Traffic Impact Study
Proposed Car Wash

Warrenville, Illinois

Prepared For:

Dream Clean Car Wash

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

April 17, 2025

1. Introduction

This report summarizes the methodologies, results, and findings of a traffic impact study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for a proposed development to be located in the northwest corner of the intersection of IL Route 59 with Duke Parkway/Everton Drive. As proposed, the south portion of the site will be developed with an automatic car wash tunnel with 19 vacuum stalls and eight employee stalls. The northeast portion of the site will contain an approximately 2,050 square-foot Starbucks coffee shop with a drive-through lane and 22 parking spaces and the northwest portion of the site, based on the proposed zoning, was assumed to be developed with a 10,000 square-foot general office building. Access to the site will be provided off Estes Street, Barkley Avenue, and Duke Parkway.

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, and determine if any roadway or access improvements are necessary to accommodate traffic generated by the proposed development. **Figure 1** shows the location of the site in relation to the area roadway system. **Figure 2** shows an aerial view of the site.

The sections of this report present the following:

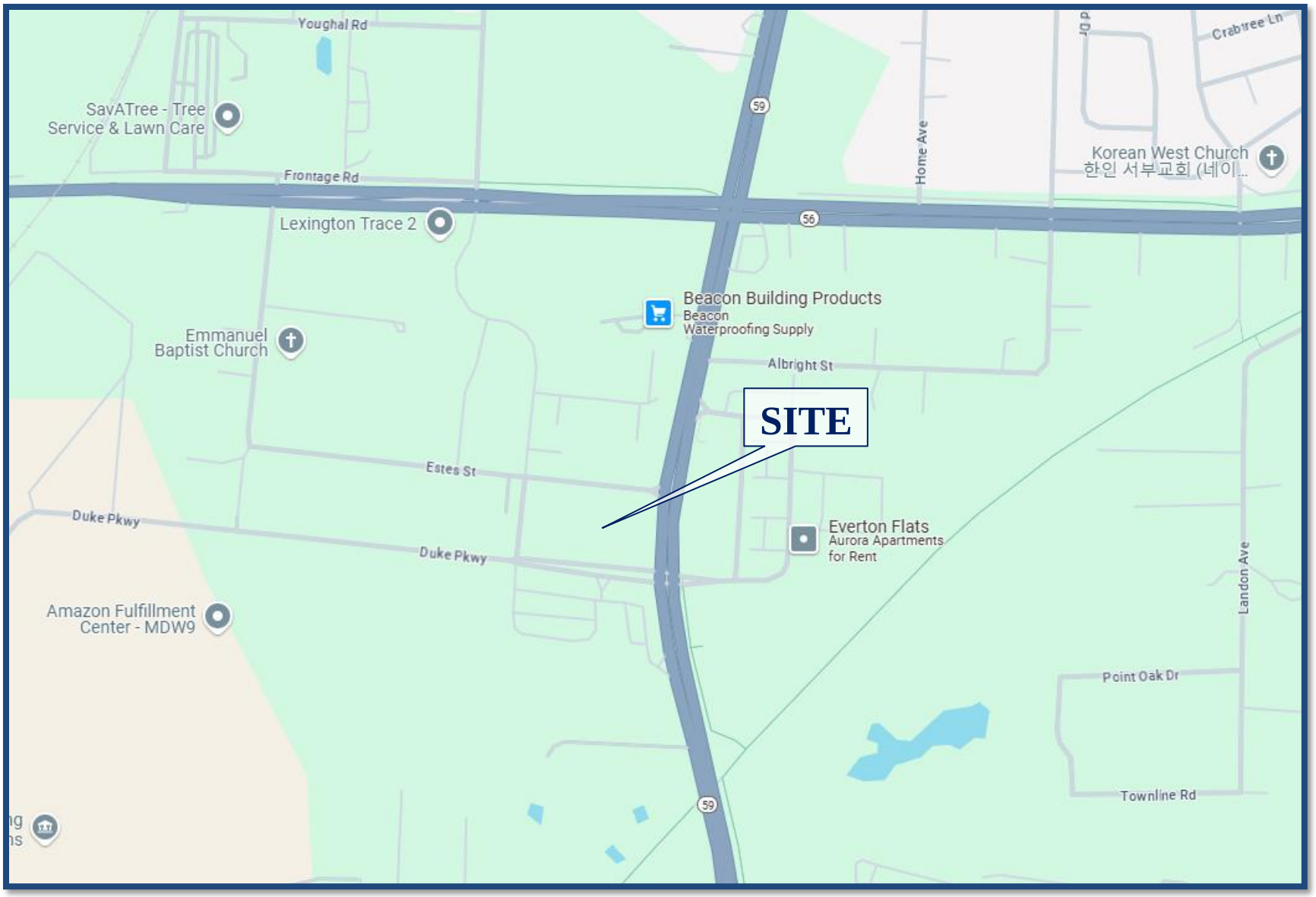
- Existing roadway conditions
- A description of the development
- Directional distribution of the development traffic
- Vehicle trip generation for the development
- Future traffic conditions including access to the development
- Traffic analyses for the weekday morning, weekday evening, and Saturday midday peak hours
- Recommendations with respect to adequacy of the site access and adjacent roadway system

Traffic capacity analyses were conducted for the weekday morning, weekday evening, and Saturday midday peak hours for the following conditions:

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

2. No-Build Conditions – Analyzes the capacity of the existing roadway system using the ambient area growth not attributable to any particular development and any additional developments not associated with the development.

3. Projected Conditions – Analyzes 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 proposed development.



Site Location **Figure 1**

Aerial View of Site **Figure 2**

2. Existing 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 vacant, is located in the northwest quadrant of the intersection of IL Route 59 with Duke Parkway/Everton Drive. Surrounding land uses are a mixture of residential and commercial land uses including Thorntons fuel center to the south, Culver's to the northeast, and residential uses to the north, west, and east.

Existing Roadway System Characteristics

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

Illinois Route 59 (IL 59) is a north-south, other principal arterial roadway that provides two travel lanes in each direction generally divided by a 12-foot striped median. At its signalized intersection with Duke Parkway/Everton Drive, IL 59 provides dual left-turn lanes, two through lanes, and an exclusive right-turn lane on the northbound approach, an exclusive left-turn lane, two through lanes, and an exclusive right-turn lane on the southbound approach. High visibility crosswalks are provided on all four legs of this intersection. At its unsignalized "T" intersection with Estes Street, IL 59 provides two through lanes on the northbound approach, two through lanes and an exclusive right-turn lane on the southbound approach. IL 59 is under the jurisdiction of the Illinois Department of Transportation (IDOT), has a posted speed limit of 45 mph, and is designated as a Strategic Regional Arterial (SRA). IL 59 carries an Annual Average Daily Traffic (AADT) volume of 34,200 vehicles (IDOT 2023) and has a posted speed limit of 45 miles per hour.

Duke Parkway is a local roadway that extends from IL 59 west and then south to Ferry Road. It generally provides one travel lane in each direction. At its signalized intersection with IL 59/Everton Drive, Duke Parkway provides an exclusive left-turn lane, a through lane, and an exclusive right-turn lane on the eastbound approach while the Everton Drive provides an exclusive left-turn lane and a shared through/right-turn lane on the westbound approach. At its unsignalized intersection with Barkley Drive, Duke Parkway provides an exclusive left-turn lane and a shared through/right-turn lane on the eastbound approach and an exclusive left-turn lane, a through lane, and an exclusive right-turn lane on the westbound approach. High visibility crosswalks are provided on the west and north legs of this intersection. Duke Parkway is under the jurisdiction of the City of Aurora and has a posted speed limit of 20 mph.

LEGEND

- TRAVEL LANE
- TRAFFIC SIGNAL
- STOP SIGN
- XX - SPEED LIMIT SIGN
- NO PARKING
- HIGH VISIBILITY CROSSWALK
- NO LEFT TURN SIGN

N

NOT TO SCALE

BARKLEY AVENUE

20

56

BUTTERFIELD ROAD

RESIDENTIAL

RESIDENTIAL

59

CULVER'S

ESTES STREET

20

LOT 1

LOT 2

SITE

LOT 3

RESIDENTIAL

DUKE PARKWAY

THORNTONS

CAR WASH
WARRENVILLE,
ILLINOIS

EXISTING ROADWAY CHARACTERISTICS

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Job No: 25-009 Figure: 3

Barkley Avenue is a local roadway that provides one travel lane in each direction. At its unsignalized intersection with Duke Parkway, Barkley Avenue provides a shared left-turn/through/right-turn lane on both approaches. At its unsignalized intersection with Estes Street, Barkley Avenue provides a shared left-turn/through/right-turn lane on b approaches. At its unsignalized intersection with Butterfield Road, Barkley Avenue provides a shared left-turn/through lane, an exclusive right-turn lane, and a high visibility crosswalk on the northbound approach. Barkley Drive is under the jurisdiction of the city of Warrenville and has a posted speed limit of 25 miles per hour.

Butterfield Road (IL Route 56) is an east-west, other principal arterial that in the vicinity of the site provides two travel lanes in each direction separated by a landscaped raised median. At its unsignalized intersection with Barkley Avenue, Butterfield Road provides an exclusive left-turn lane, a through lane, and a shared through/right-turn lane on both approaches. Butterfield Road is under the jurisdiction of IDOT, is designated as an SRA, carries an AADT volume of 22,600 vehicles (IDOT 2023, and has a posted speed limit of 45 miles per hour in the vicinity of the site.

Estes Street is an east-west local roadway that provides one travel lane in each direction. At its unsignalized intersection with IL 59, Estes Street provides an exclusive right-turn lane under stop sign control. Estes Street is under the jurisdiction of the city of Warrenville and has a posted speed limit of 20 miles per hour.

Existing Traffic Volumes

In order to determine current traffic conditions in the vicinity of the site, KLOA, Inc. conducted peak period traffic counts utilizing Miovision Scout Video Collection Units during the weekday morning (7:00 to 9:00 A.M.), weekday evening (4:00 to 6:00 P.M.), and Saturday midday (12:00 to 2:00 P.M.) peak periods at the following intersections:

- IL Route 59 with Duke Parkway/Everton Drive
- IL Route 59 with Estes Drive
- Barkley Avenue with Butterfield Road
- Barkley Avenue with Estes Drive
- Barkley Avenue with Duke Parkway

All counts were conducted on January 25th and 28th, 2025. The results of the traffic counts showed that the weekday morning peak hour of traffic generally occurs from 7:15 A.M. to 8:15 A.M., the weekday evening peak hour of traffic generally occurs from 4:30 P.M. to 5:30 P.M., and the Saturday midday peak hour generally occurs from 1:00 P.M. to 2:00 P.M.

Figure 4 illustrates the existing traffic volumes. Copies of the traffic count summary sheets are included in the Appendix.

LEGEND

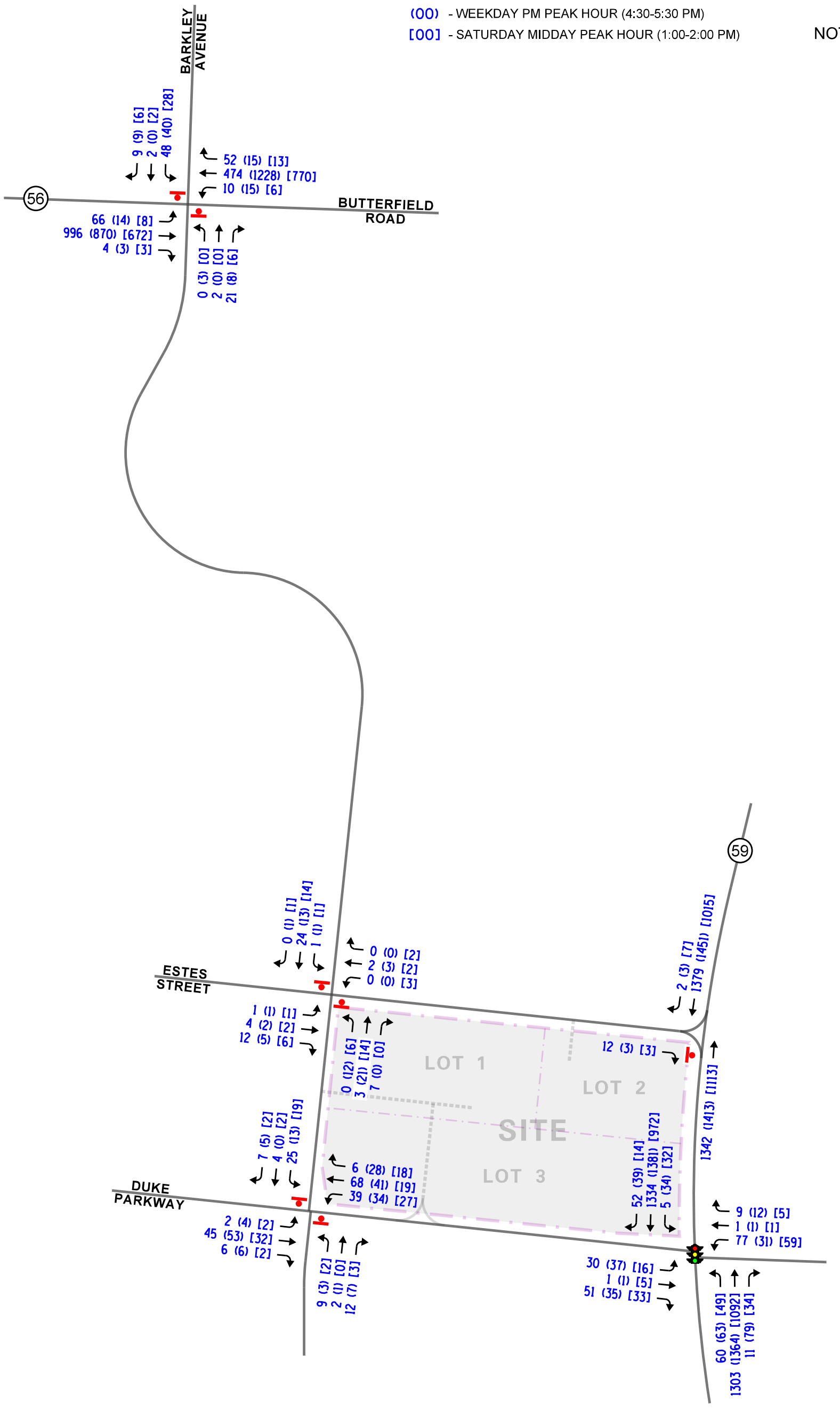
00 - WEEKDAY AM PEAK HOUR (7:15-8:15 AM)

(00) - WEEKDAY PM PEAK HOUR (4:30-5:30 PM)

[00] - SATURDAY MIDDAY PEAK HOUR (1:00-2:00 PM)

N

NOT TO SCALE



CAR WASH
WARRENVILLE,
ILLINOIS

EXISTING TRAFFIC VOLUMES

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Crash Data Summary

KLOA, Inc. obtained crash data[1] for the most recent available past five years (2019 to 2023) for the intersections within the study area. It should be noted that no crashes were reported at the intersections of Barkley Road with Estes Street and Duke Parkway during the review period. The crash data for the other intersections is summarized in **Tables 1** through **3**. A review of the crash data revealed that no fatalities were reported at the intersections during the reviewed period.

Table 1
IL 59 WITH DUKE PARKWAY/EVERTON DRIVE – CRASH SUMMARY

Year	Type of Crash Frequency							
	Angle	Head On	Object	Rear End	Sideswipe	Turning	Other	Total
2019	0	0	0	0	0	0	0	0
2020	0	0	0	1	0	0	0	1
2021	0	0	0	2	0	1	0	3
2022	0	0	0	1	0	1	0	2
2023	0	0	0	2	0	0	0	2
Total	**0**	**0**	**0**	**6**	**0**	**2**	**0**	**8**
Average	**--**	**--**	**--**	**1.2**	**--**	**<1.0**	**--**	**1.6**

Table 2
BUTTERFIELD ROAD AND BARKLEY AVENUE – CRASH SUMMARY

Year	Type of Crash Frequency							
	Angle	Head On	Object	Rear End	Sideswipe	Turning	Other	Total
2019	0	0	0	0	0	1	0	1
2020	0	0	0	0	0	0	0	0
2021	0	0	0	1	0	0	0	1
2022	0	0	0	0	0	0	0	0
2023	0	0	0	0	0	1	0	1
Total	**0**	**0**	**0**	**1**	**0**	**2**	**0**	**3**
Average	**--**	**--**	**--**	**<1.0**	**--**	**<1.0**	**--**	**<1.0**

[1] IDOT DISCLAIMER: The motor vehicle crash data referenced herein was provided by the Illinois Department of Transportation. Any conclusions drawn from analysis of the aforementioned data are the sole responsibility of the data recipient(s).

Table 3
IL 59 WITH ESTES STREET – CRASH SUMMARY

Year	Type of Crash Frequency							
	Angle	Head On	Object	Rear End	Sideswipe	Turning	Other	Total
2019	0	0	0	0	0	0	0	0
2020	0	0	0	0	0	0	0	0
2021	0	0	0	0	0	0	0	0
2022	0	0	0	0	0	1	0	1
2023	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**
Average	**--**	**--**	**--**	**--**	**--**	**<1.0**	**--**	**<1.0**

3. Traffic Characteristics of the Proposed Development

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 generates.

Proposed Site and Development Plan

As proposed, the south portion of the site will be developed with an automatic car wash tunnel with 19 vacuum stalls and eight employee stalls. The northeast portion of the site will contain an approximately 2,050 square-foot Starbucks coffee shop with a drive-through lane and 22 parking spaces and the northwest portion of the site, based on the proposed zoning, was assumed to be developed with a 10,000 square-foot general office building. Access to the proposed development will be provided via the following access drives:

- A proposed full-movement access drive off Estes Street located approximately 270 feet west of IL 59. This access drive will provide one inbound lane and one outbound lane with the outbound movements under stop sign control. It should be noted that this access drive will provide direct access to Starbucks and indirect access to the car wash via an internal shared driveway.

- A proposed full movement access drive off Barkley Avenue approximately 170 feet south of Estes Street. This access drive will provide one inbound lane and one outbound lane with the outbound movements under stop sign control.

- A proposed right-in/right-out access drive located approximately 430 feet west of the IL 59 westerly right-of-way line. This access drive will provide one inbound lane and one outbound lane with the outbound movement under stop sign control. This access drive will provide direct access to the car wash and indirect access to Starbucks via an internal shared driveway.

A copy of the preliminary site plan is included in the Appendix.

Car Wash Operations and Circulation

The car wash tunnel will be located in the southeast portion of the property, oriented east-west. The vacuum stalls will be located on the south side of the car wash tunnel. Circulation through the vacuum stalls will be provided via a two-way drive aisle. All vehicles will have access to the vacuum stalls before and after utilizing the car wash.

Access to the car wash tunnel entrance will be provided via a two-way drive aisle on the west side of the building. The two queue lanes will be provided with two pay stations before the merger. Immediately after the pay stations, the two approach lanes will narrow to one lane that leads to the entrance of the car wash tunnel.

As proposed, the single-lane automatic car wash tunnel will be an exterior-only car wash system and will provide one-way, counterclockwise circulation. Manual and automated controls will increase, decrease, or stop vehicle flow through the car wash. The entrance to the car wash will be oriented towards the east of the site and the exit will be located towards the west of the site. Each of the two approach lanes will be individually gated with a separate automatic pay station. The gates will meter the traffic flow proceeding to the car wash tunnel entrance and will open in sequence based on the order of vehicle arrival.

Once the gate is lifted for the respective lane, the individual vehicle will proceed north and east to the entrance to the car wash tunnel. At the entrance to the car wash tunnel, the driver will remain in the vehicle and the car wash will automatically pull the vehicle through the tunnel. After exiting the tunnel, the vehicles will proceed to either use the vacuum stalls or exit the site via the access drives.

Car Wash Stacking

According to the site plan, there will be stacking for a total of approximately 37 to 38 vehicles to queue in the two approach lanes to the two pay stations. In addition, there will be stacking for approximately four vehicles between the pay stations and the entrance to the tunnel. As such, the plan provides stacking for a total of approximately 41 to 42 vehicles from the drive aisle to the entrance to the drive-through system.

Car Wash Wayfinding and Traffic Control Signage

The following wayfinding and traffic control signage is recommended:

- Wayfinding signage should be posted to guide vehicles to the respective car wash stacking area to minimize vehicle turning movements within the internal site circulation area.
- Wayfinding signage should be posted at the exit of the car wash tunnel to direct vehicles exiting the car wash to either the access drives or the vacuum stalls.
- A “Do Not Enter” sign should be posted at the exit of the car wash tunnel to deter opposing traffic from entering the car wash tunnel from the one-way exit direction.

- A stop sign should be provided at the western end of the vacuum stall drive aisle in order to promote free-flow movement for vehicles entering and exiting the site.

Vacuum Stalls

All the 19 vacuum stalls will be located on the south side of the car wash tunnel, of which one will be accessible. A two-way drive aisle will be provided, allowing flexibility for vehicles to access the south vacuum area before or after the car wash and vehicles exiting the vacuum stalls to utilize the two-way drive aisle to exit the site.

Peak Day Operations

Typical of any car wash, its peak operations (design day) typically occur after a weather event such as a snowfall or a rain event. Based on historical data from other car washes, this typically occurs 12 to 15 times per year.

When this peak demand occurs, the following operational procedures are implemented:

- Increase the service rate of the tunnel to the maximum it can process.
- Provide staff at critical locations within the circulation system during peak periods at the car wash to help direct and manage the flow of traffic through the site. Critical internal locations where staff should be located include the pay stations and at the exit of the car wash.

Starbucks Stacking

All vehicles will enter the drive-through lane from the southwest corner of the site. After ordering, the vehicles will make a left-turn to drive north and make another left to the pick-up window located on the north side of the building. After picking up the order, vehicles can make a right turn to exit onto Estes Street or continue west to access the other two access drives. Exiting movements from the drive-through should be under stop sign control. A review of the site plan showed a stacking of approximately 15 vehicles within the drive-through layout.

Directional Distribution of Site Traffic

The directions from which traffic will approach and depart the site were estimated based on existing travel patterns, as determined from the traffic counts. **Figure 5** illustrates the directional distribution of vehicles to/from the proposed development.

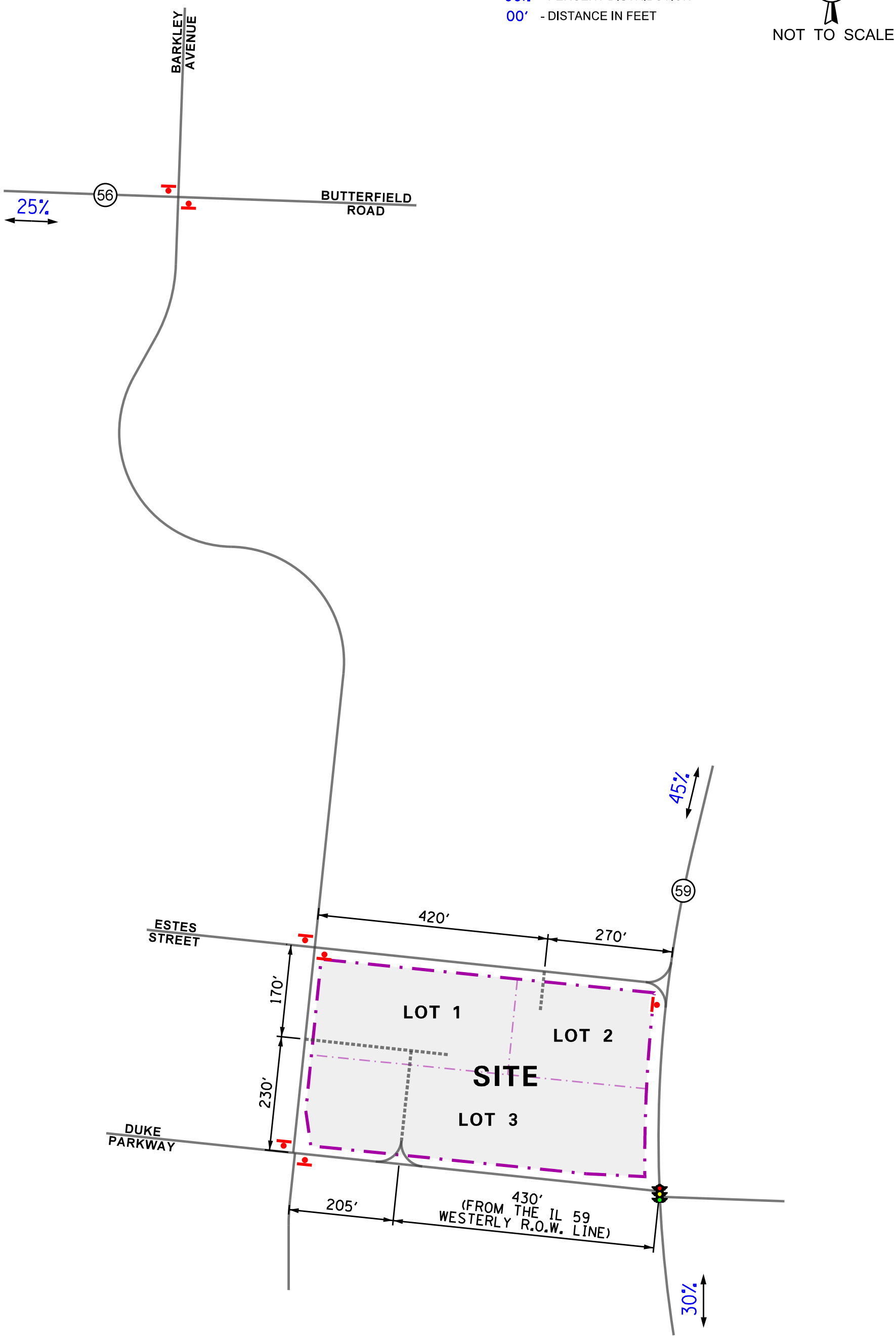
LEGEND

00% - PERCENT DISTRIBUTION

00′ - DISTANCE IN FEET

N

NOT TO SCALE



CAR WASH
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DIRECTIONAL DISTRIBUTION

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Job No: 25-009 Figure: 5

Development-Generated Traffic Volumes

The number of peak hour trips estimated to be generated by the proposed development was based on vehicle trip generation rates contained in *Trip Generation Manual*, 11th Edition, published by the Institute of Transportation Engineers (ITE). The "Automated Car Wash" (Land-Use Code 948) rate was utilized for the car wash tunnel.

It is important to note that trips made to car washes are typically diverted from the existing traffic on the roadway system. This is particularly true during the weekday morning and evening peak hours when traffic is diverted from the home-to-work and work-to-home trips. Such diverted trips are referred to as pass-by traffic. However, in order to present a worst-case scenario, no reduction in the site-generated traffic was taken into account. Based on the data provided in the ITE Manual for an automated car wash (Land-Use Code 948), the typical usage is approximately 71 vehicles per hour during the weekday evening peak hour. The ITE Manual does not provide data for the morning peak hour for an automated car wash. For the purposes of the evaluation, it was assumed to be approximately one-third of the weekday evening peak hour trip generation.

The "Coffee Shop with Drive-Through" (Land-Use Code 937) rate was used for the Starbucks with drive-through facility. It is important to note that surveys conducted by ITE have shown that as much as 90 percent of trips made to coffee shops are diverted from the existing traffic on the roadway system. However, in order to provide for a conservative analysis and consistent with other studies approved by IDOT, DuPage County and other municipalities, the number of new passenger vehicle trips estimated to be generated by Starbucks was reduced by 70 percent to account for pass-by traffic.

Lot 1 of the development, based on the proposed zoning, was assumed to be developed with a 10,000 square-foot general office building. The ITE "General Office Building" (Land-Use Code 710) was utilized to estimate the number of trips for this lot.

Table 4 summarizes the estimated peak hour trips. A copy of the ITE trip generation sheets is included in the Appendix.

Table 4
PEAK HOUR SITE-GENERATED TRAFFIC VOLUMES

ITE Land-Use Code	Type/Size	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Saturday Midday Peak Hour		
		In	Out	Total	In	Out	Total	In	Out	Total
948	Automated Car Wash (1 Tunnel)	13	13	26	39	39	78	19	22	41
937	Coffee Shop with Drive-Through (2,050 s.f.)	90	86	176	40	40	80	90	90	180
	Total Trips	103	99	202	79	79	158	109	112	221
	70% Pass-By Reduction	*-60*	*-60*	*-120*	*-28*	*-28*	*-56*	*-63*	*-63*	*-126*
710	General Office (10,000 s.f.)	20	3	23	4	21	25	3	2	5
	Total New Trips	**63**	**42**	**105**	**55**	**72**	**127**	**49**	**51**	**100**

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 development.

Site-Generated Traffic Assignment

The estimated weekday morning, weekday evening, and Saturday midday peak hour traffic volumes that will be generated by the proposed development were assigned to the roadway system in accordance with the previously described directional distribution (Figure 5). The traffic assignment for the car wash is illustrated in **Figure 6**, for the Starbucks in **Figure 7** and for the assumed general office building in **Figure 8**. The pass-by traffic volumes are illustrated in **Figure 9.**

Background (No-Build) Traffic Conditions

The existing traffic volumes (Figure 4) 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 2050 Average Daily Traffic (ADT) projections provided by the Chicago Metropolitan Agency for Planning (CMAP) in a letter, the existing traffic volumes were increased by an annually compounded growth rate of 0.94 percent for six years totaling approximately seven percent to represent Year 2031 background conditions. **Figure 10** shows the Year 2031 no-build traffic volumes.

Year 2031 Total Projected Traffic Volumes

The Year 2031 total projected traffic volumes include the no-build traffic volumes and the traffic estimated to be generated by the proposed car wash and Starbucks. **Figure 11** shows the Year 2031 total projected traffic volumes.

