

**EXHIBIT
PWC-604**

Traffic Impact Study Proposed Pheasant Run Industrial Park

St. Charles, Illinois



Prepared For:



**GRECO | DEROSA
INVESTMENT GROUP**



October 12, 2021

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 the Pheasant Run Industrial Park, a proposed industrial development to be located in St. Charles, Illinois. The site is located in the southeast quadrant of the intersection of Illinois Route 64 (Main Street/North Avenue) with Kautz Road. As proposed, the site will be redeveloped with approximately 1,172,718 square feet of general light industrial space in four buildings. Access to the development will be provided off IL 64 via its existing signalized intersection with Pheasant Run Drive and via its unsignalized intersection with Keil Road and off Kautz Road via two full movement access drives.

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.

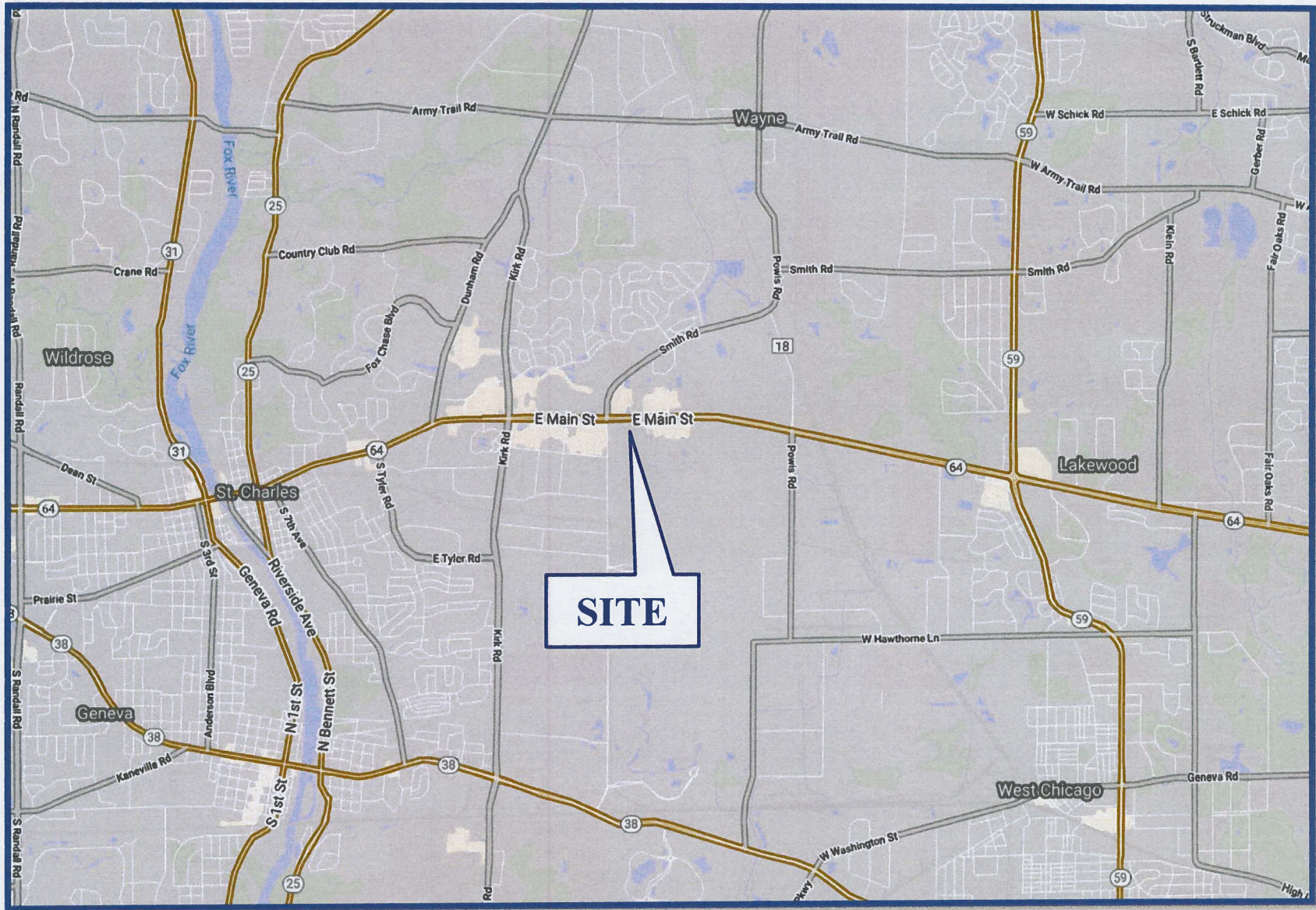
Figure 1 shows the location of the site in relation to the area roadway system. **Figure 2** shows an aerial view of the site.

The sections of this report present the following:

- Existing roadway conditions
- A description of the proposed 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 and evening peak hours
- Recommendations with respect to adequacy of the site access and adjacent roadway system

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

1. Year 2021 Base Conditions – Analyzes the capacity of the existing roadway system using peak hour traffic volumes conducted in 2021 adjusted to represent pre-pandemic conditions.
2. Year 2027 No-Build Conditions – Analyzes the capacity of the existing roadway system using Year 2020 base traffic volumes increased by the traffic projected to be generated by the under-construction McGrath Automotive Dealership and Brooke Toria Estates developments and an ambient area growth factor not attributable to any particular development.
3. Year 2027 Total Projected Conditions – Analyzes the capacity of the future roadway system using the projected traffic volumes that include the Year 2027 no-build traffic volumes and the traffic estimated to be generated by the proposed development.



Site Location

*Pheasant Run Industrial Park
West Chicago, Illinois*

Figure 1





Aerial View of Site
Pheasant Run Industrial Park
West Chicago, Illinois

Figure 2



2. Existing Conditions

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

Site Location

The site of the proposed development is located in the southeast quadrant of the intersection of IL 64 and Kautz Road. McGrath Auto Dealership, which is currently under construction, is located in the southeast quadrant of the intersection of IL 64 with Pheasant Run Drive. Land uses in the site are primarily industrial and commercial and include Charlestowne Mall, Walmart, and Pheasant Run Crossing to the north and East Gate Commons (EGC) and numerous industrial developments to the west. The DuPage Airport is located south of the site.

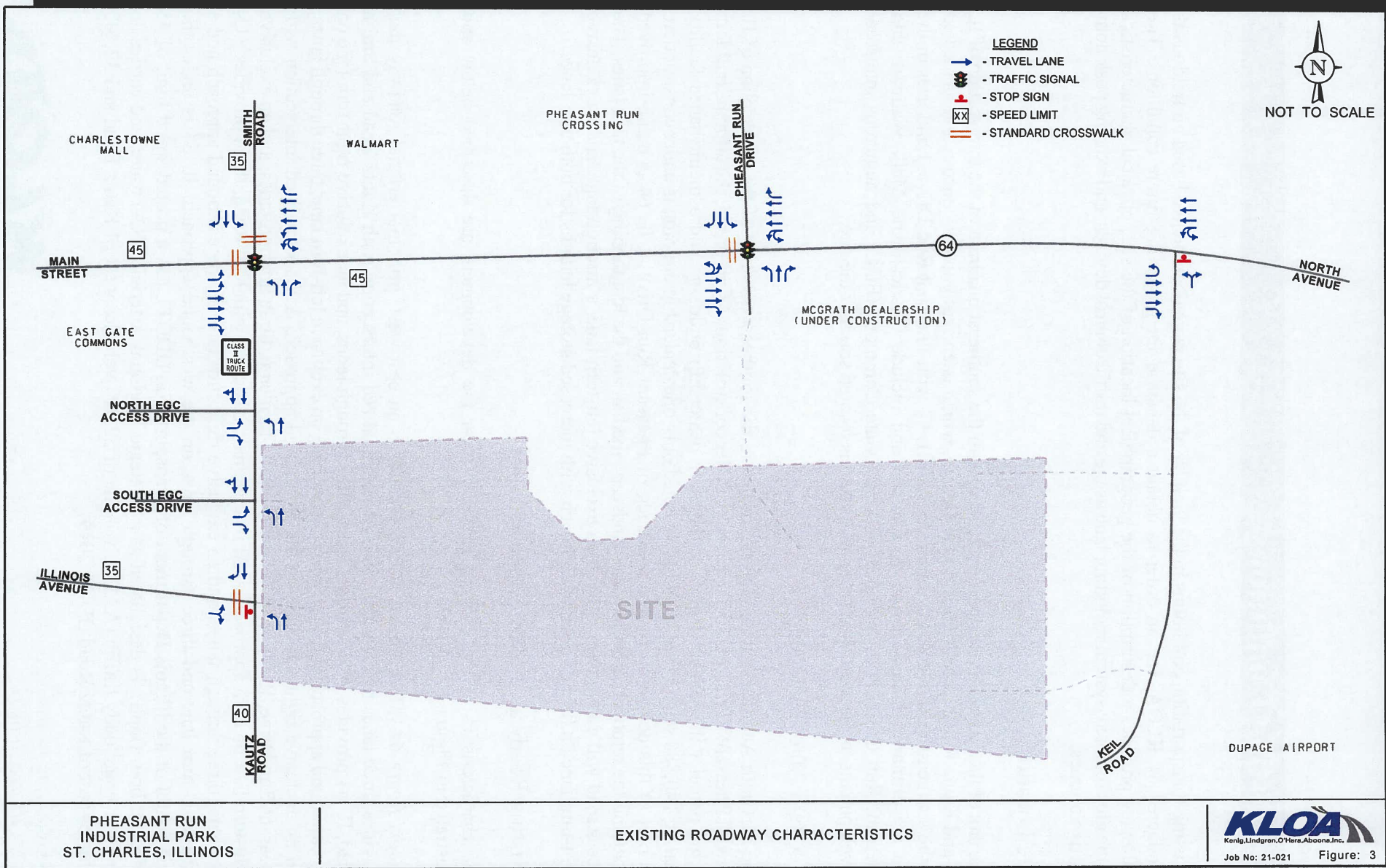
McGrath Auto Dealership

The McGrath Auto Dealership is to be located in the southeast quadrant of the intersection of IL 64 with Pheasant Run Drive and is currently under construction. As proposed, the ultimate buildout of the parcel will consist of three automotive dealership buildings and a maintenance facility totaling 140,880 square feet. It should be noted only one dealership building is under construction. As part of this development, the south leg of Pheasant Run Drive at IL 64 is being improved including the removal of the existing landscape median and the lengthening of the turn lanes. The access road will continue to provide an exclusive left-turn lane, a through lane, and an exclusive right-turn lane on the northbound approach with increased storage lengths for both turn lanes.

Existing Roadway System Characteristics

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

Illinois Route 64 (Main Street, North Avenue) is an east-west, principal arterial roadway that provides three lanes in each direction. At its signalized intersection with Kautz Road and Smith Road, IL 64 provides dual left-turn lanes, three through lanes, and an exclusive right-turn lane on the eastbound approach and a left-turn/U-turn lane, an exclusive left-turn lane, three through lanes, and an exclusive right-turn lane on the westbound approach. At its signalized intersection with Pheasant Run Drive, IL 64 provides a left-turn/U-turn lane, three through lanes, and an exclusive right-turn lane on both approaches. At its unsignalized access with Keil Road, IL 64 provides a U-turn lane, three through lanes, and an exclusive right-turn lane on the eastbound approach and a left-turn/U-turn lane and three through lanes on the westbound approach. IL 64 is under the jurisdiction of the Illinois Department of Transportation (IDOT), has a posted speed limit of 45 miles per hour (mph), is designated as a Strategic Regional Arterial (SRA) route, and carries an annual average daily traffic (AADT) volume of 32,900 vehicles west of Kautz Road and 32,400 vehicles east of Kautz Road (IDOT 2019).



NOT TO SCALE

PHEASANT RUN INDUSTRIAL PARK
ST. CHARLES, ILLINOIS

EXISTING ROADWAY CHARACTERISTICS

Kautz Road is a north-south, major collector roadway that extends south from IL 64 and provides two southbound lanes and one northbound lane narrowing to one lane in each direction south of Illinois Avenue. At its signalized intersection with IL 64, Kautz Road provides an exclusive left-turn lane, a through lane, and an exclusive right-turn lane on the northbound approach and is aligned opposite Smith Road. At its unsignalized intersection with Illinois Road, Kautz Road provides an exclusive left-turn lane and a through lane on the northbound approach and a through lane and an exclusive right-turn lane on the southbound approach. At its unsignalized intersections with the EGC access drives, Kautz Road provides an exclusive left-turn lane and a through lane on the northbound approaches and a through lane and shared through lanes on the southbound approaches. Both access drives provide an exclusive left-turn lane and an exclusive right-turn lane and are under stop sign control. Kautz Road is under the jurisdiction of the City of St. Charles, has a posted speed limit of 40 mph, is designated as a Class II Truck Route, and carries an AADT volume of 8,150 vehicles (IDOT 2018).

Smith Road is a north-south, major collector roadway that extends north from IL 64 and provides two northbound lanes and one southbound lane narrowing to one lane in each direction north of the Charlestowne Mall access road. At its signalized intersection with IL 64, Smith Road provides an exclusive left-turn lane, a through lane, and an exclusive right-turn lane on the southbound approach and is aligned opposite Kautz Road. Smith Road is under the jurisdiction of the City of St. Charles, has a posted speed limit of 35 mph, and carries an AADT volume of 7,050 vehicles (IDOT 2016).

Keil Road is a north-south, private road that extends south from IL 64 and provides one lane in each direction. At its unsignalized intersection with IL 64, Keil Road provides a shared left-turn/right-turn lane on the northbound approach and is under stop sign control. Keil Road is signed for "Private Road Authorized Airport Use Only" and a speed table is provided approximately 1,500 feet south of IL 64. Keil Road is under the jurisdiction of the City of West Chicago.

Illinois Avenue is an east-west, local roadway that extends west from Kautz Road and provides one lane in each direction. At its unsignalized intersection with Kautz Road, Illinois Avenue provides a shared left-turn/right-turn lane on the eastbound approach. Illinois Avenue is under the jurisdiction of the City of St. Charles.

Existing Traffic Volumes

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

- IL 64 with Kautz Road and Smith Road
- IL 64 with Pheasant Run Drive
- IL 64 with Keil Road
- Kautz Road with Illinois Avenue
- Kautz Road with the EGC access drives

The traffic counts were conducted on **Wednesday, January 27, 2021** during the weekday morning (6:00 A.M. to 9:00 A.M.) and weekday evening (4:00 P.M. to 6:00 P.M.) peak periods. The results of the traffic counts show that the peak hours of traffic generally occur between 7:15 A.M. and 8:15 A.M. during the weekday morning peak period and between 4:30 P.M. and 5:30 P.M. during the weekday evening peak period. Copies of the traffic count summary sheets are included in the Appendix. In order to accurately represent Year 2021 normal traffic conditions due to the ongoing pandemic, the traffic volumes were compared with counts previously conducted at the intersection of IL 64 with Kautz Road and Smith Road by KLOA, Inc. in 2017. The 2017 traffic counts, increased by an ambient growth factor as discussed later in the report, were found to be 35 percent higher during the weekday morning and 30 percent higher during the weekday evening. As such, all traffic volumes were increased accordingly to determine the Year 2021 base traffic volumes. **The existing unadjusted traffic volumes are illustrated in Figure 4.** The Year 2021 base traffic volumes, inclusive of heavy vehicles, are illustrated in **Figure 5.** The Year 2021 base heavy vehicle traffic volumes are illustrated in **Figure 6.**

Crash Analysis

KLOA, Inc. obtained crash data for the most recent available past five years (2016 to 2020) at the following intersections:

- IL 64 with Kautz Road and Smith Road
- IL 64 with Pheasant Run Drive
- IL 64 with Keil Road
- Kautz Road with Illinois Avenue
- Kautz Road with the EGC access drives

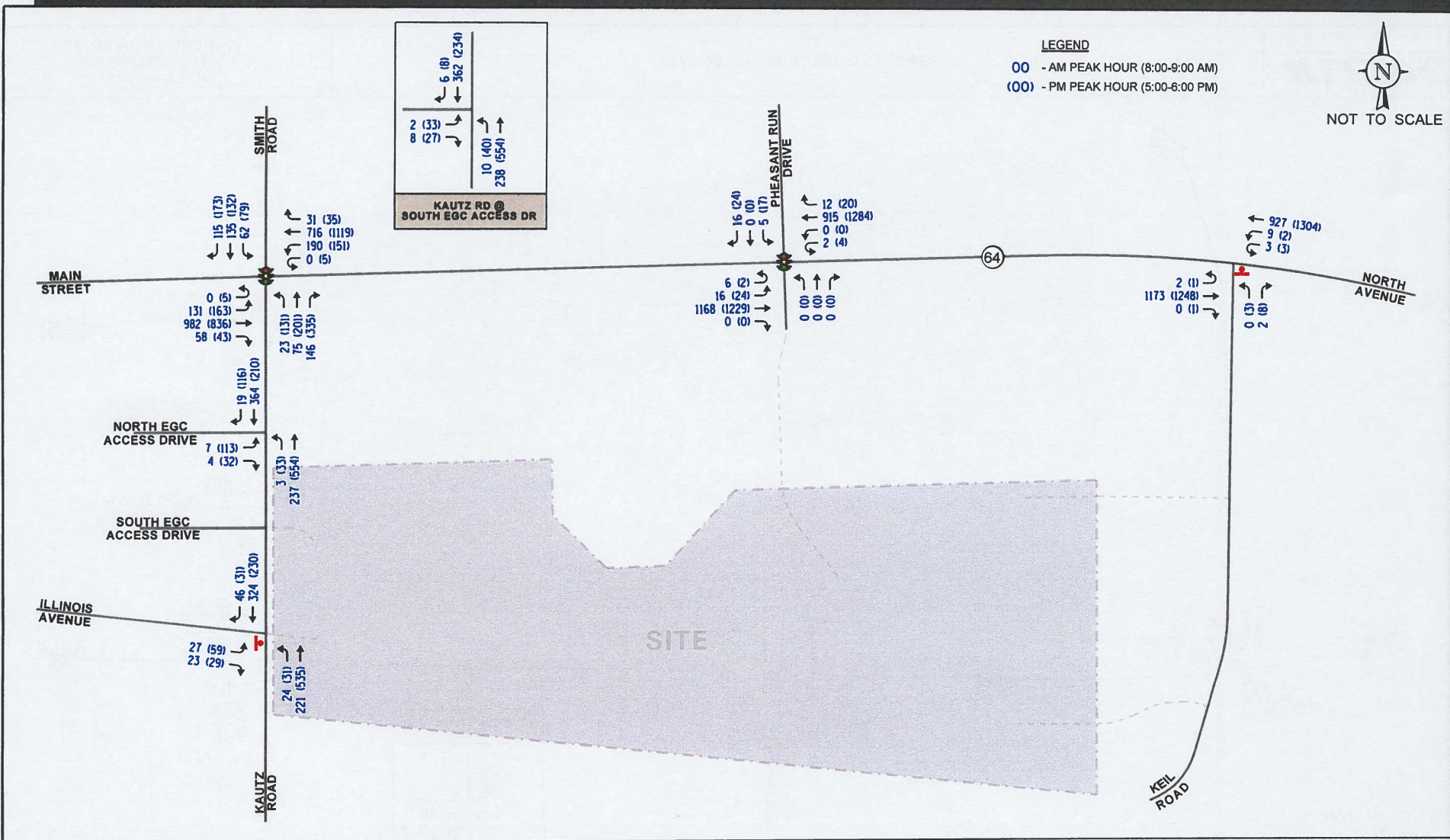
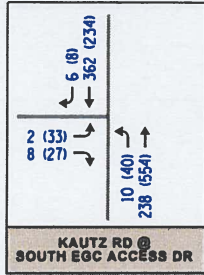
A review of the crash data revealed two crashes were reported at the intersection of IL 64 with Keil Road, three crashes were reported at the intersection of Kautz Road with Illinois Avenue, two crashes were reported at the intersection of Kautz Road with the north EGC access drive, and one crash occurred at the intersection of Kautz Road with the south EGC access drive. Further, no fatalities were reported at any of the study area intersections during the review period. A summary of the crash data for the remaining intersections is shown in **Tables 1 and 2.**¹

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). Additionally, for coding years 2015 to present,



NOT TO SCALE

LEGEND
00 - AM PEAK HOUR (8:00-9:00 AM)
(00) - PM PEAK HOUR (5:00-6:00 PM)



PHEASANT RUN INDUSTRIAL PARK
ST. CHARLES, ILLINOIS

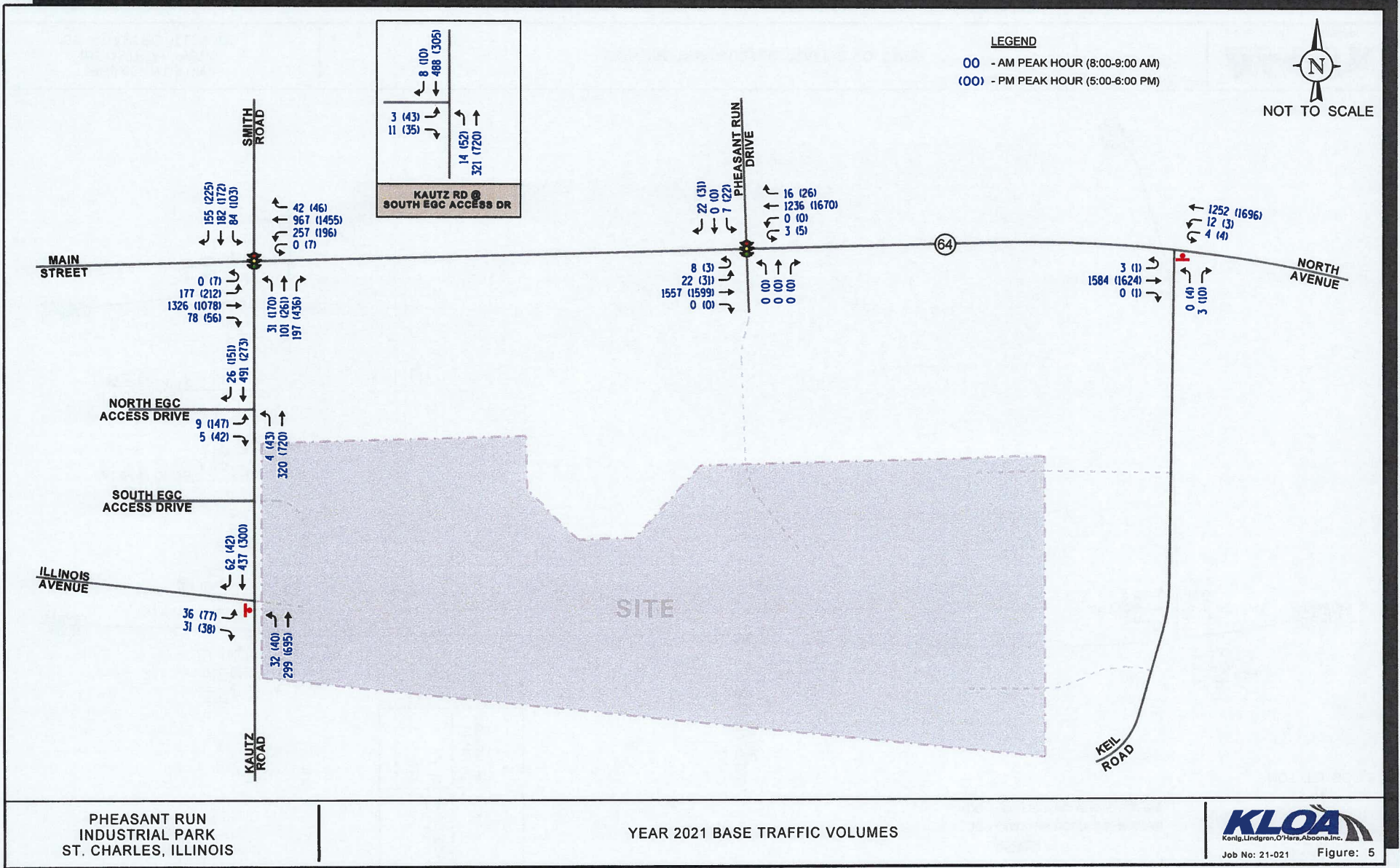
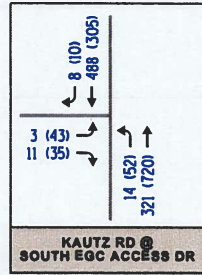
EXISTING UNADJUSTED TRAFFIC VOLUMES



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PHEASANT RUN INDUSTRIAL PARK
ST. CHARLES, ILLINOIS

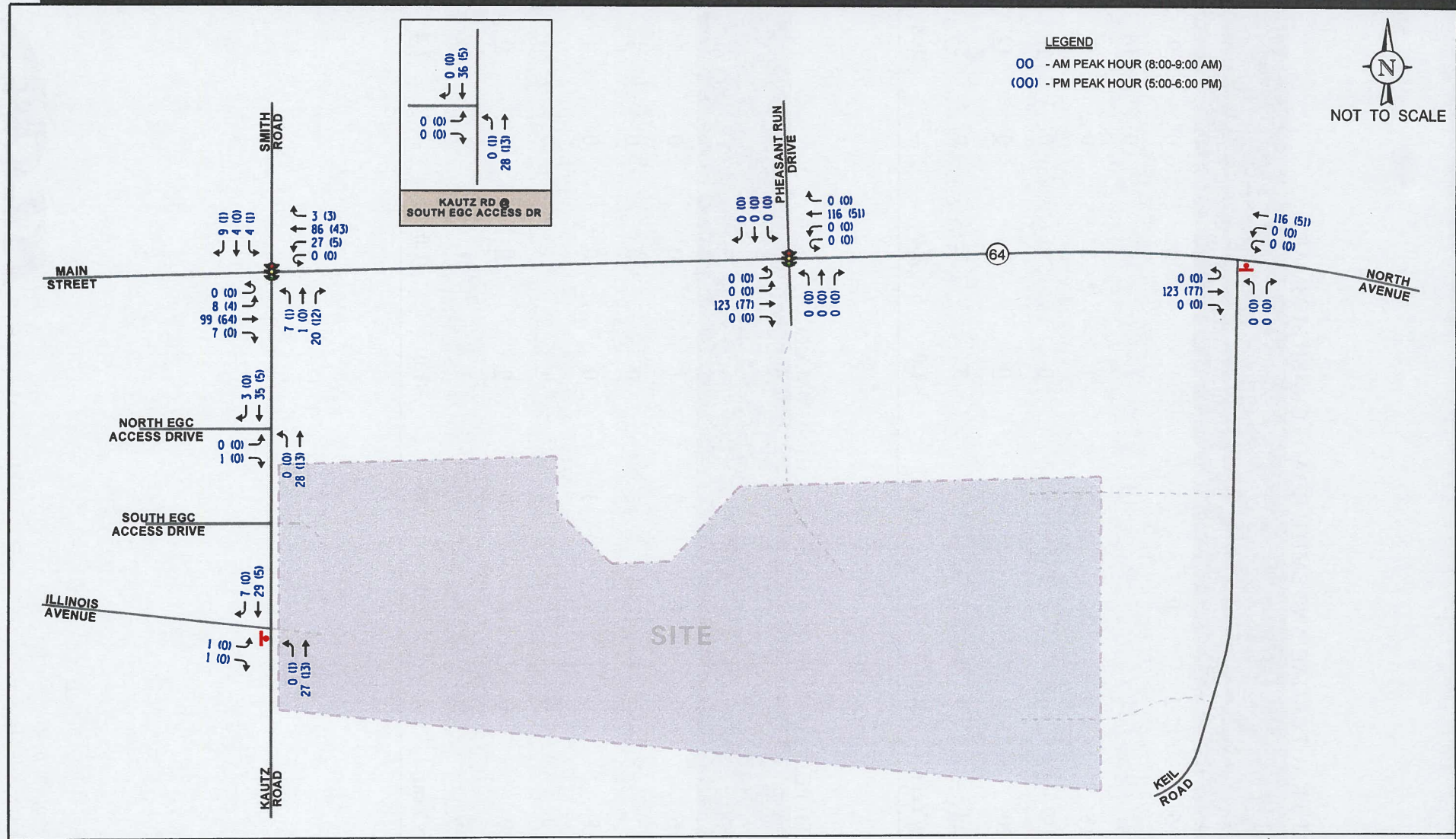
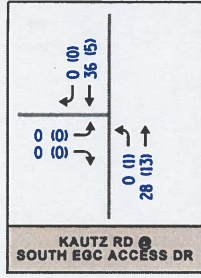
YEAR 2021 BASE TRAFFIC VOLUMES



NOT TO SCALE

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- 00 - AM PEAK HOUR (8:00-9:00 AM)
- (00) - PM PEAK HOUR (5:00-6:00 PM)



PHEASANT RUN INDUSTRIAL PARK
ST. CHARLES, ILLINOIS

YEAR 2021 BASE TRUCK TRAFFIC VOLUMES

Table 1

IL 64 WITH KAUTZ ROAD AND SMITH ROAD - CRASH SUMMARY

Type of Accident Frequency							
Year	Angle	Object	Rear End	Sideswipe	Turning	Other	Total
2016	2	0	3	1	3	0	9
2017	1	1	10	1	3	0	16
2018	1	0	3	1	2	0	7
2019	0	1	8	0	1	0	10
2020	<u>0</u>	<u>0</u>	<u>9</u>	<u>0</u>	<u>3</u>	<u>0</u>	<u>12</u>
Total	4	2	33	3	12	0	54
Average/Year	<1.0	<1.0	6.6	<1.0	2.4	--	10.8

Table 2

IL 64 WITH PHEASANT RUN DRIVE - CRASH SUMMARY

Type of Accident Frequency							
Year	Angle	Object	Rear End	Sideswipe	Turning	Other	Total
2016	0	0	0	1	0	0	1
2017	0	0	3	0	0	0	3
2018	0	1	3	0	0	0	4
2019	0	0	2	1	1	0	4
2020	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	0	1	8	2	1	0	12
Average/Year	--	<1.0	1.6	<1.0	<1.0	--	2.4

3. Traffic Characteristics of the Proposed Development

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

Proposed Site and Development Plan

As proposed, the site will be developed with approximately 1,172,718 square feet of general light industrial space in four buildings. Access to the site will be accommodated via the following:

- Pheasant Run Drive, which has a signalized intersection with IL 64 north of the site. As previously mentioned, this access road is being improved as part of the McGrath Dealership and will be extended south to the site. This access road will serve both passenger vehicles and truck traffic.
- A proposed full movement access drive on Kautz Road that will form the fourth (east) leg of the intersection of Kautz Road with the south EGC access drive. This access drive will provide one inbound lane and two outbound lanes striped to provide an exclusive left-turn lane and a shared through/right-turn lane. Outbound movements will be under stop sign control. As part of the development, the existing striped median on Kautz Road north of this access drive, which currently provides a northbound left-turn lane serving the north EGC access drive, will be restriped to provide a northbound (north EGC access drive) and a southbound (proposed site access drive) left-turn lane. These turn lanes will provide 100 feet of storage each and a 100-foot shared taper. This access drive will serve passenger vehicles and truck traffic.
- A proposed full movement access drive on Kautz Road that will form the fourth (east) leg of the intersection of Kautz Road with Illinois Avenue. This access drive will provide one inbound lane and one outbound lane with outbound movements under stop sign control. As part of the development, the existing striped median on Kautz Road north of this access drive, which currently provides a northbound left-turn lane serving the south EGC access drive, will be restriped to provide a northbound (south EGC access drive) and a southbound (proposed site access drive) left-turn lane. These turn lanes will provide 130 feet of storage and a 100-foot shared taper. This access drive will serve passenger vehicles only.
- A proposed full movement access drive on Keil Road located approximately 800 feet south of IL 64. This access drive will provide one inbound lane and one outbound lane with outbound movements under stop sign control. This access drive will serve passenger vehicles and truck traffic.
- A proposed full movement access drive on Keil Road located approximately 1,740 feet south of IL 64. This access drive will provide one inbound lane and one outbound lane with outbound movements under stop sign control. This access drive will serve passenger vehicles and truck traffic.

