

VILLAGE OF BARTLETT

COMMITTEE AGENDA

JANUARY 19, 2021

COMMUNITY & ECONOMIC DEV., CHAIRMAN GANDSEY

1. West Bartlett Road Transportation Corridor Study
2. O'Hare's Pub & Restaurant BEDA Application

BUILDING & ZONING, CHAIRMAN REINKE

3. Puckett Reserve Concept Plan Review



Agenda Item Executive Summary

Item Name West Bartlett Road Transportation Corridor Study Committee or Board Committee

BUDGET IMPACT

Amount:	N/A	Budgeted	N/A
List what fund	N/A		

EXECUTIVE SUMMARY

The Village Board directed Staff to hire a consultant to review the existing traffic conditions along the West Bartlett Road Corridor. The Board requested an analysis of the existing traffic counts, how the traffic was distributed, the types of vehicular traffic and the percentage of the traffic that could be attributed to trucks. Future traffic projections were also requested to be analyzed, due to large tracts of vacant land having the potential for future development impacts along this corridor.

The Village hired Fish Transportation Group (Cindy Fish and Tim Doron) as their consultant who completed the analysis with assistance from Sam Schwartz. They reviewed and prepared the attached *Existing Conditions Preliminary Analysis Report*. Key takeaways have been developed and will be discussed with the Board.

The Study area encompassed the portion of West Bartlett Road from Rt. 25 (west boundary) to Rt. 59 (east boundary). Intersections along this corridor (i.e. Naperville Road) and their impacts were also included in this study.

The Staff requested that Elmhurst Chicago Stone also prepare their own traffic analysis (attached) to determine the traffic impact the Brewster Creek Business Park may have on the West Bartlett Road Corridor. Fish Transportation Group incorporated the findings of this study within their Existing Conditions Report.

The Consultant will be in attendance to discuss their report and findings.

ATTACHMENTS

PDS Memo, *Existing Conditions Preliminary Analysis Report* prepared by Fish Transportation Group and the *Brewster Creek Business Park Traffic Impact Study* prepared by V3.

ACTION REQUESTED

- For Discussion Only - To review and direct Staff/Consultant with further strategies and initiatives
- Resolution
- Ordinance
- Motion

Staff Roberta Grill, Planning & Development Services Director Date: 01.07.2021

PLANNING AND DEVELOPMENT SERVICES MEMORANDUM

21-2

DATE: January 7, 2021

TO: Paula Schumacher, Village Administrator

FROM: Roberta Grill, Planning & Development Services Director

RE: **West Bartlett Road Transportation Corridor Study**

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The Consultant will be in attendance to discuss their report and findings.

Staff and the Consultant are looking for direction for future strategies and initiatives to implement along this corridor.

TRAFFIC IMPACT STUDY

REPORT FOR:

BREWSTER CREEK BUSINESS PARK BARTLETT, ILLINOIS



PREPARED BY:



V3 Companies
7325 Janes Avenue
Woodridge, Illinois 60517

V3 Project No. 9428.IND

October 12, 2020



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Appendix B	CMAP Correspondence
Appendix C	Capacity Analysis Worksheets – Existing
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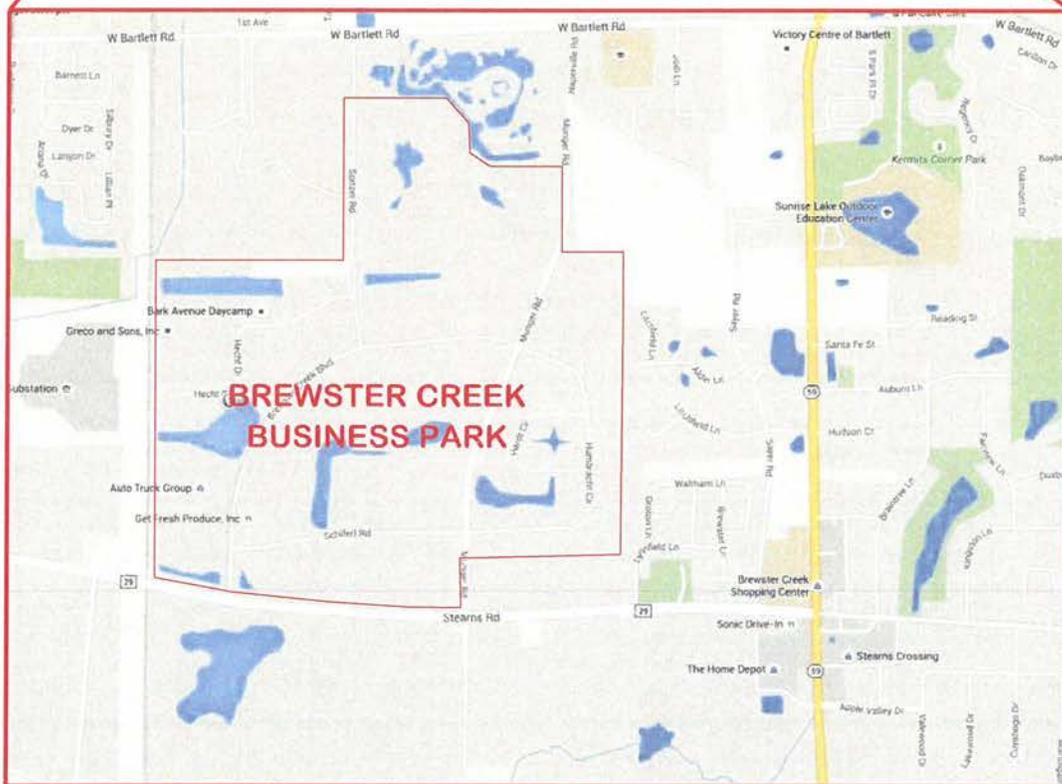
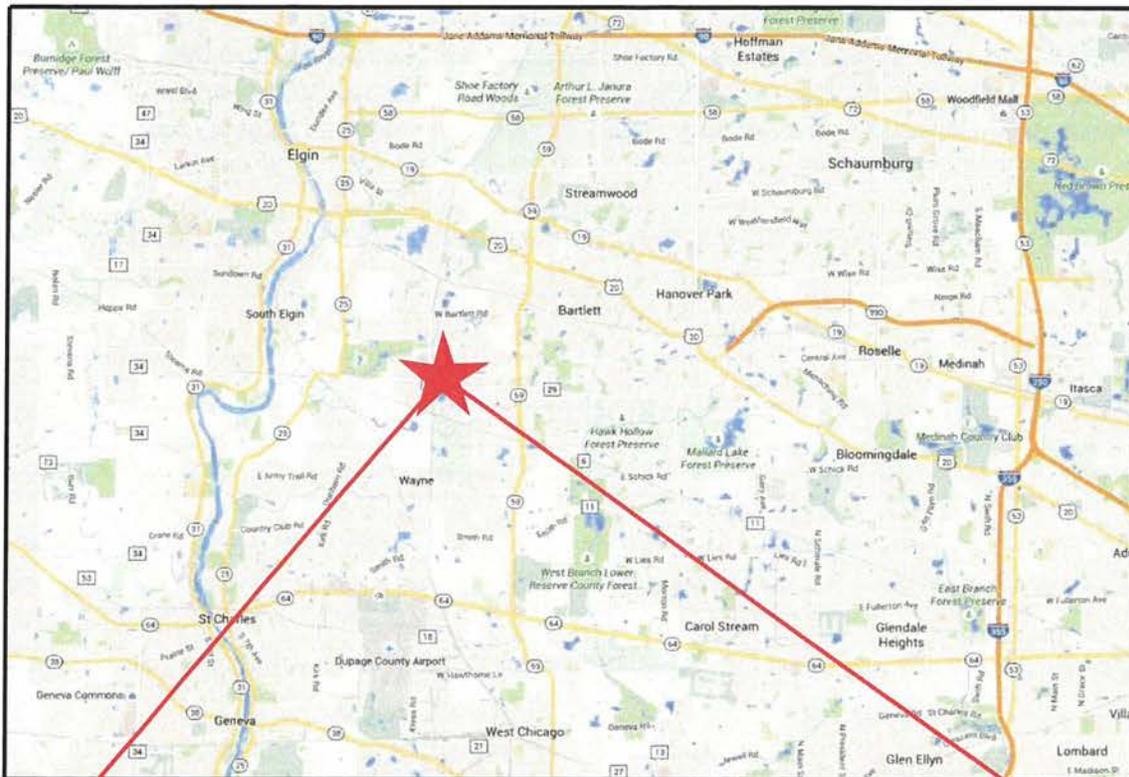


I. INTRODUCTION

V3 Companies has been retained by Elmhurst Chicago Stone Company to conduct a traffic impact study for Brewster Creek Business Park. The site is generally located north of Stearns Road, south of Bartlett Road, east of the Canadian National Railroad, and west of IL 59 in Bartlett, Illinois. Brewster Creek Business Park is an industrial park that is still currently being developed with warehouse buildings. A site location map is located in Figure 1.

The purpose of this report is to estimate the number of passenger vehicle and truck trips that enter and exit the business park and evaluate the existing and potential future build out traffic impacts of the business park. There are currently several sites within the business park that are under development and additional sites that are planned for development. Figure 2 illustrates the various parcels within the business park that are currently occupied, under development, and are planned for development. Land use plans and traffic estimates for the currently under-development and vacant lots are projected to 2025 for the traffic analysis. The study area consists of the intersections of Spitzer Road/Bartlett Road, Munger Road/Brewster Creek Boulevard, Brewster Creek Boulevard/Stearns Road, and Munger Road/Stearns Road.

This report includes a description of existing conditions, data collection, capacity analysis, evaluation of data, and conclusions.



**BREWSTER CREEK
BUSINESS PARK**

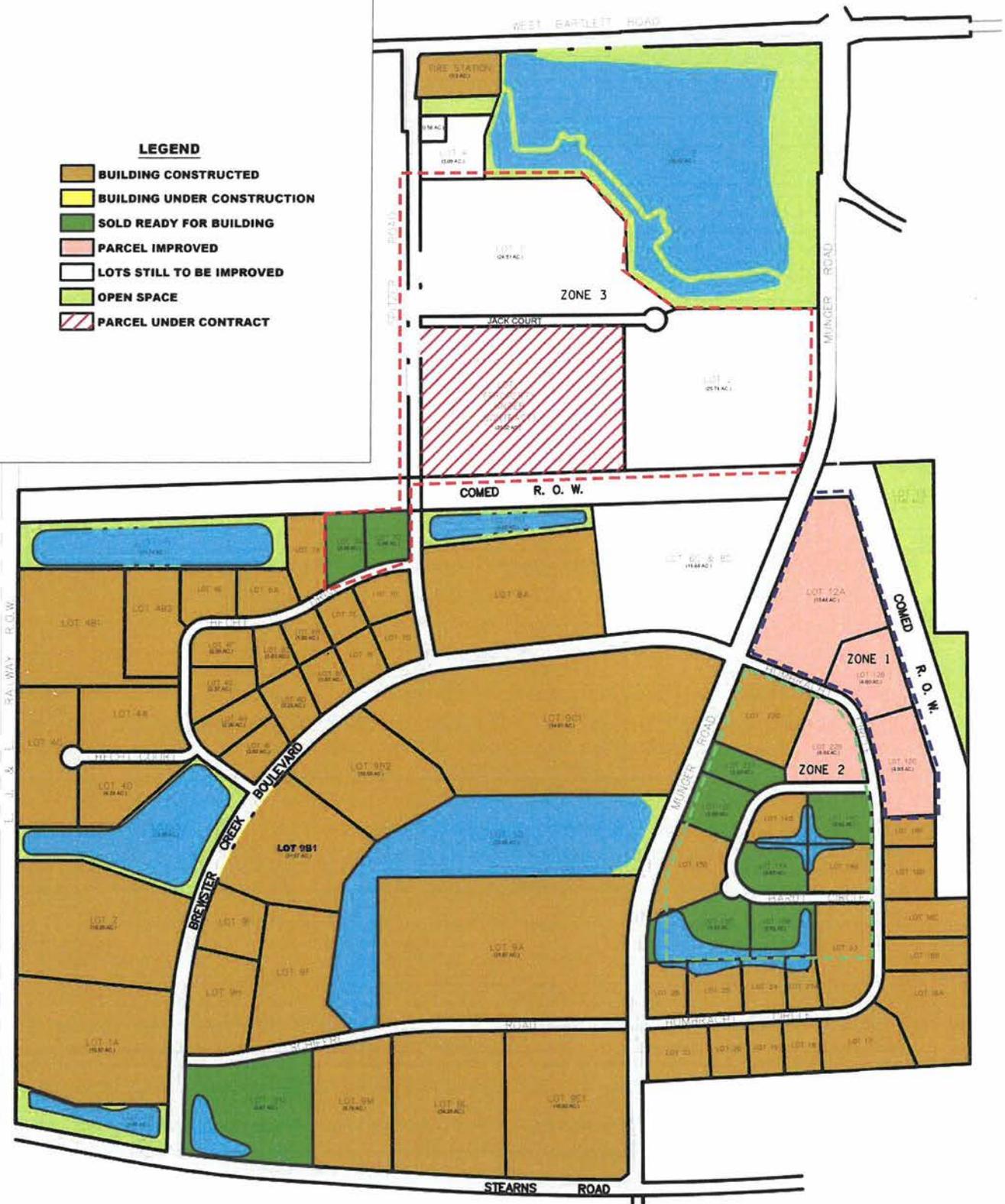
**FIGURE 1
SITE LOCATION MAP**

BARTLETT

ILLINOIS



- LEGEND**
- BUILDING CONSTRUCTED
 - BUILDING UNDER CONSTRUCTION
 - SOLD READY FOR BUILDING
 - PARCEL IMPROVED
 - LOTS STILL TO BE IMPROVED
 - OPEN SPACE
 - PARCEL UNDER CONTRACT



**BREWSTER CREEK
BUSINESS PARK**

**FIGURE 2
MASTER PLAN**





II. PROJECT CONDITIONS

Land Uses

A variety of land uses exist near the project site, including residential, industrial, and community land uses and the Pratt's Wayne Woods Forest Preserve. The surrounding land uses are illustrated in Figure 3.

Roadway System

The characteristics of the roadways in the vicinity of the site are presented below. The existing lane configurations at the study area intersections are illustrated in Figure 4.

Stearns Road (DuPage County Route 29) is an east-west principal arterial with two travel lanes in each direction with paved shoulders. The speed limit varies throughout the corridor but is posted as 45 mph east of Munger Road and 50 mph west of Munger Road along the business park. Stearns Road was recently widened east of Munger Road to provide a continuous center left turn lane. Stearns Road is a four lane road west of Munger Road which widens at Brewster Creek Boulevard to provide left turn lanes. Right turn lanes are provided in the westbound direction at Munger Road and Brewster Creek Boulevard. A multiuse path is provided along the north side of the roadway east of Munger Road. Stearns Road is under the jurisdiction of DuPage County DOT and is designated as a Strategic Regional Arterial (SRA).

Bartlett Road is an east-west minor arterial with two travel lanes in each direction and a posted speed limit of 45 mph. A center median is provided for left turn lanes at intersections and driveways, including Spitzer Road and Munger Road, which has dual left turn lanes in the westbound direction. Right turn lanes are provided in both directions at Munger Road and the eastbound direction of Spitzer Road. A multiuse path is provided on the south side of Bartlett Road from Spitzer Road to Munger Road. Bartlett Road is under the jurisdiction of Cook County DOTH.

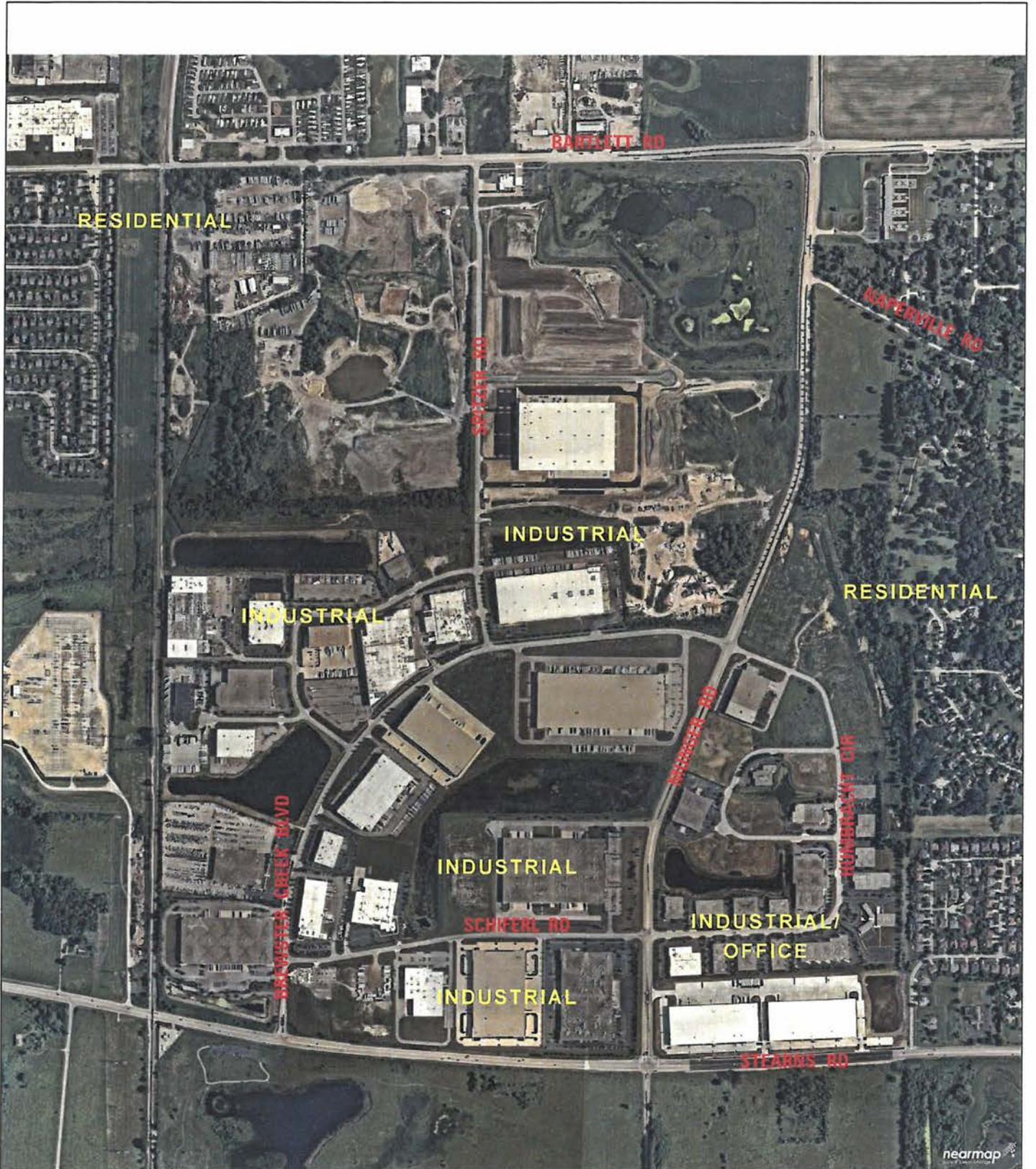
Munger Road is a north-south major collector with two travel lanes in each direction with a landscaped median and a posted speed limit of 45 mph. Munger Road is under the jurisdiction of the DuPage County Division of Transportation. Left turn lanes are provided in the median at most intersections and driveways. Right turn lanes are provided in the northbound and southbound direction at Bartlett Road and in the southbound direction at Stearns Road. A multiuse path is provided on the west side for approximately 1,600 feet south of Bartlett Road. Munger Road is under the jurisdiction of DuPage County DOT south of the county line and Cook County DOTH north of the county line.

Spitzer Road is a north-south local roadway with one travel lane in each direction from Bartlett Road to Brewster Creek Boulevard. It primarily provides access to the business park and the fire station.



Humbracht Circle/Brewster Creek Boulevard is a two lane local collector that serves a number of industrial land uses in the business park. The roadway is named Humbracht Circle east of Munger Road and Brewster Creek Boulevard west of Munger Road. The roadway is generally striped with one lane in each direction but wide enough for striped left turn lanes at most intersections.

The intersection of Munger Road/Stearns Road is signalized while the intersections of Spitzer Road/Bartlett Road, Munger Road/Brewster Creek Boulevard, and Brewster Creek Boulevard/Stearns Road are unsignalized.



**BREWSTER CREEK
BUSINESS PARK**

**FIGURE 3
LAND USE MAP**

BARTLETT

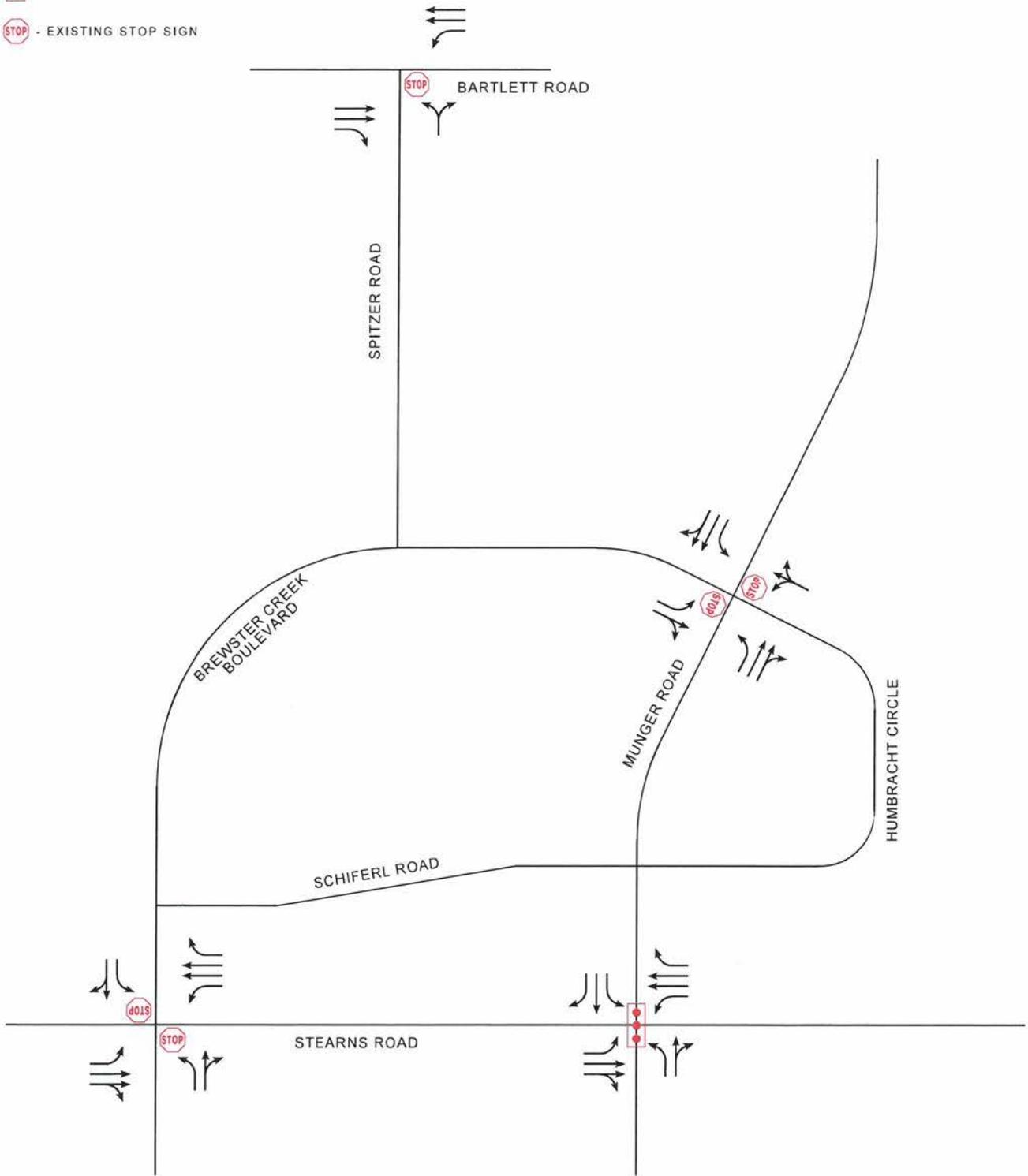
ILLINOIS



LEGEND

 - EXISTING TRAFFIC SIGNAL

 - EXISTING STOP SIGN



**BREWSTER CREEK
BUSINESS PARK**

**FIGURE 4
EXISTING LANE CONFIGURATION**





Traffic Volumes

To assist in the evaluation of the existing and future intersection capacity analyses, existing vehicular volumes were collected at the four study area intersections. Vehicle counts were conducted on Thursday, September 15, 2020 at the intersections of Spitzer Road/Bartlett Road, Munger Road/Brewster Creek Boulevard, Brewster Creek Boulevard/Stearns Road, and Munger Road/Stearns Road. Traffic counts were collected from 6:00 am to 8:00 pm to capture the morning and evening peak hours.

The traffic volumes collected indicate that the weekday peak hours occur from 7:15 am to 8:15 am and 4:15 pm to 5:15 pm. The existing peak hour vehicular volumes at the study area intersections are illustrated in Figure 5. A summary of the traffic volumes collected is provided in Appendix A. Data is presented in fifteen-minute increments, aggregated hours, and peak hour summaries.

Additionally, the traffic generated by the existing uses within the Brewster Creek Business Park can be estimated from the traffic volumes collected at the study area intersections. The traffic data can be summarized on an hourly basis from 6 am to 8 pm. The traffic count data was also collected to break out the passenger cars, construction trucks, and standard heavy vehicles. For the purposes of this study, construction trucks include concrete mixer trucks, dump trucks, flatbed trailers, and other general construction vehicles. Heavy vehicles are generally defined as vehicles with three or more axles and trucks with trailers. The hourly summary of vehicle trips entering and exiting Brewster Creek Business Park is provided in Table 1.

Table 1: Existing Inbound and Outbound Vehicle Trips At Brewster Creek Business Park

TOTAL BREWSTER CREEK BUSINESS PARK									
Start Time	End Time	Inbound Trips				Outbound Trips			
		Passenger Car	Construction Truck	Heavy Vehicle	Total	Passenger Car	Construction Truck	Heavy Vehicle	Total
6:00 AM	7:00 AM	840	8	47	895	679	10	55	744
7:00 AM	8:00 AM	1,089	16	67	1,172	641	24	88	753
8:00 AM	9:00 AM	751	34	91	876	542	34	99	675
9:00 AM	10:00 AM	491	26	97	614	419	25	86	530
10:00 AM	11:00 AM	426	35	102	563	424	42	102	568
11:00 AM	12:00 PM	517	28	98	643	560	36	83	679
12:00 PM	1:00 PM	655	28	85	768	672	30	83	785
1:00 PM	2:00 PM	807	27	100	934	692	36	98	826
2:00 PM	3:00 PM	729	27	87	843	1,066	23	61	1,150
3:00 PM	4:00 PM	892	16	80	988	1,056	19	56	1,131
4:00 PM	5:00 PM	859	4	76	939	1,402	5	50	1,457
5:00 PM	6:00 PM	851	8	39	898	1,289	5	39	1,333
6:00 PM	7:00 PM	611	3	25	639	737	2	17	756
7:00 PM	8:00 PM	477	0	16	493	493	1	13	507
Total Trips		9,995	260	1,010	11,265	10,672	292	930	11,894

The inbound trips are generally the volumes entering the business park at northbound Brewster Creek Boulevard and Munger Road at Stearns Road, the southbound volume on Spitzer Road at Bartlett Road, and the southbound approach at the intersection of Munger Road/Brewster Creek Boulevard. The outbound trips are the southbound approach on Brewster Creek Boulevard and



Munger Road at Stearns Road, the northbound approach on Spitzer Road at Bartlett Road, and the northbound traffic from the Munger Road/Brewster Creek Boulevard intersection.

The estimated existing trips into and out of the Brewster Creek Business Park total 11,265 inbound trips and 11,894 outbound trips from 6 am to 8 pm. This may include a portion of traffic that cuts through the business park utilizing Munger Road and Brewster Creek Boulevard. Of the total trips, 89.2 percent are passenger car trips, 2.4 percent are from construction vehicles, and 8.4 percent are from heavy vehicles.

Proposed Development

Land Use Development

There are currently 14 parcels that are planned for development within the Brewster Creek Business Park. The parcels have been assembled into zones based on their location and the adjacent street network. Table 2 provides a summary of the proposed development plan for each of the vacant parcels. In total, the vacant parcels are anticipated to be developed with nearly an additional 2.1 million square feet of warehousing land uses.

Table 2: Proposed Development Plan for Vacant Parcels

Zone	Parcel	Size	Proposed Land Use
1	Lot 8	246,000 sf	Warehousing (ITE Land Use Code 150)
	Lot 12A	200,000 sf	Warehousing (ITE Land Use Code 150)
	Lot 12B	25,000 sf	Warehousing (ITE Land Use Code 150)
	Lot 12C	65,000 sf	Warehousing (ITE Land Use Code 150)
2	Lot 14A	30,000 sf	Warehousing (ITE Land Use Code 150)
	Lot 14C	25,000 sf	Warehousing (ITE Land Use Code 150)
	Lot 15BC	40,000 sf	Warehousing (ITE Land Use Code 150)
	Lot 15E	25,000 sf	Warehousing (ITE Land Use Code 150)
	Lot 22A	25,000 sf	Warehousing (ITE Land Use Code 150)
	Lot 22B	45,000 sf	Warehousing (ITE Land Use Code 150)
3	Lot 7BC	60,000 sf	Warehousing (ITE Land Use Code 150)
	Project Oak	475,000 sf	Warehousing (ITE Land Use Code 150)
	North Cook	435,000 sf	Warehousing (ITE Land Use Code 150)
	East Cook	400,000 sf	Warehousing (ITE Land Use Code 150)

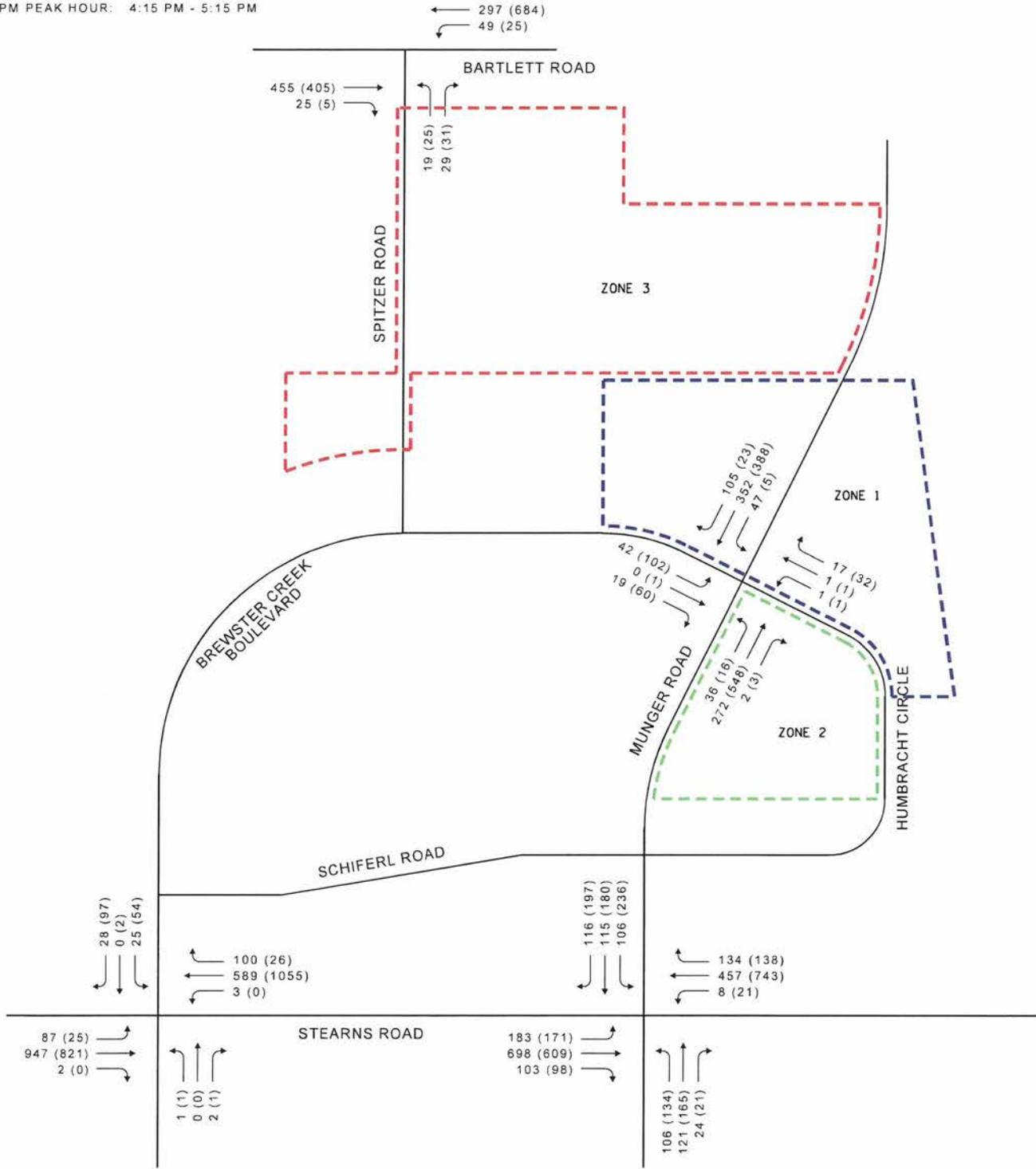
Roadway Development

Roadway improvements have recently been completed on Stearns Road east of Munger Road which including widening Stearns Road with a center striped median to accommodate left turn lanes. Improvements also included the multiuse path on the north side of the roadway. There are no other known proposed roadway projects in the vicinity of the site that will impact the study area.

