	-	47.3	0.0	1.3	49.8	-	51.1	-
PHF	0.000	0.500	0.563	-	0.778	0.000	0.885	0.708	-	0.888	0.000	0.750	0.950	-	0.944	0.946
Lights	0	10	18	-	28	0	816	17	-	833	0	22	865	-	887	1748
% Lights	-	100.0	100.0	-	100.0	-	97.3	100.0	-	97.3	-	91.7	96.0	-	95.9	96.6
Buses	0	0	0	-	0	0	10	0	-	10	0	2	9	-	11	21
% Buses	-	0.0	0.0	-	0.0	-	1.2	0.0	-	1.2	-	8.3	1.0	-	1.2	1.2
Single-Unit Trucks	0	0	0	-	0	0	13	0	-	13	0	0	22	-	22	35
% Single-Unit Trucks	-	0.0	0.0	-	0.0	-	1.5	0.0	-	1.5	-	0.0	2.4	-	2.4	1.9
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	5	-	5	5
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.6	-	0.5	0.3
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	24	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Arlington Heights Road with Unsignalized Access
Site Code:
Start Date: 08/27/2017

Turning Movement Data

Start Time	Inbound Access Drive Eastbound					Arlington Heights Road Northbound					Arlington Heights Road Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
9:00 AM	0	0	0	2	0	0	6	77	0	83	0	82	9	0	91	174
9:15 AM	0	0	0	0	0	0	6	95	0	101	0	126	10	0	136	237
9:30 AM	0	0	0	1	0	0	29	82	0	111	0	101	34	0	135	246
9:45 AM	0	0	1	10	1	0	34	95	0	129	0	107	48	4	155	285
Hourly Total	0	0	1	13	1	0	75	349	0	424	0	416	101	4	517	942
10:00 AM	0	0	0	20	0	0	6	106	3	112	0	141	7	0	148	260
10:15 AM	0	0	0	1	0	0	0	111	0	111	0	116	4	0	120	231
10:30 AM	0	0	0	1	0	0	1	142	0	143	0	134	0	0	134	277
10:45 AM	0	0	0	11	0	0	1	140	0	141	0	161	4	4	165	306
Hourly Total	0	0	0	33	0	0	8	499	3	507	0	552	15	4	567	1074
11:00 AM	0	0	0	21	0	0	22	155	0	177	0	262	17	0	279	456
11:15 AM	0	0	0	1	0	0	32	135	0	167	0	151	33	0	184	351
11:30 AM	0	0	0	4	0	0	14	131	0	145	0	142	13	0	155	300
11:45 AM	0	0	0	0	0	0	3	157	0	160	0	174	2	0	176	336
Hourly Total	0	0	0	26	0	0	71	578	0	649	0	729	65	0	794	1443
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7:30 AM	0	0	0	0	0	0	7	170	0	177	0	248	3	0	251	428
7:45 AM	0	0	0	0	0	0	8	158	0	166	0	283	6	0	289	455
Hourly Total	0	0	0	0	0	0	15	328	0	343	0	531	9	0	540	883
8:00 AM	0	0	0	0	0	0	5	146	0	151	0	245	12	0	257	408
8:15 AM	0	0	0	0	0	0	41	180	0	221	0	283	77	0	360	581
8:30 AM	0	0	0	0	0	0	15	181	0	196	0	261	43	0	304	500
8:45 AM	0	0	0	0	0	0	2	162	0	164	0	238	4	0	242	406
Hourly Total	0	0	0	0	0	0	63	669	0	732	0	1027	136	0	1163	1895
9:00 AM	0	0	0	3	0	0	2	151	0	153	0	240	5	0	245	398
9:15 AM	0	0	0	0	0	0	0	156	0	156	0	182	3	0	185	341
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	3	0	0	2	307	0	309	0	422	8	0	430	739
2:30 PM	0	0	0	0	0	0	0	181	0	181	0	185	0	0	185	366
2:45 PM	0	0	0	0	0	0	5	206	0	211	0	204	6	0	210	421
Hourly Total	0	0	0	0	0	0	5	387	0	392	0	389	6	0	395	787
3:00 PM	0	0	0	0	0	0	16	183	0	199	0	214	12	0	226	425
3:15 PM	0	0	0	0	0	0	26	195	0	221	0	220	19	0	239	460
3:30 PM	0	0	0	0	0	0	3	199	0	202	0	245	11	0	256	458
3:45 PM	0	0	1	0	1	0	1	218	0	219	0	242	1	0	243	463
Hourly Total	0	0	1	0	1	0	46	795	0	841	0	921	43	0	964	1806
4:00 PM	0	0	0	0	0	0	0	225	0	225	0	223	0	0	223	448
4:15 PM	0	0	0	0	0	0	0	219	0	219	0	254	1	0	255	474

Grand Total	0	0	2	75	2	0	285	4356	3	4641	0	5464	384	8	5848	10491
Approach %	0.0	0.0	100.0	-	-	0.0	6.1	93.9	-	-	0.0	93.4	6.6	-	-	-
Total %	0.0	0.0	0.0	-	0.0	0.0	2.7	41.5	-	44.2	0.0	52.1	3.7	-	55.7	-
Lights	0	0	2	-	2	0	285	4232	-	4517	0	5301	384	-	5685	10204
% Lights	-	-	100.0	-	100.0	-	100.0	97.2	-	97.3	-	97.0	100.0	-	97.2	97.3
Buses	0	0	0	-	0	0	0	39	-	39	0	38	0	-	38	77
% Buses	-	-	0.0	-	0.0	-	0.0	0.9	-	0.8	-	0.7	0.0	-	0.6	0.7
Single-Unit Trucks	0	0	0	-	0	0	0	78	-	78	0	106	0	-	106	184
% Single-Unit Trucks	-	-	0.0	-	0.0	-	0.0	1.8	-	1.7	-	1.9	0.0	-	1.8	1.8
Articulated Trucks	0	0	0	-	0	0	0	7	-	7	0	19	0	-	19	26
% Articulated Trucks	-	-	0.0	-	0.0	-	0.0	0.2	-	0.2	-	0.3	0.0	-	0.3	0.2
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	75	-	-	-	-	3	-	-	-	-	8	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Arlington Heights Road with Unsignalized Access
Site Code:
Start Date: 08/27/2017

Turning Movement Peak Hour Data (11:00 AM)

Start Time	Inbound Access Drive Eastbound					Arlington Heights Road Northbound					Arlington Heights Road Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
11:00 AM	0	0	0	21	0	0	22	155	0	177	0	262	17	0	279	456
11:15 AM	0	0	0	1	0	0	32	135	0	167	0	151	33	0	184	351
11:30 AM	0	0	0	4	0	0	14	131	0	145	0	142	13	0	155	300
11:45 AM	0	0	0	0	0	0	3	157	0	160	0	174	2	0	176	336
Total	0	0	0	26	0	0	71	578	0	649	0	729	65	0	794	1443
Approach %	NaN	NaN	NaN	-	-	0.0	10.9	89.1	-	-	0.0	91.8	8.2	-	-	-
Total %	0.0	0.0	0.0	-	0.0	0.0	4.9	40.1	-	45.0	0.0	50.5	4.5	-	55.0	-
PHF	0.000	0.000	0.000	-	0.000	0.000	0.555	0.920	-	0.917	0.000	0.696	0.492	-	0.711	0.791
Lights	0	0	0	-	0	0	71	575	-	646	0	729	65	-	794	1440
% Lights	-	-	-	-	-	-	100.0	99.5	-	99.5	-	100.0	100.0	-	100.0	99.8
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	-	-	-	-	-	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	0	-	0	0	0	3	-	3	0	0	0	-	0	3
% Single-Unit Trucks	-	-	-	-	-	-	0.0	0.5	-	0.5	-	0.0	0.0	-	0.0	0.2
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	-	-	-	-	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	-	-	-	-	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	26	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Arlington Heights Road with Unsignalized Access
Site Code:
Start Date: 08/27/2017

Turning Movement Peak Hour Data (7:45 AM)

Start Time	Inbound Access Drive Eastbound					Arlington Heights Road Northbound					Arlington Heights Road Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
7:45 AM	0	0	0	0	0	0	8	158	0	166	0	283	6	0	289	455
8:00 AM	0	0	0	0	0	0	5	146	0	151	0	245	12	0	257	408
8:15 AM	0	0	0	0	0	0	41	180	0	221	0	283	77	0	360	581
8:30 AM	0	0	0	0	0	0	15	181	0	196	0	261	43	0	304	500
Total	0	0	0	0	0	0	69	665	0	734	0	1072	138	0	1210	1944
Approach %	NaN	NaN	NaN	-	-	0.0	9.4	90.6	-	-	0.0	88.6	11.4	-	-	-
Total %	0.0	0.0	0.0	-	0.0	0.0	3.5	34.2	-	37.8	0.0	55.1	7.1	-	62.2	-
PHF	0.000	0.000	0.000	-	0.000	0.000	0.421	0.919	-	0.830	0.000	0.947	0.448	-	0.840	0.836
Lights	0	0	0	-	0	0	69	632	-	701	0	1024	138	-	1162	1863
% Lights	-	-	-	-	-	-	100.0	95.0	-	95.5	-	95.5	100.0	-	96.0	95.8
Buses	0	0	0	-	0	0	0	8	-	8	0	9	0	-	9	17
% Buses	-	-	-	-	-	-	0.0	1.2	-	1.1	-	0.8	0.0	-	0.7	0.9
Single-Unit Trucks	0	0	0	-	0	0	0	23	-	23	0	32	0	-	32	55
% Single-Unit Trucks	-	-	-	-	-	-	0.0	3.5	-	3.1	-	3.0	0.0	-	2.6	2.8
Articulated Trucks	0	0	0	-	0	0	0	2	-	2	0	7	0	-	7	9
% Articulated Trucks	-	-	-	-	-	-	0.0	0.3	-	0.3	-	0.7	0.0	-	0.6	0.5
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	-	-	-	-	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Arlington Heights Road with Unsignalized Access
Site Code:
Start Date: 08/27/2017

Turning Movement Peak Hour Data (3:00 PM)

Start Time	Inbound Access Drive Eastbound					Arlington Heights Road Northbound					Arlington Heights Road Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
3:00 PM	0	0	0	0	0	0	16	183	0	199	0	214	12	0	226	425
3:15 PM	0	0	0	0	0	0	26	195	0	221	0	220	19	0	239	460
3:30 PM	0	0	0	0	0	0	3	199	0	202	0	245	11	0	256	458
3:45 PM	0	0	1	0	1	0	1	218	0	219	0	242	1	0	243	463
Total	0	0	1	0	1	0	46	795	0	841	0	921	43	0	964	1806
Approach %	0.0	0.0	100.0	-	-	0.0	5.5	94.5	-	-	0.0	95.5	4.5	-	-	-
Total %	0.0	0.0	0.1	-	0.1	0.0	2.5	44.0	-	46.6	0.0	51.0	2.4	-	53.4	-
PHF	0.000	0.000	0.250	-	0.250	0.000	0.442	0.912	-	0.951	0.000	0.940	0.566	-	0.941	0.975
Lights	0	0	1	-	1	0	46	775	-	821	0	886	43	-	929	1751
% Lights	-	-	100.0	-	100.0	-	100.0	97.5	-	97.6	-	96.2	100.0	-	96.4	97.0
Buses	0	0	0	-	0	0	0	10	-	10	0	9	0	-	9	19
% Buses	-	-	0.0	-	0.0	-	0.0	1.3	-	1.2	-	1.0	0.0	-	0.9	1.1
Single-Unit Trucks	0	0	0	-	0	0	0	10	-	10	0	21	0	-	21	31
% Single-Unit Trucks	-	-	0.0	-	0.0	-	0.0	1.3	-	1.2	-	2.3	0.0	-	2.2	1.7
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	5	0	-	5	5
% Articulated Trucks	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.5	0.0	-	0.5	0.3
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Study Name Pine Avenue with Frederick Street
Start Date Sunday, August 27, 2017 9:00 AM
End Date Tuesday, August 29, 2017 4:30 PM
Site Code

Report Summary

		Eastbound							Westbound							Northbound							Southbound							Northeastbound								Crosswalk	
Time Period	**Class.**	**U**	**L**	**T**	**R**	**HR**	**I**	**O**	**U**	**L**	**BL**	**T**	**R**	**I**	**O**	**U**	**HL**	**L**	**T**	**R**	**I**	**O**	**U**	**L**	**T**	**BR**	**R**	**I**	**O**	**U**	**HL**	**BL**	**BR**	**HR**	**I**	**O**	**Total**		**Pedestrians**	**Total**
Peak 1	Lights	0	3	16	2	7	28	17	0	2	5	5	0	12	22	0	0	7	18	3	28	7	0	0	3	2	1	6	25	0	4	4	3	0	11	14	85	W	1	1
Specified Period	%	0%	100%	100%	100%	100%	100%	94%	0%	100%	100%	83%	0%	92%	100%	0%	0%	100%	100%	100%	100%	100%	0%	0%	100%	100%	100%	100%	100%	0%	100%	100%	100%	0%	100%	100%	99%		100%	
11:00 AM - 12:00 PM	Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	E	0	0
One Hour Peak	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	
11:00 AM - 12:00 PM	Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	5	5
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		100%	
	Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	N	0	0
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	
	Bicycles on Road	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	SW	2	2
	%	0%	0%	0%	0%	0%	0%	6%	0%	0%	0%	17%	0%	8%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%		100%	
	Total	**0**	**3**	**16**	**2**	**7**	**28**	**18**	**0**	**2**	**5**	**6**	**0**	**13**	**22**	**0**	**0**	**7**	**18**	**3**	**28**	**7**	**0**	**0**	**3**	**2**	**1**	**6**	**25**	**0**	**4**	**4**	**3**	**0**	**11**	**14**	**86**		**8**	**8**
	PHF	0	0.25	0.36	0.25	0.58	0.41	0.56	0	0.5	0.42	0.38	0	0.41	0.32	0	0	0.35	0.25	0.25	0.27	0.88	0	0	0.38	0.5	0.25	0.5	0.27	0	0.33	0.5	0.25	0	0.34	0.5	0.41			
	Approach %						33%	21%						15%	26%						33%	8%						7%	29%						13%	16%				

Time Period	Class.	U	L	T	R	HR	I	O	U	L	BL	T	R	I	O	U	HL	L	T	R	I	O	U	L	T	BR	R	I	O	U	HL	BL	BR	HR	I	O	Total		Pedestrians	Total
Peak 1	Lights	0	3	20	2	6	31	51	0	2	3	16	1	22	29	0	0	7	13	3	23	11	0	0	4	4	8	16	27	0	20	10	6	3	39	13	131	W	1	1
Specified Period	%	0%	100%	100%	100%	100%	100%	100%	0%	67%	100%	100%	50%	92%	100%	0%	0%	100%	100%	100%	100%	85%	0%	0%	80%	100%	100%	94%	96%	0%	100%	100%	100%	100%	100%	100%	98%		100%	
7:45 AM - 8:45 AM	Buses	0	0	0	0	0	0	0	0	1	0	0	1	2	0	0	0	0	0	0	0	2	0	0	1	0	0	1	1	0	0	0	0	0	0	0	3	E	0	0
One Hour Peak	%	0%	0%	0%	0%	0%	0%	0%	0%	33%	0%	0%	50%	8%	0%	0%	0%	0%	0%	0%	0%	15%	0%	0%	20%	0%	0%	6%	4%	0%	0%	0%	0%	0%	0%	0%	2%		0%	
7:45 AM - 8:45 AM	Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	8	8
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		100%	
	Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	N	0	0
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	
	Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SW	1	1
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		100%	
	Total	**0**	**3**	**20**	**2**	**6**	**31**	**51**	**0**	**3**	**3**	**16**	**2**	**24**	**29**	**0**	**0**	**7**	**13**	**3**	**23**	**13**	**0**	**0**	**5**	**4**	**8**	**17**	**28**	**0**	**20**	**10**	**6**	**3**	**39**	**13**	**134**		**10**	**10**
	PHF	0	0.38	0.71	0.5	0.75	0.7	0.64	0	0.38	0.38	0.8	0.5	0.67	0.81	0	0	0.58	0.65	0.38	0.72	0.54	0	0	0.62	0.33	0.5	0.85	0.64	0	0.31	0.5	0.38	0.75	0.39	0.65	0.73			
	Approach %						23%	38%						18%	22%						17%	10%						13%	21%						29%	10%				
Peak 2	Lights	1	4	17	9	7	38	26	0	8	2	15	2	27	19	0	2	4	2	0	8	25	0	2	8	11	5	26	8	0	1	0	0	0	1	22	100	W	8	8
Specified Period	%	100%	100%	100%	90%	88%	95%	100%	0%	100%	100%	100%	100%	100%	100%	0%	100%	100%	100%	0%	100%	96%	0%	100%	100%	100%	100%	100%	100%	0%	100%	0%	0%	0%	100%	96%	98%		100%	
3:00 PM - 4:00 PM	Buses	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	E	0	0
One Hour Peak	%	0%	0%	0%	10%	13%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	4%	2%		0%	
3:00 PM - 4:00 PM	Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	14	14
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		100%	
	Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	N	2	2
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		100%	
	Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SW	0	0
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	
	Total	**1**	**4**	**17**	**10**	**8**	**40**	**26**	**0**	**8**	**2**	**15**	**2**	**27**	**19**	**0**	**2**	**4**	**2**	**0**	**8**	**26**	**0**	**2**	**8**	**11**	**5**	**26**	**8**	**0**	**1**	**0**	**0**	**0**	**1**	**23**	**102**		**24**	**24**
	PHF	0.25	0.5	0.53	0.5	0.67	0.83	0.72	0	0.33	0.25	0.62	0.5	0.75	0.59	0	0.5	0.25	0.5	0	0.4	0.46	0	0.5	0.67	0.39	0.42	0.59	0.5	0	0.25	0	0	0	0.25	0.44	0.88			
	Approach %						39%	25%						26%	19%						8%	25%						25%	8%						1%	23%				

