Windsor Elementary School
Traffic and Parking Study
Arlington Heights, Illinois

Prepared For:

Arlington Heights
School District 25

Prepared by:

Eriksson Engineering Associates, Ltd.

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INTRODUCTION

Eriksson Engineering Associates, Ltd. (EEA) was retained by Arlington Heights School District 25 (AHSD 25) to conduct a traffic and parking study for the proposed all-day Kindergarten program at Windsor Elementary School in Arlington Heights, Illinois.

The purpose of the study was to observe the existing traffic patterns around the school, to determine the traffic characteristics of the existing and expanded school, to review the parking needs, and to develop roadway and parking recommendations.

EXISTING CONDITIONS

Site Location and Area Land-Uses

Windsor Elementary School is located at 1315 East Miner Street in Arlington Heights, Illinois. The site is bounded by Windsor Drive to the east, Miner Street to the north, single-family homes to the south, and Miner School/soccer fields to the west. Miner School is a therapeutic day school run by the Northwest Suburban Special Education Organization (NSSEO). **Figure 1** illustrates the site location and the surrounding land-uses and roads.

Bicycle and Pedestrian Routes

Miner Street and Windsor Drive are designated on-street bike routes. Public sidewalks are located on both sides of each street around the school. The All-Way Stop Controlled (AWSC) intersection of Miner Street and Windsor Drive has crosswalks on the east, west, and south legs. The intersection of Kensington Road and Windsor Drive has crosswalks on the north, south, and west legs. During arrival and dismissal, one adult crossing guard is located at each of these intersections. A crossing guard is also located at Dryden Place and Miner Street to the west.

Roadway Characteristics

A description of the area roadways accessing the school is provided below and shown on **Figure 2**.

Kensington Road is an east-west secondary arterial roadway with one travel lane in each direction and a center painted median. It has a 30-mph speed limit with a 20-mph school speed limit approaching the Windsor Drive intersection. At Windsor Drive, the center left-turn median is painted as separate eastbound and westbound left-turn lanes. High visibility crosswalks are provided on the north, south, and west legs. Kensington Road is under the jurisdiction of the Village of Arlington Heights.

Miner Street is an east-west collector roadway. It has a 25-mph speed limit with a 20-mph school speed limit by Windsor Elementary and Miner Schools. At its All-Way-Stop Controlled (AWSC) intersection with Windsor Drive, it has one travel lane in each direction and high visibility pedestrian crosswalks on the east, west, and south legs. Adjacent to the school property, the south side of Minor Street is posted as a student pick-up/drop-off zone from 8-9 AM and 3-4 PM on school days from the school sign to Windsor Drive. Miner Street is under the jurisdiction of the Village of Arlington Heights.

Windsor Drive is a north-south local residential street. It has one lane in each direction and on-street parking through the residential areas. It is under the jurisdiction of the Village of Arlington Heights with a 25-mph posted speed limit and a 20-mph school speed zone. It is a designated on-street bike route. Adjacent to the school property, the west side of Windsor Drive is posted as a student pick-up/drop-off zone from 8-9 AM and 3-4 PM on school days. The east side of Windsor is posted No Stopping or Standing - 8:00 AM to 4:00 PM on school days.

Campbell Street (East and West) is an east-west residential street south of the school with an off-set intersection at Windsor Drive. It is under the jurisdiction of the Village of Arlington Heights with a 25-mph posted speed limit. Both approaches are under stop-sign control at Windsor Drive.

Existing Traffic Volumes

Weekday morning arrival (8:00-9:30 AM) and afternoon dismissal (2:30-4:00 PM) manual traffic counts were conducted along Windsor Drive and Miner Street. Peak-hours of school traffic occurred from 8:30 to 9:30 AM and 3:00 to 4:00 PM on a school weekday. The existing traffic volumes are shown on **Figure 3A** and included in the **Appendix**. EEA then separated the school traffic from the background non-school traffic in **Figures 3B** and **3C**. **Figure 4** summarizes the existing pedestrian and bicycle volumes observed.

School Observations

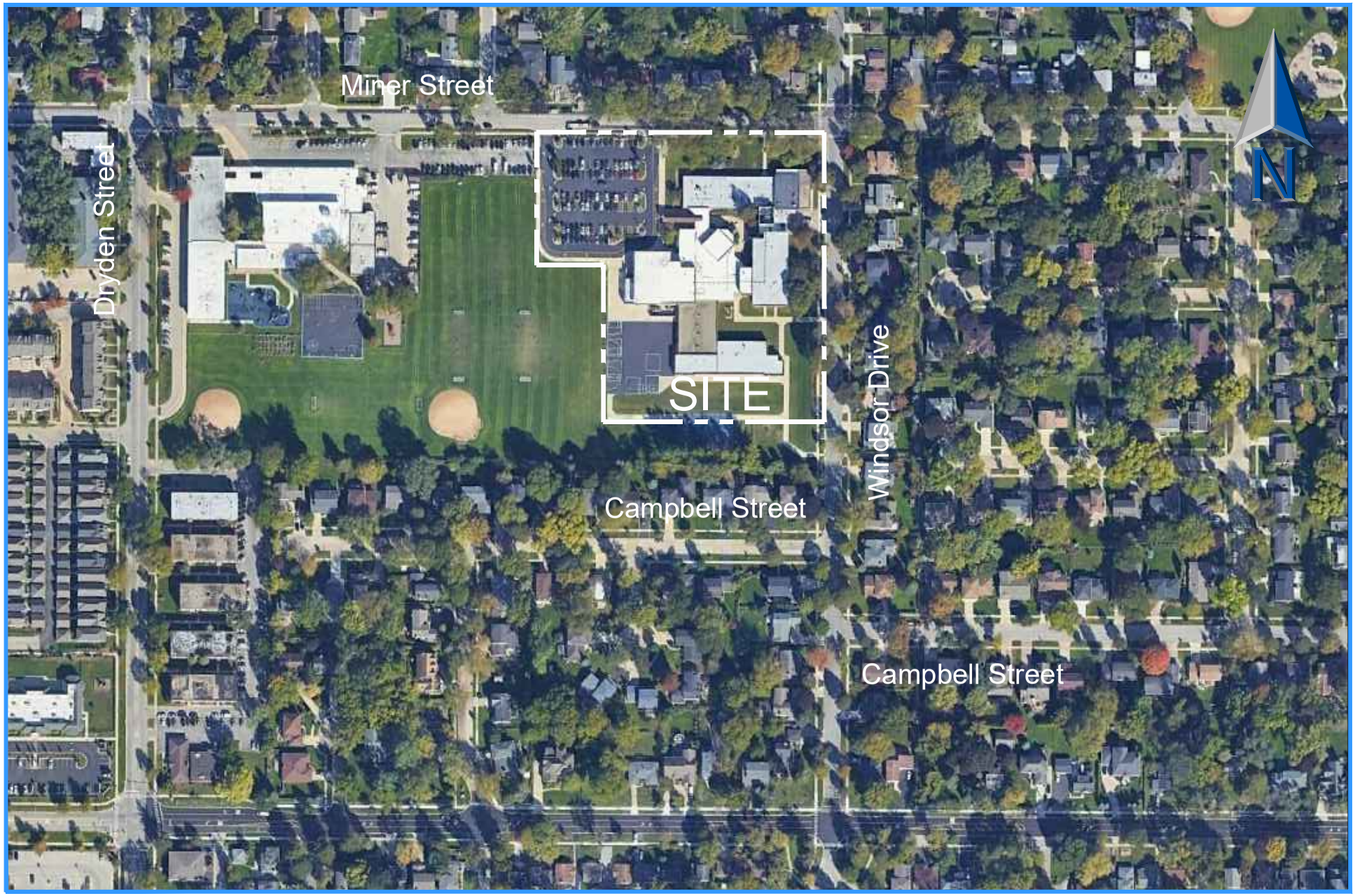
Windsor School does not provide bussing for its students due to its close proximity to the school's residential areas The main student loading area is the west side of Windsor Drive south of Miner Street. Staff members assist in loading students out of or into the vehicle. Parents also park on Windsor Street north of Miner Street and at West Campbell Street and walk their students to school. In the afternoon dismissal, parents fill up the loading areas along the school frontage, Windsor Drive to the north, and at Campbell Street.

Student loading is also located in the staff/visitor parking lot on the west side of the school for parent drop-off and pick-up. Parents enter and exit the lot from Miner Street and travel counter-clockwise through the lot. See **Exhibits 1 and 2**. The west lot is underutilized by existing parents to load their students compared to the Windsor Drive curb front.

As with most other schools, congestion occurs in the area and lasts 10 to 15 minutes during the peak arrival and dismissal periods.

Exhibit 1
Windsor Morning Observations – West Lot
Tuesday - September 20, 2022 9:03 AM

Exhibit 2
Windsor Afternoon Observations – West Lot
Tuesday - September 20, 2022 3:33 PM



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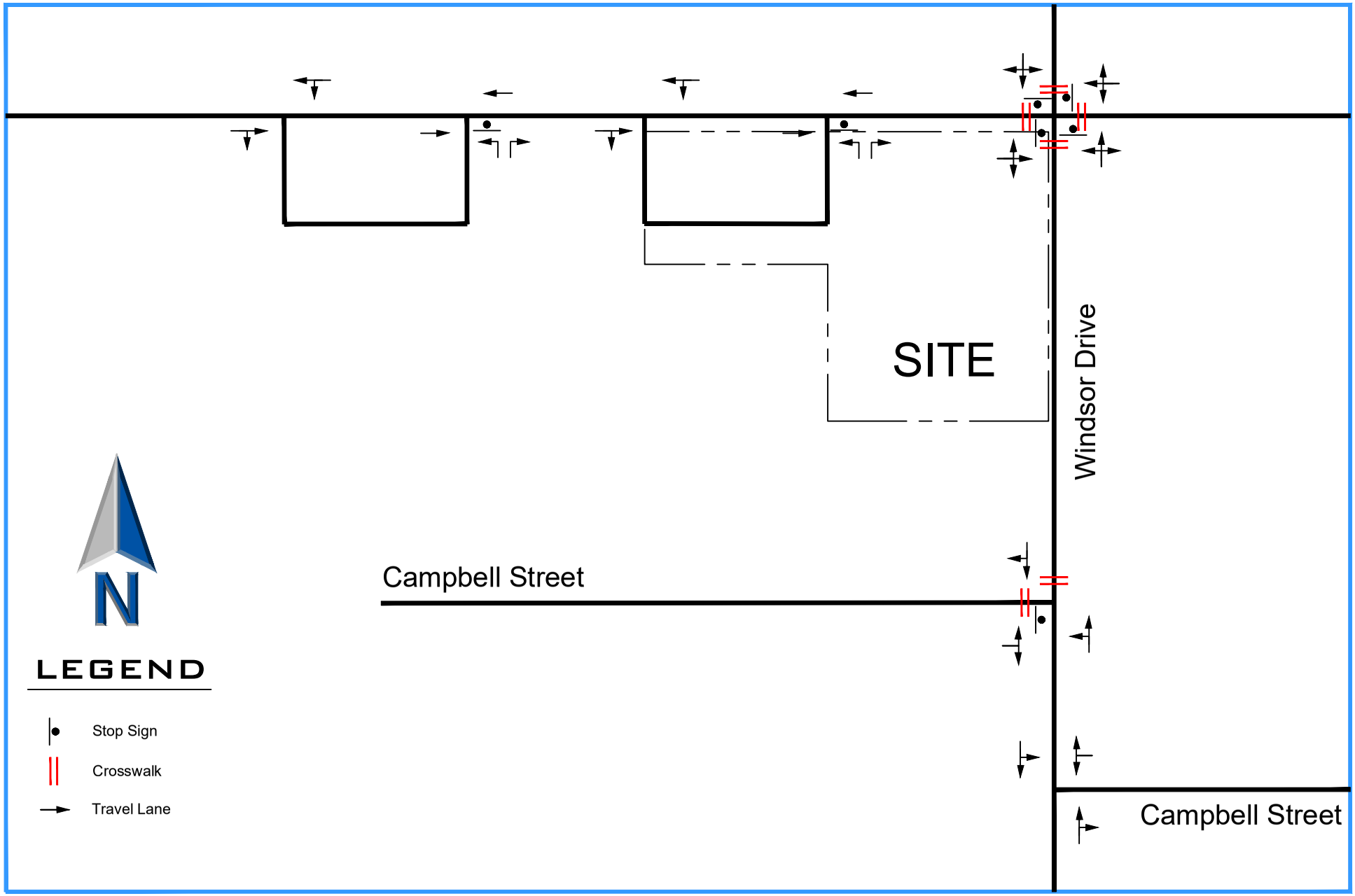
Site Location and Area Roadways

Figure 1



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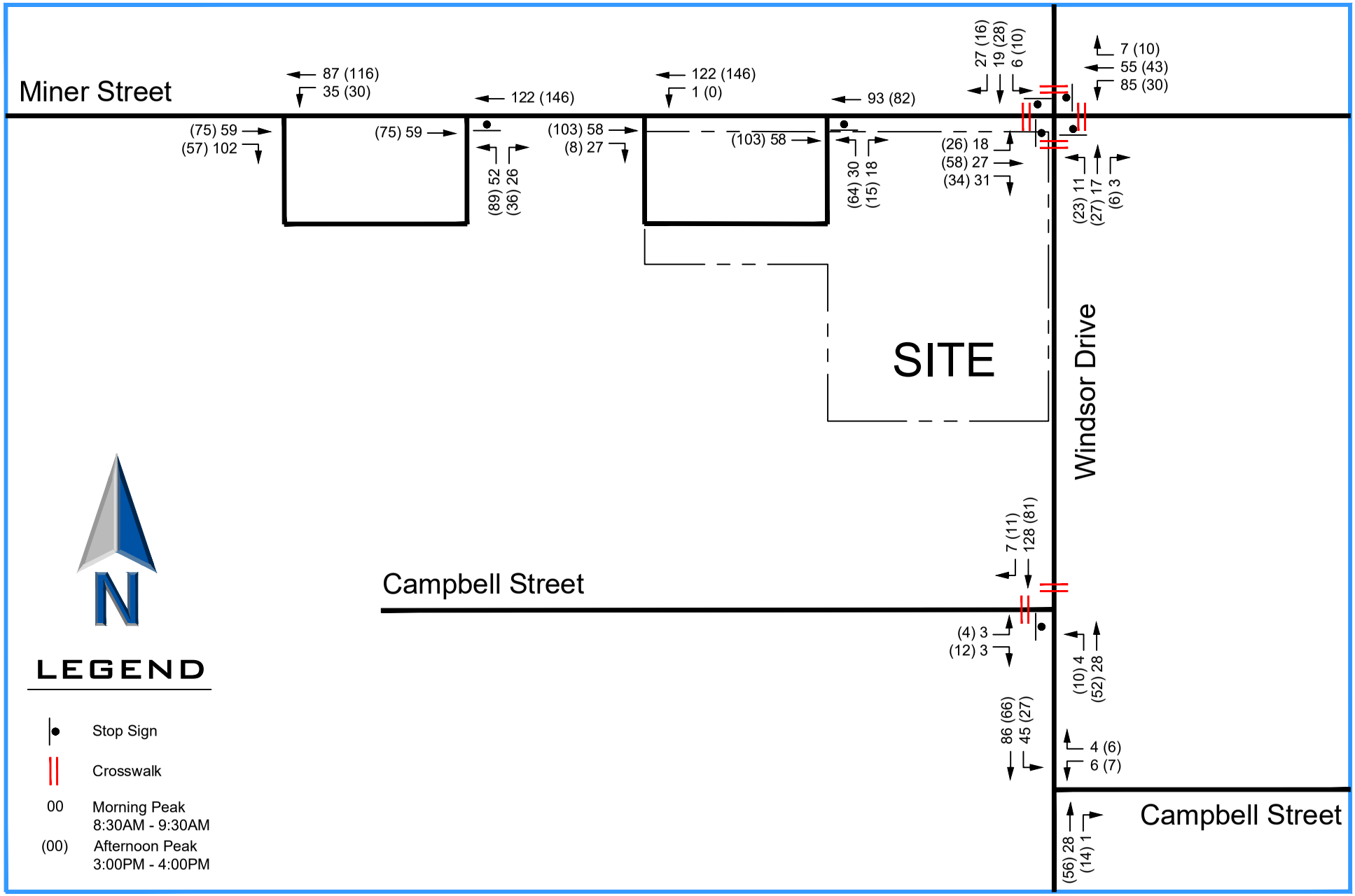
Existing Roadway Geometrics

