622 Graceland Avenue

Traffic Impact Study

Des Plaines, Illinois

Prepared For:

622 Graceland Apartments LLC

Prepared by:

Eriksson Engineering Associates, Ltd.

ERIKSSON ENGINEERING ASSOCIATES, LTD.

145 Commerce Drive, Grayslake, Illinois 60030

847.223.4804

www.eea-ltd.com

1 – INTRODUCTION AND EXISTING CONDITIONS

This report summarizes the results of a transportation analysis for the proposed mixed-use development in Downtown Des Plaines, Illinois. The building site is located at 622 Graceland Avenue and consists of three lots occupied by a public parking lot and two commercial buildings. **Figure 1** illustrates the site location and area roadways.

The purpose of this study was to identify the transportation system serving the proposed development, to determine its transportation characteristics, and to evaluate the need for improvements to support the proposed building program.

Report Revisions

This report is an update from the February 22,2022 traffic study. The following changes were made:

1. The traffic figures were corrected to show the PM peak hour as occurring from 4:30 to 5:30 PM.
2. The on-street parking spaces were changed from perpendicular to parallel spaces on Webford Avenue.
3. Additional traffic counts were conducted on Webford Avenue at Graceland Avenue and at Laurel Avenue.
4. Reviewed the concern about Metra riders being picked up on Webford Avenue.
5. Expanded the trip generation and directional distribution discussion.

Site Location

The development site is located in the northwestern area of Downtown Des Plaines, Illinois. It is bordered by Union Pacific/Metra train tracks to the north, Graceland Avenue to the east, Webford Avenue to the south, and a commercial building to the west. It is occupied by a public parking lot and two commercial buildings.

Roadway Characteristics

A description of the area roadways providing access to the site is illustrated in **Figure 2** and provided below:

Graceland Avenue (U.S. Route 12-45 Southbound) is a one-way southbound other principal arterial that provides two through lanes and extends between Rand Road and Mannheim Road. At its signalized intersection with Miner Street, Graceland Avenue provides a combined through/left-turn lane, a through lane, and an exclusive right-turn lane. At its unsignalized intersection with Ellinwood Street, Graceland Avenue provides a combined through/left-turn lane and a through lane. At its signalized intersection with Prairie Avenue, Graceland Avenue provides a combined through/left-turn lane and a combined through/right-turn lane. The UP-NW Metra Rail Line has an at-grade crossing on Graceland Avenue approximately 60 feet north of Ellinwood Street and 75 feet south of Miner Street. On-street parking is permitted on the east side of Graceland Avenue south of Ellinwood Street. Graceland Avenue is under the jurisdiction of IDOT, has a posted speed limit of 30 mph, and carries an Annual Average Daily Traffic (ADT) volume of 18,800 (IDOT 2018) vehicles.

Miner Street (U.S. Route 14) is an east-west minor arterial that in the vicinity of the site provides two through lanes in each direction. At its signalized intersection with Graceland Avenue, Miner Street provides a through lane and a combined through/right-turn lane on the eastbound approach and a through lane and combined through/left-turn lane on the westbound approach. On-street parking is permitted on the north side of the street between Graceland Avenue and Pearson Street, while a Metra parking lot is provided on the south side of the street between Perry Street and Lee Street. Immediately east of Lee Street, Miner Street provides a pick-up/drop-off lane for the Des Plaines Metra Station separated by a concrete barrier. Miner Street is under the jurisdiction of IDOT, has a posted speed limit of 25 mph in the vicinity of the site, and carries an Annual Average Daily Traffic (AADT) volume of 16,200 (IDOT 2019) vehicles.

Ellinwood Street is an east-west local roadway that in the vicinity of the site provides one through lane in each direction and extends from Graceland Avenue east to River Road. At its unsignalized intersection with Graceland Avenue, Ellinwood Street provides a left-turn only lane under stop sign control. Ellinwood Street generally provides diagonal on-street parking spaces on both sides of the street that are limited to 90-minute parking between 6:00 A.M. and 6:00 P.M. every day. Ellinwood Street is under the jurisdiction of the City of Des Plaines.

Prairie Avenue is a generally an east-west local roadway that in the vicinity of the site provides one through lane in each direction. At its signalized intersection with Graceland Avenue, Prairie Avenue provides a shared through/right-turn lane on the eastbound approach and an exclusive left turn lane and a through lane on the westbound approach. Prairie Avenue provides on-street parking on the south side of the roadway that is generally restricted to 90 minutes. Prairie Avenue is under the jurisdiction of the City of Des Plaines, has a posted speed limit of 25 miles per hour, and carries an Annual Average Daily Traffic (AADT) volume of 1,850 (IDOT 2018) vehicles.

Webford Avenue is an east-west local roadway that in the vicinity of the site provides one through lane in each direction and extends from Graceland Avenue west to Arlington Avenue. At its unsignalized intersection with Graceland Avenue, Webford Avenue provides a right-turn only lane under stop sign control. At Laurel Avenue three-legged intersection, the Laurel Avenue approach has a yield sign. It is under the jurisdiction of the City of Des Plaines, has a posted speed limit of 25 miles per hour,

Laurel Avenue is a north-south local roadway with one through lane in each direction and no parking on the west side and 3-hour parking on the east side. It extends south from Webford Avenue to Prairie Avenue where it jogs 70 feet to the east and continues south to Thacker Street. It is under the jurisdiction of the City of Des Plaines, has a posted speed limit of 25 miles per hour,

Public Transportation

The site is located near of the Des Plaines Metra station for the UP-NW Metra Rail Line which offers daily service between Harvard/McHenry and Chicago. The site is near several PACE bus routes as described below:

- *Route 208 (Golf Road)* - Davis Street Metra/CTA stations to Northwest Transportation Center (Schaumburg) via Church Street.
- *Route 209 (Busse Highway)* – CTA Blue Line Harlem Station to Downtown Des Plaines
- *Route 226 (Oakton Street)* - Jefferson Park CTA Blue Line station and Oakton Street and Hamilton Street in southern Mt. Prospect (including Des Plaines Metra station) via Oakton Street and Niles Center Road.
- *Route 230 (South Des Plaines)* - Rosemont CTA Blue Line station to the Des Plaines Metra station via River Road.
- *Route 234 (Wheeling – Des Plaines)* - Weekday service from Des Plaines to Wheeling. Rush hour service operates between the Des Plaines Metra station and Pace Buffalo Grove Terminal. Mid-day trips end at Strong/Milwaukee (Wheeling). Serves the following major destinations: Holy Family Hospital, Metra UP Northwest Line stations (Des Plaines, Cumberland and Mt. Prospect), Randhurst Mall, Wheeling High School, Metra North Central Line station (Wheeling), Wheeling Municipal Complex, and Wheeling Tower.

Sidewalks are provided on the entire surrounding roadway network and crosswalks are provided at all intersections. In addition, high visibility crosswalks are provided on the north, east, and south legs of Graceland Avenue with Miner Street; the west and south legs of Graceland Avenue with Prairie Avenue; and all legs of Lee Street with Miner Street and Lee Street with Prairie Avenue. Pedestrian walk signals with countdown timers are provided at all signalized intersections within the study area.

Bicycle Routes

The City of Des Plaines identifies Miner Street, Prairie Avenue, and Graceland Avenue north of Miner Street as locations for future bike routes.

Existing Vehicular, Pedestrian, and Bicycle Volumes

Weekday morning (7:00 to 9:00 AM) and afternoon (4:00 to 6:00 PM) manual counts of pedestrians and vehicles were conducted in January 2022 on Graceland Avenue at Miner Street, Webford Avenue, and Prairie Avenue and at the existing site driveways (four).

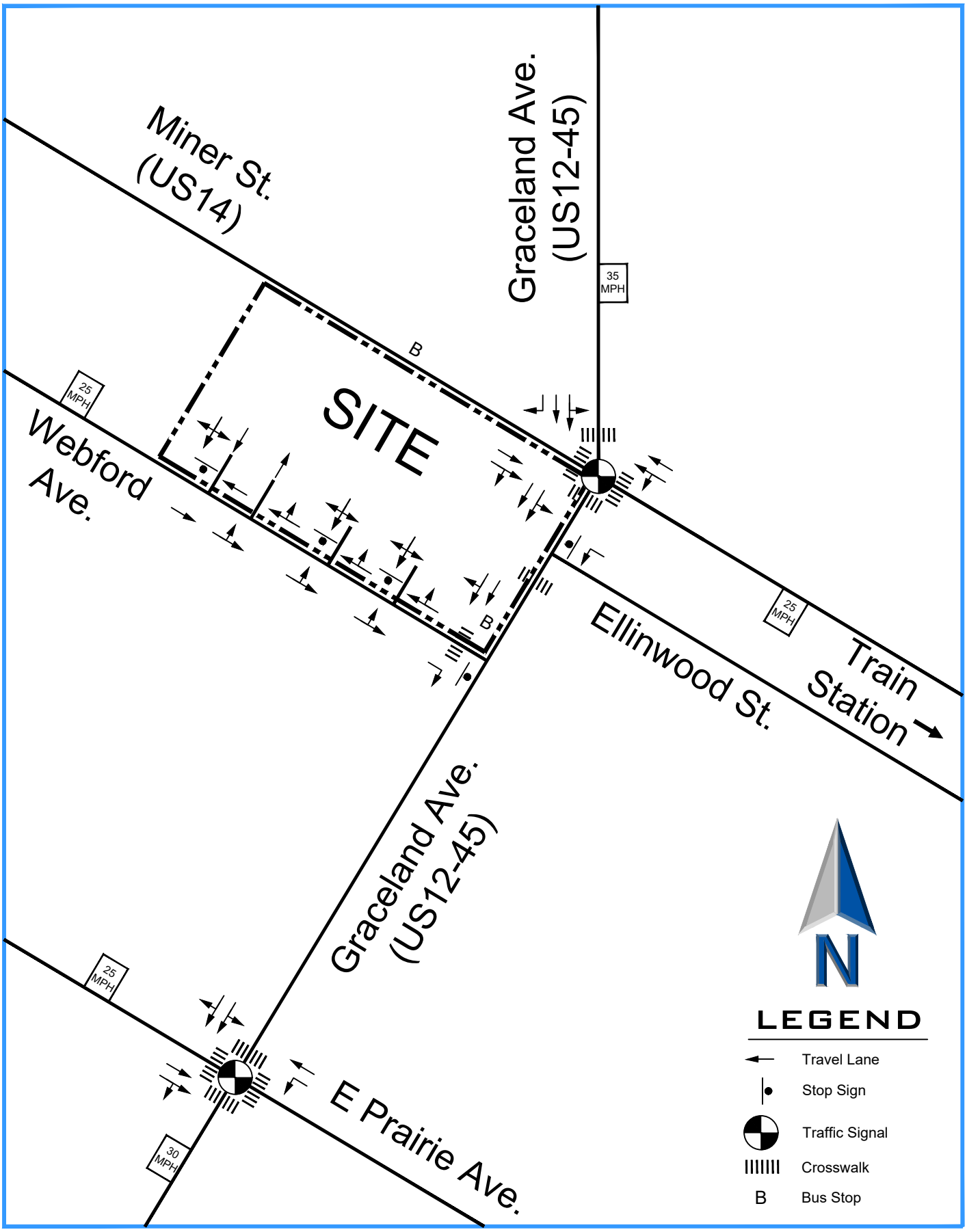
These counts showed the peak-hours of traffic occurring from 7:45 to 8:45 AM and 4:00 to 5:00 PM on a weekday. However, these counts were conducted during the current pandemic and do not represent pre-pandemic conditions. A comparison was made with the 2018 pre-pandemic traffic counts conducted for the Ellinwood Apartment traffic study which found the 2018 volumes to be higher than the 2022 traffic counts and slightly different peak-hour of traffic (7:15-8:15 PM and 4:30-5:30 PM). To be conservative, the 2018 traffic counts were used as the base existing traffic volumes for this study and increased by 4% to represent the Year 2022.

Figures 3 and **4** illustrates the existing vehicular and pedestrian volumes respectively. Copies of the counts can be found in the **Appendix**.

ERIKSSON ENGINEERING ASSOCIATES, LTD.

Site Location and Area Roadways

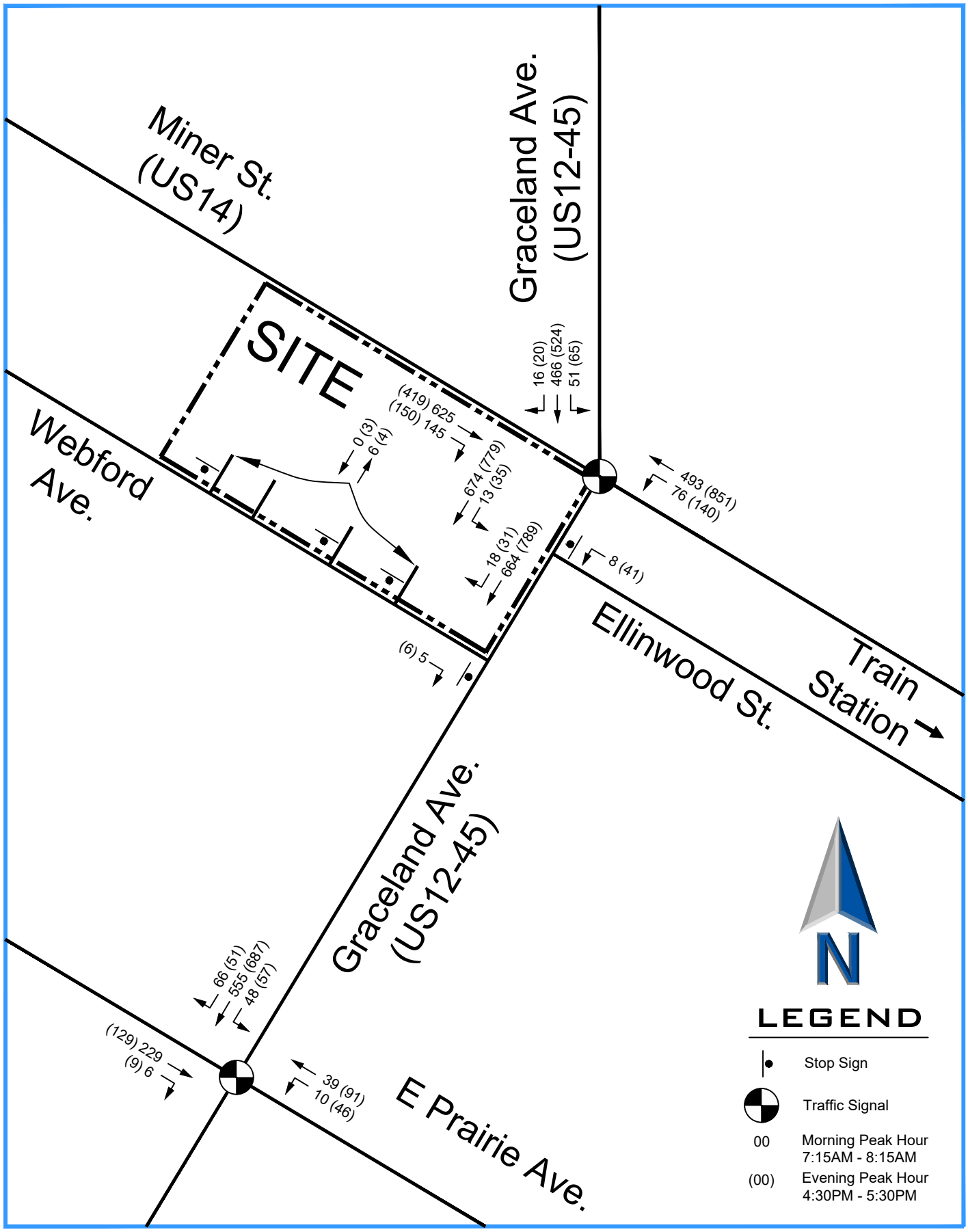
Figure 1



ERIKSSON ENGINEERING ASSOCIATES, LTD.

Existing Lane Geometrics

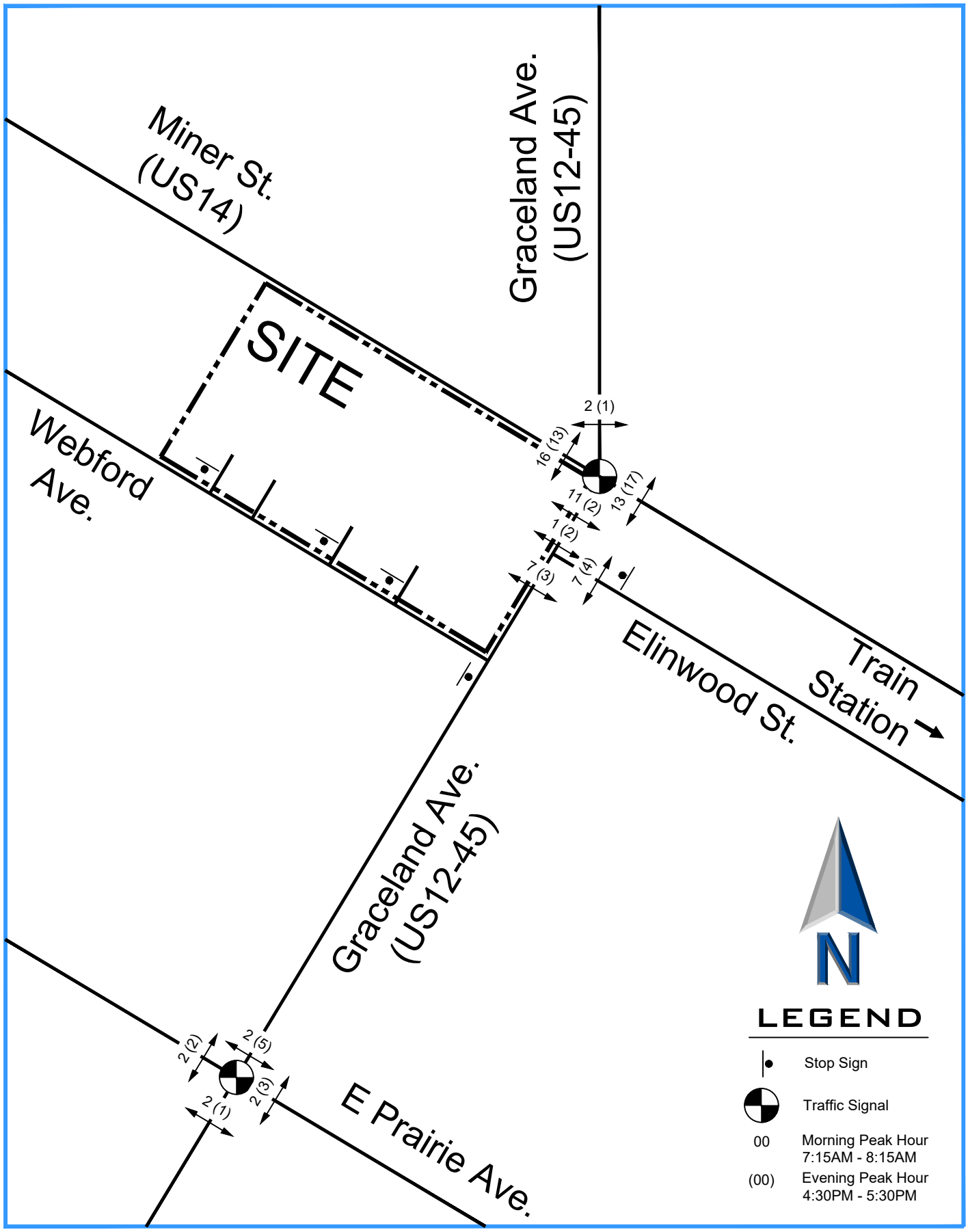
Figure 2



ERIKSSON ENGINEERING ASSOCIATES, LTD.