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Pine Avenue with Marshall Street
Site Code:
Start Date: 08/27/2017

Turning Movement Data

Start Time	Marshall Street Westbound					Pine Avenue Northbound					Pine Avenue Southbound					Int. Total
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	
9:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	3	0	3	4
9:15 AM	0	0	1	0	1	0	4	0	0	4	0	18	61	0	79	84
9:30 AM	0	0	0	0	0	0	1	1	0	2	0	1	6	0	7	9
9:45 AM	0	0	8	0	8	0	20	0	0	20	0	0	4	2	4	32
Hourly Total	0	0	9	0	9	0	26	1	0	27	0	19	74	2	93	129
10:00 AM	0	0	1	0	1	0	7	0	0	7	0	0	3	0	3	11
10:15 AM	0	0	0	0	0	0	3	0	0	3	0	0	2	0	2	5
10:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	2	1	2	3
10:45 AM	0	0	0	0	0	0	5	1	0	6	0	2	5	5	7	13
Hourly Total	0	0	1	0	1	0	16	1	0	17	0	2	12	6	14	32
11:00 AM	0	0	0	0	0	0	4	0	0	4	0	9	31	5	40	44
11:15 AM	0	0	1	2	1	0	3	0	0	3	0	1	5	0	6	10
11:30 AM	0	1	1	2	2	0	0	2	0	2	0	0	2	0	2	6
11:45 AM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	2
Hourly Total	0	1	3	4	4	0	7	3	0	10	0	10	38	5	48	62
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7:30 AM	0	0	2	0	2	0	6	0	0	6	0	1	7	0	8	16
7:45 AM	0	0	0	0	0	0	3	0	0	3	0	3	11	0	14	17
Hourly Total	0	0	2	0	2	0	9	0	0	9	0	4	18	0	22	33
8:00 AM	0	0	1	1	1	0	0	0	0	0	0	6	10	0	16	17
8:15 AM	0	0	0	0	0	0	5	0	0	5	0	1	5	0	6	11
8:30 AM	0	0	1	1	1	0	0	0	0	0	0	0	6	1	6	7
8:45 AM	0	0	1	0	1	0	1	0	0	1	0	1	1	1	2	4
Hourly Total	0	0	3	2	3	0	6	0	0	6	0	8	22	2	30	39
9:00 AM	0	0	0	1	0	0	1	0	0	1	0	1	1	0	2	3
9:15 AM	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	1
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	2	0	0	1	0	0	1	0	1	2	0	3	4
2:30 PM	0	1	1	0	2	0	3	0	0	3	0	0	0	0	0	5
2:45 PM	0	1	0	0	1	0	2	0	0	2	0	1	1	0	2	5
Hourly Total	0	2	1	0	3	0	5	0	0	5	0	1	1	0	2	10
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
3:15 PM	0	1	0	0	1	0	2	3	0	5	0	1	3	1	4	10
3:30 PM	0	0	0	0	0	0	5	1	0	6	0	26	16	5	42	48
3:45 PM	0	1	1	1	2	0	4	0	0	4	0	2	4	0	6	12
Hourly Total	0	2	1	1	3	0	11	4	0	15	0	29	25	6	54	72
4:00 PM	0	0	1	0	1	0	1	0	0	1	0	0	5	0	5	7
4:15 PM	0	0	0	0	0	0	4	0	0	4	0	1	3	0	4	8

Grand Total	0	5	21	9	26	0	86	9	0	95	0	75	200	21	275	396
Approach %	0.0	19.2	80.8	-	-	0.0	90.5	9.5	-	-	0.0	27.3	72.7	-	-	-
Total %	0.0	1.3	5.3	-	6.6	0.0	21.7	2.3	-	24.0	0.0	18.9	50.5	-	69.4	-
Lights	0	5	20	-	25	0	86	9	-	95	0	75	195	-	270	390
% Lights	-	100.0	95.2	-	96.2	-	100.0	100.0	-	100.0	-	100.0	97.5	-	98.2	98.5
Buses	0	0	0	-	0	0	0	0	-	0	0	0	4	-	4	4
% Buses	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	2.0	-	1.5	1.0
Single-Unit Trucks	0	0	1	-	1	0	0	0	-	0	0	0	0	-	0	1
% Single-Unit Trucks	-	0.0	4.8	-	3.8	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.3
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	1	-	1	1
% Bicycles on Road	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.5	-	0.4	0.3
Pedestrians	-	-	-	9	-	-	-	-	0	-	-	-	-	21	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	100.0	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Pine Avenue with Marshall Street
Site Code:
Start Date: 08/27/2017

Turning Movement Peak Hour Data (11:00 AM)

Start Time	Marshall Street Westbound					Pine Avenue Northbound					Pine Avenue Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	Int. Total
11:00 AM	0	0	0	0	0	0	4	0	0	4	0	9	31	5	40	44
11:15 AM	0	0	1	2	1	0	3	0	0	3	0	1	5	0	6	10
11:30 AM	0	1	1	2	2	0	0	2	0	2	0	0	2	0	2	6
11:45 AM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	2
Total	0	1	3	4	4	0	7	3	0	10	0	10	38	5	48	62
Approach %	0.0	25.0	75.0	-	-	0.0	70.0	30.0	-	-	0.0	20.8	79.2	-	-	-
Total %	0.0	1.6	4.8	-	6.5	0.0	11.3	4.8	-	16.1	0.0	16.1	61.3	-	77.4	-
PHF	0.000	0.250	0.750	-	0.500	0.000	0.438	0.375	-	0.625	0.000	0.278	0.306	-	0.300	0.352
Lights	0	1	3	-	4	0	7	3	-	10	0	10	38	-	48	62
% Lights	-	100.0	100.0	-	100.0	-	100.0	100.0	-	100.0	-	100.0	100.0	-	100.0	100.0
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Single-Unit Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	4	-	-	-	-	0	-	-	-	-	5	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	100.0	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Pine Avenue with Marshall Street
Site Code:
Start Date: 08/27/2017

Turning Movement Peak Hour Data (7:45 AM)

Start Time	Marshall Street Westbound					Pine Avenue Northbound					Pine Avenue Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	Int. Total
7:45 AM	0	0	0	0	0	0	3	0	0	3	0	3	11	0	14	17
8:00 AM	0	0	1	1	1	0	0	0	0	0	0	6	10	0	16	17
8:15 AM	0	0	0	0	0	0	5	0	0	5	0	1	5	0	6	11
8:30 AM	0	0	1	1	1	0	0	0	0	0	0	0	6	1	6	7
Total	0	0	2	2	2	0	8	0	0	8	0	10	32	1	42	52
Approach %	0.0	0.0	100.0	-	-	0.0	100.0	0.0	-	-	0.0	23.8	76.2	-	-	-
Total %	0.0	0.0	3.8	-	3.8	0.0	15.4	0.0	-	15.4	0.0	19.2	61.5	-	80.8	-
PHF	0.000	0.000	0.500	-	0.500	0.000	0.400	0.000	-	0.400	0.000	0.417	0.727	-	0.656	0.765
Lights	0	0	1	-	1	0	8	0	-	8	0	10	30	-	40	49
% Lights	-	-	50.0	-	50.0	-	100.0	-	-	100.0	-	100.0	93.8	-	95.2	94.2
Buses	0	0	0	-	0	0	0	0	-	0	0	0	2	-	2	2
% Buses	-	-	0.0	-	0.0	-	0.0	-	-	0.0	-	0.0	6.3	-	4.8	3.8
Single-Unit Trucks	0	0	1	-	1	0	0	0	-	0	0	0	0	-	0	1
% Single-Unit Trucks	-	-	50.0	-	50.0	-	0.0	-	-	0.0	-	0.0	0.0	-	0.0	1.9
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	-	0.0	-	0.0	-	0.0	-	-	0.0	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	-	0.0	-	0.0	-	0.0	-	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	2	-	-	-	-	0	-	-	-	-	1	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	100.0	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Pine Avenue with Marshall Street
Site Code:
Start Date: 08/27/2017

Turning Movement Peak Hour Data (3:00 PM)

Start Time	Marshall Street Westbound					Pine Avenue Northbound					Pine Avenue Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	Int. Total
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
3:15 PM	0	1	0	0	1	0	2	3	0	5	0	1	3	1	4	10
3:30 PM	0	0	0	0	0	0	5	1	0	6	0	26	16	5	42	48
3:45 PM	0	1	1	1	2	0	4	0	0	4	0	2	4	0	6	12
Total	0	2	1	1	3	0	11	4	0	15	0	29	25	6	54	72
Approach %	0.0	66.7	33.3	-	-	0.0	73.3	26.7	-	-	0.0	53.7	46.3	-	-	-
Total %	0.0	2.8	1.4	-	4.2	0.0	15.3	5.6	-	20.8	0.0	40.3	34.7	-	75.0	-
PHF	0.000	0.500	0.250	-	0.375	0.000	0.550	0.333	-	0.625	0.000	0.279	0.391	-	0.321	0.375
Lights	0	2	1	-	3	0	11	4	-	15	0	29	23	-	52	70
% Lights	-	100.0	100.0	-	100.0	-	100.0	100.0	-	100.0	-	100.0	92.0	-	96.3	97.2
Buses	0	0	0	-	0	0	0	0	-	0	0	0	2	-	2	2
% Buses	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	8.0	-	3.7	2.8
Single-Unit Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Single-Unit Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	1	-	-	-	-	0	-	-	-	-	6	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	100.0	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Pine Avenue with Hawthorne Stret
Site Code:
Start Date: 08/27/2017

Turning Movement Data

Start Time	Hawthorne Street Eastbound					Hawthorne Street Westbound					Pine Avenue Southbound					Int. Total
	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total	
9:00 AM	0	0	1	0	1	0	3	2	0	5	0	1	2	1	3	9
9:15 AM	0	1	2	0	3	0	1	3	0	4	0	29	32	4	61	68
9:30 AM	0	2	1	0	3	0	2	1	0	3	0	4	3	0	7	13
9:45 AM	0	6	2	0	8	0	4	15	0	19	0	2	2	3	4	31
Hourly Total	0	9	6	0	15	0	10	21	0	31	0	36	39	8	75	121
10:00 AM	0	6	3	0	9	0	3	1	0	4	0	2	3	1	5	18
10:15 AM	0	0	1	0	1	0	3	3	0	6	0	0	2	0	2	9
10:30 AM	0	1	3	0	4	0	2	1	0	3	0	3	0	4	3	10
10:45 AM	0	5	6	0	11	0	4	0	0	4	0	3	3	2	6	21
Hourly Total	0	12	13	0	25	0	12	5	0	17	0	8	8	7	16	58
11:00 AM	0	3	11	0	14	0	2	2	0	4	0	22	9	3	31	49
11:15 AM	0	1	8	0	9	0	5	2	0	7	0	2	2	1	4	20
11:30 AM	0	0	0	0	0	0	3	1	0	4	0	0	3	0	3	7
11:45 AM	0	3	2	0	5	0	2	1	0	3	0	1	1	1	2	10
Hourly Total	0	7	21	0	28	0	12	6	0	18	0	25	15	5	40	86
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7:30 AM	0	2	30	0	32	0	10	3	0	13	0	3	4	1	7	52
7:45 AM	0	0	15	0	15	0	8	3	0	11	0	4	7	2	11	37
Hourly Total	0	2	45	0	47	0	18	6	0	24	0	7	11	3	18	89
8:00 AM	0	0	4	0	4	0	5	0	0	5	0	5	7	2	12	21
8:15 AM	0	0	11	0	11	0	10	3	0	13	0	3	4	2	7	31
8:30 AM	0	0	7	0	7	0	5	0	0	5	0	5	1	1	6	18
8:45 AM	0	1	1	0	2	0	0	0	0	0	0	0	1	0	1	3
Hourly Total	0	1	23	0	24	0	20	3	0	23	0	13	13	5	26	73
9:00 AM	0	0	6	0	6	0	5	1	0	6	0	1	0	1	1	13
9:15 AM	0	0	5	0	5	0	2	0	0	2	0	0	1	2	1	8
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	11	0	11	0	7	1	0	8	0	1	1	3	2	21
2:30 PM	0	2	6	0	8	0	2	1	0	3	0	1	0	0	1	12
2:45 PM	0	2	6	0	8	0	2	0	0	2	0	2	1	0	3	13
Hourly Total	0	4	12	0	16	0	4	1	0	5	0	3	1	0	4	25
3:00 PM	0	0	4	0	4	0	5	1	0	6	0	1	0	1	1	11
3:15 PM	0	4	6	0	10	0	12	0	0	12	0	1	2	0	3	25
3:30 PM	0	2	9	0	11	0	1	1	0	2	0	5	8	0	13	26
3:45 PM	0	2	8	0	10	0	5	1	0	6	0	3	3	4	6	22
Hourly Total	0	8	27	0	35	0	23	3	0	26	0	10	13	5	23	84
4:00 PM	0	0	5	0	5	0	4	1	0	5	0	1	1	2	2	12
4:15 PM	0	3	2	0	5	0	0	0	0	0	0	2	2	1	4	9

Grand Total	0	46	165	0	211	0	110	47	0	157	0	106	104	39	210	578
Approach %	0.0	21.8	78.2	-	-	0.0	70.1	29.9	-	-	0.0	50.5	49.5	-	-	-
Total %	0.0	8.0	28.5	-	36.5	0.0	19.0	8.1	-	27.2	0.0	18.3	18.0	-	36.3	-
Lights	0	46	159	-	205	0	106	47	-	153	0	102	102	-	204	562
% Lights	-	100.0	96.4	-	97.2	-	96.4	100.0	-	97.5	-	96.2	98.1	-	97.1	97.2
Buses	0	0	2	-	2	0	0	0	-	0	0	2	2	-	4	6
% Buses	-	0.0	1.2	-	0.9	-	0.0	0.0	-	0.0	-	1.9	1.9	-	1.9	1.0
Single-Unit Trucks	0	0	1	-	1	0	1	0	-	1	0	0	0	-	0	2
% Single-Unit Trucks	-	0.0	0.6	-	0.5	-	0.9	0.0	-	0.6	-	0.0	0.0	-	0.0	0.3
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	3	-	3	0	3	0	-	3	0	2	0	-	2	8
% Bicycles on Road	-	0.0	1.8	-	1.4	-	2.7	0.0	-	1.9	-	1.9	0.0	-	1.0	1.4
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	39	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Pine Avenue with Hawthorne Stret
Site Code:
Start Date: 08/27/2017

Turning Movement Peak Hour Data (11:00 AM)

Start Time	Hawthorne Street Eastbound					Hawthorne Street Westbound					Pine Avenue Southbound					
	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total	Int. Total
11:00 AM	0	3	11	0	14	0	2	2	0	4	0	22	9	3	31	49
11:15 AM	0	1	8	0	9	0	5	2	0	7	0	2	2	1	4	20
11:30 AM	0	0	0	0	0	0	3	1	0	4	0	0	3	0	3	7
11:45 AM	0	3	2	0	5	0	2	1	0	3	0	1	1	1	2	10
Total	0	7	21	0	28	0	12	6	0	18	0	25	15	5	40	86
Approach %	0.0	25.0	75.0	-	-	0.0	66.7	33.3	-	-	0.0	62.5	37.5	-	-	-
Total %	0.0	8.1	24.4	-	32.6	0.0	14.0	7.0	-	20.9	0.0	29.1	17.4	-	46.5	-
PHF	0.000	0.583	0.477	-	0.500	0.000	0.600	0.750	-	0.643	0.000	0.284	0.417	-	0.323	0.439
Lights	0	7	21	-	28	0	12	6	-	18	0	25	15	-	40	86
% Lights	-	100.0	100.0	-	100.0	-	100.0	100.0	-	100.0	-	100.0	100.0	-	100.0	100.0
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Single-Unit Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	5	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Pine Avenue with Hawthorne Stret
Site Code:
Start Date: 08/27/2017