As previously indicated, Keil Road is currently signed for authorized airport use only. It is recommended that the sign is moved to south of the southern Keil Road access drive. Furthermore, the design and location of the existing speed tables on Keil should be evaluated further to determine if they can be traversed by the projected truck traffic or need to be removed. A copy of the proposed site plan is included in the Appendix.

Directional Distribution

The directions from which employees and trucks will approach and depart the site were estimated based on existing travel patterns, as determined from the traffic counts. **Figure 7** illustrates the directional distribution of the site-generated traffic. Figure 7 also shows the distance, in feet, between the existing and proposed access intersections.

Truck Access

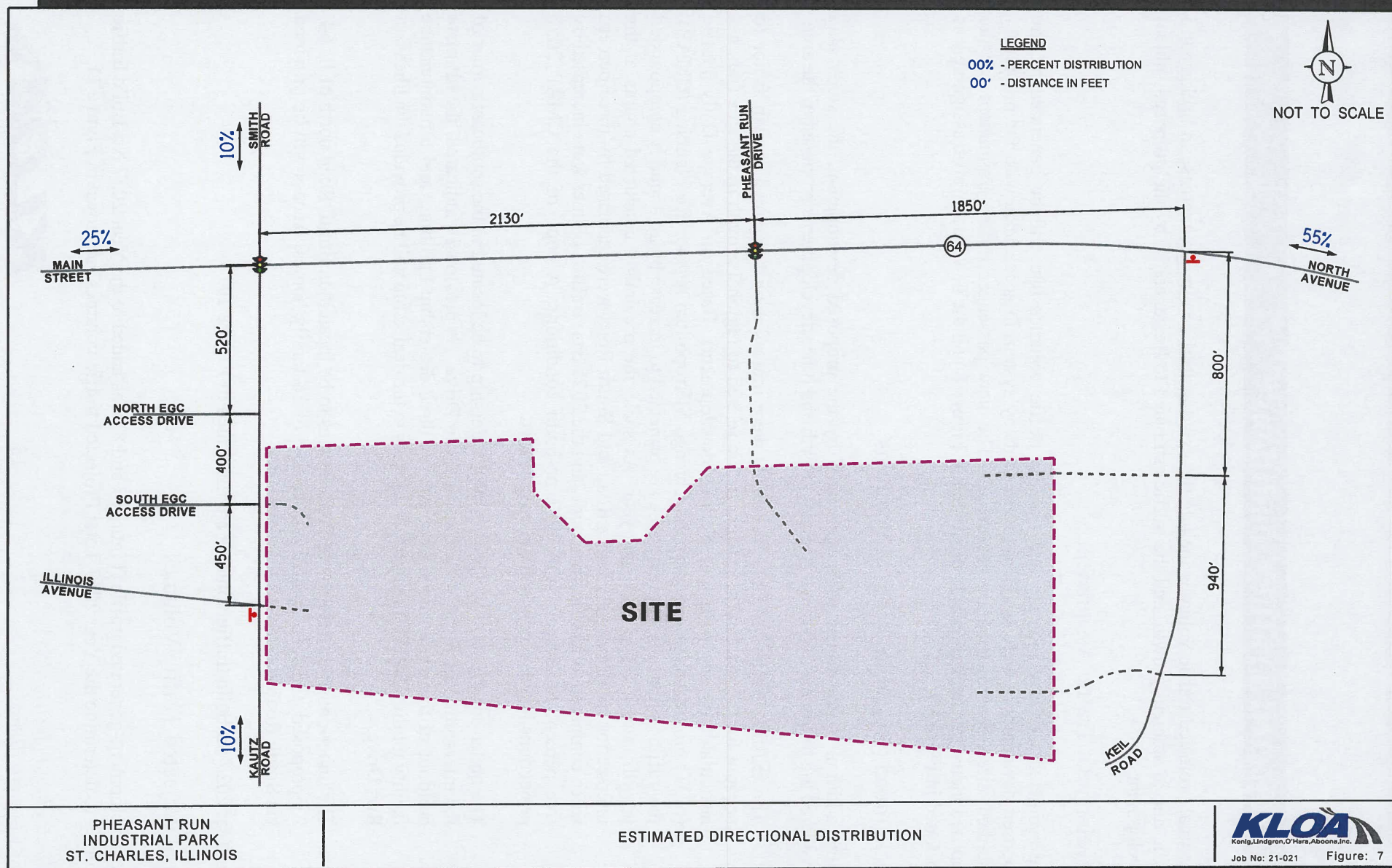
It is important to note that truck traffic from the two westernmost buildings (denoted as buildings **C and D** on the included site plan) will access the site primarily from Kautz Road while the truck traffic the two easternmost buildings (denoted as buildings **A and B** on the included site plan) will access the site primarily from Pheasant Run Drive and Keil Road. These routes will serve to reduce onsite conflicts and help improve on site circulation and safety. As part of the development the existing speed table on Keil Road should be investigated further to determine if they can be traversed by truck traffic or will need to be removed.

Development-Generated Traffic Volumes

The number of peak hour trips estimated to be generated by the proposed development was based on trip generation rates published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual*, 10th Edition. The “General Light Industrial” (Land-Use Code 110) was used for the development. It is important to note that ITE rates indicate that general light industrial developments typically generate minimal truck trips during the peak hours. However, in order to provide a conservative analysis, it was assumed that 10 percent of traffic generated by the development during the peak hours was truck traffic. **Table 3** summarizes the trips projected to be generated by the development.

Table 3
ESTIMATED SITE GENERATED TRAFFIC

ITE Land-Use Code	Type/Size	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Daily Two-Way Trips	
		In	Out	Total	In	Out	Total	In	Out
110	General Light Industrial (1,172,718 s.f.)	242	33	275	26	175	201	2,239	2,239
	Passenger Vehicles (90%)	218	30	248	23	157	180	2,015	2,015
	Trucks (10%)	24	3	27	3	18	21	224	224



PHEASANT RUN
 INDUSTRIAL PARK
 ST. CHARLES, ILLINOIS

ESTIMATED DIRECTIONAL DISTRIBUTION

4. Projected Traffic Conditions

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

Development Traffic Assignment

The estimated weekday morning and evening 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 7). The new passenger traffic assignment for the proposed industrial development is illustrated in **Figure 8** and the new truck traffic assignment is illustrated in **Figure 9**.

Background (No-Build) Traffic Conditions

In the addition to the traffic to be generated by the proposed development, the study also considered the following additional regional growth and other developments proposed in the area:

- 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 Average Daily Traffic (ADT) projections provided by the Chicago Metropolitan Agency for Planning (CMAP), the traffic volumes in the study area are projected to increase by an annually compounded growth rate of 0.8 percent per year. As such, the previously conducted counts at the intersection of IL 64 with Kautz Road and Smith Road were increased by three percent when compared to 2021 traffic counts and the 2021 base traffic volumes were increased by five percent to project Year 2027 no-build conditions. A copy of the CMAP 2050 projections letter is included in the Appendix.
- The under-construction McGrath Auto Dealership to be located in the southeast corner of the intersection of IL 64 with Pheasant Run Drive. As previously indicated, the ultimate buildout of the dealership will consist of three dealership buildings and a maintenance facility totaling 140,880 square feet. Access to the dealership will be provided via Pheasant Run Drive.
- The under-construction Brooke Toria Estates to be located on Smith Road north of IL 64. As proposed, the development will consist of 16 family homes. Access will be provided via Smith Road.

The Year 2027 no-build traffic volumes are illustrated in **Figure 10**.

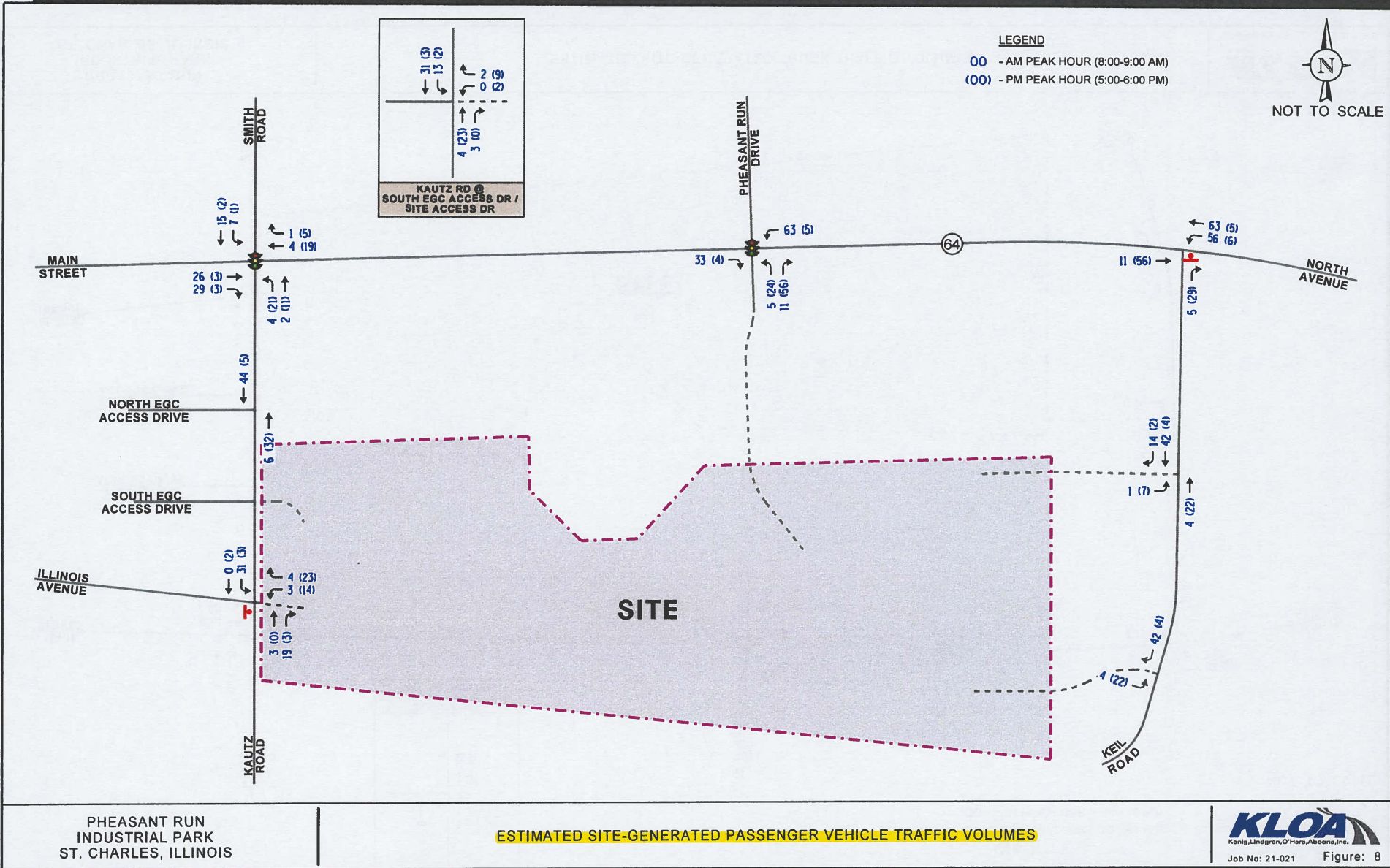
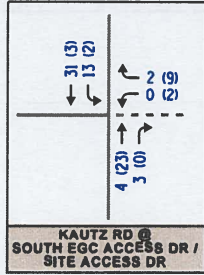
Total Projected Traffic Volumes

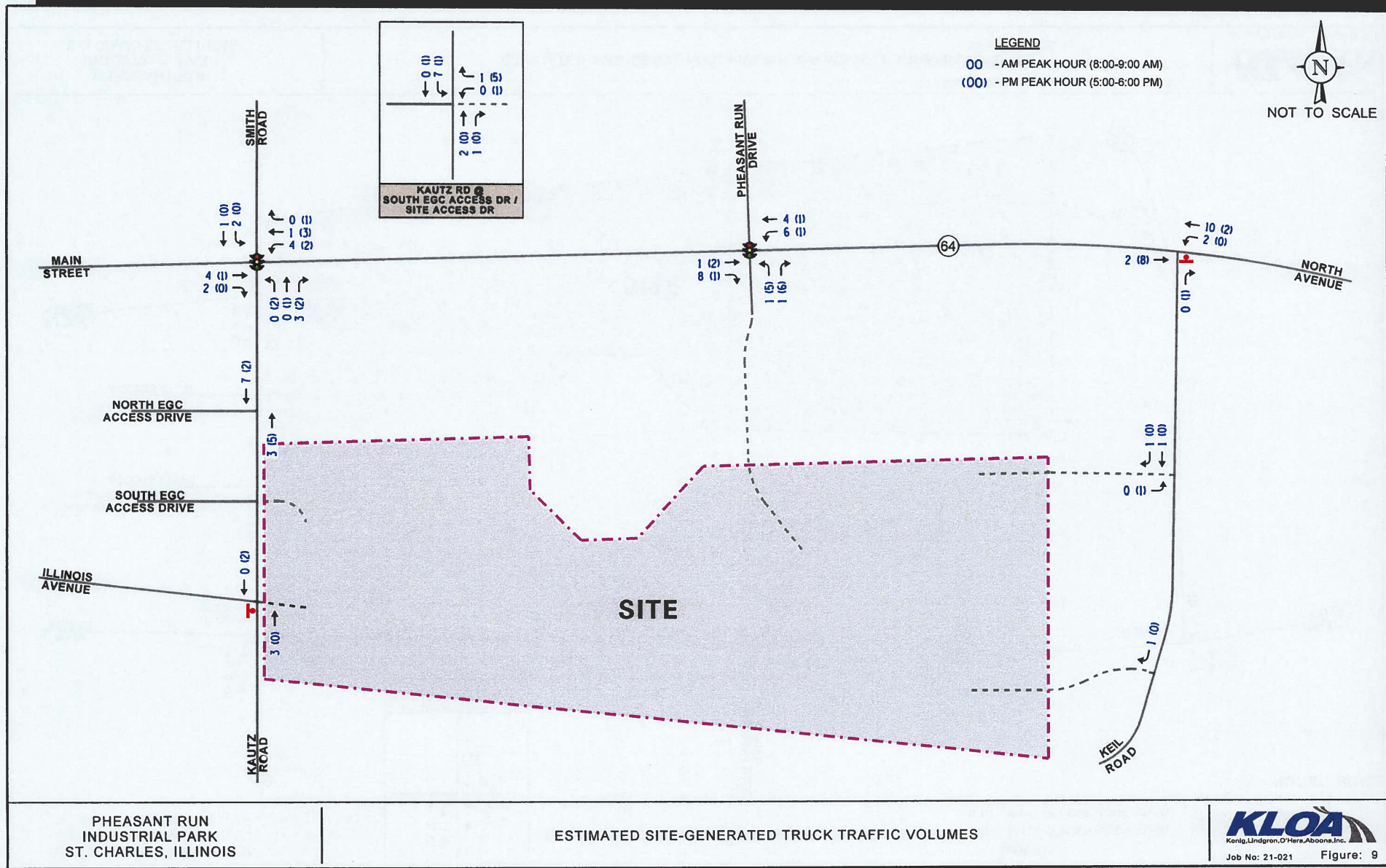
The development-generated traffic (Figures 7 and 8) was added to the Year 2027 No-Build traffic volumes to determine the Year 2027 Total Projected traffic volumes, as shown in **Figure 11**.



NOT TO SCALE

LEGEND
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 (00) - PM PEAK HOUR (5:00-6:00 PM)





PHEASANT RUN INDUSTRIAL PARK
 ST. CHARLES, ILLINOIS

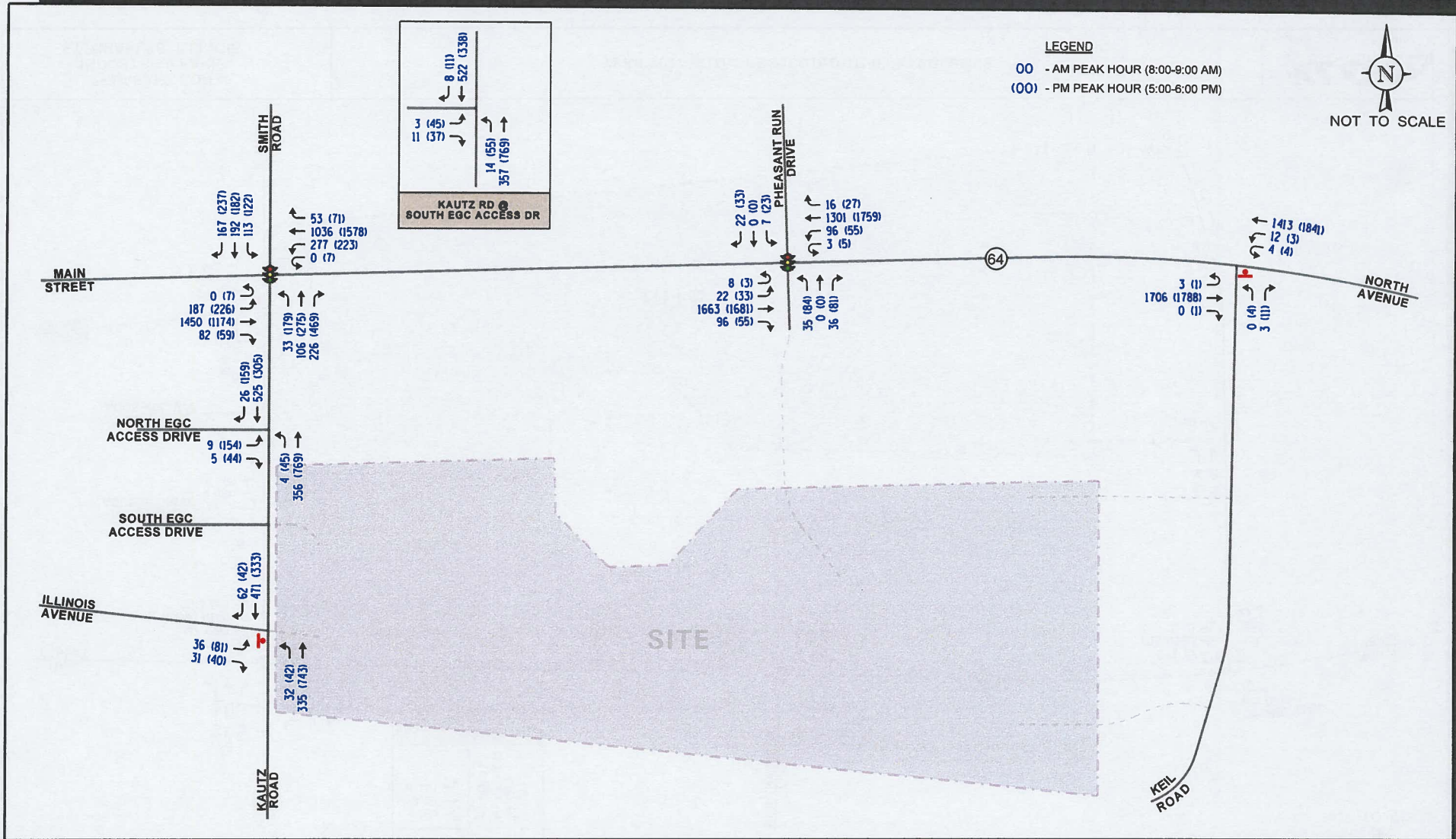
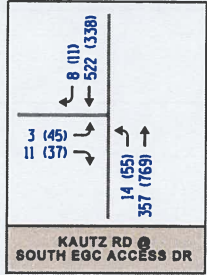
ESTIMATED SITE-GENERATED TRUCK TRAFFIC VOLUMES





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PHEASANT RUN
 INDUSTRIAL PARK
 ST. CHARLES, ILLINOIS

YEAR 2027 NO-BUILD TRAFFIC VOLUMES

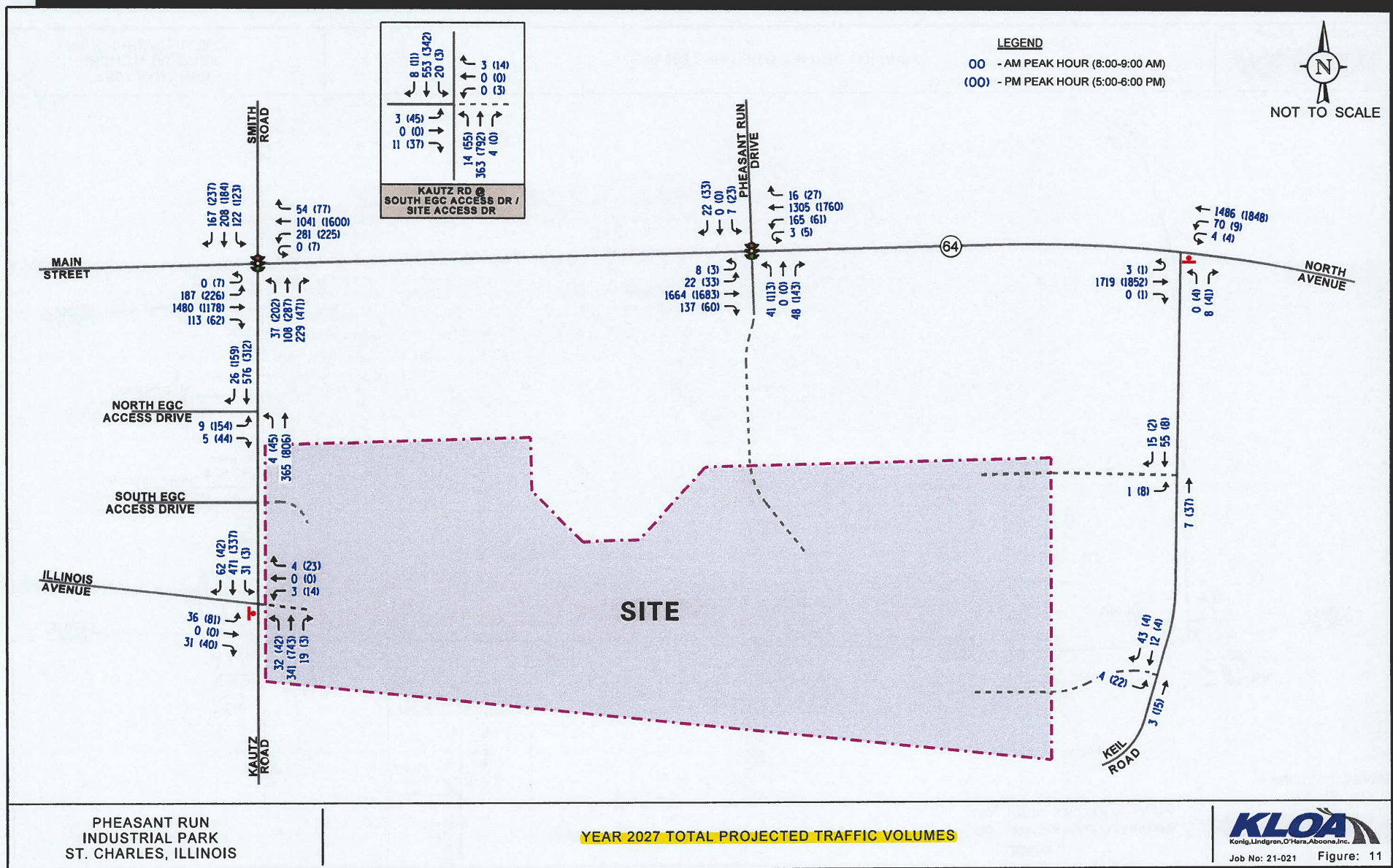


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- OO - AM PEAK HOUR (8:00-9:00 AM)
- (OO) - PM PEAK HOUR (5:00-6:00 PM)

8 (11)	553 (342)	3 (45)	14 (55)
20 (3)		0 (6)	363 (732)
		11 (37)	4 (10)
KAUTZ RD @ SOUTH EGC ACCESS DR / SITE ACCESS DR			



5. Traffic Analysis and Recommendations

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

Traffic Analyses

Roadway and adjacent or nearby intersection analyses were performed for the weekday morning and evening peak hours for the Year 2021 base, Year 2027 no-build, and Year 2027 Total Projected traffic volumes.

The traffic analyses were performed using the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM)*, 6th Edition and analyzed using Synchro/SimTraffic 11 software. The analysis for the traffic-signal controlled intersections were accomplished using field measured cycle lengths and phasings to determine the average overall vehicle delay and levels of service.

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

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

Summaries of the traffic analysis results showing the level of service and overall intersection delay (measured in seconds) for the projected Year 2021 base, Year 2027 no-build, and Year 2027 total projected conditions are presented in Tables 4 through 8. A discussion of each intersection follows. Summary sheets for the capacity analyses are included in the Appendix.

Table 5

CAPACITY ANALYSIS RESULTS – SIGNALIZED - IL 64 WITH KAUTZ ROAD AND SMITH ROAD

	Peak Hour	Eastbound			Westbound			Northbound			Southbound			Overall
		L/U	T	R	L/U	T	R	L	T	R	L	T	R	
Year 2021 Base Conditions	Weekday Morning Peak Hour	E 66.4	C 25.9	B 12.1	E 61.9	B 19.4	A 9.4	D 36.7	D 52.1	F 98.7	E 63.9	E 58.6	D 38.5	D 36.6
		C – 29.4			C – 27.7			E – 78.6			E – 56.5			
	Weekday Evening Peak Hour	E 77.7	C 27.0	B 12.4	E 77.1	C 24.6	B 11.4	D 42.6	E 62.2	F 99+	D 40.3	E 57.3	E 70.5	E 56.0
		C – 34.5			C – 30.5			F – 99+			E – 59.8			
Year 2027 No-Build Conditions	Weekday Morning Peak Hour	E 66.9	C 27.7	B 12.3	E 59.7	C 26.5	A 9.5	D 37.0	D 52.5	F 99+	D 40.5	E 59.6	E 66.7	D 41.1
		C – 31.3			C – 32.6			F – 97.9			E – 57.6			
	Weekday Evening Peak Hour	E 79.1	C 28.4	B 12.8	E 70.8	C 27.3	B 11.0	D 43.9	E 65.3	F 99+	D 42.7	E 58.3	E 73.7	E 63.0
		D – 35.9			C – 32.0			F – 99+			E – 61.5			
Year 2027 Total Projected Conditions	Weekday Morning Peak Hour	E 66.9	C 28.2	B 12.7	E 60.1	C 27.4	B 10.0	D 37.6	D 52.7	F 99+	D 41.7	E 62.6	E 66.7	D 42.0
		C – 31.3			C – 33.4			F – 99+			E – 58.8			
	Weekday Evening Peak Hour	E 79.1	C 28.6	B 12.9	E 68.6	C 31.6	B 11.5	D 46.5	E 66.8	F 99+	D 43.5	E 58.6	E 74.3	E 64.6
		D – 35.9			D – 35.3			F – 99+			E – 62.0			

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

Table 5

CAPACITY ANALYSIS RESULTS – SIGNALIZED – IL 64 WITH PHEASANT RUN DRIVE

	Peak Hour	Eastbound			Westbound			Northbound			Southbound			Overall
		L/U	T	R	L/U	T	R	L	T	R	L	T	R	
Year 2021 Base Conditions	Weekday Morning Peak Hour	E 65.4	A 1.4	--	E 60.0	A 4.6	A 1.1	--	--	--	D 54.6	--	E 61.5	A 4.1
		A – 2.6			A – 4.7			--			E – 59.8			
Year 2021 Base Conditions	Weekday Evening Peak Hour	F 82.2	A 1.4	--	E 71.0	A 5.8	A 1.1	--	--	--	E 66.1	--	E 73.9	A 5.6
		A – 3.1			A – 5.9			--			E – 70.7			
Year 2027 No-Build Conditions	Weekday Morning Peak Hour	E 71.2	A 7.2	A 3.6	E 66.1	A 9.2	A 4.8	D 47.7	--	E 61.9	D 43.6	--	E 61.5	B 11.7
		A – 8.1			B – 13.1			D – 54.9			E – 57.1			
Year 2027 No-Build Conditions	Weekday Evening Peak Hour	E 74.0	A 8.9	A 4.8	E 79.5	B 13.1	A 5.8	E 56.3	--	E 77.7	D 50.0	--	E 74.2	B 15.7
		B – 10.1			B – 15.2			E – 66.7			E – 64.1			
Year 2027 Total Projected Conditions	Weekday Morning Peak Hour	E 71.5	B 10.2	A 4.4	E 58.7	A 9.6	A 5.0	D 47.8	--	E 64.4	D 42.9	--	E 60.9	B 14.2
		B – 10.8			B – 15.0			E – 56.8			E – 56.4			
Year 2027 Total Projected Conditions	Weekday Evening Peak Hour	E 75.3	B 11.3	A 6.6	F 83.7	B 16.9	A 8.0	E 51.5	--	E 77.9	D 44.0	--	E 64.7	B 19.7
		B – 12.4			B – 19.1			E – 66.2			E – 56.2			

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

Table 6
 CAPACITY ANALYSIS RESULTS – UNSIGNALIZED INTERSECTIONS
 YEAR 2021 BASE TRAFFIC CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
IL 64 with Keil Road				
• Eastbound U-Turn	B	13.0	C	17.5
• Westbound Left Turn	C	24.8	C	21.7
• Northbound Approach	C	19.0	D	32.3
Kautz Road with Illinois Avenue				
• Eastbound Approach	B	14.2	C	16.7
• Northbound Left Turn	A	8.7	A	8.1
Kautz Road with the North EGC Access Drive				
• Eastbound Left Turn	B	13.5	C	18.8
• Eastbound Right Turn	B	10.6	A	9.9
• Northbound Left Turn	A	8.6	A	8.4
Kautz Road with the South EGC Access Drive				
• Eastbound Left Turn	B	14.1	C	17.9
• Eastbound Right Turn	B	10.1	A	9.4
• Northbound Left Turn	A	8.6	A	8.0
LOS = Level of Service Delay is measured in seconds.				