2022 Existing Traffic Volumes

Figure 3



ERIKSSON ENGINEERING ASSOCIATES, LTD.

2018 Pedestrian Volumes

Figure 4

2 - DEVELOPMENT CHARACTERISTICS

Existing and Proposed Site Use

The project site is currently occupied by two-commercial buildings and a public parking lot. The parking lot has two driveways (inbound and outbound) and the two buildings each have a full access drive.

The development plan is for a multi-story apartment building with 132 units with a restaurant (1,477 sq. ft.) and a lounge (1,255 square feet). A parking garage will have two full access drives on either end.

Site Trip Generation

Vehicle traffic volumes generated by the residential and commercial uses were estimated from the Institute of Transportation Engineer's Trip Generation Manual, 11th Edition. **Table 1** summarizes the estimated traffic volumes for the development and compares it to the site's existing traffic volumes. To be conservative, the existing site traffic volumes were not removed from the existing traffic counts.

Table 1
Site Trip Generation Estimates

Use	ITE LUC	Size	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Apartments	221	132 units	24	18	**42**	16	22	**38**
Restaurant	931	1,477 sq. ft.	0	1	**1**	7	4	**11**
Lounge	975	1,255 sq. ft.	1	1	**2**	9	5	**14**
Development Total			**25**	**20**	**45**	**32**	**31**	**63**
City Lot and Newspaper Existing Volumes			**-6**	**-0**	**-6**	**-4**	**-3**	**-7**
Net Additional Traffic			**+19**	**+20**	**+39**	**+28**	**+28**	**+56**

Directional Distribution

The trip distribution for the development is based on a combination of the existing traffic volumes, the existing road system, traffic congestion, and the proposed site access. The trip distribution for the site is shown on **Table 2** and **Figure 5**.

For inbound traffic, 75% of the site traffic comes from the north on Graceland Avenue and Miner Street. The most direct route is to turn right onto Webford Avenue and then turn right into the parking garage. Measured from the southern railroad tracks to the western garage access, the distance is approximately 640 feet. The alternate route from the north is to continue down Graceland Avenue to Prairie Avenue to Laurel Avenue to Webford Avenue to the western garage access. Site users are not likely to use this route since it has an approximate distance of 1,700 feet or almost three times the distance.

From the south, the most direct route is from the south is Lee Street to Ellinwood Road to Webford Avenue to the parking garage for a distance of 1,330 feet versus the roundabout way of Lee Street to Prairie Avenue to Laurel Avenue to Webford Avenue to the parking garage for a distance of 1,630 feet.

Table 2
Directional Distribution

Direction	Inbound	Outbound
West Miner Street	20%	-
North Graceland Avenue	25%	-
East Miner Avenue	30%	-
East Ellinwood Street	20%	-
East Prairie Avenue	-	55%
South Graceland Avenue	-	40%
West Webford Avenue	5%	5%
Total	**100%**	**100%**

Site Traffic Assignment

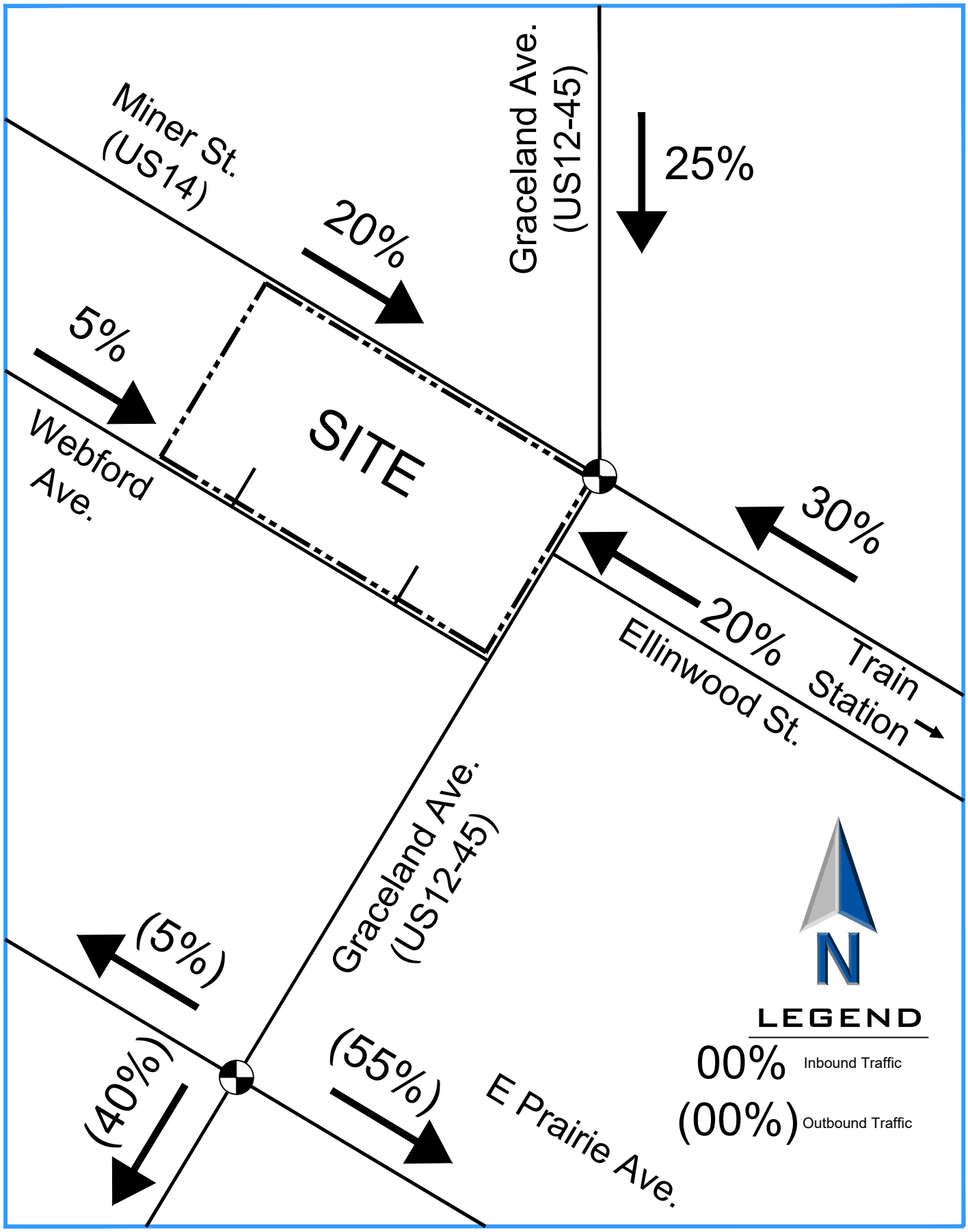
Based on trip generation and directional distribution estimates, the site generated traffic was assigned to the proposed access drive and area roadways for each phase. **Figure 6** shows the resulting traffic assignments.

Total Traffic Volumes

The Ellinwood Apartment project to the east of the site is under construction with two driveways on Graceland Avenue. The site traffic volumes to be generated by that project were taken from its traffic study and are shown on **Figure 7.**

The existing adjusted traffic volumes and annual growth in these volumes were combined to estimate the amount of traffic in the future without the development. The existing traffic volumes were increased by 0.5% a year to account for traffic growth in the area. A five-year time frame was used (Year 2028). **Figure 8** shows the projected traffic volumes in the study area without the development.

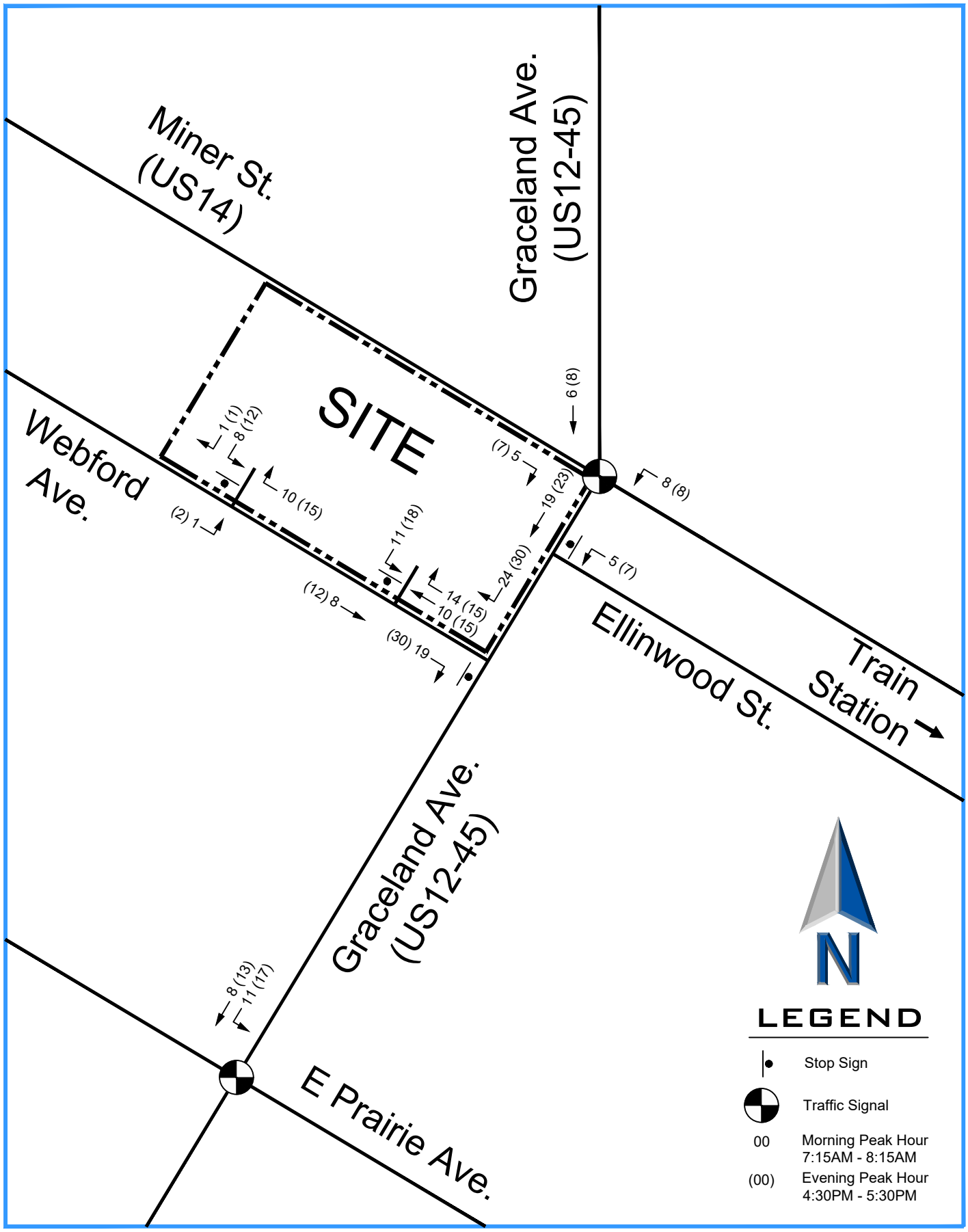
The total traffic volumes with the development were calculated by combining the volumes in Figures 6, 7, and 8. The projected traffic volumes are shown in **Figure 9**.



ERIKSSON ENGINEERING ASSOCIATES, LTD.

Directional Distribution

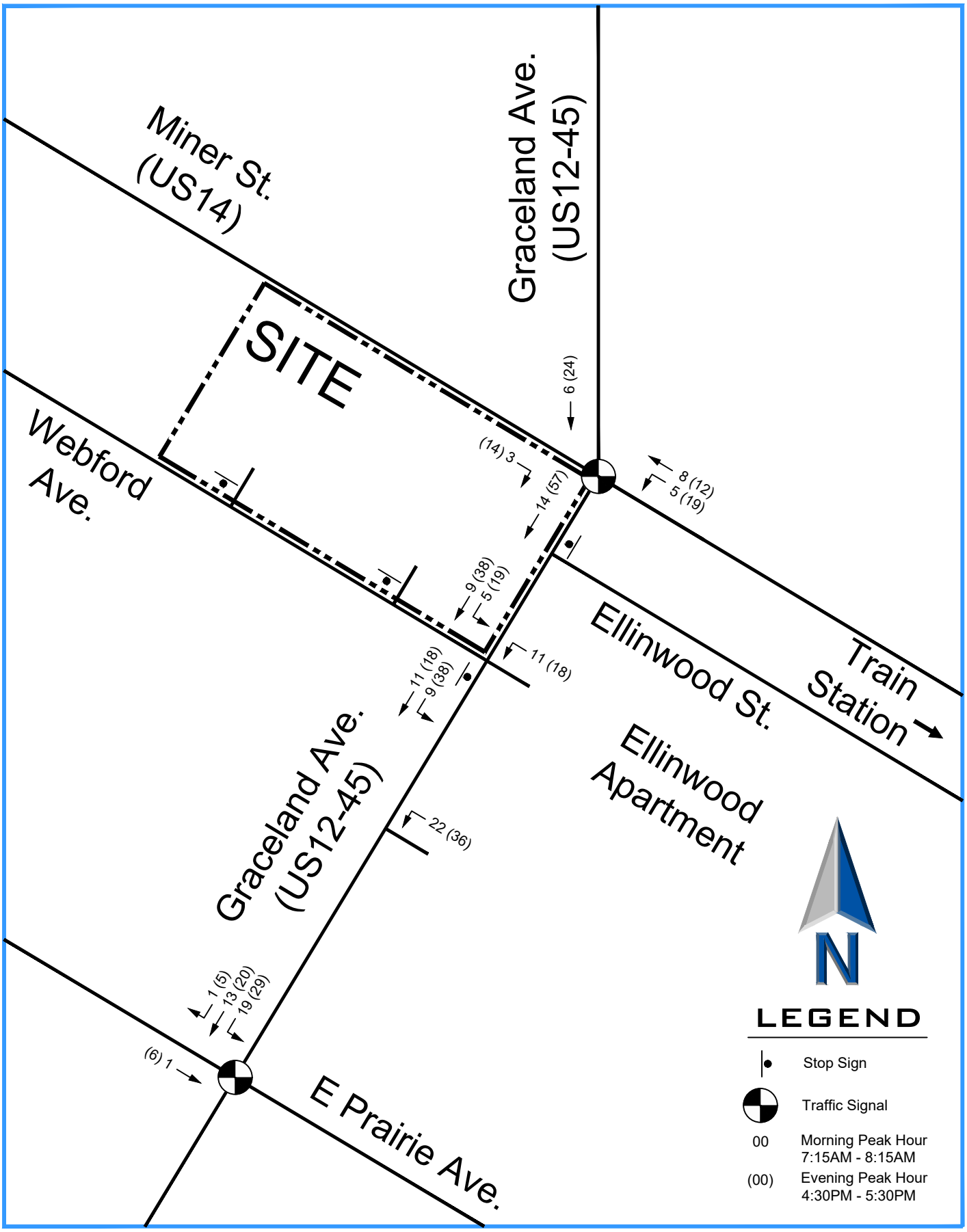
Figure 5



ERIKSSON ENGINEERING ASSOCIATES, LTD.

Site Traffic Volumes

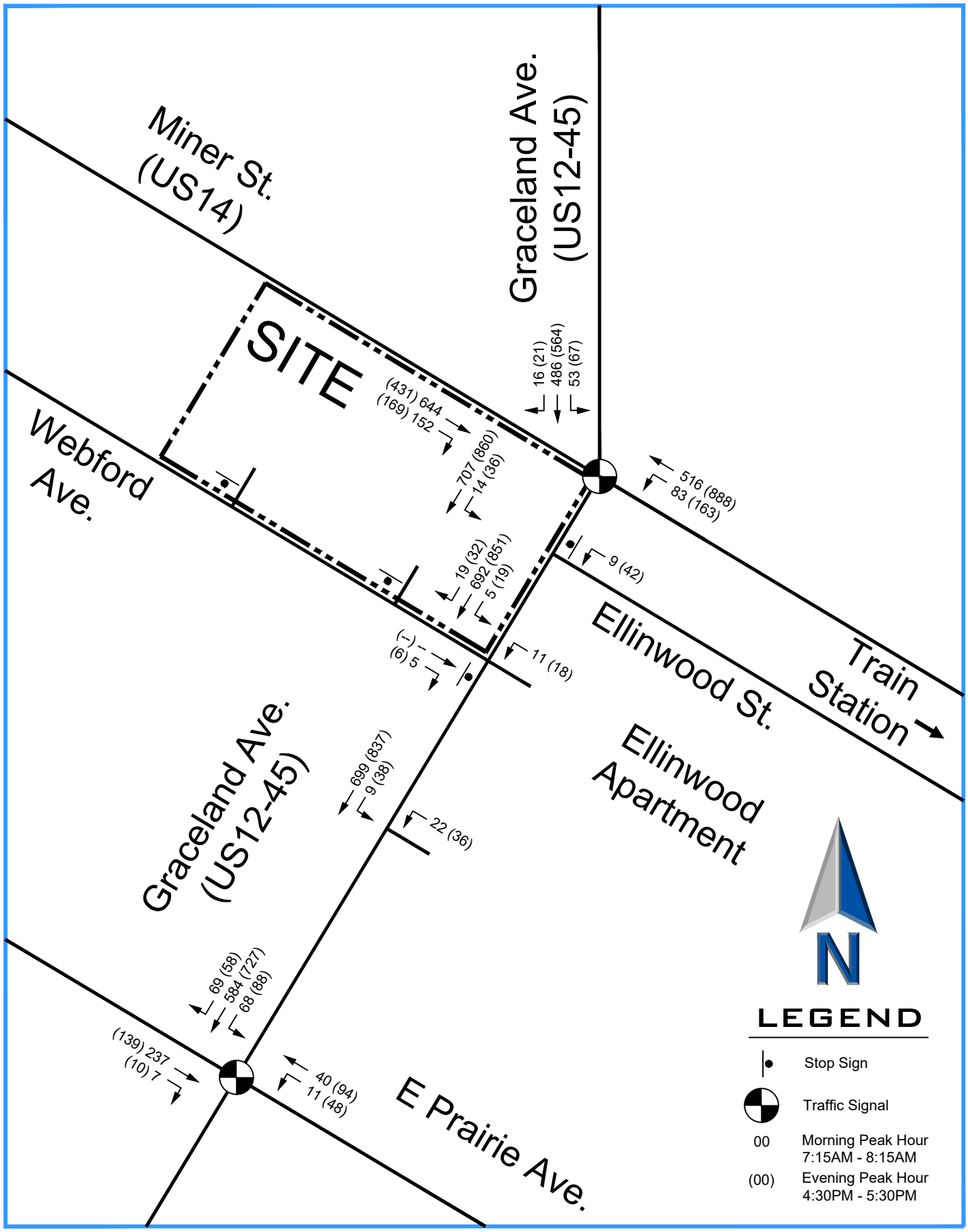
Figure 6



ERIKSSON ENGINEERING ASSOCIATES, LTD.

