



# TRAFFIC IMPACT ANALYSIS

## HAVILAND FIELDS

RAMSEY, MINNESOTA

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**Senior Housing Partners**

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# TRAFFIC IMPACT ANALYSIS

## HAVILAND FIELDS

RAMSEY, MINNESOTA

### **REPORT CERTIFICATION**

I hereby certify that this report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.



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October 16, 2023

Date

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## APPENDIX

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- B. Turning Movement Counts**
- C. Site Layout Exhibit**
- D. SimTraffic Analysis Results**

## INTRODUCTION

Presbyterian Homes is proposing a new residential development on the +/- 35-acre Lord of Life Church site in Ramsey, MN. The development would include includes 303 multifamily housing (Mid-rise) units, 22 senior adult housing – single family units and 173 senior adult housing – multi-family units for a total of 498 units. The existing church will remain on site. **Exhibit 1** shows the proposed project location. All exhibits are included in **Appendix A**.

## EXISTING ROADWAY CONDITIONS

The proposed development is located on the northwest corner of MN-47 and CSAH 5. The following intersections will be included in the traffic capacity analysis:

- MN-47 (St Francis Blvd) & Nowthen Blvd NW
- MN-47 (St Francis Blvd) & Sunwood Dr NW
- CSAH 5 (Nowthen Blvd) & Dysprosium St NW
- CSAH 5 (Nowthen Blvd) & Iodine St NW
- CSAH 5 (Nowthen Blvd) & Lord of Life Church Access
- CSAH 5 (Nowthen Blvd) & 146<sup>th</sup> Ave NW
- CSAH 5 (Nowthen Blvd) & Sunwood Dr
- Sunwood Dr & Cobalt St NW

The study intersection locations are shown in **Exhibit 1**.

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## EXISTING ROADWAYS

The following provides a detailed description of the major surrounding roadways.

**MN-47 (St Francis Blvd)** is a north-south, two-lane, divided highway, with a single through lane and turn lanes provided at all accesses. The MnDOT Functional Classification Map classifies MN-47 as A-Minor Connector. The MnDOT Traffic Mapping Application reports an annual average daily traffic (AADT) of 22,000 vehicles per day (vpd) in 2019 south of CSAH 5 and 12,100 vpd in 2021 north of CSAH 5. The posted speed limit is 45 mph south of CSAH 5 and 55 mph north of CSAH 5.

**CSAH 5 (Nowthen Blvd)** is a two-lane County Road with a single through lane in each direction and right turn lanes provided at all studied intersections. The highway is divided from MN-47 to Dysprosium St. The roadway runs in a southeast-northwest direction within the study area. The MnDOT Functional Classification Map Classifies CSAH 5 as A-Minor Expander. The MnDOT Traffic Mapping Application reports an AADT of 8,700 vpd in 2021, between MN-47 and Dysprosium St NW. The posted speed limit on CSAH 5 is 30 mph east of MN-47, and 50 mph to the west.

**Sunwood Dr NW** is an east-west two-lane undivided road with one travel lane in each direction. The Anoka County 2040 Functional Classification Map classifies Sunwood Dr as a local road. The MnDOT Traffic Mapping Application reports that the AADT ranges from 730 (west of MN-47) to

1,950 (east of CSAH 5). The posted speed limit on Sunwood Dr is 30 mph except west of CSAH 5, where it is 35 mph.

**Dysprosium St NW** is a two-lane north-south roadway with one lane in each direction. Dysprosium St NW is classified as a local Road according to the Anoka Functional Classification Map. In 2021, Dysprosium St NW had an AADT of 3100 vpd, according to the MnDOT Traffic Mapping Application. The current posted speed limit on Dysprosium St NW is 30 mph.

All other roadways are one-lane roadways with no turn lanes. They are all considered to be local roads by Anoka County, have no MnDOT count data, and have a speed limit of 30 mph.

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## EXISTING TRAFFIC VOLUMES

To analyze the traffic operations at the study intersection, weekday and weekend peak period turning movement counts were collected. The weekend data was collected on 1/29/2023 while the weekday data was collected on 1/27/2023 except for the intersection of CSAH 5 & Sunwood Dr which was collected on 1/30/2023. Weekday and weekend data collection occurred on a typical weekday and typical Sunday when church was in service. While January is not historically one of the higher traffic months, peak hour volumes on the study area roadways were compared to MnDOT AADTs. PM peak hour volumes were between 8% and 10% of MnDOT AADT volumes, therefore it was assumed that the traffic volumes were reasonable, and no adjustments were made. **Exhibit 2** provides a summary of the weekday AM and PM peak hour turning traffic volumes. The turning movement count data is provided in **Appendix B**.

The network AM peak hour was determined to be 7:00 AM to 8:00 AM and the network PM peak hour was determined to be 4:30 PM to 5:30 PM. The Sunday peak hours were determined to be 12:00pm to 1:00pm.

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## BACKGROUND GROWTH AND COMMITTED TRAFFIC

The growth rates were calculated using the forecast in the City of Ramsey's 2040 comprehensive plan. The growth rate was found to be 0.6 % for MN-47, and 0.9% for CSAH 5. These were used to forecast the peak hour traffic at intersections along these corridors in 2027 and 2040. The rest of the roadways in the study area are local/fully developed and are thus considered to have a growth rate of 0%.

**Exhibit 4** shows the Opening Year No-Build (2027) turning movement volumes and **Exhibit 5** shows the Horizon Year No-Build (2040) turning movement volumes.

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## PEDESTRIANS AND BICYCLES

There are existing pedestrian facilities/trails on both sides of Sunwood Dr, Dysprosium Rd and CSAH 5. MN-47 has a pedestrian/bicycle path on its east side only. There are marked crosswalks at all intersections that the pedestrian paths cross, as well as push-buttons at both of the stoplight controlled intersections.

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## PROPOSED DEVELOPMENT

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### SITE TRIP GENERATION

The trip-generating potential of the proposed development was calculated using the Institute of Transportation Engineers (ITE) *Trip Generation Manual, Eleventh Edition*. Standard ITE trip rates were used to develop the anticipated total trips generated by the site.

The average rate for ITE Land Use Code (LUC) 221 (Multifamily Housing), ITE LUC 251 (Senior Adult Housing – Single-Family), and ITE LUC 252 (Senior Adult Housing – Multi-Family) were used to calculate the trip generation potential of the site. **Table 1** provides a summary of the number of trips anticipated to be generated during the weekday AM and PM peak hours, including internal capture and pass-by reduction. As shown, the site is anticipated to generate 153 new trips during the AM peak hour (40 entering, 113 exiting), 168 new trips during the PM peak hour (100 entering, 68 exiting), and 161 new trips in the Sunday peak hour (86 entering, 75 exiting).

**Table 1 – Site Trip Generation**

Land Use Description	Intensity	Daily	AM Peak Hour			SUN Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total	In	Out	Total
Multifamily Housing	303 Units	1,376	26	86	112	53	44	97	72	46	118
Senior Adult Housing – Single-Family (Twin homes)	22 Units	94	2	4	6	3	2	5	4	3	7
Senior Adult Housing – Multi-Family	173 Units	561	12	23	35	30	29	59	24	19	43
Total Vehicle Trips		1,849	40	113	153	86	75	161	100	68	168

For this analysis, it was assumed that all site trips would be new trips and no mode split reductions for trips via transit, bike or walking were used.

#### SITE TRIP DISTRIBUTION

The site trips were distributed to the adjacent roadways based on the current traffic patterns in the area and a general assessment of the major regional roadways surrounding the study area. In general, the following global trip distribution was assumed for the development:

- 70% to/from the south on MN-47
- 15% to/from the north on MN-47
- 10% to/from the north on CSAH 5
- 5% to/from the south on Dysprosium Road NW

The trip distribution for the primary site-generated traffic is shown in **Exhibit 5**.

#### SITE ACCESSES AND ASSIGNMENT

The site will include three (3) accesses. The northern access will be via Cobalt St to the north. The Cobalt St access is expected to be a gated access, because of this, no traffic is assigned to the access in this analysis. The north access along CSAH 5 which leads to the north of the parking lot for the residential and church. All of the residential parking garages would be located closer to the access further to the south on CSAH 5, it is expected that most of the traffic to this access would come from the north along CSAH 5, with only a small percentage of the traffic originating from MN-47 choosing this access. The third access is across from Iodine St on CSAH 5, this access is expected to be the busiest of the three. The two accesses

on CSAH 5 are in the same locations as the existing accesses and the Cobalt St access would be an extension of the current dead end road. Based on discussions with Anoka County, it is anticipated that the north access on CASH 5 will be limited to right in/right out.

The proposed site plan is included in **Appendix C**. The primary site trips were assigned to the study intersections as shown in **Exhibit 6**. The total site-generated trips are depicted in **Exhibit 7**.

## CAPACITY ANALYSIS

A capacity analysis was performed to quantify the delay and level of service at the study intersections during the weekday AM and PM peak hours. The capacity analysis was performed using Synchro/SimTraffic. Existing signal timings used in the analysis were provided by MnDOT.

The capacity of an intersection quantifies its ability to accommodate traffic volumes and is measured in average delay per vehicle. It is expressed in terms of level of service (LOS) which ranges from A to F, with LOS A as the highest (best traffic flow and least delay), LOS E as saturated or at-capacity conditions, and LOS F as the lowest (oversaturated conditions). The LOS grades shown below, which are provided in the Transportation Research Board’s Highway Capacity Manual (HCM), quantify and categorize the driver’s discomfort, frustration, fuel consumption, and travel times experienced as a result of intersection control and the resulting traffic queuing. A detailed description of each LOS rating can be found in **Table 2**. The range of control delay for each rating (as detailed in the HCM) is also shown in Table 2. Because signalized intersections are expected to carry a larger volume of vehicles and stopping is required during red time, higher delays are tolerated for the corresponding LOS ratings.

**Table 2 – Level of Service Information**

Level of Service	Average Control Delay (seconds/vehicle)	Description
A	0-10 (Unsignalized); 0-10 (Signalized)	Minimal control delay; traffic operates at primarily free-flow conditions; unimpeded movement within traffic stream.
B	>10-15 (Unsignalized); >10-20 (Signalized)	Minor control delay at signalized intersections; traffic operates at a fairly unimpeded level with slightly restricted movement within traffic stream.
C	>15-25 (Unsignalized); >20-35 (Signalized)	Moderate control delay; movement within traffic stream more restricted than at LOS B; formation of queues contributes to lower average travel speeds.
D	>25-35 (Unsignalized); >35-55 (Signalized)	Considerable control delay that may be substantially increased by small increases in flow; average travel speeds continue to decrease.
E	>35-50 (Unsignalized); >55-80 (Signalized)	High control delay; average travel speed no more than 33 percent of free flow speed.
F	>50 (Unsignalized); >80 (Signalized)	Extremely high control delay; extensive queuing and high volumes create exceedingly restricted traffic flow.

Traffic models for each scenario were developed using Synchro/SimTraffic, and the delay and queuing were evaluated for each scenario. The scenarios that were analyzed are as follows:

- Existing Year (2023)
- Opening Year (2027) No-Build
- Opening Year (2027) Build

- Design Year (2040) No-Build
- Design Year (2040) Build

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## EXISTING YEAR (2023) CONDITIONS

A capacity analysis was performed for Existing Year (2023) conditions in order to develop baseline operating conditions for the current year. The analysis was performed using Synchro/SimTraffic. The three site accesses were modeled with the existing geometry and intersection control. The four study intersections were also modeled with the existing geometry and intersection control as summarized in Exhibit 2. Signal timings were obtained from MnDOT. The traffic volumes are provided in Exhibit 3.

The results of the analysis are provided in **Table 3**.

**Table 3 – Existing Year (2023) Intersection Analysis**

<b>Lord of Life SimTraffic Delay Summary - Existing AM Peak Traffic</b>										
Intersection	Control	Approach	Operations by Movement						Overall Intersection	
			Left		Through		Right		LOS	LOS
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	Delay (sec/veh)		
CSAH 5 & Sunwood Drive	Minor Road Stop	EB	13.7	B	11.0	B	6.9	A	13.9	B
		WB	13.9	B	11.1	B	1.5	A		
		NB	2.0	A	0.8	A	0.2	A		
		SB	-	-	1.3	A	0.1	A		
Sunwood Drive & Cobalt Street	Minor Road Stop	EB	0.0	A	2.1	A	2.4	A	4.5	B
		WB	1.7	A	0.6	A	0.0	A		
		NB	4.5	A	-	-	2.3	A		
		SB	-	-	-	-	-	-		
MN-47 & Sunwood Drive	Signal	EB	44.8	D	45.0	D	6.3	A	7.2	A
		WB	40.1	D	41.8	D	5.8	A		
		NB	51.8	D	5.8	A	3.5	A		
		SB	63.6	E	3.5	A	1.6	A		
CSAH 5 & 146th Avenue	Minor Road Stop	EB	5.1	A	0.0	A	10.0	A	10.0	A
		WB	2.2	A	-	-	-	-		
		NB	0.4	A	0.1	A	1.3	A		
		SB	-	-	0.4	A	1.4	A		
CSAH 5 & Lord of Life Access	Minor Road Stop	EB	-	-	-	-	-	-	2.3	A
		WB	-	-	-	-	2.3	A		
		NB	-	-	0.4	A	-	-		
		SB	-	-	0.7	A	-	-		
CSAH 5 & Iodine Street	Minor Road Stop	EB	10.1	B	-	-	6.3	A	10.1	B
		WB	-	-	-	-	-	-		
		NB	6.1	A	0.7	A	0.2	A		
		SB	0.7	A	1.3	A	0.2	A		
CSAH 5 & Dysprosium Street	Minor Road Stop	EB	-	-	2.2	A	0.8	A	15.2	C
		WB	11.3	B	1.3	A	-	-		
		NB	15.2	C	-	-	5.1	A		
		SB	-	-	-	-	-	-		
MN-47 & CSAH 5	Signal	EB	23.2	C	34.5	C	3.5	A	16.8	B
		WB	42.1	D	32.8	C	6.6	A		
		NB	46.3	D	6.6	A	1.4	A		
		SB	45.7	D	18.5	B	6.8	A		

**Table 3 – Existing Year (2023) Intersection Analysis (Cont.)**

<b>Lord of Life SimTraffic Delay Summary - Existing PM Peak Hour</b>										
Intersection	Control	Approach	Operations by Movement						Overall Intersection	
			Left		Through		Right		Delay (sec/veh)	LOS
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS		
CSAH 5 & Sunwood Drive	Minor Road Stop	EB	21.0	C	9.0	A	2.2	A	28.6	D
		WB	28.6	D	15.8	C	1.4	A		
		NB	1.8	A	2.8	A	1.7	A		
		SB	1.2	A	1.1	A	0.3	A		
Sunwood Drive & Cobalt Street	Minor Road Stop	EB	0.0	A	0.0	A	0.0	A	4.5	A
		WB	0.0	A	0.0	A	0.0	A		
		NB	1.1	A	0.3	A	0.7	A		
		SB	4.5	A	2.4	A	1.8	A		
MN-47 & Sunwood Drive	Signal	EB	49.3	D	0.2	A	3.4	A	13.1	B
		WB	59.1	E	72.1	E	0.0	A		
		NB	31.3	C	13.4	B	7.7	A		
		SB	20.1	C	2.9	A	0.0	A		
CSAH 5 & 146th Avenue	Minor Road Stop	EB	4.6	A	0.0	A	-	-	4.6	A
		WB	-	-	0.0	A	-	-		
		NB	0.3	A	0.5	A	0.0	A		
		SB	-	-	0.5	A	0.1	A		
CSAH 5 & Lord of Life Access	Minor Road Stop	EB	-	-	-	-	-	-	2.4	A
		WB	-	-	-	-	2.4	A		
		NB	-	-	0.4	A	-	-		
		SB	-	-	0.4	A	-	-		
CSAH 5 & Iodine Street	Minor Road Stop	EB	40.2	E	-	-	2.8	A	40.2	E
		WB	-	-	-	-	-	-		
		NB	-	-	1.3	A	0.0	A		
		SB	7.9	A	0.5	A	-	-		
CSAH 5 & Dysprosium Street	Minor Road Stop	EB	-	-	1.4	A	0.3	A	8.4	A
		WB	3.4	A	1.9	A	-	-		
		NB	8.4	A	-	-	3.6	A		
		SB	-	-	-	-	-	-		
MN-47 & CSAH 5	Signal	EB	58.1	E	26.8	C	1.6	A	20.4	C
		WB	58.3	E	55.6	E	39.3	D		
		NB	40.2	D	9.6	A	2.2	A		
		SB	34.3	C	13.7	B	12.9	B		

**Table 3 – Existing Year (2023) Intersection Analysis (Cont.)**

<b>Lord of Life SimTraffic Delay Summary - Existing Sunday Peak Traffic</b>										
Intersection	Control	Approach	Operations by Movement						Overall Intersection	
			Left		Through		Right		Delay (sec/veh)	LOS
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS		
CSAH 5 & Sunwood Drive	Minor Road Stop	EB	5.2	A	7.2	A	2.5	A	8.5	A
		WB	5.5	A	8.5	A	1.5	A		
		NB	1.4	A	1.2	A	0.1	A		
		SB	-	-	0.8	A	0.1	A		
Sunwood Drive & Cobalt Street	Minor Road Stop	EB	0.0	A	1.4	A	1.6	A	2.1	A
		WB	1.9	A	1.1	A	0.0	A		
		NB	-	-	-	-	2.1	A		
		SB	-	-	-	-	-	-		
MN-47 & Sunwood Drive	Signal	EB	36.6	D	16.1	B	5.6	A	7.1	A
		WB	44.1	D	36.8	D	5.7	A		
		NB	30.1	C	5.7	A	3.2	A		
		SB	31.5	C	2.9	A	0.1	A		
CSAH 5 & 146th Avenue	Minor Road Stop	EB	4.3	A	0.0	A	2.5	A	4.3	A
		WB	4.2	A	0.0	A	-	-		
		NB	0.4	A	0.6	A	0.1	A		
		SB	-	-	0.4	A	0.6	A		
CSAH 5 & Lord of Life Access	Minor Road Stop	EB	-	-	-	-	-	-	2.6	A
		WB	6.3	A	-	-	2.6	A		
		NB	-	-	0.5	A	-	-		
		SB	-	-	0.3	A	-	-		
CSAH 5 & Iodine Street	Minor Road Stop	EB	-	-	6.1	A	2.8	A	6.1	A
		WB	4.8	A	5.7	A	2.5	A		
		NB	1.7	A	0.7	A	0.1	A		
		SB	3.2	A	0.6	A	0.1	A		
CSAH 5 & Dysprosium Street	Minor Road Stop	EB	-	-	1.0	A	0.1	A	8.4	A
		WB	4.4	A	1.4	A	-	-		
		NB	8.4	A	-	-	2.6	A		
		SB	-	-	-	-	-	-		
MN-47 & CSAH 5	Signal	EB	64.2	E	41.1	D	2.0	A	17.3	B
		WB	51.4	D	37.6	D	21.7	C		
		NB	46.7	D	5.2	A	1.4	A		
		SB	68.5	E	14.6	B	3.3	A		

Based on the Existing Year (2023) capacity analysis, the study intersections are anticipated to operate at LOS B or better in the morning and C or better at the evening peak hour. The SimTraffic reports are provided in **Appendix D**. All 95<sup>th</sup> percentile queues are anticipated to remain within their respective storage bays. All individual movements are anticipated to operate at LOS D or better, except for the following:

During the morning peak hours, the northbound through movement of MN-47 operates at LOS E. This is likely due to the signal timing favoring the southbound through/left movement which sees around four times as much traffic at this time. At the same intersection, the westbound left and through movements are also operating at LOS E in the PM peak hours. Finally, the eastbound left and southbound left intersections operate at LOS E in the Sunday peak, these movements are low volume and are not anticipated to have queuing issues.

All movements at stop-controlled intersections operate at LOS D or better except the eastbound left movement at CSAH 5 & Iodine St which operates at LOS E. Queues for the movement are minimal and delays are expected for minor side street movements along a corridor like CSAH 5.

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#### OPENING YEAR (2027) NO-BUILD CONDITIONS

A capacity analysis was performed for Opening Year (2027) No-Build conditions in order to develop baseline operating conditions for the opening year. The analysis was performed using Synchro/SimTraffic. The three site accesses were modeled with the existing geometry and intersection control. The four study intersections were also modeled with the existing geometry and intersection control. The traffic volumes are provided in **Exhibit 4**. The results of the analysis are provided in **Table 4**.

**Table 4 – Opening Year (2027) No-Build Intersection Analysis**

<b>Lord of Life SimTraffic Delay Summary - 2027 AM No Build Peak Traffic</b>										
Intersection	Control	Approach	Operations by Movement						Overall Intersection	
			Left		Through		Right		Delay (sec/veh)	LOS
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS		
CSAH 5 & Sunwood Drive	Minor Road Stop	EB	8.5	A	11.6	B	6.2	A	11.8	B
		WB	11.3	B	11.8	B	2.6	A		
		NB	4.4	A	0.8	A	0.2	A		
		SB	0.7	A	1.3	A	0.2	A		
Sunwood Drive & Cobalt Street	Minor Road Stop	EB	0.0	A	2.3	A	1.5	A	4.4	A
		WB	-	-	1.0	A	0.0	A		
		NB	4.4	A	-	-	2.2	A		
		SB	-	-	-	-	-	-		
MN-47 & Sunwood Drive	Signal	EB	46.6	D	50.1	D	7.6	A	8.7	A
		WB	44.2	D	48.4	D	5.4	A		
		NB	38.8	D	5.4	A	3.1	A		
		SB	50.9	D	4.3	A	1.1	A		
CSAH 5 & 146th Avenue	Minor Road Stop	EB	5.1	A	0.0	A	9.8	A	9.8	A
		WB	3.2	A	-	-	-	-		
		NB	0.6	A	0.0	A	1.3	A		
		SB	-	-	0.4	A	1.5	A		
CSAH 5 & Lord of Life Access	Minor Road Stop	EB	-	-	-	-	-	-	1.4	A
		WB	-	-	-	-	1.4	A		
		NB	-	-	0.3	A	-	-		
		SB	-	-	0.7	A	-	-		
CSAH 5 & Iodine Street	Minor Road Stop	EB	8.9	A	-	-	7.5	A	8.9	A
		WB	-	-	-	-	-	-		
		NB	6.0	A	0.6	A	0.2	A		
		SB	1.8	A	1.3	A	0.2	A		
CSAH 5 & Dysprosium Street	Minor Road Stop	EB	-	-	2.2	A	0.8	A	14.1	B
		WB	8.8	A	1.2	A	-	-		
		NB	14.1	B	-	-	6.0	A		
		SB	-	-	-	-	-	-		
MN-47 & CSAH 5	Signal	EB	39.0	D	37.0	D	3.6	A	17.1	B
		WB	48.5	D	34.9	C	8.5	A		
		NB	47.3	D	6.0	A	1.6	A		
		SB	44.0	D	18.2	B	6.4	A		

For Side Street Stop intersections, the worst individual movement was reported for the overall intersection LOS.

Table 4 – Opening Year (2027) No-Build Intersection Analysis (Cont.)

Lord of Life SimTraffic Delay Summary – 2027 No Build PM Peak Hour										
Intersection	Control	Approach	Operations by Movement						Overall Intersection	
			Left		Through		Right		Delay (sec/veh)	LOS
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS		
CSAH 5 & Sunwood Drive	Minor Road Stop	EB	20.2	C	20.0	C	6.9	A	20.2	C
		WB	19.5	C	5.6	A	-	-		
		NB	3.5	A	4.3	A	1.3	A		
		SB	3.9	A	1.0	A	0.1	A		
Sunwood Drive & Cobalt Street	Minor Road Stop	EB	0.0	A	2.0	A	1.3	A	2.0	A
		WB	0.0	A	0.0	A	0.0	A		
		NB	-	-	-	-	2.0	A		
		SB	-	-	-	-	-	-		
MN-47 & Sunwood Drive	Signal	EB	16.7	B	74.5	E	3.9	A	12.7	B
		WB	66.3	E	0.0	A	3.2	A		
		NB	-	-	13.8	B	6.9	A		
		SB	35.3	D	1.6	A	-	-		
CSAH 5 & 146th Avenue	Minor Road Stop	EB	6.7	A	0.0	A	3.3	A	14.5	B
		WB	14.5	B	0.0	A	-	-		
		NB	0.6	A	1.6	A	-	-		
		SB	0.2	A	0.6	A	-	-		
CSAH 5 & Lord of Life Access	Minor Road Stop	EB	-	-	-	-	-	-	0.8	A
		WB	-	-	-	-	-	-		
		NB	-	-	0.8	A	-	-		
		SB	-	-	0.6	A	-	-		
CSAH 5 & Iodine Street	Minor Road Stop	EB	-	-	-	-	5.0	A	7.0	A
		WB	-	-	-	-	5.5	A		
		NB	-	-	1.7	A	0.8	A		
		SB	7.0	A	0.8	A	-	-		
CSAH 5 & Dysprosium Street	Minor Road Stop	EB	-	-	1.8	A	0.3	A	18.7	C
		WB	3.0	A	2.3	A	-	-		
		NB	18.7	C	-	-	3.7	A		
		SB	-	-	-	-	-	-		
MN-47 & CSAH 5	Signal	EB	59.2	E	42.2	D	2.2	A	21.5	C
		WB	24.6	C	53.4	D	27.1	C		
		NB	40.1	D	11.6	B	2.0	A		
		SB	42.2	D	20.6	C	2.2	A		

For Side Street Stop intersections, the worst individual movement was reported for the overall intersection LOS.

Lord of Life SimTraffic Delay Summary - Sunday 2027 No Build Peak Traffic										
Intersection	Control	Approach	Operations by Movement						Overall Intersection	
			Left		Through		Right		Delay (sec/veh)	LOS
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS		
CSAH 5 & Sunwood Drive	Minor Road Stop	EB	4.5	A	7.8	A	1.6	A	7.8	A
		WB	6.4	A	6.5	A	1.4	A		
		NB	1.7	A	1.3	A	0.5	A		
		SB	-	-	0.6	A	0.2	A		
Sunwood Drive & Cobalt Street	Minor Road Stop	EB	0.0	A	1.3	A	1.3	A	2.0	A
		WB	2.0	A	0.9	A	0.0	A		
		NB	-	-	-	-	2.0	A		
		SB	-	-	-	-	-	-		
MN-47 & Sunwood Drive	Signal	EB	76.4	E	48.8	D	4.0	A	7.0	A
		WB	36.0	D	57.2	E	3.1	A		
		NB	45.6	D	5.4	A	2.6	A		
		SB	29.3	C	3.7	A	0.8	A		
CSAH 5 & 146th Avenue	Minor Road Stop	EB	-	-	0.0	A	2.7	A	4.2	A
		WB	4.2	A	0.0	A	-	-		
		NB	0.5	A	0.8	A	0.1	A		
		SB	-	-	0.4	A	0.1	A		
CSAH 5 & Lord of Life Access	Minor Road Stop	EB	-	-	-	-	-	-	5.5	A
		WB	5.5	A	-	-	3.5	A		
		NB	-	-	0.6	A	-	-		
		SB	-	-	0.2	A	-	-		
CSAH 5 & Iodine Street	Minor Road Stop	EB	-	-	9.8	A	2.5	A	9.8	A
		WB	4.4	A	-	-	-	-		
		NB	1.6	A	0.9	A	0.0	A		
		SB	2.7	A	0.4	A	0.0	A		
CSAH 5 & Dysprosium Street	Minor Road Stop	EB	-	-	1.0	A	0.2	A	4.6	A
		WB	4.1	A	1.9	A	-	-		
		NB	4.6	A	-	-	1.6	A		
		SB	-	-	-	-	-	-		
MN-47 & CSAH 5	Signal	EB	58.6	E	32.2	C	1.7	A	20.0	B
		WB	55.0	D	43.2	D	11.1	B		
		NB	55.5	E	7.5	A	1.4	A		
		SB	56.4	E	15.1	B	6.0	A		

With the addition of background traffic growth, the study area intersections are projected to experience very little change in delay with the majority of movements and approaches projected to operate at the same LOS as compared to existing conditions. All intersections operate at the same level of service as the existing conditions and no movement has significantly worsened delay.

The SimTraffic reports are provided in **Appendix D**. All 95<sup>th</sup> percentile queues are anticipated to remain within their respective storage bays.

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## OPENING YEAR (2027) BUILD CONDITIONS

Opening Year (2027) Build conditions were analyzed to determine any traffic impacts from the addition of the site traffic to the study intersections. The site accesses were modeled as side street stop control. Opening Year (2027) Build turning movement volumes were developed by adding the site trips in **Exhibit 8** to the Opening Year (2027) No-Build turning movement volumes in **Exhibit 4**. The Opening Year (2027) Build turning movement volumes are shown in **Exhibit 8**. The results of the analysis are provided in **Table 5**.

Table 5 – Opening Year (2027) Build Intersection Analysis

Lord of Life SimTraffic Delay Summary - 2027 Build AM Peak Traffic										
Intersection	Control	Approach	Operations by Movement						Overall Intersection	
			Left		Through		Right		Delay (sec/veh)	LOS
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS		
CSAH 5 & Sunwood Drive	Minor Road Stop	EB	9.9	A	12.4	B	5.0	A	12.8	B
		WB	12.8	B	12.2	B	3.0	A		
		NB	4.4	A	0.8	A	0.1	A		
		SB	1.5	A	1.4	A	0.1	A		
Sunwood Drive & Cobalt Street	Minor Road Stop	EB	0.0	A	2.0	A	1.7	A	4.2	A
		WB	0.0	A	0.9	A	0.0	A		
		NB	4.2	A	-	-	2.4	A		
		SB	-	-	-	-	-	-		
MN-47 & Sunwood Road	Signal	EB	99.8	F	41.2	D	5.4	A	7.4	A
		WB	43.9	D	47.3	D	3.5	A		
		NB	53.0	D	5.0	A	2.9	A		
		SB	42.1	D	3.6	A	0.6	A		
CSAH 5 & 146th Avenue	Minor Road Stop	EB	14.8	B	0.0	A	5.4	A	14.8	B
		WB	9.3	A	0.0	A	-	-		
		NB	2.9	A	0.6	A	0.0	A		
		SB	-	-	1.3	A	0.5	A		
CSAH 5 & Lord of Life Access	Minor Road Stop	EB	-	-	-	-	-	-	3.0	A
		WB	-	-	-	-	3.0	A		
		NB	-	-	0.4	A	0.1	A		
		SB	-	-	0.7	A	-	-		
CSAH 5 & Iodine Street	Minor Road Stop	EB	15.4	C	-	-	17.6	C	26.3	D
		WB	26.3	D	-	-	7.1	A		
		NB	5.7	A	0.7	A	0.4	A		
		SB	2.1	A	2.1	A	0.3	A		
CSAH 5 & Dysprosium Street	Minor Road Stop	EB	-	-	2.8	A	1.2	A	22.8	C
		WB	12.6	B	1.2	A	-	-		
		NB	22.8	C	-	-	7.4	A		
		SB	-	-	-	-	-	-		
MN-47 & CSAH 5	Signal	EB	38.9	D	34.7	C	4.0	A	16.9	B
		WB	49.6	D	30.7	C	5.0	A		
		NB	45.3	D	5.8	A	1.1	A		
		SB	47.2	D	16.8	B	6.3	A		

For Side Street Stop intersections, the worst individual movement was reported for the overall intersection LOS.

**Table 5 – Opening Year (2027) Build Intersection Analysis (Cont.)**

<b>Lord of Life SimTraffic Delay Summary - 2027 Build PM Peak Traffic</b>										
Intersection	Control	Approach	Operations by Movement						Overall Intersection	
			Left		Through		Right		Delay (sec/veh)	LOS
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS		
CSAH 5 & Sunwood Drive	Minor Road Stop	EB	13.4	B	13.4	B	3.2	A	13.8	B
		WB	13.8	B	13.2	B	3.6	A		
		NB	4.0	A	3.7	A	1.1	A		
		SB	2.3	A	1.3	A	0.2	A		
Sunwood Drive & Cobalt Street	Minor Road Stop	EB	0.0	A	1.2	A	1.5	A	4.0	A
		WB	3.0	A	1.4	A	0.0	A		
		NB	4.0	A	-	-	2.2	A		
		SB	-	-	-	-	-	-		
MN-47 & Sunwood Road	Signal	EB	59.9	E	62.9	E	10.5	B	15.8	B
		WB	59.2	E	51.6	D	12.2	B		
		NB	66.7	E	16.4	B	8.9	A		
		SB	62.1	E	3.6	A	0.4	A		
CSAH 5 & 146th Avenue	Minor Road Stop	EB	14.0	B	0.0	A	4.1	A	14.0	B
		WB	9.4	A	0.0	A	-	-		
		NB	2.6	A	1.4	A	0.2	A		
		SB	2.5	A	0.9	A	0.3	A		
CSAH 5 & Lord of Life Access	Minor Road Stop	EB	-	-	-	-	-	-	3.6	A
		WB	-	-	-	-	3.6	A		
		NB	-	-	1.0	A	0.3	A		
		SB	-	-	0.5	A	-	-		
CSAH 5 & Iodine Street	Minor Road Stop	EB	14.4	B	-	-	4.8	A	22.1	C
		WB	22.1	C	-	-	9.4	A		
		NB	1.9	A	1.6	A	0.9	A		
		SB	5.7	A	1.0	A	0.1	A		
CSAH 5 & Dysprosium Street	Minor Road Stop	EB	-	-	1.9	A	0.4	A	17.8	C
		WB	7.6	A	2.2	A	-	-		
		NB	17.8	C	-	-	4.6	A		
		SB	-	-	-	-	-	-		
MN-47 & CSAH 5	Signal	EB	56.7	E	42.5	D	2.4	A	22.5	C
		WB	52.8	D	48.0	D	23.4	C		
		NB	43.9	D	10.2	B	2.0	A		
		SB	61.5	E	23.2	C	6.0	A		

For Side Street Stop intersections, the worst individual movement was reported for the overall intersection LOS.

Lord of Life SimTraffic Delay Summary - 2027 Build Sunday Peak Traffic										
Intersection	Control	Approach	Operations by Movement						Overall Intersection	
			Left		Through		Right		Delay (sec/veh)	LOS
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS		
CSAH 5 & Sunwood Drive	Minor Road Stop	EB	4.5	A	7.1	A	2.4	A	7.9	A
		WB	5.4	A	7.9	A	1.4	A		
		NB	1.5	A	1.0	A	0.3	A		
		SB	-	-	0.7	A	0.1	A		
Sunwood Drive & Cobalt Street	Minor Road Stop	EB	0.0	A	1.4	A	1.2	A	2.7	A
		WB	2.7	A	0.7	A	0.0	A		
		NB	-	-	-	-	2.1	A		
		SB	-	-	-	-	-	-		
MN-47 & Sunwood Road	Signal	EB	44.1	D	20.8	C	5.5	A	6.2	A
		WB	42.7	D	33.2	C	5.6	A		
		NB	40.0	D	5.5	A	3.5	A		
		SB	45.2	D	2.6	A	0.6	A		
CSAH 5 & 146th Avenue	Minor Road Stop	EB	6.4	A	0.0	A	2.7	A	6.4	A
		WB	5.5	A	0.0	A	-	-		
		NB	1.5	A	0.8	A	0.1	A		
		SB	-	-	0.5	A	0.1	A		
CSAH 5 & Lord of Life Access	Minor Road Stop	EB	-	-	-	-	-	-	3.3	A
		WB	-	-	-	-	3.3	A		
		NB	-	-	0.5	A	0.1	A		
		SB	-	-	0.2	A	-	-		
CSAH 5 & Iodine Street	Minor Road Stop	EB	5.2	A	-	-	14.7	B	14.7	B
		WB	3.0	A	-	-	7.9	A		
		NB	5.1	A	3.7	A	2.5	A		
		SB	0.8	A	0.8	A	1.1	A		
CSAH 5 & Dysprosium Street	Minor Road Stop	EB	-	-	1.2	A	0.4	A	7.4	A
		WB	5.3	A	1.3	A	-	-		
		NB	7.4	A	-	-	3.1	A		
		SB	-	-	-	-	-	-		
MN-47 & CSAH 5	Signal	EB	52.3	D	33.3	C	2.1	A	19.4	B
		WB	53.4	D	47.2	D	10.5	B		
		NB	56.7	E	6.4	A	1.6	A		
		SB	62.4	E	12.1	B	4.1	A		

With the addition of site-generated traffic, the study area intersections are projected to experience very little change in delay with all of the intersections and almost all movements operating at the same level of service. The eastbound left turn movement at MN-47 & Sunwood Road is anticipated to operate at LOS F during the AM peak hours. This movement has a very low volume of 4 vehicles in the AM peak hour, so the performance of this movement is of little consequence. Various other left turn movements are shown to operate at LOS E during the PM and Sunday peak hours. It is accepted that turning movements along MN-

47 will see somewhat higher delay as the road has very high traffic during the peak hours and none of these turning movements operate with a high enough level of delay to be considered a concern. All intersections and movements are anticipated to operate within acceptable conditions and all 95<sup>th</sup> percentile queues are anticipated to remain within their respective storage bays.

While the main site access at Iodine Street/site access & CSAH 5 is anticipated to operate acceptably and currently provides turn lanes on CSAH 5. Anoka County has expressed a desire to eliminate the “trap lane” scenario. Currently the outside northwest bound lane on CSAH 5 becomes the right turn lane into the site access, forcing vehicles that are going straight to merge into the other through lane. It is recommended to explore options to restripe the northwest bound approach to have the merge occur before the intersection and have a dedicated northwest bound right turn lane into the site access.

The SimTraffic reports are provided in **Appendix D**.

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#### HORIZON YEAR (2040) NO-BUILD CONDITIONS

A capacity analysis was performed for Horizon Year (2040) No-Build conditions in order to develop baseline operating conditions for the design year. The two site accesses were modeled with the existing geometry and intersection control. The traffic volumes are provided in Exhibit 5. The results of the analysis are provided in **Table 6**.

**Table 6 – Horizon Year (2040) No-Build Intersection Analysis**

<b>Lord of Life SimTraffic Delay Summary - 2040 AM No Build Peak Traffic</b>										
Intersection	Control	Approach	Operations by Movement						Overall Intersection	
			Left		Through		Right		Delay (sec/veh)	LOS
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS		
CSAH 5 & Sunwood Drive	Minor Road Stop	EB	13.6	B	12.3	B	7.6	A	15.4	C
		WB	13.6	B	15.4	C	2.1	A		
		NB	5.0	A	1.2	A	0.2	A		
		SB	0.5	A	1.4	A	0.2	A		
Sunwood Drive & Cobalt Street	Minor Road Stop	EB	0.0	A	1.8	A	1.9	A	4.2	A
		WB	-	-	1.1	A	0.0	A		
		NB	4.2	A	-	-	2.4	A		
		SB	-	-	-	-	-	-		
MN-47 & Sunwood Drive	Signal	EB	44.9	D	38.0	D	7.3	A	8.2	A
		WB	48.9	D	39.6	D	5.2	A		
		NB	59.5	E	5.7	A	3.2	A		
		SB	53.5	D	4.2	A	0.9	A		
CSAH 5 & 146th Avenue	Minor Road Stop	EB	7.8	A	0.0	A	10.6	B	10.6	B
		WB	4.2	A	-	-	-	-		
		NB	0.6	A	0.0	A	1.5	A		
		SB	-	-	0.4	A	1.7	A		
CSAH 5 & Lord of Life Access	Minor Road Stop	EB	-	-	-	-	-	-	3.1	A
		WB	-	-	-	-	3.1	A		
		NB	-	-	0.4	A	-	-		
		SB	-	-	0.7	A	-	-		
CSAH 5 & Iodine Street	Minor Road Stop	EB	25.0	C	-	-	9.5	A	25.0	C
		WB	-	-	-	-	-	-		
		NB	6.0	A	0.7	A	0.2	A		
		SB	1.7	A	1.5	A	0.3	A		
CSAH 5 & Dysprosium Street	Minor Road Stop	EB	-	-	2.6	A	1.0	A	18.1	C
		WB	13.2	B	1.3	A	-	-		
		NB	18.1	C	-	-	7.4	A		
		SB	-	-	-	-	-	-		
MN-47 & CSAH 5	Signal	EB	36.9	D	34.9	C	4.0	A	17.7	B
		WB	50.4	D	32.5	C	5.9	A		
		NB	46.1	D	6.4	A	1.6	A		
		SB	47.3	D	19.1	B	6.2	A		

For Side Street Stop intersections, the worst individual movement was reported for the overall intersection LOS.

**Table 6 – Horizon Year (2040) No-Build Intersection Analysis (Cont.)**

<b>Lord of Life SimTraffic Delay Summary - 2040 PM No Build Peak Traffic</b>										
Intersection	Control	Approach	Operations by Movement						Overall Intersection	
			Left		Through		Right		Delay (sec/veh)	LOS
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS		
CSAH 5 & Sunwood Drive	Minor Road Stop	EB	11.4	B	15.8	C	3.8	A	15.8	C
		WB	14.3	B	13.4	B	3.5	A		
		NB	4.3	A	4.4	A	1.3	A		
		SB	2.7	A	1.3	A	0.2	A		
Sunwood Drive & Cobalt Street	Minor Road Stop	EB	0.0	A	1.2	A	1.1	A	4.1	A
		WB	3.0	A	1.2	A	0.0	A		
		NB	4.1	A	-	-	1.9	A		
		SB	-	-	-	-	-	-		
MN-47 & Sunwood Drive	Signal	EB	60.1	E	64.7	E	14.1	B	14.0	B
		WB	58.6	E	57.1	E	15.5	B		
		NB	60.0	E	13.7	B	8.5	A		
		SB	64.9	E	3.8	A	1.0	A		
CSAH 5 & 146th Avenue	Minor Road Stop	EB	3.9	A	0.0	A	10.7	B	10.7	B
		WB	2.1	A	-	-	-	-		
		NB	1.3	A	0.1	A	3.8	A		
		SB	1.0	A	0.5	A	1.3	A		
CSAH 5 & Lord of Life Access	Minor Road Stop	EB	-	-	-	-	-	-	14.1	B
		WB	14.1	B	-	-	5.4	A		
		NB	-	-	0.9	A	-	-		
		SB	-	-	0.6	A	-	-		
CSAH 5 & Iodine Street	Minor Road Stop	EB	12.5	B	-	-	3.5	A	15.4	C
		WB	15.4	C	-	-	10.6	B		
		NB	-	-	1.8	A	0.3	A		
		SB	5.5	A	0.8	A	0.2	A		
CSAH 5 & Dysprosium Street	Minor Road Stop	EB	-	-	1.8	A	0.2	A	17.0	C
		WB	7.0	A	3.0	A	-	-		
		NB	17.0	C	-	-	5.5	A		
		SB	-	-	-	-	-	-		
MN-47 & CSAH 5	Signal	EB	55.2	E	37.3	D	2.5	A	22.7	C
		WB	46.4	D	45.2	D	29.6	C		
		NB	50.9	D	11.9	B	2.3	A		
		SB	50.9	D	20.8	C	5.3	A		

For Side Street Stop intersections, the worst individual movement was reported for the overall intersection LOS.

Lord of Life SimTraffic Delay Summary - 2040 SUN No Build Peak Traffic										
Intersection	Control	Approach	Operations by Movement						Overall Intersection	
			Left		Through		Right		Delay (sec/veh)	LOS
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS		
CSAH 5 & Sunwood Drive	Minor Road Stop	EB	5.4	A	7.8	A	2.2	A	7.8	A
		WB	5.7	A	7.9	A	2.4	A		
		NB	1.2	A	1.2	A	0.2	A		
		SB	-	-	0.7	A	0.1	A		
Sunwood Drive & Cobalt Street	Minor Road Stop	EB	0.0	A	1.2	A	1.5	A	2.5	A
		WB	2.5	A	0.7	A	0.0	A		
		NB	2.1	A	-	-	1.6	A		
		SB	-	-	-	-	-	-		
MN-47 & Sunwood Drive	Signal	EB	37.4	D	29.8	C	6.3	A	6.5	A
		WB	39.7	D	31.1	C	2.0	A		
		NB	43.7	D	5.2	A	3.4	A		
		SB	39.3	D	3.2	A	0.5	A		
CSAH 5 & 146th Avenue	Minor Road Stop	EB	2.8	A	0.0	A	6.0	A	6.0	A
		WB	1.2	A	-	-	-	-		
		NB	0.6	A	0.1	A	0.5	A		
		SB	-	-	0.3	A	0.7	A		
CSAH 5 & Lord of Life Access	Minor Road Stop	EB	-	-	-	-	-	-	5.8	A
		WB	5.8	A	-	-	3.2	A		
		NB	-	-	0.4	A	-	-		
		SB	-	-	0.3	A	-	-		
CSAH 5 & Iodine Street	Minor Road Stop	EB	8.8	A	3.3	A	2.9	A	15.3	C
		WB	6.8	A	15.3	C	2.3	A		
		NB	2.1	A	0.7	A	0.1	A		
		SB	1.7	A	0.5	A	0.1	A		
CSAH 5 & Dysprosium Street	Minor Road Stop	EB	-	-	1.0	A	0.2	A	6.5	A
		WB	4.3	A	1.5	A	-	-		
		NB	6.5	A	-	-	2.2	A		
		SB	-	-	-	-	-	-		
MN-47 & CSAH 5	Signal	EB	46.8	D	42.2	D	2.0	A	17.6	B
		WB	55.5	E	45.7	D	11.9	B		
		NB	50.6	D	5.7	A	1.3	A		
		SB	62.0	E	13.1	B	4.9	A		

With additional background traffic growth, the study area intersections are projected to experience some change in delay, with some of movements and approaches projected to operate at a lower LOS as compared to the Opening Year (2027) No-Build Conditions. The network is expected to need new signal timings in order to operate at an acceptable level of service. Specifically, the stoplight at MN-47 & Sunwood Drive may need protected left turn phases in order for the left turn movements to operate at a LOS of D or better.

The SimTraffic reports are provided in **Appendix D**.

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## HORIZON YEAR (2040) BUILD CONDITIONS

The Horizon Year (2040) Build traffic volumes were developed from the addition of the Horizon Year (2040) No-Build volumes in Exhibit 5 and the Site Trips in Exhibit 7. **Exhibit 9** shows the Horizon Year (2040) Build turning movement volumes. The site accesses were modeled as side street stop control. The results of the analysis are provided in **Table 7**.

**Table 7 – Horizon Year (2040) Build Intersection Analysis**

<b>Lord of Life SimTraffic Delay Summary - 2040 Build AM Peak Traffic</b>										
Intersection	Control	Approach	Operations by Movement						Overall Intersection	
			Left		Through		Right		Delay (sec/veh)	LOS
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS		
CSAH 5 & Sunwood Drive	Minor Road Stop	EB	12.1	B	14.3	B	7.9	A	14.0	B
		WB	14.0	B	14.2	B	2.8	A		
		NB	5.1	A	1.1	A	0.4	A		
		SB	3.4	A	1.5	A	0.2	A		
Sunwood Drive & Cobalt Street	Minor Road Stop	EB	0.0	A	2.0	A	1.6	A	4.4	A
		WB	0.0	A	1.0	A	0.0	A		
		NB	4.4	A	-	-	2.2	A		
		SB	-	-	-	-	-	-		
MN-47 & Sunwood Road	Signal	EB	67.8	E	37.3	D	8.7	A	7.6	A
		WB	47.1	D	46.2	D	3.6	A		
		NB	43.1	D	5.7	A	3.0	A		
		SB	56.5	E	3.6	A	0.8	A		
CSAH 5 & 146th Avenue	Minor Road Stop	EB	11.8	B	0.0	A	6.9	A	13.6	B
		WB	13.6	B	0.0	A	-	-		
		NB	5.9	A	0.7	A	0.1	A		
		SB	-	-	1.6	A	0.7	A		
CSAH 5 & Lord of Life Access	Minor Road Stop	EB	-	-	-	-	-	-	3.3	A
		WB	-	-	-	-	3.3	A		
		NB	-	-	0.5	A	0.2	A		
		SB	-	-	0.9	A	-	-		
CSAH 5 & Iodine Street	Minor Road Stop	EB	14.7	B	-	-	25.5	D	45.0	E
		WB	45.0	E	-	-	28.0	D		
		NB	7.7	A	0.8	A	0.3	A		
		SB	1.9	A	2.3	A	0.4	A		
CSAH 5 & Dysprosium Street	Minor Road Stop	EB	-	-	3.1	A	1.3	A	33.9	D
		WB	15.7	C	1.2	A	-	-		
		NB	33.9	D	-	-	9.0	A		
		SB	-	-	-	-	-	-		
MN-47 & CSAH 5	Signal	EB	38.0	D	33.7	C	4.5	A	18.7	B
		WB	40.0	D	31.4	C	8.2	A		
		NB	56.7	E	6.7	A	1.1	A		
		SB	48.5	D	20.6	C	6.2	A		

For Side Street Stop intersections, the worst individual movement was reported for the overall intersection LOS.