Table 7
 CAPACITY ANALYSIS RESULTS – UNSIGNALIZED INTERSECTIONS
 YEAR 2027 NO-BUILD TRAFFIC CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
IL 64 with Keil Road				
• Eastbound U-Turn	B	14.5	C	19.6
• Westbound Left Turn	D	28.3	D	25.4
• Northbound Approach	C	20.5	E	39.0
Kautz Road with Illinois Avenue				
• Eastbound Approach	B	14.9	C	18.2
• Northbound Left Turn	A	8.9	A	8.2
Kautz Road with the North EGC Access Drive				
• Eastbound Left Turn	B	14.0	C	20.6
• Eastbound Right Turn	B	10.8	B	10.1
• Northbound Left Turn	A	8.8	A	8.5
Kautz Road with the South EGC Access Drive				
• Eastbound Left Turn	B	14.8	C	19.2
• Eastbound Right Turn	B	10.2	A	9.2
• Northbound Left Turn	A	8.7	A	8.1
LOS = Level of Service Delay is measured in seconds.				

Table 8

**CAPACITY ANALYSIS RESULTS – UNSIGNALIZED INTERSECTIONS
YEAR 2027 TOTAL PROJECTED TRAFFIC CONDITIONS**

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
IL 64 with Keil Road				
• Eastbound U-Turn	C	15.2	C	19.7
• Westbound Left Turn	F	55.2	D	32.2
• Northbound Approach	C	21.0	E	36.8
Kautz Road with Illinois Avenue and the South Site Access Drive				
• Eastbound Approach (Illinois Avenue)	C	17.1	C	23.3
• Westbound Approach (Site)	B	14.1	C	17.3
• Northbound Left Turn	A	8.9	A	8.2
• Southbound Left Turn	A	8.2	A	9.2
Kautz Road with North EGC Access Drive				
• Eastbound Left Turn	B	14.7	C	21.2
• Eastbound Right Turn	B	11.0	B	10.1
• Northbound Left Turn	A	9.0	A	8.5
Kautz Road with the South EGC Access Drive and the North Site Access Drive				
• Eastbound Left Turn (EGC)	C	17.5	C	24.9
• Eastbound Right Turn (EGC)	B	10.3	A	9.5
• Westbound Left Turn (Site)	--	--	C	22.0
• Westbound Right Turn (Site)	B	11.4	C	16.8
• Northbound Left Turn	A	8.8	A	8.1
• Southbound Left Turn	A	8.8	B	10.4
LOS = Level of Service Delay is measured in seconds.				

Discussion and Recommendations

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

IL 64 with Kautz Road and Smith Road

The results of the capacity analysis indicate that overall, this intersection currently operates at Level of Service (LOS) D during the weekday morning peak hour and LOS E during the weekday evening peak hour. Further, eastbound, and westbound through movements on IL 64 operate at LOS C or better during both peak hours. It should be noted that left-turn movements and northbound and southbound through movements at this intersection operate at LOS D to E during both peak hours. This delay is the result of the long cycle length (130 to 150 seconds) and the fact that IL 64 is an SRA and through movements on IL 64 receive a majority of the green time. In addition, the northbound right-turn movement operates at LOS F during both hours. This delay is the result of limited green time and the fact that a northbound overlap phase cannot be provided as westbound U-turns are permitted on IL 64.

Under Year 2027 no-build traffic conditions, this intersection is projected to continue to operate at LOS D during the weekday morning peak hour and LOS E during the weekday evening peak hours.

Under Year 2027 total projected traffic conditions, this intersection is projected to continue to operate at LOS D during the weekday morning peak hour and LOS E during the weekday evening peak hour. Further, through movements on IL 64 are projected to operate at LOS C during both peak hours. Overall, the proposed development will increase the volume of traffic at this intersection by less two to four percent and the traffic estimated to be generated by the proposed development will have a limited impact on the operations of this intersection.

IL 64 with the Pheasant Run Drive

The results of the capacity analysis indicate that overall, this intersection currently operates at LOS A during the weekday morning and weekday evening peak hours. Further, eastbound and westbound through movements operate at LOS A during both peak hours. It should be noted that left-turn movements from the southbound approach at this intersection operate at LOS E to F during both peak hours. This delay is the result of the long cycle length (130 to 150 seconds) and the fact that IL 64 is an SRA and through movements on IL 64 receive a majority of the green time.

Under Year 2027 no-build traffic conditions, the south leg of this intersection will serve the McGarh Automotive Dealership and this intersection is projected to operate at LOS B during both peak hours. Further, eastbound and westbound through movements are projected to operate at LOS B or better during both peak hours and all approaches are projected to operate at the same LOS.

Under Year 2027 total projected conditions, the south leg of this intersection is projected to continue to operate at LOS B during both peak hours. Further, eastbound and westbound through movements are projected to continue to operate at LOS B or better during both peak hours. As with existing conditions, eastbound and westbound left-turn movements are projected to operate at LOS E to F during the peak hours. However, these movements are projected to operate with volume to capacity (v/c) ratios of less than one. In addition, the northbound and southbound approaches are projected to operate at an acceptable LOS D to E during both peak hours. As such, this intersection will be adequate in accommodating the traffic estimated to be generated by the proposed development and the addition of development-generated traffic will not have a significant impact on the operations of IL 64.

IL 64 with Keil Road

The results of the capacity analyses show that the northbound approach at this intersection operates at LOS C during the weekday morning peak hour and LOS D during the weekday evening peak hour. Further, eastbound and westbound left-turn/U-turn movements operate at LOS C or better.

Under Year 2027 no-build traffic conditions, the northbound approach at this intersection is projected to operate at LOS C during the weekday morning peak hour and LOS E during the weekday evening peak hour. Further, eastbound and westbound left-turn/U-turn movements operate at LOS D or better.

Under Year 2027 total projected conditions, Keil Road will carry traffic traveling to and from the site access drives south of this intersection. It should be noted that the development is not projected to increase the volume of northbound left-turn movements at this intersection. The northbound approach at this intersection is projected to operate at LOS C during the weekday morning peak hour and LOS E during the weekday evening peak hour. The westbound left turn is projected to operate at LOS F during the weekday morning peak hour and LOS D during the weekday evening peak hour. However, this movement is projected to operate with a volume to capacity (v/c) ratio of less than one and 95th percentile queues that can be accommodated within the existing turn lane. As such, this intersection will be adequate in accommodating the traffic estimated to be generated by the proposed development and the addition of development-generated will not have a significant impact on the operations of IL 64.

Kautz Road with Illinois Avenue and the South Site Access Drive

The results of the capacity analyses show that the eastbound approach at this intersection operates at LOS B during the weekday morning peak hour and LOS C during the weekday evening peak hour. Further, northbound left-turn movements operate at LOS A during both peak hours. Under Year 2027 no-build traffic conditions, all critical movements are projected to operate at the same LOS.

As proposed, a full movement access drive serving the site will form the fourth (east) leg of this intersection. This access drive will provide one inbound lane and one outbound lane with outbound movements under stop sign control. As part of the development, the existing striped median on Kautz Road north of Illinois Avenue, which currently accommodates a northbound left-turn lane serving the south EGC access drive, will be restriped to provide a northbound (south EGC access drive) and a southbound (proposed south site access drive) left-turn lane. These turn lanes will provide 130 feet of storage and a 100-foot shared taper. This access drive will serve passenger vehicles only.

Under Year 2027 total projected conditions, westbound movements out of the site are projected to operate at LOS B during the weekday morning peak hour and LOS C during the weekday evening peak hour and eastbound movements from Illinois Avenue are projected to operate at LOS C during both peak hours. Further, the southbound and northbound left-turn movements at this intersection are projected to operate at LOS A during both peak hours with 95th percentile queues of one to two vehicles which can be accommodated within the left-turn lanes. As such, this intersection will be adequate in accommodating the traffic estimated to be generated by the proposed development and the addition of the proposed access drive and development-generated traffic will not have a significant impact on the operations of Kautz Road or Illinois Avenue.

Kautz Road with the North EGC Access Drive

The results of the capacity analyses show that all critical movements at this intersection operate at LOS C or better during the weekday morning and weekday evening peak hours. Under Year 2027 no-build and Year 2027 total projected traffic conditions, all critical movements are projected to continue to operate at LOS C or better. As part of the development the northbound left-turn lane serving this access drive will be shortened to provide 100 feet of storage. As the northbound left-turn movement is projected to operate at LOS A during both peak hours with 95th percentile queues of one to two vehicles, this turn lane will be adequate in accommodating left-turning traffic. As such, this intersection has sufficient reserve capacity to accommodate development-generated traffic.

Kautz Road with the South EGC Access Drive and the North Site Access Drive

The results of the capacity analyses show that the eastbound approach at this intersection operates at LOS B during the weekday morning peak hour and LOS C during the weekday evening peak hour. Further, northbound left-turn movements operate at LOS A during both peak hours. Under Year 2027 no-build traffic conditions, all critical movements are projected to operate at the same LOS.

As proposed, a full movement access drive serving the site will form the fourth (east) leg of this intersection. This access drive will provide one inbound lane and two outbound lanes striped to provide an exclusive left-turn lane and a shared through/right-turn lane. Outbound movements will be under stop sign control. As part of the development, the existing striped median on Kautz Road north of this access drive, which currently accommodates a northbound left-turn lane serving the north EGC access drive, will be restriped to provide a northbound (north EGC access drive) and a southbound (proposed site access drive) left-turn lane. These turn lanes will provide 100 feet of storage for each lane and a 100-foot shared taper. This access drive will serve passenger vehicles and truck traffic.

Under Year 2027 total projected conditions, westbound movements out of the site are projected to operate at LOS B during the weekday morning peak hour and LOS C during the weekday evening peak hour and eastbound movements from the south EGC access drive are projected to operate at LOS C or better during both peak hours. Further, southbound and northbound left-turn movements at this intersection are projected to operate at LOS A during both peak hours with 95th percentile queues of one to two vehicles which can be accommodated within the proposed left-turn lanes. As such, this intersection will be adequate in accommodating the traffic estimated to be generated by the proposed development and the addition of the proposed access drive and development-generated traffic will not have a significant impact on the operations of Kautz Road or the EGC access drive.

6. Conclusion

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

- The roadway system has sufficient reserve capacity to accommodate the traffic projected to be generated by the proposed development.
- The proposed access system on IL 64, Kautz Road, and Keil Road will be adequate in accommodating the development-generated traffic and will ensure that efficient and flexible access is provided.
- The traffic entering the proposed development off IL 64 will be accommodated by the existing Pheasant Run Drive signalized intersection.
- As part of the development, the striped median on Kautz Road will be restriped to provide southbound left-turn lanes serving the site access drives.
- Outbound movements from the Kautz Road and Keil Road access drives should be under stop sign control.

Appendix

Traffic Count Summary Sheets
Preliminary Site Plan
ITE Trip Generation Worksheets
CMAP 2050 Projections Letter
Level of Service Criteria
Capacity Analysis Summary Sheets

Traffic Count Summary Sheets



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(847)518-9990

Count Name: Kautz Road with Illinois Avenue
Site Code:
Start Date: 01/27/2021
Page No: 1

Turning Movement Data

Start Time	Illinois Avenue Eastbound					Kautz Road Northbound					Kautz Road Southbound					Int. Total
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	
6:00 AM	0	3	4	0	7	0	0	25	0	25	0	40	5	0	45	77
6:15 AM	0	3	0	0	3	0	2	28	0	30	0	41	2	0	43	76
6:30 AM	0	2	2	0	4	0	3	47	0	50	0	59	11	0	70	124
6:45 AM	0	4	5	0	9	0	10	43	0	53	0	108	21	0	129	191
Hourly Total	0	12	11	0	23	0	15	143	0	158	0	248	39	0	287	468
7:00 AM	0	3	7	0	10	0	8	53	0	61	0	62	10	0	72	143
7:15 AM	0	9	2	0	11	0	3	54	0	57	0	67	8	0	75	143
7:30 AM	0	5	9	0	14	0	3	63	0	66	0	68	14	0	82	162
7:45 AM	0	7	6	0	13	0	9	54	0	63	0	105	12	0	117	193
Hourly Total	0	24	24	0	48	0	23	224	0	247	0	302	44	0	346	641
8:00 AM	0	6	6	0	12	0	9	50	0	59	0	84	12	0	96	167
8:15 AM	0	5	5	0	10	0	5	37	0	42	0	77	17	0	94	146
8:30 AM	0	6	5	0	11	0	1	41	0	42	0	54	6	0	60	113
8:45 AM	0	5	6	0	11	0	9	29	0	38	0	67	11	0	78	127
Hourly Total	0	22	22	0	44	0	24	157	0	181	0	282	46	0	328	553
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	23	10	0	33	0	11	109	0	120	0	59	8	0	67	220
4:15 PM	0	11	4	0	15	0	7	83	0	90	0	74	11	0	85	190
4:30 PM	0	19	6	0	25	0	5	141	0	146	0	52	7	0	59	230
4:45 PM	0	13	4	0	17	0	11	115	0	126	0	68	11	0	79	222
Hourly Total	0	66	24	0	90	0	34	448	0	482	0	253	37	0	290	862
5:00 PM	0	11	7	0	18	0	10	146	0	156	0	49	6	0	55	229
5:15 PM	0	16	12	0	28	0	5	133	0	138	0	59	7	0	66	232
5:30 PM	0	11	8	0	19	0	10	74	0	84	0	53	7	0	60	163
5:45 PM	0	10	11	0	21	0	7	71	0	78	0	53	9	0	62	161
Hourly Total	0	48	38	0	86	0	32	424	0	456	0	214	29	0	243	785
Grand Total	0	172	119	0	291	0	128	1396	0	1524	0	1299	195	0	1494	3309
Approach %	0.0	59.1	40.9	-	-	0.0	8.4	91.6	-	-	0.0	86.9	13.1	-	-	-
Total %	0.0	5.2	3.6	-	8.8	0.0	3.9	42.2	-	46.1	0.0	39.3	5.9	-	45.1	-
Lights	0	164	116	-	280	0	123	1333	-	1456	0	1233	179	-	1412	3148
% Lights	-	95.3	97.5	-	96.2	-	96.1	95.5	-	95.5	-	94.9	91.8	-	94.5	95.1
Buses	0	0	0	-	0	0	0	1	-	1	0	2	0	-	2	3
% Buses	-	0.0	0.0	-	0.0	-	0.0	0.1	-	0.1	-	0.2	0.0	-	0.1	0.1
Single-Unit Trucks	0	5	3	-	8	0	5	26	-	31	0	28	9	-	37	76
% Single-Unit Trucks	-	2.9	2.5	-	2.7	-	3.9	1.9	-	2.0	-	2.2	4.6	-	2.5	2.3
Articulated Trucks	0	3	0	-	3	0	0	36	-	36	0	36	7	-	43	82



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Count Name: Kautz Road with Target North
Access
Site Code:
Start Date: 01/27/2021
Page No: 1

Turning Movement Data

Start Time	Target North Access Eastbound					Kautz Road Northbound					Kautz Road Southbound					Int. Total
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	
6:00 AM	0	1	0	0	1	0	0	27	0	27	0	48	0	0	48	76
6:15 AM	0	0	0	0	0	0	0	31	0	31	0	40	2	0	42	73
6:30 AM	0	0	1	0	1	0	2	45	0	47	0	67	0	0	67	115
6:45 AM	0	1	4	0	5	0	1	44	0	45	0	126	8	0	134	184
Hourly Total	0	2	5	0	7	0	3	147	0	150	0	281	10	0	291	448
7:00 AM	0	0	0	0	0	0	0	54	0	54	0	69	1	0	70	124
7:15 AM	0	1	1	0	2	0	0	61	0	61	0	71	4	0	75	138
7:30 AM	0	2	2	0	4	0	2	63	0	65	0	82	1	0	83	152
7:45 AM	0	1	1	0	2	0	1	57	0	58	0	114	9	0	123	183
Hourly Total	0	4	4	0	8	0	3	235	0	238	0	336	15	0	351	597
8:00 AM	0	3	0	0	3	0	0	55	0	55	0	97	5	0	102	160
8:15 AM	0	6	0	0	6	0	2	39	0	41	0	94	6	0	100	147
8:30 AM	0	4	0	0	4	0	0	51	0	51	0	56	9	0	65	120
8:45 AM	0	2	0	0	2	0	1	31	0	32	0	78	16	0	94	128
Hourly Total	0	15	0	0	15	0	3	176	0	179	0	325	36	0	361	555
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	27	12	0	39	0	4	124	0	128	0	53	29	0	82	249
4:15 PM	0	22	7	0	29	0	4	96	0	100	0	69	26	0	95	224
4:30 PM	0	24	6	0	30	0	10	144	0	154	0	51	27	0	78	262
4:45 PM	0	32	8	0	40	0	11	117	0	128	0	60	29	0	89	257
Hourly Total	0	105	33	0	138	0	29	481	0	510	0	233	111	0	344	992
5:00 PM	0	23	11	0	34	0	6	149	0	155	0	41	28	0	69	258
5:15 PM	0	34	7	0	41	0	6	143	0	149	0	58	32	0	90	280
5:30 PM	0	30	6	0	36	0	10	73	0	83	0	54	32	0	86	205
5:45 PM	0	22	8	0	30	0	8	66	0	74	0	47	24	0	71	175
Hourly Total	0	109	32	0	141	0	30	431	0	461	0	200	116	0	316	918
Grand Total	0	235	74	0	309	0	68	1470	0	1538	0	1375	288	0	1663	3510
Approach %	0.0	76.1	23.9	-	-	0.0	4.4	95.6	-	-	0.0	82.7	17.3	-	-	-
Total %	0.0	6.7	2.1	-	8.8	0.0	1.9	41.9	-	43.8	0.0	39.2	8.2	-	47.4	-
Lights	0	233	73	-	306	0	68	1398	-	1466	0	1293	285	-	1578	3350
% Lights	-	99.1	98.6	-	99.0	-	100.0	95.1	-	95.3	-	94.0	99.0	-	94.9	95.4
Buses	0	0	1	-	1	0	0	1	-	1	0	1	1	-	2	4
% Buses	-	0.0	1.4	-	0.3	-	0.0	0.1	-	0.1	-	0.1	0.3	-	0.1	0.1
Single-Unit Trucks	0	1	0	-	1	0	0	31	-	31	0	37	2	-	39	71
% Single-Unit Trucks	-	0.4	0.0	-	0.3	-	0.0	2.1	-	2.0	-	2.7	0.7	-	2.3	2.0
Articulated Trucks	0	1	0	-	1	0	0	40	-	40	0	44	0	-	44	85



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Count Name: Kautz Road with Target South
Access
Site Code:
Start Date: 01/27/2021
Page No: 1

Turning Movement Data

Start Time	Target South Access Eastbound					Kautz Road Northbound					Kautz Road Southbound					Int. Total
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	
6:00 AM	0	0	0	0	0	0	1	27	0	28	0	48	0	0	48	76
6:15 AM	0	0	0	0	0	0	0	30	0	30	0	44	0	0	44	74
6:30 AM	0	0	1	0	1	0	2	48	0	50	0	69	0	0	69	120
6:45 AM	0	1	0	0	1	0	1	43	0	44	0	125	1	0	126	171
Hourly Total	0	1	1	0	2	0	4	148	0	152	0	286	1	0	287	441
7:00 AM	0	0	3	0	3	0	4	55	0	59	0	67	1	0	68	130
7:15 AM	0	0	2	0	2	0	2	56	0	58	0	77	1	0	78	138
7:30 AM	0	1	1	0	2	0	4	63	0	67	0	74	0	0	74	143
7:45 AM	0	0	3	0	3	0	1	57	0	58	0	112	2	0	114	175
Hourly Total	0	1	9	0	10	0	11	231	0	242	0	330	4	0	334	586
8:00 AM	0	1	2	0	3	0	3	58	0	61	0	97	3	0	100	164
8:15 AM	0	1	1	0	2	0	2	39	0	41	0	91	1	0	92	135
8:30 AM	0	4	4	0	8	0	0	47	0	47	0	63	1	0	64	119
8:45 AM	0	2	3	0	5	0	3	33	0	36	0	75	2	0	77	118
Hourly Total	0	8	10	0	18	0	8	177	0	185	0	326	7	0	333	536
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	7	6	0	13	0	8	113	0	121	0	59	4	0	63	197
4:15 PM	0	13	10	0	23	0	9	92	0	101	0	73	3	0	76	200
4:30 PM	0	8	5	0	13	0	9	141	0	150	0	53	1	0	54	217
4:45 PM	0	8	14	0	22	0	14	120	0	134	0	65	3	0	68	224
Hourly Total	0	36	35	0	71	0	40	466	0	506	0	250	11	0	261	838
5:00 PM	0	5	3	0	8	0	7	152	0	159	0	51	0	0	51	218
5:15 PM	0	12	5	0	17	0	10	131	0	141	0	61	4	0	65	223
5:30 PM	0	4	4	0	8	0	6	90	0	96	0	54	5	0	59	163
5:45 PM	0	11	10	0	21	0	14	66	0	80	0	53	4	0	57	158
Hourly Total	0	32	22	0	54	0	37	439	0	476	0	219	13	0	232	762
Grand Total	0	78	77	0	155	0	100	1461	0	1561	0	1411	36	0	1447	3163
Approach %	0.0	50.3	49.7	-	-	0.0	6.4	93.6	-	-	0.0	97.5	2.5	-	-	-
Total %	0.0	2.5	2.4	-	4.9	0.0	3.2	46.2	-	49.4	0.0	44.6	1.1	-	45.7	-
Lights	0	78	76	-	154	0	100	1392	-	1492	0	1328	36	-	1364	3010
% Lights	-	100.0	98.7	-	99.4	-	100.0	95.3	-	95.6	-	94.1	100.0	-	94.3	95.2
Buses	0	0	0	0	0	0	0	1	-	1	0	2	0	-	2	3
% Buses	-	0.0	0.0	-	0.0	-	0.0	0.1	-	0.1	-	0.1	0.0	-	0.1	0.1
Single-Unit Trucks	0	0	1	-	1	0	0	30	-	30	0	36	0	-	36	67
% Single-Unit Trucks	-	0.0	1.3	-	0.6	-	0.0	2.1	-	1.9	-	2.6	0.0	-	2.5	2.1
Articulated Trucks	0	0	0	0	0	0	0	38	-	38	0	45	0	-	45	83



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

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

Count Name: Main Street with Kautz Road
Site Code:
Start Date: 01/27/2021
Page No: 1

Turning Movement Data

Start Time	Main Street Eastbound						Main Street Westbound						Kautz Road Northbound						Smith Road 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	
6:00 AM	0	9	121	11	0	141	0	24	97	2	0	123	0	2	8	18	0	28	0	4	9	9	0	22	314
6:15 AM	0	11	166	10	0	187	0	19	111	3	0	133	0	2	8	20	0	30	0	6	17	12	0	35	385
6:30 AM	0	21	200	14	0	235	0	38	157	5	0	200	0	3	8	29	0	40	0	8	15	15	0	38	513
6:45 AM	0	23	208	19	0	250	0	76	127	7	0	210	0	8	16	25	0	49	0	10	36	24	0	70	579
Hourly Total	0	64	695	54	0	813	0	157	492	17	0	666	0	15	40	92	0	147	0	28	77	60	0	165	1791
7:00 AM	0	29	218	6	0	253	1	33	141	7	0	182	0	5	14	34	0	53	0	12	33	17	0	62	550
7:15 AM	0	23	250	14	0	287	0	38	149	8	0	195	0	4	11	45	0	60	0	20	25	18	0	63	605
7:30 AM	0	35	236	14	0	285	0	39	192	9	0	240	0	6	20	39	0	65	0	9	25	25	0	59	649
7:45 AM	0	45	258	16	0	319	0	60	180	9	0	249	0	9	21	26	0	56	0	19	38	43	0	100	724
Hourly Total	0	132	962	50	0	1144	1	170	662	33	0	866	0	24	66	144	0	234	0	60	121	103	0	284	2528
8:00 AM	0	28	182	14	0	224	0	53	161	5	0	219	0	4	21	36	0	61	0	14	36	29	0	79	583
8:15 AM	0	21	158	21	0	200	1	42	180	4	0	227	0	10	11	24	0	45	0	14	27	33	0	74	546
8:30 AM	0	41	176	10	0	227	0	40	177	10	0	227	0	8	14	33	0	55	0	12	15	34	0	61	570
8:45 AM	0	28	137	25	0	190	0	43	197	7	0	247	0	8	5	23	0	36	0	7	29	31	0	67	540
Hourly Total	0	118	653	70	0	841	1	178	715	26	0	920	0	30	51	116	0	197	0	47	107	127	0	281	2239
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	1	42	202	10	0	255	1	31	268	14	0	314	0	20	46	72	0	138	0	21	39	40	0	100	807
4:15 PM	1	38	189	14	0	242	0	52	306	14	0	372	0	23	54	53	0	130	0	24	26	42	0	92	836
4:30 PM	1	35	202	14	0	252	0	39	307	5	0	351	0	27	51	95	0	173	0	16	25	39	0	80	856
4:45 PM	1	46	191	9	0	247	1	46	255	10	0	312	0	30	43	74	0	147	0	12	30	40	0	82	788
Hourly Total	4	161	784	47	0	996	2	168	1136	43	0	1349	0	100	194	294	0	588	0	73	120	161	0	354	3287
5:00 PM	0	36	201	12	0	249	3	29	301	10	0	343	0	26	56	89	0	171	0	32	29	45	0	106	869
5:15 PM	3	46	224	8	0	281	1	37	256	10	0	304	0	48	49	77	0	174	0	19	46	49	0	114	873
5:30 PM	0	39	164	10	0	213	1	35	225	7	0	268	0	13	34	64	0	111	0	16	41	33	0	90	682
5:45 PM	1	24	169	8	0	202	3	39	234	6	0	282	0	21	32	44	0	97	0	29	26	35	0	90	671
Hourly Total	4	145	758	38	0	945	8	140	1016	33	0	1197	0	108	171	274	0	553	0	96	142	162	0	400	3095
Grand Total	8	620	3852	259	0	4739	12	813	4021	152	0	4998	0	277	522	920	0	1719	0	304	567	613	0	1484	12940
Approach %	0.2	13.1	81.3	5.5	-	-	0.2	16.3	80.5	3.0	-	-	0.0	16.1	30.4	53.5	-	-	0.0	20.5	38.2	41.3	-	-	-
Total %	0.1	4.8	29.8	2.0	-	36.6	0.1	6.3	31.1	1.2	-	38.6	0.0	2.1	4.0	7.1	-	13.3	0.0	2.3	4.4	4.7	-	11.5	-
Lights	8	602	3566	241	-	4417	12	748	3731	141	-	4632	0	266	515	866	-	1647	0	299	564	595	-	1458	12154
% Lights	100.0	97.1	92.6	93.1	-	93.2	100.0	92.0	92.8	92.8	-	92.7	-	96.0	98.7	94.1	-	95.8	-	98.4	99.5	97.1	-	98.2	93.9
Buses	0	8	37	0	-	45	0	1	44	1	-	46	0	0	1	0	-	1	0	0	1	7	-	8	100
% Buses	0.0	1.3	1.0	0.0	-	0.9	0.0	0.1	1.1	0.7	-	0.9	-	0.0	0.2	0.0	-	0.1	-	0.0	0.2	1.1	-	0.5	0.8
Single-Unit Trucks	0	6	116	8	-	130	0	34	95	6	-	135	0	4	5	22	-	31	0	3	1	6	-	10	306
% Single-Unit Trucks	0.0	1.0	3.0	3.1	-	2.7	0.0	4.2	2.4	3.9	-	2.7	-	1.4	1.0	2.4	-	1.8	-	1.0	0.2	1.0	-	0.7	2.4



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Count Name: Main Street with Kautz Road
Site Code:
Start Date: 01/27/2021
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Turning Movement Peak Hour Data (7:15 AM)