LEGEND

00 - WEEKDAY AM PEAK HOUR (7:15-8:15 AM)

(00) - WEEKDAY PM PEAK HOUR (4:30-5:30 PM)

[00] - SATURDAY MIDDAY PEAK HOUR (1:00-2:00 PM)

N

NOT TO SCALE

BARKLEY AVENUE

56

BUTTERFIELD ROAD

3 (10) [5]

3 (10) [6]
3 (8) [4]

1 (3) [1]
1 (3) [2]

2 (6) [4]

A ESTES STREET @ ACCESS DRIVE

1 (3) [2]

8 (23) [11]

5 (15) [8]

C DUKE PARKWAY @ RI/RO ACCESS DRIVE

4 (13) [6]

5 (15) [8]
5 (15) [8]

1 (3) [2]

B BARKLEY AVENUE @ ACCESS DRIVE

59

3 (10) [5]

1 (3) [1]

2 (6) [3]
4 (11) [5]

ESTES STREET

A

LOT 1

LOT 2

SITE

LOT 3

B

6 (18) [10]

5 (15) [8]

2 (6) [4]

3 (9) [5]

4 (11) [5]
2 (6) [4]

DUKE PARKWAY

1 (3) [2]

C

3 (9) [5]
2 (6) [3]

4 (12) [6]

CAR WASH
WARRENVILLE,
ILLINOIS

CAR WASH-GENERATED TRAFFIC VOLUMES

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Job No: 25-009 Figure: 6

LEGEND

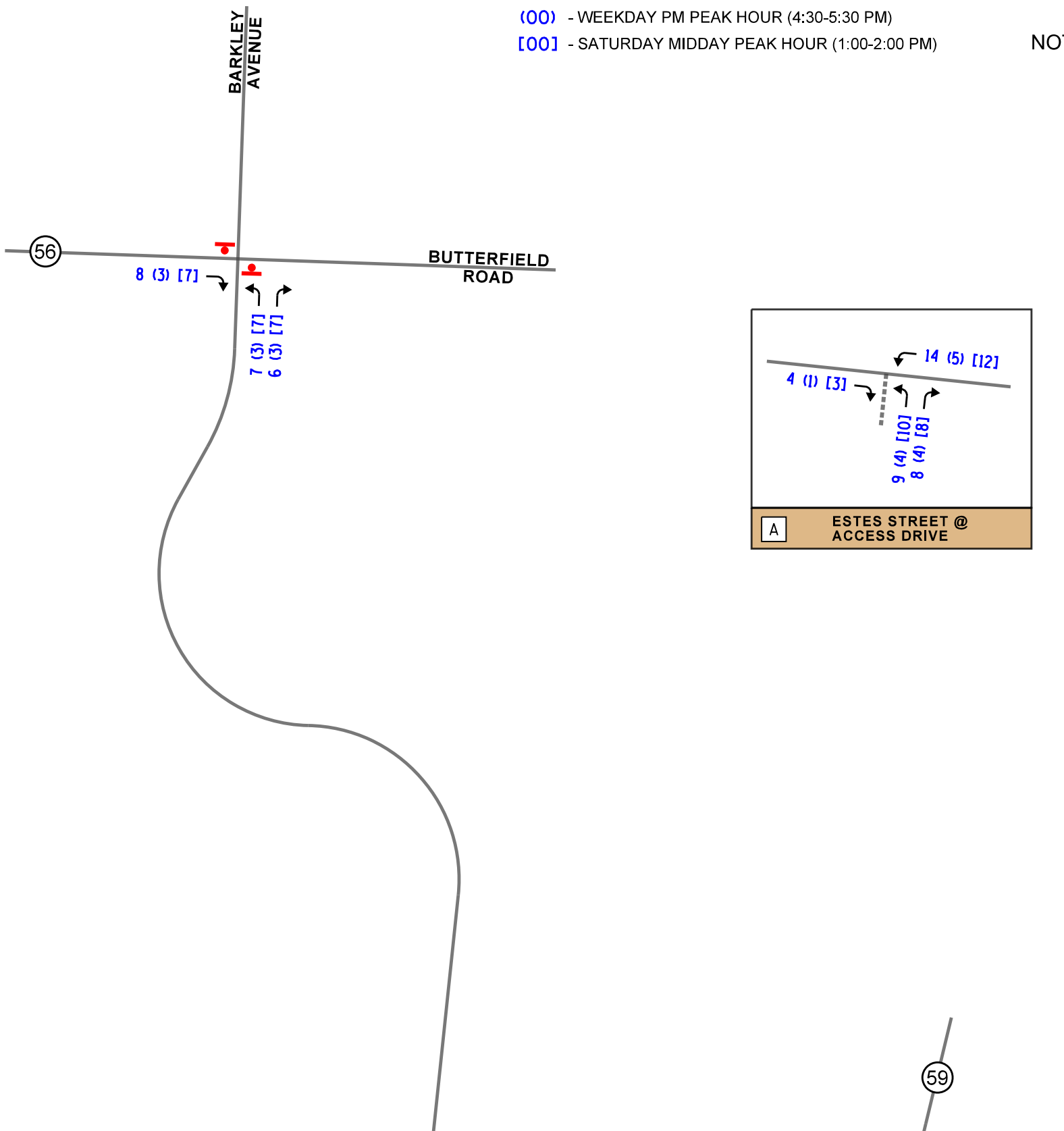
00 - WEEKDAY AM PEAK HOUR (7:15-8:15 AM)

(00) - WEEKDAY PM PEAK HOUR (4:30-5:30 PM)

[00] - SATURDAY MIDDAY PEAK HOUR (1:00-2:00 PM)

N

NOT TO SCALE



CAR WASH
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STARBUCKS-GENERATED TRAFFIC VOLUMES

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Job No: 25-009 Figure: 7

LEGEND

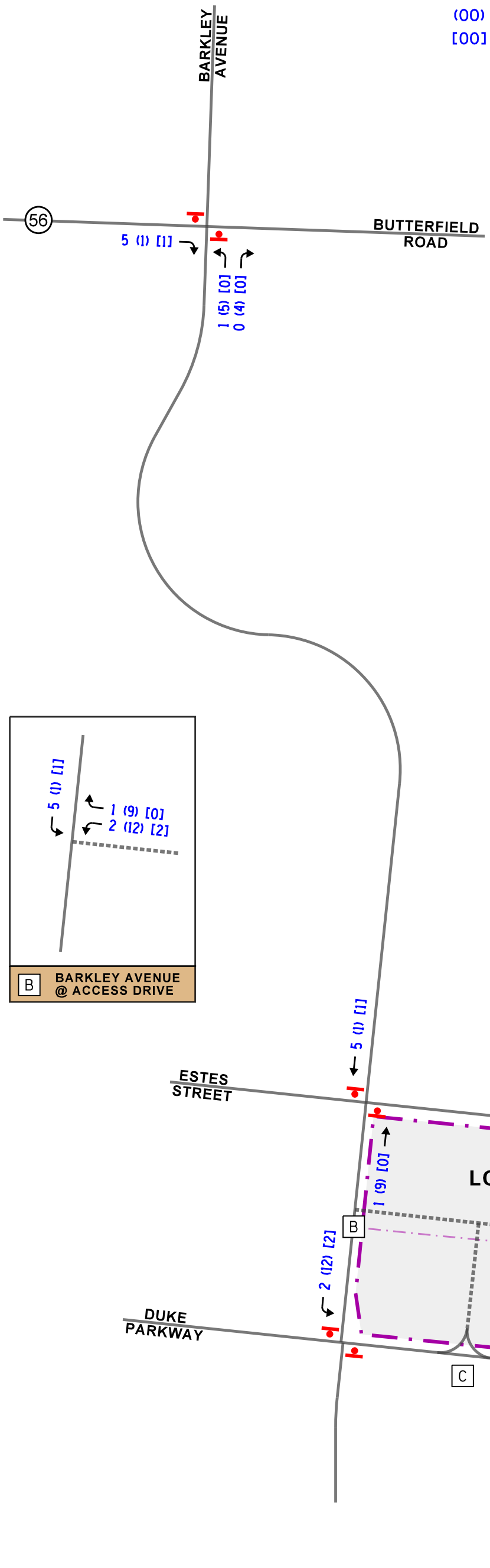
00 - WEEKDAY AM PEAK HOUR (7:15-8:15 AM)

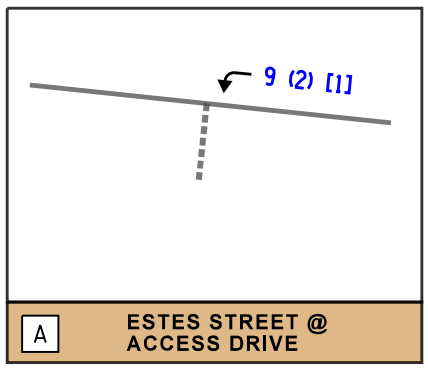
(00) - WEEKDAY PM PEAK HOUR (4:30-5:30 PM)

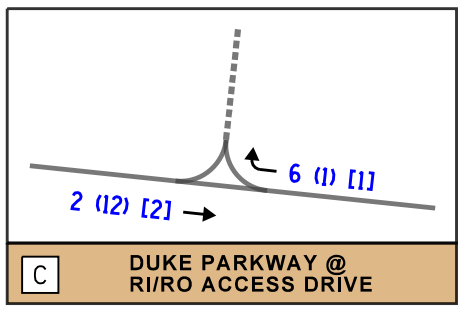
[00] - SATURDAY MIDDAY PEAK HOUR (1:00-2:00 PM)

N

NOT TO SCALE







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GENERAL OFFICE TRAFFIC VOLUMES

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Job No: 25-009 Figure: 8

LEGEND

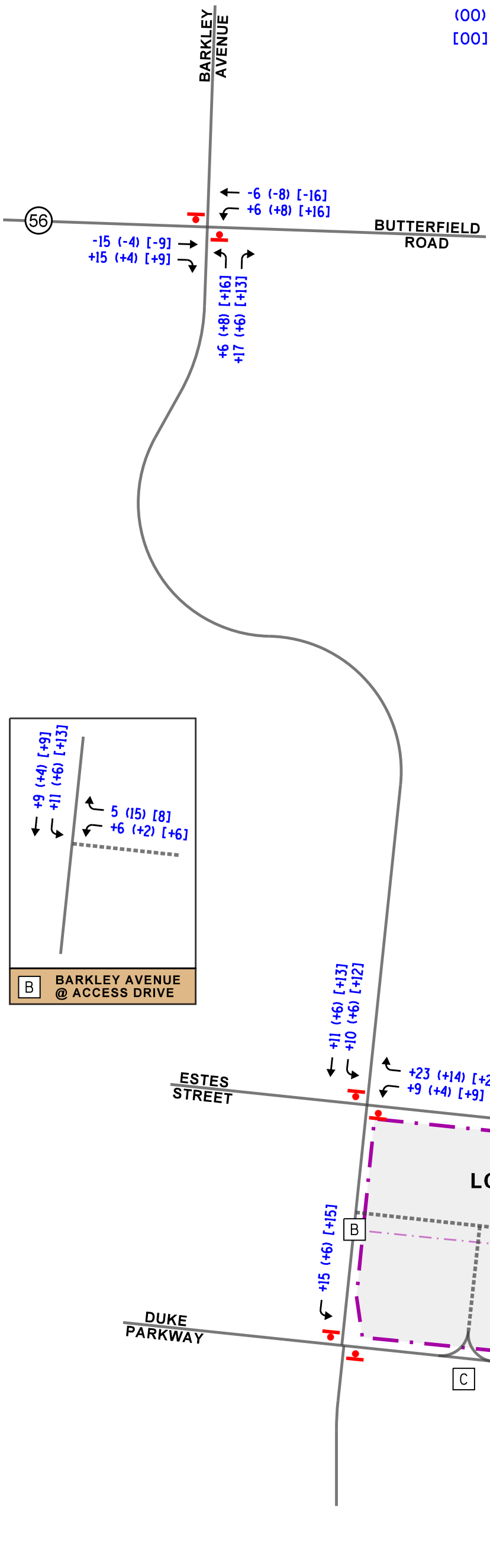
00 - WEEKDAY AM PEAK HOUR (7:15-8:15 AM)

(00) - WEEKDAY PM PEAK HOUR (4:30-5:30 PM)

[00] - SATURDAY MIDDAY PEAK HOUR (1:00-2:00 PM)

N

NOT TO SCALE



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PASS-BY TRAFFIC VOLUMES

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Job No: 25-009 Figure: 9

LEGEND

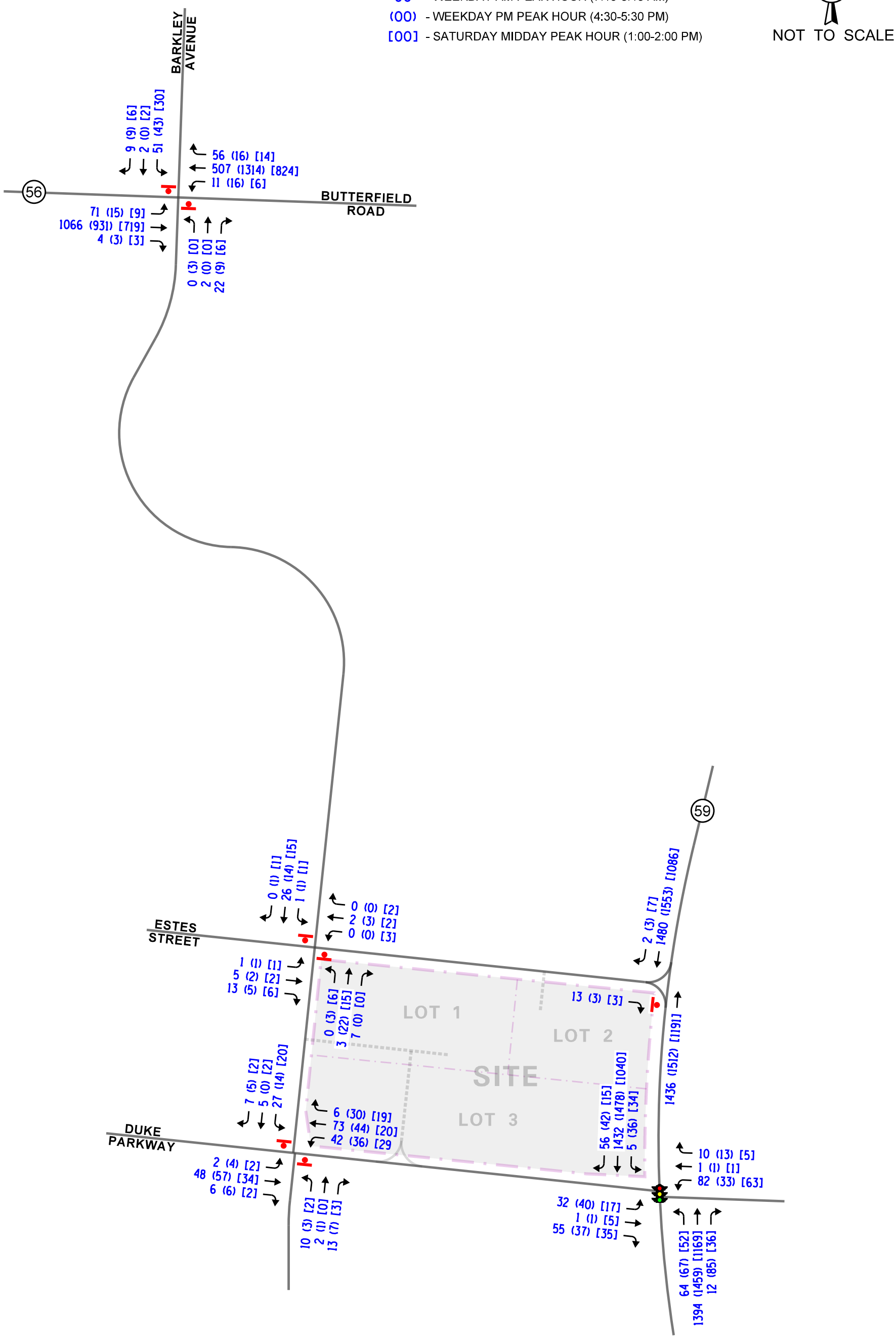
00 - WEEKDAY AM PEAK HOUR (7:15-8:15 AM)

(00) - WEEKDAY PM PEAK HOUR (4:30-5:30 PM)

[00] - SATURDAY MIDDAY PEAK HOUR (1:00-2:00 PM)

N

NOT TO SCALE



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YEAR 2031 NO-BUILD TRAFFIC VOLUMES

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LEGEND

00 - WEEKDAY AM PEAK HOUR (7:15-8:15 AM)
(00) - WEEKDAY PM PEAK HOUR (4:30-5:30 PM)
[00] - SATURDAY MIDDAY PEAK HOUR (1:00-2:00 PM)

N

NOT TO SCALE

BARKLEY AVENUE

BUTTERFIELD ROAD

56

10 (10) [6]
2 (0) [2]
51 (43) [30]

56 (16) [14]
501 (1306) [808]
17 (24) [22]

71 (15) [9]
105] (927) [710]
35 (21) [25]

17 (29) [29]
2 (0) [0]
48 (30) [30]

3 (6) [8]
45 (18) [34]
13 (3) [3]
14 (7) [15]
41 (22) [48]
31 (18) [31]

A ESTES STREET @ ACCESS DRIVE

1 (3) [2]
40 (36) [39]
121 (110) [68]
115 (113) [87]

C DUKE PARKWAY @ RI/RO ACCESS DRIVE

5] (24) [36]
24 (22) [24]
6 (24) [8]
15 (30) [18]
11 (38) [23]
0 (0) [0]

B BARKLEY AVENUE @ ACCESS DRIVE

59

ESTES STREET

DUKE PARKWAY

SITE

LOT 1

LOT 2

LOT 3

A

B

C

0 (1) [1]
49 (33) [38]
15 (8) [16]
29 (17) [38]
2 (3) [2]
13 (8) [16]
1 (1) [1]
5 (2) [2]
13 (5) [6]
0 (3) [6]
10 (49) [25]
7 (0) [0]
44 (21) [34]
48 (24) [42]
1463 (1556) [1072]
1442 (1526) [1198]
7 (5) [2]
5 (0) [2]
54 (49) [50]
7 (33) [21]
73 (44) [20]
42 (36) [29]
60 (53) [20]
1442 (1488) [1052]
5 (36) [34]
2 (4) [2]
48 (57) [34]
6 (6) [2]
10 (3) [2]
2 (1) [0]
13 (7) [3]
56 (62) [43]
1 (1) [5]
58 (50) [39]
10 (13) [5]
1 (1) [1]
82 (33) [63]
100 (92) [86]
1376 (1451) [1150]
12 (85) [36]

CAR WASH
WARRENVILLE, ILLINOIS

YEAR 2031 TOTAL TRAFFIC VOLUMES

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

Job No: 25-009 Figure: 11

5. Traffic Analysis and Recommendations

The following provides an evaluation conducted for the weekday morning, weekday evening, and Saturday midday 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 modifications are required.

Traffic Analyses

Roadway and adjacent or nearby intersection analyses were performed for the weekday morning, weekday evening, and Saturday midday peak hours for the existing (Year 2025), no-build, and future projected (Year 2031) traffic volumes.

The traffic analyses were performed using the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM), 7*th Edition and analyzed using the Synchro/SimTraffic 12 software. The analysis for the traffic-signal controlled intersections were accomplished using actual cycle lengths, phasings, and offsets 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, Year 2031 no-build, and Year 2031 total projected conditions are presented in **Tables 5** through **8**. A discussion of the intersections follows. Summary sheets for the capacity analyses are included in the Appendix.

Table 5
IL 59 WITH DUKE PARKWAY – SIGNALIZED

	Peak Hour	Eastbound			Westbound		Northbound			Southbound			Overall
		L	T	R	L	T/R	L	T	R	L	T	R	
Existing Conditions	Weekday Morning	E 59.5	E 63.0	B 18.4	E 63.4	E 63.0	E 66.2	A 6.5	A 1.6	E 65.6	B 10.2	A 0.2	B 11.8
		C – 33.9			E – 63.4		A – 9.1			B – 10.0			
	Weekday Evening	E 62.1	E 60.0	A 8.1	D 54.0	E 64.3	E 66.3	B 11.6	A 2.7	E 71.2	B 12.2	A 0.1	B 14.5
		D – 35.4			E – 57.0		B – 13.4			B – 13.3			
	Saturday Midday	E 56.3	E 63.0	A 7.9	E 62.9	E 61.0	E 65.5	A 7.2	A 2.4	E 71.1	A 7.4	A 0.0	B 11.3
		C – 27.0			E – 62.8		A – 9.5			A – 9.3			
No-Build Conditions	Weekday Morning	E 61.1	E 63.0	B 19.3	E 59.0	E 63.0	E 66.3	A 8.0	A 1.6	E 65.6	B 13.3	A 0.3	B 13.8
		C – 34.9			E – 59.5		B – 10.5			B – 13.0			
	Weekday Evening	E 62.3	E 60.0	A 9.1	D 53.8	E 64.4	E 66.4	B 12.7	A 2.7	E 71.5	B 13.4	A 0.1	B 15.5
		D – 36.3			E – 57.0		B – 14.4			B – 14.4			
	Saturday Midday	E 56.4	E 63.0	A 8.7	E 63.4	E 61.0	E 65.6	A 8.3	A 2.5	E 71.4	A 7.7	A 0.0	B 12.0
		C – 27.8			E – 63.2		B – 10.5			A – 9.6			
Projected Conditions	Weekday Morning	E 63.4	E 62.0	B 17.4	E 58.7	E 63.8	E 66.5	A 8.2	A 1.7	E 65.6	B 14.7	A 0.4	B 15.5
		D – 40.2			E – 59.3		B – 12.1			B – 14.3			
	Weekday Evening	E 62.9	E 58.0	B 14.8	D 51.9	E 64.4	E 66.5	B 13.5	A 3.0	E 71.5	B 15.6	A 0.3	B 17.5
		D – 41.0			E – 55.6		B – 16.0			B – 16.3			
	Saturday Midday	E 60.9	E 63.0	A 9.9	E 63.8	E 62.5	E 66.1	A 8.1	A 2.5	E 71.4	A 8.5	A 0.1	B 13.5
		D – 38.1			E – 63.7		B – 11.9			B – 10.3			

Letter denotes Level of Service L – Left Turn R – Right Turn
Delay is measured in seconds. T – Through

Table 6
UNSIGNALIZED – EXISTING CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour		Saturday Midday Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Butterfield Road with Barkley Avenue[1]						
• Northbound Approach	C	15.7	B	16.9	B	10.6
• Southbound Approach	E	47.4	F	77.9	C	21.5
• Eastbound Left Turn	A	8.2	A	10.0	A	8.5
• Westbound Left Turn	B	10.9	A	9.9	A	9.0
Barkley Avenue with Estes Street[1]						
• Northbound Approach	A	8.6	A	9.2	A	9.1
• Southbound Approach	A	9.3	A	9.1	A	9.2
• Eastbound Left Turn	A	7.2	A	7.2	A	7.2
• Westbound Left Turn	A	0.0	A	0.0	A	7.2
Barkley Avenue with Duke Parkway[1]						
• Northbound Approach	B	10.6	B	10.5	A	9.5
• Southbound Approach	B	10.9	B	10.0	A	9.5
• Eastbound Left Turn	A	7.4	A	7.4	A	7.3
• Westbound Left Turn	A	8.0	A	7.9	A	7.6
IL 59 with Estes Street[2]						
• Eastbound Approach	B	10.3	B	10.3	A	9.5

LOS = Level of Service
Delay is measured in seconds.
1 – Two-way stop control
2 – One-way stop control

Table 7
UNSIGNALIZED – YEAR 2031 NO-BUILD CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour		Saturday Midday Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Butterfield Road with Barkley Avenue[1]						
• Northbound Approach	C	16.9	C	18.6	B	10.8
• Southbound Approach	F	63.4	F	142.3	C	24.6
• Eastbound Left Turn	A	8.3	B	10.5	A	8.7
• Westbound Left Turn	B	11.4	B	10.1	A	9.2
Barkley Avenue with Estes Street[1]						
• Northbound Approach	A	8.6	A	9.3	A	9.1
• Southbound Approach	A	9.3	A	9.2	A	9.2
• Eastbound Left Turn	A	7.2	A	7.2	A	7.2
• Westbound Left Turn	A	0.0	A	0.0	A	7.2
Barkley Avenue with Duke Parkway[1]						
• Northbound Approach	B	10.7	B	10.6	A	9.5
• Southbound Approach	B	11.2	B	10.2	A	9.6
• Eastbound Left Turn	A	7.4	A	7.4	A	7.3
• Westbound Left Turn	A	8.0	A	7.9	A	7.6
IL 59 with Estes Street[2]						
• Eastbound Approach	B	10.4	B	10.6	A	9.6

LOS = Level of Service
Delay is measured in seconds.
1 – Two-way stop control
2 – One-way stop control

Table 8
UNSIGNALIZED – YEAR 2031 TOTAL CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour		Saturday Midday Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Butterfield Road with Barkley Avenue[1]						
• Northbound Approach	D	28.7	D	32.5	C	17.9
• Southbound Approach	F	70.8	F	161.5	D	26.6
• Eastbound Left Turn	A	8.3	B	10.4	A	8.6
• Westbound Left Turn	B	11.1	B	10.3	A	9.3
Barkley Avenue with Estes Street[1]						
• Northbound Approach	A	9.1	B	10.0	A	9.7
• Southbound Approach	A	9.8	A	9.8	A	9.7
• Eastbound Left Turn	A	7.3	A	7.3	A	7.3
• Westbound Left Turn	A	7.3	A	7.2	A	7.2
Barkley Avenue with Duke Parkway[1]						
• Northbound Approach	B	10.7	B	10.6	A	9.5
• Southbound Approach	B	11.8	B	11.0	A	9.8
• Eastbound Left Turn	A	7.4	A	7.4	A	7.3
• Westbound Left Turn	A	8.0	A	7.9	A	7.6
IL 59 with Estes Street[2]						
• Eastbound Approach	B	10.7	B	10.7	A	9.8
Barkley Avenue with Proposed Access Drive[2]						
• Westbound Approach	A	9.0	A	9.1	A	9.0
• Southbound Left Turn	A	7.3	A	7.3	A	7.3
Estes Street with Proposed Access Drive[2]						
• Northbound Approach	A	9.2	A	8.7	A	9.1
• Westbound Left Turn	A	7.3	A	7.2	A	7.3
Duke Parkway with Proposed Right-In/Right-Out[2]						
• Southbound Approach	A	9.0	A	8.9	A	8.7

LOS = Level of Service
Delay is measured in seconds.
1 – Two-way stop control
2 – One-way stop control

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.

IL 59 with Duke Parkway

The results of the capacity analysis indicate that this signalized intersection currently operates overall at Level of Service (LOS) B during the weekday morning, weekday afternoon, and weekday evening peak hours. All the approaches operate at LOS D or better during the peak hours except for the westbound approach that operates at LOS E during all three peak hours which is due to the long cycle length (140 seconds) of the signal.

Under Year 2031 no-build and total projected conditions, the intersection is projected to continue operating at LOS B during all three peak hours with increases in delay of less than four seconds over the existing conditions. All the approaches are projected to continue operating at LOS D or better during the peak hours except for the westbound approach that is projected to continue operating at LOS E during all three peak hours. Additionally, the maximum 95th percentile queue for the eastbound left-turn movement is projected to be approximately 90 feet during the weekday evening peak hour and will not extend back to the location of the proposed right-in/right-out access drive. It should be noted that the proposed development is estimated to increase traffic traversing this intersection by less than two percent during the peak hours. As such, this intersection will not be significantly impacted by the proposed development and no roadway or traffic signal modifications will be required.

Butterfield Road with Barkley Avenue

The results of the capacity analysis indicate the northbound and southbound approaches currently operate at LOS D or better during the weekday morning, weekday evening, and Saturday midday peak hours except for the southbound approach that operates at LOS E during the weekday morning peak hour and LOS F during the weekday evening peak hour. The eastbound and westbound left-turn movements operate at LOS B or better during the peak hours.

Under Year 2031 no-build and total projected conditions, the northbound and southbound approaches are projected to operate at LOS C or better during the peak hours except for the southbound approach during the weekday morning and evening peak hours where it is projected to operate at LOS F with a Volume to Capacity ratio (v/c) of less than one during the weekday morning and weekday evening peak hours and queues of two to four vehicle length. This lower level of service is common and expected when a minor road intersects a major roadway such as Butterfield Road. **Table 9** in the Appendix shows a comparison of the existing and proposed queues for the northbound and southbound approaches.

The eastbound and westbound left-turn movements are projected to continue operating at LOS B or better during all three peak hours. As such, this intersection has adequate reserve capacity to

accommodate the traffic estimated to be generated by the proposed development and no roadway improvements or traffic control adjustments will be required.

Barkley Avenue with Estes Street

The results of the capacity analysis indicate that all the approaches and their critical movements currently operate at LOS A during the weekday morning, weekday evening, and Saturday midday peak hours and will continue to do so under Year 2031 no-build conditions. Under Year 2031 total projected conditions, all of the critical movements will continue operating at acceptable LOS with increases in delay of less than one second over the existing conditions. The 95th percentile queues for all approaches are projected to be one to two vehicles and will not interrupt the traffic flow on either road. As such, this intersection has adequate reserve capacity to accommodate the traffic estimated to be generated by the proposed development and no roadway improvements or traffic control adjustments will be required.

Barkley Avenue with Duke Parkway

The results of the capacity analysis indicate that the northbound and southbound approaches currently operate at LOS B or better during the weekday morning, weekday evening, and Saturday midday peak hours while the eastbound and westbound approaches operate at LOS A during all three peak hours.

Under Year 2031 no-build and total projected conditions, all the approaches are their critical movements are projected to continue operating at the same existing levels of service during the peak hours with increases in delay of less than one second over the existing conditions. The 95th percentile queues for the westbound and eastbound approaches are projected to be one to two vehicles and will not interrupt the traffic flow on Duke Parkway. As such, this intersection has adequate reserve capacity to accommodate the traffic estimated to be generated by the proposed development and no roadway improvements or traffic control adjustments will be required.

IL 59 with Estes Street

The results of the capacity analysis indicate that currently the eastbound approach operates at LOS B during the weekday morning, weekday evening, and Saturday midday peak hours and will continue to do so under Year 2031 no-build and total projected conditions with increases in delay of less than two seconds over the existing conditions. The 95th percentile queue for the eastbound approach is projected to be one to vehicles during all three peak hours and will not extend to the location of the proposed access drive. As such, this intersection has adequate reserve capacity to accommodate the traffic estimated to be generated by the proposed development and no roadway improvements or traffic control adjustments will be required.

Barkley Avenue with Proposed Full Movement Access Drive

The results of the capacity analysis indicate that under Year 2031 total projected conditions, the westbound approach and the southbound left-turn movement are projected to operate at LOS A during the weekday morning, weekday evening, and Saturday midday peak hours. The 95th percentile queue for the southbound left-turn movement is projected to be one to two vehicles during all three peak hours and will not interrupt the traffic flow along Barkley Avenue. Furthermore, the 95th percentile queue for the outbound movements will be 25 feet or less. As such this access drive is projected to provide flexible and efficient access to the site and no additional roadway or traffic control measures are required.

Estes Street with Proposed Full Movement Access Drive

The results of the capacity analysis indicate that under Year 2031 total projected conditions, the northbound approach and the westbound left-turn movement are projected to operate at LOS A during the weekday morning, weekday evening, and Saturday midday peak hours. The 95th percentile queue for the westbound left turn movement is projected to be one to two vehicles during all three peak hours and will not interrupt the traffic flow along Estes Street. Furthermore, the 95th percentile queue for the outbound movements will be 25 feet or less. As such this access drive is projected to provide flexible and efficient access to the site and no additional roadway or traffic control measures are required.

Duke Parkway with Proposed Right-In/Right-Out Access Drive

The results of the capacity analysis indicate that under Year 2031 total projected conditions, the southbound approach is projected to operate at LOS A during the weekday morning, weekday evening, and Saturday midday peak hours. Furthermore, the 95th percentile queue for the outbound movements will be 25 feet or less. As such this access drive is projected to provide efficient access to the site and no additional roadway or traffic control measures are required.

6. Conclusion

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

- The site will be developed into an automatic car wash with one car wash tunnel with 19 vacuum stalls and eight employee parking spaces, a Starbucks coffee shop with drive-through and 22 parking spaces and a potential 10,000 square-foot general office building.

- Access to the proposed development will be provided via the following:

    - A proposed full-movement access drive off Estes Street located approximately 205 feet west of IL 59. This access drive will provide one inbound lane and one outbound lane with the outbound movements under stop sign control. It should be noted that this access drive will provide direct access to Starbucks and indirect access to the car wash via an internal shared driveway.

    - A proposed full-movement access drive off Barkley Avenue approximately 170 feet south of Estes Street. This access drive will provide one inbound lane and one outbound lane with the outbound movements under stop sign control.

    - A proposed right-in/right-out access drive located approximately 430 feet west of IL 59 westerly right-of way line. This access drive will provide one inbound lane and one outbound lane with the outbound movement under stop sign control. This access drive will provide direct access to the car wash and indirect access to Starbucks via an internal shared driveway.

- The results of the capacity analysis indicated that the existing roadway system will not be significantly impacted by the proposed car wash and no additional roadway improvements or traffic control modifications are required.

- In order to enhance the flow of traffic through the car wash site on peak days, the operator should consider implementing the following recommendations:

    - Increase the service rate of the tunnel to the maximum it can process.

    - Provide staff at critical locations within the circulation system during peak periods at the car wash to help direct and manage the flow of traffic through the site. Critical internal locations where staff should be located include at the pay stations and at the exit of the car wash.

