Traffic Impact and Parking Study

Timber Ridge School - NSSEO

Arlington Heights, Illinois

February 5, 2021

Prepared for:

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GHA

## Part I. Introduction and Project Context

Gewalt Hamilton Associates, Inc. (GHA) has conducted a Traffic Impact Study for an addition to the existing North Suburban Special Education Organization (NSSEO) Timber Ridge School (School). The School is located at 201 S. Evanston Avenue in Arlington Heights, Illinois. It is currently served by approximately 100 students (kindergarten through 8<sup>th</sup> grade) and 70 school staff. The School also provides a pre-school program, served by 30 students and 3 staff. Access to the site is provided via two driveways on Evanston Avenue. The site is served by 73 off-street parking spaces, including 3 accessible spaces; visitor on-street parking is also provided along the east side of Kensington Road adjacent to the School.

As currently proposed, the development will include the construction of a gymnasium addition, weight/fitness room, boys/girls' bathrooms, site accessibility improvements (including an elevator), three offices, positive sensory lounge, additional support space, gym storage room and two additional classrooms, which will provide the ability to serve 25 additional students and 4 staff. Access to the site will be maintained via two driveways on Evanston Avenue; however, the northern access will be relocated approximately 80 feet to the north, towards Kensington Road.

This Traffic Impact Study evaluates traffic access, safety and parking. The following summarizes our findings and provides various recommendations for your consideration. *Appendices* referenced are in the Technical Addendum at the end of this document.

# Part II. Background Information

#### Site Location Map and Roadway Inventory

*Exhibit 1* provides a site location map. The existing traffic, parking and circulation operations in the site area are illustrated on *Exhibits 2A, 2B and 2C*, respectively.

**Appendix A** provides a photo inventory of the site vicinity. Pertinent comments on the area land use, street network operations and pedestrian mobility include:

- Land uses surrounding the site are predominately residential. Prospect High School is located to the east of the School.
- Kensington Road is an east-west local roadway, under the jurisdiction of the Village of Arlington Heights in the site vicinity. It provides a three-lane cross-section (one through lane in each direction and a center lane for turns at intersections). On-street parking is prohibited along both the north and south sides of the roadway. The posted speed limit on Kensington Road is 30 miles per hour (mph). It has an annual average daily traffic (AADT) volume of 7,750 vehicles, year 2018.
- Evanston Avenue is a north-south local roadway, under the jurisdiction of the Village of Arlington Heights in the site vicinity. It provides a two-lane cross-section (one travel lane in each direction. On-street parking is restricted on both sides of the roadway on school days between the hours of 8AM and 4PM except the east side of Evanston Avenue adjacent to the site, where School visitor parking is permitted. The posted speed limit on Evanston Avenue is 25 mph. A 20-mph speed limit is posted adjacent to the site, on school days when pedestrians are present.
- Sidewalks are provided in the site vicinity along both sides of the roads.





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Exhibit 2A **Existing Traffic Operations** 



**GER GEWALT HAMILTON** Associates, inc. Exhibit 2B Existing Parking Operations



Exhibit 2C Drop-Off / Pick-Up Circulation

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## **Existing School Characteristics**

- School hours are from 9:00 AM to 3:00 PM. The School is currently operating on a hybrid model, with a morning program from 9:00 to 11:15 AM and an afternoon program from 12:45 to 3:00 PM.
- The student enrollment at NSSEO Timber Ridge School is approximately 100 students. Enrollment is currently down by 10 students (to 90 students) due to the COVID-19 pandemic. Approximately 1/3 of the student population (30 students) are currently remote learning. Students are equally split between the morning and afternoon programs: 30 students per session.
- The School is supported by approximately 70 staff members, with start and end times of approximately 8:00AM and 4:00 PM, respectively.
- The School also provides a pre-school program, served by 30 students and 3 staff. Staff hours for this program are 8:15 AM to 2:15 PM and student hours are 8:30 AM to 2:00 PM. *Enrollment is current half (15 students) due to the COVID-19 pandemic.*
- Students are transported to the School via van, bus and taxi; there are no walkers/bikers, as well as minimal students dropped-off/picked-up by parents (less than 5%).
- Average student occupancy per vehicle is 3.8: 4 students per van, 6 students per bus and 1 student per taxi. Due to the COVID-19 pandemic, to provide adequate student separation, the average student occupancy per vehicle is 2: 4 students per bus and 1 student per van/taxi.

## **Existing Operational Observations**

Observations were conducted of the NSSEO Timber Ridge School drop-off and pick-up activities. Separate morning and afternoon observations were conducted due to the current hybrid model. Some of these observations, which are depicted on *Exhibits 3A – 3D*, include the following:

## Drop-Off (see Exhibits 3A & 3C)

- School staff is present along the drop-off lane at the main entrance to facilitate student drop-offs.
- School doors do not open until 8:57 AM. For the afternoon session doors open at 12:45 PM.
- Buses stage briefly in the northeast area of the main parking lot after dropping off students; a maximum stacking (queueing) of 3 buses was observed.
- Bus/taxi/van drop-off activity was contained within the main parking lot. For the afternoon session, the queue extended onto Evanston Avenue (3 vehicles); however, the vehicle queue was quickly cleared, within 2 minutes of doors opening.
- One student was dropped off on Evanston Avenue at the School entrance.
- No School activity was observed along Mayfair Road, located to the south of the School.
- No northbound vehicle queuing / issues were observed on northbound Evanston Avenue at Kensington Road, resulting from School drop-off activity.

#### Pick-Up (see Exhibits 3B & 3D)

- Similar to drop-off operations, staff is present along the pick-up lane at the main entrance to facilitate student pick-ups.
- Bus/taxi/van drop-off activity was contained within the main parking lot.
- One student was dropped off on Evanston Avenue at the School entrance.
- No northbound vehicle queuing / issues were observed on northbound Evanston Avenue at Kensington Road, resulting from School pick-off activity.

# Legend:

Existing Stop Sign
 Existing Traffic Signal

- ₩ School Staff
- → Drop-Off Queue

# **Observations:**

- School doors open at 8:57 AM and operations begin with 4 school staff present to facilitate. Staff was present until operations conclude at 9:12 AM.
- Buses stage after drop-off. Maximum of 2 observed.
- 3. 1 drop-off observed along Evanston Ave.
- No activity observed along Mayfair Rd.
- 5. No northbound queue observed as a result of exiting school traffic.

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Exhibit 3A AM Drop-Off - 9:00 AM



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Exhibit 3B AM Pick-Up - 11:15 AM

# Legend:

- S Existing Stop Sign
   Existing Traffic Signal
   - School Staff
- → Drop-Off Queue

# **Observations:**

- Queue extends onto Evanston Ave with 3 vehicles on Evanston Ave at 12:44 PM. Queue is cleared off Evanston Ave at 12:47 PM.
- School doors open at 12:45 PM and operations begin with 4 school staff present to facilitate. Staff was present until operations conclude at 12:52 PM.
- Buses stage after drop-off. Maximum of 2 observed.
- 4. 1 drop-off observed along Evanston Ave.
- 5. No activity observed along Mayfair Rd.
- No northbound queue observed as a result of exiting school traffic.

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Exhibit 3C PM Drop-Off - 12:45 PM



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Exhibit 3D PM Pick-Up - 3:00 PM

#### **Existing Traffic**

Peak period traffic turning movement and pedestrian counts were conducted by GHA on Wednesday, January 13, 2021 from 7:30 to 9:30 AM and 2:30 to 4:30 PM. *Exhibit 4* summarizes the existing weekday morning and afternoon school peak hour traffic volumes. The observed weekday morning school peak hour occurred from 8:30 to 9:30 AM, the weekday afternoon school peak hour occurred from 2:45 to 3:45 PM.

*Exhibit 4* also provides the AADT (24-hour volume) along Kensington Road as published by IDOT on their website <u>www.gettingaroundillinois.com</u>. Summaries of the existing GHA and IDOT traffic counts can be found in *Appendix B*.

- Notes: 1. The 2021 intersection volumes were approximately 3 to 28 percent higher than historical Illinois Department of Transportation (IDOT) roadway segment peak hour volumes during the weekday morning and afternoon school peak hours along Kensington Road to account for abnormal traffic conditions associated with business and school closures in connection with the COVID-19 pandemic.
  - 2. The IDOT roadway volumes were performed in July 2018 when area schools were not in session. Accordingly, to provide a conservative analysis scenario, traffic associated with reduced student attendance at the nearby Prospect High School, as well as incremental difference at the Timber Ridge School (less students, however lower vehicle occupancy) was estimated and assigned to the adjacent roadway network. A summary of additional site and background traffic is provided in **Table 1** and associated Institute of Transportation Engineers (ITE),10<sup>th</sup> Edition Trip Generation worksheets used in the calculations are provided in **Appendix C**.

	ITE Land	AM So	hool Pea	k Hour	PM So	chool Pea	ak Hour
Land Use / Size	Use Code	In	Out	Total	In	Out	Total
Prospect High School							
Pre-Covid / 2,150 Students	530	649	305	954	186	395	581
Less Current In-Person / 550 Students (25%)	530	-260	-123	-383	-73	-154	-227
Total		389	182	571	113	241	354
Timber Ridge - Preschool							
Pre-Covid / 30 Students	565	15	13	28			
Less Current In-Person / 15 Students (50%)	202	-9	-9	-18			1
Total		6	4	10			
Timber Ridge – K-8 School							
Pre-Covid / 100 Students <sup>2</sup>		26	26	52	26	26	52
Less Current In-Person / 30 Students <sup>3</sup>		-15	-15	-15	-15	-15	-15
Total		11	11	22	11	11	22

#### Table 1: Estimated Trip Generation – Background Traffic

<sup>1</sup> Preschool dismissal (2:00 PM) does not coincide with School afternoon peak hour (2:45 – 3:45 PM).

<sup>2</sup> Average student occupancy per vehicle: 3.8.

<sup>3</sup> Average student occupancy per vehicle: 2.0.



### **Existing Parking**

In order to determine the existing parking demand in the study area, GHA conducted a parking inventory and parking occupancy surveys for the off-street and on-street vehicular parking areas, serving the NSSEO Timber Ridge School. parking surveys were conducted hourly on Wednesday, January 13, 2021 between 8:00 and 10:00 AM, 11:00 AM and 12:00 PM and 1:00 and 3:00 PM. These times were chosen as they represent the peak hours of occupancy based on predicted usage during the day for the existing School use.