Start Time	Main Street Eastbound						Main Street Westbound						Kautz Road Northbound						Smith Road 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	23	250	14	0	287	0	38	149	8	0	195	0	4	11	45	0	60	0	20	25	18	0	63	605
7:30 AM	0	35	236	14	0	285	0	39	192	9	0	240	0	6	20	39	0	65	0	9	25	25	0	59	649
7:45 AM	0	45	258	16	0	319	0	60	180	9	0	249	0	9	21	26	0	56	0	19	38	43	0	100	724
8:00 AM	0	28	182	14	0	224	0	53	161	5	0	219	0	4	21	36	0	61	0	14	36	29	0	79	583
Total	0	131	926	58	0	1115	0	190	682	31	0	903	0	23	73	146	0	242	0	62	124	115	0	301	2561
Approach %	0.0	11.7	83.0	5.2	-	-	0.0	21.0	75.5	3.4	-	-	0.0	9.5	30.2	60.3	-	-	0.0	20.6	41.2	38.2	-	-	-
Total %	0.0	5.1	36.2	2.3	-	43.5	0.0	7.4	26.6	1.2	-	35.3	0.0	0.9	2.9	5.7	-	9.4	0.0	2.4	4.8	4.5	-	11.8	-
PHF	0.000	0.728	0.897	0.906	-	0.874	0.000	0.792	0.888	0.861	-	0.907	0.000	0.639	0.869	0.811	-	0.931	0.000	0.775	0.816	0.669	-	0.753	0.884
Lights	0	125	855	53	-	1033	0	170	618	29	-	817	0	18	70	133	-	221	0	59	122	108	-	289	2360
% Lights	-	95.4	92.3	91.4	-	92.6	-	89.5	90.6	93.5	-	90.5	-	78.3	95.9	91.1	-	91.3	-	95.2	98.4	93.9	-	96.0	92.2
Buses	0	3	14	0	-	17	0	1	1	0	-	2	0	0	1	0	-	1	0	0	1	6	-	7	27
% Buses	-	2.3	1.5	0.0	-	1.5	-	0.5	0.1	0.0	-	0.2	-	0.0	1.4	0.0	-	0.4	-	0.0	0.8	5.2	-	2.3	1.1
Single-Unit Trucks	0	2	27	4	-	33	0	5	34	1	-	40	0	2	2	4	-	8	0	2	0	0	-	2	83
% Single-Unit Trucks	-	1.5	2.9	6.9	-	3.0	-	2.6	5.0	3.2	-	4.4	-	8.7	2.7	2.7	-	3.3	-	3.2	0.0	0.0	-	0.7	3.2
Articulated Trucks	0	1	30	1	-	32	0	14	29	1	-	44	0	3	0	9	-	12	0	1	1	1	-	3	91
% Articulated Trucks	-	0.8	3.2	1.7	-	2.9	-	7.4	4.3	3.2	-	4.9	-	13.0	0.0	6.2	-	5.0	-	1.6	0.8	0.9	-	1.0	3.6
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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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

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Count Name: Main Street with Keil Road
Site Code:
Start Date: 01/27/2021
Page No: 1

Turning Movement Data

Start Time	Main Street Eastbound					Main Street Westbound					Keil Road Northbound					Int. Total
	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total	
6:00 AM	0	148	0	0	148	0	2	143	0	145	0	0	0	0	0	293
6:15 AM	0	177	0	0	177	1	0	139	0	140	0	0	0	0	0	317
6:30 AM	0	246	0	0	246	0	2	198	0	200	0	0	0	0	0	446
6:45 AM	0	230	0	0	230	2	5	213	0	220	0	0	0	0	0	450
Hourly Total	0	801	0	0	801	3	9	693	0	705	0	0	0	0	0	1506
7:00 AM	1	277	0	0	278	2	1	193	0	196	0	0	0	0	0	474
7:15 AM	1	322	0	0	323	1	2	226	0	229	0	0	1	0	1	553
7:30 AM	1	332	0	0	333	1	1	222	0	224	0	0	0	0	0	557
7:45 AM	0	302	0	0	302	0	2	267	0	269	0	0	0	0	0	571
Hourly Total	3	1233	0	0	1236	4	6	908	0	918	0	0	1	0	1	2155
8:00 AM	0	215	0	0	215	1	4	206	0	211	0	0	1	0	1	427
8:15 AM	1	199	0	0	200	0	1	238	0	239	0	0	2	0	2	441
8:30 AM	2	204	0	0	206	2	2	243	0	247	0	0	0	0	0	453
8:45 AM	2	162	0	0	164	1	5	242	0	248	0	0	1	0	1	413
Hourly Total	5	780	0	0	785	4	12	929	0	945	0	0	4	0	4	1734
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	2	299	0	0	301	4	0	325	0	329	0	0	2	0	2	632
4:15 PM	0	256	0	0	256	1	0	357	0	358	0	0	2	0	2	616
4:30 PM	0	326	1	0	327	0	1	333	0	334	0	1	3	0	4	665
4:45 PM	0	294	0	0	294	0	0	366	0	366	0	1	1	0	2	662
Hourly Total	2	1175	1	0	1178	5	1	1381	0	1387	0	2	8	0	10	2575
5:00 PM	0	313	0	0	313	2	1	310	0	313	0	0	2	0	2	628
5:15 PM	1	315	0	0	316	1	0	278	0	279	0	1	2	0	3	598
5:30 PM	0	240	1	0	241	4	0	292	0	296	0	0	3	0	3	540
5:45 PM	1	233	1	0	235	2	1	271	0	274	0	0	1	0	1	510
Hourly Total	2	1101	2	0	1105	9	2	1151	0	1162	0	1	8	0	9	2276
Grand Total	12	5090	3	0	5105	25	30	5062	0	5117	0	3	21	0	24	10246
Approach %	0.2	99.7	0.1	-	-	0.5	0.6	98.9	-	-	0.0	12.5	87.5	-	-	-
Total %	0.1	49.7	0.0	-	49.8	0.2	0.3	49.4	-	49.9	0.0	0.0	0.2	-	0.2	-
Lights	12	4746	3	-	4761	25	29	4696	-	4750	0	3	21	-	24	9535
% Lights	100.0	93.2	100.0	-	93.3	100.0	96.7	92.8	-	92.8	-	100.0	100.0	-	100.0	93.1
Buses	0	35	0	-	35	0	0	45	-	45	0	0	0	-	0	80
% Buses	0.0	0.7	0.0	-	0.7	0.0	0.0	0.9	-	0.9	-	0.0	0.0	-	0.0	0.8
Single-Unit Trucks	0	136	0	-	136	0	1	133	-	134	0	0	0	-	0	270
% Single-Unit Trucks	0.0	2.7	0.0	-	2.7	0.0	3.3	2.6	-	2.6	-	0.0	0.0	-	0.0	2.6
Articulated Trucks	0	173	0	-	173	0	0	188	-	188	0	0	0	-	0	361



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Count Name: Main Street with Pheasant Run
 Access Drive
 Site Code:
 Start Date: 01/27/2021
 Page No: 1

Turning Movement Data

Start Time	Main Street Eastbound						Main Street Westbound						Pheasant Run Access Northbound						Access Drive 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	
6:00 AM	0	3	152	0	0	155	0	0	128	1	0	129	0	0	0	0	0	0	0	1	0	0	0	1	285
6:15 AM	0	2	187	0	0	189	1	0	148	0	0	149	0	0	0	0	0	0	0	0	0	2	0	2	340
6:30 AM	1	2	255	0	0	258	0	0	182	0	0	182	0	0	0	0	0	0	0	2	0	2	0	4	444
6:45 AM	0	6	239	0	0	245	0	0	220	1	0	221	0	0	0	0	0	0	0	1	0	3	0	4	470
Hourly Total	1	13	833	0	0	847	1	0	678	2	0	681	0	0	0	0	0	0	0	4	0	7	0	11	1539
7:00 AM	1	3	267	0	0	271	0	0	180	4	0	184	0	0	0	0	0	0	0	2	0	0	0	2	457
7:15 AM	1	3	330	0	0	334	0	0	228	0	0	228	0	0	0	0	0	0	0	1	0	3	0	4	566
7:30 AM	0	4	321	0	0	325	1	0	214	3	0	218	0	0	0	0	0	0	0	0	0	5	0	5	548
7:45 AM	2	6	304	0	0	312	0	0	251	5	0	256	0	0	0	0	0	0	0	3	0	4	0	7	575
Hourly Total	4	16	1222	0	0	1242	1	0	873	12	0	886	0	0	0	0	0	0	0	6	0	12	0	18	2146
8:00 AM	3	3	213	0	0	219	0	1	222	4	0	227	0	0	0	0	0	0	0	1	0	4	0	5	451
8:15 AM	2	2	197	0	0	201	0	0	258	4	0	262	0	0	0	0	0	0	0	1	0	0	0	1	464
8:30 AM	1	8	208	1	0	218	1	1	287	1	0	290	0	0	0	0	0	0	0	1	0	1	0	2	510
8:45 AM	1	3	162	0	0	166	0	0	267	2	0	269	0	0	0	0	0	0	0	1	1	0	0	2	437
Hourly Total	7	16	780	1	0	804	1	2	1034	11	0	1048	0	0	0	0	0	0	0	4	1	5	0	10	1862
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	10	291	0	0	301	1	1	305	4	0	311	0	0	0	1	0	1	0	5	0	2	0	7	620
4:15 PM	0	5	250	0	0	255	0	0	327	3	0	330	0	0	0	0	0	0	0	3	0	6	0	9	594
4:30 PM	0	2	310	0	0	312	1	0	347	0	0	348	0	1	0	0	0	1	0	6	0	4	0	10	671
4:45 PM	0	4	278	1	0	283	1	0	333	9	0	343	0	0	0	0	0	0	0	4	0	2	0	6	632
Hourly Total	0	21	1129	1	0	1151	3	1	1312	16	0	1332	0	1	0	1	0	2	0	18	0	14	0	32	2517
5:00 PM	0	10	310	0	0	320	0	0	306	6	0	312	0	0	0	1	0	1	0	2	0	10	0	12	645
5:15 PM	2	8	308	0	0	318	2	0	280	5	0	287	0	0	0	0	0	0	0	5	0	8	0	13	618
5:30 PM	1	9	230	0	0	240	0	0	258	6	0	264	0	0	0	1	0	1	0	7	0	4	0	11	516
5:45 PM	0	12	226	1	0	239	0	1	289	7	0	297	0	0	0	2	0	2	0	8	0	3	0	11	549
Hourly Total	3	39	1074	1	0	1117	2	1	1133	24	0	1160	0	0	0	4	0	4	0	22	0	25	0	47	2328
Grand Total	15	105	5038	3	0	5161	8	4	5030	65	0	5107	0	1	0	5	0	6	0	54	1	63	0	118	10392
Approach %	0.3	2.0	97.6	0.1	-	-	0.2	0.1	98.5	1.3	-	-	0.0	16.7	0.0	83.3	-	-	0.0	45.8	0.8	53.4	-	-	-
Total %	0.1	1.0	48.5	0.0	-	49.7	0.1	0.0	48.4	0.6	-	49.1	0.0	0.0	0.0	0.0	-	0.1	0.0	0.5	0.0	0.6	-	1.1	-
Lights	15	101	4695	3	-	4814	8	4	4673	65	-	4750	0	1	0	5	-	6	0	53	1	62	-	116	9686
% Lights	100.0	96.2	93.2	100.0	-	93.3	100.0	100.0	92.9	100.0	-	93.0	-	100.0	-	100.0	-	100.0	-	98.1	100.0	98.4	-	98.3	93.2
Buses	0	0	36	0	-	36	0	0	52	0	-	52	0	0	0	0	-	0	0	0	0	0	-	0	88
% Buses	0.0	0.0	0.7	0.0	-	0.7	0.0	0.0	1.0	0.0	-	1.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.8
Single-Unit Trucks	0	4	141	0	-	145	0	0	125	0	-	125	0	0	0	0	-	0	0	0	0	1	-	1	271
% Single-Unit Trucks	0.0	3.8	2.8	0.0	-	2.8	0.0	0.0	2.5	0.0	-	2.4	-	0.0	-	0.0	-	0.0	-	0.0	0.0	1.6	-	0.8	2.6



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

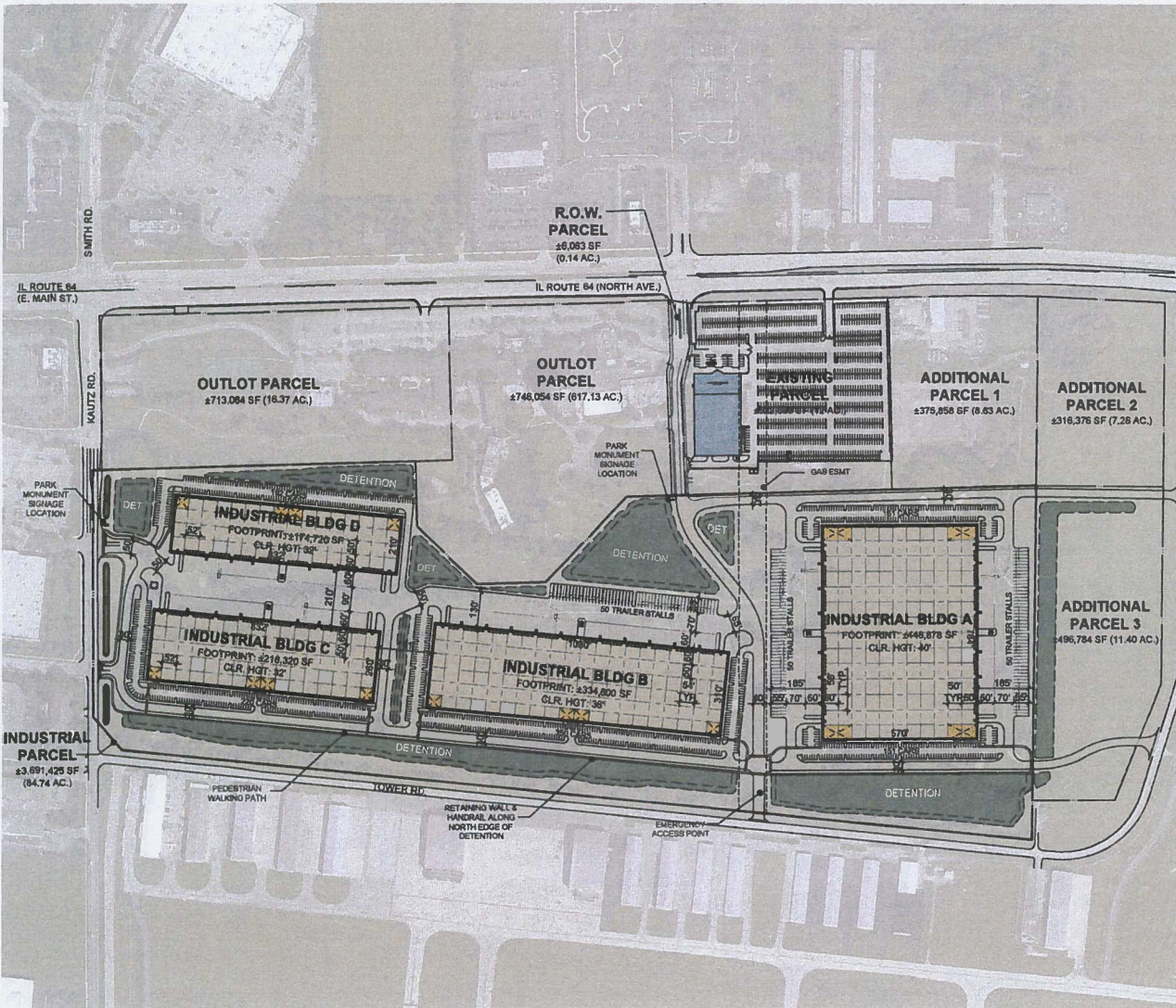
Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Main Street with Pheasant Run
Access Drive
Site Code:
Start Date: 01/27/2021
Page No: 4

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Main Street Eastbound						Main Street Westbound						Pheasant Run Access Northbound						Access Drive 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	2	310	0	0	312	1	0	347	0	0	348	0	1	0	0	0	1	0	6	0	4	0	10	671
4:45 PM	0	4	278	1	0	283	1	0	333	9	0	343	0	0	0	0	0	0	0	4	0	2	0	6	632
5:00 PM	0	10	310	0	0	320	0	0	306	6	0	312	0	0	0	1	0	1	0	2	0	10	0	12	645
5:15 PM	2	8	308	0	0	318	2	0	280	5	0	287	0	0	0	0	0	0	0	5	0	8	0	13	618
Total	2	24	1206	1	0	1233	4	0	1266	20	0	1290	0	1	0	1	0	2	0	17	0	24	0	41	2566
Approach %	0.2	1.9	97.8	0.1	-	-	0.3	0.0	98.1	1.6	-	-	0.0	50.0	0.0	50.0	-	-	0.0	41.5	0.0	58.5	-	-	-
Total %	0.1	0.9	47.0	0.0	-	48.1	0.2	0.0	49.3	0.8	-	50.3	0.0	0.0	0.0	0.0	-	0.1	0.0	0.7	0.0	0.9	-	1.6	-
PHF	0.250	0.600	0.973	0.250	-	0.963	0.500	0.000	0.912	0.556	-	0.927	0.000	0.250	0.000	0.250	-	0.500	0.000	0.708	0.000	0.600	-	0.788	0.956
Lights	2	24	1149	1	-	1176	4	0	1230	20	-	1254	0	1	0	1	-	2	0	17	0	24	-	41	2473
% Lights	100.0	100.0	95.3	100.0	-	95.4	100.0	-	97.2	100.0	-	97.2	-	100.0	-	100.0	-	100.0	-	100.0	-	100.0	-	100.0	96.4
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	-	0.2	0.0	-	0.2	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.1
Single-Unit Trucks	0	0	26	0	-	26	0	0	10	0	-	10	0	0	0	0	-	0	0	0	0	0	-	0	36
% Single-Unit Trucks	0.0	0.0	2.2	0.0	-	2.1	0.0	-	0.8	0.0	-	0.8	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	1.4
Articulated Trucks	0	0	31	0	-	31	0	0	23	0	-	23	0	0	0	0	-	0	0	0	0	0	-	0	54
% Articulated Trucks	0.0	0.0	2.6	0.0	-	2.5	0.0	-	1.8	0.0	-	1.8	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	2.1
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
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

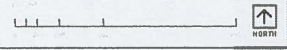
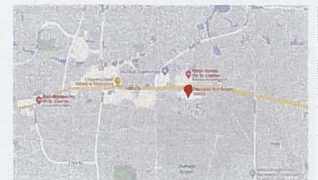
Preliminary Site Plan



PROJECT DATA:			EXISTING DEVELOPMENT STANDARD		
SITE AREA:			ZONING:	BR -	
GROSS:	84.74 AC			REGIONAL BUSINESS	
(INDUSTRIAL PARCEL ONLY)	3,691,425 SF		MAX. COVERAGE:	30%	
DETECTION:	@ 15%	564,695 SF	MAX. BLDG HT:	40 FT	
NET:		71,78 AC			
		3,126,730 SF	BUILDING SETBACKS:		
BUILDING AREA:			FRONT: 20 FT		
BUILDING A	446,878 SF		SIDE: 20 FT		
BUILDING B	334,800 SF		REAR: 30 FT		
BUILDING C	216,320 SF		LANDSCAPE SETBACKS:		
BUILDING D	174,720 SF		ALL:		
TOTAL:	1,172,718 SF		LANDSCAPE REQ:		
FAR:			OFF-STREET PARKING:		
GROSS:	0.32		STANDARD: 9X18		
NET:	0.38		DRIVE AISLE: 24 FT		
COVERAGE:			OVERHANG: 2 FT		
GROSS:	32%		REQ. PARKING RATIO BY USE:		
NET:	38%		WAREHOUSE: 1/1000 SF		
BUILDING A			NOTES:		
▲ DOCK-HIGH DOORS	76		1 SPECIAL USE OVERLAY DISTRICT #2 URM-04		
● GRADE-LEVEL DOORS	4		2 GOLF COURSE		
PARKING REQUIRED: (WITH CITY COUNCIL APPROVAL)			2 CONCRETE ASB TOP		
WAREHOUSE	446,878 SF	299 STALLS			
PARKING PROVIDED:					
	302 STALLS				
REQ. ACCESSIBLE					
TRAILER STALLS	@0.68/2,000 SF	8 STALLS			
BUILDING B			POTENTIAL ZONING DEV. STANDARDS		
▲ DOCK-HIGH DOORS	63		ZONING: M-2		
● GRADE-LEVEL DOORS	2		MIN. LOT AREA: NONE		
PARKING REQUIRED:			MIN. LOT WIDTH: NONE		
WAREHOUSE	334,800 SF	335 STALLS	MAX. COVERAGE: 60%		
PARKING PROVIDED:			MAX. BLDG HT: 60 FT		
DAY 1 PARKING	350 STALLS				
FUTURE PARKING	0 STALLS				
TOTAL POTENTIAL	350 STALLS				
REQ. ACCESSIBLE			BUILDING SETBACKS:		
TRAILER STALLS	@1.05/1,000 SF	8 STALLS	FRONT: 40 FT		
BUILDING C			INT. SIDE: 20 FT		
▲ DOCK-HIGH DOORS	48		EXT. SIDE: 40 FT		
● GRADE-LEVEL DOORS	2		REAR: 20 FT		
PARKING REQUIRED:			LANDSCAPE SETBACKS:		
WAREHOUSE	334,800 SF	335 STALLS	ALL:		
PARKING PROVIDED:			LANDSCAPE REQ: 20% MIN		
DAY 1 PARKING	350 STALLS				
FUTURE PARKING	0 STALLS				
TOTAL POTENTIAL	350 STALLS				
REQ. ACCESSIBLE			OFF-STREET PARKING:		
TRAILER STALLS	@1.02/1,000 SF	7 STALLS	STANDARD: 9X18		
BUILDING D			DRIVE AISLE: 24 FT		
▲ DOCK-HIGH DOORS	48		OVERHANG: 2 FT		
● GRADE-LEVEL DOORS	2				
PARKING REQUIRED:			REQ. PARKING RATIO BY USE:		
WAREHOUSE	174,720 SF	175 STALLS	WAREHOUSE: 1/1000 SF		
PARKING PROVIDED:					
DAY 1 PARKING	192 STALLS				
FUTURE PARKING	0 STALLS				
TOTAL POTENTIAL	192 STALLS				
REQ. ACCESSIBLE			NOTES:		
TRAILER STALLS	@1.1/1,000 SF	6 STALLS	1 SEE ALL APPLICABLE ORDINANCES AND		
			2 MAY BE SUBJECT TO LAND PLANNING & RECORDS DEPT.		
			3 FUTURE USES DETERMINED BY OWNER AND CITY, SUBJECT TO ALL		
			4 CITY USE SUBJECT TO USE IN ZONE BY CITY COUNCIL, 2014 LAW		
			5 SEE WEBSITE FOR DETAILS		

This conceptual design is based upon a preliminary review of development requirements and an on-site and possibly incomplete site plan. The design is not intended to be used for permitting or construction. The project may be subject to change.

Siteowner Management Design
AVERAGE RETENTIONAL DEPTH PROVIDED:
 4'-0" (4'-0")
 5'-0" (5'-0")
 6'-0" (6'-0")
 SEE MAP & AERIAL IMAGE



scheme: 17

Conceptual Site Plan

Pheasant Run Industrial Park
St. Charles, IL

WARE MALCOMB

DATE: 07/15/2024
SHEET 1

ITE Trip Generation Worksheets

Land Use: 110

General Light Industrial

Description

A light industrial facility is a free-standing facility devoted to a single use. The facility has an emphasis on activities other than manufacturing and typically has minimal office space. Typical light industrial activities include printing, material testing, and assembly of data processing equipment. Industrial park (Land Use 130) and manufacturing (Land Use 140) are related uses.

Additional Data

Time-of-day distribution data for this land use are presented in Appendix A. For the 30 general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:30 and 8:30 a.m. and 4:30 and 5:30 p.m., respectively.

The sites were surveyed in the 1980s, the 2000s, and the 2010s in Colorado, Connecticut, Indiana, New Jersey, New York, Oregon, Pennsylvania, and Texas.

Source Numbers

106, 157, 174, 177, 179, 184, 191, 251, 253, 286, 300, 611, 874, 875, 912

General Light Industrial (110)

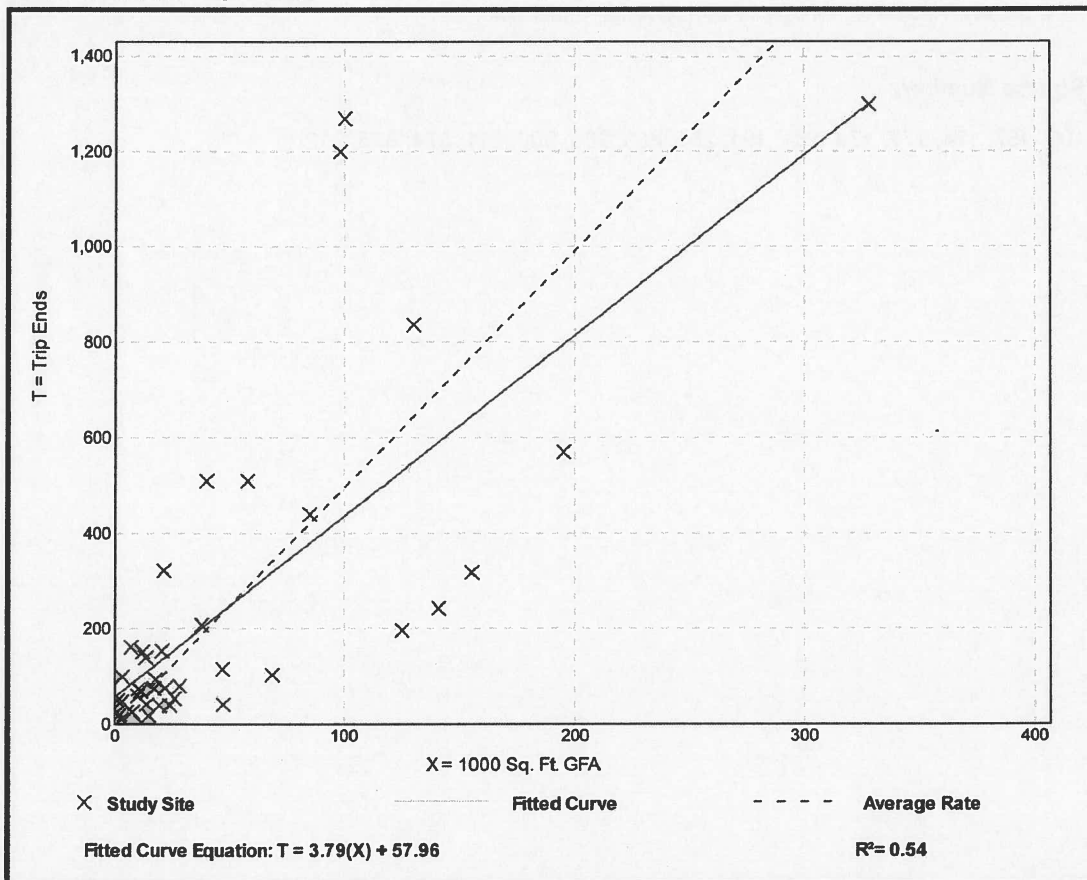
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 40
1000 Sq. Ft. GFA: 49
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
4.96	0.34 - 43.86	4.20

Data Plot and Equation



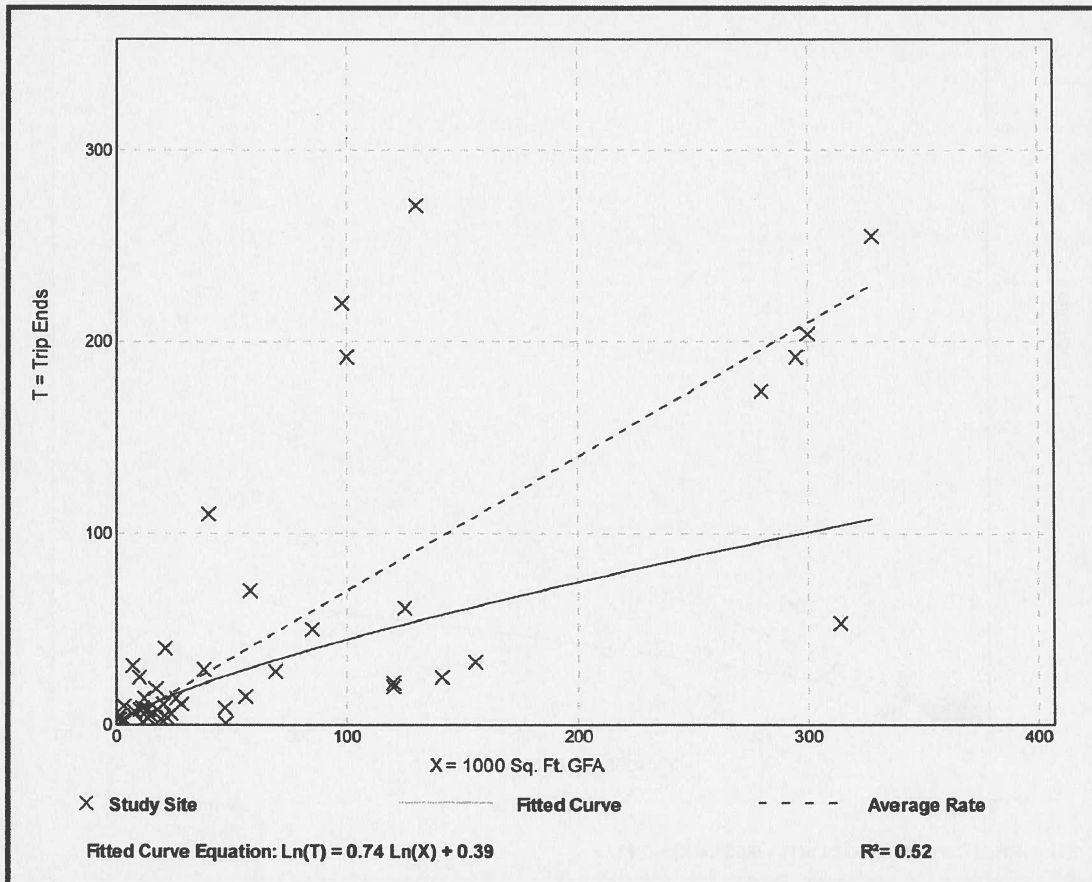
General Light Industrial (110)

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: 45
 1000 Sq. Ft. GFA: 73
 Directional Distribution: 88% entering, 12% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.70	0.02 - 4.46	0.65

Data Plot and Equation



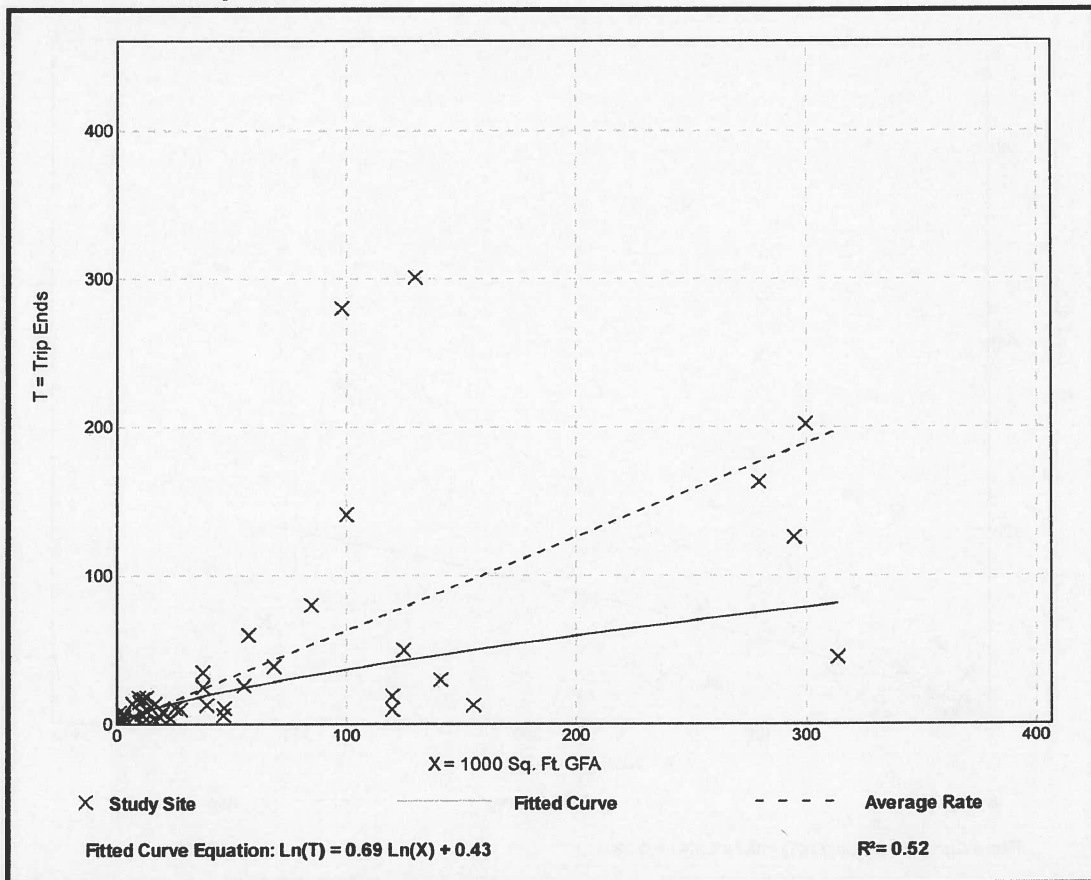
General Light Industrial (110)

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: 44
 1000 Sq. Ft. GFA: 67
Directional Distribution: 13% entering, 87% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.63	0.07 - 7.02	0.68

Data Plot and Equation



CMAP 2050 Projections Letter



Chicago Metropolitan Agency for Planning

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

July 12, 2021

Andrew Bowen
Traffic Engineer
Kenig, Lindgren, O'Hara and Aboona, Inc.
9575 West Higgins Road
Suite 400
Rosemont, IL 60018

Subject: IL 64 (Main Street) @ Kautz Road/Smith Road
IDOT

Dear Mr. Bowen:

In response to a request made on your behalf and dated July 8, 2021, we have developed year 2050 average daily traffic (ADT) projections for the subject location.