Ellinwood Apartment Traffic Volumes

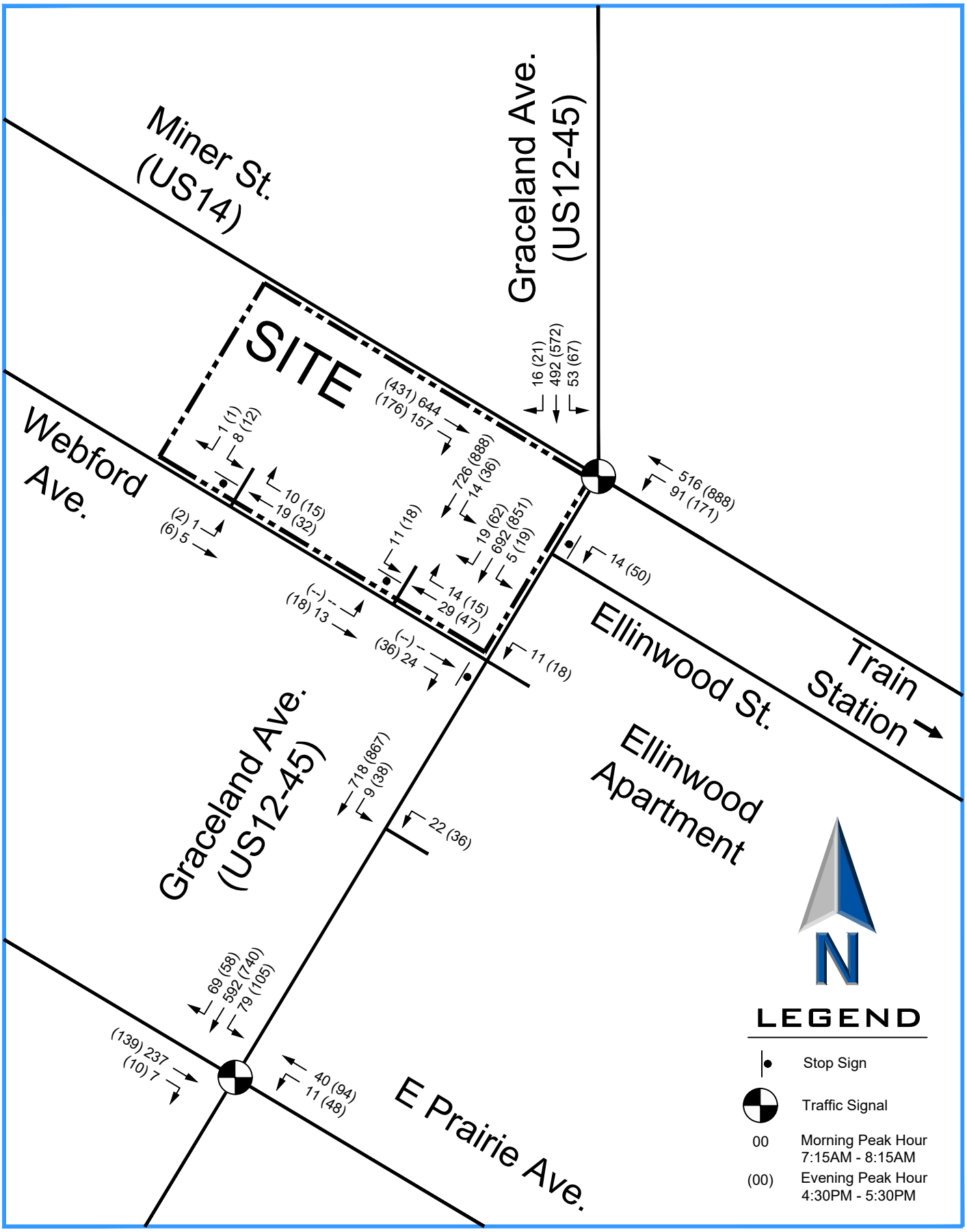
Figure 7



ERIKSSON ENGINEERING ASSOCIATES, LTD.

2028 Base Traffic Volumes

Figure 8



ERIKSSON ENGINEERING ASSOCIATES, LTD.

2028 Total Traffic Volumes

Figure 9

3 – ANALYSES

Intersection Capacity Analyses

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

Table 3
Level of Service Criteria for Intersections

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

Source: Highway Capacity Manual

Capacity analyses were conducted for each intersection area using the SYCHRO computer program to determine the existing and future operations of the access system. These analyses were performed for the weekday peak-hours. Copies of the capacity analysis summaries are included in the **Appendix**.

Table 4 shows the existing and future level of service and delay results for the signalized intersections in the study area. In general, all the signalized intersections work well now and in the future. **Table 5** shows the existing and future level of service and delay results for the signalized intersections in the study area.

Graceland Avenue and Miner Street

The signalized intersection of Graceland and Prairie Avenues is currently operating at a good level of service and will continue to operate that way in the future. No additional improvements are required due to the low volume of site generated traffic.

Graceland Avenue and Ellinwood Street

The stop controlled left-turn only onto Graceland Avenue will operate well with minimal delays.

Graceland Avenue and Webford Avenue/North Ellinwood Apartment Access

The stop controlled eastbound right-turn only and westbound right-turn only onto Graceland Avenue will operate well with minimal delays.

Table 4
Signalized Intersection Level of Service and Total Delay

Intersection	Morning Peak		Evening Peak	
	2022	2028	2022	2028
Graceland Avenue at Miner Street	C-20.1	C-20.6	C-25.9	C-24.6
Graceland Avenue at Prairie Avenue	B-19.3	B-17.6	B-18.0	B-15.8

Table 5
Unsignalized Intersection Level of Service and Total Delay

Intersection	Approach	Morning Peak		Evening Peak	
		2022	2028	2022	2028
Graceland Avenue At Ellinwood Street	Wb Left	B-11.8	B-12.2	B-13.6	B-14.9
	Sb Left	A-7.3	A-7.3	A-7.3	A-7.3
Graceland Avenue At Webford Avenue And N. Ellinwood Apt.	Eb Right	B-10.9	B-11.4	B-11.6	B-12.8
	Wb Left		B-12.1		B-14.3
Graceland Avenue At S. Ellinwood Apt.	Wb Left		B-11.6		B-13.5
Webford Avenue At East Site Drive	EB Left		A-0.0		A-0.0
	Sb Left/Right		A-8.8		A-9.0
Webford Avenue At West Site Drive	EB Left		A-7.4		A-8.8
	Sb Left/Right		A-8.7		A-7.3

Site Access Drives on Webford Avenue

Two access drives are proposed at each end of the parking garage. They are located 115 and 300 feet west of Graceland Avenue (center to center) and each will have one inbound and one outbound lane under stop sign control. Both driveways will work well in the future due to the low volume of traffic entering and exiting the site and on Webford Avenue.

Ellinwood Apartment Drives on Graceland Avenue

Two driveways for the Ellinwood Apartment project are to be located on the east side of Graceland Avenue near Webford Avenue and to the south. Both drives were included in the analyses and found to have no adverse impact from the proposed project.

Graceland Avenue and Prairie Avenue

The signalized intersection of Graceland and Prairie Avenues is currently operating at a good level of service and will continue to operate that way in the future. No additional improvements are required due to the low volume of site generated traffic.

Additional Traffic Counts

Supplemental traffic counts were conducted at the intersection of Graceland Road at Webford Avenue and at Laurel Avenue and Webford Avenue. They were conducted from 6:00 to 9 AM or 10 AM and from 3:00 to 7:00 PM from Wednesday afternoon April 20th thru Wednesday morning on April 27th. Please note that the data for the Friday morning count at Laurel Avenue and Webford Avenue was corrupted and not included in this study. Copies of the data is located in the **Appendix** and summarized in **Tables 6 and 7**.

Table 6
Peak Hourly Traffic Volumes at Laurel Avenue at Webford Avenue

Day And Date	Peak Time	Webford Avenue Southbound		Webford Avenue Westbound		Laurel Avenue Northbound		Intersection Totals
		Thru	Left	Right	Left	Right	Thru	
4/20/2022 Wednesday	No Count							
	5:00 PM	33	2	5	9	7	4	60
4/21/2022 Thursday	9:00 AM	15	0	9	4	16	15	59
	3:00 PM	33	3	5	20	12	12	85
4/22/2022 Friday	No Data							
	4:00 PM	23	2	9	9	9	3	55
4/23/2022 Saturday	9:00 AM	10	0	3	2	7	4	26
	5:00 PM	20	6	8	4	6	4	48
4/24/2022 Sunday	9:00 AM	8	2	9	4	7	3	33
	5:00 PM	15	4	4	6	3	3	35
4/25/2022 Monday	8:00 AM	8	4	6	7	5	3	33
	5:00 PM	20	2	13	7	7	5	54
4/26/2022 Tuesday	8:00 AM	14	4	9	9	10	0	46
	6:00 PM	16	3	6	8	14	6	53
4/27/2022 Wednesday	8:00 AM	8	2	10	7	4	1	32
	No Count							
Average Weekday	AM	11.3	2.5	8.5	6.8	8.8	4.8	42.5
	PM	25.0	2.4	7.6	10.6	9.8	6.0	61.4
Ave Weekend	AM	8.0	3.0	7.5	5.5	6.0	3.0	33.0
	PM	17.5	3.0	8.5	6.5	5.0	4.0	44.5

Table 7
Peak Hourly Traffic Volumes at Laurel Avenue at Graceland Avenue

Day And Date	Peak Time	Graceland Avenue Southbound		Webford Avenue Eastbound	Total Intersection
		Right	Thru	Right	
4/20/2022 Wednesday	No Count				
	4:00 PM	42	700	10	752
4/21/2022 Thursday	8:00 AM	18	607	7	632
	5:00 PM	38	686	10	734
4/22/2022 Friday	8:00 AM	17	533	10	560
	4:00 PM	31	825	9	865
4/23/2022 Saturday	9:00 AM	14	476	7	497
	3:00 PM	21	480	4	505
4/24/2022 Sunday	9:00 AM	14	304	2	320
	3:00 PM	16	397	2	415
4/25/2022 Monday	7:00 AM	19	400	7	426
	5:00 PM	37	634	13	684
4/26/2022 Tuesday	8:00 AM	19	609	5	633
	3:00 PM	22	654	9	685
4/27/2022 Wednesday	8:00 AM	15	579	4	598
	No Count				
Average Weekday	AM	17.6	545.6	6.6	569.8
	PM	34.0	699.8	10.2	744.0
Average Weekend	AM	14.0	390.0	4.5	408.5
	PM	18.5	438.5	3.0	460.0

Table 8 compares the original right-turning counts with the multi-day weekday peak and average volumes. The right-turn counts were 2 to 11 vph lower than the peak observed counts. The average day volumes were very similar to the count data. These small changes in right-turning vehicles have a nominal effect on traffic conditions along Webford Avenue.

Table 8
Peak Hour Traffic Comparison at Laurel Avenue at Graceland Avenue

Peak Period	Data	Graceland Avenue Southbound	Webford Avenue Eastbound
		Right	Right
AM Peak	Original(1)	18	5
	Peak(2)	19	10
	Difference	+2	+5
	Average(3)	18	7
PM Peak	Original(1)	31	6
	Peak(2)	42	13
	Difference	+11	+7
	Average(3)	34	10

(1) Original Webford Turning Movement Counts
(2) Peak-hour Volume from 7 Day Count
(3) Average Weekday Volume from 7 Day Counts

Metra Patron Loading on Webford Avenue

Vehicles waiting to pick up Metra riders from the Des Plaines Station are using Webford Avenue as a pickup location even as Metra ridership is down due to the pandemic and changing work habits (i.e., working from home). As ridership increases, it is expected to get worse under typical conditions. Part of the issues is that Ellinwood Street has been closed and its parking under construction as part of the Ellinwood Apartment project which prevents vehicles from using that street and parking spaces for pickup of Metra riders and shifted them to other locations. With the reopening of the road and the approximately 50 street parking spaces, these vehicles can be closer to the station than at Webford Avenue and reduce its usage.

The proposed project will also help mitigate any usage for Metra pickups with the widening of the road to 28 feet which allows two-way traffic to occur if a vehicle is stopped along the curb. The on-street parallel spaces could be used for pick-ups that don't interfere with thru traffic.

Conclusions

With the additional traffic generated by the project along with other area traffic growth, the following conclusions and recommendations were developed:

1. The street network can accommodate the additional traffic from the proposed project and future traffic growth.
2. The location of the site and the availability of public transportation, walking and biking will minimize the volume of vehicular traffic generated by the site.
3. Access to the site from Webford Avenue will have two driveways with one inbound and one outbound lane under stop sign control and can handle the projected traffic volumes.

Appendix

- **Existing 2018/2022 Traffic Counts**
    - **2018 Counts**
    - **2022 Counts**
    - **2022 Weeklong Counts**
- **CMAP Letter**
- **ITE Trip Calculations**
- **Intersection Capacity Analyses**
    - **2022 Existing Conditions**
    - **2028 Total Traffic Volumes**

Graceland Avenue (US 12/45) at Prairie Avenue

Des Plaines, Illinois

Begin Time	Graceland Avenue Southbound			Prairie Avenue Westbound		Prairie Avenue Eastbound		15 Minute Totals	60 Minute Totals	Peak Hour Factor
	Right Turn	Through	Left Turn	Through	Left Turn	Right Turn	Through			
	Wednesday January 26, 2022									
7:00 AM	2	56	1	4	2	2	20	87	562	0.63
7:15 AM	4	67	0	4	3	1	36	115	687	0.77
7:30 AM	10	90	5	2	3	3	23	136	748	0.83
7:45 AM	21	126	10	9	4	2	52	224	**803**	**0.90**
8:00 AM	11	135	12	7	7	4	36	212	743	0.88
8:15 AM	5	122	12	1	2	1	33	176		
8:30 AM	6	136	10	9	5	1	24	191		
8:45 AM	3	112	12	8	5	3	21	164		
Total	62	844	62	44	31	17	245			
7:45-8:45 AM	**43**	**519**	**44**	**26**	**18**	**8**	**145**	**803**		
	Wednesday January 26, 2022									
4:00 PM	11	128	13	14	12	1	25	204	***777***	**0.95**
4:15 PM	12	141	10	7	7	2	11	190	780	0.94
4:30 PM	10	108	15	14	6	2	23	178	802	0.95
4:45 PM	16	143	7	14	7	0	18	205	805	0.95
5:00 PM	20	141	5	13	4	1	23	207	797	0.94
5:15 PM	17	141	9	11	14	3	17	212		
5:30 PM	11	117	7	15	7	3	21	181		
5:45 PM	10	137	5	14	12	1	18	197		
Total	107	1056	71	102	69	13	156			
4:00-5:00 PM	**49**	**520**	**45**	**49**	**32**	**5**	***77***	***777***		

Graceland Avenue (US 12/45) at Miner Street (US 14)

Des Plaines, Illinois

Begin Time	Graceland Avenue Southbound			Miner Street Westbound		Miner Street Eastbound		15 Minute Totals	60 Minute Totals	Peak Hour Factor
	Right Turn	Through	Left Turn	Through	Left Turn	Right Turn	Through			
	Tuesday January 25, 2022									
7:00 AM	1	48	10	43	17	13	107	239	1286	0.77
7:15 AM	0	48	9	67	15	17	121	277	1443	0.87
7:30 AM	1	69	8	90	22	26	139	355	1560	0.94
7:45 AM	0	98	8	117	24	32	136	415	**1566**	**0.94**
8:00 AM	2	95	10	89	34	37	129	396	1521	0.96
8:15 AM	1	85	11	115	22	30	130	394		
8:30 AM	1	73	12	92	33	35	115	361		
8:45 AM	2	88	10	94	33	24	119	370		
Total	8	604	78	707	200	214	996			
7:45-8:45 AM	**4**	**351**	**41**	**413**	**113**	**134**	**510**	**1566**		
	Tuesday January 25, 2022									
4:00 PM	6	97	10	188	34	34	103	472	**1738**	**0.92**
4:15 PM	4	95	9	150	34	45	84	421	1682	0.93
4:30 PM	3	100	12	195	34	26	81	451	1673	0.93
4:45 PM	3	105	4	152	33	32	65	394	1607	0.97
5:00 PM	1	82	10	181	35	25	82	416	1610	0.97
5:15 PM	8	67	7	170	37	35	88	412		
5:30 PM	1	101	10	130	36	24	83	385		
5:45 PM	6	66	12	157	50	25	81	397		
Total	32	713	74	1323	293	246	667			
4:00-5:00 PM	**16**	**397**	**35**	**685**	**135**	**137**	**333**	**1738**		

ERIKSSON ENGINEERING ASSOCIATES, LTD.