LEGEND

- AM PEAK HOUR
 (##) - PM PEAK HOUR

AM PEAK HOUR: 7:15 AM - 8:15 AM
 PM PEAK HOUR: 4:15 PM - 5:15 PM



**BREWSTER CREEK
 BUSINESS PARK**

**FIGURE 5
 EXISTING TRAFFIC VOLUMES**





III. TRAFFIC FORECASTS

Project Traffic Volumes

Trip Generation

In order to estimate the number of vehicle trips that will be generated by the proposed developments on the vacant parcels, new traffic is estimated using the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10th Edition*. The following land use category is used to determine project traffic:

Warehousing (150) – Warehouses are primarily devoted to the storage of materials, but they may also include office and maintenance areas.

The ITE *Trip Generation Manual, 10th Edition* assigns trip generation rates for each land use based on gross area. Separate generation rates and directional distributions are provided for weekday am and weekday pm peak periods based on the peak hour of the adjacent road network. It is also expected that a portion of trips generated by the site will be heavy vehicles. The ITE *Trip Generation Manual, 10th Edition* does not provide any guidance on typical heavy vehicle percentages. However, the ITE *Trip Generation Manual, 9th Edition* does cite a heavy vehicle percentage of 20 percent for this land use. Therefore, the heavy vehicle proportion is assumed to be 20 percent this study.

A summary of trip generation for proposed parcel is summarized in Table 3.

Trip Distribution and Assignment

The direction from which traffic approaches and departs a site is a function of numerous variables, including location of residences, location of employment centers, location of commercial/retail centers, available roadway systems, location and number of access points, and level of congestion on adjacent road systems. The directional distribution of new traffic generated by the vacant parcels is split between passenger car trips and heavy vehicle trips, as these two vehicle categories impact the roadway network in different ways and potentially exhibit different distribution patterns.

Since existing traffic counts for passenger cars and heavy vehicles were collected at the study area intersections entering and exiting the business park, travel patterns can be calculated for each vehicle type. These existing travel patterns have been applied to the trips generated by the vacant parcels. The assumed distribution within Brewster Creek Business Park is influenced by the anticipated trips generated by each development zone. The directional distributions and assignment for new passenger car trips and new heavy vehicle trips are illustrated in Figure 6 and Figure 7, respectively. The assignments of new passenger car trips and heavy vehicle trips are totaled to achieve the total new project trip directional distribution and assignment, which is illustrated in Figure 8.



Table 3: Trip Generation for Vacant Parcels

Zone	Parcel	Size (in sf)	Daily	AM			PM		
				In	Out	Total	In	Out	Total
1	Lot 8	246,000	434	42	13	55	15	42	57
	Lot 12A	200,000	362	38	11	49	14	38	52
	Lot 12B	25,000	85	22	6	28	8	23	31
	Lot 12C	65,000	148	25	8	33	10	26	36
2	Lot 14A	30,000	93	22	7	29	8	23	31
	Lot 14C	25,000	85	22	6	28	8	23	31
	Lot 15BC	40,000	109	23	7	30	9	24	33
	Lot 15E	25,000	85	22	6	28	8	23	31
	Lot 22A	25,000	85	22	6	28	8	23	31
	Lot 22B	45,000	117	24	7	31	9	24	33
3	Lot 7BC	60,000	140	25	8	33	9	26	35
	Project Oak	475,000	796	63	19	82	23	62	85
	North Cook	435,000	733	60	18	78	22	58	80
	East Cook	400,000	678	56	17	73	21	55	76
Total Brewster Creek Infill Development		All Vehicles	3950	466	139	605	172	470	642
		Passenger Car (80%)	3160	373	111	484	138	376	514
		Trucks (20%)	790	93	28	121	34	94	128

Background Traffic Volumes

Background traffic volumes are estimated for the year 2025, which is when the Brewster Creek Business Park is anticipated to be fully occupied. These volumes account for future non-project related growth in the area. The anticipated growth rates in the area are based on projections from the Chicago Metropolitan Agency for Planning (CMAP). The average daily traffic volumes along the study area roadways were obtained from the DuPage County and IDOT websites. A summary of the CMAP growth rates are provided in Table 4. CMAP correspondence, including supporting historical daily traffic volume information, is provided in Appendix B.



Table 4: CMAP Growth Rates

Street	AADT		Total Growth from Count Year to 2050	Compounde d Yearly Rate	Total Growth from 2020 to 2025	Total Growth from 2020 to 2050
	Existing AADT (Year)	2050 Proj.				
Stearns Road – West of Munger Road	18,900 (2016)	22,000	16.4%	0.4%	2.3%	14.3%
Stearns Road – East of Munger Road	21,200 (2016)	24,700	16.5%	0.5%	2.3%	14.4%
Munger Road – North of Stearns Road	8,300 (2014)	8,600	3.6%	0.1%	0.5%	3.0%
Munger Road – South of Stearns Road	4,500 (2014)	5,240	16.4%	0.4%	2.1%	13.5%
Bartlett Road – West of Munger Road/Naperville Road	11,900 (2018)	15,000	26.1%	0.7%	3.7%	24.2%
Bartlett Road – East of Munger Road/Naperville Road	14,600 (2018)	16,500	13.0%	0.4%	1.9%	12.2%
Naperville Road – North of Bartlett Road	12,300 (2018)	14,900	21.1%	0.6%	3.0%	19.7%
Munger Road – South of Bartlett Road	12,000 (2018)	13,400	11.7%	0.3%	1.7%	10.9%

It is likely that the CMAP projections include traffic generated by development within the Brewster Creek Business Park, including the trip generation associated with the 2.1 million square feet of warehouse included in this study. Therefore, the growth factors obtained from CMAP will be applied to the existing peak hour counts for the Stearns Road and Bartlett Road through movements. The CMAP projections indicate yearly growth rates along Stearns Road are approximately 0.5 percent and the yearly growth rates along Bartlett Road range from 0.4 to 0.7 percent. The background traffic volumes are illustrated in Figure 9.

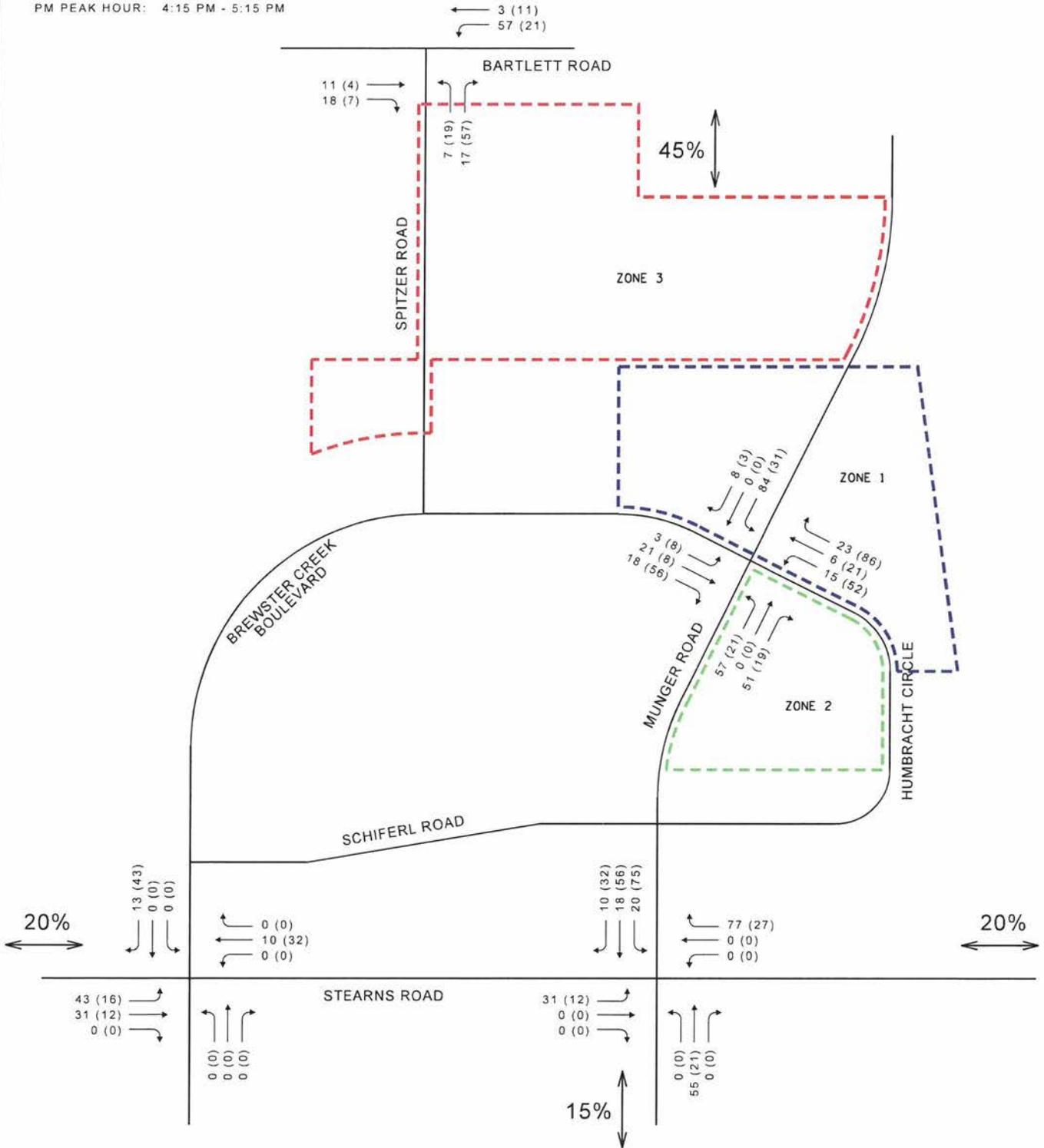
Future Traffic Volumes

The total new project traffic volumes are added to the background volumes to obtain the future traffic volumes for the study intersections. Future with project traffic volumes are depicted in Figure 10.

LEGEND

- AM PEAK HOUR
 (##) - PM PEAK HOUR

AM PEAK HOUR: 7:15 AM - 8:15 AM
 PM PEAK HOUR: 4:15 PM - 5:15 PM



**BREWSTER CREEK
 BUSINESS PARK**

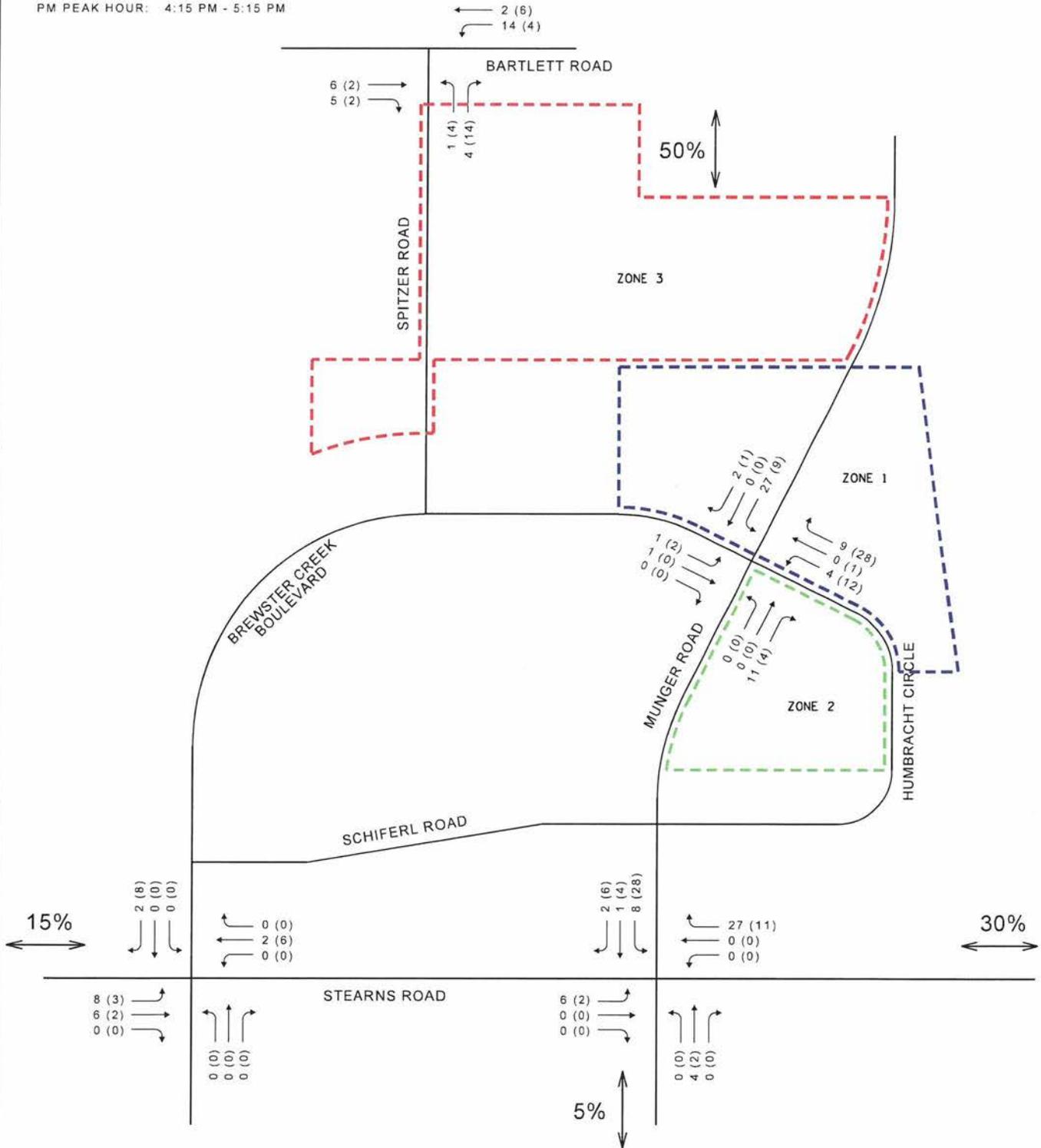
**FIGURE 6
 FUTURE TRAFFIC
 PASSENGER CARS**



LEGEND

- AM PEAK HOUR
 (##) - PM PEAK HOUR

AM PEAK HOUR: 7:15 AM - 8:15 AM
 PM PEAK HOUR: 4:15 PM - 5:15 PM



**BREWSTER CREEK
 BUSINESS PARK**

**FIGURE 7
 FUTURE TRAFFIC
 HEAVY VEHICLES**



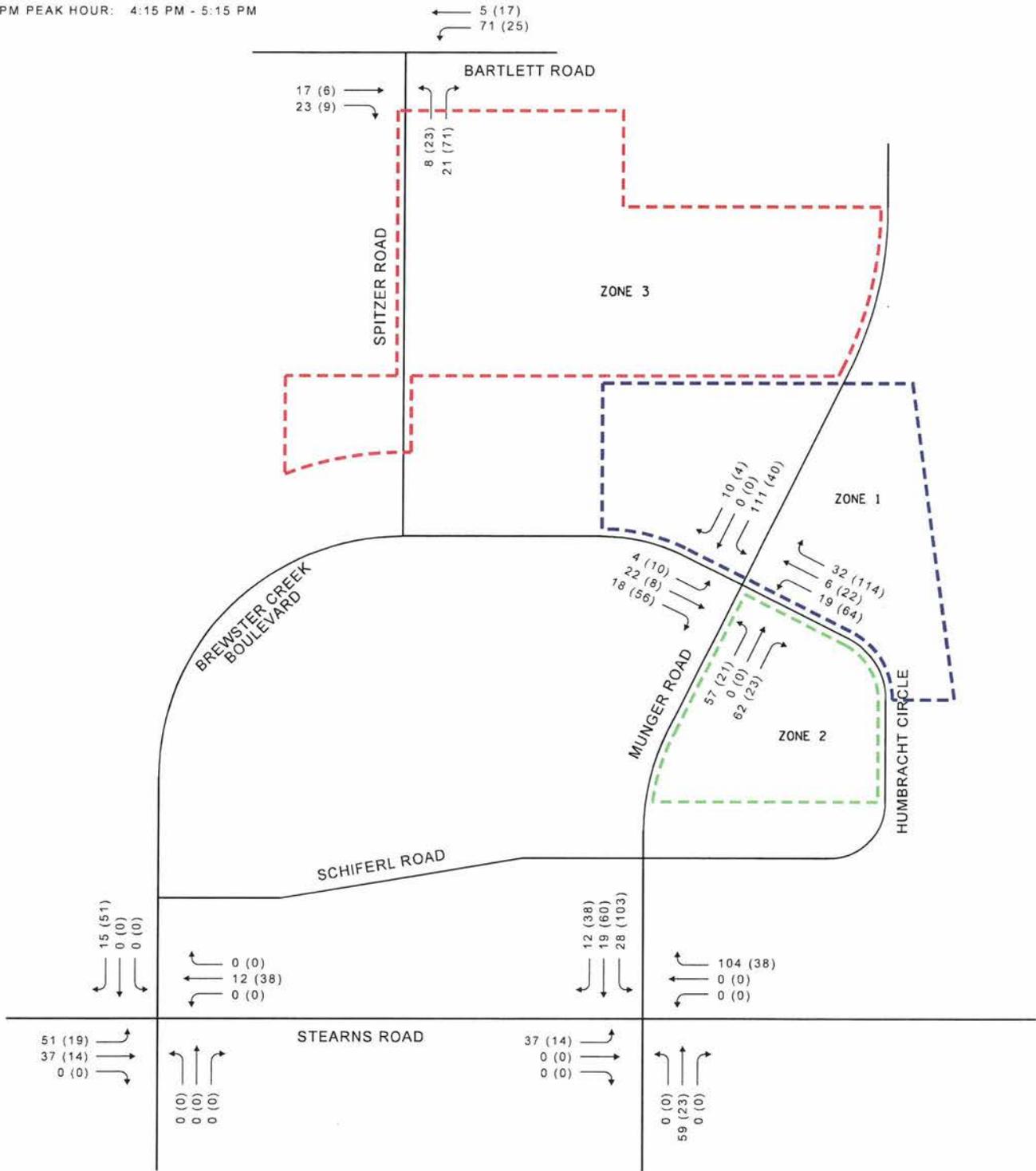
LEGEND

- AM PEAK HOUR
 (##) - PM PEAK HOUR

AM PEAK HOUR: 7:15 AM - 8:15 AM
 PM PEAK HOUR: 4:15 PM - 5:15 PM

NOTE:

TOTAL TRIP GENERATION = FUTURE TRAFFIC PASSENGER CAR (FIGURE 6) + FUTURE TRAFFIC HEAVY VEHICLE (FIGURE 7)



**BREWSTER CREEK
 BUSINESS PARK**

**FIGURE 8
 TOTAL
 TRAFFIC VOLUMES**



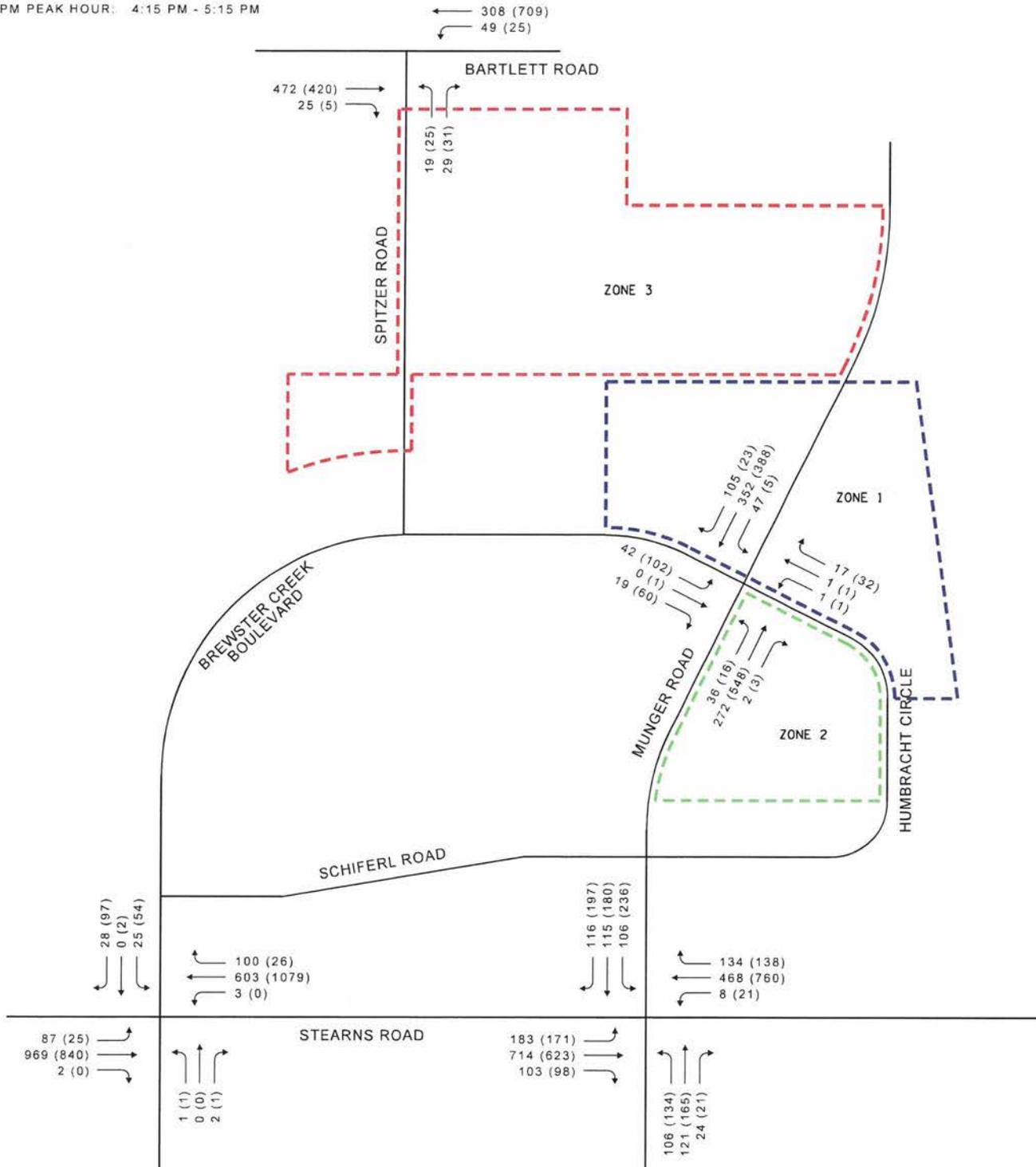
LEGEND

- AM PEAK HOUR
 (##) - PM PEAK HOUR

AM PEAK HOUR: 7:15 AM - 8:15 AM
 PM PEAK HOUR: 4:15 PM - 5:15 PM

NOTE:

2025 BACKGROUND TRAFFIC VOLUME = EXISTING TRAFFIC VOLUME + CMAP GROWTH PROJECTIONS TO 2025
 (FIGURE 5)



**BREWSTER CREEK
 BUSINESS PARK**

**FIGURE 9
 BACKGROUND
 TRAFFIC VOLUMES**

BARTLETT

ILLINOIS



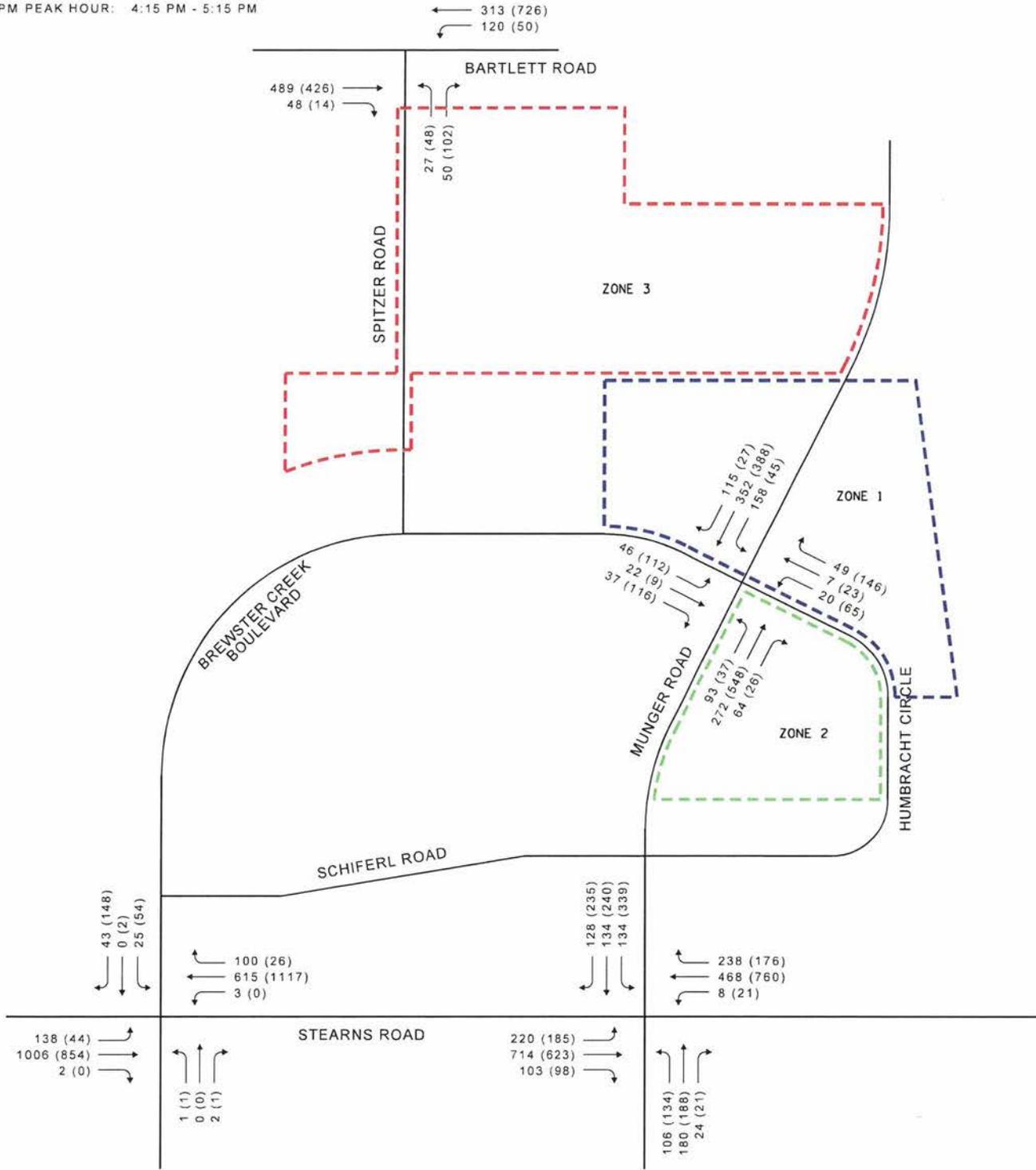
LEGEND

- AM PEAK HOUR
 (##) - PM PEAK HOUR

AM PEAK HOUR: 7:15 AM - 8:15 AM
 PM PEAK HOUR: 4:15 PM - 5:15 PM

NOTE:

2025 FUTURE WITH PROJECT TRAFFIC VOLUME = 2025 BACKGROUND TRAFFIC VOLUME (FIGURE 9) + TOTAL PROJECT TRAFFIC (FIGURE 8)



**BREWSTER CREEK
 BUSINESS PARK**

**FIGURE 10
 FUTURE WITH PROJECT
 TRAFFIC VOLUMES**





IV. TRAFFIC ANALYSIS

Capacity Analysis

The operation of a facility is evaluated based on level of service (LOS) calculations obtained by analytical methods defined in the Transportation Research Board’s *Highway Capacity Manual (HCM)*, 6th Edition. The concept of LOS is defined as a quality measure describing operational conditions within a traffic stream, generally in terms of such service measures as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience.

There are six LOS letter designations, from A to F, with LOS A representing the best operating conditions and LOS F the worst.

The LOS of an intersection is based on the average control delay per vehicle. For a signalized intersection, the delay is calculated for each lane group and then aggregated for each approach and for the intersection as a whole. Generally, the LOS is reported for the intersection as a whole. For an unsignalized intersection, the delay is only calculated and reported for each minor movement. An overall intersection LOS is not calculated.

There are different LOS criteria for signalized and unsignalized intersections primarily due to driver perceptions of transportation facilities. The perception is that a signalized intersection is expected to carry higher traffic volumes and experience a greater average delay than an unsignalized intersection. The LOS criteria for signalized and unsignalized intersections are provided in Table 5.

Table 5: Level of Service Definitions for Signalized and Unsignalized Intersections

Level of Service	Signalized Intersection Control Delay (seconds/vehicle)	Unsignalized Intersection Control Delay (seconds/vehicle)
A	≤ 10	≤ 10.0
B	> 10.0 and ≤ 20.0	> 10.0 and ≤ 15.0
C	> 20.0 and ≤ 35.0	> 15.0 and ≤ 25.0
D	> 35.0 and ≤ 55.0	> 25.0 and ≤ 35.0
E	> 55.0 and ≤ 80.0	> 35.0 and ≤ 50.0
F	> 80.0	> 50.0

Source: Transportation Research Board, *Highway Capacity Manual 6th Edition*, National Research Council, 2016.

The study area consists of the intersections of Spitzer Road/Bartlett Road, Munger Road/Brewster Creek Boulevard, Brewster Creek Boulevard/Stearns Road, and Munger Road/Stearns Road. Capacity analysis was performed with Synchro 9.2. Models were created for the weekday am and weekday pm peak hours for the 2020 existing, 2025 background, and 2025 future with fully occupied business park development scenarios.



The capacity analysis results at the signalized intersections are summarized in Table 6 and at the unsignalized intersections in Table 7. The traffic signal timing plans were obtained from videos captured during the traffic counts and utilized for this analysis and verified with information provided by DuPage County DOT. Supporting capacity analysis worksheets are provided in Appendices C, D, and E, respectively.