ROAD SEGMENT	Current ADT	Year 2050 ADT
IL 64 (Main St) east of Kautz Rd	32,400	42,000
IL 64 (Main St) west of Kautz Rd	32,900	40,000
Kautz Rd south of IL 64 (Main St)	8,150	11,700
Smith Rd north of IL 64 (Main St)	7,050	8,100

Traffic projections are developed using existing ADT data provided in the request letter and the results from the June 2021 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.

Sincerely,

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

cc: Rios (IDOT)
2021_CY_TrafficForecast\St.Charles\ka-23-21\ka-23-21.docx

Level of Service Criteria

LEVEL OF SERVICE CRITERIA

Signalized Intersections		
Level of Service	Interpretation	Average Control Delay (seconds per vehicle)
A	Favorable progression. Most vehicles arrive during the green indication and travel through the intersection without stopping.	≤10
B	Good progression, with more vehicles stopping than for Level of Service A.	>10 - 20
C	Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear. Number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	>20 - 35
D	The volume-to-capacity ratio is high and either progression is ineffective or the cycle length is too long. Many vehicles stop and individual cycle failures are noticeable.	>35 - 55
E	Progression is unfavorable. The volume-to-capacity ratio is high and the cycle length is long. Individual cycle failures are frequent.	>55 - 80
F	The volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.	>80.0
Unsignalized Intersections		
Level of Service	Average Total Delay (SEC/VEH)	
A	0 - 10	
B	> 10 - 15	
C	> 15 - 25	
D	> 25 - 35	
E	> 35 - 50	
F	> 50	

Source: *Highway Capacity Manual*, 2010.

Capacity Analysis Summary Sheets
2021 Base Weekday Morning Peak Hour Conditions

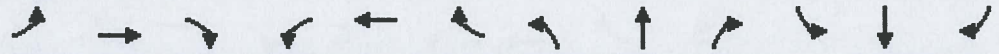
Lanes, Volumes, Timings
1: Kautz Road/Smith Road & II 64

10/12/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	177	1326	78	257	967	42	31	101	197	84	182	155
Future Volume (vph)	177	1326	78	257	967	42	31	101	197	84	182	155
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	255		200	300		190	200		580	195		0
Storage Lanes	2		1	2		1	1		0	1		1
Taper Length (ft)	300			300			175			175		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3335	5103	1482	3155	5009	1509	1467	1980	1468	1719	1961	1524
Flt Permitted	0.950			0.950			0.436			0.594		
Satd. Flow (perm)	3335	5103	1482	3155	5009	1509	673	1980	1468	1075	1961	1524
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			40			40	
Link Distance (ft)		2097			2145			538			1315	
Travel Time (s)		31.8			32.5			9.2			22.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	7%	9%	11%	9%	7%	23%	1%	10%	5%	2%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	201	1507	89	292	1099	48	35	115	224	95	207	176
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases			2			6	8		8	4		4
Detector Phase	5	2	3	1	6	7	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	3.0	15.0	3.0	3.0	15.0	3.0	3.0	8.0	8.0	3.0	8.0	8.0
Minimum Split (s)	7.5	21.0	6.5	7.5	21.0	6.5	6.5	14.0	14.0	6.5	14.0	14.0
Total Split (s)	18.0	67.0	13.0	23.0	72.0	13.0	13.0	27.0	27.0	13.0	27.0	27.0
Total Split (%)	13.8%	51.5%	10.0%	17.7%	55.4%	10.0%	10.0%	20.8%	20.8%	10.0%	20.8%	20.8%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	3.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	1.0	1.5	0.0	1.0	1.5	0.0	0.0	1.5	1.5	0.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	3.5	4.5	6.0	3.5	3.5	6.0	6.0	3.5	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	None	C-Min	None	None	None	None	None	None	None
Act Effct Green (s)	12.2	63.4	77.0	16.4	67.6	82.6	31.3	21.1	21.1	34.1	22.5	22.5
Actuated g/C Ratio	0.09	0.49	0.59	0.13	0.52	0.64	0.24	0.16	0.16	0.26	0.17	0.17

Lanes, Volumes, Timings
1: Kautz Road/Smith Road & II 64

10/12/2021

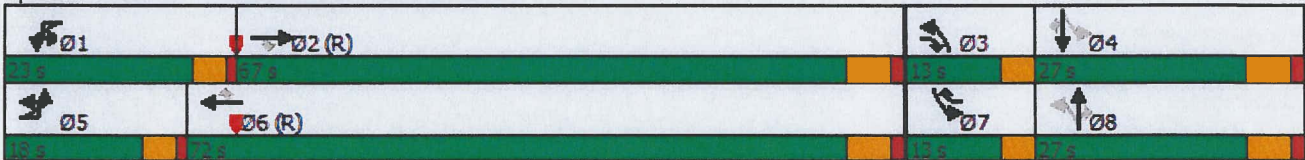


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.64	0.61	0.10	0.73	0.42	0.05	0.17	0.36	0.94	0.29	0.61	0.67
Control Delay	66.4	25.9	12.1	61.9	19.4	9.4	36.7	52.1	98.7	38.5	58.6	63.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.4	25.9	12.1	61.9	19.4	9.4	36.7	52.1	98.7	38.5	58.6	63.9
LOS	E	C	B	E	B	A	D	D	F	D	E	E
Approach Delay	29.7			27.7			78.6			56.5		
Approach LOS	C			C			E			E		
Queue Length 50th (ft)	85	335	32	123	194	14	22	87	189	61	163	140
Queue Length 95th (ft)	123	380	55	166	216	30	49	144	#339	106	246	#233
Internal Link Dist (ft)	2017			2065			458			1235		
Turn Bay Length (ft)	255		200	300		190	200		580	195		
Base Capacity (vph)	346	2488	899	448	2604	964	229	321	238	331	339	264
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.61	0.10	0.65	0.42	0.05	0.15	0.36	0.94	0.29	0.61	0.67

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 32 (25%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.94
 Intersection Signal Delay: 36.6
 Intersection LOS: D
 Intersection Capacity Utilization 65.6%
 ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Kautz Road/Smith Road & II 64



Lanes, Volumes, Timings
2: Pheasant Run & Il 64

10/12/2021

Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	8	22	1577	0	3	0	1236	16	0	0	0	7
Future Volume (vph)	8	22	1577	0	3	0	1236	16	0	0	0	7
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	1900	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)			0%				0%			0%		
Storage Length (ft)		190		195		200		200	100		100	80
Storage Lanes		1		1		1		1	1		1	1
Taper Length (ft)		200				200			100			115
Lane Util. Factor	0.91	1.00	0.91	1.00	0.91	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt								0.850				
Flt Protected		0.950				0.950						0.950
Satd. Flow (prot)	0	1805	5056	1900	0	1805	5009	1615	1900	2000	1900	1805
Flt Permitted		0.950				0.950						0.950
Satd. Flow (perm)	0	1805	5056	1900	0	1805	5009	1615	1900	2000	1900	1805
Right Turn on Red				No				No			No	
Satd. Flow (RTOR)												
Link Speed (mph)			45				45			30		
Link Distance (ft)			2145				1836			1071		
Travel Time (s)			32.5				27.8			24.3		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	8%	0%	0%	0%	9%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)			0%				0%			0%		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	33	1696	0	0	3	1329	17	0	0	0	8
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	pm+ov	pm+pt		Perm	pm+pt
Protected Phases	5	5	2	3	1	1	6	7	3	8		7
Permitted Phases				2				6	8		8	4
Detector Phase	5	5	2	3	1	1	6	7	3	8	8	7
Switch Phase												
Minimum Initial (s)	3.0	3.0	15.0	3.0	3.0	3.0	15.0	3.0	3.0	8.0	8.0	3.0
Minimum Split (s)	7.5	7.5	21.0	7.5	7.5	7.5	21.0	7.5	7.5	14.0	14.0	7.5
Total Split (s)	14.0	14.0	78.0	13.0	14.0	14.0	78.0	13.0	13.0	25.0	25.0	13.0
Total Split (%)	10.8%	10.8%	60.0%	10.0%	10.8%	10.8%	60.0%	10.0%	10.0%	19.2%	19.2%	10.0%
Yellow Time (s)	3.5	3.5	4.5	3.5	3.5	3.5	4.5	3.5	3.5	4.5	4.5	3.5
All-Red Time (s)	1.0	1.0	1.5	0.0	1.0	1.0	1.5	0.0	0.0	1.5	1.5	0.0
Lost Time Adjust (s)		0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	6.0	3.5			4.5	6.0	3.5	3.5	6.0	3.5
Lead/Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Min	None	None	None	C-Min	None	None	None	None	None
Act Effect Green (s)		7.9	114.9				5.8	108.9	119.8			9.4
Actuated g/C Ratio		0.06	0.88				0.04	0.84	0.92			0.07

Lanes, Volumes, Timings
2: Pheasant Run & Il 64

10/12/2021



Lane Group	SBT	SBR
Lane Configurations	↑	↑
Traffic Volume (vph)	0	22
Future Volume (vph)	0	22
Ideal Flow (vphpl)	2000	1900
Lane Width (ft)	12	12
Grade (%)	0%	
Storage Length (ft)		0
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Ped Bike Factor		
Frt		0.850
Flt Protected		
Satd. Flow (prot)	2000	1615
Flt Permitted		
Satd. Flow (perm)	2000	1615
Right Turn on Red		No
Satd. Flow (RTOR)		
Link Speed (mph)	30	
Link Distance (ft)	404	
Travel Time (s)	9.2	
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor	0.93	0.93
Growth Factor	100%	100%
Heavy Vehicles (%)	0%	0%
Bus Blockages (#/hr)	0	0
Parking (#/hr)		
Mid-Block Traffic (%)	0%	
Shared Lane Traffic (%)		
Lane Group Flow (vph)	0	24
Turn Type		Perm
Protected Phases	4	
Permitted Phases		4
Detector Phase	4	4
Switch Phase		
Minimum Initial (s)	8.0	8.0
Minimum Split (s)	14.0	14.0
Total Split (s)	25.0	25.0
Total Split (%)	19.2%	19.2%
Yellow Time (s)	4.5	4.5
All-Red Time (s)	1.5	1.5
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	6.0	6.0
Lead/Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effect Green (s)		8.9
Actuated g/C Ratio		0.07

Lanes, Volumes, Timings
2: Pheasant Run & Il 64

10/12/2021



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
v/c Ratio		0.30	0.38			0.04	0.32	0.01				0.06
Control Delay		65.4	1.4			60.0	4.6	1.1				54.6
Queue Delay		0.0	0.0			0.0	0.0	0.0				0.0
Total Delay		65.4	1.4			60.0	4.6	1.1				54.6
LOS		E	A			E	A	A				D
Approach Delay			2.6				4.7					
Approach LOS			A				A					
Queue Length 50th (ft)		27	37			3	122	1				6
Queue Length 95th (ft)		m44	m106			13	170	4				23
Internal Link Dist (ft)			2065				1756			991		
Turn Bay Length (ft)		190				200		200				80
Base Capacity (vph)		134	4468			131	4197	1488				152
Starvation Cap Reductn		0	0			0	0	0				0
Spillback Cap Reductn		0	0			0	0	0				0
Storage Cap Reductn		0	0			0	0	0				0
Reduced v/c Ratio		0.25	0.38			0.02	0.32	0.01				0.05

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 59 (45%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.38

Intersection Signal Delay: 4.1

Intersection LOS: A

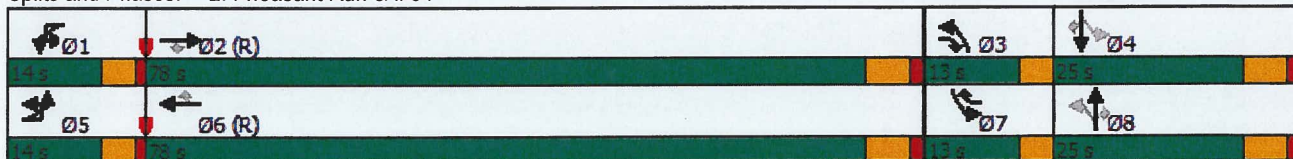
Intersection Capacity Utilization 45.6%

ICU Level of Service A

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Pheasant Run & Il 64



Lanes, Volumes, Timings
 2: Pheasant Run & Il 64

10/12/2021



Lane Group	SBT	SBR
v/c Ratio		0.22
Control Delay		61.5
Queue Delay		0.0
Total Delay		61.5
LOS		E
Approach Delay	59.8	
Approach LOS	E	
Queue Length 50th (ft)		20
Queue Length 95th (ft)		48
Internal Link Dist (ft)	324	
Turn Bay Length (ft)		
Base Capacity (vph)		236
Starvation Cap Reductn		0
Spillback Cap Reductn		0
Storage Cap Reductn		0
Reduced v/c Ratio		0.10
Intersection Summary		

Intersection

Int Delay, s/veh 0.2

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations	↔	↑↑↑	↗		↘	↑↑↑	↖	
Traffic Vol, veh/h	3	1584	0	4	12	1252	0	3
Future Vol, veh/h	3	1584	0	4	12	1252	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	None
Storage Length	200	-	180	-	200	-	0	-
Veh in Median Storage, #	-	0	-	-	-	0	1	-
Grade, %	-	0	-	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	8	0	0	0	9	0	0
Mvmt Flow	3	1722	0	4	13	1361	0	3

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	993	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	5.6	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.3	-	-
Pot Cap-1 Maneuver	451	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	451	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	19
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBU	EBT	EBR	WBL	WBT
Capacity (veh/h)	260	451	-	-	199	-
HCM Lane V/C Ratio	0.013	0.007	-	-	0.087	-
HCM Control Delay (s)	19	13	-	-	24.8	-
HCM Lane LOS	C	B	-	-	C	-
HCM 95th %tile Q(veh)	0	0	-	-	0.3	-

HCM 6th TWSC
4: Kautz Road & North EGC Access

08/18/2021

Intersection

Int Delay, s/veh 0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↘	↗	↘	↕	↕	↕
Traffic Vol, veh/h	9	5	4	320	491	26
Future Vol, veh/h	9	5	4	320	491	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	110	0	140	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	20	0	9	7	12
Mvmt Flow	10	6	5	368	564	30

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	773	297	594	0	-
Stage 1	579	-	-	-	-
Stage 2	194	-	-	-	-
Critical Hdwy	6.8	7.3	4.1	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.5	2.2	-	-
Pot Cap-1 Maneuver	340	648	992	-	-
Stage 1	529	-	-	-	-
Stage 2	826	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	338	648	992	-	-
Mov Cap-2 Maneuver	432	-	-	-	-
Stage 1	526	-	-	-	-
Stage 2	826	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.5	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	992	-	432	648	-	-
HCM Lane V/C Ratio	0.005	-	0.024	0.009	-	-
HCM Control Delay (s)	8.6	-	13.5	10.6	-	-
HCM Lane LOS	A	-	B	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	0	-	-

HCM 6th TWSC
5: Kautz Road & South EGC Access

08/18/2021

Intersection

Int Delay, s/veh 0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↘	↗	↘	↗	↗	↗
Traffic Vol, veh/h	3	11	14	321	488	8
Future Vol, veh/h	3	11	14	321	488	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	175	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	9	7	0
Mvmt Flow	3	12	16	361	548	9

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	946	279	557	0	-	0
Stage 1	553	-	-	-	-	-
Stage 2	393	-	-	-	-	-
Critical Hdwy	6.6	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	278	724	1024	-	-	-
Stage 1	546	-	-	-	-	-
Stage 2	686	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	274	724	1024	-	-	-
Mov Cap-2 Maneuver	397	-	-	-	-	-
Stage 1	537	-	-	-	-	-
Stage 2	686	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1024	-	397	724	-	-
HCM Lane V/C Ratio	0.015	-	0.008	0.017	-	-
HCM Control Delay (s)	8.6	-	14.1	10.1	-	-
HCM Lane LOS	A	-	B	B	-	-
HCM 95th %tile Q(veh)	0	-	0	0.1	-	-

Intersection

Int Delay, s/veh 1.4

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations	↕		↕	↑	↑	↗
Traffic Vol, veh/h	36	31	32	299	437	62
Future Vol, veh/h	36	31	32	299	437	62
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	-	105	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	3	3	0	9	7	11
Mvmt Flow	42	36	37	348	508	72

Major/Minor Minor2 Major1 Major2

Conflicting Flow All	930	508	580	0	-	0
Stage 1	508	-	-	-	-	-
Stage 2	422	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.1	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.2	-	-	-
Pot Cap-1 Maneuver	295	563	1004	-	-	-
Stage 1	602	-	-	-	-	-
Stage 2	659	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	284	563	1004	-	-	-
Mov Cap-2 Maneuver	410	-	-	-	-	-
Stage 1	580	-	-	-	-	-
Stage 2	659	-	-	-	-	-

Approach EB NB SB

HCM Control Delay, s	14.2	0.8	0
HCM LOS	B		

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h)	1004	-	469	-	-
HCM Lane V/C Ratio	0.037	-	0.166	-	-
HCM Control Delay (s)	8.7	-	14.2	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	-	-

Capacity Analysis Summary Sheets
2021 Base Weekday Evening Peak Hour Conditions

Lanes, Volumes, Timings
1: Kautz Road/Smith Road & Il 64

10/12/2021

Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	7	212	1087	56	7	196	1455	46	170	261	436	103
Future Volume (vph)	7	212	1087	56	7	196	1455	46	170	261	436	103
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	1900	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)			0%				0%			0%		
Storage Length (ft)		255		200		300		190	200		580	195
Storage Lanes		2		1		2		1	1		0	1
Taper Length (ft)		300				300			175			175
Lane Util. Factor	0.91	0.97	0.91	1.00	0.91	0.97	0.91	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt				0.850				0.850			0.850	
Flt Protected		0.950				0.950			0.950			0.950
Satd. Flow (prot)	0	3435	5151	1615	0	3403	5301	1509	1787	2000	1568	1787
Flt Permitted		0.950				0.950			0.461			0.339
Satd. Flow (perm)	0	3435	5151	1615	0	3403	5301	1509	867	2000	1568	638
Right Turn on Red				No				No			No	
Satd. Flow (RTOR)												
Link Speed (mph)			45				45			40		
Link Distance (ft)			2097				2145			538		
Travel Time (s)			31.8				32.5			9.2		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	6%	0%	0%	3%	3%	7%	1%	0%	3%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)			0%				0%			0%		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	226	1121	58	0	209	1500	47	175	269	449	106
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	pm+ov	pm+pt	NA	Perm	pm+pt
Protected Phases	5	5	2	3	1	1	6	7	3	8		7
Permitted Phases				2				6	8		8	4
Detector Phase	5	5	2	3	1	1	6	7	3	8	8	7
Switch Phase												
Minimum Initial (s)	3.0	3.0	15.0	3.0	3.0	3.0	15.0	3.0	3.0	8.0	8.0	3.0
Minimum Split (s)	7.5	7.5	21.0	6.5	7.5	7.5	21.0	6.5	6.5	14.0	14.0	6.5
Total Split (s)	20.0	20.0	73.0	18.0	24.0	24.0	77.0	18.0	18.0	35.0	35.0	18.0
Total Split (%)	13.3%	13.3%	48.7%	12.0%	16.0%	16.0%	51.3%	12.0%	12.0%	23.3%	23.3%	12.0%
Yellow Time (s)	3.5	3.5	4.5	3.5	3.5	3.5	4.5	3.5	3.5	4.5	4.5	3.5
All-Red Time (s)	1.0	1.0	1.5	0.0	1.0	1.0	1.5	0.0	0.0	1.5	1.5	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
Total Lost Time (s)		4.5	6.0	3.5		4.5	6.0	3.5	3.5	6.0	6.0	3.5
Lead/Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Min	None	None	None	C-Min	None	None	None	None	None
Act Effct Green (s)		14.1	72.0	91.7		14.5	72.4	90.1	48.0	31.8	31.8	44.0
Actuated g/C Ratio		0.09	0.48	0.61		0.10	0.48	0.60	0.32	0.21	0.21	0.29

Lanes, Volumes, Timings
 1: Kautz Road/Smith Road & II 64

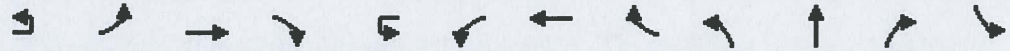
10/12/2021



Lane Group	SBT	SBR
Lane Configurations	↑	↑
Traffic Volume (vph)	172	225
Future Volume (vph)	172	225
Ideal Flow (vphpl)	2000	1900
Lane Width (ft)	12	12
Grade (%)	0%	
Storage Length (ft)		0
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Ped Bike Factor		
Frt		0.850
Flt Protected		
Satd. Flow (prot)	2000	1615
Flt Permitted		
Satd. Flow (perm)	2000	1615
Right Turn on Red		No
Satd. Flow (RTOR)		
Link Speed (mph)	40	
Link Distance (ft)	1315	
Travel Time (s)	22.4	
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor	0.97	0.97
Growth Factor	100%	100%
Heavy Vehicles (%)	0%	0%
Bus Blockages (#/hr)	0	0
Parking (#/hr)		
Mid-Block Traffic (%)	0%	
Shared Lane Traffic (%)		
Lane Group Flow (vph)	177	232
Turn Type	NA	Perm
Protected Phases	4	
Permitted Phases		4
Detector Phase	4	4
Switch Phase		
Minimum Initial (s)	8.0	8.0
Minimum Split (s)	14.0	14.0
Total Split (s)	35.0	35.0
Total Split (%)	23.3%	23.3%
Yellow Time (s)	4.5	4.5
All-Red Time (s)	1.5	1.5
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	6.0	6.0
Lead/Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)	29.8	29.8
Actuated g/C Ratio	0.20	0.20

Lanes, Volumes, Timings
 1: Kautz Road/Smith Road & Il 64

10/12/2021

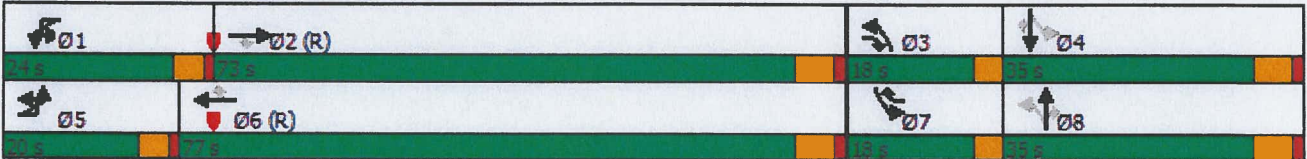


Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
v/c Ratio		0.70	0.45	0.06		0.64	0.59	0.05	0.48	0.63	1.35	0.38
Control Delay		77.7	27.0	12.4		77.1	24.6	11.4	42.6	62.2	220.5	40.3
Queue Delay		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		77.7	27.0	12.4		77.1	24.6	11.4	42.6	62.2	220.5	40.3
LOS		E	C	B		E	C	B	D	E	F	D
Approach Delay			34.5				30.5			137.9		
Approach LOS			C				C			F		
Queue Length 50th (ft)		111	262	22		109	245	15	127	243	~576	74
Queue Length 95th (ft)		157	319	44		153	266	28	194	352	#824	123
Internal Link Dist (ft)			2017				2065			458		
Turn Bay Length (ft)		255		200		300		190	200		580	195
Base Capacity (vph)		354	2472	995		442	2557	934	367	424	332	309
Starvation Cap Reductn		0	0	0		0	0	0	0	0	0	0
Spillback Cap Reductn		0	0	0		0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0		0	0	0	0	0	0	0
Reduced v/c Ratio		0.64	0.45	0.06		0.47	0.59	0.05	0.48	0.63	1.35	0.34

Intersection Summary

Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 53 (35%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.35
 Intersection Signal Delay: 56.0
 Intersection LOS: E
 Intersection Capacity Utilization 75.5%
 ICU Level of Service D
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Kautz Road/Smith Road & Il 64



Lanes, Volumes, Timings
 1: Kautz Road/Smith Road & Il 64

10/12/2021



Lane Group	SBT	SBR
v/c Ratio	0.45	0.72
Control Delay	57.3	70.5
Queue Delay	0.0	0.0
Total Delay	57.3	70.5
LOS	E	E
Approach Delay	59.8	
Approach LOS	E	
Queue Length 50th (ft)	155	216
Queue Length 95th (ft)	234	#332
Internal Link Dist (ft)	1235	
Turn Bay Length (ft)		
Base Capacity (vph)	397	320
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.45	0.72
Intersection Summary		