Appendix

Traffic Count Summary Sheets
Site Plan
ITE Trip Generation Summary Sheets
CMAP 2050 Projections Letter
Level of Service Criteria
Capacity Analysis Summary Sheets
Butterfield Road and Barkley Avenue Queue Comparison Table

Traffic Count Summary Sheets

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

Rosemont, Illinois, United States 60018
(847)518-9990 sainkeshavarzi@kloainc.com

Count Name: Barkley Avenue with Duke Pkwy
TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Data

Start Time	Duke Pkwy Eastbound						Duke Pkwy Westbound						Barkley Avenue Northbound						Barkley Avenue Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
12:00 PM	0	1	2	2	0	5	0	12	4	5	0	21	0	1	0	1	0	2	0	3	1	1	0	5	33
12:15 PM	0	0	1	0	0	1	2	7	1	3	0	13	0	2	0	2	0	4	0	2	0	0	0	2	20
12:30 PM	0	0	2	0	0	2	0	9	2	2	0	13	0	0	1	1	0	2	0	3	0	0	0	3	20
12:45 PM	0	0	4	0	0	4	1	5	2	6	0	14	0	0	0	0	1	0	0	2	0	0	0	2	20
Hourly Total	0	1	9	2	0	12	3	33	9	16	0	61	0	3	1	4	1	8	0	10	1	1	0	12	93
1:00 PM	0	0	5	1	2	6	0	6	2	2	0	10	0	0	0	1	0	1	0	8	0	1	0	9	26
1:15 PM	0	2	4	0	0	6	0	5	1	5	0	11	0	2	0	1	0	3	0	2	0	1	0	3	23
1:30 PM	0	0	1	0	0	1	0	9	4	6	0	19	0	0	0	0	0	0	0	3	0	0	0	3	23
1:45 PM	0	0	5	1	2	6	1	6	3	5	0	15	0	0	0	1	0	1	0	6	2	0	0	8	30
Hourly Total	0	2	15	2	4	19	1	26	10	18	0	55	0	2	0	3	0	5	0	19	2	2	0	23	102
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7:00 AM	0	0	6	1	0	7	0	6	26	1	0	33	0	3	0	2	0	5	0	4	1	5	0	10	55
7:15 AM	0	1	4	2	0	7	0	12	29	1	0	42	0	3	0	4	0	7	0	10	0	5	0	15	71
7:30 AM	0	0	5	3	1	8	0	9	11	0	0	20	0	2	1	4	0	7	0	4	1	2	0	7	42
7:45 AM	0	0	3	1	0	4	0	11	9	3	1	23	0	1	0	2	0	3	0	7	0	0	0	7	37
Hourly Total	0	1	18	7	1	26	0	38	75	5	1	118	0	9	1	12	0	22	0	25	2	12	0	39	205
8:00 AM	0	1	9	0	0	10	0	7	16	2	0	25	0	3	1	2	0	6	0	4	2	0	0	6	47
8:15 AM	0	0	2	2	0	4	0	17	15	3	0	35	0	1	0	2	0	3	0	2	0	0	0	2	44
8:30 AM	0	0	3	1	0	4	0	10	15	2	0	27	0	1	1	3	0	5	0	6	0	1	0	7	43
8:45 AM	1	0	3	2	0	6	0	9	10	3	0	22	0	1	0	4	0	5	0	2	0	0	0	2	35
Hourly Total	1	1	17	5	0	24	0	43	56	10	0	109	0	6	2	11	0	19	0	14	2	1	0	17	169
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	0	16	2	0	18	0	10	4	7	0	21	0	0	0	4	0	4	0	3	0	0	0	3	46
4:15 PM	0	1	4	0	0	5	0	10	3	5	0	18	0	1	0	1	0	2	0	0	0	0	0	0	25
4:30 PM	0	0	12	3	0	15	1	8	2	8	0	19	0	1	0	1	0	2	0	1	0	0	0	1	37
4:45 PM	0	3	2	0	0	5	0	4	5	8	0	17	0	1	1	0	0	2	0	3	0	0	0	3	27
Hourly Total	0	4	34	5	0	43	1	32	14	28	0	75	0	3	1	6	0	10	0	7	0	0	0	7	135
5:00 PM	0	1	11	1	0	13	0	15	12	7	0	34	0	0	0	3	0	3	0	8	0	3	1	11	61
5:15 PM	0	0	12	2	1	14	0	6	14	5	0	25	0	1	0	3	0	4	0	1	0	2	1	3	46
5:30 PM	1	0	36	1	0	38	0	6	15	9	0	30	0	1	0	4	0	5	0	3	0	1	0	4	77
5:45 PM	0	2	13	0	0	15	0	8	21	10	0	39	0	2	1	0	0	3	0	4	0	0	0	4	61
Hourly Total	1	3	72	4	1	80	0	35	62	31	0	128	0	4	1	10	0	15	0	16	0	6	2	22	245
Grand Total	2	12	165	25	6	204	5	207	226	108	1	546	0	27	6	46	1	79	0	91	7	22	2	120	949
Approach %	1.0	5.9	80.9	12.3	-	-	0.9	37.9	41.4	19.8	-	-	0.0	34.2	7.6	58.2	-	-	0.0	75.8	5.8	18.3	-	-	-
Total %	0.2	1.3	17.4	2.6	-	21.5	0.5	21.8	23.8	11.4	-	57.5	0.0	2.8	0.6	4.8	-	8.3	0.0	9.6	0.7	2.3	-	12.6	-

Lights	0	12	144	10	-	166	5	136	205	104	-	450	0	15	6	6	-	27	0	90	7	22	-	119	762
% Lights	0.0	100.0	87.3	40.0	-	81.4	100.0	65.7	90.7	96.3	-	82.4	-	55.6	100.0	13.0	-	34.2	-	98.9	100.0	100.0	-	99.2	80.3
Buses	0	0	0	0	-	0	0	1	0	1	-	2	0	0	0	0	-	0	0	0	0	0	-	0	2
% Buses	0.0	0.0	0.0	0.0	-	0.0	0.0	0.5	0.0	0.9	-	0.4	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.2
Single-Unit Trucks	1	0	6	8	-	15	0	19	3	2	-	24	0	6	0	6	-	12	0	1	0	0	-	1	52
% Single-Unit Trucks	50.0	0.0	3.6	32.0	-	7.4	0.0	9.2	1.3	1.9	-	4.4	-	22.2	0.0	13.0	-	15.2	-	1.1	0.0	0.0	-	0.8	5.5
Articulated Trucks	1	0	15	7	-	23	0	51	18	0	-	69	0	6	0	34	-	40	0	0	0	0	-	0	132
% Articulated Trucks	50.0	0.0	9.1	28.0	-	11.3	0.0	24.6	8.0	0.0	-	12.6	-	22.2	0.0	73.9	-	50.6	-	0.0	0.0	0.0	-	0.0	13.9
Bicycles on Road	0	0	0	0	-	0	0	0	0	1	-	1	0	0	0	0	-	0	0	0	0	0	-	0	1
% Bicycles on Road	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.9	-	0.2	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.1
Pedestrians	-	-	-	-	6	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

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9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 sainkeshavarzi@kloainc.com

Count Name: Barkley Avenue with Duke Pkwy
TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Peak Hour Data (1:00 PM)

Start Time	Duke Pkwy Eastbound						Duke Pkwy Westbound						Barkley Avenue Northbound						Barkley Avenue Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
1:00 PM	0	0	5	1	2	6	0	6	2	2	0	10	0	0	0	1	0	1	0	8	0	1	0	9	26
1:15 PM	0	2	4	0	0	6	0	5	1	5	0	11	0	2	0	1	0	3	0	2	0	1	0	3	23
1:30 PM	0	0	1	0	0	1	0	9	4	6	0	19	0	0	0	0	0	0	0	3	0	0	0	3	23
1:45 PM	0	0	5	1	2	6	1	6	3	5	0	15	0	0	0	1	0	1	0	6	2	0	0	8	30
Total	0	2	15	2	4	19	1	26	10	18	0	55	0	2	0	3	0	5	0	19	2	2	0	23	102
Approach %	0.0	10.5	78.9	10.5	-	-	1.8	47.3	18.2	32.7	-	-	0.0	40.0	0.0	60.0	-	-	0.0	82.6	8.7	8.7	-	-	-
Total %	0.0	2.0	14.7	2.0	-	18.6	1.0	25.5	9.8	17.6	-	53.9	0.0	2.0	0.0	2.9	-	4.9	0.0	18.6	2.0	2.0	-	22.5	-
PHF	0.000	0.250	0.750	0.500	-	0.792	0.250	0.722	0.625	0.750	-	0.724	0.000	0.250	0.000	0.750	-	0.417	0.000	0.594	0.250	0.500	-	0.639	0.850
Lights	0	2	11	0	-	13	1	18	8	18	-	45	0	1	0	1	-	2	0	18	2	2	-	22	82
% Lights	-	100.0	73.3	0.0	-	68.4	100.0	69.2	80.0	100.0	-	81.8	-	50.0	-	33.3	-	40.0	-	94.7	100.0	100.0	-	95.7	80.4
Buses	0	0	0	0	-	0	0	0	0	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	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	2	1	-	3	0	6	0	0	-	6	0	0	0	0	-	0	0	1	0	0	-	1	10
% Single-Unit Trucks	-	0.0	13.3	50.0	-	15.8	0.0	23.1	0.0	0.0	-	10.9	-	0.0	-	0.0	-	0.0	-	5.3	0.0	0.0	-	4.3	9.8
Articulated Trucks	0	0	2	1	-	3	0	2	2	0	-	4	0	1	0	2	-	3	0	0	0	0	-	0	10
% Articulated Trucks	-	0.0	13.3	50.0	-	15.8	0.0	7.7	20.0	0.0	-	7.3	-	50.0	-	66.7	-	60.0	-	0.0	0.0	0.0	-	0.0	9.8
Bicycles on Road	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
Pedestrians	-	-	-	-	4	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Rosemont, Illinois, United States 60018
(847)518-9990 sainkeshavarzi@kloainc.com

Count Name: Barkley Avenue with Duke Pkwy
TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Duke Pkwy Eastbound						Duke Pkwy Westbound						Barkley Avenue Northbound						Barkley Avenue Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:15 AM	0	1	4	2	0	7	0	12	29	1	0	42	0	3	0	4	0	7	0	10	0	5	0	15	71
7:30 AM	0	0	5	3	1	8	0	9	11	0	0	20	0	2	1	4	0	7	0	4	1	2	0	7	42
7:45 AM	0	0	3	1	0	4	0	11	9	3	1	23	0	1	0	2	0	3	0	7	0	0	0	7	37
8:00 AM	0	1	9	0	0	10	0	7	16	2	0	25	0	3	1	2	0	6	0	4	2	0	0	6	47
Total	0	2	21	6	1	29	0	39	65	6	1	110	0	9	2	12	0	23	0	25	3	7	0	35	197
Approach %	0.0	6.9	72.4	20.7	-	-	0.0	35.5	59.1	5.5	-	-	0.0	39.1	8.7	52.2	-	-	0.0	71.4	8.6	20.0	-	-	-
Total %	0.0	1.0	10.7	3.0	-	14.7	0.0	19.8	33.0	3.0	-	55.8	0.0	4.6	1.0	6.1	-	11.7	0.0	12.7	1.5	3.6	-	17.8	-
PHF	0.000	0.500	0.583	0.500	-	0.725	0.000	0.813	0.560	0.500	-	0.655	0.000	0.750	0.500	0.750	-	0.821	0.000	0.625	0.375	0.350	-	0.583	0.694
Lights	0	2	18	2	-	22	0	18	61	4	-	83	0	8	2	0	-	10	0	25	3	7	-	35	150
% Lights	-	100.0	85.7	33.3	-	75.9	-	46.2	93.8	66.7	-	75.5	-	88.9	100.0	0.0	-	43.5	-	100.0	100.0	100.0	-	100.0	76.1
Buses	0	0	0	0	-	0	0	1	0	1	-	2	0	0	0	0	-	0	0	0	0	0	-	0	2
% Buses	-	0.0	0.0	0.0	-	0.0	-	2.6	0.0	16.7	-	1.8	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	1.0
Single-Unit Trucks	0	0	2	3	-	5	0	4	1	0	-	5	0	0	0	2	-	2	0	0	0	0	-	0	12
% Single-Unit Trucks	-	0.0	9.5	50.0	-	17.2	-	10.3	1.5	0.0	-	4.5	-	0.0	0.0	16.7	-	8.7	-	0.0	0.0	0.0	-	0.0	6.1
Articulated Trucks	0	0	1	1	-	2	0	16	3	0	-	19	0	1	0	10	-	11	0	0	0	0	-	0	32
% Articulated Trucks	-	0.0	4.8	16.7	-	6.9	-	41.0	4.6	0.0	-	17.3	-	11.1	0.0	83.3	-	47.8	-	0.0	0.0	0.0	-	0.0	16.2
Bicycles on Road	0	0	0	0	-	0	0	0	0	1	-	1	0	0	0	0	-	0	0	0	0	0	-	0	1
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	16.7	-	0.9	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.5
Pedestrians	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Barkley Avenue with Duke Pkwy
TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Duke Pkwy Eastbound						Duke Pkwy Westbound						Barkley Avenue Northbound						Barkley Avenue Southbound						
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
4:30 PM	0	0	12	3	0	15	1	8	2	8	0	19	0	1	0	1	0	2	0	1	0	0	0	1	37
4:45 PM	0	3	2	0	0	5	0	4	5	8	0	17	0	1	1	0	0	2	0	3	0	0	0	3	27
5:00 PM	0	1	11	1	0	13	0	15	12	7	0	34	0	0	0	3	0	3	0	8	0	3	1	11	61
5:15 PM	0	0	12	2	1	14	0	6	14	5	0	25	0	1	0	3	0	4	0	1	0	2	1	3	46
Total	0	4	37	6	1	47	1	33	33	28	0	95	0	3	1	7	0	11	0	13	0	5	2	18	171
Approach %	0.0	8.5	78.7	12.8	-	-	1.1	34.7	34.7	29.5	-	-	0.0	27.3	9.1	63.6	-	-	0.0	72.2	0.0	27.8	-	-	-
Total %	0.0	2.3	21.6	3.5	-	27.5	0.6	19.3	19.3	16.4	-	55.6	0.0	1.8	0.6	4.1	-	6.4	0.0	7.6	0.0	2.9	-	10.5	-
PHF	0.000	0.333	0.771	0.500	-	0.783	0.250	0.550	0.589	0.875	-	0.699	0.000	0.750	0.250	0.583	-	0.688	0.000	0.406	0.000	0.417	-	0.409	0.701
Lights	0	4	32	4	-	40	1	19	25	27	-	72	0	0	1	1	-	2	0	13	0	5	-	18	132
% Lights	-	100.0	86.5	66.7	-	85.1	100.0	57.6	75.8	96.4	-	75.8	-	0.0	100.0	14.3	-	18.2	-	100.0	-	100.0	-	100.0	77.2
Buses	0	0	0	0	-	0	0	0	0	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	0.0	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	1	1	-	2	0	1	2	1	-	4	0	2	0	0	-	2	0	0	0	0	-	0	8
% Single-Unit Trucks	-	0.0	2.7	16.7	-	4.3	0.0	3.0	6.1	3.6	-	4.2	-	66.7	0.0	0.0	-	18.2	-	0.0	-	0.0	-	0.0	4.7
Articulated Trucks	0	0	4	1	-	5	0	13	6	0	-	19	0	1	0	6	-	7	0	0	0	0	-	0	31
% Articulated Trucks	-	0.0	10.8	16.7	-	10.6	0.0	39.4	18.2	0.0	-	20.0	-	33.3	0.0	85.7	-	63.6	-	0.0	-	0.0	-	0.0	18.1
Bicycles on Road	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
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

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9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
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Count Name: Butterfield+Road+and+Barkley+Avenue TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Data

Start Time	Butterfield Road Eastbound						Butterfield Road Westbound						Barley Avenue Northbound						Barkley Avenue Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
12:00 PM	0	2	150	2	2	154	1	2	175	2	0	180	0	2	0	0	2	2	0	6	1	5	0	12	348
12:15 PM	0	3	158	1	0	162	0	0	176	4	0	180	0	1	0	2	0	3	0	9	1	3	0	13	358
12:30 PM	0	2	149	2	0	153	0	3	179	1	0	183	0	0	0	0	0	0	0	5	0	2	0	7	343
12:45 PM	0	2	163	0	0	165	0	1	183	5	0	189	0	1	0	2	0	3	0	2	0	2	0	4	361
Hourly Total	0	9	620	5	2	634	1	6	713	12	0	732	0	4	0	4	2	8	0	22	2	12	0	36	1410
1:00 PM	0	3	163	0	0	166	0	0	173	0	0	173	0	0	0	0	0	0	0	6	1	2	0	9	348
1:15 PM	0	3	180	2	0	185	0	0	193	4	0	197	0	0	0	4	2	4	0	9	0	2	0	11	397
1:30 PM	0	1	167	0	0	168	0	2	207	3	0	212	0	0	0	1	0	1	0	6	1	1	0	8	389
1:45 PM	0	1	162	1	0	164	2	2	197	6	0	207	0	0	0	1	0	1	0	7	0	1	0	8	380
Hourly Total	0	8	672	3	0	683	2	4	770	13	0	789	0	0	0	6	2	6	0	28	2	6	0	36	1514
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7:00 AM	0	3	228	3	0	234	0	0	164	9	0	173	0	0	0	6	0	6	0	5	0	1	0	6	419
7:15 AM	0	7	239	2	0	248	0	1	190	12	0	203	0	0	0	4	0	4	0	9	1	4	0	14	469
7:30 AM	0	10	296	1	0	307	1	2	187	8	0	198	0	0	0	7	0	7	0	8	1	1	0	10	522
7:45 AM	0	30	242	0	0	272	0	3	199	12	0	214	0	0	2	5	0	7	0	15	0	2	0	17	510
Hourly Total	0	50	1005	6	0	1061	1	6	740	41	0	788	0	0	2	22	0	24	0	37	2	8	0	47	1920
8:00 AM	1	18	219	1	0	239	1	2	171	20	0	194	0	0	0	5	0	5	0	16	0	2	0	18	456
8:15 AM	0	8	260	1	0	269	1	2	176	9	0	188	0	0	0	5	0	5	0	8	0	3	0	11	473
8:30 AM	0	9	237	0	0	246	0	1	156	16	0	173	0	2	0	3	0	5	0	17	0	0	0	17	441
8:45 AM	0	9	197	0	0	206	1	0	147	18	0	166	0	1	0	3	0	4	0	13	0	2	0	15	391
Hourly Total	1	44	913	2	0	960	3	5	650	63	0	721	0	3	0	16	0	19	0	54	0	7	0	61	1761
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	6	222	1	0	229	0	1	296	6	0	303	0	0	0	1	0	1	0	11	2	4	0	17	550
4:15 PM	0	4	212	0	0	216	0	4	296	3	0	303	0	0	0	1	0	1	0	14	0	3	0	17	537
4:30 PM	1	5	230	0	0	236	2	3	278	3	0	286	0	0	0	4	0	4	0	12	0	3	0	15	541
4:45 PM	0	3	216	0	0	219	1	1	297	3	0	302	0	1	0	0	0	1	0	7	0	1	0	8	530
Hourly Total	1	18	880	1	0	900	3	9	1167	15	0	1194	0	1	0	6	0	7	0	44	2	11	0	57	2158
5:00 PM	0	4	185	1	0	190	1	3	358	7	0	369	0	2	0	1	0	3	0	8	0	4	0	12	574
5:15 PM	0	1	239	2	0	242	0	4	295	2	0	301	0	0	0	3	0	3	0	13	0	1	0	14	560
5:30 PM	0	2	203	1	0	206	0	4	274	2	0	280	0	0	0	5	0	5	0	8	0	4	0	12	503
5:45 PM	0	3	169	2	0	174	0	6	240	2	0	248	0	0	0	3	0	3	0	6	0	0	0	6	431
Hourly Total	0	10	796	6	0	812	1	17	1167	13	0	1198	0	2	0	12	0	14	0	35	0	9	0	44	2068
Grand Total	2	139	4886	23	2	5050	11	47	5207	157	0	5422	0	10	2	66	4	78	0	220	8	53	0	281	10831
Approach %	0.0	2.8	96.8	0.5	-	-	0.2	0.9	96.0	2.9	-	-	0.0	12.8	2.6	84.6	-	-	0.0	78.3	2.8	18.9	-	-	-
Total %	0.0	1.3	45.1	0.2	-	46.6	0.1	0.4	48.1	1.4	-	50.1	0.0	0.1	0.0	0.6	-	0.7	0.0	2.0	0.1	0.5	-	2.6	-

Lights	2	132	4743	23	-	4900	11	47	5070	142	-	5270	0	10	1	66	-	77	0	198	8	51	-	257	10504
% Lights	100.0	95.0	97.1	100.0	-	97.0	100.0	100.0	97.4	90.4	-	97.2	-	100.0	50.0	100.0	-	98.7	-	90.0	100.0	96.2	-	91.5	97.0
Buses	0	1	10	0	-	11	0	0	11	2	-	13	0	0	0	0	-	0	0	0	0	0	-	0	24
% Buses	0.0	0.7	0.2	0.0	-	0.2	0.0	0.0	0.2	1.3	-	0.2	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.2
Single-Unit Trucks	0	4	66	0	-	70	0	0	59	10	-	69	0	0	0	0	-	0	0	12	0	2	-	14	153
% Single-Unit Trucks	0.0	2.9	1.4	0.0	-	1.4	0.0	0.0	1.1	6.4	-	1.3	-	0.0	0.0	0.0	-	0.0	-	5.5	0.0	3.8	-	5.0	1.4
Articulated Trucks	0	2	67	0	-	69	0	0	67	3	-	70	0	0	0	0	-	0	0	10	0	0	-	10	149
% Articulated Trucks	0.0	1.4	1.4	0.0	-	1.4	0.0	0.0	1.3	1.9	-	1.3	-	0.0	0.0	0.0	-	0.0	-	4.5	0.0	0.0	-	3.6	1.4
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	1
% 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	50.0	0.0	-	1.3	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	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 sainkeshavarzi@kloainc.com

Count Name: Butterfield+Road+and+Barkley+Avenue TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Peak Hour Data (1:00 PM)

Start Time	Butterfield Road Eastbound						Butterfield Road Westbound						Barley Avenue Northbound						Barkley Avenue Southbound						
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
1:00 PM	0	3	163	0	0	166	0	0	173	0	0	173	0	0	0	0	0	0	0	6	1	2	0	9	348
1:15 PM	0	3	180	2	0	185	0	0	193	4	0	197	0	0	0	4	2	4	0	9	0	2	0	11	397
1:30 PM	0	1	167	0	0	168	0	2	207	3	0	212	0	0	0	1	0	1	0	6	1	1	0	8	389
1:45 PM	0	1	162	1	0	164	2	2	197	6	0	207	0	0	0	1	0	1	0	7	0	1	0	8	380
Total	0	8	672	3	0	683	2	4	770	13	0	789	0	0	0	6	2	6	0	28	2	6	0	36	1514
Approach %	0.0	1.2	98.4	0.4	-	-	0.3	0.5	97.6	1.6	-	-	0.0	0.0	0.0	100.0	-	-	0.0	77.8	5.6	16.7	-	-	-
Total %	0.0	0.5	44.4	0.2	-	45.1	0.1	0.3	50.9	0.9	-	52.1	0.0	0.0	0.0	0.4	-	0.4	0.0	1.8	0.1	0.4	-	2.4	-
PHF	0.000	0.667	0.933	0.375	-	0.923	0.250	0.500	0.930	0.542	-	0.930	0.000	0.000	0.000	0.375	-	0.375	0.000	0.778	0.500	0.750	-	0.818	0.953
Lights	0	8	656	3	-	667	2	4	759	12	-	777	0	0	0	6	-	6	0	28	2	6	-	36	1486
% Lights	-	100.0	97.6	100.0	-	97.7	100.0	100.0	98.6	92.3	-	98.5	-	-	-	100.0	-	100.0	-	100.0	100.0	100.0	-	100.0	98.2
Buses	0	0	3	0	-	3	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	3
% Buses	-	0.0	0.4	0.0	-	0.4	0.0	0.0	0.0	0.0	-	0.0	-	-	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.2
Single-Unit Trucks	0	0	9	0	-	9	0	0	9	0	-	9	0	0	0	0	-	0	0	0	0	0	-	0	18
% Single-Unit Trucks	-	0.0	1.3	0.0	-	1.3	0.0	0.0	1.2	0.0	-	1.1	-	-	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	1.2
Articulated Trucks	0	0	4	0	-	4	0	0	2	1	-	3	0	0	0	0	-	0	0	0	0	0	-	0	7
% Articulated Trucks	-	0.0	0.6	0.0	-	0.6	0.0	0.0	0.3	7.7	-	0.4	-	-	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.5
Bicycles on Road	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
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

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Rosemont, Illinois, United States 60018
(847)518-9990 sainkeshavarzi@kloainc.com

Count Name: Butterfield+Road+and+Barkley+Avenue TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Butterfield Road Eastbound						Butterfield Road Westbound						Barley Avenue Northbound						Barkley Avenue Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:15 AM	0	7	239	2	0	248	0	1	190	12	0	203	0	0	0	4	0	4	0	9	1	4	0	14	469
7:30 AM	0	10	296	1	0	307	1	2	187	8	0	198	0	0	0	7	0	7	0	8	1	1	0	10	522
7:45 AM	0	30	242	0	0	272	0	3	199	12	0	214	0	0	2	5	0	7	0	15	0	2	0	17	510
8:00 AM	1	18	219	1	0	239	1	2	171	20	0	194	0	0	0	5	0	5	0	16	0	2	0	18	456
Total	1	65	996	4	0	1066	2	8	747	52	0	809	0	0	2	21	0	23	0	48	2	9	0	59	1957
Approach %	0.1	6.1	93.4	0.4	-	-	0.2	1.0	92.3	6.4	-	-	0.0	0.0	8.7	91.3	-	-	0.0	81.4	3.4	15.3	-	-	-
Total %	0.1	3.3	50.9	0.2	-	54.5	0.1	0.4	38.2	2.7	-	41.3	0.0	0.0	0.1	1.1	-	1.2	0.0	2.5	0.1	0.5	-	3.0	-
PHF	0.250	0.542	0.841	0.500	-	0.868	0.500	0.667	0.938	0.650	-	0.945	0.000	0.000	0.250	0.750	-	0.821	0.000	0.750	0.500	0.563	-	0.819	0.937
Lights	1	65	963	4	-	1033	2	8	711	52	-	773	0	0	1	21	-	22	0	36	2	8	-	46	1874
% Lights	100.0	100.0	96.7	100.0	-	96.9	100.0	100.0	95.2	100.0	-	95.6	-	-	50.0	100.0	-	95.7	-	75.0	100.0	88.9	-	78.0	95.8
Buses	0	0	2	0	-	2	0	0	4	0	-	4	0	0	0	0	-	0	0	0	0	0	-	0	6
% Buses	0.0	0.0	0.2	0.0	-	0.2	0.0	0.0	0.5	0.0	-	0.5	-	-	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.3
Single-Unit Trucks	0	0	17	0	-	17	0	0	13	0	-	13	0	0	0	0	-	0	0	5	0	1	-	6	36
% Single-Unit Trucks	0.0	0.0	1.7	0.0	-	1.6	0.0	0.0	1.7	0.0	-	1.6	-	-	0.0	0.0	-	0.0	-	10.4	0.0	11.1	-	10.2	1.8
Articulated Trucks	0	0	14	0	-	14	0	0	19	0	-	19	0	0	0	0	-	0	0	7	0	0	-	7	40
% Articulated Trucks	0.0	0.0	1.4	0.0	-	1.3	0.0	0.0	2.5	0.0	-	2.3	-	-	0.0	0.0	-	0.0	-	14.6	0.0	0.0	-	11.9	2.0
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	1
% Bicycles on Road	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	-	50.0	0.0	-	4.3	-	0.0	0.0	0.0	-	0.0	0.1
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Butterfield+Road+and+Barkley+Avenue TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Butterfield Road Eastbound						Butterfield Road Westbound						Barley Avenue Northbound						Barkley Avenue Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
4:30 PM	1	5	230	0	0	236	2	3	278	3	0	286	0	0	0	4	0	4	0	12	0	3	0	15	541
4:45 PM	0	3	216	0	0	219	1	1	297	3	0	302	0	1	0	0	0	1	0	7	0	1	0	8	530
5:00 PM	0	4	185	1	0	190	1	3	358	7	0	369	0	2	0	1	0	3	0	8	0	4	0	12	574
5:15 PM	0	1	239	2	0	242	0	4	295	2	0	301	0	0	0	3	0	3	0	13	0	1	0	14	560
Total	1	13	870	3	0	887	4	11	1228	15	0	1258	0	3	0	8	0	11	0	40	0	9	0	49	2205
Approach %	0.1	1.5	98.1	0.3	-	-	0.3	0.9	97.6	1.2	-	-	0.0	27.3	0.0	72.7	-	-	0.0	81.6	0.0	18.4	-	-	-
Total %	0.0	0.6	39.5	0.1	-	40.2	0.2	0.5	55.7	0.7	-	57.1	0.0	0.1	0.0	0.4	-	0.5	0.0	1.8	0.0	0.4	-	2.2	-
PHF	0.250	0.650	0.910	0.375	-	0.916	0.500	0.688	0.858	0.536	-	0.852	0.000	0.375	0.000	0.500	-	0.688	0.000	0.769	0.000	0.563	-	0.817	0.960
Lights	1	13	846	3	-	863	4	11	1204	11	-	1230	0	3	0	8	-	11	0	37	0	9	-	46	2150
% Lights	100.0	100.0	97.2	100.0	-	97.3	100.0	100.0	98.0	73.3	-	97.8	-	100.0	-	100.0	-	100.0	-	92.5	-	100.0	-	93.9	97.5
Buses	0	0	0	0	-	0	0	0	3	0	-	3	0	0	0	0	-	0	0	0	0	0	-	0	3
% Buses	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.2	0.0	-	0.2	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.1
Single-Unit Trucks	0	0	9	0	-	9	0	0	4	4	-	8	0	0	0	0	-	0	0	1	0	0	-	1	18
% Single-Unit Trucks	0.0	0.0	1.0	0.0	-	1.0	0.0	0.0	0.3	26.7	-	0.6	-	0.0	-	0.0	-	0.0	-	2.5	-	0.0	-	2.0	0.8
Articulated Trucks	0	0	15	0	-	15	0	0	17	0	-	17	0	0	0	0	-	0	0	2	0	0	-	2	34
% Articulated Trucks	0.0	0.0	1.7	0.0	-	1.7	0.0	0.0	1.4	0.0	-	1.4	-	0.0	-	0.0	-	0.0	-	5.0	-	0.0	-	4.1	1.5
Bicycles on Road	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
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 sainkeshavarzi@kloainc.com

Count Name: Estes Street with Barley Avenue
TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Data

Start Time	Estes Street Eastbound						Estes Street Westbound						Barkley Avenue Northbound						Barkley Avenue Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
12:00 PM	0	1	1	2	0	4	0	0	0	0	0	0	0	3	4	0	0	7	0	1	2	0	2	3	14
12:15 PM	0	0	1	2	0	3	0	0	1	0	0	1	0	1	2	0	0	3	0	2	2	0	0	4	11
12:30 PM	0	0	1	1	0	2	0	0	0	1	0	1	0	0	2	0	0	2	0	0	2	0	1	2	7
12:45 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	1	6	0	0	7	0	0	2	0	0	2	10
Hourly Total	0	1	4	5	0	10	0	0	1	1	0	2	0	5	14	0	0	19	0	3	8	0	3	11	42
1:00 PM	0	1	1	3	2	5	0	1	1	2	0	4	0	1	0	0	0	1	0	0	5	0	0	5	15
1:15 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	3	2	0	0	5	0	0	2	0	0	2	8
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	7	0	0	9	0	1	2	1	0	4	13
1:45 PM	0	0	1	2	0	3	0	2	1	0	0	3	0	0	3	0	0	3	0	0	5	0	0	5	14
Hourly Total	0	1	2	6	2	9	0	3	2	2	0	7	0	6	12	0	0	18	0	1	14	1	0	16	50
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7:00 AM	0	0	1	4	0	5	0	0	0	0	0	0	0	1	1	0	0	2	0	0	5	0	1	5	12
7:15 AM	0	0	0	6	0	6	0	0	1	0	0	1	0	1	1	0	0	2	0	1	7	0	0	8	17
7:30 AM	0	1	1	3	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	11
7:45 AM	0	0	1	2	0	3	0	0	0	0	0	0	0	1	3	0	0	4	0	0	6	0	0	6	13
Hourly Total	0	1	3	15	0	19	0	0	1	0	0	1	0	3	5	0	0	8	0	1	24	0	1	25	53
8:00 AM	0	0	2	1	0	3	0	0	1	0	0	1	0	1	3	0	0	4	0	0	5	0	0	5	13
8:15 AM	0	1	3	1	0	5	0	0	0	1	0	1	0	1	2	0	0	3	0	0	1	0	0	1	10
8:30 AM	0	0	1	1	0	2	0	0	0	0	0	0	0	2	1	0	0	3	0	0	5	0	1	5	10
8:45 AM	0	1	3	2	0	6	0	0	0	1	0	1	0	0	2	0	0	2	0	0	1	0	1	1	10
Hourly Total	0	2	9	5	0	16	0	0	1	2	0	3	0	4	8	0	0	12	0	0	12	0	2	12	43
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	0	0	1	0	1	0	0	2	0	0	2	0	2	5	0	0	7	0	2	1	0	0	3	13
4:15 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	3	3	0	0	6	0	0	0	0	0	0	7
4:30 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	3	5	0	0	8	0	0	0	0	2	0	9
4:45 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	4	8	0	0	12	0	1	3	0	0	4	17
Hourly Total	0	0	0	4	0	4	0	0	2	0	0	2	0	12	21	0	0	33	0	3	4	0	2	7	46
5:00 PM	0	1	1	1	0	3	0	0	2	0	1	2	0	3	4	0	0	7	0	0	10	1	0	11	23
5:15 PM	0	0	1	2	0	3	0	0	1	0	0	1	0	2	1	0	0	3	0	0	0	0	0	0	7
5:30 PM	0	1	0	1	0	2	0	0	1	2	0	3	0	9	4	0	0	13	0	0	2	1	0	3	21
5:45 PM	0	0	2	3	0	5	0	0	1	0	0	1	0	4	8	0	0	12	0	0	3	0	0	3	21
Hourly Total	0	2	4	7	0	13	0	0	5	2	1	7	0	18	17	0	0	35	0	0	15	2	0	17	72
Grand Total	0	7	22	42	2	71	0	3	12	7	1	22	0	48	77	0	0	125	0	8	77	3	8	88	306
Approach %	0.0	9.9	31.0	59.2	-	-	0.0	13.6	54.5	31.8	-	-	0.0	38.4	61.6	0.0	-	-	0.0	9.1	87.5	3.4	-	-	-
Total %	0.0	2.3	7.2	13.7	-	23.2	0.0	1.0	3.9	2.3	-	7.2	0.0	15.7	25.2	0.0	-	40.8	0.0	2.6	25.2	1.0	-	28.8	-

Lights	0	7	22	41	-	70	0	3	12	7	-	22	0	47	74	0	-	121	0	8	77	3	-	88	301
% Lights	-	100.0	100.0	97.6	-	98.6	-	100.0	100.0	100.0	-	100.0	-	97.9	96.1	-	-	96.8	-	100.0	100.0	100.0	-	100.0	98.4
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	1
% Buses	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	2.1	0.0	-	-	0.8	-	0.0	0.0	0.0	-	0.0	0.3
Single-Unit Trucks	0	0	0	1	-	1	0	0	0	0	-	0	0	0	2	0	-	2	0	0	0	0	-	0	3
% Single-Unit Trucks	-	0.0	0.0	2.4	-	1.4	-	0.0	0.0	0.0	-	0.0	-	0.0	2.6	-	-	1.6	-	0.0	0.0	0.0	-	0.0	1.0
Articulated Trucks	0	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	0.0	-	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	1	0	-	1	0	0	0	0	-	0	1
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	1.3	-	-	0.8	-	0.0	0.0	0.0	-	0.0	0.3
Pedestrians	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	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 sainkeshavarzi@kloainc.com