Table 7 – Design Year (2040) Build Intersection Analysis (Cont.)

Lord of Life SimTraffic Delay Summary - 2040 Build PM Peak Traffic										
Intersection	Control	Approach	Operations by Movement						Overall Intersection	
			Left		Through		Right		Delay (sec/veh)	LOS
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS		
CSAH 5 & Sunwood Drive	Minor Road Stop	EB	16.0	C	14.5	B	4.5	A	18.8	C
		WB	18.8	C	16.2	C	4.7	A		
		NB	5.0	A	4.4	A	1.1	A		
		SB	2.5	A	1.4	A	0.3	A		
Sunwood Drive & Cobalt Street	Minor Road Stop	EB	0.0	A	1.3	A	0.9	A	4.7	A
		WB	3.0	A	1.1	A	0.0	A		
		NB	4.7	A	-	-	2.2	A		
		SB	-	-	-	-	-	-		
MN-47 & Sunwood Road	Signal	EB	54.6	D	52.0	D	11.5	B	14.4	B
		WB	56.3	E	55.9	E	13.5	B		
		NB	69.7	E	14.3	B	8.5	A		
		SB	72.4	E	4.1	A	0.6	A		
CSAH 5 & 146th Avenue	Minor Road Stop	EB	8.5	A	0.0	A	3.4	A	16.1	C
		WB	16.1	C	0.0	A	-	-		
		NB	2.9	A	1.5	A	0.2	A		
		SB	1.2	A	1.0	A	0.4	A		
CSAH 5 & Lord of Life Access	Minor Road Stop	EB	-	-	-	-	-	-	9.8	A
		WB	-	-	-	-	4.4	A		
		NB	-	-	1.0	A	0.3	A		
		SB	-	-	0.6	A	-	-		
CSAH 5 & Iodine Street	Minor Road Stop	EB	14.3	B	-	-	4.6	A	26.3	D
		WB	26.3	D	-	-	18.0	C		
		NB	-	-	2.1	A	0.8	A		
		SB	6.5	A	1.1	A	0.3	A		
CSAH 5 & Dysprosium Street	Minor Road Stop	EB	-	-	2.0	A	0.4	A	21.4	C
		WB	7.9	A	2.6	A	-	-		
		NB	21.4	C	-	-	6.2	A		
		SB	-	-	-	-	-	-		
MN-47 & CSAH 5	Signal	EB	56.2	E	38.4	D	2.6	A	23.4	C
		WB	50.3	D	45.1	D	23.9	C		
		NB	46.9	D	12.4	B	2.1	A		
		SB	56.4	E	23.9	C	7.3	A		

For Side Street Stop intersections, the worst individual movement was reported for the overall intersection LOS.

**Table 7 – Design Year (2040) Build Intersection Analysis (Cont.)**

<b>Lord of Life SimTraffic Delay Summary - 2040 Build Sunday Peak Traffic</b>										
Intersection	Control	Approach	Operations by Movement						Overall Intersection	
			Left		Through		Right		Delay (sec/veh)	LOS
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS		
CSAH 5 & Sunwood Drive	Minor Road Stop	EB	5.0	A	8.0	A	2.3	A	8.0	A
		WB	5.9	A	6.4	A	3.0	A		
		NB	1.7	A	1.3	A	0.4	A		
		SB	-	-	0.7	A	0.1	A		
Sunwood Drive & Cobalt Street	Minor Road Stop	EB	0.0	A	1.2	A	1.0	A	2.0	A
		WB	1.9	A	0.5	A	0.0	A		
		NB	-	-	-	-	2.0	A		
		SB	-	-	-	-	-	-		
MN-47 & Sunwood Road	Signal	EB	47.4	D	44.1	D	6.6	A	6.5	A
		WB	39.8	D	40.7	D	3.6	A		
		NB	44.9	D	5.6	A	3.6	A		
		SB	60.0	E	2.9	A	0.6	A		
CSAH 5 & 146th Avenue	Minor Road Stop	EB	-	-	0.0	A	2.9	A	5.7	A
		WB	5.7	A	0.0	A	-	-		
		NB	1.1	A	0.8	A	0.1	A		
		SB	-	-	0.5	A	0.1	A		
CSAH 5 & Lord of Life Access	Minor Road Stop	EB	-	-	-	-	-	-	2.9	A
		WB	-	-	-	-	2.9	A		
		NB	-	-	0.6	A	0.0	A		
		SB	-	-	0.3	A	-	-		
CSAH 5 & Iodine Street	Minor Road Stop	EB	7.0	A	9.4	A	4.1	A	9.4	A
		WB	8.3	A	6.1	A	3.6	A		
		NB	2.0	A	0.9	A	0.7	A		
		SB	1.3	A	0.8	A	0.1	A		
CSAH 5 & Dysprosium Street	Minor Road Stop	EB	-	-	1.5	A	0.4	A	8.4	A
		WB	5.2	A	1.3	A	-	-		
		NB	8.4	A	-	-	3.2	A		
		SB	-	-	-	-	-	-		
MN-47 & CSAH 5	Signal	EB	52.1	D	34.4	C	2.1	A	19.1	B
		WB	53.1	D	48.3	D	11.5	B		
		NB	48.8	D	6.8	A	1.3	A		
		SB	64.1	E	16.4	B	4.7	A		

For Side Street Stop intersections, the worst individual movement was reported for the overall intersection LOS.

With additional site traffic and background traffic growth, the study area intersections are projected to experience little change in delay, with few of movements and approaches projected to operate at a lower LOS as compared to Opening Year (2027) Build Conditions. The network is not expected to need significant mitigations along the corridor in order to operate at acceptable levels. Some minor changes at the two

signal-controlled intersections might be necessary, especially regarding timing. The signal timings were optimized when the 2040 builds were run but the phasing and cycle length were unchanged.

Some of the left-turn movements are anticipated to see an increase in delay due to the site traffic with a few operating at LOS E. No individual movement is anticipated to operate at LOS F and the movements that operate at LOS E generally saw only a modest increase in delay as a result of the added site traffic. The only intersection to operate at a LOS lower than D is the intersection of CSAH 5 & Iodine Street, specifically the westbound left turn movement which is primarily site traffic exiting the development. This level of delay is expected considering the high number of vehicles traveling southbound along CSAH 5 in the AM and is not of high enough concern to justify any major mitigation changes. Traffic patterns at this intersection should be observed in the future in case the traffic generated by the development is higher than estimated.

The project could also exacerbate the aforementioned issue with the left turns at the MN-47 & Sunwood Dr intersection, since these movements show higher delays and in some cases LOS when compared to the 2040 No-Build Scenario.

The SimTraffic reports are provided in **Appendix D**.

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#### TURN LANE WARRANT AT NORTH SITE ACCESS

While the operations at the north site access are acceptable in all analysis scenarios, turn lane warrants were analyzed for the intersection in the build condition as the access is proposed to be converted from an exit only to right in/right out. The necessity of northbound right turn lane at CSAH 5 and the north site access was analyzed using NCHRP Report 457 – Evaluating Intersection Improvements: An Engineering Study Guide. CSAH 5 has a posted speed limit of 50 mph.

The guidelines from NCHRP Report 457 recommend that if the plotted volumes are to the right of the curves for the speed of the major road listed, a right turn lane be considered. The PM Peak hour is the highest of the three peak hours in terms of volumes at the intersection. **Table 8** summarizes the results from Figure 2-6 from NCHRP Report 457. A northbound right turn lane is not warranted in 2027 or 2040.

**Table 8 – Right-Turn Lane Warrants**

Condition	Major Road Volume (veh/h)	Right Turn Volume (veh/h)	Limiting Right Turn Volume (veh/h)	Right Turn Warranted yes/no?
2027 – PM Peak Hour	442	5	28	No
2040 – PM Peak Hour	496	5	25	No

While a northbound right turn lane is not warranted, Anoka County has expressed a desire to have a northbound right turn lane installed at the access.

## CONCLUSIONS AND RECOMMENDATIONS

Presbyterian Homes is proposing a residential development consisting of 303 total Multifamily Housing Units, 173 units of Senior Adult Multifamily Housing building, and 22 Senior Single-family housing units. For a total of 498 housing units on site. The development is located on the block northwest of MN-47 (St Francis Blvd) & CSAH 5 (Nowthen Blvd) which is the area around the Lord of Life Church. The church will remain on site. The site is anticipated to generate 153 new trips during the AM peak hour (40 entering, 113 exiting), 168 new trips during the PM peak hour (100 entering, 68 exiting), and 161 new trips in the Sunday peak hour (86 entering, 75 exiting).

The site will include three (3) accesses. The northern access will be via Cobalt St to the north. This is a gated access only and will generally not serve a significant amount of site traffic. The second access is a right-in/right-out access located along CSAH 5 which leads to the north of the parking lot for the residential and church. The third (and primary) site access is across from Iodine St on CSAH 5, this access is expected to be the see nearly all of the site's traffic. The two accesses on CSAH 5 are in the same locations as the existing accesses and the Cobalt St access would be an extension of the current dead-end road.

A capacity analysis was performed for Existing Year (2023), Opening Year (2027) No-Build, Opening Year (2027) Build, Horizon Year (2040) No-Build, and Horizon Year (2040) Build. In all scenarios, the study intersections are anticipated to operate at an acceptable LOS in the weekday AM and PM peak hours as well as the Sunday peak hours. Analysis showed that the build conditions have minimal impacts on the LOS at the study area intersections, with some movements seeing small increases in delay and LOS. It is anticipated that all intersections will operate at LOS D or better with the lone exception being the exiting movement of the site access (westbound left turns) operating at LOS E in the AM peak hour. Though not ideal, it is not anticipated to see any queueing issues or become a major issue in any way. Additionally, there are some longer delays (LOS E/F) for various other minor side street movements at intersections along CSAH 5, however there is minimal queueing and anticipated delays are not uncommon on a higher volume corridor like CSAH 5.

No changes to the road geometry are necessary based on the operational analysis results with the addition of development traffic. Side-street stop control is adequate at the site accesses. However, based on conversations with Anoka County, the following improvements should be considered:

- A northbound right turn lane at the north site access.
- Reconfigure the northwest bound approach at the Iodine Street/site access & CSAH 5 to eliminate the trap lane and provide a dedicated northwest bound right turn lane.

## APPENDIX

### A. Exhibits

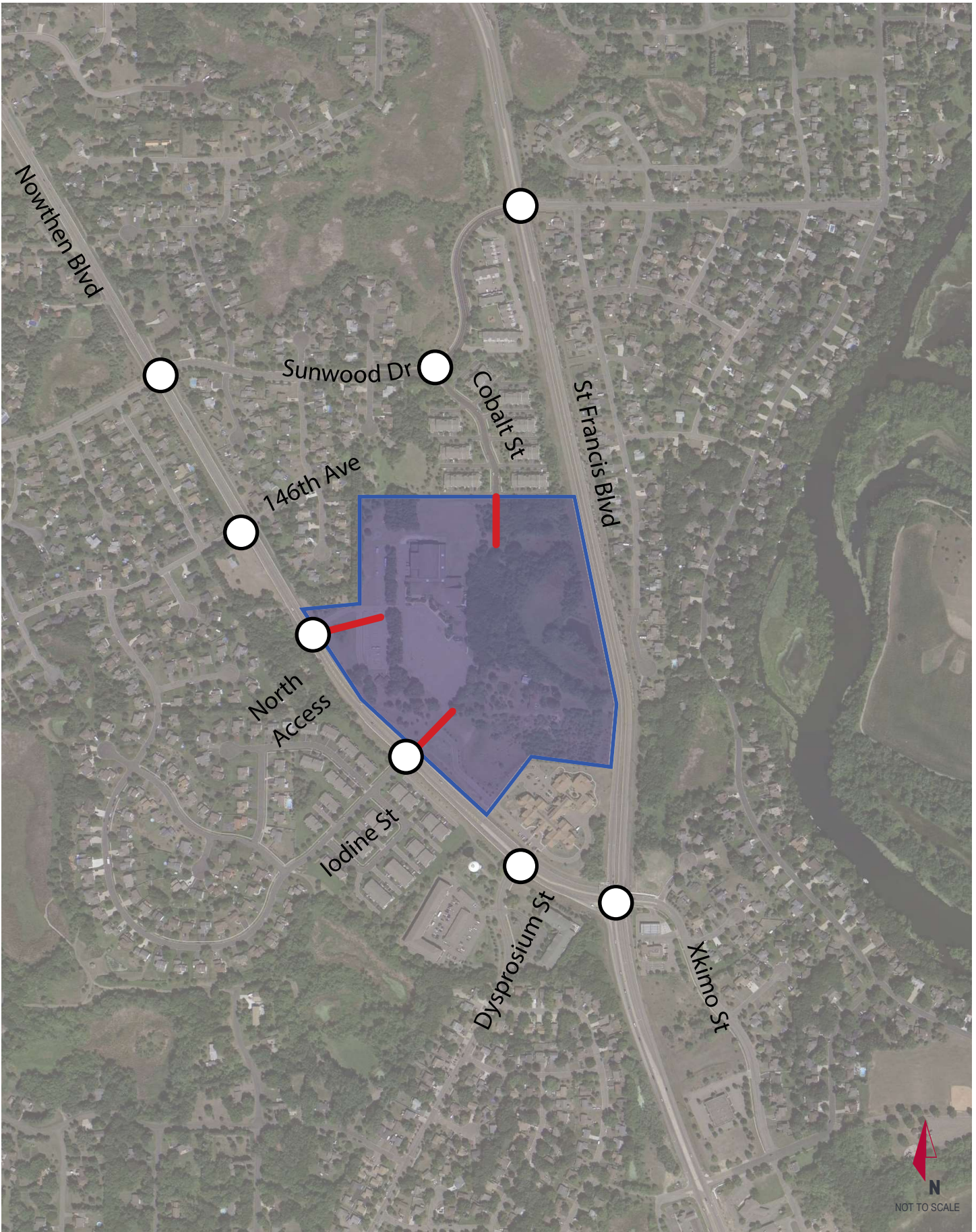
### B. Turning Movement Counts

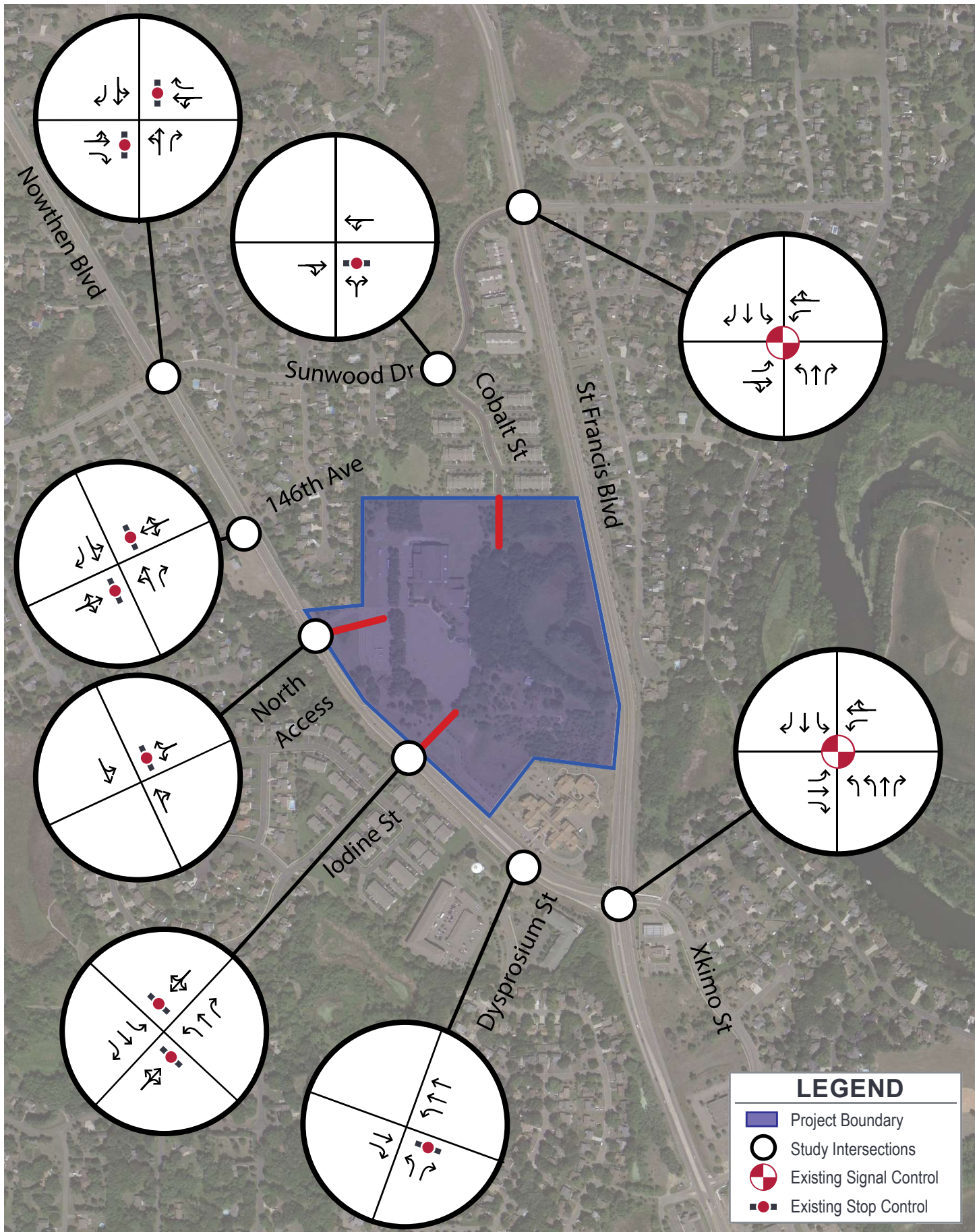
### C. Site Layout Exhibit

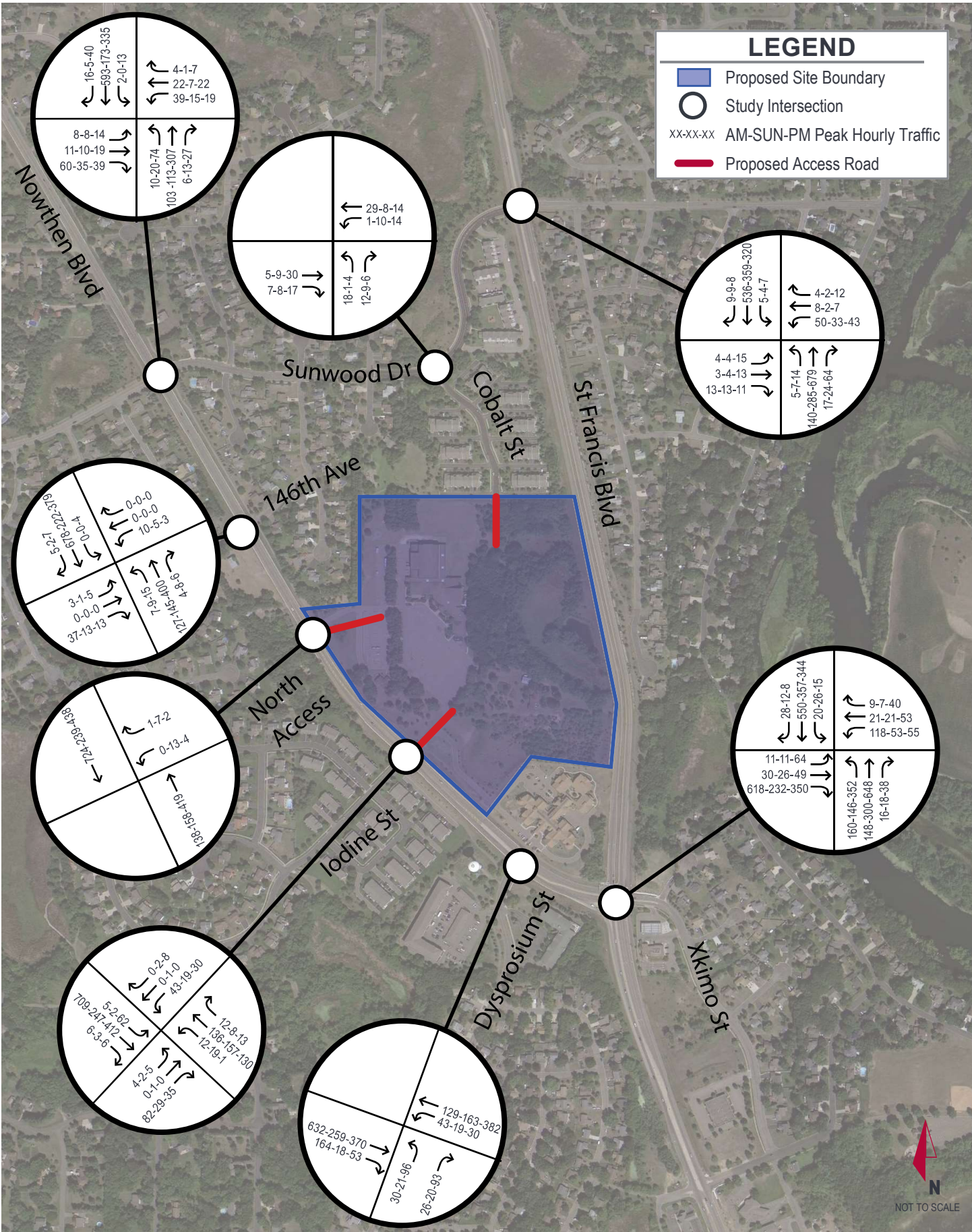
### D. SimTraffic Analysis Results

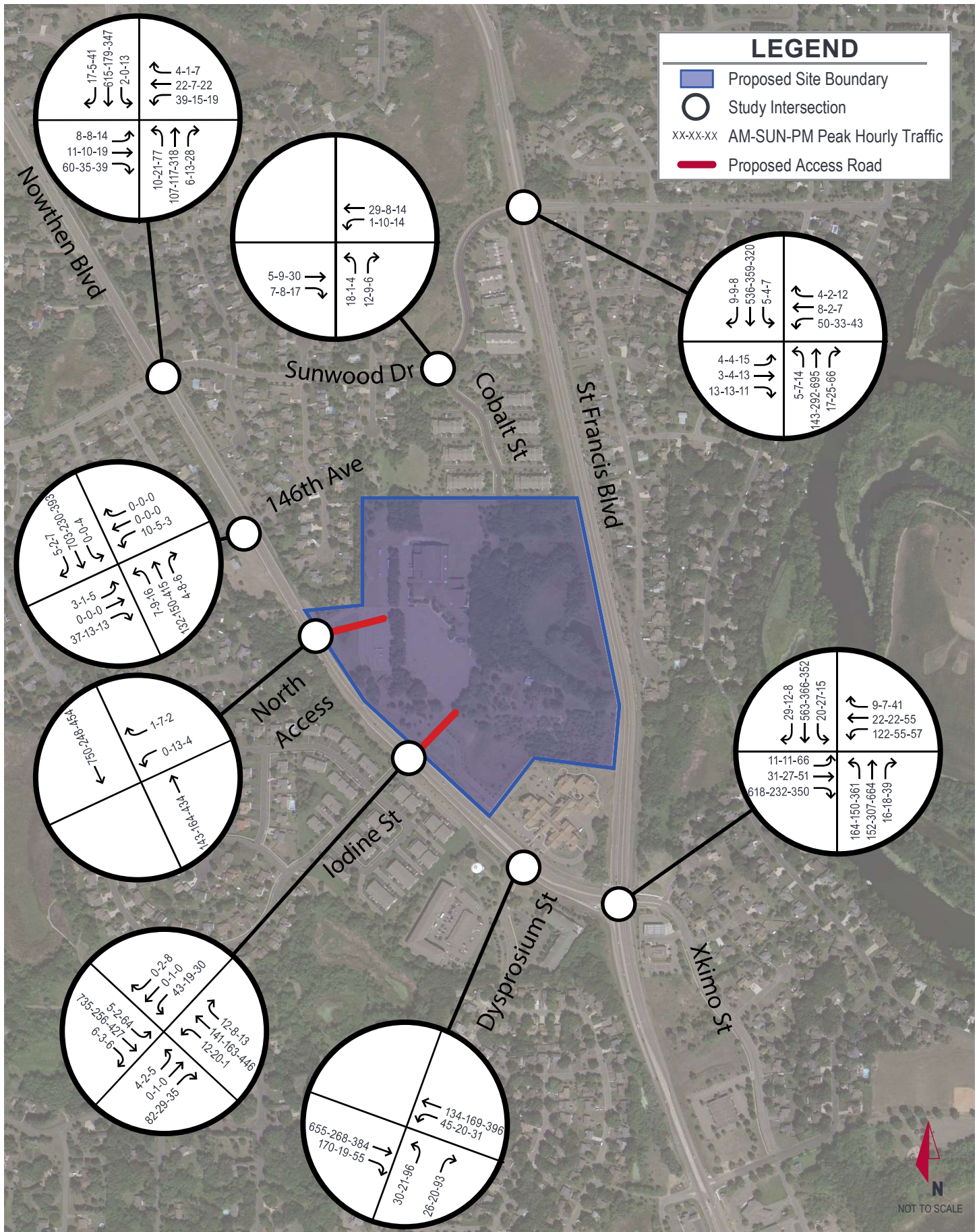
## A. Exhibits

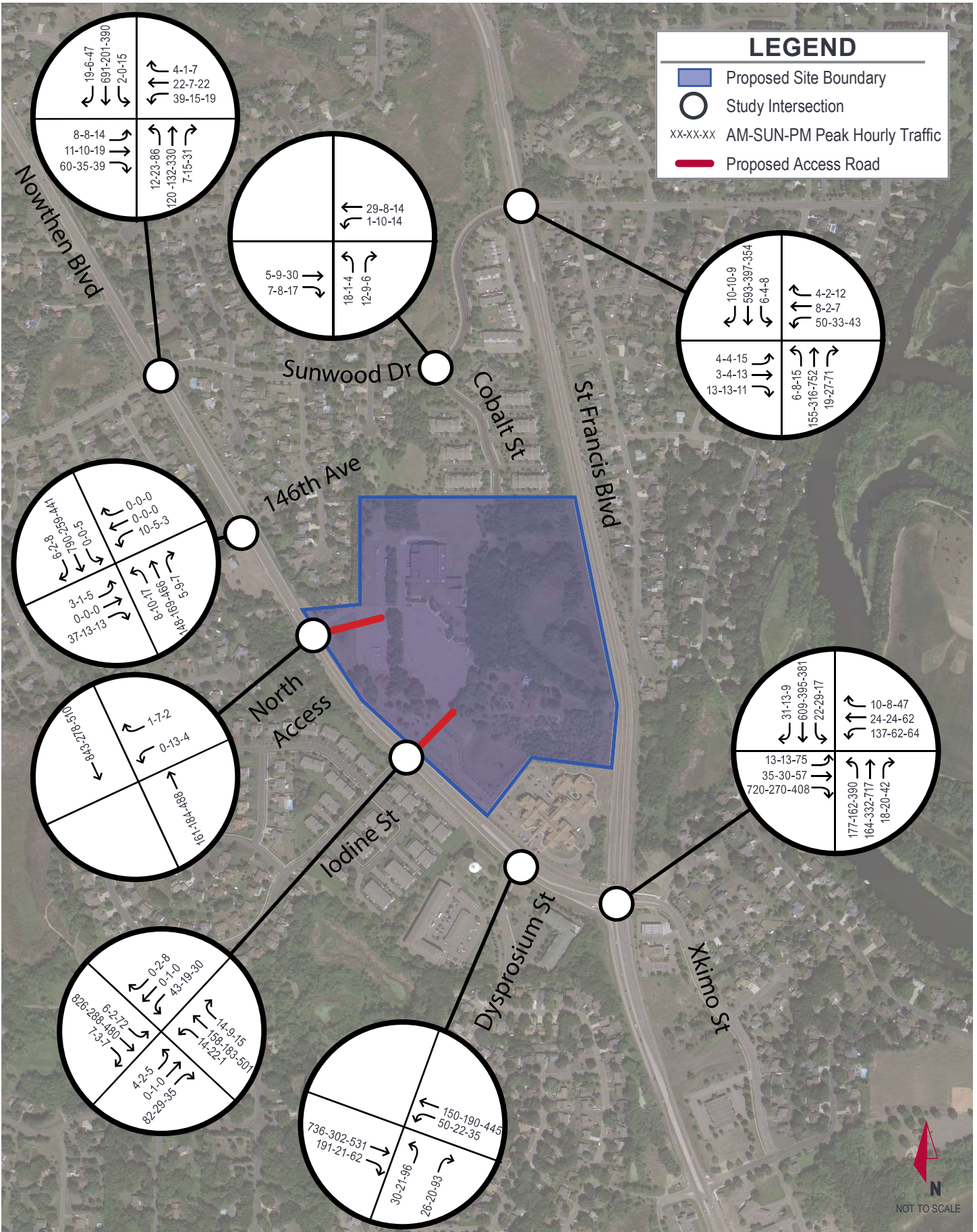


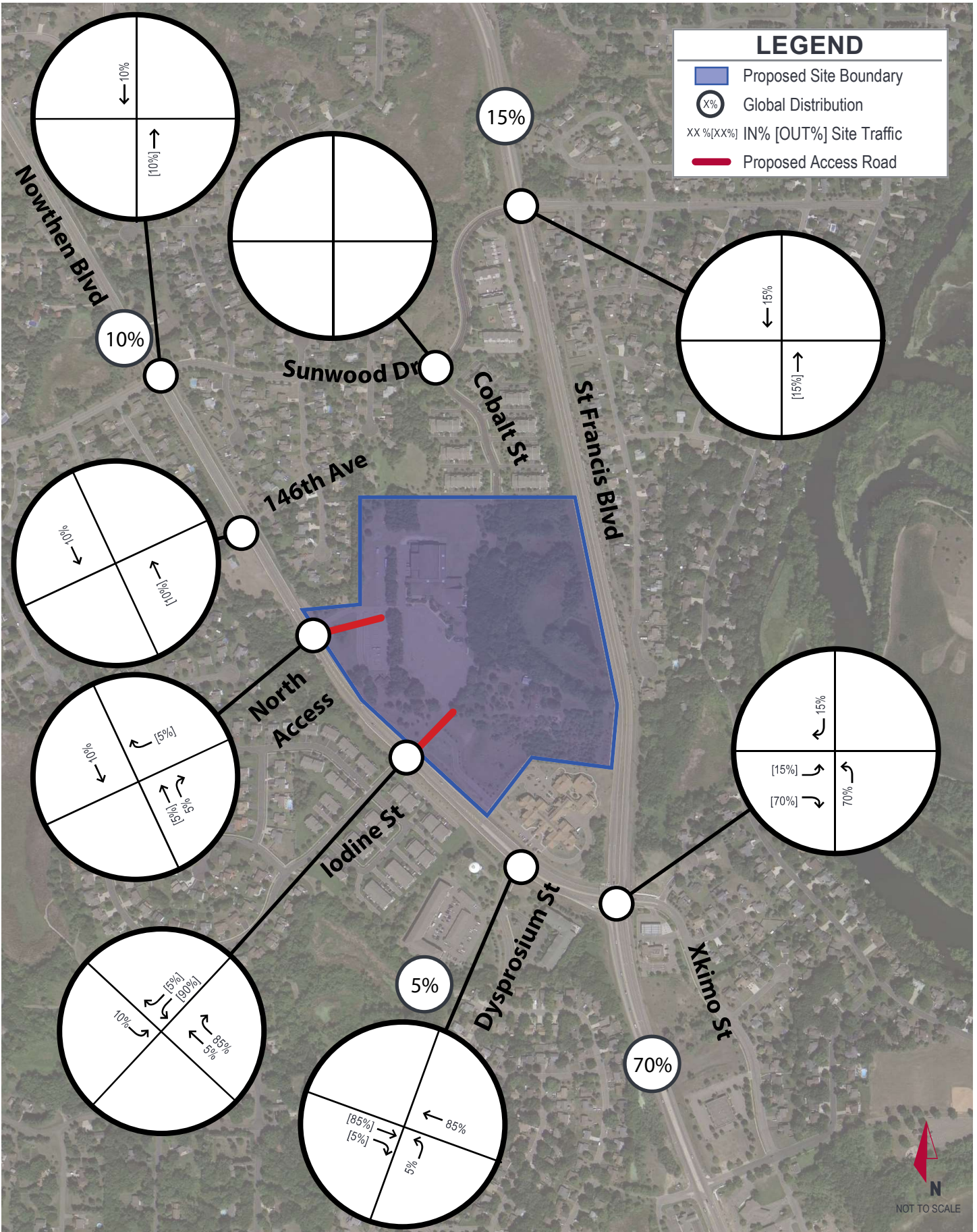


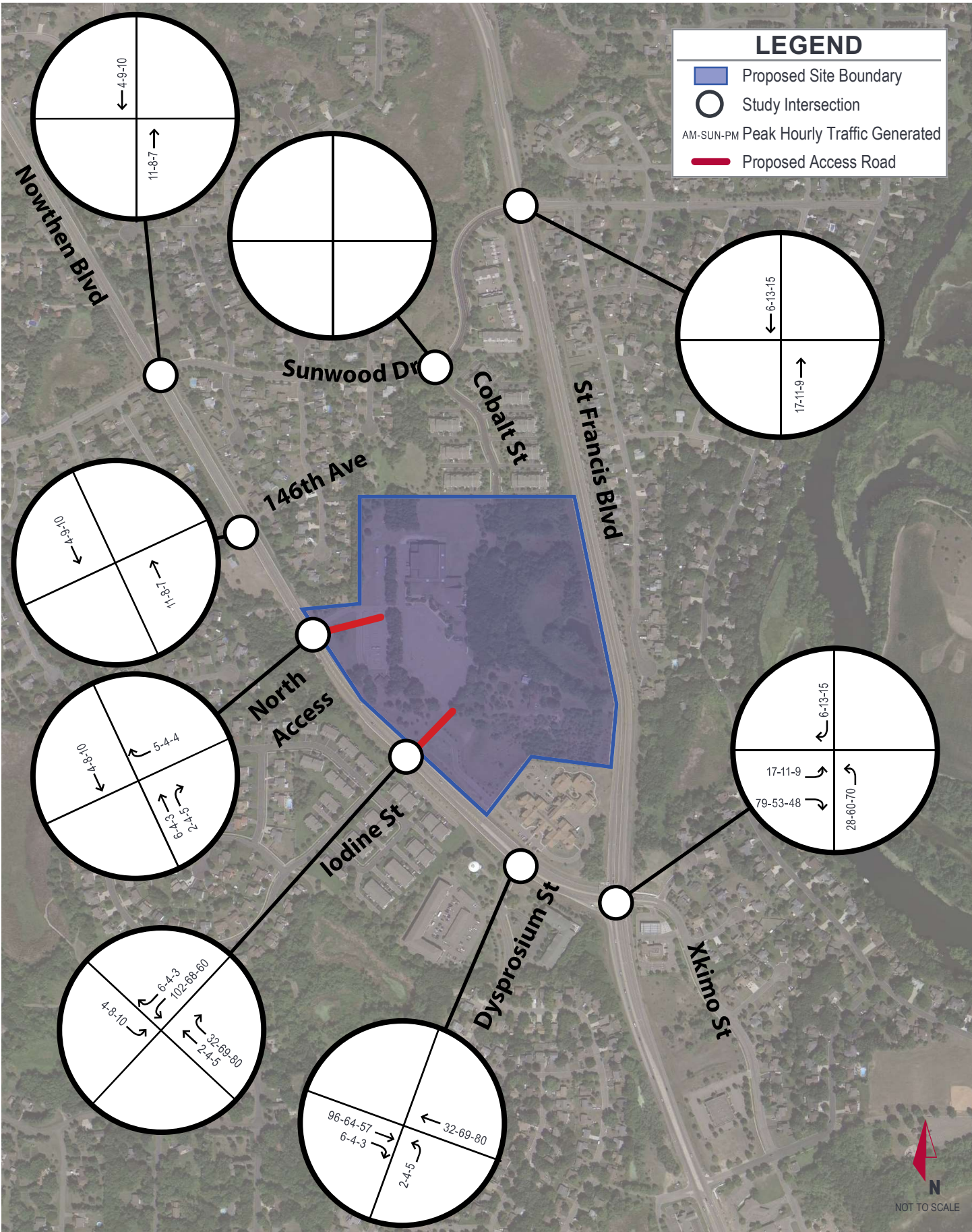


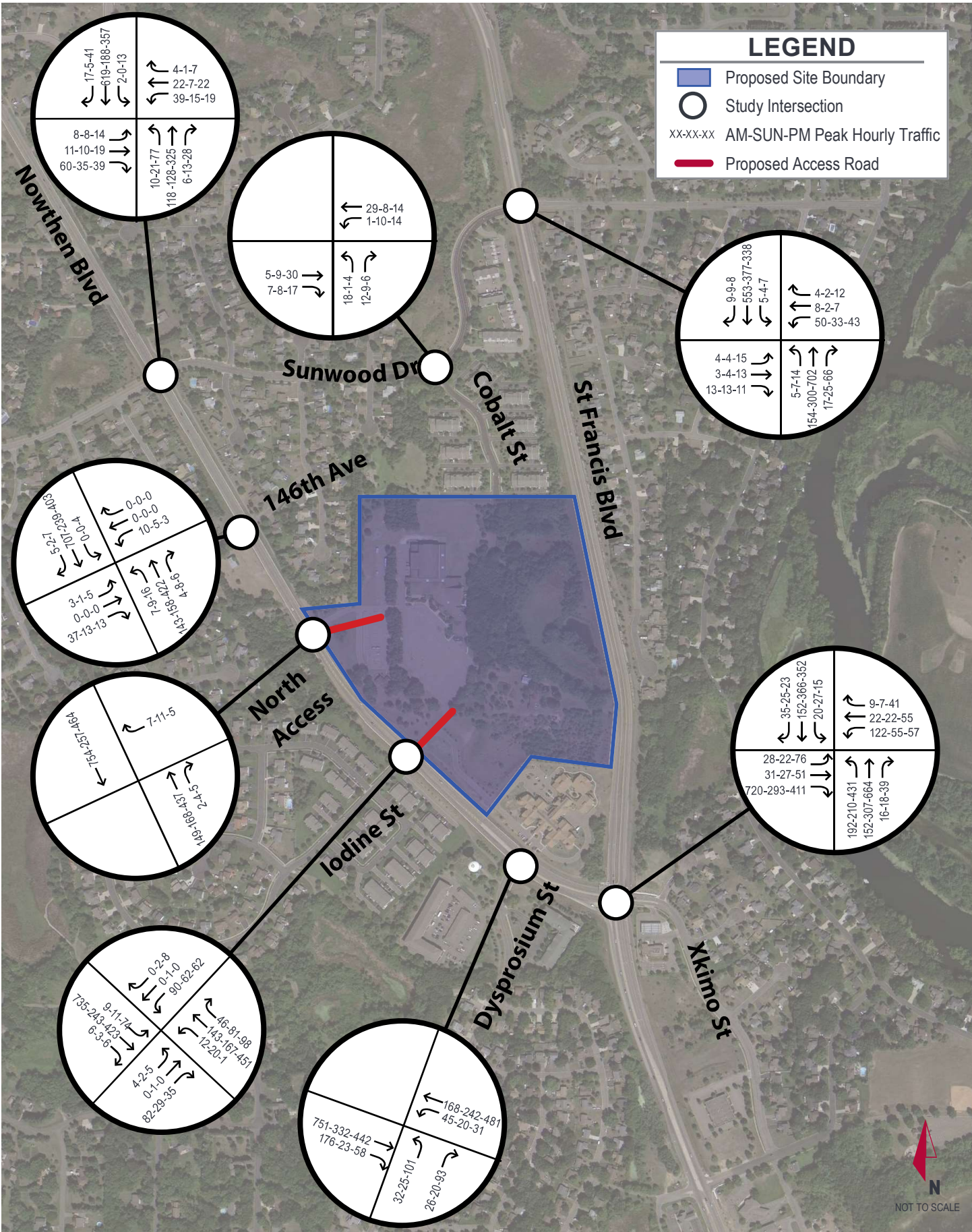


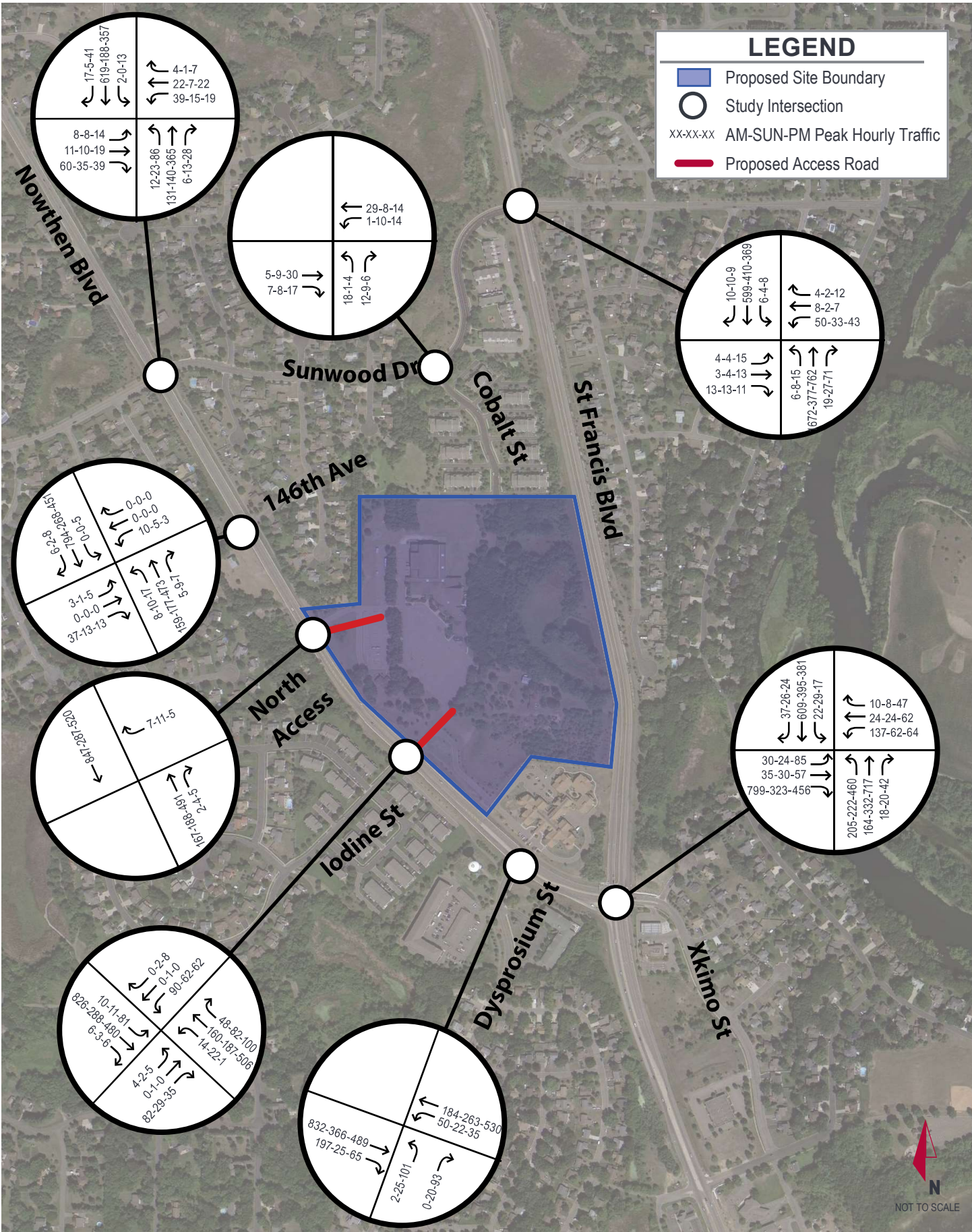












## B. Turning Movement Counts





Kimley-Horn and Associates, Inc.  
4201 Winfield Road Suite 600

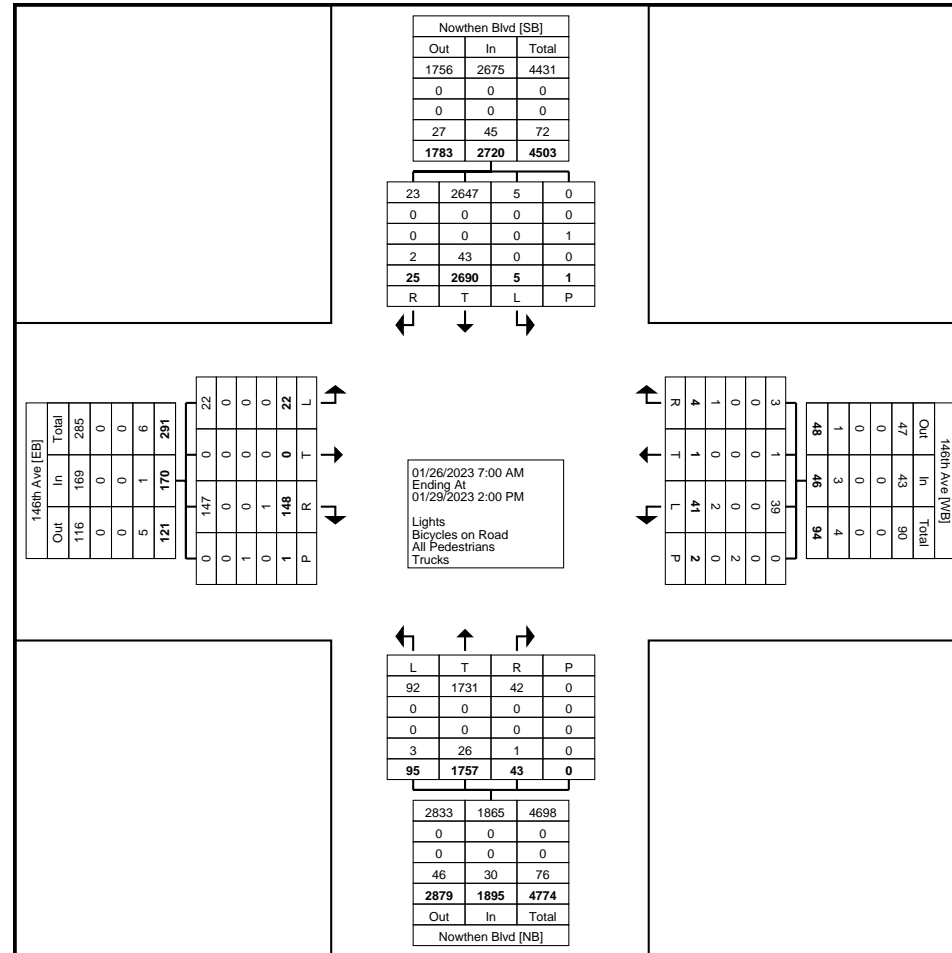
Warrenville, Illinois, United States 60555  
(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: Nowthen Blvd & 146th Ave  
Site Code:  
Start Date: 01/26/2023  
Page No: 1