Figure 2



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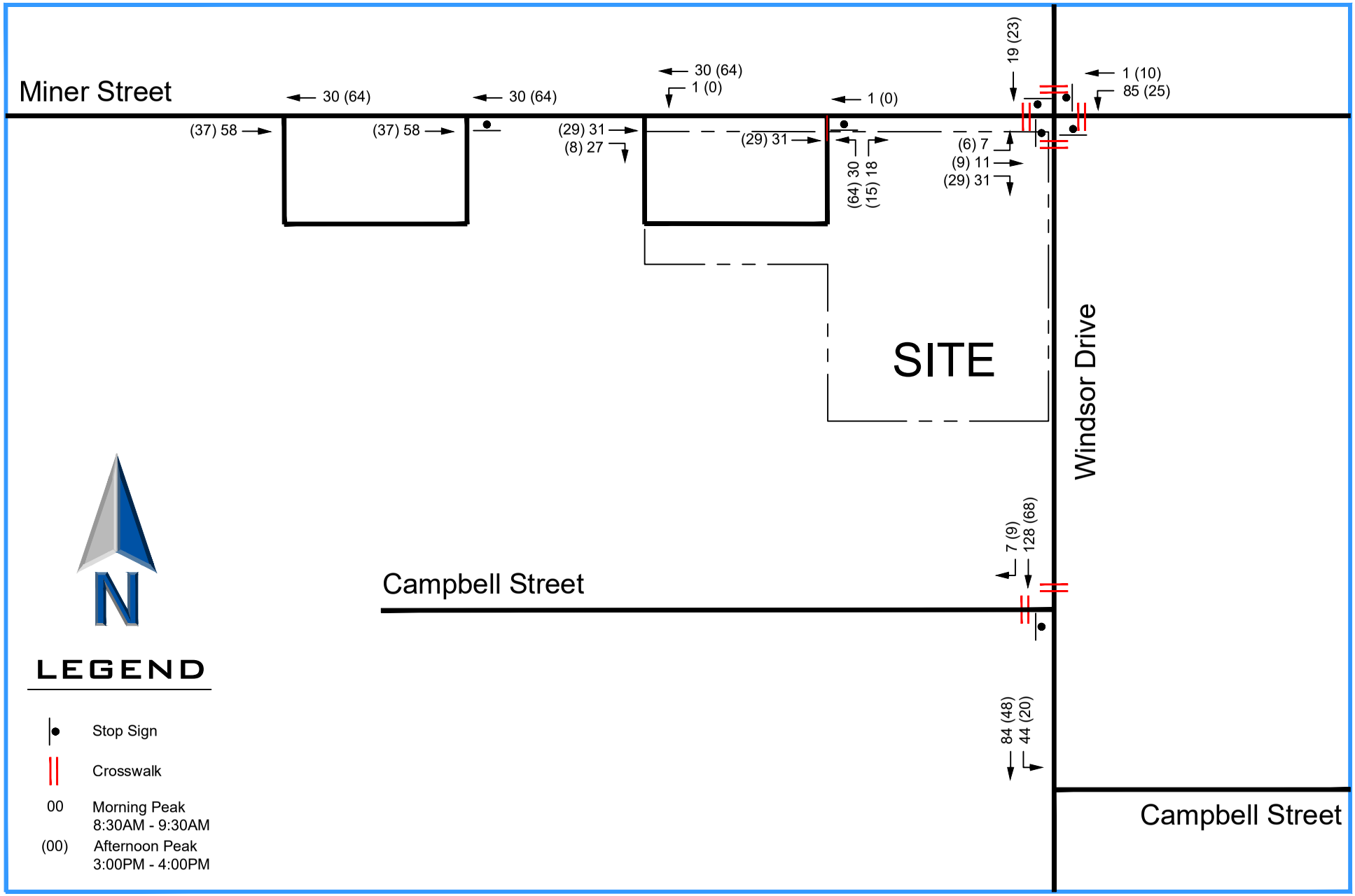
Existing Traffic Volumes

Figure 3A



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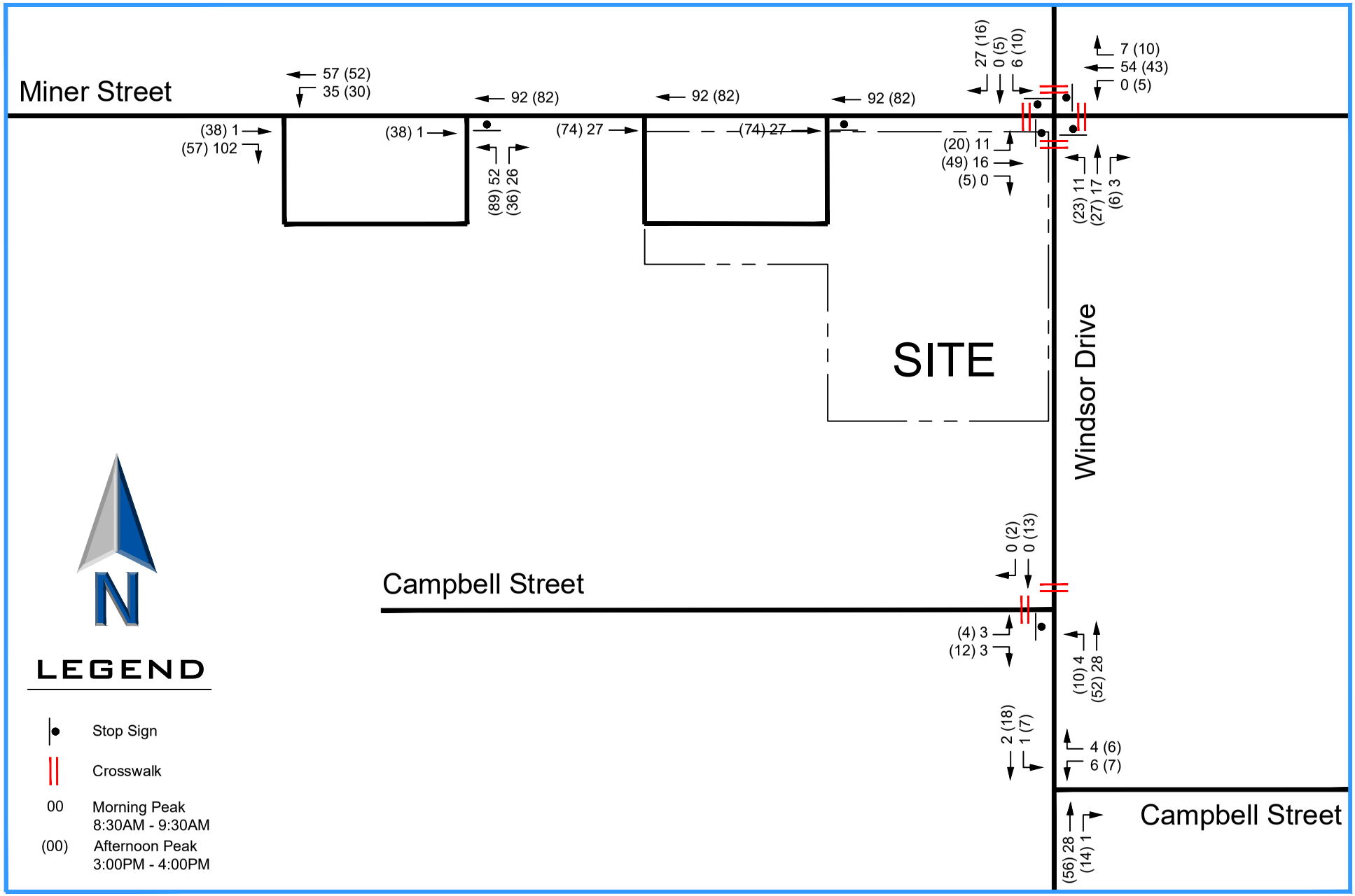
Existing School Traffic Volumes

Figure 3B



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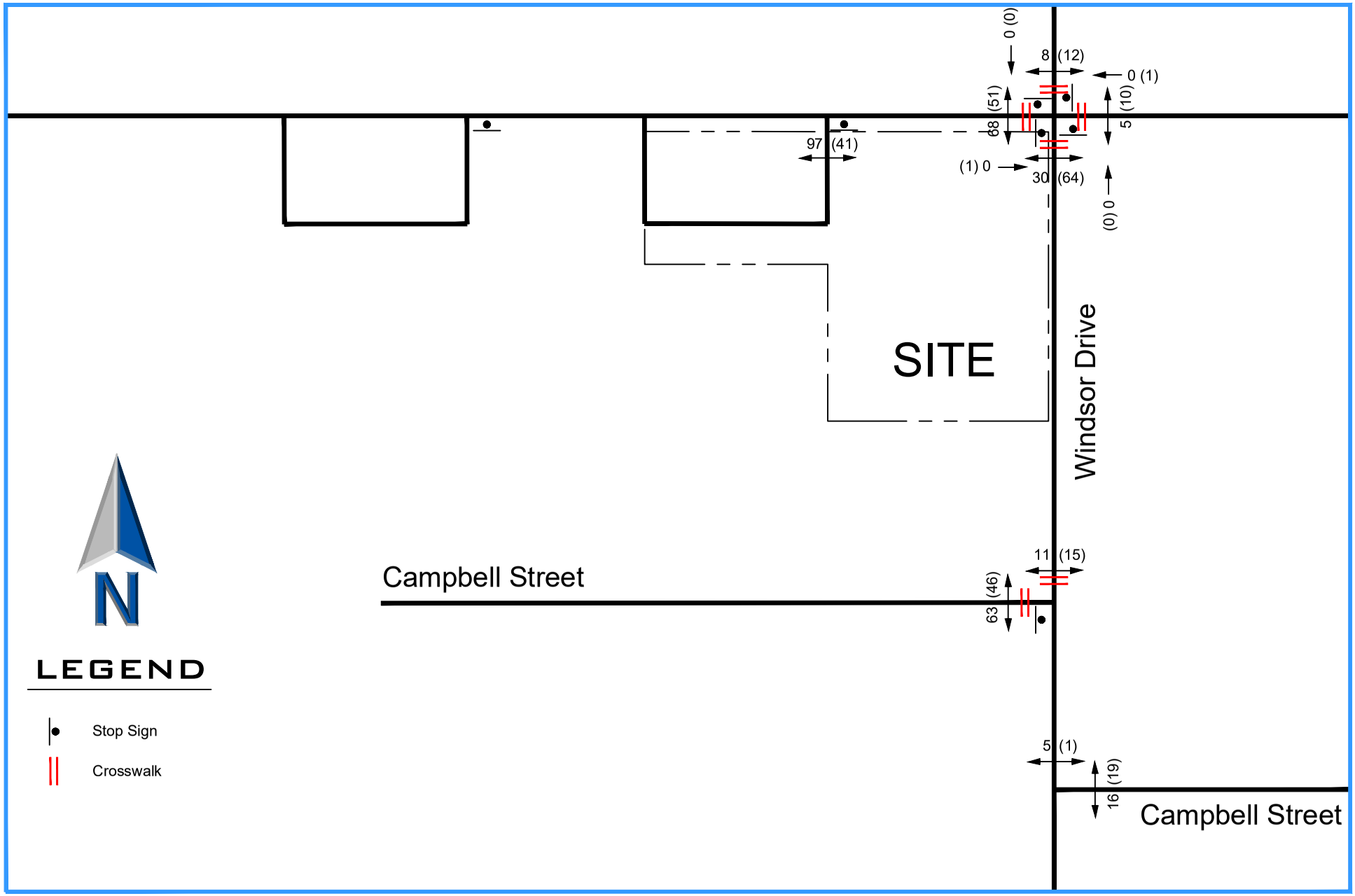
Existing Non-School Traffic Volumes

Figure 3C



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Year 2022 Pedestrian and Bike Volumes

Figure 4

SITE TRAFFIC CHARACTERISTICS

School Trip Generation

The school currently serves 455 Kindergarten thru 5th Grade students. Classroom hours are from 9:05 AM to 3:35 PM. Attendance boundaries are formed by Arlington Heights Road to the west, Northwest Highway to the southwest, Dale and Foster Avenues to the east, Euclid Avenue to the north, and Gregory Street to the south.

The school expansion will provide more room for the all-day Kindergarten program with 2 new classrooms for a total of 34 classrooms. Student population is expected to grow by 11 students to 466 students over the next five years. The number of staff is expected to grow from 91 to 93 persons.

Traffic estimates were made for the additional students using the traffic counts at the current school. The trip generation rates for the school are higher than the data provided by the Institute of Transportation Engineer's Trip Generation, 11th Ed. manual for elementary schools due to a higher percentage of automobile usage and no busing. The rate of vehicle trip generation was applied to the proposed increase in students with the results shown in **Table 1.**

Table 1
School Expansion Traffic Volumes

Scenario	Morning Arrival			Afternoon Dismissal		
	In	Out	Total	In	Out	Total
Trip Generation Based on Existing Traffic Volumes						
Existing 455 Students	222	182	404	131	140	271
Total 466 Students	259	213	472	153	164	317
Net Additional Traffic	**+37**	**+31**	**+68**	**+22**	**+24**	**+46**
ITE Trip Generation Comparison(1)						
Existing 455 Students	182	155	337	94	111	205
Total 466 Students	186	159	345	96	114	210
Net Additional Traffic(2)	**+4**	**+4**	**+8**	**+3**	**+3**	**+5**

(1) ITE Trip Generation Manual, 11th Edition – Land Use Code 520 (Elementary School)
(2) For comparison only – Not used for analyses

The directional distribution for school traffic is based on the existing school traffic counts and is shown in **Table 2** and on **Figure 5**.

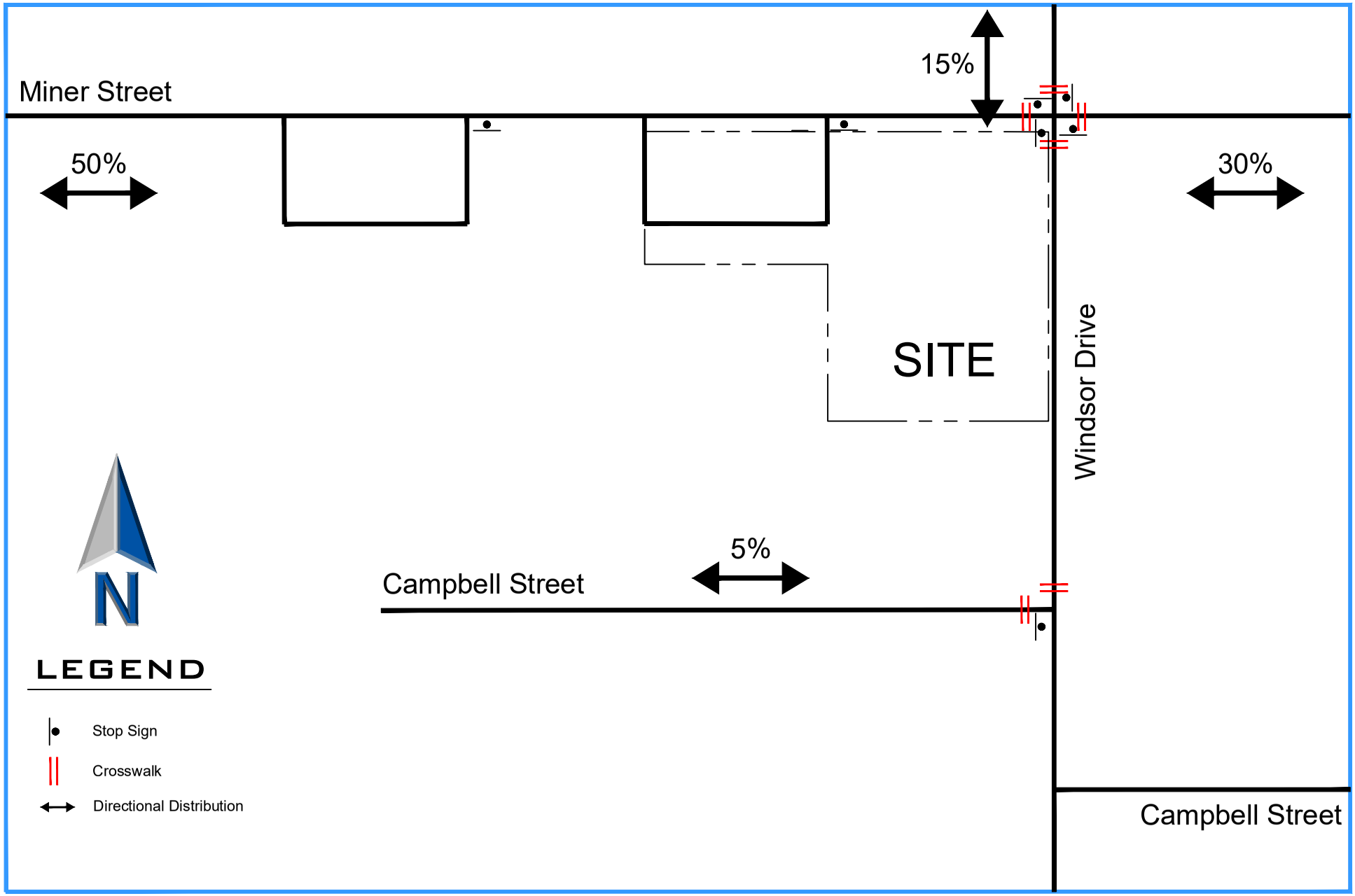
Table 2
Existing Directional Distribution

Direction	Distribution
North on Windsor Drive	15%
East on Miner Street	30%
South on Windsor Drive	5%
West on Miner Street	50%
Total	**100%**

Trip Assignment

The trip distribution for school is based on the existing traffic volumes at the school and the existing road network, and site plan. The future vehicular trips that are generated by the expansion were distributed to the area roadways. **Figure 6** illustrates the total traffic generated by the school (existing and expansion) and its assignment on the road system.