Count Name: Estes Street with Barley Avenue
TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Peak Hour Data (1:00 PM)

Start Time	Estes Street Eastbound						Estes Street Westbound						Barkley Avenue Northbound						Barkley Avenue Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
1:00 PM	0	1	1	3	2	5	0	1	1	2	0	4	0	1	0	0	0	1	0	0	5	0	0	5	15
1:15 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	3	2	0	0	5	0	0	2	0	0	2	8
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	7	0	0	9	0	1	2	1	0	4	13
1:45 PM	0	0	1	2	0	3	0	2	1	0	0	3	0	0	3	0	0	3	0	0	5	0	0	5	14
Total	0	1	2	6	2	9	0	3	2	2	0	7	0	6	12	0	0	18	0	1	14	1	0	16	50
Approach %	0.0	11.1	22.2	66.7	-	-	0.0	42.9	28.6	28.6	-	-	0.0	33.3	66.7	0.0	-	-	0.0	6.3	87.5	6.3	-	-	-
Total %	0.0	2.0	4.0	12.0	-	18.0	0.0	6.0	4.0	4.0	-	14.0	0.0	12.0	24.0	0.0	-	36.0	0.0	2.0	28.0	2.0	-	32.0	-
PHF	0.000	0.250	0.500	0.500	-	0.450	0.000	0.375	0.500	0.250	-	0.438	0.000	0.500	0.429	0.000	-	0.500	0.000	0.250	0.700	0.250	-	0.800	0.833
Lights	0	1	2	5	-	8	0	3	2	2	-	7	0	6	12	0	-	18	0	1	14	1	-	16	49
% Lights	-	100.0	100.0	83.3	-	88.9	-	100.0	100.0	100.0	-	100.0	-	100.0	100.0	-	-	100.0	-	100.0	100.0	100.0	-	100.0	98.0
Buses	0	0	0	0	-	0	0	0	0	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	-	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	0	1	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1
% Single-Unit Trucks	-	0.0	0.0	16.7	-	11.1	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	0.0	0.0	0.0	-	0.0	2.0
Articulated Trucks	0	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	0.0	-	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
% 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
Pedestrians	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 sainkeshavarzi@kloainc.com

Count Name: Estes Street with Barley Avenue
TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Estes Street Eastbound						Estes Street Westbound						Barkley Avenue Northbound						Barkley Avenue Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:15 AM	0	0	0	6	0	6	0	0	1	0	0	1	0	1	1	0	0	2	0	1	7	0	0	8	17
7:30 AM	0	1	1	3	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	11
7:45 AM	0	0	1	2	0	3	0	0	0	0	0	0	0	1	3	0	0	4	0	0	6	0	0	6	13
8:00 AM	0	0	2	1	0	3	0	0	1	0	0	1	0	1	3	0	0	4	0	0	5	0	0	5	13
Total	0	1	4	12	0	17	0	0	2	0	0	2	0	3	7	0	0	10	0	1	24	0	0	25	54
Approach %	0.0	5.9	23.5	70.6	-	-	0.0	0.0	100.0	0.0	-	-	0.0	30.0	70.0	0.0	-	-	0.0	4.0	96.0	0.0	-	-	-
Total %	0.0	1.9	7.4	22.2	-	31.5	0.0	0.0	3.7	0.0	-	3.7	0.0	5.6	13.0	0.0	-	18.5	0.0	1.9	44.4	0.0	-	46.3	-
PHF	0.000	0.250	0.500	0.500	-	0.708	0.000	0.000	0.500	0.000	-	0.500	0.000	0.750	0.583	0.000	-	0.625	0.000	0.250	0.857	0.000	-	0.781	0.794
Lights	0	1	4	12	-	17	0	0	2	0	-	2	0	2	6	0	-	8	0	1	24	0	-	25	52
% Lights	-	100.0	100.0	100.0	-	100.0	-	-	100.0	-	-	100.0	-	66.7	85.7	-	-	80.0	-	100.0	100.0	-	-	100.0	96.3
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	1
% Buses	-	0.0	0.0	0.0	-	0.0	-	-	0.0	-	-	0.0	-	33.3	0.0	-	-	10.0	-	0.0	0.0	-	-	0.0	1.9
Single-Unit Trucks	0	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	-	0.0	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
% 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
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	1
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	-	0.0	-	-	0.0	-	0.0	14.3	-	-	10.0	-	0.0	0.0	-	-	0.0	1.9
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
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Count Name: Estes Street with Barley Avenue
TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Estes Street Eastbound						Estes Street Westbound						Barkley Avenue Northbound						Barkley Avenue Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
4:30 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	3	5	0	0	8	0	0	0	0	2	0	9
4:45 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	4	8	0	0	12	0	1	3	0	0	4	17
5:00 PM	0	1	1	1	0	3	0	0	2	0	1	2	0	3	4	0	0	7	0	0	10	1	0	11	23
5:15 PM	0	0	1	2	0	3	0	0	1	0	0	1	0	2	1	0	0	3	0	0	0	0	0	0	7
Total	0	1	2	5	0	8	0	0	3	0	1	3	0	12	18	0	0	30	0	1	13	1	2	15	56
Approach %	0.0	12.5	25.0	62.5	-	-	0.0	0.0	100.0	0.0	-	-	0.0	40.0	60.0	0.0	-	-	0.0	6.7	86.7	6.7	-	-	-
Total %	0.0	1.8	3.6	8.9	-	14.3	0.0	0.0	5.4	0.0	-	5.4	0.0	21.4	32.1	0.0	-	53.6	0.0	1.8	23.2	1.8	-	26.8	-
PHF	0.000	0.250	0.500	0.625	-	0.667	0.000	0.000	0.375	0.000	-	0.375	0.000	0.750	0.563	0.000	-	0.625	0.000	0.250	0.325	0.250	-	0.341	0.609
Lights	0	1	2	5	-	8	0	0	3	0	-	3	0	12	17	0	-	29	0	1	13	1	-	15	55
% Lights	-	100.0	100.0	100.0	-	100.0	-	-	100.0	-	-	100.0	-	100.0	94.4	-	-	96.7	-	100.0	100.0	100.0	-	100.0	98.2
Buses	0	0	0	0	-	0	0	0	0	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	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	1
% Single-Unit Trucks	-	0.0	0.0	0.0	-	0.0	-	-	0.0	-	-	0.0	-	0.0	5.6	-	-	3.3	-	0.0	0.0	0.0	-	0.0	1.8
Articulated Trucks	0	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	-	0.0	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
% 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
Pedestrians	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

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9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
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Count Name: IL 59 with Duke Pkwy/Everton Drive TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Data

Start Time	Duke Pkwy Eastbound						Everton Drive Westbound						IL 59 Northbound						IL 59 Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
12:00 PM	0	4	0	7	0	11	0	7	1	1	0	9	0	14	208	11	0	233	0	14	218	5	0	237	490
12:15 PM	0	3	2	6	0	11	0	11	2	1	0	14	3	10	230	12	0	255	0	4	246	4	0	254	534
12:30 PM	0	6	1	5	0	12	0	15	1	0	0	16	1	7	256	9	1	273	0	4	227	2	0	233	534
12:45 PM	0	4	0	4	0	8	0	17	1	3	0	21	0	10	216	12	0	238	0	9	248	3	0	260	527
Hourly Total	0	17	3	22	0	42	0	50	5	5	0	60	4	41	910	44	1	999	0	31	939	14	0	984	2085
1:00 PM	0	4	0	13	0	17	0	11	0	1	0	12	1	9	239	5	0	254	1	9	265	3	0	278	561
1:15 PM	0	3	1	5	0	9	0	20	0	0	0	20	2	10	260	7	0	279	0	7	212	2	0	221	529
1:30 PM	0	2	2	6	0	10	0	16	1	3	0	20	1	16	239	9	0	265	0	5	225	2	0	232	527
1:45 PM	0	7	2	9	0	18	0	12	0	1	0	13	2	8	215	13	0	238	0	10	267	7	0	284	553
Hourly Total	0	16	5	33	0	54	0	59	1	5	0	65	6	43	953	34	0	1036	1	31	969	14	0	1015	2170
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7:00 AM	0	1	0	11	0	12	0	7	0	2	0	9	3	19	254	4	0	280	0	2	315	15	0	332	633
7:15 AM	0	4	1	13	0	18	0	12	0	2	0	14	0	23	321	1	0	345	0	2	321	19	0	342	719
7:30 AM	0	12	0	13	0	25	0	24	1	3	0	28	2	9	318	2	0	331	0	1	315	9	0	325	709
7:45 AM	0	5	0	13	0	18	0	21	0	2	0	23	0	13	283	3	0	299	0	0	384	14	0	398	738
Hourly Total	0	22	1	50	0	73	0	64	1	9	0	74	5	64	1176	10	0	1255	0	5	1335	57	0	1397	2799
8:00 AM	0	9	0	12	0	21	0	20	0	2	0	22	1	12	314	5	0	332	0	2	304	10	0	316	691
8:15 AM	0	8	1	7	0	16	0	11	0	2	0	13	1	22	244	3	0	270	0	4	323	13	0	340	639
8:30 AM	0	5	0	16	0	21	0	8	0	2	0	10	2	14	301	7	0	324	0	2	276	13	0	291	646
8:45 AM	0	5	0	8	0	13	0	18	1	1	0	20	0	12	233	1	0	246	0	3	272	9	0	284	563
Hourly Total	0	27	1	43	0	71	0	57	1	7	0	65	4	60	1092	16	0	1172	0	11	1175	45	0	1231	2539
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	13	0	13	0	26	0	2	1	1	0	4	2	17	300	10	0	329	0	8	313	3	0	324	683
4:15 PM	0	11	2	4	0	17	1	14	0	4	1	19	2	15	274	14	0	305	0	9	310	2	0	321	662
4:30 PM	0	10	0	6	0	16	0	6	0	0	0	6	1	14	345	11	0	371	0	5	375	7	0	387	780
4:45 PM	0	3	0	5	0	8	0	8	1	3	0	12	0	11	281	16	0	308	0	4	323	7	0	334	662
Hourly Total	0	37	2	28	0	67	1	30	2	8	1	41	5	57	1200	51	0	1313	0	26	1321	19	0	1366	2787
5:00 PM	0	13	0	18	0	31	0	12	0	3	0	15	0	24	327	24	0	375	1	15	318	12	0	346	767
5:15 PM	0	11	1	6	0	18	0	5	0	6	0	11	2	11	369	28	0	410	1	8	365	13	0	387	826
5:30 PM	0	16	1	33	0	50	0	13	0	2	1	15	2	22	295	17	0	336	1	16	262	9	0	288	689
5:45 PM	0	5	1	11	0	17	0	6	4	3	0	13	2	19	281	16	0	318	0	18	291	13	0	322	670
Hourly Total	0	45	3	68	0	116	0	36	4	14	1	54	6	76	1272	85	0	1439	3	57	1236	47	0	1343	2952
Grand Total	0	164	15	244	0	423	1	296	14	48	2	359	30	341	6603	240	1	7214	4	161	6975	196	0	7336	15332
Approach %	0.0	38.8	3.5	57.7	-	-	0.3	82.5	3.9	13.4	-	-	0.4	4.7	91.5	3.3	-	-	0.1	2.2	95.1	2.7	-	-	-
Total %	0.0	1.1	0.1	1.6	-	2.8	0.0	1.9	0.1	0.3	-	2.3	0.2	2.2	43.1	1.6	-	47.1	0.0	1.1	45.5	1.3	-	47.8	-

Lights	0	140	15	171	-	326	1	294	14	48	-	357	30	289	6194	236	-	6749	4	157	6591	155	-	6907	14339
% Lights	-	85.4	100.0	70.1	-	77.1	100.0	99.3	100.0	100.0	-	99.4	100.0	84.8	93.8	98.3	-	93.6	100.0	97.5	94.5	79.1	-	94.2	93.5
Buses	0	2	0	0	-	2	0	0	0	0	-	0	0	2	9	1	-	12	0	3	12	0	-	15	29
% Buses	-	1.2	0.0	0.0	-	0.5	0.0	0.0	0.0	0.0	-	0.0	0.0	0.6	0.1	0.4	-	0.2	0.0	1.9	0.2	0.0	-	0.2	0.2
Single-Unit Trucks	0	6	0	20	-	26	0	2	0	0	-	2	0	18	137	1	-	156	0	1	99	5	-	105	289
% Single-Unit Trucks	-	3.7	0.0	8.2	-	6.1	0.0	0.7	0.0	0.0	-	0.6	0.0	5.3	2.1	0.4	-	2.2	0.0	0.6	1.4	2.6	-	1.4	1.9
Articulated Trucks	0	16	0	53	-	69	0	0	0	0	-	0	0	32	263	2	-	297	0	0	273	36	-	309	675
% Articulated Trucks	-	9.8	0.0	21.7	-	16.3	0.0	0.0	0.0	0.0	-	0.0	0.0	9.4	4.0	0.8	-	4.1	0.0	0.0	3.9	18.4	-	4.2	4.4
Bicycles on Road	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	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	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 sainkeshavarzi@kloainc.com

Count Name: IL 59 with Duke Pkwy/Everton Drive TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Peak Hour Data (1:00 PM)

Start Time	Duke Pkwy Eastbound						Everton Drive Westbound						IL 59 Northbound						IL 59 Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
1:00 PM	0	4	0	13	0	17	0	11	0	1	0	12	1	9	239	5	0	254	1	9	265	3	0	278	561
1:15 PM	0	3	1	5	0	9	0	20	0	0	0	20	2	10	260	7	0	279	0	7	212	2	0	221	529
1:30 PM	0	2	2	6	0	10	0	16	1	3	0	20	1	16	239	9	0	265	0	5	225	2	0	232	527
1:45 PM	0	7	2	9	0	18	0	12	0	1	0	13	2	8	215	13	0	238	0	10	267	7	0	284	553
Total	0	16	5	33	0	54	0	59	1	5	0	65	6	43	953	34	0	1036	1	31	969	14	0	1015	2170
Approach %	0.0	29.6	9.3	61.1	-	-	0.0	90.8	1.5	7.7	-	-	0.6	4.2	92.0	3.3	-	-	0.1	3.1	95.5	1.4	-	-	-
Total %	0.0	0.7	0.2	1.5	-	2.5	0.0	2.7	0.0	0.2	-	3.0	0.3	2.0	43.9	1.6	-	47.7	0.0	1.4	44.7	0.6	-	46.8	-
PHF	0.000	0.571	0.625	0.635	-	0.750	0.000	0.738	0.250	0.417	-	0.813	0.750	0.672	0.916	0.654	-	0.928	0.250	0.775	0.907	0.500	-	0.893	0.967
Lights	0	14	5	23	-	42	0	59	1	5	-	65	6	36	926	34	-	1002	1	30	941	11	-	983	2092
% Lights	-	87.5	100.0	69.7	-	77.8	-	100.0	100.0	100.0	-	100.0	100.0	83.7	97.2	100.0	-	96.7	100.0	96.8	97.1	78.6	-	96.8	96.4
Buses	0	0	0	0	-	0	0	0	0	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	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	2	0	3	-	5	0	0	0	0	-	0	0	6	18	0	-	24	0	1	8	0	-	9	38
% Single-Unit Trucks	-	12.5	0.0	9.1	-	9.3	-	0.0	0.0	0.0	-	0.0	0.0	14.0	1.9	0.0	-	2.3	0.0	3.2	0.8	0.0	-	0.9	1.8
Articulated Trucks	0	0	0	7	-	7	0	0	0	0	-	0	0	1	9	0	-	10	0	0	20	3	-	23	40
% Articulated Trucks	-	0.0	0.0	21.2	-	13.0	-	0.0	0.0	0.0	-	0.0	0.0	2.3	0.9	0.0	-	1.0	0.0	0.0	2.1	21.4	-	2.3	1.8
Bicycles on Road	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	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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9575 W. Higgins Rd., Suite 400

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(847)518-9990 sainkeshavarzi@kloainc.com

Count Name: IL 59 with Duke Pkwy/Everton Drive TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Duke Pkwy Eastbound						Everton Drive Westbound						IL 59 Northbound						IL 59 Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:15 AM	0	4	1	13	0	18	0	12	0	2	0	14	0	23	321	1	0	345	0	2	321	19	0	342	719
7:30 AM	0	12	0	13	0	25	0	24	1	3	0	28	2	9	318	2	0	331	0	1	315	9	0	325	709
7:45 AM	0	5	0	13	0	18	0	21	0	2	0	23	0	13	283	3	0	299	0	0	384	14	0	398	738
8:00 AM	0	9	0	12	0	21	0	20	0	2	0	22	1	12	314	5	0	332	0	2	304	10	0	316	691
Total	0	30	1	51	0	82	0	77	1	9	0	87	3	57	1236	11	0	1307	0	5	1324	52	0	1381	2857
Approach %	0.0	36.6	1.2	62.2	-	-	0.0	88.5	1.1	10.3	-	-	0.2	4.4	94.6	0.8	-	-	0.0	0.4	95.9	3.8	-	-	-
Total %	0.0	1.1	0.0	1.8	-	2.9	0.0	2.7	0.0	0.3	-	3.0	0.1	2.0	43.3	0.4	-	45.7	0.0	0.2	46.3	1.8	-	48.3	-
PHF	0.000	0.625	0.250	0.981	-	0.820	0.000	0.802	0.250	0.750	-	0.777	0.375	0.620	0.963	0.550	-	0.947	0.000	0.625	0.862	0.684	-	0.867	0.968
Lights	0	20	1	31	-	52	0	77	1	9	-	87	3	44	1136	9	-	1192	0	5	1231	39	-	1275	2606
% Lights	-	66.7	100.0	60.8	-	63.4	-	100.0	100.0	100.0	-	100.0	100.0	77.2	91.9	81.8	-	91.2	-	100.0	93.0	75.0	-	92.3	91.2
Buses	0	2	0	0	-	2	0	0	0	0	-	0	0	2	3	1	-	6	0	0	2	0	-	2	10
% Buses	-	6.7	0.0	0.0	-	2.4	-	0.0	0.0	0.0	-	0.0	0.0	3.5	0.2	9.1	-	0.5	-	0.0	0.2	0.0	-	0.1	0.4
Single-Unit Trucks	0	1	0	6	-	7	0	0	0	0	-	0	0	1	19	1	-	21	0	0	33	3	-	36	64
% Single-Unit Trucks	-	3.3	0.0	11.8	-	8.5	-	0.0	0.0	0.0	-	0.0	0.0	1.8	1.5	9.1	-	1.6	-	0.0	2.5	5.8	-	2.6	2.2
Articulated Trucks	0	7	0	14	-	21	0	0	0	0	-	0	0	10	78	0	-	88	0	0	58	10	-	68	177
% Articulated Trucks	-	23.3	0.0	27.5	-	25.6	-	0.0	0.0	0.0	-	0.0	0.0	17.5	6.3	0.0	-	6.7	-	0.0	4.4	19.2	-	4.9	6.2
Bicycles on Road	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
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: IL 59 with Duke Pkwy/Everton Drive TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Duke Pkwy Eastbound						Everton Drive Westbound						IL 59 Northbound						IL 59 Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
4:30 PM	0	10	0	6	0	16	0	6	0	0	0	6	1	14	345	11	0	371	0	5	375	7	0	387	780
4:45 PM	0	3	0	5	0	8	0	8	1	3	0	12	0	11	281	16	0	308	0	4	323	7	0	334	662
5:00 PM	0	13	0	18	0	31	0	12	0	3	0	15	0	24	327	24	0	375	1	15	318	12	0	346	767
5:15 PM	0	11	1	6	0	18	0	5	0	6	0	11	2	11	369	28	0	410	1	8	365	13	0	387	826
Total	0	37	1	35	0	73	0	31	1	12	0	44	3	60	1322	79	0	1464	2	32	1381	39	0	1454	3035
Approach %	0.0	50.7	1.4	47.9	-	-	0.0	70.5	2.3	27.3	-	-	0.2	4.1	90.3	5.4	-	-	0.1	2.2	95.0	2.7	-	-	-
Total %	0.0	1.2	0.0	1.2	-	2.4	0.0	1.0	0.0	0.4	-	1.4	0.1	2.0	43.6	2.6	-	48.2	0.1	1.1	45.5	1.3	-	47.9	-
PHF	0.000	0.712	0.250	0.486	-	0.589	0.000	0.646	0.250	0.500	-	0.733	0.375	0.625	0.896	0.705	-	0.893	0.500	0.533	0.921	0.750	-	0.939	0.919
Lights	0	30	1	27	-	58	0	31	1	12	-	44	3	47	1261	79	-	1390	2	32	1305	29	-	1368	2860
% Lights	-	81.1	100.0	77.1	-	79.5	-	100.0	100.0	100.0	-	100.0	100.0	78.3	95.4	100.0	-	94.9	100.0	100.0	94.5	74.4	-	94.1	94.2
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	1
% Buses	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.1	0.0	-	0.1	0.0	0.0	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	0	1	-	1	0	0	0	0	-	0	0	3	17	0	-	20	0	0	10	1	-	11	32
% Single-Unit Trucks	-	0.0	0.0	2.9	-	1.4	-	0.0	0.0	0.0	-	0.0	0.0	5.0	1.3	0.0	-	1.4	0.0	0.0	0.7	2.6	-	0.8	1.1
Articulated Trucks	0	7	0	7	-	14	0	0	0	0	-	0	0	10	43	0	-	53	0	0	66	9	-	75	142
% Articulated Trucks	-	18.9	0.0	20.0	-	19.2	-	0.0	0.0	0.0	-	0.0	0.0	16.7	3.3	0.0	-	3.6	0.0	0.0	4.8	23.1	-	5.2	4.7
Bicycles on Road	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	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Rosemont, Illinois, United States 60018
(847)518-9990 sainkeshavarzi@kloainc.com

Count Name: IL 59 with Estes Street TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Data

Start Time	Estes Street Eastbound					IL 59 Northbound					IL 59 Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
12:00 PM	0	0	2	0	2	0	0	196	0	196	0	244	1	0	245	443
12:15 PM	0	0	2	0	2	0	0	251	0	251	0	252	1	0	253	506
12:30 PM	0	0	1	0	1	0	0	250	0	250	0	241	0	0	241	492
12:45 PM	0	0	1	0	1	0	0	203	0	203	0	240	0	0	240	444
Hourly Total	0	0	6	0	6	0	0	900	0	900	0	977	2	0	979	1885
1:00 PM	0	0	1	0	1	0	0	274	0	274	0	277	4	0	281	556
1:15 PM	0	0	0	0	0	0	0	257	0	257	0	233	0	0	233	490
1:30 PM	0	0	1	0	1	0	0	295	0	295	0	224	0	0	224	520
1:45 PM	0	0	0	0	0	0	0	287	0	287	0	281	3	0	284	571
Hourly Total	0	0	2	0	2	0	0	1113	0	1113	0	1015	7	0	1022	2137
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7:00 AM	0	0	1	0	1	0	0	283	0	283	0	296	0	0	296	580
7:15 AM	0	0	1	0	1	0	0	348	0	348	0	353	1	0	354	703
7:30 AM	0	0	2	0	2	0	0	360	0	360	0	312	0	0	312	674
7:45 AM	0	0	1	0	1	0	0	322	0	322	0	365	0	0	365	688
Hourly Total	0	0	5	0	5	0	0	1313	0	1313	0	1326	1	0	1327	2645
8:00 AM	0	0	2	0	2	0	0	312	0	312	0	349	1	0	350	664
8:15 AM	0	0	2	0	2	0	0	279	0	279	0	328	1	0	329	610
8:30 AM	0	0	1	0	1	0	0	310	0	310	0	283	0	0	283	594
8:45 AM	0	0	3	0	3	0	0	243	0	243	0	296	1	0	297	543
Hourly Total	0	0	8	0	8	0	0	1144	0	1144	0	1256	3	0	1259	2411
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	0	2	0	2	0	0	298	0	298	0	311	1	0	312	612
4:15 PM	0	0	0	1	0	0	0	300	0	300	0	330	0	0	330	630
4:30 PM	0	0	0	0	0	0	0	394	0	394	0	355	1	0	356	750
4:45 PM	0	0	1	0	1	0	0	304	0	304	0	331	0	0	331	636
Hourly Total	0	0	3	1	3	0	0	1296	0	1296	0	1327	2	0	1329	2628
5:00 PM	0	0	1	0	1	0	0	355	0	355	0	355	1	0	356	712
5:15 PM	0	0	1	0	1	0	0	360	0	360	0	370	1	0	371	732
5:30 PM	0	0	0	0	0	0	0	321	0	321	0	326	3	0	329	650
5:45 PM	0	0	2	0	2	0	0	305	0	305	0	293	1	0	294	601
Hourly Total	0	0	4	0	4	0	0	1341	0	1341	0	1344	6	0	1350	2695
Grand Total	0	0	28	1	28	0	0	7107	0	7107	0	7245	21	0	7266	14401
Approach %	0.0	0.0	100.0	-	-	0.0	0.0	100.0	-	-	0.0	99.7	0.3	-	-	-
Total %	0.0	0.0	0.2	-	0.2	0.0	0.0	49.4	-	49.4	0.0	50.3	0.1	-	50.5	-
Lights	0	0	28	-	28	0	0	6688	-	6688	0	6824	21	-	6845	13561

% Lights	-	-	100.0	-	100.0	-	-	94.1	-	94.1	-	94.2	100.0	-	94.2	94.2
Buses	0	0	0	-	0	0	0	13	-	13	0	15	0	-	15	28
% Buses	-	-	0.0	-	0.0	-	-	0.2	-	0.2	-	0.2	0.0	-	0.2	0.2
Single-Unit Trucks	0	0	0	-	0	0	0	118	-	118	0	109	0	-	109	227
% Single-Unit Trucks	-	-	0.0	-	0.0	-	-	1.7	-	1.7	-	1.5	0.0	-	1.5	1.6
Articulated Trucks	0	0	0	-	0	0	0	288	-	288	0	297	0	-	297	585
% Articulated Trucks	-	-	0.0	-	0.0	-	-	4.1	-	4.1	-	4.1	0.0	-	4.1	4.1
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	-	-	-	1	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: IL 59 with Estes Street TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Peak Hour Data (1:00 PM)

Start Time	Estes Street Eastbound					IL 59 Northbound					IL 59 Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
1:00 PM	0	0	1	0	1	0	0	274	0	274	0	277	4	0	281	556
1:15 PM	0	0	0	0	0	0	0	257	0	257	0	233	0	0	233	490
1:30 PM	0	0	1	0	1	0	0	295	0	295	0	224	0	0	224	520
1:45 PM	0	0	0	0	0	0	0	287	0	287	0	281	3	0	284	571
Total	0	0	2	0	2	0	0	1113	0	1113	0	1015	7	0	1022	2137
Approach %	0.0	0.0	100.0	-	-	0.0	0.0	100.0	-	-	0.0	99.3	0.7	-	-	-
Total %	0.0	0.0	0.1	-	0.1	0.0	0.0	52.1	-	52.1	0.0	47.5	0.3	-	47.8	-
PHF	0.000	0.000	0.500	-	0.500	0.000	0.000	0.943	-	0.943	0.000	0.903	0.438	-	0.900	0.936
Lights	0	0	2	-	2	0	0	1079	-	1079	0	989	7	-	996	2077
% Lights	-	-	100.0	-	100.0	-	-	96.9	-	96.9	-	97.4	100.0	-	97.5	97.2
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	19	-	19	0	8	0	-	8	27
% Single-Unit Trucks	-	-	0.0	-	0.0	-	-	1.7	-	1.7	-	0.8	0.0	-	0.8	1.3
Articulated Trucks	0	0	0	-	0	0	0	15	-	15	0	18	0	-	18	33
% Articulated Trucks	-	-	0.0	-	0.0	-	-	1.3	-	1.3	-	1.8	0.0	-	1.8	1.5
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
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 sainkeshavarzi@kloainc.com

Count Name: IL 59 with Estes Street TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Estes Street Eastbound					IL 59 Northbound					IL 59 Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
7:15 AM	0	0	1	0	1	0	0	348	0	348	0	353	1	0	354	703
7:30 AM	0	0	2	0	2	0	0	360	0	360	0	312	0	0	312	674
7:45 AM	0	0	1	0	1	0	0	322	0	322	0	365	0	0	365	688
8:00 AM	0	0	2	0	2	0	0	312	0	312	0	349	1	0	350	664
Total	0	0	6	0	6	0	0	1342	0	1342	0	1379	2	0	1381	2729
Approach %	0.0	0.0	100.0	-	-	0.0	0.0	100.0	-	-	0.0	99.9	0.1	-	-	-
Total %	0.0	0.0	0.2	-	0.2	0.0	0.0	49.2	-	49.2	0.0	50.5	0.1	-	50.6	-
PHF	0.000	0.000	0.750	-	0.750	0.000	0.000	0.932	-	0.932	0.000	0.945	0.500	-	0.946	0.970
Lights	0	0	6	-	6	0	0	1231	-	1231	0	1277	2	-	1279	2516
% Lights	-	-	100.0	-	100.0	-	-	91.7	-	91.7	-	92.6	100.0	-	92.6	92.2
Buses	0	0	0	-	0	0	0	4	-	4	0	2	0	-	2	6
% Buses	-	-	0.0	-	0.0	-	-	0.3	-	0.3	-	0.1	0.0	-	0.1	0.2
Single-Unit Trucks	0	0	0	-	0	0	0	21	-	21	0	38	0	-	38	59
% Single-Unit Trucks	-	-	0.0	-	0.0	-	-	1.6	-	1.6	-	2.8	0.0	-	2.8	2.2
Articulated Trucks	0	0	0	-	0	0	0	86	-	86	0	62	0	-	62	148
% Articulated Trucks	-	-	0.0	-	0.0	-	-	6.4	-	6.4	-	4.5	0.0	-	4.5	5.4
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
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 sainkeshavarzi@kloainc.com

Count Name: IL 59 with Estes Street TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Estes Street Eastbound					IL 59 Northbound					IL 59 Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
4:30 PM	0	0	0	0	0	0	0	394	0	394	0	355	1	0	356	750
4:45 PM	0	0	1	0	1	0	0	304	0	304	0	331	0	0	331	636
5:00 PM	0	0	1	0	1	0	0	355	0	355	0	355	1	0	356	712
5:15 PM	0	0	1	0	1	0	0	360	0	360	0	370	1	0	371	732
Total	0	0	3	0	3	0	0	1413	0	1413	0	1411	3	0	1414	2830
Approach %	0.0	0.0	100.0	-	-	0.0	0.0	100.0	-	-	0.0	99.8	0.2	-	-	-
Total %	0.0	0.0	0.1	-	0.1	0.0	0.0	49.9	-	49.9	0.0	49.9	0.1	-	50.0	-
PHF	0.000	0.000	0.750	-	0.750	0.000	0.000	0.897	-	0.897	0.000	0.953	0.750	-	0.953	0.943
Lights	0	0	3	-	3	0	0	1351	-	1351	0	1327	3	-	1330	2684
% Lights	-	-	100.0	-	100.0	-	-	95.6	-	95.6	-	94.0	100.0	-	94.1	94.8
Buses	0	0	0	-	0	0	0	2	-	2	0	0	0	-	0	2
% Buses	-	-	0.0	-	0.0	-	-	0.1	-	0.1	-	0.0	0.0	-	0.0	0.1
Single-Unit Trucks	0	0	0	-	0	0	0	13	-	13	0	11	0	-	11	24
% Single-Unit Trucks	-	-	0.0	-	0.0	-	-	0.9	-	0.9	-	0.8	0.0	-	0.8	0.8
Articulated Trucks	0	0	0	-	0	0	0	47	-	47	0	73	0	-	73	120
% Articulated Trucks	-	-	0.0	-	0.0	-	-	3.3	-	3.3	-	5.2	0.0	-	5.2	4.2
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
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Site Plan

PAVING LEGEND

HMA PAVEMENT
1.5" HMA N-50 SURFACE
2" HMA N-50 BINDER*
10" AGGREGATE BASE

HEAVY DUTY CONCRETE
8" CONCRETE CLASS PV
4" AGGREGATE BASE

SIDEWALK
5" CONCRETE CLASS SI
4" AGGREGATE BASE

SITE DATA TABLE - PROPOSED DREAM CLEAN AND STARBUCKS
ROUTE 59 and DUKE PARKWAY, WARRENVILLE, IL
PIN 04-33-403-003,006,007,008

SITE AREA = 4.02 ACRES

BUILDING SETBACKS

FRONT - EAST	40 FEET
REAR - WEST	20 FEET
SIDE - NORTH	40 FEET
SIDE - SOUTH	15 FEET

LAND USE DATA - LOT 1

ZONING CATEGORY/ ZONING AGENCY	B-4, CITY OF WARRENVILLE
SITE AREA	1.22 AC.
EXISTING BUILDING AREA	0 S. FT.
ONSITE VEHICULAR CIRCULATION	7,648 S. FT.
AREA (PAVED) 110,997 S. FT.	
ONSITE OPEN SPACE/ LANDSCAPE AREA .	45,495 S. FT.