### Turning Movement Data

Start Time	146th Ave Eastbound					146th Ave Westbound					Nowthen Blvd Northbound					Nowthen Blvd Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
7:00 AM	1	0	9	0	10	4	0	0	0	4	1	14	0	0	15	0	212	2	0	214	243
7:15 AM	1	0	15	0	16	3	0	0	0	3	1	32	1	0	34	0	190	1	0	191	244
7:30 AM	1	0	6	0	7	2	0	0	0	2	4	45	2	0	51	0	142	2	0	144	204
7:45 AM	0	0	7	0	7	1	0	0	0	1	1	36	1	0	38	0	134	0	0	134	180
Hourly Total	3	0	37	0	40	10	0	0	0	10	7	127	4	0	138	0	678	5	0	683	871
8:00 AM	0	0	8	0	8	2	0	0	0	2	0	55	0	0	55	0	103	0	0	103	168
8:15 AM	2	0	4	0	6	2	0	0	0	2	0	49	2	0	51	0	97	1	0	98	157
8:30 AM	2	0	2	0	4	2	0	0	0	2	2	34	1	0	37	0	87	0	0	87	130
8:45 AM	0	0	3	0	3	2	0	0	1	2	1	38	0	0	39	0	91	1	0	92	136
Hourly Total	4	0	17	0	21	8	0	0	1	8	3	176	3	0	182	0	378	2	0	380	591
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
4:00 PM	1	0	7	0	8	1	0	0	0	1	1	82	1	0	84	3	119	4	0	126	219
4:15 PM	2	0	2	0	4	0	0	0	0	0	7	101	3	0	111	0	88	2	0	90	205
4:30 PM	2	0	3	0	5	1	0	0	1	1	1	121	2	0	124	1	74	1	0	76	206
4:45 PM	0	0	1	0	1	1	0	0	0	1	6	96	0	0	102	0	98	0	0	98	202
Hourly Total	5	0	13	0	18	3	0	0	1	3	15	400	6	0	421	4	379	7	0	390	832
5:00 PM	1	0	4	1	5	1	0	0	0	1	6	115	2	0	123	0	87	2	1	89	218
5:15 PM	0	0	5	0	5	1	0	2	0	3	7	87	1	0	95	0	93	1	0	94	197
5:30 PM	0	0	4	0	4	2	0	0	0	2	4	81	3	0	88	0	78	1	0	79	173
5:45 PM	2	0	4	0	6	1	0	0	0	1	9	113	0	0	122	0	64	0	0	64	193
Hourly Total	3	0	17	1	20	5	0	2	0	7	26	396	6	0	428	0	322	4	1	326	781
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	7	0	7	2	0	0	0	2	2	27	1	0	30	0	53	0	0	53	92
10:15 AM	1	0	4	0	5	3	0	0	0	3	1	32	0	0	33	0	76	1	0	77	118
10:30 AM	0	0	5	0	5	0	0	0	0	0	1	28	0	0	29	0	64	0	0	64	98
10:45 AM	1	0	4	0	5	0	0	0	0	0	1	28	1	0	30	0	70	0	0	70	105
Hourly Total	2	0	20	0	22	5	0	0	0	5	5	115	2	0	122	0	263	1	0	264	413
11:00 AM	0	0	1	0	1	2	0	0	0	2	3	26	1	0	30	0	39	0	0	39	72
11:15 AM	0	0	5	0	5	0	0	0	0	0	3	37	2	0	42	0	49	1	0	50	97
11:30 AM	1	0	4	0	5	0	0	0	0	0	0	42	4	0	46	0	55	1	0	56	107
11:45 AM	0	0	3	0	3	3	0	0	0	3	3	40	1	0	44	0	79	0	0	79	129
Hourly Total	1	0	13	0	14	5	0	0	0	5	9	145	8	0	162	0	222	2	0	224	405

12:00 PM	1	0	4	0	5	0	0	0	0	0	5	44	0	0	49	0	53	0	0	53	107
12:15 PM	0	0	4	0	4	0	0	0	0	0	4	45	1	0	50	0	74	1	0	75	129
12:30 PM	1	0	4	0	5	0	0	0	0	0	6	53	2	0	61	0	60	1	0	61	127
12:45 PM	0	0	2	0	2	2	0	0	0	2	3	54	1	0	58	0	46	0	0	46	108
Hourly Total	2	0	14	0	16	2	0	0	0	2	18	196	4	0	218	0	233	2	0	235	471
1:00 PM	0	0	7	0	7	0	0	0	0	0	3	31	1	0	35	0	48	0	0	48	90
1:15 PM	0	0	3	0	3	1	0	1	0	2	3	60	3	0	66	0	71	1	0	72	143
1:30 PM	2	0	3	0	5	1	0	1	0	2	1	61	6	0	68	1	47	1	0	49	124
1:45 PM	0	0	4	0	4	1	1	0	0	2	5	49	0	0	54	0	49	0	0	49	109
Hourly Total	2	0	17	0	19	3	1	2	0	6	12	201	10	0	223	1	215	2	0	218	466
Grand Total	22	0	148	1	170	41	1	4	2	46	95	1757	43	0	1895	5	2690	25	1	2720	4831
Approach %	12.9	0.0	87.1	-	-	89.1	2.2	8.7	-	-	5.0	92.7	2.3	-	-	0.2	98.9	0.9	-	-	-
Total %	0.5	0.0	3.1	-	3.5	0.8	0.0	0.1	-	1.0	2.0	36.4	0.9	-	39.2	0.1	55.7	0.5	-	56.3	-
Lights	22	0	147	-	169	39	1	3	-	43	92	1731	42	-	1865	5	2647	23	-	2675	4752
% Lights	100.0	-	99.3	-	99.4	95.1	100.0	75.0	-	93.5	96.8	98.5	97.7	-	98.4	100.0	98.4	92.0	-	98.3	98.4
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	-	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0
All Pedestrians	-	-	-	1	-	-	-	-	2	-	-	-	-	0	-	-	-	-	1	-	-
% All Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	100.0	-	-
Trucks	0	0	1	-	1	2	0	1	-	3	3	26	1	-	30	0	43	2	-	45	79
% Trucks	0.0	-	0.7	-	0.6	4.9	0.0	25.0	-	6.5	3.2	1.5	2.3	-	1.6	0.0	1.6	8.0	-	1.7	1.6



Turning Movement Data Plot



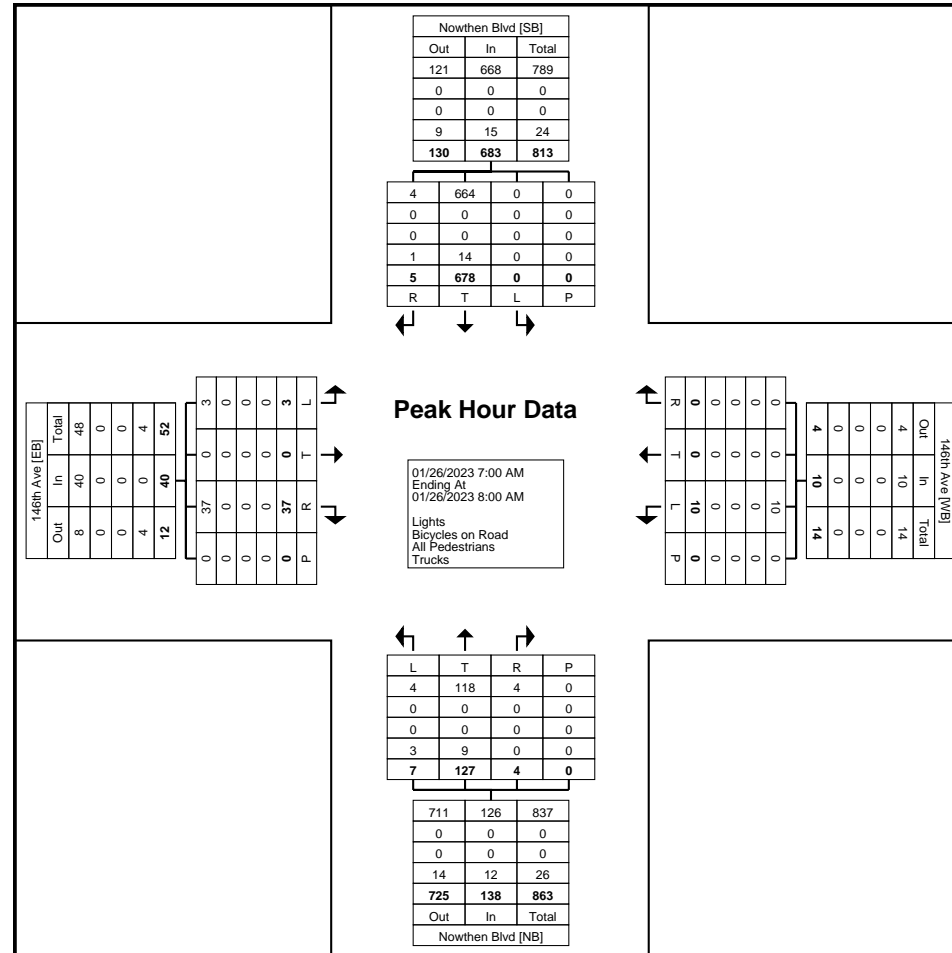
Kimley-Horn and Associates, Inc.  
4201 Winfield Road Suite 600

Warrenville, Illinois, United States 60555  
(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: Nowthen Blvd & 146th Ave  
Site Code:  
Start Date: 01/26/2023  
Page No: 4

### Turning Movement Peak Hour Data (7:00 AM)

Start Time	146th Ave Eastbound					146th Ave Westbound					Nowthen Blvd Northbound					Nowthen Blvd Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
7:00 AM	1	0	9	0	10	4	0	0	0	4	1	14	0	0	15	0	212	2	0	214	243
7:15 AM	1	0	15	0	16	3	0	0	0	3	1	32	1	0	34	0	190	1	0	191	244
7:30 AM	1	0	6	0	7	2	0	0	0	2	4	45	2	0	51	0	142	2	0	144	204
7:45 AM	0	0	7	0	7	1	0	0	0	1	1	36	1	0	38	0	134	0	0	134	180
Total	3	0	37	0	40	10	0	0	0	10	7	127	4	0	138	0	678	5	0	683	871
Approach %	7.5	0.0	92.5	-	-	100.0	0.0	0.0	-	-	5.1	92.0	2.9	-	-	0.0	99.3	0.7	-	-	-
Total %	0.3	0.0	4.2	-	4.6	1.1	0.0	0.0	-	1.1	0.8	14.6	0.5	-	15.8	0.0	77.8	0.6	-	78.4	-
PHF	0.750	0.000	0.617	-	0.625	0.625	0.000	0.000	-	0.625	0.438	0.706	0.500	-	0.676	0.000	0.800	0.625	-	0.798	0.892
Lights	3	0	37	-	40	10	0	0	-	10	4	118	4	-	126	0	664	4	-	668	844
% Lights	100.0	-	100.0	-	100.0	100.0	-	-	-	100.0	57.1	92.9	100.0	-	91.3	-	97.9	80.0	-	97.8	96.9
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	-	0.0	-	0.0	0.0	-	-	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
All Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% All Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trucks	0	0	0	-	0	0	0	0	-	0	3	9	0	-	12	0	14	1	-	15	27
% Trucks	0.0	-	0.0	-	0.0	0.0	-	-	-	0.0	42.9	7.1	0.0	-	8.7	-	2.1	20.0	-	2.2	3.1



Turning Movement Peak Hour Data Plot (7:00 AM)



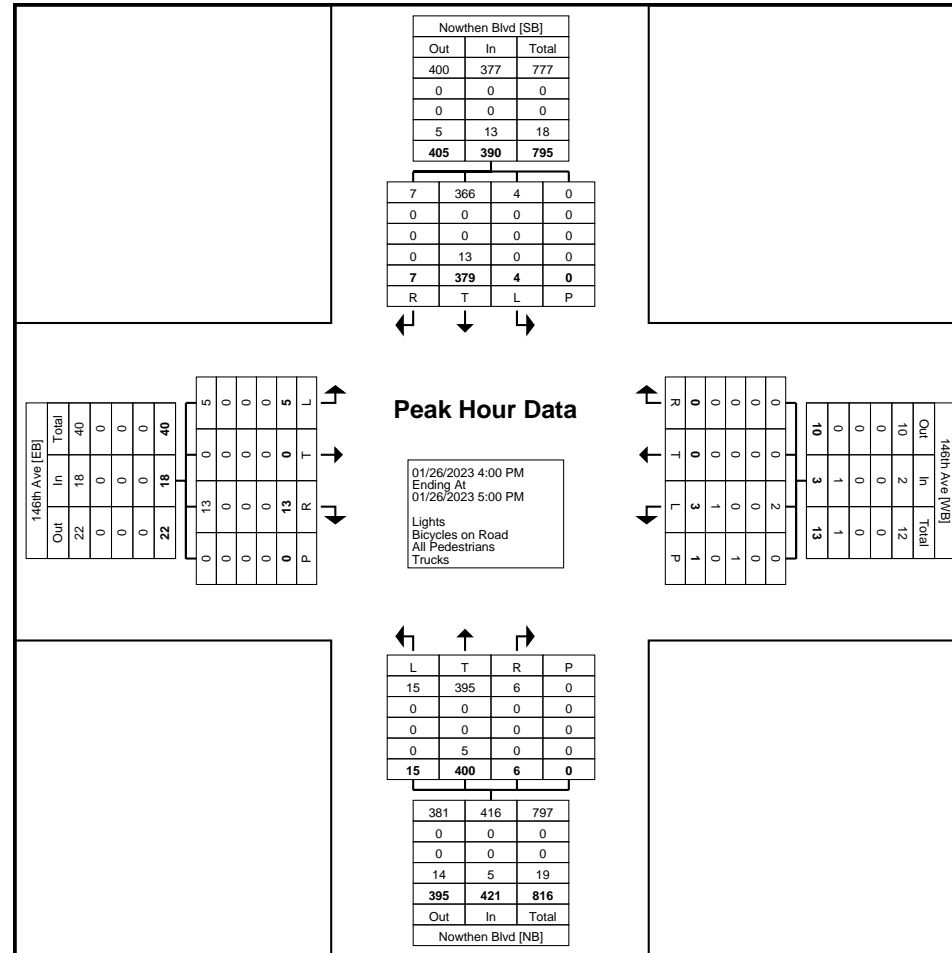
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Count Name: Nowthen Blvd & 146th Ave  
Site Code:  
Start Date: 01/26/2023  
Page No: 6

### Turning Movement Peak Hour Data (4:00 PM)

Start Time	146th Ave Eastbound					146th Ave Westbound					Nowthen Blvd Northbound					Nowthen Blvd Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
4:00 PM	1	0	7	0	8	1	0	0	0	1	1	82	1	0	84	3	119	4	0	126	219
4:15 PM	2	0	2	0	4	0	0	0	0	0	7	101	3	0	111	0	88	2	0	90	205
4:30 PM	2	0	3	0	5	1	0	0	1	1	1	121	2	0	124	1	74	1	0	76	206
4:45 PM	0	0	1	0	1	1	0	0	0	1	6	96	0	0	102	0	98	0	0	98	202
Total	5	0	13	0	18	3	0	0	1	3	15	400	6	0	421	4	379	7	0	390	832
Approach %	27.8	0.0	72.2	-	-	100.0	0.0	0.0	-	-	3.6	95.0	1.4	-	-	1.0	97.2	1.8	-	-	-
Total %	0.6	0.0	1.6	-	2.2	0.4	0.0	0.0	-	0.4	1.8	48.1	0.7	-	50.6	0.5	45.6	0.8	-	46.9	-
PHF	0.625	0.000	0.464	-	0.563	0.750	0.000	0.000	-	0.750	0.536	0.826	0.500	-	0.849	0.333	0.796	0.438	-	0.774	0.950
Lights	5	0	13	-	18	2	0	0	-	2	15	395	6	-	416	4	366	7	-	377	813
% Lights	100.0	-	100.0	-	100.0	66.7	-	-	-	66.7	100.0	98.8	100.0	-	98.8	100.0	96.6	100.0	-	96.7	97.7
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	-	0.0	-	0.0	0.0	-	-	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0
All Pedestrians	-	-	-	0	-	-	-	-	1	-	-	-	-	0	-	-	-	-	0	-	-
% All Pedestrians	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-
Trucks	0	0	0	-	0	1	0	0	-	1	0	5	0	-	5	0	13	0	-	13	19
% Trucks	0.0	-	0.0	-	0.0	33.3	-	-	-	33.3	0.0	1.3	0.0	-	1.2	0.0	3.4	0.0	-	3.3	2.3



Turning Movement Peak Hour Data Plot (4:00 PM)



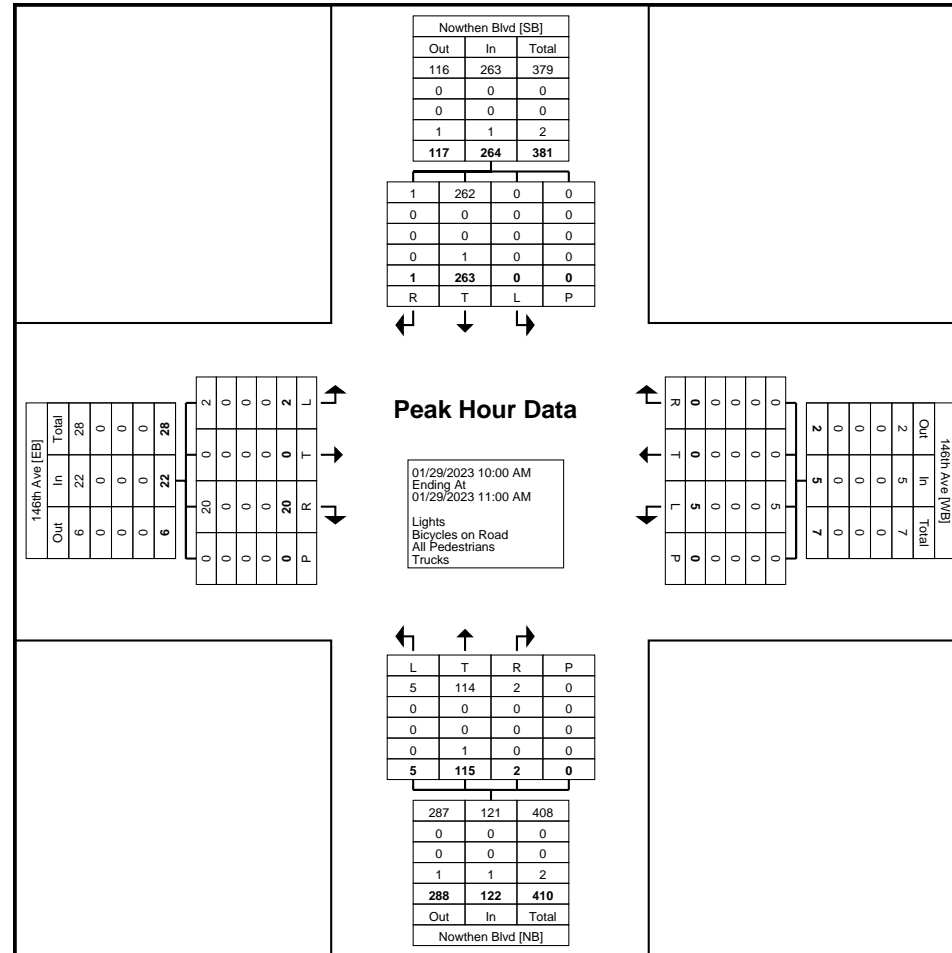
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(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: Nowthen Blvd & 146th Ave  
Site Code:  
Start Date: 01/26/2023  
Page No: 8

### Turning Movement Peak Hour Data (10:00 AM)

Start Time	146th Ave Eastbound					146th Ave Westbound					Nowthen Blvd Northbound					Nowthen Blvd Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
10:00 AM	0	0	7	0	7	2	0	0	0	2	2	27	1	0	30	0	53	0	0	53	92
10:15 AM	1	0	4	0	5	3	0	0	0	3	1	32	0	0	33	0	76	1	0	77	118
10:30 AM	0	0	5	0	5	0	0	0	0	0	1	28	0	0	29	0	64	0	0	64	98
10:45 AM	1	0	4	0	5	0	0	0	0	0	1	28	1	0	30	0	70	0	0	70	105
Total	2	0	20	0	22	5	0	0	0	5	5	115	2	0	122	0	263	1	0	264	413
Approach %	9.1	0.0	90.9	-	-	100.0	0.0	0.0	-	-	4.1	94.3	1.6	-	-	0.0	99.6	0.4	-	-	-
Total %	0.5	0.0	4.8	-	5.3	1.2	0.0	0.0	-	1.2	1.2	27.8	0.5	-	29.5	0.0	63.7	0.2	-	63.9	-
PHF	0.500	0.000	0.714	-	0.786	0.417	0.000	0.000	-	0.417	0.625	0.898	0.500	-	0.924	0.000	0.865	0.250	-	0.857	0.875
Lights	2	0	20	-	22	5	0	0	-	5	5	114	2	-	121	0	262	1	-	263	411
% Lights	100.0	-	100.0	-	100.0	100.0	-	-	-	100.0	100.0	99.1	100.0	-	99.2	-	99.6	100.0	-	99.6	99.5
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	-	0.0	-	0.0	0.0	-	-	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
All Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% All Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trucks	0	0	0	-	0	0	0	0	-	0	0	1	0	-	1	0	1	0	-	1	2
% Trucks	0.0	-	0.0	-	0.0	0.0	-	-	-	0.0	0.0	0.9	0.0	-	0.8	-	0.4	0.0	-	0.4	0.5



Turning Movement Peak Hour Data Plot (10:00 AM)



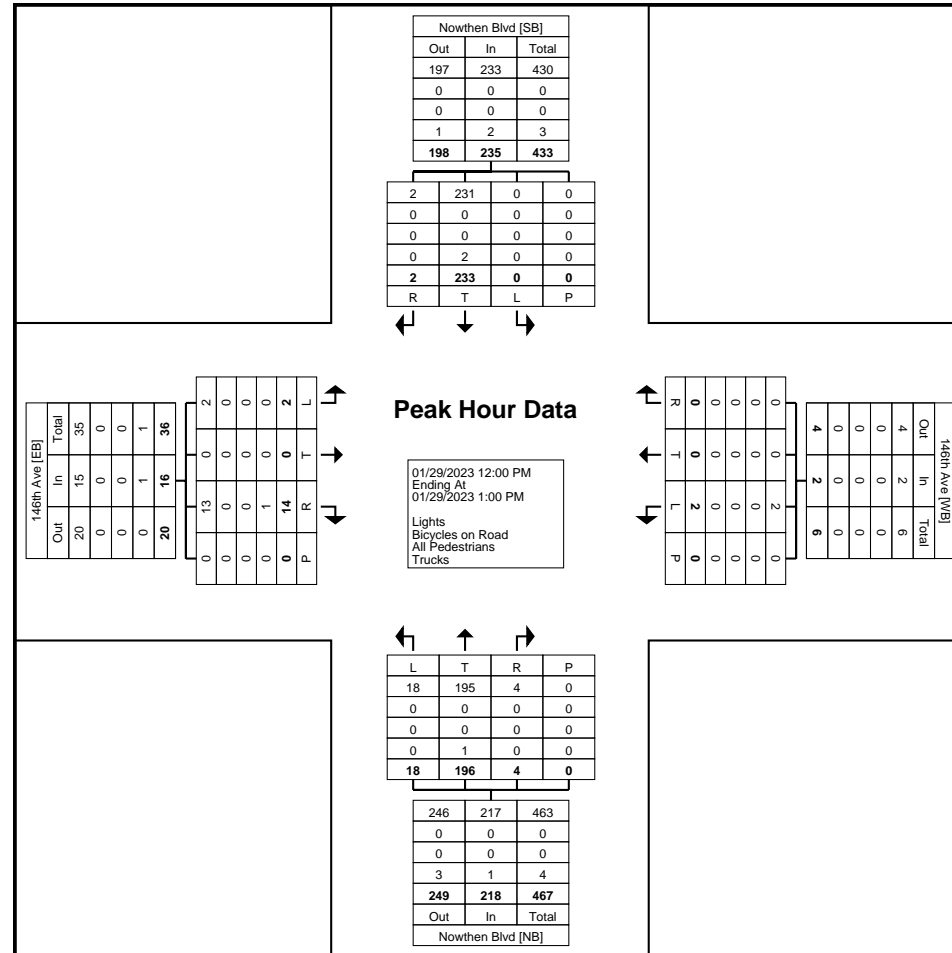
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Count Name: Nowthen Blvd & 146th Ave  
Site Code:  
Start Date: 01/26/2023  
Page No: 10

### Turning Movement Peak Hour Data (12:00 PM)

Start Time	146th Ave Eastbound					146th Ave Westbound					Nowthen Blvd Northbound					Nowthen Blvd Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
12:00 PM	1	0	4	0	5	0	0	0	0	0	5	44	0	0	49	0	53	0	0	53	107
12:15 PM	0	0	4	0	4	0	0	0	0	0	4	45	1	0	50	0	74	1	0	75	129
12:30 PM	1	0	4	0	5	0	0	0	0	0	6	53	2	0	61	0	60	1	0	61	127
12:45 PM	0	0	2	0	2	2	0	0	0	2	3	54	1	0	58	0	46	0	0	46	108
Total	2	0	14	0	16	2	0	0	0	2	18	196	4	0	218	0	233	2	0	235	471
Approach %	12.5	0.0	87.5	-	-	100.0	0.0	0.0	-	-	8.3	89.9	1.8	-	-	0.0	99.1	0.9	-	-	-
Total %	0.4	0.0	3.0	-	3.4	0.4	0.0	0.0	-	0.4	3.8	41.6	0.8	-	46.3	0.0	49.5	0.4	-	49.9	-
PHF	0.500	0.000	0.875	-	0.800	0.250	0.000	0.000	-	0.250	0.750	0.907	0.500	-	0.893	0.000	0.787	0.500	-	0.783	0.913
Lights	2	0	13	-	15	2	0	0	-	2	18	195	4	-	217	0	231	2	-	233	467
% Lights	100.0	-	92.9	-	93.8	100.0	-	-	-	100.0	100.0	99.5	100.0	-	99.5	-	99.1	100.0	-	99.1	99.2
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	-	0.0	-	0.0	0.0	-	-	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
All Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% All Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trucks	0	0	1	-	1	0	0	0	-	0	0	1	0	-	1	0	2	0	-	2	4
% Trucks	0.0	-	7.1	-	6.3	0.0	-	-	-	0.0	0.0	0.5	0.0	-	0.5	-	0.9	0.0	-	0.9	0.8



Turning Movement Peak Hour Data Plot (12:00 PM)



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4201 Winfield Road Suite 600

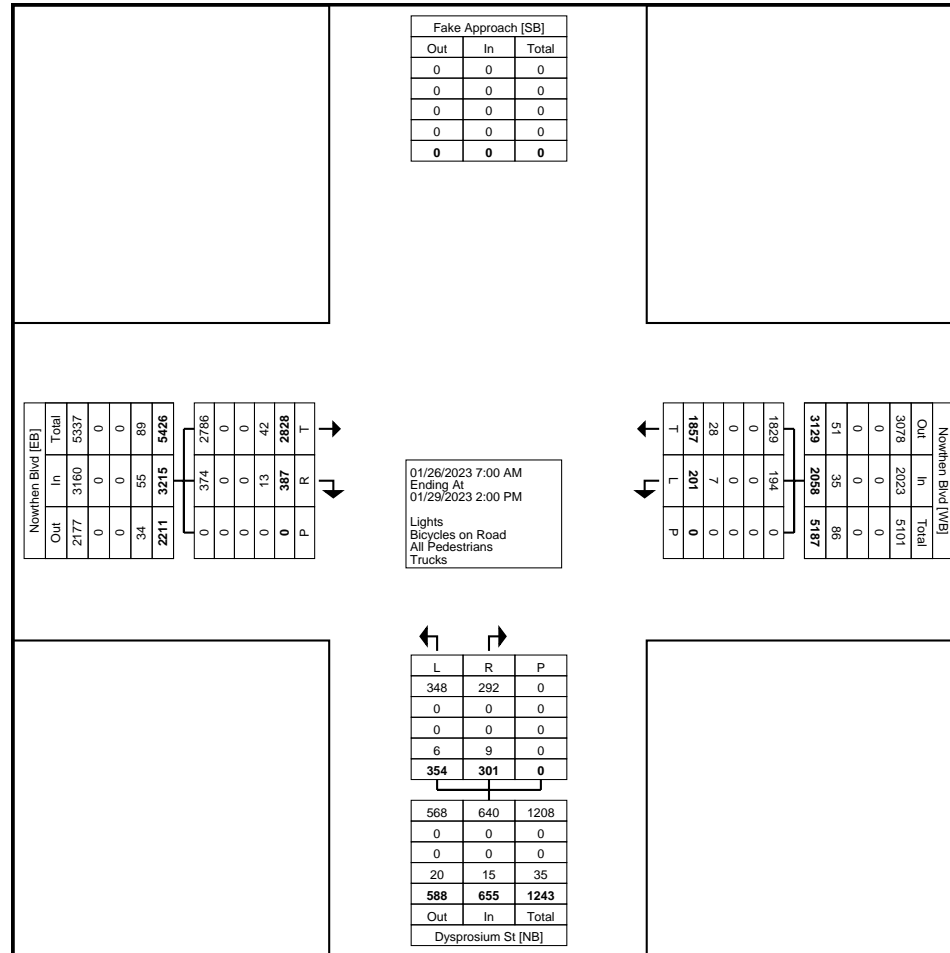
Warrenville, Illinois, United States 60555  
(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: Nowthen Blvd & Dysprosium St  
Site Code:  
Start Date: 01/26/2023  
Page No: 1

### Turning Movement Data

Start Time	Nowthen Blvd Eastbound				Nowthen Blvd Westbound				Dysprosium St Northbound				Int. Total
	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	
7:00 AM	188	52	0	240	1	15	0	16	3	6	0	9	265
7:15 AM	190	48	0	238	12	30	0	42	11	6	0	17	297
7:30 AM	123	35	0	158	16	52	0	68	7	6	0	13	239
7:45 AM	131	29	0	160	14	32	0	46	9	8	0	17	223
Hourly Total	632	164	0	796	43	129	0	172	30	26	0	56	1024
8:00 AM	101	15	0	116	9	53	0	62	9	8	0	17	195
8:15 AM	95	12	0	107	8	48	0	56	11	11	0	22	185
8:30 AM	84	17	0	101	3	36	0	39	8	4	0	12	152
8:45 AM	87	8	0	95	7	44	0	51	8	4	0	12	158
Hourly Total	367	52	0	419	27	181	0	208	36	27	0	63	690
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	114	19	0	133	10	84	0	94	19	21	0	40	267
4:15 PM	79	13	0	92	2	104	0	106	21	18	0	39	237
4:30 PM	83	7	0	90	9	103	0	112	37	37	0	74	276
4:45 PM	94	14	0	108	9	91	0	100	19	17	0	36	244
Hourly Total	370	53	0	423	30	382	0	412	96	93	0	189	1024
5:00 PM	84	8	0	92	7	128	0	135	26	20	0	46	273
5:15 PM	108	7	0	115	6	99	0	105	17	10	0	27	247
5:30 PM	106	8	0	114	11	88	0	99	19	11	0	30	243
5:45 PM	73	11	0	84	3	109	0	112	15	12	0	27	223
Hourly Total	371	34	0	405	27	424	0	451	77	53	0	130	986
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	68	3	0	71	1	26	0	27	4	6	0	10	108
10:15 AM	77	10	0	87	4	38	0	42	13	8	0	21	150
10:30 AM	70	5	0	75	4	42	0	46	5	4	0	9	130
10:45 AM	72	10	0	82	6	38	0	44	5	6	0	11	137
Hourly Total	287	28	0	315	15	144	0	159	27	24	0	51	525
11:00 AM	49	0	0	49	5	29	0	34	2	4	0	6	89
11:15 AM	59	6	0	65	5	51	0	56	4	4	0	8	129
11:30 AM	58	3	0	61	5	39	0	44	10	8	0	18	123
11:45 AM	93	9	0	102	4	44	0	48	5	4	0	9	159
Hourly Total	259	18	0	277	19	163	0	182	21	20	0	41	500

12:00 PM	62	10	0	72	4	40	0	44	13	5	0	18	134
12:15 PM	83	1	0	84	5	54	0	59	9	5	0	14	157
12:30 PM	62	7	0	69	4	57	0	61	8	11	0	19	149
12:45 PM	59	3	0	62	9	63	0	72	8	7	0	15	149
Hourly Total	266	21	0	287	22	214	0	236	38	28	0	66	589
1:00 PM	63	3	0	66	2	35	0	37	8	7	0	15	118
1:15 PM	86	7	0	93	3	60	0	63	8	5	0	13	169
1:30 PM	66	3	0	69	5	61	0	66	6	7	0	13	148
1:45 PM	61	4	0	65	8	64	0	72	7	11	0	18	155
Hourly Total	276	17	0	293	18	220	0	238	29	30	0	59	590
Grand Total	2828	387	0	3215	201	1857	0	2058	354	301	0	655	5928
Approach %	88.0	12.0	-	-	9.8	90.2	-	-	54.0	46.0	-	-	-
Total %	47.7	6.5	-	54.2	3.4	31.3	-	34.7	6.0	5.1	-	11.0	-
Lights	2786	374	-	3160	194	1829	-	2023	348	292	-	640	5823
% Lights	98.5	96.6	-	98.3	96.5	98.5	-	98.3	98.3	97.0	-	97.7	98.2
Bicycles on Road	0	0	-	0	0	0	-	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
All Pedestrians	-	-	0	-	-	-	0	-	-	-	0	-	-
% All Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-
Trucks	42	13	-	55	7	28	-	35	6	9	-	15	105
% Trucks	1.5	3.4	-	1.7	3.5	1.5	-	1.7	1.7	3.0	-	2.3	1.8



Turning Movement Data Plot



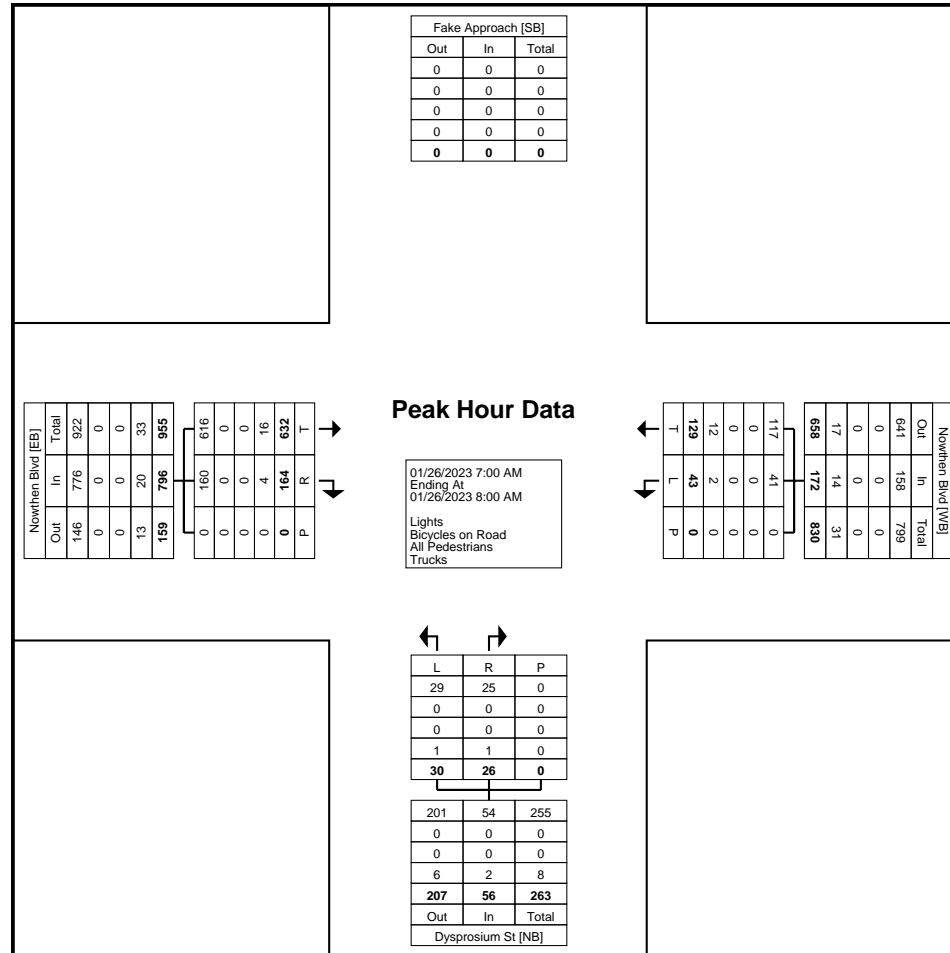
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Count Name: Nowthen Blvd & Dysprosium St  
Site Code:  
Start Date: 01/26/2023  
Page No: 4

### Turning Movement Peak Hour Data (7:00 AM)

Start Time	Nowthen Blvd Eastbound				Nowthen Blvd Westbound				Dysprosium St Northbound				Int. Total
	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	
7:00 AM	188	52	0	240	1	15	0	16	3	6	0	9	265
7:15 AM	190	48	0	238	12	30	0	42	11	6	0	17	297
7:30 AM	123	35	0	158	16	52	0	68	7	6	0	13	239
7:45 AM	131	29	0	160	14	32	0	46	9	8	0	17	223
Total	632	164	0	796	43	129	0	172	30	26	0	56	1024
Approach %	79.4	20.6	-	-	25.0	75.0	-	-	53.6	46.4	-	-	-
Total %	61.7	16.0	-	77.7	4.2	12.6	-	16.8	2.9	2.5	-	5.5	-
PHF	0.832	0.788	-	0.829	0.672	0.620	-	0.632	0.682	0.813	-	0.824	0.862
Lights	616	160	-	776	41	117	-	158	29	25	-	54	988
% Lights	97.5	97.6	-	97.5	95.3	90.7	-	91.9	96.7	96.2	-	96.4	96.5
Bicycles on Road	0	0	-	0	0	0	-	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
All Pedestrians	-	-	0	-	-	-	0	-	-	-	0	-	-
% All Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-
Trucks	16	4	-	20	2	12	-	14	1	1	-	2	36
% Trucks	2.5	2.4	-	2.5	4.7	9.3	-	8.1	3.3	3.8	-	3.6	3.5



Turning Movement Peak Hour Data Plot (7:00 AM)



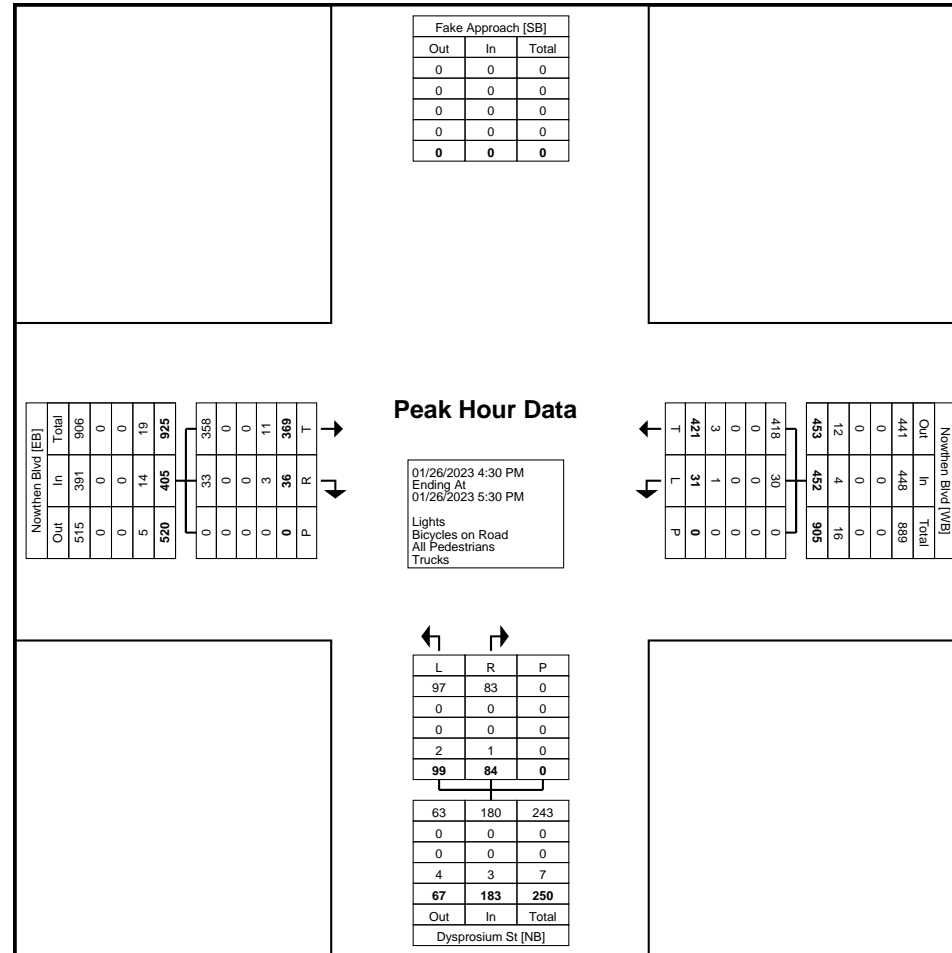
Kimley-Horn and Associates, Inc.  
4201 Winfield Road Suite 600

Warrenville, Illinois, United States 60555  
(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: Nowthen Blvd & Dysprosium St  
Site Code:  
Start Date: 01/26/2023  
Page No: 6

### Turning Movement Peak Hour Data (4:30 PM)

Start Time	Nowthen Blvd Eastbound				Nowthen Blvd Westbound				Dysprosium St Northbound				Int. Total
	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	
4:30 PM	83	7	0	90	9	103	0	112	37	37	0	74	276
4:45 PM	94	14	0	108	9	91	0	100	19	17	0	36	244
5:00 PM	84	8	0	92	7	128	0	135	26	20	0	46	273
5:15 PM	108	7	0	115	6	99	0	105	17	10	0	27	247
Total	369	36	0	405	31	421	0	452	99	84	0	183	1040
Approach %	91.1	8.9	-	-	6.9	93.1	-	-	54.1	45.9	-	-	-
Total %	35.5	3.5	-	38.9	3.0	40.5	-	43.5	9.5	8.1	-	17.6	-
PHF	0.854	0.643	-	0.880	0.861	0.822	-	0.837	0.669	0.568	-	0.618	0.942
Lights	358	33	-	391	30	418	-	448	97	83	-	180	1019
% Lights	97.0	91.7	-	96.5	96.8	99.3	-	99.1	98.0	98.8	-	98.4	98.0
Bicycles on Road	0	0	-	0	0	0	-	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
All Pedestrians	-	-	0	-	-	-	0	-	-	-	0	-	-
% All Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-
Trucks	11	3	-	14	1	3	-	4	2	1	-	3	21
% Trucks	3.0	8.3	-	3.5	3.2	0.7	-	0.9	2.0	1.2	-	1.6	2.0



Turning Movement Peak Hour Data Plot (4:30 PM)



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Count Name: Nowthen Blvd & Dysprosium St  
Site Code:  
Start Date: 01/26/2023  
Page No: 8

### Turning Movement Peak Hour Data (10:00 AM)

Start Time	Nowthen Blvd Eastbound				Nowthen Blvd Westbound				Dysprosium St Northbound				Int. Total
	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	
10:00 AM	68	3	0	71	1	26	0	27	4	6	0	10	108
10:15 AM	77	10	0	87	4	38	0	42	13	8	0	21	150
10:30 AM	70	5	0	75	4	42	0	46	5	4	0	9	130
10:45 AM	72	10	0	82	6	38	0	44	5	6	0	11	137
Total	287	28	0	315	15	144	0	159	27	24	0	51	525
Approach %	91.1	8.9	-	-	9.4	90.6	-	-	52.9	47.1	-	-	-
Total %	54.7	5.3	-	60.0	2.9	27.4	-	30.3	5.1	4.6	-	9.7	-
PHF	0.932	0.700	-	0.905	0.625	0.857	-	0.864	0.519	0.750	-	0.607	0.875
Lights	287	28	-	315	15	144	-	159	27	24	-	51	525
% Lights	100.0	100.0	-	100.0	100.0	100.0	-	100.0	100.0	100.0	-	100.0	100.0
Bicycles on Road	0	0	-	0	0	0	-	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
All Pedestrians	-	-	0	-	-	-	0	-	-	-	0	-	-
% All Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-
Trucks	0	0	-	0	0	0	-	0	0	0	-	0	0
% Trucks	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0





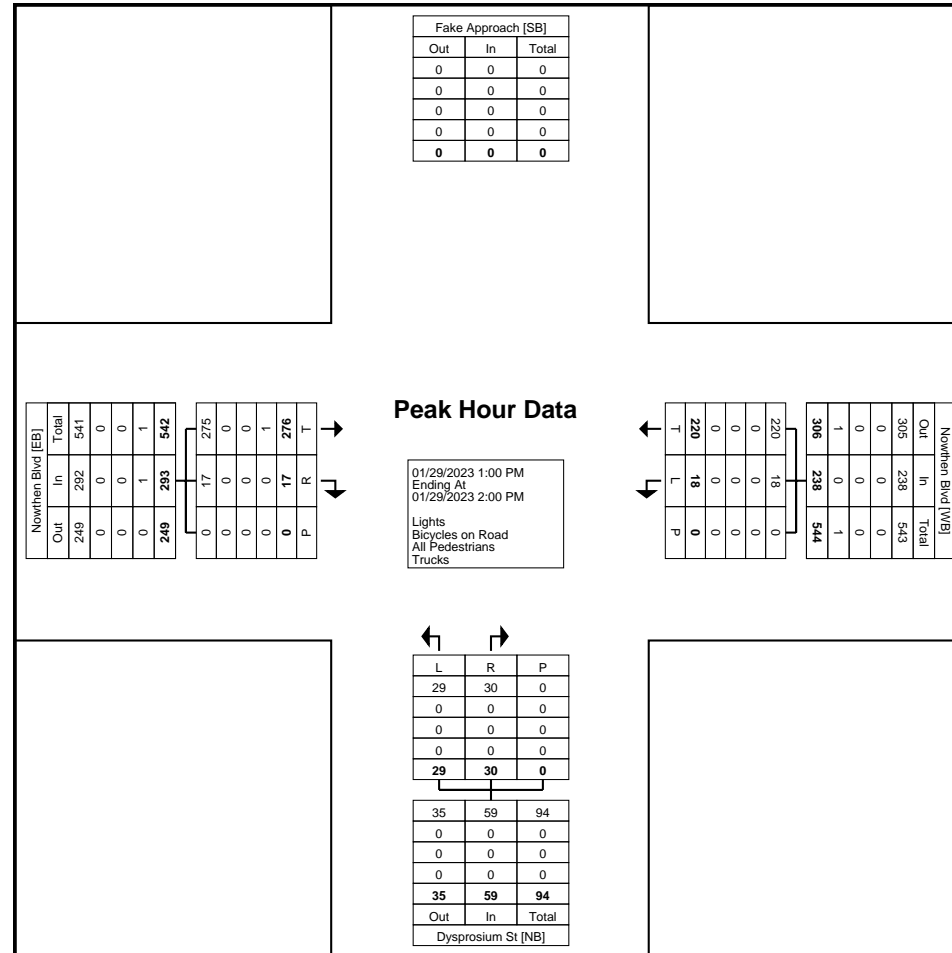
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(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: Nowthen Blvd & Dysprosium St  
Site Code:  
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Page No: 10