Figure 7 shows the total traffic volumes which a combination of Figure 3C (Non-School traffic) and Figure 6 (Projected School Volumes).



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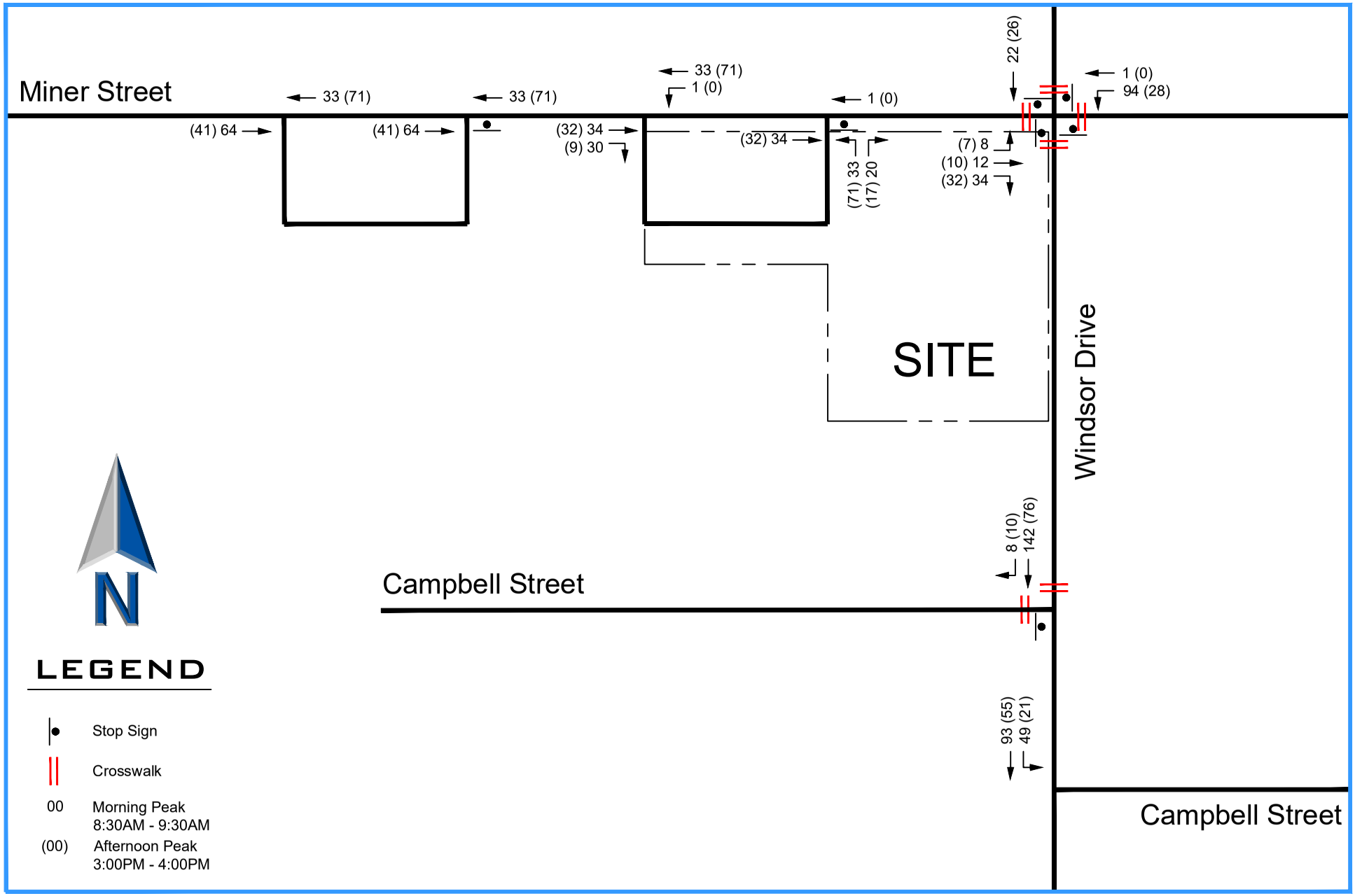
Directional Distribution

Figure 5



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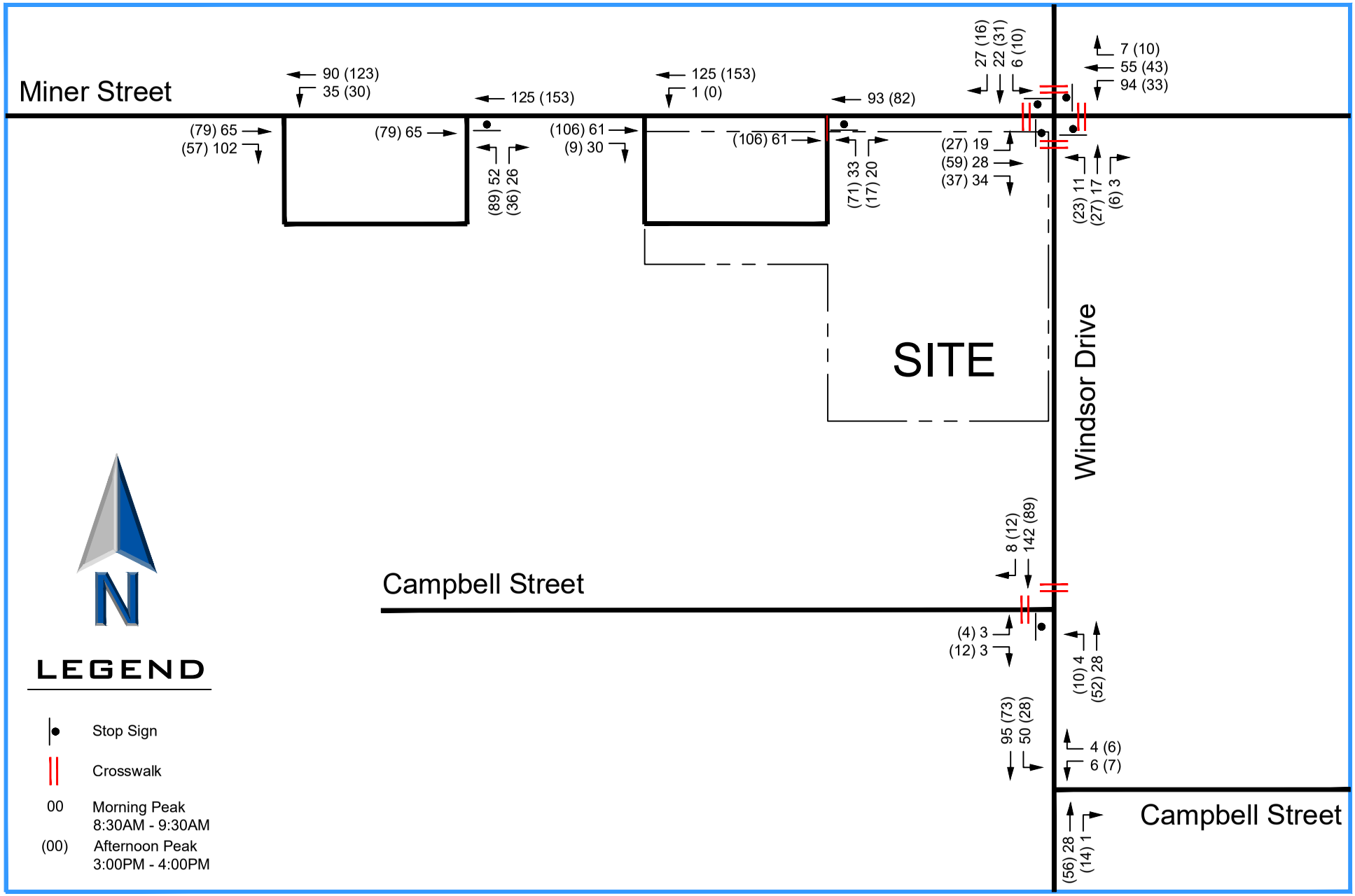
Projected School Traffic Volumes

Figure 6



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Projected Traffic Volumes

Figure 7

ANALYSES

Intersection Capacity Analyses

An intersection's ability to accommodate traffic flow is based on the average control delay experienced by vehicles passing through the intersection. The intersection and individual traffic movements are assigned a level of service (LOS), ranging from A to F based on the control delay created by a traffic signal or stop sign. Control delay consists of the initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. LOS A has the best traffic flow and least delay. LOS E represents saturated or at capacity conditions. LOS F experiences oversaturated conditions and extensive delays. The Highway Capacity Manual definitions for levels of service and the corresponding control delay for both signalized and unsignalized intersections are shown in **Table 3**.

Table 3
Level of Service Criteria for Intersections

Level of Service	Description	Control Delay (seconds/vehicle)	
		Signals	Stop Signs
A	Minimal delay and few stops	<10	<10
B	Low delay with more stops	>10-20	>10-15
C	Light congestion	>20-35	>15-25
D	Congestion is more noticeable with longer delays	>35-55	>25-35
E	High delays and number of stops	>55-80	>35-50
F	Unacceptable delays and over capacity	>80	>50

Source: Highway Capacity Manual 2010

Capacity analyses were conducted for each intersection using the computer program Highway Capacity Software (HCS) to determine the existing operating conditions of the access system. These analyses were performed for the school's peak arrival and dismissal periods. **Table 4** shows the existing and future level of service results for each intersection. Copies of the capacity analysis summaries are included in the **Appendix**.

Shared Exit onto Miner Street

The east-west parking lot along Miner Street has as exit only drive with northbound left- and right-turn lanes that is used by the staff parking at both schools and the Miner School loading area. It is located on the Miner School property. No changes are proposed to this intersection which will operate at a good level of service.

West Lot Entry and Access Drives on Miner Street

The existing driveways just west of the school building serves the staff parking lot and the loading area for students. Both driveways work well and no changes are proposed to this intersection which will operate at a good level of service.

Windsor Drive at Miner Street

The all-way-stop intersection will continue to at an acceptable level of service. Periodic congestion does occur at the intersection when pedestrians cross and traffic is stopped.

Table 4
Intersection Level of Service and Delay

Intersection	Movement	AM Arrival		PM Dismissal	
		Existing	Future	Existing	Future
Windsor School Lot Entrance Only On Miner Street (Two-Way Stop)	**WB Lt**	A-7.5	A-7.5	A-7.6	A-7.6
Windsor School Lot Exit Only On Miner Street (Two-Way Stop)	**NB Lt**	B-10.8	B-10.9	B-11.1	B-11.3
Miner School Lot Entrance Only On Miner Street (Two-Way Stop)	**WB Lt**	A-7.9	A-7.9	A-7.9	A-7.9
Miner School Lot Exit Only On Miner Street (Two-Way Stop)	**NB Lt**	B-12.1	B-12.3	B-14.7	C-15.1
Windsor Drive At Miner Street (All-Way Stop)	**EB Lt**	A-8.4	A-8.5	A-8.4	A-8.5
	WB LT	B-10.1	A-10.4	A-8.3	A-8.4
	NB Lt	A-8.5	A-8.6	A-8.3	A-8.3
	SB Lt	A-8.4	A-8.6	A-8.0	A-8.1
West Campbell At Windsor Street (Two-Way Control)	**NB Lt**	A-8.0	A-8.1	A-7.7	A-7.7
	EB Lt	B-11.3	B-11.6	A-9.9	B-10.0
East Campbell At Windsor Street (Two-Way Control)	**SB Lt**	A-7.6	A-7.6	A-7.6	A-7.6
	WB Lt	B-11.7	B-12.1	B-10.1	B-10.2

Campbell Street at Windsor Drive

Due to the minimal increase in school traffic, the intersection will continue to work well and requires no additional improvements.

Kensington Road at Windsor Drive

Due to the minimal increase in school traffic, the intersection will continue to work well and requires no additional improvements.

Parking

The Village of Arlington Heights Zoning Ordinance requires elementary schools to provide one parking spaces per each employee (93 staff) and one per every five classrooms (34 rooms) for a total of 100 spaces. No parking variation is required.

National parking data is available from the Institute of Transportation Engineers (ITE) in their publication *Parking Generation*, 4th Edition for elementary schools (Land Use Code 520). The peak demand in the ITE data was 0.13 spaces per student (466 students) or 61 spaces.

The existing school on-site parking supply provides a total of 96 parking spaces including five accessible spaces. Parking counts were conducted in September, 2022 after the morning arrival period which found the

main lot nearly full. There was a total of 117 vehicles parked in in the west lot, in the Miner School lot immediately to the west, and on-street. The parking demand exceeds the current on-site supply. **Table 5** summarizes the parking inventory and survey by lot.

Table 5
Westgate School Parking Inventory and Survey

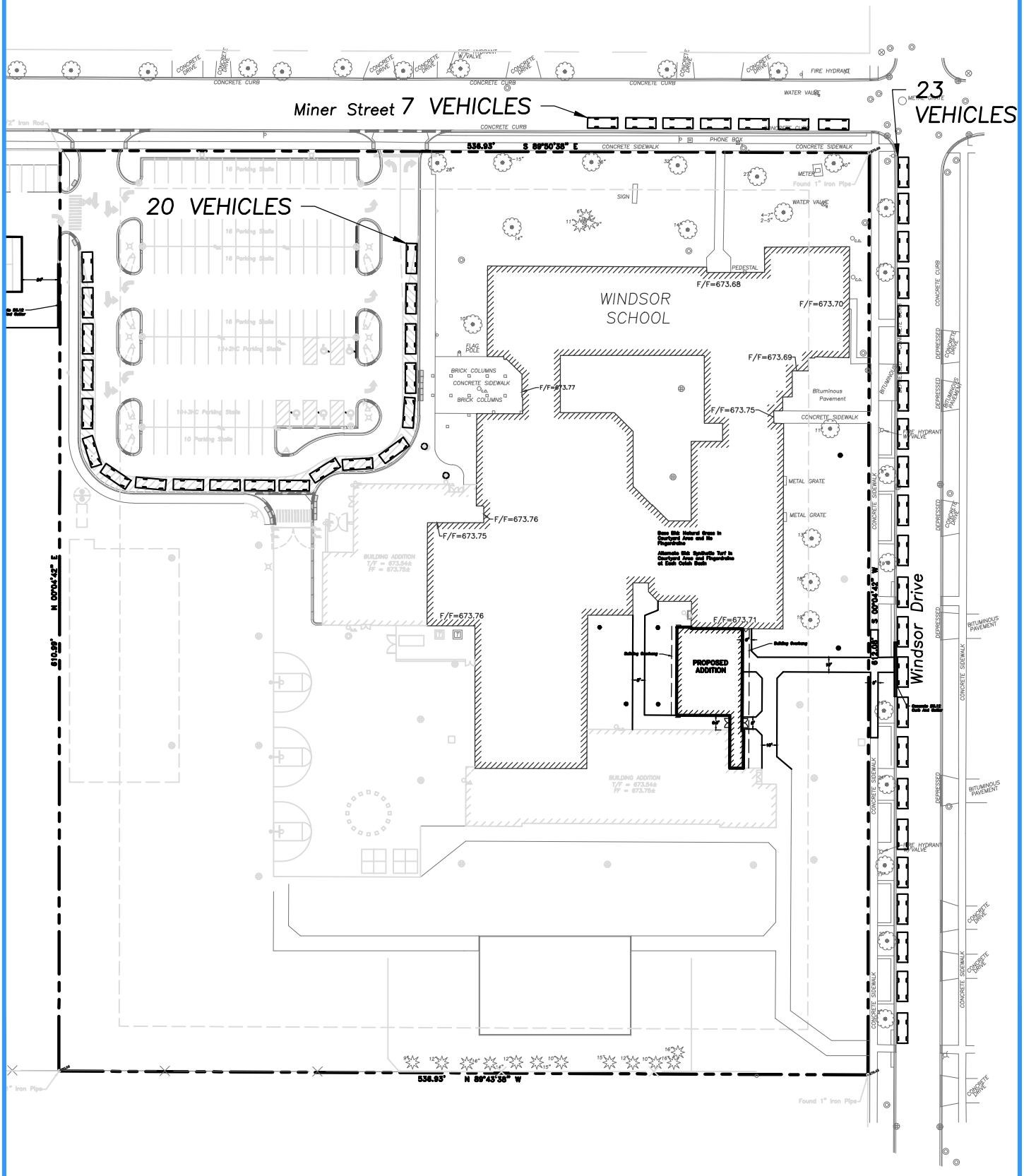
Lot	Parking Inventory			Parking Survey	
	Standard	Accessible	Total	Vehicles	Occupancy
Main	96	5	101	92	92%
Land banked	19	-	19		
Minor School Lot		--	-	10	-
On-street				15	
Total	**115**	**5**	**120**	**117**	**98%**

In the future with the all-day kindergarten and a small decrease in the other grades, the overall parking demand is expected to increase up to 121 vehicles which exceeds the on-site parking including land banked spaces by one space. The options are to build the land banked parking or continue to share parking with the Miner School to preserve existing green space.