LAND USE DATA - LOT 2 - STARBUCKS

MAX. BUILDING HEIGHT	42 FEET ALLOWED
ZONING CATEGORY/ ZONING AGENCY	B-4, CITY OF WARRENVILLE
SITE AREA	0.85 AC.
STARBUCKS BUILDING AREA	2,242 S.FT
EXISTING BUILDING AREA	0 S. FT.
PARKING PROVIDED	22 SPACES
CAR STACKING PROVIDED	15 CARS
ONSITE VEHICULAR CIRCULATION	18,938 S. FT.
AREA (PAVED) 18,970 S. FT.	
ONSITE OPEN SPACE/ LANDSCAPE AREA .	13,621 S. FT.
ONSITE SIDEWALK	2,215 S. FT.

LAND USE DATA - LOT 3 - DREAM CLEAN

MAX. BUILDING HEIGHT	42 FEET ALLOWED
ZONING CATEGORY/ ZONING AGENCY	B-4, CITY OF WARRENVILLE
SITE AREA	1.95 AC.
DREAM CLEAN BUILDING AREA	6,500 S.FT
EXISTING BUILDING AREA	0 S. FT.
PARKING PROVIDED	20 SPACES
CAR STACKING PROVIDED	37 CARS
ONSITE VEHICULAR CIRCULATION	29,548 S. FT.
AREA (PAVED) 31,855 S. FT.	
ONSITE OPEN SPACE/ LANDSCAPE AREA .	46,435 S. FT.
ONSITE SIDEWALK	2,459 S. FT.

0 30 60
GRAPHIC SCALE - FEET

WARRENVILLE R-2 RESIDENTIAL
16-ft Ornamental Light on Estes
ESTES STREET
CONCRETE SIDEWALK
DEPRESSED CURB
CONCRETE PAVEMENT
REVISED RIGHT IN/OUT
CROSSWALK
WARRENVILLE R-2 RESIDENTIAL
16-ft Ornamental Light on Barkley
BARKLEY AVENUE
LOT 1
1.22 Ac.
TRASH ENCLOSURE
B:6-12 CURB
CONCRETE PAVEMENT
ADA STRIPING
4" YELLOW STRIPE
SIGN
REMOVE EXISTING HMA PATH AND PROVIDE CONCRETE WALK WITH ADA RAMPS
HMA PAVEMENT
10-FT EASEMENT FOR WATER MAIN
LOT 2
0.85Ac.
BIKE RACK
EMPLOYEE PARKING
CONCRETE SIDEWALK
12-ft Ornamental Light
LOT 3
1.95 Ac.
1 STORY CAR WASH
19 VACUUM STALLS
6 EMPLOYEE STALLS
PAY STATION
EASEMENT FOR SANITARY SEWER
ILLINOIS ROUTE 59
WARRENVILLE B-2 COMMUNITY RETAIL
RIGHT IN/OUT PER CITY OF AURORA STANDARDS
PARKING LOT LIGHT
STOP AND RIGHT TURN ONLY SIGN W/ STOP BAR
REMOVE EXISTING HMA PATH AND PROVIDE CONCRETE WALK WITH ADA RAMPS
NO LEFT TURN SUGN
DUKE PARKWAY
WARRENVILLE B- BUSINESS

DREAM CLEAN
R. 59 AND DUKE PARKWAY
WARRENVILLE, IL 60555

Prepared For:
Dream Clean Operating Company
605 Graceland Ave.
Wheaton, IL 60187
email- mzavedyuk@dreamcleanow.com

ARCH AMERICA
Phone 847.697.7755
3413 North Rt. 31, Suite 213
Crystal Lake, IL 60012

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PH: (630)668-7903 WEB: WWW.WMLTD.COM
DESIGN FIRM LICENSE NO. 184.003161

REV'd	DATE	REVISION DESCRIPTION	BY
	04/15/25	Revised per City review	

Section-Township-Range
DuPage: 33/34 T 39N R 09E

JOB #	41516	SURV:	CB
DRAWN:	BMB	REVIEW:	SMR
SCALE:	1"=30'	DATE:	02-10-25

SHEET NAME
SITE PLAN

SHEET #
SP-1

E:\ACTIVE-PROJECTS\41516-333909-DuPage\ENGR-BB\FINAL ENGINEERING PLANS\UNIT 6\Dream Clean and Starbucks\41516 Dream Clean.dgn, Model: SP-1, Date: 4/14/2025

ITE Trip Generation Summary Sheets

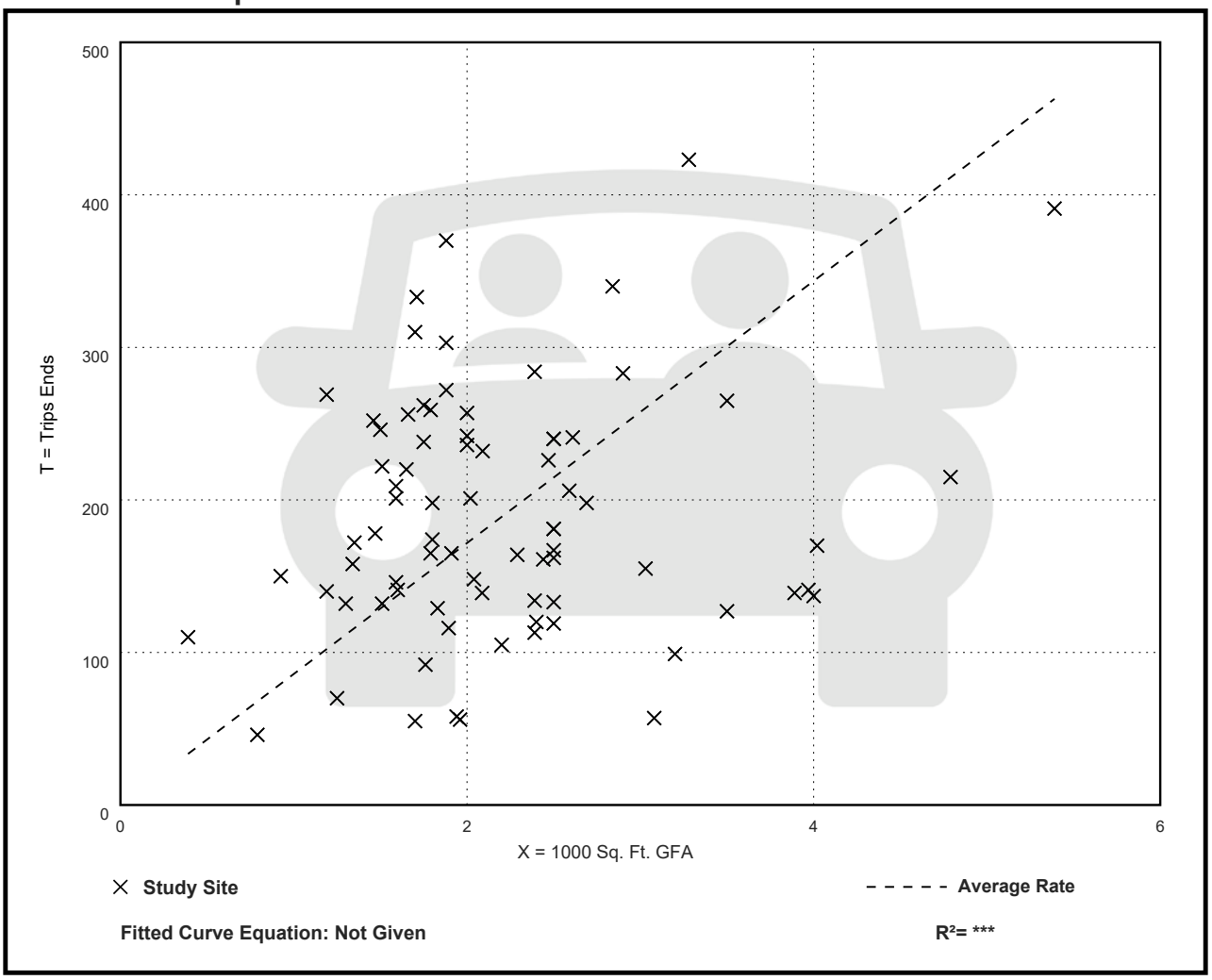
Coffee/Donut Shop with Drive-Through Window (937)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 78
Avg. 1000 Sq. Ft. GFA: 2
Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
85.88	18.51 - 282.05	44.92

Data Plot and Equation



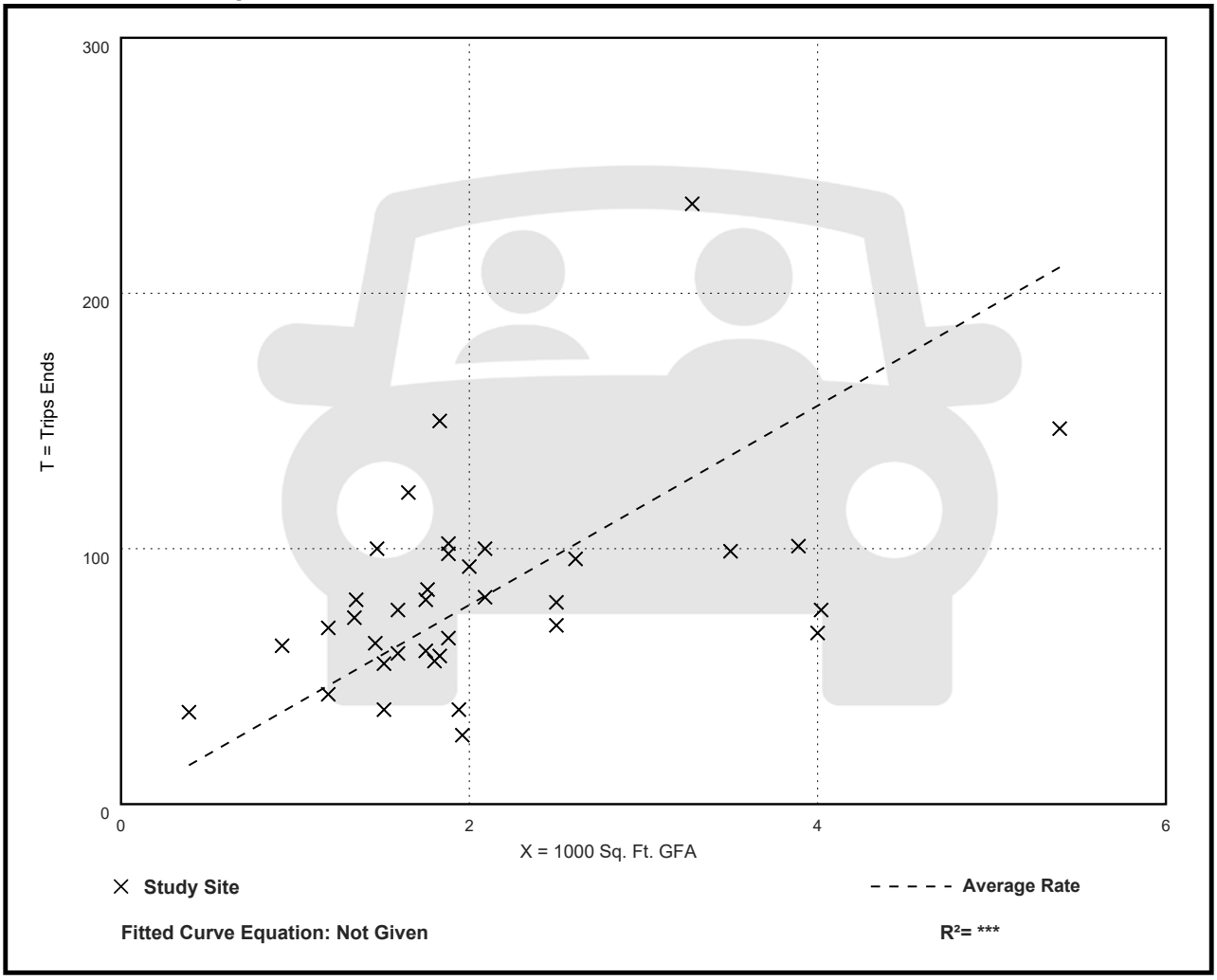
Coffee/Donut Shop with Drive-Through Window (937)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 36
Avg. 1000 Sq. Ft. GFA: 2
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
38.99	13.78 - 92.31	17.79

Data Plot and Equation



Coffee/Donut Shop with Drive-Through Window (937)

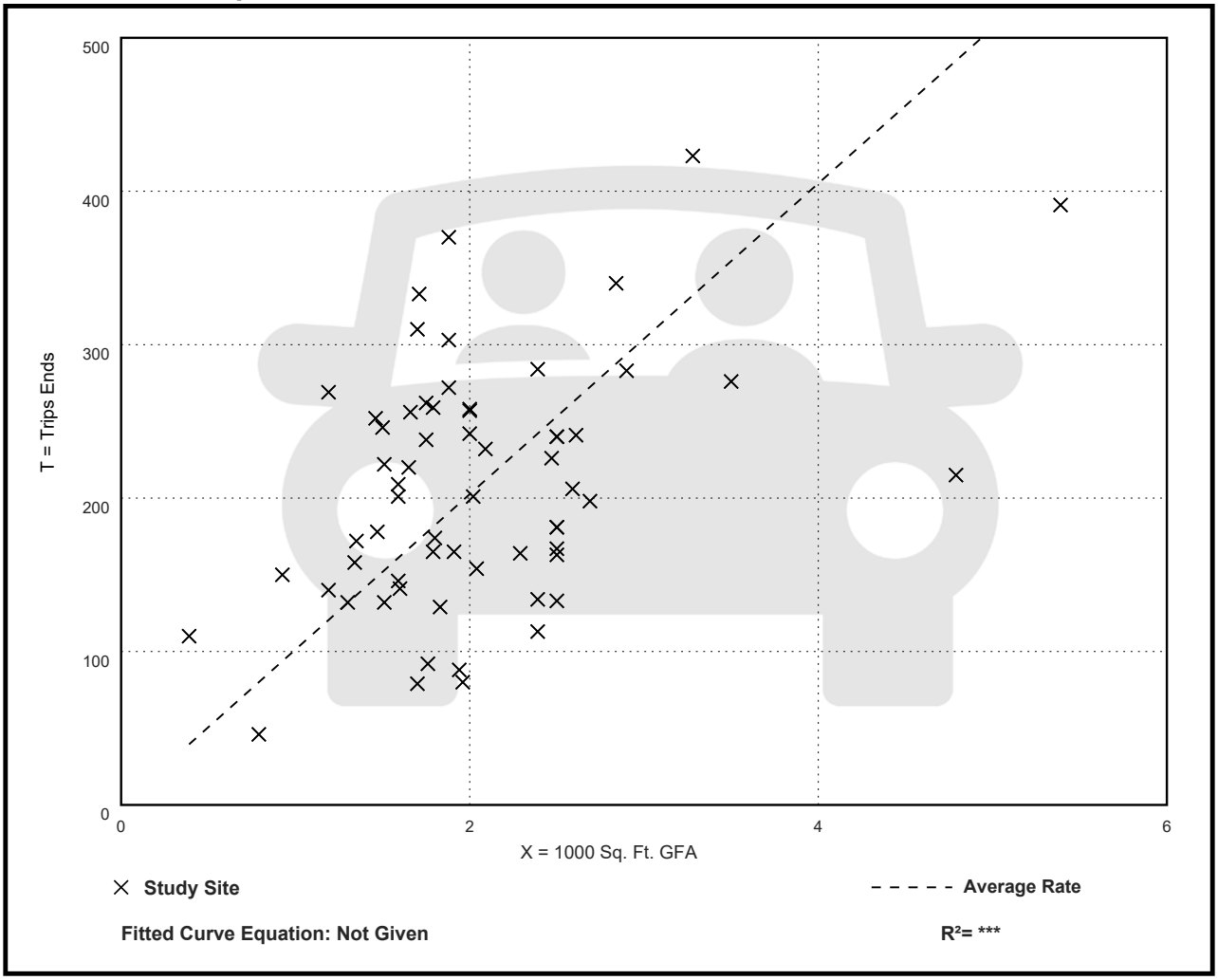
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
AM Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 62
Avg. 1000 Sq. Ft. GFA: 2
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
101.27	40.82 - 282.05	41.74

Data Plot and Equation



Coffee/Donut Shop with Drive-Through Window (937)

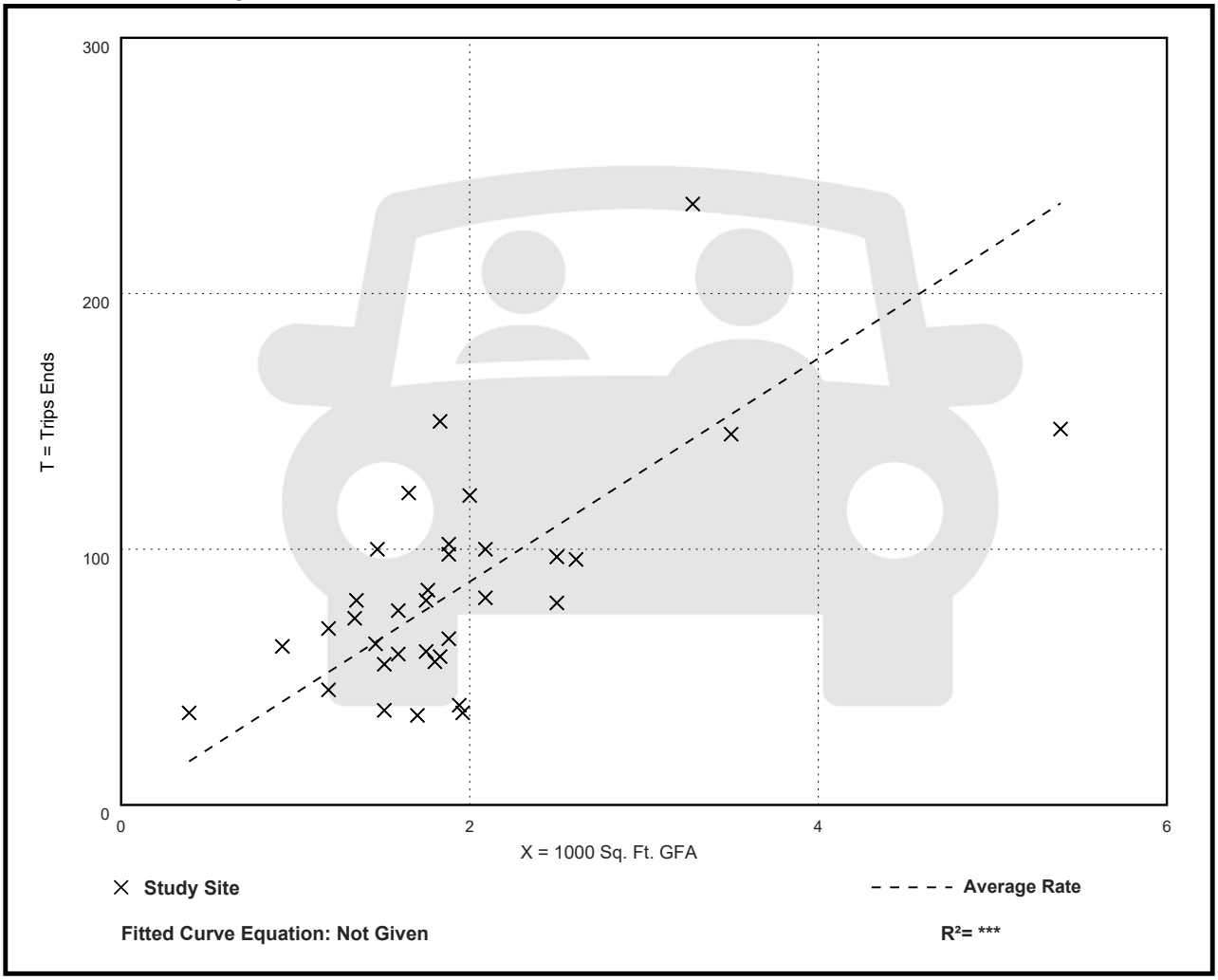
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
PM Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 34
Avg. 1000 Sq. Ft. GFA: 2
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
43.65	18.37 - 92.31	16.74

Data Plot and Equation



Coffee/Donut Shop with Drive-Through Window (937)

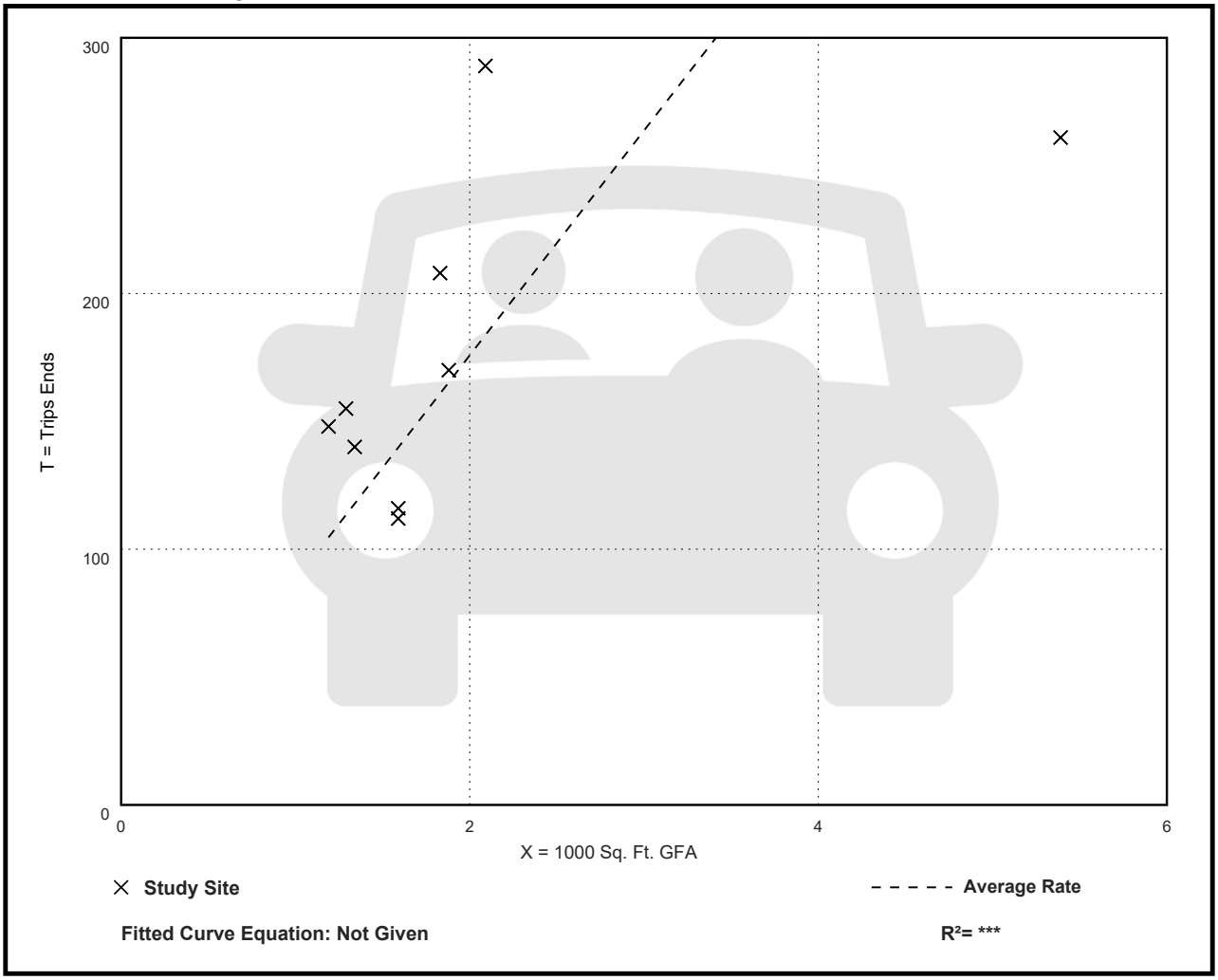
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 9
Avg. 1000 Sq. Ft. GFA: 2
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
87.91	48.42 - 138.28	34.34

Data Plot and Equation



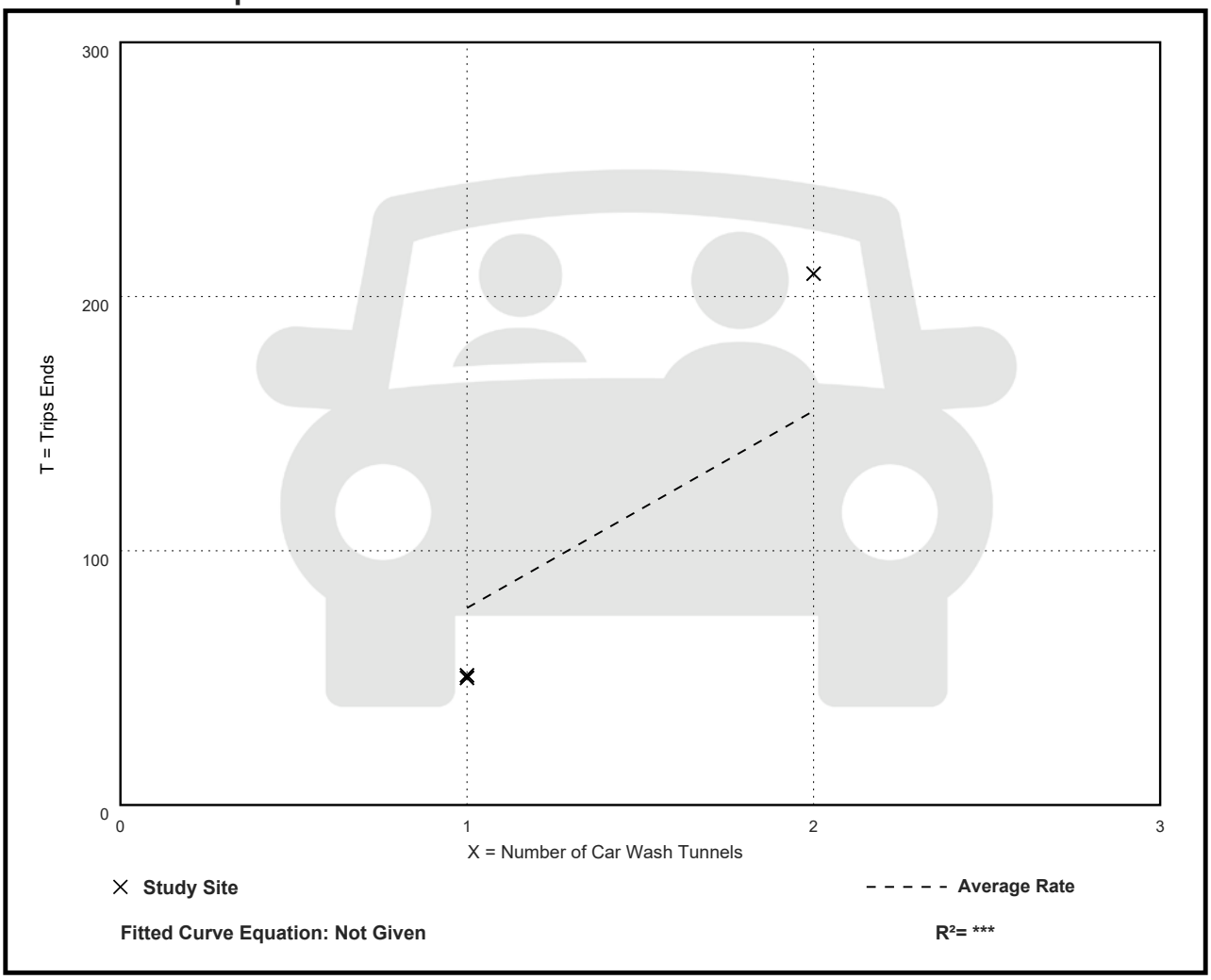
Automated Car Wash
(948)

Vehicle Trip Ends vs: Car Wash Tunnels
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 3
Avg. Num. of Car Wash Tunnels: 1
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Car Wash Tunnel

Average Rate	Range of Rates	Standard Deviation
77.50	50.00 - 104.50	33.07

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= *

Automated Car Wash
(948)

Vehicle Trip Ends vs: Car Wash Tunnels
On a: Saturday, Peak Hour of Generator

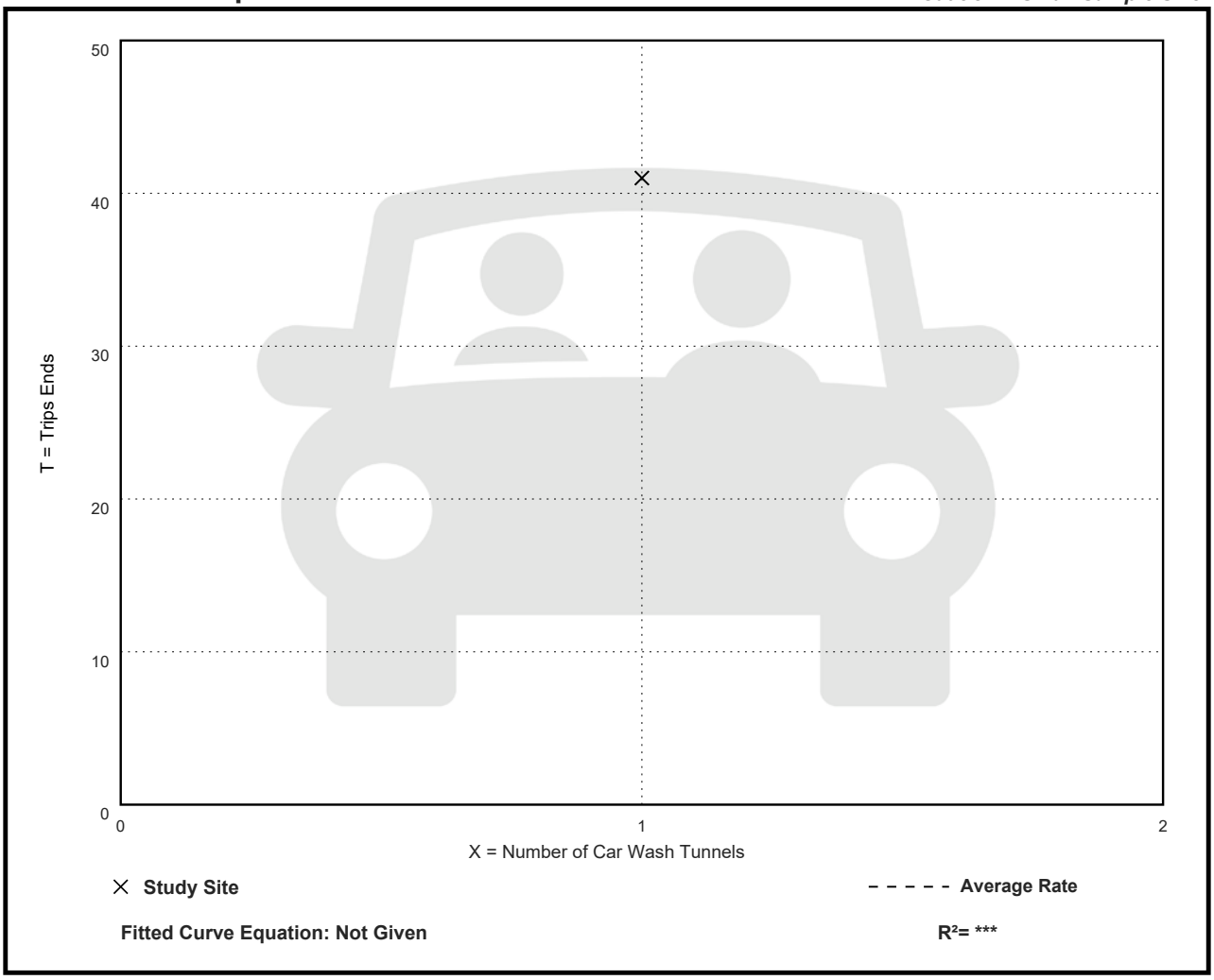
Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. Num. of Car Wash Tunnels: 1
Directional Distribution: 46% entering, 54% exiting

Vehicle Trip Generation per Car Wash Tunnel

Average Rate	Range of Rates	Standard Deviation
41.00	41.00 - 41.00	***

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= *

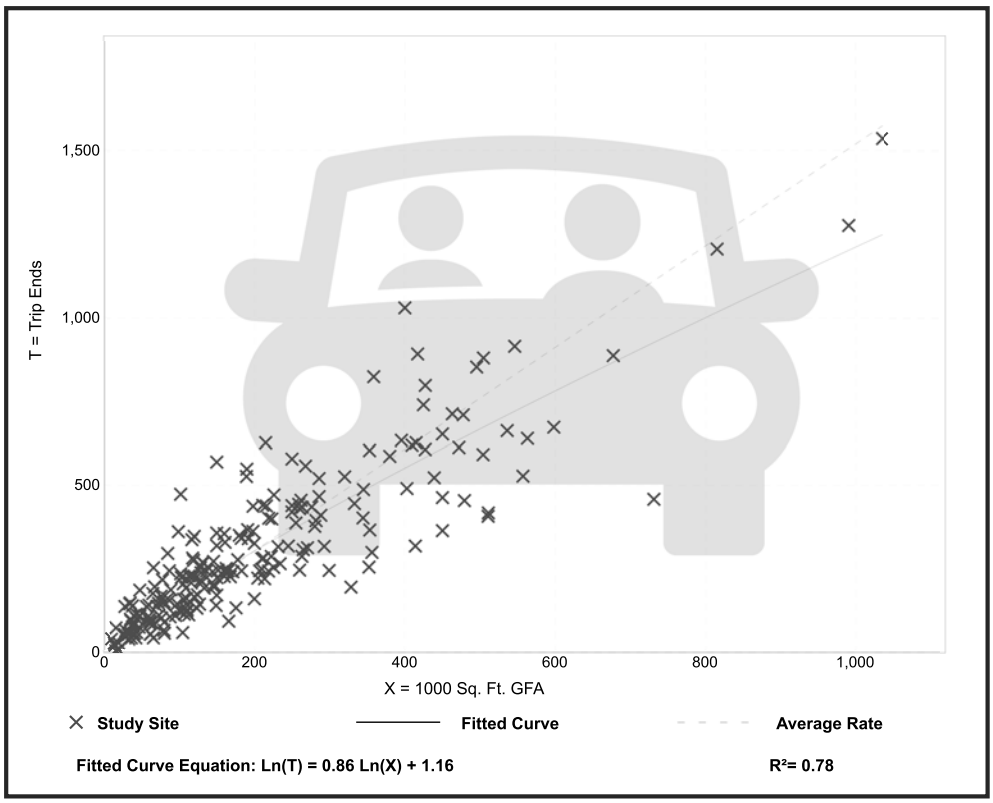
General Office Building
(710)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 221
Avg. 1000 Sq. Ft. GFA: 201
Directional Distribution: 88% entering, 12% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.52	0.32 - 4.93	0.58