Graceland Avenue (US 12) at Webford Avenue

Des Plaines, Illinois						
	Graceland Avenue Southbound		Webford Avenue Eastbound			
Begin Time	Right Turn	Through	Right Turn	15 Minute Totals	60 Minute Totals	Peak Hour Factor
	Thursday January 27, 2022					
7:00 AM	2	50	0	52	394	0.63
7:15 AM	2	76	0	78	500	0.79
7:30 AM	4	101	2	107	562	0.89
7:45 AM	5	151	1	157	**580**	**0.92**
8:00 AM	4	153	1	158	559	0.88
8:15 AM	1	139	0	140		
8:30 AM	6	117	2	125		
8:45 AM	4	130	2	136		
Total	28	917	8			
7:45-8:45 AM	**16**	**560**	**4**	**580**		
	Thursday January 27, 2022					
4:00 PM	14	142	1	157	**675**	**0.90**
4:15 PM	7	164	0	171	651	0.87
4:30 PM	3	156	0	159	624	0.83
4:45 PM	5	179	4	188	616	0.82
5:00 PM	9	124	0	133	559	0.93
5:15 PM	6	136	2	144		
5:30 PM	7	142	2	151		
5:45 PM	5	124	2	131		
Total	56	1167	11			
4:00-5:00 PM	**29**	**641**	**5**	**675**		

Site Driveways on Webford Avenue

Des Plaines, Illinois									
	Parking Lot Exit Drive Southbound		Parking Lot Entry Drive		1368 Webford Driveway	622 Graceland Driveway	15	60	Peak
Begin Time	Right Turn	Left Turn	WB Right Turn	EB Left Turn	EB Left Turn	WB Right Turn	Minute Totals	Minute Totals	Hour Factor
	Tuesday January 25, 2022								
7:00 AM	0	0	0	2	0	0	2	3	0.38
7:15 AM	0	0	0	1	0	0	1	2	0.50
7:30 AM	0	0	0	0	0	0	0	3	0.38
7:45 AM	0	0	0	0	0	0	0	**6**	**0.50**
8:00 AM	0	0	0	0	1	0	1	7	0.58
8:15 AM	0	0	0	1	0	1	2		
8:30 AM	0	0	0	1	0	2	3		
8:45 AM	0	0	0	0	1	0	1		
Total	0	0	0	5	2	3			
7:45-8:45 AM	**0**	**0**	**0**	**2**	**1**	**3**	**6**		
	Tuesday January 25, 2022								
4:00 PM	0	1	0	0	0	0	1	**7**	**0.44**
4:15 PM	0	0	0	0	0	0	0	8	0.50
4:30 PM	0	0	1	0	1	0	2	8	0.50
4:45 PM	1	1	1	0	1	0	4	7	0.44
5:00 PM	0	1	1	0	0	0	2	5	0.63
5:15 PM	0	0	0	0	0	0	0		
5:30 PM	0	1	0	0	0	0	1		
5:45 PM	2	0	0	0	0	0	2		
Total	3	4	3	0	2	0			
4:00-5:00 PM	**1**	**2**	**2**	**0**	**2**	**0**	**7**		

City: Des Plaines
Count Location: Webford Ave. and Graceland Ave. / Webford Ave. and Parking Lot Access Drives
Study Date: – January 25th, 2022 (Webford and Parking Lot Access Drives)
Study Date: - January 27th, 2022 (Webford and Graceland)

Time	Pedestrians across Webford Access Drives	Pedestrians Across Webford At Graceland
7:00-7:15 a.m.	1	0
7:15-7:30 a.m.	1	0
7:30-7:45 a.m.	1	0
7:45-8:00 a.m.	0	0
8:00-8:15 a.m.	1	0
8:15-8:30 a.m.	0	2
8:30-8:45 a.m.	1	0
8:45-9:00 a.m.	0	1
Morning Totals	**5**	**3**
4:00-4:15 p.m.	0	2
4:15-4:30 p.m.	1	2
4:30-4:45 p.m.	0	1
4:45-5:00 p.m.	0	2
5:00-5:15 p.m.	1	0
5:15-5:30 p.m.	2	0
5:30-5:45 p.m.	1	1
5:45-6:00 p.m.	0	2
Afternoon Totals	**5**	**10**

City: Des Plaines
Count Location: Northwest Highway and Graceland Ave.
Study Date: – January 25th, 2022 (Pedestrian Crosswalk Counts)

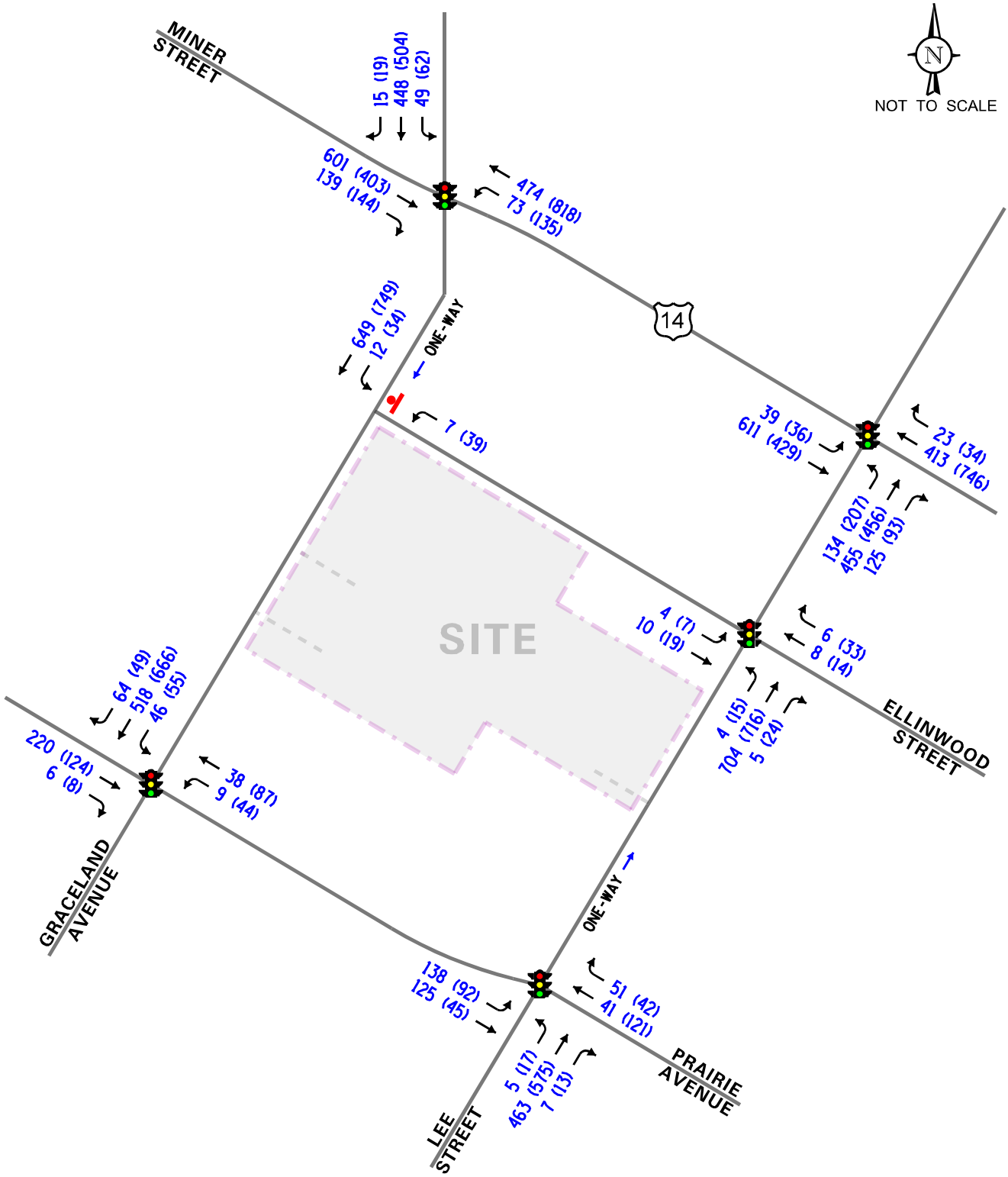
Time	East Crosswalk	West Crosswalk	North Crosswalk	South Crosswalk	Total Pedestrians
7:00-7:15 a.m.	0	0	1	1	2
7:15-7:30 a.m.	2	0	1	1	4
7:30-7:45 a.m.	2	0	1	0	3
7:45-8:00 a.m.	1	0	0	0	1
8:00-8:15 a.m.	0	0	1	1	2
8:15-8:30 a.m.	0	0	2	0	2
8:30-8:45 a.m.	2	2	1	1	6
8:45-9:00 a.m.	1	0	3	0	4
Morning Totals	**8**	**2**	**10**	**4**	**24**
4:00-4:15 p.m.	3	0	2	0	5
4:15-4:30 p.m.	0	0	1	0	1
4:30-4:45 p.m.	0	2	1	2	5
4:45-5:00 p.m.	0	1	4	0	5
5:00-5:15 p.m.	0	1	0	0	1
5:15-5:30 p.m.	0	0	1	1	2
5:30-5:45 p.m.	2	2	2	0	6
5:45-6:00 p.m.	2	0	3	0	5
Afternoon Totals	**7**	**6**	**14**	**3**	**30**

City: Des Plaines
Count Location: Prairie Ave. and Graceland Ave.
Study Date: – January 26th, 2022 (Pedestrian Crosswalk Counts)

Time	East Crosswalk	West Crosswalk	North Crosswalk	South Crosswalk	Total Pedestrians
7:00-7:15 a.m.	0	0	0	0	0
7:15-7:30 a.m.	0	0	0	1	1
7:30-7:45 a.m.	0	0	0	0	0
7:45-8:00 a.m.	0	0	0	0	0
8:00-8:15 a.m.	0	0	0	0	0
8:15-8:30 a.m.	0	0	0	0	0
8:30-8:45 a.m.	0	0	0	0	0
8:45-9:00 a.m.	0	3	0	1	4
Morning Totals	**0**	**3**	**0**	**2**	**5**
4:00-4:15 p.m.	0	2	0	2	4
4:15-4:30 p.m.	1	0	0	0	1
4:30-4:45 p.m.	1	0	0	1	2
4:45-5:00 p.m.	0	2	0	1	3
5:00-5:15 p.m.	0	0	0	0	0
5:15-5:30 p.m.	0	0	1	0	1
5:30-5:45 p.m.	0	0	0	0	0
5:45-6:00 p.m.	0	0	0	0	0
Afternoon Totals	**2**	**4**	**1**	**4**	**11**

City: Des Plaines
Count Location: Northwest Highway and Graceland Ave.
Study Date: – January 25th, 2022 (Train Gate Observations)

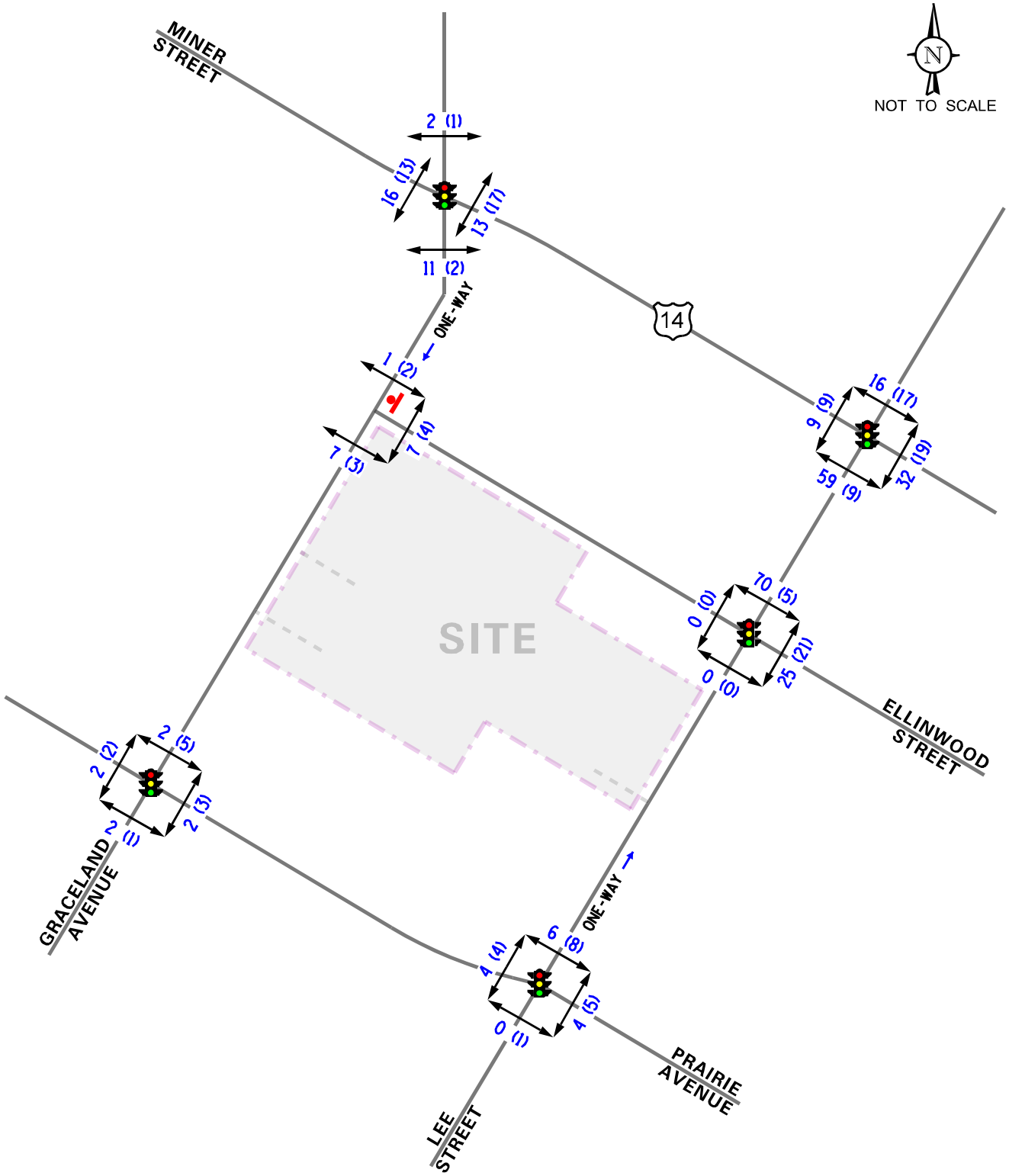
Time gates down	Time gates up	Time Down (sec)
7:09:00 a.m.	7:09:50 a.m.	50
7:15:35 a.m.	7:16:20 a.m.	45
7:16:50 a.m.	7:19:10 a.m.	140
7:24:10 a.m.	7:25:10 a.m.	60
7:39:15 a.m.	7:40:15 a.m.	60
7:47:45 a.m.	7:48:45 a.m.	60
8:01:10 a.m.	8:02:10 a.m.	60
8:09:45 a.m.	8:11:40 a.m.	115
8:33:30 a.m.	8:34:15 a.m.	45
8:47:40 a.m.	8:48:30 a.m.	50
4:02:35 p.m.	4:04:45 p.m.	130
4:15:25 p.m.	4:16:25 p.m.	60
4:23:35 p.m.	4:25:00 p.m.	85
4:43:25 p.m.	4:45:30 p.m.	125
4:57:50 p.m.	4:58:40 p.m.	50
5:08:15 p.m.	5:09:05 p.m.	50
5:37:10 p.m.	5:39:15 p.m.	125
5:45:15 p.m.	5:46:00 p.m.	45
5:50:30 p.m.	5:52:45 p.m.	135
5:56:25 p.m.	5:59:15 p.m.	170



Proposed
Ellinwood Apartments
Des Plaines, Illinois

Existing Traffic Volumes

KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.
Job No: 18-018 Figure: 4A



LEGEND

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

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

Proposed Ellinwood Apartments Des Plaines, Illinois	Existing Pedestrian Volumes	KLOA Kenig,Lindgren,O'Hara,Aboona,Inc. Job No: 18-018 Figure: 4B

Study Name Webford Ave & Laurel Ave
Start Date 04/20/2022
Start Time 3:00 PM
Type Road
Classification Totals

		Southbound Approach Southbound		Westbound Approach Westbound		Northbound Approach Northbound		Intersection	Webford
Day	**Start Time**	**Thru**	**Left**	**Right**	**Left**	**Right**	**Thru**	**Total**	**Total**
4/20/2022	3:00 PM	21	4	5	10	6	8	54	27
Wednesday	4:00 PM	31	0	10	5	10	2	58	17
	5:00 PM	**33**	**2**	**5**	**9**	**7**	**4**	**60**	**20**
	6:00 PM	16	7	3	9	6	3	44	22
4/21/2022	6:00 AM	4	0	1	0	0	0	5	1
Thursday	7:00 AM	10	1	4	4	11	9	39	18
	8:00 AM	7	3	4	8	13	7	42	22
	9:00 AM	**15**	**0**	**9**	**4**	**16**	**15**	**59**	**28**
	10:00 AM	13	0	3	1	1	6	24	10
	3:00 PM	**33**	**3**	**5**	**20**	**12**	**12**	**85**	**40**
	4:00 PM	36	1	6	8	19	12	82	27
	5:00 PM	33	2	1	11	10	10	67	24
	6:00 PM	24	2	5	4	14	12	61	23
4/22/2022	3:00 PM	27	1	5	5	5	4	47	15
Friday	**4:00 PM**	**23**	**2**	**9**	**9**	**9**	**3**	**55**	**23**
AM	5:00 PM	21	5	1	5	6	4	42	15
Missing	6:00 PM	19	1	10	5	3	4	42	20
4/23/2022	6:00 AM	1	2	3	2	3	0	11	7
Saturday	7:00 AM	5	0	2	4	5	1	17	7
	8:00 AM	0	0	0	4	4	1	9	5
	9:00 AM	**10**	**0**	**3**	**2**	**7**	**4**	**26**	**9**
	3:00 PM	15	0	3	7	4	3	32	13
	4:00 PM	16	1	3	7	8	2	37	13
	5:00 PM	**20**	**6**	**8**	**4**	**6**	**4**	**48**	**22**
	6:00 PM	10	1	5	4	5	1	26	11
4/24/2022	6:00 AM	3	0	0	0	1	0	4	0
Sunday	7:00 AM	2	0	0	0	2	0	4	0
	8:00 AM	5	1	0	5	7	2	20	8
	9:00 AM	**8**	**2**	**9**	**4**	**7**	**3**	**33**	**18**
	3:00 PM	15	0	3	6	5	2	31	11
	4:00 PM	13	0	0	0	9	3	25	3
	5:00 PM	**15**	**4**	**4**	**6**	**3**	**3**	**35**	**17**
	6:00 PM	12	1	1	3	2	1	20	6
4/25/2022	6:00 AM	3	1	1	2	4	1	12	5
Monday	7:00 AM	11	1	1	3	8	2	26	7
	8:00 AM	**8**	**4**	**6**	**7**	**5**	**3**	**33**	**20**
	9:00 AM	12	3	3	2	7	2	29	10
	3:00 PM	23	1	4	3	4	6	41	14
	4:00 PM	23	1	10	6	5	1	46	18
	5:00 PM	**20**	**2**	**13**	**7**	**7**	**5**	**54**	**27**
	6:00 PM	14	1	3	6	5	0	29	10
4/26/2022	6:00 AM	6	0	3	2	4	0	15	5
Tuesday	7:00 AM	15	0	2	2	6	6	31	10
	8:00 AM	**14**	**4**	**9**	**9**	**10**	**0**	**46**	**22**
	9:00 AM	6	0	8	3	11	4	32	15
	3:00 PM	17	0	8	14	8	2	49	24
	4:00 PM	20	4	3	9	9	5	50	21
	5:00 PM	24	2	3	11	6	1	47	17
	6:00 PM	**16**	**3**	**6**	**8**	**14**	**6**	**53**	**23**
4/27/2022	6:00 AM	6	1	2	3	4	1	17	7
Wednesday	7:00 AM	13	6	0	2	6	4	31	12
	8:00 AM	**8**	**2**	**10**	**7**	**4**	**1**	**32**	**20**
	9:00 AM	11	0	4	6	4	5	30	15