SUMMARY

This report summarizes the results of traffic and parking study for the expansion of Windsor Elementary School in Arlington Heights, Illinois. The following recommendations were developed:

1. Parking counts at the school show that the 101 proposed parking spaces will exceed the zoning code requirement of 100 spaces.
2. A land banked parking plan with 19 additional spaces has been provided in case additional parking is needed in the future. It is recommended that the school continue to share spaces with Minor School to preserve existing green space.
3. No major changes are required for the existing access and circulation system at the school.



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Parent On-Site Stacking

Figure 8

Appendix

- Existing 2022 Traffic Counts
- Arlington Heights Signage
- Arlington Heights Bike Map
- School Info
    - Bussing Schedule
    - Taxi Data
    - Crossing Guard Locations
    - Traffic Plan
- ITE Traffic and Parking Calculations
- Intersection Capacity Analyses
    - 2022 Existing Conditions
    - 2028 Total Traffic Volumes

Miner Street and School Circle Lot

Arlington Heights, IL												
	Miner Street Westbound			Circle Drive Northbound			Miner Street Eastbound			15	60	Peak
Begin Time	Right Turn	Through	Left Turn	Right Turn	Through	Left Turn	Right Turn	Through	Left Turn	Minute Totals	Minute Totals	Hour Factor
	Friday October 14, 2022											
8:00 AM	0	0	0	0	0	0	0	0	0	0	47	0.62
8:15 AM	0	0	0	2	0	3	6	0	0	11	57	0.75
8:30 AM	0	0	1	2	0	2	12	0	0	17	**76**	**0.63**
8:45 AM	0	0	0	5	0	10	4	0	0	19		
9:00 AM	0	0	0	1	0	1	8	0	0	10		
9:15 AM	0	0	0	10	0	17	3	0	0	30		
Total	0	0	1	20	0	33	33	0	0			
8:30-9:30 AM	**0**	**0**	**1**	**18**	**0**	**30**	**27**	**0**	**0**	**76**		
	Friday October 14, 2022											
2:30 PM	0	0	2	2	0	15	7	0	0	26	86	0.58
2:45 PM	0	0	0	0	0	8	2	0	0	10	**92**	**0.62**
3:00 PM	0	0	0	3	0	6	4	0	0	13	87	0.59
3:15 PM	0	0	0	7	0	29	1	0	0	37		
3:30 PM	0	0	0	2	0	27	3	0	0	32		
3:45 PM	0	0	0	3	0	2	0	0	0	5		
Total	0	0	2	17	0	87	17	0	0			
3:00-4:00 PM	**0**	**0**	**0**	**15**	**0**	**64**	**8**	**0**	**0**	**87**		

Miner Street and Windsor Drive

Arlington Heights, IL															
	Windsor Drive Southbound			Miner Street Westbound			Windsor Drive Northbound			Miner Street Eastbound			15 Minute Totals	60 Minute Totals	Peak Hour Factor
Begin Time	Right Turn	Through	Left Turn	Right Turn	Through	Left Turn	Right Turn	Through	Left Turn	Right Turn	Through	Left Turn			
	Wednesday October 12, 2022														
8:00 AM	7	6	2	0	12	0	1	8	8	4	9	4	61	319	0.56
8:15 AM	4	6	0	1	9	1	0	6	8	12	7	4	58	314	0.55
8:30 AM	14	4	1	1	11	3	1	8	4	6	3	2	58	**297**	**0.52**
8:45 AM	7	8	3	4	10	71	0	4	3	17	9	6	142		
9:00 AM	5	4	2	1	9	10	2	4	2	4	8	5	56		
9:15 AM	1	3	0	1	16	1	0	1	2	4	7	5	41		
Total	38	31	8	8	67	86	4	31	27	47	43	26			
8:30-9:30 AM	**27**	**19**	**6**	**7**	**46**	**85**	**3**	**17**	**11**	**31**	**27**	**18**	**297**		
	Wednesday October 12, 2022														
2:30 PM	2	6	0	1	5	2	1	2	1	3	6	2	31	190	0.63
2:45 PM	3	5	0	1	2	2	0	9	1	1	8	2	34	**251**	**0.68**
3:00 PM	4	7	3	3	5	5	0	7	4	3	7	2	50	272	0.74
3:15 PM	2	8	2	3	13	10	2	1	8	6	16	4	75		
3:30 PM	2	5	5	4	10	10	2	7	2	11	20	14	92		
3:45 PM	4	3	0	0	7	0	1	8	2	9	15	6	55		
Total	17	34	10	12	42	29	6	34	18	33	72	30			
3:00-4:00 PM	**12**	**23**	**10**	**10**	**35**	**25**	**5**	**23**	**16**	**29**	**58**	**26**	**272**		

Windsor Drive and Campbell Street

Arlington Heights, IL

Begin Time	Windsor Drive Southbound			Campbell Street Westbound			Windsor Drive Northbound			15 Minute Totals	60 Minute Totals	Peak Hour Factor
	Right Turn	Through	Left Turn	Right Turn	Through	Left Turn	Right Turn	Through	Left Turn			
	Tuesday October 11, 2022											
8:00 AM	0	10	1	0	0	2	2	15	0	30	166	0.47
8:15 AM	0	15	0	0	0	0	2	11	0	28	154	0.43
8:30 AM	0	11	0	1	0	2	0	5	0	19	**134**	**0.38**
8:45 AM	0	43	33	1	0	0	1	11	0	89		
9:00 AM	0	6	1	1	0	3	0	7	0	18		
9:15 AM	0	6	0	0	0	1	0	1	0	8		
Total	0	91	35	3	0	8	5	50	0			
8:30-9:30 AM	**0**	**66**	**34**	**3**	**0**	**6**	**1**	**24**	**0**	**134**		
	Tuesday October 11, 2022											
2:30 PM	0	4	0	0	0	2	2	2	0	10	94	0.60
2:45 PM	0	7	0	0	0	2	5	7	0	21	**161**	**0.52**
3:00 PM	0	7	1	1	0	0	2	13	0	24	171	0.56
3:15 PM	0	11	3	3	0	1	4	17	0	39		
3:30 PM	0	34	22	1	0	3	4	13	0	77		
3:45 PM	0	14	1	1	0	3	4	8	0	31		
Total	0	77	27	6	0	11	21	60	0			
3:00-4:00 PM	**0**	**66**	**27**	**6**	**0**	**7**	**14**	**51**	**0**	**171**		

Windsor Drive and Campbell Street

Arlington Heights, IL												
	Windsor Drive Southbound			Windsor Drive Northbound			Orchard Street Eastbound			15 Minute Totals	60 Minute Totals	Peak Hour Factor
Begin Time	Right Turn	Through	Left Turn	Right Turn	Through	Left Turn	Right Turn	Through	Left Turn			
	Tuesday October 11, 2022											
8:00 AM	0	0	0	0	0	0	0	0	0	0	21	0.53
8:15 AM	0	0	0	0	0	0	5	0	1	6	22	0.55
8:30 AM	4	0	0	0	0	2	2	0	2	10	**16**	**0.40**
8:45 AM	2	0	0	0	0	2	1	0	0	5		
9:00 AM	1	0	0	0	0	0	0	0	0	1		
9:15 AM	0	0	0	0	0	0	0	0	0	0		
Total	7	0	0	0	0	4	8	0	3			
8:30-9:30 AM	**7**	**0**	**0**	**0**	**0**	**4**	**3**	**0**	**2**	**16**		
	Tuesday October 11, 2022											
2:30 PM	1	0	0	0	0	0	1	0	1	3	25	0.37
2:45 PM	1	0	0	0	0	0	0	0	0	1	**35**	**0.51**
3:00 PM	1	0	0	0	0	2	0	0	1	4	37	0.54
3:15 PM	6	0	0	0	0	6	2	0	3	17		
3:30 PM	3	0	0	0	0	2	8	0	0	13		
3:45 PM	1	0	0	0	0	0	2	0	0	3		
Total	13	0	0	0	0	10	13	0	5			
3:00-4:00 PM	**11**	**0**	**0**	**0**	**0**	**10**	**12**	**0**	**4**	**37**		

Miner Street and West Lot

Arlington Heights, IL												
	Miner Street Westbound			West Lot Northbound			Miner Street Eastbound			15	60	Peak
Begin Time	Right Turn	Through	Left Turn	Right Turn	Through	Left Turn	Right Turn	Through	Left Turn	Minute Totals	Minute Totals	Hour Factor
	Wednesday October 17, 2022											
8:00 AM	0	15	7	2	0	8	30	10	0	72	368	0.61
8:15 AM	0	8	15	8	0	3	26	11	0	71	377	0.63
8:30 AM	0	14	14	5	0	5	28	9	0	75	**348**	**0.58**
8:45 AM	0	36	12	14	0	31	46	11	0	150		
9:00 AM	0	28	7	6	0	16	14	10	0	81		
9:15 AM	0	9	2	1	0	0	14	16	0	42		
Total	0	110	57	36	0	63	158	67	0			
8:30-9:30 AM	**0**	**87**	**35**	**26**	**0**	**52**	**102**	**46**	**0**	**348**		
	Wednesday October 17, 2022											
2:30 PM	0	8	2	0	0	0	3	11	0	24	185	0.59
2:45 PM	0	11	7	0	0	4	7	9	0	38	**330**	**0.49**
3:00 PM	0	6	3	1	0	2	15	17	0	44	387	0.57
3:15 PM	0	12	14	4	0	6	28	15	0	79		
3:30 PM	0	59	8	19	0	50	11	22	0	169		
3:45 PM	0	39	5	12	0	31	3	5	0	95		
Total	0	135	39	36	0	93	67	79	0			
3:00-4:00 PM	**0**	**116**	**30**	**36**	**0**	**89**	**57**	**59**	**0**	**387**		

City: Arlington Heights
Count Location: Miner St. and Windsor Drive
Study Date: – October 12th, 2022 (Pedestrian Counts)

Time	North Cross	South Cross	West Cross	East Cross	Total Pedestrians
8:00-8:15 a.m.	2	0	4	0	6
8:15-8:30 a.m.	3	1	4	0	8
8:30-8:45 a.m.	1	1	2	0	4
8:45-9:00 a.m.	7	29	65	4	105
9:00-9:15 a.m.	0	0	1	0	1
9:15-9:30 a.m.	0	0	0	1	1
Morning Totals	**13**	**31**	**76**	**5**	**125**
2:30-2:45 p.m.	0	0	0	0	0
2:45-3:00 p.m.	0	1	1	1	3
3:00-3:15 p.m.	0	1	0	3	4
3:15-3:30 p.m.	1	5	0	1	7
3:30-3:45 p.m.	11	58	51	4	124
3:45-4:00 p.m.	0	0	0	2	2
Afternoon Totals	**12**	**65**	**52**	**11**	**140**

City: Arlington Heights
Count Location: Windsor Drive and Campbell St. (East)
Study Date: – October 11th, 2022 (Pedestrian Counts)

Time	North Cross	East Cross	Total Pedestrians
8:00-8:15 a.m.	0	0	0
8:15-8:30 a.m.	0	1	1
8:30-8:45 a.m.	0	2	2
8:45-9:00 a.m.	3	11	14
9:00-9:15 a.m.	0	3	3
9:15-9:30 a.m.	2	0	2
Morning Totals	**5**	**17**	**22**
2:30-2:45 p.m.	0	0	0
2:45-3:00 p.m.	0	0	0
3:00-3:15 p.m.	0	1	1
3:15-3:30 p.m.	0	1	1
3:30-3:45 p.m.	1	16	17
3:45-4:00 p.m.	0	1	1
Afternoon Totals	**1**	**19**	**20**

City: Arlington Heights
Count Location: Windsor Drive and Campbell St. (West)
Study Date: – October 11th, 2022 (Pedestrian Counts)

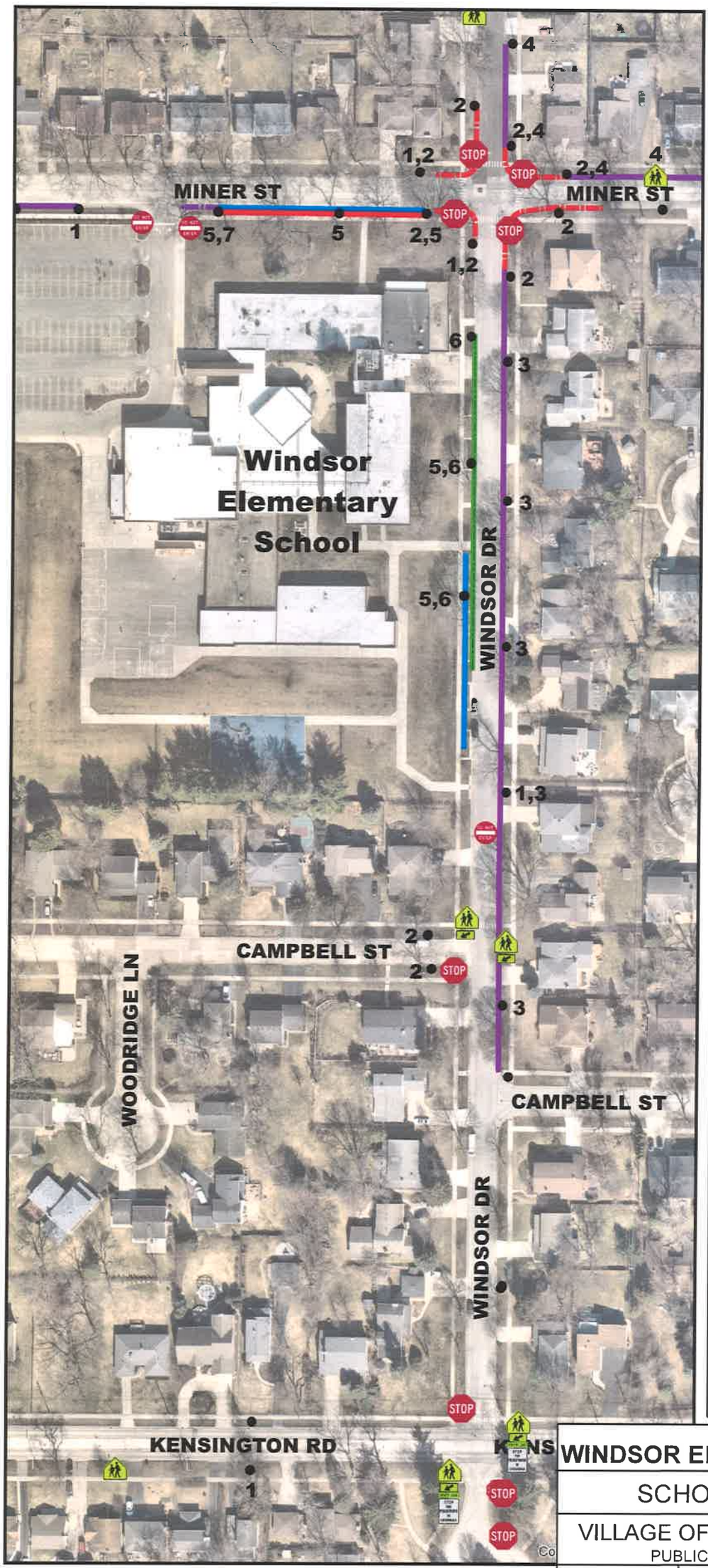
Time	North Cross	West Cross	Total Pedestrians
8:00-8:15 a.m.	0	1	1
8:15-8:30 a.m.	0	0	0
8:30-8:45 a.m.	4	13	17
8:45-9:00 a.m.	7	43	50
9:00-9:15 a.m.	0	7	7
9:15-9:30 a.m.	0	0	0
Morning Totals	**11**	**64**	**75**
2:30-2:45 p.m.	0	0	0
2:45-3:00 p.m.	0	1	1
3:00-3:15 p.m.	0	2	2
3:15-3:30 p.m.	0	2	2
3:30-3:45 p.m.	15	42	57
3:45-4:00 p.m.	0	0	0
Afternoon Totals	**15**	**47**	**62**