Data Plot and Equation



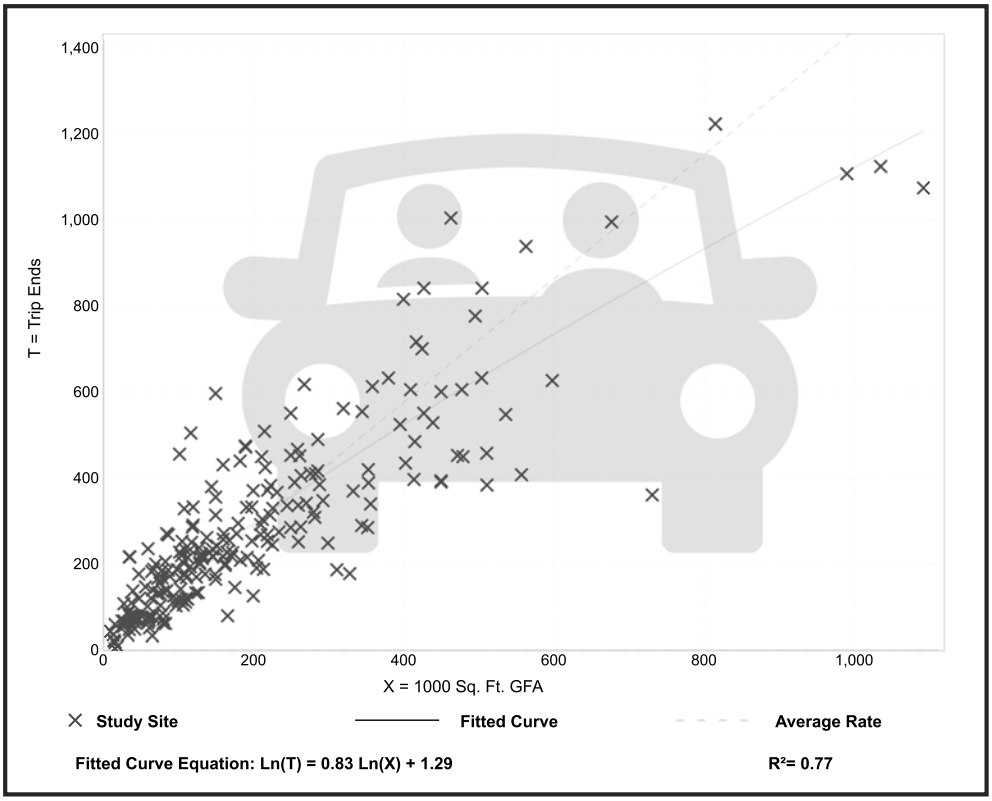
General Office Building
(710)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 232
Avg. 1000 Sq. Ft. GFA: 199
Directional Distribution: 17% entering, 83% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.44	0.26 - 6.20	0.60

Data Plot and Equation



General Office Building
(710)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Saturday, Peak Hour of Generator**

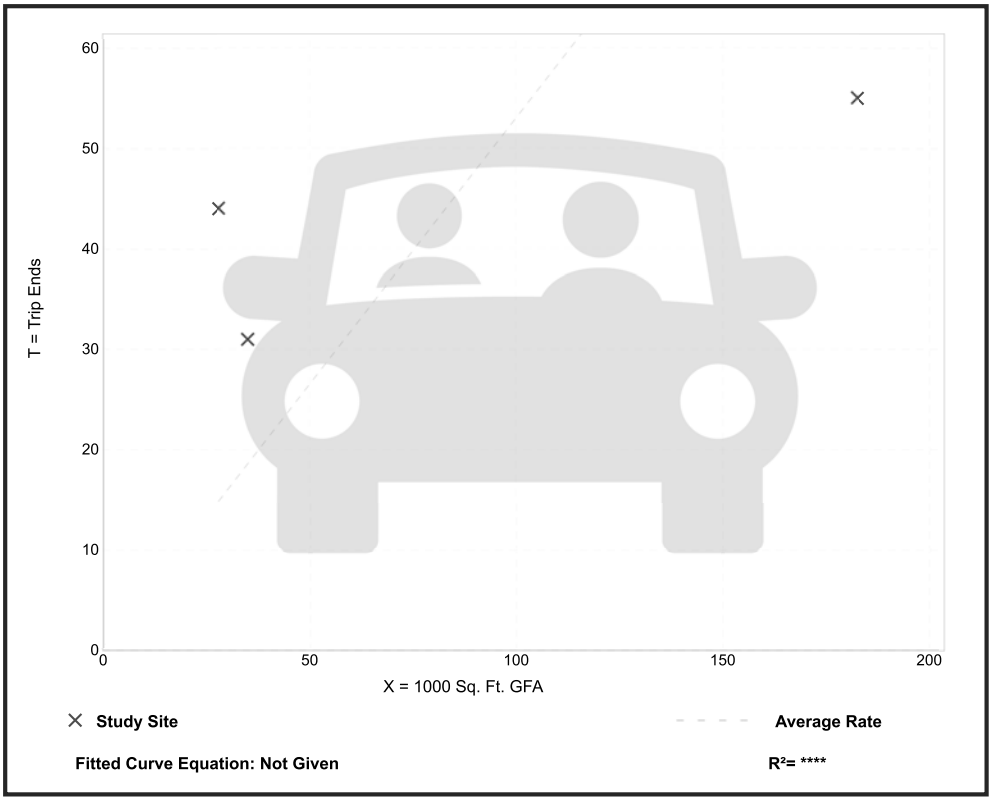
Setting/Location: **General Urban/Suburban**
Number of Studies: 3
Avg. 1000 Sq. Ft. GFA: 82
Directional Distribution: 54% entering, 46% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.53	0.30 - 1.57	0.52

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ****

Trip Gen Manual, 11th Edition • Institute of Transportation Engineers

CMAP 2050 Projections Letter

Chicago Metropolitan Agency for Planning

433 West Van Buren Street, Suite 450
Chicago, IL 60607
cmap.illinois.gov | 312-454-0400

January 8, 2025

Ryan May
Project Coordinator
Kenig, Lindgren, O'Hara and Aboona, Inc.
9575 West Higgins Road
Suite 400
Rosemont, IL 60018

Subject: IL 56 at Barley Avenue // IL 59 at Duke Parkway/Everton Drive
IDOT

Dear Ms. May

In response to a request made on your behalf and dated January 8, 2025, we have developed year 2050 average daily traffic (ADT) projections for the subject location.

ROAD SEGMENT	Current ADT	Year 2050 ADT
IL 56, at Barkley Ave	22,600	29,100
IL 59, at Duke Pky/Everton Dr	34,300	44,100

Traffic projections are developed using existing ADT data provided in the request letter and the results from the June 2024 CMAP Travel Demand Analysis. The regional travel model uses CMAP 2050 socioeconomic projections and assumes the implementation of the ON TO 2050 Comprehensive Regional Plan for the Northeastern Illinois area. The provision of this data in support of your request does not constitute a CMAP endorsement of the proposed development or any subsequent developments.

If you have any questions, please call me at (312) 386-8806 or email me at jrodriguez@cmap.illinois.gov

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

cc: Rios (IDOT)
2025_TrafficcForecasts\Warrenville\du-01-25\du-01-25.docx

Level of Service Criteria

LEVEL OF SERVICE CRITERIA

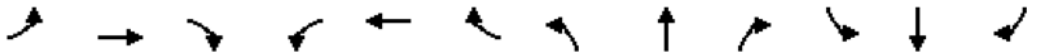
Signalized Intersections		
Level of Service	**Interpretation**	**Average Control Delay (seconds per vehicle)**
A	Favorable progression. Most vehicles arrive during the green indication and travel through the intersection without stopping.	≤10
B	Good progression, with more vehicles stopping than for Level 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

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*, 6th Edition.

Capacity Analysis Summary Sheets

Existing Weekday Morning Peak Hour

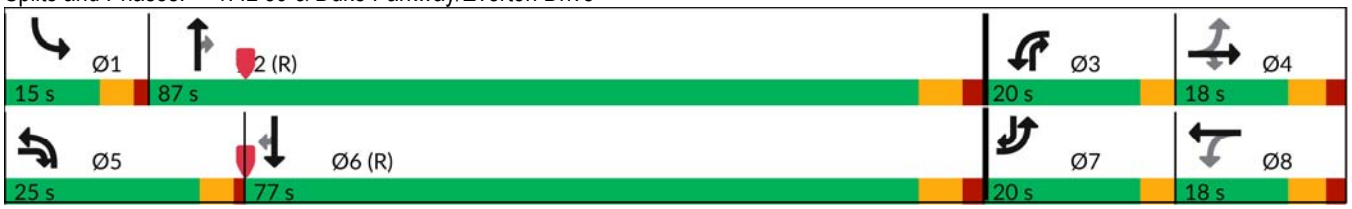


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	1	51	77	1	9	60	1303	11	5	1334	52
Future Volume (vph)	30	1	51	77	1	9	60	1303	11	5	1334	52
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Storage Length (ft)	375		230	0		0	230		245	215		0
Storage Lanes	1		1	1		0	2		1	1		1
Taper Length (ft)	120			25			300			230		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.865				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1357	2000	1162	1805	1644	0	2870	3519	1369	1805	3551	1292
Flt Permitted				0.930			0.950			0.950		
Satd. Flow (perm)	1429	2000	1162	1767	1644	0	2870	3519	1369	1805	3551	1292
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)			55									97
Link Speed (mph)		25			30			50			50	
Link Distance (ft)		713			332			2388			366	
Travel Time (s)		19.4			7.5			32.6			5.0	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	33%	0%	39%	0%	0%	0%	22%	8%	18%	0%	7%	25%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	31	1	53	79	10	0	62	1343	11	5	1375	54
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4	8					2			6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	8.0	3.0	3.0	8.0		3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	9.5	18.0	14.0	9.5	18.0		14.0	35.5	9.5	9.5	43.5	9.5
Total Split (s)	20.0	18.0	25.0	20.0	18.0		25.0	87.0	20.0	15.0	77.0	20.0
Total Split (%)	14.3%	12.9%	17.9%	14.3%	12.9%		17.9%	62.1%	14.3%	10.7%	55.0%	14.3%
Yellow Time (s)	3.5	4.0	3.5	3.5	4.0		3.5	4.5	3.5	3.5	4.5	3.5
All-Red Time (s)	0.0	2.0	1.0	0.0	2.0		1.0	2.0	0.0	1.5	2.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0	4.5	3.5	6.0		4.5	6.5	3.5	5.0	6.5	3.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Min	None	None	C-Min	None
Act Effct Green (s)	12.4	8.0	12.2	14.7	8.9		9.4	112.9	134.1	6.0	103.7	120.4
Actuated g/C Ratio	0.09	0.06	0.09	0.11	0.06		0.07	0.81	0.96	0.04	0.74	0.86
v/c Ratio	0.26	0.01	0.35	0.42	0.10		0.32	0.47	0.01	0.06	0.52	0.05
Control Delay (s/veh)	59.5	63.0	18.4	63.4	63.0		66.2	6.5	1.6	65.6	10.2	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	59.5	63.0	18.4	63.4	63.0		66.2	6.5	1.6	65.6	10.2	0.2
LOS	E	E	B	E	E		E	A	A	E	B	A
Approach Delay (s/veh)		33.9			63.4			9.1			10.0	
Approach LOS		C			E			A			B	
Queue Length 50th (ft)	27	1	0	70	9		28	123	0	5	241	0
Queue Length 95th (ft)	53	7	38	109	28		52	418	6	20	473	2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		633			252			2308			286	
Turn Bay Length (ft)	375		230				230		245	215		
Base Capacity (vph)	181	171	239	243	140		420	2836	1314	128	2629	1174
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.01	0.22	0.33	0.07		0.15	0.47	0.01	0.04	0.52	0.05

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 138.6 (99%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.52			
Intersection Signal Delay (s/veh): 11.8		Intersection LOS: B	
Intersection Capacity Utilization 56.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: IL 59 & Duke Parkway/Everton Drive



Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	45	6	39	68	6	9	2	12	25	4	7
Future Vol, veh/h	2	45	6	39	68	6	9	2	12	25	4	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	130	-	120	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	69	69	69	69	69	69	69	69	69	69	69	69
Heavy Vehicles, %	0	14	67	54	6	17	11	0	100	0	0	0
Mvmt Flow	3	65	9	57	99	9	13	3	17	36	6	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	107	0	0	74	0	0	290	296	70	284	291	99
Stage 1	-	-	-	-	-	-	75	75	-	212	212	-
Stage 2	-	-	-	-	-	-	214	220	-	72	80	-
Critical Hdwy	4.1	-	-	4.64	-	-	7.21	6.5	7.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.21	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.21	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.686	-	-	3.599	4	4.2	3.5	4	3.3
Pot Cap-1 Maneuver	1496	-	-	1252	-	-	645	619	776	672	623	963
Stage 1	-	-	-	-	-	-	912	836	-	795	731	-
Stage 2	-	-	-	-	-	-	768	725	-	942	833	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1496	-	-	1252	-	-	602	590	776	623	593	963
Mov Cap-2 Maneuver	-	-	-	-	-	-	602	590	-	623	593	-
Stage 1	-	-	-	-	-	-	910	835	-	759	698	-
Stage 2	-	-	-	-	-	-	719	692	-	916	831	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.28	2.76	10.56	10.87
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	681	1496	-	-	1252	-	-	665
HCM Lane V/C Ratio	0.049	0.002	-	-	0.045	-	-	0.078
HCM Control Delay (s/veh)	10.6	7.4	-	-	8	-	-	10.9
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0.3

Intersection	
Int Delay, s/veh	6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	4	12	0	2	0	0	3	7	1	24	0
Future Vol, veh/h	1	4	12	0	2	0	0	3	7	1	24	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	2
Mvmt Flow	1	5	15	0	3	0	0	4	9	1	30	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	3	0	0	20	0	0	33	18	13	12	25	3
Stage 1	-	-	-	-	-	-	15	15	-	3	3	-
Stage 2	-	-	-	-	-	-	18	3	-	9	23	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.318
Pot Cap-1 Maneuver	1633	-	-	1609	-	-	979	880	1074	1010	872	1082
Stage 1	-	-	-	-	-	-	1010	887	-	1025	898	-
Stage 2	-	-	-	-	-	-	1007	898	-	1017	880	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1633	-	-	1609	-	-	945	880	1074	997	871	1082
Mov Cap-2 Maneuver	-	-	-	-	-	-	945	880	-	997	871	-
Stage 1	-	-	-	-	-	-	1009	886	-	1025	898	-
Stage 2	-	-	-	-	-	-	973	898	-	1003	880	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.42	0	8.62	9.27
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1007	92	-	-	1609	-	-	876
HCM Lane V/C Ratio	0.013	0.001	-	-	-	-	-	0.036
HCM Control Delay (s/veh)	8.6	7.2	0	-	0	-	-	9.3
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	12	0	1342	1379	2
Future Vol, veh/h	0	12	0	1342	1379	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	85
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	8	7	0
Mvmt Flow	0	12	0	1384	1422	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	711	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	*695	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %		0		-	-	-
Mov Cap-1 Maneuver	-	*695	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	10.27	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	695	-	-
HCM Lane V/C Ratio	-	0.018	-	-
HCM Control Delay (s/veh)	-	10.3	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	66	996	4	10	474	52	0	2	21	48	2	9
Future Vol, veh/h	66	996	4	10	474	52	0	2	21	48	2	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	215	-	-	355	-	-	-	-	50	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	3	0	8	0	0	0	0	0	25	0	0
Mvmt Flow	70	1060	4	11	504	55	0	2	22	51	2	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	560	0	0	1064	0	0	1477	1783	532	1224	1757	280
Stage 1	-	-	-	-	-	-	1202	1202	-	553	553	-
Stage 2	-	-	-	-	-	-	274	581	-	671	1204	-
Critical Hdwy	4.1	-	-	4.26	-	-	7.5	6.5	6.9	8	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	7	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	7	5.5	-
Follow-up Hdwy	2.2	-	-	2.28	-	-	3.5	4	3.3	3.75	4	3.3
Pot Cap-1 Maneuver	1179	-	-	616	-	-	*110	91	497	149	95	*968
Stage 1	-	-	-	-	-	-	*199	260	-	602	629	-
Stage 2	-	-	-	-	-	-	*912	610	-	362	259	-
Platoon blocked, %	0	-	-		-	-	0	0		0	0	0
Mov Cap-1 Maneuver	1179	-	-	616	-	-	*99	84	497	128	88	*968
Mov Cap-2 Maneuver	-	-	-	-	-	-	*99	84	-	128	88	-
Stage 1	-	-	-	-	-	-	*187	244	-	592	618	-
Stage 2	-	-	-	-	-	-	*885	599	-	322	244	-

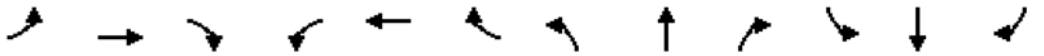
Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.51	0.2	15.72	47.36
HCM LOS			C	E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	84	497	1179	-	-	616	-	-	145
HCM Lane V/C Ratio	0.025	0.045	0.06	-	-	0.017	-	-	0.432
HCM Control Delay (s/veh)	48.7	12.6	8.2	-	-	10.9	-	-	47.4
HCM Lane LOS	E	B	A	-	-	B	-	-	E
HCM 95th %tile Q(veh)	0.1	0.1	0.2	-	-	0.1	-	-	1.9

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Capacity Analysis Summary Sheets

Existing Weekday Evening Peak Hour

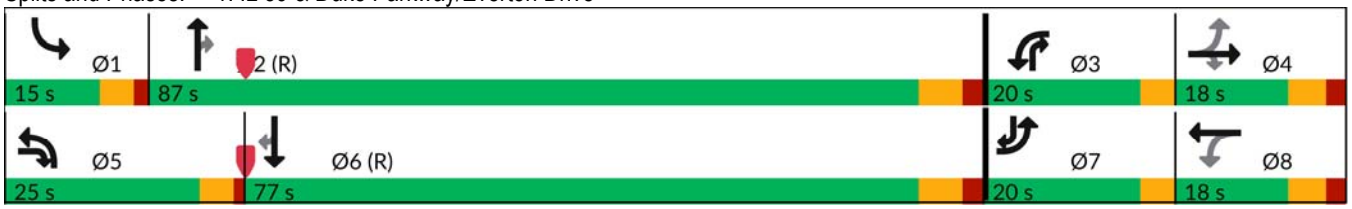


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	1	35	31	1	12	63	1364	79	34	1381	39
Future Volume (vph)	37	1	35	31	1	12	63	1364	79	34	1381	39
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Storage Length (ft)	375		230	0		0	230		245	215		0
Storage Lanes	1		1	1		0	2		1	1		1
Taper Length (ft)	120			25			300			230		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.861				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1517	2000	1313	1805	1636	0	2894	3619	1615	1805	3585	1538
Flt Permitted				0.678			0.950			0.950		
Satd. Flow (perm)	1597	2000	1313	1288	1636	0	2894	3619	1615	1805	3585	1538
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)			55									97
Link Speed (mph)		25			30			50			50	
Link Distance (ft)		713			332			2388			366	
Travel Time (s)		19.4			7.5			32.6			5.0	
Peak Hour Factor	0.97	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	19%	0%	23%	0%	0%	0%	21%	5%	0%	0%	6%	5%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	38	1	38	34	14	0	68	1483	86	37	1501	42
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4	8					2			6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	8.0	3.0	3.0	8.0		3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	9.5	18.0	14.0	9.5	18.0		14.0	35.5	9.5	9.5	43.5	9.5
Total Split (s)	20.0	18.0	25.0	20.0	18.0		25.0	87.0	20.0	15.0	77.0	20.0
Total Split (%)	14.3%	12.9%	17.9%	14.3%	12.9%		17.9%	62.1%	14.3%	10.7%	55.0%	14.3%
Yellow Time (s)	3.5	4.0	3.5	3.5	4.0		3.5	4.5	3.5	3.5	4.5	3.5
All-Red Time (s)	0.0	2.0	1.0	0.0	2.0		1.0	2.0	0.0	1.5	2.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0	4.5	3.5	6.0		4.5	6.5	3.5	5.0	6.5	3.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Min	None	None	C-Min	None
Act Effct Green (s)	11.7	8.8	13.3	15.2	8.9		9.7	102.6	122.3	8.3	102.0	117.3
Actuated g/C Ratio	0.08	0.06	0.10	0.11	0.06		0.07	0.73	0.87	0.06	0.73	0.84
v/c Ratio	0.30	0.01	0.22	0.18	0.13		0.34	0.56	0.06	0.35	0.57	0.03
Control Delay (s/veh)	62.1	60.0	8.1	54.0	64.3		66.3	11.6	2.7	71.2	12.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	62.1	60.0	8.1	54.0	64.3		66.3	11.6	2.7	71.2	12.2	0.1
LOS	E	E	A	D	E		E	B	A	E	B	A
Approach Delay (s/veh)		35.4			57.0			13.4			13.3	
Approach LOS		D			E			B			B	
Queue Length 50th (ft)	34	1	0	30	12		30	241	7	33	256	0
Queue Length 95th (ft)	62	7	18	57	36		56	523	36	70	542	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		633			252			2308			286	
Turn Bay Length (ft)	375		230				230		245	215		
Base Capacity (vph)	205	172	272	258	140		423	2652	1464	131	2611	1378
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.01	0.14	0.13	0.10		0.16	0.56	0.06	0.28	0.57	0.03

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 7 (5%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.57			
Intersection Signal Delay (s/veh): 14.5		Intersection LOS: B	
Intersection Capacity Utilization 55.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: IL 59 & Duke Parkway/Everton Drive



Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	53	6	34	41	28	3	1	7	13	0	5
Future Vol, veh/h	4	53	6	34	41	28	3	1	7	13	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	130	-	120	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	70	70	70	70	70	70	70	70	70	70	70	70
Heavy Vehicles, %	0	14	33	41	24	4	100	0	86	0	0	0
Mvmt Flow	6	76	9	49	59	40	4	1	10	19	0	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	99	0	0	84	0	0	247	287	80	244	251	59
Stage 1	-	-	-	-	-	-	91	91	-	156	156	-
Stage 2	-	-	-	-	-	-	156	196	-	88	96	-
Critical Hdwy	4.1	-	-	4.51	-	-	8.1	6.5	7.06	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	7.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.569	-	-	4.4	4	4.074	3.5	4	3.3
Pot Cap-1 Maneuver	1507	-	-	1299	-	-	544	626	790	715	655	1013
Stage 1	-	-	-	-	-	-	722	823	-	851	773	-
Stage 2	-	-	-	-	-	-	661	743	-	925	820	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1507	-	-	1299	-	-	518	600	790	675	628	1013
Mov Cap-2 Maneuver	-	-	-	-	-	-	518	600	-	675	628	-
Stage 1	-	-	-	-	-	-	719	820	-	820	744	-
Stage 2	-	-	-	-	-	-	632	715	-	908	817	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.47	2.6	10.47	10.01
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	674	1507	-	-	1299	-	-	744
HCM Lane V/C Ratio	0.023	0.004	-	-	0.037	-	-	0.035
HCM Control Delay (s/veh)	10.5	7.4	-	-	7.9	-	-	10
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.1

Intersection	
Int Delay, s/veh	7.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	2	5	0	3	0	12	21	0	1	13	1
Future Vol, veh/h	1	2	5	0	3	0	12	21	0	1	13	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	61	61	61	61	61	61	61	61	61	61	61	61
Heavy Vehicles, %	0	0	0	0	0	0	0	6	0	0	0	0
Mvmt Flow	2	3	8	0	5	0	20	34	0	2	21	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	5	0	0	11	0	0	26	16	7	29	20	5
Stage 1	-	-	-	-	-	-	11	11	-	5	5	-
Stage 2	-	-	-	-	-	-	16	5	-	24	15	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.56	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.56	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.56	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4.054	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1630	-	-	1621	-	-	989	871	1081	986	878	1084
Stage 1	-	-	-	-	-	-	1015	879	-	1022	896	-
Stage 2	-	-	-	-	-	-	1009	884	-	999	887	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1630	-	-	1621	-	-	963	870	1081	946	877	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	963	870	-	946	877	-
Stage 1	-	-	-	-	-	-	1014	878	-	1022	896	-
Stage 2	-	-	-	-	-	-	984	884	-	959	886	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.9	0	9.25	9.15
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	902	197	-	-	1621	-	-	893
HCM Lane V/C Ratio	0.06	0.001	-	-	-	-	-	0.028
HCM Control Delay (s/veh)	9.2	7.2	0	-	0	-	-	9.1
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	3	0	1413	1451	3
Future Vol, veh/h	0	3	0	1413	1451	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	85
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	4	6	2
Mvmt Flow	0	3	0	1503	1544	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	772	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	*680	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %		0		-	-	-
Mov Cap-1 Maneuver	-	*680	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	10.32	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	680	-	-
HCM Lane V/C Ratio	-	0.005	-	-
HCM Control Delay (s/veh)	-	10.3	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	870	3	15	1228	15	3	0	8	40	0	9
Future Vol, veh/h	14	870	3	15	1228	15	3	0	8	40	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	215	-	-	355	-	-	-	-	50	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	3	0	0	2	27	0	0	0	8	0	2
Mvmt Flow	15	906	3	16	1279	16	3	0	8	42	0	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1295	0	0	909	0	0	1608	2263	455	1801	2257	647
Stage 1	-	-	-	-	-	-	937	937	-	1318	1318	-
Stage 2	-	-	-	-	-	-	671	1326	-	482	939	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.66	6.5	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.66	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.66	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.58	4	3.32
Pot Cap-1 Maneuver	735	-	-	757	-	-	*147	46	558	86	47	*738
Stage 1	-	-	-	-	-	-	*289	346	-	331	361	-
Stage 2	-	-	-	-	-	-	*700	357	-	519	346	-
Platoon blocked, %	0	-	-		-	-	0	0		0	0	0
Mov Cap-1 Maneuver	735	-	-	757	-	-	*139	45	558	81	45	*738
Mov Cap-2 Maneuver	-	-	-	-	-	-	*139	45	-	81	45	-
Stage 1	-	-	-	-	-	-	*283	339	-	324	354	-
Stage 2	-	-	-	-	-	-	*677	350	-	501	339	-

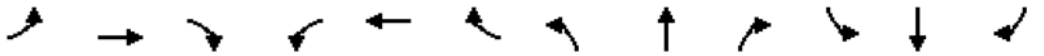
Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.16	0.12	16.96	77.9
HCM LOS			C	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	139	558	735	-	-	757	-	-	97
HCM Lane V/C Ratio	0.022	0.015	0.02	-	-	0.021	-	-	0.528
HCM Control Delay (s/veh)	31.4	11.5	10	-	-	9.9	-	-	77.9
HCM Lane LOS	D	B	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	0.1	0	0.1	-	-	0.1	-	-	2.4

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Capacity Analysis Summary Sheets

Existing Saturday Midday Peak Hour

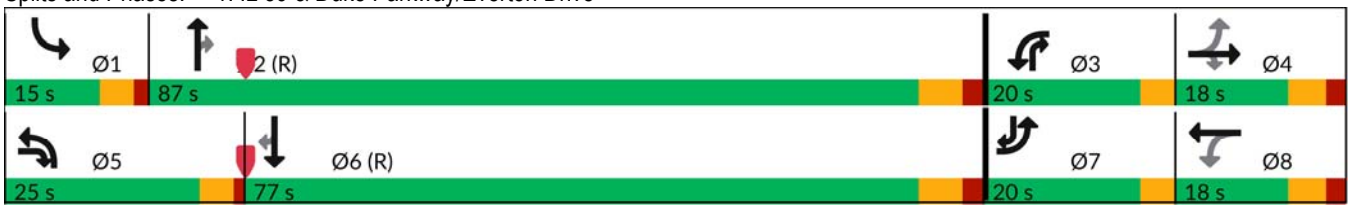


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	5	33	59	1	5	49	1092	34	32	972	14
Future Volume (vph)	16	5	33	59	1	5	49	1092	34	32	972	14
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Storage Length (ft)	375		230	0		0	230		245	215		0
Storage Lanes	1		1	1		0	2		1	1		1
Taper Length (ft)	120			25			300			230		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.875				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1597	2000	1242	1805	1662	0	3072	3689	1615	1752	3689	1335
Flt Permitted				0.851			0.950			0.950		
Satd. Flow (perm)	1681	2000	1242	1617	1662	0	3072	3689	1615	1752	3689	1335
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)			55									97
Link Speed (mph)		25			30			50			50	
Link Distance (ft)		713			332			2388			366	
Travel Time (s)		19.4			7.5			32.6			5.0	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	13%	0%	30%	0%	0%	0%	14%	3%	0%	3%	3%	21%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	16	5	34	61	6	0	51	1126	35	33	1002	14
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4	8					2			6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	8.0	3.0	3.0	8.0		3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	9.5	18.0	14.0	9.5	18.0		14.0	35.5	9.5	9.5	43.5	9.5
Total Split (s)	20.0	18.0	25.0	20.0	18.0		25.0	87.0	20.0	15.0	77.0	20.0
Total Split (%)	14.3%	12.9%	17.9%	14.3%	12.9%		17.9%	62.1%	14.3%	10.7%	55.0%	14.3%
Yellow Time (s)	3.5	4.0	3.5	3.5	4.0		3.5	4.5	3.5	3.5	4.5	3.5
All-Red Time (s)	0.0	2.0	1.0	0.0	2.0		1.0	2.0	0.0	1.5	2.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0	4.5	3.5	6.0		4.5	6.5	3.5	5.0	6.5	3.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Min	None	None	C-Min	None
Act Effct Green (s)	10.6	8.2	11.7	13.2	9.1		8.7	111.4	126.3	8.1	109.0	121.4
Actuated g/C Ratio	0.08	0.06	0.08	0.09	0.07		0.06	0.80	0.90	0.06	0.78	0.87
v/c Ratio	0.13	0.04	0.22	0.37	0.06		0.27	0.38	0.02	0.33	0.35	0.01
Control Delay (s/veh)	56.3	63.0	7.9	62.9	61.0		65.5	7.2	2.4	71.1	7.4	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	56.3	63.0	7.9	62.9	61.0		65.5	7.2	2.4	71.1	7.4	0.0
LOS	E	E	A	E	E		E	A	A	E	A	A
Approach Delay (s/veh)		27.0			62.8			9.5			9.3	
Approach LOS		C			E			A			A	
Queue Length 50th (ft)	14	4	0	54	5		23	160	3	30	137	0
Queue Length 95th (ft)	33	19	15	89	20		45	335	16	65	282	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		633			252			2308			286	
Turn Bay Length (ft)	375		230				230		245	215		
Base Capacity (vph)	215	171	253	238	145		449	2934	1491	127	2872	1223
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.03	0.13	0.26	0.04		0.11	0.38	0.02	0.26	0.35	0.01

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 135.8 (97%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.38			
Intersection Signal Delay (s/veh): 11.3		Intersection LOS: B	
Intersection Capacity Utilization 49.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: IL 59 & Duke Parkway/Everton Drive



Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	32	2	27	19	18	2	0	3	19	2	2
Future Vol, veh/h	2	32	2	27	19	18	2	0	3	19	2	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	130	-	120	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	27	100	30	20	0	50	0	67	5	0	0
Mvmt Flow	2	38	2	32	22	21	2	0	4	22	2	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	44	0	0	40	0	0	131	151	39	128	131	22
Stage 1	-	-	-	-	-	-	44	44	-	86	86	-
Stage 2	-	-	-	-	-	-	87	107	-	42	45	-
Critical Hdwy	4.1	-	-	4.4	-	-	7.6	6.5	6.87	7.15	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.6	5.5	-	6.15	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.6	5.5	-	6.15	5.5	-
Follow-up Hdwy	2.2	-	-	2.47	-	-	3.95	4	3.903	3.545	4	3.3
Pot Cap-1 Maneuver	1578	-	-	1407	-	-	743	745	875	838	764	1061
Stage 1	-	-	-	-	-	-	862	863	-	915	828	-
Stage 2	-	-	-	-	-	-	815	811	-	964	862	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1578	-	-	1407	-	-	721	727	875	814	745	1061
Mov Cap-2 Maneuver	-	-	-	-	-	-	721	727	-	814	745	-
Stage 1	-	-	-	-	-	-	860	861	-	894	809	-
Stage 2	-	-	-	-	-	-	792	792	-	959	860	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.4	3.21	9.5	9.51
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	806	1578	-	-	1407	-	-	824
HCM Lane V/C Ratio	0.007	0.001	-	-	0.023	-	-	0.033
HCM Control Delay (s/veh)	9.5	7.3	-	-	7.6	-	-	9.5
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0.1	-	-	0.1