### Turning Movement Peak Hour Data (1:00 PM)

Start Time	Nowthen Blvd Eastbound				Nowthen Blvd Westbound				Dysprosium St Northbound				Int. Total
	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	
1:00 PM	63	3	0	66	2	35	0	37	8	7	0	15	118
1:15 PM	86	7	0	93	3	60	0	63	8	5	0	13	169
1:30 PM	66	3	0	69	5	61	0	66	6	7	0	13	148
1:45 PM	61	4	0	65	8	64	0	72	7	11	0	18	155
Total	276	17	0	293	18	220	0	238	29	30	0	59	590
Approach %	94.2	5.8	-	-	7.6	92.4	-	-	49.2	50.8	-	-	-
Total %	46.8	2.9	-	49.7	3.1	37.3	-	40.3	4.9	5.1	-	10.0	-
PHF	0.802	0.607	-	0.788	0.563	0.859	-	0.826	0.906	0.682	-	0.819	0.873
Lights	275	17	-	292	18	220	-	238	29	30	-	59	589
% Lights	99.6	100.0	-	99.7	100.0	100.0	-	100.0	100.0	100.0	-	100.0	99.8
Bicycles on Road	0	0	-	0	0	0	-	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
All Pedestrians	-	-	0	-	-	-	0	-	-	-	0	-	-
% All Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-
Trucks	1	0	-	1	0	0	-	0	0	0	-	0	1
% Trucks	0.4	0.0	-	0.3	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.2



Turning Movement Peak Hour Data Plot (1:00 PM)



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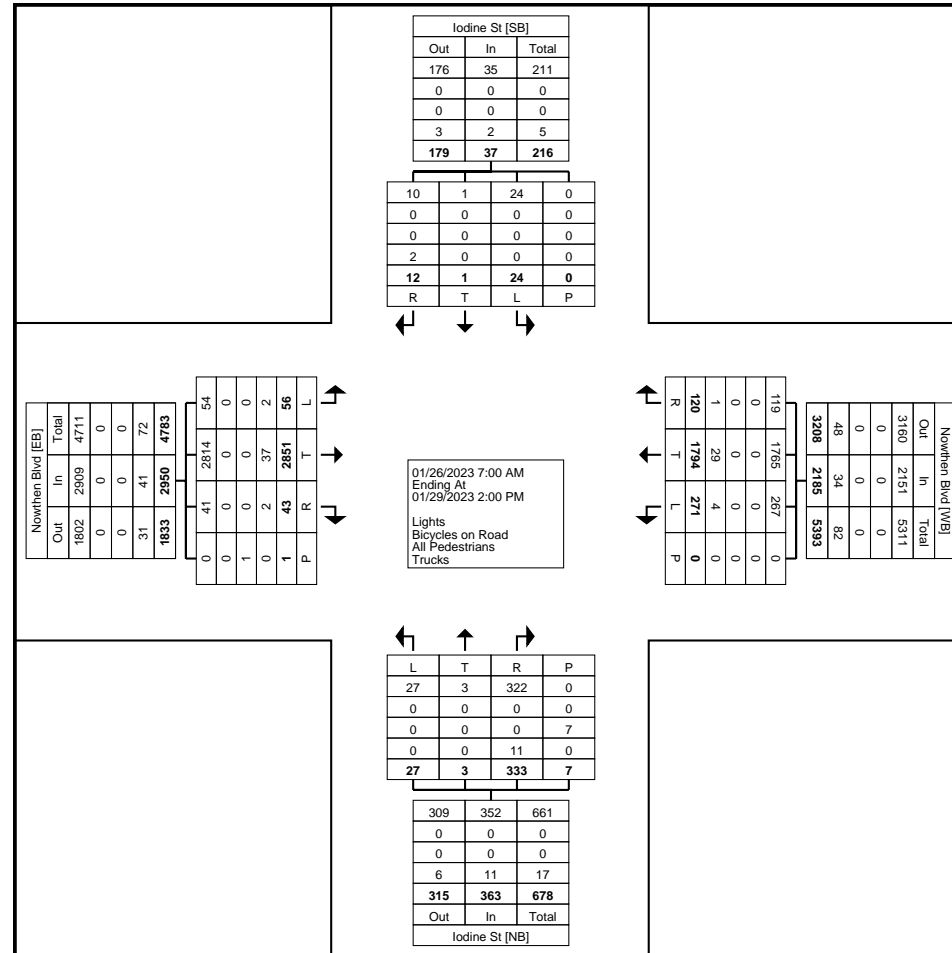
Warrenville, Illinois, United States 60555  
(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: Nowthen Blvd & Iodine St  
Site Code:  
Start Date: 01/26/2023  
Page No: 1

### Turning Movement Data

Start Time	Nowthen Blvd Eastbound					Nowthen Blvd Westbound					Iodine St Northbound					Iodine St Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
7:00 AM	0	216	0	0	216	3	15	1	0	19	2	0	23	0	25	0	0	0	0	0	260
7:15 AM	1	210	1	0	212	3	32	6	0	41	1	0	27	0	28	0	0	0	0	0	281
7:30 AM	2	140	2	0	144	5	52	1	0	58	0	0	17	0	17	0	0	0	0	0	219
7:45 AM	2	143	3	0	148	1	37	4	0	42	1	0	15	0	16	0	0	0	0	0	206
Hourly Total	5	709	6	0	720	12	136	12	0	160	4	0	82	0	86	0	0	0	0	0	966
8:00 AM	4	109	0	0	113	3	53	7	0	63	0	0	7	0	7	0	0	0	0	0	183
8:15 AM	2	98	2	0	102	4	49	6	0	59	3	0	8	0	11	0	0	0	0	0	172
8:30 AM	2	86	0	1	88	6	33	2	0	41	1	0	13	1	14	0	0	0	0	0	143
8:45 AM	9	86	1	0	96	3	39	11	0	53	0	0	9	0	9	0	0	0	0	0	158
Hourly Total	17	379	3	1	399	16	174	26	0	216	4	0	37	1	41	0	0	0	0	0	656
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	128	3	0	131	12	85	3	0	100	1	0	3	0	4	1	0	0	0	1	236
4:15 PM	0	80	6	0	86	11	117	1	0	129	2	0	8	0	10	2	0	0	0	2	227
4:30 PM	1	78	0	0	79	25	114	1	0	140	2	0	13	0	15	4	0	2	0	6	240
4:45 PM	0	94	4	0	98	14	96	1	0	111	0	0	11	0	11	1	0	0	0	1	221
Hourly Total	1	380	13	0	394	62	412	6	0	480	5	0	35	0	40	8	0	2	0	10	924
5:00 PM	7	81	3	0	91	21	125	2	0	148	0	0	11	1	11	1	0	0	0	1	251
5:15 PM	8	102	0	0	110	13	77	16	0	106	0	0	10	2	10	0	0	1	0	1	227
5:30 PM	2	95	4	0	101	17	81	11	0	109	1	0	17	0	18	2	0	1	0	3	231
5:45 PM	0	68	1	0	69	15	108	4	0	127	1	0	12	1	13	4	0	2	0	6	215
Hourly Total	17	346	8	0	371	66	391	33	0	490	2	0	50	4	52	7	0	4	0	11	924
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	64	0	0	64	0	24	3	0	27	0	0	6	0	6	0	0	0	0	0	97
10:15 AM	4	84	0	0	88	7	29	5	0	41	0	0	5	0	5	0	0	0	0	0	134
10:30 AM	4	64	0	0	68	5	24	13	0	42	4	1	8	0	13	1	0	1	0	2	125
10:45 AM	2	75	2	0	79	7	27	4	0	38	2	1	8	0	11	0	0	0	0	0	128
Hourly Total	10	287	2	0	299	19	104	25	0	148	6	2	27	0	35	1	0	1	0	2	484
11:00 AM	0	40	2	0	42	1	30	0	0	31	0	0	9	0	9	0	0	0	0	0	82
11:15 AM	0	59	0	0	59	7	44	4	0	55	1	1	6	0	8	0	1	0	0	1	123
11:30 AM	2	56	0	0	58	5	41	4	0	50	0	0	4	1	4	1	0	1	0	2	114
11:45 AM	0	92	1	0	93	6	42	0	0	48	1	0	10	0	11	1	0	0	0	1	153
Hourly Total	2	247	3	0	252	19	157	8	0	184	2	1	29	1	32	2	1	1	0	4	472
12:00 PM	0	65	0	0	65	9	44	2	0	55	0	0	4	0	4	1	0	0	0	1	125
12:15 PM	1	76	3	0	80	10	53	0	0	63	0	0	10	0	10	0	0	0	0	0	153

12:30 PM	0	64	0	0	64	9	54	0	0	63	0	0	8	0	8	1	0	1	0	2	137
12:45 PM	0	49	2	0	51	9	60	4	0	73	1	0	9	1	10	2	0	0	0	2	136
Hourly Total	1	254	5	0	260	37	211	6	0	254	1	0	31	1	32	4	0	1	0	5	551
1:00 PM	1	54	1	0	56	6	36	1	0	43	0	0	14	0	14	0	0	0	0	0	113
1:15 PM	1	84	1	0	86	10	55	3	0	68	2	0	8	0	10	1	0	1	0	2	166
1:30 PM	1	59	0	0	60	11	59	0	0	70	1	0	9	0	10	0	0	2	0	2	142
1:45 PM	0	52	1	0	53	13	59	0	0	72	0	0	11	0	11	1	0	0	0	1	137
Hourly Total	3	249	3	0	255	40	209	4	0	253	3	0	42	0	45	2	0	3	0	5	558
Grand Total	56	2851	43	1	2950	271	1794	120	0	2185	27	3	333	7	363	24	1	12	0	37	5535
Approach %	1.9	96.6	1.5	-	-	12.4	82.1	5.5	-	-	7.4	0.8	91.7	-	-	64.9	2.7	32.4	-	-	-
Total %	1.0	51.5	0.8	-	53.3	4.9	32.4	2.2	-	39.5	0.5	0.1	6.0	-	6.6	0.4	0.0	0.2	-	0.7	-
Lights	54	2814	41	-	2909	267	1765	119	-	2151	27	3	322	-	352	24	1	10	-	35	5447
% Lights	96.4	98.7	95.3	-	98.6	98.5	98.4	99.2	-	98.4	100.0	100.0	96.7	-	97.0	100.0	100.0	83.3	-	94.6	98.4
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0
All Pedestrians	-	-	-	1	-	-	-	-	0	-	-	-	-	7	-	-	-	-	0	-	-
% All Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-
Trucks	2	37	2	-	41	4	29	1	-	34	0	0	11	-	11	0	0	2	-	2	88
% Trucks	3.6	1.3	4.7	-	1.4	1.5	1.6	0.8	-	1.6	0.0	0.0	3.3	-	3.0	0.0	0.0	16.7	-	5.4	1.6



Turning Movement Data Plot



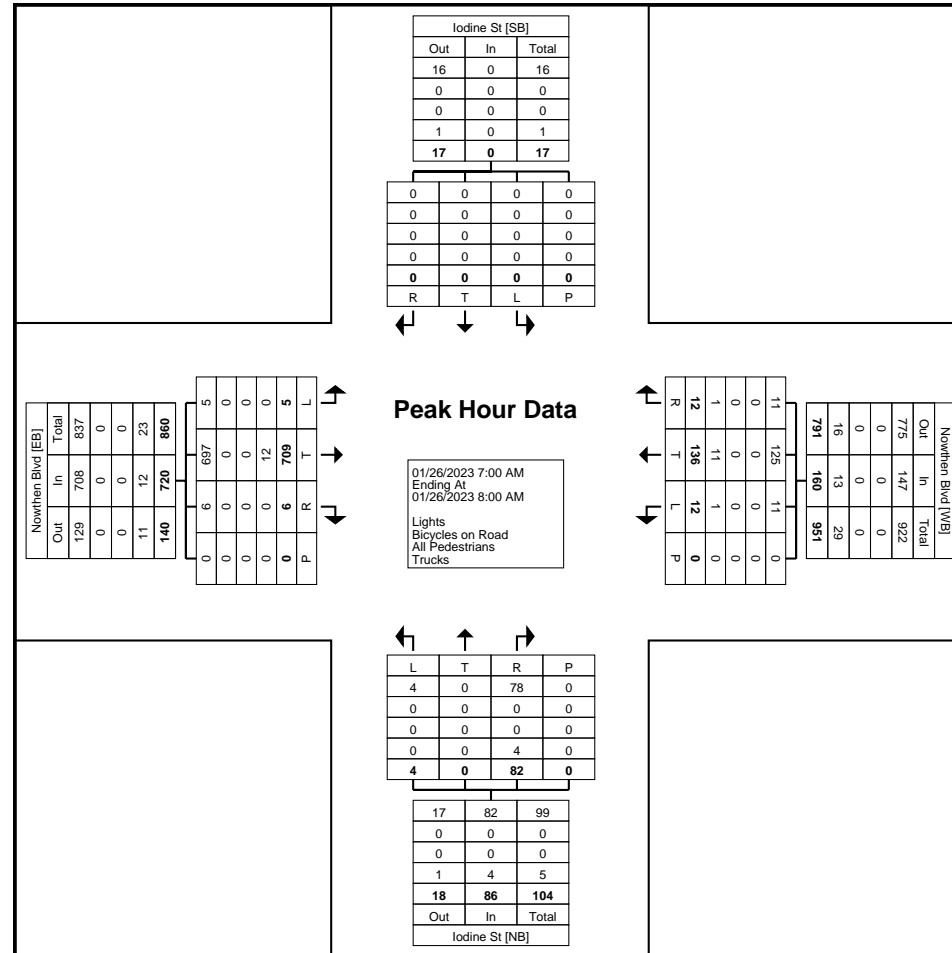
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4201 Winfield Road Suite 600

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(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: Nowthen Blvd & Iodine St  
Site Code:  
Start Date: 01/26/2023  
Page No: 4

### Turning Movement Peak Hour Data (7:00 AM)

Start Time	Nowthen Blvd Eastbound					Nowthen Blvd Westbound					Iodine St Northbound					Iodine St Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
7:00 AM	0	216	0	0	216	3	15	1	0	19	2	0	23	0	25	0	0	0	0	0	260
7:15 AM	1	210	1	0	212	3	32	6	0	41	1	0	27	0	28	0	0	0	0	0	281
7:30 AM	2	140	2	0	144	5	52	1	0	58	0	0	17	0	17	0	0	0	0	0	219
7:45 AM	2	143	3	0	148	1	37	4	0	42	1	0	15	0	16	0	0	0	0	0	206
Total	5	709	6	0	720	12	136	12	0	160	4	0	82	0	86	0	0	0	0	0	966
Approach %	0.7	98.5	0.8	-	-	7.5	85.0	7.5	-	-	4.7	0.0	95.3	-	-	0.0	0.0	0.0	-	-	-
Total %	0.5	73.4	0.6	-	74.5	1.2	14.1	1.2	-	16.6	0.4	0.0	8.5	-	8.9	0.0	0.0	0.0	-	0.0	-
PHF	0.625	0.821	0.500	-	0.833	0.600	0.654	0.500	-	0.690	0.500	0.000	0.759	-	0.768	0.000	0.000	0.000	-	0.000	0.859
Lights	5	697	6	-	708	11	125	11	-	147	4	0	78	-	82	0	0	0	-	0	937
% Lights	100.0	98.3	100.0	-	98.3	91.7	91.9	91.7	-	91.9	100.0	-	95.1	-	95.3	-	-	-	-	-	97.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	-	0.0	-	0.0	-	-	-	-	-	0.0
All Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	0	-	-	-	-	-	0	-	-
% All Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trucks	0	12	0	-	12	1	11	1	-	13	0	0	4	-	4	0	0	0	-	0	29
% Trucks	0.0	1.7	0.0	-	1.7	8.3	8.1	8.3	-	8.1	0.0	-	4.9	-	4.7	-	-	-	-	-	3.0



Turning Movement Peak Hour Data Plot (7:00 AM)



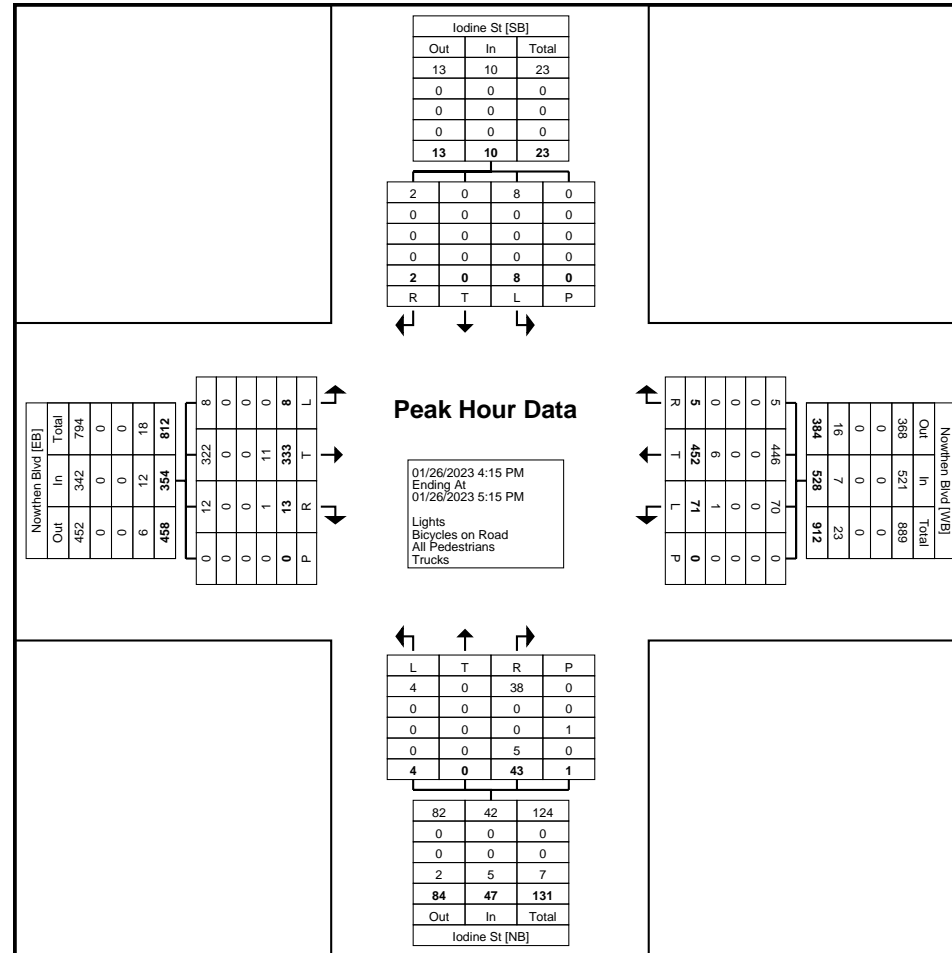
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4201 Winfield Road Suite 600

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(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: Nowthen Blvd & Iodine St  
Site Code:  
Start Date: 01/26/2023  
Page No: 6

### Turning Movement Peak Hour Data (4:15 PM)

Start Time	Nowthen Blvd Eastbound					Nowthen Blvd Westbound					Iodine St Northbound					Iodine St Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
4:15 PM	0	80	6	0	86	11	117	1	0	129	2	0	8	0	10	2	0	0	0	2	227
4:30 PM	1	78	0	0	79	25	114	1	0	140	2	0	13	0	15	4	0	2	0	6	240
4:45 PM	0	94	4	0	98	14	96	1	0	111	0	0	11	0	11	1	0	0	0	1	221
5:00 PM	7	81	3	0	91	21	125	2	0	148	0	0	11	1	11	1	0	0	0	1	251
<b>Total</b>	<b>8</b>	<b>333</b>	<b>13</b>	<b>0</b>	<b>354</b>	<b>71</b>	<b>452</b>	<b>5</b>	<b>0</b>	<b>528</b>	<b>4</b>	<b>0</b>	<b>43</b>	<b>1</b>	<b>47</b>	<b>8</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>10</b>	<b>939</b>
Approach %	2.3	94.1	3.7	-	-	13.4	85.6	0.9	-	-	8.5	0.0	91.5	-	-	80.0	0.0	20.0	-	-	-
Total %	0.9	35.5	1.4	-	37.7	7.6	48.1	0.5	-	56.2	0.4	0.0	4.6	-	5.0	0.9	0.0	0.2	-	1.1	-
PHF	0.286	0.886	0.542	-	0.903	0.710	0.904	0.625	-	0.892	0.500	0.000	0.827	-	0.783	0.500	0.000	0.250	-	0.417	0.935
Lights	8	322	12	-	342	70	446	5	-	521	4	0	38	-	42	8	0	2	-	10	915
% Lights	100.0	96.7	92.3	-	96.6	98.6	98.7	100.0	-	98.7	100.0	-	88.4	-	89.4	100.0	-	100.0	-	100.0	97.4
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0
All Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	-	-	-	-	0	-
% All Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-
Trucks	0	11	1	-	12	1	6	0	-	7	0	0	5	-	5	0	0	0	-	0	24
% Trucks	0.0	3.3	7.7	-	3.4	1.4	1.3	0.0	-	1.3	0.0	-	11.6	-	10.6	0.0	-	0.0	-	0.0	2.6



Turning Movement Peak Hour Data Plot (4:15 PM)



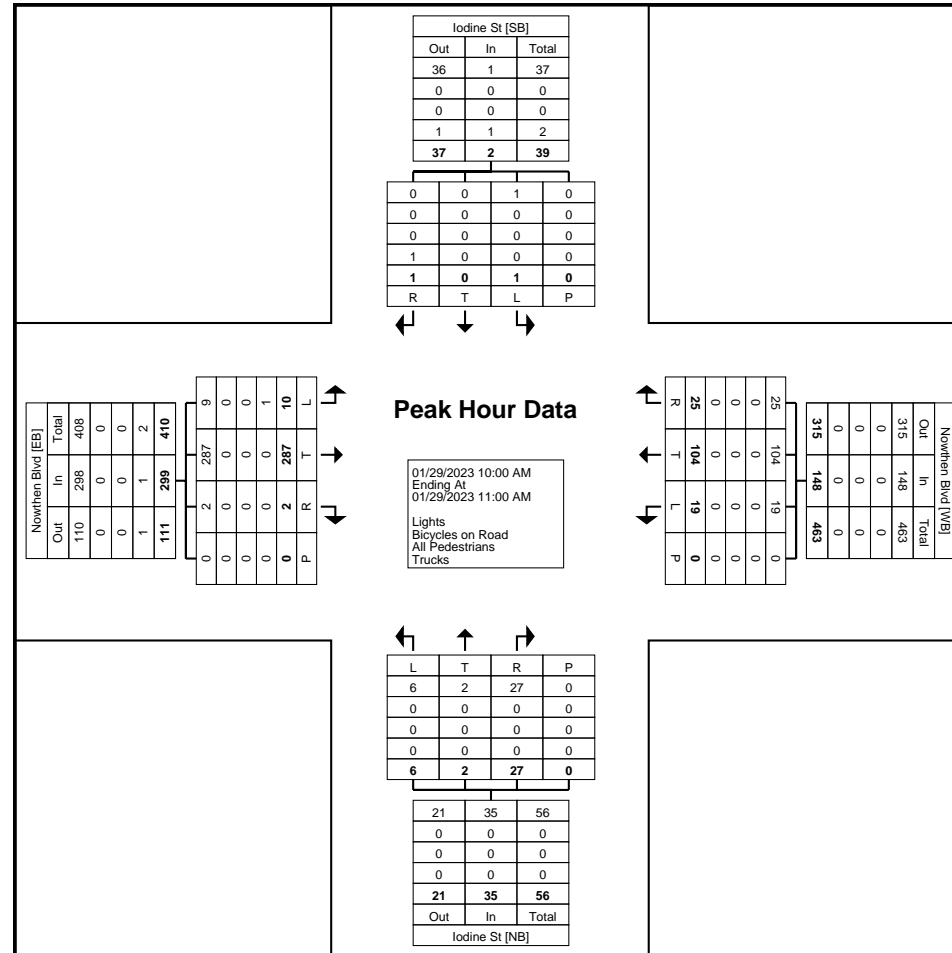
Kimley-Horn and Associates, Inc.  
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Warrenville, Illinois, United States 60555  
(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: Nowthen Blvd & Iodine St  
Site Code:  
Start Date: 01/26/2023  
Page No: 8

### Turning Movement Peak Hour Data (10:00 AM)

Start Time	Nowthen Blvd Eastbound					Nowthen Blvd Westbound					Iodine St Northbound					Iodine St Southbound					Int. Total	
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total		
10:00 AM	0	64	0	0	64	0	24	3	0	27	0	0	6	0	6	0	0	0	0	0	0	97
10:15 AM	4	84	0	0	88	7	29	5	0	41	0	0	5	0	5	0	0	0	0	0	0	134
10:30 AM	4	64	0	0	68	5	24	13	0	42	4	1	8	0	13	1	0	1	0	2	2	125
10:45 AM	2	75	2	0	79	7	27	4	0	38	2	1	8	0	11	0	0	0	0	0	0	128
Total	10	287	2	0	299	19	104	25	0	148	6	2	27	0	35	1	0	1	0	2	2	484
Approach %	3.3	96.0	0.7	-	-	12.8	70.3	16.9	-	-	17.1	5.7	77.1	-	-	50.0	0.0	50.0	-	-	-	-
Total %	2.1	59.3	0.4	-	61.8	3.9	21.5	5.2	-	30.6	1.2	0.4	5.6	-	7.2	0.2	0.0	0.2	-	0.4	-	-
PHF	0.625	0.854	0.250	-	0.849	0.679	0.897	0.481	-	0.881	0.375	0.500	0.844	-	0.673	0.250	0.000	0.250	-	0.250	-	0.903
Lights	9	287	2	-	298	19	104	25	-	148	6	2	27	-	35	1	0	0	-	1	1	482
% Lights	90.0	100.0	100.0	-	99.7	100.0	100.0	100.0	-	100.0	100.0	100.0	100.0	-	100.0	100.0	-	0.0	-	50.0	99.6	99.6
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0
% Bicycles on Road	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	0.0
All Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-
% All Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trucks	1	0	0	-	1	0	0	0	-	0	0	0	-	0	0	0	0	1	-	1	2	2
% Trucks	10.0	0.0	0.0	-	0.3	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	100.0	-	50.0	0.4	0.4



Turning Movement Peak Hour Data Plot (10:00 AM)



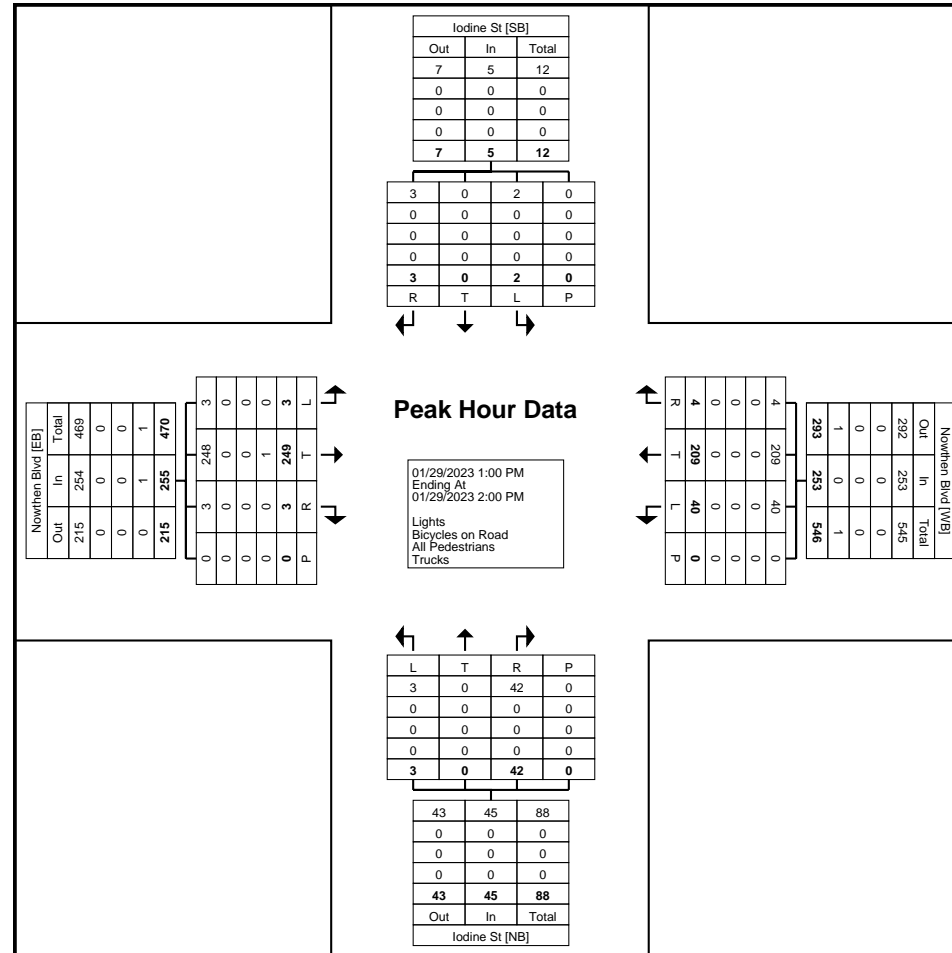
Kimley-Horn and Associates, Inc.  
4201 Winfield Road Suite 600

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(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: Nowthen Blvd & Iodine St  
Site Code:  
Start Date: 01/26/2023  
Page No: 10

### Turning Movement Peak Hour Data (1:00 PM)

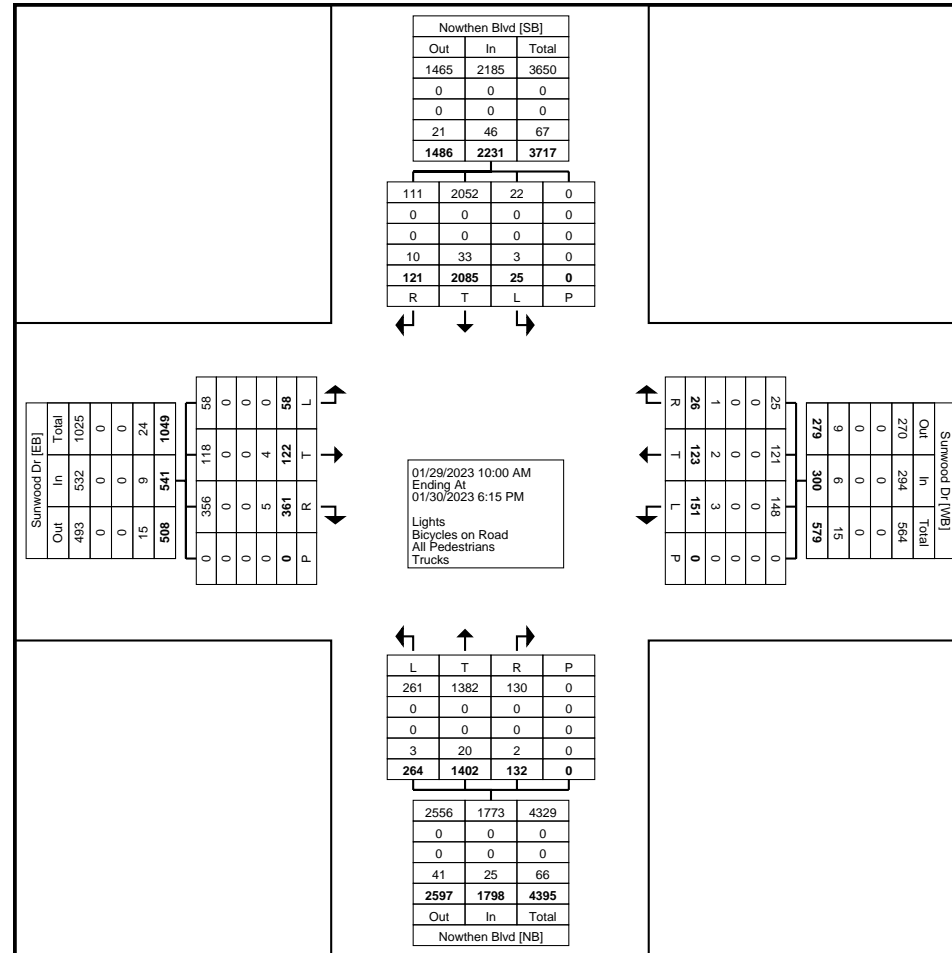
Start Time	Nowthen Blvd Eastbound					Nowthen Blvd Westbound					Iodine St Northbound					Iodine St Southbound					Int. Total	
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total		
1:00 PM	1	54	1	0	56	6	36	1	0	43	0	0	14	0	14	0	0	0	0	0	0	113
1:15 PM	1	84	1	0	86	10	55	3	0	68	2	0	8	0	10	1	0	1	0	2	2	166
1:30 PM	1	59	0	0	60	11	59	0	0	70	1	0	9	0	10	0	0	2	0	2	2	142
1:45 PM	0	52	1	0	53	13	59	0	0	72	0	0	11	0	11	1	0	0	0	1	1	137
Total	3	249	3	0	255	40	209	4	0	253	3	0	42	0	45	2	0	3	0	5	5	558
Approach %	1.2	97.6	1.2	-	-	15.8	82.6	1.6	-	-	6.7	0.0	93.3	-	-	40.0	0.0	60.0	-	-	-	-
Total %	0.5	44.6	0.5	-	45.7	7.2	37.5	0.7	-	45.3	0.5	0.0	7.5	-	8.1	0.4	0.0	0.5	-	0.9	-	-
PHF	0.750	0.741	0.750	-	0.741	0.769	0.886	0.333	-	0.878	0.375	0.000	0.750	-	0.804	0.500	0.000	0.375	-	0.625	0.840	-
Lights	3	248	3	-	254	40	209	4	-	253	3	0	42	-	45	2	0	3	-	5	5	557
% Lights	100.0	99.6	100.0	-	99.6	100.0	100.0	100.0	-	100.0	100.0	-	100.0	-	100.0	100.0	-	100.0	-	100.0	99.8	99.8
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0
% Bicycles on Road	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	0.0
All Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-
% All Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trucks	0	1	0	-	1	0	0	0	-	0	0	0	0	0	0	0	0	0	-	0	0	1
% Trucks	0.0	0.4	0.0	-	0.4	0.0	0.0	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	0.2



Turning Movement Peak Hour Data Plot (1:00 PM)



4:00 PM	6	5	6	0	17	2	5	4	0	11	21	84	12	0	117	11	120	37	0	168	313
4:15 PM	2	1	14	0	17	3	4	0	0	7	15	60	5	0	80	2	71	5	0	78	182
4:30 PM	4	7	15	0	26	8	6	1	0	15	24	82	6	0	112	3	77	3	0	83	236
4:45 PM	2	11	6	0	19	8	7	2	0	17	14	84	4	0	102	0	62	3	0	65	203
Hourly Total	14	24	41	0	79	21	22	7	0	50	74	310	27	0	411	16	330	48	0	394	934
5:00 PM	3	6	12	0	21	0	2	2	0	4	21	82	3	0	106	0	69	5	0	74	205
5:15 PM	0	5	14	0	19	2	6	0	0	8	11	96	4	0	111	0	55	8	0	63	201
5:30 PM	1	3	14	0	18	1	3	1	0	5	10	77	7	0	94	0	48	5	0	53	170
5:45 PM	1	4	11	0	16	2	3	0	0	5	14	63	3	0	80	0	45	5	0	50	151
Hourly Total	5	18	51	0	74	5	14	3	0	22	56	318	17	0	391	0	217	23	0	240	727
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
Grand Total	58	122	361	0	541	151	123	26	0	300	264	1402	132	0	1798	25	2085	121	0	2231	4870
Approach %	10.7	22.6	66.7	-	-	50.3	41.0	8.7	-	-	14.7	78.0	7.3	-	-	1.1	93.5	5.4	-	-	-
Total %	1.2	2.5	7.4	-	11.1	3.1	2.5	0.5	-	6.2	5.4	28.8	2.7	-	36.9	0.5	42.8	2.5	-	45.8	-
Lights	58	118	356	-	532	148	121	25	-	294	261	1382	130	-	1773	22	2052	111	-	2185	4784
% Lights	100.0	96.7	98.6	-	98.3	98.0	98.4	96.2	-	98.0	98.9	98.6	98.5	-	98.6	88.0	98.4	91.7	-	97.9	98.2
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0
All Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% All Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trucks	0	4	5	-	9	3	2	1	-	6	3	20	2	-	25	3	33	10	-	46	86
% Trucks	0.0	3.3	1.4	-	1.7	2.0	1.6	3.8	-	2.0	1.1	1.4	1.5	-	1.4	12.0	1.6	8.3	-	2.1	1.8



Turning Movement Data Plot



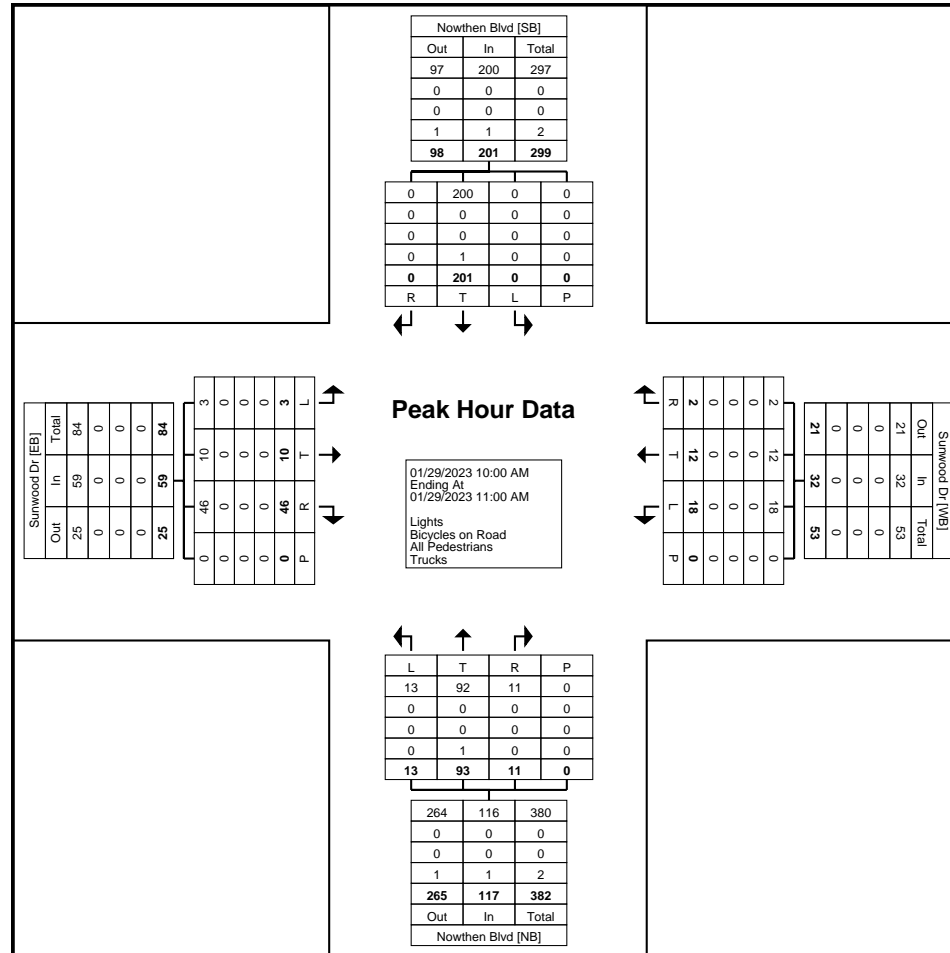
Kimley-Horn and Associates, Inc.  
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Warrenville, Illinois, United States 60555  
(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: Nowthen Blvd & Sunwood Dr  
Site Code:  
Start Date: 01/29/2023  
Page No: 4

### Turning Movement Peak Hour Data (10:00 AM)

Start Time	Sunwood Dr Eastbound					Sunwood Dr Westbound					Nowthen Blvd Northbound					Nowthen Blvd Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
10:00 AM	1	2	11	0	14	2	1	0	0	3	2	21	4	0	27	0	41	0	0	41	85
10:15 AM	0	4	14	0	18	6	3	0	0	9	4	26	3	0	33	0	58	0	0	58	118
10:30 AM	1	2	7	0	10	5	1	2	0	8	5	22	1	0	28	0	52	0	0	52	98
10:45 AM	1	2	14	0	17	5	7	0	0	12	2	24	3	0	29	0	50	0	0	50	108
Total	3	10	46	0	59	18	12	2	0	32	13	93	11	0	117	0	201	0	0	201	409
Approach %	5.1	16.9	78.0	-	-	56.3	37.5	6.3	-	-	11.1	79.5	9.4	-	-	0.0	100.0	0.0	-	-	-
Total %	0.7	2.4	11.2	-	14.4	4.4	2.9	0.5	-	7.8	3.2	22.7	2.7	-	28.6	0.0	49.1	0.0	-	49.1	-
PHF	0.750	0.625	0.821	-	0.819	0.750	0.429	0.250	-	0.667	0.650	0.894	0.688	-	0.886	0.000	0.866	0.000	-	0.866	0.867
Lights	3	10	46	-	59	18	12	2	-	32	13	92	11	-	116	0	200	0	-	200	407
% Lights	100.0	100.0	100.0	-	100.0	100.0	100.0	100.0	-	100.0	100.0	98.9	100.0	-	99.1	-	99.5	-	-	99.5	99.5
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	-	-	0.0	0.0
All Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% All Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trucks	0	0	0	-	0	0	0	0	-	0	0	1	0	-	1	0	1	0	-	1	2
% Trucks	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	1.1	0.0	-	0.9	-	0.5	-	-	0.5	0.5



Turning Movement Peak Hour Data Plot (10:00 AM)



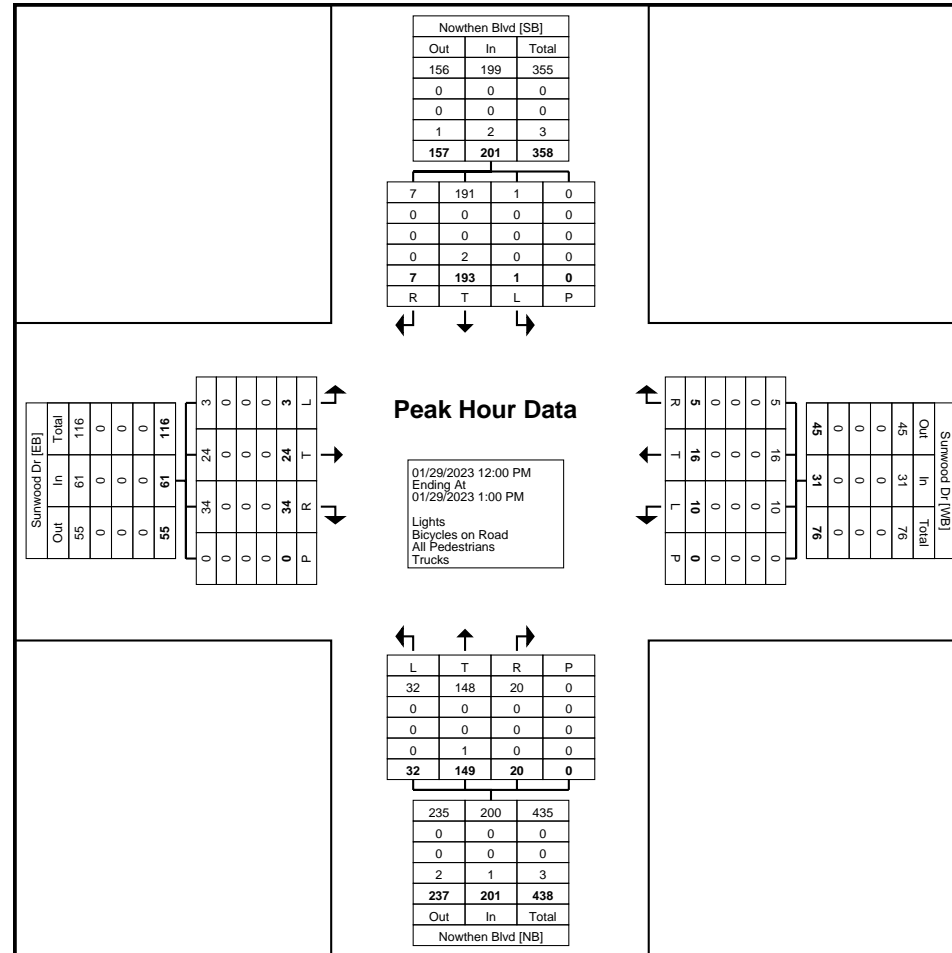
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Count Name: Nowthen Blvd & Sunwood Dr  
Site Code:  
Start Date: 01/29/2023  
Page No: 6

### Turning Movement Peak Hour Data (12:00 PM)

Start Time	Sunwood Dr Eastbound					Sunwood Dr Westbound					Nowthen Blvd Northbound					Nowthen Blvd Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
12:00 PM	1	3	10	0	14	4	6	1	0	11	11	30	5	0	46	0	41	3	0	44	115
12:15 PM	0	7	10	0	17	1	4	1	0	6	5	35	4	0	44	0	63	2	0	65	132
12:30 PM	1	7	7	0	15	4	1	2	0	7	7	44	4	0	55	0	50	1	0	51	128
12:45 PM	1	7	7	0	15	1	5	1	0	7	9	40	7	0	56	1	39	1	0	41	119
Total	3	24	34	0	61	10	16	5	0	31	32	149	20	0	201	1	193	7	0	201	494
Approach %	4.9	39.3	55.7	-	-	32.3	51.6	16.1	-	-	15.9	74.1	10.0	-	-	0.5	96.0	3.5	-	-	-
Total %	0.6	4.9	6.9	-	12.3	2.0	3.2	1.0	-	6.3	6.5	30.2	4.0	-	40.7	0.2	39.1	1.4	-	40.7	-
PHF	0.750	0.857	0.850	-	0.897	0.625	0.667	0.625	-	0.705	0.727	0.847	0.714	-	0.897	0.250	0.766	0.583	-	0.773	0.936
Lights	3	24	34	-	61	10	16	5	-	31	32	148	20	-	200	1	191	7	-	199	491
% Lights	100.0	100.0	100.0	-	100.0	100.0	100.0	100.0	-	100.0	100.0	99.3	100.0	-	99.5	100.0	99.0	100.0	-	99.0	99.4
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0
All Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% All Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trucks	0	0	0	-	0	0	0	0	-	0	0	1	0	-	1	0	2	0	-	2	3
% Trucks	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.7	0.0	-	0.5	0.0	1.0	0.0	-	1.0	0.6



Turning Movement Peak Hour Data Plot (12:00 PM)