Table 6: Signalized Intersection Capacity Analysis Results: Munger Road/Stearns Road

Peak Hour	Scenario	Eastbound		Westbound		Northbound		Southbound		Intersection	
		Delay (sec)	LOS	Delay (sec)	LOS						
AM	2020 Existing	19.7	B	20.4	C	34.4	C	20.3	C	21.9	C
	2025 Background	16.6	B	21.2	C	29.0	C	19.5	B	19.7	C
	2025 Future with Project	18.9	B	20.5	C	33.5	C	20.0	C	21.4	C
PM	2020 Existing	17.1	B	24.5	C	35.1	D	23.4	C	23.1	C
	2025 Background	17.2	B	24.7	C	35.3	D	23.8	C	23.3	C
	2025 Future with Project	18.3	B	25.4	C	37.6	D	36.9	D	27.8	C

Based on analysis of existing traffic volumes, the signalized intersection of Munger Road and Stearns Road operates at LOS C during both the weekday am and pm peak hours. The highest delay occurs on the northbound approach during the weekday pm peak hour, which operates at LOS D. All other approaches operate at LOS C or better during both the weekday peak hours.

The intersection delay slightly decreases during the weekday am peak hour due to the through volumes on Stearns Road increasing, which is the movement that receives the most green time. The additional vehicles decrease the average delay time for this movement, resulting in an overall intersection delay time lower than the existing. The delay times slightly increase during the weekday pm peak hour. Overall, each approach continues to operate at LOS C or better except the northbound during the weekday pm peak hour which continues to operate at LOS D. The overall intersection continues to operate at LOS C.

Adding the new trips from the currently vacant parcels increases delays on each approach and for the overall intersection. The highest delays occur on the northbound and southbound approaches during the weekday pm peak hour, which operates at LOS D. All other movements and the overall intersection operate at LOS C or better. Therefore, it is concluded that the development of the project site will not have a significant impact on the signalized intersection of Stearns Road and Munger Road.



Table 7: Unsignalized Intersection Capacity Analysis Results

Intersection / Approach	AM Peak Hour						PM Peak Hour					
	2020 Existing		2025 Background		2025 Future with Project		2020 Existing		2025 Background		2025 Future with Project	
	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS
Stearns Road & Brewster Creek Boulevard												
NB Left	59.6	F	63.2	F	90.9	F	62.2	F	67.1	F	92.9	F
NB Right	12.2	B	12.3	B	12.5	B	11.3	B	11.4	B	11.5	B
SB Left	73.1	F	78.5	F	123.4	F	179.4	F	203.0	F	284.8	F
SB Right	11.5	B	11.6	B	11.6	B	17.3	C	17.7	C	20.8	C
EB Left	9.5	A	9.6	A	10.2	B	12.0	B	12.2	B	12.8	B
WB Left	10.5	B	10.6	B	10.8	B	0.0	A	0.0	A	0.0	A
Munger Road & Brewster Creek Boulevard												
NB Left	8.6	A	8.6	A	8.8	A	8.5	A	8.5	A	8.4	A
SB Left	8.1	A	8.1	A	9.1	A	9.2	A	9.2	A	9.6	A
EB Left	27.7	D	27.7	D	112.3	F	28.3	D	28.3	D	120.3	F
EB Right	10.2	B	10.2	B	28.3	D	10.4	B	10.4	B	12.6	B
WB Approach	12.3	B	12.3	B	35.8	E	11.1	B	11.1	B	84.6	F
Bartlett Road & Spitzer Road												
NB Approach	13.2	B	13.5	B	16.3	C	10.9	B	11.1	B	13.1	B
WB Left	8.6	A	8.7	A	9.4	A	9.5	A	9.6	A	9.2	A

Under existing conditions, all movements at the intersections of Munger Road/Brewster Creek Boulevard and Bartlett Road/Spitzer Road operate at LOS D or better. The northbound and southbound left turn movements at Stearns Road/Brewster Creek Boulevard currently operate at LOS F during the weekday am and pm peak hours. The other movements at this intersection operate at LOS C or better. There is one northbound left turn during each of the weekday am and pm peak hours. The southbound left turn has 25 vehicles and 54 vehicles during the weekday am and weekday pm peak hours, respectively. High delays are expected for left turns on local streets to principal arterials during the peak hours. There is the option for these vehicles to make a protected left turn at the signalized intersection of Munger Road and Stearns Road, which is easily accessible using the local streets within the business park.

The delay for each movement slightly increases or stays the same during the 2025 background condition. There are no changes in LOS for any movement.



The addition of the new vehicle trips generated by vacant parcels results in increased delays for most movements at the unsignalized intersections. The northbound and southbound left turns at Stearns Road/Brewster Creek Parkway continue to operate at LOS F even though no new vehicle trips are assigned to these movements. At the intersection of Munger Road/Brewster Creek Boulevard, delays increase for several movements resulting in decreased levels of service. The eastbound left turn drops from LOS D to LOS F during both the weekday am and pm peak hours. The one-lane westbound approach drops from LOS B to LOS E during the weekday am peak hour and from LOS B to LOS F during the weekday pm peak hour. All other movements continue to operate at LOS D or better.

While the delays on several stop-controlled approaches are not ideal, Stearns Road and Munger Road are major roadways in the area with significant peak hour volumes that can result in longer delays for left turning vehicles. For the southbound left turn at Stearns Road/Brewster Creek Boulevard, these vehicles could travel to the Munger Road/Stearns Road intersection to make a protected left turn.

Queue Length Analysis

The 95th percentile queue lengths are also analyzed using the Synchro models. The left turn queue lengths for the weekday am and pm peak hours are summarized in Table 8.

Table 8: 95th Percentile Queue Lengths: Munger Road/Stearns Road

Peak Hour	Scenario	95% Queue Length (feet)			
		EB Left	WB Left	NB Left	SB Left
AM	2020 Existing	103	10	90	92
	2025 Background	103	10	92	94
	2025 Future with Project	141	11	96	121
PM	2020 Existing	94	18	111	191
	2025 Background	94	18	113	193
	2025 Future with Project	110	20	115	339
Existing Storage Length		260	170	70	315
Existing Taper Length		140	120	230	105

The eastbound and westbound left turn storage lengths are adequate during the existing, background, and future with project conditions. The northbound left turn queue length is longer than the storage length for both the weekday am and pm peak hours and increases in both scenarios in the future. The longest queue is 115 feet during the weekday pm peak hour, which exceeds the provided storage by 45 feet or approximately two vehicles. It is anticipated that these



vehicles could be accommodated within the 230-taper without impacting the northbound through movement. The southbound left turn is projected to be 339 feet, 24 feet longer than the existing 315-foot storage length, or approximately one vehicle. It is anticipated that this one vehicle can be accommodated within the 105-foot taper length and not impact the southbound through movement.



V. CONCLUSIONS

The purpose of this report is to estimate the number of vehicle and truck trips that enter and exit the business park and evaluate the existing and potential future build out traffic impacts of the Brewster Creek Business Park with the development of currently vacant parcels. The business park is generally located north of Stearns Road, south of Bartlett Road, east of the Canadian National Railroad, and west of IL 59 in Bartlett, Illinois. Brewster Creek Business Park is an industrial park that is still currently being developed with warehouse buildings. The study area consists of the intersections of Spitzer Road/Bartlett Road, Munger Road/Brewster Creek Boulevard, Brewster Creek Boulevard/Stearns Road, and Munger Road/Stearns Road.

The inbound trips are generally the volumes entering the business park at northbound Brewster Creek Boulevard and Munger Road at Stearns Road, the southbound volume on Spitzer Road at Bartlett Road, and the southbound approach at the intersection of Munger Road/Brewster Creek Boulevard. The outbound trips are the southbound approach on Brewster Creek Boulevard and Munger Road at Stearns Road, the northbound approach on Spitzer Road at Bartlett Road, and the northbound traffic from the Munger Road/Brewster Creek Boulevard intersection.

The estimated existing trips into and out of the Brewster Creek Business Park total 11,265 inbound trips and 11,894 outbound trips from 6 am to 8 pm. This may include a portion of traffic that cuts through the business park utilizing Munger Road and Brewster Creek Boulevard. Of the total trips, 89.2 percent are passenger car trips, 2.4 percent are from construction vehicles, and 8.4 percent are from heavy vehicles.

Capacity analysis was conducted for existing, 2025 background, and 2025 future with project conditions during the weekday am and weekday pm peak hours at the study area intersections. Traffic was estimated to 2025, which is when the business park is anticipated to be fully occupied.

The analysis results indicate that all approaches at the signalized intersection of Munger Road/Stearns Road operate at LOS D or better for the existing, background, and future with project scenarios. The overall intersection operates at LOS C for each of the scenarios.

At the unsignalized intersections for the existing scenario, all movements at the intersections of Munger Road/Brewster Creek Boulevard and Bartlett Road/Spitzer Road operate at LOS D or better. The northbound and southbound left turn movements at Stearns Road/Brewster Creek Boulevard currently operate at LOS F during the weekday am and pm peak hours. The other movements at this intersection operate at LOS C or better.

The delays for each movement at all intersections slightly increases or stays the same during the 2025 background condition. There are no changes in LOS for any movement.

The addition of the new vehicle trips generated by vacant parcels results in increased delays for most movements at all intersections. At the signalized intersection of Munger Road and Stearns Road the highest delays occur on the northbound and southbound approaches during the



weekday pm peak hour, which operates at LOS D. All other movements and the overall intersection operate at LOS C or better. Therefore, it is concluded that the development of the project site will not have a significant impact on the signalized intersection of Stearns Road and Munger Road.

The northbound and southbound left turns at the unsignalized intersection of Stearns Road/Brewster Creek Parkway continue to operate at LOS F even though no new vehicle trips are assigned to these movements. At the intersection of Munger Road/Brewster Creek Boulevard, the delay of several movements increase the future LOS. The eastbound left turn drops from LOS D to LOS F during both the weekday am and pm peak hours. The one-lane westbound approach drops from LOS B to LOS E during the weekday am peak hour and from LOS B to LOS F during the weekday pm peak hour. All other movements continue to operate at LOS D or better.

While the delays on several stop-controlled approaches are not ideal, Stearns Road and Munger Road are major roadways in the area with significant peak hour volumes that can result in longer delays for left turning vehicles. For the southbound left turn at Stearns Road/Brewster Creek Boulevard, these vehicles could travel to the Munger Road/Stearns Road intersection to make a protected left turn.



APPENDIX A

EXISTING TRAFFIC COUNTS



Location: Brewster Creek Blvd – Stearns Rd

Date: 9/15/2020

Site Code: 15277801 - ALL VEHICLES

Start Time	Brewster Creek Blvd Southbound				Stearns Rd Westbound				Harrier Lake Parking Lot Northbound				Brewster Creek Blvd Eastbound			
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns
06:00 AM	11	0	12	0	13	70	0	0	0	0	0	0	0	129	9	0
06:15 AM	3	0	2	0	19	100	0	0	0	0	0	0	0	179	10	0
06:30 AM	5	0	3	0	16	139	0	0	0	0	0	0	0	188	7	0
06:45 AM	9	0	0	0	11	123	0	0	0	0	1	0	2	238	14	0
07:00 AM	6	0	6	0	11	123	0	0	0	0	1	0	0	202	18	0
07:15 AM	3	0	2	0	23	145	1	0	0	0	0	0	0	243	16	0
07:30 AM	10	0	5	0	27	161	2	0	0	0	0	0	1	234	22	0
07:45 AM	6	0	5	0	35	164	0	0	1	0	1	0	0	249	33	0
08:00 AM	9	0	13	0	15	119	0	0	1	0	0	0	1	221	16	0
08:15 AM	9	0	5	0	12	134	1	1	0	0	1	0	0	207	18	0
08:30 AM	2	0	3	0	15	131	0	0	0	0	0	0	0	157	5	0
08:45 AM	4	0	6	0	9	118	0	0	0	0	0	0	0	136	11	0
09:00 AM	5	0	4	0	13	92	0	1	0	0	0	0	2	116	11	0
09:15 AM	6	0	9	0	15	94	2	0	0	0	0	0	0	151	5	0
09:30 AM	6	0	10	0	12	126	0	0	3	0	0	0	1	123	4	0
09:45 AM	6	1	10	0	7	108	0	0	2	1	1	0	1	128	6	0
10:00 AM	3	0	9	0	6	96	1	0	0	0	0	0	0	108	9	0
10:15 AM	5	0	13	0	6	99	1	0	1	0	0	0	0	116	7	0
10:30 AM	6	0	10	0	10	96	0	0	0	0	0	0	2	113	9	0
10:45 AM	5	0	15	0	12	97	1	0	0	0	0	0	0	122	4	0
11:00 AM	4	0	6	0	8	97	0	0	1	0	0	0	1	121	7	0
11:15 AM	10	1	11	0	10	109	0	0	0	0	0	0	0	101	10	1
11:30 AM	6	0	11	0	10	109	0	0	1	1	0	0	0	123	2	0
11:45 AM	6	0	12	0	11	106	2	0	0	0	2	0	0	103	4	0
12:00 PM	17	1	38	0	12	116	4	0	2	0	0	0	1	149	6	0
12:15 PM	12	0	5	0	27	143	0	0	2	0	0	0	0	132	8	0
12:30 PM	6	0	11	0	5	139	1	0	4	1	0	0	0	116	11	0
12:45 PM	6	1	7	0	10	110	1	0	0	1	0	0	0	144	7	0
01:00 PM	12	0	9	0	12	136	2	0	2	1	0	0	0	121	11	0
01:15 PM	7	0	13	0	12	109	1	0	1	0	0	0	2	124	9	0
01:30 PM	11	0	16	0	14	162	1	0	0	2	0	0	0	129	15	0
01:45 PM	16	0	12	0	8	126	2	0	1	0	2	0	0	154	15	0
02:00 PM	19	0	10	0	13	129	0	0	0	0	0	0	0	116	5	0
02:15 PM	14	0	12	0	12	162	1	1	0	0	1	0	0	172	9	0
02:30 PM	31	0	40	0	12	151	0	0	0	0	0	0	0	142	7	0
02:45 PM	12	0	14	0	16	175	0	0	1	0	0	0	0	139	9	0
03:00 PM	12	0	15	0	16	187	0	0	0	0	1	0	1	150	7	0
03:15 PM	14	0	9	0	5	193	0	0	1	0	0	0	1	204	7	0
03:30 PM	21	0	14	0	9	196	3	0	1	0	0	0	0	170	12	0
03:45 PM	14	0	7	1	15	247	1	0	1	0	1	0	0	188	6	0
04:00 PM	37	0	21	0	7	258	2	0	1	0	1	0	0	167	10	0
04:15 PM	16	0	7	0	11	265	0	0	0	0	1	0	0	237	5	0
04:30 PM	29	0	20	0	7	284	0	0	0	0	0	0	0	205	10	0
04:45 PM	16	0	8	0	5	230	0	0	0	0	0	0	0	202	6	0
05:00 PM	36	2	19	0	3	276	0	0	1	0	0	0	0	177	4	0
05:15 PM	21	0	11	0	3	287	3	0	0	0	0	0	0	201	6	0
05:30 PM	21	0	13	0	8	238	0	0	0	0	0	0	0	167	3	0
05:45 PM	12	0	8	0	8	243	0	1	0	0	0	0	1	145	6	0
06:00 PM	8	0	19	0	9	189	1	0	4	0	1	0	2	150	2	0
06:15 PM	6	0	10	0	9	173	0	0	2	0	0	0	0	129	1	0
06:30 PM	5	0	8	0	4	145	0	0	1	0	0	0	1	95	3	0
06:45 PM	2	0	7	0	11	143	1	0	0	0	1	0	1	100	3	0
07:00 PM	6	0	6	0	4	122	0	0	0	0	1	0	0	117	5	0
07:15 PM	1	0	5	0	3	121	1	0	3	0	0	0	0	110	2	0
07:30 PM	7	0	1	0	4	115	0	0	0	0	1	0	1	134	5	0
07:45 PM	1	0	5	0	4	94	0	0	1	0	0	0	0	101	2	0
Total	593	6	582	1	624	8420	36	4	39	7	18	0	22	8595	474	1

Peak Hour: 4:15 PM - 5:15 PM
 Peak 15: 4:30 PM - 4:45 PM
 PHF: 0.937838



Quality Counts
DATA THAT DRIVES COMMUNITIES

Location: Brewster Creek Blvd – Stearns Rd
Date: 9/15/2020
Site Code: 15277801 - PASSENGER VEHICLES

Start Time	Brewster Creek Blvd Southbound				Stearns Rd Westbound				Hamier Lake Parking Lot Northbound				Brewster Creek Blvd Eastbound			
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns
06:00 AM	11	0	7	0	11	68	0	0	0	0	0	0	0	118	8	0
06:15 AM	3	0	1	0	17	98	0	0	0	0	0	0	0	153	10	0
06:30 AM	5	0	3	0	14	135	0	0	0	0	0	0	0	164	7	0
06:45 AM	9	0	0	0	10	115	0	0	0	0	1	0	2	211	13	0
07:00 AM	5	0	6	0	11	114	0	0	0	0	1	0	0	188	16	0
07:15 AM	1	0	2	0	21	134	1	0	0	0	0	0	0	232	14	0
07:30 AM	6	0	4	0	25	144	2	0	0	0	0	0	1	214	22	0
07:45 AM	5	0	4	0	34	146	0	0	1	0	1	0	0	234	30	0
08:00 AM	6	0	9	0	14	109	0	0	1	0	0	0	1	198	14	0
08:15 AM	6	0	4	0	6	122	1	1	0	0	1	0	0	184	17	0
08:30 AM	1	0	1	0	12	122	0	0	0	0	0	0	0	140	4	0
08:45 AM	3	0	3	0	8	101	0	0	0	0	0	0	0	118	8	0
09:00 AM	2	0	2	0	11	76	0	1	0	0	0	0	2	105	10	0
09:15 AM	4	0	7	0	10	73	2	0	0	0	0	0	0	133	4	0
09:30 AM	5	0	6	0	10	101	0	0	3	0	0	0	1	105	3	0
09:45 AM	4	1	4	0	5	91	0	0	2	1	1	0	1	109	6	0
10:00 AM	2	0	3	0	3	82	1	0	0	0	0	0	0	89	8	0
10:15 AM	4	0	5	0	5	85	1	0	1	0	0	0	0	90	5	0
10:30 AM	6	0	8	0	6	78	0	0	0	0	0	0	1	97	5	0
10:45 AM	2	0	9	0	6	80	1	0	0	0	0	0	0	102	4	0
11:00 AM	3	0	4	0	5	82	0	0	1	0	0	0	1	101	4	0
11:15 AM	5	1	8	0	4	94	0	0	0	0	0	0	0	81	6	1
11:30 AM	6	0	5	0	7	92	0	0	1	1	0	0	0	103	1	0
11:45 AM	4	0	8	0	5	87	2	0	0	0	1	0	0	90	4	0
12:00 PM	15	1	35	0	10	98	4	0	2	0	0	0	1	125	3	0
12:15 PM	12	0	4	0	24	118	0	0	2	0	0	0	0	118	7	0
12:30 PM	6	0	10	0	3	116	1	0	4	1	0	0	0	96	10	0
12:45 PM	4	1	5	0	9	97	1	0	0	1	0	0	0	122	6	0
01:00 PM	7	0	7	0	7	119	2	0	2	1	0	0	0	102	7	0
01:15 PM	6	0	9	0	12	100	1	0	1	0	0	0	2	114	6	0
01:30 PM	10	0	12	0	11	150	1	0	0	2	0	0	0	115	12	0
01:45 PM	15	0	7	0	6	108	2	0	1	0	2	0	0	140	12	0
02:00 PM	18	0	9	0	9	110	0	0	0	0	0	0	0	105	4	0
02:15 PM	10	0	10	0	9	145	1	1	0	0	1	0	0	151	8	0
02:30 PM	31	0	39	0	9	139	0	0	0	0	0	0	0	130	6	0
02:45 PM	10	0	13	0	16	161	0	0	1	0	0	0	0	127	7	0
03:00 PM	11	0	12	0	14	179	0	0	0	0	1	0	1	138	7	0
03:15 PM	13	0	7	0	3	182	0	0	1	0	0	0	1	193	6	0
03:30 PM	20	0	13	0	7	188	3	0	1	0	0	0	0	164	10	0
03:45 PM	13	0	6	1	14	237	1	0	1	0	1	0	0	181	6	0
04:00 PM	34	0	19	0	6	243	2	0	1	0	1	0	0	160	8	0
04:15 PM	15	0	7	0	9	251	0	0	0	0	1	0	0	229	4	0
04:30 PM	29	0	19	0	6	262	0	0	0	0	0	0	0	201	10	0
04:45 PM	16	0	8	0	4	216	0	0	0	0	0	0	0	195	3	0
05:00 PM	35	2	16	0	1	271	0	0	1	0	0	0	0	175	4	0
05:15 PM	21	0	10	0	2	276	3	0	0	0	0	0	0	198	5	0
05:30 PM	21	0	11	0	6	233	0	0	0	0	0	0	0	167	3	0
05:45 PM	12	0	7	0	8	240	0	1	0	0	0	0	1	142	5	0
06:00 PM	8	0	18	0	7	187	1	0	4	0	1	0	2	145	1	0
06:15 PM	6	0	10	0	8	172	0	0	2	0	0	0	0	127	1	0
06:30 PM	5	0	8	0	4	143	0	0	1	0	0	0	1	93	3	0
06:45 PM	2	0	6	0	8	138	1	0	0	0	1	0	1	96	3	0
07:00 PM	6	0	6	0	4	115	0	0	0	0	1	0	0	115	5	0
07:15 PM	1	0	4	0	2	116	1	0	3	0	0	0	0	107	2	0
07:30 PM	7	0	1	0	4	114	0	0	0	0	1	0	1	130	5	0
07:45 PM	1	0	5	0	4	92	0	0	1	0	0	0	0	100	2	0
Total	528	6	466	1	506	7745	36	4	39	7	17	0	21	7860	404	1



Quality Counts
DATA THAT DRIVES COMMUNITIES

Location: Brewster Creek Blvd -- Stearns Rd

Date: 9/15/2020

Site Code: 15277801_CONSTRUCTION VEHICLES

Start Time	Brewster Creek Blvd Southbound				Stearns Rd Westbound				Harrier Lake Parking Lot Northbound				Brewster Creek Blvd Eastbound			
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns
06:00 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	3	1	0
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0	0
06:30 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	12	0	0
06:45 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	12	0	0
07:00 AM	0	0	0	0	0	3	0	0	0	0	0	0	0	5	0	0
07:15 AM	0	0	0	0	0	3	0	0	0	0	0	0	0	2	0	0
07:30 AM	0	0	0	0	0	11	0	0	0	0	0	0	0	6	0	0
07:45 AM	0	0	0	0	0	16	0	0	0	0	0	0	0	7	0	0
08:00 AM	0	0	0	0	0	6	0	0	0	0	0	0	0	8	1	0
08:15 AM	2	0	0	0	0	11	0	0	0	0	0	0	0	15	0	0
08:30 AM	0	0	0	0	0	4	0	0	0	0	0	0	0	11	0	0
08:45 AM	0	0	0	0	0	6	0	0	0	0	0	0	0	11	0	0
09:00 AM	0	0	0	0	0	8	0	0	0	0	0	0	0	8	0	0
09:15 AM	0	0	0	0	0	9	0	0	0	0	0	0	0	6	0	0
09:30 AM	0	0	0	0	0	11	0	0	0	0	0	0	0	11	0	0
09:45 AM	1	0	0	0	0	9	0	0	0	0	0	0	0	8	0	0
10:00 AM	0	0	0	0	0	7	0	0	0	0	0	0	0	8	0	0
10:15 AM	0	0	0	0	0	7	0	0	0	0	0	0	0	15	0	0
10:30 AM	0	0	0	0	1	10	0	0	0	0	0	0	0	6	0	0
10:45 AM	1	0	0	0	0	10	0	0	0	0	0	0	0	9	0	0
11:00 AM	0	0	0	0	0	7	0	0	0	0	0	0	0	13	0	0
11:15 AM	0	0	0	0	0	10	0	0	0	0	0	0	0	10	0	0
11:30 AM	0	0	0	0	0	12	0	0	0	0	0	0	0	11	0	0
11:45 AM	0	0	0	0	0	8	0	0	0	0	0	0	0	5	0	0
12:00 PM	0	0	0	0	0	12	0	0	0	0	0	0	0	12	0	0
12:15 PM	0	0	0	0	0	12	0	0	0	0	0	0	0	8	0	0
12:30 PM	0	0	0	0	0	9	0	0	0	0	0	0	0	14	0	0
12:45 PM	0	0	0	0	0	7	0	0	0	0	0	0	0	15	0	0
01:00 PM	0	0	0	0	0	10	0	0	0	0	0	0	0	14	0	0
01:15 PM	0	0	1	0	0	6	0	0	0	0	0	0	0	5	0	0
01:30 PM	1	0	0	0	0	6	0	0	0	0	0	0	0	11	0	0
01:45 PM	0	0	0	0	0	10	0	0	0	0	0	0	0	5	0	0
02:00 PM	0	0	0	0	1	11	0	0	0	0	0	0	0	3	0	0
02:15 PM	0	0	0	0	0	7	0	0	0	0	0	0	0	12	0	0
02:30 PM	0	0	0	0	0	4	0	0	0	0	0	0	0	7	0	0
02:45 PM	0	0	0	0	0	8	0	0	0	0	0	0	0	5	0	0
03:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	6	0	0
03:15 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	4	0	0
03:30 PM	0	0	0	0	1	3	0	0	0	0	0	0	0	4	0	0
03:45 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	4	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
04:15 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	4	0	0
04:30 PM	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
07:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	6	0	2	0	4	293	0	0	0	0	0	0	0	353	2	0



Location: Brewster Creek Blvd -- Stearns Rd
 Date: 9/15/2020
 Site Code: 15277801 - STANDARD HEAVY VEHICLES

Start Time	Brewster Creek Blvd Southbound				Stearns Rd Westbound				Harrier Lake Parking Lot Northbound				Brewster Creek Blvd Eastbound			
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns
06:00 AM	0	0	5	0	1	1	0	0	0	0	0	0	0	8	0	0
06:15 AM	0	0	1	0	2	2	0	0	0	0	0	0	0	12	0	0
06:30 AM	0	0	0	0	2	2	0	0	0	0	0	0	0	12	0	0
06:45 AM	0	0	0	0	1	6	0	0	0	0	0	0	0	15	1	0
07:00 AM	1	0	0	0	0	6	0	0	0	0	0	0	0	9	2	0
07:15 AM	2	0	0	0	2	8	0	0	0	0	0	0	0	9	2	0
07:30 AM	4	0	1	0	2	6	0	0	0	0	0	0	0	14	0	0
07:45 AM	1	0	1	0	1	2	0	0	0	0	0	0	0	8	3	0
08:00 AM	3	0	4	0	1	4	0	0	0	0	0	0	0	15	1	0
08:15 AM	1	0	1	0	6	1	0	0	0	0	0	0	0	8	1	0
08:30 AM	1	0	2	0	3	5	0	0	0	0	0	0	0	6	1	0
08:45 AM	1	0	3	0	1	11	0	0	0	0	0	0	0	7	3	0
09:00 AM	3	0	2	0	2	8	0	0	0	0	0	0	0	3	1	0
09:15 AM	2	0	2	0	5	12	0	0	0	0	0	0	0	12	1	0
09:30 AM	1	0	4	0	2	14	0	0	0	0	0	0	0	7	1	0
09:45 AM	1	0	6	0	2	8	0	0	0	0	0	0	0	11	0	0
10:00 AM	1	0	6	0	3	7	0	0	0	0	0	0	0	11	1	0
10:15 AM	1	0	8	0	1	7	0	0	0	0	0	0	0	11	2	0
10:30 AM	0	0	2	0	3	8	0	0	0	0	0	0	1	10	4	0
10:45 AM	2	0	6	0	6	7	0	0	0	0	0	0	0	11	0	0
11:00 AM	1	0	2	0	3	8	0	0	0	0	0	0	0	7	3	0
11:15 AM	5	0	3	0	6	5	0	0	0	0	0	0	0	10	4	0
11:30 AM	0	0	6	0	3	5	0	0	0	0	0	0	0	9	1	0
11:45 AM	2	0	4	0	6	11	0	0	0	0	1	0	0	8	0	0
12:00 PM	2	0	3	0	2	6	0	0	0	0	0	0	0	12	3	0
12:15 PM	0	0	1	0	3	13	0	0	0	0	0	0	0	6	1	0
12:30 PM	0	0	1	0	2	14	0	0	0	0	0	0	0	6	1	0
12:45 PM	2	0	2	0	1	6	0	0	0	0	0	0	0	7	1	0
01:00 PM	5	0	2	0	5	7	0	0	0	0	0	0	0	5	4	0
01:15 PM	1	0	3	0	0	3	0	0	0	0	0	0	0	5	3	0
01:30 PM	0	0	4	0	3	6	0	0	0	0	0	0	0	3	3	0
01:45 PM	1	0	5	0	2	8	0	0	0	0	0	0	0	9	3	0
02:00 PM	1	0	1	0	3	8	0	0	0	0	0	0	0	8	1	0
02:15 PM	4	0	2	0	3	10	0	0	0	0	0	0	0	9	1	0
02:30 PM	0	0	1	0	3	8	0	0	0	0	0	0	0	5	1	0
02:45 PM	2	0	1	0	0	6	0	0	0	0	0	0	0	7	2	0
03:00 PM	1	0	3	0	2	6	0	0	0	0	0	0	0	6	0	0
03:15 PM	1	0	2	0	2	9	0	0	0	0	0	0	0	7	1	0
03:30 PM	1	0	1	0	1	5	0	0	0	0	0	0	0	2	2	0
03:45 PM	0	0	1	0	1	9	0	0	0	0	0	0	0	3	0	0
04:00 PM	3	0	2	0	1	15	0	0	0	0	0	0	0	6	2	0
04:15 PM	1	0	0	0	2	11	0	0	0	0	0	0	0	4	1	0
04:30 PM	0	0	0	0	1	20	0	0	0	0	0	0	0	4	0	0
04:45 PM	0	0	0	0	1	13	0	0	0	0	0	0	0	5	3	0
05:00 PM	1	0	3	0	2	5	0	0	0	0	0	0	0	2	0	0
05:15 PM	0	0	1	0	1	9	0	0	0	0	0	0	0	3	1	0
05:30 PM	0	0	2	0	2	5	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	1	0	0	3	0	0	0	0	0	0	0	3	1	0
06:00 PM	0	0	1	0	2	2	0	0	0	0	0	0	0	5	1	0
06:15 PM	0	0	0	0	1	1	0	0	0	0	0	0	0	2	0	0
06:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0
06:45 PM	0	0	1	0	3	4	0	0	0	0	0	0	0	4	0	0
07:00 PM	0	0	0	0	0	7	0	0	0	0	0	0	0	2	0	0
07:15 PM	0	0	1	0	1	5	0	0	0	0	0	0	0	3	0	0
07:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	3	0	0
07:45 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0
Total	59	0	114	0	114	382	0	0	0	0	1	0	1	382	68	0



Location: Brewster Creek Blvd – Stearns Rd

Date: 9/15/2020

Site Code: 15277801 - BIKES AND PEDS

Start Time	Brewster Creek Blvd Southbound				Stearns Rd Westbound				Harrier Lake Parking Lot Northbound				Brewster Creek Blvd Eastbound			
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	1	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
10:15 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
12:45 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0
05:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
05:45 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0
06:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	7	0	1	0	0	9	0	0	0	0	0	0	0	25	5	0



