Traffic Impact Study
Proposed Warehouse/Distribution Development

Crest Hill, Illinois

Prepared For:

SPACECO INC.

KLOA
Kenig, Lindgren, O'Hara, Aboona, Inc.

March 25, 2024

1. Introduction

This report summarizes the methodologies, results, and findings of a traffic impact study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for a proposed warehouse/distribution development to be located in Crest Hill, Illinois. The site, which is currently vacant, is located at the south end of Advantage Avenue. As proposed, the site will be developed with an approximately 160,047 square-foot warehouse/distribution building with access provided via three full-movement access drives located along the Advantage Avenue cul-de-sac.

The purpose of this study was to examine background traffic conditions, assess the impact that the proposed development will have on traffic conditions in the area, and determine if any roadway or access improvements are necessary to accommodate traffic generated by the proposed development.

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

The sections of this report present the following:

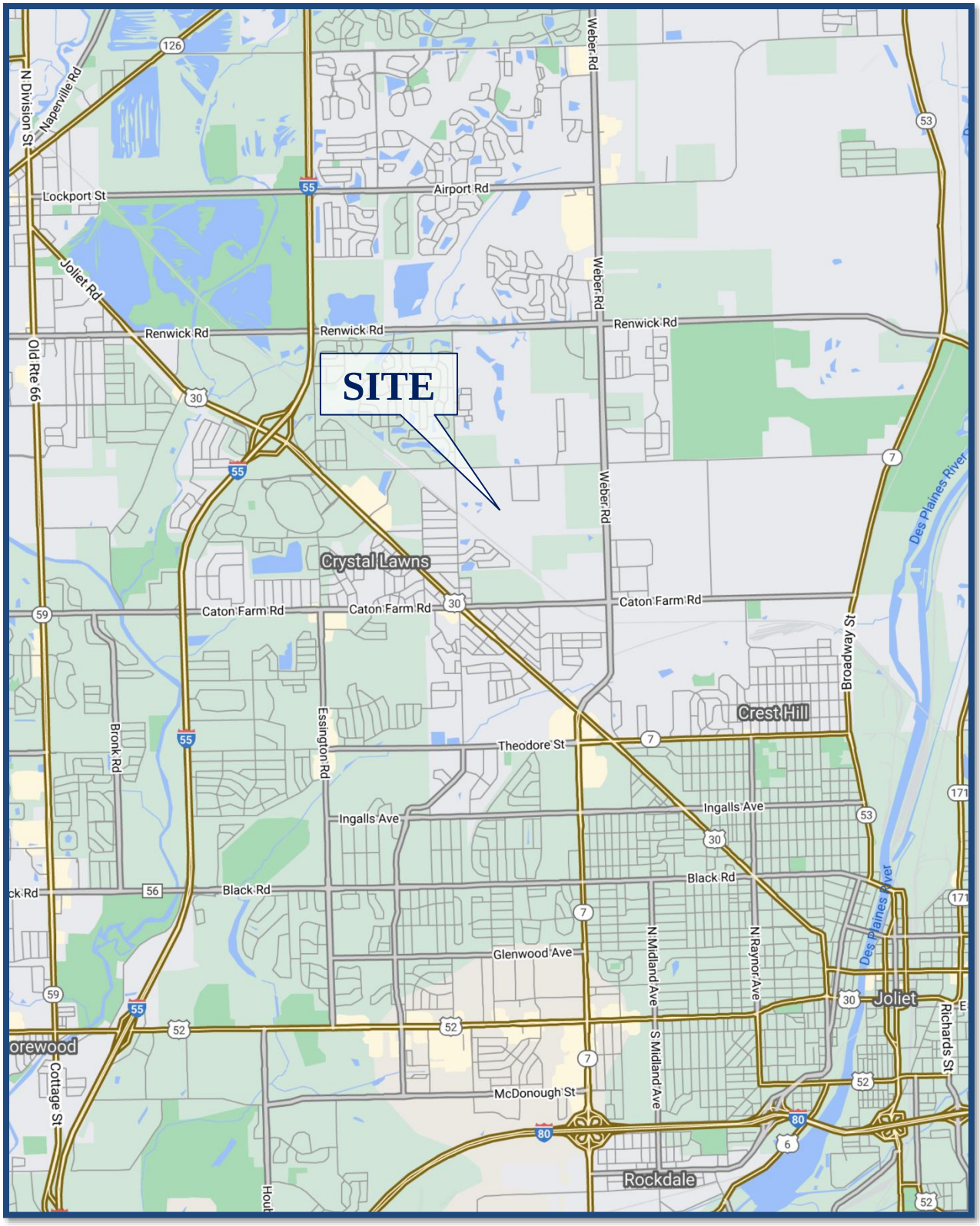
- Existing roadway conditions
- A description of the proposed development
- Directional distribution of the development traffic
- Vehicle trip generation for the development
- Future traffic conditions including access to the development
- Traffic analyses for the weekday morning and weekday evening peak hours
- Recommendations with respect to adequacy of the site access and adjacent roadway system

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

1. Existing Conditions – Analyzes the capacity of the existing roadway system using existing peak hour traffic volumes in the surrounding area.

2. Year 2030 No-Build Conditions – Analyzes the capacity of the future roadway system using existing traffic volumes increased by an ambient area growth factor as well as the traffic expected to be generated by area developments.

3. Year 2030 Total Projected Conditions – Analyzes the capacity of the future roadway system using Year 2030 no-build traffic volumes plus the traffic estimated to be generated by the proposed development.



Site Location **Figure 1**

Aerial View of Site **Figure 2**

2. Existing Conditions

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

Site Location

The site, which is currently vacant, is located at the end of Advantage Avenue and bounded on the north by TLC Ingredients and Rich Products Corporation. The east, south, and west sides of the site are bordered by wetlands and green space. Land uses in the surrounding the site consists of industrial, residential, commercial, and agricultural uses.

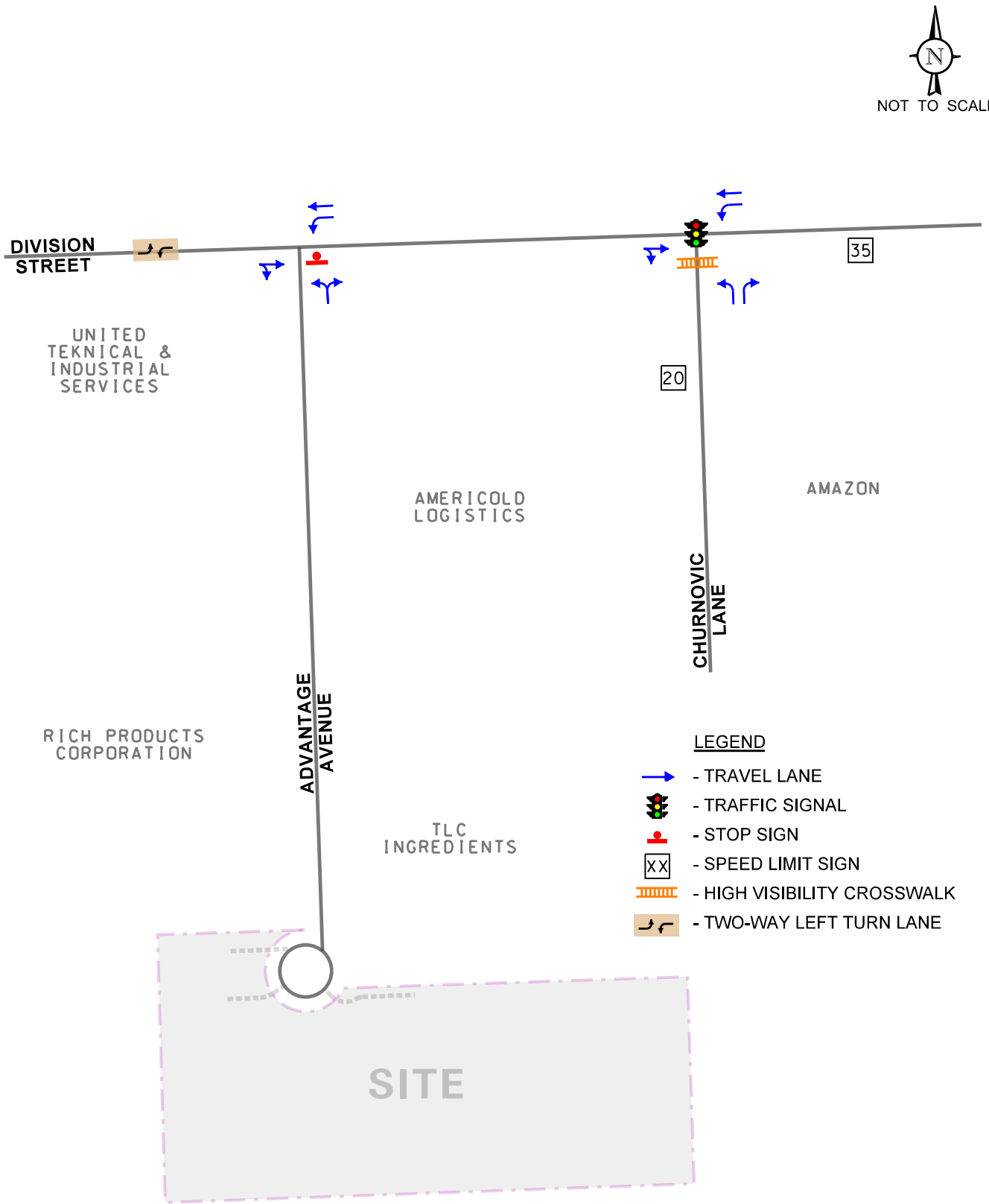
Existing Roadway System Characteristics

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

Division Street is an east-west, major collector roadway that provides one lane in each direction. West of Advantage Avenue, Division Street is divided by a two-way left-turn lane. At its unsignalized intersection with Advantage Avenue, Division Street provides a combined through/right-turn lane on the eastbound approach and a left-turn lane and a through lane on the westbound approach. At its signalized intersection with Churnovic Lane, Division Street provides a combined through/right-turn lane on the eastbound approach and a left-turn lane and a through lane on the westbound approach. A private residential driveway is located opposite Churnovic Lane at this intersection, but the southbound approach is not signalized and does not generate significant traffic and, as such, is not included in the analysis. Turns into this driveway may utilize the through lanes to perform turning movements. Division Street carries an annual average daily traffic (AADT) volume of 3,300 vehicles (IDOT 2019), is under the jurisdiction of the City of Crest Hill, and has a posted speed limit of 35 miles per hour. Division Street is designated as a Class II Truck Route by IDOT.

Advantage Avenue is a north-south, local roadway that extends south from Division Street and provides one lane in each direction. At its unsignalized intersection with Division Street, Advantage Avenue provides a shared left-turn/right-turn lane on the northbound approach and is under stop sign control. Advantage Avenue is under the jurisdiction of the City of Crest Hill.

Churnovic Lane is a north-south, local roadway that extends south from Division Street and provides one lane in each direction. At its signalized intersection with Division Street, Churnovic Lane is aligned opposite a private residential driveway and provides a left-turn lane and a right-turn lane. A high-visibility crosswalk is provided on the south leg of the intersection. Churnovic Lane is under the jurisdiction of the City of Crest Hill and has a posted speed limit of 20 mph.