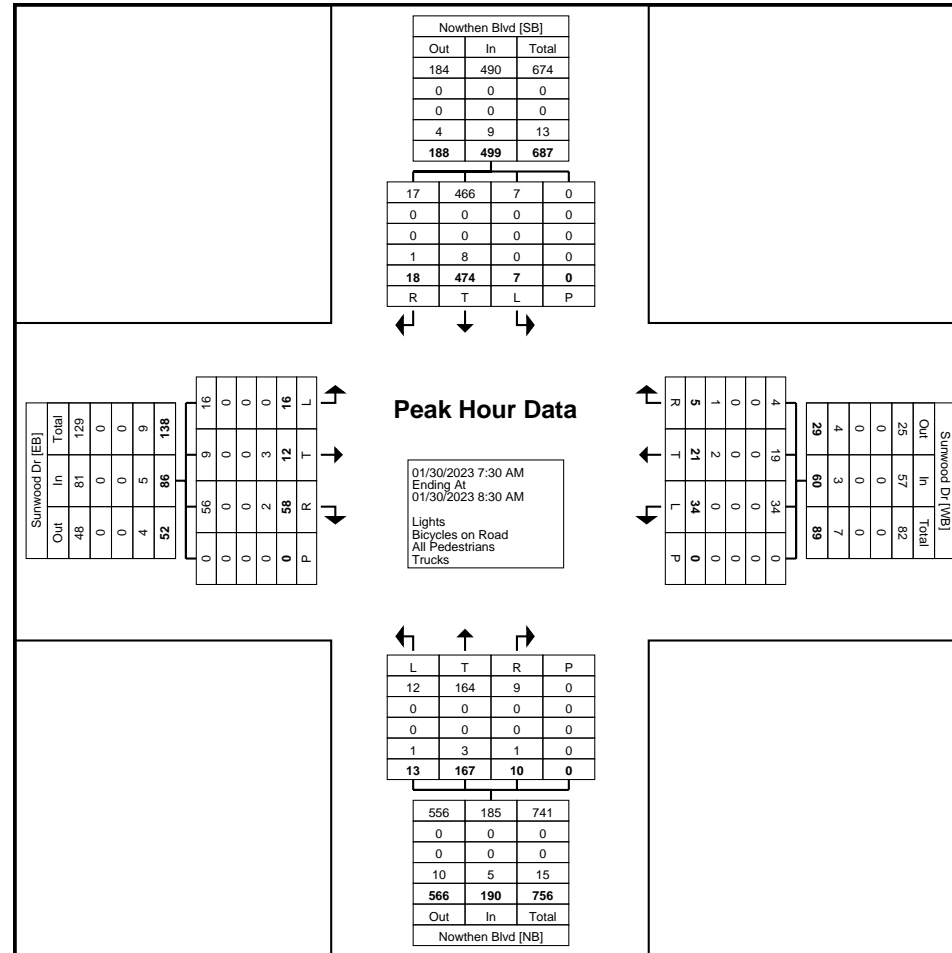
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Count Name: Nowthen Blvd & Sunwood Dr  
Site Code:  
Start Date: 01/29/2023  
Page No: 8

### Turning Movement Peak Hour Data (7:30 AM)

Start Time	Sunwood Dr Eastbound					Sunwood Dr Westbound					Nowthen Blvd Northbound					Nowthen Blvd Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
7:30 AM	3	1	6	0	10	12	6	0	0	18	3	31	3	0	37	2	108	6	0	116	181
7:45 AM	3	6	17	0	26	6	6	3	0	15	3	34	0	0	37	0	126	5	0	131	209
8:00 AM	6	2	21	0	29	9	3	1	0	13	4	46	5	0	55	3	140	3	0	146	243
8:15 AM	4	3	14	0	21	7	6	1	0	14	3	56	2	0	61	2	100	4	0	106	202
Total	16	12	58	0	86	34	21	5	0	60	13	167	10	0	190	7	474	18	0	499	835
Approach %	18.6	14.0	67.4	-	-	56.7	35.0	8.3	-	-	6.8	87.9	5.3	-	-	1.4	95.0	3.6	-	-	-
Total %	1.9	1.4	6.9	-	10.3	4.1	2.5	0.6	-	7.2	1.6	20.0	1.2	-	22.8	0.8	56.8	2.2	-	59.8	-
PHF	0.667	0.500	0.690	-	0.741	0.708	0.875	0.417	-	0.833	0.813	0.746	0.500	-	0.779	0.583	0.846	0.750	-	0.854	0.859
Lights	16	9	56	-	81	34	19	4	-	57	12	164	9	-	185	7	466	17	-	490	813
% Lights	100.0	75.0	96.6	-	94.2	100.0	90.5	80.0	-	95.0	92.3	98.2	90.0	-	97.4	100.0	98.3	94.4	-	98.2	97.4
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0
All Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% All Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trucks	0	3	2	-	5	0	2	1	-	3	1	3	1	-	5	0	8	1	-	9	22
% Trucks	0.0	25.0	3.4	-	5.8	0.0	9.5	20.0	-	5.0	7.7	1.8	10.0	-	2.6	0.0	1.7	5.6	-	1.8	2.6



Turning Movement Peak Hour Data Plot (7:30 AM)



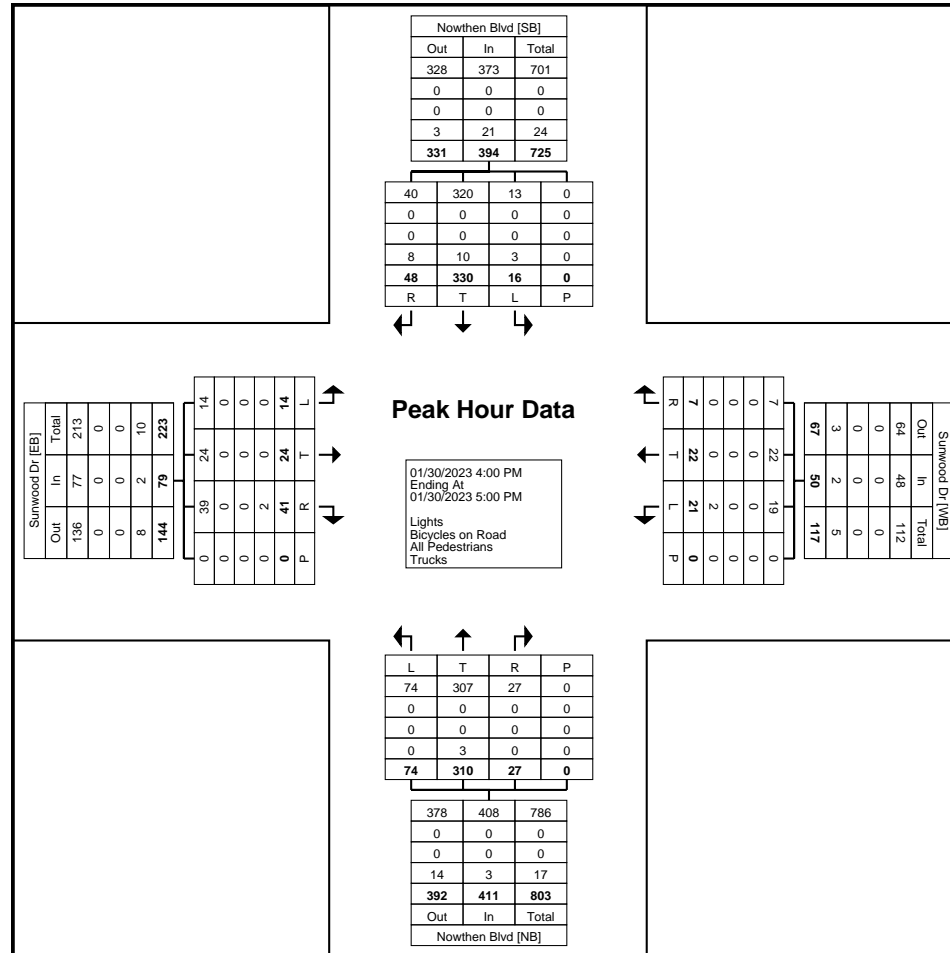
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(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: Nowthen Blvd & Sunwood Dr  
Site Code:  
Start Date: 01/29/2023  
Page No: 10

### Turning Movement Peak Hour Data (4:00 PM)

Start Time	Sunwood Dr Eastbound					Sunwood Dr Westbound					Nowthen Blvd Northbound					Nowthen Blvd Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
4:00 PM	6	5	6	0	17	2	5	4	0	11	21	84	12	0	117	11	120	37	0	168	313
4:15 PM	2	1	14	0	17	3	4	0	0	7	15	60	5	0	80	2	71	5	0	78	182
4:30 PM	4	7	15	0	26	8	6	1	0	15	24	82	6	0	112	3	77	3	0	83	236
4:45 PM	2	11	6	0	19	8	7	2	0	17	14	84	4	0	102	0	62	3	0	65	203
Total	14	24	41	0	79	21	22	7	0	50	74	310	27	0	411	16	330	48	0	394	934
Approach %	17.7	30.4	51.9	-	-	42.0	44.0	14.0	-	-	18.0	75.4	6.6	-	-	4.1	83.8	12.2	-	-	-
Total %	1.5	2.6	4.4	-	8.5	2.2	2.4	0.7	-	5.4	7.9	33.2	2.9	-	44.0	1.7	35.3	5.1	-	42.2	-
PHF	0.583	0.545	0.683	-	0.760	0.656	0.786	0.438	-	0.735	0.771	0.923	0.563	-	0.878	0.364	0.688	0.324	-	0.586	0.746
Lights	14	24	39	-	77	19	22	7	-	48	74	307	27	-	408	13	320	40	-	373	906
% Lights	100.0	100.0	95.1	-	97.5	90.5	100.0	100.0	-	96.0	100.0	99.0	100.0	-	99.3	81.3	97.0	83.3	-	94.7	97.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0
All Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% All Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trucks	0	0	2	-	2	2	0	0	-	2	0	3	0	-	3	3	10	8	-	21	28
% Trucks	0.0	0.0	4.9	-	2.5	9.5	0.0	0.0	-	4.0	0.0	1.0	0.0	-	0.7	18.8	3.0	16.7	-	5.3	3.0



Turning Movement Peak Hour Data Plot (4:00 PM)



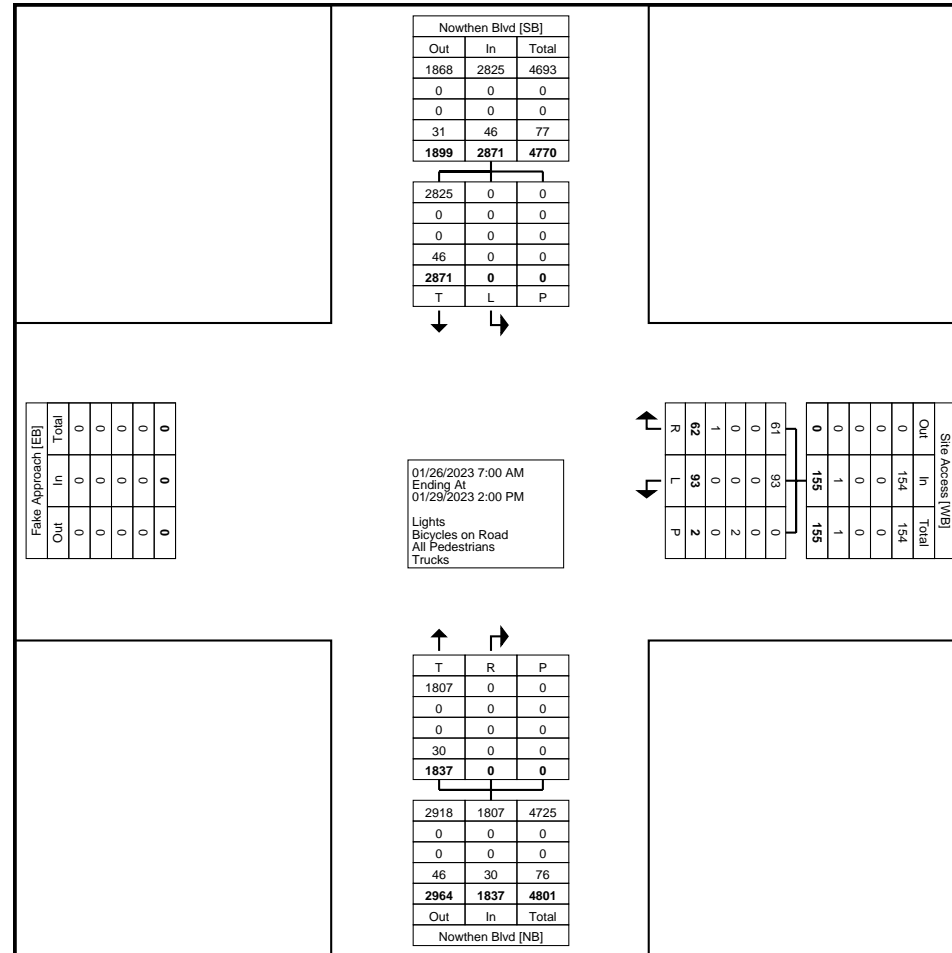
Kimley-Horn and Associates, Inc.  
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 Warrenville, Illinois, United States 60555  
 (630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: Nowthen Blvd & the North Site  
 Access  
 Site Code:  
 Start Date: 01/26/2023  
 Page No: 1

### Turning Movement Data

Start Time	Site Access Westbound				Nowthen Blvd Northbound				Nowthen Blvd Southbound				Int. Total
	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	
7:00 AM	0	0	0	0	15	0	0	15	0	222	0	222	237
7:15 AM	0	0	0	0	34	0	0	34	0	209	0	209	243
7:30 AM	0	1	0	1	51	0	0	51	0	145	0	145	197
7:45 AM	0	0	0	0	38	0	0	38	0	148	0	148	186
Hourly Total	0	1	0	1	138	0	0	138	0	724	0	724	863
8:00 AM	3	0	0	3	53	0	0	53	0	111	0	111	167
8:15 AM	1	0	0	1	52	0	0	52	0	102	0	102	155
8:30 AM	0	2	1	2	33	0	0	33	0	87	0	87	122
8:45 AM	2	1	0	3	39	0	0	39	0	94	0	94	136
Hourly Total	6	3	1	9	177	0	0	177	0	394	0	394	580
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	2	1	0	3	84	0	0	84	0	127	0	127	214
4:15 PM	0	0	0	0	113	0	0	113	0	88	0	88	201
4:30 PM	2	0	1	2	123	0	0	123	0	75	0	75	200
4:45 PM	0	1	0	1	99	0	0	99	0	98	0	98	198
Hourly Total	4	2	1	6	419	0	0	419	0	388	0	388	813
5:00 PM	1	2	0	3	124	0	0	124	0	94	0	94	221
5:15 PM	8	5	0	13	85	0	0	85	0	101	0	101	199
5:30 PM	15	11	0	26	80	0	0	80	0	83	0	83	189
5:45 PM	1	0	0	1	120	0	0	120	0	71	0	71	192
Hourly Total	25	18	0	43	409	0	0	409	0	349	0	349	801
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	4	6	0	10	24	0	0	24	0	59	0	59	93
10:15 AM	4	3	0	7	29	0	0	29	0	85	0	85	121
10:30 AM	1	0	0	1	28	0	0	28	0	68	0	68	97
10:45 AM	5	1	0	6	29	0	0	29	0	75	0	75	110
Hourly Total	14	10	0	24	110	0	0	110	0	287	0	287	421
11:00 AM	1	0	0	1	30	0	0	30	0	40	0	40	71
11:15 AM	3	1	0	4	41	0	0	41	0	56	0	56	101
11:30 AM	0	0	0	0	46	0	0	46	0	58	0	58	104
11:45 AM	9	6	0	15	41	0	0	41	0	85	0	85	141
Hourly Total	13	7	0	20	158	0	0	158	0	239	0	239	417

12:00 PM	6	1	0	7	47	0	0	47	0	60	0	60	114
12:15 PM	1	1	0	2	49	0	0	49	0	80	0	80	131
12:30 PM	1	2	0	3	58	0	0	58	0	64	0	64	125
12:45 PM	0	1	0	1	61	0	0	61	0	51	0	51	113
Hourly Total	8	5	0	13	215	0	0	215	0	255	0	255	483
1:00 PM	1	0	0	1	36	0	0	36	0	55	0	55	92
1:15 PM	14	10	0	24	57	0	0	57	0	75	0	75	156
1:30 PM	6	3	0	9	64	0	0	64	0	51	0	51	124
1:45 PM	2	3	0	5	54	0	0	54	0	54	0	54	113
Hourly Total	23	16	0	39	211	0	0	211	0	235	0	235	485
Grand Total	93	62	2	155	1837	0	0	1837	0	2871	0	2871	4863
Approach %	60.0	40.0	-	-	100.0	0.0	-	-	0.0	100.0	-	-	-
Total %	1.9	1.3	-	3.2	37.8	0.0	-	37.8	0.0	59.0	-	59.0	-
Lights	93	61	-	154	1807	0	-	1807	0	2825	-	2825	4786
% Lights	100.0	98.4	-	99.4	98.4	-	-	98.4	-	98.4	-	98.4	98.4
Bicycles on Road	0	0	-	0	0	0	-	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	0.0	0.0	-	-	0.0	-	0.0	-	0.0	0.0
All Pedestrians	-	-	2	-	-	-	0	-	-	-	0	-	-
% All Pedestrians	-	-	100.0	-	-	-	-	-	-	-	-	-	-
Trucks	0	1	-	1	30	0	-	30	0	46	-	46	77
% Trucks	0.0	1.6	-	0.6	1.6	-	-	1.6	-	1.6	-	1.6	1.6



Turning Movement Data Plot

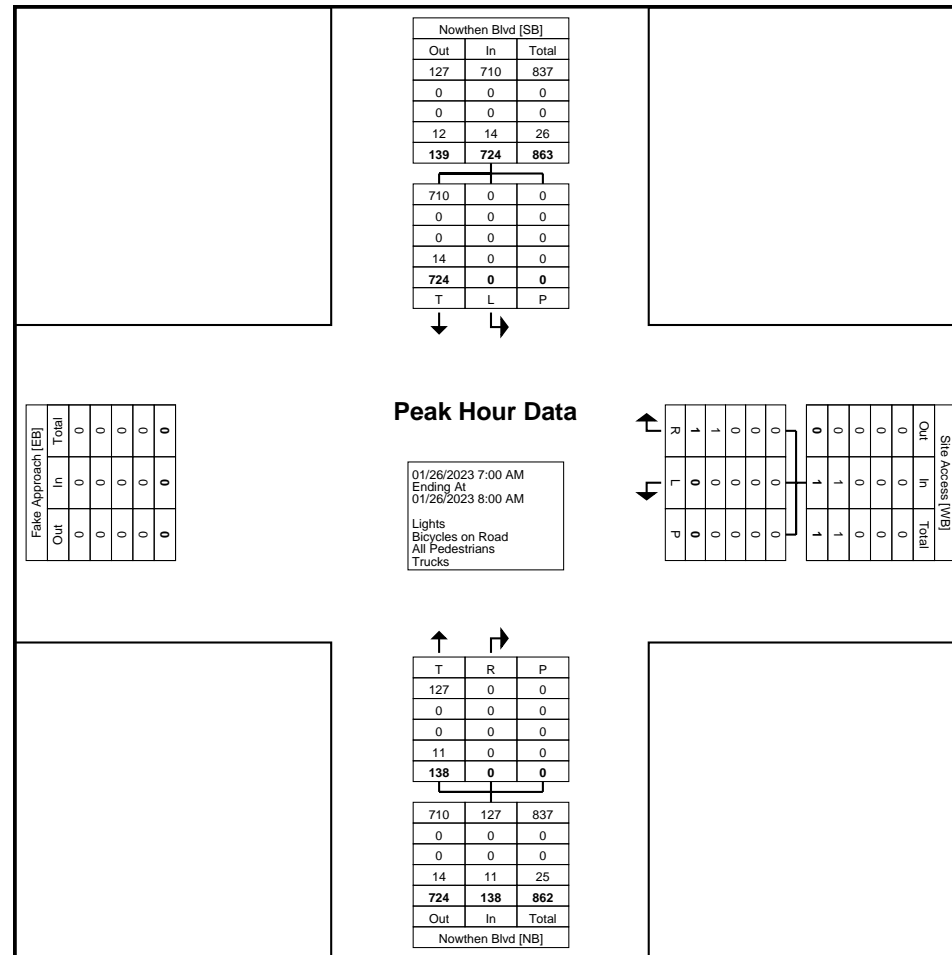


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Count Name: Nowthen Blvd & the North Site  
 Access  
 Site Code:  
 Start Date: 01/26/2023  
 Page No: 4

### Turning Movement Peak Hour Data (7:00 AM)

Start Time	Site Access Westbound				Nowthen Blvd Northbound				Nowthen Blvd Southbound				Int. Total
	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	
7:00 AM	0	0	0	0	15	0	0	15	0	222	0	222	237
7:15 AM	0	0	0	0	34	0	0	34	0	209	0	209	243
7:30 AM	0	1	0	1	51	0	0	51	0	145	0	145	197
7:45 AM	0	0	0	0	38	0	0	38	0	148	0	148	186
Total	0	1	0	1	138	0	0	138	0	724	0	724	863
Approach %	0.0	100.0	-	-	100.0	0.0	-	-	0.0	100.0	-	-	-
Total %	0.0	0.1	-	0.1	16.0	0.0	-	16.0	0.0	83.9	-	83.9	-
PHF	0.000	0.250	-	0.250	0.676	0.000	-	0.676	0.000	0.815	-	0.815	0.888
Lights	0	0	-	0	127	0	-	127	0	710	-	710	837
% Lights	-	0.0	-	0.0	92.0	-	-	92.0	-	98.1	-	98.1	97.0
Bicycles on Road	0	0	-	0	0	0	-	0	0	0	-	0	0
% Bicycles on Road	-	0.0	-	0.0	0.0	-	-	0.0	-	0.0	-	0.0	0.0
All Pedestrians	-	-	0	-	-	-	0	-	-	-	0	-	-
% All Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-
Trucks	0	1	-	1	11	0	-	11	0	14	-	14	26
% Trucks	-	100.0	-	100.0	8.0	-	-	8.0	-	1.9	-	1.9	3.0



Turning Movement Peak Hour Data Plot (7:00 AM)

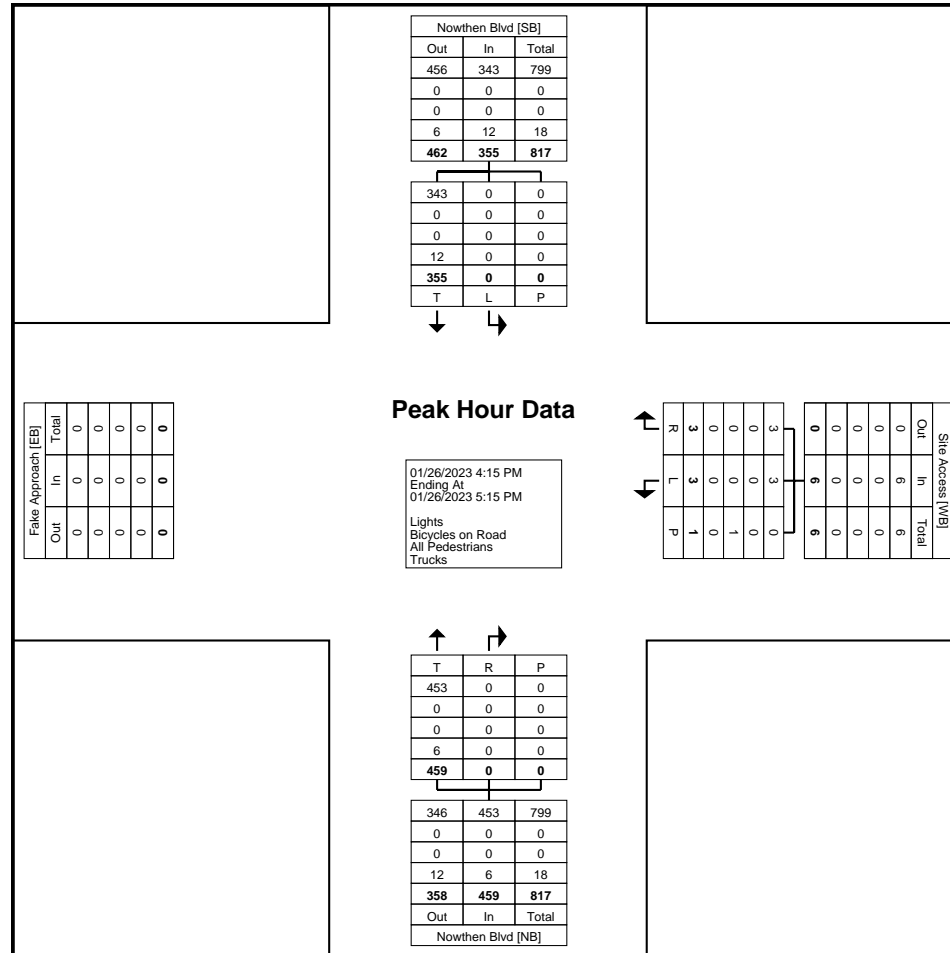


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Count Name: Nowthen Blvd & the North Site  
 Access  
 Site Code:  
 Start Date: 01/26/2023  
 Page No: 6

### Turning Movement Peak Hour Data (4:15 PM)

Start Time	Site Access Westbound				Nowthen Blvd Northbound				Nowthen Blvd Southbound				Int. Total
	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	
4:15 PM	0	0	0	0	113	0	0	113	0	88	0	88	201
4:30 PM	2	0	1	2	123	0	0	123	0	75	0	75	200
4:45 PM	0	1	0	1	99	0	0	99	0	98	0	98	198
5:00 PM	1	2	0	3	124	0	0	124	0	94	0	94	221
Total	3	3	1	6	459	0	0	459	0	355	0	355	820
Approach %	50.0	50.0	-	-	100.0	0.0	-	-	0.0	100.0	-	-	-
Total %	0.4	0.4	-	0.7	56.0	0.0	-	56.0	0.0	43.3	-	43.3	-
PHF	0.375	0.375	-	0.500	0.925	0.000	-	0.925	0.000	0.906	-	0.906	0.928
Lights	3	3	-	6	453	0	-	453	0	343	-	343	802
% Lights	100.0	100.0	-	100.0	98.7	-	-	98.7	-	96.6	-	96.6	97.8
Bicycles on Road	0	0	-	0	0	0	-	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	0.0	0.0	-	-	0.0	-	0.0	-	0.0	0.0
All Pedestrians	-	-	1	-	-	-	0	-	-	-	0	-	-
% All Pedestrians	-	-	100.0	-	-	-	-	-	-	-	-	-	-
Trucks	0	0	-	0	6	0	-	6	0	12	-	12	18
% Trucks	0.0	0.0	-	0.0	1.3	-	-	1.3	-	3.4	-	3.4	2.2



Turning Movement Peak Hour Data Plot (4:15 PM)



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Count Name: Nowthen Blvd & the North Site  
 Access  
 Site Code:  
 Start Date: 01/26/2023  
 Page No: 8

### Turning Movement Peak Hour Data (10:00 AM)

Start Time	Site Access Westbound				Nowthen Blvd Northbound				Nowthen Blvd Southbound				Int. Total
	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	
10:00 AM	4	6	0	10	24	0	0	24	0	59	0	59	93
10:15 AM	4	3	0	7	29	0	0	29	0	85	0	85	121
10:30 AM	1	0	0	1	28	0	0	28	0	68	0	68	97
10:45 AM	5	1	0	6	29	0	0	29	0	75	0	75	110
Total	14	10	0	24	110	0	0	110	0	287	0	287	421
Approach %	58.3	41.7	-	-	100.0	0.0	-	-	0.0	100.0	-	-	-
Total %	3.3	2.4	-	5.7	26.1	0.0	-	26.1	0.0	68.2	-	68.2	-
PHF	0.700	0.417	-	0.600	0.948	0.000	-	0.948	0.000	0.844	-	0.844	0.870
Lights	14	10	-	24	109	0	-	109	0	286	-	286	419
% Lights	100.0	100.0	-	100.0	99.1	-	-	99.1	-	99.7	-	99.7	99.5
Bicycles on Road	0	0	-	0	0	0	-	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	0.0	0.0	-	-	0.0	-	0.0	-	0.0	0.0
All Pedestrians	-	-	0	-	-	-	0	-	-	-	0	-	-
% All Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-
Trucks	0	0	-	0	1	0	-	1	0	1	-	1	2
% Trucks	0.0	0.0	-	0.0	0.9	-	-	0.9	-	0.3	-	0.3	0.5





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Count Name: Nowthen Blvd & the North Site  
 Access  
 Site Code:  
 Start Date: 01/26/2023  
 Page No: 10

### Turning Movement Peak Hour Data (12:30 PM)

Start Time	Site Access Westbound				Nowthen Blvd Northbound				Nowthen Blvd Southbound				Int. Total
	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	
12:30 PM	1	2	0	3	58	0	0	58	0	64	0	64	125
12:45 PM	0	1	0	1	61	0	0	61	0	51	0	51	113
1:00 PM	1	0	0	1	36	0	0	36	0	55	0	55	92
1:15 PM	14	10	0	24	57	0	0	57	0	75	0	75	156
Total	16	13	0	29	212	0	0	212	0	245	0	245	486
Approach %	55.2	44.8	-	-	100.0	0.0	-	-	0.0	100.0	-	-	-
Total %	3.3	2.7	-	6.0	43.6	0.0	-	43.6	0.0	50.4	-	50.4	-
PHF	0.286	0.325	-	0.302	0.869	0.000	-	0.869	0.000	0.817	-	0.817	0.779
Lights	16	13	-	29	211	0	-	211	0	243	-	243	483
% Lights	100.0	100.0	-	100.0	99.5	-	-	99.5	-	99.2	-	99.2	99.4
Bicycles on Road	0	0	-	0	0	0	-	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	0.0	0.0	-	-	0.0	-	0.0	-	0.0	0.0
All Pedestrians	-	-	0	-	-	-	0	-	-	-	0	-	-
% All Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-
Trucks	0	0	-	0	1	0	-	1	0	2	-	2	3
% Trucks	0.0	0.0	-	0.0	0.5	-	-	0.5	-	0.8	-	0.8	0.6





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4201 Winfield Road Suite 600

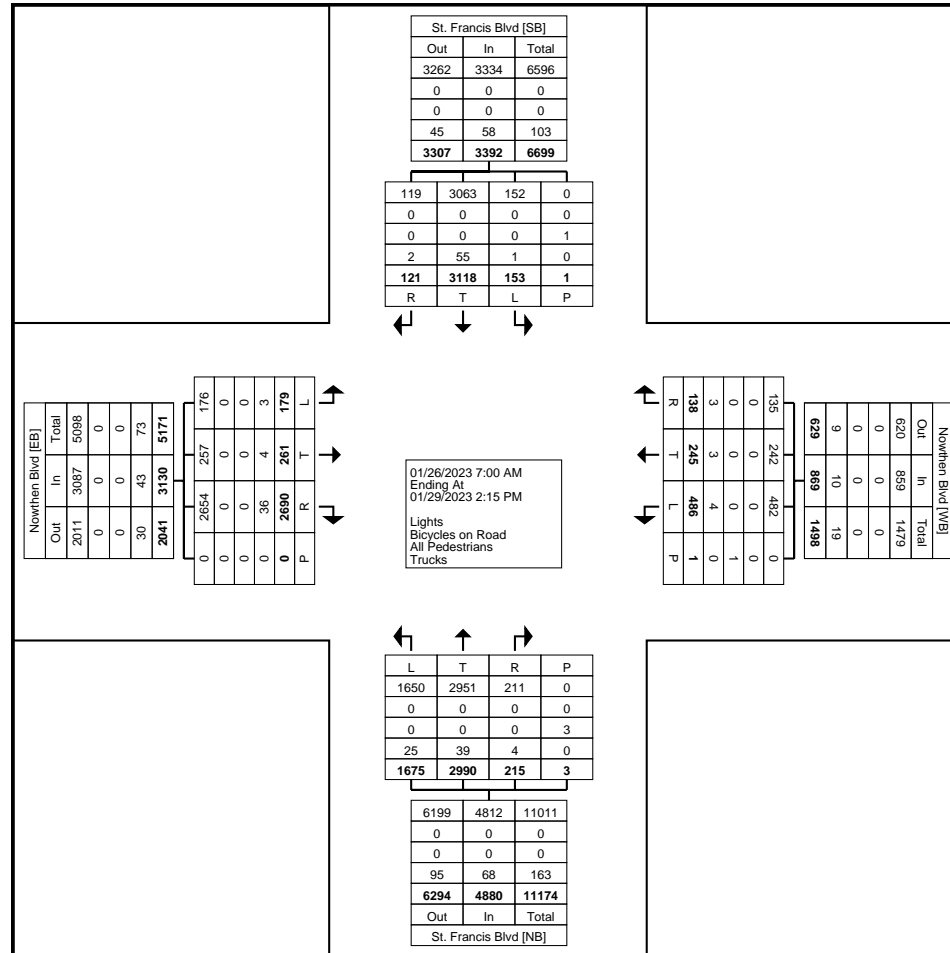
Warrenville, Illinois, United States 60555  
(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: St Francis Blvd & Nowthen Blvd  
Site Code:  
Start Date: 01/26/2023  
Page No: 1

### Turning Movement Data

Start Time	Nowthen Blvd Eastbound					Nowthen Blvd Westbound					St. Francis Blvd Northbound					St. Francis Blvd Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
7:00 AM	3	9	174	0	186	31	2	2	0	35	13	20	2	0	35	4	147	1	0	152	408
7:15 AM	2	9	194	0	205	40	6	3	0	49	32	53	6	0	91	3	116	10	0	129	474
7:30 AM	4	4	119	0	127	28	10	2	0	40	43	37	5	0	85	8	146	4	0	158	410
7:45 AM	2	8	131	0	141	19	3	2	0	24	28	38	3	0	69	5	141	13	0	159	393
Hourly Total	11	30	618	0	659	118	21	9	0	148	116	148	16	0	280	20	550	28	0	598	1685
8:00 AM	3	12	93	0	108	13	6	4	0	23	48	52	8	0	108	1	126	9	0	136	375
8:15 AM	2	10	92	0	104	10	6	1	0	17	42	53	8	0	103	4	104	8	0	116	340
8:30 AM	4	2	83	0	89	13	6	3	0	22	33	48	4	0	85	6	106	2	0	114	310
8:45 AM	2	7	83	0	92	14	5	0	0	19	37	42	3	0	82	8	86	7	0	101	294
Hourly Total	11	31	351	0	393	50	23	8	0	81	160	195	23	0	378	19	422	26	0	467	1319
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	15	12	107	0	134	11	16	8	0	35	83	188	13	2	284	4	80	1	0	85	538
4:15 PM	12	11	73	0	96	14	11	7	0	32	90	173	5	0	268	5	86	0	0	91	487
4:30 PM	25	14	82	0	121	18	13	10	0	41	94	132	10	0	236	6	90	6	0	102	500
4:45 PM	12	12	88	0	112	12	13	15	1	40	85	155	10	0	250	0	88	1	1	89	491
Hourly Total	64	49	350	0	463	55	53	40	1	148	352	648	38	2	1038	15	344	8	1	367	2016
5:00 PM	13	5	84	0	102	16	21	9	0	46	110	165	20	1	295	4	71	5	0	80	523
5:15 PM	4	8	105	0	117	8	14	11	0	33	87	193	9	0	289	1	102	4	0	107	546
5:30 PM	11	6	103	0	120	18	9	10	0	37	86	147	12	0	245	5	77	5	0	87	489
5:45 PM	8	9	67	0	84	14	9	6	0	29	104	151	5	0	260	5	90	3	0	98	471
Hourly Total	36	28	359	0	423	56	53	36	0	145	387	656	46	1	1089	15	340	17	0	372	2029
6:00 PM	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
10:00 AM	4	6	66	0	76	10	3	5	0	18	20	50	4	0	74	3	85	0	0	88	256
10:15 AM	8	6	70	0	84	14	5	0	0	19	24	47	2	0	73	3	100	4	0	107	283
10:30 AM	2	7	67	0	76	10	2	1	0	13	32	45	6	0	83	6	90	7	0	103	275
10:45 AM	2	6	71	0	79	18	6	5	0	29	31	68	6	0	105	7	97	2	0	106	319
Hourly Total	16	25	274	0	315	52	16	11	0	79	107	210	18	0	335	19	372	13	0	404	1133
11:00 AM	2	4	46	0	52	13	4	3	0	20	29	63	3	0	95	4	77	1	0	82	249
11:15 AM	3	5	47	0	55	16	9	3	0	28	40	68	5	0	113	5	74	4	0	83	279
11:30 AM	4	5	61	0	70	13	4	1	0	18	36	79	3	0	118	8	113	5	0	126	332
11:45 AM	2	12	78	0	92	11	4	0	0	15	41	90	7	0	138	9	93	2	0	104	349
Hourly Total	11	26	232	0	269	53	21	7	0	81	146	300	18	0	464	26	357	12	0	395	1209

12:00 PM	4	7	58	0	69	22	3	7	0	32	37	86	9	0	132	5	112	5	0	122	355
12:15 PM	4	11	76	0	91	15	9	1	0	25	49	84	3	0	136	5	113	3	0	121	373
12:30 PM	3	13	59	0	75	11	3	3	0	17	54	99	6	0	159	7	101	2	0	110	361
12:45 PM	2	4	57	0	63	12	14	5	0	31	60	96	6	0	162	3	75	3	0	81	337
Hourly Total	13	35	250	0	298	60	29	16	0	105	200	365	24	0	589	20	401	13	0	434	1426
1:00 PM	3	7	62	0	72	4	1	4	0	9	34	112	3	0	149	9	90	1	0	100	330
1:15 PM	5	16	71	0	92	12	7	1	0	20	56	106	8	0	170	2	75	0	0	77	359
1:30 PM	2	7	62	0	71	15	13	1	0	29	56	121	13	0	190	4	84	0	0	88	378
1:45 PM	7	7	60	0	74	11	8	5	0	24	61	128	8	0	197	4	83	3	0	90	385
Hourly Total	17	37	255	0	309	42	29	11	0	82	207	467	32	0	706	19	332	4	0	355	1452
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	179	261	2690	0	3130	486	245	138	1	869	1675	2990	215	3	4880	153	3118	121	1	3392	12271
Approach %	5.7	8.3	85.9	-	-	55.9	28.2	15.9	-	-	34.3	61.3	4.4	-	-	4.5	91.9	3.6	-	-	-
Total %	1.5	2.1	21.9	-	25.5	4.0	2.0	1.1	-	7.1	13.7	24.4	1.8	-	39.8	1.2	25.4	1.0	-	27.6	-
Lights	176	257	2654	-	3087	482	242	135	-	859	1650	2951	211	-	4812	152	3063	119	-	3334	12092
% Lights	98.3	98.5	98.7	-	98.6	99.2	98.8	97.8	-	98.8	98.5	98.7	98.1	-	98.6	99.3	98.2	98.3	-	98.3	98.5
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0
All Pedestrians	-	-	-	0	-	-	-	-	1	-	-	-	-	3	-	-	-	-	1	-	-
% All Pedestrians	-	-	-	-	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-
Trucks	3	4	36	-	43	4	3	3	-	10	25	39	4	-	68	1	55	2	-	58	179
% Trucks	1.7	1.5	1.3	-	1.4	0.8	1.2	2.2	-	1.2	1.5	1.3	1.9	-	1.4	0.7	1.8	1.7	-	1.7	1.5



Turning Movement Data Plot



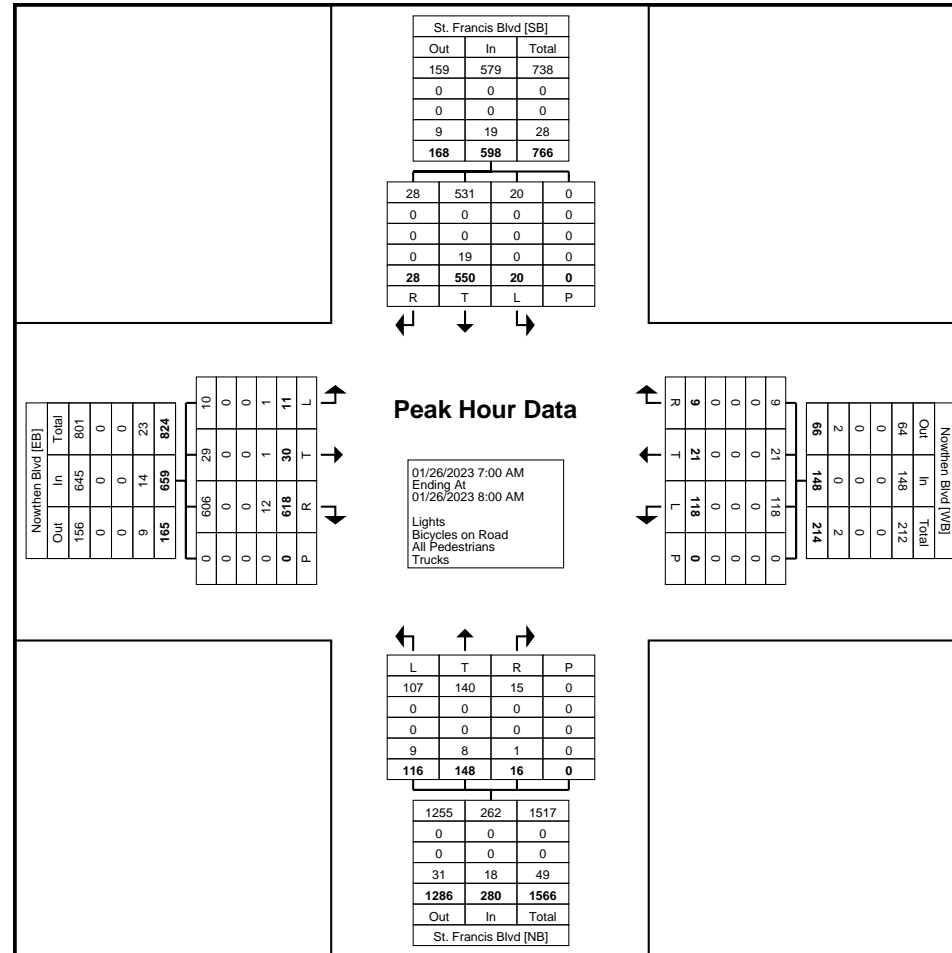
Kimley-Horn and Associates, Inc.  
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Count Name: St Francis Blvd & Nowthen Blvd  
Site Code:  
Start Date: 01/26/2023  
Page No: 4

### Turning Movement Peak Hour Data (7:00 AM)

Start Time	Nowthen Blvd Eastbound					Nowthen Blvd Westbound					St. Francis Blvd Northbound					St. Francis Blvd Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
7:00 AM	3	9	174	0	186	31	2	2	0	35	13	20	2	0	35	4	147	1	0	152	408
7:15 AM	2	9	194	0	205	40	6	3	0	49	32	53	6	0	91	3	116	10	0	129	474
7:30 AM	4	4	119	0	127	28	10	2	0	40	43	37	5	0	85	8	146	4	0	158	410
7:45 AM	2	8	131	0	141	19	3	2	0	24	28	38	3	0	69	5	141	13	0	159	393
Total	11	30	618	0	659	118	21	9	0	148	116	148	16	0	280	20	550	28	0	598	1685
Approach %	1.7	4.6	93.8	-	-	79.7	14.2	6.1	-	-	41.4	52.9	5.7	-	-	3.3	92.0	4.7	-	-	-
Total %	0.7	1.8	36.7	-	39.1	7.0	1.2	0.5	-	8.8	6.9	8.8	0.9	-	16.6	1.2	32.6	1.7	-	35.5	-
PHF	0.688	0.833	0.796	-	0.804	0.738	0.525	0.750	-	0.755	0.674	0.698	0.667	-	0.769	0.625	0.935	0.538	-	0.940	0.889
Lights	10	29	606	-	645	118	21	9	-	148	107	140	15	-	262	20	531	28	-	579	1634
% Lights	90.9	96.7	98.1	-	97.9	100.0	100.0	100.0	-	100.0	92.2	94.6	93.8	-	93.6	100.0	96.5	100.0	-	96.8	97.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0
All Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% All Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trucks	1	1	12	-	14	0	0	0	-	0	9	8	1	-	18	0	19	0	-	19	51
% Trucks	9.1	3.3	1.9	-	2.1	0.0	0.0	0.0	-	0.0	7.8	5.4	6.3	-	6.4	0.0	3.5	0.0	-	3.2	3.0



Turning Movement Peak Hour Data Plot (7:00 AM)



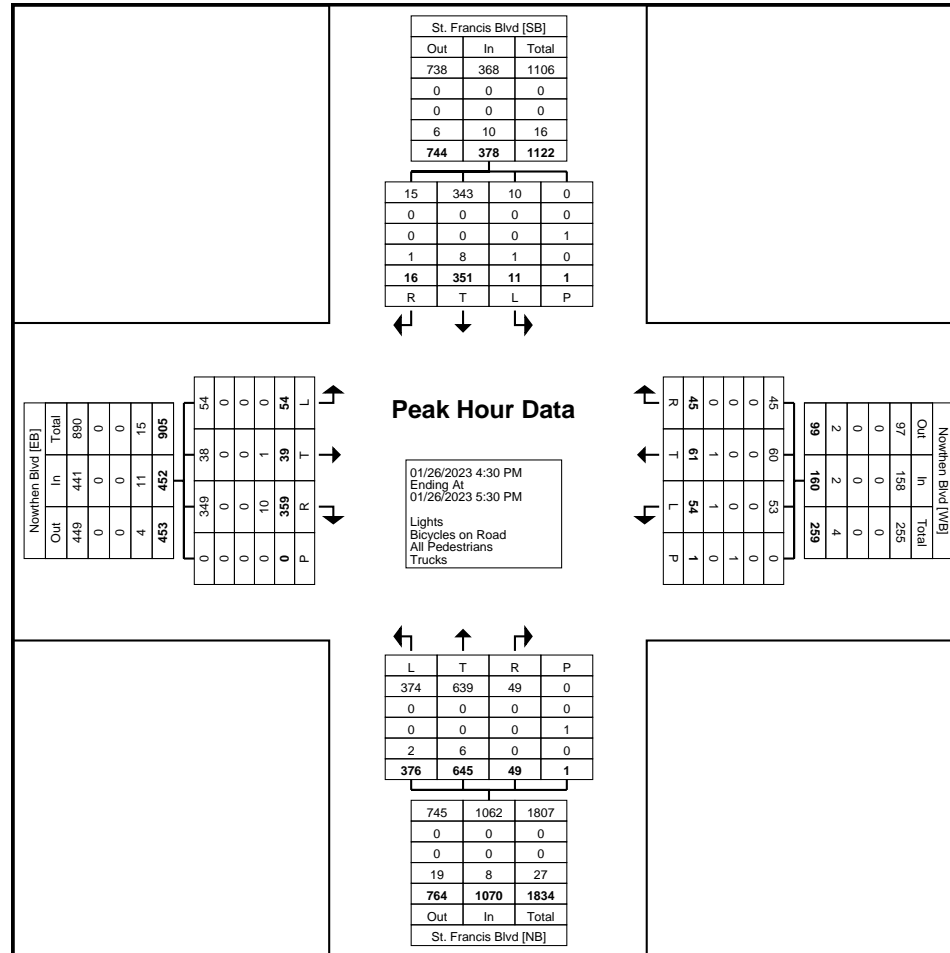
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Count Name: St Francis Blvd & Nowthen Blvd  
Site Code:  
Start Date: 01/26/2023  
Page No: 6

### Turning Movement Peak Hour Data (4:30 PM)

Start Time	Nowthen Blvd Eastbound					Nowthen Blvd Westbound					St. Francis Blvd Northbound					St. Francis Blvd Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
4:30 PM	25	14	82	0	121	18	13	10	0	41	94	132	10	0	236	6	90	6	0	102	500
4:45 PM	12	12	88	0	112	12	13	15	1	40	85	155	10	0	250	0	88	1	1	89	491
5:00 PM	13	5	84	0	102	16	21	9	0	46	110	165	20	1	295	4	71	5	0	80	523
5:15 PM	4	8	105	0	117	8	14	11	0	33	87	193	9	0	289	1	102	4	0	107	546
Total	54	39	359	0	452	54	61	45	1	160	376	645	49	1	1070	11	351	16	1	378	2060
Approach %	11.9	8.6	79.4	-	-	33.8	38.1	28.1	-	-	35.1	60.3	4.6	-	-	2.9	92.9	4.2	-	-	-
Total %	2.6	1.9	17.4	-	21.9	2.6	3.0	2.2	-	7.8	18.3	31.3	2.4	-	51.9	0.5	17.0	0.8	-	18.3	-
PHF	0.540	0.696	0.855	-	0.934	0.750	0.726	0.750	-	0.870	0.855	0.835	0.613	-	0.907	0.458	0.860	0.667	-	0.883	0.943
Lights	54	38	349	-	441	53	60	45	-	158	374	639	49	-	1062	10	343	15	-	368	2029
% Lights	100.0	97.4	97.2	-	97.6	98.1	98.4	100.0	-	98.8	99.5	99.1	100.0	-	99.3	90.9	97.7	93.8	-	97.4	98.5
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0
All Pedestrians	-	-	-	0	-	-	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-
% All Pedestrians	-	-	-	-	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-
Trucks	0	1	10	-	11	1	1	0	-	2	2	6	0	-	8	1	8	1	-	10	31
% Trucks	0.0	2.6	2.8	-	2.4	1.9	1.6	0.0	-	1.3	0.5	0.9	0.0	-	0.7	9.1	2.3	6.3	-	2.6	1.5