Study Name Webford Ave & Graceland Ave
Start Date 04/20/2022
Start Time 3:00 PM

		Southbound Approach Southbound		Eastbound Approach Eastbound	Intersection
Day	Start Time	Right	Thru	Right	Volume
4/20/2022	3:00 PM	27	653	9	689
Wednesday	**4:00 PM**	**42**	**700**	**10**	**752**
	5:00 PM	38	635	12	685
	6:00 PM	23	525	7	555
4/21/2022	6:00 AM	5	155	1	161
Thursday	7:00 AM	10	467	11	488
	8:00 AM	**18**	**607**	**7**	**632**
	9:00 AM	22	473	21	516
	10:00 AM	13	198	7	218
	3:00 PM	42	676	9	727
	4:00 PM	38	652	12	702
	5:00 PM	**38**	**686**	**10**	**734**
	6:00 PM	34	536	17	587
4/22/2022	6:00 AM	6	133	1	140
Friday	7:00 AM	21	436	14	471
	8:00 AM	**17**	**533**	**10**	**560**
	9:00 AM	21	439	5	465
	10:00 AM	9	226	3	238
	3:00 PM	36	687	8	731
	4:00 PM	**31**	**825**	**9**	**865**
	5:00 PM	29	586	6	621
	6:00 PM	22	469	8	499
4/23/2022	6:00 AM	2	137	1	140
Saturday	7:00 AM	5	199	7	211
	8:00 AM	1	341	1	343
	9:00 AM	**14**	**476**	**7**	**497**
	3:00 PM	**21**	**480**	**4**	**505**
	4:00 PM	19	479	5	503
	5:00 PM	24	447	6	477
	6:00 PM	18	454	6	478
4/24/2022	6:00 AM	4	66	2	72
Sunday	7:00 AM	2	120	4	126
	8:00 AM	8	180	3	191
	9:00 AM	**14**	**304**	**2**	**320**
	3:00 PM	**16**	**397**	**2**	**415**
	4:00 PM	19	357	4	380
	5:00 PM	19	377	5	401
	6:00 PM	16	341	1	358
4/25/2022	6:00 AM	4	254	3	261
Monday	**7:00 AM**	**19**	**400**	**7**	**426**
	8:00 AM	17	510	3	530
	9:00 AM	17	436	3	456
	3:00 PM	31	587	7	625
	4:00 PM	31	634	5	670
	5:00 PM	**37**	**634**	**13**	**684**
	6:00 PM	20	470	6	496
4/26/2022	6:00 AM	6	253	3	262
Tuesday	7:00 AM	19	450	8	477
	8:00 AM	**19**	**609**	**5**	**633**
	9:00 AM	10	456	7	473
	3:00 PM	**22**	**654**	**9**	**685**
	4:00 PM	27	626	7	660
	5:00 PM	32	669	2	703
	6:00 PM	23	515	7	545
4/27/2022	6:00 AM	7	245	2	254
Wednesday	7:00 AM	18	422	5	445
	8:00 AM	**15**	**579**	**4**	**598**
	9:00 AM	18	414	8	440

Chicago Metropolitan Agency for Planning

433 West Van Buren Street
Suite 450
Chicago, IL 60607

312-454-0400
cmap.illinois.gov

January 17, 2022

Stephen B. Corcoran, P.E., PTOE
Director of Traffic Engineering
Eriksson Engneering Associates
145 Commerce Drive
Suite A
Grayslake, IL 60030

Subject: ***Graceland Avenue (US 12) @ Northwest Highway (US 14)***
IDOT

Dear Mr. Corcoran:

In response to a request made on your behalf and dated January 15, 2022, we have developed year 2050 average daily traffic (ADT) projections for the subject location.

ROAD SEGMENT	Current ADT	Year 2050 ADT
Graceland Ave (US 12) N of NW Hwy	18,800	21,700
Graceland Ave (US 12) S of Prairie Ave	18,700	21,600
NW Hwy (US 14) E of Graceland Ave	16,200	18,700
NW Hwy (US 14) W of Graceland Ave	16,100	18,600
Prairie Ave W of Graceland Ave	1,850	2,130

Traffic projections are developed using existing ADT data provided in the request letter and the results from the June 2021 CMAP Travel Demand Analysis. The regional travel model uses CMAP 2050 socioeconomic projections and assumes the implementation of the ON TO 2050 Comprehensive Regional Plan for the Northeastern Illinois area. The provision of this data in support of your request does not constitute a CMAP endorsement of the proposed development or any subsequent developments.

If you have any questions, please call me at (312) 386-8806.

Sincerely,

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

cc: Rios (IDOT)
2022_ForecastTraffic\DesPlaines\ck-13-22\ck-13-22.docx

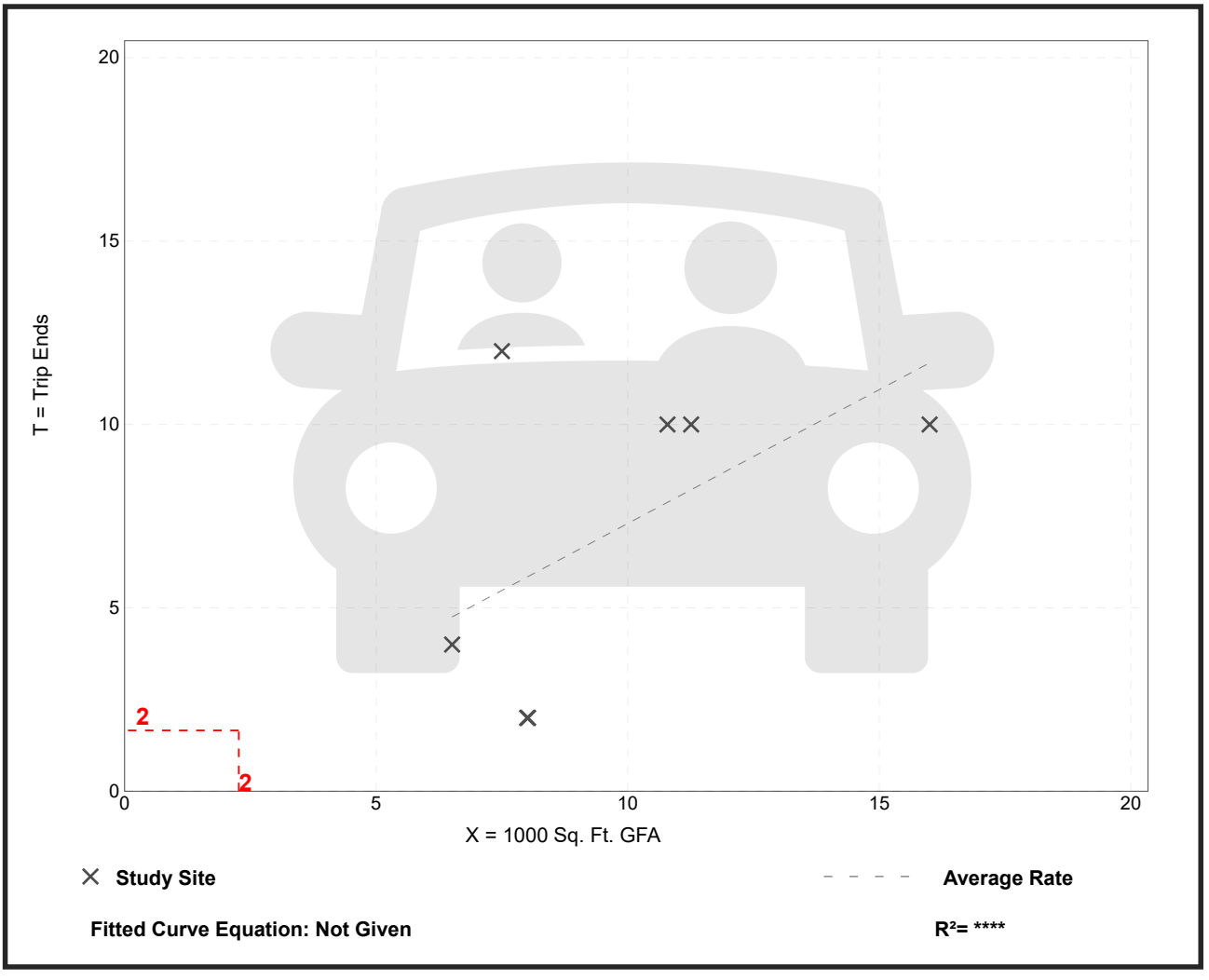
Fine Dining Restaurant
(931)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 7
Avg. 1000 Sq. Ft. GFA: 10
Directional Distribution: Not Available

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.73	0.25 - 1.60	0.42

Data Plot and Equation



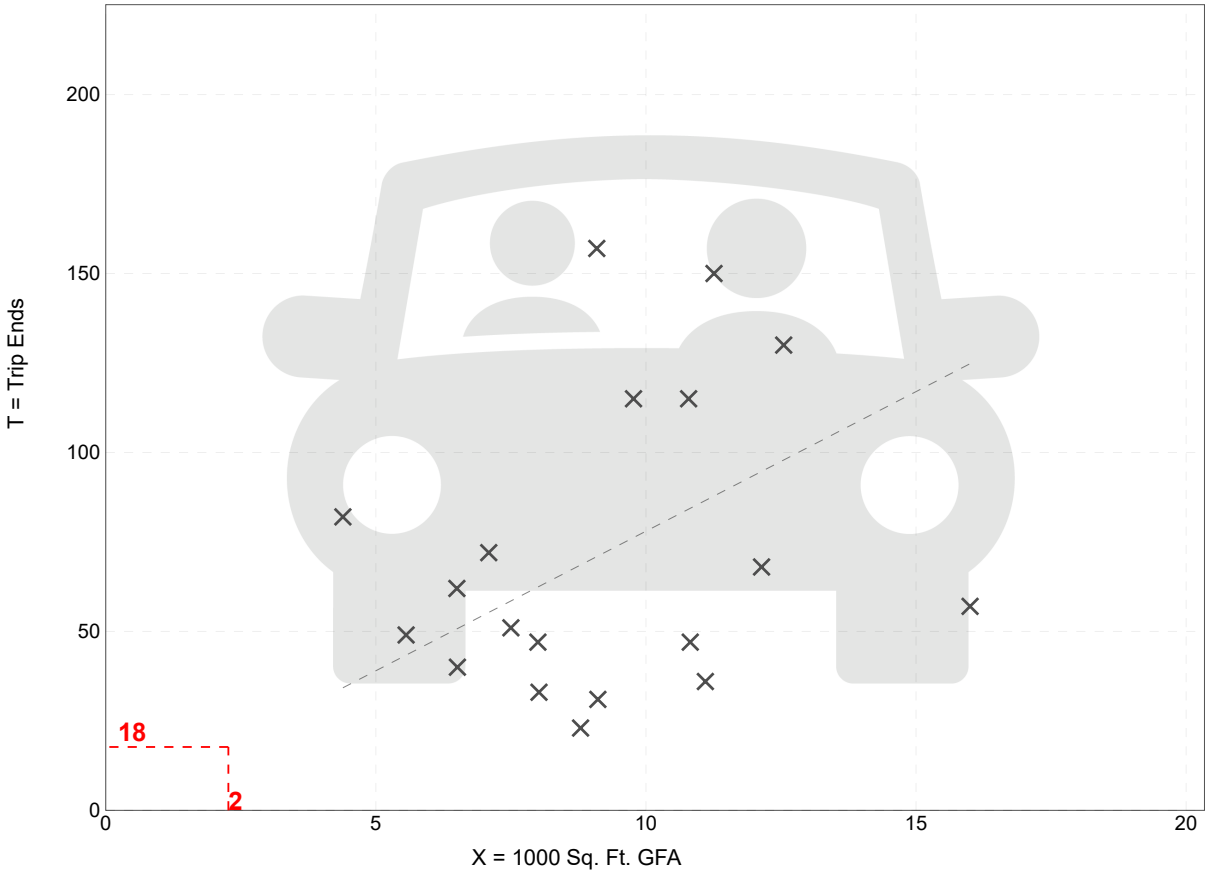
Fine Dining Restaurant
(931)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 19
Avg. 1000 Sq. Ft. GFA: 9
Directional Distribution: 67% entering, 33% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
7.80	2.62 - 18.68	4.49

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= ****

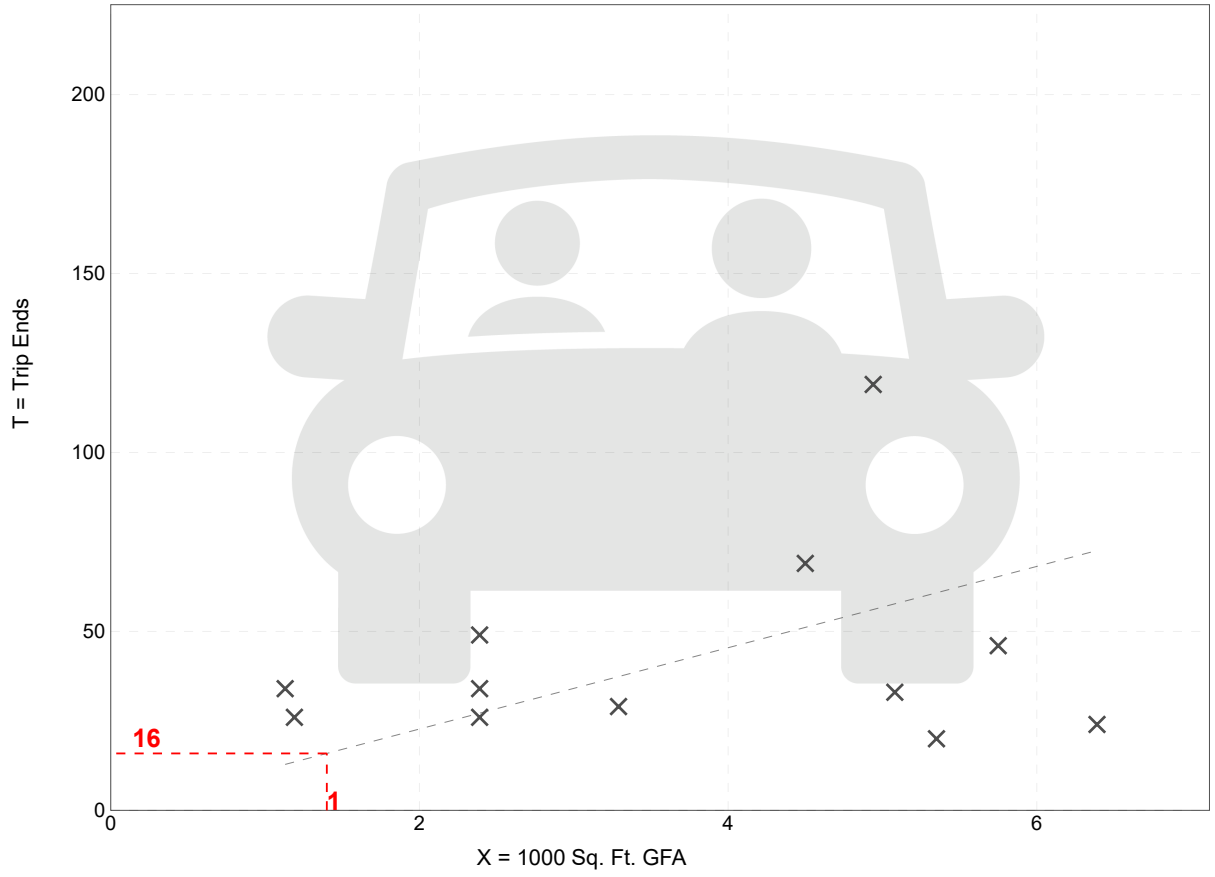
Drinking Place
(975)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 12
Avg. 1000 Sq. Ft. GFA: 4
Directional Distribution: 66% entering, 34% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
11.36	3.74 - 30.09	7.81