Turning Movement Peak Hour Data (7:45 AM)

Start Time	Hawthorne Street Eastbound					Hawthorne Street Westbound					Pine Avenue Southbound					
	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total	Int. Total
7:45 AM	0	0	15	0	15	0	8	3	0	11	0	4	7	2	11	37
8:00 AM	0	0	4	0	4	0	5	0	0	5	0	5	7	2	12	21
8:15 AM	0	0	11	0	11	0	10	3	0	13	0	3	4	2	7	31
8:30 AM	0	0	7	0	7	0	5	0	0	5	0	5	1	1	6	18
Total	0	0	37	0	37	0	28	6	0	34	0	17	19	7	36	107
Approach %	0.0	0.0	100.0	-	-	0.0	82.4	17.6	-	-	0.0	47.2	52.8	-	-	-
Total %	0.0	0.0	34.6	-	34.6	0.0	26.2	5.6	-	31.8	0.0	15.9	17.8	-	33.6	-
PHF	0.000	0.000	0.617	-	0.617	0.000	0.700	0.500	-	0.654	0.000	0.850	0.679	-	0.750	0.723
Lights	0	0	36	-	36	0	28	6	-	34	0	15	19	-	34	104
% Lights	-	-	97.3	-	97.3	-	100.0	100.0	-	100.0	-	88.2	100.0	-	94.4	97.2
Buses	0	0	1	-	1	0	0	0	-	0	0	2	0	-	2	3
% Buses	-	-	2.7	-	2.7	-	0.0	0.0	-	0.0	-	11.8	0.0	-	5.6	2.8
Single-Unit Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Single-Unit Trucks	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	7	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Pine Avenue with Hawthorne Stret
Site Code:
Start Date: 08/27/2017

Turning Movement Peak Hour Data (3:00 PM)

Start Time	Hawthorne Street Eastbound					Hawthorne Street Westbound					Pine Avenue Southbound					
	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total	Int. Total
3:00 PM	0	0	4	0	4	0	5	1	0	6	0	1	0	1	1	11
3:15 PM	0	4	6	0	10	0	12	0	0	12	0	1	2	0	3	25
3:30 PM	0	2	9	0	11	0	1	1	0	2	0	5	8	0	13	26
3:45 PM	0	2	8	0	10	0	5	1	0	6	0	3	3	4	6	22
Total	0	8	27	0	35	0	23	3	0	26	0	10	13	5	23	84
Approach %	0.0	22.9	77.1	-	-	0.0	88.5	11.5	-	-	0.0	43.5	56.5	-	-	-
Total %	0.0	9.5	32.1	-	41.7	0.0	27.4	3.6	-	31.0	0.0	11.9	15.5	-	27.4	-
PHF	0.000	0.500	0.750	-	0.795	0.000	0.479	0.750	-	0.542	0.000	0.500	0.406	-	0.442	0.808
Lights	0	8	27	-	35	0	23	3	-	26	0	10	11	-	21	82
% Lights	-	100.0	100.0	-	100.0	-	100.0	100.0	-	100.0	-	100.0	84.6	-	91.3	97.6
Buses	0	0	0	-	0	0	0	0	-	0	0	0	2	-	2	2
% Buses	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	15.4	-	8.7	2.4
Single-Unit Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Single-Unit Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	5	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Pine Avenue with Northerly Access Drive
Site Code:
Start Date: 08/27/2017

Turning Movement Data

Start Time	Northerly Access Drive Eastbound					Pine Avenue Northbound					Pine Avenue Southbound					Int. Total
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	
9:00 AM	0	0	0	2	0	0	0	0	0	0	0	2	0	0	2	2
9:15 AM	0	12	21	3	33	0	0	10	3	10	0	13	0	0	13	56
9:30 AM	0	1	3	0	4	0	1	0	0	1	0	1	1	0	2	7
9:45 AM	0	0	0	0	0	0	3	2	0	5	0	4	4	0	8	13
Hourly Total	0	13	24	5	37	0	4	12	3	16	0	20	5	0	25	78
10:00 AM	0	0	0	0	0	0	1	1	0	2	0	2	1	0	3	5
10:15 AM	0	0	0	1	0	0	1	1	0	2	0	2	0	0	2	4
10:30 AM	0	1	0	1	1	0	0	1	0	1	0	1	0	0	1	3
10:45 AM	0	0	1	1	1	0	1	2	0	3	0	2	0	0	2	6
Hourly Total	0	1	1	3	2	0	3	5	0	8	0	7	1	0	8	18
11:00 AM	0	9	6	0	15	0	0	18	0	18	0	2	0	0	2	35
11:15 AM	0	0	1	0	1	0	0	1	0	1	0	1	2	0	3	5
11:30 AM	0	0	1	0	1	0	0	1	0	1	0	1	0	0	1	3
11:45 AM	0	0	0	1	0	0	0	1	0	1	0	0	1	0	1	2
Hourly Total	0	9	8	1	17	0	0	21	0	21	0	4	3	0	7	45
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7:30 AM	0	1	0	0	1	0	1	4	0	5	0	8	0	0	8	14
7:45 AM	0	4	6	1	10	0	0	5	0	5	0	4	0	0	4	19
Hourly Total	0	5	6	1	11	0	1	9	0	10	0	12	0	0	12	33
8:00 AM	0	2	4	1	6	0	0	3	0	3	0	2	0	1	2	11
8:15 AM	0	2	1	3	3	0	3	4	0	7	0	4	0	0	4	14
8:30 AM	0	0	0	1	0	0	0	2	0	2	0	2	0	1	2	4
8:45 AM	0	0	0	1	0	0	0	3	0	3	0	2	0	0	2	5
Hourly Total	0	4	5	6	9	0	3	12	0	15	0	10	0	2	10	34
9:00 AM	0	1	1	1	2	0	0	1	0	1	0	1	0	0	1	4
9:15 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	1	1	3	2	0	0	1	0	1	0	1	0	0	1	4
2:30 PM	0	0	0	0	0	0	0	5	0	5	0	0	0	0	0	5
2:45 PM	0	0	0	0	0	0	0	1	0	1	0	2	0	0	2	3
Hourly Total	0	0	0	0	0	0	0	6	0	6	0	2	0	0	2	8
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	3
3:15 PM	0	0	1	0	1	0	0	1	1	1	0	8	1	2	9	11
3:30 PM	0	0	0	3	0	0	1	2	0	3	0	9	1	1	10	13
3:45 PM	0	2	0	0	2	0	0	4	0	4	0	2	0	0	2	8
Hourly Total	0	2	1	3	3	0	1	7	1	8	0	21	3	3	24	35
4:00 PM	0	0	0	0	0	0	0	2	0	2	0	6	0	0	6	8
4:15 PM	0	0	0	2	0	0	0	3	0	3	0	0	2	0	2	5

Grand Total	0	35	46	24	81	0	12	78	4	90	0	83	14	5	97	268
Approach %	0.0	43.2	56.8	-	-	0.0	13.3	86.7	-	-	0.0	85.6	14.4	-	-	-
Total %	0.0	13.1	17.2	-	30.2	0.0	4.5	29.1	-	33.6	0.0	31.0	5.2	-	36.2	-
Lights	0	35	46	-	81	0	12	77	-	89	0	80	13	-	93	263
% Lights	-	100.0	100.0	-	100.0	-	100.0	98.7	-	98.9	-	96.4	92.9	-	95.9	98.1
Buses	0	0	0	-	0	0	0	0	-	0	0	2	1	-	3	3
% Buses	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	2.4	7.1	-	3.1	1.1
Single-Unit Trucks	0	0	0	-	0	0	0	1	-	1	0	0	0	-	0	1
% Single-Unit Trucks	-	0.0	0.0	-	0.0	-	0.0	1.3	-	1.1	-	0.0	0.0	-	0.0	0.4
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	1	0	-	1	1
% Bicycles on Road	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	1.2	0.0	-	1.0	0.4
Pedestrians	-	-	-	24	-	-	-	-	4	-	-	-	-	5	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

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(847)518-9990

Count Name: Pine Avenue with Northerly Access Drive
Site Code:
Start Date: 08/27/2017

Turning Movement Peak Hour Data (11:00 AM)

Start Time	Northerly Access Drive Eastbound					Pine Avenue Northbound					Pine Avenue Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
11:00 AM	0	9	6	0	15	0	0	18	0	18	0	2	0	0	2	35
11:15 AM	0	0	1	0	1	0	0	1	0	1	0	1	2	0	3	5
11:30 AM	0	0	1	0	1	0	0	1	0	1	0	1	0	0	1	3
11:45 AM	0	0	0	1	0	0	0	1	0	1	0	0	1	0	1	2
Total	0	9	8	1	17	0	0	21	0	21	0	4	3	0	7	45
Approach %	0.0	52.9	47.1	-	-	0.0	0.0	100.0	-	-	0.0	57.1	42.9	-	-	-
Total %	0.0	20.0	17.8	-	37.8	0.0	0.0	46.7	-	46.7	0.0	8.9	6.7	-	15.6	-
PHF	0.000	0.250	0.333	-	0.283	0.000	0.000	0.292	-	0.292	0.000	0.500	0.375	-	0.583	0.321
Lights	0	9	8	-	17	0	0	21	-	21	0	4	3	-	7	45
% Lights	-	100.0	100.0	-	100.0	-	-	100.0	-	100.0	-	100.0	100.0	-	100.0	100.0
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Single-Unit Trucks	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	1	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

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(847)518-9990

Count Name: Pine Avenue with Northerly Access Drive
Site Code:
Start Date: 08/27/2017

Turning Movement Peak Hour Data (7:45 AM)

Start Time	Northerly Access Drive Eastbound					Pine Avenue Northbound					Pine Avenue Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
7:45 AM	0	4	6	1	10	0	0	5	0	5	0	4	0	0	4	19
8:00 AM	0	2	4	1	6	0	0	3	0	3	0	2	0	1	2	11
8:15 AM	0	2	1	3	3	0	3	4	0	7	0	4	0	0	4	14
8:30 AM	0	0	0	1	0	0	0	2	0	2	0	2	0	1	2	4
Total	0	8	11	6	19	0	3	14	0	17	0	12	0	2	12	48
Approach %	0.0	42.1	57.9	-	-	0.0	17.6	82.4	-	-	0.0	100.0	0.0	-	-	-
Total %	0.0	16.7	22.9	-	39.6	0.0	6.3	29.2	-	35.4	0.0	25.0	0.0	-	25.0	-
PHF	0.000	0.500	0.458	-	0.475	0.000	0.250	0.700	-	0.607	0.000	0.750	0.000	-	0.750	0.632
Lights	0	8	11	-	19	0	3	13	-	16	0	10	0	-	10	45
% Lights	-	100.0	100.0	-	100.0	-	100.0	92.9	-	94.1	-	83.3	-	-	83.3	93.8
Buses	0	0	0	-	0	0	0	0	-	0	0	2	0	-	2	2
% Buses	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	16.7	-	-	16.7	4.2
Single-Unit Trucks	0	0	0	-	0	0	0	1	-	1	0	0	0	-	0	1
% Single-Unit Trucks	-	0.0	0.0	-	0.0	-	0.0	7.1	-	5.9	-	0.0	-	-	0.0	2.1
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	-	-	0.0	0.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	-	-	0.0	0.0
Pedestrians	-	-	-	6	-	-	-	-	0	-	-	-	-	2	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	100.0	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Pine Avenue with Northerly Access Drive
Site Code:
Start Date: 08/27/2017

Turning Movement Peak Hour Data (3:00 PM)

Start Time	Northerly Access Drive Eastbound					Pine Avenue Northbound					Pine Avenue Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	3
3:15 PM	0	0	1	0	1	0	0	1	1	1	0	8	1	2	9	11
3:30 PM	0	0	0	3	0	0	1	2	0	3	0	9	1	1	10	13
3:45 PM	0	2	0	0	2	0	0	4	0	4	0	2	0	0	2	8
Total	0	2	1	3	3	0	1	7	1	8	0	21	3	3	24	35
Approach %	0.0	66.7	33.3	-	-	0.0	12.5	87.5	-	-	0.0	87.5	12.5	-	-	-
Total %	0.0	5.7	2.9	-	8.6	0.0	2.9	20.0	-	22.9	0.0	60.0	8.6	-	68.6	-
PHF	0.000	0.250	0.250	-	0.375	0.000	0.250	0.438	-	0.500	0.000	0.583	0.750	-	0.600	0.673
Lights	0	2	1	-	3	0	1	7	-	8	0	21	2	-	23	34
% Lights	-	100.0	100.0	-	100.0	-	100.0	100.0	-	100.0	-	100.0	66.7	-	95.8	97.1
Buses	0	0	0	-	0	0	0	0	-	0	0	0	1	-	1	1
% Buses	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	33.3	-	4.2	2.9
Single-Unit Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Single-Unit Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	3	-	-	-	-	1	-	-	-	-	3	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

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Count Name: Pine Avenue with Southerly Access Drive
Site Code:
Start Date: 08/27/2017

Turning Movement Data

Start Time	Southerly Access Drive Eastbound					Pine Avenue Northbound					Pine Avenue Southbound					Int. Total
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	
9:00 AM	0	0	2	2	2	0	1	0	0	1	0	2	0	0	2	5
9:15 AM	0	6	33	10	39	0	1	4	0	5	0	38	0	0	38	82
9:30 AM	0	0	4	1	4	0	0	1	0	1	0	4	0	0	4	9
9:45 AM	0	0	2	1	2	0	23	5	0	28	0	1	2	0	3	33
Hourly Total	0	6	41	14	47	0	25	10	0	35	0	45	2	0	47	129
10:00 AM	0	0	0	0	0	0	5	3	0	8	0	3	0	0	3	11
10:15 AM	0	0	0	1	0	0	1	2	3	3	0	1	0	0	1	4
10:30 AM	0	0	0	1	0	0	0	1	0	1	0	2	0	0	2	3
10:45 AM	0	0	4	6	4	0	2	3	0	5	0	2	0	0	2	11
Hourly Total	0	0	4	8	4	0	8	9	3	17	0	8	0	0	8	29
11:00 AM	0	17	38	2	55	0	3	1	0	4	0	9	0	0	9	68
11:15 AM	0	0	3	1	3	0	3	1	0	4	0	3	0	0	3	10
11:30 AM	0	0	0	0	0	0	0	1	0	1	0	2	0	0	2	3
11:45 AM	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	1
Hourly Total	0	17	41	4	58	0	6	4	0	10	0	14	0	0	14	82
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7:30 AM	0	1	1	0	2	1	5	4	0	10	0	5	2	0	7	19
7:45 AM	0	4	11	2	15	0	3	1	0	4	0	7	2	0	9	28
Hourly Total	0	5	12	2	17	1	8	5	0	14	0	12	4	0	16	47
8:00 AM	0	2	4	3	6	0	0	1	0	1	0	7	1	0	8	15
8:15 AM	0	1	3	4	4	0	0	6	0	6	0	5	0	0	5	15
8:30 AM	0	1	2	1	3	0	0	1	0	1	0	2	0	0	2	6
8:45 AM	0	1	0	2	1	0	0	2	0	2	0	2	0	0	2	5
Hourly Total	0	5	9	10	14	0	0	10	0	10	0	16	1	0	17	41
9:00 AM	0	0	1	0	1	0	0	1	0	1	0	2	0	0	2	4
9:15 AM	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1	1
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	1	1	1	0	0	1	0	1	0	3	0	0	3	5
2:30 PM	0	0	0	0	0	0	0	5	0	5	0	0	0	0	0	5
2:45 PM	0	0	0	0	0	0	0	1	0	1	0	2	0	0	2	3
Hourly Total	0	0	0	0	0	0	0	6	0	6	0	2	0	0	2	8
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
3:15 PM	0	0	1	0	1	0	1	1	0	2	0	5	2	0	7	10
3:30 PM	0	0	29	14	29	0	0	3	0	3	0	13	0	0	13	45
3:45 PM	0	0	0	0	0	0	0	4	0	4	0	3	0	0	3	7
Hourly Total	0	0	30	14	30	0	1	8	0	9	0	22	2	0	24	63
4:00 PM	0	0	1	0	1	0	0	1	0	1	0	5	1	0	6	8
4:15 PM	0	2	4	0	6	0	3	1	3	4	0	0	0	0	0	10