Location: Brewster Creek Blvd – Stearns Rd
 Date: 9/15/2020
 Site Code: 15277801

TOTAL EXISTING TRIP BREAKDOWN								
Start Time	Inbound Trips				Outbound Trips			
	PC	Con	HV	Total	PC	Con	HV	Total
06:00 AM	90	2	7	99	39	0	6	45
07:00 AM	173	0	12	185	33	0	10	43
08:00 AM	83	1	17	101	33	2	16	51
09:00 AM	60	0	14	74	35	1	21	57
10:00 AM	42	1	20	63	39	1	26	66
11:00 AM	37	0	26	63	44	0	23	67
12:00 PM	74	0	14	88	93	0	11	104
01:00 PM	76	0	23	99	73	2	21	96
02:00 PM	68	1	14	83	140	0	12	152
03:00 PM	67	1	9	77	96	1	10	107
04:00 PM	50	0	11	61	147	1	6	154
05:00 PM	34	0	7	41	135	0	8	143
06:00 PM	35	0	7	42	63	0	2	65
07:00 PM	28	0	1	29	31	0	1	32
Total	917	6	182	1105	1001	8	173	1182

TOTAL TRIPS																
Start Time	Brewster Creek Blvd Southbound				Stearns Rd Westbound				Harrier Lake Parking Lot Northbound				Brewster Creek Blvd Eastbound			
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns
06:00 AM	28	0	17	0	59	432	0	0	0	0	1	0	2	734	40	0
07:00 AM	25	0	18	0	96	593	3	0	1	0	2	0	1	928	89	0
08:00 AM	24	0	27	0	51	502	1	1	1	0	1	0	1	721	50	0
09:00 AM	23	1	33	0	47	420	2	1	5	1	1	0	4	518	26	0
10:00 AM	19	0	47	0	34	388	3	0	1	0	0	0	2	459	29	0
11:00 AM	26	1	40	0	39	421	2	0	2	1	2	0	1	448	23	1
12:00 PM	41	2	61	0	54	508	6	0	8	2	0	0	1	541	32	0
01:00 PM	46	0	50	0	46	533	6	0	4	3	2	0	2	528	50	0
02:00 PM	76	0	76	0	53	617	1	1	1	0	1	0	0	569	30	0
03:00 PM	61	0	45	1	45	823	4	0	3	0	2	0	2	712	32	0
04:00 PM	98	0	56	0	30	1037	2	0	1	0	2	0	0	811	31	0
05:00 PM	90	2	51	0	22	1044	3	1	1	0	0	0	1	690	19	0
06:00 PM	21	0	44	0	33	650	2	0	7	0	2	0	4	474	9	0
07:00 PM	15	0	17	0	15	452	1	0	4	0	2	0	1	462	14	0
Total	593	6	582	1	624	8420	36	4	39	7	18	0	22	8595	474	1

PASSENGER CARS

Start Time	Brewster Creek Blvd Southbound				Stearns Rd Westbound				Harrier Lake Parking Lot Northbound				Brewster Creek Blvd Eastbound			
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns
06:00 AM	28	0	11	0	52	416	0	0	0	0	1	0	2	646	38	0
07:00 AM	17	0	16	0	91	538	3	0	1	0	2	0	1	868	82	0
08:00 AM	16	0	17	0	40	454	1	1	1	0	1	0	1	640	43	0
09:00 AM	15	1	19	0	36	341	2	1	5	1	1	0	4	452	23	0
10:00 AM	14	0	25	0	20	325	3	0	1	0	0	0	1	378	22	0
11:00 AM	18	1	25	0	21	355	2	0	2	1	1	0	1	375	15	1
12:00 PM	37	2	54	0	46	429	6	0	8	2	0	0	1	461	26	0
01:00 PM	38	0	35	0	36	477	6	0	4	3	2	0	2	471	37	0
02:00 PM	69	0	71	0	43	555	1	1	1	0	1	0	0	513	25	0
03:00 PM	57	0	38	1	38	786	4	0	3	0	2	0	2	676	29	0
04:00 PM	94	0	53	0	25	972	2	0	1	0	2	0	0	785	25	0
05:00 PM	89	2	44	0	17	1020	3	1	1	0	0	0	0	682	17	0
06:00 PM	21	0	42	0	27	640	2	0	7	0	2	0	4	461	8	0
07:00 PM	15	0	16	0	14	437	1	0	4	0	2	0	1	452	14	0
Total	528	6	466	1	506	7745	36	4	39	7	17	0	21	7860	404	1

CONSTRUCTION VEHICLES

Start Time	Brewster Creek Blvd Southbound				Stearns Rd Westbound				Harrier Lake Parking Lot Northbound				Brewster Creek Blvd Eastbound			
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns
06:00 AM	0	0	0	0	1	5	0	0	0	0	0	0	0	41	1	0
07:00 AM	0	0	0	0	0	33	0	0	0	0	0	0	0	20	0	0
08:00 AM	2	0	0	0	0	27	0	0	0	0	0	0	0	45	1	0
09:00 AM	1	0	0	0	0	37	0	0	0	0	0	0	0	33	0	0
10:00 AM	1	0	0	0	1	34	0	0	0	0	0	0	0	38	0	0
11:00 AM	0	0	0	0	0	37	0	0	0	0	0	0	0	39	0	0
12:00 PM	0	0	0	0	0	40	0	0	0	0	0	0	0	49	0	0
01:00 PM	1	0	1	0	0	32	0	0	0	0	0	0	0	35	0	0
02:00 PM	0	0	0	0	1	30	0	0	0	0	0	0	0	27	0	0
03:00 PM	1	0	0	0	1	8	0	0	0	0	0	0	0	18	0	0
04:00 PM	0	0	1	0	0	6	0	0	0	0	0	0	0	7	0	0
05:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
06:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Total	6	0	2	0	4	293	0	0	0	0	0	0	0	353	2	0

HEAVY VEHICLES

Start Time	Brewster Creek Blvd Southbound				Stearns Rd Westbound				Harrier Lake Parking Lot Northbound				Brewster Creek Blvd Eastbound			
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns
06:00 AM	0	0	6	0	6	11	0	0	0	0	0	0	0	47	1	0
07:00 AM	8	0	2	0	5	22	0	0	0	0	0	0	0	40	7	0
08:00 AM	6	0	10	0	11	21	0	0	0	0	0	0	0	36	6	0
09:00 AM	7	0	14	0	11	42	0	0	0	0	0	0	0	33	3	0
10:00 AM	4	0	22	0	13	29	0	0	0	0	0	0	1	43	7	0
11:00 AM	8	0	15	0	18	29	0	0	0	0	1	0	0	34	8	0
12:00 PM	4	0	7	0	8	39	0	0	0	0	0	0	0	31	6	0
01:00 PM	7	0	14	0	10	24	0	0	0	0	0	0	0	22	13	0
02:00 PM	7	0	5	0	9	32	0	0	0	0	0	0	0	29	5	0
03:00 PM	3	0	7	0	6	29	0	0	0	0	0	0	0	18	3	0
04:00 PM	4	0	2	0	5	59	0	0	0	0	0	0	0	19	6	0
05:00 PM	1	0	7	0	5	22	0	0	0	0	0	0	0	8	2	0
06:00 PM	0	0	2	0	6	8	0	0	0	0	0	0	0	13	1	0
07:00 PM	0	0	1	0	1	15	0	0	0	0	0	0	0	9	0	0
Total	59	0	114	0	114	382	0	0	0	0	1	0	1	382	68	0

U4	TOTAL VEHICLES																	PHF	
	Brewster Creek Blvd Southbound				Stearns Rd Westbound				Harrier Lake Parking Lot Northbound				Brewster Creek Blvd Eastbound						
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns			
AM Peak	28	0	25	0	100	589	3	0	2	0	1	0	2	947	87	0	0.903	1784	
PM Peak	97	2	54	0	26	1055	0	0	1	0	1	0	0	821	25	0	0.938	2082	

TOTAL TRUCK PERCENTAGE (Construction + Standard)																	
	Southbound				Westbound				Northbound				Eastbound				
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	
AM Peak	36%	0%	24%	0%	6%	10%	0%	0%	0%	0%	0%	0%	0%	7%	8%	0%	
PM Peak	2%	0%	7%	0%	23%	5%	0%	0%	0%	0%	0%	0%	0%	3%	16%	0%	

Construction Vehicles																
	Southbound				Westbound				Northbound				Eastbound			
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns
AM Peak	0	0	0	0	0	36	0	0	0	0	0	0	0	23	1	0
PM Peak	0	0	1	0	0	6	0	0	0	0	0	0	0	6	0	0

Standard Heavy Vehicles																
	Southbound				Westbound				Northbound				Eastbound			
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns
AM Peak	10	0	6	0	6	20	0	0	0	0	0	0	0	46	6	0
PM Peak	2	0	3	0	6	49	0	0	0	0	0	0	0	15	4	0

TOTAL HEAVY VEHICLES																
	Southbound				Westbound				Northbound				Eastbound			
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns
AM Peak	10	0	6	0	6	56	0	0	0	0	0	0	0	69	7	0
PM Peak	2	0	4	0	6	55	0	0	0	0	0	0	0	21	4	0

Pedestrians																
	Southbound				Westbound				Northbound				Eastbound			
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns
AM Peak	1	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0
PM Peak	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0



Location: Munger Rd -- Stearns Rd

Date: 9/15/2020

Site Code: 15277802 - ALL VEHICLES

Start Time	Munger Rd Southbound				Stearns Rd Westbound				Munger Rd Northbound				Brewster Creek Blvd Eastbound			
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns
06:00 AM	16	38	36	0	21	55	2	0	3	19	12	0	18	106	21	0
06:15 AM	24	52	18	0	17	74	1	0	1	14	15	0	22	131	26	0
06:30 AM	39	34	26	0	25	91	3	0	4	12	31	0	26	135	24	0
06:45 AM	22	44	16	0	32	83	0	0	7	31	23	0	23	167	37	0
07:00 AM	33	30	30	0	16	84	2	0	2	32	16	0	28	148	24	0
07:15 AM	27	27	30	0	26	128	3	0	4	22	25	0	26	181	46	0
07:30 AM	29	32	27	0	33	108	0	0	5	35	27	0	22	176	50	0
07:45 AM	33	34	24	0	47	133	4	0	6	37	31	0	28	174	47	0
08:00 AM	27	22	25	0	28	88	1	0	9	27	23	0	27	167	40	0
08:15 AM	27	28	36	0	22	95	3	0	4	25	21	0	20	148	39	0
08:30 AM	25	18	22	0	32	111	1	0	3	12	9	0	15	117	32	0
08:45 AM	25	15	30	0	29	84	0	0	6	14	11	0	6	118	25	0
09:00 AM	23	14	16	0	35	71	5	0	4	8	15	0	13	95	17	0
09:15 AM	16	11	32	0	25	83	1	0	6	11	13	0	11	119	24	0
09:30 AM	21	23	33	0	27	93	5	0	4	13	19	0	11	101	22	0
09:45 AM	18	10	29	0	22	90	4	0	3	11	6	0	14	108	20	0
10:00 AM	16	20	28	0	32	77	2	0	2	6	13	0	10	87	20	0
10:15 AM	19	15	30	0	25	83	3	0	2	8	6	0	10	93	22	0
10:30 AM	22	10	34	0	20	78	5	0	1	11	9	0	11	100	15	0
10:45 AM	15	19	29	0	30	83	1	0	2	14	9	0	7	102	20	0
11:00 AM	15	16	39	0	32	75	3	0	2	14	10	0	9	93	24	0
11:15 AM	14	16	38	0	25	93	1	0	1	12	11	0	10	88	25	1
11:30 AM	32	21	34	0	39	80	2	0	6	16	9	0	10	105	20	0
11:45 AM	30	19	44	0	38	74	2	0	4	12	15	0	10	91	15	0
12:00 PM	24	13	70	0	48	97	4	0	5	6	12	0	13	142	23	0
12:15 PM	30	16	48	0	43	115	3	0	2	18	18	0	13	102	28	0
12:30 PM	28	19	34	0	43	101	5	0	2	14	18	0	7	104	24	0
12:45 PM	20	22	30	0	48	89	0	0	3	22	12	0	14	114	19	0
01:00 PM	33	19	27	0	44	105	5	0	3	19	13	0	11	103	21	0
01:15 PM	27	24	38	0	47	94	4	0	1	19	8	0	12	109	25	0
01:30 PM	38	22	31	0	37	115	6	0	4	25	22	0	18	97	20	0
01:45 PM	17	30	28	0	36	99	2	0	3	26	16	0	13	128	22	0
02:00 PM	28	32	50	0	30	96	7	0	2	17	15	0	24	93	22	0
02:15 PM	32	29	32	0	35	120	2	0	7	34	22	0	15	136	29	0
02:30 PM	32	31	44	0	23	112	3	0	6	37	25	0	17	146	19	0
02:45 PM	40	26	36	0	39	136	5	0	4	27	21	0	13	108	27	0
03:00 PM	33	32	49	0	37	126	3	0	2	16	30	0	10	129	29	0
03:15 PM	34	35	35	0	40	140	9	0	3	47	29	0	19	148	42	0
03:30 PM	37	37	69	0	38	142	4	0	5	34	33	0	22	144	22	0
03:45 PM	44	24	41	0	42	169	4	0	4	67	45	0	15	147	31	0
04:00 PM	36	55	65	1	28	189	4	0	3	43	41	0	20	143	29	0
04:15 PM	43	42	53	0	35	181	2	0	5	37	31	0	34	149	49	0
04:30 PM	60	54	60	0	30	209	4	0	0	32	26	0	15	171	37	0
04:45 PM	37	38	57	0	35	172	5	0	10	44	35	0	29	145	45	0
05:00 PM	57	46	66	0	38	181	10	0	6	52	42	0	20	144	40	0
05:15 PM	49	30	48	0	29	181	9	0	8	30	56	0	14	146	30	0
05:30 PM	49	42	66	0	27	150	4	0	2	40	44	0	20	147	44	0
05:45 PM	32	22	26	0	39	181	4	0	5	36	44	0	25	108	28	0
06:00 PM	28	28	29	0	33	133	6	0	3	26	32	0	23	116	30	0
06:15 PM	32	23	28	0	34	130	3	0	4	27	28	0	16	97	29	0
06:30 PM	24	27	31	0	26	107	1	0	7	23	26	0	11	68	19	0
06:45 PM	17	19	31	0	26	124	5	0	5	26	19	0	9	84	16	0
07:00 PM	14	16	23	0	25	97	2	0	1	20	14	0	15	86	17	0
07:15 PM	29	13	21	0	25	86	4	0	3	16	12	0	13	89	26	0
07:30 PM	26	13	15	0	29	81	3	0	5	13	14	0	8	96	21	0
07:45 PM	8	15	10	0	21	67	0	0	0	15	17	0	6	91	19	0
Total	1606	1462	1997	1	1788	6239	186	0	214	1324	1199	0	901	6780	1537	1

Peak Hour: 4:15 PM - 5:15 PM
 Peak 15: 5:00 PM - 5:15 PM
 PHF: 0.966168



Location: Munger Rd -- Stearns Rd

Date: 9/15/2020

Site Code: 15277802 - PASSENGER VEHICLES

Start Time	Munger Rd Southbound				Stearns Rd Westbound				Munger Rd Northbound				Brewster Creek Blvd Eastbound			
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns
06:00 AM	16	38	34	0	19	50	2	0	3	19	12	0	17	87	20	0
06:15 AM	24	49	16	0	17	72	0	0	1	14	15	0	21	107	25	0
06:30 AM	38	34	19	0	21	85	3	0	4	12	31	0	26	109	24	0
06:45 AM	20	40	13	0	31	77	0	0	7	30	23	0	23	146	31	0
07:00 AM	33	30	16	0	14	75	2	0	2	31	16	0	28	139	22	0
07:15 AM	26	27	23	0	24	113	3	0	4	21	25	0	25	167	46	0
07:30 AM	27	30	19	0	31	95	0	0	5	34	27	0	22	160	45	0
07:45 AM	29	32	21	0	44	117	4	0	6	37	31	0	28	161	45	0
08:00 AM	22	21	23	0	25	82	1	0	9	27	22	0	27	142	38	0
08:15 AM	23	28	26	0	17	84	2	0	3	24	21	0	20	130	36	0
08:30 AM	23	18	17	0	27	100	1	0	3	12	9	0	15	99	30	0
08:45 AM	20	12	18	0	19	72	0	0	6	13	10	0	6	100	23	0
09:00 AM	20	14	13	0	22	57	4	0	3	7	14	0	13	86	14	0
09:15 AM	13	11	25	0	22	60	1	0	6	8	12	0	10	102	20	0
09:30 AM	16	21	24	0	23	73	5	0	4	12	18	0	11	80	22	0
09:45 AM	14	10	24	0	16	77	4	0	3	10	5	0	12	89	16	0
10:00 AM	10	20	22	0	25	66	2	0	2	6	13	0	10	65	15	0
10:15 AM	15	15	18	0	18	72	3	0	2	8	6	0	9	63	20	0
10:30 AM	18	7	29	0	15	61	5	0	1	11	9	0	10	86	12	0
10:45 AM	11	18	22	0	21	63	1	0	2	12	9	0	7	84	16	0
11:00 AM	12	16	31	0	29	62	3	0	2	12	9	0	9	76	19	0
11:15 AM	11	15	29	0	20	77	1	0	1	12	10	0	9	69	21	1
11:30 AM	27	21	32	0	30	65	2	0	6	13	8	0	9	84	17	0
11:45 AM	23	17	39	0	34	57	2	0	4	12	14	0	10	73	14	0
12:00 PM	19	12	65	0	45	81	4	0	5	6	12	0	13	122	17	0
12:15 PM	27	14	39	0	37	94	3	0	2	18	17	0	13	90	26	0
12:30 PM	26	19	30	0	34	77	5	0	2	14	18	0	7	82	21	0
12:45 PM	20	20	24	0	44	76	0	0	3	21	12	0	14	93	17	0
01:00 PM	24	17	23	0	39	92	5	0	3	18	12	0	11	85	19	0
01:15 PM	24	22	32	0	40	89	4	0	1	18	8	0	12	94	25	0
01:30 PM	35	21	24	0	32	103	6	0	4	24	22	0	17	83	17	0
01:45 PM	15	29	26	0	29	80	2	0	3	24	15	0	13	115	17	0
02:00 PM	22	31	46	0	27	81	7	0	2	16	15	0	23	83	20	0
02:15 PM	30	28	26	0	27	103	2	0	7	32	22	0	14	118	28	0
02:30 PM	30	31	41	0	18	99	3	0	6	36	25	0	16	132	17	0
02:45 PM	35	25	33	0	30	128	4	0	4	27	21	0	13	100	24	0
03:00 PM	32	32	43	0	32	118	2	0	2	15	30	0	10	112	29	0
03:15 PM	29	34	33	0	33	133	9	0	3	46	29	0	19	136	41	0
03:30 PM	34	37	65	0	32	135	3	0	5	34	33	0	22	137	21	0
03:45 PM	41	23	36	0	38	158	4	0	4	67	45	0	15	142	29	0
04:00 PM	31	55	62	1	26	182	4	0	3	40	41	0	18	137	29	0
04:15 PM	40	40	53	0	32	169	2	0	5	36	31	0	34	142	49	0
04:30 PM	54	53	57	0	28	195	4	0	0	32	25	0	15	165	37	0
04:45 PM	31	37	57	0	34	162	5	0	10	43	35	0	29	139	44	0
05:00 PM	57	46	65	0	35	175	10	0	6	50	42	0	20	142	39	0
05:15 PM	48	30	46	0	26	173	9	0	8	30	54	0	14	141	29	0
05:30 PM	44	42	65	0	27	148	4	0	2	38	43	0	20	145	44	0
05:45 PM	32	21	25	0	34	179	4	0	5	36	43	0	25	105	27	0
06:00 PM	28	28	28	0	31	131	6	0	3	26	32	0	23	112	30	0
06:15 PM	31	23	25	0	33	130	3	0	4	27	27	0	16	94	29	0
06:30 PM	23	26	28	0	26	105	1	0	7	22	26	0	11	66	19	0
06:45 PM	16	19	29	0	25	119	5	0	5	26	18	0	9	80	15	0
07:00 PM	13	16	22	0	24	91	2	0	1	20	14	0	15	85	17	0
07:15 PM	29	12	20	0	22	80	4	0	3	16	12	0	13	86	26	0
07:30 PM	26	13	15	0	29	80	3	0	5	13	14	0	8	94	21	0
07:45 PM	8	15	10	0	21	65	0	0	0	15	17	0	6	91	19	0
Total	1445	1415	1746	1	1554	5643	180	0	212	1283	1179	0	885	6052	1433	1



Location: Munger Rd -- Stearns Rd

Date: 9/15/2020

Site Code: 15277802 - CONSTRUCTION VEHICLES

Start Time	Munger Rd Southbound				Stearns Rd Westbound				Munger Rd Northbound				Brewster Creek Blvd Eastbound			
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns
06:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	1	6	0	0
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0
06:30 AM	0	0	0	0	1	3	0	0	0	0	0	0	0	15	0	0
06:45 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	9	1	0
07:00 AM	0	0	1	0	0	2	0	0	0	0	0	0	0	2	2	0
07:15 AM	0	0	0	0	1	3	0	0	0	0	0	0	0	4	0	0
07:30 AM	2	0	1	0	0	10	0	0	0	0	0	0	0	6	0	0
07:45 AM	4	0	0	0	1	13	0	0	0	0	0	0	0	6	1	0
08:00 AM	4	0	0	0	2	3	0	0	0	0	0	0	0	9	0	0
08:15 AM	4	0	5	0	0	5	0	0	0	0	0	0	0	11	1	0
08:30 AM	2	0	1	0	0	3	0	0	0	0	0	0	0	11	2	0
08:45 AM	0	0	1	0	1	6	0	0	0	1	0	0	0	11	1	0
09:00 AM	0	0	2	0	1	7	0	0	0	0	0	0	0	4	3	0
09:15 AM	0	0	1	0	0	8	0	0	0	0	0	0	0	6	1	0
09:30 AM	3	0	1	0	0	8	0	0	0	0	0	0	0	9	0	0
09:45 AM	2	0	0	0	1	7	0	0	0	0	0	0	0	8	2	0
10:00 AM	5	0	2	0	0	3	0	0	0	0	0	0	0	7	3	0
10:15 AM	2	0	0	0	1	6	0	0	0	0	0	0	0	14	0	0
10:30 AM	3	0	3	0	2	8	0	0	0	0	0	0	0	5	1	0
10:45 AM	3	0	1	0	0	9	0	0	0	0	0	0	0	7	2	0
11:00 AM	2	0	2	0	1	4	0	0	0	0	0	0	0	10	2	0
11:15 AM	2	0	3	0	0	7	0	0	0	0	0	0	0	11	2	0
11:30 AM	4	0	1	0	0	8	0	0	0	0	0	0	1	9	1	0
11:45 AM	5	1	0	0	1	4	0	0	0	0	0	0	0	5	0	0
12:00 PM	4	1	0	0	1	10	0	0	0	0	0	0	0	10	1	0
12:15 PM	1	0	1	0	1	9	0	0	0	0	0	0	0	7	0	0
12:30 PM	1	0	1	0	1	10	0	0	0	0	0	0	0	15	2	0
12:45 PM	0	0	2	0	0	6	0	0	0	0	0	0	0	14	2	0
01:00 PM	8	1	2	0	1	7	0	0	0	0	0	0	0	14	1	0
01:15 PM	2	0	0	0	0	5	0	0	0	1	0	0	0	9	0	0
01:30 PM	3	0	2	0	0	3	0	0	0	0	0	0	0	10	2	0
01:45 PM	0	0	0	0	3	10	0	0	0	0	1	0	0	4	3	0
02:00 PM	5	0	1	0	0	10	0	0	0	0	0	0	0	4	1	0
02:15 PM	2	0	0	0	2	9	0	0	0	0	0	0	0	12	1	0
02:30 PM	2	0	0	0	0	3	0	0	0	0	0	0	0	5	2	0
02:45 PM	3	1	0	0	1	5	1	0	0	0	0	0	0	5	1	0
03:00 PM	1	0	0	0	0	4	0	0	0	1	0	0	0	10	0	0
03:15 PM	3	0	1	0	0	2	0	0	0	0	0	0	0	4	1	0
03:30 PM	2	0	2	0	1	3	0	0	0	0	0	0	0	4	1	0
03:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	4	1	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
04:15 PM	1	2	0	0	1	2	0	0	0	0	0	0	0	4	0	0
04:30 PM	0	0	0	0	1	2	0	0	0	0	0	0	0	2	0	0
04:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0
05:00 PM	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0
05:15 PM	0	0	0	0	2	1	0	0	0	0	1	0	0	1	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	86	8	38	0	30	234	1	0	0	4	2	0	2	338	45	0



Location: Munger Rd -- Stearns Rd

Date: 9/15/2020

Site Code: 15277802 - STANDARD HEAVY VEHICLES

Start Time	Munger Rd Southbound				Stearns Rd Westbound				Munger Rd Northbound				Brewster Creek Blvd Eastbound			
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns
06:00 AM	0	0	2	0	2	4	0	0	0	0	0	0	0	13	1	0
06:15 AM	0	3	2	0	0	2	1	0	0	0	0	0	1	13	1	0
06:30 AM	1	0	7	0	3	3	0	0	0	0	0	0	11	0	0	
06:45 AM	2	4	3	0	1	4	0	0	0	1	0	0	12	5	0	
07:00 AM	0	0	13	0	2	7	0	0	0	1	0	0	7	0	0	
07:15 AM	1	0	7	0	1	12	0	0	0	1	0	0	10	0	0	
07:30 AM	0	2	7	0	2	3	0	0	0	1	0	0	10	5	0	
07:45 AM	0	2	3	0	2	3	0	0	0	0	0	0	7	1	0	
08:00 AM	1	1	2	0	1	3	0	0	0	1	1	0	16	2	0	
08:15 AM	0	0	5	0	5	6	1	0	1	1	0	0	7	2	0	
08:30 AM	0	0	4	0	5	8	0	0	0	0	0	0	7	0	0	
08:45 AM	5	3	11	0	9	6	0	0	0	1	0	0	7	1	0	
09:00 AM	3	0	1	0	12	7	1	0	1	1	1	0	5	0	0	
09:15 AM	3	0	6	0	3	15	0	0	0	3	1	0	11	3	0	
09:30 AM	2	2	8	0	4	12	0	0	0	1	1	0	12	0	0	
09:45 AM	2	0	5	0	5	6	0	0	0	1	1	0	11	2	0	
10:00 AM	1	0	4	0	7	8	0	0	0	0	0	0	15	2	0	
10:15 AM	2	0	12	0	6	5	0	0	0	0	0	0	16	2	0	
10:30 AM	1	3	2	0	3	9	0	0	0	0	0	0	9	2	0	
10:45 AM	1	1	6	0	9	11	0	0	0	2	0	0	11	2	0	
11:00 AM	1	0	6	0	2	9	0	0	0	2	1	0	7	3	0	
11:15 AM	1	1	6	0	5	9	0	0	0	1	0	1	8	2	0	
11:30 AM	1	0	1	0	9	7	0	0	0	3	1	0	12	2	0	
11:45 AM	2	1	5	0	3	13	0	0	0	1	0	0	13	1	0	
12:00 PM	1	0	5	0	2	6	0	0	0	0	0	0	10	5	0	
12:15 PM	2	2	8	0	5	12	0	0	0	1	0	0	5	2	0	
12:30 PM	1	0	3	0	8	14	0	0	0	0	0	0	7	1	0	
12:45 PM	0	2	4	0	4	7	0	0	0	1	0	0	7	0	0	
01:00 PM	1	1	2	0	4	6	0	0	0	1	1	0	4	1	0	
01:15 PM	1	2	6	0	7	0	0	0	0	0	0	0	6	0	0	
01:30 PM	0	1	5	0	5	9	0	0	0	1	0	0	4	1	0	
01:45 PM	2	1	2	0	4	9	0	0	0	2	0	0	9	2	0	
02:00 PM	1	1	3	0	3	5	0	0	0	1	0	0	6	1	0	
02:15 PM	0	1	6	0	6	8	0	0	0	2	0	0	6	0	0	
02:30 PM	0	0	3	0	5	10	0	0	0	1	0	0	9	0	0	
02:45 PM	2	0	3	0	8	3	0	0	0	0	0	0	3	2	0	
03:00 PM	0	0	6	0	5	4	1	0	0	0	0	0	7	0	0	
03:15 PM	2	1	1	0	7	5	0	0	0	1	0	0	8	0	0	
03:30 PM	1	0	2	0	5	4	1	0	0	0	0	0	3	0	0	
03:45 PM	3	0	5	0	4	10	0	0	0	0	0	0	1	1	0	
04:00 PM	5	0	3	0	2	7	0	0	0	3	0	0	2	4	0	
04:15 PM	2	0	0	0	2	10	0	0	0	1	0	0	3	0	0	
04:30 PM	6	1	3	0	1	12	0	0	0	0	1	0	4	0	0	
04:45 PM	6	1	0	0	1	9	0	0	0	1	0	0	4	1	0	
05:00 PM	0	0	1	0	1	6	0	0	0	1	0	0	2	1	0	
05:15 PM	1	0	2	0	1	7	0	0	0	0	1	0	4	1	0	
05:30 PM	5	0	1	0	0	2	0	0	0	2	1	0	2	0	0	
05:45 PM	0	0	1	0	5	2	0	0	0	0	1	0	3	0	0	
06:00 PM	0	0	1	0	2	2	0	0	0	0	0	0	4	0	0	
06:15 PM	1	0	3	0	1	0	0	0	0	1	0	0	3	0	0	
06:30 PM	0	1	2	0	0	1	0	0	0	1	0	0	2	0	0	
06:45 PM	1	0	2	0	1	5	0	0	0	1	0	0	4	1	0	
07:00 PM	1	0	1	0	1	6	0	0	0	0	0	0	1	0	0	
07:15 PM	0	1	1	0	3	6	0	0	0	0	0	0	3	0	0	
07:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	2	0	0	
07:45 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	
Total	75	39	213	0	204	362	5	0	2	37	18	0	14	390	59	0



Quality Counts

DATA THAT DRIVES COMMUNITIES

Location: Munger Rd -- Stearns Rd

Date: 9/15/2020

Site Code: 15277802 - BIKES AND PEDS

Start Time	Munger Rd Southbound				Stearns Rd Westbound				Munger Rd Northbound				Brewster Creek Blvd Eastbound			
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 AM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
05:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0
06:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0
07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	4	0	3	0	5	0	3	0	2	4	2	16	1	2	3



Location: Munger Rd – Stearns Rd
 Date: 9/15/2020
 Site Code: 15277802

TOTAL EXISTING TRIP BREAKDOWN								
Start Time	Inbound Trips				Outbound Trips			
	PC	Con	HV	Total	PC	Con	HV	Total
06:00 AM	263	2	14	279	341	0	24	365
07:00 AM	394	5	16	415	313	8	35	356
08:00 AM	291	8	26	325	251	17	32	300
09:00 AM	192	8	35	235	205	9	32	246
10:00 AM	179	9	35	223	205	19	33	257
11:00 AM	233	7	32	272	273	20	25	318
12:00 PM	300	8	28	336	315	11	28	354
01:00 PM	302	11	28	341	292	18	24	334
02:00 PM	302	8	29	339	378	14	20	412
03:00 PM	417	5	23	445	439	10	21	470
04:00 PM	430	2	12	444	571	3	27	601
05:00 PM	415	6	12	433	521	1	11	533
06:00 PM	309	0	6	315	304	2	11	317
07:00 PM	243	0	4	247	199	0	4	203
Total	4270	79	300	4649	4607	132	327	5066