The results of the parking survey, as summarized in *Table 2*, indicate the following key findings and observations:

- The peak parking demand within the School parking lots did not exceed 73 percent (53 of 73 spaces occupied). There was a minimum of 17 spaces available, including 2 accessible spaces. This can readily accommodate the additional staff (4) associated with the proposed addition.
- There was ample on-street visitor parking available throughout the day, along the east side of Kensington Road adjacent to the School.
- As previously identified, there is ample capacity to accommodate the peak school drop-off and pick-up demand.

	entory and Occupar	icy Survey	. weunest	iay, Janua	y 13, 2021			
	Parking			Tim	eframe / S	paces Occup	pied	
Description	Туре	Supply	8:00 AM	8:30 AM	9:30 AM	11:30 AM	1:00 PM	2:00 PM
Off-Street Parking								
	Reserved (NW)	8	8	8	8	7	8	8
	ADA (NW)	2	0	0	0	0	0	0
Main Parking Lot	Reserved (Center)	34	22	22	22	18	20	20
-	School Vehicle	5	4	4	4	2	4	4
	Reserved (East) A	2	0	0	0	0	0	0
South Darking Lat	Reserved	21	15	16	16	16	19	20
South Parking Lot	ADA	1	0	1	1	1	1	1
Total Parking Sp	aces (Off-Street)	73	49	51	51	44	52	53
Percent	Occupied		67.1%	<b>69.9%</b>	<b>69.9%</b>	60.3%	71.2%	72.6%
<b>On-Street Parking</b>								
Evanston Ave	East Side	13	0	0	0	0	0	0
(Kensington Rd – Mayfair Rd)	West Side <sup>B</sup>	19	0	1	1	0	0	0
Total O	n-Street	32	0	1	1	0	0	0
Percent	Occupied		0.0%	3.1%	3.1%	0.0%	0.0%	0.0%

#### Table 2: Parking Inventory and Occupancy Survey: Wednesday, January 13, 2021

Key

85%-100% Occupied 60%-85% Occupied 0%-60% Occupied

#### <u>Notes</u>

<sup>A</sup> Main Parking Lot "Reserved (East)" had 3 sapces blocked by portable storage units. Those units are holding furniture not used during COVID due to the need for increased social distancing in classrooms, and the storage units will be removed after COVID once the furniture can be moved back into the classrooms. At that time, the parking spaces will no longer be blocked.

<sup>b</sup> No Parking from 8:00 AM - 4:00 PM

Small bus parked along Mayfair Road around 1:55 PM.

A storage shed is located in the northeast corner of the parking lot that will be relocated, which would permit 2 additional parking spaces.

## Part III. Traffic Evaluation

#### Future Site Characteristics

#### **Proposed Development Plan**

The Site Plan prepared by Wold Architects & Engineers is provided in *Appendix D*. The development will include a gymnasium addition, weight/fitness room, boys/girls' bathrooms, site accessibility improvements (including an elevator), three offices, positive sensory lounge, additional support space, gym storage room and two additional classrooms. The addition will provide capacity for an additional 25 students and 4 staff. The School will be served by an additional 2 off-street parking spaces, for a total of 75 spaces, including 4 accessible. Visitor parking will also be maintained along the east side of Kensington Road adjacent to the School.

Access to the site will be maintained via two driveways on Evanston Avenue; however, the northern access will be relocated approximately 80 feet to the north, towards Kensington Road. This will also provide for additional on-site stacking space of approximately 100 feet (4 to 5 vehicles) for drop-off and pick-up activities. Additional site circulation improvements also include a widened drop-off/pick-up lane (expanded from approximately 18 to 25 feet), as well as widened adjacent drive aisle (also expanded from approximately 19 to 25 feet).

#### **Trip Generation**

Trip generation rates based on the existing site characteristics were used to determine the anticipated traffic from the proposed addition. The estimated vehicular trip generation for the proposed development is summarized in *Table 3*.

Land Use / Size	ITE Land	AM So	chool Pea	k Hour	PM So	chool Pea	ak Hour
Land Use / Size	Use Code	In	Out	Total	In	Out	Total
Timber Ridge – K-8 School							
25 Students <sup>1</sup>		7	7	14	7	7	14
4 Staff		4	0	4	0	4	4
Total		11	7	18	7	11	18

#### Table 3: Estimated Trip Generation – Additional Site Traffic

<sup>1</sup> Average student occupancy per vehicle: 3.8.

#### **Directional Distribution**

The anticipated trip distribution of site traffic is summarized in *Table 4*. This was based on current travel patterns, the operational characteristics of the street system and site access.

#### Table 4: Trip Distribution

Route & Direction	Percent	Route
Roule & Direction	Arrive From	Depart To
Kensington Road		
West of Evanston Avenue	20%	40%
East of Evanston Avenue	25%	35%
Evanston Avenue		
North of Kensington Road		5%
South of the Site	55%	20%
Total	100%	6

-- = less than 5%.

#### Site and Total Traffic Assignments

**Exhibit 5** illustrates the site traffic assignment for the *new* school trips, which is based on the traffic characteristics summarized in *Tables 3 and 4* (traffic generation and trip distribution) and assigned to the area roadways. The site traffic and Existing traffic (see *Exhibits 5* and *4*, respectively) were combined to produce the Total traffic, which is illustrated on **Exhibit 6**.

## **Capacity Analysis**

Capacity analyses are a standard measurement that identifies how an intersection operates. They are measured in terms of level of service (LOS). The concept of LOS is defined as a qualitative measure describing operational conditions within a traffic stream and their perception by motorists and/or passengers. A level-of-service definition provides an index to quality of traffic flow in terms of such factors as speed, travel time, freedom to maneuver, traffic interruptions, comfort, convenience, and safety.

Six levels of service are defined for each type of facility. They are given letter designations from A to F, with LOS A representing the best operating conditions and LOS F the worst. LOS C is often considered acceptable for design purposes and LOS D is usually considered as providing the lower threshold of acceptable operations. However, due to the traffic characteristics of dense urban areas, such as Chicago, it is not uncommon to have intersections operating at LOS E or LOS F during peak periods.

Since the level of service of a traffic facility is a function of the traffic flows placed upon it, it may operate at a wide range of levels of service, depending on the time of day or day of the week. A description of the operating condition under each level of service, based on the analysis parameters as published in the Transportation Research Board's (TRB) Highway Capacity Manual (HCM), Sixth Edition, is provided in *Table 5*.

		Delay (s	ec/veh)
LOS	Description	Traffic Signal	Stop Sign
Α	Describes conditions with little to no delay to motorists.	<10	< 10
В	Represents a desirable level with relatively low delay to motorists.	>10 and < 20	>10 and < 15
С	Describes conditions with average delays to motorists.	>20 and < 35	>15 and < 25
D	Describes operations where the influence of congestion becomes more noticeable. Delays are still within an acceptable range.	>35 and < 55	>25 and < 35
E	Represents operating conditions with high delay values. This level is often considered within urban settings or for minor streets intersecting major arterial roadways to be the limit of acceptable delay.	>55 and < 80	>35 and < 50
F	Is considered to be unacceptable to most drivers with high delay values that often occur, when arrival flow rates exceed the capacity of the intersection.	>80	>50

#### Table 5: Level of Service (LOS) Summary

An intersection capacity analysis was used to analyze the intersections for the weekday morning and afternoon school peak hours using the methodologies outlined in the HCM using Synchro v10 software, for the following scenarios:

- Existing Traffic Existing traffic (year 2021, adjusted to pre-COVID pandemic conditions),
- *Total Traffic* Existing traffic plus the addition of site generated traffic.

*Table 6* summarizes the intersection capacity analysis results and calculated 95<sup>th</sup>-percentile queues. Capacity analysis summary printouts are provided in *Appendix E*.





## Table 6: Level-of-Service Summary

	b. Level-of-Service Summ					Моч	ement	t Gro	up By	Appro	bach			
In	tersection / Timeframe	Roadway Conditions			red La								oveme	
			Ea	astbou	Ind	W	estbou	und	No	rthbou	nd	Sc	outhbou	und
1. Kensi	ngton Rd at Evanston Ave	TWSC - NB/SB Stops	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
		• LOS	Α	-	-	Α	-	-	>	С	<	>	Α	<
	A.Existing (See Exhibit 4)	• Delay	7.9	-	-	8.7	-	-	-	19.1	-	-	0.0	-
AM	· · · · · · · · · · · · · · · · · · ·	• 95th Queue Length (ft)	-	-	-	3	-	-	-	18	-	-	-	-
School		Approach LOS (Delay)		-			-			<u>C (19.1)</u>			A (0.0)	
Peak		• LOS	A	•	-		-	-	>	<b>C</b>	<	>	A	<
	B. Total (See Exhibit 6)	• Delay	7.9	-	-	8.7 3	-	-	-	19.6 20	-	-	0.0	-
		• 95th Queue Length (ft)	-	-	-	3	-	-	-		-	-	-	-
		Approach LOS (Delay)     LOS	A	-	-	A	•		>	C (19.6) D	<	>	A (0.0) C	~
		• Delay	8.9	•		8.2	•	•		25.0		Í	22.2	
	A.Existing (See Exhibit 4)	• 95th Queue Length (ft)	0.5			0.2	-	-		32	-		8	_
PM		Approach LOS (Delay)	_	-						D (25.0)	_	_	C (22.2)	· -
School		• LOS	A	-	-	A	-	-	>	D (20.0) D	<	>	<u>C</u>	'<
Peak		• Delay	8.9	-	-	8.2	-	-	_	26.7	_	_	22.6	-
	B. Total (See Exhibit 6)	• 95th Queue Length (ft)	-	-	-	3	-	-	-	40	-	-	8	-
		Approach LOS (Delay)		-						D (26.7)			C (22.6)	)
2. Evans	ston Ave at North Site Access	TWSC - WB Stops	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	R
		• LOS	•	•	•	>	Α	<	<	Α	•	-	•	-
	A Eviating (See Evhibit 4)	• Delay	-	-	-	-	9.1	-	7.5	-	-	-	-	-
AM	A.Existing (See Exhibit 4)	95th Queue Length (ft)	-	-	-	-	3	-	-	-	-	-	-	-
School		<ul> <li>Approach LOS (Delay)</li> </ul>		-			A (9.1)			-			-	
Peak		• LOS	-	-	-	>	Α	<	>	Α	-	-	-	-
reak	B. Total (See Exhibit 6)	• Delay	-	-	-	-	9.2	-	7.6	-	-	-	-	-
	B. Total (Occ Exhibit of	95th Queue Length (ft)	-	-	-	-	5	-	3	-	-	-	-	-
		<ul> <li>Approach LOS (Delay)</li> </ul>		•			A (9.2)			-			-	
		• LOS	-	•	•	>	Α	<	<	Α	-	-	-	-
	A.Existing (See Exhibit 4)	• Delay	-	-	-	-	9.1	-	7.5	-	-	-	-	-
PM	, C	95th Queue Length (ft)	-	-	-	-	5	-	-	-	-	-	-	-
School		Approach LOS (Delay)     LOS		-			A (9.1)	-		-			-	
Peak		• Delay	-	•	-	>	<b>A</b> 9.2	<	> 7.5	Α	-	- 1	-	-
	B. Total (See Exhibit 6)	• 95th Queue Length (ft)	-	-	-		9.2 8	-	7.5	-	-		-	-
		Approach LOS (Delay)	-	-	-	<sup>-</sup>	A (9.2)	-	-	_	-	- I	_	-
3 Evans	ston Ave at South Site Access	TWSC - WB Stops	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	R
		• LOS	-	-	-	>	A	<	<	A	-	-	-	
		• Delay	-	-	-	-	0	_	0	-	-	-	-	-
	A.Existing (See Exhibit 4)	95th Queue Length (ft)	-	-	-	- 1	-	-	-	-	-	-	-	-
AM		Approach LOS (Delay)		-			A (0.0)						-	
School		• LOS	-	-	-	>	A	<	<	Α	-	-		
Peak	D. Tatal (Cas Exhibit ()	• Delay	-	-	-	-	0	-	0	-	-	-	-	-
	B. Total (See Exhibit 6)	• 95th Queue Length (ft)	-	-	-	-	-	-	-	-	-	-	-	-
		<ul> <li>Approach LOS (Delay)</li> </ul>		-			A (0.0)			•			-	
		• LOS	•	-	•	>	Α	<	<	Α	-	•	•	
	A.Existing (See Exhibit 4)	• Delay	-	-	-	-	8.7	-	0	-	-	-	-	-
PM		• 95th Queue Length (ft)	-	-	-	-	3	-	-	-	-	-	-	-
School		Approach LOS (Delay)		-			A (8.7)	0720720720720720720720720720		-	****		-	200200200200
Peak		• LOS	-	-	-	>	A	<	<	Α	-	-	•	-
	B. Total (See Exhibit 6)	• Delay	-	-	-	-	8.7	-	0	-	-	-	-	-
		• 95th Queue Length (ft)	-	-	-	-	3	-	-	-	-	-	-	-
		<ul> <li>Approach LOS (Delay)</li> </ul>		-			A (8.7)			-			•	

As shown in Table 6, under both existing and future (total) traffic conditions, all study intersections and approaches are anticipated to operate at acceptable levels of service (at LOS D or better). The proposed addition has minimal, if any, impact on intersection operations (delay and/or queuing).