Warehouse/Distribution Development
Crest Hill, Illinois

Existing Roadway Characteristics

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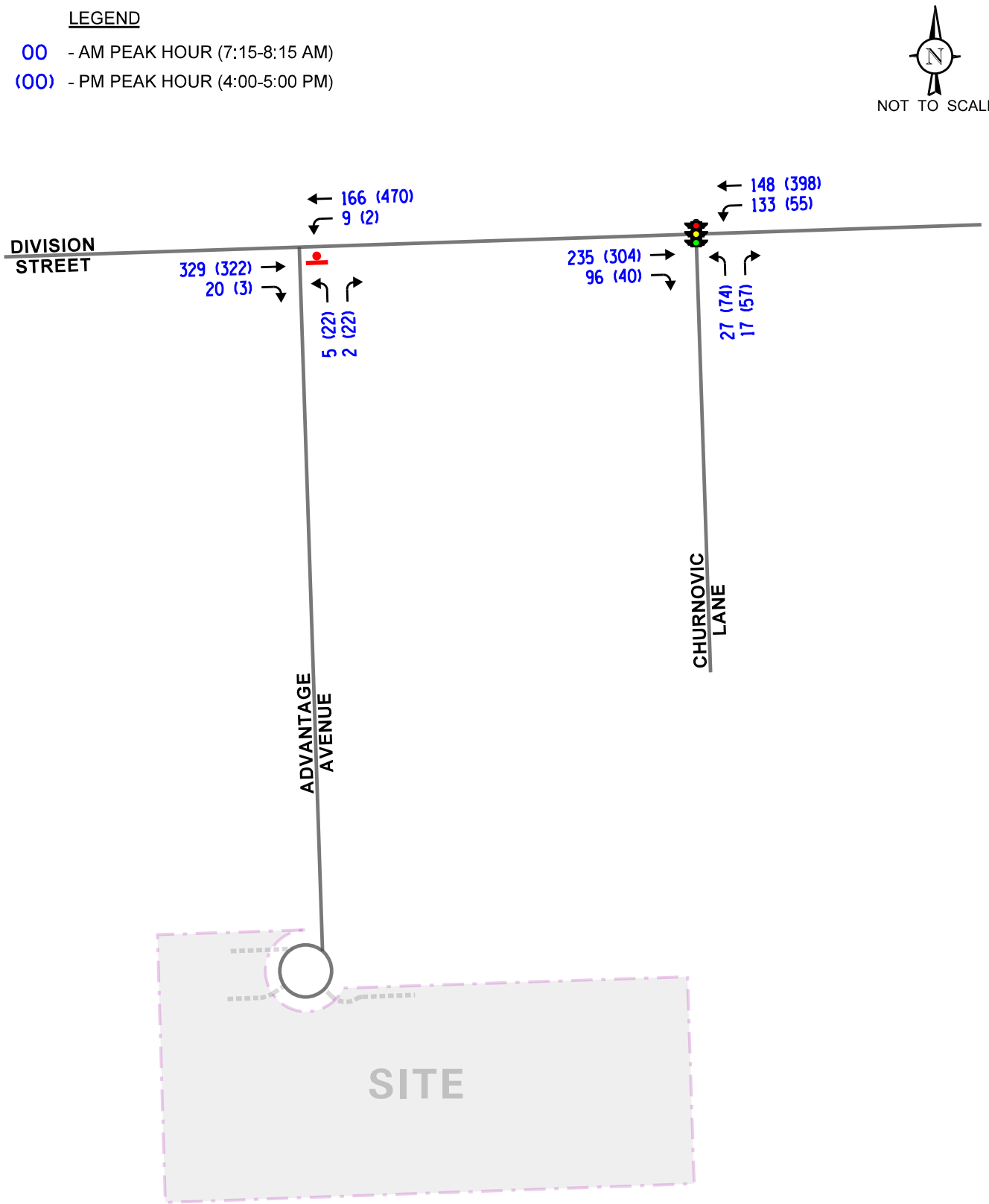
Job No: 24-044 Figure: 3

Existing Traffic Volumes

In order to determine current traffic conditions in the vicinity of the site, KLOA, Inc. conducted peak period traffic counts on Tuesday, March 5, 2024, during the weekday morning (6:00 to 9:00 A.M.) and evening (3:00 to 6:00 P.M.) peak periods at the following intersections:

- Division Street with Advantage Avenue
- Division Street with Churnovic Lane

Based on the results of the traffic counts, the weekday morning peak hour of traffic occurred from 7:15 A.M. to 8:15 A.M. and the weekday evening peak hour of traffic occurred from 4:00 P.M. to 5:00 P.M. **Figure 4** illustrates the existing peak hour vehicle traffic volumes, inclusive of trucks. **Figure 5** illustrates the existing truck peak hour traffic volumes. Copies of the traffic counts are included in the Appendix.



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Existing Traffic Volumes

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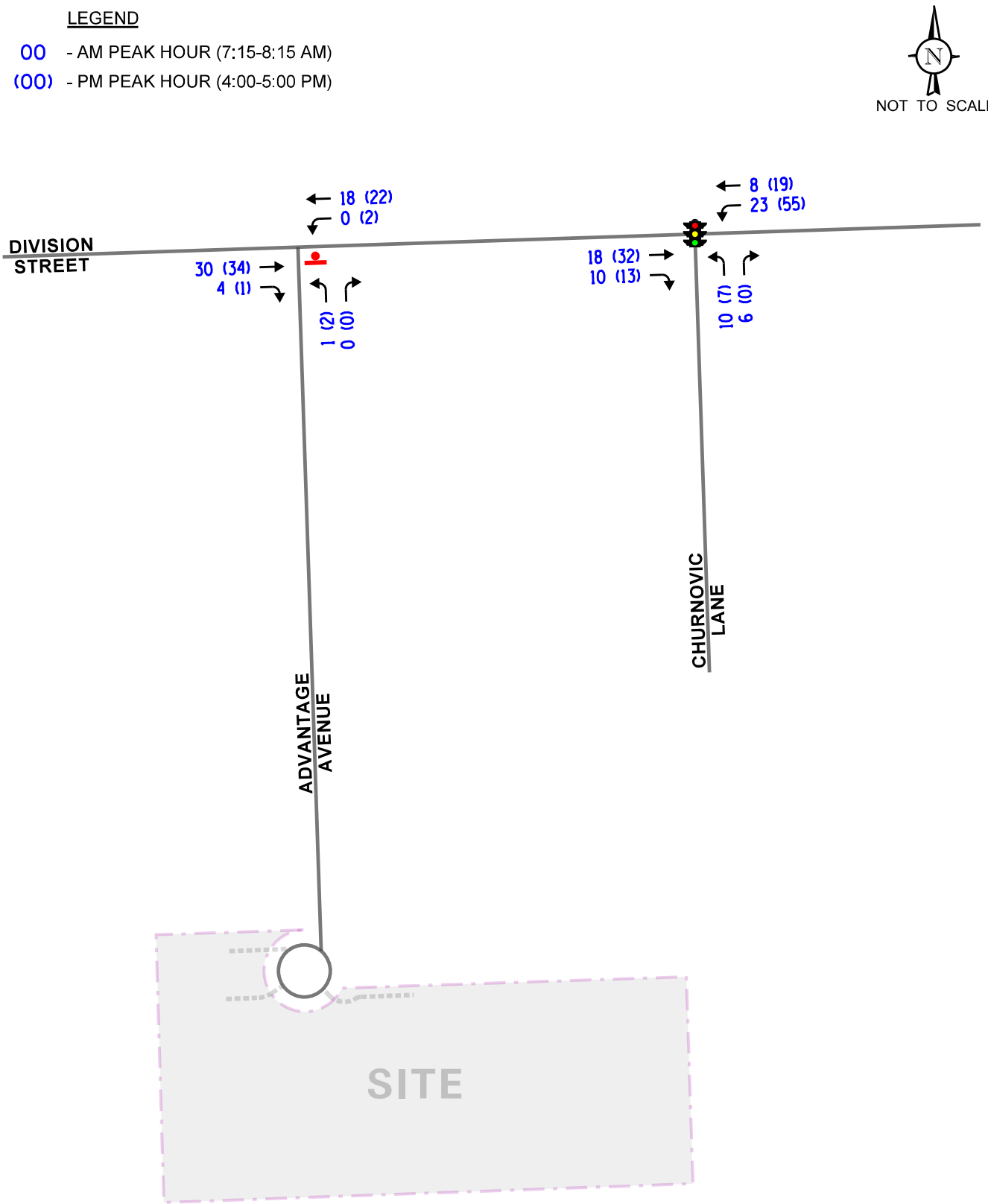

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Existing Traffic Volumes - Trucks

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Crash Data Summary

KLOA, Inc. obtained crash data[1] for the most recent available past five years (2018 to 2022) for the intersections included in the study. The crash data for the intersections are summarized in **Tables 1** and **2**. A review of the crash data indicated that no fatalities were reported at the intersections during the review period.

Table 1
DIVISION STREET WITH CHURNOVIC LANE – CRASH SUMMARY

Year	Type of Crash Frequency							
	Angle	Head On	Object	Rear End	Sideswipe	Turning	Other	Total
2018	0	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0	0
2020	0	0	0	0	0	1	0	1
2021	0	0	0	2	0	0	0	2
2022	0	0	0	0	0	1	0	1
Total	0	0	0	2	0	2	0	4
Average	**0.0**	**0.0**	**0.0**	**<1.0**	**0.0**	**<1.0**	**0.0**	**<1.0**

Table 2
DIVISION STREET WITH ADVANTAGE AVENUE – CRASH SUMMARY

Year	Type of Crash Frequency							
	Angle	Head On	Object	Rear End	Sideswipe	Turning	Other	Total
2018	0	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0	0
2020	0	0	0	0	0	1	0	1
2021	0	0	0	0	0	0	0	0
2022	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1
Average	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**<1.0**	**0.0**	**<1.0**

[1] IDOT DISCLAIMER: The motor vehicle crash data referenced herein was provided by the Illinois Department of Transportation. The author is responsible for any data analyses and conclusions drawn.

3. Traffic Characteristics of the Proposed Development

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

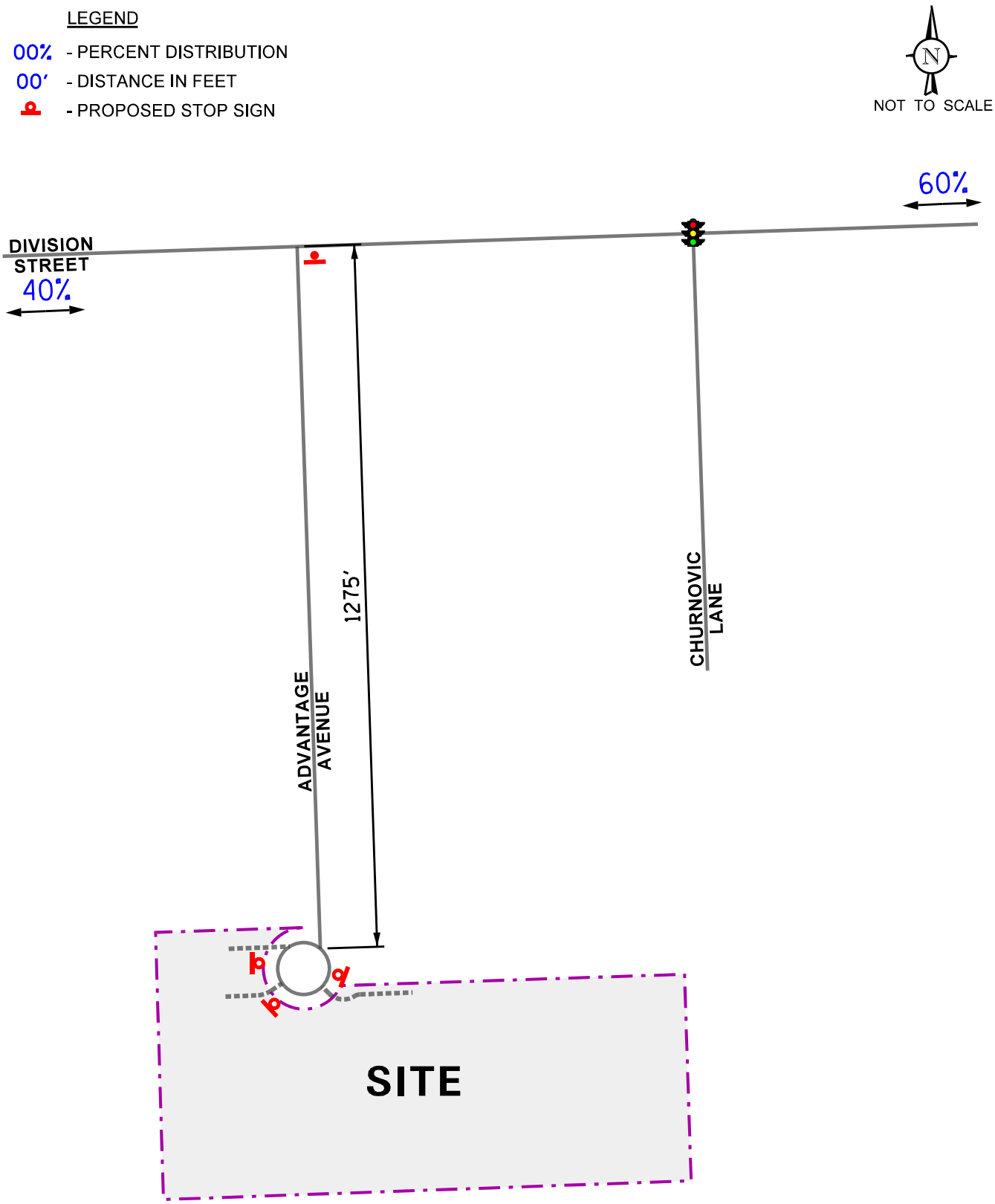
Proposed Site Plan

As proposed, the development is to consist of a single building with approximately 160,047 square feet of warehouse/distribution space. A total of approximately 149 passenger vehicle parking spaces will be located on the north, west, and east sides of the development.