Intersection	
Int Delay, s/veh	7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	2	6	3	2	2	6	15	0	1	15	1
Future Vol, veh/h	1	2	6	3	2	2	6	15	0	1	15	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	0	0	17	0	0	0	0	0	0	0	0	0
Mvmt Flow	1	2	7	4	2	2	7	18	0	1	18	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	5	0	0	10	0	0	27	20	6	25	23	4
Stage 1	-	-	-	-	-	-	8	8	-	11	11	-
Stage 2	-	-	-	-	-	-	19	12	-	14	12	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1630	-	-	1623	-	-	988	877	1083	991	875	1086
Stage 1	-	-	-	-	-	-	1018	893	-	1015	891	-
Stage 2	-	-	-	-	-	-	1006	890	-	1011	890	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1630	-	-	1623	-	-	964	875	1083	968	872	1086
Mov Cap-2 Maneuver	-	-	-	-	-	-	964	875	-	968	872	-
Stage 1	-	-	-	-	-	-	1017	892	-	1013	889	-
Stage 2	-	-	-	-	-	-	982	888	-	990	889	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.8	3.1	9.12	9.15
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	898	174	-	-	701	-	-	887
HCM Lane V/C Ratio	0.028	0.001	-	-	0.002	-	-	0.023
HCM Control Delay (s/veh)	9.1	7.2	0	-	7.2	0	-	9.2
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	3	0	1113	1015	7
Future Vol, veh/h	0	3	0	1113	1015	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	85
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	3	3	0
Mvmt Flow	0	3	0	1184	1080	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	540	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	*801	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %		0		-	-	-
Mov Cap-1 Maneuver	-	*801	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	9.51	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	801	-	-
HCM Lane V/C Ratio	-	0.004	-	-
HCM Control Delay (s/veh)	-	9.5	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	672	3	6	770	13	0	0	6	28	2	6
Future Vol, veh/h	8	672	3	6	770	13	0	0	6	28	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	215	-	-	355	-	-	-	-	50	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	2	0	0	1	8	0	0	0	0	0	0
Mvmt Flow	8	707	3	6	811	14	0	0	6	29	2	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	824	0	0	711	0	0	1145	1563	355	1201	1557	412
Stage 1	-	-	-	-	-	-	726	726	-	830	830	-
Stage 2	-	-	-	-	-	-	419	837	-	371	727	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1028	-	-	898	-	-	*268	147	647	239	149	*878
Stage 1	-	-	-	-	-	-	*387	433	-	553	537	-
Stage 2	-	-	-	-	-	-	*827	532	-	627	432	-
Platoon blocked, %	0	-	-		-	-	0	0		0	0	0
Mov Cap-1 Maneuver	1028	-	-	898	-	-	*258	145	647	233	147	*878
Mov Cap-2 Maneuver	-	-	-	-	-	-	*258	145	-	233	147	-
Stage 1	-	-	-	-	-	-	*384	429	-	549	533	-
Stage 2	-	-	-	-	-	-	*812	529	-	616	428	-

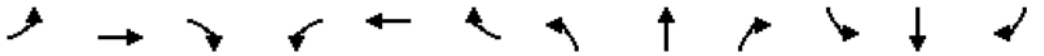
Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.1	0.07	10.62	21.48
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	647	1028	-	-	898	-	-	256
HCM Lane V/C Ratio	-	0.01	0.008	-	-	0.007	-	-	0.148
HCM Control Delay (s/veh)	0	10.6	8.5	-	-	9	-	-	21.5
HCM Lane LOS	A	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	-	0	0	-	-	0	-	-	0.5

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Capacity Analysis Summary Sheets

Year 2031 No-Build Weekday Morning Peak Hour

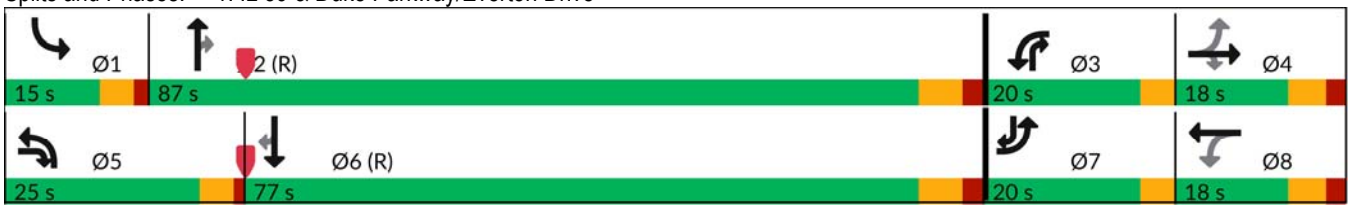


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	1	55	82	1	10	64	1394	12	5	1432	56
Future Volume (vph)	32	1	55	82	1	10	64	1394	12	5	1432	56
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Storage Length (ft)	375		230	0		0	230		245	215		0
Storage Lanes	1		1	1		0	2		1	1		1
Taper Length (ft)	120			25			300			230		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.864				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1357	2000	1162	1805	1642	0	2870	3519	1369	1805	3551	1292
Flt Permitted				0.784			0.950			0.950		
Satd. Flow (perm)	1429	2000	1162	1490	1642	0	2870	3519	1369	1805	3551	1292
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)			57									97
Link Speed (mph)		25			30			50			50	
Link Distance (ft)		713			332			2388			366	
Travel Time (s)		19.4			7.5			32.6			5.0	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	33%	0%	39%	0%	0%	0%	22%	8%	18%	0%	7%	25%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	33	1	57	85	11	0	66	1437	12	5	1476	58
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4	8					2			6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	8.0	3.0	3.0	8.0		3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	9.5	18.0	14.0	9.5	18.0		14.0	35.5	9.5	9.5	43.5	9.5
Total Split (s)	20.0	18.0	25.0	20.0	18.0		25.0	87.0	20.0	15.0	77.0	20.0
Total Split (%)	14.3%	12.9%	17.9%	14.3%	12.9%		17.9%	62.1%	14.3%	10.7%	55.0%	14.3%
Yellow Time (s)	3.5	4.0	3.5	3.5	4.0		3.5	4.5	3.5	3.5	4.5	3.5
All-Red Time (s)	0.0	2.0	1.0	0.0	2.0		1.0	2.0	0.0	1.5	2.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0	4.5	3.5	6.0		4.5	6.5	3.5	5.0	6.5	3.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Min	None	None	C-Min	None
Act Effct Green (s)	12.0	8.0	12.4	17.4	9.0		9.6	110.2	134.1	6.0	98.5	114.9
Actuated g/C Ratio	0.09	0.06	0.09	0.12	0.06		0.07	0.79	0.96	0.04	0.70	0.82
v/c Ratio	0.28	0.01	0.37	0.39	0.10		0.34	0.52	0.01	0.06	0.59	0.05
Control Delay (s/veh)	61.1	63.0	19.3	59.0	63.0		66.3	8.0	1.6	65.6	13.3	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	61.1	63.0	19.3	59.0	63.0		66.3	8.0	1.6	65.6	13.3	0.3
LOS	E	E	B	E	E		E	A	A	E	B	A
Approach Delay (s/veh)		34.9			59.5			10.5			13.0	
Approach LOS		C			E			B			B	
Queue Length 50th (ft)	29	1	0	76	10		29	142	0	5	277	0
Queue Length 95th (ft)	56	7	40	116	30		55	473	6	20	540	3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		633			252			2308			286	
Turn Bay Length (ft)	375		230				230		245	215		
Base Capacity (vph)	181	171	240	262	140		420	2769	1314	128	2498	1134
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.01	0.24	0.32	0.08		0.16	0.52	0.01	0.04	0.59	0.05

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 138.6 (99%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay (s/veh): 13.8		Intersection LOS: B	
Intersection Capacity Utilization 59.2%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: IL 59 & Duke Parkway/Everton Drive



Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	48	6	42	73	6	10	2	13	27	5	7
Future Vol, veh/h	2	48	6	42	73	6	10	2	13	27	5	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	130	-	120	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	69	69	69	69	69	69	69	69	69	69	69	69
Heavy Vehicles, %	0	14	67	54	6	17	11	0	100	0	0	0
Mvmt Flow	3	70	9	61	106	9	14	3	19	39	7	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	114	0	0	78	0	0	311	316	74	304	312	106
Stage 1	-	-	-	-	-	-	80	80	-	228	228	-
Stage 2	-	-	-	-	-	-	231	236	-	77	84	-
Critical Hdwy	4.1	-	-	4.64	-	-	7.21	6.5	7.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.21	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.21	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.686	-	-	3.599	4	4.2	3.5	4	3.3
Pot Cap-1 Maneuver	1487	-	-	1247	-	-	624	603	772	652	607	954
Stage 1	-	-	-	-	-	-	907	833	-	780	719	-
Stage 2	-	-	-	-	-	-	752	713	-	937	829	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1487	-	-	1247	-	-	579	573	772	601	576	954
Mov Cap-2 Maneuver	-	-	-	-	-	-	579	573	-	601	576	-
Stage 1	-	-	-	-	-	-	905	831	-	742	684	-
Stage 2	-	-	-	-	-	-	700	678	-	909	827	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.27	2.79	10.73	11.17
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	665	1487	-	-	1247	-	-	640
HCM Lane V/C Ratio	0.054	0.002	-	-	0.049	-	-	0.088
HCM Control Delay (s/veh)	10.7	7.4	-	-	8	-	-	11.2
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0.2	-	-	0.3

Intersection	
Int Delay, s/veh	5.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	5	13	0	2	0	0	3	7	1	26	0
Future Vol, veh/h	1	5	13	0	2	0	0	3	7	1	26	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	2
Mvmt Flow	1	6	16	0	3	0	0	4	9	1	33	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	3	0	0	23	0	0	36	20	15	13	28	3
Stage 1	-	-	-	-	-	-	17	17	-	3	3	-
Stage 2	-	-	-	-	-	-	19	3	-	11	25	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.318
Pot Cap-1 Maneuver	1633	-	-	1606	-	-	975	878	1071	1008	869	1082
Stage 1	-	-	-	-	-	-	1008	885	-	1025	898	-
Stage 2	-	-	-	-	-	-	1005	898	-	1015	878	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1633	-	-	1606	-	-	937	877	1071	995	868	1082
Mov Cap-2 Maneuver	-	-	-	-	-	-	937	877	-	995	868	-
Stage 1	-	-	-	-	-	-	1007	884	-	1025	898	-
Stage 2	-	-	-	-	-	-	968	898	-	1002	877	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.38	0	8.63	9.29
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1005	83	-	-	1606	-	-	873
HCM Lane V/C Ratio	0.013	0.001	-	-	-	-	-	0.039
HCM Control Delay (s/veh)	8.6	7.2	0	-	0	-	-	9.3
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	13	0	1436	1480	2
Future Vol, veh/h	0	13	0	1436	1480	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	85
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	8	7	0
Mvmt Flow	0	13	0	1480	1526	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	763	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	*680	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %		0		-	-	-
Mov Cap-1 Maneuver	-	*680	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	10.4	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	680	-	-
HCM Lane V/C Ratio	-	0.02	-	-
HCM Control Delay (s/veh)	-	10.4	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	71	1066	4	11	507	56	0	2	22	51	2	9
Future Vol, veh/h	71	1066	4	11	507	56	0	2	22	51	2	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	215	-	-	355	-	-	-	-	50	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	3	0	8	0	0	0	0	0	25	0	0
Mvmt Flow	76	1134	4	12	539	60	0	2	23	54	2	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	599	0	0	1138	0	0	1581	1910	569	1312	1882	299
Stage 1	-	-	-	-	-	-	1287	1287	-	593	593	-
Stage 2	-	-	-	-	-	-	294	622	-	719	1289	-
Critical Hdwy	4.1	-	-	4.26	-	-	7.5	6.5	6.9	8	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	7	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	7	5.5	-
Follow-up Hdwy	2.2	-	-	2.28	-	-	3.5	4	3.3	3.75	4	3.3
Pot Cap-1 Maneuver	1159	-	-	576	-	-	*93	76	470	130	79	*953
Stage 1	-	-	-	-	-	-	*176	237	-	591	619	-
Stage 2	-	-	-	-	-	-	*898	598	-	337	236	-
Platoon blocked, %	0	-	-		-	-	0	0		0	0	0
Mov Cap-1 Maneuver	1159	-	-	576	-	-	*82	69	470	110	72	*953
Mov Cap-2 Maneuver	-	-	-	-	-	-	*82	69	-	110	72	-
Stage 1	-	-	-	-	-	-	*165	221	-	579	606	-
Stage 2	-	-	-	-	-	-	*868	586	-	296	221	-

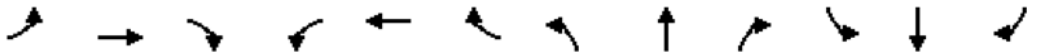
Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.52	0.22	16.86	63.44
HCM LOS			C	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	69	470	1159	-	-	576	-	-	124
HCM Lane V/C Ratio	0.031	0.05	0.065	-	-	0.02	-	-	0.534
HCM Control Delay (s/veh)	58.7	13.1	8.3	-	-	11.4	-	-	63.4
HCM Lane LOS	F	B	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	0.1	0.2	0.2	-	-	0.1	-	-	2.5

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Capacity Analysis Summary Sheets

Year 2031 No-Build Weekday Evening Peak Hour

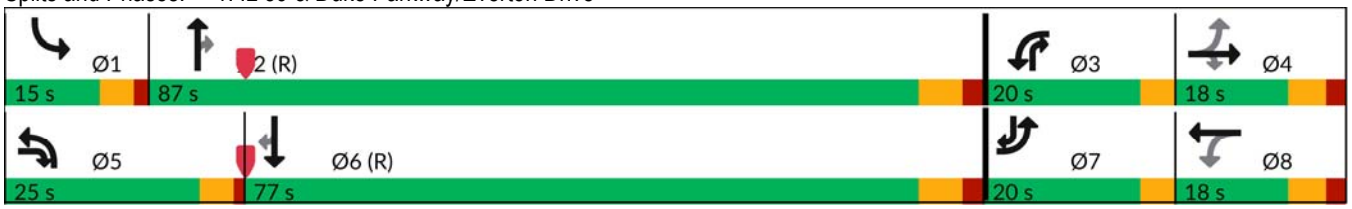


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	1	37	33	1	13	67	1459	85	36	1478	42
Future Volume (vph)	40	1	37	33	1	13	67	1459	85	36	1478	42
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Storage Length (ft)	375		230	0		0	230		245	215		0
Storage Lanes	1		1	1		0	2		1	1		1
Taper Length (ft)	120			25			300			230		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.860				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1517	2000	1313	1805	1634	0	2894	3619	1615	1805	3585	1282
Flt Permitted				0.667			0.950			0.950		
Satd. Flow (perm)	1597	2000	1313	1267	1634	0	2894	3619	1615	1805	3585	1282
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)			55									97
Link Speed (mph)		25			30			50			50	
Link Distance (ft)		713			332			2388			366	
Travel Time (s)		19.4			7.5			32.6			5.0	
Peak Hour Factor	0.97	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	19%	0%	23%	0%	0%	0%	21%	5%	0%	0%	6%	26%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	41	1	40	36	15	0	73	1586	92	39	1607	46
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4	8					2			6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	8.0	3.0	3.0	8.0		3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	9.5	18.0	14.0	9.5	18.0		14.0	35.5	9.5	9.5	43.5	9.5
Total Split (s)	20.0	18.0	25.0	20.0	18.0		25.0	87.0	20.0	15.0	77.0	20.0
Total Split (%)	14.3%	12.9%	17.9%	14.3%	12.9%		17.9%	62.1%	14.3%	10.7%	55.0%	14.3%
Yellow Time (s)	3.5	4.0	3.5	3.5	4.0		3.5	4.5	3.5	3.5	4.5	3.5
All-Red Time (s)	0.0	2.0	1.0	0.0	2.0		1.0	2.0	0.0	1.5	2.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0	4.5	3.5	6.0		4.5	6.5	3.5	5.0	6.5	3.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Min	None	None	C-Min	None
Act Effct Green (s)	12.0	8.9	13.6	15.4	9.0		9.9	102.2	122.1	8.4	101.5	117.0
Actuated g/C Ratio	0.09	0.06	0.10	0.11	0.06		0.07	0.73	0.87	0.06	0.73	0.84
v/c Ratio	0.31	0.01	0.23	0.19	0.14		0.36	0.60	0.07	0.36	0.62	0.04
Control Delay (s/veh)	62.3	60.0	9.1	53.8	64.4		66.4	12.7	2.7	71.5	13.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	62.3	60.0	9.1	53.8	64.4		66.4	12.7	2.7	71.5	13.4	0.1
LOS	E	E	A	D	E		E	B	A	E	B	A
Approach Delay (s/veh)		36.3			57.0			14.4			14.4	
Approach LOS		D			E			B			B	
Queue Length 50th (ft)	37	1	0	32	13		33	275	7	35	294	0
Queue Length 95th (ft)	66	7	21	59	37		59	596	39	73	622	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		633			252			2308			286	
Turn Bay Length (ft)	375		230				230		245	215		
Base Capacity (vph)	207	173	272	259	140		423	2641	1460	132	2598	1146
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.01	0.15	0.14	0.11		0.17	0.60	0.06	0.30	0.62	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 7 (5%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay (s/veh): 15.5		Intersection LOS: B	
Intersection Capacity Utilization 58.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: IL 59 & Duke Parkway/Everton Drive



Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	57	6	36	44	30	3	1	7	14	0	5
Future Vol, veh/h	4	57	6	36	44	30	3	1	7	14	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	130	-	120	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	70	70	70	70	70	70	70	70	70	70	70	70
Heavy Vehicles, %	0	14	33	41	24	4	100	0	86	0	0	0
Mvmt Flow	6	81	9	51	63	43	4	1	10	20	0	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	106	0	0	90	0	0	263	306	86	259	267	63
Stage 1	-	-	-	-	-	-	97	97	-	166	166	-
Stage 2	-	-	-	-	-	-	166	209	-	94	101	-
Critical Hdwy	4.1	-	-	4.51	-	-	8.1	6.5	7.06	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	7.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.569	-	-	4.4	4	4.074	3.5	4	3.3
Pot Cap-1 Maneuver	1498	-	-	1293	-	-	530	611	784	698	642	1007
Stage 1	-	-	-	-	-	-	716	818	-	841	765	-
Stage 2	-	-	-	-	-	-	652	733	-	918	815	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1498	-	-	1293	-	-	503	585	784	657	614	1007
Mov Cap-2 Maneuver	-	-	-	-	-	-	503	585	-	657	614	-
Stage 1	-	-	-	-	-	-	714	815	-	808	735	-
Stage 2	-	-	-	-	-	-	621	704	-	902	812	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.44	2.59	10.57	10.17
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	662	1498	-	-	1293	-	-	724
HCM Lane V/C Ratio	0.024	0.004	-	-	0.04	-	-	0.038
HCM Control Delay (s/veh)	10.6	7.4	-	-	7.9	-	-	10.2
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.1

Intersection	
Int Delay, s/veh	7.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	2	5	0	3	0	13	22	0	1	14	1
Future Vol, veh/h	1	2	5	0	3	0	13	22	0	1	14	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	61	61	61	61	61	61	61	61	61	61	61	61
Heavy Vehicles, %	0	0	0	0	0	0	0	6	0	0	0	0
Mvmt Flow	2	3	8	0	5	0	21	36	0	2	23	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	5	0	0	11	0	0	27	16	7	30	20	5
Stage 1	-	-	-	-	-	-	11	11	-	5	5	-
Stage 2	-	-	-	-	-	-	16	5	-	25	15	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.56	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.56	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.56	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4.054	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1630	-	-	1621	-	-	988	871	1081	984	878	1084
Stage 1	-	-	-	-	-	-	1015	879	-	1022	896	-
Stage 2	-	-	-	-	-	-	1008	884	-	998	887	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1630	-	-	1621	-	-	960	870	1081	943	877	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	960	870	-	943	877	-
Stage 1	-	-	-	-	-	-	1014	878	-	1022	896	-
Stage 2	-	-	-	-	-	-	981	884	-	956	886	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.9	0	9.27	9.16
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	901	197	-	-	1621	-	-	892
HCM Lane V/C Ratio	0.064	0.001	-	-	-	-	-	0.029
HCM Control Delay (s/veh)	9.3	7.2	0	-	0	-	-	9.2
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	3	0	1512	1553	3
Future Vol, veh/h	0	3	0	1512	1553	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	85
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	4	6	2
Mvmt Flow	0	3	0	1609	1652	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	826	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	*650	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %		0		-	-	-
Mov Cap-1 Maneuver	-	*650	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	10.57	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	650	-	-
HCM Lane V/C Ratio	-	0.005	-	-
HCM Control Delay (s/veh)	-	10.6	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	931	3	16	1314	16	3	0	9	43	0	9
Future Vol, veh/h	15	931	3	16	1314	16	3	0	9	43	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	215	-	-	355	-	-	-	-	50	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	3	0	0	2	27	0	0	0	8	0	2
Mvmt Flow	16	970	3	17	1369	17	3	0	9	45	0	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1385	0	0	973	0	0	1720	2421	486	1927	2415	693
Stage 1	-	-	-	-	-	-	1003	1003	-	1410	1410	-
Stage 2	-	-	-	-	-	-	718	1419	-	516	1004	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.66	6.5	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.66	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.66	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.58	4	3.32
Pot Cap-1 Maneuver	670	-	-	717	-	-	*117	33	532	64	34	*723
Stage 1	-	-	-	-	-	-	*263	323	-	287	323	-
Stage 2	-	-	-	-	-	-	*686	319	-	495	322	-
Platoon blocked, %	0	-	-		-	-	0	0		0	0	0
Mov Cap-1 Maneuver	670	-	-	717	-	-	*110	32	532	60	32	*723
Mov Cap-2 Maneuver	-	-	-	-	-	-	*110	32	-	60	32	-
Stage 1	-	-	-	-	-	-	*257	315	-	280	316	-
Stage 2	-	-	-	-	-	-	*661	312	-	475	315	-

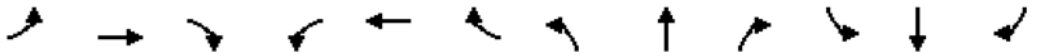
Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.17	0.12	18.6	142.3
HCM LOS			C	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	110	532	670	-	-	717	-	-	72
HCM Lane V/C Ratio	0.028	0.018	0.023	-	-	0.023	-	-	0.756
HCM Control Delay (s/veh)	38.7	11.9	10.5	-	-	10.1	-	-	142.3
HCM Lane LOS	E	B	B	-	-	B	-	-	F
HCM 95th %tile Q(veh)	0.1	0.1	0.1	-	-	0.1	-	-	3.5

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Capacity Analysis Summary Sheets

Year 2031 No-Build Saturday Midday Peak Hour

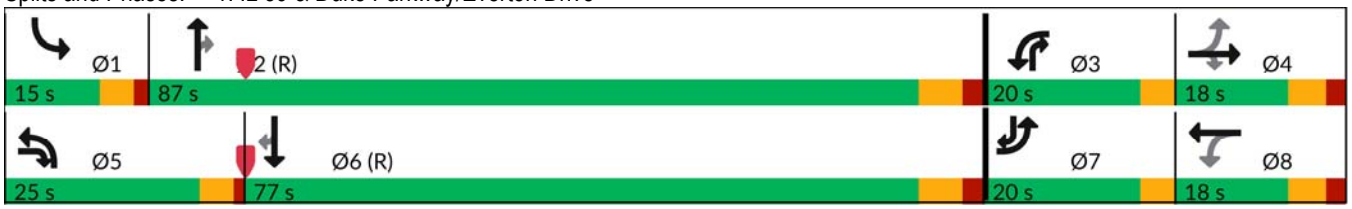


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	5	35	63	1	5	52	1169	36	34	1040	15
Future Volume (vph)	17	5	35	63	1	5	52	1169	36	34	1040	15
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Storage Length (ft)	375		230	0		0	230		245	215		0
Storage Lanes	1		1	1		0	2		1	1		1
Taper Length (ft)	120			25			300			230		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.875				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1597	2000	1242	1805	1662	0	3072	3689	1615	1752	3689	1335
Flt Permitted				0.833			0.950			0.950		
Satd. Flow (perm)	1681	2000	1242	1583	1662	0	3072	3689	1615	1752	3689	1335
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)			55									97
Link Speed (mph)		25			30			50			50	
Link Distance (ft)		713			332			2388			366	
Travel Time (s)		19.4			7.5			32.6			5.0	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	13%	0%	30%	0%	0%	0%	14%	3%	0%	3%	3%	21%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	18	5	36	65	6	0	54	1205	37	35	1072	15
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4	8					2			6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	8.0	3.0	3.0	8.0		3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	9.5	18.0	14.0	9.5	18.0		14.0	35.5	9.5	9.5	43.5	9.5
Total Split (s)	20.0	18.0	25.0	20.0	18.0		25.0	87.0	20.0	15.0	77.0	20.0
Total Split (%)	14.3%	12.9%	17.9%	14.3%	12.9%		17.9%	62.1%	14.3%	10.7%	55.0%	14.3%
Yellow Time (s)	3.5	4.0	3.5	3.5	4.0		3.5	4.5	3.5	3.5	4.5	3.5
All-Red Time (s)	0.0	2.0	1.0	0.0	2.0		1.0	2.0	0.0	1.5	2.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0	4.5	3.5	6.0		4.5	6.5	3.5	5.0	6.5	3.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Min	None	None	C-Min	None
Act Effct Green (s)	10.8	8.2	11.8	13.5	9.1		8.8	108.7	123.1	8.2	108.7	121.4
Actuated g/C Ratio	0.08	0.06	0.08	0.10	0.07		0.06	0.78	0.88	0.06	0.78	0.87
v/c Ratio	0.15	0.04	0.23	0.39	0.06		0.28	0.42	0.03	0.34	0.37	0.01
Control Delay (s/veh)	56.4	63.0	8.7	63.4	61.0		65.6	8.3	2.5	71.4	7.7	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	56.4	63.0	8.7	63.4	61.0		65.6	8.3	2.5	71.4	7.7	0.0
LOS	E	E	A	E	E		E	A	A	E	A	A
Approach Delay (s/veh)		27.8			63.2			10.5			9.6	
Approach LOS		C			E			B			A	
Queue Length 50th (ft)	16	4	0	58	5		24	180	3	31	153	0
Queue Length 95th (ft)	36	19	17	94	20		47	373	16	68	313	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		633			252			2308			286	
Turn Bay Length (ft)	375		230				230		245	215		
Base Capacity (vph)	215	171	253	238	145		449	2863	1466	128	2865	1221
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.03	0.14	0.27	0.04		0.12	0.42	0.03	0.27	0.37	0.01

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 135.8 (97%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.42			
Intersection Signal Delay (s/veh): 12.0		Intersection LOS: B	
Intersection Capacity Utilization 51.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: IL 59 & Duke Parkway/Everton Drive



Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	34	2	29	20	19	2	0	3	20	2	2
Future Vol, veh/h	2	34	2	29	20	19	2	0	3	20	2	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	130	-	120	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	27	100	30	20	0	50	0	67	5	0	0
Mvmt Flow	2	40	2	34	24	22	2	0	4	24	2	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	46	0	0	42	0	0	139	160	41	136	139	24
Stage 1	-	-	-	-	-	-	46	46	-	92	92	-
Stage 2	-	-	-	-	-	-	93	114	-	45	47	-
Critical Hdwy	4.1	-	-	4.4	-	-	7.6	6.5	6.87	7.15	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.6	5.5	-	6.15	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.6	5.5	-	6.15	5.5	-
Follow-up Hdwy	2.2	-	-	2.47	-	-	3.95	4	3.903	3.545	4	3.3
Pot Cap-1 Maneuver	1575	-	-	1404	-	-	733	736	872	828	756	1059
Stage 1	-	-	-	-	-	-	859	861	-	908	823	-
Stage 2	-	-	-	-	-	-	808	805	-	962	860	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1575	-	-	1404	-	-	710	717	872	803	736	1059
Mov Cap-2 Maneuver	-	-	-	-	-	-	710	717	-	803	736	-
Stage 1	-	-	-	-	-	-	858	859	-	886	803	-
Stage 2	-	-	-	-	-	-	785	785	-	956	858	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.38	3.25	9.54	9.59
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	799	1575	-	-	1404	-	-	813
HCM Lane V/C Ratio	0.007	0.001	-	-	0.024	-	-	0.035
HCM Control Delay (s/veh)	9.5	7.3	-	-	7.6	-	-	9.6
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0.1	-	-	0.1

Intersection	
Int Delay, s/veh	7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	2	6	3	2	2	6	15	0	1	15	1
Future Vol, veh/h	1	2	6	3	2	2	6	15	0	1	15	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	0	0	17	0	0	0	0	0	0	0	0	0
Mvmt Flow	1	2	7	4	2	2	7	18	0	1	18	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	5	0	0	10	0	0	27	20	6	25	23	4
Stage 1	-	-	-	-	-	-	8	8	-	11	11	-
Stage 2	-	-	-	-	-	-	19	12	-	14	12	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1630	-	-	1623	-	-	988	877	1083	991	875	1086
Stage 1	-	-	-	-	-	-	1018	893	-	1015	891	-
Stage 2	-	-	-	-	-	-	1006	890	-	1011	890	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1630	-	-	1623	-	-	964	875	1083	968	872	1086
Mov Cap-2 Maneuver	-	-	-	-	-	-	964	875	-	968	872	-
Stage 1	-	-	-	-	-	-	1017	892	-	1013	889	-
Stage 2	-	-	-	-	-	-	982	888	-	990	889	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.8	3.1	9.12	9.15
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	898	174	-	-	701	-	-	887
HCM Lane V/C Ratio	0.028	0.001	-	-	0.002	-	-	0.023
HCM Control Delay (s/veh)	9.1	7.2	0	-	7.2	0	-	9.2
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	3	0	1191	1086	7
Future Vol, veh/h	0	3	0	1191	1086	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	85
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	3	3	0
Mvmt Flow	0	3	0	1267	1155	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	578	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	*786	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %		0		-	-	-
Mov Cap-1 Maneuver	-	*786	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	9.6	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	786	-	-
HCM Lane V/C Ratio	-	0.004	-	-
HCM Control Delay (s/veh)	-	9.6	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	719	3	6	824	14	0	0	6	30	2	6
Future Vol, veh/h	9	719	3	6	824	14	0	0	6	30	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	215	-	-	355	-	-	-	-	50	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	2	0	0	1	8	0	0	0	0	0	0
Mvmt Flow	9	757	3	6	867	15	0	0	6	32	2	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	882	0	0	760	0	0	1225	1672	380	1285	1666	441
Stage 1	-	-	-	-	-	-	777	777	-	887	887	-
Stage 2	-	-	-	-	-	-	447	895	-	397	779	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	988	-	-	861	-	-	*238	125	624	210	126	*863
Stage 1	-	-	-	-	-	-	*360	410	-	525	514	-
Stage 2	-	-	-	-	-	-	*813	510	-	605	409	-
Platoon blocked, %	0	-	-		-	-	0	0		0	0	0
Mov Cap-1 Maneuver	988	-	-	861	-	-	*229	123	624	204	124	*863
Mov Cap-2 Maneuver	-	-	-	-	-	-	*229	123	-	204	124	-
Stage 1	-	-	-	-	-	-	*357	406	-	522	511	-
Stage 2	-	-	-	-	-	-	*798	506	-	593	405	-

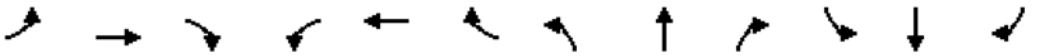
Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.11	0.07	10.83	24.56
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	624	988	-	-	861	-	-	224
HCM Lane V/C Ratio	-	0.01	0.01	-	-	0.007	-	-	0.179
HCM Control Delay (s/veh)	0	10.8	8.7	-	-	9.2	-	-	24.6
HCM Lane LOS	A	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	-	0	0	-	-	0	-	-	0.6

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Capacity Analysis Summary Sheets