City: Arlington Heights
Count Location: Miner St. and School Circle Drive / Lot
Study Date: – October 14th, 2022 (Pedestrian Counts)

Time	Total Pedestrians Across Driveway
8:00-8:15 a.m.	0
8:15-8:30 a.m.	0
8:30-8:45 a.m.	11
8:45-9:00 a.m.	43
9:00-9:15 a.m.	4
9:15-9:30 a.m.	39
Morning Totals	**97**
2:30-2:45 p.m.	0
2:45-3:00 p.m.	0
3:00-3:15 p.m.	0
3:15-3:30 p.m.	8
3:30-3:45 p.m.	27
3:45-4:00 p.m.	6
Afternoon Totals	**41**

City: Arlington Heights
Count Location: Miner St. and Windsor Drive
Study Date: – October 12th, 2022 (On-Street Biker Counts)

Time	North Approach	South Approach	West Approach	East Approach	Total Bikers
8:00-8:15 a.m.	0	0	0	0	0
8:15-8:30 a.m.	0	0	0	1	1
8:30-8:45 a.m.	0	0	0	0	0
8:45-9:00 a.m.	0	0	0	0	0
9:00-9:15 a.m.	0	0	0	0	0
9:15-9:30 a.m.	0	0	0	0	0
Morning Totals	**0**	**0**	**0**	**1**	**1**
2:30-2:45 p.m.	0	0	0	0	0
2:45-3:00 p.m.	0	0	0	0	0
3:00-3:15 p.m.	0	0	0	0	0
3:15-3:30 p.m.	0	0	0	0	0
3:30-3:45 p.m.	0	0	0	0	0
3:45-4:00 p.m.	0	0	1	1	2
Afternoon Totals	**0**	**0**	**1**	**1**	**2**



Legend

SIGNS

STOP

DO NOT ENTER

1 SCHOOL SPEED LIMIT 20 ON SCHOOL DAYS WHEN CHILDREN ARE PRESENT

2 NO PARKING HERE TO CORNER

3 NO PARKING STOPPING STANDING 8 AM TO 4 PM SCHOOL DAYS

4 NO PARKING STOPPING STANDING 8:30 - 9:15AM 3:00 - 4:00PM SCHOOL DAYS

5 STUDENT DROP-OFF AND PICK-UP ZONE 8AM - 9AM 3PM - 4PM SCHOOL DAYS

NO UNATTENDED VEHICLES

6 IDLE FREE ZONE

7 NO PARKING HERE TO DRIVEWAY

MAP PREPARED BY:
VILLAGE OF ARLINGTON HEIGHTS
PUBLIC WORKS DEPARTMENT
TIFFANY SCHMOKER
33 S. ARLINGTON HTS. RD.
ARLINGTON HEIGHTS, IL 60005
(847) 368-5250
http://www.vah.com

July 2019

N W E S

0 50 100 200 300 Feet

WINDSOR ELEMENTARY SCHOOL

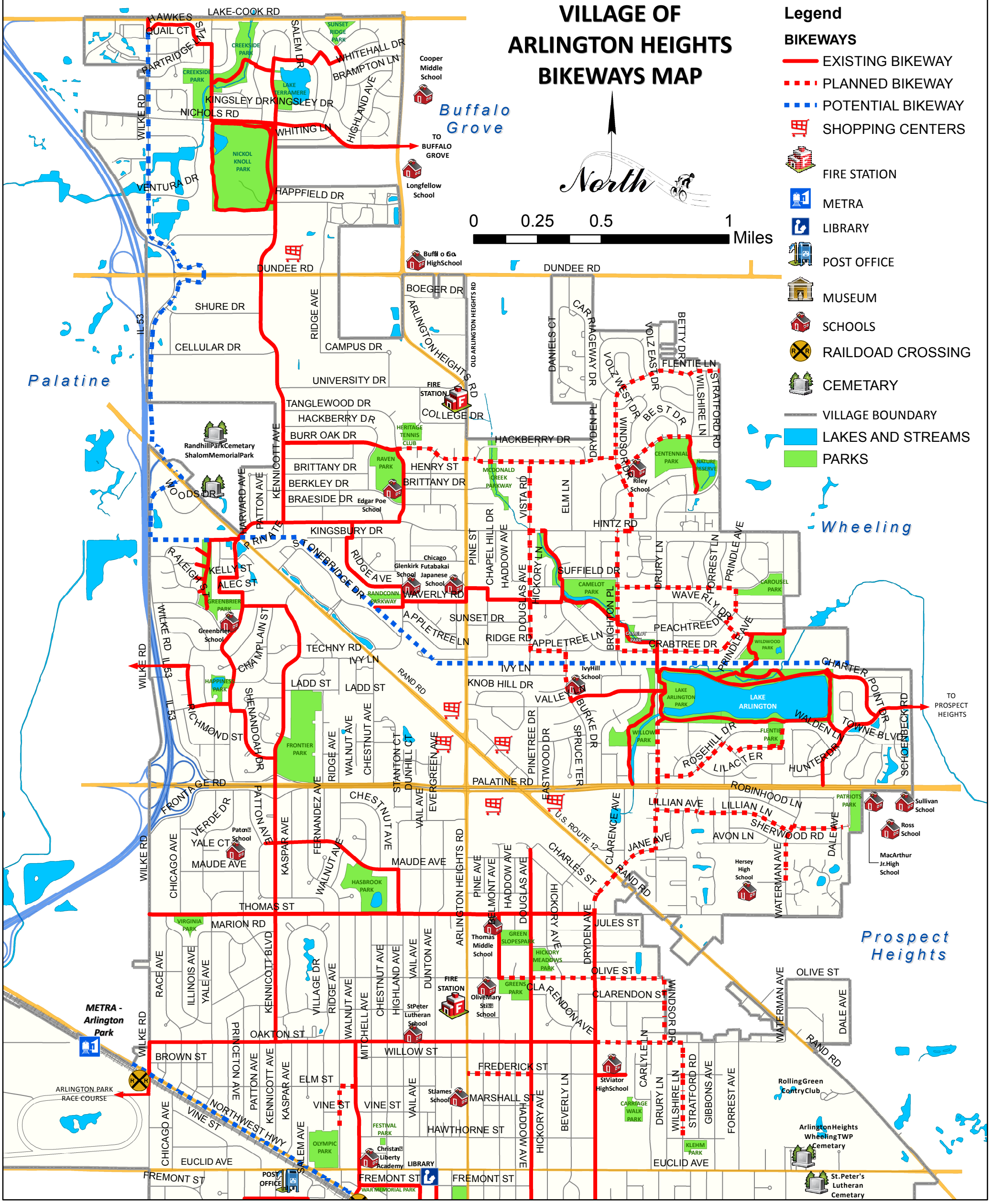
SCHOOL SITE MAPS

VILLAGE OF ARLINGTON HEIGHTS

PUBLIC WORKS DEPARTMENT

DRAWN: TLS	V.MNGR:		ORD. NO. 94-63
CHECKED: TJP	POLICE:		DIR FAC 25:
DATE: 10/2015	V.ENGR:		
REVISION/DATE	7/2019	12/2021	

VILLAGE OF ARLINGTON HEIGHTS BIKEWAYS MAP



BICYCLE SAFETY RULES

1. Always ride your bike in single file, in the same direction as traffic. Stay close to the right edge of the road.
2. Helmets are highly recommended for all bicyclists.
3. Bicycle riders are expected to know and obey all traffic regulations (signs, signals, pavement markings, etc.).
4. Riding on sidewalks is legal except in the Central Business District.
5. Indicate your intention to slow down, stop, turn or change lanes by using arm signals. This will prevent being cutoff.
6. Be extra careful at intersections and railroad crossings and when emerging from driveways, alleys or from behind parked cars. Establish eye contact with motorists who may not be looking for a cyclist.
7. Look out for motorists pulling into traffic. Keep a close watch for car doors opening suddenly in your path causing you to veer into traffic.
8. Maintain your bicycle in sake working order. Check brakes, tires and wheels.
9. Wear bright colored and reflective clothing when riding after dark. Make sure your bike has proper lights and reflectors before riding at night.
10. Stop before reaching a school bus which has s topped to load or unload passengers.
11. Be ready to yield the right-of-way to other moving vehicles.
12. Keep at least one hand on the handlebars at all times for control of the bicycle. Carry books, packages, or other items in a back pack or carrier.
13. Watch for poor road surfaces including drainage grates (tires may fall through grooves), pot holes, loose gravel, and unsafe shoulders.
14. Make sure that the bike you ride is the right size for you.
15. Right turns on red are permissible, after coming to complete stop, except where a sign is posted prohibiting such a turn. You must yield the right-of-way to other traffic lawfully using the intersection and to pedestrians.
16. Only one person should ride on a bicycle except on a tandem bicycle or with an attached child's seat if available.
17. Never hitch a ride with any motorized vehicle.
18. Do not wear headphones when riding a bicycle.

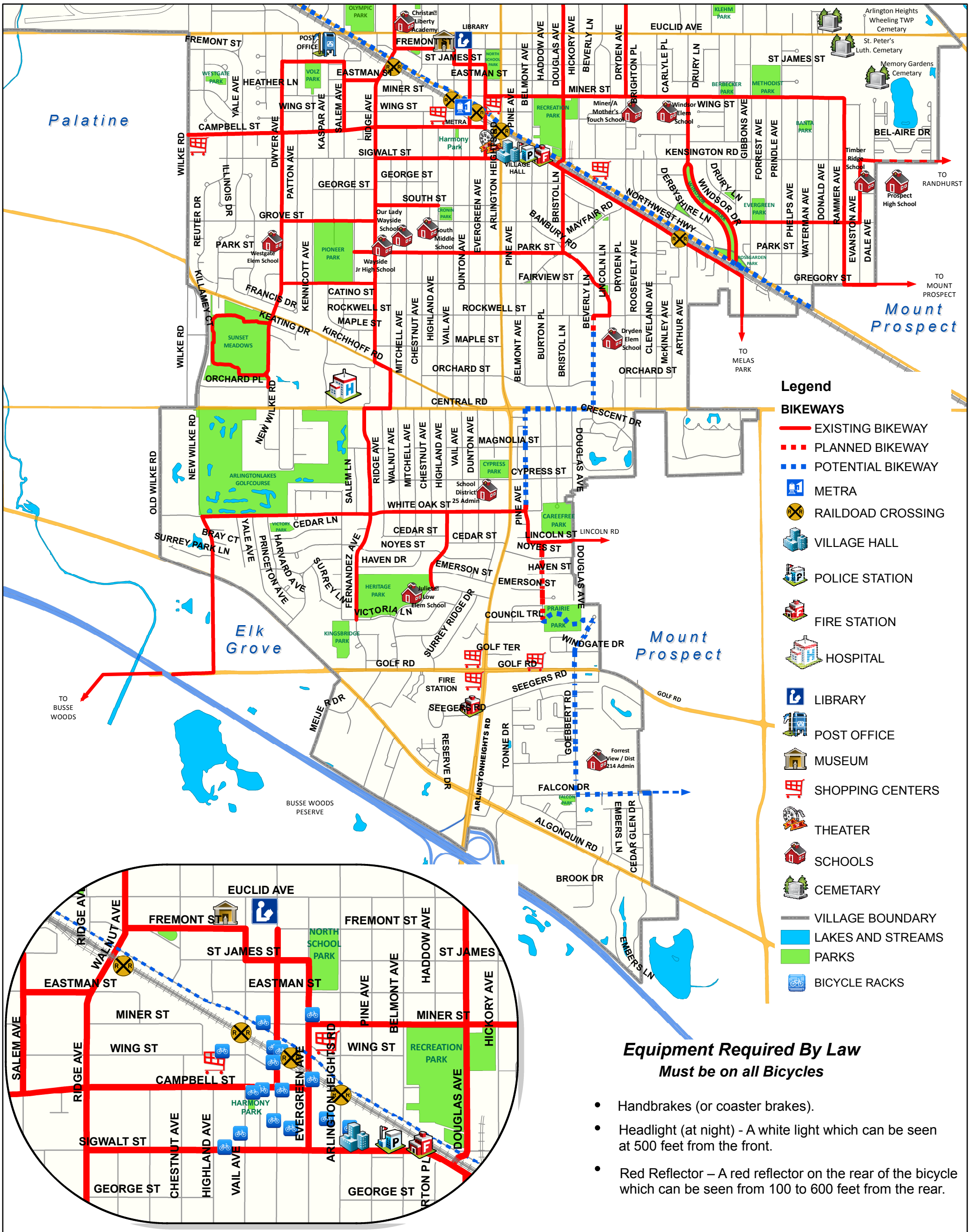
Source:

Portions of this list were excerpts from **Illinois Bicycle Rules of The Road.** Copies are available from the Arlington Heights Police Department, Village Hall, or Illinois Secretary of State, Woodfield Commons, Schaumburg, IL.

Prepared by the Village of Arlington Heights Engineering Department.

June, 2014

VILLAGE OF ARLINGTON HEIGHTS BIKEWAYS MAP



DOWNTOWN

Equipment Required By Law

Must be on all Bicycles

- Handbrakes (or coaster brakes).
- Headlight (at night) - A white light which can be seen at 500 feet from the front.
- Red Reflector – A red reflector on the rear of the bicycle which can be seen from 100 to 600 feet from the rear.