Access to the development will be provided via three access drives that will be located along the cul-de-sac at the south end of Advantage Avenue. Two access drives are to be located on the west side of the cul-de-sac and one access drive is to be located on the east side of the cul-de-sac. All truck traffic will enter and exit the development via the northern access drive on the west side of the cul-de-sac. Each of the three access drives are proposed to provide one inbound lane and one outbound lane with outbound lanes under stop sign control. The northern access drive on the west side of the cul-de-sac will provide larger radii to accommodate the turning truck traffic. A copy of the preliminary site plan is included in the Appendix.

Directional Distribution

The directions from which employees and trucks will approach and depart the development were estimated based on existing travel patterns, as determined from the traffic counts. **Figure 6** illustrates the directional distribution of the development-generated traffic.



Warehouse/Distribution Development
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Directional Distribution

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Development-Generated Traffic Volumes

The total number of peak hour vehicle trips estimated to be generated by the proposed development was based on vehicle trip generation rates contained in *Trip Generation Manual*, 11th Edition, published by the Institute of Transportation Engineers (ITE) for Land-Use Code 150 (Warehousing). **Table 3** summarizes the trips projected to be generated by the development during the peak hours and on a daily basis. **Table 4** summarizes the truck trips projected to be generated by the development throughout the day. Copies of the ITE trip generation sheets are included in the Appendix.

Table 3
ESTIMATED PEAK HOUR AND DAILY TRIP GENERATION

ITE Land-Use Code	Type/Size	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Daily Trips	
		In	Out	Total	In	Out	Total	In	Out
150	**Warehousing (160,047 S.F.)**	**21**	**6**	**27**	**8**	**21**	**29**	**146**	**146**
Truck Trips		2	1	3	2	3	5	48	48
Passenger Vehicle Trips		19	5	24	6	18	24	98	98

Table 4
ESTIMATED 24-HOUR TRUCK TRIP GENERATION

Hour	Warehousing (ITE Land-Use Code 150) – 160,047 S.F.					
	Weekday Morning			Weekday Evening		
	In	Out	Total	In	Out	Total
12:00	0	0	**0**	4	3	**7**
1:00	0	0	**0**	4	4	**8**
2:00	0	0	**0**	3	3	**6**
3:00	0	0	**0**	5	4	**9**
4:00	1	1	**2**	2	3	**5**
5:00	2	2	**4**	3	2	**5**
6:00	2	2	**4**	1	0	**1**
7:00	2	4	**6**	1	0	**1**
8:00	2	3	**5**	1	1	**2**
9:00	6	4	**10**	0	0	**0**
10:00	4	6	**10**	0	0	**0**
11:00	5	6	**11**	0	0	**0**

Based on daily truck trips (Table 1) and ITE's Hourly Distribution of Entering and Exiting Truck Trips tables.

4. Projected Traffic Conditions

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

Development Traffic Assignment

The estimated weekday morning and weekday evening traffic volumes that will be generated by the proposed development were assigned to the roadway system in accordance with the previously described directional distribution (Figure 6). **Figure 7** illustrates the traffic assignment of the new passenger vehicle trips and **Figure 8** illustrates the traffic assignment of the new truck trips.

Year 2030 No-Build Traffic Volumes

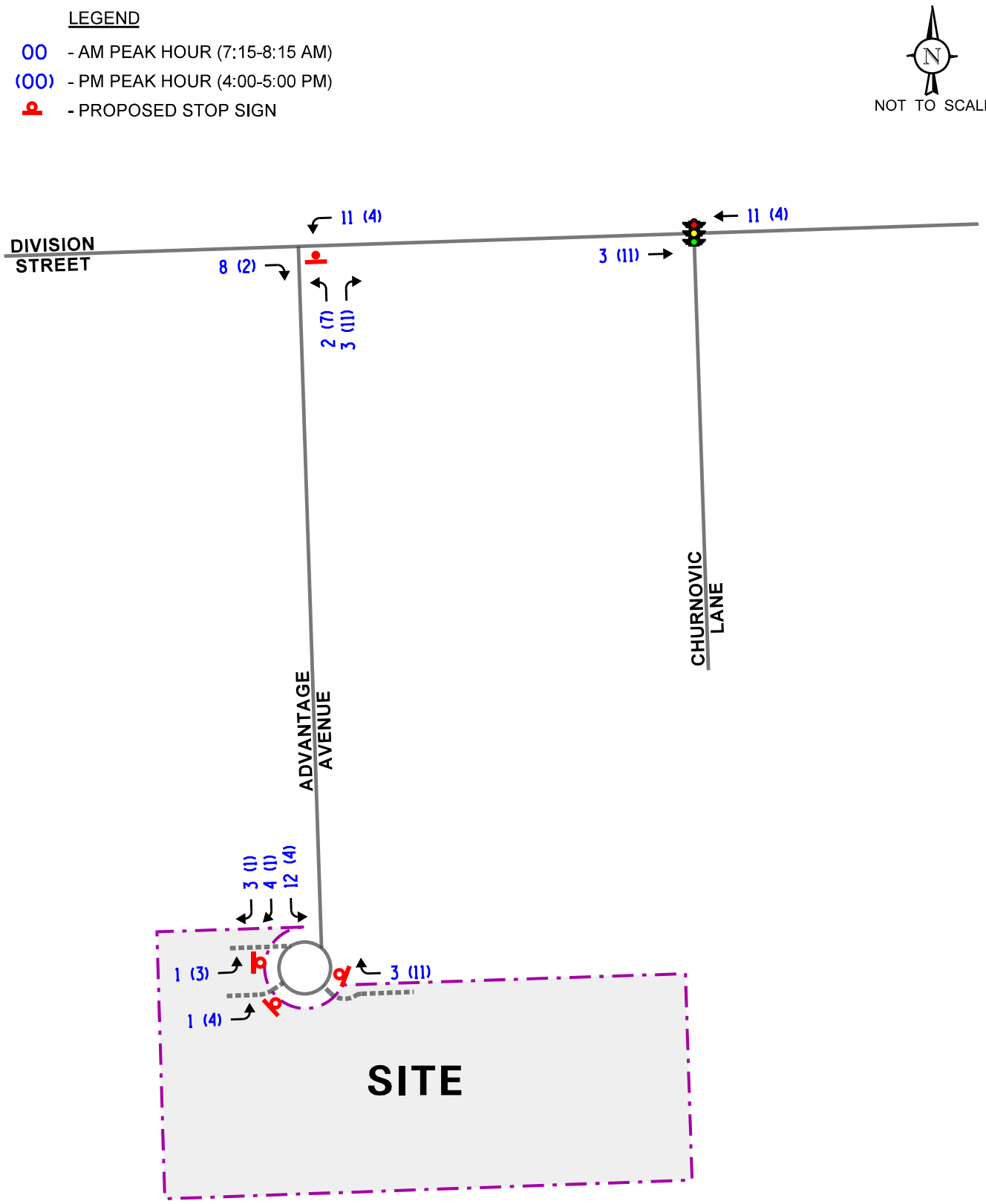
The existing traffic volumes (Figure 4) were increased by a regional growth factor to account for the increase in existing traffic related to regional growth in the area (i.e., not attributable to any particular planned development). Based on AADT projections provided by the Chicago Metropolitan Agency for Planning (CMAP) in a letter dated March 20, 2024, the existing through traffic volumes on Division Street were increased by an annually compounded growth rate of 1.1 percent per year for six years (buildout year plus five years) for a total of seven percent. A copy of the CMAP 2050 projections letter is included in the Appendix.

In addition, the traffic estimated to be generated by a proposed warehouse/distribution development to be located just east of the with access via Churnovic Lane was included in the Year 2030 no-build traffic volumes.

Figure 9 illustrates the Year 2029 no-build traffic volumes, which include the existing traffic volumes increased by the regional growth factor and the traffic estimated to be generated by the adjacent warehouse/distribution development.

Year 2030 Total Projected Conditions

The Year 2030 total projected traffic volumes include the Year 2030 no-build traffic volumes (Figure 9) plus the traffic estimated to be generated by the proposed development (Figures 7 and 8) which are illustrated in **Figure 10**.



Warehouse/Distribution Development
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Site-Generated Traffic Volumes
Passenger Vehicles

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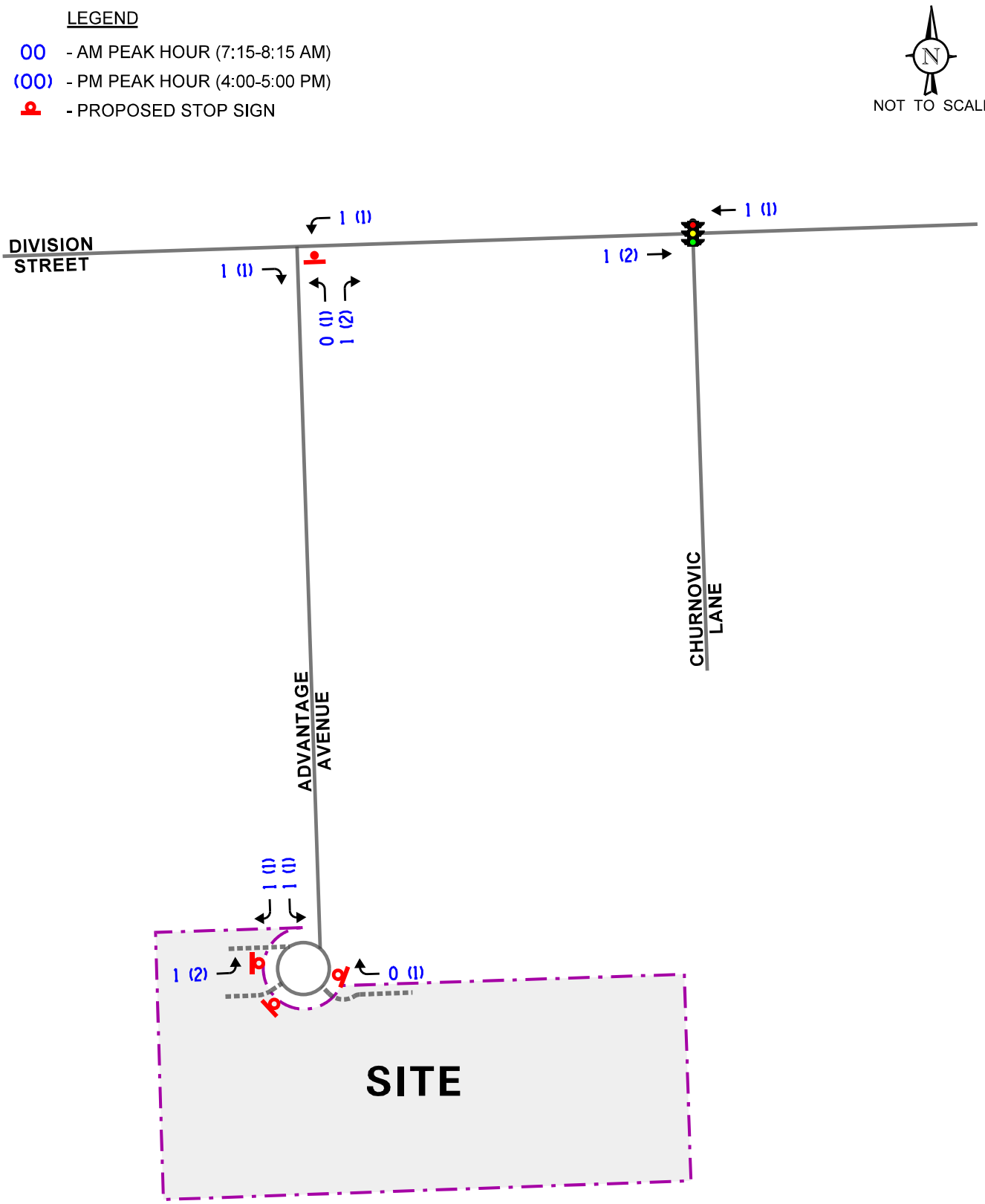