## Part IV. Conclusions and Recommendations

A traffic impact study was performed for the proposed addition to the NSSEO Timber Ridge School in Arlington Heights, Illinois. Existing and future conditions in the study area have been described, analyzed and evaluated with respect to traffic operations and the impact of the planned development. Conclusions and recommendations of this effort are presented below:

- 1. The proposed development includes a gymnasium addition, weight/fitness room, boys/girls' bathrooms, site accessibility improvements (including an elevator), three offices, positive sensory lounge, additional support space, gym storage room and two additional classrooms.
- 2. The annex is anticipated to serve an additional student enrollment of 25 students, served by 4 staff.
- 3. Improvements to on-site circulation will also be provided, including a widened drop-off/pick-up lane, widened adjacent drive aisle and additional on-site stacking (queuing) capacity.
- 4. The site will be served by an additional 2 off-street parking spaces, for a total of 75 spaces, including 4 accessible spaces. Visitor parking will be maintained along the east side of Kensington Road adjacent to the School.
- 5. Trip generation for the increase in Pre-K student population was quantified for the weekday morning and afternoon school peak periods using industry standard (ITE Trip Generation).
- 6. Analyses have been conducted for all study intersections to determine the impact from the planned development. The capacity analysis results indicate that the increase in projected site-generated traffic has little effect upon the operations of the area roadway network.
- 7. Site improvements, including accessible walkways, will be provided to safely accommodate pedestrians to/from the proposed addition and the existing sidewalk network.
- 8. Based on the project volume of additional student drop-off/pick-up and staff traffic, it is anticipated that these vehicles can be accommodated within the available spaces and parking lot.

# Part V. Technical Addendum

The following Appendices were previously referenced. They provide technical support for our observations, findings and recommendations discussed in the text.

#### **Appendices**

- A. Photo Inventory
- B. Traffic Count Summaries
- C. ITE Trip Generation Excerpts
- D. Site Plan
- E. Intersection Capacity Analyses



Gewalt Hamilton Associates, Inc.

**Technical Addendum** 



Appendices



# Appendix A Photo Inventory





Looking west along Mayfair Rd at Evanston Ave



Looking north along Evanston Ave at Mayfair Rd



Looking east along Mayfair Rd at Dale Ave



Looking north along Evanston Ave at South Parking Lot Access

Appendix A Photo Inventory Page 1 | 4









Looking north along Evanston Ave at North Parking Lot Access





Looking west along South Parking Lot Access at Evanston Ave



Looking north along Evanston Ave near west School Entrance





Looking west along North Parking Lot Access at Evanston Ave



Looking south in North Parking Lot at Drop-Off/Pick-Up Lane



# Looking east along North Parking Lot Access into Parking Lot



Looking south along Evanston Ave at North Parking Lot Access



Appendix A Photo Inventory Page 3 | 4



Looking east along Kensington Rd at Evanston Ave



Looking west along Kensington Rd at Evanston Ave

Appendix A Photo Inventory Page 4 | 4



Looking north along Evanston Ave at Kensington Rd



Looking south along Evanston Ave at Kensington Rd



# Appendix B Traffic Count Summaries



#### South Evanston Avenue & East Kensington Road - TMC

Wed Jan 13, 2021

Full Length (7:30 AM-9:30 AM, 2:30 PM-4:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians)

All Movements

ID: 808236, Location: 42.080839, -87.952611



625 Forest Edge Drive, Vernon Hills, IL, 60061, US

Leg	Kensin	gton					Kensing	ton					Evansto	n					Evanst	on					
Direction	Eastbo	-					Westbo						Northbo	ound					Southb	ound					
Time	L	Т	R	U	Арр		L	Т	R	U	Арр	Ped*	L	Т	R	U	Арр	Ped*	L	Т	R	U	App 1	Ped*	Int
2021-01-13	0	<b>F</b> 1	17	0	<u> </u>	1	0	47	1	0	50	0		0	2	0		0	0	0	2	0		1	120
7:30AM	0	51	17		68	1	8	47	1		56	0	2	0	2	0	4	0		0	2	0	2	1	130
7:45AM	1	53	8		62	1	3	37	0	0	40	8	2		4		8	2		0	0	0	0	0	110
Hourly Total	1	104	25		130	2	11	84	1		96	8		2	6	0	12	2	_	0	2	0	2	1	240
8:00AM	0	51		0	54	3	2	40		0	43	9	0	0	3		3	1	1	0	0	0	1	9	101
8:15AM	1	44		0	45	1	3	45	0	0	48	1		0	1		5	1	1	0	0	0	1	1	99
8:30AM	0	37	1		38	0	2	27	0	0	29	0	3	0	3	0	6	0		0	0	0	0	1	73
8:45AM	0	43	3	-	46	0	8	42	0	0	50	0	3	3	4	0	10	1	0	0	0	0	0	0	106
Hourly Total	1	175		0	183	4	15	154		0	170	10	10	3	11		24	3		0	0	0	2	11	379
9:00AM	0	46	2		48	0	5	42	1	0	48	1	7	1	7	0	15	1	0	0	0	0	0	2	111
9:15AM	1	31	0	-	32	0	3	36	0	0	39	1	4	0	3	0	7	3		0	0	0	0	0	78
Hourly Total	1	77		0	80	0	8	78	1	0	87	2		1	10	0	22	4		0	0	0	0	2	189
2:30PM	2	40		0	43	1	5	60	0	0	65	0	1	0	0	0	1	3		1	2	0	4	0	113
2:45PM	1	40		0	46	0	3	63	0	0	66	2	0	0	0		0	0		0	0	0	2	5	114
Hourly Total	3	80	6		89	1	8	123	0	0	131	2		0	0	0	1	3		1	2	0	6	5	227
3:00PM	1	34	4	0	39	0	2	48	1	0	51	0	7	1	12	0	20	0		1	1	0	3	1	113
3:15PM	1	36	4	0	41	0	2	79	1	0	82	0	11	1	7	0	19	1	0	1	4	0	5	0	147
3:30PM	1	58	2	0	61	0	4	120	1	0	125	0	7	1	3	0	11	0	3	0	1	0	4	1	201
3:45PM	3	57	4	0	64	1	4	88	2	0	94	2	2	0	1	0	3	0	0	0	6	0	6	0	167
Hourly Total	6	185	14	0	205	1	12	335	5	0	352	2	27	3	23	0	53	1	4	2	12	0	18	2	628
4:00PM	4	54	3	0	61	2	3	64	1	0	68	0	5	2	2	0	9	0	1	1	1	0	3	3	141
4:15PM	1	41	2	0	44	0	1	72	1	0	74	0	2	0	3	0	5	3	1	1	0	0	2	0	125
Hourly Total	5	95	5	0	105	2	4	136	2	0	142	0	7	2	5	0	14	3	2	2	1	0	5	3	266
Total	17	716	59	0	792	10	58	910	10	0	978	24	60	11	55	0	126	16	11	5	17	0	33	24	1929
% Approach	2.1% 9	90.4%	7.4%	0%	-	-	5.9% 9	93.0%	1.0%	)%	-	-	47.6%	8.7%	43.7%	0%	-	-	33.3%	15.2%	51.5% (	)%	-	-	-
% Total	0.9%	37.1%	3.1%	0%4	41.1%	-	3.0% 4	47.2%	0.5%	)% :	50.7%	-	3.1%	0.6%	2.9%	0%	6.5%	-	0.6%	0.3%	0.9% (	)%	1.7%	-	-
Lights	17	702	59	0	778	-	54	893	10	0	957	-	53	11	51	0	115	-	10	5	16	0	31	-	1881
% Lights	100% 9	98.0%	100%	0% <b>9</b>	98.2%	-	93.1% 9	98.1%	100%	)% 9	97.9%	-	88.3%	100%	92.7%	0% <b>9</b>	91.3%	-	90.9%	100%	94.1% (	)% 9	93.9%	-	97.5%
Articulated Trucks	0	0	0	0	0		0	2	0	0	2		0	0	0	0	0		0	0	0	0	0		2
% Articulated	0	0	0	0	0	-	0	2	0	0	2	-	0	0	0	0	0	-	0	0	0	0	0	-	2
% Articulated Trucks	0%	0%	0%	0%	0%	-	0%	0.2%	0%	)%	0.2%	-	0%	0%	0%	0%	0%	-	0%	0%	0% 0	)%	0%	-	0.1%
Buses and																									
Single-Unit			0	0				4-	0	0				0		0				0		0			10
Trucks	0	14	0	0	14	-	4	15	0	0	19	-	7	0	4	0	11	-	1	0	1	0	2	-	46
% Buses and Single-Unit																									
Trucks	0%	2.0%	0%	0%	1.8%	-	6.9%	1.6%	0%	)%	1.9%	-	11.7%	0%	7.3%	0%	8.7%	-	9.1%	0%	5.9% (	)%	6.1%	-	2.4%
Pedestrians	-	-	-	-	-	10	-	-	-	-	-	24	-	-	-	-	-	16		-	-	-	-	24	
% Pedestrians	-	-	-	-	_	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	- 1	00%	-
. s r cacourano	1					_ 0 0 / 0	L						1					-0070					1	/ 0	

#### South Evanston Avenue & East Kensington Road - TMC

Wed Jan 13, 2021 Forced Peak (8:30 AM - 9:30 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians) All Movements



625 Forest Edge Drive, Vernon Hills, IL, 60061, US

ID: 808236, Location: 42.080839, -87.952611

Leg Direction	Kensir Eastbo	0					Kensin Westbo	<i>.</i>					Evansto Northb						Eva Sou	nsto thbo					
Time	L	Т	R	U	App Pe	d*	L	Т	R	U	Арр	Ped*	L	Т	R	U	Арр	Ped*	L	Т	R	UA	App I	Ped*	Int
2021-01-13 8:30AM	0	37	1	0	38	0	2	27	0	0	29	0		0	3	0	6	0	0	0	0	0	0	1	73
8:45AM	0	43	3	0	46	0	8	42	0	0	50	0	3	3	4	0	10	1	0	0	0	0	0	0	106
9:00AM	0	46	2	0	48	0	5	42	1	0	48	1	7	1	7	0	15	1	0	0	0	0	0	2	111
9:15AM	1	31	0	0	32	0	3	36	0	0	39	1	4	0	3	0	7	3	0	0	0	0	0	0	78
Total	1	157	6	0	164	0	18	147	1	0	166	2	17	4	17	0	38	5	0	0	0	0	0	3	368
% Approach	0.6%	95.7%	3.7%	0%	-	-	10.8%	88.6%	0.6%	0%	-	-	44.7%	10.5%	44.7%	0%	-	-	0%	0%	0% (	)%	-	-	-
% Total	0.3%	42.7%	1.6%	0% 4	4.6%	-	4.9%	39.9%	0.3%	0%	45.1%	-	4.6%	1.1%	4.6%	0% 1	L <b>0.3%</b>	-	0%	0%	0% (	)%	0%	-	-
PHF	0.250	0.853	0.500	-	0.854	-	0.563	0.875	0.250	-	0.830	-	0.607	0.333	0.607	-	0.633	-	-	-	-	-	-	-	0.829
Lights	1	153	6	0	160	-	17	146	1	0	164	-	15	4	16	0	35	-	0	0	0	0	0	-	359
% Lights	100%	97.5%	100%	0% S	7.6%	-	94.4%	99.3%	100%	0% 9	98.8%	-	88.2%	100%	94.1%	0% <b>9</b>	92.1%	-	0%	0%	0% (	)%	-	-	97.6%
Articulated Trucks	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
% Articulated Trucks	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0% (	)%	-	-	0%
Buses and Single-Unit Trucks	0	4	0	0	4	-	1	1	0	0	2	-	2	0	1	0	3	-	0	0	0	0	0	-	9
% Buses and Single- Unit Trucks	0%	2.5%	0%	0%	2.4%	-	5.6%	0.7%	0%	0%	1.2%	-	11.8%	0%	5.9%	0%	7.9%	-	0%	0%	0% (	)%	-	-	2.4%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	5	-	-	-	-	-	3	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	- 1	100%	-	-	-	-	- 1	00%	-