TOTAL TRIPS																
Start Time	Brewster Creek Blvd Southbound				Stearns Rd Westbound				Harrier Lake Parking Lot Northbound				Brewster Creek Blvd Eastbound			
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns
06:00 AM	101	168	96	0	95	303	6	0	15	76	81	0	89	539	108	0
07:00 AM	122	123	111	0	122	453	9	0	17	126	99	0	104	679	167	0
08:00 AM	104	83	113	0	111	378	5	0	22	78	64	0	68	550	136	0
09:00 AM	78	58	110	0	109	337	15	0	17	43	53	0	49	423	83	0
10:00 AM	72	64	121	0	107	321	11	0	7	39	37	0	38	382	77	0
11:00 AM	91	72	155	0	134	322	8	0	13	54	45	0	39	377	84	1
12:00 PM	102	70	182	0	182	402	12	0	12	60	60	0	47	462	94	0
01:00 PM	115	95	124	0	164	413	17	0	11	89	59	0	54	437	88	0
02:00 PM	132	118	162	0	127	464	17	0	19	115	83	0	69	483	97	0
03:00 PM	148	128	194	0	157	577	20	0	14	164	137	0	66	568	124	0
04:00 PM	176	189	235	1	128	751	15	0	18	156	133	0	98	608	160	0
05:00 PM	187	140	206	0	133	693	27	0	21	158	186	0	79	545	142	0
06:00 PM	101	97	119	0	119	494	15	0	19	102	105	0	59	365	94	0
07:00 PM	77	57	69	0	100	331	9	0	9	64	57	0	42	362	83	0
Total	1606	1462	1997	1	1788	6239	186	0	214	1324	1199	0	901	6780	1537	1

PASSENGER CARS

Start Time	Brewster Creek Blvd Southbound				Stearns Rd Westbound				Harrier Lake Parking Lot Northbound				Brewster Creek Blvd Eastbound			
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns
06:00 AM	98	161	82	0	88	284	5	0	15	75	81	0	87	449	100	0
07:00 AM	115	119	79	0	113	400	9	0	17	123	99	0	103	627	158	0
08:00 AM	88	79	84	0	88	338	4	0	21	76	62	0	68	471	127	0
09:00 AM	63	56	86	0	83	267	14	0	16	37	49	0	46	357	72	0
10:00 AM	54	60	91	0	79	262	11	0	7	37	37	0	36	298	63	0
11:00 AM	73	69	131	0	113	261	8	0	13	49	41	0	37	302	71	1
12:00 PM	92	65	158	0	160	328	12	0	12	59	59	0	47	387	81	0
01:00 PM	98	89	105	0	140	364	17	0	11	84	57	0	53	377	78	0
02:00 PM	117	115	146	0	102	411	16	0	19	111	83	0	66	433	89	0
03:00 PM	136	126	177	0	135	544	18	0	14	162	137	0	66	527	120	0
04:00 PM	156	185	229	1	120	708	15	0	18	151	132	0	96	583	159	0
05:00 PM	181	139	201	0	122	675	27	0	21	154	182	0	79	533	139	0
06:00 PM	98	96	110	0	115	485	15	0	19	101	103	0	59	352	93	0
07:00 PM	76	56	67	0	96	316	9	0	9	64	57	0	42	356	83	0
Total	1445	1415	1746	1	1554	5643	180	0	212	1283	1179	0	885	6052	1433	1

CONSTRUCTION VEHICLES

Start Time	Brewster Creek Blvd Southbound				Stearns Rd Westbound				Harrier Lake Parking Lot Northbound				Brewster Creek Blvd Eastbound			
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns
06:00 AM	0	0	0	0	1	6	0	0	0	0	0	0	1	41	1	0
07:00 AM	6	0	2	0	2	28	0	0	0	0	0	0	0	18	3	0
08:00 AM	10	0	7	0	3	17	0	0	0	1	0	0	0	42	4	0
09:00 AM	5	0	4	0	2	30	0	0	0	0	0	0	0	27	6	0
10:00 AM	13	0	6	0	3	26	0	0	0	0	0	0	0	33	6	0
11:00 AM	13	1	6	0	2	23	0	0	0	0	0	0	1	35	5	0
12:00 PM	6	1	4	0	3	35	0	0	0	0	0	0	0	46	5	0
01:00 PM	13	1	4	0	4	25	0	0	0	1	1	0	0	37	6	0
02:00 PM	12	1	1	0	3	27	1	0	0	0	0	0	0	26	5	0
03:00 PM	6	1	3	0	1	10	0	0	0	1	0	0	0	22	3	0
04:00 PM	1	2	0	0	2	5	0	0	0	0	0	0	0	10	0	0
05:00 PM	0	1	0	0	4	1	0	0	0	1	1	0	0	1	1	0
06:00 PM	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	86	8	38	0	30	234	1	0	0	4	2	0	2	338	45	0

HEAVY VEHICLES

Start Time	Brewster Creek Blvd Southbound				Stearns Rd Westbound				Harrier Lake Parking Lot Northbound				Brewster Creek Blvd Eastbound			
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns
06:00 AM	3	7	14	0	6	13	1	0	0	1	0	0	1	49	7	0
07:00 AM	1	4	30	0	7	25	0	0	0	3	0	0	1	34	6	0
08:00 AM	6	4	22	0	20	23	1	0	1	1	2	0	0	37	5	0
09:00 AM	10	2	20	0	24	40	1	0	1	6	4	0	3	39	5	0
10:00 AM	5	4	24	0	25	33	0	0	0	2	0	0	2	51	8	0
11:00 AM	5	2	18	0	19	38	0	0	0	5	4	0	1	40	8	0
12:00 PM	4	4	20	0	19	39	0	0	0	1	1	0	0	29	8	0
01:00 PM	4	5	15	0	20	24	0	0	0	4	1	0	1	23	4	0
02:00 PM	3	2	15	0	22	26	0	0	0	4	0	0	3	24	3	0
03:00 PM	6	1	14	0	21	23	2	0	0	1	0	0	0	19	1	0
04:00 PM	19	2	6	0	6	38	0	0	0	5	1	0	2	15	1	0
05:00 PM	6	0	5	0	7	17	0	0	0	3	3	0	0	11	2	0
06:00 PM	2	1	8	0	4	8	0	0	0	1	2	0	0	13	1	0
07:00 PM	1	1	2	0	4	15	0	0	0	0	0	0	0	6	0	0
Total	75	39	213	0	204	362	5	0	2	37	18	0	14	390	59	0

TOTAL VEHICLES																	
Munger Rd Southbound				Stearns Rd Westbound				Munger Rd Northbound				Brewster Creek Blvd Eastbound				PHF	
Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns		
AM Peak	116	115	106	0	134	457	8	0	24	121	105	0	103	698	183	0	0.908
PM Peak	197	180	236	0	138	743	21	0	21	165	134	0	98	609	171	0	0.966

2171
2713

TOTAL TRUCK PERCENTAGE (Construction + Standard)																
Southbound				Westbound				Northbound				Eastbound				
Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	
AM Peak	10%	4%	19%	0%	7%	11%	0%	0%	0%	2%	1%	0%	1%	10%	5%	0%
PM Peak	8%	2%	2%	0%	7%	6%	0%	0%	0%	2%	1%	0%	0%	3%	1%	0%

Construction Vehicles																
Southbound				Westbound				Northbound				Eastbound				
Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	
AM Peak	10	0	1	0	4	29	0	0	0	0	0	0	25	1	0	
PM Peak	1	2	0	0	4	5	0	0	0	1	0	0	8	0	0	

Standard Heavy Vehicles																
Southbound				Westbound				Northbound				Eastbound				
Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	
AM Peak	2	5	19	0	6	21	0	0	0	2	1	0	1	43	8	0
PM Peak	14	2	4	0	5	37	0	0	0	3	1	0	0	13	2	0

TOTAL HEAVY VEHICLES																
Southbound				Westbound				Northbound				Eastbound				
Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	
AM Peak	12	5	20	0	10	50	0	0	0	2	1	0	1	68	9	0
PM Peak	15	4	4	0	9	42	0	0	0	4	1	0	0	21	2	0

Pedestrians																
Southbound				Westbound				Northbound				Eastbound				
Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	
AM Peak	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
PM Peak	0	0	0	1	0	0	0	1	0	0	2	1	0	0	0	2



Location: Munger Rd -- Brewster Creek Blvd/Humbracht Cir

Date: 9/15/2020

Site Code: 15277804 - ALL VEHICLES

Start Time	Munger Rd Southbound				Humbracht Cir Westbound				Munger Rd Northbound				Brewster Creek Blvd Eastbound			
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns
06:00 AM	26	80	3	0	1	0	0	0	0	62	15	0	13	0	39	0
06:15 AM	18	94	8	0	1	0	0	0	1	60	6	0	6	0	10	0
06:30 AM	13	100	6	0	1	0	0	0	3	41	7	1	6	0	17	0
06:45 AM	28	82	10	1	2	0	0	0	1	63	6	0	6	0	8	0
07:00 AM	32	81	6	0	0	0	0	0	1	48	9	0	5	0	10	0
07:15 AM	28	97	7	0	3	1	0	0	0	62	7	0	4	0	8	0
07:30 AM	20	80	13	0	3	0	1	0	0	81	8	0	3	0	6	0
07:45 AM	33	90	17	0	4	0	0	0	2	75	14	0	7	0	10	0
08:00 AM	24	85	10	1	7	0	0	0	0	54	7	0	5	0	18	0
08:15 AM	20	79	4	1	2	0	1	0	0	60	6	0	5	0	18	0
08:30 AM	14	69	5	0	3	0	0	0	2	55	9	0	4	0	9	0
08:45 AM	22	56	2	0	2	0	0	0	0	44	10	0	2	0	11	0
09:00 AM	15	49	3	0	3	0	0	0	0	32	6	0	6	1	2	0
09:15 AM	13	53	4	0	4	0	1	0	0	42	9	0	5	0	10	0
09:30 AM	18	62	4	0	3	0	0	0	0	44	7	0	10	2	4	0
09:45 AM	13	45	2	1	3	1	0	0	0	40	2	0	6	0	6	0
10:00 AM	9	47	1	0	1	0	0	0	0	40	10	0	8	0	10	0
10:15 AM	16	53	1	0	7	2	0	0	0	46	3	0	9	1	6	0
10:30 AM	7	57	2	1	4	0	0	0	0	38	3	0	5	0	16	0
10:45 AM	11	49	0	0	0	0	0	0	0	40	8	0	7	0	6	0
11:00 AM	7	50	1	0	3	0	0	0	0	48	9	0	9	0	9	0
11:15 AM	9	46	3	1	1	0	1	0	0	55	4	0	8	0	7	0
11:30 AM	7	71	1	1	3	0	1	0	1	58	4	0	9	0	12	0
11:45 AM	16	69	4	0	6	2	0	0	4	59	9	0	6	0	6	0
12:00 PM	11	52	0	1	4	0	1	0	1	60	3	0	12	0	21	0
12:15 PM	12	67	2	1	3	0	0	0	1	55	8	0	6	0	15	0
12:30 PM	10	64	5	0	1	1	0	0	3	52	9	0	7	1	11	0
12:45 PM	18	61	1	0	1	0	0	0	0	63	4	0	7	1	9	0
01:00 PM	13	65	2	1	6	0	0	0	0	56	16	0	6	1	15	0
01:15 PM	25	79	4	0	10	0	0	0	1	61	12	0	5	1	20	0
01:30 PM	24	103	7	0	5	1	2	0	1	67	10	0	10	1	28	0
01:45 PM	33	84	5	0	3	1	0	0	0	58	12	0	6	0	22	0
02:00 PM	13	69	3	0	2	0	1	0	1	152	11	0	21	0	41	0
02:15 PM	17	73	2	0	1	0	0	0	2	90	5	1	9	0	19	0
02:30 PM	18	86	3	0	6	0	0	0	3	66	7	0	14	0	50	0
02:45 PM	20	81	4	0	8	0	0	0	0	77	4	0	13	0	20	0
03:00 PM	7	77	0	1	3	0	1	0	1	82	6	0	6	0	11	0
03:15 PM	12	96	0	0	3	1	2	0	2	104	5	0	8	1	12	0
03:30 PM	20	106	1	1	8	0	1	0	0	101	2	0	13	0	39	0
03:45 PM	11	106	0	0	2	0	3	0	0	126	8	0	5	0	20	0
04:00 PM	8	88	1	0	11	0	3	0	0	133	3	0	12	0	31	0
04:15 PM	6	93	1	0	4	0	0	0	1	129	5	0	19	1	29	0
04:30 PM	3	96	0	0	11	1	1	0	1	133	3	0	22	0	17	0
04:45 PM	10	101	0	0	3	0	0	0	1	137	5	0	10	0	17	0
05:00 PM	4	98	4	0	14	0	0	0	0	149	3	0	9	0	39	0
05:15 PM	6	103	1	0	7	1	0	0	0	90	5	0	5	0	24	0
05:30 PM	6	94	1	0	11	0	0	0	0	106	4	0	10	0	24	0
05:45 PM	7	70	0	1	2	0	0	0	1	116	4	0	6	0	11	0
06:00 PM	7	66	0	0	2	0	1	0	0	78	5	1	12	0	26	0
06:15 PM	4	61	1	0	3	0	0	0	1	79	8	0	8	0	3	0
06:30 PM	3	59	0	0	1	0	0	0	0	71	2	0	7	0	9	0
06:45 PM	5	57	0	1	0	0	0	0	0	63	2	0	6	0	8	0
07:00 PM	4	42	0	0	0	0	0	0	0	58	1	0	4	0	9	0
07:15 PM	2	57	0	0	0	0	0	0	0	68	3	0	3	0	5	0
07:30 PM	10	41	0	0	0	0	0	0	0	60	2	0	2	0	6	0
07:45 PM	17	30	0	0	0	0	0	0	0	48	5	0	0	0	2	0
Total	785	4069	165	14	202	12	21	0	36	4035	360	3	437	11	871	0

Peak Hour: 4:15 PM - 5:15 PM
 Peak 15: 5:00 PM - 5:15 PM
 PHF: 0.921875



Location: Munger Rd – Brewster Creek Blvd/Humbracht Cir

Date: 9/15/2020

Site Code: 15277804 - PASSENGER VEHICLES

Start Time	Munger Rd Southbound				Humbracht Cir Westbound				Munger Rd Northbound				Brewster Creek Blvd Eastbound			
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns
06:00 AM	25	76	2	0	0	0	0	0	0	58	14	0	13	0	36	0
06:15 AM	17	89	8	0	1	0	0	0	1	57	6	0	6	0	7	0
06:30 AM	10	97	6	0	1	0	0	0	3	39	7	1	5	0	13	0
06:45 AM	27	75	9	1	2	0	0	0	1	56	5	0	5	0	8	0
07:00 AM	26	73	6	0	0	0	0	0	1	45	6	0	5	0	6	0
07:15 AM	25	91	6	0	1	0	0	0	0	57	7	0	3	0	2	0
07:30 AM	20	73	11	0	2	0	0	0	0	74	8	0	3	0	2	0
07:45 AM	31	80	16	0	2	0	0	0	2	69	14	0	7	0	6	0
08:00 AM	19	76	10	1	5	0	0	0	0	50	6	0	4	0	17	0
08:15 AM	14	64	4	1	1	0	1	0	0	54	3	0	4	0	11	0
08:30 AM	10	61	4	0	2	0	0	0	1	52	7	0	3	0	5	0
08:45 AM	13	46	1	0	2	0	0	0	0	35	7	0	1	0	3	0
09:00 AM	11	44	3	0	2	0	0	0	0	27	4	0	4	1	1	0
09:15 AM	9	47	3	0	4	0	0	0	0	35	4	0	3	0	5	0
09:30 AM	7	51	4	0	3	0	0	0	0	40	6	0	5	2	2	0
09:45 AM	10	35	0	1	3	0	0	0	0	35	1	0	5	0	4	0
10:00 AM	4	35	0	0	1	0	0	0	0	32	7	0	6	0	5	0
10:15 AM	10	43	1	0	7	0	0	0	0	39	2	0	5	1	2	0
10:30 AM	3	45	2	1	3	0	0	0	0	30	2	0	3	0	9	0
10:45 AM	3	42	0	0	0	0	0	0	0	32	4	0	3	0	4	0
11:00 AM	3	44	1	0	3	0	0	0	0	42	7	0	7	0	5	0
11:15 AM	5	36	3	1	0	0	1	0	0	48	3	0	4	0	3	0
11:30 AM	6	65	1	1	3	0	1	0	1	49	1	0	8	0	10	0
11:45 AM	9	54	4	0	5	1	0	0	2	54	8	0	5	0	4	0
12:00 PM	5	42	0	1	4	0	1	0	1	48	3	0	9	0	15	0
12:15 PM	9	56	2	1	2	0	0	0	1	50	4	0	5	0	8	0
12:30 PM	7	58	5	0	1	1	0	0	3	45	7	0	6	1	8	0
12:45 PM	13	55	1	0	1	0	0	0	0	55	4	0	3	0	7	0
01:00 PM	12	49	2	1	6	0	0	0	0	49	12	0	3	1	10	0
01:15 PM	16	72	4	0	9	0	0	0	1	58	11	0	4	1	13	0
01:30 PM	21	94	6	0	3	1	1	0	1	62	7	0	7	1	21	0
01:45 PM	28	80	3	0	2	1	0	0	0	45	11	0	6	0	19	0
02:00 PM	9	59	3	0	1	0	0	0	1	147	11	0	19	0	38	0
02:15 PM	12	69	2	0	1	0	0	0	2	83	3	1	7	0	18	0
02:30 PM	15	76	3	0	6	0	0	0	2	59	6	0	14	0	49	0
02:45 PM	15	71	3	0	7	0	0	0	0	73	2	0	10	0	16	0
03:00 PM	7	73	0	1	3	0	1	0	1	75	5	0	6	0	11	0
03:15 PM	7	80	0	0	3	1	2	0	2	101	4	0	8	1	10	0
03:30 PM	16	102	1	1	8	0	1	0	0	90	1	0	11	0	38	0
03:45 PM	9	97	0	0	2	0	2	0	0	125	6	0	4	0	17	0
04:00 PM	5	80	0	0	11	0	3	0	0	128	3	0	11	0	29	0
04:15 PM	4	86	1	0	4	0	0	0	1	124	4	0	18	1	27	0
04:30 PM	1	90	0	0	11	1	1	0	1	132	3	0	20	0	16	0
04:45 PM	5	93	0	0	3	0	0	0	1	135	5	0	8	0	17	0
05:00 PM	2	98	3	0	14	0	0	0	0	144	2	0	8	0	38	0
05:15 PM	1	100	1	0	6	0	0	0	0	86	5	0	4	0	22	0
05:30 PM	6	90	1	0	11	0	0	0	0	103	4	0	9	0	23	0
05:45 PM	6	69	0	1	2	0	0	1	1	111	4	0	5	0	11	0
06:00 PM	6	64	0	0	2	0	1	0	0	78	4	1	10	0	25	0
06:15 PM	1	60	1	0	3	0	0	0	1	79	7	0	8	0	3	0
06:30 PM	1	56	0	0	1	0	0	0	0	70	2	0	6	0	9	0
06:45 PM	4	56	0	1	0	0	0	0	0	61	2	0	5	0	8	0
07:00 PM	4	41	0	0	0	0	0	0	0	57	1	0	4	0	8	0
07:15 PM	1	53	0	0	0	0	0	0	0	65	3	0	3	0	5	0
07:30 PM	10	39	0	0	0	0	0	0	0	59	2	0	2	0	4	0
07:45 PM	16	30	0	0	0	0	0	0	0	48	5	0	0	0	1	0
Total	591	3680	147	14	180	6	16	0	32	3754	292	3	360	10	714	0



Location: Munger Rd -- Brewster Creek Blvd/Humbracht Cir

Date: 9/15/2020

Site Code: 15277804 - CONSTRUCTION VEHICLES

Start Time	Munger Rd Southbound				Humbracht Cir Westbound				Munger Rd Northbound				Brewster Creek Blvd Eastbound			
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns
06:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
06:30 AM	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0
06:45 AM	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0
07:00 AM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
07:15 AM	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0
07:30 AM	0	4	2	0	1	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	3	0	0	0	0	0	0	0	3	0	0	0	0	0	0
08:00 AM	2	4	0	0	0	0	0	0	0	0	1	0	1	0	0	0
08:15 AM	1	10	0	0	0	0	0	0	0	2	1	0	0	0	0	0
08:30 AM	0	4	0	0	0	0	0	0	0	2	1	0	1	0	0	0
08:45 AM	0	2	0	0	0	0	0	0	0	4	0	0	0	0	0	0
09:00 AM	1	2	0	0	0	0	0	0	0	3	0	0	1	0	0	0
09:15 AM	0	4	0	0	0	0	0	0	0	1	1	0	1	0	0	0
09:30 AM	1	4	0	0	0	0	0	0	0	2	0	0	1	0	0	0
09:45 AM	0	2	0	0	0	1	0	0	0	1	0	0	0	0	0	0
10:00 AM	0	7	1	0	0	0	0	0	0	4	2	0	0	0	0	0
10:15 AM	0	3	0	0	0	0	0	0	0	2	1	0	2	0	2	0
10:30 AM	0	6	0	0	1	0	0	0	0	3	0	0	0	0	1	0
10:45 AM	1	5	0	0	0	0	0	0	0	1	0	0	0	0	0	0
11:00 AM	0	5	0	0	0	0	0	0	0	3	0	0	1	0	0	0
11:15 AM	0	5	0	0	0	0	0	0	0	2	1	0	2	0	0	0
11:30 AM	1	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0
11:45 AM	0	8	0	0	0	0	0	0	0	3	0	0	1	0	0	0
12:00 PM	0	4	0	0	0	0	0	0	0	4	0	0	1	0	0	0
12:15 PM	0	2	0	0	0	0	0	0	0	1	3	0	0	0	0	0
12:30 PM	0	2	0	0	0	0	0	0	0	3	0	0	1	0	1	0
12:45 PM	0	2	0	0	0	0	0	0	0	4	0	0	1	0	0	0
01:00 PM	0	9	0	0	0	0	0	0	0	1	1	0	1	0	0	0
01:15 PM	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	3	0	0	0	0	0	0	0	1	0	0	1	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0
02:00 PM	0	6	0	0	0	0	0	0	0	1	0	0	0	0	0	0
02:15 PM	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
02:30 PM	0	2	0	0	0	0	0	0	0	3	1	0	0	0	0	0
02:45 PM	0	4	0	0	0	0	0	0	0	3	0	0	0	0	0	0
03:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	3	0	0	0	0	0	0	0	3	0	0	1	0	1	0
03:45 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
04:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
05:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
07:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	9	137	3	0	2	1	0	0	0	81	14	0	18	0	6	0



Location: Munger Rd -- Brewster Creek Blvd/Humbracht Cir

Date: 9/15/2020

Site Code: 15277804 - STANDARD HEAVY VEHICLES

Start Time	Munger Rd Southbound				Humbracht Cir Westbound				Munger Rd Northbound				Brewster Creek Blvd Eastbound				
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	
06:00 AM	1	3	1	0	1	0	0	0	0	4	1	0	0	0	0	3	0
06:15 AM	1	5	0	0	0	0	0	0	0	3	0	0	0	0	0	2	0
06:30 AM	3	1	0	0	0	0	0	0	0	1	0	0	1	0	4	0	
06:45 AM	1	7	1	0	0	0	0	0	0	4	0	0	1	0	0	0	
07:00 AM	6	7	0	0	0	0	0	0	0	2	3	0	0	0	4	0	
07:15 AM	3	5	1	0	2	1	0	0	0	3	0	0	1	0	6	0	
07:30 AM	0	3	0	0	0	0	1	0	0	7	0	0	0	0	4	0	
07:45 AM	2	7	1	0	2	0	0	0	0	3	0	0	0	0	4	0	
08:00 AM	3	5	0	0	2	0	0	0	0	4	0	0	0	0	1	0	
08:15 AM	5	5	0	0	1	0	0	0	0	4	2	0	1	0	7	0	
08:30 AM	4	4	1	0	1	0	0	0	1	1	1	0	0	0	4	0	
08:45 AM	9	8	1	0	0	0	0	0	0	5	3	0	1	0	8	0	
09:00 AM	3	3	0	0	1	0	0	0	0	2	2	0	1	0	1	0	
09:15 AM	4	2	1	0	0	0	1	0	0	6	4	0	1	0	5	0	
09:30 AM	10	7	0	0	0	0	0	0	0	2	1	0	4	0	2	0	
09:45 AM	3	8	2	0	0	0	0	0	0	4	1	0	1	0	2	0	
10:00 AM	5	5	0	0	0	0	0	0	0	4	1	0	2	0	5	0	
10:15 AM	6	7	0	0	0	2	0	0	0	5	0	0	2	0	2	0	
10:30 AM	4	6	0	0	0	0	0	0	0	5	1	0	2	0	6	0	
10:45 AM	7	2	0	0	0	0	0	0	0	7	4	0	4	0	2	0	
11:00 AM	4	1	0	0	0	0	0	0	0	3	2	0	1	0	4	0	
11:15 AM	4	5	0	0	1	0	0	0	0	5	0	0	2	0	4	0	
11:30 AM	0	4	0	0	0	0	0	0	0	8	3	0	1	0	2	0	
11:45 AM	7	7	0	0	1	1	0	0	2	2	1	0	0	0	2	0	
12:00 PM	6	6	0	0	0	0	0	0	0	8	0	0	2	0	6	0	
12:15 PM	3	9	0	0	1	0	0	0	0	4	1	0	1	0	7	0	
12:30 PM	3	4	0	0	0	0	0	0	0	4	2	0	0	0	2	0	
12:45 PM	5	4	0	0	0	0	0	0	0	4	0	0	3	1	2	0	
01:00 PM	1	7	0	0	0	0	0	0	0	6	3	0	2	0	5	0	
01:15 PM	8	5	0	0	1	0	0	0	0	3	1	0	1	0	7	0	
01:30 PM	3	6	1	0	2	0	1	0	0	4	3	0	2	0	7	0	
01:45 PM	5	4	2	0	1	0	0	0	0	8	1	0	0	0	3	0	
02:00 PM	4	4	0	0	1	0	1	0	0	4	0	0	2	0	3	0	
02:15 PM	4	3	0	0	0	0	0	0	0	6	2	0	2	0	1	0	
02:30 PM	3	8	0	0	0	0	0	0	1	4	0	0	0	0	1	0	
02:45 PM	5	6	1	0	1	0	0	0	0	1	2	0	3	0	4	0	
03:00 PM	0	3	0	0	0	0	0	0	0	7	1	0	0	0	0	0	
03:15 PM	5	12	0	0	0	0	0	0	0	3	1	0	0	0	2	0	
03:30 PM	4	1	0	0	0	0	0	0	0	8	1	0	1	0	0	0	
03:45 PM	2	8	0	0	0	0	1	0	0	0	2	0	1	0	3	0	
04:00 PM	3	7	1	0	0	0	0	0	0	5	0	0	1	0	2	0	
04:15 PM	2	6	0	0	0	0	0	0	0	4	1	0	1	0	2	0	
04:30 PM	2	6	0	0	0	0	0	0	0	1	0	0	2	0	1	0	
04:45 PM	5	8	0	0	0	0	0	0	0	2	0	0	1	0	0	0	
05:00 PM	2	0	1	0	0	0	0	0	0	2	1	0	1	0	1	0	
05:15 PM	5	3	0	0	1	1	0	0	0	3	0	0	1	0	2	0	
05:30 PM	0	3	0	0	0	0	0	0	0	3	0	0	1	0	1	0	
05:45 PM	1	1	0	0	0	0	0	0	0	5	0	0	1	0	0	0	
06:00 PM	1	2	0	0	0	0	0	0	0	0	1	0	2	0	1	0	
06:15 PM	3	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
06:30 PM	2	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	
06:45 PM	1	1	0	0	0	0	0	0	0	2	0	0	1	0	0	0	
07:00 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	
07:15 PM	1	4	0	0	0	0	0	0	0	3	0	0	0	0	0	0	
07:30 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	
07:45 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	
Total	185	252	15	0	20	5	5	0	4	200	54	0	59	1	151	0	



Location: Munger Rd -- Brewster Creek Blvd/Humbracht Cir

Date: 9/15/2020

Site Code: 15277804 - BIKES AND PEDS

Start Time	Munger Rd Southbound				Humbracht Cir Westbound				Munger Rd Northbound				Brewster Creek Blvd Eastbound			
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
07:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	2	0	7	0	0	0	2	0	0	0	2	3	0



Location: Munger Rd – Brewster Creek Blvd/Humbracht Cir

Date: 9/15/2020

Site Code: 15277804

TOTAL EXISTING TRIP BREAKDOWN								
Start Time	Inbound Trips				Outbound Trips			
	PC	Con	HV	Total	PC	Con	HV	Total
06:00 AM	442	3	24	469	278	5	22	305
07:00 AM	458	11	35	504	266	7	37	310
08:00 AM	324	23	45	392	237	8	38	283
09:00 AM	225	14	43	282	161	7	25	193
10:00 AM	189	23	42	254	164	14	36	214
11:00 AM	233	21	32	286	226	9	32	267
12:00 PM	255	10	40	305	244	13	38	295
01:00 PM	388	15	42	445	297	7	47	351
02:00 PM	337	14	38	389	498	8	26	532
03:00 PM	394	9	35	438	483	5	23	511
04:00 PM	365	2	40	407	637	1	17	655
05:00 PM	378	1	16	395	571	4	18	593
06:00 PM	250	3	11	264	339	0	4	343
07:00 PM	194	0	9	203	247	1	8	256
Total	4432	149	452	5033	4648	89	371	5108

TOTAL TRIPS																
Start Time	Brewster Creek Blvd Southbound				Stearns Rd Westbound				Hamer Lake Parking Lot Northbound				Brewster Creek Blvd Eastbound			
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns
06:00 AM	85	356	27	1	5	0	0	0	5	226	34	1	31	0	74	0
07:00 AM	113	348	43	0	10	1	1	0	3	266	38	0	19	0	34	0
08:00 AM	80	289	21	2	14	0	1	0	2	213	32	0	16	0	56	0
09:00 AM	59	209	13	1	13	1	1	0	0	158	24	0	27	3	22	0
10:00 AM	43	206	4	1	12	2	0	0	0	164	24	0	29	1	38	0
11:00 AM	39	236	9	2	13	2	2	0	5	220	26	0	32	0	34	0
12:00 PM	51	244	8	2	9	1	1	0	5	230	24	0	32	2	56	0
01:00 PM	95	331	18	1	24	2	2	0	2	242	50	0	27	3	85	0
02:00 PM	68	309	12	0	17	0	1	0	6	385	27	1	57	0	130	0
03:00 PM	50	385	1	2	16	1	7	0	3	413	21	0	32	1	82	0
04:00 PM	27	378	2	0	29	1	4	0	3	532	16	0	63	1	94	0
05:00 PM	23	365	6	1	34	1	0	0	1	461	16	0	30	0	98	0
06:00 PM	19	243	1	1	6	0	1	0	1	291	17	1	33	0	46	0
07:00 PM	33	170	0	0	0	0	0	0	0	234	11	0	9	0	22	0
Total	785	4069	165	14	202	12	21	0	36	4035	360	3	437	11	871	0