Warehouse/Distribution Development
Crest Hill, Illinois

Site-Generated Traffic Volumes
Trucks

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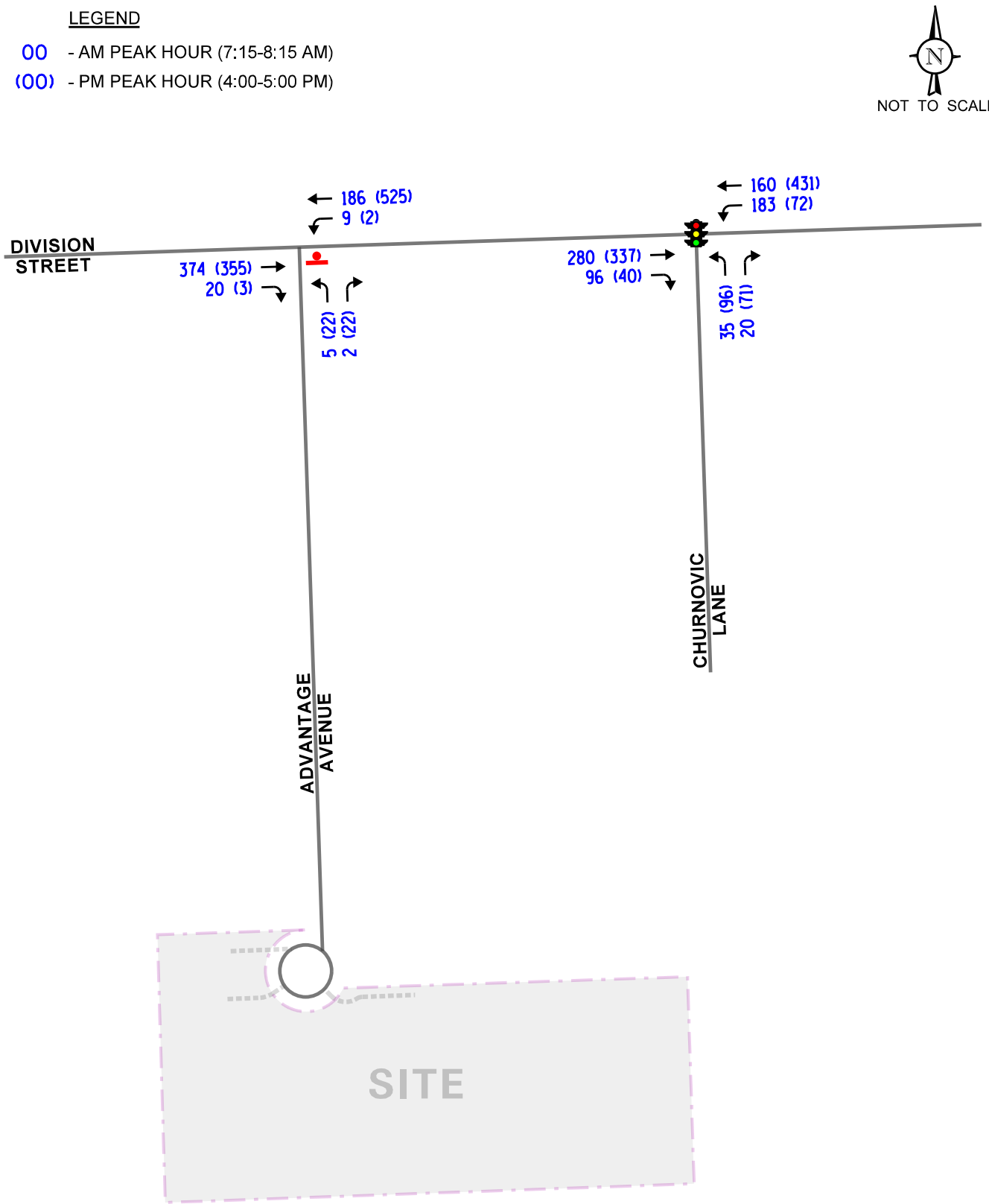

Warehouse/Distribution Development
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Year 2030 No-Build Traffic Volumes

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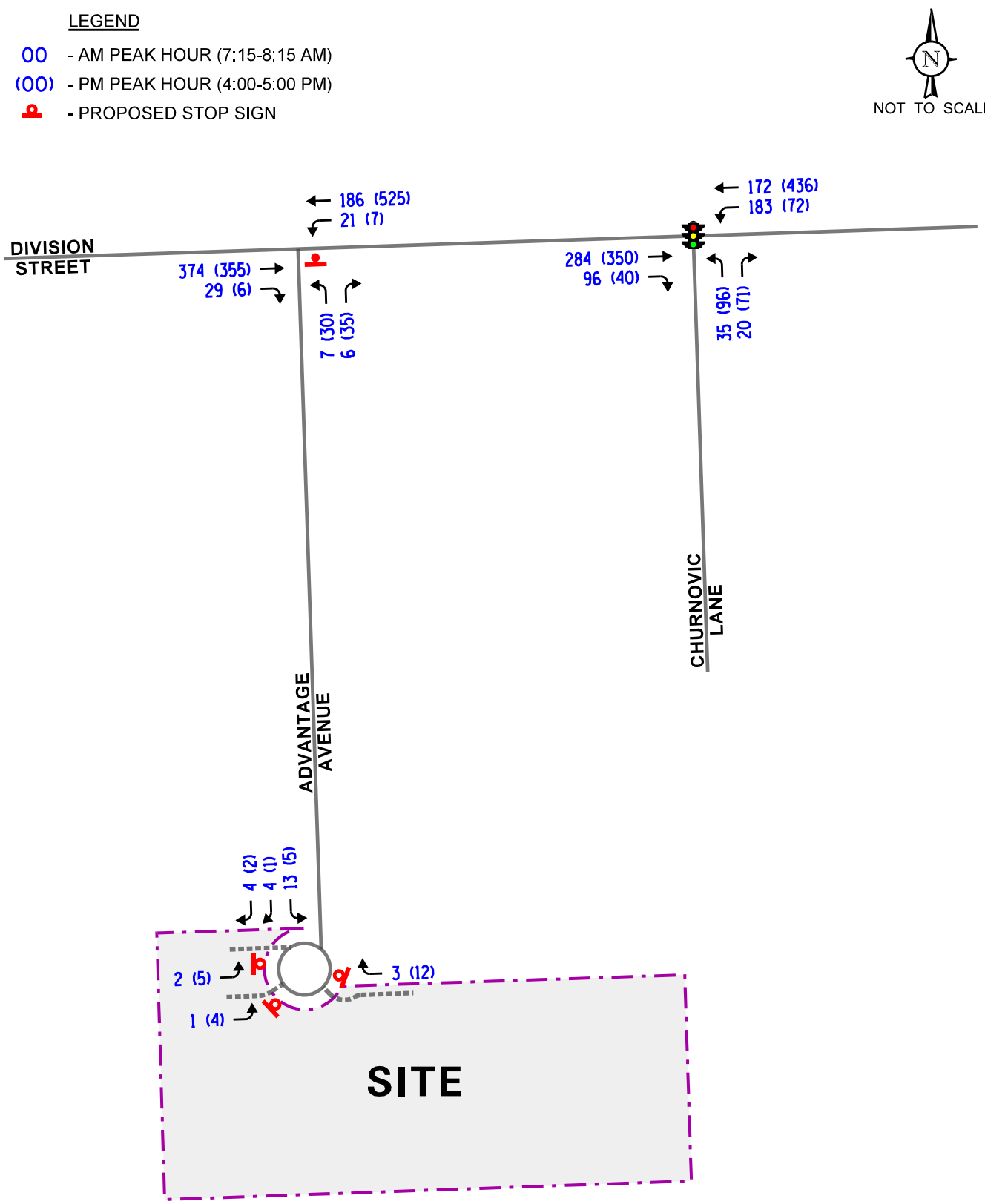

Warehouse/Distribution Development
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Year 2030 Total Traffic Volumes

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Job No: 24-044 Figure: 10

5. Traffic Analysis and Recommendations

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

Traffic Analyses

Roadway and adjacent or nearby intersection analyses were performed for the weekday morning and evening peak hours for the existing, Year 2030 no-build, and Year 2030 total traffic volumes.

The traffic analyses were performed using the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM)*, 6th Edition and analyzed using Synchro/SimTraffic 11 software. The analysis for the intersection of Division Street with Churnovic Lane was accomplished using field measured cycle lengths and phasings.

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

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

Summaries of the traffic analysis results showing the level of service and overall intersection delay (measured in seconds) for the Year 2024 existing, Year 2030 no-build, and Year 2030 total projected conditions are presented in **Tables 5** and **6**. A discussion of each intersection follows. Summary sheets for the capacity analyses are included in the Appendix.

Table 5
CAPACITY ANALYSIS RESULTS – DIVISION STREET WITH CHURNOVIC LANE – SIGNALIZED

	Peak Hour	Eastbound		Westbound		Northbound		Overall
		T	R	L	T	L	R	
Existing Conditions	Weekday Morning	B – 12.0		A 4.5	A 4.3	C 29.0	B 13.9	A 9.4
				A – 4.4		C – 23.5		
	Weekday Evening	B – 13.2		A 5.5	A 7.0	C 25.7	A 8.7	B 10.8
				A – 6.8		B – 18.3		
Year 2030 No-Build Conditions	Weekday Morning	B – 14.5		A 5.2	A 4.2	C 28.5	B 13.2	B 10.8
				A – 4.7		C – 22.9		
	Weekday Evening	B – 14.8		A 5.8	A 6.8	C 28.5	A 8.4	B 11.7
				A – 6.7		B – 19.9		
Year 2030 Total Conditions	Weekday Morning	B – 14.6		A 5.2	A 4.2	C 28.7	B 13.2	B 10.7
				A – 4.7		C – 23.1		
	Weekday Evening	B – 14.9		A 5.8	A 6.8	C 29.0	A 8.5	B 11.8
				A – 6.7		C – 20.3		

Letter denotes Level of Service
Delay is measured in seconds.

L – Left Turns
R – Right Turns
T – Through

Table 6
CAPACITY ANALYSIS RESULTS – UNSIGNALIZED
DIVISION STREET WITH ADVANTAGE AVENUE

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Existing Conditions				
• Northbound Approach	B	12.0	B	12.4
• Westbound Left Turn	A	8.2	A	9.4
Year 2030 No-Build Conditions				
• Northbound Approach	B	12.6	B	13.0
• Westbound Left Turn	A	8.4	A	9.6
Year 2030 Total Projected Conditions				
• Northbound Approach	B	12.6	B	13.4
• Westbound Left Turn	A	8.6	A	8.7

LOS = Level of Service
Delay is measured in seconds.

Discussion and Recommendations

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

Division Street with Churnovic Lane

The results of the capacity analysis indicate that this signalized intersection is currently operating at level of service (LOS) A during the weekday morning peak hour and at LOS B during the weekday evening peak hour. Further, all movements operate at LOS C or better during both peak hours.

Assuming Year 2030 no-build volumes, this intersection is projected to operate at LOS B during the weekday morning and weekday evening peak hours. Further, all movements are projected to continue operating at LOS C or better during both peak hours.

Assuming the Year 2030 total projected volumes, this intersection is projected to operate at LOS B during the weekday morning and weekday evening peak hours. Further, all movements are projected to continue to operate at LOS C or better. As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

Division Street with Advantage Avenue

The results of the capacity analysis indicate that the critical movements at this intersection currently operate at LOS B or better during the weekday morning and weekday evening peak hours.

Assuming the Year 2030 no-build traffic volumes, the critical movements at this intersection are projected to continue to operate at LOS B or better during the peak hours.

Assuming the Year 2030 total projected traffic volumes, the critical movements at this intersection are projected to continue to operate at LOS B or better during the weekday morning and weekday evening peak hours. 95th percentile queues for the northbound approach are projected to be approximately one to two vehicles during the peak hours. Additionally, intersection currently provides wider lanes along Advantage Avenue and larger radiuses which is sufficient to accommodate turning truck traffic. As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development. and no roadway improvements or traffic control modifications are required.

Development Access Drives

Access to the development will be provided via three access drives that will be located along the cul-de-sac at the south end of Advantage Avenue. Two access drives are to be located on the west side of the cul-de-sac and one access drive is to be located on the east side of the cul-de-sac. All truck traffic will enter and exit the development via the northern access drive on the west side of the cul-de-sac. Each of the three access drives are proposed to provide one inbound lane and one outbound lane with outbound lanes under stop sign control. The northern access drive on the west side of the cul-de-sac will provide larger radiuses to accommodate the turning truck traffic.

Given the low volume of traffic along Advantage Avenue, particularly at the cul-de-sac, the three access drive will be sufficient to accommodate the traffic to be generated by the development and will provide efficient and orderly access.

6. Conclusion

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

- The proposed development will consist of an approximately 160,047 square-foot warehouse building that will be located at the south end of Advantage Avenue.

- Access to the development will be provided via three access drives that will be located along the cul-de-sac at the south end of Advantage Avenue. Two access drives are to be located on the west side of the cul-de-sac and one access drive is to be located on the east side of the cul-de-sac. All truck traffic will enter and exit the development via the northern access drive on the west side of the cul-de-sac. Each of the three access drives are proposed to provide one inbound lane and one outbound lane with outbound lanes under stop sign control. The northern access drive on the west side of the cul-de-sac will provide larger radiuses to accommodate the turning truck traffic.

- The existing area roadway system has sufficient capacity to accommodate the traffic estimated to be generated by the proposed warehouse development.