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= ****

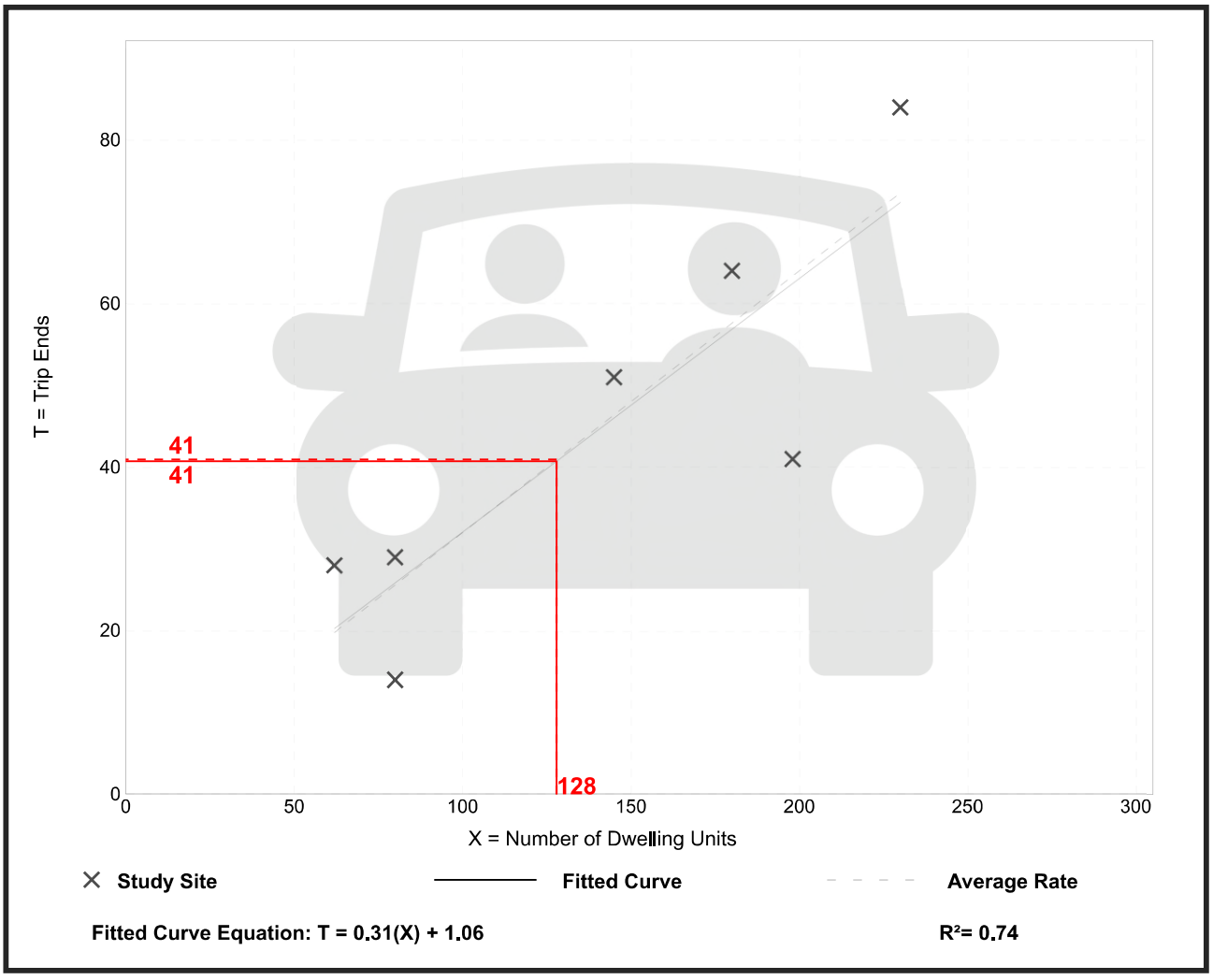
Multifamily Housing (Mid-Rise)
Close to Rail Transit (221)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 7
Avg. Num. of Dwelling Units: 139
Directional Distribution: 56% entering, 44% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.32	0.18 - 0.45	0.09

Data Plot and Equation



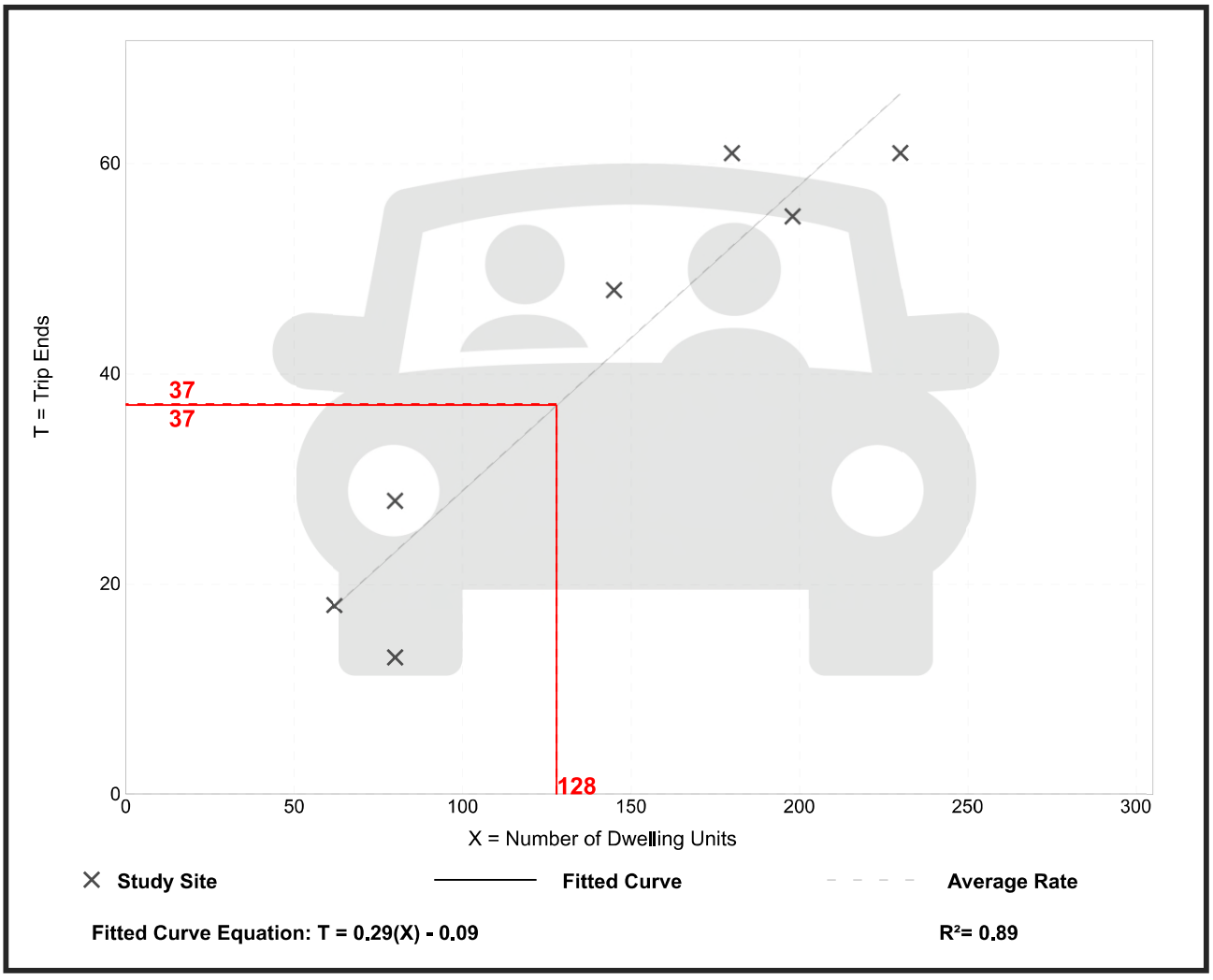
Multifamily Housing (Mid-Rise)
Close to Rail Transit (221)

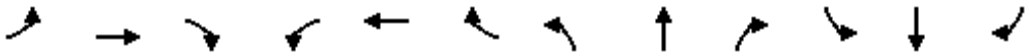
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 7
Avg. Num. of Dwelling Units: 139
Directional Distribution: 43% entering, 57% exiting

Vehicle Trip Generation per Dwelling Unit

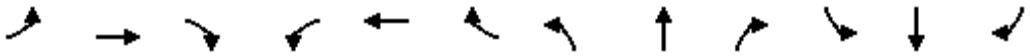
Average Rate	Range of Rates	Standard Deviation
0.29	0.16 - 0.35	0.05

Data Plot and Equation





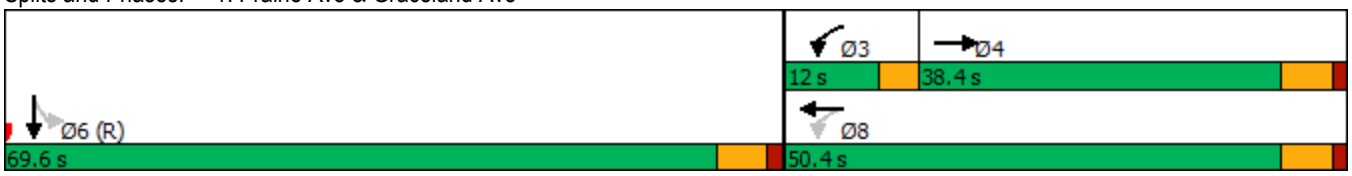
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	229	6	10	39	0	0	0	0	48	555	66
Future Volume (vph)	0	229	6	10	39	0	0	0	0	48	555	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor		1.00		1.00							1.00	
Frt		0.996									0.985	
Flt Protected				0.950							0.996	
Satd. Flow (prot)	0	3140	0	1577	1660	0	0	0	0	0	3086	0
Flt Permitted				0.410							0.996	
Satd. Flow (perm)	0	3140	0	678	1660	0	0	0	0	0	3084	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2									15	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		393			421			360			352	
Travel Time (s)		10.7			11.5			8.2			8.0	
Confl. Peds. (#/hr)	4		4	4		4	4		4	4		4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	0	254	7	11	43	0	0	0	0	53	617	73
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	261	0	11	43	0	0	0	0	0	743	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1	2	
Detector Template		Thru		Left	Thru					Left	Thru	
Leading Detector (ft)		100		20	100					20	100	
Trailing Detector (ft)		0		0	0					0	0	
Detector 1 Position(ft)		0		0	0					0	0	
Detector 1 Size(ft)		6		20	6					20	6	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		4		3	8						6	
Permitted Phases				8						6		

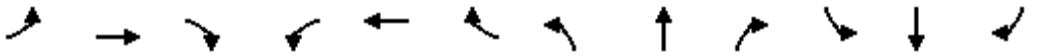


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		4		3	8					6	6	
Switch Phase												
Minimum Initial (s)		15.0		5.0	15.0					15.0	15.0	
Minimum Split (s)		21.0		9.5	21.0					21.0	21.0	
Total Split (s)		38.4		12.0	50.4					69.6	69.6	
Total Split (%)		32.0%		10.0%	42.0%					58.0%	58.0%	
Maximum Green (s)		32.4		8.5	44.4					63.6	63.6	
Yellow Time (s)		4.5		3.5	4.5					4.5	4.5	
All-Red Time (s)		1.5		0.0	1.5					1.5	1.5	
Lost Time Adjust (s)		0.0		0.0	0.0						0.0	
Total Lost Time (s)		6.0		3.5	6.0						6.0	
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Recall Mode		None		None	None					C-Max	C-Max	
Walk Time (s)		10.0			10.0					10.0	10.0	
Flash Dont Walk (s)		14.0			14.0					15.0	15.0	
Pedestrian Calls (#/hr)		0			0					0	0	
Act Effct Green (s)		16.3		21.0	18.5						89.5	
Actuated g/C Ratio		0.14		0.18	0.15						0.75	
v/c Ratio		0.61		0.07	0.17						0.32	
Control Delay		54.7		38.4	43.3						5.1	
Queue Delay		0.0		0.0	0.0						0.0	
Total Delay		54.7		38.4	43.3						5.1	
LOS		D		D	D						A	
Approach Delay		54.7			42.3						5.1	
Approach LOS		D			D						A	
Queue Length 50th (ft)		102		7	30						56	
Queue Length 95th (ft)		142		21	57						138	
Internal Link Dist (ft)		313			341			280			272	
Turn Bay Length (ft)												
Base Capacity (vph)		849		182	614						2303	
Starvation Cap Reductn		0		0	0						0	
Spillback Cap Reductn		0		0	0						0	
Storage Cap Reductn		0		0	0						0	
Reduced v/c Ratio		0.31		0.06	0.07						0.32	

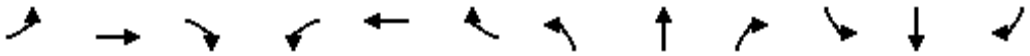
Intersection Summary			
Area Type:	CBD		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2: and 6:SBTL, Start of Green			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 19.3		Intersection LOS: B	
Intersection Capacity Utilization 47.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: Prairie Ave & Graceland Ave





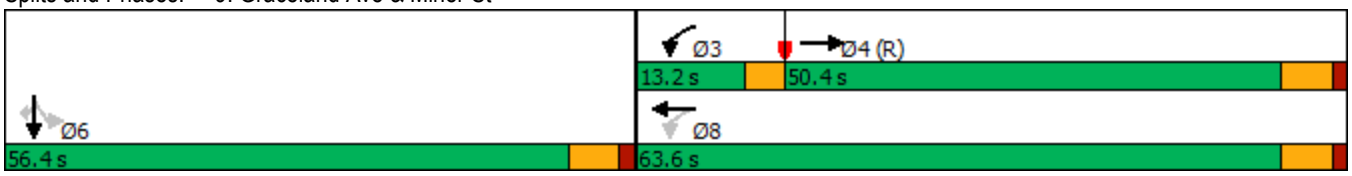
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	625	145	76	493	0	0	0	0	51	466	16
Future Volume (vph)	0	625	145	76	493	0	0	0	0	51	466	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor		0.99									1.00	0.98
Frt		0.972										0.850
Flt Protected					0.993						0.995	
Satd. Flow (prot)	0	3310	0	0	3414	0	0	0	0	0	3487	1568
Flt Permitted					0.725						0.995	
Satd. Flow (perm)	0	3310	0	0	2493	0	0	0	0	0	3475	1543
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26										59
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		582			522			211			503	
Travel Time (s)		13.2			14.2			4.8			11.4	
Confl. Peds. (#/hr)	4		22	22		4	32		26	26		3
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	0	665	154	81	524	0	0	0	0	54	496	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	819	0	0	605	0	0	0	0	0	550	17
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1	2	1
Detector Template		Thru		Left	Thru					Left	Thru	Right
Leading Detector (ft)		100		20	100					20	100	20
Trailing Detector (ft)		0		0	0					0	0	0
Detector 1 Position(ft)		0		0	0					0	0	0
Detector 1 Size(ft)		6		20	6					20	6	20
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	0.0
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA		pm+pt	NA					Perm	NA	Perm
Protected Phases		4		3	8						6	
Permitted Phases				8						6		6



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		4		3	8					6	6	6
Switch Phase												
Minimum Initial (s)		15.0		3.0	15.0					5.0	5.0	5.0
Minimum Split (s)		21.0		22.5	25.0					31.0	31.0	31.0
Total Split (s)		50.4		13.2	63.6					56.4	56.4	56.4
Total Split (%)		42.0%		11.0%	53.0%					47.0%	47.0%	47.0%
Maximum Green (s)		44.4		9.7	57.6					50.4	50.4	50.4
Yellow Time (s)		4.5		3.5	4.5					4.5	4.5	4.5
All-Red Time (s)		1.5		0.0	1.5					1.5	1.5	1.5
Lost Time Adjust (s)		0.0			0.0						0.0	0.0
Total Lost Time (s)		6.0			6.0						6.0	6.0
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	3.0
Recall Mode		C-Max		None	Max					None	None	None
Walk Time (s)		7.0			7.0					7.0	7.0	7.0
Flash Dont Walk (s)		13.0			12.0					18.0	18.0	18.0
Pedestrian Calls (#/hr)		0			0					0	0	0
Act Effct Green (s)		82.2			82.2						25.8	25.8
Actuated g/C Ratio		0.68			0.68						0.22	0.22
v/c Ratio		0.36			0.35						0.74	0.04
Control Delay		8.7			9.2						49.7	0.2
Queue Delay		0.0			0.0						0.0	0.0
Total Delay		8.7			9.2						49.7	0.2
LOS		A			A						D	A
Approach Delay		8.7			9.2						48.2	
Approach LOS		A			A						D	
Queue Length 50th (ft)		121			92						211	0
Queue Length 95th (ft)		186			148						254	0
Internal Link Dist (ft)		502			442			131			423	
Turn Bay Length (ft)												
Base Capacity (vph)		2274			1706						1459	682
Starvation Cap Reductn		0			0						0	0
Spillback Cap Reductn		0			0						0	0
Storage Cap Reductn		0			0						0	0
Reduced v/c Ratio		0.36			0.35						0.38	0.02

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 99 (83%), Referenced to phase 4:EBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 20.1		Intersection LOS: C	
Intersection Capacity Utilization 71.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 9: Graceland Ave & Miner St



Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	5	0	0	664	18
Future Vol, veh/h	0	5	0	0	664	18
Conflicting Peds, #/hr	0	4	0	0	0	4
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	5	0	0	722	20

Major/Minor	Minor2			Major2	
Conflicting Flow All	-	379		-	0
Stage 1	-	-		-	-
Stage 2	-	-		-	-
Critical Hdwy	-	6.96		-	-
Critical Hdwy Stg 1	-	-		-	-
Critical Hdwy Stg 2	-	-		-	-
Follow-up Hdwy	-	3.33		-	-
Pot Cap-1 Maneuver	0	616		-	-
Stage 1	0	-		-	-
Stage 2	0	-		-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	-	614		-	-
Mov Cap-2 Maneuver	-	-		-	-
Stage 1	-	-		-	-
Stage 2	-	-		-	-

Approach	EB	SB
HCM Control Delay, s	10.9	0
HCM LOS	B	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	614	-	-
HCM Lane V/C Ratio	0.009	-	-
HCM Control Delay (s)	10.9	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	0	0	0	13	674
Future Vol, veh/h	8	0	0	0	13	674
Conflicting Peds, #/hr	17	0	0	0	14	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	9	0	0	0	14	733

Major/Minor	Minor1		Major2	
Conflicting Flow All	426	-	14	0
Stage 1	14	-	-	-
Stage 2	412	-	-	-
Critical Hdwy	6.86	-	4.16	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-
Follow-up Hdwy	3.53	-	2.23	-
Pot Cap-1 Maneuver	554	0	1595	-
Stage 1	-	0	-	-
Stage 2	634	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	538	-	1574	-
Mov Cap-2 Maneuver	538	-	-	-
Stage 1	-	-	-	-
Stage 2	624	-	-	-

Approach	WB	SB
HCM Control Delay, s	11.8	0.2
HCM LOS	B	

Minor Lane/Major Mvmt	WBLn1	SBL	SBT
Capacity (veh/h)	538	1574	-
HCM Lane V/C Ratio	0.016	0.009	-
HCM Control Delay (s)	11.8	7.3	0.1
HCM Lane LOS	B	A	A
HCM 95th %tile Q(veh)	0	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	6	0	0	789	31
Future Vol, veh/h	0	6	0	0	789	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	7	0	0	877	34

Major/Minor	Minor2			Major2	
Conflicting Flow All	-	456		-	0
Stage 1	-	-		-	-
Stage 2	-	-		-	-
Critical Hdwy	-	6.96		-	-
Critical Hdwy Stg 1	-	-		-	-
Critical Hdwy Stg 2	-	-		-	-
Follow-up Hdwy	-	3.33		-	-
Pot Cap-1 Maneuver	0	549		-	-
Stage 1	0	-		-	-
Stage 2	0	-		-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	-	549		-	-
Mov Cap-2 Maneuver	-	-		-	-
Stage 1	-	-		-	-
Stage 2	-	-		-	-

Approach	EB	SB
HCM Control Delay, s	11.6	0
HCM LOS	B	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	549	-	-
HCM Lane V/C Ratio	0.012	-	-
HCM Control Delay (s)	11.6	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0	-	-