Grand Total	0	35	143	53	178	1	51	55	6	107	0	127	10	0	137	422
Approach %	0.0	19.7	80.3	-	-	0.9	47.7	51.4	-	-	0.0	92.7	7.3	-	-	-
Total %	0.0	8.3	33.9	-	42.2	0.2	12.1	13.0	-	25.4	0.0	30.1	2.4	-	32.5	-
Lights	0	35	140	-	175	1	51	54	-	106	0	124	10	-	134	415
% Lights	-	100.0	97.9	-	98.3	100.0	100.0	98.2	-	99.1	-	97.6	100.0	-	97.8	98.3
Buses	0	0	2	-	2	0	0	0	-	0	0	2	0	-	2	4
% Buses	-	0.0	1.4	-	1.1	0.0	0.0	0.0	-	0.0	-	1.6	0.0	-	1.5	0.9
Single-Unit Trucks	0	0	0	-	0	0	0	1	-	1	0	0	0	-	0	1
% Single-Unit Trucks	-	0.0	0.0	-	0.0	0.0	0.0	1.8	-	0.9	-	0.0	0.0	-	0.0	0.2
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	1	-	1	0	0	0	-	0	0	1	0	-	1	2
% Bicycles on Road	-	0.0	0.7	-	0.6	0.0	0.0	0.0	-	0.0	-	0.8	0.0	-	0.7	0.5
Pedestrians	-	-	-	53	-	-	-	-	6	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	-	-

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(847)518-9990

Count Name: Pine Avenue with Southerly Access Drive
Site Code:
Start Date: 08/27/2017

Turning Movement Peak Hour Data (11:00 AM)

Start Time	Southerly Access Drive Eastbound					Pine Avenue Northbound					Pine Avenue Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
11:00 AM	0	17	38	2	55	0	3	1	0	4	0	9	0	0	9	68
11:15 AM	0	0	3	1	3	0	3	1	0	4	0	3	0	0	3	10
11:30 AM	0	0	0	0	0	0	0	1	0	1	0	2	0	0	2	3
11:45 AM	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	1
Total	0	17	41	4	58	0	6	4	0	10	0	14	0	0	14	82
Approach %	0.0	29.3	70.7	-	-	0.0	60.0	40.0	-	-	0.0	100.0	0.0	-	-	-
Total %	0.0	20.7	50.0	-	70.7	0.0	7.3	4.9	-	12.2	0.0	17.1	0.0	-	17.1	-
PHF	0.000	0.250	0.270	-	0.264	0.000	0.500	1.000	-	0.625	0.000	0.389	0.000	-	0.389	0.301
Lights	0	17	41	-	58	0	6	4	-	10	0	14	0	-	14	82
% Lights	-	100.0	100.0	-	100.0	-	100.0	100.0	-	100.0	-	100.0	-	-	100.0	100.0
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	-	-	0.0	0.0
Single-Unit Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Single-Unit Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	-	-	0.0	0.0
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	-	-	0.0	0.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	-	-	0.0	0.0
Pedestrians	-	-	-	4	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-

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Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Pine Avenue with Southerly Access Drive
Site Code:
Start Date: 08/27/2017

Turning Movement Peak Hour Data (7:45 AM)

Start Time	Southerly Access Drive Eastbound					Pine Avenue Northbound					Pine Avenue Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
7:45 AM	0	4	11	2	15	0	3	1	0	4	0	7	2	0	9	28
8:00 AM	0	2	4	3	6	0	0	1	0	1	0	7	1	0	8	15
8:15 AM	0	1	3	4	4	0	0	6	0	6	0	5	0	0	5	15
8:30 AM	0	1	2	1	3	0	0	1	0	1	0	2	0	0	2	6
Total	0	8	20	10	28	0	3	9	0	12	0	21	3	0	24	64
Approach %	0.0	28.6	71.4	-	-	0.0	25.0	75.0	-	-	0.0	87.5	12.5	-	-	-
Total %	0.0	12.5	31.3	-	43.8	0.0	4.7	14.1	-	18.8	0.0	32.8	4.7	-	37.5	-
PHF	0.000	0.500	0.455	-	0.467	0.000	0.250	0.375	-	0.500	0.000	0.750	0.375	-	0.667	0.571
Lights	0	8	20	-	28	0	3	8	-	11	0	19	3	-	22	61
% Lights	-	100.0	100.0	-	100.0	-	100.0	88.9	-	91.7	-	90.5	100.0	-	91.7	95.3
Buses	0	0	0	-	0	0	0	0	-	0	0	2	0	-	2	2
% Buses	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	9.5	0.0	-	8.3	3.1
Single-Unit Trucks	0	0	0	-	0	0	0	1	-	1	0	0	0	-	0	1
% Single-Unit Trucks	-	0.0	0.0	-	0.0	-	0.0	11.1	-	8.3	-	0.0	0.0	-	0.0	1.6
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	10	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-

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9575 W. Higgins Rd., Suite 400

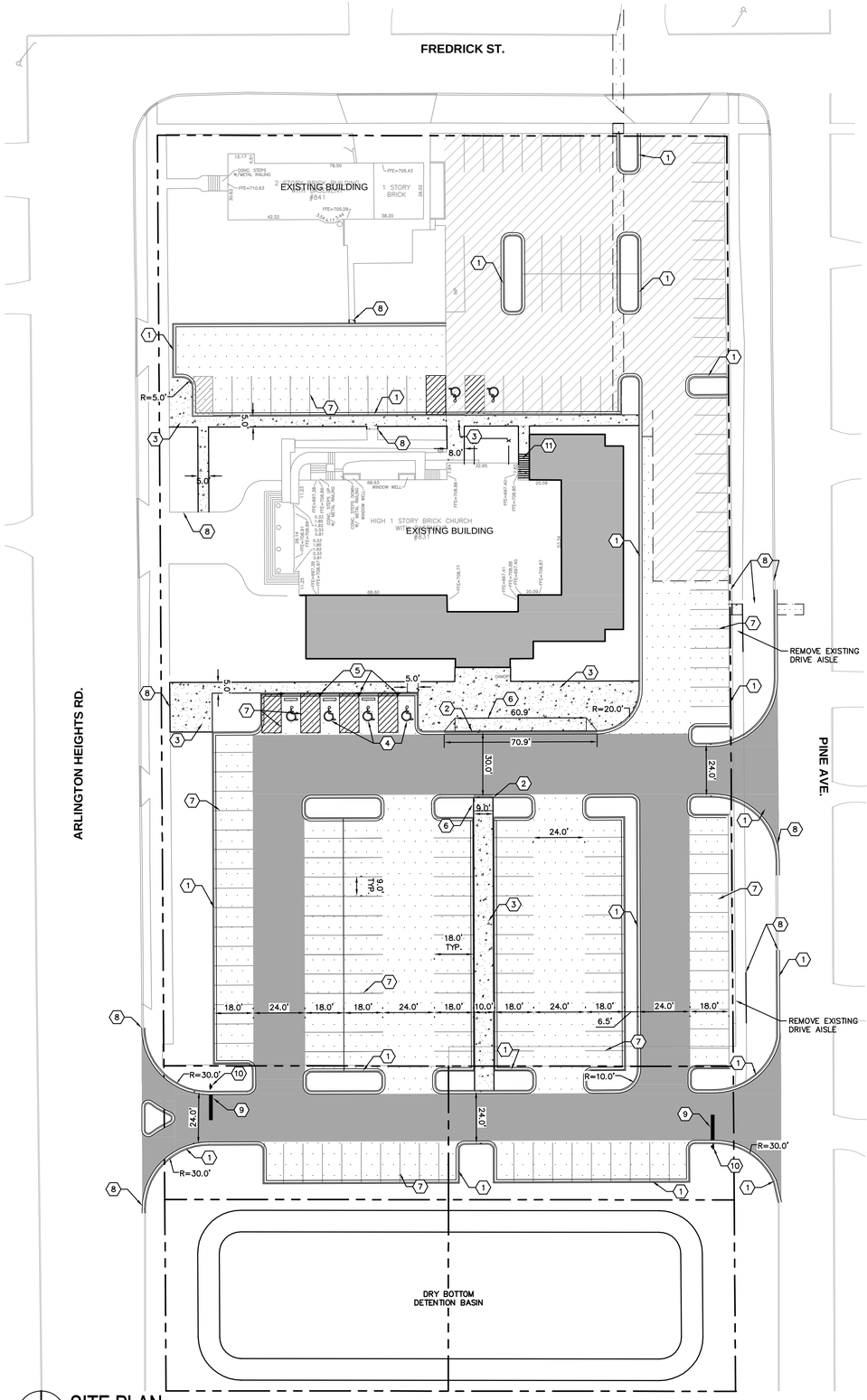
Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Pine Avenue with Southerly Access Drive
Site Code:
Start Date: 08/27/2017

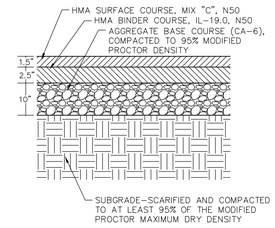
Turning Movement Peak Hour Data (3:00 PM)

Start Time	Southerly Access Drive Eastbound					Pine Avenue Northbound					Pine Avenue Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
3:15 PM	0	0	1	0	1	0	1	1	0	2	0	5	2	0	7	10
3:30 PM	0	0	29	14	29	0	0	3	0	3	0	13	0	0	13	45
3:45 PM	0	0	0	0	0	0	0	4	0	4	0	3	0	0	3	7
Total	0	0	30	14	30	0	1	8	0	9	0	22	2	0	24	63
Approach %	0.0	0.0	100.0	-	-	0.0	11.1	88.9	-	-	0.0	91.7	8.3	-	-	-
Total %	0.0	0.0	47.6	-	47.6	0.0	1.6	12.7	-	14.3	0.0	34.9	3.2	-	38.1	-
PHF	0.000	0.000	0.259	-	0.259	0.000	0.250	0.500	-	0.563	0.000	0.423	0.250	-	0.462	0.350
Lights	0	0	28	-	28	0	1	8	-	9	0	22	2	-	24	61
% Lights	-	-	93.3	-	93.3	-	100.0	100.0	-	100.0	-	100.0	100.0	-	100.0	96.8
Buses	0	0	2	-	2	0	0	0	-	0	0	0	0	-	0	2
% Buses	-	-	6.7	-	6.7	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	3.2
Single-Unit Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Single-Unit Trucks	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	14	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-

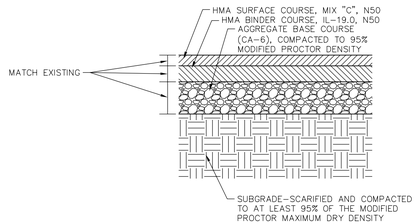
Site Plan



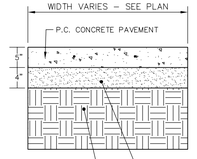
SITE PLAN
SCALE: 1" = 30'
0' 15' 30' 60'
NORTH



STANDARD DUTY ASPHALTIC PAVEMENT SECTION
N.T.S.



HEAVY DUTY ASPHALTIC PAVEMENT SECTION
N.T.S.



NOTES:

1. ALL SIDEWALK SHALL BE CONSTRUCTED WITH CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 4,500 PSI AT 14 DAYS.
2. PROVIDE 1/2" EXPANSION JOINTS AT 20', MAXIMUM, SPACING AND FILLED WITH PREMOLDED BITUMINOUS EXPANSION JOINT FILLER MATERIAL OR REDWOOD. EXPANSION JOINTS SHALL HAVE #4 DOWELS, LUBRICATED, 18" LONG, AT 12" CENTERS, 6" FROM EDGE.
3. PROVIDE 3/8" GROOVED CONTROL JOINTS AT 5' CENTERS.
4. WELDED WIRE FABRIC (6X6-6X6) SHALL BE INSTALLED THROUGH DRIVEWAYS AT 2" ABOVE SLAB BOTTOM.
5. PROVIDE 1/2" BITUMINOUS EXPANSION JOINT FILLER MATERIAL WHERE WALK ABUTS EXISTING IMPROVEMENTS AND AT ALL CHANGES IN GRADE.
6. USE 2-#4 REINFORCING BARS, 10' LONG OVER ALL UTILITY TRENCHES FOR NEW SIDEWALK AND CONNECTIONS TO EXISTING SIDEWALK.
7. AT DRIVE APPROACHES, SIDEWALK PCC AND BASE THICKNESS SHALL MATCH THAT OF THE DRIVE.

CONCRETE SIDEWALK
N.T.S.

NORTH

GRAPHIC SCALE IN FEET
0 15 30 60

Call Before You Dig
JULIE
1-800-892-0123

KEY NOTES

1. B6.12 CONCRETE CURB AND GUTTER, TYP. (SEE DETAILS)
2. DEPRESSED CURB AND GUTTER
3. CONCRETE SIDEWALK, TYP. (SEE DETAILS)
4. ACCESSIBLE PAVEMENT MARKINGS, TYP. (SEE DETAILS)
5. ACCESSIBLE PARKING SIGN, TYP. (MUTCD R7-8, SEE DETAILS)
6. ACCESSIBLE RAMP (SEE DETAILS)
7. 4" WIDE PAINTED WHITE SOLID LINE, TYP.
8. CONNECT TO EXISTING PAVEMENT, SIDEWALK, CURB, TYP.
9. 24" WIDE STOP BAR, TYP. (SEE DETAILS)
10. STOP SIGN, TYP. (MUTCD R1-1, SEE DETAILS)
11. PROPOSED STAIRS

GENERAL NOTES

1. ALL DIMENSIONS REFER TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
2. BUILDING DIMENSIONS ARE TO THE OUTSIDE FACE OF BUILDING UNLESS OTHERWISE NOTED.
3. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS TO VERIFY ALL BUILDING DIMENSIONS.
4. RADII ADJACENT TO PARKING STALL AND NOT DIMENSIONED ON THIS PLAN SHALL BE 3-FEET, TYPICAL.
5. REFER TO ARCHITECTURAL PLANS FOR MONUMENT SIGN DETAILS. SEE MEP PLANS FOR SITE ELECTRICAL DRAWINGS.
6. ALL PROPOSED ON-SITE STRIPING SHALL BE PAINTED UNLESS OTHERWISE NOTED.

PAVING AND CURB LEGEND

- STANDARD DUTY ASPHALT PAVEMENT
  SEE DETAIL THIS SHEET FOR PAVEMENT SECTION
- HEAVY DUTY ASPHALT PAVEMENT
  SEE DETAIL THIS SHEET FOR PAVEMENT SECTION
- CONCRETE SIDEWALK
  SEE DETAIL THIS SHEET FOR PAVEMENT SECTION
  *SEE ARCHITECTURAL PLANS FOR SCOURING PATTERN
- STANDARD DUTY ASPHALT MILL & OVERLAY
  VARIABLE DEPTH, SEE DETAILS
- STANDARD PITCH CONCRETE CURB AND GUTTER
- REVERSE PITCH CONCRETE CURB AND GUTTER
- CONCRETE DEPRESSED CURB AND GUTTER

PARKING SUMMARY

PARKING SPACES PROVIDED	=	180 SPACES
ACCESSIBLE PARKING SPACES REQUIRED	=	6 SPACES
ACCESSIBLE PARKING SPACES PROVIDED	=	6 SPACES
TOTAL PARKING SPACES PROVIDED	=	186 SPACES

newman architecture
1730 Park Street, Suite 115, Naperville, Illinois 60563-2611
(630) 420-1600 FAX (630) 420-1987 www.newmanarchitecture.com

Participating Consultants:

Kimley»Horn
© 2015 KIMLEY-HORN AND ASSOCIATES, INC.
1001 WARRENVILLE ROAD, SUITE 350,
LISLE, IL 60532
PHONE: 630-487-5550
WWW.KIMLEY-HORN.COM

Project Name:

CHURCH ADDITION AND RENOVATION

820 N ARLINGTON HEIGHTS ROAD
ARLINGTON HEIGHTS, IL 60004

FOR

ST. JAMES PARISH & ARCHDIOCESE OF CHICAGO

Engineer's Certification:

PRELIMINARY
FOR REVIEW ONLY
Not for construction or permit purposes.
Kimley»Horn Kimley-Horn and Associates, Inc.
Engineer ANDREW N. HEINEN
P.E. No. 062-056317 Date 9/30/2015
License: Illinois Registration No. 062-05680
Expires: 11/30/15

Signature Date

Issue/ Revision:

No.	Date	Description

Drawing Title:

PRELIMINARY

SITE PLAN

Project No.: 168144008 Date: 08/11/17

C2.0

CMAP 2040 Projections Letter

Chicago Metropolitan
Agency for Planning

233 South Wacker Drive
Suite 800
Chicago, Illinois 60606

312 454 0400
www.cmap.illinois.gov

September 20, 2017

Brendan S. May
Consultant
Kenig, Lindgren, O'Hara and Aboona, Inc.
9575 West Higgins Road
Suite 400
Rosemont, IL 60018

Subject: ***Arlington Heights Road @ Frederick Street***
IDOT

Dear Mr. May:

In response to a request made on your behalf and dated September 20, 2017, we have developed year 2040 average daily traffic (ADT) projections for the subject location.