Appendix

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

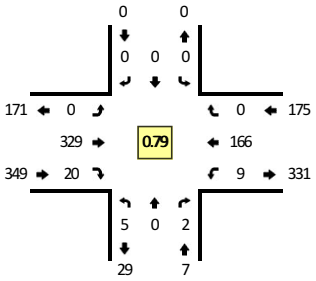
Traffic Count Summary Sheets

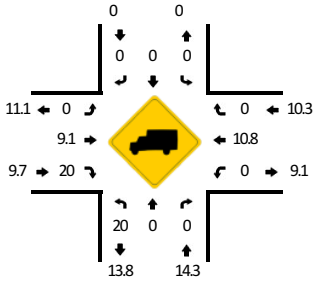
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

LOCATION: Advantage Ave -- Division St
CITY/STATE: Crest Hill, IL

QC JOB #: 16512001
DATE: Tue, Mar 5 2024

Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:45 AM -- 8:00 AM





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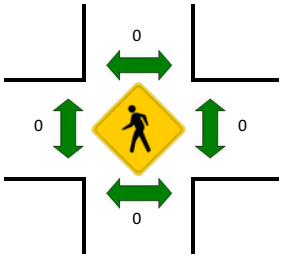
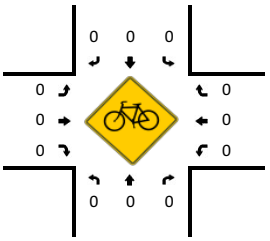
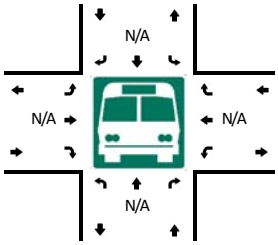
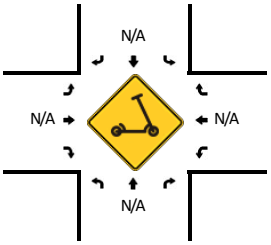








15-Min Count Period Beginning At	Advantage Ave (Northbound)				Advantage Ave (Southbound)				Division St (Eastbound)				Division St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	2	0	2	0	0	0	0	0	0	48	8	0	8	23	0	0	91	
6:15 AM	2	0	5	0	0	0	0	0	0	42	4	0	7	25	0	0	85	
6:30 AM	4	0	5	0	0	0	0	0	0	76	6	0	12	23	0	0	126	
6:45 AM	0	0	3	0	0	0	0	0	0	87	4	0	8	29	0	0	131	433
7:00 AM	0	0	1	0	0	0	0	0	0	78	4	0	2	25	0	0	110	452
7:15 AM	1	0	1	0	0	0	0	0	0	61	7	0	2	28	0	0	100	467
7:30 AM	2	0	1	0	0	0	0	0	0	83	2	0	2	44	0	0	134	475
7:45 AM	1	0	0	0	0	0	0	0	0	111	6	0	2	49	0	0	169	513
8:00 AM	1	0	0	0	0	0	0	0	0	74	5	0	3	45	0	0	128	531
8:15 AM	1	0	0	0	0	0	0	0	0	52	2	0	0	35	0	0	90	521
8:30 AM	1	0	0	0	0	0	0	0	0	59	2	0	0	42	0	0	104	491
8:45 AM	0	0	1	0	0	0	0	0	0	68	2	0	3	47	0	0	121	443

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	0	0	0	0	0	0	0	0	444	24	0	8	196	0	0	676
Heavy Trucks	0	0	0		0	0	0		0	44	4		0	20	0		68
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/7/2024 9:48 AM

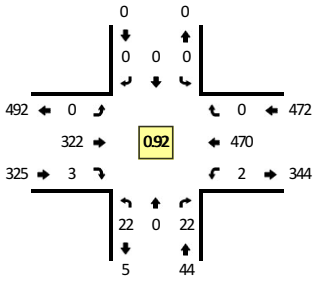
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

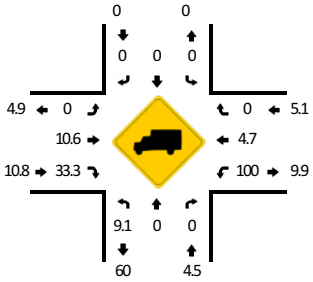
Type of peak hour being reported: System-wide Peak | Method for determining peak hour: Total Entering Volume

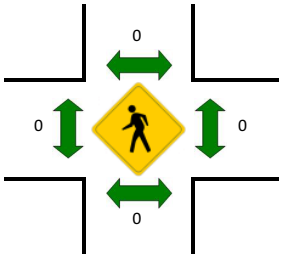
LOCATION: Advantage Ave -- Division St
CITY/STATE: Crest Hill, IL

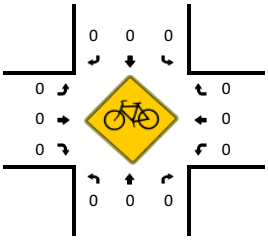
QC JOB #: 16512002
DATE: Tue, Mar 5 2024

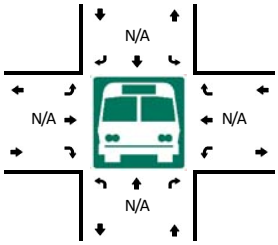
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:30 PM -- 4:45 PM

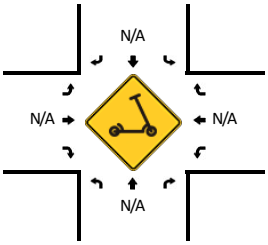












15-Min Count Period Beginning At	Advantage Ave (Northbound)				Advantage Ave (Southbound)				Division St (Eastbound)				Division St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
3:00 PM	12	0	23	0	0	0	0	0	0	66	1	0	6	112	0	0	220	
3:15 PM	10	0	12	0	0	0	0	0	0	49	2	0	4	107	0	0	184	
3:30 PM	6	0	3	0	0	0	0	0	0	88	2	0	1	75	0	0	175	
3:45 PM	2	0	11	0	0	0	0	0	0	79	0	0	3	92	0	0	187	766
4:00 PM	4	0	7	0	0	0	0	0	0	70	0	0	1	132	0	0	214	760
4:15 PM	4	0	6	0	0	0	0	0	0	78	2	0	0	105	0	0	195	771
4:30 PM	9	0	8	0	0	0	0	0	0	82	0	0	1	129	0	0	229	825
4:45 PM	5	0	1	0	0	0	0	0	0	92	1	0	0	104	0	0	203	841
5:00 PM	5	0	3	0	0	0	0	0	0	82	0	0	2	101	0	0	193	820
5:15 PM	2	0	3	0	0	0	0	0	0	77	1	0	1	94	0	0	178	803
5:30 PM	2	0	2	0	0	0	0	0	0	68	1	0	1	91	0	0	165	739
5:45 PM	3	0	6	0	0	0	0	0	0	70	1	0	3	96	0	0	179	715

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	36	0	32	0	0	0	0	0	0	328	0	0	4	516	0	0	916
Heavy Trucks	0	0	0		0	0	0		0	28	0		4	24	0		56
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/20/2024 12:39 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

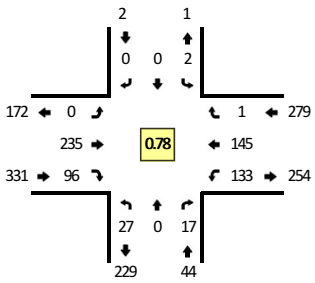
Type of peak hour being reported: Intersection Peak

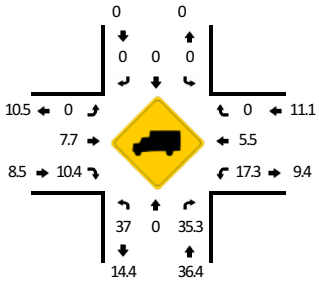
Method for determining peak hour: Total Entering Volume

LOCATION: Churnovic Ln -- Division St
CITY/STATE: Crest Hill, IL

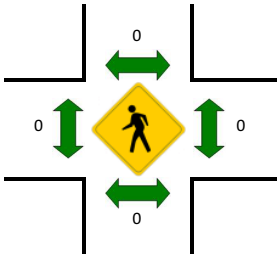
QC JOB #: 16512003
DATE: Tue, Mar 5 2024

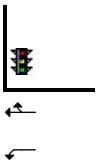
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

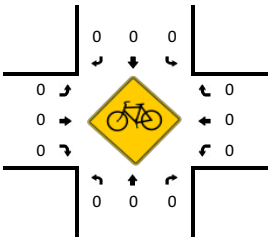


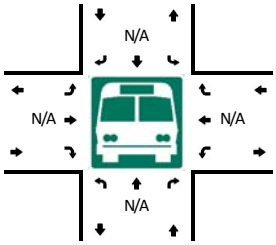


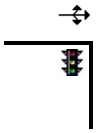
TRUE DATA TO IMPROVE MOBILITY

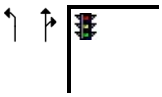


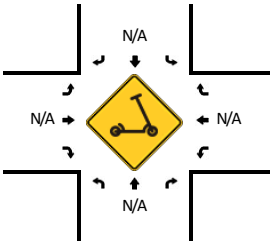












15-Min Count Period Beginning At	Churnovic Ln (Northbound)				Churnovic Ln (Southbound)				Division St (Eastbound)				Division St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	9	0	3	0	0	0	0	0	0	40	7	0	8	25	0	0	92	
6:15 AM	5	0	1	0	0	0	0	0	0	33	11	0	8	27	0	0	85	
6:30 AM	8	0	4	0	0	0	0	0	0	68	14	0	14	27	0	0	135	
6:45 AM	4	0	2	0	0	0	0	0	0	70	18	0	10	34	0	0	138	450
7:00 AM	3	0	4	0	0	0	0	0	0	69	10	0	22	26	0	0	134	492
7:15 AM	3	0	2	0	0	0	0	0	0	46	16	0	14	25	0	0	106	513
7:30 AM	9	0	5	0	1	0	0	0	0	66	17	0	42	39	0	0	179	557
7:45 AM	8	0	7	0	0	0	0	0	0	63	45	0	46	41	1	0	211	630
8:00 AM	7	0	3	0	1	0	0	0	0	60	18	0	31	40	0	0	160	656
8:15 AM	7	0	5	0	0	0	0	0	0	40	12	0	15	27	0	0	106	656
8:30 AM	5	0	2	0	0	0	0	0	0	50	11	0	20	38	0	0	126	603
8:45 AM	8	0	2	0	1	0	0	0	0	51	17	0	7	41	0	0	127	519

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	32	0	28	0	0	0	0	0	0	252	180	0	184	164	4	0	844
Heavy Trucks	16	0	8		0	0	0		0	32	12		24	0	0		92
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/7/2024 9:48 AM

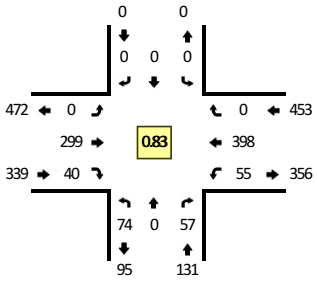
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

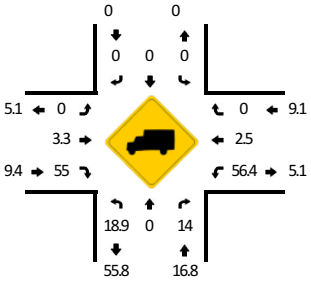
Type of peak hour being reported: System-wide Peak | Method for determining peak hour: Total Entering Volume

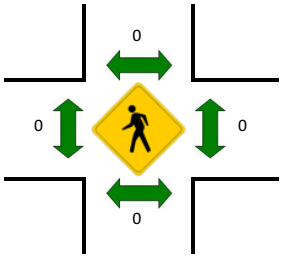
LOCATION: Churnovic Ln -- Division St
CITY/STATE: Crest Hill, IL

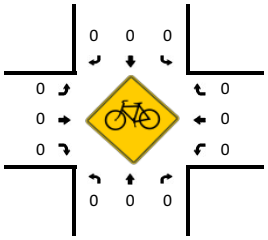
QC JOB #: 16512004
DATE: Tue, Mar 5 2024

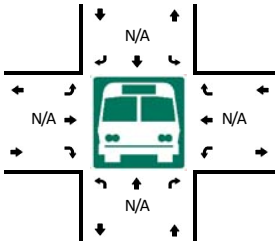
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:30 PM -- 4:45 PM