#### South Evanston Avenue & East Kensington Road - TMC

Wed Jan 13, 2021

Forced Peak (2:45 PM - 3:45 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians) All Movements

All Movements

ID: 808236, Location: 42.080839, -87.952611



625 Forest Edge Drive, Vernon Hills, IL, 60061, US

Leg	Kensii	ngton					Kensin	gton					Evanst	on					Evansto	on					
Direction	Eastbo	ound					Westbo	und					Northb	ound					Southb	ound					
Time	L	Т	R	U	App	Ped*	L	Т	R	U	Арр	Ped*	L	Т	R	U	Арр	Ped*	L	Т	R	U	Арр	Ped*	Int
2021-01-13 2:45PM	1	40	5	0	46	0	3	63	0	0	66	2	0	0	0	0	0	0	2	0	0	0	2	5	114
3:00PM	1	34	4	0	39	0	2	48	1	0	51	0	7	1	12	0	20	0	1	1	1	0	3	1	113
3:15PM	1	36	4	0	41	0	2	79	1	0	82	0	11	1	7	0	19	1	0	1	4	0	5	0	147
3:30PM	1	58	2	0	61	0	4	120	1	0	125	0	7	1	3	0	11	0	3	0	1	0	4	1	201
Total	4	168	15	0	187	0	11	310	3	0	324	2	25	3	22	0	50	1	6	2	6	0	14	7	575
% Approach	2.1%	89.8%	8.0%	0%	-	-	3.4%	95.7%	0.9%	0%	-	-	50.0%	6.0%	44.0%	0%	-	-	42.9%	14.3%	42.9% (	0%	-	-	-
% Total	0.7%	29.2%	2.6%	0%3	32.5%	-	1.9%	53.9%	0.5%	0%	56.3%	-	4.3%	0.5%	3.8%	0%	8.7%	-	1.0%	0.3%	1.0% (	0%	2.4%	-	-
PHF	1.000	0.724	0.750	-	0.766	-	0.688	0.646	0.750	-	0.648	-	0.568	0.750	0.458	-	0.625	-	0.500	0.500	0.375	- (	0.700	-	0.715
Lights	4	163	15	0	182	-	10	302	3	0	315	-	20	3	20	0	43	-	5	2	5	0	12	-	552
% Lights	100%	97.0%	100%	0% 9	97.3%	-	90.9%	97.4%	100%	0%	97.2%	-	80.0%	100%	90.9%	0% <b>8</b>	36.0%	-	83.3%	100%	83.3% (	0% <b>8</b>	5.7%	-	96.0%
Articulated Trucks	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
% Articulated Trucks	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0% (	0%	0%	-	0%
Buses and Single-Unit Trucks	0	5	0	0	5	-	1	8	0	0	9	-	5	0	2	0	7	-	1	0	1	0	2	-	23
% Buses and Single-Unit Trucks	0%	3.0%	0%	0%	2.7%	-	9.1%	2.6%	0%	0%	2.8%	_	20.0%	0%	9.1%	0% 1	14.0%	_	16.7%	0%	16.7% (	0% <b>1</b>	4.3%	_	4.0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	7	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	- 1	100%	-

#### Evanston/North Site Access - TMC

Wed Jan 13, 2021 Full Length (7:30 AM-9:30 AM, 2:30 PM-4:30 PM) All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians) All Movements



625 Forest Edge Drive, Vernon Hills, IL, 60061, US

ID: 808237, Location: 42.080084, -87.952598

Leg	Drivewa						Access						Evan						Evansto						
Direction	Eastbou						Westbo						<u> </u>	hbound					Southbo						
Time	L	Т	R	U	Арр	Ped*	L	Т	R	U	Арр	Ped*	L	Т	R	U	Арр	Ped*	L	Т	R	U	Арр	Ped*	Int
2021-01-13		_		_	_						_	_		_								_			
7:30AM	0	0	0	0	0	1	0	0	0	0	0	2	0	2	2	0	4	0	16	9	0	0	25	1	29
7:45AM	0	0	0	0	0	0	0	0	0	0	0	11	0	9	4	0	13	0	6	5	0	0	11	0	24
Hourly Total	0	0	0		0	1	0	0	0	0	0	13		11	6	0	17	0		14	0	0	36	1	53
8:00AM	0	0	0	0	0	3	0	0	1	0	1	8		2	0	0	2			5	0	0	5	0	8
8:15AM		0	-	0	0	2	0	0	1	0	1	2	0	4	0		4	0	0	3	0		3	0	8
8:30AM	0	0		0	1	1	1	0	0	0	1	1	0	6	1		7	0	-	3	0		3	0	12
8:45AM	0	0	0	0	0	0	0	0	3	0	3	1	0	7	6	0	13	0	4	7	0	0	11	0	27
Hourly Total		0	1	0	1	6	1	0	5	0	6	12	0	19	7	0	26	0	4	18	0	0	22	0	55
9:00AM	0	0	0	0	0	1	1	0	6	0	7	2	0	9	0	0	9	0	2	5	0	0	7	0	23
9:15AM	0	0	0	0	0	0	0	0	1	0	1	0		5	0	0	5	0		3	0	0	3	0	9
Hourly Total	0	0	0	0	0	1	1	0	7	0	8	2	0	14	0		14	0		8	0	0	10	0	32
2:30PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1		2		0	6	1		7	0	9
2:45PM	0	0	1	0	1	1	0	0	0	0	0	3	0	1	3	0	4	0	1	7	0	0	8	0	13
Hourly Total	0	0	1	0	1	1	0	0	0	0	0	3	0	2	4	0	6	0	1	13	1	0	15	0	22
3:00PM	0	0	0	0	0	0	2	0	13	0	15	1	0	6	2	0	8	0	4	3	0	0	7	0	30
3:15PM	0	0	0	0	0	0	3	0	10	0	13	0	0	9	3	0	12	0	0	7	0	0	7	0	32
3:30PM	1	0	0	0	1	0	2	0	6	0	8	0	0	4	0	0	4	0	1	6	0	0	7	0	20
3:45PM	0	0	0	0	0	1	0	0	2	0	2	4	0	1	0	0	1	1	0	8	0	0	8	0	11
Hourly Total	1	0	0	0	1	1	7	0	31	0	38	5	0	20	5	0	25	1	5	24	0	0	29	0	93
4:00PM	0	0	0	0	0	4	0	0	3	0	3	0	0	6	1	0	7	0	0	7	0	0	7	0	17
4:15PM	0	0	0	0	0	0	0	0	2	0	2	0	0	3	0	0	3	0	0	3	1	0	4	0	9
Hourly Total	0	0	0	0	0	4	0	0	5	0	5	0	0	9	1	0	10	0	0	10	1	0	11	0	26
Total	1	0	2	0	3	14	9	0	48	0	57	35	0	75	23	0	98	1	34	87	2	0	123	1	281
% Approach	33.3% 0	)% (	66.7% (	0%	-	-	15.8% (	)% 8	4.2% (	)%	-	-	0% 7	6.5% 2	23.5%	0%	-	-	27.6% 7	70.7%	1.6% (	0%	-	-	-
% Total	0.4% 0	)%	0.7% (	0%	1.1%	-	3.2% (	0% 1	7.1% (	)% 2	20.3%	-	0% 2	.7%	8.2%	0%3	34.9%	-	12.1% 3	31.0%	0.7% (	0%4	13.8%	-	-
Lights	1	0	2	0	3	-	8	0	38	0	46	-	0	74	14	0	88	-	32	85	2	0	119	-	256
% Lights	100% 0	)%	100% (	0%	100%	-	88.9% (	)% 7	9.2% (	)% <b>E</b>	30.7%	-	0% 9	8.7% 6	50.9%	0% <b>8</b>	39.8%	-	94.1% 9	97.7% 1	00%	0% 9	96.7%	-	91.1%
Articulated Trucks	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
% Articulated																									
Trucks	0% 0	)%	0% (	0%	0%	-	0% (	)%	0% (	)%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0% (	0%	0%	-	0%
Buses and Single- Unit Trucks	0	0	0	0	0	-	1	0	10	0	11	-	0	1	9	0	10	-	2	2	0	0	4	-	25
% Buses and Single-Unit Trucks	0% 0	)%	0% (	0%	0%	-	11.1% (	)% 2	0.8% (	)% 1	19.3%	-	0%	1.3% 3	39.1%	0% 1	10.2%	-	5.9%	2.3%	0% (	0%	3.3%	_	8.9%
Pedestrians		-	-	-	-	14	-	-	-	-	-	35	-	-	-	-	-	1	-	-	-	-	-	1	
% Pedestrians	-	-	-	-	_ `	100%	-	-	-	-	- '	100%	-	-	-	-	-	100%	-	-	-	-	- 1	.00%	-
% Pedestrians	-	-	-	-		100%	-	-	-	-		100%	-	-	-	-	-	100%	-	-	-	-	- 1	.00%	

#### Evanston/North Site Access - TMC

Wed Jan 13, 2021 AM Peak (8:30 AM - 9:30 AM) All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians) All Movements ID: 808237, Location: 42.080084, -87.952598