ROAD SEGMENT	Current ADT	Year 2040 ADT
Arlington Heights Rd, @ Frederick St	22,000	24,700

Traffic projections are developed using existing ADT data provided in the request letter and the results from the March 2017 CMAP Travel Demand Analysis. The regional travel model uses CMAP 2040 socioeconomic projections and assumes the implementation of the GO TO 2040 Comprehensive Regional Plan for the Northeastern Illinois area.

If you have any questions, please call me at (312) 386-8806.

Sincerely,

Jose Rodriguez, PTP, AICP
Senior Planner, Research & Analysis

cc: Quigley (IDOT)
S:\AdminGroups\ResearchAnalysis\TrafficForecasts_CY2017\ArlingtonHeights\ck-83-17\ck-83-17.docx

Level of Service Criteria

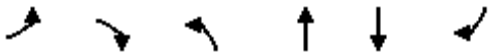
LEVEL OF SERVICE CRITERIA

Signalized Intersections		
Level of Service	Interpretation	Average Control Delay (seconds per vehicle)
A	Favorable progression. Most vehicles arrive during the green indication and travel through the intersection without stopping.	≤10
B	Good progression, with more vehicles stopping than for Level of Service A.	>10 - 20
C	Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear. Number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	>20 - 35
D	The volume-to-capacity ratio is high and either progression is ineffective or the cycle length is too long. Many vehicles stop and individual cycle failures are noticeable.	>35 - 55
E	Progression is unfavorable. The volume-to-capacity ratio is high and the cycle length is long. Individual cycle failures are frequent.	>55 - 80
F	The volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.	>80.0

Unsignalized Intersections	
Level of Service	Average Total Delay (SEC/VEH)
A	0 - 10
B	> 10 - 15
C	> 15 - 25
D	> 25 - 35
E	> 35 - 50
F	> 50

Source: *Highway Capacity Manual*, 2010.

Capacity Analysis Summary Sheets

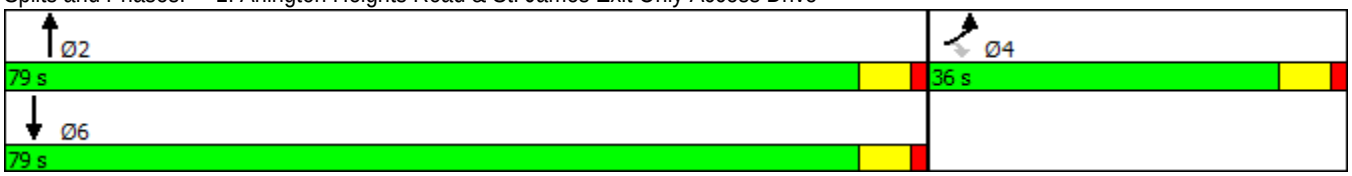


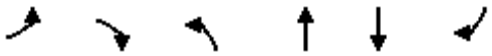
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	79	90	0	592	707	0
Future Volume (vph)	79	90	0	592	707	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.76				
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	1805	1615	0	1693	1710	0
Flt Permitted	0.950					
Satd. Flow (perm)	1805	1229	0	1693	1710	0
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	25			30	30	
Link Distance (ft)	471			160	300	
Travel Time (s)	12.8			3.6	6.8	
Confl. Peds. (#/hr)		70	34			34
Confl. Bikes (#/hr)						
Peak Hour Factor	0.26	0.29	0.91	1.00	0.86	0.86
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)				0	0	
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	304	310	0	592	822	0
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4				
Detector Phase	4	4		2	6	
Switch Phase						
Minimum Initial (s)	4.0	4.0		15.0	5.0	
Minimum Split (s)	24.0	24.0		24.0	24.0	
Total Split (s)	36.0	36.0		79.0	79.0	
Total Split (%)	31.3%	31.3%		68.7%	68.7%	
Yellow Time (s)	4.5	4.5		4.5	4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None		Min	Min	
Act Effct Green (s)	29.6	29.6		65.8	65.8	
Actuated g/C Ratio	0.28	0.28		0.61	0.61	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
v/c Ratio	0.61	0.92		0.57	0.79	
Control Delay	42.0	72.8		14.8	21.9	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	42.0	72.8		14.8	21.9	
LOS	D	E		B	C	
Approach Delay	57.6			14.8	21.9	
Approach LOS	E			B	C	
Queue Length 50th (ft)	201	227		228	396	
Queue Length 95th (ft)	71	85		324	515	
Internal Link Dist (ft)	391			80	220	
Turn Bay Length (ft)						
Base Capacity (vph)	509	347		1163	1175	
Starvation Cap Reductn	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	
Storage Cap Reductn	0	0		0	0	
Reduced v/c Ratio	0.60	0.89		0.51	0.70	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 107.5			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 30.6		Intersection LOS: C	
Intersection Capacity Utilization 61.8%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: Arlington Heights Road & St. James Exit Only Access Drive



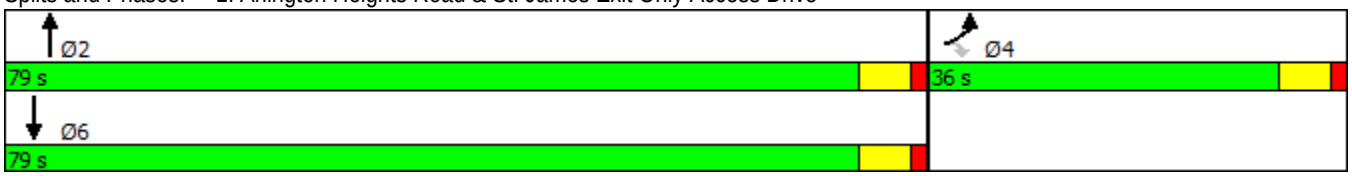


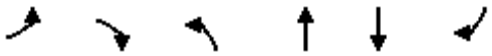
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	94	88	0	667	1132	0
Future Volume (vph)	94	88	0	667	1132	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor		0.83				
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	1805	1615	0	3438	3471	0
Flt Permitted	0.950					
Satd. Flow (perm)	1805	1338	0	3438	3471	0
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	25			30	30	
Link Distance (ft)	471			160	300	
Travel Time (s)	12.8			3.6	6.8	
Confl. Peds. (#/hr)		85	2			2
Confl. Bikes (#/hr)						
Peak Hour Factor	0.45	0.40	0.90	0.90	0.84	0.84
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	5%	4%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	209	220	0	741	1348	0
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4				
Detector Phase	4	4		2	6	
Switch Phase						
Minimum Initial (s)	4.0	4.0		15.0	5.0	
Minimum Split (s)	24.0	24.0		24.0	24.0	
Total Split (s)	36.0	36.0		79.0	79.0	
Total Split (%)	31.3%	31.3%		68.7%	68.7%	
Yellow Time (s)	4.5	4.5		4.5	4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None		Min	Min	
Act Effct Green (s)	23.2	23.2		73.2	73.2	
Actuated g/C Ratio	0.21	0.21		0.68	0.68	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
v/c Ratio	0.54	0.77		0.32	0.58	
Control Delay	43.0	58.2		8.4	11.3	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	43.0	58.2		8.4	11.3	
LOS	D	E		A	B	
Approach Delay	50.8			8.4	11.3	
Approach LOS	D			A	B	
Queue Length 50th (ft)	130	144		102	238	
Queue Length 95th (ft)	92	88		158	314	
Internal Link Dist (ft)	391			80	220	
Turn Bay Length (ft)						
Base Capacity (vph)	501	371		2321	2344	
Starvation Cap Reductn	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	
Storage Cap Reductn	0	0		0	0	
Reduced v/c Ratio	0.42	0.59		0.32	0.58	

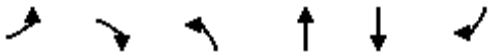
Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 108.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 17.2		Intersection LOS: B	
Intersection Capacity Utilization 56.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: Arlington Heights Road & St. James Exit Only Access Drive





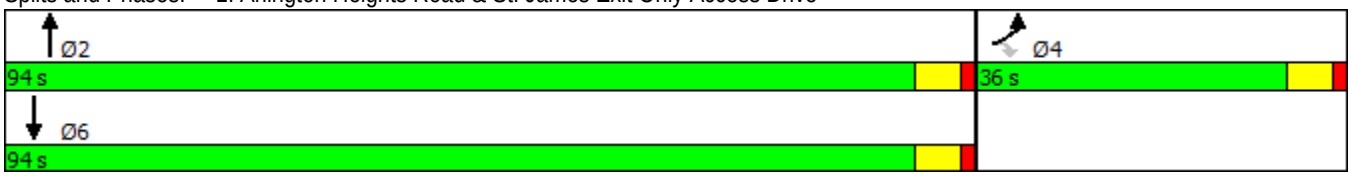
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	53	54	0	819	915	0
Future Volume (vph)	53	54	0	819	915	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor		0.69				
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	1805	1615	0	3539	3471	0
Flt Permitted	0.950					
Satd. Flow (perm)	1805	1108	0	3539	3471	0
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	25			30	30	
Link Distance (ft)	471			160	300	
Travel Time (s)	12.8			3.6	6.8	
Confl. Peds. (#/hr)		157				
Confl. Bikes (#/hr)						
Peak Hour Factor	0.55	0.41	0.91	0.91	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	2%	4%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	96	132	0	900	984	0
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4				
Detector Phase	4	4		2	6	
Switch Phase						
Minimum Initial (s)	4.0	4.0		15.0	5.0	
Minimum Split (s)	24.0	24.0		24.0	24.0	
Total Split (s)	36.0	36.0		94.0	94.0	
Total Split (%)	27.7%	27.7%		72.3%	72.3%	
Yellow Time (s)	4.5	4.5		4.5	4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None		Min	Min	
Act Effct Green (s)	19.1	19.1		74.2	74.2	
Actuated g/C Ratio	0.18	0.18		0.70	0.70	

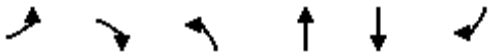


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
v/c Ratio	0.30	0.66		0.36	0.41	
Control Delay	43.3	60.2		7.2	7.6	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	43.3	60.2		7.2	7.6	
LOS	D	E		A	A	
Approach Delay	53.1			7.2	7.6	
Approach LOS	D			A	A	
Queue Length 50th (ft)	66	98		116	131	
Queue Length 95th (ft)	69	68		194	220	
Internal Link Dist (ft)	391			80	220	
Turn Bay Length (ft)						
Base Capacity (vph)	541	332		2913	2857	
Starvation Cap Reductn	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	
Storage Cap Reductn	0	0		0	0	
Reduced v/c Ratio	0.18	0.40		0.31	0.34	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 106.1			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 12.3		Intersection LOS: B	
Intersection Capacity Utilization 50.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: Arlington Heights Road & St. James Exit Only Access Drive



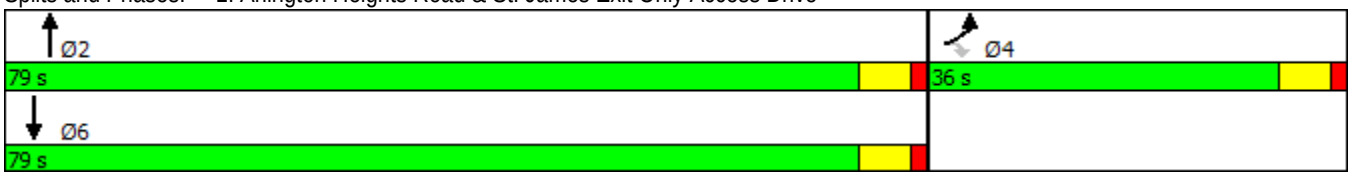


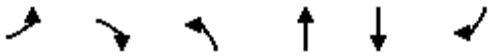
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	62	69	0	631	706	0
Future Volume (vph)	62	69	0	631	706	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.76				
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	1805	1615	0	1693	1710	0
Flt Permitted	0.950					
Satd. Flow (perm)	1805	1229	0	1693	1710	0
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	25			30	30	
Link Distance (ft)	471			160	217	
Travel Time (s)	12.8			3.6	4.9	
Confl. Peds. (#/hr)		70	34			34
Confl. Bikes (#/hr)						
Peak Hour Factor	0.26	0.29	0.91	1.00	0.86	0.86
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)				0	0	
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	238	238	0	631	821	0
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4				
Detector Phase	4	4		2	6	
Switch Phase						
Minimum Initial (s)	4.0	4.0		15.0	5.0	
Minimum Split (s)	24.0	24.0		24.0	24.0	
Total Split (s)	36.0	36.0		79.0	79.0	
Total Split (%)	31.3%	31.3%		68.7%	68.7%	
Yellow Time (s)	4.5	4.5		4.5	4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None		Min	Min	
Act Effct Green (s)	24.6	24.6		63.5	63.5	
Actuated g/C Ratio	0.24	0.24		0.63	0.63	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
v/c Ratio	0.54	0.80		0.59	0.76	
Control Delay	40.0	57.9		14.1	19.4	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	40.0	57.9		14.1	19.4	
LOS	D	E		B	B	
Approach Delay	48.9			14.1	19.4	
Approach LOS	D			B	B	
Queue Length 50th (ft)	150	162		240	377	
Queue Length 95th (ft)	58	66		359	514	
Internal Link Dist (ft)	391			80	137	
Turn Bay Length (ft)						
Base Capacity (vph)	562	383		1251	1264	
Starvation Cap Reductn	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	
Storage Cap Reductn	0	0		0	0	
Reduced v/c Ratio	0.42	0.62		0.50	0.65	

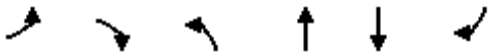
Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 100.6			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 24.9		Intersection LOS: C	
Intersection Capacity Utilization 61.6%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: Arlington Heights Road & St. James Exit Only Access Drive





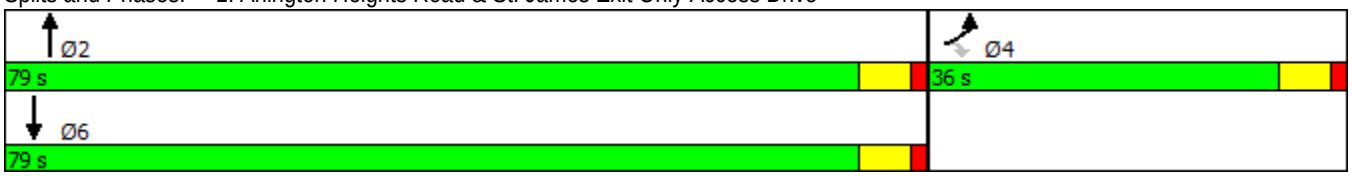
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	94	88	0	688	1168	0
Future Volume (vph)	94	88	0	688	1168	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor		0.83				
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	1805	1615	0	3438	3471	0
Flt Permitted	0.950					
Satd. Flow (perm)	1805	1338	0	3438	3471	0
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	25			30	30	
Link Distance (ft)	471			160	300	
Travel Time (s)	12.8			3.6	6.8	
Confl. Peds. (#/hr)		85	2			2
Confl. Bikes (#/hr)						
Peak Hour Factor	0.45	0.40	0.90	0.90	0.84	0.84
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	5%	4%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	209	220	0	764	1390	0
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4				
Detector Phase	4	4		2	6	
Switch Phase						
Minimum Initial (s)	4.0	4.0		15.0	5.0	
Minimum Split (s)	24.0	24.0		24.0	24.0	
Total Split (s)	36.0	36.0		79.0	79.0	
Total Split (%)	31.3%	31.3%		68.7%	68.7%	
Yellow Time (s)	4.5	4.5		4.5	4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None		Min	Min	
Act Effct Green (s)	23.2	23.2		73.2	73.2	
Actuated g/C Ratio	0.21	0.21		0.68	0.68	

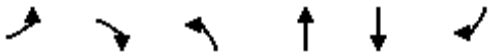


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
v/c Ratio	0.54	0.77		0.33	0.59	
Control Delay	43.0	58.2		8.4	11.6	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	43.0	58.2		8.4	11.6	
LOS	D	E		A	B	
Approach Delay	50.8			8.4	11.6	
Approach LOS	D			A	B	
Queue Length 50th (ft)	130	144		106	251	
Queue Length 95th (ft)	92	88		164	330	
Internal Link Dist (ft)	391			80	220	
Turn Bay Length (ft)						
Base Capacity (vph)	501	371		2321	2344	
Starvation Cap Reductn	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	
Storage Cap Reductn	0	0		0	0	
Reduced v/c Ratio	0.42	0.59		0.33	0.59	