Lanes, Volumes, Timings
2: Pheasant Run & II 64

10/12/2021



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations		↔	↑↑↑	↗			↑↑↑	↗	↖	↑	↗	↖
Traffic Volume (vph)	3	31	1599	0	5	0	1670	26	0	0	0	22
Future Volume (vph)	3	31	1599	0	5	0	1670	26	0	0	0	22
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	1900	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)			0%				0%			0%		
Storage Length (ft)		190		195		200		200	100		100	80
Storage Lanes		1		1		1		1	1		1	1
Taper Length (ft)		200				200			100			115
Lane Util. Factor	0.91	1.00	0.91	1.00	0.91	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt								0.850				
Flt Protected		0.950				0.950						0.950
Satd. Flow (prot)	0	1805	5200	1900	0	1805	5301	1615	1900	2000	1900	1805
Flt Permitted		0.950				0.950						0.950
Satd. Flow (perm)	0	1805	5200	1900	0	1805	5301	1615	1900	2000	1900	1805
Right Turn on Red				No				No			No	
Satd. Flow (RTOR)												
Link Speed (mph)			45				45			30		
Link Distance (ft)			2145				1836			1071		
Travel Time (s)			32.5				27.8			24.3		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	5%	0%	0%	0%	3%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)			0%				0%			0%		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	35	1666	0	0	5	1740	27	0	0	0	23
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	pm+ov	pm+pt		Perm	pm+pt
Protected Phases	5	5	2	3	1	1	6	7	3	8		7
Permitted Phases				2				6	8		8	4
Detector Phase	5	5	2	3	1	1	6	7	3	8	8	7
Switch Phase												
Minimum Initial (s)	3.0	3.0	15.0	3.0	3.0	3.0	15.0	3.0	3.0	8.0	8.0	3.0
Minimum Split (s)	7.5	7.5	21.0	7.5	7.5	7.5	21.0	7.5	7.5	14.0	14.0	7.5
Total Split (s)	17.0	17.0	88.0	20.0	17.0	17.0	88.0	20.0	20.0	25.0	25.0	20.0
Total Split (%)	11.3%	11.3%	58.7%	13.3%	11.3%	11.3%	58.7%	13.3%	13.3%	16.7%	16.7%	13.3%
Yellow Time (s)	3.5	3.5	4.5	3.5	3.5	3.5	4.5	3.5	3.5	4.5	4.5	3.5
All-Red Time (s)	1.0	1.0	1.5	0.0	1.0	1.0	1.5	0.0	0.0	1.5	1.5	0.0
Lost Time Adjust (s)		0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	6.0	3.5			4.5	6.0	3.5	6.0	6.0	3.5
Lead/Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Min	None	None	None	C-Min	None	None	None	None	None
Act Effct Green (s)		8.3	130.0				6.0	121.4	136.4			11.2
Actuated g/C Ratio		0.06	0.87				0.04	0.81	0.91			0.07

Lanes, Volumes, Timings
2: Pheasant Run & Il 64

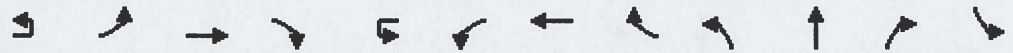
10/12/2021



Lane Group	SBT	SBR
Lane Configurations	↑	↑
Traffic Volume (vph)	0	31
Future Volume (vph)	0	31
Ideal Flow (vphpl)	2000	1900
Lane Width (ft)	12	12
Grade (%)	0%	
Storage Length (ft)		0
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Ped Bike Factor		
Frt		0.850
Flt Protected		
Satd. Flow (prot)	2000	1615
Flt Permitted		
Satd. Flow (perm)	2000	1615
Right Turn on Red		No
Satd. Flow (RTOR)		
Link Speed (mph)	30	
Link Distance (ft)	404	
Travel Time (s)	9.2	
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor	0.96	0.96
Growth Factor	100%	100%
Heavy Vehicles (%)	0%	0%
Bus Blockages (#/hr)	0	0
Parking (#/hr)		
Mid-Block Traffic (%)	0%	
Shared Lane Traffic (%)		
Lane Group Flow (vph)	0	32
Turn Type		Perm
Protected Phases	4	
Permitted Phases		4
Detector Phase	4	4
Switch Phase		
Minimum Initial (s)	8.0	8.0
Minimum Split (s)	14.0	14.0
Total Split (s)	25.0	25.0
Total Split (%)	16.7%	16.7%
Yellow Time (s)	4.5	4.5
All-Red Time (s)	1.5	1.5
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	6.0	6.0
Lead/Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)		9.7
Actuated g/C Ratio		0.06

Lanes, Volumes, Timings
2: Pheasant Run & Il 64

10/12/2021

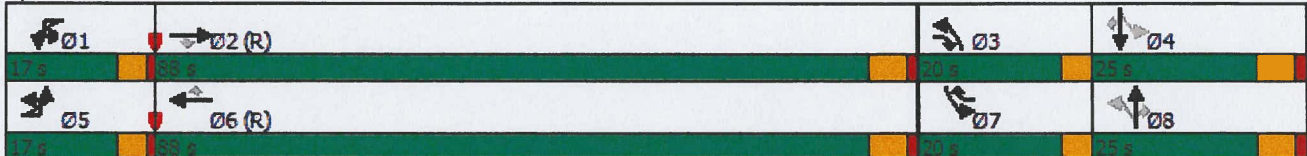


Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
v/c Ratio		0.35	0.37			0.07	0.41	0.02				0.17
Control Delay		82.2	1.4			71.0	5.8	1.1				66.1
Queue Delay		0.0	0.0			0.0	0.0	0.0				0.0
Total Delay		82.2	1.4			71.0	5.8	1.1				66.1
LOS		F	A			E	A	A				E
Approach Delay			3.1				5.9					
Approach LOS			A				A					
Queue Length 50th (ft)		35	37			5	185	2				21
Queue Length 95th (ft)		m59	m113			20	252	6				52
Internal Link Dist (ft)			2065				1756			991		
Turn Bay Length (ft)		190				200		200				80
Base Capacity (vph)		150	4506			150	4291	1501				198
Starvation Cap Reductn		0	0			0	0	0				0
Spillback Cap Reductn		0	0			0	0	0				0
Storage Cap Reductn		0	0			0	0	0				0
Reduced v/c Ratio		0.23	0.37			0.03	0.41	0.02				0.12

Intersection Summary

Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 68 (45%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.41
 Intersection Signal Delay: 5.6 Intersection LOS: A
 Intersection Capacity Utilization 47.3% ICU Level of Service A
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Pheasant Run & Il 64



Lanes, Volumes, Timings
 2: Pheasant Run & Il 64

10/12/2021



Lane Group	SBT	SBR
v/c Ratio		0.31
Control Delay		73.9
Queue Delay		0.0
Total Delay		73.9
LOS		E
Approach Delay	70.7	
Approach LOS	E	
Queue Length 50th (ft)		31
Queue Length 95th (ft)		67
Internal Link Dist (ft)	324	
Turn Bay Length (ft)		
Base Capacity (vph)		204
Starvation Cap Reductn		0
Spillback Cap Reductn		0
Storage Cap Reductn		0
Reduced v/c Ratio		0.16
Intersection Summary		

Intersection

Int Delay, s/veh 0.2

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations	⇐ ↑↑↑	↑↑↑	↗		⇐ ↑↑↑	↑↑↑	↘	
Traffic Vol, veh/h	1	1624	1	4	3	1696	4	10
Future Vol, veh/h	1	1624	1	4	3	1696	4	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	None
Storage Length	200	-	180	-	200	-	0	-
Veh in Median Storage, #	-	0	-	-	-	0	1	-
Grade, %	-	0	-	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	5	0	0	0	3	0	0
Mvmt Flow	1	1765	1	4	3	1843	4	11

Major/Minor	Major1		Major2		Minor1		
Conflicting Flow All	1346	0	0	1289	1766	0	2518
Stage 1	-	-	-	-	-	-	1767
Stage 2	-	-	-	-	-	-	751
Critical Hdwy	5.6	-	-	5.6	5.3	-	5.7
Critical Hdwy Stg 1	-	-	-	-	-	-	6.6
Critical Hdwy Stg 2	-	-	-	-	-	-	6
Follow-up Hdwy	2.3	-	-	2.3	3.1	-	3.8
Pot Cap-1 Maneuver	288	-	-	309	168	-	50
Stage 1	-	-	-	-	-	-	82
Stage 2	-	-	-	-	-	-	392
Platoon blocked, %	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	288	-	-	223	223	-	48
Mov Cap-2 Maneuver	-	-	-	-	-	-	72
Stage 1	-	-	-	-	-	-	82
Stage 2	-	-	-	-	-	-	378

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	32.3
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBU	EBT	EBR	WBL	WBT
Capacity (veh/h)	147	288	-	-	223	-
HCM Lane V/C Ratio	0.104	0.004	-	-	0.034	-
HCM Control Delay (s)	32.3	17.5	-	-	21.7	-
HCM Lane LOS	D	C	-	-	C	-
HCM 95th %tile Q(veh)	0.3	0	-	-	0.1	-

HCM 6th TWSC
4: Kautz Road & North EGC Access

08/18/2021

Intersection						
Int Delay, s/veh	2.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↵	↶	↵	↕↕	↕↶	
Traffic Vol, veh/h	147	42	43	720	273	151
Future Vol, veh/h	147	42	43	720	273	151
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	110	0	140	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	156	45	46	766	290	161
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	846	226	451	0	-	0
Stage 1	371	-	-	-	-	-
Stage 2	475	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	305	783	1120	-	-	-
Stage 1	674	-	-	-	-	-
Stage 2	597	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	292	783	1120	-	-	-
Mov Cap-2 Maneuver	416	-	-	-	-	-
Stage 1	646	-	-	-	-	-
Stage 2	597	-	-	-	-	-
Approach	EB	NB	SB			
HCM Control Delay, s	16.8	0.5	0			
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1120	-	416	783	-	-
HCM Lane V/C Ratio	0.041	-	0.376	0.057	-	-
HCM Control Delay (s)	8.4	-	18.8	9.9	-	-
HCM Lane LOS	A	-	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	1.7	0.2	-	-

HCM 6th TWSC
5: Kautz Road & South EGC Access

08/18/2021

Intersection

Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↘	↗	↘	↗	↗↗	
Traffic Vol, veh/h	43	35	52	720	305	10
Future Vol, veh/h	43	35	52	720	305	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	175	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	44	36	53	735	311	10

Major/Minor

	Minor2	Major1		Major2		
Conflicting Flow All	1157	161	321	0	-	0
Stage 1	316	-	-	-	-	-
Stage 2	841	-	-	-	-	-
Critical Hdwy	6.6	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	205	862	1250	-	-	-
Stage 1	718	-	-	-	-	-
Stage 2	426	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	196	862	1250	-	-	-
Mov Cap-2 Maneuver	322	-	-	-	-	-
Stage 1	688	-	-	-	-	-
Stage 2	426	-	-	-	-	-

Approach

	EB	NB	SB
HCM Control Delay, s	14.1	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt

	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1250	-	322	862	-	-
HCM Lane V/C Ratio	0.042	-	0.136	0.041	-	-
HCM Control Delay (s)	8	-	17.9	9.4	-	-
HCM Lane LOS	A	-	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	0.1	-	-

HCM 6th TWSC
6: Kautz Road

08/18/2021

Intersection

Int Delay, s/veh 1.9

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations	Y		Y	↑	↑	↑
Traffic Vol, veh/h	77	38	40	695	300	40
Future Vol, veh/h	77	38	40	695	300	40
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	-	105	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	3	2	2	0
Mvmt Flow	79	39	41	709	306	41

Major/Minor Minor2 Major1 Major2

Conflicting Flow All	1097	306	347	0	-	0
Stage 1	306	-	-	-	-	-
Stage 2	791	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.13	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.227	-	-	-
Pot Cap-1 Maneuver	238	739	1206	-	-	-
Stage 1	751	-	-	-	-	-
Stage 2	450	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	230	739	1206	-	-	-
Mov Cap-2 Maneuver	349	-	-	-	-	-
Stage 1	725	-	-	-	-	-
Stage 2	450	-	-	-	-	-

Approach EB NB SB

HCM Control Delay, s	16.7	0.4	0
HCM LOS	C		

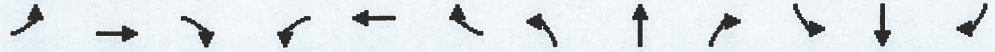
Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h)	1206	-	423	-	-
HCM Lane V/C Ratio	0.034	-	0.277	-	-
HCM Control Delay (s)	8.1	-	16.7	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	1.1	-	-

Capacity Analysis Summary Sheets
2027 No Build Weekday Morning Peak Hour Conditions

Lanes, Volumes, Timings
1: Kautz Road/Smith Road & II 64

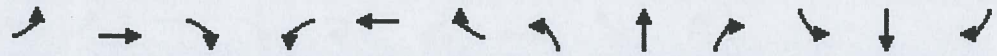
10/12/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	187	1450	82	277	1036	53	33	106	226	113	192	167
Future Volume (vph)	187	1450	82	277	1036	53	33	106	226	113	192	167
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	255		200	300		190	200		580	195		0
Storage Lanes	2		1	2		1	1		0	1		1
Taper Length (ft)	300			300			175			175		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3367	5103	1482	3183	5009	1524	1492	1980	1482	1736	1961	1524
Flt Permitted	0.950			0.950			0.412			0.579		
Satd. Flow (perm)	3367	5103	1482	3183	5009	1524	647	1980	1482	1058	1961	1524
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			40			40	
Link Distance (ft)		2097			2145			538			1315	
Travel Time (s)		31.8			32.5			9.2			22.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	7%	9%	10%	9%	6%	21%	1%	9%	4%	2%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	213	1648	93	315	1177	60	38	120	257	128	218	190
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases			2			6	8		8	4		4
Detector Phase	5	2	3	1	6	7	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	3.0	15.0	3.0	3.0	15.0	3.0	3.0	8.0	8.0	3.0	8.0	8.0
Minimum Split (s)	7.5	21.0	6.5	7.5	21.0	6.5	6.5	14.0	14.0	6.5	14.0	14.0
Total Split (s)	18.0	67.0	13.0	23.0	72.0	13.0	13.0	27.0	27.0	13.0	27.0	27.0
Total Split (%)	13.8%	51.5%	10.0%	17.7%	55.4%	10.0%	10.0%	20.8%	20.8%	10.0%	20.8%	20.8%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	3.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	1.0	1.5	0.0	1.0	1.5	0.0	0.0	1.5	1.5	0.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	3.5	4.5	6.0	3.5	3.5	6.0	6.0	3.5	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	None	C-Min	None	None	None	None	None	None	None
Act Effct Green (s)	12.5	62.6	76.4	16.9	67.0	82.4	31.4	21.2	21.2	34.6	22.8	22.8
Actuated g/C Ratio	0.10	0.48	0.59	0.13	0.52	0.63	0.24	0.16	0.16	0.27	0.18	0.18

Lanes, Volumes, Timings
 1: Kautz Road/Smith Road & II 64

10/12/2021

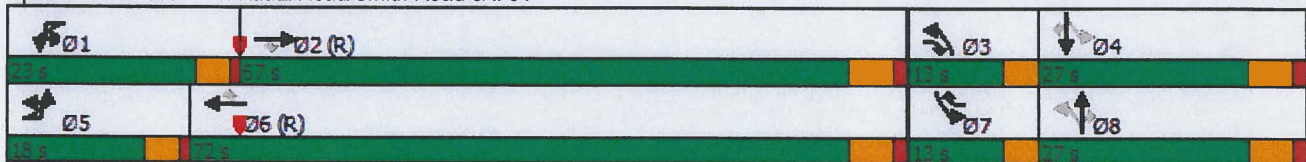


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.66	0.67	0.11	0.76	0.46	0.06	0.18	0.37	1.07	0.39	0.64	0.71
Control Delay	66.9	27.7	12.3	59.7	26.5	9.5	37.0	52.5	128.1	40.5	59.6	66.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.9	27.7	12.3	59.7	26.5	9.5	37.0	52.5	128.1	40.5	59.6	66.7
LOS	E	C	B	E	C	A	D	D	F	D	E	E
Approach Delay		31.3			32.6			97.9			57.6	
Approach LOS		C			C			F			E	
Queue Length 50th (ft)	89	387	33	132	213	18	24	91	~240	84	173	153
Queue Length 95th (ft)	129	430	57	179	334	36	51	150	#400	137	257	#261
Internal Link Dist (ft)		2017			2065			458			1235	
Turn Bay Length (ft)	255		200	300		190	200		580	195		
Base Capacity (vph)	349	2458	890	452	2583	967	226	322	241	331	343	266
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.67	0.10	0.70	0.46	0.06	0.17	0.37	1.07	0.39	0.64	0.71

Intersection Summary

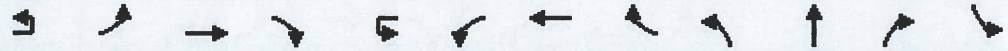
Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 32 (25%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.07
 Intersection Signal Delay: 41.1 Intersection LOS: D
 Intersection Capacity Utilization 71.9% ICU Level of Service C
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Kautz Road/Smith Road & II 64



Lanes, Volumes, Timings
2: Pheasant Run & Il 64

10/12/2021



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations		↔	↕↕↕	↗		↔	↕↕↕	↗	↖	↕	↗	↖
Traffic Volume (vph)	8	22	1663	96	3	96	1301	16	35	0	36	7
Future Volume (vph)	8	22	1663	96	3	96	1301	16	35	0	36	7
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	1900	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)			0%				0%			0%		
Storage Length (ft)		190		195		200		200	100		100	80
Storage Lanes		1		1		1		1	1		1	1
Taper Length (ft)		200				200			100			115
Lane Util. Factor	0.91	1.00	0.91	1.00	0.91	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt				0.850				0.850			0.850	
Flt Protected		0.950				0.950			0.950			0.950
Satd. Flow (prot)	0	1805	5056	1615	0	1805	5009	1615	1805	2000	1615	1805
Flt Permitted		0.950				0.950			0.469			0.757
Satd. Flow (perm)	0	1805	5056	1615	0	1805	5009	1615	891	2000	1615	1438
Right Turn on Red				No				No			No	
Satd. Flow (RTOR)												
Link Speed (mph)			45				45			30		
Link Distance (ft)			2145				1836			1071		
Travel Time (s)			32.5				27.8			24.3		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	8%	0%	0%	0%	9%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)			0%				0%			0%		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	33	1788	103	0	106	1399	17	38	0	39	8
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	pm+ov	pm+pt		Perm	pm+pt
Protected Phases	5	5	2	3	1	1	6	7	3	8		7
Permitted Phases				2				6	8		8	4
Detector Phase	5	5	2	3	1	1	6	7	3	8	8	7
Switch Phase												
Minimum Initial (s)	3.0	3.0	15.0	3.0	3.0	3.0	15.0	3.0	3.0	8.0	8.0	3.0
Minimum Split (s)	7.5	7.5	21.0	7.5	7.5	7.5	21.0	7.5	7.5	14.0	14.0	7.5
Total Split (s)	14.0	14.0	78.0	13.0	14.0	14.0	78.0	13.0	13.0	25.0	25.0	13.0
Total Split (%)	10.8%	10.8%	60.0%	10.0%	10.8%	10.8%	60.0%	10.0%	10.0%	19.2%	19.2%	10.0%
Yellow Time (s)	3.5	3.5	4.5	3.5	3.5	3.5	4.5	3.5	3.5	4.5	4.5	3.5
All-Red Time (s)	1.0	1.0	1.5	0.0	1.0	1.0	1.5	0.0	0.0	1.5	1.5	0.0
Lost Time Adjust (s)		0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	6.0	3.5			4.5	6.0	3.5	3.5	6.0	3.5
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Min	None	None	None	C-Min	None	None	None	None	None
Act Effect Green (s)		7.9	83.5	99.0			13.7	93.6	105.6	18.0	10.3	13.3
Actuated g/C Ratio		0.06	0.64	0.76			0.11	0.72	0.81	0.14	0.08	0.10

Lanes, Volumes, Timings
2: Pheasant Run & II 64

10/12/2021

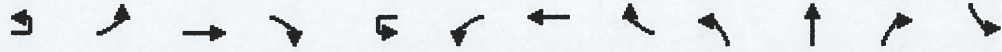


Lane Group	SBT	SBR
Lane Configurations	↑	↑
Traffic Volume (vph)	0	22
Future Volume (vph)	0	22
Ideal Flow (vphpl)	2000	1900
Lane Width (ft)	12	12
Grade (%)	0%	
Storage Length (ft)		0
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Ped Bike Factor		
Frt		0.850
Flt Protected		
Satd. Flow (prot)	2000	1615
Flt Permitted		
Satd. Flow (perm)	2000	1615
Right Turn on Red		No
Satd. Flow (RTOR)		
Link Speed (mph)	30	
Link Distance (ft)	404	
Travel Time (s)	9.2	
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor	0.93	0.93
Growth Factor	100%	100%
Heavy Vehicles (%)	0%	0%
Bus Blockages (#/hr)	0	0
Parking (#/hr)		
Mid-Block Traffic (%)	0%	
Shared Lane Traffic (%)		
Lane Group Flow (vph)	0	24
Turn Type		Perm
Protected Phases	4	
Permitted Phases		4
Detector Phase	4	4
Switch Phase		
Minimum Initial (s)	8.0	8.0
Minimum Split (s)	14.0	14.0
Total Split (s)	25.0	25.0
Total Split (%)	19.2%	19.2%
Yellow Time (s)	4.5	4.5
All-Red Time (s)	1.5	1.5
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	6.0	6.0
Lead/Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effect Green (s)		8.9
Actuated g/C Ratio		0.07

Lanes, Volumes, Timings

2: Pheasant Run & Il 64

10/12/2021



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
v/c Ratio		0.30	0.55	0.08		0.56	0.39	0.01	0.20		0.30	0.05
Control Delay		71.2	7.2	3.6		66.1	9.2	4.8	47.7		61.9	43.6
Queue Delay		0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0
Total Delay		71.2	7.2	3.6		66.1	9.2	4.8	47.7		61.9	43.6
LOS		E	A	A		E	A	A	D		E	D
Approach Delay			8.1				13.1			54.9		
Approach LOS			A				B			D		
Queue Length 50th (ft)		29	112	13		86	187	3	28		32	6
Queue Length 95th (ft)		m44	m119	m18		144	256	11	58		68	20
Internal Link Dist (ft)			2065				1756			991		
Turn Bay Length (ft)		190		195		200		200	100		100	80
Base Capacity (vph)		134	3248	1235		191	3605	1355	196		236	211
Starvation Cap Reductn		0	0	0		0	0	0	0		0	0
Spillback Cap Reductn		0	0	0		0	0	0	0		0	0
Storage Cap Reductn		0	0	0		0	0	0	0		0	0
Reduced v/c Ratio		0.25	0.55	0.08		0.55	0.39	0.01	0.19		0.17	0.04

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 59 (45%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.56

Intersection Signal Delay: 11.7

Intersection LOS: B

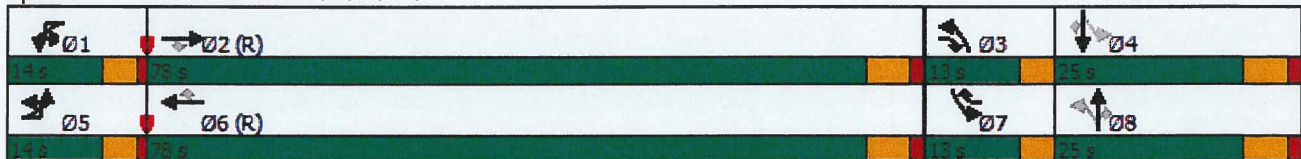
Intersection Capacity Utilization 63.1%

ICU Level of Service B

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Pheasant Run & Il 64



Lanes, Volumes, Timings
 2: Pheasant Run & Il 64

10/12/2021



Lane Group	SBT	SBR
v/c Ratio		0.22
Control Delay		61.5
Queue Delay		0.0
Total Delay		61.5
LOS		E
Approach Delay	57.1	
Approach LOS	E	
Queue Length 50th (ft)		20
Queue Length 95th (ft)		48
Internal Link Dist (ft)	324	
Turn Bay Length (ft)		
Base Capacity (vph)		236
Starvation Cap Reductn		0
Spillback Cap Reductn		0
Storage Cap Reductn		0
Reduced v/c Ratio		0.10
Intersection Summary		

Intersection

Int Delay, s/veh 0.2

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations	↔	↑↑↑	↗		↖	↑↑↑	↘	↙
Traffic Vol, veh/h	3	1706	0	4	12	1413	0	3
Future Vol, veh/h	3	1706	0	4	12	1413	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	None
Storage Length	200	-	180	-	200	-	0	-
Veh in Median Storage, #	-	0	-	-	-	0	1	-
Grade, %	-	0	-	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	8	0	0	0	9	0	0
Mvmt Flow	3	1854	0	4	13	1536	0	3

Major/Minor	Major1		Major2		Minor1			
Conflicting Flow All	1121	0	0	1354	1854	0	2508	927
Stage 1	-	-	-	-	-	-	1860	-
Stage 2	-	-	-	-	-	-	648	-
Critical Hdwy	5.6	-	-	5.6	5.3	-	5.7	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-	6.6	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6	-
Follow-up Hdwy	2.3	-	-	2.3	3.1	-	3.8	3.9
Pot Cap-1 Maneuver	383	-	-	285	152	-	51	235
Stage 1	-	-	-	-	-	-	71	-
Stage 2	-	-	-	-	-	-	444	-
Platoon blocked, %	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	383	-	-	172	172	-	46	235
Mov Cap-2 Maneuver	-	-	-	-	-	-	62	-
Stage 1	-	-	-	-	-	-	70	-
Stage 2	-	-	-	-	-	-	400	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	20.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBU	EBT	EBR	WBL	WBT
Capacity (veh/h)	235	383	-	-	172	-
HCM Lane V/C Ratio	0.014	0.009	-	-	0.101	-
HCM Control Delay (s)	20.5	14.5	-	-	28.3	-
HCM Lane LOS	C	B	-	-	D	-
HCM 95th %tile Q(veh)	0	0	-	-	0.3	-

HCM 6th TWSC
4: Kautz Road & North EGC Access

08/18/2021

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↘	↗	↘	↕↕	↕↕	
Traffic Vol, veh/h	9	5	4	356	525	26
Future Vol, veh/h	9	5	4	356	525	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	110	0	140	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	20	0	8	7	12
Mvmt Flow	10	6	5	409	603	30

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	833	317	633	0	-	0
Stage 1	618	-	-	-	-	-
Stage 2	215	-	-	-	-	-
Critical Hdwy	6.8	7.3	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.5	2.2	-	-	-
Pot Cap-1 Maneuver	311	628	960	-	-	-
Stage 1	506	-	-	-	-	-
Stage 2	806	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	309	628	960	-	-	-
Mov Cap-2 Maneuver	409	-	-	-	-	-
Stage 1	503	-	-	-	-	-
Stage 2	806	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.9	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	960	-	409	628	-	-
HCM Lane V/C Ratio	0.005	-	0.025	0.009	-	-
HCM Control Delay (s)	8.8	-	14	10.8	-	-
HCM Lane LOS	A	-	B	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	0	-	-

HCM 6th TWSC
5: Kautz Road & South EGC Access

08/18/2021

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↖	↖	↖	↖↖	↖↖
Traffic Vol, veh/h	3	11	14	357	522	8
Future Vol, veh/h	3	11	14	357	522	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	175	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	8	7	0
Mvmt Flow	3	12	16	401	587	9

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1025	298	596	0	-	0
Stage 1	592	-	-	-	-	-
Stage 2	433	-	-	-	-	-
Critical Hdwy	6.6	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	248	704	990	-	-	-
Stage 1	521	-	-	-	-	-
Stage 2	658	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	244	704	990	-	-	-
Mov Cap-2 Maneuver	372	-	-	-	-	-
Stage 1	513	-	-	-	-	-
Stage 2	658	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.2	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	990	-	372	704	-	-
HCM Lane V/C Ratio	0.016	-	0.009	0.018	-	-
HCM Control Delay (s)	8.7	-	14.8	10.2	-	-
HCM Lane LOS	A	-	B	B	-	-
HCM 95th %tile Q(veh)	0	-	0	0.1	-	-

Intersection

Int Delay, s/veh 1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		W	U	U	W
Traffic Vol, veh/h	36	31	32	335	471	62
Future Vol, veh/h	36	31	32	335	471	62
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	-	105	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	3	3	0	8	6	11
Mvmt Flow	42	36	37	390	548	72

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1012	548	620	0	-	0
Stage 1	548	-	-	-	-	-
Stage 2	464	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.1	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.2	-	-	-
Pot Cap-1 Maneuver	264	534	970	-	-	-
Stage 1	577	-	-	-	-	-
Stage 2	631	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	254	534	970	-	-	-
Mov Cap-2 Maneuver	385	-	-	-	-	-
Stage 1	555	-	-	-	-	-
Stage 2	631	-	-	-	-	-

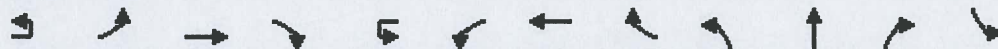
Approach	EB	NB	SB
HCM Control Delay, s	14.9	0.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	970	-	442	-	-
HCM Lane V/C Ratio	0.038	-	0.176	-	-
HCM Control Delay (s)	8.9	-	14.9	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	-	-

Capacity Analysis Summary Sheets
2027 No Build Weekday Evening Peak Hour Conditions

Lanes, Volumes, Timings
1: Kautz Road/Smith Road & II 64

10/12/2021



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	7	226	1174	59	7	223	1578	71	179	275	469	122
Future Volume (vph)	7	226	1174	59	7	223	1578	71	179	275	469	122
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	1900	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)			0%				0%			0%		
Storage Length (ft)		255		200		300		190	200		580	195
Storage Lanes		2		1		2		1	1		0	1
Taper Length (ft)		300				300			175			175
Lane Util. Factor	0.91	0.97	0.91	1.00	0.91	0.97	0.91	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt				0.850				0.850			0.850	
Flt Protected		0.950				0.950			0.950			0.950
Satd. Flow (prot)	0	3435	5151	1615	0	3435	5301	1538	1787	2000	1568	1787
Flt Permitted		0.950				0.950			0.444			0.291
Satd. Flow (perm)	0	3435	5151	1615	0	3435	5301	1538	835	2000	1568	547
Right Turn on Red				No				No			No	
Satd. Flow (RTOR)												
Link Speed (mph)			45				45			40		
Link Distance (ft)			2097				2145			538		
Travel Time (s)			31.8				32.5			9.2		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	6%	0%	0%	2%	3%	5%	1%	0%	3%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)			0%				0%			0%		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	240	1210	61	0	237	1627	73	185	284	484	126
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	pm+ov	pm+pt	NA	Perm	pm+pt
Protected Phases	5	5	2	3	1	1	6	7	3	8		7
Permitted Phases				2				6	8		8	4
Detector Phase	5	5	2	3	1	1	6	7	3	8	8	7
Switch Phase												
Minimum Initial (s)	3.0	3.0	15.0	3.0	3.0	3.0	15.0	3.0	3.0	8.0	8.0	3.0
Minimum Split (s)	7.5	7.5	21.0	6.5	7.5	7.5	21.0	6.5	6.5	14.0	14.0	6.5
Total Split (s)	20.0	20.0	73.0	18.0	24.0	24.0	77.0	18.0	18.0	35.0	35.0	18.0
Total Split (%)	13.3%	13.3%	48.7%	12.0%	16.0%	16.0%	51.3%	12.0%	12.0%	23.3%	23.3%	12.0%
Yellow Time (s)	3.5	3.5	4.5	3.5	3.5	3.5	4.5	3.5	3.5	4.5	4.5	3.5
All-Red Time (s)	1.0	1.0	1.5	0.0	1.0	1.0	1.5	0.0	0.0	1.5	1.5	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
Total Lost Time (s)		4.5	6.0	3.5		4.5	6.0	3.5	3.5	6.0	6.0	3.5
Lead/Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Min	None	None	None	C-Min	None	None	None	None	None
Act Effct Green (s)		14.4	70.9	90.8		15.6	72.1	90.6	47.4	31.0	31.0	44.6
Actuated g/C Ratio		0.10	0.47	0.61		0.10	0.48	0.60	0.32	0.21	0.21	0.30