625 Forest Edge Drive, Vernon Hills, IL, 60061, US

Leg Direction		/ewa bour	·				Access Westbo	und						inston thbound					Evansto Southbo						
Time	L	Т	R	U	Арр	Ped*	L	Т	R	U	Арр	Ped*	L	Т	R	U	App P	ed*	L	Т	R	U	App P	ed*	Int
2021-01-13 8:30AM	0	0	1	0	1	1	1	0	0	0	1	1	0	6	1	0	7	0	0	3	0	0	3	0	12
8:45AM	0	0	0	0	0	0	0	0	3	0	3	1	0	7	6	0	13	0	4	7	0	0	11	0	27
9:00AM	0	0	0	0	0	1	1	0	6	0	7	2	0	9	0	0	9	0	2	5	0	0	7	0	23
9:15AM	0	0	0	0	0	0	0	0	1	0	1	0	0	5	0	0	5	0	0	3	0	0	3	0	9
Total	0	0	1	0	1	2	2	0	10	0	12	4	0	27	7	0	34	0	6	18	0	0	24	0	71
% Approach	0%	0% 1	.00%	0%	-	-	16.7% (	0% 8	3.3% 0	%	-	-	0%	79.4% 2	20.6%	0%	-	-	25.0%	75.0%	)%(	)%	-	-	-
% Total	0%	0%	1.4%	0%	1.4%	-	2.8%	0% 1	4.1% 0	% 1	6.9%	-	0%	38.0%	9.9%	0%4	47.9%	-	8.5%	25.4%	)%(	)% <b>3</b> :	3.8%	-	-
PHF	-	- 0	.250	- (	0.250	-	0.500	- 1	0.417	- 1	0.429	-	-	0.750	0.292	-	0.654	-	0.375	0.643	-	- 0	).545	-	0.657
Lights	0	0	1	0	1	-	1	0	7	0	8	-	0	27	4	0	31	-	5	18	0	0	23	-	63
% Lights	0%	0% 1	.00%	0%	100%	-	50.0% (	)% 7	'0.0% C	%6	6.7%	-	0%	100% 5	57.1%	0% <b>9</b>	91.2%	-	83.3%	100%	)%(	)% <b>9</b>	5.8%	-	88.7%
Articulated Trucks	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
% Articulated Trucks	0%	0%	0%	0%	0%	-	0% (	)%	0% 0	%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	)%(	)%	0%	-	0%
Buses and Single-Unit Trucks		0	0	0	0	-	1	0	3	0	4	-	0	0	3	0	3	-	1	0	0	0	1	-	8
% Buses and Single-Unit Trucks		0%	0%	0%	0%	-	50.0% (	0% 3	30.0% C	)% 3	3.3%	-	0%	0% 4	2.9%	0%	8.8%	-	16.7%	0%	0% (	)%	4.2%	-	11.3%
Pedestrians	-	-	-	-	-	2	-	-	-	-	-	4	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	- 1	100%	-	-	-	-	-	-	-	-	-	-	-	-	-

#### Evanston/North Site Access - TMC

Wed Jan 13, 2021 PM Peak (2:45 PM - 3:45 PM) - Overall Peak Hour All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians) All Movements



625 Forest Edge Drive, Vernon Hills, IL, 60061, US

ID: 808237, Location: 42.080084, -87.952598

Leg Direction	Drivewa Eastbou	5					Access Westbo	und						inston thbound	l				Evansto Southb						
Time	L	Т	R	U	Арр	Ped*	L	Т	R	U	Арр	Ped*	L	Т	R	U	App I	ed*	L	Т	R	U	App P	ed*	Int
2021-01-13 2:45PM	0	0	1	0	1	1	0	0	0	0	0	3	0	1	3	0	4	0	1	7	0	0	8	0	13
3:00PM	0	0	0	0	0	0	2	0	13	0	15	1	0	6	2	0	8	0	4	3	0	0	7	0	30
3:15PM	0	0	0	0	0	0	3	0	10	0	13	0	0	9	3	0	12	0	0	7	0	0	7	0	32
3:30PM	1	0	0	0	1	0	2	0	6	0	8	0	0	4	0	0	4	0	1	6	0	0	7	0	20
Total	1	0	1	0	2	1	7	0	29	0	36	4	0	20	8	0	28	0	6	23	0	0	29	0	95
% Approach	50.0% (	)%	50.0%	0%	-	-	19.4% (	0% 8	0.6% (	)%	-	-	0%	71.4% 2	28.6%	0%	-	-	20.7%	79.3%	0% (	0%	-	-	-
% Total	1.1% (	)%	1.1%	0%	2.1%	-	7.4% (	0% 3	0.5% (	)% 3	87.9%	-	0%	21.1%	8.4%	0% <b>2</b>	9.5%	-	6.3%	24.2%	0% (	0% <b>3</b>	0.5%	-	-
PHF	0.250	-	0.250	- (	0.500	-	0.583	-	0.558	-	0.600	-	-	0.556	0.667	-	0.583	-	0.375	0.821	-	- (	0.906	-	0.742
Lights	1	0	1	0	2	-	7	0	22	0	29	-	0	20	3	0	23	-	5	23	0	0	28	-	82
% Lights	100% (	)%	100%	0% :	100%	-	100% (	)% 7	5.9% (	)% 8	80.6%	-	0%	100% 3	37.5%	0% <b>8</b>	32.1%	-	83.3%	100%	0% (	0% <b>9</b>	6.6%	-	86.3%
Articulated Trucks	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
% Articulated Trucks	0% (	)%	0%	0%	0%	-	0% (	)%	0% (	)%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0% (	0%	0%	-	0%
Buses and Single-Unit Trucks	0	0	0	0	0	-	0	0	7	0	7	-	0	0	5	0	5	-	1	0	0	0	1	-	13
% Buses and Single- Unit Trucks	0% (	)%	0%	0%	0%	-	0% (	)% 2	4.1% (	)% 1	9.4%	-	0%	0% 6	62.5%	0% 1	7.9%	-	16.7%	0%	0% (	0%	3.4%	-	13.7%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	4	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	- 1	100%	-	-	-	-	-	-	-	-	-	-	-	-	-

#### Evanston/South Site Access - TMC

Wed Jan 13, 2021 Full Length (7:30 AM-9:30 AM, 2:30 PM-4:30 PM) All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians) All Movements



625 Forest Edge Drive, Vernon Hills, IL, 60061, US

ID: 808238, Location: 42.07907, -87.952598

Leg Direction	Driveway Eastbound						Access Westbo	und					Evansto Northbo						Evanston Southbound						
Time	L		R	II.	\nn	Ped*	L	T	R	U	App	Ped*	L	T	R	U	Арр	Dod*	L		R	U	Арр	Ped*	Int
2021-01-13 7:30AM	1 0		<u>к</u>	0	<u>קקי</u> 0	1	0	0	0	0	<u>дүл</u> 0		0 1	4	4		<u>лүр</u> 8	1	5	4		0	<u>קקר</u> 9	0	11 17
7:45AM	0		0	0	0	0	0	0	0	0	0		0	12	1	0	13	1	1	3		0	4	0	17
Hourly Total	-	0	0	0	0	1	0	0	0	0	0		0	12	5		21	2		7		0	13	0	34
8:00AM	0		0	0	0	2	0	0	0	0	0		0	2		0	3	0	0	5	0	0	5	2	8
8:15AM	0		0	0	0	2	0	0	0	0	0		0	4	0		4	2		3	0	0	3	0	7
8:30AM	0	-	0	0	0	1	0	0	0	0	0		0	6	0	0	6	1	0	5	0	0	5	0	11
8:45AM	0		0	0	0	2	0	0	0	0	0		0	14	1	-	15	0		7		0	7	0	22
Hourly Total		0	0	0	0	7	0	0	0	0	0		0	26	2		28	3			0	0	20	2	48
9:00AM		0	0	0	0	1	0	0	0	0	0		0	9	0		9	0		6	0	0	6	0	15
9:15AM	0		0	0	0	0	0	0	0	0	0		0	4	0		4	0		3	0	0	3	0	7
Hourly Total	0		0	0	0	1	0	0	0	0	0		0	13	0	-	13	0		9	0	0	9	0	22
2:30PM	0	0	0	0	0	0	0	0	0	0	0		0	3	0	0	3	0	0	6	0	0	6	0	9
2:45PM	0	0	0	0	0	0	0	0	1	0	1	3	0	3	0	0	3	0	0	6	0	2	8	1	12
Hourly Total	0	0	0	0	0	0	0	0	1	0	1	3	0	6	0	0	6	0	0	12	0	2	14	1	21
3:00PM	0	0	0	0	0	0	1	0	1	0	2	1	0	5	0	0	5	0	0	4	0	0	4	0	11
3:15PM	0	0	0	0	0	0	2	0	5	0	7	0	0	4	0	0	4	0	0	7	0	1	8	0	19
3:30PM	0	0	0	0	0	1	4	0	1	0	5	0	1	2	0	0	3	0	0	10	0	0	10	0	18
3:45PM	0	0	0	0	0	4	1	0	0	0	1	2	0	3	0	0	3	0	0	10	0	0	10	0	14
Hourly Total	0	0	0	0	0	5	8	0	7	0	15	3	1	14	0	0	15	0	0	31	0	1	32	0	62
4:00PM	0	0	0	0	0	2	1	0	0	0	1	2	0	7	0	0	7	1	0	7	0	0	7	2	15
4:15PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	3	0	0	3	0	6
Hourly Total	0	0	0	0	0	2	1	0	0	0	1	2	0	10	0	0	10	1	0	10	0	0	10	2	21
Total	0	0	0	0	0	16	9	0	8	0	17	36	1	85	7	0	93	6	6	89	0	3	98	5	208
% Approach	0%	0%	0%	0%	-	-	52.9% (	)% 4	47.1% (	)%	-	-	1.1% 9	1.4%	7.5%	0%	-	-	6.1% 9	0.8%	0% 3	3.1%	-	-	-
% Total	0%	0%	0%	0%	0%	-	4.3% (	)%	3.8% (	)%	8.2%	-	0.5% 4	0.9%	3.4%	0% 4	14.7%	-	2.9% 4	12.8%	0% 1	1.4%	47.1%	-	-
Lights	0	0	0	0	0	-	9	0	8	0	17	-	1	75	7	0	83	-	6	86	0	3	95	-	195
% Lights	0%	0%	0%	0%	-	-	100% (	)%	100% (	)%	100%	-	100% 8	88.2%	100%	0% <b>8</b>	39.2%	-	100% 9	96.6%	0% 1	00% 9	96.9%	-	93.8%
Articulated Trucks	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
% Articulated Trucks	0%	0%	0%	0%	-	-	0% (	)%	0% (	)%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%
Buses and Single-Unit Trucks	0	0	0	0	0	-	0	0	0	0	0	-	0	10	0	0	10	-	0	3	0	0	3	-	13
% Buses and Single-Unit Trucks		0%	0%	0%	-	-	0% (	)%	0% (	)%	0%	-	0% 1	1.8%	0%	0% 1	0.8%	_	0%	3.4%	0%	0%	3.1%	_	6.3%
Pedestrians	-	-	-	-	-	16	-	-	-	-	-	36	-	-	-	-	-	6	-	-	-	-	-	5	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	- 1	.00%	-	-	-	-	- 1	.00%	-

#### Evanston/South Site Access - TMC

Wed Jan 13, 2021 Forced Peak (8:30 AM - 9:30 AM) All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians) All Movements ID: 808238, Location: 42.07907, -87.952598