Village of Arlington Heights

Thomas W. Hayes, Mayor
33 South Arlington Heights Rd
Arlington Heights, IL 60005
(847) 368-5100

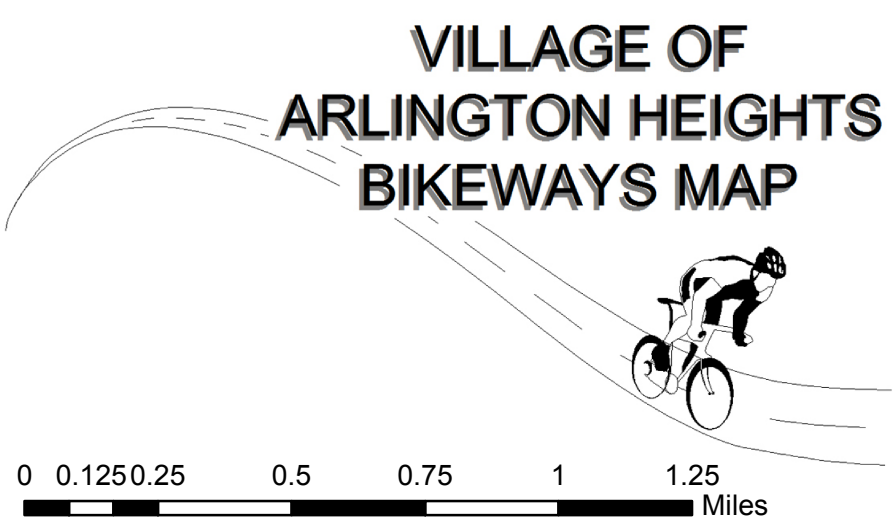
Reporting Bicycle Accidents

Police Department (847) 368-5300
Emergency 911

Bicycle Advisory Commission

Peter Szabo, Chairman
James K. Daley
Paul Danko
Janet Harlow
Alan Medsker
Mitchell D. Polonsky
Michael Walczak

Bike Map Information
(847) 368-5250



AM ROUTE THOMAS - IVY HILL - OLIVE - GREENBRIER SOUTH - WESTGATE - DRYDEN - PIONEER - OLIVE - REC PARK

1ST ROUTE 7:05-7:20AM		DRIVER	DRIVER SUB	X	BUS	BUS SUB	2ND ROUTE 8:20-8:40AM		DRIVER SUB	BUS SUB
THOMAS A	7:10				8		IVY HILL A	8:30		
THOMAS B	7:10				11		IVY HILL D (600, 700)	8:40		
THOMAS C	7:10				19		GREENBRIER A	8:35		
THOMAS D	7:10				22		IVY HILL E (800,900)	8:40		
THOMAS E	7:05				1909					
THOMAS F	7:05				5		IVY HILL B	8:35		
THOMAS G	7:15				21		IVY HILL C-(400, 500)			
THOMAS H	7:10				7GPT		OLIVE A	8:20		
THOMAS I	7:10				3		OLIVE-REC	8:40		
THOMAS J	7:10				9		DRYDEN C	8:15		
THOMAS K	7:20				1908					
THOMAS L	7:10				6GPT					

1ST ROUTE 7:05-7:20AM		DRIVER	DRIVER SUB	X	BUS	BUS SUB	2ND ROUTE 8:15-8:40AM		DRIVER SUB	BUS SUB
SOUTH A	7:10				16					
SOUTH B	7:15				4		DRYDEN B	8:15		
SOUTH C	7:10				58					
SOUTH D	7:20				24					
SOUTH E	7:20				1					
SOUTH F	7:05				2		WESTGATE A	8:20		
SOUTH G	7:15				20					
SOUTH H	7:15				1915					
SOUTH I	7:15				59		DRYDEN A	8:35		
SOUTH J	7:10				173		DRYDEN D	8:15		
SOUTH K	7:15				12		WESTGATE-PIONEER	8:35		

PM ROUTE THOMAS - IVY HILL - OLIVE **5/31/2022**

1ST ROUTE 2:45 PM		DRIVER	DRIVER SUB	X	BUS	BUS SUB	2ND ROUTE 3:35 PM	DRIVER SUB	BUS SUB
THOMAS A	2:40				8		IVY HILL A		
THOMAS B	2:40				11		IVY HILL D (600, 700)		
THOMAS C	2:40				19		GREENBRIER A		
THOMAS D	2:40				22		IVY HILL E (800,900)		
THOMAS E	2:40				1909				
THOMAS F	2:40				5		IVY HILL B		
THOMAS G	2:40				21		IVY HILL C (400,500)		
THOMAS H	2:40				7GPT		OLIVE A		
THOMAS I	2:40				3		OLIVE-REC 3:45		
THOMAS J	2:40				9		DRYDEN C		
THOMAS K	2:40				1908		ACTIVITY EAST THOMAS		
THOMAS L	2:40				6GPT		ACTIVITY WEST		

PM ROUTE SOUTH - WESTGATE - DRYDEN - PIONEER - OLIVE - REC-PARK

PUNCH	1ST ROUTE 2:45 PM		DRIVER	DRIVER SUB	X	BUS	BUS SUB	2ND ROUTE 3:35 PM	DRIVER SUB	BUS SUB
	SOUTH A	2:40				16		ACTIVITY SOUTH		
	SOUTH B	2:40				4		DRYDEN B		
	SOUTH C	2:40				58				
	SOUTH D	2:40				24		ACTIVITY NORTH		
	SOUTH E	2:40				1		ACTIVITY NORTHEAST		
	SOUTH F	2:40				2		WESTGATE A		
	SOUTH G	2:40				20				
	SOUTH H	2:40				1915				
	SOUTH I	2:40				59		DRYDEN A		
	SOUTH J	2:40				173		DRYDEN D		
	SOUTH K	2:40				12		WESTGATE-PIONEER 3:50		

MIDDAY ROUTE DRYDEN - IVY HILL - OLIVE - WESTGATE - DATE: **5/31/2022**

PUNCH	K ROUTE 11:45 AM		DRIVER	DRIVER SUB	X	BUS	BUS SUB	L ROUTE 12:20 - 12:40 PM		DRIVER SUB	BUS SUB
11:15 AM	DRYDEN	K2-31				21		DRYDEN 31L	12:20		
11:15 AM	DRYDEN	K31				1909					
11:15 AM	IVY HILL	K37				11		IVY HILL 37L	12:30		
11:15 AM	OLIVE	K34				8		OLIVE 34L	12:40		
11:15 AM						22		WESTGATE 32L	12:40		

NOTES.-

Taxi at Schools 21-22	AM	MID-DAY	PM
Dryden Elementary School	-	-	-
Greenbrier Elementary School	6	11	6
Ivy Hill Elementary School	1		1
Olive Mary Stitt Elementary School	-	-	-
Westgate Elementary School	8	3	8
Windsor Elementary School	6	1	6
Thomas Middle School	6	1	5
South Middle School	4	1	4
Total	31	17	30

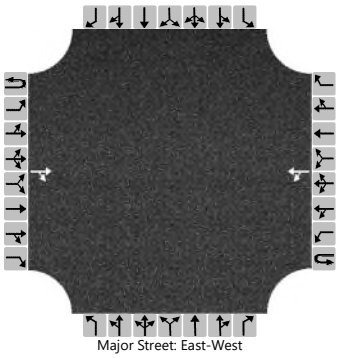
Crossing Guard Locations

Location	AM	PM	K-5	Middle School	Parochial
Arlington & Olive	7:15-9:00	2:25-4:10	Olive		St. Peters
Arlington & Park	7:10-8:25	2:45-3:30		South	OLW
Arlington & Thomas	7:15-7:45	2:45-3:15		Thomas	
Arlington @ St. James	7:45-8:30	3:15-4:00			St. James
Belmont & Thomas	7:15-7:45	2:30-4:00	Olive	Thomas	St. James, St. Peter
	8:15-9:00				
Dryden & Miner	8:05-9:05	3:40-4:10	Windsor		St. James
Dryden & Rockwell	8:35-9:05	3:35-4:05	Dryden		
Dwyer & Grove	8:35-9:05	3:35-4:05	Westgate		
Dwyer & Harvard	8:35-9:05	3:35-4:05	Westgate		
Kennicott & Maude	8:35-9:05	3:35-4:05	Patton		
Maude & Patton	8:35-9:05	3:35-4:05	Patton		
Olive & Belmont	8:35-9:05	3:35-4:05	Olive		
Olive & Douglas	8:35-9:05	3:35-4:05	Olive		
Park & Highland	7:15-7:45	2:45-3:15		South	
Ridge & Park	7:55-8:25	2:55-3:25			OLW
Thomas & Harvard	8:35-9:05	3:35-4:05	Patton		
Windsor & Kensington	8:25-9:10	3:30-4:15	Windsor		
Windsor & Miner	8:20-9:05	3:35-4:05	Windsor		

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	AG	Intersection	Miner and School Lot Enter
Agency/Co.	Eriksson	Jurisdiction	Arlington Heights
Date Performed	11/3/2022	East/West Street	Miner Street
Analysis Year	2022	North/South Street	School Lot Enter
Time Analyzed	AM Peak	Peak Hour Factor	0.63
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Windsor Elementary School		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	0	0
Configuration				TR		LT										
Volume (veh/h)			58	27		1	122									
Percent Heavy Vehicles (%)						0										
Proportion Time Blocked																
Percent Grade (%)																
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1										
Critical Headway (sec)						4.10										
Base Follow-Up Headway (sec)						2.2										
Follow-Up Headway (sec)						2.20										

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						2										
Capacity, c (veh/h)						1462										
v/c Ratio						0.00										
95% Queue Length, Q_{95} (veh)						0.0										
Control Delay (s/veh)						7.5	0.0									
Level of Service (LOS)						A	A									
Approach Delay (s/veh)					0.1											
Approach LOS					A											

HCS Two-Way Stop-Control Report

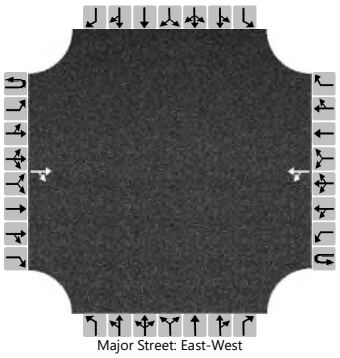
General Information

Analyst	AG
Agency/Co.	Eriksson
Date Performed	11/3/2022
Analysis Year	2028
Time Analyzed	AM Peak
Intersection Orientation	East-West
Project Description	Windsor Elementary School

Site Information

Intersection	Miner and School Lot Enter
Jurisdiction	Arlington Heights
East/West Street	Miner Street
North/South Street	School Lot Enter
Peak Hour Factor	0.63
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	0	0
Configuration				TR		LT										
Volume (veh/h)			61	30		1	125									
Percent Heavy Vehicles (%)						0										
Proportion Time Blocked																
Percent Grade (%)																
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1										
Critical Headway (sec)						4.10										
Base Follow-Up Headway (sec)						2.2										
Follow-Up Headway (sec)						2.20										

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						2										
Capacity, c (veh/h)						1450										
v/c Ratio						0.00										
95% Queue Length, Q_{95} (veh)						0.0										
Control Delay (s/veh)						7.5	0.0									
Level of Service (LOS)						A	A									
Approach Delay (s/veh)					0.1											
Approach LOS					A											

HCS Two-Way Stop-Control Report

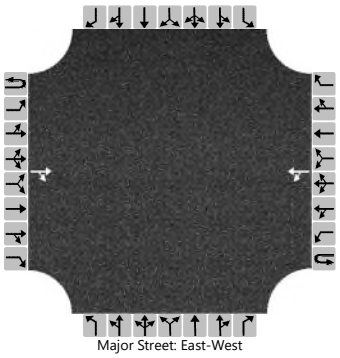
General Information

Analyst	AG
Agency/Co.	Eriksson
Date Performed	11/3/2022
Analysis Year	2022
Time Analyzed	PM Peak
Intersection Orientation	East-West
Project Description	Windsor Elementary School

Site Information

Intersection	Miner and School Lot Enter
Jurisdiction	Arlington Heights
East/West Street	Miner Street
North/South Street	School Lot Enter
Peak Hour Factor	0.62
Analysis Time Period (hrs)	0.25

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	0	0
Configuration				TR		LT										
Volume (veh/h)			103	8		0	146									
Percent Heavy Vehicles (%)						0										
Proportion Time Blocked																
Percent Grade (%)																
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1										
Critical Headway (sec)						4.10										
Base Follow-Up Headway (sec)						2.2										
Follow-Up Headway (sec)						2.20										

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						0										
Capacity, c (veh/h)						1409										
v/c Ratio						0.00										
95% Queue Length, Q_{95} (veh)						0.0										
Control Delay (s/veh)						7.6	0.0									
Level of Service (LOS)						A	A									
Approach Delay (s/veh)					0.0											
Approach LOS					A											

HCS Two-Way Stop-Control Report

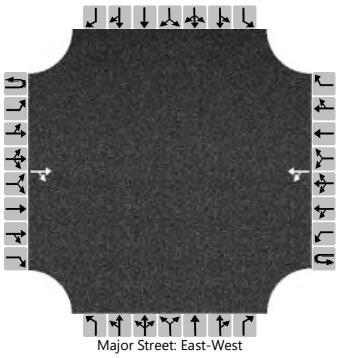
General Information

Analyst	AG
Agency/Co.	Eriksson
Date Performed	11/3/2022
Analysis Year	2028
Time Analyzed	PM Peak
Intersection Orientation	East-West
Project Description	Windsor Elementary School

Site Information

Intersection	Miner and School Lot Enter
Jurisdiction	Arlington Heights
East/West Street	Miner Street
North/South Street	School Lot Enter
Peak Hour Factor	0.62
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	0	0
Configuration				TR		LT										
Volume (veh/h)			106	9		0	153									
Percent Heavy Vehicles (%)						0										
Proportion Time Blocked																
Percent Grade (%)																
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1										
Critical Headway (sec)						4.10										
Base Follow-Up Headway (sec)						2.2										
Follow-Up Headway (sec)						2.20										

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						0										
Capacity, c (veh/h)						1401										
v/c Ratio						0.00										
95% Queue Length, Q_{95} (veh)						0.0										
Control Delay (s/veh)						7.6	0.0									
Level of Service (LOS)						A	A									
Approach Delay (s/veh)					0.0											
Approach LOS					A											

HCS Two-Way Stop-Control Report

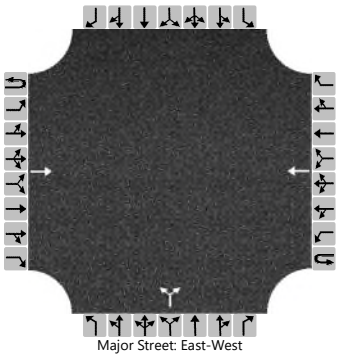
General Information

Analyst	AG
Agency/Co.	Eriksson
Date Performed	11/3/2022
Analysis Year	2022
Time Analyzed	AM Peak
Intersection Orientation	East-West
Project Description	Windsor Elementary School

Site Information

Intersection	Miner and School Lot Exit
Jurisdiction	Arlington Heights
East/West Street	Miner Street
North/South Street	School Lot Exit
Peak Hour Factor	0.63
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration			T				T				LR					
Volume (veh/h)			58				93			30		18				
Percent Heavy Vehicles (%)										0		0				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)										7.1		6.2				
Critical Headway (sec)										6.40		6.20				
Base Follow-Up Headway (sec)										3.5		3.3				
Follow-Up Headway (sec)										3.50		3.30				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)											76					
Capacity, c (veh/h)											702					
v/c Ratio											0.11					
95% Queue Length, Q_{95} (veh)											0.4					
Control Delay (s/veh)											10.8					
Level of Service (LOS)											B					
Approach Delay (s/veh)										10.8						
Approach LOS										B						

HCS Two-Way Stop-Control Report

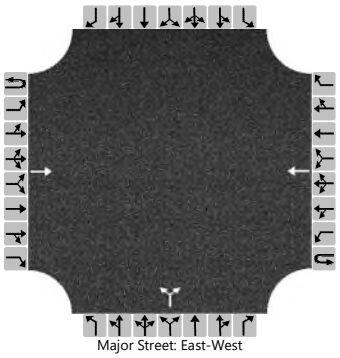
General Information

Analyst	AG
Agency/Co.	Eriksson
Date Performed	11/3/2022
Analysis Year	2028
Time Analyzed	AM Peak
Intersection Orientation	East-West
Project Description	Windsor Elementary School

Site Information

Intersection	Miner and School Lot Exit
Jurisdiction	Arlington Heights
East/West Street	Miner Street
North/South Street	School Lot Exit
Peak Hour Factor	0.63
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration			T				T				LR					
Volume (veh/h)			61				93			33		20				
Percent Heavy Vehicles (%)										0		0				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)										7.1		6.2				
Critical Headway (sec)										6.40		6.20				
Base Follow-Up Headway (sec)										3.5		3.3				
Follow-Up Headway (sec)										3.50		3.30				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)											84					
Capacity, c (veh/h)											698					
v/c Ratio											0.12					
95% Queue Length, Q_{95} (veh)											0.4					
Control Delay (s/veh)											10.9					
Level of Service (LOS)											B					
Approach Delay (s/veh)										10.9						
Approach LOS										B						

HCS Two-Way Stop-Control Report

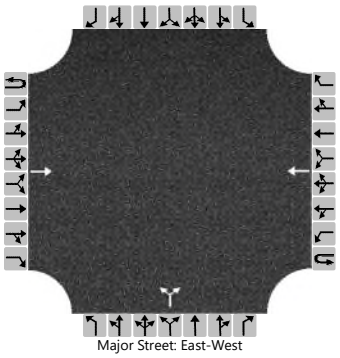
General Information

Analyst	AG
Agency/Co.	Eriksson
Date Performed	11/3/2022
Analysis Year	2022
Time Analyzed	PM Peak
Intersection Orientation	East-West
Project Description	Windsor Elementary School

Site Information

Intersection	Miner and School Lot Exit
Jurisdiction	Arlington Heights
East/West Street	Miner Street
North/South Street	School Lot Exit
Peak Hour Factor	0.62
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration			T				T				LR					
Volume (veh/h)			103				82			64		15				
Percent Heavy Vehicles (%)										0		0				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)										7.1		6.2				
Critical Headway (sec)										6.40		6.20				
Base Follow-Up Headway (sec)										3.5		3.3				
Follow-Up Headway (sec)										3.50		3.30				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)											127					
Capacity, c (veh/h)											715					
v/c Ratio											0.18					
95% Queue Length, Q_{95} (veh)											0.6					
Control Delay (s/veh)											11.1					
Level of Service (LOS)											B					
Approach Delay (s/veh)										11.1						
Approach LOS										B						