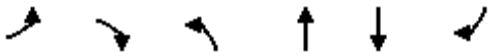
Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 108.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 17.2		Intersection LOS: B	
Intersection Capacity Utilization 57.0%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: Arlington Heights Road & St. James Exit Only Access Drive





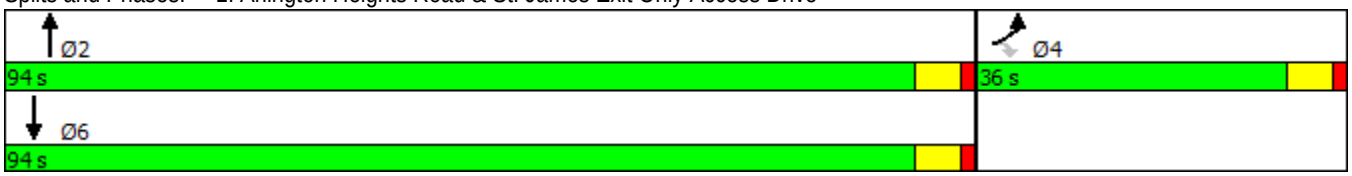
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	53	54	0	845	944	0
Future Volume (vph)	53	54	0	845	944	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor		0.69				
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	1805	1615	0	3539	3471	0
Flt Permitted	0.950					
Satd. Flow (perm)	1805	1108	0	3539	3471	0
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	25			30	30	
Link Distance (ft)	471			160	300	
Travel Time (s)	12.8			3.6	6.8	
Confl. Peds. (#/hr)		157				
Confl. Bikes (#/hr)						
Peak Hour Factor	0.55	0.41	0.91	0.91	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	2%	4%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	96	132	0	929	1015	0
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4				
Detector Phase	4	4		2	6	
Switch Phase						
Minimum Initial (s)	4.0	4.0		15.0	5.0	
Minimum Split (s)	24.0	24.0		24.0	24.0	
Total Split (s)	36.0	36.0		94.0	94.0	
Total Split (%)	27.7%	27.7%		72.3%	72.3%	
Yellow Time (s)	4.5	4.5		4.5	4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None		Min	Min	
Act Effct Green (s)	19.3	19.3		75.9	75.9	
Actuated g/C Ratio	0.18	0.18		0.70	0.70	

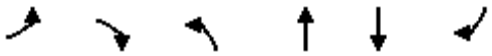


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
v/c Ratio	0.30	0.67		0.37	0.42	
Control Delay	43.6	61.1		7.3	7.7	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	43.6	61.1		7.3	7.7	
LOS	D	E		A	A	
Approach Delay	53.7			7.3	7.7	
Approach LOS	D			A	A	
Queue Length 50th (ft)	66	98		121	138	
Queue Length 95th (ft)	69	68		202	230	
Internal Link Dist (ft)	391			80	220	
Turn Bay Length (ft)						
Base Capacity (vph)	526	323		2894	2838	
Starvation Cap Reductn	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	
Storage Cap Reductn	0	0		0	0	
Reduced v/c Ratio	0.18	0.41		0.32	0.36	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 107.8			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 12.3		Intersection LOS: B	
Intersection Capacity Utilization 51.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: Arlington Heights Road & St. James Exit Only Access Drive





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	71	578	729	65
Future Volume (Veh/h)	0	0	71	578	729	65
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.50	0.50	0.55	0.92	0.70	0.49
Hourly flow rate (vph)	0	0	129	628	1041	133
Pedestrians	26					
Lane Width (ft)	0.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					382	
pX, platoon unblocked	0.57	0.57	0.57			
vC, conflicting volume	2020	1134	1200			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2415	855	972			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	68			
cM capacity (veh/h)	14	205	407			

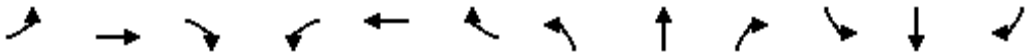
Direction, Lane #	NB 1	SB 1
Volume Total	757	1174
Volume Left	129	0
Volume Right	0	133
cSH	407	1700
Volume to Capacity	0.32	0.69
Queue Length 95th (ft)	33	0
Control Delay (s)	10.5	0.0
Lane LOS	B	
Approach Delay (s)	10.5	0.0
Approach LOS		

Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	83.5%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	9	12	633	22	7	691
Future Volume (Veh/h)	9	12	633	22	7	691
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Hourly flow rate (vph)	11	15	801	28	9	875
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			300			
pX, platoon unblocked	0.74	0.74			0.74	
vC, conflicting volume	1270	815			829	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1192	580			599	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	92	96			99	
cM capacity (veh/h)	135	344			736	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	26	829	301	583
Volume Left	11	0	9	0
Volume Right	15	28	0	0
cSH	207	1700	736	1700
Volume to Capacity	0.13	0.49	0.01	0.34
Queue Length 95th (ft)	11	0	1	0
Control Delay (s)	24.8	0.0	0.4	0.0
Lane LOS	C		A	
Approach Delay (s)	24.8	0.0	0.1	
Approach LOS	C			

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	44.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	7	19	2	2	11	0	7	18	3	0	3	3
Future Volume (vph)	7	19	2	2	11	0	7	18	3	0	3	3
Peak Hour Factor	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41
Hourly flow rate (vph)	17	46	5	5	27	0	17	44	7	0	7	7

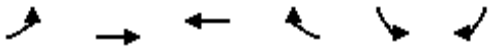
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	68	32	68	14
Volume Left (vph)	17	5	17	0
Volume Right (vph)	5	0	7	7
Hadj (s)	0.01	0.03	-0.01	-0.30
Departure Headway (s)	4.1	4.2	4.1	3.9
Degree Utilization, x	0.08	0.04	0.08	0.02
Capacity (veh/h)	852	839	844	895
Control Delay (s)	7.5	7.3	7.5	6.9
Approach Delay (s)	7.5	7.3	7.5	6.9
Approach LOS	A	A	A	A

Intersection Summary			
Delay	7.4		
Level of Service	A		
Intersection Capacity Utilization	18.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1	3	7	3	10	38
Future Volume (Veh/h)	1	3	7	3	10	38
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.35	0.35	0.35	0.35	0.35	0.35
Hourly flow rate (vph)	3	9	20	9	29	109
Pedestrians	4					5
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	3.5					3.5
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	196	34			33	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	196	34			33	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	99			98	
cM capacity (veh/h)	780	1037			1586	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	12	29	138
Volume Left	3	0	29
Volume Right	9	9	0
cSH	958	1700	1586
Volume to Capacity	0.01	0.02	0.02
Queue Length 95th (ft)	1	0	1
Control Delay (s)	8.8	0.0	1.6
Lane LOS	A		A
Approach Delay (s)	8.8	0.0	1.6
Approach LOS	A		

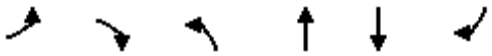
Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	20.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	7	21	12	6	25	15
Future Volume (Veh/h)	7	21	12	6	25	15
Sign Control		Free	Free		Yield	
Grade		0%	0%		0%	
Peak Hour Factor	0.44	0.44	0.44	0.44	0.44	0.44
Hourly flow rate (vph)	16	48	27	14	57	34
Pedestrians					5	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	46				119	39
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	46				119	39
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				93	97
cM capacity (veh/h)	1567				868	1033

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	64	41	91
Volume Left	16	0	57
Volume Right	0	14	34
cSH	1567	1700	923
Volume to Capacity	0.01	0.02	0.10
Queue Length 95th (ft)	1	0	8
Control Delay (s)	1.9	0.0	9.3
Lane LOS	A		A
Approach Delay (s)	1.9	0.0	9.3
Approach LOS			A

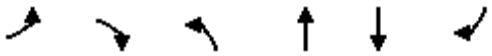
Intersection Summary			
Average Delay	4.9		
Intersection Capacity Utilization	17.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	9	8	0	21	4	3
Future Volume (Veh/h)	9	8	0	21	4	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.32	0.32	0.32	0.32	0.32	0.32
Hourly flow rate (vph)	28	25	0	66	13	9
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	84	18	23			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	84	18	23			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	98	100			
cM capacity (veh/h)	921	1065	1604			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	53	66	22
Volume Left	28	0	0
Volume Right	25	0	9
cSH	984	1604	1700
Volume to Capacity	0.05	0.00	0.01
Queue Length 95th (ft)	4	0	0
Control Delay (s)	8.9	0.0	0.0
Lane LOS	A		
Approach Delay (s)	8.9	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	3.3		
Intersection Capacity Utilization	13.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	17	41	6	4	14	0
Future Volume (Veh/h)	17	41	6	4	14	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.30	0.30	0.30	0.30	0.30	0.30
Hourly flow rate (vph)	57	137	20	13	47	0
Pedestrians	4					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	104	51	51			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	104	51	51			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	94	87	99			
cM capacity (veh/h)	884	1019	1562			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	194	33	47
Volume Left	57	20	0
Volume Right	137	0	0
cSH	975	1562	1700
Volume to Capacity	0.20	0.01	0.03
Queue Length 95th (ft)	18	1	0
Control Delay (s)	9.6	4.5	0.0
Lane LOS	A	A	
Approach Delay (s)	9.6	4.5	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	7.3		
Intersection Capacity Utilization	15.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	21	7	7	14	4	7
Future Volume (Veh/h)	21	7	7	14	4	7
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.41	0.41	0.41	0.41	0.41	0.41
Hourly flow rate (vph)	51	17	17	34	10	17
Pedestrians					2	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			70		130	62
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			70		130	62
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		99	98
cM capacity (veh/h)			1541		858	1007

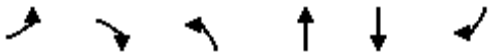
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	68	51	27
Volume Left	0	17	10
Volume Right	17	0	17
cSH	1700	1541	946
Volume to Capacity	0.04	0.01	0.03
Queue Length 95th (ft)	0	1	2
Control Delay (s)	0.0	2.5	8.9
Lane LOS		A	A
Approach Delay (s)	0.0	2.5	8.9
Approach LOS			A

Intersection Summary			
Average Delay		2.5	
Intersection Capacity Utilization		16.9%	ICU Level of Service A
Analysis Period (min)		15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	585	0	0	797
Future Volume (Veh/h)	0	0	585	0	0	797
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.30	0.30	0.91	0.91	0.86	0.86
Hourly flow rate (vph)	0	0	643	0	0	927
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						160
pX, platoon unblocked	0.56					
vC, conflicting volume	1570	643			643	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1625	643			643	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	64	477			951	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	0	643	927
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1700	1700
Volume to Capacity	0.00	0.38	0.55
Queue Length 95th (ft)	0	0	0
Control Delay (s)	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	45.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	69	667	1082	138
Future Volume (Veh/h)	0	0	69	667	1082	138
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.42	0.92	0.95	0.45
Hourly flow rate (vph)	0	0	164	725	1139	307
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					382	
pX, platoon unblocked	0.79	0.79	0.79			
vC, conflicting volume	1983	723	1446			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1720	134	1044			
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	69			
cM capacity (veh/h)	45	712	535			

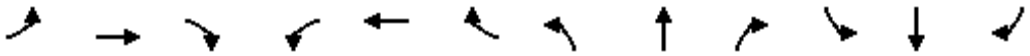
Direction, Lane #	NB 1	NB 2	SB 1	SB 2
Volume Total	406	483	759	687
Volume Left	164	0	0	0
Volume Right	0	0	0	307
cSH	535	1700	1700	1700
Volume to Capacity	0.31	0.28	0.45	0.40
Queue Length 95th (ft)	32	0	0	0
Control Delay (s)	9.0	0.0	0.0	0.0
Lane LOS	A			
Approach Delay (s)	4.1		0.0	
Approach LOS				

Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	61.4%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	17	38	744	17	13	1115
Future Volume (Veh/h)	17	38	744	17	13	1115
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	20	44	865	20	15	1297
Pedestrians	11					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	1					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			300			
pX, platoon unblocked	0.92	0.92			0.92	
vC, conflicting volume	1564	454			896	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1436	226			708	
tC, single (s)	6.8	7.0			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	82	94			98	
cM capacity (veh/h)	113	703			818	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	64	577	308	447	865
Volume Left	20	0	0	15	0
Volume Right	44	0	20	0	0
cSH	267	1700	1700	818	1700
Volume to Capacity	0.24	0.34	0.18	0.02	0.51
Queue Length 95th (ft)	23	0	0	1	0
Control Delay (s)	22.7	0.0	0.0	0.5	0.0
Lane LOS	C			A	
Approach Delay (s)	22.7	0.0		0.2	
Approach LOS	C				

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	13	26	5	3	19	2	7	13	3	0	5	12
Future Volume (vph)	13	26	5	3	19	2	7	13	3	0	5	12
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Hourly flow rate (vph)	18	36	7	4	26	3	10	18	4	0	7	16

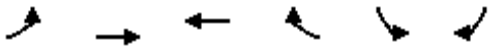
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	61	33	32	23
Volume Left (vph)	18	4	10	0
Volume Right (vph)	7	3	4	16
Hadj (s)	-0.01	0.04	-0.01	-0.31
Departure Headway (s)	4.0	4.1	4.1	3.8
Degree Utilization, x	0.07	0.04	0.04	0.02
Capacity (veh/h)	873	857	845	914
Control Delay (s)	7.3	7.3	7.3	6.9
Approach Delay (s)	7.3	7.3	7.3	6.9
Approach LOS	A	A	A	A

Intersection Summary				
Delay	7.2			
Level of Service	A			
Intersection Capacity Utilization	20.6%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	2	8	0	10	32
Future Volume (Veh/h)	0	2	8	0	10	32
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77
Hourly flow rate (vph)	0	3	10	0	13	42
Pedestrians	2					1
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	3.5					3.5
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	80	13			12	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	80	13			12	
tC, single (s)	6.4	6.7			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.8			2.2	
p0 queue free %	100	100			99	
cM capacity (veh/h)	918	941			1617	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	3	10	55
Volume Left	0	0	13
Volume Right	3	0	0
cSH	941	1700	1617
Volume to Capacity	0.00	0.01	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	8.8	0.0	1.8
Lane LOS	A		A
Approach Delay (s)	8.8	0.0	1.8
Approach LOS	A		

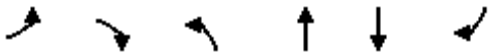
Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	19.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	37	28	6	17	19
Future Volume (Veh/h)	0	37	28	6	17	19
Sign Control		Free	Free		Yield	
Grade		0%	0%		0%	
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72
Hourly flow rate (vph)	0	51	39	8	24	26
Pedestrians					7	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	54				101	50
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	54				101	50
tC, single (s)	4.1				6.5	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.3
p0 queue free %	100				97	97
cM capacity (veh/h)	1554				868	1017

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	51	47	50
Volume Left	0	0	24
Volume Right	0	8	26
cSH	1554	1700	940
Volume to Capacity	0.00	0.03	0.05
Queue Length 95th (ft)	0	0	4
Control Delay (s)	0.0	0.0	9.0
Lane LOS			A
Approach Delay (s)	0.0	0.0	9.0
Approach LOS			A

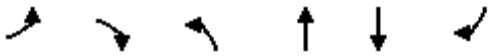
Intersection Summary			
Average Delay	3.1		
Intersection Capacity Utilization	15.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	8	11	3	14	12	0
Future Volume (Veh/h)	8	11	3	14	12	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.63	0.63	0.63	0.63	0.63	0.63
Hourly flow rate (vph)	13	17	5	22	19	0
Pedestrians	6				2	
Lane Width (ft)	12.0				12.0	
Walking Speed (ft/s)	3.5				3.5	
Percent Blockage	1				0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	59	25	25			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	59	25	25			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	98	100			
cM capacity (veh/h)	943	1051	1593			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	30	27	19
Volume Left	13	5	0
Volume Right	17	0	0
cSH	1001	1593	1700
Volume to Capacity	0.03	0.00	0.01
Queue Length 95th (ft)	2	0	0
Control Delay (s)	8.7	1.4	0.0
Lane LOS	A	A	
Approach Delay (s)	8.7	1.4	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	3.9		
Intersection Capacity Utilization	15.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	8	20	3	9	21	3
Future Volume (Veh/h)	8	20	3	9	21	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.57	0.57	0.57	0.57	0.57	0.57
Hourly flow rate (vph)	14	35	5	16	37	5
Pedestrians	10					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	76	50	52			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	76	50	52			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	97	100			
cM capacity (veh/h)	921	1015	1552			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	49	21	42
Volume Left	14	5	0
Volume Right	35	0	5
cSH	986	1552	1700
Volume to Capacity	0.05	0.00	0.02
Queue Length 95th (ft)	4	0	0
Control Delay (s)	8.8	1.8	0.0
Lane LOS	A	A	
Approach Delay (s)	8.8	1.8	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	4.2		
Intersection Capacity Utilization	16.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	25	6	7	31	20	19
Future Volume (Veh/h)	25	6	7	31	20	19
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73
Hourly flow rate (vph)	34	8	10	42	27	26
Pedestrians					1	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			43		101	39
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			43		101	39
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		97	97
cM capacity (veh/h)			1577		896	1037