PASSENGER CARS

Start Time	Brewster Creek Blvd Southbound				Stearns Rd Westbound				Harrier Lake Parking Lot Northbound				Brewster Creek Blvd Eastbound				
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	
06:00 AM	79	337	25	1	4	0	0	0	0	5	210	32	1	29	0	64	0
07:00 AM	102	317	39	0	5	0	0	0	0	3	245	35	0	18	0	16	0
08:00 AM	56	247	19	2	10	0	1	0	0	1	191	23	0	12	0	36	0
09:00 AM	37	177	10	1	12	0	0	0	0	0	137	15	0	17	3	12	0
10:00 AM	20	165	3	1	11	0	0	0	0	0	133	15	0	17	1	20	0
11:00 AM	23	199	9	2	11	1	2	0	0	3	193	19	0	24	0	22	0
12:00 PM	34	211	8	2	8	1	1	0	0	5	198	18	0	23	1	38	0
01:00 PM	77	295	15	1	20	2	1	0	0	2	214	41	0	20	3	63	0
02:00 PM	51	275	11	0	15	0	0	0	0	5	362	22	1	50	0	121	0
03:00 PM	39	352	1	2	16	1	6	0	0	3	391	16	0	29	1	76	0
04:00 PM	15	349	1	0	29	1	4	0	0	3	519	15	0	57	1	89	0
05:00 PM	15	357	5	1	33	0	0	0	0	1	444	15	0	26	0	94	0
06:00 PM	12	236	1	1	6	0	1	0	0	1	288	15	1	29	0	45	0
07:00 PM	31	163	0	0	0	0	0	0	0	0	229	11	0	9	0	18	0
Total	591	3680	147	14	180	6	16	0	0	32	3754	292	3	360	10	714	0

CONSTRUCTION VEHICLES

Start Time	Brewster Creek Blvd Southbound				Stearns Rd Westbound				Harrier Lake Parking Lot Northbound				Brewster Creek Blvd Eastbound				
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	
06:00 AM	0	3	0	0	0	0	0	0	0	0	4	1	0	0	0	1	0
07:00 AM	0	9	2	0	1	0	0	0	0	0	6	0	0	0	0	0	0
08:00 AM	3	20	0	0	0	0	0	0	0	0	8	3	0	2	0	0	0
09:00 AM	2	12	0	0	0	1	0	0	0	0	7	1	0	3	0	0	0
10:00 AM	1	21	1	0	1	0	0	0	0	0	10	3	0	2	0	3	0
11:00 AM	1	20	0	0	0	0	0	0	0	0	9	1	0	4	0	0	0
12:00 PM	0	10	0	0	0	0	0	0	0	0	12	3	0	3	0	1	0
01:00 PM	1	14	0	0	0	0	0	0	0	0	7	1	0	2	0	0	0
02:00 PM	1	13	0	0	0	0	0	0	0	0	8	1	0	0	0	0	0
03:00 PM	0	9	0	0	0	0	0	0	0	0	4	0	0	1	0	1	0
04:00 PM	0	2	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0
05:00 PM	0	1	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0
06:00 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Total	9	137	3	0	2	1	0	0	0	0	81	14	0	18	0	6	0

HEAVY VEHICLES

Start Time	Brewster Creek Blvd Southbound				Stearns Rd Westbound				Harrier Lake Parking Lot Northbound				Brewster Creek Blvd Eastbound				
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	
06:00 AM	6	16	2	0	1	0	0	0	0	0	12	1	0	2	0	9	0
07:00 AM	11	22	2	0	4	1	1	0	0	0	15	3	0	1	0	18	0
08:00 AM	21	22	2	0	4	0	0	0	0	1	14	6	0	2	0	20	0
09:00 AM	20	20	3	0	1	0	1	0	0	0	14	8	0	7	0	10	0
10:00 AM	22	20	0	0	0	2	0	0	0	0	21	6	0	10	0	15	0
11:00 AM	15	17	0	0	2	1	0	0	0	2	18	6	0	4	0	12	0
12:00 PM	17	23	0	0	1	0	0	0	0	0	20	3	0	6	1	17	0
01:00 PM	17	22	3	0	4	0	1	0	0	0	21	8	0	5	0	22	0
02:00 PM	16	21	1	0	2	0	1	0	0	1	15	4	0	7	0	9	0
03:00 PM	11	24	0	0	0	0	1	0	0	0	18	5	0	2	0	5	0
04:00 PM	12	27	1	0	0	0	0	0	0	0	12	1	0	5	0	5	0
05:00 PM	8	7	1	0	1	1	0	0	0	0	13	1	0	4	0	4	0
06:00 PM	7	4	0	0	0	0	0	0	0	0	3	2	0	4	0	1	0
07:00 PM	2	7	0	0	0	0	0	0	0	0	4	0	0	0	0	4	0
Total	185	252	15	0	20	5	5	0	0	4	200	54	0	59	1	151	0



Location: Spitzer Rd -- W Bartlett Rd
 Date: 9/15/2020
 Site Code: 15277803 - ALL VEHICLES

Start Time	Southbound				W Bartlett Rd Westbound				Spitzer Rd Northbound				W Bartlett Rd Eastbound			
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns
06:00 AM	0	0	0	0	0	40	7	0	8	0	6	0	6	86	0	0
06:15 AM	0	0	0	0	0	48	6	0	0	0	1	0	5	94	0	0
06:30 AM	0	0	0	0	0	76	10	0	6	0	5	0	2	89	0	0
06:45 AM	0	0	0	0	0	62	6	0	1	0	2	0	6	128	0	0
07:00 AM	0	0	0	0	0	69	10	0	6	0	2	0	5	121	0	0
07:15 AM	0	0	0	0	0	71	8	0	3	0	5	0	2	125	0	0
07:30 AM	0	0	0	0	0	74	10	1	5	0	6	0	5	112	0	0
07:45 AM	0	0	0	0	0	73	16	0	12	0	5	0	12	117	0	0
08:00 AM	0	0	0	0	0	79	15	0	9	0	3	0	6	101	0	0
08:15 AM	0	0	0	0	0	53	10	0	7	0	0	0	5	69	0	0
08:30 AM	0	0	0	0	0	54	5	0	13	0	2	0	4	88	0	0
08:45 AM	0	0	0	0	0	48	8	0	7	0	0	0	5	76	0	0
09:00 AM	0	0	0	0	0	66	4	0	6	0	2	0	1	41	0	0
09:15 AM	0	0	0	0	0	59	3	1	8	0	3	0	4	95	0	0
09:30 AM	0	0	0	0	0	55	2	0	4	0	5	0	3	78	0	0
09:45 AM	0	0	0	0	0	45	4	0	4	0	2	0	2	60	0	0
10:00 AM	0	0	0	0	0	58	4	0	4	0	2	0	2	63	0	0
10:15 AM	0	0	0	0	0	56	2	0	1	0	7	0	2	74	0	0
10:30 AM	0	0	0	0	0	61	4	0	9	0	3	0	2	83	0	0
10:45 AM	0	0	0	0	0	71	3	0	3	0	2	0	4	64	0	0
11:00 AM	0	0	0	0	0	66	2	0	4	0	3	0	3	71	0	0
11:15 AM	0	0	0	0	0	63	5	1	5	0	0	0	1	88	0	0
11:30 AM	0	0	0	0	0	73	4	0	7	0	4	0	2	77	0	0
11:45 AM	0	0	0	0	0	85	3	0	2	0	2	0	2	57	0	0
12:00 PM	0	0	0	0	0	72	5	0	8	0	4	0	4	111	0	0
12:15 PM	0	0	0	0	0	82	2	0	1	0	2	0	1	79	0	0
12:30 PM	0	0	0	0	0	94	8	0	8	0	1	0	5	86	0	0
12:45 PM	0	0	0	0	0	87	12	0	5	0	3	0	2	75	0	0
01:00 PM	0	0	0	0	0	84	4	0	7	0	3	0	6	69	0	0
01:15 PM	0	0	0	0	0	69	7	0	5	0	1	0	4	80	0	0
01:30 PM	0	0	0	0	0	113	6	0	5	0	6	0	9	59	0	0
01:45 PM	0	0	0	0	0	73	9	0	13	0	5	0	4	85	0	0
02:00 PM	0	0	0	0	0	86	4	0	15	0	6	0	2	45	0	0
02:15 PM	0	0	0	0	0	71	6	0	4	0	7	0	6	91	0	0
02:30 PM	0	0	0	0	0	109	6	1	8	0	6	0	1	94	0	0
02:45 PM	0	0	0	0	0	98	5	0	6	0	2	0	2	95	0	0
03:00 PM	0	0	0	0	0	128	3	0	8	0	2	0	2	104	0	0
03:15 PM	0	0	0	0	0	127	7	0	4	0	2	0	1	102	0	0
03:30 PM	0	0	0	0	0	112	4	0	10	0	2	0	2	113	0	0
03:45 PM	0	0	0	0	0	135	4	0	10	0	5	0	5	97	0	0
04:00 PM	0	0	0	0	0	118	2	0	3	0	11	0	0	102	0	0
04:15 PM	0	0	0	0	0	141	10	0	5	0	4	0	1	94	0	0
04:30 PM	0	0	0	0	0	180	6	0	7	0	6	0	2	95	0	0
04:45 PM	0	0	0	0	0	177	4	0	4	0	7	0	2	117	0	0
05:00 PM	0	0	0	0	0	186	5	0	15	0	8	0	0	99	0	0
05:15 PM	0	0	0	0	0	167	7	0	8	0	2	0	2	105	0	0
05:30 PM	0	0	0	0	0	197	2	0	10	0	8	0	1	113	0	0
05:45 PM	0	0	0	0	0	157	9	0	7	0	6	0	3	97	0	0
06:00 PM	0	0	0	0	0	133	0	0	4	0	1	0	0	67	0	0
06:15 PM	0	0	0	0	0	106	6	0	8	0	0	0	4	67	0	0
06:30 PM	0	0	0	0	0	113	1	0	6	0	7	0	4	112	0	0
06:45 PM	0	0	0	0	0	112	1	0	3	0	2	0	2	104	0	0
07:00 PM	0	0	0	0	0	82	0	0	5	0	5	0	2	73	0	0
07:15 PM	0	0	0	0	0	101	2	0	1	0	1	0	2	60	0	0
07:30 PM	0	0	0	0	0	96	0	0	1	0	3	0	0	43	0	0
07:45 PM	0	0	0	0	0	83	3	0	0	0	0	0	5	44	0	0
Total	0	0	0	0	0	5194	301	4	338	0	200	0	177	4834	0	0

Peak Hour: 4:45 PM - 5:45 PM
 Peak 15: 5:30 PM - 5:45 PM
 PHF: 0.941088



Quality Counts
DATA THAT DRIVES COMMUNITIES

Location: Spitzer Rd -- W Bartlett Rd

Date: 9/15/2020

Site Code: 15277803 - PASSENGER VEHICLES

Start Time	Southbound				W Bartlett Rd Westbound				Spitzer Rd Northbound				W Bartlett Rd Eastbound			
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns
06:00 AM	0	0	0	0	0	35	7	0	6	0	5	0	6	66	0	0
06:15 AM	0	0	0	0	0	40	6	0	0	0	1	0	4	83	0	0
06:30 AM	0	0	0	0	0	66	8	0	4	0	3	0	2	65	0	0
06:45 AM	0	0	0	0	0	54	6	0	1	0	1	0	6	101	0	0
07:00 AM	0	0	0	0	0	56	10	0	3	0	2	0	5	90	0	0
07:15 AM	0	0	0	0	0	54	7	0	2	0	3	0	2	108	0	0
07:30 AM	0	0	0	0	0	58	9	1	3	0	5	0	4	102	0	0
07:45 AM	0	0	0	0	0	56	16	0	8	0	3	0	11	103	0	0
08:00 AM	0	0	0	0	0	66	14	0	6	0	2	0	6	88	0	0
08:15 AM	0	0	0	0	0	45	9	0	3	0	0	0	5	60	0	0
08:30 AM	0	0	0	0	0	44	4	0	4	0	1	0	4	76	0	0
08:45 AM	0	0	0	0	0	35	6	0	5	0	0	0	5	64	0	0
09:00 AM	0	0	0	0	0	53	2	0	4	0	1	0	0	37	0	0
09:15 AM	0	0	0	0	0	47	1	1	4	0	1	0	4	83	0	0
09:30 AM	0	0	0	0	0	45	1	0	3	0	3	0	3	62	0	0
09:45 AM	0	0	0	0	0	38	2	0	1	0	1	0	1	48	0	0
10:00 AM	0	0	0	0	0	40	2	0	3	0	1	0	2	50	0	0
10:15 AM	0	0	0	0	0	39	2	0	0	0	5	0	1	60	0	0
10:30 AM	0	0	0	0	0	49	3	0	4	0	1	0	2	65	0	0
10:45 AM	0	0	0	0	0	59	1	0	0	0	2	0	3	49	0	0
11:00 AM	0	0	0	0	0	53	2	0	4	0	2	0	3	54	0	0
11:15 AM	0	0	0	0	0	50	2	1	1	0	0	0	1	77	0	0
11:30 AM	0	0	0	0	0	62	2	0	5	0	2	0	1	69	0	0
11:45 AM	0	0	0	0	0	69	2	0	1	0	2	0	1	45	0	0
12:00 PM	0	0	0	0	0	56	3	0	6	0	2	0	3	95	0	0
12:15 PM	0	0	0	0	0	70	1	0	1	0	1	0	1	69	0	0
12:30 PM	0	0	0	0	0	83	6	0	6	0	1	0	3	73	0	0
12:45 PM	0	0	0	0	0	80	8	0	2	0	1	0	1	61	0	0
01:00 PM	0	0	0	0	0	76	3	0	4	0	3	0	4	62	0	0
01:15 PM	0	0	0	0	0	55	5	0	2	0	1	0	4	71	0	0
01:30 PM	0	0	0	0	0	99	6	0	4	0	5	0	6	51	0	0
01:45 PM	0	0	0	0	0	57	9	0	7	0	4	0	4	73	0	0
02:00 PM	0	0	0	0	0	73	2	0	14	0	6	0	2	35	0	0
02:15 PM	0	0	0	0	0	58	4	0	3	0	7	0	6	76	0	0
02:30 PM	0	0	0	0	0	93	3	1	6	0	6	0	0	88	0	0
02:45 PM	0	0	0	0	0	84	3	0	6	0	2	0	2	89	0	0
03:00 PM	0	0	0	0	0	119	1	0	7	0	2	0	2	97	0	0
03:15 PM	0	0	0	0	0	115	4	0	3	0	2	0	1	92	0	0
03:30 PM	0	0	0	0	0	98	1	0	10	0	2	0	1	108	0	0
03:45 PM	0	0	0	0	0	119	0	0	8	0	4	0	4	91	0	0
04:00 PM	0	0	0	0	0	106	1	0	3	0	11	0	0	91	0	0
04:15 PM	0	0	0	0	0	132	5	0	5	0	4	0	1	93	0	0
04:30 PM	0	0	0	0	0	173	2	0	7	0	6	0	2	91	0	0
04:45 PM	0	0	0	0	0	173	1	0	4	0	7	0	2	115	0	0
05:00 PM	0	0	0	0	0	175	3	0	14	0	8	0	0	97	0	0
05:15 PM	0	0	0	0	0	158	6	0	7	0	2	0	2	101	0	0
05:30 PM	0	0	0	0	0	191	2	0	10	0	8	0	1	109	0	0
05:45 PM	0	0	0	0	0	151	7	0	7	0	6	0	3	94	0	0
06:00 PM	0	0	0	0	0	126	0	0	4	0	1	0	0	65	0	0
06:15 PM	0	0	0	0	0	103	6	0	8	0	0	0	4	63	0	0
06:30 PM	0	0	0	0	0	102	0	0	6	0	7	0	4	105	0	0
06:45 PM	0	0	0	0	0	110	1	0	3	0	2	0	2	98	0	0
07:00 PM	0	0	0	0	0	79	0	0	5	0	5	0	2	70	0	0
07:15 PM	0	0	0	0	0	97	0	0	1	0	1	0	2	54	0	0
07:30 PM	0	0	0	0	0	91	0	0	1	0	3	0	0	42	0	0
07:45 PM	0	0	0	0	0	75	3	0	0	0	0	0	5	44	0	0
Total	0	0	0	0	0	4590	220	4	249	0	167	0	156	4268	0	0



Location: Spitzer Rd – W Bartlett Rd

Date: 9/15/2020

Site Code: 15277803 - CONSTRUCTION VEHICLES

Start Time	Southbound				W Bartlett Rd Westbound				Spitzer Rd Northbound				W Bartlett Rd Eastbound			
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns
06:00 AM	0	0	0	0	0	1	0	0	0	0	1	0	0	7	0	0
06:15 AM	0	0	0	0	0	5	0	0	0	0	0	0	0	7	0	0
06:30 AM	0	0	0	0	0	2	1	0	0	1	0	2	0	15	0	0
06:45 AM	0	0	0	0	0	3	0	0	0	0	1	0	0	10	0	0
07:00 AM	0	0	0	0	0	5	0	0	3	0	0	0	0	6	0	0
07:15 AM	0	0	0	0	0	2	0	0	1	0	2	0	0	11	0	0
07:30 AM	0	0	0	0	0	11	0	0	0	0	1	0	0	2	0	0
07:45 AM	0	0	0	0	0	10	0	0	2	0	0	0	0	6	0	0
08:00 AM	0	0	0	0	0	9	1	0	1	0	1	0	0	6	0	0
08:15 AM	0	0	0	0	0	4	1	0	2	0	0	0	0	5	0	0
08:30 AM	0	0	0	0	0	3	0	0	1	0	1	0	0	9	0	0
08:45 AM	0	0	0	0	0	7	0	0	1	0	0	0	0	5	0	0
09:00 AM	0	0	0	0	0	8	0	0	1	0	1	0	1	0	0	0
09:15 AM	0	0	0	0	0	6	1	0	2	0	1	0	0	6	0	0
09:30 AM	0	0	0	0	0	3	1	0	1	0	0	0	0	7	0	0
09:45 AM	0	0	0	0	0	2	0	0	1	0	1	0	1	3	0	0
10:00 AM	0	0	0	0	0	12	0	0	1	0	1	0	0	7	0	0
10:15 AM	0	0	0	0	0	11	0	0	1	0	0	0	0	7	0	0
10:30 AM	0	0	0	0	0	6	1	0	1	0	2	0	0	14	0	0
10:45 AM	0	0	0	0	0	4	1	0	2	0	0	0	0	11	0	0
11:00 AM	0	0	0	0	0	5	0	0	0	0	1	0	0	10	0	0
11:15 AM	0	0	0	0	0	6	0	0	2	0	0	0	0	7	0	0
11:30 AM	0	0	0	0	0	3	0	0	1	0	2	0	0	3	0	0
11:45 AM	0	0	0	0	0	13	0	0	1	0	0	0	0	6	0	0
12:00 PM	0	0	0	0	0	8	2	0	1	0	2	0	0	8	0	0
12:15 PM	0	0	0	0	0	4	1	0	0	0	1	0	0	8	0	0
12:30 PM	0	0	0	0	0	7	1	0	1	0	0	0	0	2	7	0
12:45 PM	0	0	0	0	0	2	4	0	0	0	1	0	0	9	0	0
01:00 PM	0	0	0	0	0	3	0	0	2	0	0	0	1	2	0	0
01:15 PM	0	0	0	0	0	3	0	0	3	0	0	0	0	7	0	0
01:30 PM	0	0	0	0	0	2	0	0	0	0	1	0	0	4	0	0
01:45 PM	0	0	0	0	0	9	0	0	3	0	0	0	0	5	0	0
02:00 PM	0	0	0	0	0	8	0	0	0	0	0	0	0	9	0	0
02:15 PM	0	0	0	0	0	7	0	0	0	0	0	0	0	11	0	0
02:30 PM	0	0	0	0	0	10	2	0	1	0	0	0	1	4	0	0
02:45 PM	0	0	0	0	0	5	1	0	0	0	0	0	0	4	0	0
03:00 PM	0	0	0	0	0	1	0	0	1	0	0	0	0	6	0	0
03:15 PM	0	0	0	0	0	3	0	0	1	0	0	0	0	6	0	0
03:30 PM	0	0	0	0	0	4	1	0	0	0	0	0	0	1	0	0
03:45 PM	0	0	0	0	0	9	0	0	1	0	0	0	0	1	0	0
04:00 PM	0	0	0	0	0	7	0	0	0	0	0	0	0	4	0	0
04:15 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
06:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
07:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
07:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	247	20	0	40	0	23	0	6	272	0	0



Quality Counts

DATA THAT DRIVES COMMUNITIES

Location: Spitzer Rd -- W Bartlett Rd

Date: 9/15/2020

Site Code: 15277803 - STANDARD HEAVY VEHICLES

Start Time	Southbound				W Bartlett Rd Westbound				Spitzer Rd Northbound				W Bartlett Rd Eastbound			
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns
06:00 AM	0	0	0	0	0	4	0	0	2	0	0	0	0	13	0	0
06:15 AM	0	0	0	0	0	3	0	0	0	0	0	0	1	4	0	0
06:30 AM	0	0	0	0	0	8	1	0	1	0	0	0	0	9	0	0
06:45 AM	0	0	0	0	0	5	0	0	0	0	0	0	0	17	0	0
07:00 AM	0	0	0	0	0	8	0	0	0	0	0	0	0	25	0	0
07:15 AM	0	0	0	0	0	15	1	0	0	0	0	0	0	6	0	0
07:30 AM	0	0	0	0	0	5	1	0	2	0	0	0	1	8	0	0
07:45 AM	0	0	0	0	0	7	0	0	2	0	2	0	1	8	0	0
08:00 AM	0	0	0	0	0	4	0	0	2	0	0	0	0	7	0	0
08:15 AM	0	0	0	0	0	4	0	0	2	0	0	0	0	4	0	0
08:30 AM	0	0	0	0	0	7	1	0	8	0	0	0	0	3	0	0
08:45 AM	0	0	0	0	0	6	2	0	1	0	0	0	0	7	0	0
09:00 AM	0	0	0	0	0	5	2	0	1	0	0	0	0	4	0	0
09:15 AM	0	0	0	0	0	6	1	0	2	0	1	0	0	6	0	0
09:30 AM	0	0	0	0	0	7	0	0	0	0	2	0	0	9	0	0
09:45 AM	0	0	0	0	0	5	2	0	2	0	0	0	0	9	0	0
10:00 AM	0	0	0	0	0	6	2	0	0	0	0	0	0	6	0	0
10:15 AM	0	0	0	0	0	6	0	0	0	0	2	0	1	7	0	0
10:30 AM	0	0	0	0	0	6	0	0	4	0	0	0	0	4	0	0
10:45 AM	0	0	0	0	0	8	1	0	1	0	0	0	1	4	0	0
11:00 AM	0	0	0	0	0	8	0	0	0	0	0	0	0	7	0	0
11:15 AM	0	0	0	0	0	7	3	0	2	0	0	0	0	4	0	0
11:30 AM	0	0	0	0	0	8	2	0	1	0	0	0	1	5	0	0
11:45 AM	0	0	0	0	0	3	1	0	0	0	0	0	1	6	0	0
12:00 PM	0	0	0	0	0	8	0	0	1	0	0	0	1	8	0	0
12:15 PM	0	0	0	0	0	8	0	0	0	0	0	0	0	2	0	0
12:30 PM	0	0	0	0	0	4	1	0	1	0	0	0	0	6	0	0
12:45 PM	0	0	0	0	0	5	0	0	3	0	1	0	1	5	0	0
01:00 PM	0	0	0	0	0	5	1	0	1	0	0	0	1	5	0	0
01:15 PM	0	0	0	0	0	11	2	0	0	0	0	0	0	2	0	0
01:30 PM	0	0	0	0	0	12	0	0	1	0	0	0	3	4	0	0
01:45 PM	0	0	0	0	0	7	0	0	3	0	1	0	0	7	0	0
02:00 PM	0	0	0	0	0	5	2	0	1	0	0	0	0	1	0	0
02:15 PM	0	0	0	0	0	6	2	0	1	0	0	0	0	4	0	0
02:30 PM	0	0	0	0	0	6	1	0	1	0	0	0	0	2	0	0
02:45 PM	0	0	0	0	0	9	1	0	0	0	0	0	0	2	0	0
03:00 PM	0	0	0	0	0	8	2	0	0	0	0	0	0	1	0	0
03:15 PM	0	0	0	0	0	9	3	0	0	0	0	0	0	4	0	0
03:30 PM	0	0	0	0	0	10	2	0	0	0	0	0	1	4	0	0
03:45 PM	0	0	0	0	0	7	4	0	1	0	1	0	1	5	0	0
04:00 PM	0	0	0	0	0	5	1	0	0	0	0	0	0	7	0	0
04:15 PM	0	0	0	0	0	6	5	0	0	0	0	0	0	1	0	0
04:30 PM	0	0	0	0	0	5	4	0	0	0	0	0	0	2	0	0
04:45 PM	0	0	0	0	0	4	3	0	0	0	0	0	0	2	0	0
05:00 PM	0	0	0	0	0	8	1	0	1	0	0	0	0	2	0	0
05:15 PM	0	0	0	0	0	9	1	0	1	0	0	0	0	4	0	0
05:30 PM	0	0	0	0	0	4	0	0	0	0	0	0	0	4	0	0
05:45 PM	0	0	0	0	0	6	2	0	0	0	0	0	0	2	0	0
06:00 PM	0	0	0	0	0	6	0	0	0	0	0	0	0	2	0	0
06:15 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	4	0	0
06:30 PM	0	0	0	0	0	10	1	0	0	0	0	0	0	6	0	0
06:45 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	6	0	0
07:00 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	2	0	0
07:15 PM	0	0	0	0	0	4	2	0	0	0	0	0	0	5	0	0
07:30 PM	0	0	0	0	0	5	0	0	0	0	0	0	0	1	0	0
07:45 PM	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	357	61	0	49	0	10	0	15	294	0	0



Location: Spitzer Rd – W Bartlett Rd
 Date: 9/15/2020
 Site Code: 15277803 - BIKES AND PEDS

Start Time	Southbound				W Bartlett Rd Westbound				Spitzer Rd Northbound				W Bartlett Rd Eastbound			
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
07:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
07:15 PM	0	0	0	0	0	1	0	0	0	0	1	0	1	0	0	0
07:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	2	0	0	0	0	6	0	4	3	0	0



Location: Spitzer Rd – W Bartlett Rd
 Date: 9/15/2020
 Site Code: 15277803

TOTAL EXISTING TRIP BREAKDOWN									
Start Time	Inbound Trips				Outbound Trips				Total
	PC	Con	HV	Total	PC	Con	HV	Total	
06:00 AM	45	1	2	48	21	5	3	29	29
07:00 AM	64	0	4	68	29	9	6	44	44
08:00 AM	53	2	3	58	21	7	13	41	41
09:00 AM	14	4	5	23	18	8	8	34	34
10:00 AM	16	2	5	23	16	8	7	31	31
11:00 AM	14	0	8	22	17	7	3	27	27
12:00 PM	26	10	3	39	20	6	6	32	32
01:00 PM	41	1	7	49	30	9	6	45	45
02:00 PM	22	4	6	32	50	1	3	54	54
03:00 PM	14	1	13	28	38	3	2	43	43
04:00 PM	14	0	13	27	47	0	0	47	47
05:00 PM	24	1	4	29	62	0	2	64	64
06:00 PM	17	0	1	18	31	0	0	31	31
07:00 PM	12	0	2	14	16	0	0	16	16
Total	376	26	76	478	416	63	59	538	

TOTAL TRIPS																
Start Time	Brewster Creek Blvd Southbound				Stearns Rd Westbound				Harrier Lake Parking Lot Northbound				Brewster Creek Blvd Eastbound			
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns
06:00 AM	0	0	0	0	0	226	29	0	15	0	14	0	19	397	0	0
07:00 AM	0	0	0	0	0	287	44	1	26	0	18	0	24	475	0	0
08:00 AM	0	0	0	0	0	234	38	0	36	0	5	0	20	334	0	0
09:00 AM	0	0	0	0	0	225	13	1	22	0	12	0	10	274	0	0
10:00 AM	0	0	0	0	0	246	13	0	17	0	14	0	10	284	0	0
11:00 AM	0	0	0	0	0	287	14	1	18	0	9	0	8	293	0	0
12:00 PM	0	0	0	0	0	335	27	0	22	0	10	0	12	351	0	0
01:00 PM	0	0	0	0	0	339	26	0	30	0	15	0	23	293	0	0
02:00 PM	0	0	0	0	0	364	21	1	33	0	21	0	11	325	0	0
03:00 PM	0	0	0	0	0	502	18	0	32	0	11	0	10	416	0	0
04:00 PM	0	0	0	0	0	616	22	0	19	0	28	0	5	408	0	0
05:00 PM	0	0	0	0	0	707	23	0	40	0	24	0	6	414	0	0
06:00 PM	0	0	0	0	0	464	8	0	21	0	10	0	10	350	0	0
07:00 PM	0	0	0	0	0	362	5	0	7	0	9	0	9	220	0	0
Total	0	0	0	0	0	5194	301	4	338	0	200	0	177	4834	0	0

PASSENGER CARS

Start Time	Brewster Creek Blvd Southbound				Stearns Rd Westbound				Harrier Lake Parking Lot Northbound				Brewster Creek Blvd Eastbound			
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns
06:00 AM	0	0	0	0	0	195	27	0	11	0	10	0	18	315	0	0
07:00 AM	0	0	0	0	0	224	42	1	16	0	13	0	22	403	0	0
08:00 AM	0	0	0	0	0	190	33	0	18	0	3	0	20	288	0	0
09:00 AM	0	0	0	0	0	183	6	1	12	0	6	0	8	230	0	0
10:00 AM	0	0	0	0	0	187	8	0	7	0	9	0	8	224	0	0
11:00 AM	0	0	0	0	0	234	8	1	11	0	6	0	6	245	0	0
12:00 PM	0	0	0	0	0	289	18	0	15	0	5	0	8	298	0	0
01:00 PM	0	0	0	0	0	287	23	0	17	0	13	0	18	257	0	0
02:00 PM	0	0	0	0	0	308	12	1	29	0	21	0	10	288	0	0
03:00 PM	0	0	0	0	0	451	6	0	28	0	10	0	8	388	0	0
04:00 PM	0	0	0	0	0	584	9	0	19	0	28	0	5	390	0	0
05:00 PM	0	0	0	0	0	675	18	0	38	0	24	0	6	401	0	0
06:00 PM	0	0	0	0	0	441	7	0	21	0	10	0	10	331	0	0
07:00 PM	0	0	0	0	0	342	3	0	7	0	9	0	9	210	0	0
Total	0	0	0	0	0	4590	220	4	249	0	167	0	156	4268	0	0

CONSTRUCTION VEHICLES

Start Time	Brewster Creek Blvd Southbound				Stearns Rd Westbound				Harrier Lake Parking Lot Northbound				Brewster Creek Blvd Eastbound			
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns
06:00 AM	0	0	0	0	0	11	1	0	1	0	4	0	0	39	0	0
07:00 AM	0	0	0	0	0	28	0	0	6	0	3	0	0	25	0	0
08:00 AM	0	0	0	0	0	23	2	0	5	0	2	0	0	25	0	0
09:00 AM	0	0	0	0	0	19	2	0	5	0	3	0	2	16	0	0
10:00 AM	0	0	0	0	0	33	2	0	5	0	3	0	0	39	0	0
11:00 AM	0	0	0	0	0	27	0	0	4	0	3	0	0	26	0	0
12:00 PM	0	0	0	0	0	21	8	0	2	0	4	0	2	32	0	0
01:00 PM	0	0	0	0	0	17	0	0	8	0	1	0	1	18	0	0
02:00 PM	0	0	0	0	0	30	3	0	1	0	0	0	1	28	0	0
03:00 PM	0	0	0	0	0	17	1	0	3	0	0	0	0	14	0	0
04:00 PM	0	0	0	0	0	12	0	0	0	0	0	0	0	6	0	0
05:00 PM	0	0	0	0	0	5	1	0	0	0	0	0	0	1	0	0
06:00 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	1	0	0
07:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0
Total	0	0	0	0	0	247	20	0	40	0	23	0	6	272	0	0

HEAVY VEHICLES

Start Time	Brewster Creek Blvd Southbound				Stearns Rd Westbound				Harrier Lake Parking Lot Northbound				Brewster Creek Blvd Eastbound			
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns
06:00 AM	0	0	0	0	0	20	1	0	3	0	0	0	1	43	0	0
07:00 AM	0	0	0	0	0	35	2	0	4	0	2	0	2	47	0	0
08:00 AM	0	0	0	0	0	21	3	0	13	0	0	0	0	21	0	0
09:00 AM	0	0	0	0	0	23	5	0	5	0	3	0	0	28	0	0
10:00 AM	0	0	0	0	0	26	3	0	5	0	2	0	2	21	0	0
11:00 AM	0	0	0	0	0	26	6	0	3	0	0	0	2	22	0	0
12:00 PM	0	0	0	0	0	25	1	0	5	0	1	0	2	21	0	0
01:00 PM	0	0	0	0	0	35	3	0	5	0	1	0	4	18	0	0
02:00 PM	0	0	0	0	0	26	6	0	3	0	0	0	0	9	0	0
03:00 PM	0	0	0	0	0	34	11	0	1	0	1	0	2	14	0	0
04:00 PM	0	0	0	0	0	20	13	0	0	0	0	0	0	12	0	0
05:00 PM	0	0	0	0	0	27	4	0	2	0	0	0	0	12	0	0
06:00 PM	0	0	0	0	0	20	1	0	0	0	0	0	0	18	0	0
07:00 PM	0	0	0	0	0	19	2	0	0	0	0	0	0	8	0	0
Total	0	0	0	0	0	357	61	0	49	0	10	0	15	294	0	0



APPENDIX B

CMAP CORRESPONDENCE

Carl Schwarzer

From: Jose Rodriguez <JRodriguez@cmap.illinois.gov>
Sent: Wednesday, October 7, 2020 10:32 PM
To: Carl Schwarzer
Subject: Draft 2050 ADT - Brewster Creek Industrial Park
Attachments: Zones_Vicinity_BrewsterCreekIP.jpg; Comparison_CMAP_SoccecGF_ZeroEmpGF_2015_2050.xlsx

CAUTION: This email originated from outside of V3. Do not click links or open attachments unless you trust the sender.