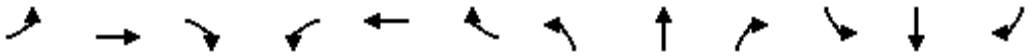
Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	41	0	0	0	35	779
Future Vol, veh/h	41	0	0	0	35	779
Conflicting Peds, #/hr	6	0	0	0	8	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	45	0	0	0	38	847

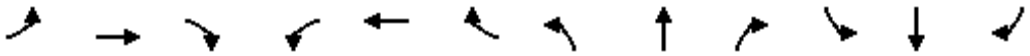
Major/Minor	Minor1		Major2	
Conflicting Flow All	514	-	8	0
Stage 1	8	-	-	-
Stage 2	506	-	-	-
Critical Hdwy	6.86	-	4.16	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-
Follow-up Hdwy	3.53	-	2.23	-
Pot Cap-1 Maneuver	488	0	1603	-
Stage 1	-	0	-	-
Stage 2	568	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	462	-	1591	-
Mov Cap-2 Maneuver	462	-	-	-
Stage 1	-	-	-	-
Stage 2	542	-	-	-

Approach	WB	SB
HCM Control Delay, s	13.6	0.5
HCM LOS	B	

Minor Lane/Major Mvmt	WBLn1	SBL	SBT
Capacity (veh/h)	462	1591	-
HCM Lane V/C Ratio	0.096	0.024	-
HCM Control Delay (s)	13.6	7.3	0.2
HCM Lane LOS	B	A	A
HCM 95th %tile Q(veh)	0.3	0.1	-



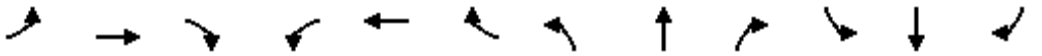
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	129	9	46	91	0	0	0	0	57	687	51
Future Volume (vph)	0	129	9	46	91	0	0	0	0	57	687	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor		1.00		1.00							1.00	
Frt		0.991									0.990	
Flt Protected				0.950							0.996	
Satd. Flow (prot)	0	3123	0	1577	1660	0	0	0	0	0	3104	0
Flt Permitted				0.515							0.996	
Satd. Flow (perm)	0	3123	0	853	1660	0	0	0	0	0	3103	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5									10	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		393			421			360			352	
Travel Time (s)		10.7			11.5			8.2			8.0	
Confl. Peds. (#/hr)	10		2	2		10	4		6	6		4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	0	136	9	48	96	0	0	0	0	60	723	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	145	0	48	96	0	0	0	0	0	837	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1	2	
Detector Template		Thru		Left	Thru					Left	Thru	
Leading Detector (ft)		100		20	100					20	100	
Trailing Detector (ft)		0		0	0					0	0	
Detector 1 Position(ft)		0		0	0					0	0	
Detector 1 Size(ft)		6		20	6					20	6	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		4		3	8						6	
Permitted Phases				8						6		



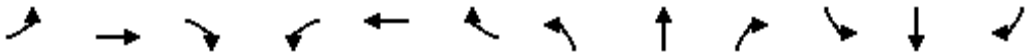
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		4		3	8					6	6	
Switch Phase												
Minimum Initial (s)		15.0		5.0	15.0					15.0	15.0	
Minimum Split (s)		30.0		9.5	29.0					31.0	31.0	
Total Split (s)		32.4		13.2	45.6					74.4	74.4	
Total Split (%)		27.0%		11.0%	38.0%					62.0%	62.0%	
Maximum Green (s)		26.4		8.7	40.6					68.4	68.4	
Yellow Time (s)		4.5		3.5	3.5					4.5	4.5	
All-Red Time (s)		1.5		1.0	1.5					1.5	1.5	
Lost Time Adjust (s)		0.0		0.0	0.0						0.0	
Total Lost Time (s)		6.0		4.5	5.0						6.0	
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Recall Mode		None		None	None					C-Max	C-Max	
Walk Time (s)		10.0			10.0					10.0	10.0	
Flash Dont Walk (s)		14.0			14.0					15.0	15.0	
Pedestrian Calls (#/hr)		0			0					0	0	
Act Effct Green (s)		15.0		26.7	26.2						82.8	
Actuated g/C Ratio		0.12		0.22	0.22						0.69	
v/c Ratio		0.37		0.20	0.27						0.39	
Control Delay		49.4		37.7	39.7						8.9	
Queue Delay		0.0		0.0	0.0						0.0	
Total Delay		49.4		37.7	39.7						8.9	
LOS		D		D	D						A	
Approach Delay		49.4			39.0						8.9	
Approach LOS		D			D						A	
Queue Length 50th (ft)		53		29	60						139	
Queue Length 95th (ft)		86		62	109						178	
Internal Link Dist (ft)		313			341			280			272	
Turn Bay Length (ft)												
Base Capacity (vph)		690		241	561						2145	
Starvation Cap Reductn		0		0	0						0	
Spillback Cap Reductn		0		0	0						0	
Storage Cap Reductn		0		0	0						0	
Reduced v/c Ratio		0.21		0.20	0.17						0.39	

Intersection Summary			
Area Type:	CBD		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 70.8 (59%), Referenced to phase 2: and 6:SBTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.39			
Intersection Signal Delay: 18.0		Intersection LOS: B	
Intersection Capacity Utilization 59.0%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: Prairie Ave & Graceland Ave



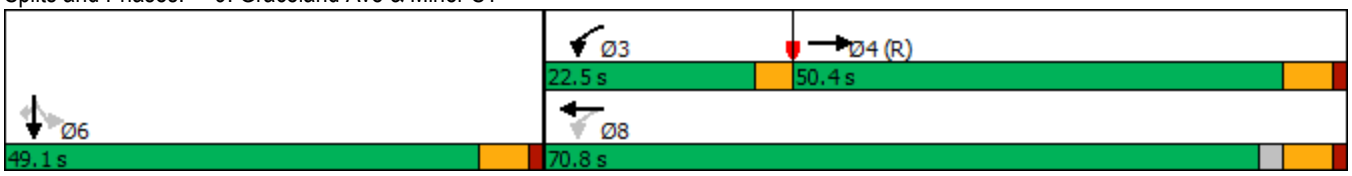
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	419	150	140	851	0	0	0	0	65	524	20
Future Volume (vph)	0	419	150	140	851	0	0	0	0	65	524	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor		0.99			1.00						0.99	0.68
Frt		0.960										0.850
Flt Protected					0.993						0.994	
Satd. Flow (prot)	0	3284	0	0	3414	0	0	0	0	0	3484	1568
Flt Permitted					0.705						0.994	
Satd. Flow (perm)	0	3284	0	0	2423	0	0	0	0	0	3465	1061
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		47										58
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		582			522			211			503	
Travel Time (s)		13.2			14.2			4.8			11.4	
Confl. Peds. (#/hr)	2		4	4		2	26		34	34		266
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	0	455	163	152	925	0	0	0	0	71	570	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	618	0	0	1077	0	0	0	0	0	641	22
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1	2	1
Detector Template		Thru		Left	Thru					Left	Thru	Right
Leading Detector (ft)		100		20	100					20	100	20
Trailing Detector (ft)		0		0	0					0	0	0
Detector 1 Position(ft)		0		0	0					0	0	0
Detector 1 Size(ft)		6		20	6					20	6	20
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	0.0
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA		pm+pt	NA					Perm	NA	Perm
Protected Phases		4		3	8						6	
Permitted Phases				8						6		6

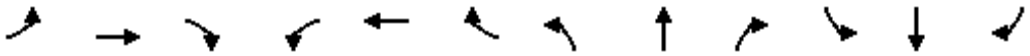


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		4		3	8					6	6	6
Switch Phase												
Minimum Initial (s)		15.0		3.0	15.0					3.0	3.0	3.0
Minimum Split (s)		26.0		22.5	26.0					31.0	31.0	31.0
Total Split (s)		50.4		22.5	70.8					49.1	49.1	49.1
Total Split (%)		41.3%		18.4%	58.0%					40.2%	40.2%	40.2%
Maximum Green (s)		44.4		19.0	64.8					43.1	43.1	43.1
Yellow Time (s)		4.5		3.5	4.5					4.5	4.5	4.5
All-Red Time (s)		1.5		0.0	1.5					1.5	1.5	1.5
Lost Time Adjust (s)		0.0			0.0						0.0	0.0
Total Lost Time (s)		6.0			6.0						6.0	6.0
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	3.0
Recall Mode		C-Max		None	None					Max	Max	Max
Walk Time (s)		7.0			7.0					7.0	7.0	7.0
Flash Dont Walk (s)		13.0			13.0					18.0	18.0	18.0
Pedestrian Calls (#/hr)		0			0					0	0	0
Act Effct Green (s)		66.9			66.9						43.1	43.1
Actuated g/C Ratio		0.55			0.55						0.35	0.35
v/c Ratio		0.34			0.81						0.52	0.05
Control Delay		14.6			28.6						33.2	0.2
Queue Delay		0.0			0.0						0.0	0.0
Total Delay		14.6			28.6						33.2	0.2
LOS		B			C						C	A
Approach Delay		14.6			28.6						32.1	
Approach LOS		B			C						C	
Queue Length 50th (ft)		125			348						210	0
Queue Length 95th (ft)		164			451						268	0
Internal Link Dist (ft)		502			442			131			423	
Turn Bay Length (ft)												
Base Capacity (vph)		1822			1328						1224	412
Starvation Cap Reductn		0			0						0	0
Spillback Cap Reductn		0			0						0	0
Storage Cap Reductn		0			0						0	0
Reduced v/c Ratio		0.34			0.81						0.52	0.05

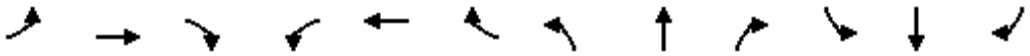
Intersection Summary			
Area Type:	Other		
Cycle Length: 122			
Actuated Cycle Length: 122			
Offset: 0 (0%), Referenced to phase 4:EBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 25.9		Intersection LOS: C	
Intersection Capacity Utilization 80.1%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 9: Graceland Ave & Miner ST





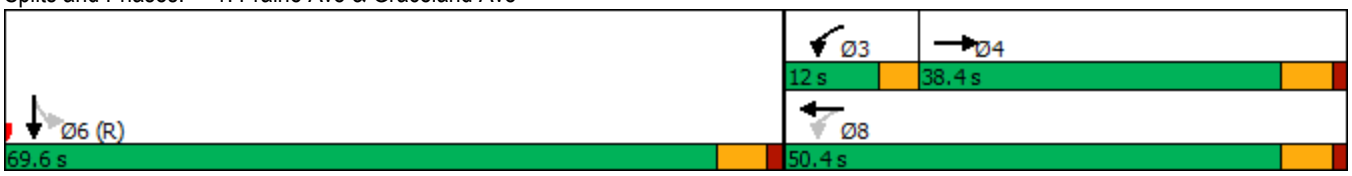
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	237	7	11	40	0	0	0	0	79	592	69
Future Volume (vph)	0	237	7	11	40	0	0	0	0	79	592	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor		1.00		1.00							1.00	
Frt		0.996									0.986	
Flt Protected				0.950							0.995	
Satd. Flow (prot)	0	3140	0	1577	1660	0	0	0	0	0	3085	0
Flt Permitted				0.399							0.995	
Satd. Flow (perm)	0	3140	0	659	1660	0	0	0	0	0	3082	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2									14	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		393			421			360			228	
Travel Time (s)		10.7			11.5			8.2			5.2	
Confl. Peds. (#/hr)	4		4	4		4	4		4	4		4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	0	263	8	12	44	0	0	0	0	88	658	77
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	271	0	12	44	0	0	0	0	0	823	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1	2	
Detector Template		Thru		Left	Thru					Left	Thru	
Leading Detector (ft)		100		20	100					20	100	
Trailing Detector (ft)		0		0	0					0	0	
Detector 1 Position(ft)		0		0	0					0	0	
Detector 1 Size(ft)		6		20	6					20	6	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		4		3	8						6	
Permitted Phases				8						6		

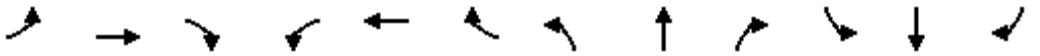


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		4		3	8					6	6	
Switch Phase												
Minimum Initial (s)		15.0		3.0	15.0					5.0	5.0	
Minimum Split (s)		24.0		9.5	24.0					24.0	24.0	
Total Split (s)		38.4		12.0	50.4					69.6	69.6	
Total Split (%)		32.0%		10.0%	42.0%					58.0%	58.0%	
Maximum Green (s)		32.4		8.5	44.4					63.6	63.6	
Yellow Time (s)		4.5		3.5	4.5					4.5	4.5	
All-Red Time (s)		1.5		0.0	1.5					1.5	1.5	
Lost Time Adjust (s)		0.0		0.0	0.0						0.0	
Total Lost Time (s)		6.0		3.5	6.0						6.0	
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Recall Mode		None		None	None					C-Max	C-Max	
Walk Time (s)		7.0			7.0					7.0	7.0	
Flash Dont Walk (s)		11.0			11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0			0					0	0	
Act Effct Green (s)		16.6		23.4	20.9						87.1	
Actuated g/C Ratio		0.14		0.20	0.17						0.73	
v/c Ratio		0.62		0.07	0.15						0.37	
Control Delay		54.8		35.5	40.2						3.9	
Queue Delay		0.0		0.0	0.0						0.0	
Total Delay		54.8		35.5	40.2						3.9	
LOS		D		D	D						A	
Approach Delay		54.8			39.2						3.9	
Approach LOS		D			D						A	
Queue Length 50th (ft)		105		8	31						29	
Queue Length 95th (ft)		146		22	57						114	
Internal Link Dist (ft)		313			341			280			148	
Turn Bay Length (ft)												
Base Capacity (vph)		849		193	614						2241	
Starvation Cap Reductn		0		0	0						0	
Spillback Cap Reductn		0		0	0						0	
Storage Cap Reductn		0		0	0						0	
Reduced v/c Ratio		0.32		0.06	0.07						0.37	

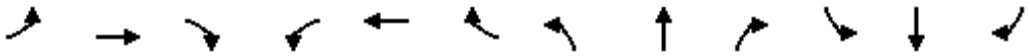
Intersection Summary			
Area Type:	CBD		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 60 (50%), Referenced to phase 2: and 6:SBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 17.6		Intersection LOS: B	
Intersection Capacity Utilization 49.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: Prairie Ave & Graceland Ave





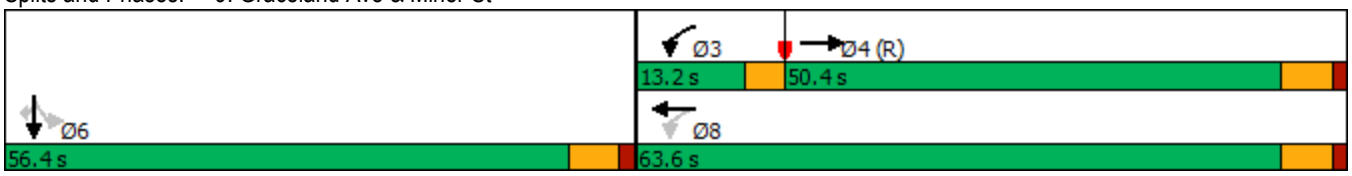
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	644	157	91	516	0	0	0	0	53	492	16
Future Volume (vph)	0	644	157	91	516	0	0	0	0	53	492	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor		0.99									1.00	0.98
Frt		0.971										0.850
Flt Protected					0.993						0.995	
Satd. Flow (prot)	0	3305	0	0	3414	0	0	0	0	0	3487	1568
Flt Permitted					0.681						0.995	
Satd. Flow (perm)	0	3305	0	0	2341	0	0	0	0	0	3475	1543
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28										59
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		582			522			211			503	
Travel Time (s)		13.2			14.2			4.8			11.4	
Confl. Peds. (#/hr)	4		22	22		4	32		26	26		3
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	0	685	167	97	549	0	0	0	0	56	523	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	852	0	0	646	0	0	0	0	0	579	17
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1	2	1
Detector Template		Thru		Left	Thru					Left	Thru	Right
Leading Detector (ft)		100		20	100					20	100	20
Trailing Detector (ft)		0		0	0					0	0	0
Detector 1 Position(ft)		0		0	0					0	0	0
Detector 1 Size(ft)		6		20	6					20	6	20
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	0.0
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA		pm+pt	NA					Perm	NA	Perm
Protected Phases		4		3	8						6	
Permitted Phases				8						6		6



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		4		3	8					6	6	6
Switch Phase												
Minimum Initial (s)		15.0		3.0	15.0					5.0	5.0	5.0
Minimum Split (s)		26.0		22.5	26.0					31.0	31.0	31.0
Total Split (s)		50.4		13.2	63.6					56.4	56.4	56.4
Total Split (%)		42.0%		11.0%	53.0%					47.0%	47.0%	47.0%
Maximum Green (s)		44.4		9.7	57.6					50.4	50.4	50.4
Yellow Time (s)		4.5		3.5	4.5					4.5	4.5	4.5
All-Red Time (s)		1.5		0.0	1.5					1.5	1.5	1.5
Lost Time Adjust (s)		0.0			0.0						0.0	0.0
Total Lost Time (s)		6.0			6.0						6.0	6.0
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	3.0
Recall Mode		C-Max		None	Max					None	None	None
Walk Time (s)		7.0			7.0					7.0	7.0	7.0
Flash Dont Walk (s)		13.0			13.0					18.0	18.0	18.0
Pedestrian Calls (#/hr)		0			0					0	0	0
Act Effct Green (s)		81.0			81.0						27.0	27.0
Actuated g/C Ratio		0.68			0.68						0.22	0.22
v/c Ratio		0.38			0.41						0.74	0.04
Control Delay		9.4			10.4						48.8	0.2
Queue Delay		0.0			0.0						0.0	0.0
Total Delay		9.4			10.4						48.8	0.2
LOS		A			B						D	A
Approach Delay		9.4			10.4						47.5	
Approach LOS		A			B						D	
Queue Length 50th (ft)		132			106						221	0
Queue Length 95th (ft)		205			174						262	0
Internal Link Dist (ft)		502			442			131			423	
Turn Bay Length (ft)												
Base Capacity (vph)		2238			1579						1459	682
Starvation Cap Reductn		0			0						0	0
Spillback Cap Reductn		0			0						0	0
Storage Cap Reductn		0			0						0	0
Reduced v/c Ratio		0.38			0.41						0.40	0.02

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 99 (83%), Referenced to phase 4:EBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 20.6		Intersection LOS: C	
Intersection Capacity Utilization 73.8%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 9: Graceland Ave & Miner St



Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	24	11	0	0	0	0	0	5	692	43
Future Vol, veh/h	0	0	24	11	0	0	0	0	0	5	692	43
Conflicting Peds, #/hr	0	0	4	0	0	0	0	0	0	0	0	4
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	2	3	2	2	2	3	3	2	2	3	3
Mvmt Flow	0	0	26	12	0	0	0	0	0	5	752	47

Major/Minor	Minor2			Minor1					Major2		
Conflicting Flow All	-	-	408	390	-	-			0	0	0
Stage 1	-	-	-	0	-	-			-	-	-
Stage 2	-	-	-	390	-	-			-	-	-
Critical Hdwy	-	-	6.96	7.54	-	-			4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-			-	-	-
Critical Hdwy Stg 2	-	-	-	6.54	-	-			-	-	-
Follow-up Hdwy	-	-	3.33	3.52	-	-			2.22	-	-
Pot Cap-1 Maneuver	0	0	590	543	0	0			-	-	-
Stage 1	0	0	-	-	0	0			-	-	-
Stage 2	0	0	-	606	0	0			-	-	-
Platoon blocked, %										-	-
Mov Cap-1 Maneuver	-	-	588	519	-	-			-	-	-
Mov Cap-2 Maneuver	-	-	-	519	-	-			-	-	-
Stage 1	-	-	-	-	-	-			-	-	-
Stage 2	-	-	-	579	-	-			-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	11.4	12.1	
HCM LOS	B	B	

Minor Lane/Major Mvmt	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	588	519	-	-	-
HCM Lane V/C Ratio	0.044	0.023	-	-	-
HCM Control Delay (s)	11.4	12.1	-	-	-
HCM Lane LOS	B	B	-	-	-
HCM 95th %tile Q(veh)	0.1	0.1	-	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	14	0	0	0	14	726
Future Vol, veh/h	14	0	0	0	14	726
Conflicting Peds, #/hr	17	0	0	0	14	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	15	0	0	0	15	789

Major/Minor	Minor1		Major2	
Conflicting Flow All	456	-	14	0
Stage 1	14	-	-	-
Stage 2	442	-	-	-
Critical Hdwy	6.86	-	4.16	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-
Follow-up Hdwy	3.53	-	2.23	-
Pot Cap-1 Maneuver	530	0	1595	-
Stage 1	-	0	-	-
Stage 2	612	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	514	-	1574	-
Mov Cap-2 Maneuver	514	-	-	-
Stage 1	-	-	-	-
Stage 2	602	-	-	-

Approach	WB	SB
HCM Control Delay, s	12.2	0.2
HCM LOS	B	

Minor Lane/Major Mvmt	WBLn1	SBL	SBT
Capacity (veh/h)	514	1574	-
HCM Lane V/C Ratio	0.03	0.01	-
HCM Control Delay (s)	12.2	7.3	0.1
HCM Lane LOS	B	A	A
HCM 95th %tile Q(veh)	0.1	0	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	13	29	14	11	0
Future Vol, veh/h	0	13	29	14	11	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	14	32	15	12	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	47	0	-	0	54	40
Stage 1	-	-	-	-	40	-
Stage 2	-	-	-	-	14	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1560	-	-	-	954	1031
Stage 1	-	-	-	-	982	-
Stage 2	-	-	-	-	1009	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1560	-	-	-	954	1031
Mov Cap-2 Maneuver	-	-	-	-	954	-
Stage 1	-	-	-	-	982	-
Stage 2	-	-	-	-	1009	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1560	-	-	-	954
HCM Lane V/C Ratio	-	-	-	-	0.013
HCM Control Delay (s)	0	-	-	-	8.8
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	1	5	10	19	8	1
Future Vol, veh/h	1	5	10	19	8	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	5	11	21	9	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	32	0	-	0	29	22
Stage 1	-	-	-	-	22	-
Stage 2	-	-	-	-	7	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1580	-	-	-	986	1055
Stage 1	-	-	-	-	1001	-
Stage 2	-	-	-	-	1016	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1580	-	-	-	985	1055
Mov Cap-2 Maneuver	-	-	-	-	985	-
Stage 1	-	-	-	-	1000	-
Stage 2	-	-	-	-	1016	-

Approach	EB	WB	SW
HCM Control Delay, s	1.2	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SWLn1
Capacity (veh/h)	1580	-	-	-	992
HCM Lane V/C Ratio	0.001	-	-	-	0.01
HCM Control Delay (s)	7.3	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

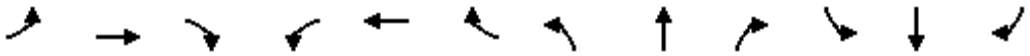
Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	22	0	0	0	9	718
Future Vol, veh/h	22	0	0	0	9	718
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	0	0	0	10	780

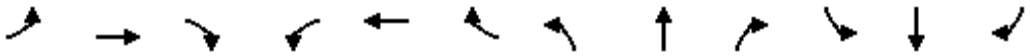
Major/Minor	Minor1		Major2	
Conflicting Flow All	410	-	0	0
Stage 1	0	-	-	-
Stage 2	410	-	-	-
Critical Hdwy	6.84	-	4.14	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-
Follow-up Hdwy	3.52	-	2.22	-
Pot Cap-1 Maneuver	570	0	-	-
Stage 1	-	0	-	-
Stage 2	638	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	570	-	-	-
Mov Cap-2 Maneuver	570	-	-	-
Stage 1	-	-	-	-
Stage 2	638	-	-	-

Approach	WB	SB
HCM Control Delay, s	11.6	
HCM LOS	B	

Minor Lane/Major Mvmt	WBLn1	SBL	SBT
Capacity (veh/h)	570	-	-
HCM Lane V/C Ratio	0.042	-	-
HCM Control Delay (s)	11.6	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-



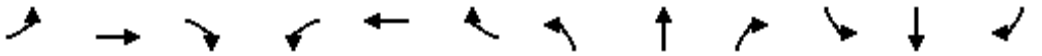
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	139	10	48	94	0	0	0	0	105	740	58
Future Volume (vph)	0	139	10	48	94	0	0	0	0	105	740	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor		1.00		1.00							1.00	
Frt		0.989									0.990	
Flt Protected				0.950							0.994	
Satd. Flow (prot)	0	3116	0	1577	1660	0	0	0	0	0	3098	0
Flt Permitted				0.652							0.994	
Satd. Flow (perm)	0	3116	0	1079	1660	0	0	0	0	0	3093	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6									11	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		393			421			360			234	
Travel Time (s)		10.7			11.5			8.2			5.3	
Confl. Peds. (#/hr)	10		2	2		10	4		6	6		4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	0	146	11	51	99	0	0	0	0	111	779	61
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	157	0	51	99	0	0	0	0	0	951	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1	2	
Detector Template		Thru		Left	Thru					Left	Thru	
Leading Detector (ft)		100		20	100					20	100	
Trailing Detector (ft)		0		0	0					0	0	
Detector 1 Position(ft)		0		0	0					0	0	
Detector 1 Size(ft)		6		20	6					20	6	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases				8						6		



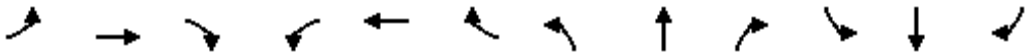
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		4		8	8					6	6	
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		23.5		23.5	23.5					23.5	23.5	
Total Split (s)		40.0		40.0	40.0					80.0	80.0	
Total Split (%)		33.3%		33.3%	33.3%					66.7%	66.7%	
Maximum Green (s)		34.5		34.5	34.5					74.5	74.5	
Yellow Time (s)		4.5		4.5	4.5					4.5	4.5	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0						0.0	
Total Lost Time (s)		5.5		5.5	5.5						5.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Recall Mode		None		None	None					C-Max	C-Max	
Walk Time (s)		7.0		7.0	7.0					7.0	7.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		12.6		12.6	12.6						96.4	
Actuated g/C Ratio		0.10		0.10	0.10						0.80	
v/c Ratio		0.47		0.45	0.57						0.38	
Control Delay		52.6		62.0	63.3						2.2	
Queue Delay		0.0		0.0	0.0						0.0	
Total Delay		52.6		62.0	63.3						2.2	
LOS		D		E	E						A	
Approach Delay		52.6			62.9						2.2	
Approach LOS		D			E						A	
Queue Length 50th (ft)		58		38	74						46	
Queue Length 95th (ft)		90		77	127						72	
Internal Link Dist (ft)		313			341			280			154	
Turn Bay Length (ft)												
Base Capacity (vph)		900		310	477						2487	
Starvation Cap Reductn		0		0	0						0	
Spillback Cap Reductn		0		0	0						0	
Storage Cap Reductn		0		0	0						0	
Reduced v/c Ratio		0.17		0.16	0.21						0.38	

Intersection Summary			
Area Type:	CBD		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2: and 6:SBTL, Start of Green			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.57			
Intersection Signal Delay: 15.8		Intersection LOS: B	
Intersection Capacity Utilization 54.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: Prairie Ave & Graceland Ave



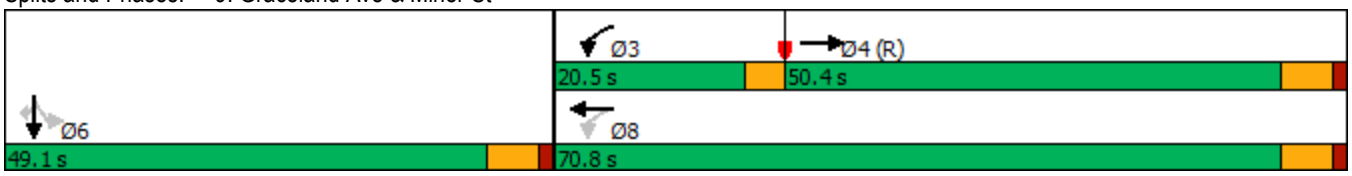
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	431	176	171	888	0	0	0	0	67	572	21
Future Volume (vph)	0	431	176	171	888	0	0	0	0	67	572	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor		0.99			1.00						0.99	0.68
Frt		0.957										0.850
Flt Protected					0.992						0.995	
Satd. Flow (prot)	0	3272	0	0	3411	0	0	0	0	0	3487	1568
Flt Permitted					0.689						0.995	
Satd. Flow (perm)	0	3272	0	0	2368	0	0	0	0	0	3469	1063
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		58										59
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		582			522			211			503	
Travel Time (s)		13.2			14.2			4.8			11.4	
Confl. Peds. (#/hr)	2		4	4		2	26		34	34		266
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	0	468	191	186	965	0	0	0	0	73	622	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	659	0	0	1151	0	0	0	0	0	695	23
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1	2	1
Detector Template		Thru		Left	Thru					Left	Thru	Right
Leading Detector (ft)		100		20	100					20	100	20
Trailing Detector (ft)		0		0	0					0	0	0
Detector 1 Position(ft)		0		0	0					0	0	0
Detector 1 Size(ft)		6		20	6					20	6	20
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	0.0
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA		pm+pt	NA					Perm	NA	Perm
Protected Phases		4		3	8						6	
Permitted Phases				8						6		6



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		4		3	8					6	6	6
Switch Phase												
Minimum Initial (s)		15.0		3.0	15.0					5.0	5.0	5.0
Minimum Split (s)		26.0		22.5	26.0					31.0	31.0	31.0
Total Split (s)		50.4		20.5	70.8					49.1	49.1	49.1
Total Split (%)		42.0%		17.1%	59.0%					40.9%	40.9%	40.9%
Maximum Green (s)		44.4		17.0	64.8					43.1	43.1	43.1
Yellow Time (s)		4.5		3.5	4.5					4.5	4.5	4.5
All-Red Time (s)		1.5		0.0	1.5					1.5	1.5	1.5
Lost Time Adjust (s)		0.0			0.0						0.0	0.0
Total Lost Time (s)		6.0			6.0						6.0	6.0
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	3.0
Recall Mode		C-Max		None	None					None	None	None
Walk Time (s)		7.0			7.0					7.0	7.0	7.0
Flash Dont Walk (s)		13.0			13.0					18.0	18.0	18.0
Pedestrian Calls (#/hr)		0			0					0	0	0
Act Effct Green (s)		76.7			76.7						31.3	31.3
Actuated g/C Ratio		0.64			0.64						0.26	0.26
v/c Ratio		0.31			0.76						0.77	0.07
Control Delay		9.9			20.7						46.7	0.4
Queue Delay		0.0			0.0						0.0	0.0
Total Delay		9.9			20.7						46.7	0.4
LOS		A			C						D	A
Approach Delay		9.9			20.7						45.2	
Approach LOS		A			C						D	
Queue Length 50th (ft)		101			305						262	0
Queue Length 95th (ft)		159			480						305	0
Internal Link Dist (ft)		502			442			131			423	
Turn Bay Length (ft)												
Base Capacity (vph)		2111			1513						1245	419
Starvation Cap Reductn		0			0						0	0
Spillback Cap Reductn		0			0						0	0
Storage Cap Reductn		0			0						0	0
Reduced v/c Ratio		0.31			0.76						0.56	0.05

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 69.6 (58%), Referenced to phase 4:EBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 24.8		Intersection LOS: C	
Intersection Capacity Utilization 83.3%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 9: Graceland Ave & Miner St



Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	38	18	0	0	0	0	0	19	851	68
Future Vol, veh/h	0	0	38	18	0	0	0	0	0	19	851	68
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	92	90	92	92	92	90	90	92	92	90	90
Heavy Vehicles, %	3	2	3	2	2	2	3	3	2	2	3	3
Mvmt Flow	0	0	42	20	0	0	0	0	0	21	946	76

Major/Minor	Minor2			Minor1						Major2		
Conflicting Flow All	-	-	511	515	-	-				0	0	0
Stage 1	-	-	-	0	-	-				-	-	-
Stage 2	-	-	-	515	-	-				-	-	-
Critical Hdwy	-	-	6.96	7.54	-	-				4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-				-	-	-
Critical Hdwy Stg 2	-	-	-	6.54	-	-				-	-	-
Follow-up Hdwy	-	-	3.33	3.52	-	-				2.22	-	-
Pot Cap-1 Maneuver	0	0	505	443	0	0				-	-	-
Stage 1	0	0	-	-	0	0				-	-	-
Stage 2	0	0	-	511	0	0				-	-	-
Platoon blocked, %											-	-
Mov Cap-1 Maneuver	-	-	505	406	-	-				-	-	-
Mov Cap-2 Maneuver	-	-	-	406	-	-				-	-	-
Stage 1	-	-	-	-	-	-				-	-	-
Stage 2	-	-	-	468	-	-				-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	12.8	14.3	
HCM LOS	B	B	

Minor Lane/Major Mvmt	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	505	406	-	-	-
HCM Lane V/C Ratio	0.084	0.048	-	-	-
HCM Control Delay (s)	12.8	14.3	-	-	-
HCM Lane LOS	B	B	-	-	-
HCM 95th %tile Q(veh)	0.3	0.2	-	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	50	0	0	0	36	888
Future Vol, veh/h	50	0	0	0	36	888
Conflicting Peds, #/hr	6	0	0	0	8	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	54	0	0	0	39	965

Major/Minor	Minor1		Major2	
Conflicting Flow All	575	-	8	0
Stage 1	8	-	-	-
Stage 2	567	-	-	-
Critical Hdwy	6.86	-	4.16	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-
Follow-up Hdwy	3.53	-	2.23	-
Pot Cap-1 Maneuver	446	0	1603	-
Stage 1	-	0	-	-
Stage 2	528	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	419	-	1591	-
Mov Cap-2 Maneuver	419	-	-	-
Stage 1	-	-	-	-
Stage 2	500	-	-	-

Approach	WB	SB
HCM Control Delay, s	14.9	0.5
HCM LOS	B	

Minor Lane/Major Mvmt	WBLn1	SBL	SBT
Capacity (veh/h)	419	1591	-
HCM Lane V/C Ratio	0.13	0.025	-
HCM Control Delay (s)	14.9	7.3	0.2
HCM Lane LOS	B	A	A
HCM 95th %tile Q(veh)	0.4	0.1	-

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	36	0	0	0	38	869
Future Vol, veh/h	36	0	0	0	38	869
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	39	0	0	0	41	945

Major/Minor	Minor1		Major2	
Conflicting Flow All	555	-	0	0
Stage 1	0	-	-	-
Stage 2	555	-	-	-
Critical Hdwy	6.84	-	4.14	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-
Follow-up Hdwy	3.52	-	2.22	-
Pot Cap-1 Maneuver	462	0	-	-
Stage 1	-	0	-	-
Stage 2	539	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	462	-	-	-
Mov Cap-2 Maneuver	462	-	-	-
Stage 1	-	-	-	-
Stage 2	539	-	-	-

Approach	WB	SB
HCM Control Delay, s	13.5	
HCM LOS	B	

Minor Lane/Major Mvmt	WBLn1	SBL	SBT
Capacity (veh/h)	462	-	-
HCM Lane V/C Ratio	0.085	-	-
HCM Control Delay (s)	13.5	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0.3	-	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	0	18	47	21	20	0
Future Vol, veh/h	0	18	47	21	20	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	20	51	23	22	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	74	0	-	0	83	63
Stage 1	-	-	-	-	63	-
Stage 2	-	-	-	-	20	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1526	-	-	-	919	1002
Stage 1	-	-	-	-	960	-
Stage 2	-	-	-	-	1003	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1526	-	-	-	919	1002
Mov Cap-2 Maneuver	-	-	-	-	919	-
Stage 1	-	-	-	-	960	-
Stage 2	-	-	-	-	1003	-

Approach	EB	WB	SW
HCM Control Delay, s	0	0	9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SWLn1
Capacity (veh/h)	1526	-	-	-	919
HCM Lane V/C Ratio	-	-	-	-	0.024
HCM Control Delay (s)	0	-	-	-	9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	2	6	32	15	12	1
Future Vol, veh/h	2	6	32	15	12	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	7	35	16	13	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	51	0	-	0	54	43
Stage 1	-	-	-	-	43	-
Stage 2	-	-	-	-	11	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1555	-	-	-	954	1027
Stage 1	-	-	-	-	979	-
Stage 2	-	-	-	-	1012	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1555	-	-	-	953	1027
Mov Cap-2 Maneuver	-	-	-	-	953	-
Stage 1	-	-	-	-	978	-
Stage 2	-	-	-	-	1012	-

Approach	EB	WB	SW
HCM Control Delay, s	1.8	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SWLn1
Capacity (veh/h)	1555	-	-	-	958
HCM Lane V/C Ratio	0.001	-	-	-	0.015
HCM Control Delay (s)	7.3	0	-	-	8.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0