Lanes, Volumes, Timings
 1: Kautz Road/Smith Road & II 64

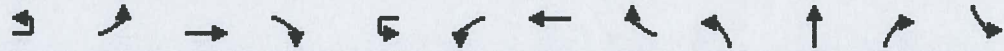
10/12/2021



Lane Group	SBT	SBR
Lane Configurations	↑	↑
Traffic Volume (vph)	182	237
Future Volume (vph)	182	237
Ideal Flow (vphpl)	2000	1900
Lane Width (ft)	12	12
Grade (%)	0%	
Storage Length (ft)		0
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Ped Bike Factor		
Frt		0.850
Flt Protected		
Satd. Flow (prot)	2000	1615
Flt Permitted		
Satd. Flow (perm)	2000	1615
Right Turn on Red		No
Satd. Flow (RTOR)		
Link Speed (mph)	40	
Link Distance (ft)	1315	
Travel Time (s)	22.4	
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor	0.97	0.97
Growth Factor	100%	100%
Heavy Vehicles (%)	0%	0%
Bus Blockages (#/hr)	0	0
Parking (#/hr)		
Mid-Block Traffic (%)	0%	
Shared Lane Traffic (%)		
Lane Group Flow (vph)	188	244
Turn Type	NA	Perm
Protected Phases	4	
Permitted Phases		4
Detector Phase	4	4
Switch Phase		
Minimum Initial (s)	8.0	8.0
Minimum Split (s)	14.0	14.0
Total Split (s)	35.0	35.0
Total Split (%)	23.3%	23.3%
Yellow Time (s)	4.5	4.5
All-Red Time (s)	1.5	1.5
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	6.0	6.0
Lead/Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)	29.6	29.6
Actuated g/C Ratio	0.20	0.20

Lanes, Volumes, Timings
 1: Kautz Road/Smith Road & Il 64

10/12/2021



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
v/c Ratio		0.73	0.50	0.06		0.67	0.64	0.08	0.53	0.69	1.50	0.47
Control Delay		79.1	28.4	12.8		70.8	27.3	11.0	43.9	65.3	278.9	42.7
Queue Delay		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		79.1	28.4	12.8		70.8	27.3	11.0	43.9	65.3	278.9	42.7
LOS		E	C	B		E	C	B	D	E	F	D
Approach Delay			35.9				32.0			169.6		
Approach LOS			D				C			F		
Queue Length 50th (ft)		118	294	23		122	282	24	135	261	~660	89
Queue Length 95th (ft)		167	355	47		168	382	39	205	372	#900	143
Internal Link Dist (ft)			2017				2065			458		
Turn Bay Length (ft)		255		200		300		190	200		580	195
Base Capacity (vph)		354	2436	984		446	2547	949	357	413	323	289
Starvation Cap Reductn		0	0	0		0	0	0	0	0	0	0
Spillback Cap Reductn		0	0	0		0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0		0	0	0	0	0	0	0
Reduced v/c Ratio		0.68	0.50	0.06		0.53	0.64	0.08	0.52	0.69	1.50	0.44

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 53 (35%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.50

Intersection Signal Delay: 63.0

Intersection LOS: E

Intersection Capacity Utilization 81.0%

ICU Level of Service D

Analysis Period (min) 15

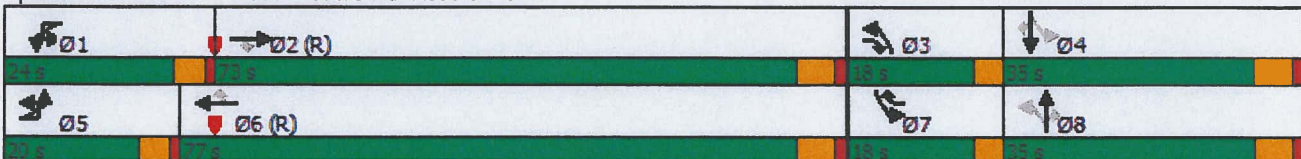
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Kautz Road/Smith Road & Il 64



Lanes, Volumes, Timings
 1: Kautz Road/Smith Road & II 64

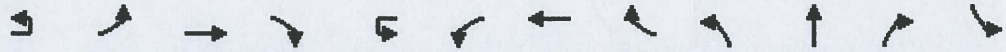
10/12/2021



Lane Group	SBT	SBR
v/c Ratio	0.48	0.76
Control Delay	58.3	73.7
Queue Delay	0.0	0.0
Total Delay	58.3	73.7
LOS	E	E
Approach Delay	61.5	
Approach LOS	E	
Queue Length 50th (ft)	166	230
Queue Length 95th (ft)	247	#359
Internal Link Dist (ft)	1235	
Turn Bay Length (ft)		
Base Capacity (vph)	394	319
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.48	0.76
Intersection Summary		

Lanes, Volumes, Timings
2: Pheasant Run & Il 64

10/12/2021



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations		↔	↑↑↑	↗		↔	↑↑↑	↗	↖	↑	↗	↖
Traffic Volume (vph)	3	33	1681	55	5	55	1759	27	84	0	81	23
Future Volume (vph)	3	33	1681	55	5	55	1759	27	84	0	81	23
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	1900	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)			0%				0%			0%		
Storage Length (ft)		190		195		200		200	100		100	80
Storage Lanes		1		1		1		1	1		1	1
Taper Length (ft)		200				200			100			115
Lane Util. Factor	0.91	1.00	0.91	1.00	0.91	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frnt				0.850				0.850			0.850	
Fit Protected		0.950				0.950			0.950			0.950
Satd. Flow (prot)	0	1805	5200	1615	0	1805	5301	1615	1805	2000	1615	1805
Fit Permitted		0.950				0.950			0.533			0.757
Satd. Flow (perm)	0	1805	5200	1615	0	1805	5301	1615	1013	2000	1615	1438
Right Turn on Red				No				No			No	
Satd. Flow (RTOR)												
Link Speed (mph)			45				45			30		
Link Distance (ft)			2145				1836			1071		
Travel Time (s)			32.5				27.8			24.3		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	5%	0%	0%	0%	3%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)			0%				0%			0%		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	37	1751	57	0	62	1832	28	88	0	84	24
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	pm+ov	pm+pt		Perm	pm+pt
Protected Phases	5	5	2	3	1	1	6	7	3	8		7
Permitted Phases				2				6	8		8	4
Detector Phase	5	5	2	3	1	1	6	7	3	8	8	7
Switch Phase												
Minimum Initial (s)	3.0	3.0	15.0	3.0	3.0	3.0	15.0	3.0	3.0	8.0	8.0	3.0
Minimum Split (s)	7.5	7.5	21.0	7.5	7.5	7.5	21.0	7.5	7.5	14.0	14.0	7.5
Total Split (s)	17.0	17.0	88.0	20.0	17.0	17.0	88.0	20.0	20.0	25.0	25.0	20.0
Total Split (%)	11.3%	11.3%	58.7%	13.3%	11.3%	11.3%	58.7%	13.3%	13.3%	16.7%	16.7%	13.3%
Yellow Time (s)	3.5	3.5	4.5	3.5	3.5	3.5	4.5	3.5	3.5	4.5	4.5	3.5
All-Red Time (s)	1.0	1.0	1.5	0.0	1.0	1.0	1.5	0.0	0.0	1.5	1.5	0.0
Lost Time Adjust (s)		0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	6.0	3.5			4.5	6.0	3.5	3.5	6.0	3.5
Lead/Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Min	None	None	None	C-Min	None	None	None	None	None
Act Effct Green (s)		8.5	102.1	121.3			10.5	103.9	117.1	25.6		14.2
Actuated g/C Ratio		0.06	0.68	0.81			0.07	0.69	0.78	0.17		0.09

Lanes, Volumes, Timings
2: Pheasant Run & Il 64

10/12/2021



Lane Group	SBT	SBR
Lane Configurations	↑	↑
Traffic Volume (vph)	0	33
Future Volume (vph)	0	33
Ideal Flow (vphpl)	2000	1900
Lane Width (ft)	12	12
Grade (%)	0%	
Storage Length (ft)		0
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Ped Bike Factor		
Frt		0.850
Flt Protected		
Satd. Flow (prot)	2000	1615
Flt Permitted		
Satd. Flow (perm)	2000	1615
Right Turn on Red		No
Satd. Flow (RTOR)		
Link Speed (mph)	30	
Link Distance (ft)	404	
Travel Time (s)	9.2	
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor	0.96	0.96
Growth Factor	100%	100%
Heavy Vehicles (%)	0%	0%
Bus Blockages (#/hr)	0	0
Parking (#/hr)		
Mid-Block Traffic (%)	0%	
Shared Lane Traffic (%)		
Lane Group Flow (vph)	0	34
Turn Type		Perm
Protected Phases	4	
Permitted Phases		4
Detector Phase	4	4
Switch Phase		
Minimum Initial (s)	8.0	8.0
Minimum Split (s)	14.0	14.0
Total Split (s)	25.0	25.0
Total Split (%)	16.7%	16.7%
Yellow Time (s)	4.5	4.5
All-Red Time (s)	1.5	1.5
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	6.0	6.0
Lead/Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)		9.9
Actuated g/C Ratio		0.07

Lanes, Volumes, Timings
2: Pheasant Run & Il 64

10/12/2021

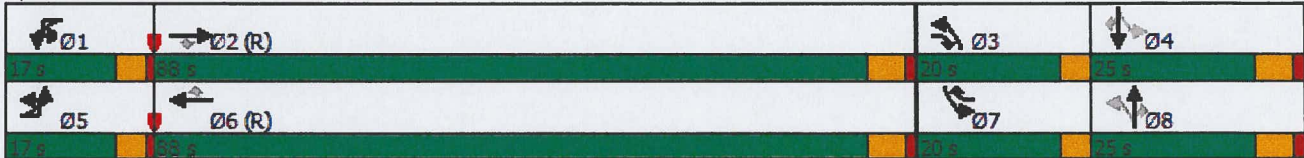


Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
v/c Ratio		0.36	0.49	0.04		0.49	0.50	0.02	0.37		0.55	0.13
Control Delay		74.0	8.9	4.8		79.5	13.1	5.8	56.3		77.7	50.0
Queue Delay		0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0
Total Delay		74.0	8.9	4.8		79.5	13.1	5.8	56.3		77.7	50.0
LOS		E	A	A		E	B	A	E		E	D
Approach Delay			10.1				15.2			66.7		
Approach LOS			B				B			E		
Queue Length 50th (ft)		35	232	12		60	312	6	75		80	20
Queue Length 95th (ft)		m56	m225	m26		108	428	18	123		135	45
Internal Link Dist (ft)			2065				1756			991		
Turn Bay Length (ft)		190		195		200		200	100		100	80
Base Capacity (vph)		150	3540	1338		155	3672	1357	266		205	289
Starvation Cap Reductn		0	0	0		0	0	0	0		0	0
Spillback Cap Reductn		0	0	0		0	0	0	0		0	0
Storage Cap Reductn		0	0	0		0	0	0	0		0	0
Reduced v/c Ratio		0.25	0.49	0.04		0.40	0.50	0.02	0.33		0.41	0.08

Intersection Summary

Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 68 (45%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.55
 Intersection Signal Delay: 15.7
 Intersection LOS: B
 Intersection Capacity Utilization 64.0%
 ICU Level of Service C
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Pheasant Run & Il 64



Lanes, Volumes, Timings
 2: Pheasant Run & Il 64

10/12/2021



Lane Group	SBT	SBR
v/c Ratio		0.32
Control Delay		74.2
Queue Delay		0.0
Total Delay		74.2
LOS		E
Approach Delay	64.1	
Approach LOS	E	
Queue Length 50th (ft)		32
Queue Length 95th (ft)		70
Internal Link Dist (ft)	324	
Turn Bay Length (ft)		
Base Capacity (vph)		204
Starvation Cap Reductn		0
Spillback Cap Reductn		0
Storage Cap Reductn		0
Reduced v/c Ratio		0.17
Intersection Summary		

Intersection

Int Delay, s/veh 0.2

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations	↔ ↑↑↑		↔		↔ ↑↑↑		↔	
Traffic Vol, veh/h	1	1788	1	4	3	1841	4	11
Future Vol, veh/h	1	1788	1	4	3	1841	4	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	None
Storage Length	200	-	180	-	200	-	0	-
Veh in Median Storage, #	-	0	-	-	-	0	1	-
Grade, %	-	0	-	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	5	0	0	0	3	0	0
Mvmt Flow	1	1943	1	4	3	2001	4	12

Major/Minor	Major1		Major2		Minor1		
Conflicting Flow All	1461	0	0	1419	1944	0	2759
Stage 1	-	-	-	-	-	-	1945
Stage 2	-	-	-	-	-	-	814
Critical Hdwy	5.6	-	-	5.6	5.3	-	5.7
Critical Hdwy Stg 1	-	-	-	-	-	-	6.6
Critical Hdwy Stg 2	-	-	-	-	-	-	6
Follow-up Hdwy	2.3	-	-	2.3	3.1	-	3.8
Pot Cap-1 Maneuver	248	-	-	262	137	-	37
Stage 1	-	-	-	-	-	-	63
Stage 2	-	-	-	-	-	-	364
Platoon blocked, %	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	248	-	-	184	184	-	35
Mov Cap-2 Maneuver	-	-	-	-	-	-	55
Stage 1	-	-	-	-	-	-	63
Stage 2	-	-	-	-	-	-	348

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	39
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBU	EBT	EBR	WBL	WBT
Capacity (veh/h)	122	248	-	-	184	-
HCM Lane V/C Ratio	0.134	0.004	-	-	0.041	-
HCM Control Delay (s)	39	19.6	-	-	25.4	-
HCM Lane LOS	E	C	-	-	D	-
HCM 95th %tile Q(veh)	0.4	0	-	-	0.1	-

Intersection

Int Delay, s/veh 2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	154	44	45	769	305	159
Future Vol, veh/h	154	44	45	769	305	159
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	110	0	140	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	164	47	48	818	324	169

Major/Minor

	Minor2	Major1	Major2			
Conflicting Flow All	914	247	493	0	-	0
Stage 1	409	-	-	-	-	-
Stage 2	505	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	276	759	1081	-	-	-
Stage 1	645	-	-	-	-	-
Stage 2	577	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	264	759	1081	-	-	-
Mov Cap-2 Maneuver	392	-	-	-	-	-
Stage 1	617	-	-	-	-	-
Stage 2	577	-	-	-	-	-

Approach

	EB	NB	SB
HCM Control Delay, s	18.3	0.5	0
HCM LOS	C		

Minor Lane/Major Mvmt

	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1081	-	392	759	-	-
HCM Lane V/C Ratio	0.044	-	0.418	0.062	-	-
HCM Control Delay (s)	8.5	-	20.6	10.1	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	2	0.2	-	-

HCM 6th TWSC
5: Kautz Road & South EGC Access

08/18/2021

Intersection

Int Delay, s/veh 1.3

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations	↘	↗	↘	↗	↗	↗
Traffic Vol, veh/h	45	37	55	769	338	11
Future Vol, veh/h	45	37	55	769	338	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	175	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	2	1	0
Mvmt Flow	46	38	56	785	345	11

Major/Minor Minor2 Major1 Major2

Conflicting Flow All	1248	178	356	0	-	0
Stage 1	351	-	-	-	-	-
Stage 2	897	-	-	-	-	-
Critical Hdwy	6.6	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	180	841	1214	-	-	-
Stage 1	690	-	-	-	-	-
Stage 2	401	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	172	841	1214	-	-	-
Mov Cap-2 Maneuver	299	-	-	-	-	-
Stage 1	658	-	-	-	-	-
Stage 2	401	-	-	-	-	-

Approach EB NB SB

HCM Control Delay, s	14.8	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt NBL NBT EBLn1 EBLn2 SBT SBR

Capacity (veh/h)	1214	-	299	841	-	-
HCM Lane V/C Ratio	0.046	-	0.154	0.045	-	-
HCM Control Delay (s)	8.1	-	19.2	9.5	-	-
HCM Lane LOS	A	-	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	0.1	-	-

Intersection						
Int Delay, s/veh	2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		W	U	U	W
Traffic Vol, veh/h	81	40	42	743	333	42
Future Vol, veh/h	81	40	42	743	333	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	-	105	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	2	2	2	0
Mvmt Flow	83	41	43	758	340	43

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1184	340	383	0	-	0
Stage 1	340	-	-	-	-	-
Stage 2	844	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.12	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.218	-	-	-
Pot Cap-1 Maneuver	211	707	1175	-	-	-
Stage 1	725	-	-	-	-	-
Stage 2	425	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	203	707	1175	-	-	-
Mov Cap-2 Maneuver	325	-	-	-	-	-
Stage 1	698	-	-	-	-	-
Stage 2	425	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.2	0.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1175	-	396	-	-
HCM Lane V/C Ratio	0.036	-	0.312	-	-
HCM Control Delay (s)	8.2	-	18.2	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	1.3	-	-

Capacity Analysis Summary Sheets
2027 Projected Weekday Morning Peak Hour Conditions

Lanes, Volumes, Timings
1: Kautz Road/Smith Road & II 64

10/12/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	187	1480	113	281	1041	54	37	108	229	122	208	167
Future Volume (vph)	187	1480	113	281	1041	54	37	108	229	122	208	167
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	255		200	300		190	200		580	195		0
Storage Lanes	2		1	2		1	1		0	1		1
Taper Length (ft)	300			300			175			175		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3367	5103	1495	3155	5009	1524	1517	1980	1468	1719	1961	1538
Flt Permitted	0.950			0.950			0.359			0.573		
Satd. Flow (perm)	3367	5103	1495	3155	5009	1524	573	1980	1468	1037	1961	1538
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			40			40	
Link Distance (ft)		2097			2145			538			1315	
Travel Time (s)		31.8			32.5			9.2			22.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	7%	8%	11%	9%	6%	19%	1%	10%	5%	2%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	213	1682	128	319	1183	61	42	123	260	139	236	190
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases			2			6	8		8	4		4
Detector Phase	5	2	3	1	6	7	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	3.0	15.0	3.0	3.0	15.0	3.0	3.0	8.0	8.0	3.0	8.0	8.0
Minimum Split (s)	7.5	21.0	6.5	7.5	21.0	6.5	6.5	14.0	14.0	6.5	14.0	14.0
Total Split (s)	18.0	67.0	13.0	23.0	72.0	13.0	13.0	27.0	27.0	13.0	27.0	27.0
Total Split (%)	13.8%	51.5%	10.0%	17.7%	55.4%	10.0%	10.0%	20.8%	20.8%	10.0%	20.8%	20.8%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	3.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	1.0	1.5	0.0	1.0	1.5	0.0	0.0	1.5	1.5	0.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	3.5	4.5	6.0	3.5	3.5	6.0	6.0	3.5	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	None	C-Min	None	None	None	None	None	None	None
Act Effct Green (s)	12.5	62.5	76.4	17.0	67.0	82.5	31.5	21.1	21.1	34.5	22.6	22.6
Actuated g/C Ratio	0.10	0.48	0.59	0.13	0.52	0.63	0.24	0.16	0.16	0.27	0.17	0.17

Lanes, Volumes, Timings
1: Kautz Road/Smith Road & II 64

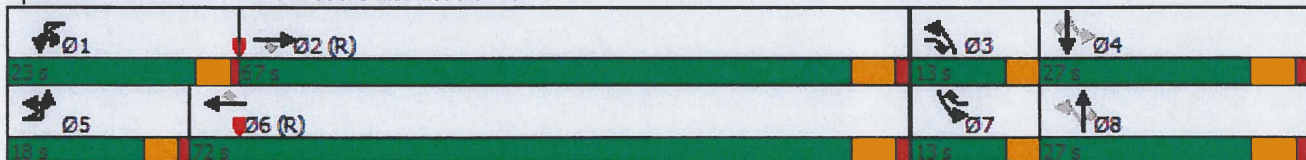
10/12/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.66	0.69	0.15	0.77	0.46	0.06	0.21	0.38	1.09	0.43	0.69	0.71
Control Delay	66.9	28.2	12.7	60.1	27.4	10.0	37.6	52.7	135.7	41.7	62.6	66.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.9	28.2	12.7	60.1	27.4	10.0	37.6	52.7	135.7	41.7	62.6	66.7
LOS	E	C	B	E	C	B	D	D	F	D	E	E
Approach Delay		31.3			33.4			102.0			58.8	
Approach LOS		C			C			F			E	
Queue Length 50th (ft)	89	401	47	135	219	18	26	94	~248	92	189	153
Queue Length 95th (ft)	129	443	76	182	347	39	55	153	#409	147	#292	#259
Internal Link Dist (ft)		2017			2065			458			1235	
Turn Bay Length (ft)	255		200	300		190	200		580	195		
Base Capacity (vph)	349	2452	896	448	2583	967	214	320	238	325	340	267
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.69	0.14	0.71	0.46	0.06	0.20	0.38	1.09	0.43	0.69	0.71

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 32 (25%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.09
 Intersection Signal Delay: 42.0 Intersection LOS: D
 Intersection Capacity Utilization 73.2% ICU Level of Service D
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

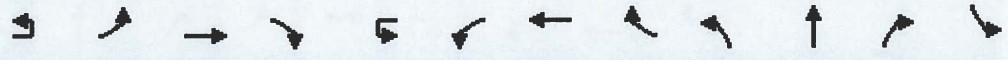
Splits and Phases: 1: Kautz Road/Smith Road & II 64



Lanes, Volumes, Timings

2: Pheasant Run & Il 64

10/12/2021



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations		↔	↑↑↑	↗		↔	↑↑↑	↗	↖	↑	↗	↖
Traffic Volume (vph)	8	22	1664	137	3	165	1305	16	41	0	48	7
Future Volume (vph)	8	22	1664	137	3	165	1305	16	41	0	48	7
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	1900	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)			0%				0%			0%		
Storage Length (ft)		190		195		200		200	100		100	80
Storage Lanes		1		1		1		1	1		1	1
Taper Length (ft)		200				200			100			115
Lane Util. Factor	0.91	1.00	0.91	1.00	0.91	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor				0.850				0.850			0.850	
Flt Protected		0.950				0.950			0.950			0.950
Satd. Flow (prot)	0	1805	5056	1524	0	1737	4964	1615	1770	2000	1583	1805
Flt Permitted		0.950				0.950			0.475			0.757
Satd. Flow (perm)	0	1805	5056	1524	0	1737	4964	1615	885	2000	1583	1438
Right Turn on Red				No				No			No	
Satd. Flow (RTOR)												
Link Speed (mph)			45				45			30		
Link Distance (ft)			2145				1836			1071		
Travel Time (s)			32.5				27.8			24.3		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	8%	6%	0%	4%	10%	0%	2%	0%	2%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)			0%				0%			0%		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	33	1789	147	0	180	1403	17	44	0	52	8
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	pm+ov	pm+pt		Perm	pm+pt
Protected Phases	5	5	2	3	1	1	6	7	3	8		7
Permitted Phases				2				6	8		8	4
Detector Phase	5	5	2	3	1	1	6	7	3	8	8	7
Switch Phase												
Minimum Initial (s)	3.0	3.0	15.0	3.0	3.0	3.0	15.0	3.0	3.0	8.0	8.0	3.0
Minimum Split (s)	7.5	7.5	21.0	7.5	7.5	7.5	21.0	7.5	7.5	14.0	14.0	7.5
Total Split (s)	14.0	14.0	78.0	13.0	14.0	14.0	78.0	13.0	13.0	25.0	25.0	13.0
Total Split (%)	10.8%	10.8%	60.0%	10.0%	10.8%	10.8%	60.0%	10.0%	10.0%	19.2%	19.2%	10.0%
Yellow Time (s)	3.5	3.5	4.5	3.5	3.5	3.5	4.5	3.5	3.5	4.5	4.5	3.5
All-Red Time (s)	1.0	1.0	1.5	0.0	1.0	1.0	1.5	0.0	0.0	1.5	1.5	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
Total Lost Time (s)		4.5	6.0	3.5		4.5	6.0	3.5	3.5	6.0	6.0	3.5
Lead/Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Min	None	None	None	C-Min	None	None	None	None	None
Act Effct Green (s)		7.9	73.2	89.0		23.5	93.0	105.1	18.8		10.9	13.5
Actuated g/C Ratio		0.06	0.56	0.68		0.18	0.72	0.81	0.14		0.08	0.10

Lanes, Volumes, Timings
2: Pheasant Run & Il 64

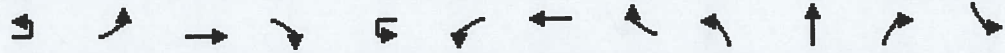
10/12/2021



Lane Group	SBT	SBR
Lane Configurations	↑	↑
Traffic Volume (vph)	0	22
Future Volume (vph)	0	22
Ideal Flow (vphpl)	2000	1900
Lane Width (ft)	12	12
Grade (%)	0%	
Storage Length (ft)		0
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Ped Bike Factor		
Frt		0.850
Flt Protected		
Satd. Flow (prot)	2000	1615
Flt Permitted		
Satd. Flow (perm)	2000	1615
Right Turn on Red		No
Satd. Flow (RTOR)		
Link Speed (mph)	30	
Link Distance (ft)	404	
Travel Time (s)	9.2	
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor	0.93	0.93
Growth Factor	100%	100%
Heavy Vehicles (%)	0%	0%
Bus Blockages (#/hr)	0	0
Parking (#/hr)		
Mid-Block Traffic (%)	0%	
Shared Lane Traffic (%)		
Lane Group Flow (vph)	0	24
Turn Type		Perm
Protected Phases	4	
Permitted Phases		4
Detector Phase	4	4
Switch Phase		
Minimum Initial (s)	8.0	8.0
Minimum Split (s)	14.0	14.0
Total Split (s)	25.0	25.0
Total Split (%)	19.2%	19.2%
Yellow Time (s)	4.5	4.5
All-Red Time (s)	1.5	1.5
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	6.0	6.0
Lead/Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)		9.1
Actuated g/C Ratio		0.07

Lanes, Volumes, Timings
2: Pheasant Run & Il 64

10/12/2021

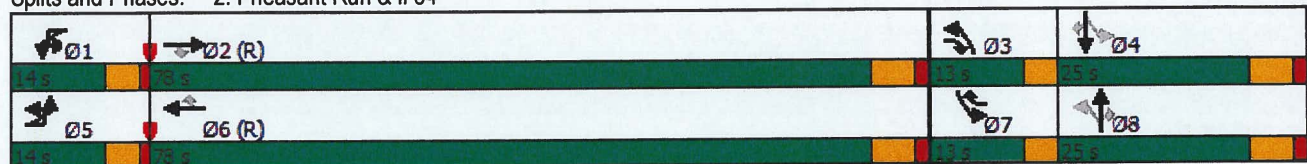


Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
v/c Ratio		0.30	0.63	0.14		0.58	0.39	0.01	0.23		0.39	0.05
Control Delay		71.5	10.2	4.4		58.7	9.6	5.0	47.8		64.4	42.9
Queue Delay		0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0
Total Delay		71.5	10.2	4.4		58.7	9.6	5.0	47.8		64.4	42.9
LOS		E	B	A		E	A	A	D		E	D
Approach Delay			10.8				15.0			56.8		
Approach LOS			B				B			E		
Queue Length 50th (ft)		29	113	18		143	190	3	32		42	6
Queue Length 95th (ft)		m43	m120	m25		#273	264	11	64		84	20
Internal Link Dist (ft)			2065				1756			991		
Turn Bay Length (ft)		190		195		200		200	100		100	80
Base Capacity (vph)		134	2846	1046		313	3552	1348	198		231	214
Starvation Cap Reductn		0	0	0		0	0	0	0		0	0
Spillback Cap Reductn		0	0	0		0	0	0	0		0	0
Storage Cap Reductn		0	0	0		0	0	0	0		0	0
Reduced v/c Ratio		0.25	0.63	0.14		0.58	0.39	0.01	0.22		0.23	0.04

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 59 (45%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.63
 Intersection Signal Delay: 14.2
 Intersection Capacity Utilization 66.9%
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Pheasant Run & Il 64



Lanes, Volumes, Timings
 2: Pheasant Run & Il 64

10/12/2021



Lane Group	SBT	SBR
v/c Ratio		0.21
Control Delay		60.9
Queue Delay		0.0
Total Delay		60.9
LOS		E
Approach Delay	56.4	
Approach LOS	E	
Queue Length 50th (ft)		20
Queue Length 95th (ft)		48
Internal Link Dist (ft)	324	
Turn Bay Length (ft)		
Base Capacity (vph)		236
Starvation Cap Reductn		0
Spillback Cap Reductn		0
Storage Cap Reductn		0
Reduced v/c Ratio		0.10
Intersection Summary		