Carl:

I have developed draft 2050 ADTs for the 8 segments requested as part of the Brewster Creek Industrial Park redevelopment project.

ROAD SEGMENT	Current Volumes	Recmd 2050 ADT	Effe. Link Grt Rate	CMAP Soccec	Soccec-EGZero
Stearns Road – West of Munger Road	18,900	22,000	1.164	1.270	1.120
Stearns Road – East of Munger Road	21,200	24,700	1.165	1.270	1.120
Munger Road – North of Stearns Road	8,300	8,600	1.036	1.270	1.120
Munger Road – South of Stearns Road	4,500	5,240	1.164	1.270	1.120
Bartlett Road – West of Munger Road/Naperville Road	11,900	15,000	1.261	1.270	1.120
Bartlett Road – East of Munger Road/Naperville Road	14,600	16,500	1.130	1.270	1.120
Naperville Road – North of Bartlett Road	12,300	14,900	1.211	1.270	1.120
Munger Road – South of Bartlett Road	12,000	13,400	1.117	1.270	1.120

The 2050 ADTs were determined through link-based growth factors (Effective Link Grt Rate) as opposed to utilizing the CMAP socioeconomic (households plus employment) growth factor of 1.27 for the 4 traffic analysis zones (see attached image) that Brewster Creek Industrial Park is located in the middle of. If employment growth is held to zero, the resulting housing-only growth factor is 1.12. An excel sheet describing the household and employment forecast growth of both the CMAP combined socioeconomic forecast and the housing growth only forecast is attached.

Please discuss with project team and determine if these draft 2050 ADTs are satisfactory or need further discussion.

Thank you,

Jose

Jose Rodriguez, AICP, PTP
Senior Transportation Planner



APPENDIX C

CAPACITY ANALYSIS WORKSHEETS

EXISTING

Intersection

Int Delay, s/veh	1.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↗		↖	↕↗	↖	↖	↗		↖	↗	
Traffic Vol, veh/h	87	947	2	3	589	100	1	0	2	25	0	28
Future Vol, veh/h	87	947	2	3	589	100	1	0	2	25	0	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	165	-	-	165	-	210	0	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	8	7	0	3	10	6	0	0	0	24	0	36
Mvmt Flow	96	1041	2	3	647	110	1	0	2	27	0	31

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	647	0	0	1043	0	0	1563	1887	521	1366	1888	324
Stage 1	-	-	-	-	-	-	1233	1233	-	654	654	-
Stage 2	-	-	-	-	-	-	330	654	-	712	1234	-
Critical Hdwy	4.26	-	-	4.16	-	-	7.5	6.5	6.9	7.98	6.5	7.62
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.98	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.98	5.5	-
Follow-up Hdwy	2.28	-	-	2.23	-	-	3.5	4	3.3	3.74	4	3.66
Pot Cap-1 Maneuver	895	-	-	657	-	-	77	71	505	87	71	581
Stage 1	-	-	-	-	-	-	191	251	-	373	466	-
Stage 2	-	-	-	-	-	-	663	466	-	342	251	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	895	-	-	657	-	-	67	63	505	79	63	581
Mov Cap-2 Maneuver	-	-	-	-	-	-	67	63	-	79	63	-
Stage 1	-	-	-	-	-	-	171	224	-	333	464	-
Stage 2	-	-	-	-	-	-	625	464	-	304	224	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0	28	40.6
HCM LOS			D	E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	67	505	895	-	-	657	-	-	79	581
HCM Lane V/C Ratio	0.016	0.004	0.107	-	-	0.005	-	-	0.348	0.053
HCM Control Delay (s)	59.6	12.2	9.5	-	-	10.5	-	-	73.1	11.5
HCM Lane LOS	F	B	A	-	-	B	-	-	F	B
HCM 95th %tile Q(veh)	0.1	0	0.4	-	-	0	-	-	1.3	0.2

Brewster Creek Business Park
2: Munger Rd & Stearns Rd

Existing (2020)
Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	183	698	103	8	457	134	106	121	24	106	115	116
Future Volume (vph)	183	698	103	8	457	134	106	121	24	106	115	116
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	1900	1900	1900	2000	1900
Storage Length (ft)	260		0	170		300	70		0	310		150
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	140			120			230			130		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.981				0.850		0.975				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1719	3254	0	1805	3423	1509	1787	1822	0	1517	1923	1468
Flt Permitted	0.350			0.323			0.676			0.637		
Satd. Flow (perm)	633	3254	0	614	3423	1509	1272	1822	0	1017	1923	1468
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15				147		6				127
Link Speed (mph)		50			45			35			40	
Link Distance (ft)		2697			848			650			528	
Travel Time (s)		36.8			12.8			12.7			9.0	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	5%	10%	1%	0%	11%	7%	1%	2%	0%	19%	4%	10%
Adj. Flow (vph)	201	767	113	9	502	147	116	133	26	116	126	127
Shared Lane Traffic (%)												
Lane Group Flow (vph)	201	880	0	9	502	147	116	159	0	116	126	127
Enter Blocked Intersection	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			12			12	
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	0.94	1.00	1.00	1.00	1.00	1.00	0.94	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	3		1	3	1	1	2		1	2	1
Detector Template												
Leading Detector (ft)	36	256		36	256	36	36	36		36	36	36
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Size(ft)	36	6		36	6	36	36	36		36	36	36
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	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	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		97			97			0			0	
Detector 2 Size(ft)		6			6			0			0	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Detector 3 Position(ft)		250			250							
Detector 3 Size(ft)		6			6							

Brewster Creek Business Park
2: Munger Rd & Stearns Rd

Existing (2020)
Timing Plan: AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 3 Type	Cl+Ex				Cl+Ex							
Detector 3 Channel												
Detector 3 Extend (s)	0.0				0.0							
Turn Type	pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Detector Phase	7	4		3	8	1	5	2		1	6	7
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0	3.0	3.0	8.0		3.0	8.0	3.0
Minimum Split (s)	6.5	21.0		6.5	21.0	6.5	6.5	14.0		6.5	14.0	6.5
Total Split (s)	19.0	71.0		19.0	71.0	17.0	17.0	38.0		17.0	38.0	19.0
Total Split (%)	13.1%	49.0%		13.1%	49.0%	11.7%	11.7%	26.2%		11.7%	26.2%	13.1%
Maximum Green (s)	15.5	65.0		15.5	65.0	13.5	13.5	32.0		13.5	32.0	15.5
Yellow Time (s)	3.5	4.0		3.5	4.0	3.5	3.5	4.0		3.5	4.0	3.5
All-Red Time (s)	0.0	2.0		0.0	2.0	0.0	0.0	2.0		0.0	2.0	0.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0		3.5	6.0	3.5	3.5	6.0		3.5	6.0	3.5
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Min		None	Min	None	None	None		None	None	None
Act Effct Green (s)	39.1	35.0		28.9	20.3	36.4	24.8	12.6		25.2	12.7	31.5
Actuated g/C Ratio	0.52	0.47		0.39	0.27	0.49	0.33	0.17		0.34	0.17	0.42
v/c Ratio	0.39	0.58		0.03	0.54	0.18	0.24	0.51		0.29	0.39	0.18
Control Delay	12.8	17.2		10.9	26.4	2.8	18.7	36.1		19.6	34.2	4.3
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	12.8	17.2		10.9	26.4	2.8	18.7	36.1		19.6	34.2	4.3
LOS	B	B		B	C	A	B	D		B	C	A
Approach Delay	16.4				20.9		28.8				19.3	
Approach LOS	B				C		C				B	
90th %ile Green (s)	15.5	45.2		6.2	35.9	13.5	13.5	19.6		13.5	19.6	15.5
90th %ile Term Code	Max	Gap		Gap	Hold	Max	Max	Gap		Max	Hold	Max
70th %ile Green (s)	14.8	38.7		0.0	20.4	11.3	10.9	14.3		11.3	14.7	14.8
70th %ile Term Code	Gap	Hold		Skip	Gap	Gap	Gap	Gap		Gap	Hold	Gap
50th %ile Green (s)	12.7	34.3		0.0	18.1	9.7	9.5	12.1		9.7	12.3	12.7
50th %ile Term Code	Gap	Hold		Skip	Gap	Gap	Gap	Gap		Gap	Hold	Gap
30th %ile Green (s)	10.8	29.3		0.0	15.0	8.2	8.1	10.1		8.2	10.2	10.8
30th %ile Term Code	Gap	Hold		Skip	Min	Gap	Gap	Gap		Gap	Hold	Gap
10th %ile Green (s)	8.4	26.9		0.0	15.0	6.7	6.6	8.0		6.7	8.1	8.4
10th %ile Term Code	Gap	Hold		Skip	Min	Gap	Gap	Min		Gap	Hold	Gap
Queue Length 50th (ft)	46	135		2	102	0	33	62		33	50	0
Queue Length 95th (ft)	103	292		10	179	29	90	155		92	129	35
Internal Link Dist (ft)	2617				768		570				448	
Turn Bay Length (ft)	260		170		300		70		310		150	
Base Capacity (vph)	563	2833		566	2978	885	569	813		473	855	755
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.36	0.31		0.02	0.17	0.17	0.20	0.20		0.25	0.15	0.17

Intersection Summary

Area Type: Other
 Cycle Length: 145
 Actuated Cycle Length: 75
 Natural Cycle: 55
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.58
 Intersection Signal Delay: 19.5
 Intersection Capacity Utilization 56.3%
 Analysis Period (min) 15
 90th %ile Actuated Cycle: 103.5
 70th %ile Actuated Cycle: 79.8
 50th %ile Actuated Cycle: 71.6
 30th %ile Actuated Cycle: 63.1
 10th %ile Actuated Cycle: 57.1

Intersection LOS: B
 ICU Level of Service B

Splits and Phases: 2: Munger Rd & Stearns Rd

 Ø1	 Ø2	 Ø3	 Ø4
17 s	38 s	19 s	71 s
 Ø5	 Ø6	 Ø7	 Ø8
17 s	38 s	19 s	71 s

Brewster Creek Business Park
 3: Munger Rd & Brewster Creek Blvd/Humbracht Cir

Existing (2020)
 Timing Plan: AM

Intersection

Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	42	0	19	1	1	17	36	272	2	47	352	105
Future Vol, veh/h	42	0	19	1	1	17	36	272	2	47	352	105
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									
Storage Length	150	-	-	-	-	-	250	-	-	190	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	36	0	11	100	100	41	3	8	0	9	9	10
Mvmt Flow	47	0	21	1	1	19	40	306	2	53	396	118

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	794	949	257	691	1007	154	513	0	0	308	0	0
Stage 1	560	560	-	388	388	-	-	-	-	-	-	-
Stage 2	234	389	-	303	619	-	-	-	-	-	-	-
Critical Hdwy	8.22	6.5	7.12	9.5	8.5	7.72	4.16	-	-	4.28	-	-
Critical Hdwy Stg 1	7.22	5.5	-	8.5	7.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7.22	5.5	-	8.5	7.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.86	4	3.41	4.5	5	3.71	2.23	-	-	2.29	-	-
Pot Cap-1 Maneuver	226	262	715	193	124	754	1042	-	-	1200	-	-
Stage 1	403	514	-	404	415	-	-	-	-	-	-	-
Stage 2	660	612	-	470	296	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	205	241	715	176	114	754	1042	-	-	1200	-	-
Mov Cap-2 Maneuver	205	241	-	176	114	-	-	-	-	-	-	-
Stage 1	388	491	-	388	399	-	-	-	-	-	-	-
Stage 2	617	589	-	436	283	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	22.2	12.3	1	0.8
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1042	-	-	205	715	514	1200	-	-
HCM Lane V/C Ratio	0.039	-	-	0.23	0.03	0.042	0.044	-	-
HCM Control Delay (s)	8.6	-	-	27.7	10.2	12.3	8.1	-	-
HCM Lane LOS	A	-	-	D	B	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.9	0.1	0.1	0.1	-	-

Intersection						
Int Delay, s/veh	1.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↘	↑↑	↘	
Traffic Vol, veh/h	455	25	49	297	19	29
Future Vol, veh/h	455	25	49	297	19	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	205	360	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	12	8	6	21	32	34
Mvmt Flow	489	27	53	319	20	31

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	489	0	754
Stage 1	-	-	-	-	489
Stage 2	-	-	-	-	265
Critical Hdwy	-	-	4.22	-	7.44
Critical Hdwy Stg 1	-	-	-	-	6.44
Critical Hdwy Stg 2	-	-	-	-	6.44
Follow-up Hdwy	-	-	2.26	-	3.82
Pot Cap-1 Maneuver	-	-	1043	-	367
Stage 1	-	-	-	-	504
Stage 2	-	-	-	-	849
Platoon blocked, %	-	-	-	-	1
Mov Cap-1 Maneuver	-	-	1043	-	348
Mov Cap-2 Maneuver	-	-	-	-	348
Stage 1	-	-	-	-	504
Stage 2	-	-	-	-	806

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	13.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	489	-	-	1043	-
HCM Lane V/C Ratio	0.106	-	-	0.051	-
HCM Control Delay (s)	13.2	-	-	8.6	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0.2	-

Intersection

Int Delay, s/veh 5.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↗		↖	↕↗	↖	↖	↕↗		↖	↕↗	
Traffic Vol, veh/h	25	821	0	0	1055	26	1	0	1	54	2	97
Future Vol, veh/h	25	821	0	0	1055	26	1	0	1	54	2	97
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	165	-	-	165	-	210	0	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	16	3	0	0	5	23	0	0	0	2	0	7
Mvmt Flow	27	873	0	0	1122	28	1	0	1	57	2	103

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	1122	0	0	873
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.42	-	-	4.1
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.36	-	-	2.2
Pot Cap-1 Maneuver	543	-	-	781
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	543	-	-	781
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0	36.8	74.5
HCM LOS			E	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	64	573	543	-	-	781	-	-	66	397
HCM Lane V/C Ratio	0.017	0.002	0.049	-	-	-	-	-	0.87	0.265
HCM Control Delay (s)	62.2	11.3	12	-	-	0	-	-	179.4	17.3
HCM Lane LOS	F	B	B	-	-	A	-	-	F	C
HCM 95th %tile Q(veh)	0.1	0	0.2	-	-	0	-	-	4.1	1.1

Brewster Creek Business Park
2: Munger Rd & Stearns Rd

Existing (2020)
Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	171	609	98	21	743	138	134	165	21	236	180	197
Future Volume (vph)	171	609	98	21	743	138	134	165	21	236	180	197
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	1900	1900	1900	2000	1900
Storage Length (ft)	260		0	170		300	70		0	310		150
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	140			120			230			130		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr		0.979				0.850		0.983				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3445	0	1805	3585	1509	1787	1835	0	1770	1961	1495
Flt Permitted	0.209			0.375			0.625			0.450		
Satd. Flow (perm)	393	3445	0	712	3585	1509	1176	1835	0	838	1961	1495
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16				142		4				187
Link Speed (mph)		50			45			35			40	
Link Distance (ft)		2697			848			650			528	
Travel Time (s)		36.8			12.8			12.7			9.0	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	1%	3%	0%	0%	6%	7%	1%	2%	0%	2%	2%	8%
Adj. Flow (vph)	176	628	101	22	766	142	138	170	22	243	186	203
Shared Lane Traffic (%)												
Lane Group Flow (vph)	176	729	0	22	766	142	138	192	0	243	186	203
Enter Blocked Intersection	No	No	No	No	No							
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
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	0.94	1.00	1.00	1.00	1.00	1.00	0.94	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	3		1	3	1	1	2		1	2	1
Detector Template												
Leading Detector (ft)	36	256		36	256	36	36	36		36	36	36
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Size(ft)	36	6		36	6	36	36	36		36	36	36
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	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	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	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	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		97			97			0			0	
Detector 2 Size(ft)		6			6			0			0	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Detector 3 Position(ft)		250			250							
Detector 3 Size(ft)		6			6							

Brewster Creek Business Park
2: Munger Rd & Stearns Rd

Existing (2020)
Timing Plan: PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 3 Type	Cl+Ex			Cl+Ex								
Detector 3 Channel												
Detector 3 Extend (s)	0.0			0.0								
Turn Type	pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Detector Phase	7	4		3	8	1	5	2		1	6	7
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0	3.0	3.0	8.0		3.0	8.0	3.0
Minimum Split (s)	6.5	21.0		6.5	21.0	6.5	6.5	14.0		6.5	14.0	6.5
Total Split (s)	19.0	71.0		19.0	71.0	17.0	17.0	38.0		17.0	38.0	19.0
Total Split (%)	13.1%	49.0%		13.1%	49.0%	11.7%	11.7%	26.2%		11.7%	26.2%	13.1%
Maximum Green (s)	15.5	65.0		15.5	65.0	13.5	13.5	32.0		13.5	32.0	15.5
Yellow Time (s)	3.5	4.0		3.5	4.0	3.5	3.5	4.0		3.5	4.0	3.5
All-Red Time (s)	0.0	2.0		0.0	2.0	0.0	0.0	2.0		0.0	2.0	0.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0		3.5	6.0	3.5	3.5	6.0		3.5	6.0	3.5
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Min		None	Min	None	None	None		None	None	None
Act Effct Green (s)	46.8	40.8		37.1	28.3	47.0	27.7	14.7		31.8	16.7	35.2
Actuated g/C Ratio	0.54	0.47		0.42	0.32	0.54	0.32	0.17		0.36	0.19	0.40
v/c Ratio	0.43	0.45		0.06	0.66	0.16	0.31	0.62		0.55	0.50	0.28
Control Delay	14.4	17.7		11.3	28.9	2.5	22.2	44.3		26.7	39.1	5.1
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	14.4	17.7		11.3	28.9	2.5	22.2	44.3		26.7	39.1	5.1
LOS	B	B		B	C	A	C	D		C	D	A
Approach Delay	17.1			24.5		35.1				23.4		
Approach LOS	B			C		D				C		
90th %ile Green (s)	15.5	49.0		6.9	40.4	13.5	13.5	21.9		13.5	21.9	15.5
90th %ile Term Code	Max	Hold		Gap	Gap	Max	Max	Gap		Max	Hold	Max
70th %ile Green (s)	13.8	39.8		6.3	32.3	13.5	12.3	17.1		13.5	18.3	13.8
70th %ile Term Code	Gap	Hold		Gap	Gap	Max	Gap	Gap		Max	Hold	Gap
50th %ile Green (s)	12.8	44.2		0.0	27.9	13.5	10.5	14.4		13.5	17.4	12.8
50th %ile Term Code	Gap	Hold		Skip	Gap	Max	Gap	Gap		Max	Hold	Gap
30th %ile Green (s)	11.0	38.4		0.0	23.9	12.1	9.1	12.1		12.1	15.1	11.0
30th %ile Term Code	Gap	Hold		Skip	Gap	Gap	Gap	Gap		Gap	Hold	Gap
10th %ile Green (s)	8.6	31.3		0.0	19.2	9.4	7.4	9.3		9.4	11.3	8.6
10th %ile Term Code	Gap	Hold		Skip	Gap	Gap	Gap	Gap		Gap	Hold	Gap
Queue Length 50th (ft)	47	123		5	191	0	49	98		93	92	5
Queue Length 95th (ft)	94	236		18	290	28	111	194		191	189	53
Internal Link Dist (ft)	2617			768		570				448		
Turn Bay Length (ft)	260			170		300		70		310		150
Base Capacity (vph)	465	2645		572	2749	899	514	695		458	740	768
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.38	0.28		0.04	0.28	0.16	0.27	0.28		0.53	0.25	0.26

Intersection Summary

Area Type: Other
 Cycle Length: 145
 Actuated Cycle Length: 87.4
 Natural Cycle: 50
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.66
 Intersection Signal Delay: 23.1
 Intersection Capacity Utilization 68.7%
 Analysis Period (min) 15
 90th %ile Actuated Cycle: 110.3
 70th %ile Actuated Cycle: 95.7
 50th %ile Actuated Cycle: 87.6
 30th %ile Actuated Cycle: 78.1
 10th %ile Actuated Cycle: 65.5

Intersection LOS: C
 ICU Level of Service C

Splits and Phases: 2: Munger Rd & Stearns Rd

 Ø1	 Ø2	 Ø3	 Ø4
17 s	38 s	19 s	71 s
 Ø5	 Ø6	 Ø7	 Ø8
17 s	38 s	19 s	71 s

Brewster Creek Business Park
 3: Munger Rd & Brewster Creek Blvd/Humbracht Cir

Existing (2020)
 Timing Plan: PM

Intersection												
Int Delay, s/veh	3.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↕		↖	↗		↖	↗	
Traffic Vol, veh/h	102	1	60	1	1	32	16	548	3	5	388	23
Future Vol, veh/h	102	1	60	1	1	32	16	548	3	5	388	23
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									
Storage Length	150	-	-	-	-	-	250	-	-	190	-	-
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	100
Heavy Vehicles, %	4	0	10	0	0	0	13	2	0	20	5	48
Mvmt Flow	111	1	65	1	1	35	17	596	3	5	422	23

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	777	1078	222	854	1088	299	445	0	0	599	0	0
Stage 1	444	444	-	632	632	-	-	-	-	-	-	-
Stage 2	333	634	-	222	456	-	-	-	-	-	-	-
Critical Hdwy	7.58	6.5	7.1	7.5	6.5	6.9	4.36	-	-	4.5	-	-
Critical Hdwy Stg 1	6.58	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.58	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.54	4	3.4	3.5	4	3.3	2.33	-	-	2.4	-	-
Pot Cap-1 Maneuver	283	220	758	256	218	703	1037	-	-	860	-	-
Stage 1	557	579	-	440	477	-	-	-	-	-	-	-
Stage 2	649	476	-	766	572	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	263	215	758	229	213	703	1037	-	-	860	-	-
Mov Cap-2 Maneuver	263	215	-	229	213	-	-	-	-	-	-	-
Stage 1	548	576	-	433	469	-	-	-	-	-	-	-
Stage 2	605	468	-	695	569	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21.6	11.1	0.2	0.1
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1037	-	-	263	728	623	860	-	-
HCM Lane V/C Ratio	0.017	-	-	0.422	0.091	0.059	0.006	-	-
HCM Control Delay (s)	8.5	-	-	28.3	10.4	11.1	9.2	-	-
HCM Lane LOS	A	-	-	D	B	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	2	0.3	0.2	0	-	-

Intersection

Int Delay, s/veh 0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑↑	
Traffic Vol, veh/h	405	5	25	684	25	31
Future Vol, veh/h	405	5	25	684	25	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	205	360	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	0	56	5	0	3
Mvmt Flow	431	5	27	728	27	33

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	431	0	848
Stage 1	-	-	-	-	431
Stage 2	-	-	-	-	417
Critical Hdwy	-	-	5.22	-	6.8
Critical Hdwy Stg 1	-	-	-	-	5.8
Critical Hdwy Stg 2	-	-	-	-	5.8
Follow-up Hdwy	-	-	2.76	-	3.5
Pot Cap-1 Maneuver	-	-	820	-	*584
Stage 1	-	-	-	-	*629
Stage 2	-	-	-	-	*795
Platoon blocked, %	-	-	-	-	1
Mov Cap-1 Maneuver	-	-	820	-	*565
Mov Cap-2 Maneuver	-	-	-	-	*565
Stage 1	-	-	-	-	*629
Stage 2	-	-	-	-	*769

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	10.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	670	-	-	820	-
HCM Lane V/C Ratio	0.089	-	-	0.032	-
HCM Control Delay (s)	10.9	-	-	9.5	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon



APPENDIX D

CAPACITY ANALYSIS WORKSHEETS BACKGROUND

Intersection												
Int Delay, s/veh	1.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕↔		↔	↕↔	↔	↔	↕	↔	↔	↕	↔
Traffic Vol, veh/h	87	969	2	3	603	100	1	0	2	25	0	28
Future Vol, veh/h	87	969	2	3	603	100	1	0	2	25	0	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	165			165		210	0			150		
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	8	7	0	3	10	6	0	0	0	24	0	36
Mvmt Flow	96	1065	2	3	663	110	1	0	2	27	0	31

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	663	0	0	1067	0	0	1595	1926	534	1393	1927	331
Stage 1	-	-	-	-	-	-	1257	1257	-	669	669	-
Stage 2	-	-	-	-	-	-	338	669	-	724	1258	-
Critical Hdwy	4.26			4.16			7.5	6.5	6.9	7.98	6.5	7.62
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.98	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.98	5.5	-
Follow-up Hdwy	2.28			2.23			3.5	4	3.3	3.74	4	3.66
Pot Cap-1 Maneuver	882			643			73	67	496	83	67	575
Stage 1	-	-	-	-	-	-	184	245	-	365	459	-
Stage 2	-	-	-	-	-	-	656	459	-	336	245	-
Platoon blocked, %												
Mov Cap-1 Maneuver	882			643			63	59	496	75	59	575
Mov Cap-2 Maneuver	-	-	-	-	-	-	63	59	-	75	59	-
Stage 1	-	-	-	-	-	-	164	218	-	325	457	-
Stage 2	-	-	-	-	-	-	618	457	-	298	218	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0	29.3	43.2
HCM LOS			D	E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	63	496	882	-	-	643	-	-	75	575
HCM Lane V/C Ratio	0.017	0.004	0.108	-	-	0.005	-	-	0.366	0.054
HCM Control Delay (s)	63.2	12.3	9.6	-	-	10.6	-	-	78.5	11.6
HCM Lane LOS	F	B	A	-	-	B	-	-	F	B
HCM 95th %tile Q(veh)	0.1	0	0.4	-	-	0	-	-	1.4	0.2

Brewster Creek Business Park
2: Munger Rd & Stearns Rd

Background (2025)
Timing Plan: AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	183	714	103	8	468	134	106	121	24	106	115	116
Future Volume (vph)	183	714	103	8	468	134	106	121	24	106	115	116
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	1900	1900	1900	2000	1900
Storage Length (ft)	260		0	170		300	70		0	310		150
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	140			120			230			130		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr		0.981				0.850		0.975				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1719	3253	0	1805	3423	1509	1787	1822	0	1517	1923	1468
Flt Permitted	0.343			0.317			0.676			0.630		
Satd. Flow (perm)	621	3253	0	602	3423	1509	1272	1822	0	1006	1923	1468
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14				147		6				127
Link Speed (mph)		50			45			35			40	
Link Distance (ft)		2697			848			650			528	
Travel Time (s)		36.8			12.8			12.7			9.0	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	5%	10%	1%	0%	11%	7%	1%	2%	0%	19%	4%	10%
Adj. Flow (vph)	201	785	113	9	514	147	116	133	26	116	126	127
Shared Lane Traffic (%)												
Lane Group Flow (vph)	201	898	0	9	514	147	116	159	0	116	126	127
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
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	0.94	1.00	1.00	1.00	1.00	1.00	0.94	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	3		1	3	1	1	2		1	2	1
Detector Template												
Leading Detector (ft)	36	256		36	256	36	36	36		36	36	36
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Size(ft)	36	6		36	6	36	36	36		36	36	36
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	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	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	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	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		97			97			0			0	
Detector 2 Size(ft)		6			6			0			0	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Detector 3 Position(ft)		250			250							
Detector 3 Size(ft)		6			6							

Brewster Creek Business Park
2: Munger Rd & Stearns Rd

Background (2025)
Timing Plan: AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 3 Type	CI+Ex				CI+Ex							
Detector 3 Channel												
Detector 3 Extend (s)	0.0				0.0							
Turn Type	pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Detector Phase	7	4		3	8	1	5	2		1	6	7
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0	3.0	3.0	8.0		3.0	8.0	3.0
Minimum Split (s)	6.5	21.0		6.5	21.0	6.5	6.5	14.0		6.5	14.0	6.5
Total Split (s)	19.0	71.0		19.0	71.0	17.0	17.0	38.0		17.0	38.0	19.0
Total Split (%)	13.1%	49.0%		13.1%	49.0%	11.7%	11.7%	26.2%		11.7%	26.2%	13.1%
Maximum Green (s)	15.5	65.0		15.5	65.0	13.5	13.5	32.0		13.5	32.0	15.5
Yellow Time (s)	3.5	4.0		3.5	4.0	3.5	3.5	4.0		3.5	4.0	3.5
All-Red Time (s)	0.0	2.0		0.0	2.0	0.0	0.0	2.0		0.0	2.0	0.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0		3.5	6.0	3.5	3.5	6.0		3.5	6.0	3.5
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Min		None	Min	None	None	None		None	None	None
Act Effct Green (s)	39.4	35.4		29.1	20.6	36.8	25.0	12.6		25.3	12.8	31.6
Actuated g/C Ratio	0.52	0.47		0.39	0.27	0.49	0.33	0.17		0.34	0.17	0.42
v/c Ratio	0.40	0.59		0.03	0.55	0.18	0.24	0.51		0.29	0.39	0.18
Control Delay	12.9	17.4		10.9	26.5	2.8	18.9	36.4		19.8	34.4	4.3
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	12.9	17.4		10.9	26.5	2.8	18.9	36.4		19.8	34.4	4.3
LOS	B	B		B	C	A	B	D		B	C	A
Approach Delay	16.6				21.1				29.0		19.5	
Approach LOS	B				C				C		B	
90th %ile Green (s)	15.5	46.1		6.2	36.8	13.5	13.5	19.7		13.5	19.7	15.5
90th %ile Term Code	Max	Gap		Gap	Hold	Max	Max	Gap		Max	Hold	Max
70th %ile Green (s)	14.9	39.2		0.0	20.8	11.4	11.0	14.4		11.4	14.8	14.9
70th %ile Term Code	Gap	Hold		Skip	Gap	Gap	Gap	Gap		Gap	Hold	Gap
50th %ile Green (s)	12.8	34.7		0.0	18.4	9.7	9.6	12.2		9.7	12.3	12.8
50th %ile Term Code	Gap	Hold		Skip	Gap	Gap	Gap	Gap		Gap	Hold	Gap
30th %ile Green (s)	10.8	29.3		0.0	15.0	8.4	8.2	10.2		8.4	10.4	10.8
30th %ile Term Code	Gap	Hold		Skip	Min	Gap	Gap	Gap		Gap	Hold	Gap
10th %ile Green (s)	8.5	27.0		0.0	15.0	6.7	6.6	8.0		6.7	8.1	8.5
10th %ile Term Code	Gap	Hold		Skip	Min	Gap	Gap	Min		Gap	Hold	Gap
Queue Length 50th (ft)	46	140		2	105	0	33	63		33	50	0
Queue Length 95th (ft)	103	300		10	184	28	92	157		94	130	36
Internal Link Dist (ft)	2617				768				570		448	
Turn Bay Length (ft)	260				170		300		70		310	
Base Capacity (vph)	559	2819		562	2965	885	568	809		469	850	752
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.36	0.32		0.02	0.17	0.17	0.20	0.20		0.25	0.15	0.17