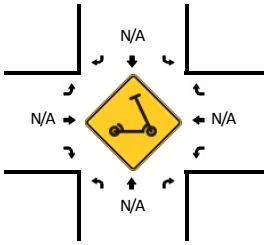












15-Min Count Period Beginning At	Churnovic Ln (Northbound)				Churnovic Ln (Southbound)				Division St (Eastbound)				Division St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
3:00 PM	6	0	6	0	0	0	0	0	0	84	7	0	9	112	0	0	224	
3:15 PM	18	0	4	0	0	0	0	0	0	61	1	0	10	93	1	0	188	
3:30 PM	6	0	5	0	0	0	0	0	0	84	6	0	8	77	0	0	186	
3:45 PM	6	0	5	0	0	0	0	0	0	80	8	0	15	87	0	0	201	799
4:00 PM	12	0	4	0	0	0	0	0	0	66	6	0	5	117	0	0	210	785
4:15 PM	9	0	6	0	0	0	0	0	0	74	11	0	14	97	0	0	211	808
4:30 PM	38	0	35	0	0	0	0	0	0	76	12	0	21	95	0	0	277	899
4:45 PM	15	0	12	0	0	0	0	0	0	83	11	0	15	89	0	0	225	923
5:00 PM	11	0	14	0	0	0	0	0	0	74	13	0	19	92	0	0	223	936
5:15 PM	11	0	6	0	0	0	0	0	0	72	8	0	15	87	0	0	199	924
5:30 PM	14	0	18	0	0	0	0	0	0	56	14	0	11	79	1	0	193	840
5:45 PM	7	0	7	0	0	0	0	0	0	57	17	0	11	91	0	0	190	805

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	152	0	140	0	0	0	0	0	0	304	48	0	84	380	0	0	1108
Heavy Trucks	12	0	8		0	0	0		0	8	20		48	16	0		112
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/20/2024 12:39 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Site Plan

CONCEPT SITE PLAN # 4-3

SPACECO INC.
CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

1" = 30'
(24 X 36)
#13122

EXISTING ROW LIMIT

EXISTING GATE

15' PUBLIC UTILITY EASEMENT

21' PUBLIC UTILITY EASEMENT

Possible Future Entrance. Not included in study

26 ft

+/- 13 STALLS

+/- 13 STALLS

+/- 13 STALLS

26 ft

+/- 60 PARKING STALLS

851 ft

192 ft

160,047 sf

+/- 20 PARKING STALLS

+/- 20 PARKING STALLS

+/- 20 PARKING STALLS

26 ft

+/- 4 VAN STALLS

35' DRAINAGE, RAIL UTILITY EASEMENT

60 ft

70 ft

+/- 2 VAN STALLS

20' PUBLIC UTILITY EASEMENT

20' PUBLIC UTILITY EASEMENT

20' PUBLIC UTILITY EASEMENT

25' DRAINAGE, RAIL UTILITY EASEMENT

PROPERTY BOUNDARY

N:\Projects 13000-13999\13122\EXHIBITS\13122P-SITEPLAN-01182024.dgn option 4-3 User=dstevens

ITE Trip Generation Sheets

Warehousing
(150)

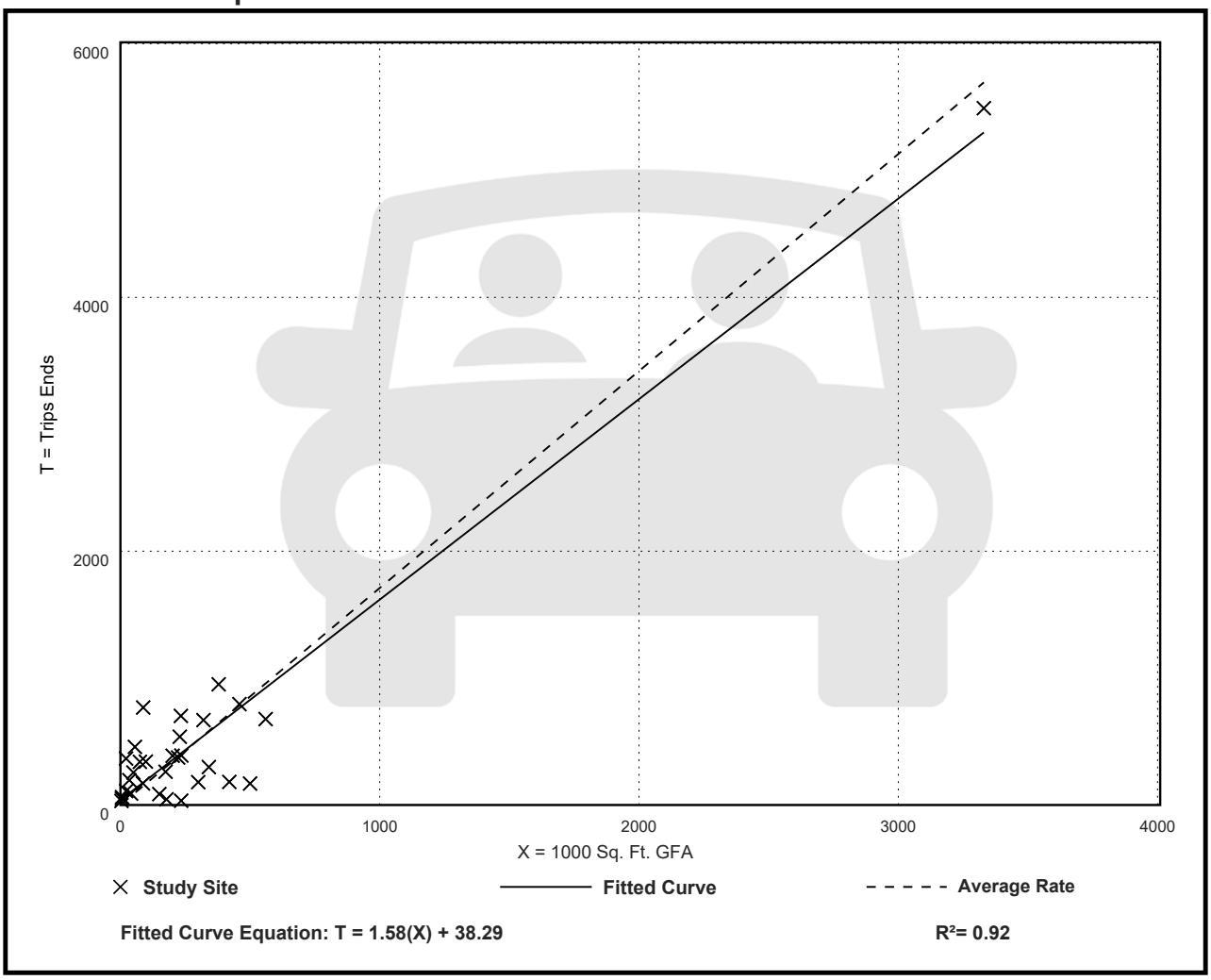
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 31
Avg. 1000 Sq. Ft. GFA: 292
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.71	0.15 - 16.93	1.48

Data Plot and Equation



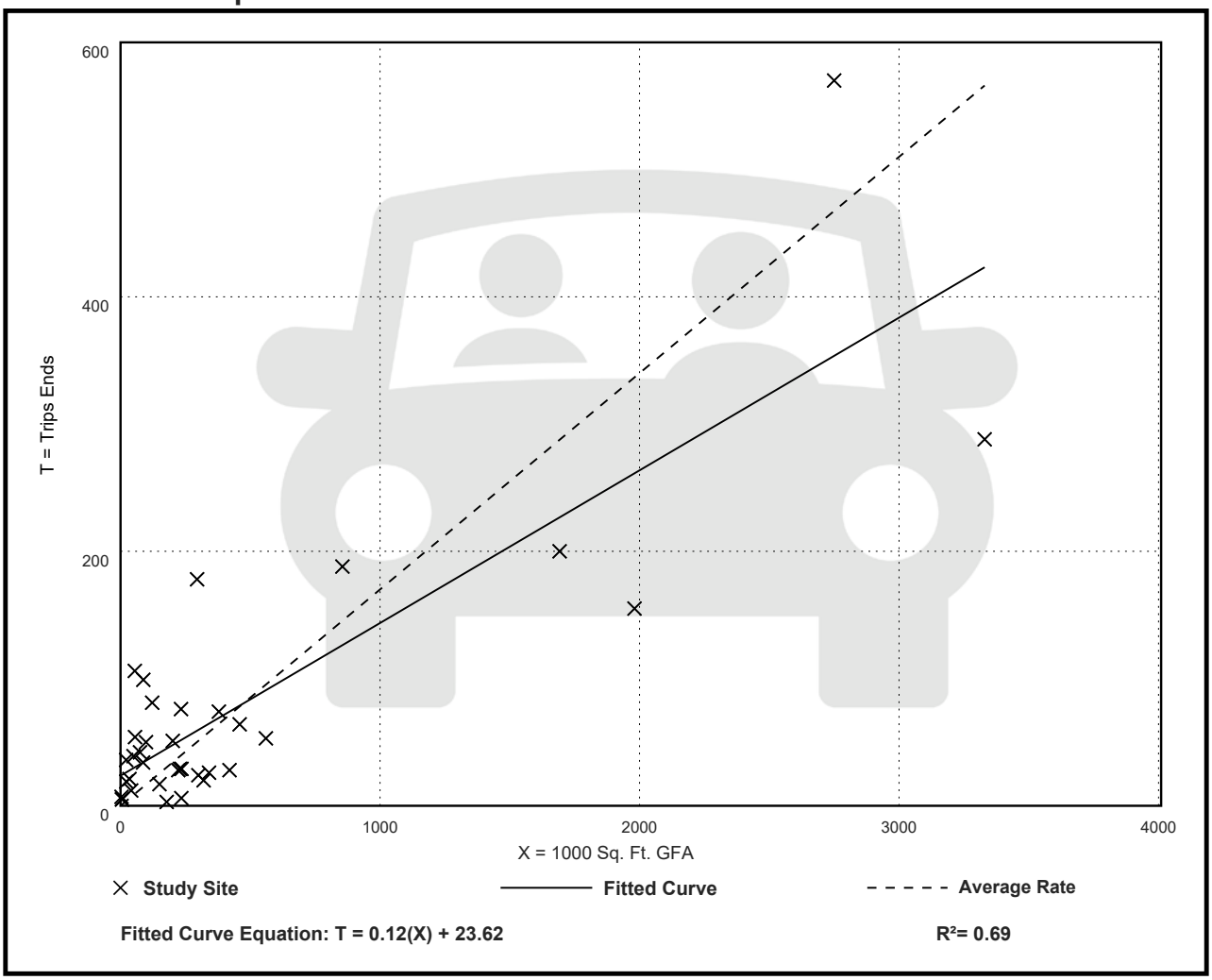
Warehousing
(150)

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: 36
Avg. 1000 Sq. Ft. GFA: 448
Directional Distribution: 77% entering, 23% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.17	0.02 - 1.93	0.19

Data Plot and Equation



Fitted Curve Equation: T = 0.12(X) + 23.62

R^2= 0.69

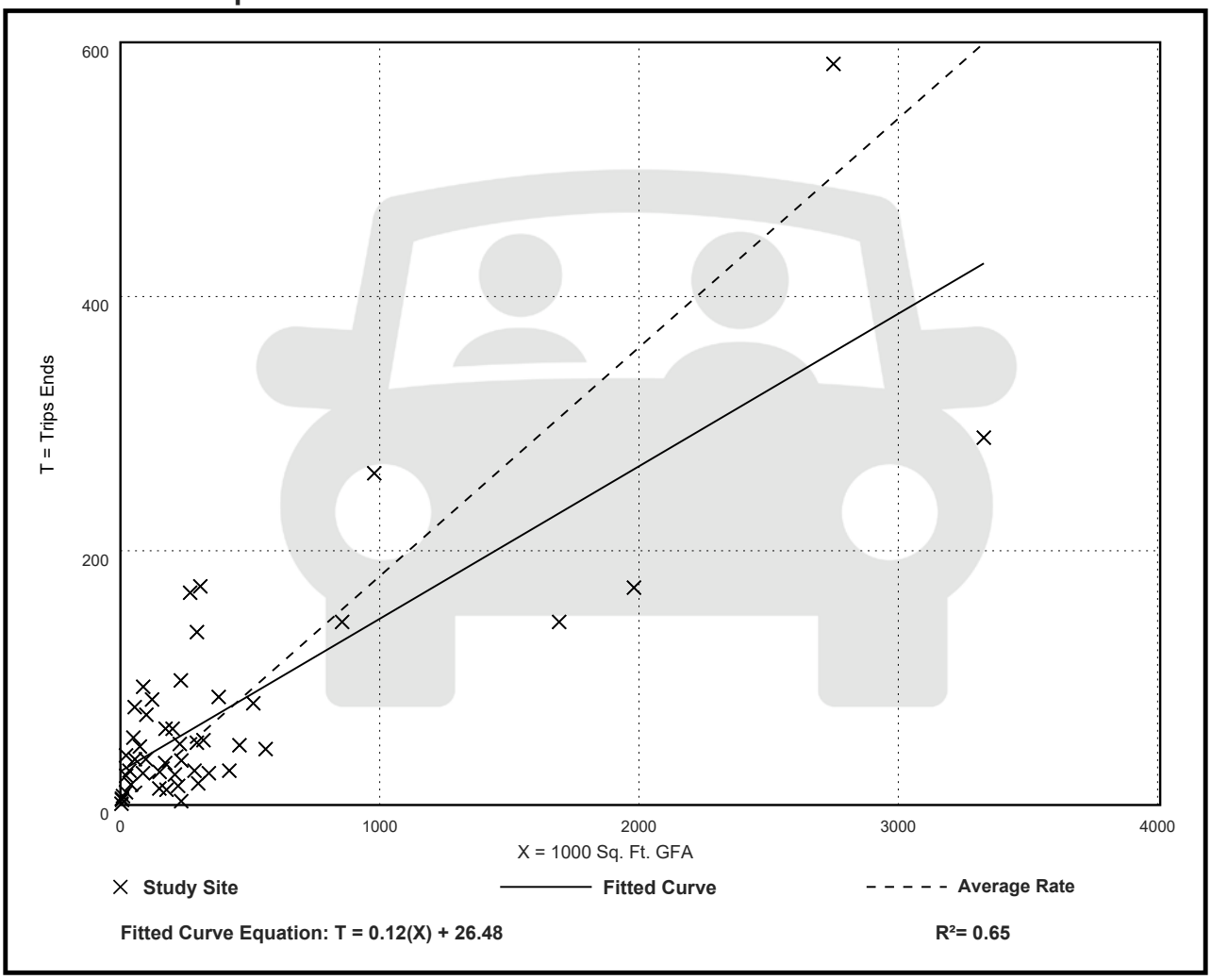
Warehousing
(150)