625 Forest Edge Drive, Vernon Hills, IL, 60061, US

Leg	Driv		-				Acce		_					nston						nston					
Direction	Eastbound					Westbound						Northbound							Southbound						
Time	L	Т	R	U.	Арр	Ped*	L	Т	R	U.	Арр	Ped*	L	Т	R	U	Арр	Ped*	L	Т	R	U	Арр	Ped*	Int
2021-01-13 8:30AM	0	0	0	0	0	1	0	0	0	0	0	1	0	6	0	0	6	1	0	5	0	0	5	0	11
8:45AM	0	0	0	0	0	2	0	0	0	0	0	1	0	14	1	0	15	0	0	7	0	0	7	0	22
9:00AM	0	0	0	0	0	1	0	0	0	0	0	3	0	9	0	0	9	0	0	6	0	0	6	0	15
9:15AM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	3	0	0	3	0	7
Total	0	0	0	0	0	4	0	0	0	0	0	5	0	33	1	0	34	1	0	21	0	0	21	0	55
% Approach	0%	0%	0%	0%	-	-	0%	0%	0%	0%	-	-	0%	97.1%	2.9%	0%	-	-	0%	100%	0%	0%	-	-	-
% Total	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	60.0%	1.8%	0%	61.8%	-	0%	38.2%	0%	0%	38.2%	-	-
PHF	-	-	-	-	-	-	-	-	-	-	-	-	-	0.589	0.250	-	0.567	-	-	0.750	-	-	0.750	-	0.625
Lights	0	0	0	0	0	-	0	0	0	0	0	-	0	30	1	0	31	-	0	20	0	0	20	-	51
% Lights	0%	0%	0%	0%	-	-	0%	0%	0%	0%	-	-	0%	90.9%	100%	0%	91.2%	-	0%	95.2%	0%	0%	95.2%	-	92.7%
Articulated Trucks	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
% Articulated Trucks	0%	0%	0%	0%	-	-	0%	0%	0%	0%	-	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%
Buses and Single-Unit Trucks	0	0	0	0	0	-	0	0	0	0	0	-	0	3	0	0	3	-	0	1	0	0	1	-	4
% Buses and Single-Unit Trucks	0%	0%	0%	0%	-	-	0%	0%	0%	0%	-	-	0%	9.1%	0%	0%	8.8%	-	0%	4.8%	0%	0%	4.8%	-	7.3%
Pedestrians	-	-	-	-	-	4	-	-	-	-	-	5	-	-	-	-	-	1	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	- 1	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	-	-
### Evanston/South Site Access - TMC

Wed Jan 13, 2021 Forced Peak (2:45 PM - 3:45 PM) All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians) All Movements ID: 808238, Location: 42.07907, -87.952598



625 Forest Edge Drive, Vernon Hills, IL, 60061, US

Leg	Driv	vew	ay				Access						Evanst	on					Evar	nston					
Direction	Eas	tbou	ınd				Westbo	und					Northb	ound					Sout	hbound	ł				
Time	L	Т	R	U	App	Ped*	L	Т	R	U	Арр	Ped*	L	Т	R	U	App P	ed*	L	Т	R	U	Арр	Ped*	Int
2021-01-13 2:45PM	0	0	0	0	0	0	0	0	1	0	1	3	0	3	0	0	3	0	0	6	0	2	8	1	12
3:00PM	0	0	0	0	0	0	1	0	1	0	2	1	0	5	0	0	5	0	0	4	0	0	4	0	11
3:15PM	0	0	0	0	0	0	2	0	5	0	7	0	0	4	0	0	4	0	0	7	0	1	8	0	19
3:30PM	0	0	0	0	0	1	4	0	1	0	5	0	1	2	0	0	3	0	0	10	0	0	10	0	18
Total	0	0	0	0	0	1	7	0	8	0	15	4	1	14	0	0	15	0	0	27	0	3	30	1	60
% Approach	0%	0%	0%	0%	-	-	46.7% (	)% !	53.3%	0%	-	-	6.7% 9	93.3%	0% (	0%	-	-	0% 9	90.0%	0%	10.0%	-	-	-
% Total	0%	0%	0%	0%	0%	-	11.7% (	)% :	13.3%	0% 2	25.0%	-	1.7% 2	23.3%	0% (	0% 2	25.0%	-	0% 4	45.0%	0%	5.0% !	50.0%	-	-
PHF	-	-	-	-	-	-	0.438	-	0.400	-	0.536	-	0.250	0.700	-	-	0.750	-	-	0.675	-	0.375	0.750	-	0.789
Lights	0	0	0	0	0	-	7	0	8	0	15	-	1	9	0	0	10	-	0	27	0	3	30	-	55
% Lights	0%	0%	0%	0%	-	-	100% (	)%	100%	0%	100%	-	100% 6	64.3%	0% (	0% <b>(</b>	6.7%	-	0%	100%	0%	100%	100%	-	91.7%
Articulated Trucks	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
% Articulated Trucks	0%	0%	0%	0%	-	-	0% (	)%	0%	0%	0%	-	0%	0%	0% (	0%	0%	-	0%	0%	0%	0%	0%	-	0%
Buses and Single-Unit Trucks	0	0	0	0	0	-	0	0	0	0	0	-	0	5	0	0	5	-	0	0	0	0	0	-	5
% Buses and Single-Unit																									
Trucks	0%	0%	0%	0%	-	-	0% (	)%	0%	0%	0%	-	0% 3	35.7%	0% (	0%3	33.3%	-	0%	0%	0%	0%	0%	-	8.3%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	4	-	-	-	-	-	0	-	-	-	-	-	1	
% Pedestrians	-	-	-	-	- 1	00%	-	-	-	-	- 1	.00%	-	-	-	-	-	-	-	-	-	-	- 1	100%	-

\*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn



Illinois Department of Transportation



# **Volume Count Report**

LOCATION INF	LOCATION INFO						
Location ID	016 4496						
Туре	LINK						
Fnct'l Class	5						
Located On	Kensington Rd						
From Road	Northwest Hwy						
To Road	Waterman Ave						
Direction	2-WAY						
County	Cook						
Community	ARLINGTON HEIGHTS						
MPO ID							
HPMS ID							
Agency	Illinois DOT						

COUNT DATA INF	FO
Count Status	Accepted
Start Date	Tue 7/24/2018
End Date	Wed 7/25/2018
Start Time	1:00:00 PM
End Time	1:00:00 PM
Direction	2-WAY
Notes	
Station	KENSINGTON RD
Study	
Speed Limit	
Description	
Sensor Type	
Source	CombineVolumeCountsIncremental
Latitude,Longitude	

INTERVAL:60-M	IN
Time	Hourly Count
0:00-1:00	23
1:00-2:00	10
2:00-3:00	4
3:00-4:00	11
4:00-5:00	20
5:00-6:00	56
6:00-7:00	134
7:00-8:00	347
8:00-9:00	331
9:00-10:00	331
10:00-11:00	346
11:00-12:00	367
12:00-13:00 📵	439
13:00-14:00	371
14:00-15:00	383
15:00-16:00	407
16:00-17:00	423
17:00-18:00	450
18:00-19:00	380
19:00-20:00	340
20:00-21:00	202
21:00-22:00	159
22:00-23:00	80
23:00-24:00	49
Total	5,663
AM Peak	11:00-12:00 367
PM Peak	17:00-18:00 450

# Appendix C ITE Trip Generation Excerpts



	<b>School</b> 30)
Vehicle Trip Ends vs: On a:	Students Weekday, AM Peak Hour of Generator
Number of Studies: Avg. Num. of Students:	

# Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
0.55	0.22 - 1.15	0.23

# **Data Plot and Equation**



*Trip Gen Manual,* 10th Ed + Supplement • Institute of Transportation Engineers

High School (530)									
Vehicle Trip Ends vs: On a:	Students Weekday, PM Peak Hour of Generator								
Number of Studies: Avg. Num. of Students:									

# Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
0.33	0.16 - 0.74	0.13

# **Data Plot and Equation**



*Trip Gen Manual,* 10th Ed + Supplement • Institute of Transportation Engineers

Day Care Center (565)									
Vehicle Trip Ends vs: On a:	Students Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.								
Setting/Location:	General Urban/Suburban								
Number of Studies:	75								
Avg. Num. of Students:	71								
Directional Distribution:	53% entering, 47% exiting								

# Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
0.78	0.39 - 1.78	0.25

# **Data Plot and Equation**



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# Appendix D Site Plan



Wold



Comm No: 173230

# **Appendix E** Intersection Capacity Analyses



1.5

### Intersection

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	ţ,		5	f,			4			4	
Traffic Vol, veh/h	1	429	8	25	274	1	23	5	22	0	0	0
Future Vol, veh/h	1	429	8	25	274	1	23	5	22	0	0	0
Conflicting Peds, #/hr	3	0	5	5	0	3	0	0	2	2	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	0	2	0	5	1	0	12	0	6	0	0	0
Mvmt Flow	1	517	10	30	330	1	28	6	27	0	0	0

Major/Minor	Major1		Maj	or2		Minor1		Ν	/linor2			
Conflicting Flow All	334	0	0 5	32 0	0	920	923	529	937	928	334	
Stage 1	-	-	-		-	529	529	-	394	394	-	
Stage 2	-	-	-		-	391	394	-	543	534	-	
Critical Hdwy	4.1	-	- 4	.15 -	-	7.22	6.5	6.26	7.1	6.5	6.2	
Critical Hdwy Stg 1	-	-	-		-	6.22	5.5	-	6.1	5.5	-	
Critical Hdwy Stg 2	-	-	-		-	6.22	5.5	-	6.1	5.5	-	
Follow-up Hdwy	2.2	-	- 2.2	45 -	-	3.608	4	3.354	3.5	4	3.3	
Pot Cap-1 Maneuver	1237	-	- 10	- 20	-	241	272	542	247	270	712	
Stage 1	-	-	-		-	515	530	-	635	609	-	
Stage 2	-	-	-		-	614	609	-	528	528	-	
Platoon blocked, %		-	-	-	-							
Mov Cap-1 Maneuver	1233	-	- 10	15 -	-	234	261	538	224	259	710	
Mov Cap-2 Maneuver	-	-	-		-	234	261	-	224	259	-	
Stage 1	-	-	-		-	512	527	-	632	589	-	
Stage 2	-	-	-		-	596	589	-	495	525	-	
Approach	EB		<u> </u>	VB		NB			SB			
HCM Control Delay, s	0			).7		19.1			0			
HCM LOS						С			А			

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR S	BLn1
Capacity (veh/h)	316	1233	-	-	1015	-	-	-
HCM Lane V/C Ratio	0.191	0.001	-	-	0.03	-	-	-
HCM Control Delay (s)	19.1	7.9	-	-	8.7	-	-	0
HCM Lane LOS	С	А	-	-	А	-	-	А
HCM 95th %tile Q(veh)	0.7	0	-	-	0.1	-	-	-

Int Delay, s/veh	3.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		et.			ŧ
Traffic Vol, veh/h	5	22	28	16	14	19
Future Vol, veh/h	5	22	28	16	14	19
Conflicting Peds, #/hr	0	0	0	4	4	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	66	66	66	66	66	66
Heavy Vehicles, %	1	30	0	43	17	0
Mvmt Flow	8	33	42	24	21	29

Major/Minor	Minor1	М	ajor1	Ν	1ajor2	
Conflicting Flow All	129	58	0	0	70	0
Stage 1	58	-	-	-	-	-
Stage 2	71	-	-	-	-	-
Critical Hdwy	6.41	6.5	-	-	4.27	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.57	-	- 1	2.353	-
Pot Cap-1 Maneuver	868	935	-	-	1441	-
Stage 1	967	-	-	-	-	-
Stage 2	954	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	852	931	-	-	1436	-
Mov Cap-2 Maneuver	852	-	-	-	-	-
Stage 1	963	-	-	-	-	-
Stage 2	940	-	-	-	-	-
Approach	WB		NB		SB	
	0.4				0.0	

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	3.2
HCM LOS	А		

Minor Lane/Major Mvmt	NBT	NBRW	/BLn1	SBL	SBT
Capacity (veh/h)	-	-	915	1436	-
HCM Lane V/C Ratio	-	-	0.045	0.015	-
HCM Control Delay (s)	-	-	9.1	7.5	0
HCM Lane LOS	-	-	А	А	А
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Int Delay, s/veh	0						
Movement	WBL	WBR	NBT	NBR	SBL	SBT	•
Lane Configurations	Y		t)			÷.	
Traffic Vol, veh/h	0	0	44	1	0	24	
Future Vol, veh/h	0	0	44	1	0	24	
Conflicting Peds, #/hr	1	0	0	5	5	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	62	62	62	62	62	62	
Heavy Vehicles, %	0	0	9	0	0	5	
Mvmt Flow	0	0	71	2	0	39	