HCM 6th TWSC
3: Kiel Road & IL 64

10/12/2021

Intersection								
Int Delay, s/veh	1.3							
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations	□	↑↑↑	↑		□	↑↑↑	↑	
Traffic Vol, veh/h	3	1719	0	4	70	1486	0	8
Future Vol, veh/h	3	1719	0	4	70	1486	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	None
Storage Length	200	-	180	-	200	-	0	-
Veh in Median Storage, #	-	0	-	-	-	0	1	-
Grade, %	-	0	-	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	8	0	0	3	9	0	0
Mvmt Flow	3	1868	0	4	76	1615	0	9

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	1179	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	5.6	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.3	-	-
Pot Cap-1 Maneuver	356	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	356	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.6	21
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBU	EBT	EBR	WBL	WBT
Capacity (veh/h)	233	356	-	-	148	-
HCM Lane V/C Ratio	0.037	0.009	-	-	0.543	-
HCM Control Delay (s)	21	15.2	-	-	55.2	-
HCM Lane LOS	C	C	-	-	F	-
HCM 95th %tile Q(veh)	0.1	0	-	-	2.7	-

HCM 6th TWSC
4: Kautz Road & North EGC Access

10/12/2021

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	5	4	365	576	26
Future Vol, veh/h	9	5	4	365	576	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	110	0	100	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	20	0	9	7	12
Mvmt Flow	10	6	5	420	662	30

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	897	346	692	0	-	0
Stage 1	677	-	-	-	-	-
Stage 2	220	-	-	-	-	-
Critical Hdwy	6.8	7.3	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.5	2.2	-	-	-
Pot Cap-1 Maneuver	283	601	912	-	-	-
Stage 1	472	-	-	-	-	-
Stage 2	802	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	282	601	912	-	-	-
Mov Cap-2 Maneuver	383	-	-	-	-	-
Stage 1	470	-	-	-	-	-
Stage 2	802	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.4	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	912	-	383	601	-	-
HCM Lane V/C Ratio	0.005	-	0.027	0.01	-	-
HCM Control Delay (s)	9	-	14.7	11	-	-
HCM Lane LOS	A	-	B	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	0	-	-

Intersection

Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	↗
Traffic Vol, veh/h	3	0	11	0	0	3	14	363	4	20	553	8
Future Vol, veh/h	3	0	11	0	0	3	14	363	4	20	553	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	0	-	-	130	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	0	0	33	0	9	25	35	7	0
Mvmt Flow	3	0	12	0	0	3	16	408	4	22	621	9

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1114	1114	315	797	1116	410	630	0	0	412	0	0
Stage 1	670	670	-	442	442	-	-	-	-	-	-	-
Stage 2	444	444	-	355	674	-	-	-	-	-	-	-
Critical Hdwy	7.3	6.5	6.9	7.3	6.5	6.695	4.1	-	-	4.625	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4.3	6.135	2.2	-	-	2.5325	-	-
Pot Cap-1 Maneuver	176	210	687	294	209	567	962	-	-	964	-	-
Stage 1	417	459	-	598	580	-	-	-	-	-	-	-
Stage 2	597	579	-	641	457	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	170	202	687	280	201	567	962	-	-	964	-	-
Mov Cap-2 Maneuver	291	315	-	399	312	-	-	-	-	-	-	-
Stage 1	410	448	-	588	570	-	-	-	-	-	-	-
Stage 2	584	569	-	615	446	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.8	11.4	0.3	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	962	-	-	291	687	-	567	964	-	-
HCM Lane V/C Ratio	0.016	-	-	0.012	0.018	-	0.006	0.023	-	-
HCM Control Delay (s)	8.8	-	-	17.5	10.3	0	11.4	8.8	-	-
HCM Lane LOS	A	-	-	C	B	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0	0.1	-	0	0.1	-	-

HCM 6th TWSC
6: Kautz Road & Illinois Avenue/South Site Access

10/12/2021

Intersection												
Int Delay, s/veh	1.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	↕
Traffic Vol, veh/h	36	0	31	3	0	4	32	341	19	31	471	62
Future Vol, veh/h	36	0	31	3	0	4	32	341	19	31	471	62
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	105	-	-	130	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	3	0	3	0	0	0	0	9	0	0	6	11
Mvmt Flow	42	0	36	3	0	5	37	397	22	36	548	72

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1105	1113	548	1156	1174	408	620	0	0	419	0	0
Stage 1	620	620	-	482	482	-	-	-	-	-	-	-
Stage 2	485	493	-	674	692	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.5	6.23	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.13	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4	3.327	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	187	210	534	175	193	648	970	-	-	1151	-	-
Stage 1	474	483	-	569	557	-	-	-	-	-	-	-
Stage 2	561	550	-	448	448	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	176	196	534	155	180	648	970	-	-	1151	-	-
Mov Cap-2 Maneuver	298	309	-	267	287	-	-	-	-	-	-	-
Stage 1	456	468	-	547	536	-	-	-	-	-	-	-
Stage 2	536	529	-	405	434	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.1	14.1	0.7	0.5
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	970	-	-	375	402	1151	-
HCM Lane V/C Ratio	0.038	-	-	0.208	0.02	0.031	-
HCM Control Delay (s)	8.9	-	-	17.1	14.1	8.2	-
HCM Lane LOS	A	-	-	C	B	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.8	0.1	0.1	-

HCM 6th TWSC
7: Kiel Road & North Access Drive

10/12/2021

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			Y	Y	
Traffic Vol, veh/h	1	0	0	7	55	15
Future Vol, veh/h	1	0	0	7	55	15
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	2	7
Mvmt Flow	1	0	0	7	58	16

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	73	66	74	0	-	0
Stage 1	66	-	-	-	-	-
Stage 2	7	-	-	-	-	-
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	936	1003	1538	-	-	-
Stage 1	962	-	-	-	-	-
Stage 2	1021	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	936	1003	1538	-	-	-
Mov Cap-2 Maneuver	936	-	-	-	-	-
Stage 1	962	-	-	-	-	-
Stage 2	1021	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1538	-	936	-	-
HCM Lane V/C Ratio	-	-	0.001	-	-
HCM Control Delay (s)	0	-	8.9	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection

Int Delay, s/veh 0.7

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations	Y			↑	↑	
Traffic Vol, veh/h	4	1	0	3	12	43
Future Vol, veh/h	4	1	0	3	12	43
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	2
Mvmt Flow	4	1	0	3	13	45

Major/Minor Minor2 Major1 Major2

Conflicting Flow All	39	36	58	0	-	0
Stage 1	36	-	-	-	-	-
Stage 2	3	-	-	-	-	-
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	978	1042	1559	-	-	-
Stage 1	992	-	-	-	-	-
Stage 2	1025	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	978	1042	1559	-	-	-
Mov Cap-2 Maneuver	978	-	-	-	-	-
Stage 1	992	-	-	-	-	-
Stage 2	1025	-	-	-	-	-

Approach EB NB SB

HCM Control Delay, s	8.7	0	0
HCM LOS	A		

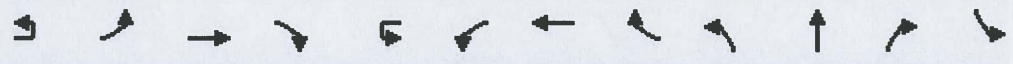
Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h)	1559	-	990	-	-
HCM Lane V/C Ratio	-	-	0.005	-	-
HCM Control Delay (s)	0	-	8.7	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Capacity Analysis Summary Sheets
2027 Projected Weekday Evening Peak Hour Conditions

Lanes, Volumes, Timings
1: Kautz Road/Smith Road & II 64

10/12/2021



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations		↔↔	↑↑↑	↗		↔↔	↑↑↑	↗	↖	↑	↗	↖
Traffic Volume (vph)	7	226	1178	62	7	225	1600	77	202	287	471	123
Future Volume (vph)	7	226	1178	62	7	225	1600	77	202	287	471	123
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	1900	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)			0%				0%			0%		
Storage Length (ft)		255		200		300		190	200		580	195
Storage Lanes		2		1		2		1	1		0	1
Taper Length (ft)		300				300			175			175
Lane Util. Factor	0.91	0.97	0.91	1.00	0.91	0.97	0.91	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt				0.850				0.850			0.850	
Flt Protected		0.950				0.950			0.950			0.950
Satd. Flow (prot)	0	3435	5151	1615	0	3403	5301	1538	1787	2000	1568	1787
Flt Permitted		0.950				0.950			0.436			0.268
Satd. Flow (perm)	0	3435	5151	1615	0	3403	5301	1538	820	2000	1568	504
Right Turn on Red				No				No			No	
Satd. Flow (RTOR)												
Link Speed (mph)			45				45			40		
Link Distance (ft)			2097				2145			538		
Travel Time (s)			31.8				32.5			9.2		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	6%	0%	0%	3%	3%	5%	1%	0%	3%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)			0%				0%			0%		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	240	1214	64	0	239	1649	79	208	296	486	127
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	pm+ov	pm+pt	NA	Perm	pm+pt
Protected Phases	5	5	2	3	1	1	6	7	3	8		7
Permitted Phases				2				6	8		8	4
Detector Phase	5	5	2	3	1	1	6	7	3	8	8	7
Switch Phase												
Minimum Initial (s)	3.0	3.0	15.0	3.0	3.0	3.0	15.0	3.0	3.0	8.0	8.0	3.0
Minimum Split (s)	7.5	7.5	21.0	6.5	7.5	7.5	21.0	6.5	6.5	14.0	14.0	6.5
Total Split (s)	20.0	20.0	73.0	18.0	24.0	24.0	77.0	18.0	18.0	35.0	35.0	18.0
Total Split (%)	13.3%	13.3%	48.7%	12.0%	16.0%	16.0%	51.3%	12.0%	12.0%	23.3%	23.3%	12.0%
Yellow Time (s)	3.5	3.5	4.5	3.5	3.5	3.5	4.5	3.5	3.5	4.5	4.5	3.5
All-Red Time (s)	1.0	1.0	1.5	0.0	1.0	1.0	1.5	0.0	0.0	1.5	1.5	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
Total Lost Time (s)		4.5	6.0	3.5		4.5	6.0	3.5	3.5	6.0	6.0	3.5
Lead/Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Min	None	None	None	C-Min	None	None	None	None	None
Act Effct Green (s)		14.4	70.8	90.9		15.7	72.1	90.6	47.6	31.0	31.0	44.4
Actuated g/C Ratio		0.10	0.47	0.61		0.10	0.48	0.60	0.32	0.21	0.21	0.30

Lanes, Volumes, Timings
 1: Kautz Road/Smith Road & II 64

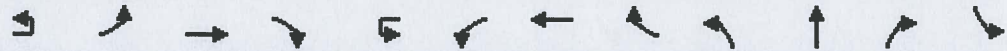
10/12/2021



Lane Group	SBT	SBR
Lane Configurations	↑	↑
Traffic Volume (vph)	184	237
Future Volume (vph)	184	237
Ideal Flow (vphpl)	2000	1900
Lane Width (ft)	12	12
Grade (%)	0%	
Storage Length (ft)		0
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Ped Bike Factor		
Frt		0.850
Flt Protected		
Satd. Flow (prot)	2000	1615
Flt Permitted		
Satd. Flow (perm)	2000	1615
Right Turn on Red		No
Satd. Flow (RTOR)		
Link Speed (mph)	40	
Link Distance (ft)	1315	
Travel Time (s)	22.4	
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor	0.97	0.97
Growth Factor	100%	100%
Heavy Vehicles (%)	0%	0%
Bus Blockages (#/hr)	0	0
Parking (#/hr)		
Mid-Block Traffic (%)	0%	
Shared Lane Traffic (%)		
Lane Group Flow (vph)	190	244
Turn Type	NA	Perm
Protected Phases	4	
Permitted Phases		4
Detector Phase	4	4
Switch Phase		
Minimum Initial (s)	8.0	8.0
Minimum Split (s)	14.0	14.0
Total Split (s)	35.0	35.0
Total Split (%)	23.3%	23.3%
Yellow Time (s)	4.5	4.5
All-Red Time (s)	1.5	1.5
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	6.0	6.0
Lead/Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)	29.4	29.4
Actuated g/C Ratio	0.20	0.20

Lanes, Volumes, Timings
1: Kautz Road/Smith Road & Il 64

10/12/2021



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
v/c Ratio		0.73	0.50	0.07		0.67	0.65	0.09	0.59	0.72	1.50	0.50
Control Delay		79.1	28.6	12.9		68.6	31.6	11.5	46.5	66.8	281.8	43.5
Queue Delay		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		79.1	28.6	12.9		68.6	31.6	11.5	46.5	66.8	281.8	43.5
LOS		E	C	B		E	C	B	D	E	F	D
Approach Delay			35.9				35.3			168.1		
Approach LOS			D				D			F		
Queue Length 50th (ft)		118	296	24		123	288	25	155	274	~664	90
Queue Length 95th (ft)		167	356	49		169	463	45	229	#396	#906	144
Internal Link Dist (ft)			2017				2065			458		
Turn Bay Length (ft)		255		200		300		190	200		580	195
Base Capacity (vph)		354	2431	983		442	2547	949	353	412	323	279
Starvation Cap Reductn		0	0	0		0	0	0	0	0	0	0
Spillback Cap Reductn		0	0	0		0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0		0	0	0	0	0	0	0
Reduced v/c Ratio		0.68	0.50	0.07		0.54	0.65	0.08	0.59	0.72	1.50	0.46

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 53 (35%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.50

Intersection Signal Delay: 64.6

Intersection LOS: E

Intersection Capacity Utilization 81.3%

ICU Level of Service D

Analysis Period (min) 15

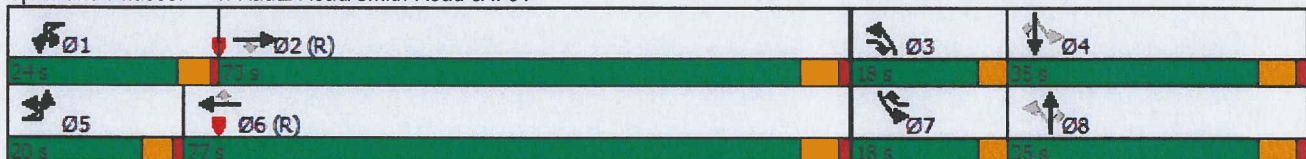
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Kautz Road/Smith Road & Il 64



Lanes, Volumes, Timings
 1: Kautz Road/Smith Road & II 64

10/12/2021



Lane Group	SBT	SBR
v/c Ratio	0.49	0.77
Control Delay	58.6	74.3
Queue Delay	0.0	0.0
Total Delay	58.6	74.3
LOS	E	E
Approach Delay	62.0	
Approach LOS	E	
Queue Length 50th (ft)	168	230
Queue Length 95th (ft)	250	#359
Internal Link Dist (ft)	1235	
Turn Bay Length (ft)		
Base Capacity (vph)	391	316
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.49	0.77
Intersection Summary		

Lanes, Volumes, Timings
2: Pheasant Run & Il 64

10/12/2021



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations		↕	↑↑↑	↗		↕	↑↑↑	↗	↕	↑	↗	↕
Traffic Volume (vph)	3	33	1683	60	5	61	1760	27	113	0	143	23
Future Volume (vph)	3	33	1683	60	5	61	1760	27	113	0	143	23
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	1900	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)			0%				0%			0%		
Storage Length (ft)		190		195		200		200	100		100	80
Storage Lanes		1		1		1		1	1		1	1
Taper Length (ft)		200				200			100			115
Lane Util. Factor	0.91	1.00	0.91	1.00	0.91	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Fr				0.850				0.850			0.850	
Flt Protected		0.950				0.950			0.950			0.950
Satd. Flow (prot)	0	1805	5200	1583	0	1772	5301	1615	1736	2000	1553	1805
Flt Permitted		0.950				0.950			0.591			0.757
Satd. Flow (perm)	0	1805	5200	1583	0	1772	5301	1615	1080	2000	1553	1438
Right Turn on Red				No				No			No	
Satd. Flow (RTOR)												
Link Speed (mph)			45				45			30		
Link Distance (ft)			2145				1836			1071		
Travel Time (s)			32.5				27.8			24.3		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	5%	2%	0%	2%	3%	0%	4%	0%	4%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)			0%				0%			0%		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	37	1753	63	0	69	1833	28	118	0	149	24
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	pm+ov	pm+pt		Perm	pm+pt
Protected Phases	5	5	2	3	1	1	6	7	3	8		7
Permitted Phases				2				6	8		8	4
Detector Phase	5	5	2	3	1	1	6	7	3	8	8	7
Switch Phase												
Minimum Initial (s)	3.0	3.0	15.0	3.0	3.0	3.0	15.0	3.0	3.0	8.0	8.0	3.0
Minimum Split (s)	7.5	7.5	21.0	7.5	7.5	7.5	21.0	7.5	7.5	14.0	14.0	7.5
Total Split (s)	17.0	17.0	88.0	20.0	17.0	17.0	88.0	20.0	20.0	25.0	25.0	20.0
Total Split (%)	11.3%	11.3%	58.7%	13.3%	11.3%	11.3%	58.7%	13.3%	13.3%	16.7%	16.7%	13.3%
Yellow Time (s)	3.5	3.5	4.5	3.5	3.5	3.5	4.5	3.5	3.5	4.5	4.5	3.5
All-Red Time (s)	1.0	1.0	1.5	0.0	1.0	1.0	1.5	0.0	0.0	1.5	1.5	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
Total Lost Time (s)		4.5	6.0	3.5		4.5	6.0	3.5	3.5	6.0	6.0	3.5
Lead/Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Min	None	None	None	C-Min	None	None	None	None	None
Act Effct Green (s)		8.5	95.6	117.2		10.6	97.3	110.5	32.1		20.8	21.6
Actuated g/C Ratio		0.06	0.64	0.78		0.07	0.65	0.74	0.21		0.14	0.14

Lanes, Volumes, Timings
2: Pheasant Run & II 64

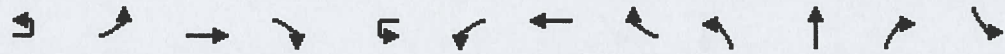
10/12/2021



Lane Group	SBT	SBR
Lane Configurations	↑	↑
Traffic Volume (vph)	0	33
Future Volume (vph)	0	33
Ideal Flow (vphpl)	2000	1900
Lane Width (ft)	12	12
Grade (%)	0%	
Storage Length (ft)		0
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Ped Bike Factor		
Frt		0.850
Flt Protected		
Satd. Flow (prot)	2000	1615
Flt Permitted		
Satd. Flow (perm)	2000	1615
Right Turn on Red		No
Satd. Flow (RTOR)		
Link Speed (mph)	30	
Link Distance (ft)	404	
Travel Time (s)	9.2	
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor	0.96	0.96
Growth Factor	100%	100%
Heavy Vehicles (%)	0%	0%
Bus Blockages (#/hr)	0	0
Parking (#/hr)		
Mid-Block Traffic (%)	0%	
Shared Lane Traffic (%)		
Lane Group Flow (vph)	0	34
Turn Type		Perm
Protected Phases	4	
Permitted Phases		4
Detector Phase	4	4
Switch Phase		
Minimum Initial (s)	8.0	8.0
Minimum Split (s)	14.0	14.0
Total Split (s)	25.0	25.0
Total Split (%)	16.7%	16.7%
Yellow Time (s)	4.5	4.5
All-Red Time (s)	1.5	1.5
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	6.0	6.0
Lead/Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)		14.0
Actuated g/C Ratio		0.09

Lanes, Volumes, Timings
2: Pheasant Run & Il 64

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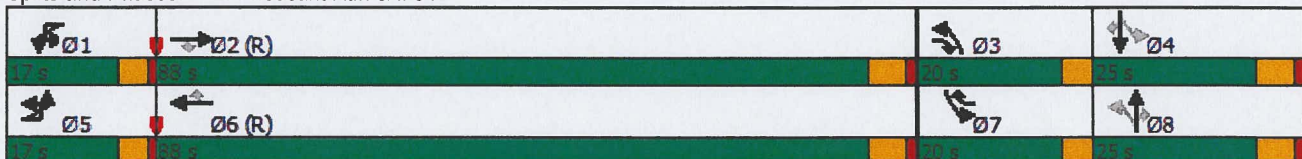


Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
v/c Ratio		0.36	0.53	0.05		0.55	0.53	0.02	0.40		0.69	0.11
Control Delay		75.3	11.3	6.6		83.7	16.9	8.0	51.5		77.9	44.0
Queue Delay		0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0
Total Delay		75.3	11.3	6.6		83.7	16.9	8.0	51.5		77.9	44.0
LOS		E	B	A		F	B	A	D		E	D
Approach Delay			12.4				19.1			66.2		
Approach LOS			B				B			E		
Queue Length 50th (ft)		34	233	18		66	362	8	97		141	19
Queue Length 95th (ft)		m60	m226	m28		120	483	21	147		212	42
Internal Link Dist (ft)			2065				1756			991		
Turn Bay Length (ft)		190		195		200		200	100		100	80
Base Capacity (vph)		150	3312	1253		148	3439	1297	303		226	334
Starvation Cap Reductn		0	0	0		0	0	0	0		0	0
Spillback Cap Reductn		0	0	0		0	0	0	0		0	0
Storage Cap Reductn		0	0	0		0	0	0	0		0	0
Reduced v/c Ratio		0.25	0.53	0.05		0.47	0.53	0.02	0.39		0.66	0.07

Intersection Summary

Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 68 (45%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.69
 Intersection Signal Delay: 19.7
 Intersection LOS: B
 Intersection Capacity Utilization 65.6%
 ICU Level of Service C
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Pheasant Run & Il 64



Lanes, Volumes, Timings
 2: Pheasant Run & Il 64

10/12/2021



Lane Group	SBT	SBR
v/c Ratio		0.23
Control Delay		64.7
Queue Delay		0.0
Total Delay		64.7
LOS		E
Approach Delay	56.2	
Approach LOS	E	
Queue Length 50th (ft)		31
Queue Length 95th (ft)		66
Internal Link Dist (ft)	324	
Turn Bay Length (ft)		
Base Capacity (vph)		204
Starvation Cap Reductn		0
Spillback Cap Reductn		0
Storage Cap Reductn		0
Reduced v/c Ratio		0.17
Intersection Summary		

Intersection

Int Delay, s/veh 0.5

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations	□	↑↑↑	↑		↑	↑↑↑	↑	
Traffic Vol, veh/h	1	1852	1	4	9	1848	4	41
Future Vol, veh/h	1	1852	1	4	9	1848	4	41
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	None
Storage Length	200	-	180	-	200	-	0	-
Veh in Median Storage, #	-	0	-	-	-	0	1	-
Grade, %	-	0	-	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	5	0	0	0	3	0	2
Mvmt Flow	1	2013	1	4	10	2009	4	45

Major/Minor	Major1		Major2		Minor1			
Conflicting Flow All	1466	0	0	1470	2014	0	2847	1007
Stage 1	-	-	-	-	-	-	2015	-
Stage 2	-	-	-	-	-	-	832	-
Critical Hdwy	5.6	-	-	5.6	5.3	-	5.7	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	6.6	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6	-
Follow-up Hdwy	2.3	-	-	2.3	3.1	-	3.8	3.92
Pot Cap-1 Maneuver	246	-	-	245	126	-	33	205
Stage 1	-	-	-	-	-	-	57	-
Stage 2	-	-	-	-	-	-	356	-
Platoon blocked, %	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	246	-	-	142	142	-	30	205
Mov Cap-2 Maneuver	-	-	-	-	-	-	50	-
Stage 1	-	-	-	-	-	-	57	-
Stage 2	-	-	-	-	-	-	321	-

Approach	EB		WB		NB
HCM Control Delay, s	0		0.2		36.8
HCM LOS					E

Minor Lane/Major Mvmt	NBLn1	EBU	EBT	EBR	WBL	WBT
Capacity (veh/h)	161	246	-	-	142	-
HCM Lane V/C Ratio	0.304	0.004	-	-	0.1	-
HCM Control Delay (s)	36.8	19.7	-	-	33.2	-
HCM Lane LOS	E	C	-	-	D	-
HCM 95th %tile Q(veh)	1.2	0	-	-	0.3	-

HCM 6th TWSC
4: Kautz Road & North EGC Access

10/12/2021

Intersection

Int Delay, s/veh 2.7

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations	↘	↗	↘	↕	↕	
Traffic Vol, veh/h	154	44	45	806	312	159
Future Vol, veh/h	154	44	45	806	312	159
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	110	0	100	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	164	47	48	857	332	169

Major/Minor Minor2 Major1 Major2

Conflicting Flow All	942	251	501	0	-	0
Stage 1	417	-	-	-	-	-
Stage 2	525	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	265	755	1074	-	-	-
Stage 1	639	-	-	-	-	-
Stage 2	564	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	253	755	1074	-	-	-
Mov Cap-2 Maneuver	383	-	-	-	-	-
Stage 1	610	-	-	-	-	-
Stage 2	564	-	-	-	-	-

Approach EB NB SB

HCM Control Delay, s	18.7	0.4	0
HCM LOS	C		

Minor Lane/Major Mvmt NBL NBT EBLn1 EBLn2 SBT SBR

Capacity (veh/h)	1074	-	383	755	-	-
HCM Lane V/C Ratio	0.045	-	0.428	0.062	-	-
HCM Control Delay (s)	8.5	-	21.2	10.1	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	2.1	0.2	-	-

Intersection

Int Delay, s/veh 1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	↗
Traffic Vol, veh/h	45	0	37	3	0	14	55	792	0	3	342	11
Future Vol, veh/h	45	0	37	3	0	14	55	792	0	3	342	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	0	-	-	130	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	33	0	36	0	2	0	33	2	0
Mvmt Flow	46	0	38	3	0	14	56	808	0	3	349	11

Major/Minor	Minor2	Minor1	Major1	Major2
Conflicting Flow All	1288	1281	180	1101
Stage 1	361	361	-	920
Stage 2	927	920	-	181
Critical Hdwy	7.3	6.5	6.9	7.795
Critical Hdwy Stg 1	6.5	5.5	-	6.595
Critical Hdwy Stg 2	6.1	5.5	-	6.995
Follow-up Hdwy	3.5	4	3.33	8.135
Pot Cap-1 Maneuver	132	167	838	147
Stage 1	636	629	-	274
Stage 2	324	352	-	730
Platoon blocked, %				
Mov Cap-1 Maneuver	121	159	838	135
Mov Cap-2 Maneuver	226	261	-	215
Stage 1	607	626	-	261
Stage 2	295	336	-	694

Approach	EB	WB	NB	SB
HCM Control Delay, s	18	17.7	0.5	0.1
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1210	-	-	226	838	215	319	668	-	-
HCM Lane V/C Ratio	0.046	-	-	0.203	0.045	0.014	0.045	0.005	-	-
HCM Control Delay (s)	8.1	-	-	24.9	9.5	22	16.8	10.4	-	-
HCM Lane LOS	A	-	-	C	A	C	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.7	0.1	0	0.1	0	-	-

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↑	↑		↑	↑	↑
Traffic Vol, veh/h	81	0	40	14	0	23	42	743	3	3	337	42
Future Vol, veh/h	81	0	40	14	0	23	42	743	3	3	337	42
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	105	-	-	130	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	92	98	92	92	92	98	98	92	92	98	98
Heavy Vehicles, %	0	0	0	0	0	0	2	2	0	0	2	0
Mvmt Flow	83	0	41	15	0	25	43	758	3	3	344	43

Major/Minor	Minor2	Minor1		Major1		Major2						
Conflicting Flow All	1208	1197	344	1238	1239	760	387	0	0	761	0	0
Stage 1	350	350	-	846	846	-	-	-	-	-	-	-
Stage 2	858	847	-	392	393	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.12	-	-	4.1	-	-
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	3.5	4	3.3	3.5	4	3.3	2.218	-	-	2.2	-	-
Pot Cap-1 Maneuver	161	187	703	154	177	409	1171	-	-	860	-	-
Stage 1	671	636	-	360	381	-	-	-	-	-	-	-
Stage 2	354	381	-	637	609	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	147	180	703	141	170	409	1171	-	-	860	-	-
Mov Cap-2 Maneuver	250	284	-	254	275	-	-	-	-	-	-	-
Stage 1	646	634	-	347	367	-	-	-	-	-	-	-
Stage 2	320	367	-	598	607	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	23.3	17.3	0.4	0.1
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1171	-	-	318	332	860	-	-
HCM Lane V/C Ratio	0.037	-	-	0.388	0.121	0.004	-	-
HCM Control Delay (s)	8.2	-	-	23.3	17.3	9.2	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.8	0.4	0	-	-

HCM 6th TWSC
7: Kiel Road & North Access Drive

10/12/2021

Intersection

Int Delay, s/veh 1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			↑	↑	
Traffic Vol, veh/h	8	0	0	37	8	2
Future Vol, veh/h	8	0	0	37	8	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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	13	0	0	0	0	0
Mvmt Flow	8	0	0	39	8	2

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	48	9	10	0	-	0
Stage 1	9	-	-	-	-	-
Stage 2	39	-	-	-	-	-
Critical Hdwy	6.53	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.53	-	-	-	-	-
Critical Hdwy Stg 2	5.53	-	-	-	-	-
Follow-up Hdwy	3.617	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	934	1079	1623	-	-	-
Stage 1	986	-	-	-	-	-
Stage 2	956	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	934	1079	1623	-	-	-
Mov Cap-2 Maneuver	934	-	-	-	-	-
Stage 1	986	-	-	-	-	-
Stage 2	956	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1623	-	934	-	-
HCM Lane V/C Ratio	-	-	0.009	-	-
HCM Control Delay (s)	0	-	8.9	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection						
Int Delay, s/veh	4.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			↑	↑	
Traffic Vol, veh/h	22	0	0	15	4	4
Future Vol, veh/h	22	0	0	15	4	4
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	23	0	0	16	4	4

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	22	6	8	0	-	0
Stage 1	6	-	-	-	-	-
Stage 2	16	-	-	-	-	-
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	1000	1083	1625	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	1012	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1000	1083	1625	-	-	-
Mov Cap-2 Maneuver	1000	-	-	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	1012	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1625	-	1000	-	-
HCM Lane V/C Ratio	-	-	0.023	-	-
HCM Control Delay (s)	0	-	8.7	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-