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: 49
Avg. 1000 Sq. Ft. GFA: 400
Directional Distribution: 28% entering, 72% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.18	0.01 - 1.80	0.18

Data Plot and Equation



CMAP 2050 Projections Letter

Chicago Metropolitan Agency for Planning

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

March 20, 2024

Kelly Pachowicz
Consultant
Kenig, Lindgren, O'Hara and Aboona, Inc.
9575 West Higgins Road
Suite 400
Rosemont, IL 60018

Subject: Division Street at Advantage Avenue
IDOT

Dear Ms. Pachowicz:

In response to a request made on your behalf and dated 3/20/2024, we have developed year 2050 average daily traffic (ADT) projections for the subject location.

ROAD SEGMENT	Current ADT	Year 2050 ADT
Division St, at Advantage Ave	3,300	4,700

Traffic projections are developed using existing ADT data provided in the request letter and the results from the December 2023 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 or email me at jrodriguez@cmap.illinois.gov

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

cc: Rios (IDOT)
S:\AdminGroups\ResearchAnalysis\2024_TrafficForecasts\CrestHill\wi-10-24\wi-10-24.docx

Level of Service Criteria

LEVEL OF SERVICE CRITERIA

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

Unsignalized Intersections	
Level of Service	**Average Total Delay (sec/veh)**
A	0 - 10
B	> 10 - 15
C	> 15 - 25
D	> 25 - 35
E	> 35 - 50
F	> 50

Source: *Highway Capacity Manual*, 6th Edition.

Capacity Analysis Summary Sheets

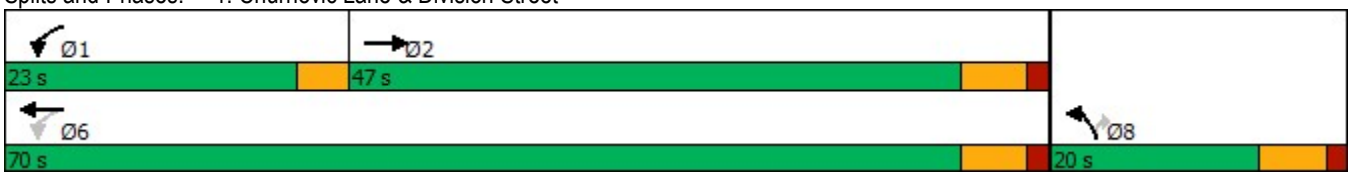
Existing Weekday Morning Peak Hour

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	235	96	133	148	27	17
Future Volume (vph)	235	96	133	148	27	17
Ideal Flow (vphpl)	1900	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	200		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			200		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.961					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1682	0	1543	1887	1318	1196
Flt Permitted			0.418		0.950	
Satd. Flow (perm)	1682	0	679	1887	1318	1196
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	30					22
Link Speed (mph)	35			35	20	
Link Distance (ft)	730			792	1209	
Travel Time (s)	14.2			15.4	41.2	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	8%	10%	17%	6%	37%	35%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	424	0	171	190	35	22
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	15.0		3.0	15.0	5.0	5.0
Minimum Split (s)	21.0		6.5	21.0	11.0	11.0
Total Split (s)	47.0		23.0	70.0	20.0	20.0
Total Split (%)	52.2%		25.6%	77.8%	22.2%	22.2%
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	0.0
Total Lost Time (s)	6.0		3.5	6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None		None	None	None	None
Act Effct Green (s)	30.6		39.5	41.3	13.5	13.5
Actuated g/C Ratio	0.58		0.75	0.79	0.26	0.26

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
v/c Ratio	0.43		0.26	0.13	0.10	0.07
Control Delay	12.0		4.5	4.3	26.0	13.0
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	12.0		4.5	4.3	26.0	13.0
LOS	B		A	A	C	B
Approach Delay	12.0			4.4	21.0	
Approach LOS	B			A	C	
Queue Length 50th (ft)	103		19	25	11	0
Queue Length 95th (ft)	160		36	43	35	15
Internal Link Dist (ft)	650			712	1129	
Turn Bay Length (ft)			200			
Base Capacity (vph)	1283		937	1786	451	423
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.33		0.18	0.11	0.08	0.05

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 52.4			
Natural Cycle: 40			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.43			
Intersection Signal Delay: 9.4		Intersection LOS: A	
Intersection Capacity Utilization 43.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: Churnovic Lane & Division Street



Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	329	20	9	166	5	2
Future Vol, veh/h	329	20	9	166	5	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	130	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	9	20	0	11	20	0
Mvmt Flow	416	25	11	210	6	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	441	0	661	429
Stage 1	-	-	-	-	429	-
Stage 2	-	-	-	-	232	-
Critical Hdwy	-	-	4.1	-	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	5.6	-
Critical Hdwy Stg 2	-	-	-	-	5.6	-
Follow-up Hdwy	-	-	2.2	-	3.68	3.3
Pot Cap-1 Maneuver	-	-	1130	-	401	630
Stage 1	-	-	-	-	620	-
Stage 2	-	-	-	-	766	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1130	-	397	630
Mov Cap-2 Maneuver	-	-	-	-	488	-
Stage 1	-	-	-	-	620	-
Stage 2	-	-	-	-	758	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	12
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	522	-	-	1130	-
HCM Lane V/C Ratio	0.017	-	-	0.01	-
HCM Control Delay (s)	12	-	-	8.2	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Capacity Analysis Summary Sheets

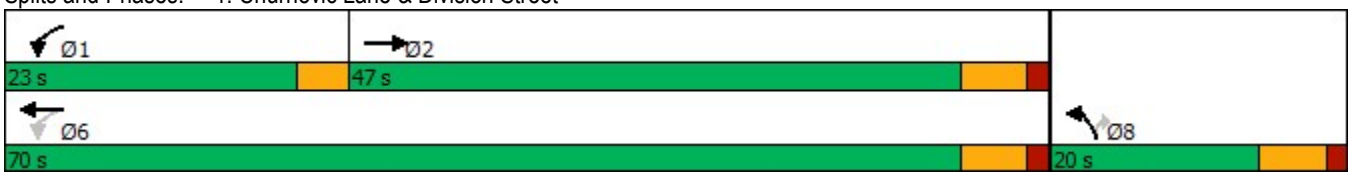
Existing Weekday Evening Peak Hour

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	304	40	55	398	74	57
Future Volume (vph)	304	40	55	398	74	57
Ideal Flow (vphpl)	1900	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	200		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			200		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.984					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1646	0	902	1905	1656	1615
Flt Permitted			0.422		0.950	
Satd. Flow (perm)	1646	0	401	1905	1656	1615
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	10					69
Link Speed (mph)	35			35	20	
Link Distance (ft)	730			792	1209	
Travel Time (s)	14.2			15.4	41.2	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	11%	33%	100%	5%	9%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	414	0	66	480	89	69
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	15.0		3.0	15.0	5.0	5.0
Minimum Split (s)	21.0		6.5	21.0	11.0	11.0
Total Split (s)	47.0		23.0	70.0	20.0	20.0
Total Split (%)	52.2%		25.6%	77.8%	22.2%	22.2%
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	0.0
Total Lost Time (s)	6.0		3.5	6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None		None	None	None	None
Act Effct Green (s)	31.9		37.5	37.5	14.3	14.3
Actuated g/C Ratio	0.58		0.68	0.68	0.26	0.26

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
v/c Ratio	0.43		0.19	0.37	0.21	0.15
Control Delay	13.2		5.5	7.0	25.7	8.7
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	13.2		5.5	7.0	25.7	8.7
LOS	B		A	A	C	A
Approach Delay	13.2			6.8	18.3	
Approach LOS	B			A	B	
Queue Length 50th (ft)	110		8	83	28	0
Queue Length 95th (ft)	175		18	122	73	28
Internal Link Dist (ft)	650			712	1129	
Turn Bay Length (ft)			200			
Base Capacity (vph)	1212		499	1800	523	557
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.34		0.13	0.27	0.17	0.12

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 55.4			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.43			
Intersection Signal Delay: 10.8		Intersection LOS: B	
Intersection Capacity Utilization 39.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: Churnovic Lane & Division Street



Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	322	3	2	470	22	22
Future Vol, veh/h	322	3	2	470	22	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	130	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	11	33	100	5	9	0
Mvmt Flow	350	3	2	511	24	24

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	353	0	867	352
Stage 1	-	-	-	-	352	-
Stage 2	-	-	-	-	515	-
Critical Hdwy	-	-	5.1	-	6.49	6.2
Critical Hdwy Stg 1	-	-	-	-	5.49	-
Critical Hdwy Stg 2	-	-	-	-	5.49	-
Follow-up Hdwy	-	-	3.1	-	3.581	3.3
Pot Cap-1 Maneuver	-	-	817	-	314	696
Stage 1	-	-	-	-	697	-
Stage 2	-	-	-	-	586	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	817	-	313	696
Mov Cap-2 Maneuver	-	-	-	-	431	-
Stage 1	-	-	-	-	697	-
Stage 2	-	-	-	-	585	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	12.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	532	-	-	817	-
HCM Lane V/C Ratio	0.09	-	-	0.003	-
HCM Control Delay (s)	12.4	-	-	9.4	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Capacity Analysis Summary Sheets

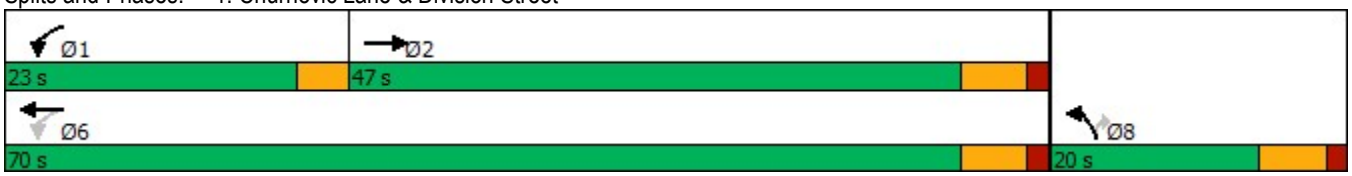
Year 2030 No-Build Weekday Morning Peak Hour

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	280	96	183	160	35	20
Future Volume (vph)	280	96	183	160	35	20
Ideal Flow (vphpl)	1900	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	200		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			200		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.966					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1703	0	1583	1905	1262	1154
Flt Permitted			0.362		0.950	
Satd. Flow (perm)	1703	0	603	1905	1262	1154
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	25					26
Link Speed (mph)	35			35	20	
Link Distance (ft)	730			792	1209	
Travel Time (s)	14.2			15.4	41.2	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	7%	10%	14%	5%	43%	40%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	482	0	235	205	45	26
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	15.0		3.0	15.0	5.0	5.0
Minimum Split (s)	21.0		6.5	21.0	11.0	11.0
Total Split (s)	47.0		23.0	70.0	20.0	20.0
Total Split (%)	52.2%		25.6%	77.8%	22.2%	22.2%
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	0.0
Total Lost Time (s)	6.0		3.5	6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None		None	None	None	None
Act Effct Green (s)	29.1		45.2	46.6	13.1	13.1
Actuated g/C Ratio	0.50		0.78	0.80	0.23	0.23

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
v/c Ratio	0.56		0.38	0.13	0.16	0.09
Control Delay	14.5		5.2	4.2	28.5	13.2
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	14.5		5.2	4.2	28.5	13.2
LOS	B		A	A	C	B
Approach Delay	14.5			4.7	22.9	
Approach LOS	B			A	C	
Queue Length 50th (ft)	134		29	28	16	0
Queue Length 95th (ft)	198		47	46	43	17
Internal Link Dist (ft)	650			712	1129	
Turn Bay Length (ft)			200			
Base Capacity (vph)	1247		858	1739	360	348
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.39		0.27	0.12	0.13	0.07