HCS Two-Way Stop-Control Report

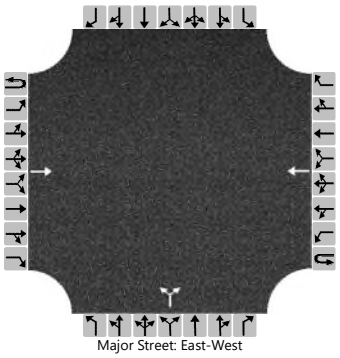
General Information

Analyst	AG
Agency/Co.	Eriksson
Date Performed	11/3/2022
Analysis Year	2028
Time Analyzed	PM Peak
Intersection Orientation	East-West
Project Description	Windsor Elementary School

Site Information

Intersection	Miner and School Lot Exit
Jurisdiction	Arlington Heights
East/West Street	Miner Street
North/South Street	School Lot Exit
Peak Hour Factor	0.62
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration			T				T				LR					
Volume (veh/h)			106				82			71		17				
Percent Heavy Vehicles (%)										0		0				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)										7.1		6.2				
Critical Headway (sec)										6.40		6.20				
Base Follow-Up Headway (sec)										3.5		3.3				
Follow-Up Headway (sec)										3.50		3.30				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)											142					
Capacity, c (veh/h)											711					
v/c Ratio											0.20					
95% Queue Length, Q_{95} (veh)											0.7					
Control Delay (s/veh)											11.3					
Level of Service (LOS)											B					
Approach Delay (s/veh)										11.3						
Approach LOS										B						

HCS Two-Way Stop-Control Report

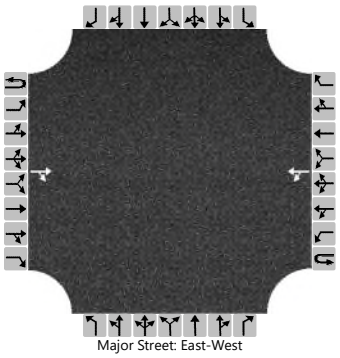
General Information

Analyst	AG
Agency/Co.	Eriksson
Date Performed	11/3/2022
Analysis Year	2022
Time Analyzed	AM Peak
Intersection Orientation	East-West
Project Description	Windsor Elementary School

Site Information

Intersection	Miner and West Lot Entrance
Jurisdiction	Arlington Heights
East/West Street	Miner Street
North/South Street	West Lot Entrance
Peak Hour Factor	0.58
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	0	0
Configuration				TR		LT										
Volume (veh/h)			59	102		35	87									
Percent Heavy Vehicles (%)						0										
Proportion Time Blocked																
Percent Grade (%)																
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1										
Critical Headway (sec)						4.10										
Base Follow-Up Headway (sec)						2.2										
Follow-Up Headway (sec)						2.20										

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						60										
Capacity, c (veh/h)						1297										
v/c Ratio						0.05										
95% Queue Length, Q_{95} (veh)						0.1										
Control Delay (s/veh)						7.9	0.4									
Level of Service (LOS)						A	A									
Approach Delay (s/veh)					2.6											
Approach LOS					A											

HCS Two-Way Stop-Control Report

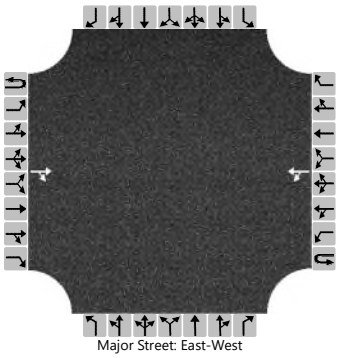
General Information

Analyst	AG
Agency/Co.	Eriksson
Date Performed	11/3/2022
Analysis Year	2028
Time Analyzed	AM Peak
Intersection Orientation	East-West
Project Description	Windsor Elementary School

Site Information

Intersection	Miner and West Lot Entrance
Jurisdiction	Arlington Heights
East/West Street	Miner Street
North/South Street	West Lot Entrance
Peak Hour Factor	0.58
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	0	0
Configuration				TR		LT										
Volume (veh/h)			65	102		35	90									
Percent Heavy Vehicles (%)						0										
Proportion Time Blocked																
Percent Grade (%)																
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1										
Critical Headway (sec)						4.10										
Base Follow-Up Headway (sec)						2.2										
Follow-Up Headway (sec)						2.20										

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						60										
Capacity, c (veh/h)						1286										
v/c Ratio						0.05										
95% Queue Length, Q_{95} (veh)						0.1										
Control Delay (s/veh)						7.9	0.4									
Level of Service (LOS)						A	A									
Approach Delay (s/veh)					2.5											
Approach LOS					A											

HCS Two-Way Stop-Control Report

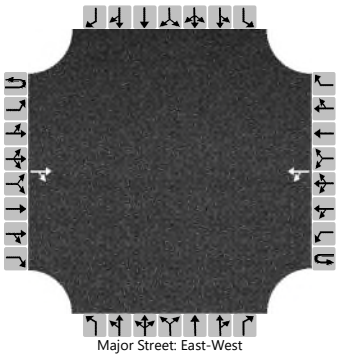
General Information

Analyst	AG
Agency/Co.	Eriksson
Date Performed	11/3/2022
Analysis Year	2022
Time Analyzed	PM Peak
Intersection Orientation	East-West
Project Description	Windsor Elementary School

Site Information

Intersection	Miner and West Lot Entrance
Jurisdiction	Arlington Heights
East/West Street	Miner Street
North/South Street	West Lot Entrance
Peak Hour Factor	0.49
Analysis Time Period (hrs)	0.25

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	0	0
Configuration				TR		LT										
Volume (veh/h)			75	57		30	116									
Percent Heavy Vehicles (%)						0										
Proportion Time Blocked																
Percent Grade (%)																
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1										
Critical Headway (sec)						4.10										
Base Follow-Up Headway (sec)						2.2										
Follow-Up Headway (sec)						2.20										

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						61										
Capacity, c (veh/h)						1306										
v/c Ratio						0.05										
95% Queue Length, Q_{95} (veh)						0.1										
Control Delay (s/veh)						7.9	0.4									
Level of Service (LOS)						A	A									
Approach Delay (s/veh)					2.0											
Approach LOS					A											

HCS Two-Way Stop-Control Report

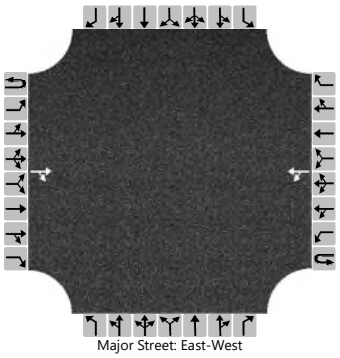
General Information

Analyst	AG
Agency/Co.	Eriksson
Date Performed	11/3/2022
Analysis Year	2028
Time Analyzed	PM Peak
Intersection Orientation	East-West
Project Description	Windsor Elementary School

Site Information

Intersection	Miner and West Lot Entrance
Jurisdiction	Arlington Heights
East/West Street	Miner Street
North/South Street	West Lot Entrance
Peak Hour Factor	0.49
Analysis Time Period (hrs)	0.25

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	0	0
Configuration				TR		LT										
Volume (veh/h)			79	57		30	123									
Percent Heavy Vehicles (%)						0										
Proportion Time Blocked																
Percent Grade (%)																
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1										
Critical Headway (sec)						4.10										
Base Follow-Up Headway (sec)						2.2										
Follow-Up Headway (sec)						2.20										

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						61										
Capacity, c (veh/h)						1297										
v/c Ratio						0.05										
95% Queue Length, Q_{95} (veh)						0.1										
Control Delay (s/veh)						7.9	0.4									
Level of Service (LOS)						A	A									
Approach Delay (s/veh)					1.9											
Approach LOS					A											

HCS Two-Way Stop-Control Report

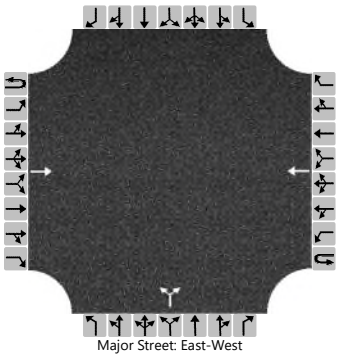
General Information

Analyst	AG
Agency/Co.	Eriksson
Date Performed	11/3/2022
Analysis Year	2022
Time Analyzed	AM Peak
Intersection Orientation	East-West
Project Description	Windsor Elementary School

Site Information

Intersection	Miner and West Lot Exit
Jurisdiction	Arlington Heights
East/West Street	Miner Street
North/South Street	West Lot Exit
Peak Hour Factor	0.58
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration			T				T				LR					
Volume (veh/h)			59				122			52		26				
Percent Heavy Vehicles (%)										0		0				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)										7.1		6.2				
Critical Headway (sec)										6.40		6.20				
Base Follow-Up Headway (sec)										3.5		3.3				
Follow-Up Headway (sec)										3.50		3.30				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)											134					
Capacity, c (veh/h)											638					
v/c Ratio											0.21					
95% Queue Length, Q_{95} (veh)											0.8					
Control Delay (s/veh)											12.1					
Level of Service (LOS)											B					
Approach Delay (s/veh)										12.1						
Approach LOS										B						

HCS Two-Way Stop-Control Report

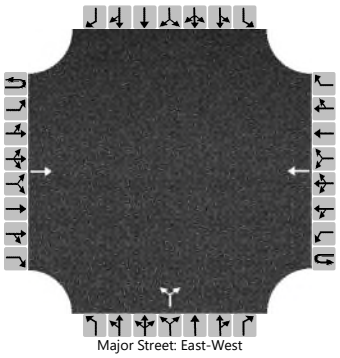
General Information

Analyst	AG
Agency/Co.	Eriksson
Date Performed	11/3/2022
Analysis Year	2028
Time Analyzed	AM Peak
Intersection Orientation	East-West
Project Description	Windsor Elementary School

Site Information

Intersection	Miner and West Lot Exit
Jurisdiction	Arlington Heights
East/West Street	Miner Street
North/South Street	West Lot Exit
Peak Hour Factor	0.58
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration			T				T				LR					
Volume (veh/h)			65				125			52		26				
Percent Heavy Vehicles (%)										0		0				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)										7.1		6.2				
Critical Headway (sec)										6.40		6.20				
Base Follow-Up Headway (sec)										3.5		3.3				
Follow-Up Headway (sec)										3.50		3.30				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)											134					
Capacity, c (veh/h)											626					
v/c Ratio											0.21					
95% Queue Length, Q_{95} (veh)											0.8					
Control Delay (s/veh)											12.3					
Level of Service (LOS)											B					
Approach Delay (s/veh)										12.3						
Approach LOS										B						

HCS Two-Way Stop-Control Report

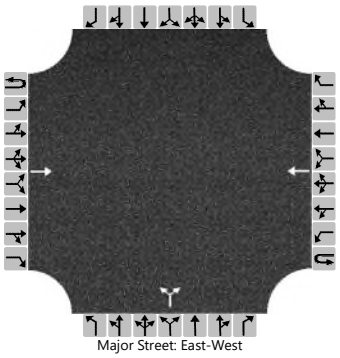
General Information

Analyst	AG
Agency/Co.	Eriksson
Date Performed	11/3/2022
Analysis Year	2022
Time Analyzed	PM Peak
Intersection Orientation	East-West
Project Description	Windsor Elementary School

Site Information

Intersection	Miner and West Lot Exit
Jurisdiction	Arlington Heights
East/West Street	Miner Street
North/South Street	West Lot Exit
Peak Hour Factor	0.49
Analysis Time Period (hrs)	0.25

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration			T				T				LR					
Volume (veh/h)			75				146			89		36				
Percent Heavy Vehicles (%)										0		0				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)										7.1		6.2				
Critical Headway (sec)										6.40		6.20				
Base Follow-Up Headway (sec)										3.5		3.3				
Follow-Up Headway (sec)										3.50		3.30				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)											255					
Capacity, c (veh/h)											625					
v/c Ratio											0.41					
95% Queue Length, Q_{95} (veh)											2.0					
Control Delay (s/veh)											14.7					
Level of Service (LOS)											B					
Approach Delay (s/veh)										14.7						
Approach LOS										B						

HCS Two-Way Stop-Control Report

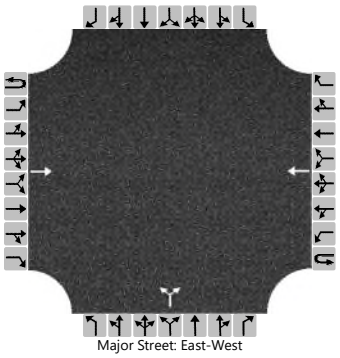
General Information

Analyst	AG
Agency/Co.	Eriksson
Date Performed	11/3/2022
Analysis Year	2028
Time Analyzed	PM Peak
Intersection Orientation	East-West
Project Description	Windsor Elementary School

Site Information

Intersection	Miner and West Lot Exit
Jurisdiction	Arlington Heights
East/West Street	Miner Street
North/South Street	West Lot Exit
Peak Hour Factor	0.49
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration			T				T				LR					
Volume (veh/h)			79				153			89		36				
Percent Heavy Vehicles (%)										0		0				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)										7.1		6.2				
Critical Headway (sec)										6.40		6.20				
Base Follow-Up Headway (sec)										3.5		3.3				
Follow-Up Headway (sec)										3.50		3.30				

Delay, Queue Length, and Level of Service

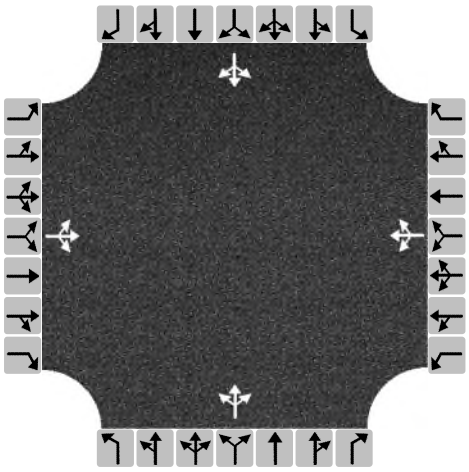
Flow Rate, v (veh/h)											255					
Capacity, c (veh/h)											609					
v/c Ratio											0.42					
95% Queue Length, Q_{95} (veh)											2.1					
Control Delay (s/veh)											15.1					
Level of Service (LOS)											C					
Approach Delay (s/veh)										15.1						
Approach LOS										C						

HCS All-Way Stop Control Report

General and Site Information

Analyst	AG
Agency/Co.	Eriksson
Date Performed	11/3/2022
Analysis Year	2022
Analysis Time Period (hrs)	0.25
Time Analyzed	AM Peak
Project Description	Windsor Elementary School
Intersection	Miner Street and Windsor Drive
Jurisdiction	Arlington Heights
East/West Street	Miner Street
North/South Street	Windsor Drive
Peak Hour Factor	0.52

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume (veh/h)	18	27	31	85	55	7	11	17	3	6	19	27
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	146			283			60			100		
Percent Heavy Vehicles	0			0			0			0		
Initial Departure Headway, h_d (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.130			0.251			0.053			0.089		
Final Departure Headway, h_d (s)	4.44			4.56			5.05			4.70		
Final Degree of Utilization, x	0.180			0.358			0.084			0.130		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, t_s (s)	2.44			2.56			3.05			2.70		

Capacity, Delay and Level of Service

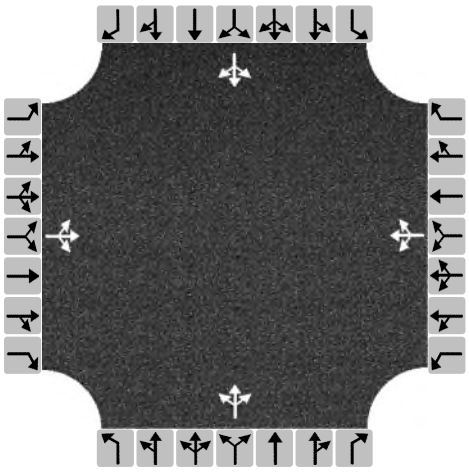
Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	146			283			60			100		
Capacity (veh/h)	812			790			713			767		
95% Queue Length, Q_{95} (veh)	0.7			1.6			0.3			0.4		
Control Delay (s/veh)	8.4			10.1			8.5			8.4		
Level of Service, LOS	A			B			A			A		
Approach Delay (s/veh) | LOS	8.4	A		10.1	B		8.5	A		8.4	A	
Intersection Delay (s/veh) | LOS	9.2						A					