Turning Movement Peak Hour Data Plot (4:30 PM)



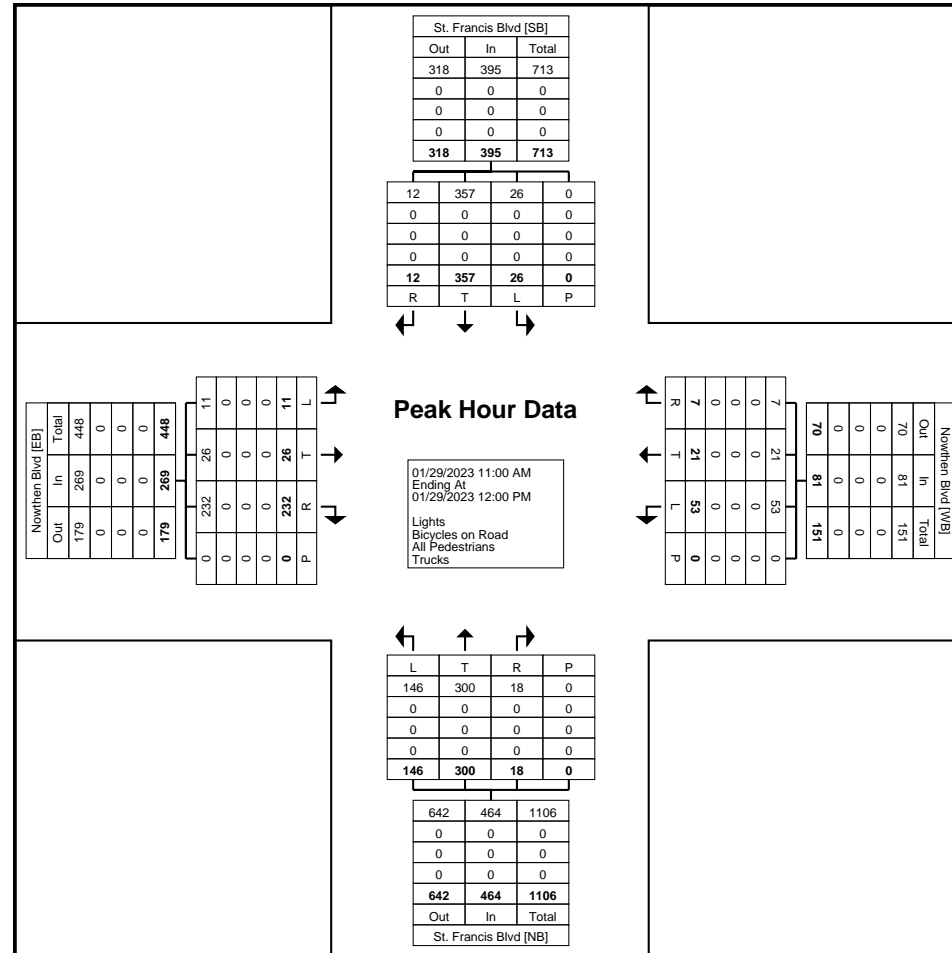
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Count Name: St Francis Blvd & Nowthen Blvd  
Site Code:  
Start Date: 01/26/2023  
Page No: 8

### Turning Movement Peak Hour Data (11:00 AM)

Start Time	Nowthen Blvd Eastbound					Nowthen Blvd Westbound					St. Francis Blvd Northbound					St. Francis Blvd Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
11:00 AM	2	4	46	0	52	13	4	3	0	20	29	63	3	0	95	4	77	1	0	82	249
11:15 AM	3	5	47	0	55	16	9	3	0	28	40	68	5	0	113	5	74	4	0	83	279
11:30 AM	4	5	61	0	70	13	4	1	0	18	36	79	3	0	118	8	113	5	0	126	332
11:45 AM	2	12	78	0	92	11	4	0	0	15	41	90	7	0	138	9	93	2	0	104	349
Total	11	26	232	0	269	53	21	7	0	81	146	300	18	0	464	26	357	12	0	395	1209
Approach %	4.1	9.7	86.2	-	-	65.4	25.9	8.6	-	-	31.5	64.7	3.9	-	-	6.6	90.4	3.0	-	-	-
Total %	0.9	2.2	19.2	-	22.2	4.4	1.7	0.6	-	6.7	12.1	24.8	1.5	-	38.4	2.2	29.5	1.0	-	32.7	-
PHF	0.688	0.542	0.744	-	0.731	0.828	0.583	0.583	-	0.723	0.890	0.833	0.643	-	0.841	0.722	0.790	0.600	-	0.784	0.866
Lights	11	26	232	-	269	53	21	7	-	81	146	300	18	-	464	26	357	12	-	395	1209
% Lights	100.0	100.0	100.0	-	100.0	100.0	100.0	100.0	-	100.0	100.0	100.0	100.0	-	100.0	100.0	100.0	100.0	-	100.0	100.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0
All Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% All Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Trucks	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0



Turning Movement Peak Hour Data Plot (11:00 AM)



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Count Name: St Francis Blvd & Nowthen Blvd  
Site Code:  
Start Date: 01/26/2023  
Page No: 10

### Turning Movement Peak Hour Data (1:00 PM)

Start Time	Nowthen Blvd Eastbound					Nowthen Blvd Westbound					St. Francis Blvd Northbound					St. Francis Blvd Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
1:00 PM	3	7	62	0	72	4	1	4	0	9	34	112	3	0	149	9	90	1	0	100	330
1:15 PM	5	16	71	0	92	12	7	1	0	20	56	106	8	0	170	2	75	0	0	77	359
1:30 PM	2	7	62	0	71	15	13	1	0	29	56	121	13	0	190	4	84	0	0	88	378
1:45 PM	7	7	60	0	74	11	8	5	0	24	61	128	8	0	197	4	83	3	0	90	385
Total	17	37	255	0	309	42	29	11	0	82	207	467	32	0	706	19	332	4	0	355	1452
Approach %	5.5	12.0	82.5	-	-	51.2	35.4	13.4	-	-	29.3	66.1	4.5	-	-	5.4	93.5	1.1	-	-	-
Total %	1.2	2.5	17.6	-	21.3	2.9	2.0	0.8	-	5.6	14.3	32.2	2.2	-	48.6	1.3	22.9	0.3	-	24.4	-
PHF	0.607	0.578	0.898	-	0.840	0.700	0.558	0.550	-	0.707	0.848	0.912	0.615	-	0.896	0.528	0.922	0.333	-	0.888	0.943
Lights	17	37	255	-	309	42	29	11	-	82	207	465	32	-	704	19	332	4	-	355	1450
% Lights	100.0	100.0	100.0	-	100.0	100.0	100.0	100.0	-	100.0	100.0	99.6	100.0	-	99.7	100.0	100.0	100.0	-	100.0	99.9
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0
All Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% All Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trucks	0	0	0	-	0	0	0	0	-	0	0	2	0	-	2	0	0	0	-	0	2
% Trucks	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.4	0.0	-	0.3	0.0	0.0	0.0	-	0.0	0.1





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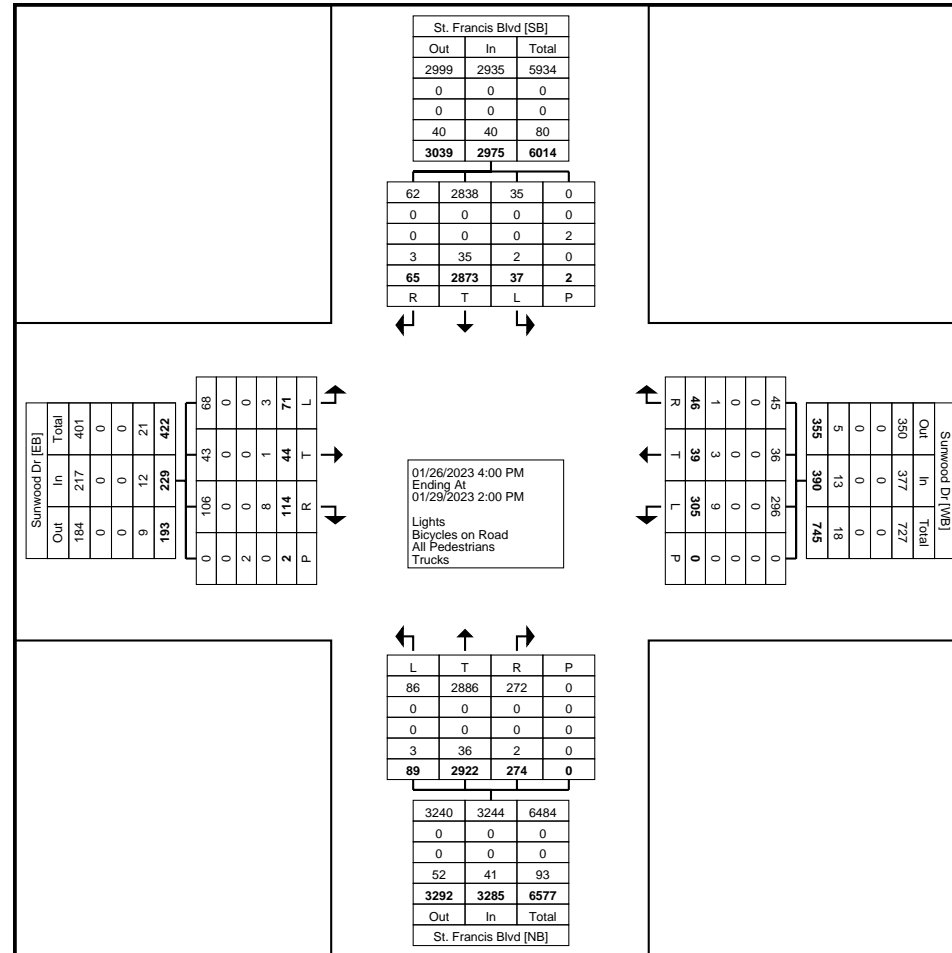
Warrenville, Illinois, United States 60555  
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Count Name: St Francis Blvd & Sunwood Dr  
Site Code:  
Start Date: 01/26/2023  
Page No: 1

### Turning Movement Data

Start Time	Sunwood Dr Eastbound					Sunwood Dr Westbound					St. Francis Blvd Northbound					St. Francis Blvd Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
4:00 PM	7	5	3	0	15	6	2	3	0	11	5	184	19	0	208	1	77	1	0	79	313
4:15 PM	3	1	1	0	5	14	2	4	0	20	1	181	24	0	206	3	86	1	0	90	321
4:30 PM	1	2	4	0	7	11	2	1	0	14	4	145	13	0	162	2	81	4	0	87	270
4:45 PM	4	5	3	0	12	12	1	4	0	17	4	169	8	0	181	1	76	2	0	79	289
Hourly Total	15	13	11	0	39	43	7	12	0	62	14	679	64	0	757	7	320	8	0	335	1193
5:00 PM	5	3	0	0	8	4	4	0	0	8	7	166	15	0	188	1	86	3	0	90	294
5:15 PM	8	2	5	0	15	6	0	2	0	8	6	185	18	0	209	1	88	3	0	92	324
5:30 PM	3	2	6	0	11	12	3	1	0	16	2	157	13	0	172	1	74	2	0	77	276
5:45 PM	2	1	4	0	7	10	0	3	0	13	9	139	14	0	162	4	85	2	0	91	273
Hourly Total	18	8	15	0	41	32	7	6	0	45	24	647	60	0	731	7	333	10	0	350	1167
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	3	0	2	0	5	13	0	1	0	14	0	25	1	0	26	2	150	3	0	155	200
7:15 AM	0	1	2	2	3	13	1	0	0	14	2	31	3	0	36	1	110	3	2	114	167
7:30 AM	1	0	3	0	4	8	3	2	0	13	1	43	10	0	54	1	104	0	0	105	176
7:45 AM	0	2	6	0	8	9	4	1	0	14	2	41	3	0	46	1	112	3	0	116	184
Hourly Total	4	3	13	2	20	43	8	4	0	55	5	140	17	0	162	5	476	9	2	490	727
8:00 AM	1	1	7	0	9	13	2	1	0	16	1	46	8	0	55	1	102	3	0	106	186
8:15 AM	1	0	6	0	7	12	0	3	0	15	1	52	3	0	56	0	102	2	0	104	182
8:30 AM	0	1	2	0	3	14	2	0	0	16	1	44	3	0	48	2	85	0	0	87	154
8:45 AM	1	0	6	0	7	12	1	0	0	13	2	40	3	0	45	0	71	0	0	71	136
Hourly Total	3	2	21	0	26	51	5	4	0	60	5	182	17	0	204	3	360	5	0	368	658
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	2	1	1	0	4	9	1	2	0	12	3	53	4	0	60	0	81	1	0	82	158
10:15 AM	3	1	9	0	13	12	1	0	0	13	2	52	3	0	57	0	86	2	0	88	171
10:30 AM	0	2	4	0	6	7	1	3	0	11	3	37	4	0	44	0	93	0	0	93	154
10:45 AM	1	0	3	0	4	9	2	1	0	12	1	69	6	0	76	1	87	5	0	93	185
Hourly Total	6	4	17	0	27	37	5	6	0	48	9	211	17	0	237	1	347	8	0	356	668
11:00 AM	2	0	4	0	6	6	1	0	0	7	2	62	5	0	69	0	73	0	0	73	155
11:15 AM	0	1	3	0	4	8	0	0	0	8	1	70	3	0	74	1	78	3	0	82	168
11:30 AM	1	1	3	0	5	14	1	2	0	17	2	71	10	0	83	1	114	3	0	118	223
11:45 AM	1	2	3	0	6	5	0	0	0	5	2	82	6	0	90	2	94	3	0	99	200
Hourly Total	4	4	13	0	21	33	2	2	0	37	7	285	24	0	316	4	359	9	0	372	746

12:00 PM	0	1	3	0	4	5	0	1	0	6	4	95	2	0	101	2	85	4	0	91	202
12:15 PM	2	2	5	0	9	11	0	2	0	13	4	84	4	0	92	1	111	1	0	113	227
12:30 PM	4	1	1	0	6	6	0	2	0	8	0	97	12	0	109	2	98	1	0	101	224
12:45 PM	3	3	3	0	9	5	1	3	0	9	2	91	13	0	106	0	78	1	0	79	203
Hourly Total	9	7	12	0	28	27	1	8	0	36	10	367	31	0	408	5	372	7	0	384	856
1:00 PM	4	0	4	0	8	6	0	0	0	6	5	101	6	0	112	2	85	1	0	88	214
1:15 PM	3	0	3	0	6	11	2	2	0	15	2	100	9	0	111	1	68	3	0	72	204
1:30 PM	3	3	5	0	11	8	2	1	0	11	5	95	11	0	111	1	73	3	0	77	210
1:45 PM	2	0	0	0	2	14	0	1	0	15	3	115	18	0	136	1	80	2	0	83	236
Hourly Total	12	3	12	0	27	39	4	4	0	47	15	411	44	0	470	5	306	9	0	320	864
Grand Total	71	44	114	2	229	305	39	46	0	390	89	2922	274	0	3285	37	2873	65	2	2975	6879
Approach %	31.0	19.2	49.8	-	-	78.2	10.0	11.8	-	-	2.7	88.9	8.3	-	-	1.2	96.6	2.2	-	-	-
Total %	1.0	0.6	1.7	-	3.3	4.4	0.6	0.7	-	5.7	1.3	42.5	4.0	-	47.8	0.5	41.8	0.9	-	43.2	-
Lights	68	43	106	-	217	296	36	45	-	377	86	2886	272	-	3244	35	2838	62	-	2935	6773
% Lights	95.8	97.7	93.0	-	94.8	97.0	92.3	97.8	-	96.7	96.6	98.8	99.3	-	98.8	94.6	98.8	95.4	-	98.7	98.5
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0
All Pedestrians	-	-	-	2	-	-	-	-	0	-	-	-	-	0	-	-	-	-	2	-	-
% All Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-
Trucks	3	1	8	-	12	9	3	1	-	13	3	36	2	-	41	2	35	3	-	40	106
% Trucks	4.2	2.3	7.0	-	5.2	3.0	7.7	2.2	-	3.3	3.4	1.2	0.7	-	1.2	5.4	1.2	4.6	-	1.3	1.5



Turning Movement Data Plot



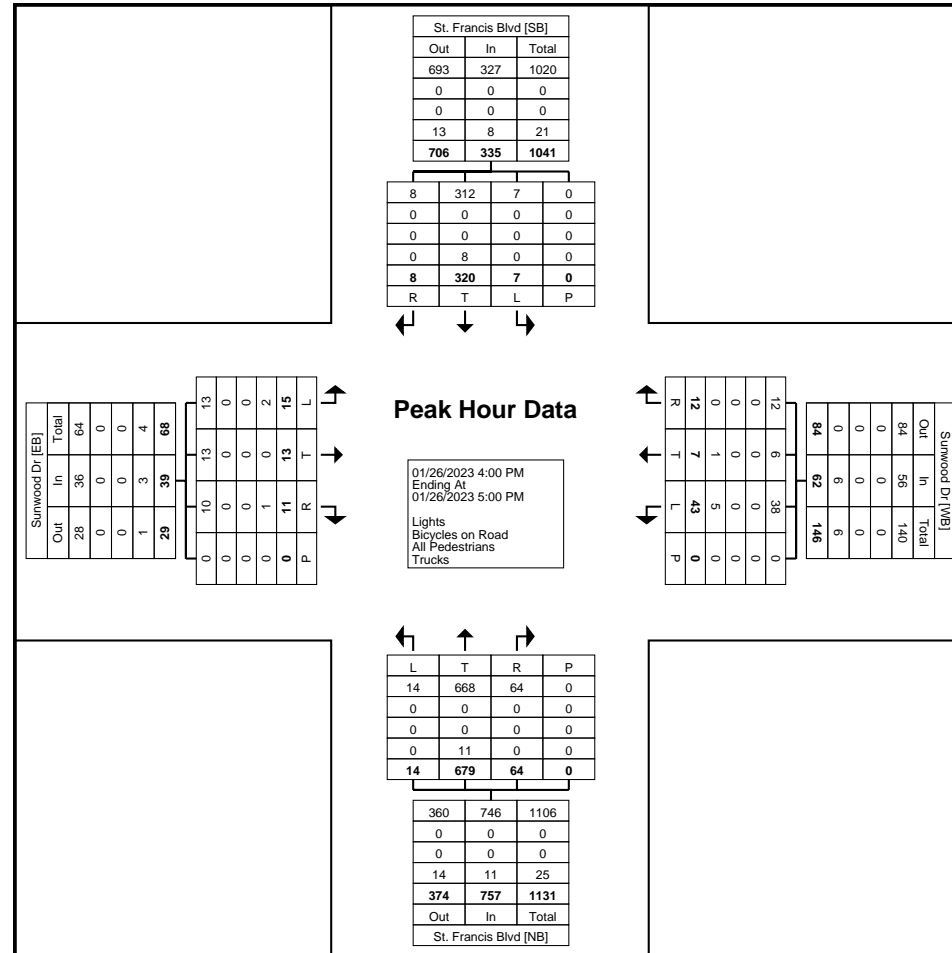
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Count Name: St Francis Blvd & Sunwood Dr  
Site Code:  
Start Date: 01/26/2023  
Page No: 4

### Turning Movement Peak Hour Data (4:00 PM)

Start Time	Sunwood Dr Eastbound					Sunwood Dr Westbound					St. Francis Blvd Northbound					St. Francis Blvd Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
4:00 PM	7	5	3	0	15	6	2	3	0	11	5	184	19	0	208	1	77	1	0	79	313
4:15 PM	3	1	1	0	5	14	2	4	0	20	1	181	24	0	206	3	86	1	0	90	321
4:30 PM	1	2	4	0	7	11	2	1	0	14	4	145	13	0	162	2	81	4	0	87	270
4:45 PM	4	5	3	0	12	12	1	4	0	17	4	169	8	0	181	1	76	2	0	79	289
Total	15	13	11	0	39	43	7	12	0	62	14	679	64	0	757	7	320	8	0	335	1193
Approach %	38.5	33.3	28.2	-	-	69.4	11.3	19.4	-	-	1.8	89.7	8.5	-	-	2.1	95.5	2.4	-	-	-
Total %	1.3	1.1	0.9	-	3.3	3.6	0.6	1.0	-	5.2	1.2	56.9	5.4	-	63.5	0.6	26.8	0.7	-	28.1	-
PHF	0.536	0.650	0.688	-	0.650	0.768	0.875	0.750	-	0.775	0.700	0.923	0.667	-	0.910	0.583	0.930	0.500	-	0.931	0.929
Lights	13	13	10	-	36	38	6	12	-	56	14	668	64	-	746	7	312	8	-	327	1165
% Lights	86.7	100.0	90.9	-	92.3	88.4	85.7	100.0	-	90.3	100.0	98.4	100.0	-	98.5	100.0	97.5	100.0	-	97.6	97.7
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0
All Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% All Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trucks	2	0	1	-	3	5	1	0	-	6	0	11	0	-	11	0	8	0	-	8	28
% Trucks	13.3	0.0	9.1	-	7.7	11.6	14.3	0.0	-	9.7	0.0	1.6	0.0	-	1.5	0.0	2.5	0.0	-	2.4	2.3



Turning Movement Peak Hour Data Plot (4:00 PM)



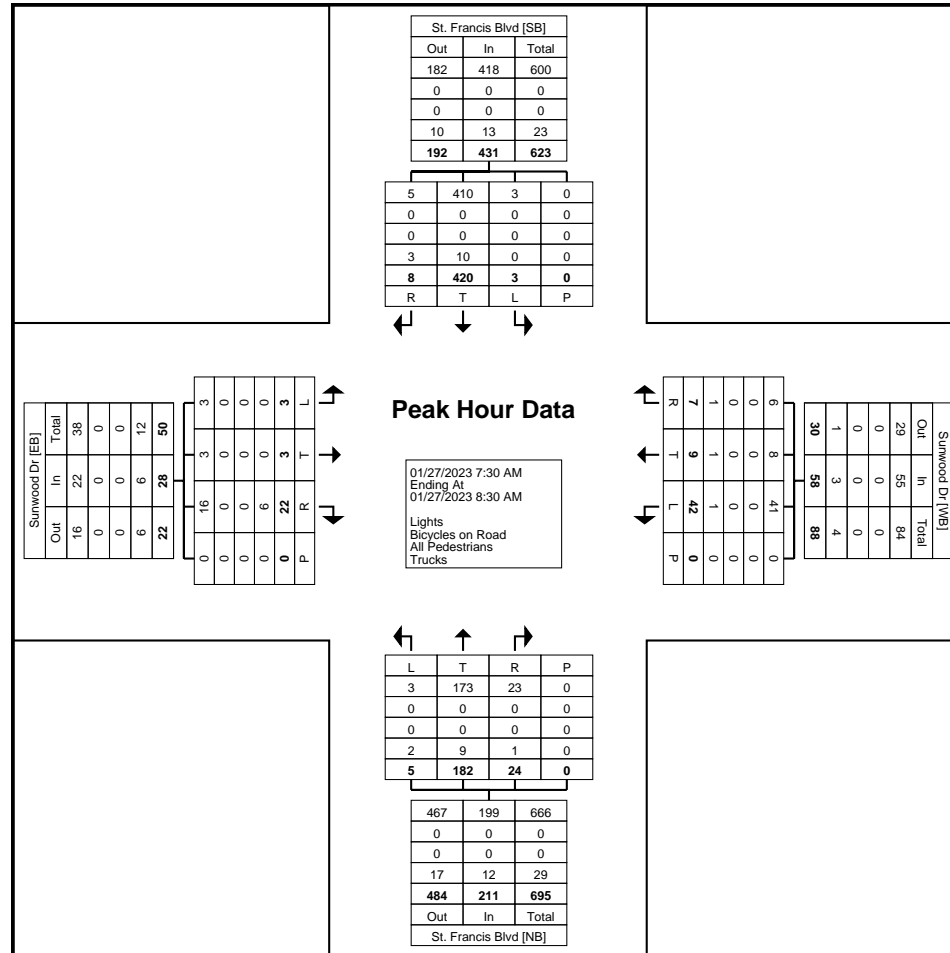
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Count Name: St Francis Blvd & Sunwood Dr  
Site Code:  
Start Date: 01/26/2023  
Page No: 6

### Turning Movement Peak Hour Data (7:30 AM)

Start Time	Sunwood Dr Eastbound					Sunwood Dr Westbound					St. Francis Blvd Northbound					St. Francis Blvd Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
7:30 AM	1	0	3	0	4	8	3	2	0	13	1	43	10	0	54	1	104	0	0	105	176
7:45 AM	0	2	6	0	8	9	4	1	0	14	2	41	3	0	46	1	112	3	0	116	184
8:00 AM	1	1	7	0	9	13	2	1	0	16	1	46	8	0	55	1	102	3	0	106	186
8:15 AM	1	0	6	0	7	12	0	3	0	15	1	52	3	0	56	0	102	2	0	104	182
Total	3	3	22	0	28	42	9	7	0	58	5	182	24	0	211	3	420	8	0	431	728
Approach %	10.7	10.7	78.6	-	-	72.4	15.5	12.1	-	-	2.4	86.3	11.4	-	-	0.7	97.4	1.9	-	-	-
Total %	0.4	0.4	3.0	-	3.8	5.8	1.2	1.0	-	8.0	0.7	25.0	3.3	-	29.0	0.4	57.7	1.1	-	59.2	-
PHF	0.750	0.375	0.786	-	0.778	0.808	0.563	0.583	-	0.906	0.625	0.875	0.600	-	0.942	0.750	0.938	0.667	-	0.929	0.978
Lights	3	3	16	-	22	41	8	6	-	55	3	173	23	-	199	3	410	5	-	418	694
% Lights	100.0	100.0	72.7	-	78.6	97.6	88.9	85.7	-	94.8	60.0	95.1	95.8	-	94.3	100.0	97.6	62.5	-	97.0	95.3
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0
All Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% All Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trucks	0	0	6	-	6	1	1	1	-	3	2	9	1	-	12	0	10	3	-	13	34
% Trucks	0.0	0.0	27.3	-	21.4	2.4	11.1	14.3	-	5.2	40.0	4.9	4.2	-	5.7	0.0	2.4	37.5	-	3.0	4.7



Turning Movement Peak Hour Data Plot (7:30 AM)



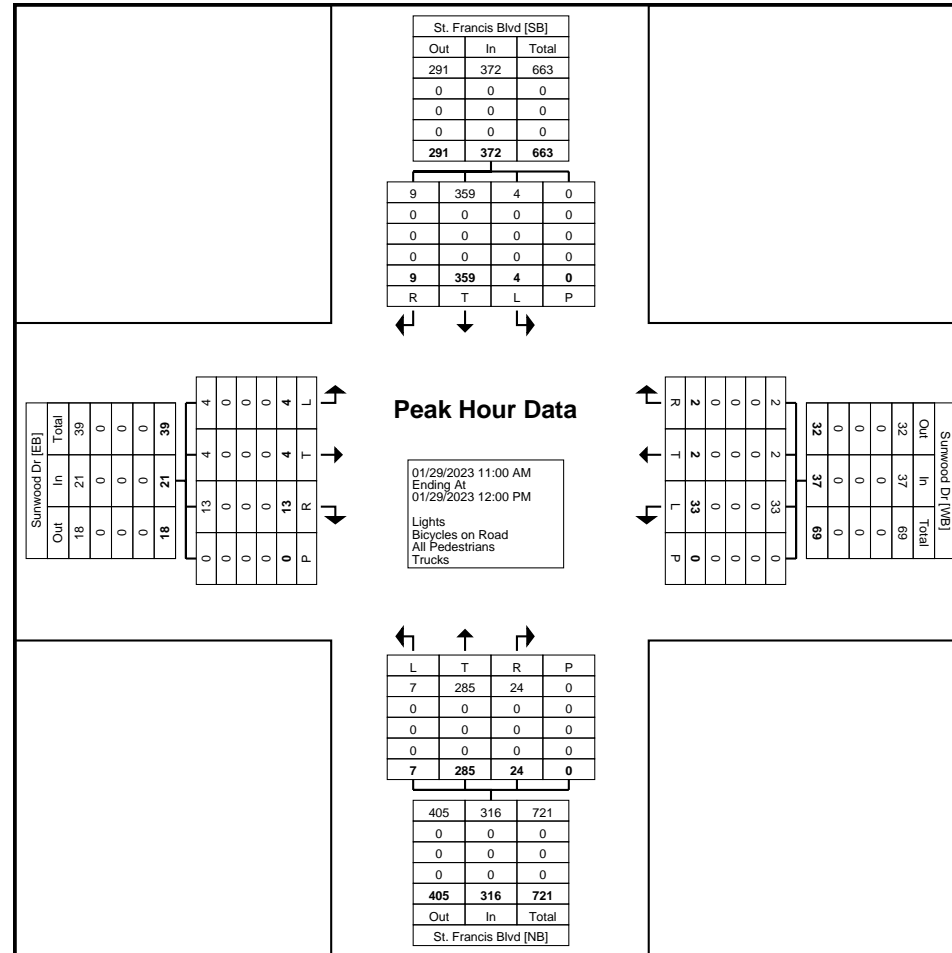
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Count Name: St Francis Blvd & Sunwood Dr  
Site Code:  
Start Date: 01/26/2023  
Page No: 8

### Turning Movement Peak Hour Data (11:00 AM)

Start Time	Sunwood Dr Eastbound					Sunwood Dr Westbound					St. Francis Blvd Northbound					St. Francis Blvd Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
11:00 AM	2	0	4	0	6	6	1	0	0	7	2	62	5	0	69	0	73	0	0	73	155
11:15 AM	0	1	3	0	4	8	0	0	0	8	1	70	3	0	74	1	78	3	0	82	168
11:30 AM	1	1	3	0	5	14	1	2	0	17	2	71	10	0	83	1	114	3	0	118	223
11:45 AM	1	2	3	0	6	5	0	0	0	5	2	82	6	0	90	2	94	3	0	99	200
Total	4	4	13	0	21	33	2	2	0	37	7	285	24	0	316	4	359	9	0	372	746
Approach %	19.0	19.0	61.9	-	-	89.2	5.4	5.4	-	-	2.2	90.2	7.6	-	-	1.1	96.5	2.4	-	-	-
Total %	0.5	0.5	1.7	-	2.8	4.4	0.3	0.3	-	5.0	0.9	38.2	3.2	-	42.4	0.5	48.1	1.2	-	49.9	-
PHF	0.500	0.500	0.813	-	0.875	0.589	0.500	0.250	-	0.544	0.875	0.869	0.600	-	0.878	0.500	0.787	0.750	-	0.788	0.836
Lights	4	4	13	-	21	33	2	2	-	37	7	285	24	-	316	4	359	9	-	372	746
% Lights	100.0	100.0	100.0	-	100.0	100.0	100.0	100.0	-	100.0	100.0	100.0	100.0	-	100.0	100.0	100.0	100.0	-	100.0	100.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0
All Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% All Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Trucks	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0



Turning Movement Peak Hour Data Plot (11:00 AM)



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Count Name: St Francis Blvd & Sunwood Dr  
Site Code:  
Start Date: 01/26/2023  
Page No: 10

### Turning Movement Peak Hour Data (12:15 PM)

Start Time	Sunwood Dr Eastbound					Sunwood Dr Westbound					St. Francis Blvd Northbound					St. Francis Blvd Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
12:15 PM	2	2	5	0	9	11	0	2	0	13	4	84	4	0	92	1	111	1	0	113	227
12:30 PM	4	1	1	0	6	6	0	2	0	8	0	97	12	0	109	2	98	1	0	101	224
12:45 PM	3	3	3	0	9	5	1	3	0	9	2	91	13	0	106	0	78	1	0	79	203
1:00 PM	4	0	4	0	8	6	0	0	0	6	5	101	6	0	112	2	85	1	0	88	214
Total	13	6	13	0	32	28	1	7	0	36	11	373	35	0	419	5	372	4	0	381	868
Approach %	40.6	18.8	40.6	-	-	77.8	2.8	19.4	-	-	2.6	89.0	8.4	-	-	1.3	97.6	1.0	-	-	-
Total %	1.5	0.7	1.5	-	3.7	3.2	0.1	0.8	-	4.1	1.3	43.0	4.0	-	48.3	0.6	42.9	0.5	-	43.9	-
PHF	0.813	0.500	0.650	-	0.889	0.636	0.250	0.583	-	0.692	0.550	0.923	0.673	-	0.935	0.625	0.838	1.000	-	0.843	0.956
Lights	13	6	13	-	32	28	1	7	-	36	11	373	35	-	419	5	371	4	-	380	867
% Lights	100.0	100.0	100.0	-	100.0	100.0	100.0	100.0	-	100.0	100.0	100.0	100.0	-	100.0	100.0	99.7	100.0	-	99.7	99.9
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0
All Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% All Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	1	0	-	1	1
% Trucks	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.3	0.0	-	0.3	0.1





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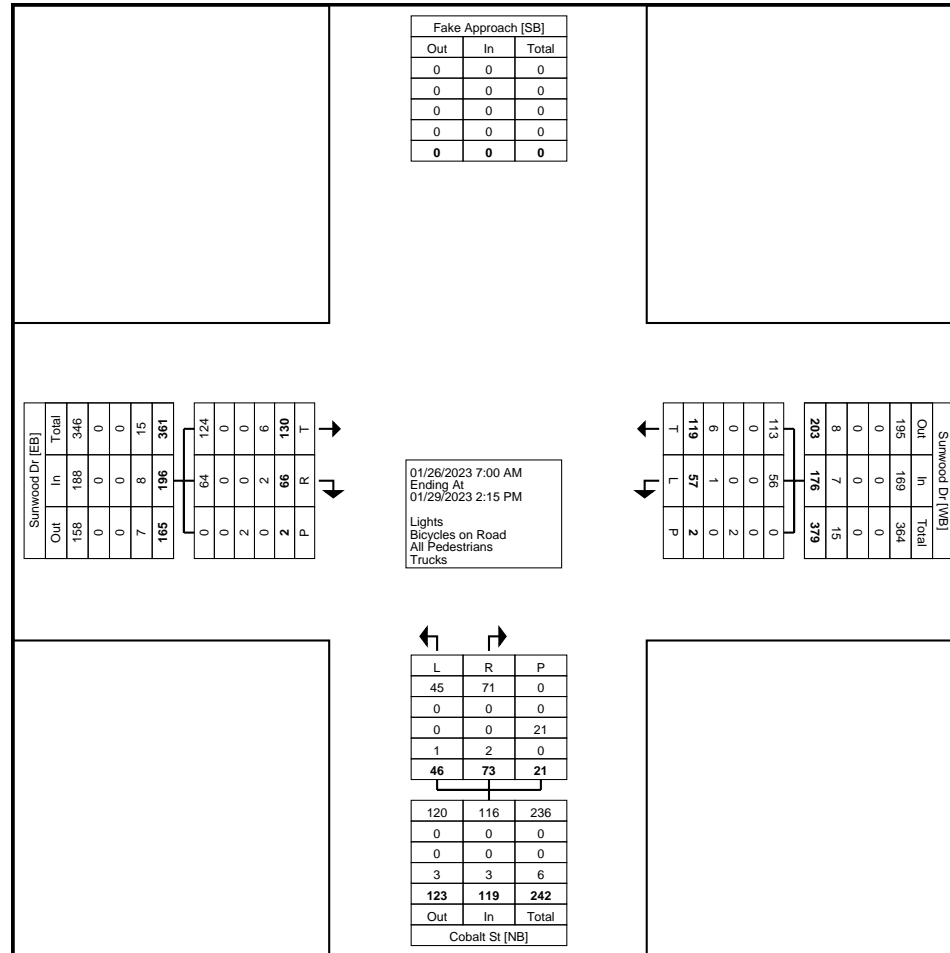
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Count Name: Sunwood Dr & Cobalt St  
Site Code:  
Start Date: 01/26/2023  
Page No: 1

### Turning Movement Data

Start Time	Sunwood Dr Eastbound				Sunwood Dr Westbound				Cobalt St Northbound				Int. Total
	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	
7:00 AM	3	1	0	4	0	5	0	5	6	4	0	10	19
7:15 AM	1	3	0	4	1	8	0	9	7	2	0	9	22
7:30 AM	2	2	0	4	0	10	2	10	4	4	0	8	22
7:45 AM	1	1	0	2	0	9	0	9	1	2	0	3	14
Hourly Total	7	7	0	14	1	32	2	33	18	12	0	30	77
8:00 AM	3	0	0	3	1	2	0	3	0	4	0	4	10
8:15 AM	2	1	0	3	0	3	0	3	0	2	0	2	8
8:30 AM	6	0	0	6	0	3	0	3	0	1	0	1	10
8:45 AM	2	2	0	4	0	6	0	6	2	4	4	6	16
Hourly Total	13	3	0	16	1	14	0	15	2	11	4	13	44
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	10	7	0	17	5	4	0	9	1	4	1	5	31
4:15 PM	3	4	0	7	0	3	0	3	2	2	12	4	14
4:30 PM	5	3	0	8	4	6	0	10	0	2	1	2	20
4:45 PM	13	5	1	18	5	2	0	7	1	0	0	1	26
Hourly Total	31	19	1	50	14	15	0	29	4	8	14	12	91
5:00 PM	8	4	1	12	5	4	0	9	0	1	0	1	22
5:15 PM	10	3	0	13	2	4	0	6	1	2	0	3	22
5:30 PM	9	2	0	11	2	5	0	7	1	2	1	3	21
5:45 PM	2	2	0	4	1	3	0	4	1	1	0	2	10
Hourly Total	29	11	1	40	10	16	0	26	3	6	1	9	75
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	3	1	0	4	3	1	0	4	1	1	1	2	10
10:15 AM	6	1	0	7	1	2	0	3	2	7	0	9	19
10:30 AM	1	0	0	1	2	1	0	3	1	3	0	4	8
10:45 AM	1	0	0	1	2	6	0	8	1	2	0	3	12
Hourly Total	11	2	0	13	8	10	0	18	5	13	1	18	49
11:00 AM	4	1	0	5	1	1	0	2	0	1	0	1	8
11:15 AM	1	4	0	5	2	3	0	5	0	2	0	2	12
11:30 AM	1	3	0	4	3	3	0	6	0	3	0	3	13
11:45 AM	3	0	0	3	4	1	0	5	1	3	0	4	12
Hourly Total	9	8	0	17	10	8	0	18	1	9	0	10	45

12:00 PM	2	1	0	3	2	6	0	8	2	3	0	5	16
12:15 PM	4	1	0	5	1	3	0	4	1	3	0	4	13
12:30 PM	5	1	0	6	0	1	0	1	1	1	0	2	9
12:45 PM	5	5	0	10	1	2	0	3	3	1	0	4	17
Hourly Total	16	8	0	24	4	12	0	16	7	8	0	15	55
1:00 PM	3	0	0	3	2	1	0	3	0	2	0	2	8
1:15 PM	4	3	0	7	2	3	0	5	2	1	0	3	15
1:30 PM	5	2	0	7	5	5	0	10	2	3	1	5	22
1:45 PM	2	3	0	5	0	3	0	3	2	0	0	2	10
Hourly Total	14	8	0	22	9	12	0	21	6	6	1	12	55
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	130	66	2	196	57	119	2	176	46	73	21	119	491
Approach %	66.3	33.7	-	-	32.4	67.6	-	-	38.7	61.3	-	-	-
Total %	26.5	13.4	-	39.9	11.6	24.2	-	35.8	9.4	14.9	-	24.2	-
Lights	124	64	-	188	56	113	-	169	45	71	-	116	473
% Lights	95.4	97.0	-	95.9	98.2	95.0	-	96.0	97.8	97.3	-	97.5	96.3
Bicycles on Road	0	0	-	0	0	0	-	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
All Pedestrians	-	-	2	-	-	-	2	-	-	-	21	-	-
% All Pedestrians	-	-	100.0	-	-	-	100.0	-	-	-	100.0	-	-
Trucks	6	2	-	8	1	6	-	7	1	2	-	3	18
% Trucks	4.6	3.0	-	4.1	1.8	5.0	-	4.0	2.2	2.7	-	2.5	3.7



Turning Movement Data Plot



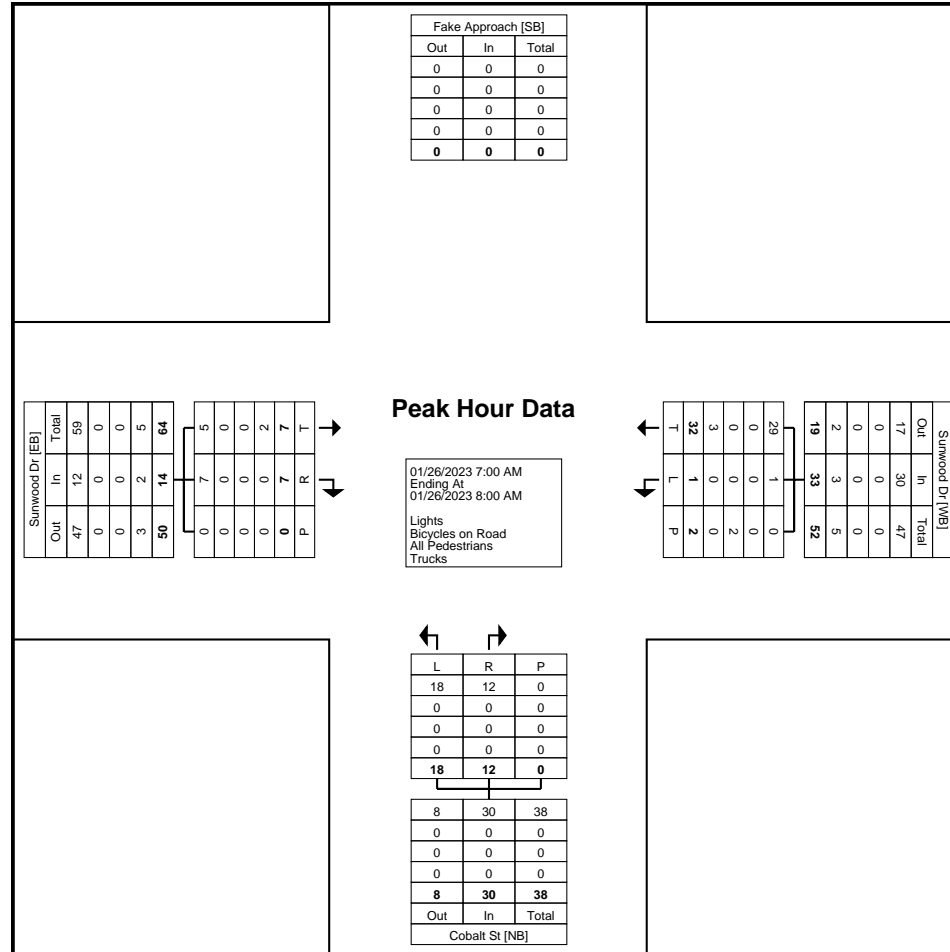
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(630) 487-5550 ethan.scowcroft@kimley-horn.com

Count Name: Sunwood Dr & Cobalt St  
Site Code:  
Start Date: 01/26/2023  
Page No: 4

### Turning Movement Peak Hour Data (7:00 AM)

Start Time	Sunwood Dr Eastbound				Sunwood Dr Westbound				Cobalt St Northbound				Int. Total
	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	
7:00 AM	3	1	0	4	0	5	0	5	6	4	0	10	19
7:15 AM	1	3	0	4	1	8	0	9	7	2	0	9	22
7:30 AM	2	2	0	4	0	10	2	10	4	4	0	8	22
7:45 AM	1	1	0	2	0	9	0	9	1	2	0	3	14
Total	7	7	0	14	1	32	2	33	18	12	0	30	77
Approach %	50.0	50.0	-	-	3.0	97.0	-	-	60.0	40.0	-	-	-
Total %	9.1	9.1	-	18.2	1.3	41.6	-	42.9	23.4	15.6	-	39.0	-
PHF	0.583	0.583	-	0.875	0.250	0.800	-	0.825	0.643	0.750	-	0.750	0.875
Lights	5	7	-	12	1	29	-	30	18	12	-	30	72
% Lights	71.4	100.0	-	85.7	100.0	90.6	-	90.9	100.0	100.0	-	100.0	93.5
Bicycles on Road	0	0	-	0	0	0	-	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
All Pedestrians	-	-	0	-	-	-	2	-	-	-	0	-	-
% All Pedestrians	-	-	-	-	-	-	100.0	-	-	-	-	-	-
Trucks	2	0	-	2	0	3	-	3	0	0	-	0	5
% Trucks	28.6	0.0	-	14.3	0.0	9.4	-	9.1	0.0	0.0	-	0.0	6.5



Turning Movement Peak Hour Data Plot (7:00 AM)



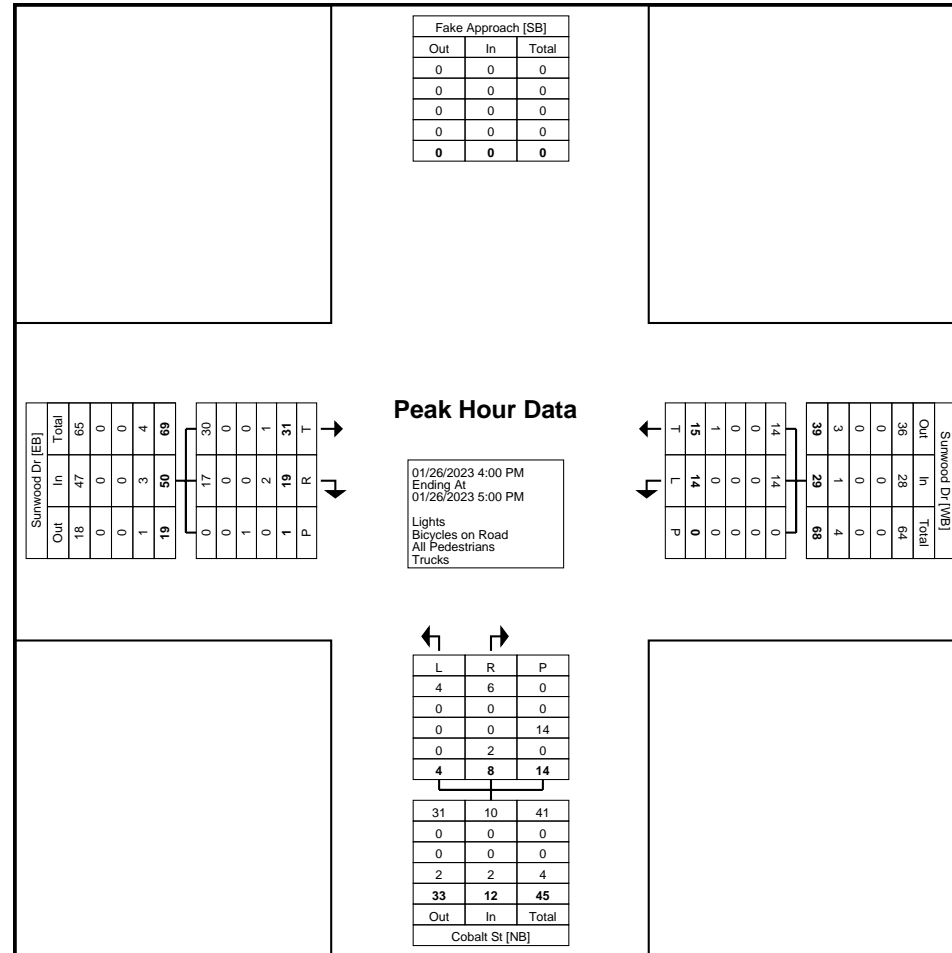
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Count Name: Sunwood Dr & Cobalt St  
Site Code:  
Start Date: 01/26/2023  
Page No: 6