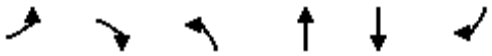
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	42	52	53
Volume Left	0	10	27
Volume Right	8	0	26
cSH	1700	1577	960
Volume to Capacity	0.02	0.01	0.06
Queue Length 95th (ft)	0	0	4
Control Delay (s)	0.0	1.4	9.0
Lane LOS		A	A
Approach Delay (s)	0.0	1.4	9.0
Approach LOS			A

Intersection Summary			
Average Delay		3.7	
Intersection Capacity Utilization		17.6%	ICU Level of Service A
Analysis Period (min)		15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	667	0	0	1220
Future Volume (Veh/h)	0	0	667	0	0	1220
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.40	0.40	0.90	0.90	0.84	0.84
Hourly flow rate (vph)	0	0	741	0	0	1452
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						160
pX, platoon unblocked	0.79					
vC, conflicting volume	1467	370			741	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1069	370			741	
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)	174	632			875	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	0	494	247	726	726
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	1700	1700	1700
Volume to Capacity	0.00	0.29	0.15	0.43	0.43
Queue Length 95th (ft)	0	0	0	0	0
Control Delay (s)	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	37.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	46	819	926	43
Future Volume (Veh/h)	0	0	46	819	926	43
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.44	0.91	0.94	0.57
Hourly flow rate (vph)	0	0	105	900	985	75
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					382	
pX, platoon unblocked	0.89	0.89	0.89			
vC, conflicting volume	1682	530	1060			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1517	220	817			
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	86			
cM capacity (veh/h)	85	702	729			

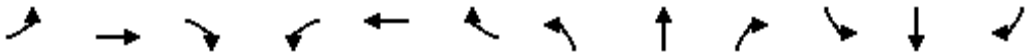
Direction, Lane #	NB 1	NB 2	SB 1	SB 2
Volume Total	405	600	657	403
Volume Left	105	0	0	0
Volume Right	0	0	0	75
cSH	729	1700	1700	1700
Volume to Capacity	0.14	0.35	0.39	0.24
Queue Length 95th (ft)	13	0	0	0
Control Delay (s)	4.2	0.0	0.0	0.0
Lane LOS	A			
Approach Delay (s)	1.7		0.0	
Approach LOS				

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	10	18	855	17	24	905
Future Volume (Veh/h)	10	18	855	17	24	905
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	11	19	900	18	25	953
Pedestrians	24					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	2					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			300			
pX, platoon unblocked	0.90	0.90			0.90	
vC, conflicting volume	1460	483			942	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1296	216			724	
tC, single (s)	6.8	6.9			4.3	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.3	
p0 queue free %	92	97			97	
cM capacity (veh/h)	133	702			738	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	30	600	318	343	635
Volume Left	11	0	0	25	0
Volume Right	19	0	18	0	0
cSH	274	1700	1700	738	1700
Volume to Capacity	0.11	0.35	0.19	0.03	0.37
Queue Length 95th (ft)	9	0	0	3	0
Control Delay (s)	19.7	0.0	0.0	1.1	0.0
Lane LOS	C			A	
Approach Delay (s)	19.7	0.0		0.4	
Approach LOS	C				

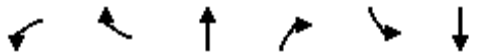
Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	52.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	4	17	10	8	17	2	6	2	0	2	8	16
Future Volume (vph)	4	17	10	8	17	2	6	2	0	2	8	16
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	5	19	11	9	19	2	7	2	0	2	9	18

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	35	30	9	29
Volume Left (vph)	5	9	7	2
Volume Right (vph)	11	2	0	18
Hadj (s)	-0.11	0.02	0.16	-0.36
Departure Headway (s)	3.9	4.0	4.2	3.7
Degree Utilization, x	0.04	0.03	0.01	0.03
Capacity (veh/h)	907	879	828	954
Control Delay (s)	7.1	7.2	7.3	6.8
Approach Delay (s)	7.1	7.2	7.3	6.8
Approach LOS	A	A	A	A

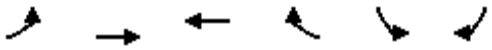
Intersection Summary				
Delay	7.0			
Level of Service	A			
Intersection Capacity Utilization	19.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	2	1	11	4	29	25
Future Volume (Veh/h)	2	1	11	4	29	25
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.38	0.38	0.38	0.38	0.38	0.38
Hourly flow rate (vph)	5	3	29	11	76	66
Pedestrians	1					6
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	3.5					3.5
Percent Blockage	0					1
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	254	42			41	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	254	42			41	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			95	
cM capacity (veh/h)	703	1028			1580	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	8	40	142
Volume Left	5	0	76
Volume Right	3	11	0
cSH	798	1700	1580
Volume to Capacity	0.01	0.02	0.05
Queue Length 95th (ft)	1	0	4
Control Delay (s)	9.6	0.0	4.1
Lane LOS	A		A
Approach Delay (s)	9.6	0.0	4.1
Approach LOS	A		

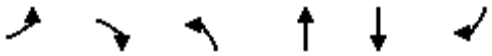
Intersection Summary			
Average Delay	3.5		
Intersection Capacity Utilization	21.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	8	27	23	3	10	13
Future Volume (Veh/h)	8	27	23	3	10	13
Sign Control		Free	Free		Yield	
Grade		0%	0%		0%	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	10	33	28	4	12	16
Pedestrians					5	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	37				88	35
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	37				88	35
tC, single (s)	4.1				6.4	6.4
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.4
p0 queue free %	99				99	98
cM capacity (veh/h)	1579				908	997

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	43	32	28
Volume Left	10	0	12
Volume Right	0	4	16
cSH	1579	1700	957
Volume to Capacity	0.01	0.02	0.03
Queue Length 95th (ft)	0	0	2
Control Delay (s)	1.7	0.0	8.9
Lane LOS	A		A
Approach Delay (s)	1.7	0.0	8.9
Approach LOS			A

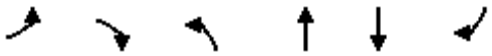
Intersection Summary			
Average Delay	3.1		
Intersection Capacity Utilization	18.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	2	1	1	7	21	3
Future Volume (Veh/h)	2	1	1	7	21	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.67	0.67	0.67	0.67	0.67	0.67
Hourly flow rate (vph)	3	1	1	10	31	4
Pedestrians	3			1	3	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	0			0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	51	37	38			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	51	37	38			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	957	1037	1581			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	4	11	35
Volume Left	3	1	0
Volume Right	1	0	4
cSH	976	1581	1700
Volume to Capacity	0.00	0.00	0.02
Queue Length 95th (ft)	0	0	0
Control Delay (s)	8.7	0.7	0.0
Lane LOS	A	A	
Approach Delay (s)	8.7	0.7	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	14.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	30	1	8	22	2
Future Volume (Veh/h)	0	30	1	8	22	2
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.35	0.35	0.35	0.35	0.35	0.35
Hourly flow rate (vph)	0	86	3	23	63	6
Pedestrians	14					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	109	80	83			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	109	80	83			
tC, single (s)	6.4	6.3	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.4	2.2			
p0 queue free %	100	91	100			
cM capacity (veh/h)	879	954	1506			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	86	26	69
Volume Left	0	3	0
Volume Right	86	0	6
cSH	954	1506	1700
Volume to Capacity	0.09	0.00	0.04
Queue Length 95th (ft)	7	0	0
Control Delay (s)	9.1	0.9	0.0
Lane LOS	A	A	
Approach Delay (s)	9.1	0.9	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	4.5		
Intersection Capacity Utilization	17.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	31	8	15	24	1	0
Future Volume (Veh/h)	31	8	15	24	1	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	35	9	17	27	1	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			44		100	40
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			44		100	40
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		100	100
cM capacity (veh/h)			1577		893	1038

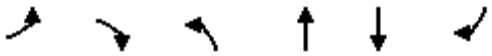
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	44	44	1
Volume Left	0	17	1
Volume Right	9	0	0
cSH	1700	1577	893
Volume to Capacity	0.03	0.01	0.00
Queue Length 95th (ft)	0	1	0
Control Delay (s)	0.0	2.9	9.0
Lane LOS		A	A
Approach Delay (s)	0.0	2.9	9.0
Approach LOS			A

Intersection Summary			
Average Delay		1.5	
Intersection Capacity Utilization		18.8%	ICU Level of Service A
Analysis Period (min)		15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	819	0	0	969
Future Volume (Veh/h)	0	0	819	0	0	969
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.50	0.50	0.91	0.91	0.93	0.93
Hourly flow rate (vph)	0	0	900	0	0	1042
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						160
pX, platoon unblocked	0.89					
vC, conflicting volume	1421	450			900	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1217	450			900	
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)	156	562			763	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	0	600	300	521	521
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	1700	1700	1700
Volume to Capacity	0.00	0.35	0.18	0.31	0.31
Queue Length 95th (ft)	0	0	0	0	0
Control Delay (s)	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	30.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	46	625	772	47
Future Volume (Veh/h)	0	0	46	625	772	47
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.50	0.50	0.55	0.92	0.70	0.49
Hourly flow rate (vph)	0	0	84	679	1103	96
Pedestrians	26					
Lane Width (ft)	0.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					382	
pX, platoon unblocked	0.66	0.66	0.66			
vC, conflicting volume	2024	1177	1225			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2288	1014	1086			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	81			
cM capacity (veh/h)	24	194	432			

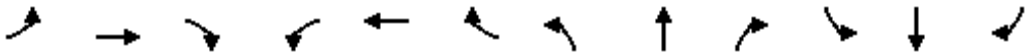
Direction, Lane #	NB 1	SB 1
Volume Total	763	1199
Volume Left	84	0
Volume Right	0	96
cSH	432	1700
Volume to Capacity	0.19	0.71
Queue Length 95th (ft)	18	0
Control Delay (s)	6.1	0.0
Lane LOS	A	
Approach Delay (s)	6.1	0.0
Approach LOS		

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	74.1%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	52	36	658	17	39	692
Future Volume (Veh/h)	52	36	658	17	39	692
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Hourly flow rate (vph)	66	46	833	22	49	876
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			300			
pX, platoon unblocked						
vC, conflicting volume	1380	428			855	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1380	428			855	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	49	92			94	
cM capacity (veh/h)	129	581			793	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	112	555	300	341	584
Volume Left	66	0	0	49	0
Volume Right	46	0	22	0	0
cSH	190	1700	1700	793	1700
Volume to Capacity	0.59	0.33	0.18	0.06	0.34
Queue Length 95th (ft)	81	0	0	5	0
Control Delay (s)	48.0	0.0	0.0	2.0	0.0
Lane LOS	E			A	
Approach Delay (s)	48.0	0.0		0.8	
Approach LOS	E				

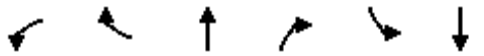
Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	13	23	1	7	11	0	25	10	8	0	8	8
Future Volume (vph)	13	23	1	7	11	0	25	10	8	0	8	8
Peak Hour Factor	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41
Hourly flow rate (vph)	32	56	2	17	27	0	61	24	20	0	20	20

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	90	44	105	40
Volume Left (vph)	32	17	61	0
Volume Right (vph)	2	0	20	20
Hadj (s)	0.06	0.08	0.00	-0.30
Departure Headway (s)	4.3	4.4	4.3	4.0
Degree Utilization, x	0.11	0.05	0.12	0.04
Capacity (veh/h)	801	785	814	857
Control Delay (s)	7.9	7.6	7.9	7.2
Approach Delay (s)	7.9	7.6	7.9	7.2
Approach LOS	A	A	A	A

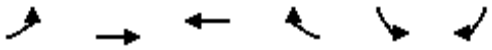
Intersection Summary				
Delay	7.7			
Level of Service	A			
Intersection Capacity Utilization	20.6%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1	1	49	3	1	71
Future Volume (Veh/h)	1	1	49	3	1	71
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.35	0.35	0.35	0.35	0.35	0.35
Hourly flow rate (vph)	3	3	140	9	3	203
Pedestrians	4					5
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	3.5					3.5
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	358	154			153	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	358	154			153	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	641	890			1434	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	6	149	206
Volume Left	3	0	3
Volume Right	3	9	0
cSH	745	1700	1434
Volume to Capacity	0.01	0.09	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	9.9	0.0	0.1
Lane LOS	A		A
Approach Delay (s)	9.9	0.0	0.1
Approach LOS	A		

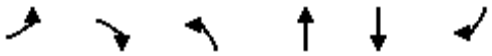
Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	16.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	16	22	12	39	54	19
Future Volume (Veh/h)	16	22	12	39	54	19
Sign Control		Free	Free		Yield	
Grade		0%	0%		0%	
Peak Hour Factor	0.44	0.44	0.44	0.44	0.44	0.44
Hourly flow rate (vph)	36	50	27	89	123	43
Pedestrians					5	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	121				198	76
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	121				198	76
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				84	96
cM capacity (veh/h)	1472				772	985

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	86	116	166
Volume Left	36	0	123
Volume Right	0	89	43
cSH	1472	1700	818
Volume to Capacity	0.02	0.07	0.20
Queue Length 95th (ft)	2	0	19
Control Delay (s)	3.3	0.0	10.5
Lane LOS	A		B
Approach Delay (s)	3.3	0.0	10.5
Approach LOS			B

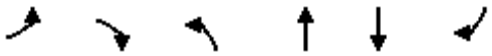
Intersection Summary			
Average Delay		5.5	
Intersection Capacity Utilization		19.5%	ICU Level of Service A
Analysis Period (min)		15	



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	20	22	16	25	10	6
Future Volume (Veh/h)	20	22	16	25	10	6
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.32	0.32	0.32	0.32	0.32	0.32
Hourly flow rate (vph)	63	69	50	78	31	19
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	220	42	51			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	220	42	51			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	92	93	97			
cM capacity (veh/h)	748	1034	1567			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	132	128	50
Volume Left	63	50	0
Volume Right	69	0	19
cSH	874	1567	1700
Volume to Capacity	0.15	0.03	0.03
Queue Length 95th (ft)	13	2	0
Control Delay (s)	9.8	3.0	0.0
Lane LOS	A	A	
Approach Delay (s)	9.8	3.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	5.4		
Intersection Capacity Utilization	18.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	21	43	30	20	28	6
Future Volume (Veh/h)	21	43	30	20	28	6
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.30	0.30	0.30	0.30	0.30	0.30
Hourly flow rate (vph)	70	143	100	67	93	20
Pedestrians	4					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	374	107	117			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	374	107	117			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	88	85	93			
cM capacity (veh/h)	586	949	1478			

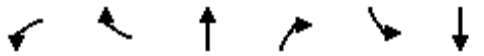
Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	213	167	113
Volume Left	70	100	0
Volume Right	143	0	20
cSH	788	1478	1700
Volume to Capacity	0.27	0.07	0.07
Queue Length 95th (ft)	27	5	0
Control Delay (s)	11.2	4.8	0.0
Lane LOS	B	A	
Approach Delay (s)	11.2	4.8	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	6.5		
Intersection Capacity Utilization	19.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	21	34	12	38	47	17
Future Volume (Veh/h)	21	34	12	38	47	17
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.41	0.41	0.41	0.41	0.41	0.41
Hourly flow rate (vph)	51	83	29	93	115	41
Pedestrians					2	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			136		246	94
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			136		246	94
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		84	96
cM capacity (veh/h)			1458		731	966

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	134	122	156
Volume Left	0	29	115
Volume Right	83	0	41
cSH	1700	1458	781
Volume to Capacity	0.08	0.02	0.20
Queue Length 95th (ft)	0	2	19
Control Delay (s)	0.0	1.9	10.8
Lane LOS		A	B
Approach Delay (s)	0.0	1.9	10.8
Approach LOS			B