HCS All-Way Stop Control Report

General and Site Information

Analyst	AG
Agency/Co.	Eriksson
Date Performed	11/3/2022
Analysis Year	2028
Analysis Time Period (hrs)	0.25
Time Analyzed	AM Peak
Project Description	Windsor Elementary School
Intersection	Miner Street and Windsor Drive
Jurisdiction	Arlington Heights
East/West Street	Miner Street
North/South Street	Windsor Drive
Peak Hour Factor	0.52

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume (veh/h)	19	28	34	94	55	7	11	17	3	6	22	27
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	156			300			60			106		
Percent Heavy Vehicles	0			0			0			0		
Initial Departure Headway, h_d (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.138			0.267			0.053			0.094		
Final Departure Headway, h_d (s)	4.47			4.60			5.13			4.78		
Final Degree of Utilization, x	0.194			0.383			0.085			0.140		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, t_s (s)	2.47			2.60			3.13			2.78		

Capacity, Delay and Level of Service

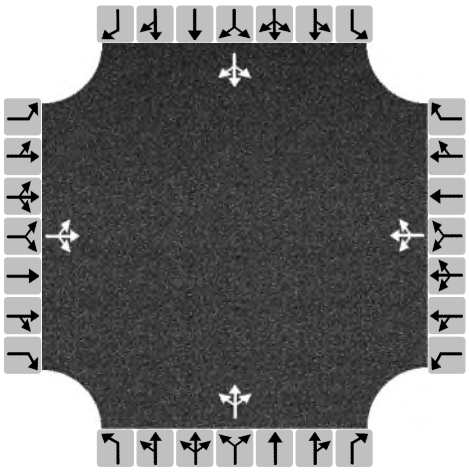
Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	156			300			60			106		
Capacity (veh/h)	805			783			701			753		
95% Queue Length, Q_{95} (veh)	0.7			1.8			0.3			0.5		
Control Delay (s/veh)	8.5			10.4			8.6			8.6		
Level of Service, LOS	A			B			A			A		
Approach Delay (s/veh) | LOS	8.5	A		10.4	B		8.6	A		8.6	A	
Intersection Delay (s/veh) | LOS	9.5						A					

HCS All-Way Stop Control Report

General and Site Information

Analyst	AG
Agency/Co.	Eriksson
Date Performed	11/3/2022
Analysis Year	2022
Analysis Time Period (hrs)	0.25
Time Analyzed	PM Peak
Project Description	Windsor Elementary School
Intersection	Miner Street and Windsor Drive
Jurisdiction	Arlington Heights
East/West Street	Miner Street
North/South Street	Windsor Drive
Peak Hour Factor	0.68

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume (veh/h)	26	58	34	30	43	10	23	27	6	10	28	16
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	174			122			82			79		
Percent Heavy Vehicles	0			0			0			0		
Initial Departure Headway, h_d (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.154			0.108			0.073			0.071		
Final Departure Headway, h_d (s)	4.30			4.48			4.69			4.54		
Final Degree of Utilization, x	0.207			0.152			0.107			0.100		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, t_s (s)	2.30			2.48			2.69			2.54		

Capacity, Delay and Level of Service

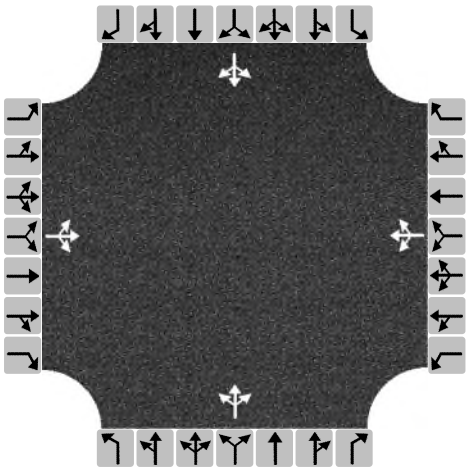
Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	174			122			82			79		
Capacity (veh/h)	837			803			767			793		
95% Queue Length, Q_{95} (veh)	0.8			0.5			0.4			0.3		
Control Delay (s/veh)	8.4			8.3			8.3			8.0		
Level of Service, LOS	A			A			A			A		
Approach Delay (s/veh) | LOS	8.4	A		8.3	A		8.3	A		8.0	A	
Intersection Delay (s/veh) | LOS	8.3						A					

HCS All-Way Stop Control Report

General and Site Information

Analyst	AG
Agency/Co.	Eriksson
Date Performed	11/3/2022
Analysis Year	2028
Analysis Time Period (hrs)	0.25
Time Analyzed	PM Peak
Project Description	Windsor Elementary School
Intersection	Miner Street and Windsor Drive
Jurisdiction	Arlington Heights
East/West Street	Miner Street
North/South Street	Windsor Drive
Peak Hour Factor	0.68

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume (veh/h)	27	59	37	33	43	10	23	27	6	10	31	16
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	181			126			82			84		
Percent Heavy Vehicles	0			0			0			0		
Initial Departure Headway, h_d (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.161			0.112			0.073			0.075		
Final Departure Headway, h_d (s)	4.32			4.51			4.73			4.58		
Final Degree of Utilization, x	0.217			0.159			0.108			0.107		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, t_s (s)	2.32			2.51			2.73			2.58		

Capacity, Delay and Level of Service

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	181			126			82			84		
Capacity (veh/h)	834			798			761			787		
95% Queue Length, Q_{95} (veh)	0.8			0.6			0.4			0.4		
Control Delay (s/veh)	8.5			8.4			8.3			8.1		
Level of Service, LOS	A			A			A			A		
Approach Delay (s/veh) | LOS	8.5	A		8.4	A		8.3	A		8.1	A	
Intersection Delay (s/veh) | LOS	8.4						A					

HCS Two-Way Stop-Control Report

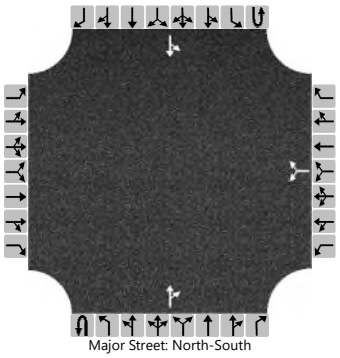
General Information

Analyst	AG
Agency/Co.	Eriksson
Date Performed	9/12/2022
Analysis Year	2022
Time Analyzed	AM Peak
Intersection Orientation	North-South
Project Description	Windsor School

Site Information

Intersection	Windsor and Campbell East
Jurisdiction	Arlington Heights
East/West Street	Campbell Street
North/South Street	Windsor Drive
Peak Hour Factor	0.38
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						6		4			28	1		45	86	
Percent Heavy Vehicles (%)						0		0						0		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.40		6.20						4.10		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.50		3.30						2.20		

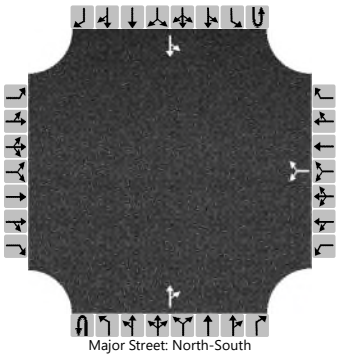
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							26							118		
Capacity, c (veh/h)							565							1522		
v/c Ratio							0.05							0.08		
95% Queue Length, Q_{95} (veh)							0.1							0.3		
Control Delay (s/veh)							11.7							7.6	0.7	
Level of Service (LOS)							B							A	A	
Approach Delay (s/veh)						11.7								3.0		
Approach LOS						B								A		

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	AG	Intersection	Windsor and Campbell East
Agency/Co.	Eriksson	Jurisdiction	Arlington Heights
Date Performed	9/12/2022	East/West Street	Campbell Street
Analysis Year	2028	North/South Street	Windsor Drive
Time Analyzed	AM Peak	Peak Hour Factor	0.38
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Windsor School		

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						6		4			28	1		50	95	
Percent Heavy Vehicles (%)						0		0						0		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.40		6.20						4.10		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.50		3.30						2.20		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							26							132		
Capacity, c (veh/h)							531							1522		
v/c Ratio							0.05							0.09		
95% Queue Length, Q_{95} (veh)							0.2							0.3		
Control Delay (s/veh)							12.1							7.6	0.8	
Level of Service (LOS)							B							A	A	
Approach Delay (s/veh)						12.1								3.1		
Approach LOS						B								A		

HCS Two-Way Stop-Control Report

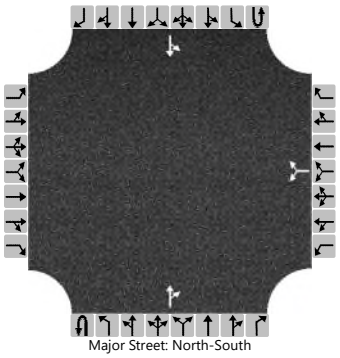
General Information

Analyst	AG
Agency/Co.	Eriksson
Date Performed	9/12/2022
Analysis Year	2022
Time Analyzed	PM Peak
Intersection Orientation	North-South
Project Description	Windsor School

Site Information

Intersection	Windsor and Campbell East
Jurisdiction	Arlington Heights
East/West Street	Campbell Street
North/South Street	Windsor Drive
Peak Hour Factor	0.52
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						7		6			56	14		27	66	
Percent Heavy Vehicles (%)						0		0						0		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.40		6.20						4.10		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.50		3.30						2.20		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							25							52		
Capacity, c (veh/h)							725							1460		
v/c Ratio							0.03							0.04		
95% Queue Length, Q_{95} (veh)							0.1							0.1		
Control Delay (s/veh)							10.1							7.6	0.3	
Level of Service (LOS)							B							A	A	
Approach Delay (s/veh)						10.1								2.4		
Approach LOS						B								A		

HCS Two-Way Stop-Control Report

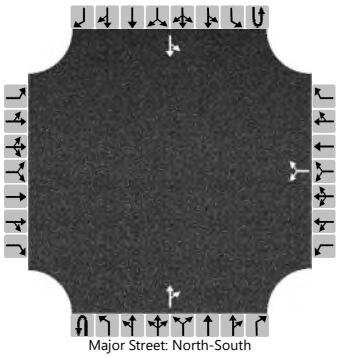
General Information

Analyst	AG
Agency/Co.	Eriksson
Date Performed	9/12/2022
Analysis Year	2028
Time Analyzed	PM Peak
Intersection Orientation	North-South
Project Description	Windsor School

Site Information

Intersection	Windsor and Campbell East
Jurisdiction	Arlington Heights
East/West Street	Campbell Street
North/South Street	Windsor Drive
Peak Hour Factor	0.52
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						7		6			56	14		28	73	
Percent Heavy Vehicles (%)						0		0						0		
Proportion Time Blocked																
Percent Grade (%)							0									
Right Turn Channelized																
Median Type | Storage							Undivided									

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.40		6.20						4.10		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.50		3.30						2.20		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							25							54		
Capacity, c (veh/h)							714							1460		
v/c Ratio							0.04							0.04		
95% Queue Length, Q_{95} (veh)							0.1							0.1		
Control Delay (s/veh)							10.2							7.6	0.3	
Level of Service (LOS)							B							A	A	
Approach Delay (s/veh)							10.2							2.3		
Approach LOS							B							A		

HCS Two-Way Stop-Control Report

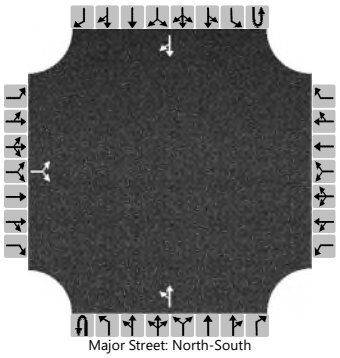
General Information

Analyst	AG
Agency/Co.	Eriksson
Date Performed	9/12/2022
Analysis Year	2022
Time Analyzed	AM Peak
Intersection Orientation	North-South
Project Description	Windsor School

Site Information

Intersection	Windsor and Campbell West
Jurisdiction	Arlington Heights
East/West Street	Campbell Street
North/South Street	Windsor Drive
Peak Hour Factor	0.40
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		3		3						4	28				128	7
Percent Heavy Vehicles (%)		0		0						0						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.40		6.20						4.10						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.50		3.30						2.20						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			15							10						
Capacity, c (veh/h)			590							1209						
v/c Ratio			0.03							0.01						
95% Queue Length, Q_{95} (veh)			0.1							0.0						
Control Delay (s/veh)			11.3							8.0	0.1					
Level of Service (LOS)			B							A	A					
Approach Delay (s/veh)		11.3								1.1						
Approach LOS		B								A						

HCS Two-Way Stop-Control Report

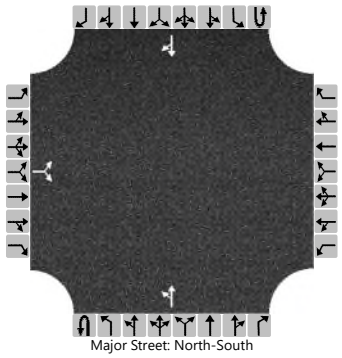
General Information

Analyst	AG
Agency/Co.	Eriksson
Date Performed	9/12/2022
Analysis Year	2028
Time Analyzed	AM Peak
Intersection Orientation	North-South
Project Description	Windsor School

Site Information

Intersection	Windsor and Campbell West
Jurisdiction	Arlington Heights
East/West Street	Campbell Street
North/South Street	Windsor Drive
Peak Hour Factor	0.40
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		3		3						4	28				142	8
Percent Heavy Vehicles (%)		0		0						0						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.40		6.20						4.10						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.50		3.30						2.20						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			15							10						
Capacity, c (veh/h)			563							1171						
v/c Ratio			0.03							0.01						
95% Queue Length, Q_{95} (veh)			0.1							0.0						
Control Delay (s/veh)			11.6							8.1	0.1					
Level of Service (LOS)			B							A	A					
Approach Delay (s/veh)		11.6								1.1						
Approach LOS		B								A						

HCS Two-Way Stop-Control Report

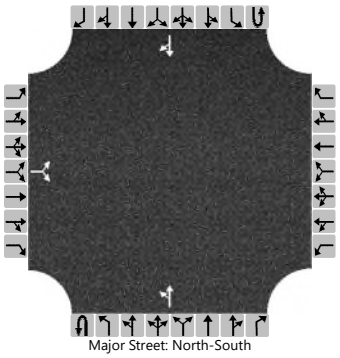
General Information

Analyst	AG
Agency/Co.	Eriksson
Date Performed	9/12/2022
Analysis Year	2022
Time Analyzed	PM Peak
Intersection Orientation	North-South
Project Description	Windsor School

Site Information

Intersection	Windsor and Campbell West
Jurisdiction	Arlington Heights
East/West Street	Campbell Street
North/South Street	Windsor Drive
Peak Hour Factor	0.51
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		4		12						10	52				81	11
Percent Heavy Vehicles (%)		0		0						0						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.40		6.20						4.10						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.50		3.30						2.20						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			31							20						
Capacity, c (veh/h)			765							1370						
v/c Ratio			0.04							0.01						
95% Queue Length, Q_{95} (veh)			0.1							0.0						
Control Delay (s/veh)			9.9							7.7	0.1					
Level of Service (LOS)			A							A	A					
Approach Delay (s/veh)		9.9								1.3						
Approach LOS		A								A						

HCS Two-Way Stop-Control Report

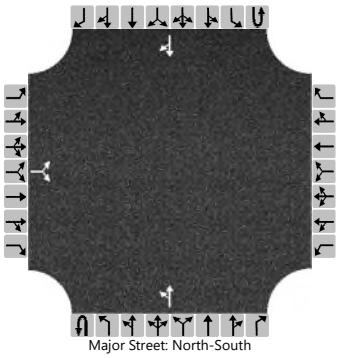
General Information

Analyst	AG
Agency/Co.	Eriksson
Date Performed	9/12/2022
Analysis Year	2028
Time Analyzed	PM Peak
Intersection Orientation	North-South
Project Description	Windsor School

Site Information

Intersection	Windsor and Campbell West
Jurisdiction	Arlington Heights
East/West Street	Campbell Street
North/South Street	Windsor Drive
Peak Hour Factor	0.51
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		4		12						10	52				89	12
Percent Heavy Vehicles (%)		0		0						0						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.40		6.20						4.10						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.50		3.30						2.20						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			31							20						
Capacity, c (veh/h)			749							1350						
v/c Ratio			0.04							0.01						
95% Queue Length, Q_{95} (veh)			0.1							0.0						
Control Delay (s/veh)			10.0							7.7	0.1					
Level of Service (LOS)			B							A	A					
Approach Delay (s/veh)		10.0								1.3						
Approach LOS		B								A						