### Turning Movement Peak Hour Data (4:00 PM)

Start Time	Sunwood Dr Eastbound				Sunwood Dr Westbound				Cobalt St Northbound				Int. Total
	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	
4:00 PM	10	7	0	17	5	4	0	9	1	4	1	5	31
4:15 PM	3	4	0	7	0	3	0	3	2	2	12	4	14
4:30 PM	5	3	0	8	4	6	0	10	0	2	1	2	20
4:45 PM	13	5	1	18	5	2	0	7	1	0	0	1	26
Total	31	19	1	50	14	15	0	29	4	8	14	12	91
Approach %	62.0	38.0	-	-	48.3	51.7	-	-	33.3	66.7	-	-	-
Total %	34.1	20.9	-	54.9	15.4	16.5	-	31.9	4.4	8.8	-	13.2	-
PHF	0.596	0.679	-	0.694	0.700	0.625	-	0.725	0.500	0.500	-	0.600	0.734
Lights	30	17	-	47	14	14	-	28	4	6	-	10	85
% Lights	96.8	89.5	-	94.0	100.0	93.3	-	96.6	100.0	75.0	-	83.3	93.4
Bicycles on Road	0	0	-	0	0	0	-	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
All Pedestrians	-	-	1	-	-	-	0	-	-	-	14	-	-
% All Pedestrians	-	-	100.0	-	-	-	-	-	-	-	100.0	-	-
Trucks	1	2	-	3	0	1	-	1	0	2	-	2	6
% Trucks	3.2	10.5	-	6.0	0.0	6.7	-	3.4	0.0	25.0	-	16.7	6.6



Turning Movement Peak Hour Data Plot (4:00 PM)



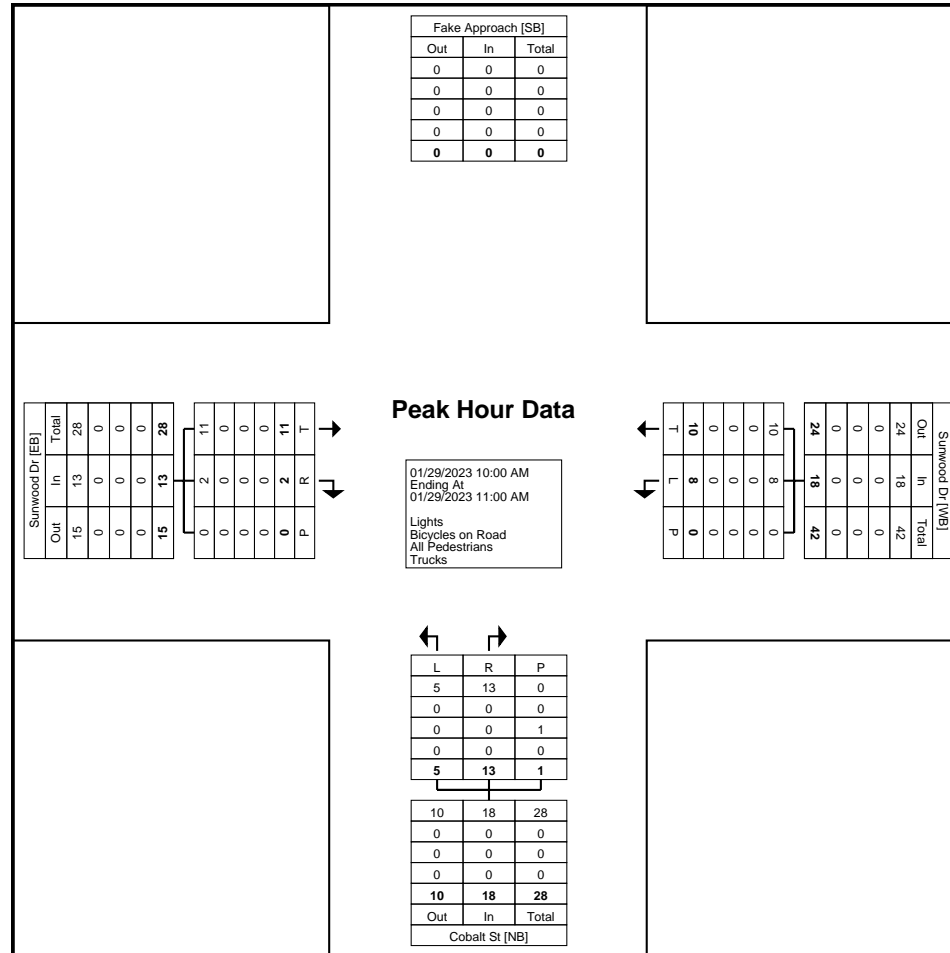
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Count Name: Sunwood Dr & Cobalt St  
Site Code:  
Start Date: 01/26/2023  
Page No: 8

### Turning Movement Peak Hour Data (10:00 AM)

Start Time	Sunwood Dr Eastbound				Sunwood Dr Westbound				Cobalt St Northbound				Int. Total
	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	
10:00 AM	3	1	0	4	3	1	0	4	1	1	1	2	10
10:15 AM	6	1	0	7	1	2	0	3	2	7	0	9	19
10:30 AM	1	0	0	1	2	1	0	3	1	3	0	4	8
10:45 AM	1	0	0	1	2	6	0	8	1	2	0	3	12
Total	11	2	0	13	8	10	0	18	5	13	1	18	49
Approach %	84.6	15.4	-	-	44.4	55.6	-	-	27.8	72.2	-	-	-
Total %	22.4	4.1	-	26.5	16.3	20.4	-	36.7	10.2	26.5	-	36.7	-
PHF	0.458	0.500	-	0.464	0.667	0.417	-	0.563	0.625	0.464	-	0.500	0.645
Lights	11	2	-	13	8	10	-	18	5	13	-	18	49
% Lights	100.0	100.0	-	100.0	100.0	100.0	-	100.0	100.0	100.0	-	100.0	100.0
Bicycles on Road	0	0	-	0	0	0	-	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
All Pedestrians	-	-	0	-	-	-	0	-	-	-	1	-	-
% All Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-
Trucks	0	0	-	0	0	0	-	0	0	0	-	0	0
% Trucks	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0



Turning Movement Peak Hour Data Plot (10:00 AM)



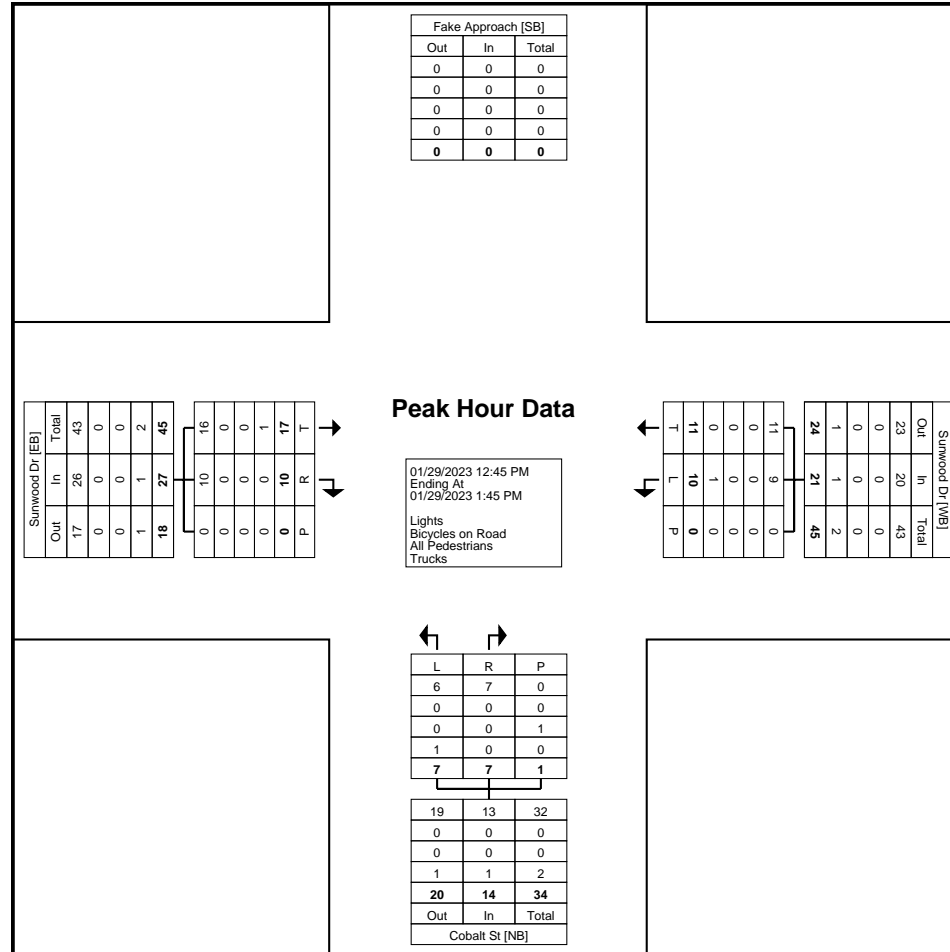
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Count Name: Sunwood Dr & Cobalt St  
Site Code:  
Start Date: 01/26/2023  
Page No: 10

### Turning Movement Peak Hour Data (12:45 PM)

Start Time	Sunwood Dr Eastbound				Sunwood Dr Westbound				Cobalt St Northbound				Int. Total
	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	
12:45 PM	5	5	0	10	1	2	0	3	3	1	0	4	17
1:00 PM	3	0	0	3	2	1	0	3	0	2	0	2	8
1:15 PM	4	3	0	7	2	3	0	5	2	1	0	3	15
1:30 PM	5	2	0	7	5	5	0	10	2	3	1	5	22
Total	17	10	0	27	10	11	0	21	7	7	1	14	62
Approach %	63.0	37.0	-	-	47.6	52.4	-	-	50.0	50.0	-	-	-
Total %	27.4	16.1	-	43.5	16.1	17.7	-	33.9	11.3	11.3	-	22.6	-
PHF	0.850	0.500	-	0.675	0.500	0.550	-	0.525	0.583	0.583	-	0.700	0.705
Lights	16	10	-	26	9	11	-	20	6	7	-	13	59
% Lights	94.1	100.0	-	96.3	90.0	100.0	-	95.2	85.7	100.0	-	92.9	95.2
Bicycles on Road	0	0	-	0	0	0	-	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
All Pedestrians	-	-	0	-	-	-	0	-	-	-	1	-	-
% All Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-
Trucks	1	0	-	1	1	0	-	1	1	0	-	1	3
% Trucks	5.9	0.0	-	3.7	10.0	0.0	-	4.8	14.3	0.0	-	7.1	4.8



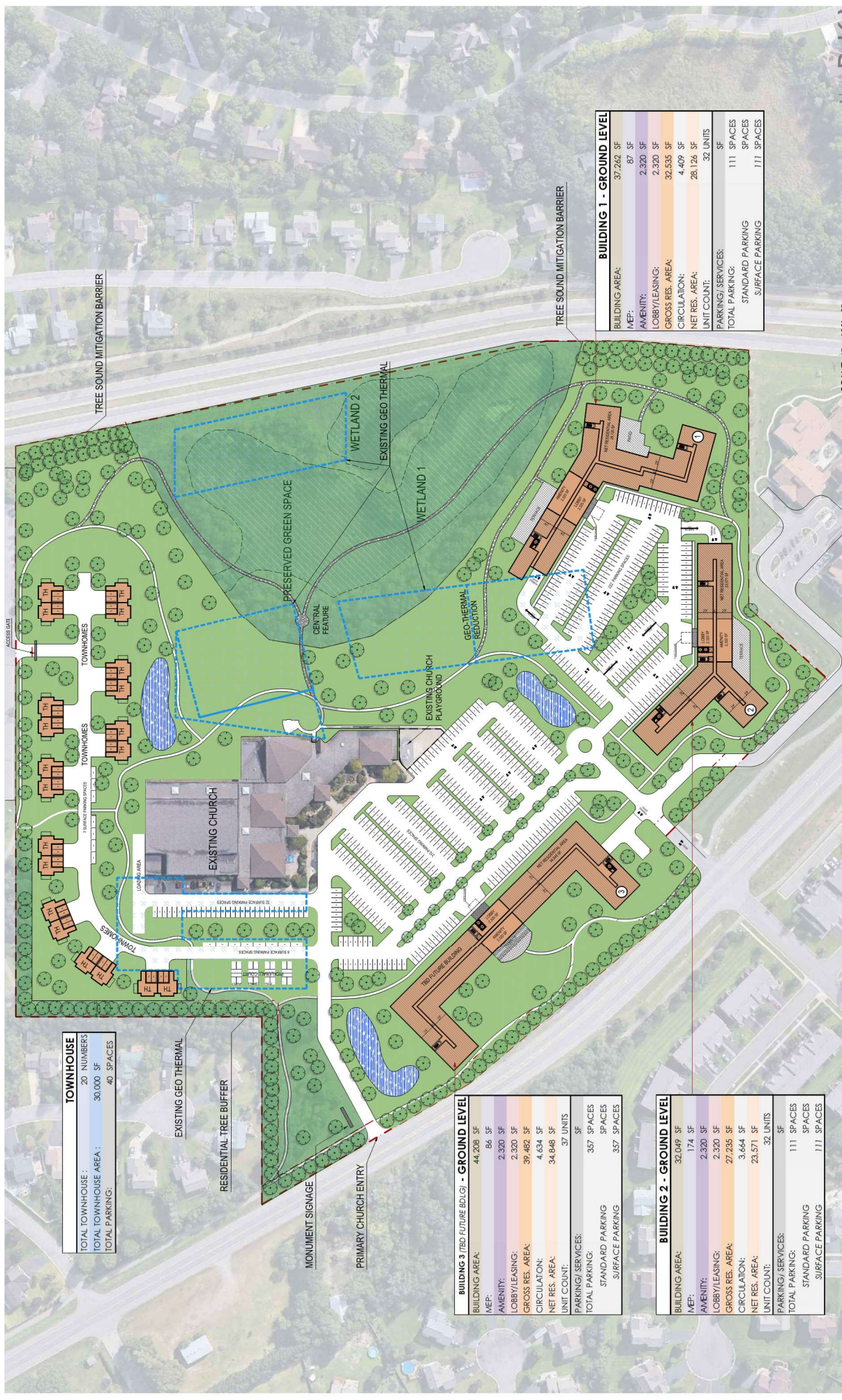
Turning Movement Peak Hour Data Plot (12:45 PM)

## C. Site Layout Exhibit



**GROUND LEVEL**

**OPTION D2-A**



<b>TOWNHOUSE</b>	
TOTAL TOWNHOUSE:	20 NUMBERS
TOTAL TOWNHOUSE AREA:	30,000 SF
TOTAL PARKING:	40 SPACES

<b>BUILDING 3 (FBD FUTURE BLDG) - GROUND LEVEL</b>	
BUILDING AREA:	44,208 SF
MEP:	86 SF
AVENUE:	2,320 SF
LOBBY/LEASING:	2,320 SF
GROSS RES. AREA:	39,482 SF
CIRCULATION:	4,634 SF
NET RES. AREA:	34,848 SF
UNIT COUNT:	37 UNITS
PARKING/SERVICES:	SF
TOTAL PARKING:	357 SPACES
STANDARD PARKING:	SPACES
SURFACE PARKING:	357 SPACES

<b>BUILDING 2 - GROUND LEVEL</b>	
BUILDING AREA:	32,049 SF
MEP:	174 SF
AVENUE:	2,320 SF
LOBBY/LEASING:	2,320 SF
GROSS RES. AREA:	27,235 SF
CIRCULATION:	3,664 SF
NET RES. AREA:	23,571 SF
UNIT COUNT:	32 UNITS
PARKING/SERVICES:	SF
TOTAL PARKING:	111 SPACES
STANDARD PARKING:	SPACES
SURFACE PARKING:	111 SPACES

<b>BUILDING 1 - GROUND LEVEL</b>	
BUILDING AREA:	37,262 SF
MEP:	87 SF
AVENUE:	2,320 SF
LOBBY/LEASING:	2,320 SF
GROSS RES. AREA:	32,535 SF
CIRCULATION:	4,409 SF
NET RES. AREA:	28,126 SF
UNIT COUNT:	32 UNITS
PARKING/SERVICES:	SF
TOTAL PARKING:	111 SPACES
STANDARD PARKING:	SPACES
SURFACE PARKING:	111 SPACES



## D. SimTraffic Analysis Results



1: Nowthen Blvd NW & Sunwood Dr NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.2	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.5	3.5	0.7
Total Del/Veh (s)	13.7	11.0	6.9	13.9	11.1	1.5	2.0	0.8	0.2	1.3	0.1	2.5

2: Cobalt St NW & Sunwood Dr NW Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.2	0.1
Total Del/Veh (s)	2.1	2.4	1.7	0.6	4.5	2.3	1.9

3: St Francis Blvd NW & Sunwood Dr NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	1.8	0.0	0.0	4.1	0.9	0.1	0.0	0.0	0.0	3.1	0.5	3.9
Total Del/Veh (s)	44.8	45.0	6.3	40.1	41.8	5.8	51.8	5.8	3.5	63.6	3.5	1.6

3: St Francis Blvd NW & Sunwood Dr NW Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	7.2

4: Nowthen Blvd NW & 146th Ave NW Performance by movement

Movement	EBL	EBR	WBL	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	5.6	5.1	10.0	2.2	0.4	0.1	1.3	0.4	1.4

5: Nowthen Blvd NW & Lord of Life Access Performance by movement

Movement	WBR	NBT	SBT	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	2.3	0.4	0.7	0.6

6: Nowthen Blvd NW & Iodine St NW Performance by movement

Movement	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	10.1	6.3	6.1	0.7	0.2	0.7	1.3	0.2	1.7

7: Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	2.2	0.8	11.3	1.3	15.2	5.1	2.7

8: St Francis Blvd NW & Nowthen Blvd NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	3.9	0.3	0.4	3.7	0.6	3.0	0.0	0.0	0.2
Total Del/Veh (s)	23.2	34.5	3.5	42.1	32.8	6.6	46.3	6.6	1.4	45.7	18.5	6.8

8: St Francis Blvd NW & Nowthen Blvd NW Performance by movement

Movement	All
Denied Del/Veh (s)	0.7
Total Del/Veh (s)	16.8

Total Network Performance

Denied Del/Veh (s)	1.2
Total Del/Veh (s)	23.2

Queuing and Blocking Report  
AM Peak

02/20/2023

Intersection: 1: Nowthen Blvd NW & Sunwood Dr NW

Movement	EB	EB	WB	WB	NB
Directions Served	LT	R	LT	R	LT
Maximum Queue (ft)	48	62	74	21	22
Average Queue (ft)	12	19	30	1	4
95th Queue (ft)	32	44	68	7	17
Link Distance (ft)	414		1298		784
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		270		270	
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 2: Cobalt St NW & Sunwood Dr NW

Movement	NB
Directions Served	LR
Maximum Queue (ft)	46
Average Queue (ft)	15
95th Queue (ft)	40
Link Distance (ft)	511
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: St Francis Blvd NW & Sunwood Dr NW

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	R	L	T	R
Maximum Queue (ft)	24	42	86	118	26	98	26	46	122	26
Average Queue (ft)	6	10	31	8	4	18	5	6	42	5
95th Queue (ft)	23	29	61	46	17	57	22	25	104	21
Link Distance (ft)		1064		520		3458			761	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	100		100		240		240	240		240
Storage Blk Time (%)			0	0						
Queuing Penalty (veh)			0	0						

# Queuing and Blocking Report

## AM Peak

02/20/2023

### Intersection: 4: Nowthen Blvd NW & 146th Ave NW

Movement	EB	WB	NB
Directions Served	LTR	LTR	LT
Maximum Queue (ft)	47	25	50
Average Queue (ft)	15	5	3
95th Queue (ft)	37	20	19
Link Distance (ft)	303	354	585
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

### Intersection: 5: Nowthen Blvd NW & Lord of Life Access

Movement	WB
Directions Served	LR
Maximum Queue (ft)	27
Average Queue (ft)	3
95th Queue (ft)	17
Link Distance (ft)	225
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

### Intersection: 6: Nowthen Blvd NW & Iodine St NW

Movement	EB	EB	NB
Directions Served	LT	R	L
Maximum Queue (ft)	24	65	43
Average Queue (ft)	3	25	6
95th Queue (ft)	17	52	24
Link Distance (ft)	278	278	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			290
Storage Blk Time (%)			
Queuing Penalty (veh)			

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Intersection: 7:

Movement	EB	EB	WB	NB	NB
Directions Served	T	R	L	L	R
Maximum Queue (ft)	22	22	90	53	46
Average Queue (ft)	1	1	27	23	21
95th Queue (ft)	7	8	68	54	41
Link Distance (ft)	659			345	345
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	300		120		
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 8: St Francis Blvd NW & Nowthen Blvd NW

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	L	TR	L	L	T	R	L	T	R
Maximum Queue (ft)	24	43	146	121	189	128	99	23	26	359	60
Average Queue (ft)	7	20	72	19	83	31	34	2	8	153	4
95th Queue (ft)	23	47	129	58	149	87	83	14	24	273	21
Link Distance (ft)	384			243			607			3458	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	200	80			500	500	290		210	210	
Storage Blk Time (%)			9	0						2	
Queuing Penalty (veh)			3	0						1	

Network Summary

Network wide Queuing Penalty: 4
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1: Nowthen Blvd NW & Sunwood Dr NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	4.2	0.1	0.1	4.2	0.0	0.0	0.0	0.1	0.3	3.7
Total Del/Veh (s)	21.0	9.0	2.2	28.6	15.8	1.4	1.8	2.8	1.7	1.2	1.1	0.3

1: Nowthen Blvd NW & Sunwood Dr NW Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	3.6

2: Cobalt St NW & Sunwood Dr NW Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	3.0	0.4	3.4	1.3	3.6	2.0	2.2

3: St Francis Blvd NW & Sunwood Dr NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	4.2	0.1	0.0	0.1	0.0	2.0	0.4	2.8	0.4
Total Del/Veh (s)	49.3	0.2	3.4	59.1	72.1	31.3	13.4	7.7	20.1	2.9	0.0	13.1

4: Nowthen Blvd NW & 146th Ave NW Performance by movement

Movement	EBL	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.6	0.3	0.5	0.0	0.5	0.1	0.6

5: Nowthen Blvd NW & Lord of Life Access Performance by movement

Movement	WBR	NBT	SBT	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	2.4	0.4	0.4	0.4

6: Nowthen Blvd NW & Iodine St NW Performance by movement

Movement	EBL	EBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.7	0.0	0.0
Total Del/Veh (s)	40.2	2.8	1.3	0.0	7.9	0.5	1.5

7: Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.2	0.0
Total Del/Veh (s)	1.4	0.3	3.4	1.9	8.4	3.6	2.5

8: St Francis Blvd NW & Nowthen Blvd NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	4.2	0.1	0.1	2.7	1.7	3.5	0.0	0.0	0.0
Total Del/Veh (s)	58.1	26.8	1.6	58.3	55.6	39.3	40.2	9.6	2.2	34.3	13.7	12.9

8: St Francis Blvd NW & Nowthen Blvd NW Performance by movement

Movement	All
Denied Del/Veh (s)	1.2
Total Del/Veh (s)	20.4

Total Network Performance

Denied Del/Veh (s)	1.4
Total Del/Veh (s)	24.9

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Intersection: 1: Nowthen Blvd NW & Sunwood Dr NW

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	LT	R	LT	R	LT	LT	R
Maximum Queue (ft)	25	21	92	25	47	21	13
Average Queue (ft)	19	11	50	5	19	4	3
95th Queue (ft)	35	26	88	21	57	18	11
Link Distance (ft)	414		1298		784	478	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		270		270			270
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 2: Cobalt St NW & Sunwood Dr NW

Movement	NB
Directions Served	LR
Maximum Queue (ft)	27
Average Queue (ft)	5
95th Queue (ft)	23
Link Distance (ft)	511
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: St Francis Blvd NW & Sunwood Dr NW

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	T	R	L	T
Maximum Queue (ft)	24	20	66	37	51	306	30	22	52
Average Queue (ft)	10	5	44	11	10	133	11	8	26
95th Queue (ft)	29	18	77	35	44	345	35	25	63
Link Distance (ft)		1064		520		3458			761
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	100		100		240		240	240	
Storage Blk Time (%)							5		
Queuing Penalty (veh)							4		

Queuing and Blocking Report  
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Intersection: 4: Nowthen Blvd NW & 146th Ave NW

Movement	EB
Directions Served	LTR
Maximum Queue (ft)	23
Average Queue (ft)	9
95th Queue (ft)	27
Link Distance (ft)	303
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Nowthen Blvd NW & Lord of Life Access

Movement	WB
Directions Served	LR
Maximum Queue (ft)	28
Average Queue (ft)	11
95th Queue (ft)	34
Link Distance (ft)	225
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Nowthen Blvd NW & Iodine St NW

Movement	EB	EB	SB
Directions Served	LT	R	L
Maximum Queue (ft)	24	40	50
Average Queue (ft)	5	15	26
95th Queue (ft)	21	39	53
Link Distance (ft)	278	278	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			300
Storage Blk Time (%)			
Queuing Penalty (veh)			

Queuing and Blocking Report  
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Intersection: 7:

Movement	WB	NB	NB
Directions Served	L	L	R
Maximum Queue (ft)	31	72	75
Average Queue (ft)	12	45	41
95th Queue (ft)	37	79	73
Link Distance (ft)		345	345
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	120		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 8: St Francis Blvd NW & Nowthen Blvd NW

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	L	TR	L	L	T	R	L	T	R
Maximum Queue (ft)	66	62	50	125	185	149	164	24	22	131	17
Average Queue (ft)	28	18	22	84	154	99	115	14	4	78	3
95th Queue (ft)	68	55	48	136	194	161	199	33	19	137	15
Link Distance (ft)		384		244			607			3458	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	200		80		500	500		290	210		210
Storage Blk Time (%)				24							
Queuing Penalty (veh)				13							

Network Summary

Network wide Queuing Penalty: 17
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1: Nowthen Blvd NW & Sunwood Dr NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.3	0.2	4.0	0.1	0.0	2.1	0.0	0.0	0.0	0.2	3.4	0.5
Total Del/Veh (s)	5.2	7.2	2.5	5.5	8.5	1.5	1.4	1.2	0.1	0.8	0.1	1.5

2: Cobalt St NW & Sunwood Dr NW Performance by movement

Movement	EBT	EBR	WBL	WBT	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.0
Total Del/Veh (s)	1.4	1.6	1.9	1.1	2.1	1.6

3: St Francis Blvd NW & Sunwood Dr NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	1.4	0.0	0.0	4.1	0.1	0.1	0.0	0.0	0.0	3.2	0.3	3.1
Total Del/Veh (s)	36.6	16.1	5.6	44.1	36.8	5.7	30.1	5.7	3.2	31.5	2.9	0.1

3: St Francis Blvd NW & Sunwood Dr NW Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	7.1

4: Nowthen Blvd NW & 146th Ave NW Performance by movement

Movement	EBL	EBR	WBL	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.3	2.5	4.2	0.4	0.6	0.1	0.4	0.6	0.6

5: Nowthen Blvd NW & Lord of Life Access Performance by movement

Movement	WBL	WBR	NBT	SBT	All
Denied Del/Veh (s)	0.2	0.1	0.0	0.0	0.0
Total Del/Veh (s)	6.3	2.6	0.5	0.3	0.7

6: Nowthen Blvd NW & Iodine St NW Performance by movement

Movement	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	6.1	2.8	4.8	5.7	2.5	1.7	0.7	0.1	3.2	0.6	0.1	0.8

7: Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	1.0	0.1	4.4	1.4	8.4	2.6	1.5

8: St Francis Blvd NW & Nowthen Blvd NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	4.0	0.1	0.3	3.3	0.7	3.1	0.0	0.0	0.0
Total Del/Veh (s)	64.2	41.1	2.0	51.4	37.6	21.7	46.7	5.2	1.4	68.5	14.6	3.3

8: St Francis Blvd NW & Nowthen Blvd NW Performance by movement

Movement	All
Denied Del/Veh (s)	0.7
Total Del/Veh (s)	17.3

Total Network Performance

Denied Del/Veh (s)	1.1
Total Del/Veh (s)	23.3

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Intersection: 1: Nowthen Blvd NW & Sunwood Dr NW

Movement	EB	EB	WB	WB	NB
Directions Served	LT	R	LT	R	LT
Maximum Queue (ft)	49	60	29	25	22
Average Queue (ft)	12	15	11	2	3
95th Queue (ft)	34	38	34	12	15
Link Distance (ft)	414		1298		784
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		270		270	
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 2: Cobalt St NW & Sunwood Dr NW

Movement	NB
Directions Served	LR
Maximum Queue (ft)	27
Average Queue (ft)	6
95th Queue (ft)	25
Link Distance (ft)	511
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: St Francis Blvd NW & Sunwood Dr NW

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	T	R	L	T
Maximum Queue (ft)	24	20	110	18	50	72	27	22	73
Average Queue (ft)	2	8	36	2	7	17	3	2	29
95th Queue (ft)	12	23	82	11	29	53	15	12	66
Link Distance (ft)		1064		520		3458			761
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	100		100		240		240	240	
Storage Blk Time (%)				2					
Queuing Penalty (veh)				0					

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Intersection: 4: Nowthen Blvd NW & 146th Ave NW

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	25	25
Average Queue (ft)	8	3
95th Queue (ft)	26	17
Link Distance (ft)	303	354
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: Nowthen Blvd NW & Lord of Life Access

Movement	WB
Directions Served	LR
Maximum Queue (ft)	51
Average Queue (ft)	17
95th Queue (ft)	40
Link Distance (ft)	225
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Nowthen Blvd NW & Iodine St NW

Movement	EB	EB	WB	NB	SB
Directions Served	LT	R	LTR	L	L
Maximum Queue (ft)	23	44	20	24	23
Average Queue (ft)	2	13	2	1	1
95th Queue (ft)	11	34	12	8	8
Link Distance (ft)	278	278	203		
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)				290	300
Storage Blk Time (%)					
Queuing Penalty (veh)					

Queuing and Blocking Report  
 Sunday Peak

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Intersection: 7:

Movement	WB	NB	NB
Directions Served	L	L	R
Maximum Queue (ft)	53	49	46
Average Queue (ft)	5	14	18
95th Queue (ft)	29	40	40
Link Distance (ft)		345	345
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	120		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 8: St Francis Blvd NW & Nowthen Blvd NW

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	L	TR	L	L	T	R	L	T	R
Maximum Queue (ft)	44	46	108	56	185	146	152	42	69	307	16
Average Queue (ft)	11	21	38	13	77	17	52	5	23	109	1
95th Queue (ft)	35	45	83	37	154	81	121	22	60	203	8
Link Distance (ft)		384		243			607			3458	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	200		80		500	500		290	210		210
Storage Blk Time (%)			2							1	
Queuing Penalty (veh)			1							0	

Network Summary

Network wide Queuing Penalty: 1
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1: Nowthen Blvd NW & Sunwood Dr NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.3	0.2	4.1	0.1	0.0	0.7	0.0	0.0	0.0	0.6	0.5	3.2
Total Del/Veh (s)	8.5	11.6	6.2	11.3	11.8	2.6	4.4	0.8	0.2	0.7	1.3	0.2

1: Nowthen Blvd NW & Sunwood Dr NW Performance by movement

Movement	All
Denied Del/Veh (s)	0.7
Total Del/Veh (s)	2.4

2: Cobalt St NW & Sunwood Dr NW Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0		0.0	0.1	0.1	0.1
Total Del/Veh (s)	2.3	1.5		1.0	4.4	2.2	2.3

3: St Francis Blvd NW & Sunwood Dr NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.8	0.0	0.0	4.1	0.2	0.3	0.0	0.0	0.0	3.3	0.5	3.6
Total Del/Veh (s)	46.6	50.1	7.6	44.2	48.4	5.4	39.1	5.4	3.1	50.9	4.3	1.1

3: St Francis Blvd NW & Sunwood Dr NW Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	8.7

4: Nowthen Blvd NW & 146th Ave NW Performance by movement

Movement	EBL	EBR	WBL	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.2	0.1	0.1	0.0	0.0	0.2	0.0	0.0	0.0
Total Del/Veh (s)	11.8	5.1	9.8	3.2	0.6	0.0	1.3	0.4	1.5

5: Nowthen Blvd NW & Lord of Life Access Performance by movement

Movement	WBR	NBT	SBT	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	1.4	0.3	0.7	0.6

6: Nowthen Blvd NW & Iodine St NW Performance by movement

Movement	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.2	0.0	0.0	0.0
Total Del/Veh (s)	8.9	7.6	6.0	0.6	0.2	1.8	1.3	0.2	1.8

7: Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	2.2	0.8	8.8	1.2	14.1	6.0	2.5

8: St Francis Blvd NW & Nowthen Blvd NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	3.9	0.3	0.4	3.6	0.6	3.5	0.4	0.0	0.2
Total Del/Veh (s)	39.0	37.0	3.6	48.3	34.9	12.1	47.3	6.0	1.6	43.9	18.1	6.4

8: St Francis Blvd NW & Nowthen Blvd NW Performance by movement

Movement	All
Denied Del/Veh (s)	0.7
Total Del/Veh (s)	17.1

Total Network Performance

Denied Del/Veh (s)	1.2
Total Del/Veh (s)	23.9

Queuing and Blocking Report  
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Intersection: 1: Nowthen Blvd NW & Sunwood Dr NW

Movement	EB	EB	WB	WB	NB	SB
Directions Served	LT	R	LT	R	LT	R
Maximum Queue (ft)	47	79	73	25	48	3
Average Queue (ft)	12	23	30	4	4	0
95th Queue (ft)	34	53	57	19	24	2
Link Distance (ft)	414		1298		784	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		270		270		270
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: Cobalt St NW & Sunwood Dr NW

Movement	NB
Directions Served	LR
Maximum Queue (ft)	52
Average Queue (ft)	19
95th Queue (ft)	44
Link Distance (ft)	511
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: St Francis Blvd NW & Sunwood Dr NW

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	R	L	T	R
Maximum Queue (ft)	24	54	99	30	26	108	37	29	146	20
Average Queue (ft)	3	11	40	6	5	19	4	5	48	1
95th Queue (ft)	14	38	82	21	20	63	21	21	115	9
Link Distance (ft)		1064		520		3458			761	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	100		100		240		240	240		240
Storage Blk Time (%)		0	1							
Queuing Penalty (veh)		0	0							

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Intersection: 4: Nowthen Blvd NW & 146th Ave NW

Movement	EB	WB	NB
Directions Served	LTR	LTR	LT
Maximum Queue (ft)	55	28	59
Average Queue (ft)	18	9	3
95th Queue (ft)	40	28	25
Link Distance (ft)	303	354	585
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: Nowthen Blvd NW & Lord of Life Access

Movement	WB
Directions Served	LR
Maximum Queue (ft)	6
Average Queue (ft)	0
95th Queue (ft)	6
Link Distance (ft)	225
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Nowthen Blvd NW & Iodine St NW

Movement	EB	EB	NB	SB
Directions Served	LT	R	L	L
Maximum Queue (ft)	19	86	48	14
Average Queue (ft)	2	26	5	0
95th Queue (ft)	14	51	26	5
Link Distance (ft)	278	278		
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			290	300
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report  
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Intersection: 7:

Movement	EB	WB	NB	NB
Directions Served	R	L	L	R
Maximum Queue (ft)	9	81	75	54
Average Queue (ft)	1	25	23	17
95th Queue (ft)	7	62	55	44
Link Distance (ft)			345	345
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	300	120		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 8: St Francis Blvd NW & Nowthen Blvd NW

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	L	TR	L	L	T	R	L	T	R
Maximum Queue (ft)	32	77	160	134	172	134	106	27	67	339	37
Average Queue (ft)	8	21	73	19	76	29	28	4	15	147	6
95th Queue (ft)	27	55	134	69	150	87	73	19	46	279	23
Link Distance (ft)		384		243			607			3458	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	200		80		500	500		290	210		210
Storage Blk Time (%)			15	0							3
Queuing Penalty (veh)			5	1							1

Network Summary

Network wide Queuing Penalty: 7
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1: Nowthen Blvd NW & Sunwood Dr NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	4.1	0.1	0.1	1.8	0.0	0.0	0.0	0.3	0.4	3.6
Total Del/Veh (s)	10.3	9.8	2.6	15.0	8.2	3.4	2.9	3.2	0.6	2.5	1.1	0.2

1: Nowthen Blvd NW & Sunwood Dr NW Performance by movement

Movement	All
Denied Del/Veh (s)	0.5
Total Del/Veh (s)	2.6

2: Cobalt St NW & Sunwood Dr NW Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	1.3	2.1	2.7	1.9	4.5	2.1	1.7

3: St Francis Blvd NW & Sunwood Dr NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	4.2	0.3	0.2	0.0	0.0	0.0	3.3	0.4	4.2
Total Del/Veh (s)	53.0	44.0	10.0	55.9	75.6	14.5	79.0	13.0	8.1	84.1	4.5	0.0

3: St Francis Blvd NW & Sunwood Dr NW Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	14.2

4: Nowthen Blvd NW & 146th Ave NW Performance by movement

Movement	EBL	EBR	WBL	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.8	0.0
Total Del/Veh (s)	6.7	2.8	11.9	1.4	1.3	0.2	1.9	0.6	0.0	1.0

5: Nowthen Blvd NW & Lord of Life Access Performance by movement

Movement	WBL	WBR	NBT	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	4.3	5.8	0.7	0.4	0.6

6: Nowthen Blvd NW & Iodine St NW Performance by movement

Movement	EBL	EBR	WBL	WBR	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.0	0.0	0.5	0.0	0.0	0.0
Total Del/Veh (s)	9.5	3.9	8.1	1.7	1.5	0.4	5.0	0.7	0.1	1.6

7: Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.1	0.0	0.0	0.2	0.1	0.0
Total Del/Veh (s)	1.6	0.5	9.4	2.4	12.6	3.8	3.3

8: St Francis Blvd NW & Nowthen Blvd NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.1	4.1	0.3	0.1	2.9	1.6	3.2	0.0	0.0	0.0
Total Del/Veh (s)	48.0	44.1	2.2	56.9	47.1	25.6	42.1	12.2	1.7	58.2	25.6	7.6

8: St Francis Blvd NW & Nowthen Blvd NW Performance by movement

Movement	All
Denied Del/Veh (s)	1.2
Total Del/Veh (s)	22.9

Total Network Performance

Denied Del/Veh (s)	1.4
Total Del/Veh (s)	30.5

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Intersection: 1: Nowthen Blvd NW & Sunwood Dr NW

Movement	EB	EB	WB	WB	NB	SB
Directions Served	LT	R	LT	R	LT	LT
Maximum Queue (ft)	65	54	53	25	70	21
Average Queue (ft)	17	15	21	6	18	3
95th Queue (ft)	42	37	44	22	48	15
Link Distance (ft)	414		1298		784	478
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		270		270		
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: Cobalt St NW & Sunwood Dr NW

Movement	NB
Directions Served	LR
Maximum Queue (ft)	27
Average Queue (ft)	8
95th Queue (ft)	29
Link Distance (ft)	511
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: St Francis Blvd NW & Sunwood Dr NW

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	T	R	L	T
Maximum Queue (ft)	46	82	65	54	52	330	28	27	168
Average Queue (ft)	16	21	27	14	14	110	6	7	46
95th Queue (ft)	42	51	59	38	39	251	23	23	111
Link Distance (ft)		1064		520		3458			761
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	100		100		240		240	240	
Storage Blk Time (%)		0				1			
Queuing Penalty (veh)		0				1			

Queuing and Blocking Report  
PM Peak

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Intersection: 4: Nowthen Blvd NW & 146th Ave NW

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LT	LT
Maximum Queue (ft)	49	24	50	22
Average Queue (ft)	9	1	6	1
95th Queue (ft)	32	8	27	8
Link Distance (ft)	303	354	585	784
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Nowthen Blvd NW & Lord of Life Access

Movement	WB
Directions Served	LR
Maximum Queue (ft)	28
Average Queue (ft)	3
95th Queue (ft)	17
Link Distance (ft)	225
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Nowthen Blvd NW & Iodine St NW

Movement	EB	EB	WB	SB
Directions Served	LT	R	LTR	L
Maximum Queue (ft)	24	66	20	49
Average Queue (ft)	4	17	6	15
95th Queue (ft)	18	40	20	42
Link Distance (ft)	278	278	203	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				300
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report  
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Intersection: 7:

Movement	WB	NB	NB
Directions Served	L	L	R
Maximum Queue (ft)	94	91	54
Average Queue (ft)	18	41	30
95th Queue (ft)	61	76	46
Link Distance (ft)		345	345
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	120		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 8: St Francis Blvd NW & Nowthen Blvd NW

Movement	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	L	TR	R	L	L	T	R	L	T	R
Maximum Queue (ft)	88	105	85	125	8	229	193	445	29	48	376	20
Average Queue (ft)	41	37	45	40	1	152	99	160	6	13	145	1
95th Queue (ft)	79	76	80	92	4	214	177	331	24	37	264	7
Link Distance (ft)		384		244	244			607			3458	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	200		80			500	500		290	210		210
Storage Blk Time (%)		0	1	4				2			3	
Queuing Penalty (veh)		0	1	2				8			1	

Network Summary

Network wide Queuing Penalty: 13
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1: Nowthen Blvd NW & Sunwood Dr NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.2	4.2	0.0	0.1	4.2	0.0	0.0	0.0	0.2	3.0	0.4
Total Del/Veh (s)	4.5	7.8	1.6	6.4	6.5	1.4	1.7	1.3	0.5	0.6	0.2	1.6

2: Cobalt St NW & Sunwood Dr NW Performance by movement

Movement	EBT	EBR	WBL	WBT	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.0
Total Del/Veh (s)	1.3	1.3	2.0	0.9	2.0	1.4

3: St Francis Blvd NW & Sunwood Dr NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	4.1	0.1	0.1	0.0	0.0	0.1	1.5	0.3	2.9
Total Del/Veh (s)	76.4	48.8	4.0	36.0	57.2	3.1	45.6	5.4	2.6	29.3	3.7	0.8

3: St Francis Blvd NW & Sunwood Dr NW Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	7.0

4: Nowthen Blvd NW & 146th Ave NW Performance by movement

Movement	EBR	WBL	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	4.2	0.0
Total Del/Veh (s)	2.7	4.2	0.5	0.8	0.1	0.4	0.1	0.7

5: Nowthen Blvd NW & Lord of Life Access Performance by movement

Movement	WBL	WBR	NBT	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	5.5	3.5	0.6	0.2	0.5

6: Nowthen Blvd NW & Iodine St NW Performance by movement

Movement	EBT	EBR	WBL	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	9.8	2.5	4.4	1.6	0.9	0.0	2.7	0.4	0.0	0.8

7: Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.2	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	1.0	0.2	4.1	1.9	4.6	1.6	1.6

8: St Francis Blvd NW & Nowthen Blvd NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	4.0	0.2	0.3	3.4	0.6	3.7	0.0	0.0	0.0
Total Del/Veh (s)	58.6	32.2	1.7	55.0	43.2	11.1	55.5	7.5	1.4	56.4	15.1	6.0

8: St Francis Blvd NW & Nowthen Blvd NW Performance by movement

Movement	All
Denied Del/Veh (s)	0.8
Total Del/Veh (s)	20.0

Total Network Performance

Denied Del/Veh (s)	1.1
Total Del/Veh (s)	24.9

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Intersection: 1: Nowthen Blvd NW & Sunwood Dr NW

Movement	EB	EB	WB	WB	NB
Directions Served	LT	R	LT	R	LT
Maximum Queue (ft)	48	44	29	25	22
Average Queue (ft)	12	10	17	1	2
95th Queue (ft)	35	30	39	8	10
Link Distance (ft)	414		1298		784
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		270		270	
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 2: Cobalt St NW & Sunwood Dr NW

Movement	NB
Directions Served	LR
Maximum Queue (ft)	46
Average Queue (ft)	9
95th Queue (ft)	32
Link Distance (ft)	511
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: St Francis Blvd NW & Sunwood Dr NW

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	R	L	T	R
Maximum Queue (ft)	24	37	88	18	52	95	27	23	92	26
Average Queue (ft)	2	7	29	4	9	20	1	1	31	3
95th Queue (ft)	13	24	69	16	32	61	9	8	74	15
Link Distance (ft)		1064		520		3458			761	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	100		100		240		240	240		240
Storage Blk Time (%)			0							
Queuing Penalty (veh)			0							

Queuing and Blocking Report  
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Intersection: 4: Nowthen Blvd NW & 146th Ave NW

Movement	EB	WB	NB
Directions Served	LTR	LTR	LT
Maximum Queue (ft)	25	25	23
Average Queue (ft)	8	3	1
95th Queue (ft)	27	18	8
Link Distance (ft)	303	354	585
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: Nowthen Blvd NW & Lord of Life Access

Movement	WB
Directions Served	LR
Maximum Queue (ft)	29
Average Queue (ft)	12
95th Queue (ft)	35
Link Distance (ft)	225
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Nowthen Blvd NW & Iodine St NW

Movement	EB	EB	WB	NB	SB
Directions Served	LT	R	LTR	L	L
Maximum Queue (ft)	23	19	20	28	24
Average Queue (ft)	0	12	1	4	1
95th Queue (ft)	0	26	7	19	8
Link Distance (ft)	278	278	203		
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)				290	300
Storage Blk Time (%)					
Queuing Penalty (veh)					

Queuing and Blocking Report  
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Intersection: 7:

Movement	WB	NB	NB
Directions Served	L	L	R
Maximum Queue (ft)	31	29	27
Average Queue (ft)	11	11	13
95th Queue (ft)	35	33	34
Link Distance (ft)		345	345
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	120		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 8: St Francis Blvd NW & Nowthen Blvd NW

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	L	TR	L	L	T	R	L	T	R
Maximum Queue (ft)	24	65	138	92	165	129	150	24	90	236	22
Average Queue (ft)	4	18	57	19	91	31	61	3	27	91	3
95th Queue (ft)	17	47	116	58	152	98	137	16	63	196	14
Link Distance (ft)		384		243			607			3458	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	200		80		500	500		290	210		210
Storage Blk Time (%)			7	2						0	
Queuing Penalty (veh)			2	1						0	

Network Summary

Network wide Queuing Penalty: 3
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1: Nowthen Blvd NW & Sunwood Dr NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.2	0.1	4.1	0.0	0.0	1.3	0.0	0.0	0.0	0.1	0.6	3.0
Total Del/Veh (s)	13.6	12.3	7.6	13.6	15.4	2.1	5.0	1.2	0.2	0.5	1.4	0.2

1: Nowthen Blvd NW & Sunwood Dr NW Performance by movement

Movement	All
Denied Del/Veh (s)	0.7
Total Del/Veh (s)	2.8

2: Cobalt St NW & Sunwood Dr NW Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0		0.0	0.1	0.2	0.1
Total Del/Veh (s)	1.8	1.9		1.1	4.2	2.4	2.2