Year 2031 Total Projected Weekday Morning Peak Hour

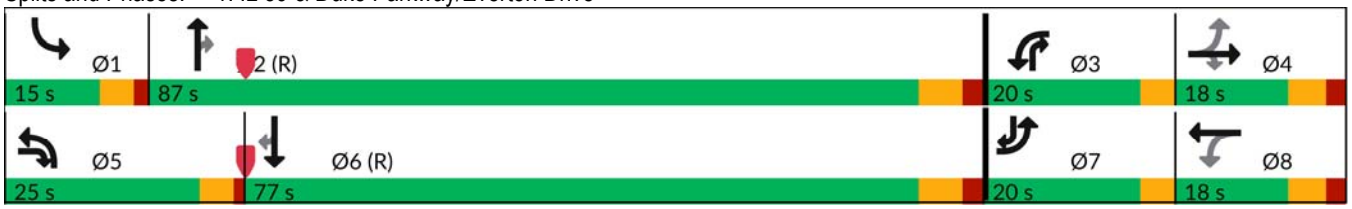


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	1	58	82	1	10	100	1376	12	5	1442	60
Future Volume (vph)	56	1	58	82	1	10	100	1376	12	5	1442	60
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Storage Length (ft)	375		230	0		0	230		245	215		0
Storage Lanes	1		1	1		0	2		1	1		1
Taper Length (ft)	120			25			300			230		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.864				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1517	2000	1170	1805	1642	0	3045	3519	1369	1805	3551	1313
Flt Permitted				0.800			0.950			0.950		
Satd. Flow (perm)	1597	2000	1170	1520	1642	0	3045	3519	1369	1805	3551	1313
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)			60									97
Link Speed (mph)		25			30			50			50	
Link Distance (ft)		367			332			2388			366	
Travel Time (s)		10.0			7.5			32.6			5.0	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	19%	0%	38%	0%	0%	0%	15%	8%	18%	0%	7%	23%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	58	1	60	85	11	0	103	1419	12	5	1487	62
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4	8					2			6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	8.0	3.0	3.0	8.0		3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	9.5	18.0	14.0	9.5	18.0		14.0	35.5	9.5	9.5	43.5	9.5
Total Split (s)	20.0	18.0	25.0	20.0	18.0		25.0	87.0	20.0	15.0	77.0	20.0
Total Split (%)	14.3%	12.9%	17.9%	14.3%	12.9%		17.9%	62.1%	14.3%	10.7%	55.0%	14.3%
Yellow Time (s)	3.5	4.0	3.5	3.5	4.0		3.5	4.5	3.5	3.5	4.5	3.5
All-Red Time (s)	0.0	2.0	1.0	0.0	2.0		1.0	2.0	0.0	1.5	2.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0	4.5	3.5	6.0		4.5	6.5	3.5	5.0	6.5	3.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Min	None	None	C-Min	None
Act Effct Green (s)	13.5	8.2	14.1	17.0	8.7		11.1	110.2	133.9	6.0	97.0	114.7
Actuated g/C Ratio	0.10	0.06	0.10	0.12	0.06		0.08	0.79	0.96	0.04	0.69	0.82
v/c Ratio	0.39	0.01	0.35	0.40	0.11		0.43	0.51	0.01	0.06	0.60	0.06
Control Delay (s/veh)	63.4	62.0	17.4	58.7	63.8		66.5	8.2	1.7	65.6	14.7	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	63.4	62.0	17.4	58.7	63.8		66.5	8.2	1.7	65.6	14.7	0.4
LOS	E	E	B	E	E		E	A	A	E	B	A
Approach Delay (s/veh)		40.2			59.3			12.1			14.3	
Approach LOS		D			E			B			B	
Queue Length 50th (ft)	51	1	0	76	10		46	139	0	5	295	0
Queue Length 95th (ft)	85	7	40	115	31		76	473	7	20	579	4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		287			252			2308			286	
Turn Bay Length (ft)	375		230				230		245	215		
Base Capacity (vph)	205	171	246	269	140		445	2769	1312	128	2459	1139
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.01	0.24	0.32	0.08		0.23	0.51	0.01	0.04	0.60	0.05

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 138.6 (99%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay (s/veh): 15.5		Intersection LOS: B	
Intersection Capacity Utilization 64.4%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: IL 59 & Duke Parkway/Everton Drive



Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	48	6	42	73	7	10	2	13	54	5	7
Future Vol, veh/h	2	48	6	42	73	7	10	2	13	54	5	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	130	-	120	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	69	69	69	69	69	69	69	69	69	69	69	69
Heavy Vehicles, %	0	14	67	54	6	17	11	0	100	0	0	0
Mvmt Flow	3	70	9	61	106	10	14	3	19	78	7	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	116	0	0	78	0	0	311	317	74	304	312	106
Stage 1	-	-	-	-	-	-	80	80	-	228	228	-
Stage 2	-	-	-	-	-	-	231	238	-	77	84	-
Critical Hdwy	4.1	-	-	4.64	-	-	7.21	6.5	7.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.21	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.21	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.686	-	-	3.599	4	4.2	3.5	4	3.3
Pot Cap-1 Maneuver	1485	-	-	1247	-	-	624	602	772	652	607	954
Stage 1	-	-	-	-	-	-	907	833	-	780	719	-
Stage 2	-	-	-	-	-	-	752	712	-	937	829	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1485	-	-	1247	-	-	579	572	772	601	576	954
Mov Cap-2 Maneuver	-	-	-	-	-	-	579	572	-	601	576	-
Stage 1	-	-	-	-	-	-	905	831	-	742	684	-
Stage 2	-	-	-	-	-	-	700	677	-	909	827	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.27	2.77	10.73	11.82
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	665	1485	-	-	1247	-	-	623
HCM Lane V/C Ratio	0.054	0.002	-	-	0.049	-	-	0.153
HCM Control Delay (s/veh)	10.7	7.4	-	-	8	-	-	11.8
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0.2	-	-	0.5

Intersection	
Int Delay, s/veh	3.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	6	11	0	24	51
Future Vol, veh/h	15	6	11	0	24	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	16	6	12	0	25	54

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	116	12	0	0	12	0
Stage 1	12	-	-	-	-	-
Stage 2	104	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	885	1075	-	-	1621	-
Stage 1	1017	-	-	-	-	-
Stage 2	925	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	871	1075	-	-	1621	-
Mov Cap-2 Maneuver	871	-	-	-	-	-
Stage 1	1017	-	-	-	-	-
Stage 2	910	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.01	0	2.32
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	921	576	-
HCM Lane V/C Ratio	-	-	0.024	0.016	-
HCM Control Delay (s/veh)	-	-	9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	5	13	13	2	29	0	10	7	15	49	0
Future Vol, veh/h	1	5	13	13	2	29	0	10	7	15	49	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	2
Mvmt Flow	1	6	16	16	3	37	0	13	9	19	62	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	39	0	0	23	0	0	84	89	15	69	79	21
Stage 1	-	-	-	-	-	-	17	17	-	54	54	-
Stage 2	-	-	-	-	-	-	66	72	-	15	25	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.318
Pot Cap-1 Maneuver	1584	-	-	1606	-	-	908	805	1071	928	815	1057
Stage 1	-	-	-	-	-	-	1008	885	-	964	854	-
Stage 2	-	-	-	-	-	-	949	839	-	1010	878	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1584	-	-	1606	-	-	830	796	1071	896	806	1057
Mov Cap-2 Maneuver	-	-	-	-	-	-	830	796	-	896	806	-
Stage 1	-	-	-	-	-	-	1007	884	-	954	845	-
Stage 2	-	-	-	-	-	-	870	830	-	986	877	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.38	2.15	9.15	9.84
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	890	83	-	-	448	-	-	825
HCM Lane V/C Ratio	0.024	0.001	-	-	0.01	-	-	0.098
HCM Control Delay (s/veh)	9.1	7.3	0	-	7.3	0	-	9.8
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	44	0	1442	1463	48
Future Vol, veh/h	0	44	0	1442	1463	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	85
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	8	7	0
Mvmt Flow	0	45	0	1487	1508	49

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	754	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	*680	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %		0		-	-	-
Mov Cap-1 Maneuver	-	*680	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	10.67	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	680	-	-
HCM Lane V/C Ratio	-	0.067	-	-
HCM Control Delay (s/veh)	-	10.7	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.2	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	71	1051	35	17	501	56	17	2	48	51	2	10
Future Vol, veh/h	71	1051	35	17	501	56	17	2	48	51	2	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	215	-	-	355	-	-	-	-	50	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	3	0	0	8	0	0	0	0	25	0	11
Mvmt Flow	76	1118	37	18	533	60	18	2	51	54	2	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	593	0	0	1155	0	0	1591	1916	578	1310	1905	296
Stage 1	-	-	-	-	-	-	1288	1288	-	599	599	-
Stage 2	-	-	-	-	-	-	304	629	-	711	1306	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	8	6.5	7.12
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	7	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	7	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.75	4	3.41
Pot Cap-1 Maneuver	1166	-	-	612	-	-	*91	75	464	130	76	*922
Stage 1	-	-	-	-	-	-	*176	237	-	585	614	-
Stage 2	-	-	-	-	-	-	*898	593	-	341	232	-
Platoon blocked, %	0	-	-		-	-	0	0		0	0	0
Mov Cap-1 Maneuver	1166	-	-	612	-	-	*79	68	464	102	69	*922
Mov Cap-2 Maneuver	-	-	-	-	-	-	*79	68	-	102	69	-
Stage 1	-	-	-	-	-	-	*165	221	-	568	596	-
Stage 2	-	-	-	-	-	-	*859	576	-	281	217	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.51	0.33	28.73	70.84
HCM LOS			D	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	78	464	1166	-	-	612	-	-	117
HCM Lane V/C Ratio	0.259	0.11	0.065	-	-	0.03	-	-	0.574
HCM Control Delay (s/veh)	66.7	13.7	8.3	-	-	11.1	-	-	70.8
HCM Lane LOS	F	B	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	0.9	0.4	0.2	-	-	0.1	-	-	2.8

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	6.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	13	14	45	3	41	31
Future Vol, veh/h	13	14	45	3	41	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	14	15	47	3	43	33

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	28	0	119	21
Stage 1	-	-	-	-	21	-
Stage 2	-	-	-	-	98	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1598	-	882	1062
Stage 1	-	-	-	-	1007	-
Stage 2	-	-	-	-	931	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1598	-	855	1062
Mov Cap-2 Maneuver	-	-	-	-	855	-
Stage 1	-	-	-	-	1007	-
Stage 2	-	-	-	-	903	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	6.86	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	934	-	-	1595	-
HCM Lane V/C Ratio	0.081	-	-	0.03	-
HCM Control Delay (s/veh)	9.2	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	115	121	40	0	1
Future Vol, veh/h	0	115	121	40	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	121	127	42	0	1

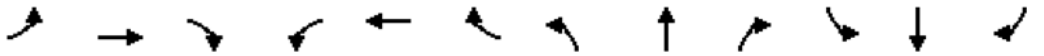
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	148
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	904
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	904
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0	0	8.99
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	904
HCM Lane V/C Ratio	-	-	-	0.001
HCM Control Delay (s/veh)	-	-	-	9
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0

Capacity Analysis Summary Sheets

Year 2031 Total Projected Weekday Evening Peak Hour

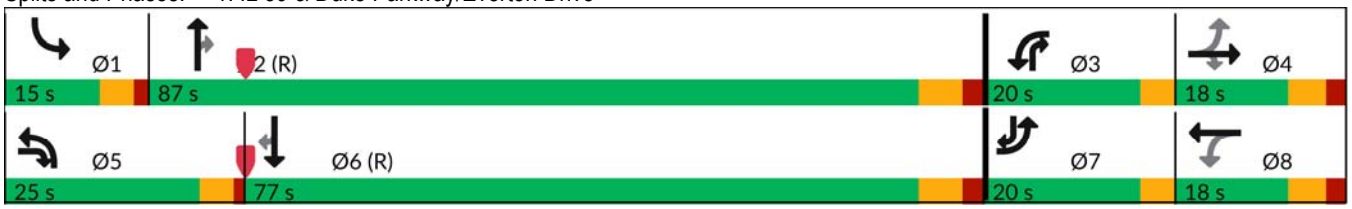


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	1	50	33	1	13	92	1451	85	36	1488	53
Future Volume (vph)	62	1	50	33	1	13	92	1451	85	36	1488	53
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Storage Length (ft)	375		230	0		0	230		245	215		0
Storage Lanes	1		1	1		0	2		1	1		1
Taper Length (ft)	120			25			300			230		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.860				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1597	2000	1346	1805	1634	0	3045	3619	1615	1805	3619	1346
Flt Permitted				0.769			0.950			0.950		
Satd. Flow (perm)	1681	2000	1346	1461	1634	0	3045	3619	1615	1805	3619	1346
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)			55									97
Link Speed (mph)		25			30			50			50	
Link Distance (ft)		367			332			2388			366	
Travel Time (s)		10.0			7.5			32.6			5.0	
Peak Hour Factor	0.97	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	13%	0%	20%	0%	0%	0%	15%	5%	0%	0%	5%	20%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	64	1	54	36	15	0	100	1577	92	39	1617	58
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4	8					2			6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	8.0	3.0	3.0	8.0		3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	9.5	18.0	14.0	9.5	18.0		14.0	35.5	9.5	9.5	43.5	9.5
Total Split (s)	20.0	18.0	25.0	20.0	18.0		25.0	87.0	20.0	15.0	77.0	20.0
Total Split (%)	14.3%	12.9%	17.9%	14.3%	12.9%		17.9%	62.1%	14.3%	10.7%	55.0%	14.3%
Yellow Time (s)	3.5	4.0	3.5	3.5	4.0		3.5	4.5	3.5	3.5	4.5	3.5
All-Red Time (s)	0.0	2.0	1.0	0.0	2.0		1.0	2.0	0.0	1.5	2.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0	4.5	3.5	6.0		4.5	6.5	3.5	5.0	6.5	3.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Min	None	None	C-Min	None
Act Effct Green (s)	14.2	9.4	15.1	15.7	9.0		10.9	101.4	121.6	8.4	97.3	114.6
Actuated g/C Ratio	0.10	0.07	0.11	0.11	0.06		0.08	0.72	0.87	0.06	0.70	0.82
v/c Ratio	0.39	0.01	0.28	0.18	0.14		0.42	0.60	0.07	0.36	0.64	0.05
Control Delay (s/veh)	62.9	58.0	14.8	51.9	64.4		66.5	13.5	3.0	71.5	15.6	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	62.9	58.0	14.8	51.9	64.4		66.5	13.5	3.0	71.5	15.6	0.3
LOS	E	E	B	D	E		E	B	A	E	B	A
Approach Delay (s/veh)		41.0			55.6			16.0			16.3	
Approach LOS		D			E			B			B	
Queue Length 50th (ft)	57	1	0	31	13		45	290	7	35	324	0
Queue Length 95th (ft)	91	7	35	57	37		75	618	42	73	669	3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		287			252			2308			286	
Turn Bay Length (ft)	375		230				230		245	215		
Base Capacity (vph)	224	180	283	270	140		445	2620	1447	132	2516	1170
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.01	0.19	0.13	0.11		0.22	0.60	0.06	0.30	0.64	0.05

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 7 (5%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay (s/veh): 17.5		Intersection LOS: B	
Intersection Capacity Utilization 59.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: IL 59 & Duke Parkway/Everton Drive



Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	57	6	36	44	33	3	1	7	49	0	5
Future Vol, veh/h	4	57	6	36	44	33	3	1	7	49	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	130	-	120	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	70	70	70	70	70	70	70	70	70	70	70	70
Heavy Vehicles, %	0	14	33	41	24	4	100	0	86	0	0	0
Mvmt Flow	6	81	9	51	63	47	4	1	10	70	0	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	110	0	0	90	0	0	263	310	86	259	267	63
Stage 1	-	-	-	-	-	-	97	97	-	166	166	-
Stage 2	-	-	-	-	-	-	166	213	-	94	101	-
Critical Hdwy	4.1	-	-	4.51	-	-	8.1	6.5	7.06	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	7.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.569	-	-	4.4	4	4.074	3.5	4	3.3
Pot Cap-1 Maneuver	1493	-	-	1293	-	-	530	608	784	698	642	1007
Stage 1	-	-	-	-	-	-	716	818	-	841	765	-
Stage 2	-	-	-	-	-	-	652	730	-	918	815	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1493	-	-	1293	-	-	503	581	784	657	614	1007
Mov Cap-2 Maneuver	-	-	-	-	-	-	503	581	-	657	614	-
Stage 1	-	-	-	-	-	-	714	815	-	808	735	-
Stage 2	-	-	-	-	-	-	621	701	-	902	812	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.44	2.52	10.57	10.98
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	662	1493	-	-	1293	-	-	679
HCM Lane V/C Ratio	0.024	0.004	-	-	0.04	-	-	0.114
HCM Control Delay (s/veh)	10.6	7.4	-	-	7.9	-	-	11
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.4

Intersection	
Int Delay, s/veh	4.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	30	24	38	0	22	24
Future Vol, veh/h	30	24	38	0	22	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	32	25	40	0	23	25

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	112	40	0	0	40	0
Stage 1	40	-	-	-	-	-
Stage 2	72	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	890	1037	-	-	1583	-
Stage 1	988	-	-	-	-	-
Stage 2	956	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	877	1037	-	-	1583	-
Mov Cap-2 Maneuver	877	-	-	-	-	-
Stage 1	988	-	-	-	-	-
Stage 2	942	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.07	0	3.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	942	861	-
HCM Lane V/C Ratio	-	-	0.06	0.015	-
HCM Control Delay (s/veh)	-	-	9.1	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	7.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	2	5	8	3	17	13	49	0	8	33	1
Future Vol, veh/h	1	2	5	8	3	17	13	49	0	8	33	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	61	61	61	61	61	61	61	61	61	61	61	61
Heavy Vehicles, %	0	0	0	0	0	0	0	6	0	0	0	0
Mvmt Flow	2	3	8	13	5	28	21	80	0	13	54	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	33	0	0	11	0	0	69	70	7	92	60	19
Stage 1	-	-	-	-	-	-	11	11	-	45	45	-
Stage 2	-	-	-	-	-	-	58	59	-	47	15	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.56	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.56	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.56	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4.054	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1592	-	-	1621	-	-	928	813	1081	897	835	1065
Stage 1	-	-	-	-	-	-	1015	879	-	974	861	-
Stage 2	-	-	-	-	-	-	959	838	-	972	887	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1592	-	-	1621	-	-	859	806	1081	801	827	1065
Mov Cap-2 Maneuver	-	-	-	-	-	-	859	806	-	801	827	-
Stage 1	-	-	-	-	-	-	1014	878	-	966	854	-
Stage 2	-	-	-	-	-	-	889	831	-	882	886	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.91	2.07	10.04	9.75
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	816	197	-	-	440	-	-	826
HCM Lane V/C Ratio	0.125	0.001	-	-	0.008	-	-	0.083
HCM Control Delay (s/veh)	10	7.3	0	-	7.2	0	-	9.8
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.4	0	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	21	0	1526	1556	24
Future Vol, veh/h	0	21	0	1526	1556	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	85
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	4	6	0
Mvmt Flow	0	22	0	1623	1655	26

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	828	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	*650	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %		0		-	-	-
Mov Cap-1 Maneuver	-	*650	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	10.74	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	650	-	-
HCM Lane V/C Ratio	-	0.034	-	-
HCM Control Delay (s/veh)	-	10.7	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	927	21	24	1306	16	29	0	30	43	0	10
Future Vol, veh/h	15	927	21	24	1306	16	29	0	30	43	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	215	-	-	355	-	-	-	-	50	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	3	0	0	2	27	0	0	0	8	0	0
Mvmt Flow	16	966	22	25	1360	17	30	0	31	45	0	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1377	0	0	988	0	0	1738	2435	494	1933	2438	689
Stage 1	-	-	-	-	-	-	1008	1008	-	1419	1419	-
Stage 2	-	-	-	-	-	-	730	1427	-	514	1019	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.66	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.66	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.66	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.58	4	3.3
Pot Cap-1 Maneuver	678	-	-	708	-	-	*112	32	526	63	32	*727
Stage 1	-	-	-	-	-	-	*262	321	-	282	319	-
Stage 2	-	-	-	-	-	-	*686	315	-	496	317	-
Platoon blocked, %	0	-	-		-	-	0	0		0	0	0
Mov Cap-1 Maneuver	678	-	-	708	-	-	*104	31	526	56	30	*727
Mov Cap-2 Maneuver	-	-	-	-	-	-	*104	31	-	56	30	-
Stage 1	-	-	-	-	-	-	*255	313	-	272	308	-
Stage 2	-	-	-	-	-	-	*652	304	-	456	310	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.16	0.18	32.51	161.51
HCM LOS			D	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	104	526	678	-	-	708	-	-	68
HCM Lane V/C Ratio	0.292	0.059	0.023	-	-	0.035	-	-	0.813
HCM Control Delay (s/veh)	53.4	12.3	10.4	-	-	10.3	-	-	161.5
HCM Lane LOS	F	B	B	-	-	B	-	-	F
HCM 95th %tile Q(veh)	1.1	0.2	0.1	-	-	0.1	-	-	3.8

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	6.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	3	7	18	6	22	18
Future Vol, veh/h	3	7	18	6	22	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	7	19	6	23	19

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	11	0	51	7
Stage 1	-	-	-	-	7	-
Stage 2	-	-	-	-	44	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1622	-	963	1082
Stage 1	-	-	-	-	1021	-
Stage 2	-	-	-	-	983	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1622	-	952	1082
Mov Cap-2 Maneuver	-	-	-	-	952	-
Stage 1	-	-	-	-	1021	-
Stage 2	-	-	-	-	972	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	5.43	8.74
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1006	-	-	1350	-
HCM Lane V/C Ratio	0.042	-	-	0.012	-
HCM Control Delay (s/veh)	8.7	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	113	110	36	0	3
Future Vol, veh/h	0	113	110	36	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	119	116	38	0	3

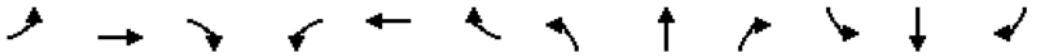
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	135
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	920
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	920
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0	0	8.93
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	920
HCM Lane V/C Ratio	-	-	-	0.003
HCM Control Delay (s/veh)	-	-	-	8.9
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0

Capacity Analysis Summary Sheets

Year 2031 Total Projected Saturday Midday Peak Hour

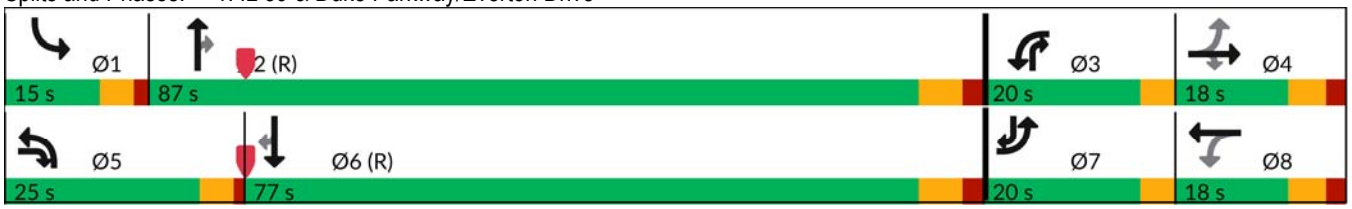


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	5	39	63	1	5	86	1150	36	34	1052	20
Future Volume (vph)	43	5	39	63	1	5	86	1150	36	34	1052	20
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Storage Length (ft)	375		230	0		0	230		245	215		0
Storage Lanes	1		1	1		0	2		1	1		1
Taper Length (ft)	120			25			300			230		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.875				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1719	2000	1262	1805	1662	0	3213	3689	1615	1752	3689	1392
Flt Permitted							0.950			0.950		
Satd. Flow (perm)	1810	2000	1262	1900	1662	0	3213	3689	1615	1752	3689	1392
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)			55									97
Link Speed (mph)		25			30			50			50	
Link Distance (ft)		367			332			2388			366	
Travel Time (s)		10.0			7.5			32.6			5.0	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	5%	0%	28%	0%	0%	0%	9%	3%	0%	3%	3%	16%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	44	5	40	65	6	0	89	1186	37	35	1085	21
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4	8					2			6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	8.0	3.0	3.0	8.0		3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	9.5	18.0	14.0	9.5	18.0		14.0	35.5	9.5	9.5	43.5	9.5
Total Split (s)	20.0	18.0	25.0	20.0	18.0		25.0	87.0	20.0	15.0	77.0	20.0
Total Split (%)	14.3%	12.9%	17.9%	14.3%	12.9%		17.9%	62.1%	14.3%	10.7%	55.0%	14.3%
Yellow Time (s)	3.5	4.0	3.5	3.5	4.0		3.5	4.5	3.5	3.5	4.5	3.5
All-Red Time (s)	0.0	2.0	1.0	0.0	2.0		1.0	2.0	0.0	1.5	2.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0	4.5	3.5	6.0		4.5	6.5	3.5	5.0	6.5	3.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Min	None	None	C-Min	None
Act Effct Green (s)	11.9	8.2	13.2	12.8	8.6		10.2	109.0	123.1	8.2	104.1	120.3
Actuated g/C Ratio	0.09	0.06	0.09	0.09	0.06		0.07	0.78	0.88	0.06	0.74	0.86
v/c Ratio	0.30	0.04	0.24	0.39	0.06		0.38	0.41	0.03	0.34	0.40	0.02
Control Delay (s/veh)	60.9	63.0	9.9	63.8	62.5		66.1	8.1	2.5	71.4	8.5	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	60.9	63.0	9.9	63.8	62.5		66.1	8.1	2.5	71.4	8.5	0.1
LOS	E	E	A	E	E		E	A	A	E	A	A
Approach Delay (s/veh)		38.1			63.7			11.9			10.3	
Approach LOS		D			E			B			B	
Queue Length 50th (ft)	39	4	0	58	5		40	176	3	31	163	0
Queue Length 95th (ft)	69	19	22	93	20		68	365	16	68	330	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		287			252			2308			286	
Turn Bay Length (ft)	375		230				230		245	215		
Base Capacity (vph)	231	171	257	243	142		470	2872	1470	128	2743	1265
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.03	0.16	0.27	0.04		0.19	0.41	0.03	0.27	0.40	0.02

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 135.8 (97%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.41			
Intersection Signal Delay (s/veh): 13.5		Intersection LOS: B	
Intersection Capacity Utilization 57.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: IL 59 & Duke Parkway/Everton Drive



Intersection	
Int Delay, s/veh	4.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	34	2	29	20	21	2	0	3	50	2	2
Future Vol, veh/h	2	34	2	29	20	21	2	0	3	50	2	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	130	-	120	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	27	100	30	20	0	50	0	67	2	0	0
Mvmt Flow	2	40	2	34	24	25	2	0	4	59	2	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	48	0	0	42	0	0	139	162	41	136	139	24
Stage 1	-	-	-	-	-	-	46	46	-	92	92	-
Stage 2	-	-	-	-	-	-	93	116	-	45	47	-
Critical Hdwy	4.1	-	-	4.4	-	-	7.6	6.5	6.87	7.12	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.6	5.5	-	6.12	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.6	5.5	-	6.12	5.5	-
Follow-up Hdwy	2.2	-	-	2.47	-	-	3.95	4	3.903	3.518	4	3.3
Pot Cap-1 Maneuver	1572	-	-	1404	-	-	733	734	872	834	756	1059
Stage 1	-	-	-	-	-	-	859	861	-	915	823	-
Stage 2	-	-	-	-	-	-	808	803	-	969	860	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1572	-	-	1404	-	-	710	715	872	810	736	1059
Mov Cap-2 Maneuver	-	-	-	-	-	-	710	715	-	810	736	-
Stage 1	-	-	-	-	-	-	858	859	-	893	803	-
Stage 2	-	-	-	-	-	-	785	784	-	964	858	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.38	3.16	9.54	9.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	799	1572	-	-	1404	-	-	814
HCM Lane V/C Ratio	0.007	0.001	-	-	0.024	-	-	0.078
HCM Control Delay (s/veh)	9.5	7.3	-	-	7.6	-	-	9.8
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0.1	-	-	0.3

Intersection	
Int Delay, s/veh	3.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	18	8	23	0	24	36
Future Vol, veh/h	18	8	23	0	24	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	19	8	24	0	25	38

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	113	24	0	0	24	0
Stage 1	24	-	-	-	-	-
Stage 2	88	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	889	1058	-	-	1604	-
Stage 1	1004	-	-	-	-	-
Stage 2	940	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	875	1058	-	-	1604	-
Mov Cap-2 Maneuver	875	-	-	-	-	-
Stage 1	1004	-	-	-	-	-
Stage 2	925	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.02	0	2.91
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	924	720	-
HCM Lane V/C Ratio	-	-	0.03	0.016	-
HCM Control Delay (s/veh)	-	-	9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	6.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	2	6	16	2	38	6	25	0	16	38	1
Future Vol, veh/h	1	2	6	16	2	38	6	25	0	16	38	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	0	0	17	0	0	0	0	0	0	0	0	0
Mvmt Flow	1	2	7	19	2	46	7	30	0	19	46	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	48	0	0	10	0	0	72	95	6	84	76	25
Stage 1	-	-	-	-	-	-	8	8	-	64	64	-
Stage 2	-	-	-	-	-	-	64	87	-	20	12	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1572	-	-	1623	-	-	924	799	1083	908	818	1057
Stage 1	-	-	-	-	-	-	1018	893	-	952	846	-
Stage 2	-	-	-	-	-	-	952	827	-	1004	890	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1572	-	-	1623	-	-	860	788	1083	862	808	1057
Mov Cap-2 Maneuver	-	-	-	-	-	-	860	788	-	862	808	-
Stage 1	-	-	-	-	-	-	1017	892	-	940	835	-
Stage 2	-	-	-	-	-	-	888	817	-	969	889	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.81	2.07	9.71	9.74
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	801	174	-	-	432	-	-	826
HCM Lane V/C Ratio	0.047	0.001	-	-	0.012	-	-	0.08
HCM Control Delay (s/veh)	9.7	7.3	0	-	7.2	0	-	9.7
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	34	0	1198	1072	42
Future Vol, veh/h	0	34	0	1198	1072	42
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	85
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	3	3	0
Mvmt Flow	0	36	0	1274	1140	45

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	570	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	*786	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %		0		-	-	-
Mov Cap-1 Maneuver	-	*786	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	9.8	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	786	-	-
HCM Lane V/C Ratio	-	0.046	-	-
HCM Control Delay (s/veh)	-	9.8	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	710	25	22	808	14	29	0	30	30	2	6
Future Vol, veh/h	9	710	25	22	808	14	29	0	30	30	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	215	-	-	355	-	-	-	-	50	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	2	0	0	1	8	0	0	0	0	0	0
Mvmt Flow	9	747	26	23	851	15	31	0	32	32	2	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	865	0	0	774	0	0	1252	1691	387	1297	1697	433
Stage 1	-	-	-	-	-	-	779	779	-	904	904	-
Stage 2	-	-	-	-	-	-	473	912	-	393	793	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1006	-	-	851	-	-	*225	121	617	205	120	*863
Stage 1	-	-	-	-	-	-	*359	409	-	511	504	-
Stage 2	-	-	-	-	-	-	*813	499	-	609	403	-
Platoon blocked, %	0	-	-		-	-	0	0		0	0	0
Mov Cap-1 Maneuver	1006	-	-	851	-	-	*211	117	617	187	115	*863
Mov Cap-2 Maneuver	-	-	-	-	-	-	*211	117	-	187	115	-
Stage 1	-	-	-	-	-	-	*356	405	-	497	490	-
Stage 2	-	-	-	-	-	-	*782	485	-	572	399	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.1	0.24	17.9	26.64
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	211	617	1006	-	-	851	-	-	206
HCM Lane V/C Ratio	0.144	0.051	0.009	-	-	0.027	-	-	0.194
HCM Control Delay (s/veh)	24.9	11.1	8.6	-	-	9.3	-	-	26.6
HCM Lane LOS	C	B	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.5	0.2	0	-	-	0.1	-	-	0.7

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	3	15	34	8	48	31
Future Vol, veh/h	3	15	34	8	48	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	16	36	8	51	33

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	19	0	91	11
Stage 1	-	-	-	-	11	-
Stage 2	-	-	-	-	80	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1611	-	914	1076
Stage 1	-	-	-	-	1017	-
Stage 2	-	-	-	-	948	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1611	-	894	1076
Mov Cap-2 Maneuver	-	-	-	-	894	-
Stage 1	-	-	-	-	1017	-
Stage 2	-	-	-	-	927	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	5.9	9.12
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	957	-	-	1457	-
HCM Lane V/C Ratio	0.087	-	-	0.022	-
HCM Control Delay (s/veh)	9.1	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	87	68	39	0	2
Future Vol, veh/h	0	87	68	39	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	92	72	41	0	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	92
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	971
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	971
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0	0	8.72
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	971
HCM Lane V/C Ratio	-	-	-	0.002
HCM Control Delay (s/veh)	-	-	-	8.7
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0

Butterfield Road and Barkley Avenue Queue Comparison Table

Table 9
QUEUE COMPARISON

Intersection	Weekday Morning Peak Hour	Weekday Evening Peak Hour	Saturday Midday Peak Hour
	95th percentile	95th percentile	95th percentile
Butterfield Road with Barkley Avenue			
• Southbound Approach (Existing Conditions)	50’	60’	25’
• Southbound Approach (No Build Conditions)	62’	88’	25’
• Southbound Approach (Proposed Conditions)	70’	95’	25’
• Northbound Approach (Existing Conditions)	25’	25’	25’
• Northbound Approach (No Build Conditions)	25’	25’	25’
• Northbound Approach (Proposed Conditions)	25’	27’	25’