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 58.2			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay: 10.8		Intersection LOS: B	
Intersection Capacity Utilization 48.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: Churnovic Lane & Division Street



Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	374	20	9	186	5	2
Future Vol, veh/h	374	20	9	186	5	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	130	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	9	20	0	12	20	0
Mvmt Flow	473	25	11	235	6	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	498	0	743	486
Stage 1	-	-	-	-	486	-
Stage 2	-	-	-	-	257	-
Critical Hdwy	-	-	4.1	-	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	5.6	-
Critical Hdwy Stg 2	-	-	-	-	5.6	-
Follow-up Hdwy	-	-	2.2	-	3.68	3.3
Pot Cap-1 Maneuver	-	-	1076	-	358	585
Stage 1	-	-	-	-	583	-
Stage 2	-	-	-	-	746	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1076	-	354	585
Mov Cap-2 Maneuver	-	-	-	-	454	-
Stage 1	-	-	-	-	583	-
Stage 2	-	-	-	-	739	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	12.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	485	-	-	1076	-
HCM Lane V/C Ratio	0.018	-	-	0.011	-
HCM Control Delay (s)	12.6	-	-	8.4	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Capacity Analysis Summary Sheets

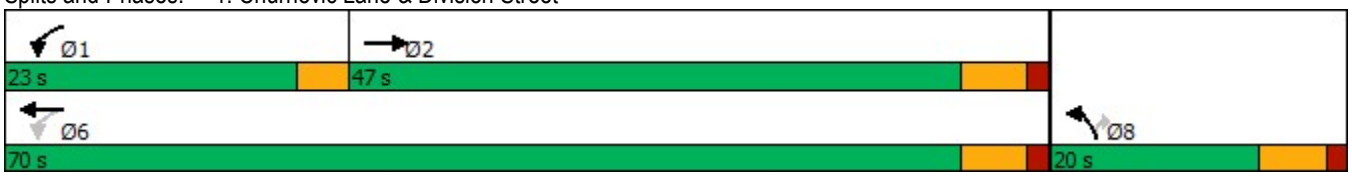
Year 2030 No-Build Weekday Evening Peak Hour

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	280	96	183	160	35	20
Future Volume (vph)	280	96	183	160	35	20
Ideal Flow (vphpl)	1900	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	200		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			200		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.966					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1703	0	1583	1905	1262	1154
Flt Permitted			0.362		0.950	
Satd. Flow (perm)	1703	0	603	1905	1262	1154
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	25					26
Link Speed (mph)	35			35	20	
Link Distance (ft)	730			792	1209	
Travel Time (s)	14.2			15.4	41.2	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	7%	10%	14%	5%	43%	40%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	482	0	235	205	45	26
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	15.0		3.0	15.0	5.0	5.0
Minimum Split (s)	21.0		6.5	21.0	11.0	11.0
Total Split (s)	47.0		23.0	70.0	20.0	20.0
Total Split (%)	52.2%		25.6%	77.8%	22.2%	22.2%
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	0.0
Total Lost Time (s)	6.0		3.5	6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None		None	None	None	None
Act Effct Green (s)	29.1		45.2	46.6	13.1	13.1
Actuated g/C Ratio	0.50		0.78	0.80	0.23	0.23

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
v/c Ratio	0.56		0.38	0.13	0.16	0.09
Control Delay	14.5		5.2	4.2	28.5	13.2
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	14.5		5.2	4.2	28.5	13.2
LOS	B		A	A	C	B
Approach Delay	14.5			4.7	22.9	
Approach LOS	B			A	C	
Queue Length 50th (ft)	134		29	28	16	0
Queue Length 95th (ft)	198		47	46	43	17
Internal Link Dist (ft)	650			712	1129	
Turn Bay Length (ft)			200			
Base Capacity (vph)	1247		858	1739	360	348
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.39		0.27	0.12	0.13	0.07

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 58.2			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay: 10.8		Intersection LOS: B	
Intersection Capacity Utilization 48.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: Churnovic Lane & Division Street



Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	374	20	9	186	5	2
Future Vol, veh/h	374	20	9	186	5	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	130	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	9	20	0	12	20	0
Mvmt Flow	473	25	11	235	6	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	498	0	743	486
Stage 1	-	-	-	-	486	-
Stage 2	-	-	-	-	257	-
Critical Hdwy	-	-	4.1	-	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	5.6	-
Critical Hdwy Stg 2	-	-	-	-	5.6	-
Follow-up Hdwy	-	-	2.2	-	3.68	3.3
Pot Cap-1 Maneuver	-	-	1076	-	358	585
Stage 1	-	-	-	-	583	-
Stage 2	-	-	-	-	746	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1076	-	354	585
Mov Cap-2 Maneuver	-	-	-	-	454	-
Stage 1	-	-	-	-	583	-
Stage 2	-	-	-	-	739	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	12.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	485	-	-	1076	-
HCM Lane V/C Ratio	0.018	-	-	0.011	-
HCM Control Delay (s)	12.6	-	-	8.4	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Capacity Analysis Summary Sheets

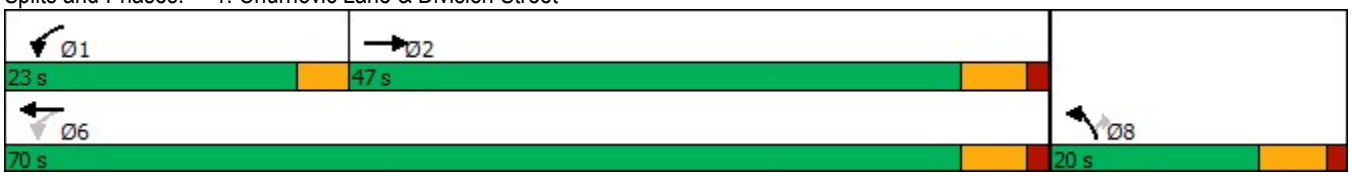
Year 2030 Total Projected Weekday Morning Peak Hour

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	284	96	183	172	35	20
Future Volume (vph)	284	96	183	172	35	20
Ideal Flow (vphpl)	1900	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	200		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			200		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.966					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1703	0	1583	1905	1262	1154
Flt Permitted			0.359		0.950	
Satd. Flow (perm)	1703	0	598	1905	1262	1154
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	25					26
Link Speed (mph)	35			35	20	
Link Distance (ft)	730			792	1209	
Travel Time (s)	14.2			15.4	41.2	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	7%	10%	14%	5%	43%	40%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	487	0	235	221	45	26
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	15.0		3.0	15.0	5.0	5.0
Minimum Split (s)	21.0		6.5	21.0	11.0	11.0
Total Split (s)	47.0		23.0	70.0	20.0	20.0
Total Split (%)	52.2%		25.6%	77.8%	22.2%	22.2%
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	0.0
Total Lost Time (s)	6.0		3.5	6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None		None	None	None	None
Act Effct Green (s)	29.4		45.5	46.9	13.2	13.2
Actuated g/C Ratio	0.50		0.78	0.80	0.23	0.23

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
v/c Ratio	0.56		0.38	0.14	0.16	0.09
Control Delay	14.6		5.2	4.2	28.7	13.2
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	14.6		5.2	4.2	28.7	13.2
LOS	B		A	A	C	B
Approach Delay	14.6			4.7	23.1	
Approach LOS	B			A	C	
Queue Length 50th (ft)	136		29	31	16	0
Queue Length 95th (ft)	200		47	49	43	17
Internal Link Dist (ft)	650			712	1129	
Turn Bay Length (ft)			200			
Base Capacity (vph)	1244		855	1733	359	347
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.39		0.27	0.13	0.13	0.07

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 58.5			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay: 10.7		Intersection LOS: B	
Intersection Capacity Utilization 48.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: Churnovic Lane & Division Street



Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	374	29	21	186	7	6
Future Vol, veh/h	374	29	21	186	7	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	130	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	9	17	5	12	14	17
Mvmt Flow	473	37	27	235	9	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	510	0	781	492
Stage 1	-	-	-	-	492	-
Stage 2	-	-	-	-	289	-
Critical Hdwy	-	-	4.15	-	6.54	6.37
Critical Hdwy Stg 1	-	-	-	-	5.54	-
Critical Hdwy Stg 2	-	-	-	-	5.54	-
Follow-up Hdwy	-	-	2.245	-	3.626	3.453
Pot Cap-1 Maneuver	-	-	1040	-	347	548
Stage 1	-	-	-	-	591	-
Stage 2	-	-	-	-	734	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1040	-	338	548
Mov Cap-2 Maneuver	-	-	-	-	447	-
Stage 1	-	-	-	-	591	-
Stage 2	-	-	-	-	715	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	12.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	489	-	-	1040	-
HCM Lane V/C Ratio	0.034	-	-	0.026	-
HCM Control Delay (s)	12.6	-	-	8.6	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Capacity Analysis Summary Sheets

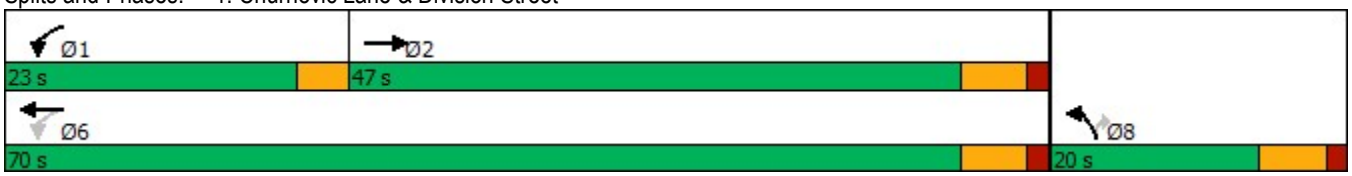
Year 2030 Total Projected Weekday Evening Peak Hour

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	350	40	72	436	96	71
Future Volume (vph)	350	40	72	436	96	71
Ideal Flow (vphpl)	1900	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	200		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			200		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.986					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1654	0	970	1905	1626	1568
Flt Permitted			0.378		0.950	
Satd. Flow (perm)	1654	0	386	1905	1626	1568
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	8					86
Link Speed (mph)	35			35	20	
Link Distance (ft)	730			792	1209	
Travel Time (s)	14.2			15.4	41.2	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	11%	33%	86%	5%	11%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	470	0	87	525	116	86
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	15.0		3.0	15.0	5.0	5.0
Minimum Split (s)	21.0		6.5	21.0	11.0	11.0
Total Split (s)	47.0		23.0	70.0	20.0	20.0
Total Split (%)	52.2%		25.6%	77.8%	22.2%	22.2%
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	0.0
Total Lost Time (s)	6.0		3.5	6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None		None	None	None	None
Act Effct Green (s)	35.3		43.4	43.6	14.9	14.9
Actuated g/C Ratio	0.57		0.71	0.71	0.24	0.24

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
v/c Ratio	0.49		0.24	0.39	0.29	0.19
Control Delay	14.9		5.8	6.8	29.0	8.5
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	14.9		5.8	6.8	29.0	8.5
LOS	B		A	A	C	A
Approach Delay	14.9			6.7	20.3	
Approach LOS	B			A	C	
Queue Length 50th (ft)	140		12	101	42	0
Queue Length 95th (ft)	210		23	136	93	31
Internal Link Dist (ft)	650			712	1129	
Turn Bay Length (ft)			200			
Base Capacity (vph)	1106		503	1745	459	504
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.42		0.17	0.30	0.25	0.17

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 61.4			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.49			
Intersection Signal Delay: 11.8		Intersection LOS: B	
Intersection Capacity Utilization 43.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: Churnovic Lane & Division Street



Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	355	6	7	525	30	35
Future Vol, veh/h	355	6	7	525	30	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	130	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	11	33	43	5	10	6
Mvmt Flow	386	7	8	571	33	38

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	393	0	977	390
Stage 1	-	-	-	-	390	-
Stage 2	-	-	-	-	587	-
Critical Hdwy	-	-	4.53	-	6.5	6.26
Critical Hdwy Stg 1	-	-	-	-	5.5	-
Critical Hdwy Stg 2	-	-	-	-	5.5	-
Follow-up Hdwy	-	-	2.587	-	3.59	3.354
Pot Cap-1 Maneuver	-	-	974	-	269	650
Stage 1	-	-	-	-	667	-
Stage 2	-	-	-	-	540	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	974	-	267	650
Mov Cap-2 Maneuver	-	-	-	-	391	-
Stage 1	-	-	-	-	667	-
Stage 2	-	-	-	-	536	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	498	-	-	974	-
HCM Lane V/C Ratio	0.142	-	-	0.008	-
HCM Control Delay (s)	13.4	-	-	8.7	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.5	-	-	0	-