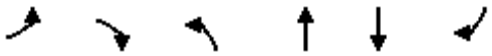
Intersection Summary			
Average Delay	4.6		
Intersection Capacity Utilization	19.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	26	598	35	0	797
Future Volume (Veh/h)	0	26	598	35	0	797
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.30	0.30	0.91	0.91	0.86	0.86
Hourly flow rate (vph)	0	87	657	38	0	927
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						160
pX, platoon unblocked	0.66					
vC, conflicting volume	1603	676			695	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1655	676			695	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	81			100	
cM capacity (veh/h)	72	457			910	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	87	695	927
Volume Left	0	0	0
Volume Right	87	38	0
cSH	457	1700	1700
Volume to Capacity	0.19	0.41	0.55
Queue Length 95th (ft)	17	0	0
Control Delay (s)	14.7	0.0	0.0
Lane LOS	B		
Approach Delay (s)	14.7	0.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	45.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	69	689	1116	138
Future Volume (Veh/h)	0	0	69	689	1116	138
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.42	0.92	0.95	0.45
Hourly flow rate (vph)	0	0	164	749	1175	307
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					382	
pX, platoon unblocked	0.78	0.78	0.78			
vC, conflicting volume	2031	741	1482			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1763	116	1062			
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	68			
cM capacity (veh/h)	41	721	520			

Direction, Lane #	NB 1	NB 2	SB 1	SB 2
Volume Total	414	499	783	699
Volume Left	164	0	0	0
Volume Right	0	0	0	307
cSH	520	1700	1700	1700
Volume to Capacity	0.32	0.29	0.46	0.41
Queue Length 95th (ft)	34	0	0	0
Control Delay (s)	9.3	0.0	0.0	0.0
Lane LOS	A			
Approach Delay (s)	4.2		0.0	
Approach LOS				

Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	63.0%	ICU Level of Service	B
Analysis Period (min)	15		

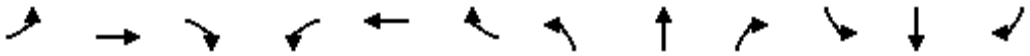
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	20	40	767	18	15	1148
Future Volume (Veh/h)	20	40	767	18	15	1148
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	23	47	892	21	17	1335
Pedestrians	11					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	1					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			300			
pX, platoon unblocked	0.91	0.91			0.91	
vC, conflicting volume	1615	468			924	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1484	228			728	
tC, single (s)	6.8	7.0			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	78	93			98	
cM capacity (veh/h)	104	698			800	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	70	595	318	462	890
Volume Left	23	0	0	17	0
Volume Right	47	0	21	0	0
cSH	243	1700	1700	800	1700
Volume to Capacity	0.29	0.35	0.19	0.02	0.52
Queue Length 95th (ft)	29	0	0	2	0
Control Delay (s)	25.7	0.0	0.0	0.6	0.0
Lane LOS	D			A	
Approach Delay (s)	25.7	0.0		0.2	
Approach LOS	D				

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
4: Pine Avenue & Frederick Street

09/21/2017



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	13	27	5	3	20	2	7	13	3	0	5	12
Future Volume (vph)	13	27	5	3	20	2	7	13	3	0	5	12
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Hourly flow rate (vph)	18	37	7	4	27	3	10	18	4	0	7	16

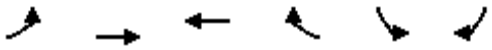
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	62	34	32	23
Volume Left (vph)	18	4	10	0
Volume Right (vph)	7	3	4	16
Hadj (s)	-0.01	0.04	-0.01	-0.31
Departure Headway (s)	4.0	4.1	4.1	3.8
Degree Utilization, x	0.07	0.04	0.04	0.02
Capacity (veh/h)	873	857	844	913
Control Delay (s)	7.3	7.3	7.3	6.9
Approach Delay (s)	7.3	7.3	7.3	6.9
Approach LOS	A	A	A	A

Intersection Summary				
Delay	7.2			
Level of Service	A			
Intersection Capacity Utilization	20.7%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	2	10	0	10	34
Future Volume (Veh/h)	0	2	10	0	10	34
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77
Hourly flow rate (vph)	0	3	13	0	13	44
Pedestrians	2					1
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	3.5					3.5
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	85	16			15	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	85	16			15	
tC, single (s)	6.4	6.7			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.8			2.2	
p0 queue free %	100	100			99	
cM capacity (veh/h)	912	937			1613	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	3	13	57
Volume Left	0	0	13
Volume Right	3	0	0
cSH	937	1700	1613
Volume to Capacity	0.00	0.01	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	8.9	0.0	1.7
Lane LOS	A		A
Approach Delay (s)	8.9	0.0	1.7
Approach LOS	A		

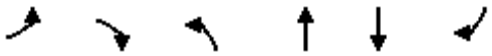
Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	19.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	38	29	7	19	20
Future Volume (Veh/h)	0	38	29	7	19	20
Sign Control		Free	Free		Yield	
Grade		0%	0%		0%	
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72
Hourly flow rate (vph)	0	53	40	10	26	28
Pedestrians					7	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	57				105	52
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	57				105	52
tC, single (s)	4.1				6.5	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.3
p0 queue free %	100				97	97
cM capacity (veh/h)	1550				863	1015

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	53	50	54
Volume Left	0	0	26
Volume Right	0	10	28
cSH	1550	1700	936
Volume to Capacity	0.00	0.03	0.06
Queue Length 95th (ft)	0	0	5
Control Delay (s)	0.0	0.0	9.1
Lane LOS			A
Approach Delay (s)	0.0	0.0	9.1
Approach LOS			A

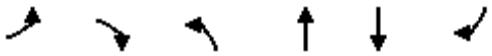
Intersection Summary			
Average Delay	3.1		
Intersection Capacity Utilization	15.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	8	11	4	14	12	0
Future Volume (Veh/h)	8	11	4	14	12	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.63	0.63	0.63	0.63	0.63	0.63
Hourly flow rate (vph)	13	17	6	22	19	0
Pedestrians	6				2	
Lane Width (ft)	12.0				12.0	
Walking Speed (ft/s)	3.5				3.5	
Percent Blockage	1				0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	61	25	25			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	61	25	25			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	98	100			
cM capacity (veh/h)	940	1051	1593			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	30	28	19
Volume Left	13	6	0
Volume Right	17	0	0
cSH	1000	1593	1700
Volume to Capacity	0.03	0.00	0.01
Queue Length 95th (ft)	2	0	0
Control Delay (s)	8.7	1.6	0.0
Lane LOS	A	A	
Approach Delay (s)	8.7	1.6	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	4.0		
Intersection Capacity Utilization	15.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	8	21	4	10	22	3
Future Volume (Veh/h)	8	21	4	10	22	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.57	0.57	0.57	0.57	0.57	0.57
Hourly flow rate (vph)	14	37	7	18	39	5
Pedestrians	10					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	84	52	54			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	84	52	54			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	96	100			
cM capacity (veh/h)	910	1012	1549			

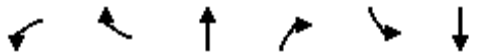
Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	51	25	44
Volume Left	14	7	0
Volume Right	37	0	5
cSH	982	1549	1700
Volume to Capacity	0.05	0.00	0.03
Queue Length 95th (ft)	4	0	0
Control Delay (s)	8.9	2.1	0.0
Lane LOS	A	A	
Approach Delay (s)	8.9	2.1	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	4.2		
Intersection Capacity Utilization	16.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	26	8	7	32	23	19
Future Volume (Veh/h)	26	8	7	32	23	19
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73
Hourly flow rate (vph)	36	11	10	44	32	26
Pedestrians					1	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			48		106	42
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			48		106	42
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		96	97
cM capacity (veh/h)			1571		889	1033

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	47	54	58
Volume Left	0	10	32
Volume Right	11	0	26
cSH	1700	1571	948
Volume to Capacity	0.03	0.01	0.06
Queue Length 95th (ft)	0	0	5
Control Delay (s)	0.0	1.4	9.0
Lane LOS		A	A
Approach Delay (s)	0.0	1.4	9.0
Approach LOS			A

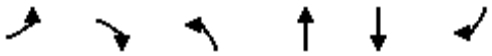
Intersection Summary			
Average Delay		3.8	
Intersection Capacity Utilization		17.7%	ICU Level of Service A
Analysis Period (min)		15	



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	1	687	2	0	1256
Future Volume (Veh/h)	0	1	687	2	0	1256
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.40	0.40	0.90	0.90	0.84	0.84
Hourly flow rate (vph)	0	3	763	2	0	1495
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						160
pX, platoon unblocked	0.78					
vC, conflicting volume	1512	382			765	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1098	382			765	
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	621			857	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	3	509	256	748	748
Volume Left	0	0	0	0	0
Volume Right	3	0	2	0	0
cSH	621	1700	1700	1700	1700
Volume to Capacity	0.00	0.30	0.15	0.44	0.44
Queue Length 95th (ft)	0	0	0	0	0
Control Delay (s)	10.8	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	10.8	0.0		0.0	
Approach LOS	B				

Intersection Summary				
Average Delay	0.0			
Intersection Capacity Utilization	38.1%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	46	846	956	43
Future Volume (Veh/h)	0	0	46	846	956	43
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.44	0.91	0.94	0.57
Hourly flow rate (vph)	0	0	105	930	1017	75
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					382	
pX, platoon unblocked	0.88	0.88	0.88			
vC, conflicting volume	1730	546	1092			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1563	224	842			
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	85			
cM capacity (veh/h)	79	694	709			

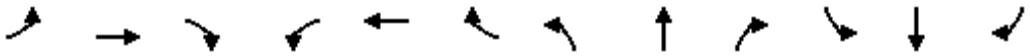
Direction, Lane #	NB 1	NB 2	SB 1	SB 2
Volume Total	415	620	678	414
Volume Left	105	0	0	0
Volume Right	0	0	0	75
cSH	709	1700	1700	1700
Volume to Capacity	0.15	0.36	0.40	0.24
Queue Length 95th (ft)	13	0	0	0
Control Delay (s)	4.3	0.0	0.0	0.0
Lane LOS	A			
Approach Delay (s)	1.7		0.0	
Approach LOS				

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	12	20	881	18	27	932
Future Volume (Veh/h)	12	20	881	18	27	932
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	13	21	927	19	28	981
Pedestrians	24					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	2					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			300			
pX, platoon unblocked	0.90	0.90			0.90	
vC, conflicting volume	1507	497			970	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1342	220			746	
tC, single (s)	6.8	6.9			4.3	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.3	
p0 queue free %	89	97			96	
cM capacity (veh/h)	123	695			721	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	34	618	328	355	654
Volume Left	13	0	0	28	0
Volume Right	21	0	19	0	0
cSH	251	1700	1700	721	1700
Volume to Capacity	0.14	0.36	0.19	0.04	0.38
Queue Length 95th (ft)	12	0	0	3	0
Control Delay (s)	21.6	0.0	0.0	1.3	0.0
Lane LOS	C			A	
Approach Delay (s)	21.6	0.0		0.4	
Approach LOS	C				

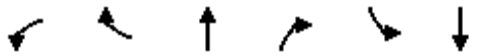
Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	4	18	10	8	18	2	6	2	0	2	8	16
Future Volume (vph)	4	18	10	8	18	2	6	2	0	2	8	16
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	5	20	11	9	20	2	7	2	0	2	9	18

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	36	31	9	29
Volume Left (vph)	5	9	7	2
Volume Right (vph)	11	2	0	18
Hadj (s)	-0.10	0.02	0.16	-0.36
Departure Headway (s)	3.9	4.0	4.2	3.7
Degree Utilization, x	0.04	0.03	0.01	0.03
Capacity (veh/h)	906	879	827	953
Control Delay (s)	7.1	7.2	7.3	6.8
Approach Delay (s)	7.1	7.2	7.3	6.8
Approach LOS	A	A	A	A

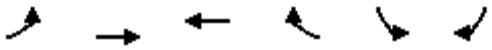
Intersection Summary				
Delay	7.0			
Level of Service	A			
Intersection Capacity Utilization	19.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	2	1	13	4	30	28
Future Volume (Veh/h)	2	1	13	4	30	28
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.38	0.38	0.38	0.38	0.38	0.38
Hourly flow rate (vph)	5	3	34	11	79	74
Pedestrians	1					6
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	3.5					3.5
Percent Blockage	0					1
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	272	46			46	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	272	46			46	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			95	
cM capacity (veh/h)	684	1022			1573	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	8	45	153
Volume Left	5	0	79
Volume Right	3	11	0
cSH	781	1700	1573
Volume to Capacity	0.01	0.03	0.05
Queue Length 95th (ft)	1	0	4
Control Delay (s)	9.7	0.0	4.0
Lane LOS	A		A
Approach Delay (s)	9.7	0.0	4.0
Approach LOS	A		

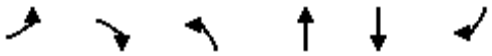
Intersection Summary			
Average Delay	3.4		
Intersection Capacity Utilization	21.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	9	28	24	4	11	14
Future Volume (Veh/h)	9	28	24	4	11	14
Sign Control		Free	Free		Yield	
Grade		0%	0%		0%	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	11	35	30	5	14	17
Pedestrians					5	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	40				94	38
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	40				94	38
tC, single (s)	4.1				6.4	6.4
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.4
p0 queue free %	99				98	98
cM capacity (veh/h)	1575				899	994

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	46	35	31
Volume Left	11	0	14
Volume Right	0	5	17
cSH	1575	1700	949
Volume to Capacity	0.01	0.02	0.03
Queue Length 95th (ft)	1	0	3
Control Delay (s)	1.8	0.0	8.9
Lane LOS	A		A
Approach Delay (s)	1.8	0.0	8.9
Approach LOS			A

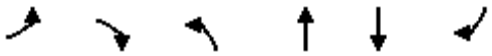
Intersection Summary			
Average Delay		3.2	
Intersection Capacity Utilization		18.6%	ICU Level of Service A
Analysis Period (min)		15	



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	2	2	2	7	22	3
Future Volume (Veh/h)	2	2	2	7	22	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.67	0.67	0.67	0.67	0.67	0.67
Hourly flow rate (vph)	3	3	3	10	33	4
Pedestrians	3			1	3	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	0			0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	57	39	40			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	57	39	40			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	948	1034	1578			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	6	13	37
Volume Left	3	3	0
Volume Right	3	0	4
cSH	989	1578	1700
Volume to Capacity	0.01	0.00	0.02
Queue Length 95th (ft)	0	0	0
Control Delay (s)	8.7	1.7	0.0
Lane LOS	A	A	
Approach Delay (s)	8.7	1.7	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	14.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	31	2	9	24	2
Future Volume (Veh/h)	0	31	2	9	24	2
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.35	0.35	0.35	0.35	0.35	0.35
Hourly flow rate (vph)	0	89	6	26	69	6
Pedestrians	14					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	124	86	89			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	124	86	89			
tC, single (s)	6.4	6.3	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.4	2.2			
p0 queue free %	100	91	100			
cM capacity (veh/h)	861	946	1499			

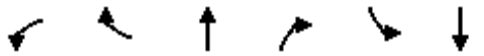
Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	89	32	75
Volume Left	0	6	0
Volume Right	89	0	6
cSH	946	1499	1700
Volume to Capacity	0.09	0.00	0.04
Queue Length 95th (ft)	8	0	0
Control Delay (s)	9.2	1.4	0.0
Lane LOS	A	A	
Approach Delay (s)	9.2	1.4	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	4.4		
Intersection Capacity Utilization	17.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	32	10	15	25	4	0
Future Volume (Veh/h)	32	10	15	25	4	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	36	11	17	28	5	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			47		104	42
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			47		104	42
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		99	100
cM capacity (veh/h)			1573		890	1035

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	47	45	5
Volume Left	0	17	5
Volume Right	11	0	0
cSH	1700	1573	890
Volume to Capacity	0.03	0.01	0.01
Queue Length 95th (ft)	0	1	0
Control Delay (s)	0.0	2.8	9.1
Lane LOS		A	A
Approach Delay (s)	0.0	2.8	9.1
Approach LOS			A

Intersection Summary			
Average Delay		1.8	
Intersection Capacity Utilization		18.8%	ICU Level of Service A
Analysis Period (min)		15	



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	1	844	2	0	998
Future Volume (Veh/h)	0	1	844	2	0	998
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.50	0.50	0.91	0.91	0.93	0.93
Hourly flow rate (vph)	0	2	927	2	0	1073
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						160
pX, platoon unblocked	0.88					
vC, conflicting volume	1464	464			929	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1258	464			929	
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)	146	550			744	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	2	618	311	536	536
Volume Left	0	0	0	0	0
Volume Right	2	0	2	0	0
cSH	550	1700	1700	1700	1700
Volume to Capacity	0.00	0.36	0.18	0.32	0.32
Queue Length 95th (ft)	0	0	0	0	0
Control Delay (s)	11.6	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	11.6	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	33.4%	ICU Level of Service	A
Analysis Period (min)	15		