3: St Francis Blvd NW & Sunwood Dr NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.8	0.0	0.0	4.1	0.2	0.4	0.0	0.0	0.0	3.4	0.5	2.9
Total Del/Veh (s)	44.9	38.0	7.3	48.9	39.6	5.2	59.5	5.7	3.2	53.5	4.2	0.9

3: St Francis Blvd NW & Sunwood Dr NW Performance by movement

Movement	All
Denied Del/Veh (s)	0.7
Total Del/Veh (s)	8.2

4: Nowthen Blvd NW & 146th Ave NW Performance by movement

Movement	EBL	EBR	WBL	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.2	0.1	0.1	0.0	0.0	0.2	0.0	0.4	0.0
Total Del/Veh (s)	11.6	7.8	10.6	4.2	0.6	0.0	1.5	0.4	1.7

5: Nowthen Blvd NW & Lord of Life Access Performance by movement

Movement	WBR	NBT	SBT	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	3.1	0.4	0.7	0.7

6: Nowthen Blvd NW & Iodine St NW Performance by movement

Movement	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.2	0.1	0.0	0.0	0.4	0.0	0.0	0.0
Total Del/Veh (s)	25.0	9.5	6.0	0.7	0.2	1.7	1.5	0.3	2.1

7: Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.1	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	2.6	1.0	13.2	1.3	18.1	7.4	3.0

8: St Francis Blvd NW & Nowthen Blvd NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	3.9	0.5	0.4	3.5	0.7	3.6	0.1	0.0	0.2
Total Del/Veh (s)	36.9	34.9	4.0	50.4	32.5	5.9	46.1	6.4	1.6	47.3	19.1	6.2

8: St Francis Blvd NW & Nowthen Blvd NW Performance by movement

Movement	All
Denied Del/Veh (s)	0.7
Total Del/Veh (s)	17.7

Total Network Performance

Denied Del/Veh (s)	1.2
Total Del/Veh (s)	24.9

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Intersection: 1: Nowthen Blvd NW & Sunwood Dr NW

Movement	EB	EB	WB	WB	NB
Directions Served	LT	R	LT	R	LT
Maximum Queue (ft)	42	62	104	25	71
Average Queue (ft)	11	23	32	4	6
95th Queue (ft)	33	49	70	20	34
Link Distance (ft)	414		1298		784
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		270		270	
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 2: Cobalt St NW & Sunwood Dr NW

Movement	NB
Directions Served	LR
Maximum Queue (ft)	52
Average Queue (ft)	18
95th Queue (ft)	42
Link Distance (ft)	511
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: St Francis Blvd NW & Sunwood Dr NW

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	R	L	T	R
Maximum Queue (ft)	24	40	88	36	37	95	31	32	183	13
Average Queue (ft)	3	8	36	7	6	20	3	4	52	1
95th Queue (ft)	16	29	75	25	23	66	18	18	131	11
Link Distance (ft)		1064		520		3458			761	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	100		100		240		240	240		240
Storage Blk Time (%)			0						0	
Queuing Penalty (veh)			0						0	

Queuing and Blocking Report  
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Intersection: 4: Nowthen Blvd NW & 146th Ave NW

Movement	EB	WB	NB
Directions Served	LTR	LTR	LT
Maximum Queue (ft)	60	25	52
Average Queue (ft)	20	7	4
95th Queue (ft)	46	26	25
Link Distance (ft)	303	354	585
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: Nowthen Blvd NW & Lord of Life Access

Movement	WB
Directions Served	LR
Maximum Queue (ft)	17
Average Queue (ft)	1
95th Queue (ft)	7
Link Distance (ft)	225
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Nowthen Blvd NW & Iodine St NW

Movement	EB	EB	NB	SB
Directions Served	LT	R	L	L
Maximum Queue (ft)	28	86	39	15
Average Queue (ft)	2	28	7	1
95th Queue (ft)	12	59	27	8
Link Distance (ft)	278	278		
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			290	300
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report  
AM Peak

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Intersection: 7:

Movement	EB	WB	NB	NB
Directions Served	R	L	L	R
Maximum Queue (ft)	34	86	52	51
Average Queue (ft)	2	33	21	18
95th Queue (ft)	16	73	48	45
Link Distance (ft)			345	345
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	300	120		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 8: St Francis Blvd NW & Nowthen Blvd NW

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	L	TR	L	L	T	R	L	T	R
Maximum Queue (ft)	36	81	175	99	176	140	95	33	59	339	29
Average Queue (ft)	8	20	91	16	82	32	28	3	20	164	7
95th Queue (ft)	28	54	156	56	155	95	67	16	49	277	24
Link Distance (ft)		384		243			607			3458	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	200		80		500	500		290	210		210
Storage Blk Time (%)		0	21	0						3	
Queuing Penalty (veh)		2	7	0						2	

Network Summary

Network wide Queuing Penalty: 11
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1: Nowthen Blvd NW & Sunwood Dr NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.2	0.2	4.0	0.1	0.1	2.4	0.0	0.0	0.0	0.5	0.5	3.4
Total Del/Veh (s)	11.4	15.8	3.8	14.3	13.4	3.5	4.3	4.4	1.3	2.7	1.3	0.2

1: Nowthen Blvd NW & Sunwood Dr NW Performance by movement

Movement	All
Denied Del/Veh (s)	0.5
Total Del/Veh (s)	3.6

2: Cobalt St NW & Sunwood Dr NW Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	1.2	1.1	3.0	1.2	4.1	1.9	1.6

3: St Francis Blvd NW & Sunwood Dr NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.0	0.0	4.1	0.1	0.2	0.0	0.0	0.1	3.4	0.4	3.5
Total Del/Veh (s)	60.1	64.7	14.1	58.6	57.1	15.5	60.0	13.7	8.5	64.9	3.8	1.0

3: St Francis Blvd NW & Sunwood Dr NW Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	14.0

4: Nowthen Blvd NW & 146th Ave NW Performance by movement

Movement	EBL	EBR	WBL	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.2	0.0
Total Del/Veh (s)	10.0	3.9	10.7	2.1	1.3	0.1	3.8	1.0	0.5	1.3

5: Nowthen Blvd NW & Lord of Life Access Performance by movement

Movement	WBL	WBR	NBT	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	14.1	5.4	0.9	0.6	0.8

6: Nowthen Blvd NW & Iodine St NW Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.2		0.0	0.0	0.4	0.0	0.3	0.1
Total Del/Veh (s)	12.5	3.5	15.4	10.6		1.8	0.3	5.5	0.8	0.2	1.8

7: Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.1	0.3	0.0	0.2	0.2	0.0
Total Del/Veh (s)	1.8	0.2	7.0	3.0	17.0	5.5	3.9

8: St Francis Blvd NW & Nowthen Blvd NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.2	3.9	0.3	0.3	3.1	1.8	3.2	0.1	0.0	0.0
Total Del/Veh (s)	55.2	37.3	2.5	46.4	45.2	29.6	50.9	11.9	2.3	50.9	20.8	5.3

8: St Francis Blvd NW & Nowthen Blvd NW Performance by movement

Movement	All
Denied Del/Veh (s)	1.3
Total Del/Veh (s)	22.7

Total Network Performance

Denied Del/Veh (s)	1.4
Total Del/Veh (s)	31.0

Queuing and Blocking Report  
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Intersection: 1: Nowthen Blvd NW & Sunwood Dr NW

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	LT	R	LT	R	LT	LT	R
Maximum Queue (ft)	57	45	50	25	114	42	4
Average Queue (ft)	20	16	24	6	30	5	0
95th Queue (ft)	46	36	47	22	80	26	2
Link Distance (ft)	414		1298		784	478	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		270		270			270
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 2: Cobalt St NW & Sunwood Dr NW

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	27	32
Average Queue (ft)	1	7
95th Queue (ft)	12	26
Link Distance (ft)	1064	511
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: St Francis Blvd NW & Sunwood Dr NW

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	R	L	T	R
Maximum Queue (ft)	49	64	87	65	56	367	126	45	143	24
Average Queue (ft)	10	15	33	11	16	107	14	8	37	1
95th Queue (ft)	33	46	71	38	44	284	77	27	95	10
Link Distance (ft)		1064		520		3458			761	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	100		100		240		240	240		240
Storage Blk Time (%)			0	0		1				
Queuing Penalty (veh)			0	0		1				

Queuing and Blocking Report  
PM Peak

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Intersection: 4: Nowthen Blvd NW & 146th Ave NW

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LT	LT
Maximum Queue (ft)	30	24	51	55
Average Queue (ft)	11	2	6	3
95th Queue (ft)	32	13	28	25
Link Distance (ft)	303	354	585	784
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Nowthen Blvd NW & Lord of Life Access

Movement	WB
Directions Served	LR
Maximum Queue (ft)	29
Average Queue (ft)	5
95th Queue (ft)	23
Link Distance (ft)	225
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Nowthen Blvd NW & Iodine St NW

Movement	EB	EB	WB	SB
Directions Served	LT	R	LTR	L
Maximum Queue (ft)	23	36	33	68
Average Queue (ft)	2	13	6	20
95th Queue (ft)	13	29	23	51
Link Distance (ft)	278	278	203	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				300
Storage Blk Time (%)				
Queuing Penalty (veh)				

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Intersection: 7:

Movement	WB	WB	WB	NB	NB
Directions Served	L	T	T	L	R
Maximum Queue (ft)	57	82	84	109	89
Average Queue (ft)	14	3	3	48	36
95th Queue (ft)	42	60	61	88	67
Link Distance (ft)		384	384	345	345
Upstream Blk Time (%)		0			
Queuing Penalty (veh)		0			
Storage Bay Dist (ft)	120				
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 8: St Francis Blvd NW & Nowthen Blvd NW

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	L	TR	L	L	T	R	L	T	R
Maximum Queue (ft)	142	133	113	130	297	211	347	32	65	287	20
Average Queue (ft)	60	34	45	58	176	118	156	8	16	125	3
95th Queue (ft)	118	85	93	116	268	216	288	27	49	218	13
Link Distance (ft)		384		243			607			3458	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	200		80		500	500		290	210		210
Storage Blk Time (%)		0	5	9			1			1	
Queuing Penalty (veh)		2	5	6			4			0	

Network Summary

Network wide Queuing Penalty: 18
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1: Nowthen Blvd NW & Sunwood Dr NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.2	4.1	0.1	0.1	2.1	0.0	0.0	0.1	0.2	3.9	0.5
Total Del/Veh (s)	5.4	7.8	2.2	5.7	7.9	2.4	1.2	1.2	0.2	0.7	0.1	1.5

2: Cobalt St NW & Sunwood Dr NW Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0		0.1	0.0
Total Del/Veh (s)	1.2	1.5	2.5	0.7		2.1	1.6

3: St Francis Blvd NW & Sunwood Dr NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.3	0.0	0.0	4.1	0.1	0.1	0.0	0.0	0.0	2.9	0.4	3.2
Total Del/Veh (s)	37.4	29.8	6.3	39.7	31.1	2.0	43.7	5.2	3.4	39.3	3.2	0.5

3: St Francis Blvd NW & Sunwood Dr NW Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	6.5

4: Nowthen Blvd NW & 146th Ave NW Performance by movement

Movement	EBL	EBR	WBL	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)		0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)		2.8	6.0	1.2	0.6	0.1	0.5	0.3	0.7

5: Nowthen Blvd NW & Lord of Life Access Performance by movement

Movement	WBL	WBR	NBT	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	5.8	3.2	0.4	0.3	0.5

6: Nowthen Blvd NW & Iodine St NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2
Total Del/Veh (s)	8.8	3.3	2.9	6.8	15.3	2.3	2.1	0.7	0.1	1.7	0.5	0.1

6: Nowthen Blvd NW & Iodine St NW Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	0.8

7: Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.5	0.0	0.1	0.1	0.0
Total Del/Veh (s)	1.0	0.2	4.3	1.5	6.5	2.2	1.5

8: St Francis Blvd NW & Nowthen Blvd NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	4.1	0.3	0.2	3.2	0.7	3.4	0.1	0.0	0.5
Total Del/Veh (s)	46.8	42.2	2.0	55.5	45.7	11.9	50.6	5.7	1.3	62.0	13.1	4.9

8: St Francis Blvd NW & Nowthen Blvd NW Performance by movement

Movement	All
Denied Del/Veh (s)	0.8
Total Del/Veh (s)	17.6

Total Network Performance

Denied Del/Veh (s)	1.1
Total Del/Veh (s)	22.7

Queuing and Blocking Report  
 SUN Peak

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Intersection: 1: Nowthen Blvd NW & Sunwood Dr NW

Movement	EB	EB	WB	WB	NB
Directions Served	LT	R	LT	R	LT
Maximum Queue (ft)	40	57	46	19	39
Average Queue (ft)	13	15	18	2	4
95th Queue (ft)	34	37	44	12	20
Link Distance (ft)	414		1298		784
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		270		270	
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 2: Cobalt St NW & Sunwood Dr NW

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	18	39
Average Queue (ft)	1	8
95th Queue (ft)	8	29
Link Distance (ft)	1064	511
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: St Francis Blvd NW & Sunwood Dr NW

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	R	L	T	R
Maximum Queue (ft)	32	42	75	17	55	93	32	26	118	15
Average Queue (ft)	2	10	24	2	11	17	2	3	30	1
95th Queue (ft)	15	32	56	10	38	61	12	16	82	10
Link Distance (ft)		1064		520		3458			761	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	100		100		240		240	240		240
Storage Blk Time (%)			0							
Queuing Penalty (veh)			0							

Queuing and Blocking Report  
 SUN Peak

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Intersection: 4: Nowthen Blvd NW & 146th Ave NW

Movement	EB	WB	NB
Directions Served	LTR	LTR	LT
Maximum Queue (ft)	25	25	19
Average Queue (ft)	11	4	1
95th Queue (ft)	30	20	10
Link Distance (ft)	303	354	585
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: Nowthen Blvd NW & Lord of Life Access

Movement	WB
Directions Served	LR
Maximum Queue (ft)	37
Average Queue (ft)	15
95th Queue (ft)	39
Link Distance (ft)	225
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Nowthen Blvd NW & Iodine St NW

Movement	EB	EB	WB	NB	SB
Directions Served	LT	R	LTR	L	L
Maximum Queue (ft)	23	36	20	27	10
Average Queue (ft)	2	11	3	4	0
95th Queue (ft)	12	29	15	20	5
Link Distance (ft)	278	278	203		
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)				290	300
Storage Blk Time (%)					
Queuing Penalty (veh)					

Queuing and Blocking Report  
 SUN Peak

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Intersection: 7:

Movement	EB	WB	NB	NB
Directions Served	R	L	L	R
Maximum Queue (ft)	4	39	46	48
Average Queue (ft)	0	9	16	16
95th Queue (ft)	3	33	41	41
Link Distance (ft)			345	345
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	300	120		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 8: St Francis Blvd NW & Nowthen Blvd NW

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	L	TR	L	L	T	R	L	T	R
Maximum Queue (ft)	40	60	117	90	186	148	155	29	73	212	20
Average Queue (ft)	8	20	48	16	93	27	54	3	26	95	3
95th Queue (ft)	26	50	98	53	164	102	120	18	62	173	14
Link Distance (ft)		384		243			607			3458	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	200		80		500	500		290	210		210
Storage Blk Time (%)			4	1						0	
Queuing Penalty (veh)			1	0						0	

Network Summary

Network wide Queuing Penalty: 2
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1: Nowthen Blvd NW & Sunwood Dr NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.2	0.2	4.1	0.0	0.0	2.0	0.0	0.0	0.0	0.9	0.5	3.2
Total Del/Veh (s)	9.9	12.4	5.0	12.8	12.2	3.0	4.4	0.8	0.1	1.5	1.4	0.1

1: Nowthen Blvd NW & Sunwood Dr NW Performance by movement

Movement	All
Denied Del/Veh (s)	0.7
Total Del/Veh (s)	2.5

2: Cobalt St NW & Sunwood Dr NW Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0		0.0	0.1	0.1	0.1
Total Del/Veh (s)	2.0	1.7		0.9	4.2	2.4	2.2

3: St Francis Blvd NW & Sunwood Dr NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.8	0.0	0.0	4.1	0.2	0.1	0.0	0.0	0.0	2.7	0.5	3.6
Total Del/Veh (s)	99.8	41.2	5.4	43.9	47.3	3.5	53.0	5.0	2.9	42.1	3.6	0.6

3: St Francis Blvd NW & Sunwood Dr NW Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	7.4

4: Nowthen Blvd NW & 146th Ave NW Performance by movement

Movement	EBL	EBR	WBL	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.0
Total Del/Veh (s)	14.8	5.4	9.3	2.9	0.6	0.0	1.3	0.5	1.5

5: Nowthen Blvd NW & Lord of Life Access Performance by movement

Movement	WBR	NBT	NBR	SBT	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.0	0.4	0.1	0.7	0.7

6: Nowthen Blvd NW & Iodine St NW Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.0
Total Del/Veh (s)	15.4	17.6	26.3	7.1	5.7	0.7	0.4	2.1	2.1	0.3	5.3

7: Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.1	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	2.8	1.2	12.6	1.2	22.8	7.4	3.3

8: St Francis Blvd NW & Nowthen Blvd NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	3.9	0.5	0.1	3.5	0.7	3.5	0.2	0.0	0.2
Total Del/Veh (s)	38.9	34.7	4.0	49.6	30.7	5.0	45.3	5.8	1.1	47.2	16.8	6.3

8: St Francis Blvd NW & Nowthen Blvd NW Performance by movement

Movement	All
Denied Del/Veh (s)	0.7
Total Del/Veh (s)	16.9

Total Network Performance

Denied Del/Veh (s)	1.1
Total Del/Veh (s)	25.0

Queuing and Blocking Report  
AM Peak Hour

10/13/2023

Intersection: 1: Nowthen Blvd NW & Sunwood Dr NW

Movement	EB	EB	WB	WB	NB	SB
Directions Served	LT	R	LT	R	LT	LT
Maximum Queue (ft)	44	64	80	24	42	4
Average Queue (ft)	13	21	34	3	4	0
95th Queue (ft)	36	45	64	15	21	3
Link Distance (ft)	414		1298		784	478
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		270		270		
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: Cobalt St NW & Sunwood Dr NW

Movement	NB
Directions Served	LR
Maximum Queue (ft)	57
Average Queue (ft)	21
95th Queue (ft)	48
Link Distance (ft)	511
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: St Francis Blvd NW & Sunwood Dr NW

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	R	L	T	R
Maximum Queue (ft)	19	52	99	30	25	107	30	27	176	16
Average Queue (ft)	1	12	34	7	3	19	3	3	45	1
95th Queue (ft)	10	35	79	23	15	65	18	16	126	7
Link Distance (ft)		1064		520		3458			761	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	100		100		240		240	240		240
Storage Blk Time (%)			0						0	
Queuing Penalty (veh)			0						0	

Queuing and Blocking Report  
AM Peak Hour

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Intersection: 4: Nowthen Blvd NW & 146th Ave NW

Movement	EB	WB	NB
Directions Served	LTR	LTR	LT
Maximum Queue (ft)	51	29	30
Average Queue (ft)	20	7	4
95th Queue (ft)	45	25	20
Link Distance (ft)	303	354	585
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: Nowthen Blvd NW & Lord of Life Access

Movement	WB
Directions Served	LR
Maximum Queue (ft)	29
Average Queue (ft)	5
95th Queue (ft)	22
Link Distance (ft)	225
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Nowthen Blvd NW & Iodine St NW

Movement	EB	EB	WB	NB	SB
Directions Served	LT	R	LTR	L	L
Maximum Queue (ft)	24	109	128	31	15
Average Queue (ft)	3	35	45	5	1
95th Queue (ft)	14	80	94	22	10
Link Distance (ft)	278	278	203		
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)				290	300
Storage Blk Time (%)					
Queuing Penalty (veh)					

Queuing and Blocking Report  
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Intersection: 7:

Movement	EB	WB	NB	NB
Directions Served	R	L	L	R
Maximum Queue (ft)	18	84	74	53
Average Queue (ft)	1	31	26	19
95th Queue (ft)	8	67	58	46
Link Distance (ft)			345	345
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	300	120		
Storage Blk Time (%)		0		
Queuing Penalty (veh)		0		

Intersection: 8: St Francis Blvd NW & Nowthen Blvd NW

Movement	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	L	TR	R	L	L	T	R	L	T	R
Maximum Queue (ft)	62	67	164	110	6	189	153	90	28	67	275	36
Average Queue (ft)	19	20	81	18	0	82	50	26	2	17	139	7
95th Queue (ft)	51	53	151	65	3	158	116	67	14	48	240	25
Link Distance (ft)		384		244	244			607			3458	
Upstream Blk Time (%)			0									
Queuing Penalty (veh)			0									
Storage Bay Dist (ft)	200		80			500	500		290	210		210
Storage Blk Time (%)			16	0								1
Queuing Penalty (veh)			4	0								1

Network Summary

Network wide Queuing Penalty: 5
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1: Nowthen Blvd NW & Sunwood Dr NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.2	0.2	4.1	0.1	0.1	2.3	0.0	0.0	0.0	0.4	0.4	3.6
Total Del/Veh (s)	13.4	13.4	3.2	13.8	13.2	3.6	4.0	3.7	1.1	2.3	1.3	0.2

1: Nowthen Blvd NW & Sunwood Dr NW Performance by movement

Movement	All
Denied Del/Veh (s)	0.5
Total Del/Veh (s)	3.3

2: Cobalt St NW & Sunwood Dr NW Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	1.2	1.5	3.0	1.4	4.0	2.2	1.7

3: St Francis Blvd NW & Sunwood Dr NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.0	0.0	4.1	0.2	0.2	0.0	0.0	0.1	3.4	0.3	3.3
Total Del/Veh (s)	59.9	62.9	10.5	59.2	51.6	12.2	66.7	16.4	8.9	62.1	3.6	0.4

3: St Francis Blvd NW & Sunwood Dr NW Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	15.8

4: Nowthen Blvd NW & 146th Ave NW Performance by movement

Movement	EBL	EBR	WBL	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total Del/Veh (s)	14.0	4.1	9.4	2.6	1.4	0.2	2.5	0.9	0.3	1.3

5: Nowthen Blvd NW & Lord of Life Access Performance by movement

Movement	WBR	NBT	NBR	SBT	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.6	1.0	0.3	0.5	0.7

6: Nowthen Blvd NW & Iodine St NW Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.4	0.0	0.0	0.1
Total Del/Veh (s)	14.4	4.8	22.1	9.4	1.9	1.6	0.9	5.7	1.0	0.1	2.8

7: Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.1	0.0	0.0	0.2	0.2	0.0
Total Del/Veh (s)	1.9	0.4	7.6	2.2	17.8	4.6	3.6

8: St Francis Blvd NW & Nowthen Blvd NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.1	3.8	0.4	0.1	3.0	1.9	3.1	0.0	0.0	0.1
Total Del/Veh (s)	56.7	42.5	2.4	52.8	48.0	23.4	43.9	10.2	2.0	61.5	23.2	6.0

8: St Francis Blvd NW & Nowthen Blvd NW Performance by movement

Movement	All
Denied Del/Veh (s)	1.3
Total Del/Veh (s)	22.5

Total Network Performance

Denied Del/Veh (s)	1.4
Total Del/Veh (s)	31.9

Queuing and Blocking Report  
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Intersection: 1: Nowthen Blvd NW & Sunwood Dr NW

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	LT	R	LT	R	LT	R	LT	R
Maximum Queue (ft)	51	41	64	29	89	14	42	3
Average Queue (ft)	18	15	25	6	25	0	3	0
95th Queue (ft)	43	33	51	24	68	8	19	2
Link Distance (ft)	414		1298		784		478	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		270		270		270		270
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 2: Cobalt St NW & Sunwood Dr NW

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	18	31
Average Queue (ft)	0	7
95th Queue (ft)	6	27
Link Distance (ft)	1064	511
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: St Francis Blvd NW & Sunwood Dr NW

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	R	L	T	R
Maximum Queue (ft)	48	76	91	63	121	711	122	32	141	4
Average Queue (ft)	12	17	32	12	16	141	14	8	36	0
95th Queue (ft)	38	54	75	38	78	406	76	25	93	3
Link Distance (ft)		1064		520		3458			761	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	100		100		240		240	240		240
Storage Blk Time (%)		0	1	0		3				
Queuing Penalty (veh)		0	0	0		3				

Queuing and Blocking Report  
PM Peak Hour

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Intersection: 4: Nowthen Blvd NW & 146th Ave NW

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LT	LT
Maximum Queue (ft)	29	25	70	38
Average Queue (ft)	12	3	8	2
95th Queue (ft)	32	17	38	16
Link Distance (ft)	303	354	585	784
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Nowthen Blvd NW & Lord of Life Access

Movement	WB
Directions Served	LR
Maximum Queue (ft)	28
Average Queue (ft)	3
95th Queue (ft)	18
Link Distance (ft)	225
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Nowthen Blvd NW & Iodine St NW

Movement	EB	EB	WB	NB	NB	SB
Directions Served	LT	R	LTR	L	R	L
Maximum Queue (ft)	28	48	97	4	15	72
Average Queue (ft)	3	15	34	0	1	19
95th Queue (ft)	16	35	73	3	6	49
Link Distance (ft)	278	278	203		659	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)				290		300
Storage Blk Time (%)						
Queuing Penalty (veh)						

Queuing and Blocking Report  
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Intersection: 7:

Movement	WB	NB	NB
Directions Served	L	L	R
Maximum Queue (ft)	45	106	70
Average Queue (ft)	15	48	34
95th Queue (ft)	43	88	56
Link Distance (ft)		345	345
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	120		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 8: St Francis Blvd NW & Nowthen Blvd NW

Movement	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	L	TR	R	L	L	T	R	L	T	R
Maximum Queue (ft)	150	98	105	150	32	274	227	321	40	55	250	29
Average Queue (ft)	62	32	41	54	2	174	131	139	8	13	130	6
95th Queue (ft)	117	78	88	120	18	253	209	265	28	41	215	21
Link Distance (ft)		384		244	244			607			3458	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	200		80			500	500		290	210		210
Storage Blk Time (%)		0	4	7				0				1
Queuing Penalty (veh)		0	3	4				2				0

Network Summary

Network wide Queuing Penalty: 12
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1: Nowthen Blvd NW & Sunwood Dr NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.2	4.1	0.1	0.1	2.1	0.0	0.0	0.1	0.2	3.3	0.5
Total Del/Veh (s)	4.5	7.1	2.4	5.4	7.9	1.4	1.5	1.0	0.3	0.7	0.1	1.4

2: Cobalt St NW & Sunwood Dr NW Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0		0.1	0.0
Total Del/Veh (s)	1.4	1.2	2.7	0.7		2.1	1.6

3: St Francis Blvd NW & Sunwood Dr NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.2	0.0	0.0	4.2	0.1	0.1	0.0	0.0	0.0	3.1	0.3	2.7
Total Del/Veh (s)	44.1	20.8	5.5	42.7	33.2	5.6	40.0	5.5	3.5	45.2	2.6	0.6

3: St Francis Blvd NW & Sunwood Dr NW Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	6.2

4: Nowthen Blvd NW & 146th Ave NW Performance by movement

Movement	EBL	EBR	WBL	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	6.4	2.7	5.5	1.5	0.8	0.1	0.5	0.1	0.7

5: Nowthen Blvd NW & Lord of Life Access Performance by movement

Movement	WBR	NBT	NBR	SBT	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.3	0.5	0.1	0.2	0.4

6: Nowthen Blvd NW & Iodine St NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	5.2	14.7	3.0	7.9	5.1	3.7	2.5	0.8	0.8	1.1	0.8	0.1

6: Nowthen Blvd NW & Iodine St NW Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	1.9

7: Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.0	0.1	0.1	0.0
Total Del/Veh (s)	1.2	0.4	5.3	1.3	7.4	3.1	1.6

8: St Francis Blvd NW & Nowthen Blvd NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	4.1	0.2	0.1	3.3	0.7	3.6	0.0	0.0	0.1
Total Del/Veh (s)	52.3	33.3	2.1	53.4	47.2	10.5	56.7	6.4	1.6	62.4	12.1	4.1

8: St Francis Blvd NW & Nowthen Blvd NW Performance by movement

Movement	All
Denied Del/Veh (s)	0.8
Total Del/Veh (s)	19.4

Total Network Performance

Denied Del/Veh (s)	1.1
Total Del/Veh (s)	24.2

Queuing and Blocking Report  
 Sunday Peak Hour

10/13/2023

Intersection: 1: Nowthen Blvd NW & Sunwood Dr NW

Movement	EB	EB	WB	WB	NB
Directions Served	LT	R	LT	R	LT
Maximum Queue (ft)	33	44	45	24	35
Average Queue (ft)	12	16	15	1	3
95th Queue (ft)	32	35	41	10	16
Link Distance (ft)	414		1298		784
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		270		270	
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 2: Cobalt St NW & Sunwood Dr NW

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	12	42
Average Queue (ft)	1	10
95th Queue (ft)	8	33
Link Distance (ft)	1064	511
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: St Francis Blvd NW & Sunwood Dr NW

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	R	L	T	R
Maximum Queue (ft)	24	36	72	18	27	100	25	22	112	10
Average Queue (ft)	3	10	21	2	6	18	2	3	25	1
95th Queue (ft)	16	30	52	12	22	64	13	15	73	8
Link Distance (ft)		1064		520		3458			761	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	100		100		240		240	240		240
Storage Blk Time (%)					0					
Queuing Penalty (veh)					0					

Queuing and Blocking Report  
 Sunday Peak Hour

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Intersection: 4: Nowthen Blvd NW & 146th Ave NW

Movement	EB	WB	NB
Directions Served	LTR	LTR	LT
Maximum Queue (ft)	25	29	40
Average Queue (ft)	9	4	2
95th Queue (ft)	28	19	18
Link Distance (ft)	303	354	585
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: Nowthen Blvd NW & Lord of Life Access

Movement	WB
Directions Served	LR
Maximum Queue (ft)	33
Average Queue (ft)	8
95th Queue (ft)	28
Link Distance (ft)	225
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Nowthen Blvd NW & Iodine St NW

Movement	EB	EB	WB	NB	NB	SB
Directions Served	LT	R	LTR	L	R	L
Maximum Queue (ft)	19	37	74	31	3	25
Average Queue (ft)	2	12	28	5	0	1
95th Queue (ft)	12	30	57	21	2	10
Link Distance (ft)	278	278	203		659	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)				290		300
Storage Blk Time (%)						
Queuing Penalty (veh)						

Queuing and Blocking Report  
 Sunday Peak Hour

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Intersection: 7:

Movement	EB	WB	NB	NB
Directions Served	R	L	L	R
Maximum Queue (ft)	4	45	43	63
Average Queue (ft)	0	9	18	15
95th Queue (ft)	3	36	42	42
Link Distance (ft)			345	345
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	300	120		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 8: St Francis Blvd NW & Nowthen Blvd NW

Movement	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	L	TR	R	L	L	T	R	L	T	R
Maximum Queue (ft)	64	79	108	70	5	186	156	174	38	81	207	32
Average Queue (ft)	16	21	45	17	0	91	57	52	3	25	84	3
95th Queue (ft)	44	57	94	51	2	164	126	127	20	62	167	17
Link Distance (ft)		384		244	244			607			3458	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	200		80			500	500		290	210		210
Storage Blk Time (%)		0	4	0							0	
Queuing Penalty (veh)		0	1	0							0	

Network Summary

Network wide Queuing Penalty: 1
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1: Nowthen Blvd NW & Sunwood Dr NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.3	0.2	4.0	0.0	0.0	0.8	0.0	0.0	0.0	1.4	0.7	2.7
Total Del/Veh (s)	12.1	14.3	7.9	14.0	14.2	2.8	5.1	1.1	0.4	3.4	1.5	0.2

1: Nowthen Blvd NW & Sunwood Dr NW Performance by movement

Movement	All
Denied Del/Veh (s)	0.8
Total Del/Veh (s)	2.8

2: Cobalt St NW & Sunwood Dr NW Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0		0.0	0.1	0.1	0.1
Total Del/Veh (s)	2.0	1.6		1.0	4.4	2.2	2.2

3: St Francis Blvd NW & Sunwood Dr NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	1.3	0.0	0.0	4.1	0.2	0.3	0.0	0.0	0.0	3.3	0.5	3.1
Total Del/Veh (s)	67.8	37.3	8.7	47.1	46.2	3.6	43.1	5.7	3.0	56.5	3.6	0.8

3: St Francis Blvd NW & Sunwood Dr NW Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	7.6

4: Nowthen Blvd NW & 146th Ave NW Performance by movement

Movement	EBL	EBR	WBL	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	11.8	6.9	13.6	5.9	0.7	0.1	1.6	0.7	1.9

5: Nowthen Blvd NW & Lord of Life Access Performance by movement

Movement	WBR	NBT	NBR	SBT	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.3	0.5	0.2	0.9	0.8

6: Nowthen Blvd NW & Iodine St NW Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	1.4	1.2	0.0	0.0	0.0	0.1	0.0	0.1	0.1
Total Del/Veh (s)	14.7	25.5	45.0	28.0	7.7	0.8	0.3	1.9	2.3	0.4	7.4

7: Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.1	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	3.1	1.3	15.7	1.2	33.9	9.0	3.8

8: St Francis Blvd NW & Nowthen Blvd NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	3.9	0.5	0.4	3.5	0.7	3.3	0.2	0.0	0.2
Total Del/Veh (s)	38.0	33.7	4.5	40.0	31.4	8.2	56.7	6.7	1.1	48.5	20.6	6.2

8: St Francis Blvd NW & Nowthen Blvd NW Performance by movement

Movement	All
Denied Del/Veh (s)	0.7
Total Del/Veh (s)	18.7

Total Network Performance

Denied Del/Veh (s)	1.2
Total Del/Veh (s)	28.6

Queuing and Blocking Report  
AM Peak

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Intersection: 1: Nowthen Blvd NW & Sunwood Dr NW

Movement	EB	EB	WB	WB	NB	SB
Directions Served	LT	R	LT	R	LT	LT
Maximum Queue (ft)	45	85	81	20	42	19
Average Queue (ft)	13	25	32	4	6	1
95th Queue (ft)	36	53	65	18	26	9
Link Distance (ft)	414		1298		784	478
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		270		270		
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: Cobalt St NW & Sunwood Dr NW

Movement	NB
Directions Served	LR
Maximum Queue (ft)	57
Average Queue (ft)	20
95th Queue (ft)	46
Link Distance (ft)	511
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: St Francis Blvd NW & Sunwood Dr NW

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	R	L	T	R
Maximum Queue (ft)	24	57	86	35	25	101	33	38	140	15
Average Queue (ft)	2	9	36	6	3	24	3	4	38	1
95th Queue (ft)	14	31	75	22	16	70	18	20	95	9
Link Distance (ft)		1064		520		3458			761	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	100		100		240		240	240		240
Storage Blk Time (%)										
Queuing Penalty (veh)										

Queuing and Blocking Report  
AM Peak

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Intersection: 4: Nowthen Blvd NW & 146th Ave NW

Movement	EB	WB	NB
Directions Served	LTR	LTR	LT
Maximum Queue (ft)	51	29	49
Average Queue (ft)	20	7	5
95th Queue (ft)	43	26	31
Link Distance (ft)	303	354	585
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: Nowthen Blvd NW & Lord of Life Access

Movement	WB
Directions Served	LR
Maximum Queue (ft)	29
Average Queue (ft)	8
95th Queue (ft)	28
Link Distance (ft)	225
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Nowthen Blvd NW & Iodine St NW

Movement	EB	EB	WB	NB	SB
Directions Served	LT	R	LTR	L	L
Maximum Queue (ft)	28	113	162	46	20
Average Queue (ft)	4	35	65	6	1
95th Queue (ft)	19	79	135	28	9
Link Distance (ft)	278	278	203		
Upstream Blk Time (%)			2		
Queuing Penalty (veh)			0		
Storage Bay Dist (ft)				290	300
Storage Blk Time (%)					
Queuing Penalty (veh)					

Queuing and Blocking Report  
AM Peak

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Intersection: 7:

Movement	EB	WB	NB	NB
Directions Served	R	L	L	R
Maximum Queue (ft)	40	88	86	58
Average Queue (ft)	2	30	25	19
95th Queue (ft)	17	69	63	44
Link Distance (ft)			345	345
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	300	120		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 8: St Francis Blvd NW & Nowthen Blvd NW

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	L	TR	L	L	T	R	L	T	R
Maximum Queue (ft)	71	67	199	97	175	145	108	23	52	349	35
Average Queue (ft)	22	22	88	17	92	52	31	3	16	178	8
95th Queue (ft)	58	53	161	65	157	111	82	17	44	309	25
Link Distance (ft)		384		243			607			3458	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	200		80		500	500		290	210		210
Storage Blk Time (%)			14	0							5
Queuing Penalty (veh)			5	0							3

Network Summary

Network wide Queuing Penalty: 8
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1: Nowthen Blvd NW & Sunwood Dr NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.3	0.3	4.1	0.1	0.1	2.6	0.0	0.0	0.0	0.5	0.5	3.3
Total Del/Veh (s)	16.0	14.5	4.5	18.8	16.2	4.7	5.0	4.4	1.1	2.5	1.4	0.3

1: Nowthen Blvd NW & Sunwood Dr NW Performance by movement

Movement	All
Denied Del/Veh (s)	0.5
Total Del/Veh (s)	3.9

2: Cobalt St NW & Sunwood Dr NW Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	1.3	0.9	3.0	1.1	4.7	2.2	1.5

3: St Francis Blvd NW & Sunwood Dr NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.0	0.0	4.0	0.2	0.2	0.0	0.0	0.0	3.6	0.3	3.3
Total Del/Veh (s)	54.6	52.0	11.5	56.3	55.9	13.5	69.7	14.3	8.5	72.4	4.1	0.6

3: St Francis Blvd NW & Sunwood Dr NW Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	14.4

4: Nowthen Blvd NW & 146th Ave NW Performance by movement

Movement	EBL	EBR	WBL	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.0
Total Del/Veh (s)	8.5	3.4	16.1	2.9	1.5	0.2	1.2	1.0	0.4	1.3

5: Nowthen Blvd NW & Lord of Life Access Performance by movement

Movement	WBL	WBR	NBT	NBR	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	9.8	4.4	1.0	0.3	0.6	0.8

6: Nowthen Blvd NW & Iodine St NW Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.2		0.0	0.0	0.3	0.0	0.9	0.1
Total Del/Veh (s)	14.3	4.6	26.3	18.0		2.1	0.8	6.5	1.1	0.3	3.2

7: Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.0	0.2	0.1	0.0
Total Del/Veh (s)	2.0	0.4	7.9	2.6	21.4	6.2	4.0

8: St Francis Blvd NW & Nowthen Blvd NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.2	3.9	0.4	0.4	3.2	2.2	3.4	0.0	0.0	0.1
Total Del/Veh (s)	56.2	38.4	2.6	50.3	45.1	23.9	46.9	12.4	2.1	56.4	23.9	7.3

8: St Francis Blvd NW & Nowthen Blvd NW Performance by movement

Movement	All
Denied Del/Veh (s)	1.5
Total Del/Veh (s)	23.4

Total Network Performance

Denied Del/Veh (s)	1.6
Total Del/Veh (s)	32.5

Queuing and Blocking Report  
PM Peak

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Intersection: 1: Nowthen Blvd NW & Sunwood Dr NW

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	LT	R	LT	R	LT	LT	R
Maximum Queue (ft)	57	60	71	26	162	41	5
Average Queue (ft)	19	18	25	5	36	5	0
95th Queue (ft)	45	42	55	21	94	27	3
Link Distance (ft)	414		1298		784	478	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		270		270			270
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 2: Cobalt St NW & Sunwood Dr NW

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	6	27
Average Queue (ft)	0	7
95th Queue (ft)	4	26
Link Distance (ft)	1064	511
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: St Francis Blvd NW & Sunwood Dr NW

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	R	L	T	R
Maximum Queue (ft)	48	67	89	70	55	281	51	38	157	5
Average Queue (ft)	11	17	32	15	15	121	10	8	37	0
95th Queue (ft)	35	47	73	44	45	247	35	29	100	5
Link Distance (ft)		1064		520		3458			761	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	100		100		240		240	240		240
Storage Blk Time (%)		0	0	0		1				
Queuing Penalty (veh)		0	0	0		1				

Queuing and Blocking Report  
PM Peak

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Intersection: 4: Nowthen Blvd NW & 146th Ave NW

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LT	LT
Maximum Queue (ft)	37	24	76	14
Average Queue (ft)	12	2	7	0
95th Queue (ft)	33	12	38	6
Link Distance (ft)	303	354	585	784
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Nowthen Blvd NW & Lord of Life Access

Movement	WB
Directions Served	LR
Maximum Queue (ft)	29
Average Queue (ft)	7
95th Queue (ft)	26
Link Distance (ft)	225
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Nowthen Blvd NW & Iodine St NW

Movement	EB	EB	WB	NB	SB
Directions Served	LT	R	LTR	R	L
Maximum Queue (ft)	24	39	107	17	75
Average Queue (ft)	2	14	36	1	25
95th Queue (ft)	14	31	82	10	57
Link Distance (ft)	278	278	203	659	
Upstream Blk Time (%)			0		
Queuing Penalty (veh)			0		
Storage Bay Dist (ft)				300	
Storage Blk Time (%)					
Queuing Penalty (veh)					

Queuing and Blocking Report  
PM Peak

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Intersection: 7:

Movement	WB	NB	NB
Directions Served	L	L	R
Maximum Queue (ft)	44	118	84
Average Queue (ft)	15	51	34
95th Queue (ft)	42	93	62
Link Distance (ft)		345	345
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	120		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 8: St Francis Blvd NW & Nowthen Blvd NW

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	L	TR	L	L	T	R	L	T	R
Maximum Queue (ft)	141	100	122	140	297	242	373	27	60	255	36
Average Queue (ft)	69	37	46	58	187	142	175	7	15	136	7
95th Queue (ft)	125	79	96	118	270	222	321	25	45	232	24
Link Distance (ft)		384		243			607			3458	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	200		80		500	500		290	210		210
Storage Blk Time (%)	0	0	4	7			1			2	
Queuing Penalty (veh)	2	0	4	5			6			1	

Network Summary

Network wide Queuing Penalty: 18
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1: Nowthen Blvd NW & Sunwood Dr NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	4.1	0.1	0.0	3.4	0.0	0.0	0.0	0.2	4.3	0.5
Total Del/Veh (s)	5.0	8.0	2.3	5.9	6.4	3.0	1.7	1.3	0.4	0.7	0.1	1.5

2: Cobalt St NW & Sunwood Dr NW Performance by movement

Movement	EBT	EBR	WBL	WBT	NBR	All
Denied Del/Veh (s)	0.0	0.1	0.0	0.0	0.1	0.0
Total Del/Veh (s)	1.2	1.0	1.9	0.5	2.0	1.2

3: St Francis Blvd NW & Sunwood Dr NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.8	0.0	0.1	4.1	0.1	0.1	0.0	0.0	0.1	2.9	0.4	3.6
Total Del/Veh (s)	47.4	44.1	6.6	39.8	40.7	3.6	44.9	5.6	3.6	60.0	2.9	0.6

3: St Francis Blvd NW & Sunwood Dr NW Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	6.5

4: Nowthen Blvd NW & 146th Ave NW Performance by movement

Movement	EBL	EBR	WBL	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)		0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)		2.9	5.7	1.1	0.8	0.1	0.5	0.1	0.8

5: Nowthen Blvd NW & Lord of Life Access Performance by movement

Movement	WBR	NBT	NBR	SBT	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	2.9	0.6	0.0	0.3	0.4

6: Nowthen Blvd NW & Iodine St NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.0	0.0	0.4	0.0	0.6
Total Del/Veh (s)	7.0	9.4	4.1	8.3	6.1	3.6	2.0	0.9	0.7	1.3	0.8	0.1

6: Nowthen Blvd NW & Iodine St NW Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	1.8

7: Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.1	0.2	0.0	0.1	0.1	0.0
Total Del/Veh (s)	1.5	0.4	5.2	1.3	8.4	3.2	1.8

8: St Francis Blvd NW & Nowthen Blvd NW Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	4.0	0.3	0.2	3.4	0.8	3.4	0.1	0.0	0.0
Total Del/Veh (s)	52.1	34.4	2.1	53.1	48.3	11.5	48.8	6.8	1.3	64.1	16.4	4.7

8: St Francis Blvd NW & Nowthen Blvd NW Performance by movement

Movement	All
Denied Del/Veh (s)	0.9
Total Del/Veh (s)	19.1

Total Network Performance

Denied Del/Veh (s)	1.1
Total Del/Veh (s)	23.6

Queuing and Blocking Report  
**SUN Peak**

10/13/2023

**Intersection: 1: Nowthen Blvd NW & Sunwood Dr NW**

Movement	EB	EB	WB	WB	NB	SB
Directions Served	LT	R	LT	R	LT	R
Maximum Queue (ft)	30	34	38	10	48	2
Average Queue (ft)	12	13	14	1	5	0
95th Queue (ft)	33	29	37	8	24	2
Link Distance (ft)	414		1298		784	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		270		270		270
Storage Blk Time (%)						
Queuing Penalty (veh)						

**Intersection: 2: Cobalt St NW & Sunwood Dr NW**

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	6	43
Average Queue (ft)	0	7
95th Queue (ft)	4	28
Link Distance (ft)	1064	511
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

**Intersection: 3: St Francis Blvd NW & Sunwood Dr NW**

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	R	L	T	R
Maximum Queue (ft)	28	37	70	22	33	116	29	28	116	20
Average Queue (ft)	3	7	24	2	7	22	2	4	31	1
95th Queue (ft)	17	25	57	12	24	77	15	18	84	9
Link Distance (ft)		1064		520		3458			761	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	100		100		240		240	240		240
Storage Blk Time (%)				0						
Queuing Penalty (veh)				0						

Queuing and Blocking Report  
 SUN Peak

10/13/2023

Intersection: 4: Nowthen Blvd NW & 146th Ave NW

Movement	EB	WB	NB
Directions Served	LTR	LTR	LT
Maximum Queue (ft)	25	25	20
Average Queue (ft)	11	4	2
95th Queue (ft)	30	20	15
Link Distance (ft)	303	354	585
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: Nowthen Blvd NW & Lord of Life Access

Movement	WB
Directions Served	LR
Maximum Queue (ft)	29
Average Queue (ft)	7
95th Queue (ft)	28
Link Distance (ft)	225
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Nowthen Blvd NW & Iodine St NW

Movement	EB	EB	WB	NB	SB
Directions Served	LT	R	LTR	L	L
Maximum Queue (ft)	24	48	72	34	20
Average Queue (ft)	2	14	25	4	1
95th Queue (ft)	13	35	49	21	11
Link Distance (ft)	278	278	203		
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)				290	300
Storage Blk Time (%)					
Queuing Penalty (veh)					

Queuing and Blocking Report  
 SUN Peak

10/13/2023

Intersection: 7:

Movement	WB	NB	NB
Directions Served	L	L	R
Maximum Queue (ft)	40	51	30
Average Queue (ft)	9	16	14
95th Queue (ft)	33	42	36
Link Distance (ft)		345	345
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	120		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 8: St Francis Blvd NW & Nowthen Blvd NW

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	L	TR	L	L	T	R	L	T	R
Maximum Queue (ft)	65	80	118	72	175	150	205	29	79	242	30
Average Queue (ft)	20	20	47	16	94	53	55	3	22	106	6
95th Queue (ft)	50	55	98	48	151	118	136	18	58	199	23
Link Distance (ft)		384		243			607			3458	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	200		80		500	500		290	210		210
Storage Blk Time (%)		0	4	0						0	
Queuing Penalty (veh)		0	1	0						0	

Network Summary

Network wide Queuing Penalty: 2
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