Major/Minor	Minor1	M	lajor1	Ν	/lajor2	
Conflicting Flow All	117	77	0	0	78	0
Stage 1	77	-	-	-	-	-
Stage 2	40	-	-	-	-	-
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	884	990	-	-	1533	-
Stage 1	951	-	-	-	-	-
Stage 2	988	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	r 879	985	-	-	1526	-
Mov Cap-2 Maneuver	r 879	-	-	-	-	-
Stage 1	946	-	-	-	-	-
Stage 2	987	-	-	-	-	-
Approach	WB		NB		SB	
				_		

Approach	WB	NB	SB	
HCM Control Delay, s	0	0	0	
HCM LOS	А			

Minor Lane/Major Mvmt	NBT	NBRWB	Ln1	SBL	SBT	
Capacity (veh/h)	-	-	-	1526	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	-	-	0	0	-	
HCM Lane LOS	-	-	А	А	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	

2.3

### Intersection

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
		2.042		VVDL		VUDIX	NDL	1.244.02	NDIX	ODL		ODIX	
Lane Configurations	<u> </u>	ef 👘		1	Þ			÷			4		
Traffic Vol, veh/h	4	247	19	13	479	3	29	4	26	6	2	6	
Future Vol, veh/h	4	247	19	13	479	3	29	4	26	6	2	6	
Conflicting Peds, #/hr	7	0	1	1	0	7	0	0	2	2	0	0	
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None	
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-	
Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	72	72	72	72	72	72	72	72	72	72	72	72	
Heavy Vehicles, %	0	3	0	9	3	0	20	0	9	17	0	17	
Mvmt Flow	6	343	26	18	665	4	40	6	36	8	3	8	

Conflicting Flow All 676 0 0 370 0 0 1078 1081 359 1101 1092 674   Stage 1 - - - - 369 369 - 710 710 -   Stage 2 - - - - 709 712 - 391 382 -   Critical Hdwy 4.1 - - 4.19 - - 7.3 6.5 6.29 7.27 6.5 6.37   Critical Hdwy Stg 1 - - - - 6.3 5.5 - 6.27 5.5 -   Critical Hdwy Stg 2 - - - - 6.3 5.5 - 6.27 5.5 -   Critical Hdwy Stg 2 - - 2.281 - 3.68 4 3.381 3.653 4 3.453   Pot Cap-1 Maneuver 925 - 1151 - 181 220 670 177 216 430   Stage 1 - - - -	Major/Minor	Major1		Ν	/lajor2		N	Minor1			Minor2			
Stage 2 - - - - 709 712 - 391 382 -   Critical Hdwy 4.1 - - 4.19 - 7.3 6.5 6.29 7.27 6.5 6.37   Critical Hdwy Stg 1 - - - - 6.3 5.5 - 6.27 5.5 -   Critical Hdwy Stg 2 - - - - 6.3 5.5 - 6.27 5.5 -   Critical Hdwy Stg 2 - - 2.281 - - 3.68 4 3.381 3.653 4 3.453   Pot Cap-1 Maneuver 925 - 1151 - 181 220 670 177 216 430   Stage 1 - - - - 398 439 - 604 616 -   Platoon blocked, % - - - - - 172 213 668 160 209 427   Mov Cap-2 Maneuver 919 - 1150 -	Conflicting Flow All	676	0	0	370	0	0	1078	1081	359	1101	1092	674	
Critical Hdwy 4.1 - - 4.19 - - 7.3 6.5 6.29 7.27 6.5 6.37   Critical Hdwy Stg 1 - - - - 6.3 5.5 - 6.27 5.5 -   Critical Hdwy Stg 2 - - - - 6.3 5.5 - 6.27 5.5 -   Follow-up Hdwy 2.2 - - 2.281 - - 3.68 4 3.381 3.653 4 3.453   Pot Cap-1 Maneuver 925 - 1151 - 181 220 670 177 216 430   Stage 1 - - - - 616 624 - 402 440 -   Stage 2 - - - - 398 439 - 604 616 -   Platoon blocked, % - - - 172 213 668 160 209 427   Mov Cap-2 Maneuver - - - - - </td <td>Stage 1</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>369</td> <td>369</td> <td>-</td> <td>710</td> <td>710</td> <td>-</td> <td></td>	Stage 1	-	-	-	-	-	-	369	369	-	710	710	-	
Critical Hdwy Stg 1 - - - - 6.3 5.5 - 6.27 5.5 -   Critical Hdwy Stg 2 - - - - 6.3 5.5 - 6.27 5.5 -   Follow-up Hdwy 2.2 - - 2.281 - - 3.68 4 3.381 3.653 4 3.453   Pot Cap-1 Maneuver 925 - 1151 - 181 220 670 177 216 430   Stage 1 - - - 616 624 - 402 440 -   Stage 2 - - - - 398 439 - 604 616 -   Platoon blocked, % - - - 172 213 668 160 209 427   Mov Cap-2 Maneuver - - - - 172 213 616 209 -   Stage 1 - - - - 382 429 - 561 611	Stage 2	-	-	-	-	-	-	709	712	-	391	382	-	
Critical Hdwy Stg 2 - - - - 6.3 5.5 - 6.27 5.5 -   Follow-up Hdwy 2.2 - 2.281 - 3.68 4 3.381 3.653 4 3.453   Pot Cap-1 Maneuver 925 - 1151 - 181 220 670 177 216 430   Stage 1 - - - 616 624 - 402 440 -   Stage 2 - - - - 398 439 - 604 616 -   Platoon blocked, % - - - 172 213 668 160 209 427   Mov Cap-2 Maneuver 919 - 1150 - 172 213 668 160 209 -   Stage 1 - - - - 172 213 610 209 -   Stage 1 - - - - 382 429 561 611 -	Critical Hdwy	4.1	-	-	4.19	-	-	7.3	6.5	6.29	7.27	6.5	6.37	
Follow-up Hdwy 2.2 - - 2.281 - - 3.68 4 3.381 3.653 4 3.453   Pot Cap-1 Maneuver 925 - 1151 - 181 220 670 177 216 430   Stage 1 - - - - 616 624 - 402 440 -   Stage 2 - - - - - 398 439 - 604 616 -   Platoon blocked, % -	Critical Hdwy Stg 1	-	-	-	-	-	-	6.3	5.5	-	6.27	5.5	-	
Pot Cap-1 Maneuver 925 - 1151 - 181 220 670 177 216 430   Stage 1 - - - - 616 624 - 402 440 -   Stage 2 - - - - 398 439 - 604 616 -   Platoon blocked, % -	Critical Hdwy Stg 2	-	-	-	-	-	-	6.3	5.5	-	6.27	5.5	-	
Stage 1 - - - - 616 624 - 402 440 -   Stage 2 - - - - 398 439 - 604 616 -   Platoon blocked, % -	Follow-up Hdwy	2.2	-	-	2.281	-	-	3.68	4	3.381	3.653	4	3.453	
Stage 2 - - - - 398 439 - 604 616 -   Platoon blocked, % - - - - - - - - - - Platoon blocked, % -	Pot Cap-1 Maneuver	925	-	-	1151	-	-	181	220	670	177	216	430	
Platoon blocked, % - - - - -   Mov Cap-1 Maneuver 919 - 1150 - 172 213 668 160 209 427   Mov Cap-2 Maneuver - - - - 172 213 - 160 209 -   Stage 1 - - - - 612 619 - 397 430 -   Stage 2 - - - - 382 429 - 561 611 -	Stage 1	-	-	-	-	-	-	616	624	-	402	440	-	
Mov Cap-1 Maneuver 919 - - 1150 - - 172 213 668 160 209 427   Mov Cap-2 Maneuver - - - - 172 213 - 160 209 -   Stage 1 - - - - 612 619 - 397 430 -   Stage 2 - - - - 382 429 - 561 611 -	Stage 2	-	-	-	-	-	-	398	439	-	604	616	-	
Mov Cap-2 Maneuver - - - - 172 213 - 160 209 -   Stage 1 - - - 612 619 - 397 430 -   Stage 2 - - - - 382 429 - 561 611 -	Platoon blocked, %		-	-		-	-							
Stage 1 - - - 612 619 - 397 430 -   Stage 2 - - - - 382 429 - 561 611 -	Mov Cap-1 Maneuve	r 919	-	-	1150	-	-	172	213	668	160	209	427	
Stage 2 382 429 - 561 611 -	Mov Cap-2 Maneuve	r -	-	-	-	-	-	172	213	-	160	209	-	
	Stage 1	-	-	-	-	-	-	612	619	-	397	430	-	
Approach EB WB NB SB	Stage 2	-	-	-	-	-	-	382	429	-	561	611	_	
Approach EB WB NB SB														
	Approach	EB			WB			NB			SB			
HCM Control Delay, s 0.1 0.2 25 22.2	HCM Control Delay, s	s 0.1			0.2			25			22.2			

HCM Control Delay, s	0.1	0.2	25	22.2	
HCM LOS			D	С	

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR \$	SBLn1	
Capacity (veh/h)	261	919	-	-	1150	-	-	229	
HCM Lane V/C Ratio	0.314	0.006	-	-	0.016	-	-	0.085	
HCM Control Delay (s)	25	8.9	-	-	8.2	-	-	22.2	
HCM Lane LOS	D	А	-	-	А	-	-	С	
HCM 95th %tile Q(veh)	1.3	0	-	-	0	-	-	0.3	

Int Delay, s/veh	4.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		et.			ŧ
Traffic Vol, veh/h	9	39	20	14	11	23
Future Vol, veh/h	9	39	20	14	11	23
Conflicting Peds, #/hr	0	0	0	4	4	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage	e, # 0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	74	74	74	74	74	74
Heavy Vehicles, %	0	24	0	62	17	0
Mvmt Flow	12	53	27	19	15	31

Major/Minor	Minor1	Ν	lajor1	Ν	lajor2	
Conflicting Flow All	102	41	0	0	50	0
Stage 1	41	-	-	-	-	-
Stage 2	61	-	-	-	-	-
Critical Hdwy	6.4	6.44	-	-	4.27	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.516	-	-	2.353	-
Pot Cap-1 Maneuver	901	971	-	-	1466	-
Stage 1	987	-	-	-	-	-
Stage 2	967	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	r 888	967	-	-	1460	-
Mov Cap-2 Maneuver	r 888	-	-	-	-	-
Stage 1	983	-	-	-	-	-
Stage 2	957	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	<b>9</b> .1		0		2.4	
, - <b>,</b> , -						

HCM LOS А

Minor Lane/Major Mvmt	NBT	NBRW	/BLn1	SBL	SBT
Capacity (veh/h)	-	-	951	1460	-
HCM Lane V/C Ratio	-	-	0.068	0.01	-
HCM Control Delay (s)	-	-	9.1	7.5	0
HCM Lane LOS	-	-	А	А	Α
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Int Delay, s/veh	2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		4			÷.
Traffic Vol, veh/h	7	10	24	0	0	32
Future Vol, veh/h	7	10	24	0	0	32
Conflicting Peds, #/hr	0	1	0	4	4	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	79	79	79	79	79	79
Heavy Vehicles, %	0	0	35	0	0	0
Mvmt Flow	9	13	30	0	0	41

Major/Minor	Minor1	Ν	lajor1	Ν	1ajor2	
Conflicting Flow All	75	35	0	0	34	0
Stage 1	34	-	-	-	-	-
Stage 2	41	-	-	-	-	-
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	933	1044	-	-	1591	-
Stage 1	994	-	-	-	-	-
Stage 2	987	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver		1039	-	-	1585	-
Mov Cap-2 Maneuver	· 929	-	-	-	-	-
Stage 1	990	-	-	-	-	-
Stage 2	987	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	8.7		0		0	
HCM LOS	А					

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT	
Capacity (veh/h)	-	- 991	1585	-	
HCM Lane V/C Ratio	-	- 0.022	-	-	
HCM Control Delay (s)	-	- 8.7	0	-	
HCM Lane LOS	-	- A	А	-	
HCM 95th %tile Q(veh)	-	- 0.1	0	-	

1.7

### Intersection

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	f,		1	ţ,			4			4	
Traffic Vol, veh/h	1	429	10	28	274	1	26	5	25	0	0	0
Future Vol, veh/h	1	429	10	28	274	1	26	5	25	0	0	0
Conflicting Peds, #/hr	3	0	5	5	0	3	0	0	2	2	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	0	2	0	5	1	0	12	0	6	0	0	0
Mvmt Flow	1	517	12	34	330	1	31	6	30	0	0	0

Major/Minor	Major1		Major	2		Minor1		Ν	/linor2			
Conflicting Flow All	334	0	0 53	4 0	0	929	932	530	947	938	334	
Stage 1	-	-	-		-	530	530	-	402	402	-	
Stage 2	-	-	-		-	399	402	-	545	536	-	
Critical Hdwy	4.1	-	- 4.1	5 -	-	7.22	6.5	6.26	7.1	6.5	6.2	
Critical Hdwy Stg 1	-	-	-		-	6.22	5.5	-	6.1	5.5	-	
Critical Hdwy Stg 2	-	-	-		-	6.22	5.5	-	6.1	5.5	-	
Follow-up Hdwy	2.2	-	- 2.24	5 -	-	3.608	4	3.354	3.5	4	3.3	
Pot Cap-1 Maneuver	1237	-	- 101	9 -	-	238	269	541	243	266	712	
Stage 1	-	-	-		-	515	530	-	629	604	-	
Stage 2	-	-	-		-	608	604	-	526	527	-	
Platoon blocked, %		-	-	-	-							
Mov Cap-1 Maneuver	1233	-	- 101	4 -	-	231	257	537	218	255	710	
Mov Cap-2 Maneuver	-	-	-		-	231	257	-	218	255	-	
Stage 1	-	-	-		-	512	527	-	626	582	-	
Stage 2	-	-	-		-	588	582	-	489	524	-	
Approach	EB		W	3		NB			SB			
HCM Control Delay, s	0		0.	3		19.6			0			
HCM LOS						С			А			

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR S	BLn1	
Capacity (veh/h)	314	1233	-	-	1014	-	-	-	
HCM Lane V/C Ratio	0.215	0.001	-	-	0.033	-	-	-	
HCM Control Delay (s)	19.6	7.9	-	-	8.7	-	-	0	
HCM Lane LOS	С	А	-	-	А	-	-	А	
HCM 95th %tile Q(veh)	0.8	0	-	-	0.1	-	-	-	

Int Delay, s/veh	3.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		t,			÷.
Traffic Vol, veh/h	6	28	28	22	19	19
Future Vol, veh/h	6	28	28	22	19	19
Conflicting Peds, #/hr	0	0	0	4	4	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	66	66	66	66	66	66
Heavy Vehicles, %	1	30	0	43	17	0
Mvmt Flow	9	42	42	33	29	29

Major/Minor	Minor1	M	ajor1	M	lajor2	
Conflicting Flow All	150	63	0	0	79	0
Stage 1	63	-	-	-	-	-
Stage 2	87	-	-	-	-	-
Critical Hdwy	6.41	6.5	-	-	4.27	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.57	-	- 2	2.353	-
Pot Cap-1 Maneuver	844	928	-	-	1429	-
Stage 1	962	-	-	-	-	-
Stage 2	939	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	823	924	-	-	1424	-
Mov Cap-2 Maneuver	823	-	-	-	-	-
Stage 1	958	-	-	-	-	-
Stage 2	919	-	-	-	-	-
Approach	WB		NB		SB	
				_		

Approach	WB	NB	SB	
HCM Control Delay, s	9.2	0	3.8	
HCM LOS	А			

Minor Lane/Major Mvmt	NBT	NBRWE	3Ln1	SBL	SBT
Capacity (veh/h)	-	-	904	1424	-
HCM Lane V/C Ratio	-	- 0	.057	0.02	-
HCM Control Delay (s)	-	-	9.2	7.6	0
HCM Lane LOS	-	-	А	А	А
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		t,			ŧ
Traffic Vol, veh/h	0	0	50	1	0	25
Future Vol, veh/h	0	0	50	1	0	25
Conflicting Peds, #/hr	1	0	0	5	5	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	62	62	62	62	62	62
Heavy Vehicles, %	0	0	9	0	0	5
Mvmt Flow	0	0	81	2	0	40

Major/Minor	Minor1	М	lajor1	Ν	1ajor2	
Conflicting Flow All	128	87	0	0	88	0
Stage 1	87	-	-	-	-	-
Stage 2	41	-	-	-	-	-
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	871	977	-	-	1520	-
Stage 1	941	-	-	-	-	-
Stage 2	987	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	866	972	-	-	1513	-
Mov Cap-2 Maneuver	866	-	-	-	-	-
Stage 1	936	-	-	-	-	-
Stage 2	986	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	0		0		0	

HCM LOS А

Minor Lane/Major Mvmt	NBT	NBRWE	3Ln1	SBL	SBT
Capacity (veh/h)	-	-	-	1513	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	А	Α	-
HCM 95th %tile Q(veh)	-	-	-	0	-

2.7

#### Intersection

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	5	1		5	1	TIBI(	HEE	4	NBR		4	OBIX	
Traffic Vol, veh/h	4	247	20	15	479	3	33	5	30	6	2	6	
Future Vol, veh/h	4	247	20	15	479	3	33	5	30	6	2	6	
Conflicting Peds, #/hr	7	0	1	1	0	7	0	0	2	2	0	0	
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None	
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-	
Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	72	72	72	72	72	72	72	72	72	72	72	72	
Heavy Vehicles, %	0	3	0	9	3	0	20	0	9	17	0	17	
Mvmt Flow	6	343	28	21	665	4	46	7	42	8	3	8	

Major/Minor	Major1		Ν	/lajor2		ľ	Minor1		I	Minor2			
Conflicting Flow All	676	0	0	372	0	0	1085	1088	360	1112	1100	674	
Stage 1	-	-	-	-	-	-	370	370	-	716	716	-	
Stage 2	-	-	-	-	-	-	715	718	-	396	384	-	
Critical Hdwy	4.1	-	-	4.19	-	-	7.3	6.5	6.29	7.27	6.5	6.37	
Critical Hdwy Stg 1	-	-	-	-	-	-	6.3	5.5	-	6.27	5.5	-	
Critical Hdwy Stg 2	-	-	-	-	-	-	6.3	5.5	-	6.27	5.5	-	
Follow-up Hdwy	2.2	-	-	2.281	-	-	3.68	4	3.381	3.653	4	3.453	
Pot Cap-1 Maneuver	925	-	-	1149	-	-	179	218	669	174	214	430	
Stage 1	-	-	-	-	-	-	615	624	-	398	437	-	
Stage 2	-	-	-	-	-	-	395	436	-	600	615	-	
Platoon blocked, %		-	-		-	-							
Mov Cap-1 Maneuver	r 919	-	-	1148	-	-	170	211	667	155	207	427	
Mov Cap-2 Maneuver	r -	-	-	-	-	-	170	211	-	155	207	-	
Stage 1	-	-	-	-	-	-	611	619	-	393	426	-	
Stage 2	-	-	-	-	-	-	378	425	-	552	610	-	
Approach	EB			WB			NB			SB			
HCM Control Delay, s	s 0.1			0.2			26.7			22.6			
HCM LOS							D			С			

Minor Lane/Major Mvmt	NBLn1	FBI	EBT	EBR	WBL	WBT	WBR S	SBI n1
	THE LITT	202	201	LDIX				<b>BENN</b>
Capacity (veh/h)	259	919	_	-	1148	-	_	224
HCM Lane V/C Ratio	0 365	0.006	-	-	0.018	-	-	0.087
		0.000			0.010			
HCM Control Delay (s)	26.7	8.9	-	-	8.2	-	-	22.6
• • • /	20.1	5.0			5.2			22.0
HCM Lane LOS	D	A	-	-	A	-	-	С
								Ŭ
HCM 95th %tile Q(veh)	1.6	0	-	-	0.1	-	-	0.3

Int Delay, s/veh	4.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		t)			÷.
Traffic Vol, veh/h	11	48	20	18	14	23
Future Vol, veh/h	11	48	20	18	14	23
Conflicting Peds, #/hr	0	0	0	4	4	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	74	74	74	74	74	74
Heavy Vehicles, %	0	24	0	62	17	0
Mvmt Flow	15	65	27	24	19	31

Major/Minor	Minor1	Ν	lajor1	Ν	lajor2	
Conflicting Flow All	112	43	0	0	55	0
Stage 1	43	-	-	-	-	-
Stage 2	69	-	-	-	-	-
Critical Hdwy	6.4	6.44	-	-	4.27	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.516	-	-	2.353	-
Pot Cap-1 Maneuver	890	968	-	-	1459	-
Stage 1	985	-	-	-	-	-
Stage 2	959	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuve		964	-	-	1453	-
Mov Cap-2 Maneuve	r 875	-	-	-	-	-
Stage 1	981	-	-	-	-	-
Stage 2	947	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay,	s 9.2		0		2.8	

HCM LOS А

Minor Lane/Major Mvmt	NBT	NBRW	/BLn1	SBL	SBT
Capacity (veh/h)	-	-	946	1453	-
HCM Lane V/C Ratio	-	-	0.084	0.013	-
HCM Control Delay (s)	-	-	9.2	7.5	0
HCM Lane LOS	-	-	Α	Α	Α
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Int Delay, s/veh	1.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		t,			ŧ
Traffic Vol, veh/h	7	10	28	0	0	34
Future Vol, veh/h	7	10	28	0	0	34
Conflicting Peds, #/hr	0	1	0	4	4	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	79	79	79	79	79	79
Heavy Vehicles, %	0	0	35	0	0	0
Mvmt Flow	9	13	35	0	0	43

Major/Minor	Minor1	Ν	lajor1	Ν	/lajor2	
Conflicting Flow All	82	40	0	0	39	0
Stage 1	39	-	-	-	-	-
Stage 2	43	-	-	-	-	-
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	925	1037	-	-	1584	-
Stage 1	989	-	-	-	-	-
Stage 2	985	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuve	r 921	1032	-	-	1578	-
Mov Cap-2 Maneuve	r 921	-	-	-	-	-
Stage 1	985	-	-	-	-	-
Stage 2	985	-	-	-	-	-
Approach	WB		NB		SB	

Approach	WB	NB	SB	
HCM Control Delay, s	8.7	0	0	
HCM LOS	А			

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT	
Capacity (veh/h)	-	- 983	1578	-	
HCM Lane V/C Ratio	-	- 0.022	-	-	
HCM Control Delay (s)	-	- 8.7	0	-	
HCM Lane LOS	-	- A	А	-	
HCM 95th %tile Q(veh)	-	- 0.1	0	-	