Intersection Summary

Area Type: Other
 Cycle Length: 145
 Actuated Cycle Length: 75.5
 Natural Cycle: 55
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.59
 Intersection Signal Delay: 19.7
 Intersection Capacity Utilization 56.7%
 Analysis Period (min) 15
 90th %ile Actuated Cycle: 104.5
 70th %ile Actuated Cycle: 80.5
 50th %ile Actuated Cycle: 72.1
 30th %ile Actuated Cycle: 63.4
 10th %ile Actuated Cycle: 57.2

Intersection LOS: B
 ICU Level of Service B

Splits and Phases: 2: Munger Rd & Stearns Rd

 Ø1	 Ø2	 Ø3	 Ø4
17 s	38 s	19 s	71 s
 Ø5	 Ø6	 Ø7	 Ø8
17 s	38 s	19 s	71 s

Intersection

Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↕		↖	↗		↖	↗	
Traffic Vol, veh/h	42	0	19	1	1	17	36	272	2	47	352	105
Future Vol, veh/h	42	0	19	1	1	17	36	272	2	47	352	105
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									
Storage Length	150	-	-	-	-	-	250	-	-	190	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	36	0	11	100	100	41	3	8	0	9	9	10
Mvmt Flow	47	0	21	1	1	19	40	306	2	53	396	118

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	794	949	257	691	1007	154	513	0	0	308	0	0
Stage 1	560	560	-	388	388	-	-	-	-	-	-	-
Stage 2	234	389	-	303	619	-	-	-	-	-	-	-
Critical Hdwy	8.22	6.5	7.12	9.5	8.5	7.72	4.16	-	-	4.28	-	-
Critical Hdwy Stg 1	7.22	5.5	-	8.5	7.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7.22	5.5	-	8.5	7.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.86	4	3.41	4.5	5	3.71	2.23	-	-	2.29	-	-
Pot Cap-1 Maneuver	226	262	715	193	124	754	1042	-	-	1200	-	-
Stage 1	403	514	-	404	415	-	-	-	-	-	-	-
Stage 2	660	612	-	470	296	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	205	241	715	176	114	754	1042	-	-	1200	-	-
Mov Cap-2 Maneuver	205	241	-	176	114	-	-	-	-	-	-	-
Stage 1	388	491	-	388	399	-	-	-	-	-	-	-
Stage 2	617	589	-	436	283	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	22.2	12.3	1	0.8
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1042	-	-	205	715	514	1200	-	-
HCM Lane V/C Ratio	0.039	-	-	0.23	0.03	0.042	0.044	-	-
HCM Control Delay (s)	8.6	-	-	27.7	10.2	12.3	8.1	-	-
HCM Lane LOS	A	-	-	D	B	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.9	0.1	0.1	0.1	-	-

Intersection						
Int Delay, s/veh	1.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑↑	
Traffic Vol, veh/h	472	25	49	308	19	29
Future Vol, veh/h	472	25	49	308	19	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	205	360	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	12	8	6	21	32	34
Mvmt Flow	508	27	53	331	20	31

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	508	0	779 254
Stage 1	-	-	-	-	508 -
Stage 2	-	-	-	-	271 -
Critical Hdwy	-	-	4.22	-	7.44 7.58
Critical Hdwy Stg 1	-	-	-	-	6.44 -
Critical Hdwy Stg 2	-	-	-	-	6.44 -
Follow-up Hdwy	-	-	2.26	-	3.82 3.64
Pot Cap-1 Maneuver	-	-	1026	-	352 657
Stage 1	-	-	-	-	491 -
Stage 2	-	-	-	-	842 -
Platoon blocked, %	-	-	-	-	1
Mov Cap-1 Maneuver	-	-	1026	-	333 657
Mov Cap-2 Maneuver	-	-	-	-	333 -
Stage 1	-	-	-	-	491 -
Stage 2	-	-	-	-	799 -

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	13.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	474	-	-	1026	-
HCM Lane V/C Ratio	0.109	-	-	0.051	-
HCM Control Delay (s)	13.5	-	-	8.7	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0.2	-

Intersection

Int Delay, s/veh 6.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕↔		↔	↕↕	↔	↔	↕	↔	↔	↕	↔
Traffic Vol, veh/h	25	840	0	0	1079	26	1	0	1	54	2	97
Future Vol, veh/h	25	840	0	0	1079	26	1	0	1	54	2	97
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	165	-	-	165	-	210	0	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	16	3	0	0	5	23	0	0	0	2	0	7
Mvmt Flow	27	894	0	0	1148	28	1	0	1	57	2	103

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	1148	0	0	894
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.42	-	-	4.1
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.36	-	-	2.2
Pot Cap-1 Maneuver	530	-	-	767
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	530	-	-	767
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0	39.3	83.1
HCM LOS			E	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	59	564	530	-	-	767	-	-	62	387
HCM Lane V/C Ratio	0.018	0.002	0.05	-	-	-	-	-	0.927	0.272
HCM Control Delay (s)	67.1	11.4	12.2	-	-	0	-	-	203	17.7
HCM Lane LOS	F	B	B	-	-	A	-	-	F	C
HCM 95th %tile Q(veh)	0.1	0	0.2	-	-	0	-	-	4.4	1.1

Brewster Creek Business Park
2: Munger Rd & Stearns Rd

Background (2025)
Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	171	623	98	21	760	138	134	165	21	236	180	197
Future Volume (vph)	171	623	98	21	760	138	134	165	21	236	180	197
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	1900	1900	1900	2000	1900
Storage Length (ft)	260		0	170		300	70		0	310		150
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	140			120			230			130		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.980				0.850		0.983				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3448	0	1805	3585	1509	1787	1835	0	1770	1961	1495
Flt Permitted	0.202			0.370			0.627			0.445		
Satd. Flow (perm)	380	3448	0	703	3585	1509	1180	1835	0	829	1961	1495
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16				142		4				182
Link Speed (mph)		50			45			35			40	
Link Distance (ft)		2697			848			650			528	
Travel Time (s)		36.8			12.8			12.7			9.0	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	1%	3%	0%	0%	6%	7%	1%	2%	0%	2%	2%	8%
Adj. Flow (vph)	176	642	101	22	784	142	138	170	22	243	186	203
Shared Lane Traffic (%)												
Lane Group Flow (vph)	176	743	0	22	784	142	138	192	0	243	186	203
Enter Blocked Intersection	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			12			12	
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	0.94	1.00	1.00	1.00	1.00	1.00	0.94	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	3		1	3	1	1	2		1	2	1
Detector Template												
Leading Detector (ft)	36	256		36	256	36	36	36		36	36	36
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Size(ft)	36	6		36	6	36	36	36		36	36	36
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	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	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	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	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		97			97			0			0	
Detector 2 Size(ft)		6			6			0			0	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Detector 3 Position(ft)		250			250							
Detector 3 Size(ft)		6			6							

Brewster Creek Business Park
2: Munger Rd & Stearns Rd

Background (2025)
Timing Plan: PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 3 Type	CI+Ex				CI+Ex							
Detector 3 Channel												
Detector 3 Extend (s)	0.0				0.0							
Turn Type	pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Detector Phase	7	4		3	8	1	5	2		1	6	7
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0	3.0	3.0	8.0		3.0	8.0	3.0
Minimum Split (s)	6.5	21.0		6.5	21.0	6.5	6.5	14.0		6.5	14.0	6.5
Total Split (s)	19.0	71.0		19.0	71.0	17.0	17.0	38.0		17.0	38.0	19.0
Total Split (%)	13.1%	49.0%		13.1%	49.0%	11.7%	11.7%	26.2%		11.7%	26.2%	13.1%
Maximum Green (s)	15.5	65.0		15.5	65.0	13.5	13.5	32.0		13.5	32.0	15.5
Yellow Time (s)	3.5	4.0		3.5	4.0	3.5	3.5	4.0		3.5	4.0	3.5
All-Red Time (s)	0.0	2.0		0.0	2.0	0.0	0.0	2.0		0.0	2.0	0.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0		3.5	6.0	3.5	3.5	6.0		3.5	6.0	3.5
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Min		None	Min	None	None	None		None	None	None
Act Effect Green (s)	47.3	41.3		37.6	28.8	47.6	27.8	14.7		31.9	16.7	35.2
Actuated g/C Ratio	0.54	0.47		0.43	0.33	0.54	0.32	0.17		0.36	0.19	0.40
v/c Ratio	0.44	0.46		0.06	0.67	0.16	0.31	0.62		0.56	0.50	0.29
Control Delay	14.5	17.8		11.3	29.1	2.5	22.4	44.6		27.2	39.4	5.5
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	14.5	17.8		11.3	29.1	2.5	22.4	44.6		27.2	39.4	5.5
LOS	B	B		B	C	A	C	D		C	D	A
Approach Delay	17.2				24.7		35.3				23.8	
Approach LOS	B				C		D				C	
90th %ile Green (s)	15.5	49.7		6.9	41.1	13.5	13.5	22.1		13.5	22.1	15.5
90th %ile Term Code	Max	Hold		Gap	Gap	Max	Max	Gap		Max	Hold	Max
70th %ile Green (s)	13.7	40.3		6.3	32.9	13.5	12.4	17.2		13.5	18.3	13.7
70th %ile Term Code	Gap	Hold		Gap	Gap	Max	Gap	Gap		Max	Hold	Gap
50th %ile Green (s)	12.8	44.7		0.0	28.4	13.5	10.6	14.5		13.5	17.4	12.8
50th %ile Term Code	Gap	Hold		Skip	Gap	Max	Gap	Gap		Max	Hold	Gap
30th %ile Green (s)	11.0	38.8		0.0	24.3	12.1	9.1	12.1		12.1	15.1	11.0
30th %ile Term Code	Gap	Hold		Skip	Gap	Gap	Gap	Gap		Gap	Hold	Gap
10th %ile Green (s)	8.6	31.6		0.0	19.5	9.5	7.4	9.3		9.5	11.4	8.6
10th %ile Term Code	Gap	Hold		Skip	Gap	Gap	Gap	Gap		Gap	Hold	Gap
Queue Length 50th (ft)	48	126		5	197	0	50	99		94	93	7
Queue Length 95th (ft)	94	241		18	298	29	113	196		193	191	56
Internal Link Dist (ft)	2617				768		570				448	
Turn Bay Length (ft)	260		170		300		70		310		150	
Base Capacity (vph)	460	2631		569	2732	902	512	691		453	735	762
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.38	0.28		0.04	0.29	0.16	0.27	0.28		0.54	0.25	0.27

Intersection Summary

Area Type: Other
 Cycle Length: 145
 Actuated Cycle Length: 88
 Natural Cycle: 50
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.67
 Intersection Signal Delay: 23.3
 Intersection Capacity Utilization 69.1%
 Analysis Period (min) 15
 90th %ile Actuated Cycle: 111.2
 70th %ile Actuated Cycle: 96.3
 50th %ile Actuated Cycle: 88.2
 30th %ile Actuated Cycle: 78.5
 10th %ile Actuated Cycle: 65.9

Intersection LOS: C
 ICU Level of Service C

Splits and Phases: 2: Munger Rd & Stearns Rd

 Ø1	 Ø2	 Ø3	 Ø4
17 s	38 s	19 s	71 s
 Ø5	 Ø6	 Ø7	 Ø8
17 s	38 s	19 s	71 s

Intersection

Int Delay, s/veh	3.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	102	1	60	1	1	32	16	548	3	5	388	23
Future Vol, veh/h	102	1	60	1	1	32	16	548	3	5	388	23
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									
Storage Length	150						250			190		
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	100
Heavy Vehicles, %	4	0	10	0	0	0	13	2	0	20	5	48
Mvmt Flow	111	1	65	1	1	35	17	596	3	5	422	23

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	777	1078	222	854	1088	299	445	0	0	599	0	0
Stage 1	444	444	-	632	632	-	-	-	-	-	-	-
Stage 2	333	634	-	222	456	-	-	-	-	-	-	-
Critical Hdwy	7.58	6.5	7.1	7.5	6.5	6.9	4.36	-	-	4.5	-	-
Critical Hdwy Stg 1	6.58	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.58	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.54	4	3.4	3.5	4	3.3	2.33	-	-	2.4	-	-
Pot Cap-1 Maneuver	283	220	758	256	218	703	1037	-	-	860	-	-
Stage 1	557	579	-	440	477	-	-	-	-	-	-	-
Stage 2	649	476	-	766	572	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	263	215	758	229	213	703	1037	-	-	860	-	-
Mov Cap-2 Maneuver	263	215	-	229	213	-	-	-	-	-	-	-
Stage 1	548	576	-	433	469	-	-	-	-	-	-	-
Stage 2	605	468	-	695	569	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21.6	11.1	0.2	0.1
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1037	-	-	263	728	623	860	-	-
HCM Lane V/C Ratio	0.017	-	-	0.422	0.091	0.059	0.006	-	-
HCM Control Delay (s)	8.5	-	-	28.3	10.4	11.1	9.2	-	-
HCM Lane LOS	A	-	-	D	B	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	2	0.3	0.2	0	-	-

Intersection

Int Delay, s/veh	0.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑↑	
Traffic Vol, veh/h	420	5	25	709	25	31
Future Vol, veh/h	420	5	25	709	25	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	205	360	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	0	56	5	0	3
Mvmt Flow	447	5	27	754	27	33

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	447	0	877	223
Stage 1	-	-	-	-	447	-
Stage 2	-	-	-	-	430	-
Critical Hdwy	-	-	5.22	-	6.8	6.96
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.76	-	3.5	3.33
Pot Cap-1 Maneuver	-	-	806	-	*553	777
Stage 1	-	-	-	-	*617	-
Stage 2	-	-	-	-	*795	-
Platoon blocked, %	-	-	-	-	1	-
Mov Cap-1 Maneuver	-	-	806	-	*535	777
Mov Cap-2 Maneuver	-	-	-	-	*535	-
Stage 1	-	-	-	-	*617	-
Stage 2	-	-	-	-	*768	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	11.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	646	-	-	806	-
HCM Lane V/C Ratio	0.092	-	-	0.033	-
HCM Control Delay (s)	11.1	-	-	9.6	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon



APPENDIX E

CAPACITY ANALYSIS WORKSHEETS FUTURE WITH PROJECT

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↗		↖	↕↗	↖	↖	↕↗		↖	↕↗	
Traffic Vol, veh/h	138	1006	2	3	615	100	1	0	2	25	0	43
Future Vol, veh/h	138	1006	2	3	615	100	1	0	2	25	0	43
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	165	-	-	165	-	210	0	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	12	8	0	3	10	6	0	0	0	24	0	25
Mvmt Flow	152	1105	2	3	676	110	1	0	2	27	0	47

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	676	0	0	1108	0	0	1755	2092	554	1538	2093	338
Stage 1	-	-	-	-	-	-	1410	1410	-	682	682	-
Stage 2	-	-	-	-	-	-	345	682	-	856	1411	-
Critical Hdwy	4.34	-	-	4.16	-	-	7.5	6.5	6.9	7.98	6.5	7.4
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.98	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.98	5.5	-
Follow-up Hdwy	2.32	-	-	2.23	-	-	3.5	4	3.3	3.74	4	3.55
Pot Cap-1 Maneuver	847	-	-	620	-	-	55	53	481	64	53	595
Stage 1	-	-	-	-	-	-	148	207	-	358	453	-
Stage 2	-	-	-	-	-	-	649	453	-	276	206	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	847	-	-	620	-	-	43	43	481	55	43	595
Mov Cap-2 Maneuver	-	-	-	-	-	-	43	43	-	55	43	-
Stage 1	-	-	-	-	-	-	121	170	-	294	451	-
Stage 2	-	-	-	-	-	-	595	451	-	225	169	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.2	0	38.6	52.7
HCM LOS			E	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	43	481	847	-	-	620	-	-	55	595
HCM Lane V/C Ratio	0.026	0.005	0.179	-	-	0.005	-	-	0.5	0.079
HCM Control Delay (s)	90.9	12.5	10.2	-	-	10.8	-	-	123.4	11.6
HCM Lane LOS	F	B	B	-	-	B	-	-	F	B
HCM 95th %tile Q(veh)	0.1	0	0.6	-	-	0	-	-	1.9	0.3

Brewster Creek Business Park
2: Munger Rd & Stearns Rd

Future with Full Build Out (2025)

Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	220	714	103	8	468	238	106	180	24	134	134	128
Future Volume (vph)	220	714	103	8	468	238	106	180	24	134	134	128
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	1900	1900	1900	2000	1900
Storage Length (ft)	260		0	170		300	70		0	310		150
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	140			120			230			130		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frnt		0.981				0.850		0.983				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1687	3253	0	1805	3423	1380	1787	1804	0	1480	1923	1455
Flt Permitted	0.331			0.317			0.663			0.440		
Satd. Flow (perm)	588	3253	0	602	3423	1380	1247	1804	0	685	1923	1455
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14				262		4				141
Link Speed (mph)		50			45			35			40	
Link Distance (ft)		2697			848			650			528	
Travel Time (s)		36.8			12.8			12.7			9.0	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	7%	10%	1%	0%	11%	17%	1%	4%	0%	22%	4%	11%
Adj. Flow (vph)	242	785	113	9	514	262	116	198	26	147	147	141
Shared Lane Traffic (%)												
Lane Group Flow (vph)	242	898	0	9	514	262	116	224	0	147	147	141
Enter Blocked Intersection	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			12			12	
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	0.94	1.00	1.00	1.00	1.00	1.00	0.94	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	3		1	3	1	1	2		1	2	1
Detector Template												
Leading Detector (ft)	36	256		36	256	36	36	36		36	36	36
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Size(ft)	36	6		36	6	36	36	36		36	36	36
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	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	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	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	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		97			97			0			0	
Detector 2 Size(ft)		6			6			0			0	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Detector 3 Position(ft)		250			250							
Detector 3 Size(ft)		6			6							

Brewster Creek Business Park
2: Munger Rd & Stearns Rd

Future with Full Build Out (2025)

Timing Plan: AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 3 Type	Cl+Ex				Cl+Ex							
Detector 3 Channel												
Detector 3 Extend (s)	0.0				0.0							
Turn Type	pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Detector Phase	7	4		3	8	1	5	2		1	6	7
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0	3.0	3.0	8.0		3.0	8.0	3.0
Minimum Split (s)	6.5	21.0		6.5	21.0	6.5	6.5	14.0		6.5	14.0	6.5
Total Split (s)	19.0	71.0		19.0	71.0	17.0	17.0	38.0		17.0	38.0	19.0
Total Split (%)	13.1%	49.0%		13.1%	49.0%	11.7%	11.7%	26.2%		11.7%	26.2%	13.1%
Maximum Green (s)	15.5	65.0		15.5	65.0	13.5	13.5	32.0		13.5	32.0	15.5
Yellow Time (s)	3.5	4.0		3.5	4.0	3.5	3.5	4.0		3.5	4.0	3.5
All-Red Time (s)	0.0	2.0		0.0	2.0	0.0	0.0	2.0		0.0	2.0	0.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0		3.5	6.0	3.5	3.5	6.0		3.5	6.0	3.5
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Min		None	Min	None	None	None		None	None	None
Act Effct Green (s)	42.5	38.5		30.7	22.2	39.5	28.7	16.3		31.1	17.5	37.8
Actuated g/C Ratio	0.51	0.46		0.37	0.27	0.47	0.34	0.20		0.37	0.21	0.45
v/c Ratio	0.50	0.60		0.03	0.57	0.33	0.24	0.63		0.41	0.36	0.19
Control Delay	16.3	19.6		12.6	29.6	3.0	19.2	40.8		22.0	33.4	4.0
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	16.3	19.6		12.6	29.6	3.0	19.2	40.8		22.0	33.4	4.0
LOS	B	B		B	C	A	B	D		C	C	A
Approach Delay	18.9				20.5				33.5		20.0	
Approach LOS	B				C				C		C	
90th %ile Green (s)	15.5	49.9		6.3	40.7	13.5	13.5	26.0		13.5	26.0	15.5
90th %ile Term Code	Max	Gap		Gap	Hold	Max	Max	Gap		Max	Hold	Max
70th %ile Green (s)	15.5	41.6		0.0	22.6	13.3	11.0	18.7		13.3	21.0	15.5
70th %ile Term Code	Max	Hold		Skip	Gap	Gap	Gap	Gap		Gap	Hold	Max
50th %ile Green (s)	15.3	38.6		0.0	19.8	11.2	9.6	15.7		11.2	17.3	15.3
50th %ile Term Code	Gap	Hold		Skip	Gap	Gap	Gap	Gap		Gap	Hold	Gap
30th %ile Green (s)	13.0	32.9		0.0	16.4	9.4	8.4	13.2		9.4	14.2	13.0
30th %ile Term Code	Gap	Hold		Skip	Gap	Gap	Gap	Gap		Gap	Hold	Gap
10th %ile Green (s)	9.9	28.4		0.0	15.0	7.5	6.7	9.8		7.5	10.6	9.9
10th %ile Term Code	Gap	Hold		Skip	Min	Gap	Gap	Gap		Gap	Hold	Gap
Queue Length 50th (ft)	66	162		2	122	0	36	103		48	64	0
Queue Length 95th (ft)	141	332		11	200	40	96	226		121	152	38
Internal Link Dist (ft)	2617				768				570		448	
Turn Bay Length (ft)	260				170				310		150	
Base Capacity (vph)	513	2669		525	2806	832	572	726		404	771	771
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.47	0.34		0.02	0.18	0.31	0.20	0.31		0.36	0.19	0.18

Intersection Summary

Area Type: Other
 Cycle Length: 145
 Actuated Cycle Length: 83.4
 Natural Cycle: 55
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.63
 Intersection Signal Delay: 21.4
 Intersection Capacity Utilization 61.4%
 Analysis Period (min) 15
 90th %ile Actuated Cycle: 114.7
 70th %ile Actuated Cycle: 89.1
 50th %ile Actuated Cycle: 81
 30th %ile Actuated Cycle: 71
 10th %ile Actuated Cycle: 61.2

Intersection LOS: C
 ICU Level of Service B

Splits and Phases: 2: Munger Rd & Stearns Rd

 Ø1	 Ø2	 Ø3	 Ø4
17 s	38 s	19 s	71 s
 Ø5	 Ø6	 Ø7	 Ø8
17 s	38 s	19 s	71 s

Intersection												
Int Delay, s/veh	9.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↶			↷		↵	↶		↵	↶	
Traffic Vol, veh/h	46	22	37	20	7	49	93	272	64	158	352	115
Future Vol, veh/h	46	22	37	20	7	49	93	272	64	158	352	115
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									
Storage Length	150	-	-	-	-	-	250	-	-	190	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	34	5	4	25	14	33	1	8	17	20	9	11
Mvmt Flow	52	25	42	22	8	55	104	306	72	178	396	129

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1181	1402	262	1116	1431	189	525	0	0	378	0	0
Stage 1	815	815	-	551	551	-	-	-	-	-	-	-
Stage 2	366	587	-	565	880	-	-	-	-	-	-	-
Critical Hdwy	8.18	6.6	6.98	8	6.78	7.56	4.12	-	-	4.5	-	-
Critical Hdwy Stg 1	7.18	5.6	-	7	5.78	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7.18	5.6	-	7	5.78	-	-	-	-	-	-	-
Follow-up Hdwy	3.84	4.05	3.34	3.75	4.14	3.63	2.21	-	-	2.4	-	-
Pot Cap-1 Maneuver	113	135	731	136	120	732	1045	-	-	1058	-	-
Stage 1	276	382	-	432	485	-	-	-	-	-	-	-
Stage 2	546	487	-	423	337	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	79	101	731	85	90	732	1045	-	-	1058	-	-
Mov Cap-2 Maneuver	79	101	-	85	90	-	-	-	-	-	-	-
Stage 1	249	318	-	389	437	-	-	-	-	-	-	-
Stage 2	446	439	-	306	280	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	65.1	35.8	1.9	2.3
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1045	-	-	79	220	200	1058	-	-
HCM Lane V/C Ratio	0.1	-	-	0.654	0.301	0.427	0.168	-	-
HCM Control Delay (s)	8.8	-	-	112.3	28.3	35.8	9.1	-	-
HCM Lane LOS	A	-	-	F	D	E	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	3	1.2	2	0.6	-	-

Intersection						
Int Delay, s/veh	2.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↘	↑↑	↘	
Traffic Vol, veh/h	489	48	120	313	27	50
Future Vol, veh/h	489	48	120	313	27	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	205	360	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	13	18	16	21	28	26
Mvmt Flow	526	52	129	337	29	54

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	526	0	952
Stage 1	-	-	-	-	526
Stage 2	-	-	-	-	426
Critical Hdwy	-	-	4.42	-	7.36
Critical Hdwy Stg 1	-	-	-	-	6.36
Critical Hdwy Stg 2	-	-	-	-	6.36
Follow-up Hdwy	-	-	2.36	-	3.78
Pot Cap-1 Maneuver	-	-	945	-	266
Stage 1	-	-	-	-	489
Stage 2	-	-	-	-	689
Platoon blocked, %	-	-	-	-	1
Mov Cap-1 Maneuver	-	-	945	-	230
Mov Cap-2 Maneuver	-	-	-	-	230
Stage 1	-	-	-	-	489
Stage 2	-	-	-	-	595

Approach	EB	WB	NB
HCM Control Delay, s	0	2.6	16.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	401	-	-	945	-
HCM Lane V/C Ratio	0.206	-	-	0.137	-
HCM Control Delay (s)	16.3	-	-	9.4	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.8	-	-	0.5	-

Intersection												
Int Delay, s/veh	8.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↗		↖	↕↗	↖	↖	↗		↖	↗	
Traffic Vol, veh/h	44	854	0	0	1117	26	1	0	1	54	2	148
Future Vol, veh/h	44	854	0	0	1117	26	1	0	1	54	2	148
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	165	-	-	165	-	210	0	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	17	3	0	0	6	23	0	0	0	2	0	8
Mvmt Flow	47	909	0	0	1188	28	1	0	1	57	2	157

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	1188	0	0	909	0	0	1597	2190	454	1736	2190	594
Stage 1	-	-	-	-	-	-	1002	1002	-	1188	1188	-
Stage 2	-	-	-	-	-	-	595	1188	-	548	1002	-
Critical Hdwy	4.44	-	-	4.1	-	-	7.5	6.5	6.9	7.54	6.5	7.06
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.54	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.54	5.5	-
Follow-up Hdwy	2.37	-	-	2.2	-	-	3.5	4	3.3	3.52	4	3.38
Pot Cap-1 Maneuver	506	-	-	757	-	-	73	46	559	~56	46	433
Stage 1	-	-	-	-	-	-	264	323	-	200	264	-
Stage 2	-	-	-	-	-	-	463	264	-	488	323	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	506	-	-	757	-	-	42	42	559	~52	42	433
Mov Cap-2 Maneuver	-	-	-	-	-	-	42	42	-	~52	42	-
Stage 1	-	-	-	-	-	-	239	293	-	181	264	-
Stage 2	-	-	-	-	-	-	292	264	-	442	293	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0	52.2	90.7
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	42	559	506	-	-	757	-	-	52	385
HCM Lane V/C Ratio	0.025	0.002	0.093	-	-	-	-	-	1.105	0.414
HCM Control Delay (s)	92.9	11.5	12.8	-	-	0	-	-	284.8	20.8
HCM Lane LOS	F	B	B	-	-	A	-	-	F	C
HCM 95th %tile Q(veh)	0.1	0	0.3	-	-	0	-	-	5	2

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Brewster Creek Business Park
2: Munger Rd & Stearns Rd

Future with Full Buildout (2025)

Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	185	623	98	21	760	176	134	188	21	339	240	235
Future Volume (vph)	185	623	98	21	760	176	134	188	21	339	240	235
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	1900	1900	1900	2000	1900
Storage Length (ft)	260		0	170		300	70		0	310		150
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	140			120			230			130		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.980				0.850		0.985				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3448	0	1805	3585	1442	1787	1822	0	1626	1942	1482
Flt Permitted	0.196			0.370			0.509			0.373		
Satd. Flow (perm)	365	3448	0	703	3585	1442	958	1822	0	638	1942	1482
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16				181		4				173
Link Speed (mph)		50			45			35			40	
Link Distance (ft)		2697			848			650			528	
Travel Time (s)		36.8			12.8			12.7			9.0	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	3%	0%	0%	6%	12%	1%	3%	0%	11%	3%	9%
Adj. Flow (vph)	191	642	101	22	784	181	138	194	22	349	247	242
Shared Lane Traffic (%)												
Lane Group Flow (vph)	191	743	0	22	784	181	138	216	0	349	247	242
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
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	0.94	1.00	1.00	1.00	1.00	1.00	0.94	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	3		1	3	1	1	2		1	2	1
Detector Template												
Leading Detector (ft)	36	256		36	256	36	36	36		36	36	36
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Size(ft)	36	6		36	6	36	36	36		36	36	36
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	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	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	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	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		97			97			0			0	
Detector 2 Size(ft)		6			6			0			0	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Detector 3 Position(ft)		250			250							
Detector 3 Size(ft)		6			6							

Brewster Creek Business Park
2: Munger Rd & Stearns Rd

Future with Full Buildout (2025)
Timing Plan: PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 3 Type	CI+Ex				CI+Ex							
Detector 3 Channel												
Detector 3 Extend (s)	0.0				0.0							
Turn Type	pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Detector Phase	7	4		3	8	1	5	2		1	6	7
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0	3.0	3.0	8.0		3.0	8.0	3.0
Minimum Split (s)	6.5	21.0		6.5	21.0	6.5	6.5	14.0		6.5	14.0	6.5
Total Split (s)	19.0	71.0		19.0	71.0	17.0	17.0	38.0		17.0	38.0	19.0
Total Split (%)	13.1%	49.0%		13.1%	49.0%	11.7%	11.7%	26.2%		11.7%	26.2%	13.1%
Maximum Green (s)	15.5	65.0		15.5	65.0	13.5	13.5	32.0		13.5	32.0	15.5
Yellow Time (s)	3.5	4.0		3.5	4.0	3.5	3.5	4.0		3.5	4.0	3.5
All-Red Time (s)	0.0	2.0		0.0	2.0	0.0	0.0	2.0		0.0	2.0	0.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0		3.5	6.0	3.5	3.5	6.0		3.5	6.0	3.5
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Min		None	Min	None	None	None		None	None	None
Act Effct Green (s)	49.2	43.2		38.7	29.9	50.0	29.8	16.6		35.4	19.9	39.2
Actuated g/C Ratio	0.53	0.46		0.42	0.32	0.54	0.32	0.18		0.38	0.21	0.42
v/c Ratio	0.49	0.46		0.06	0.68	0.21	0.34	0.66		0.89	0.60	0.33
Control Delay	16.4	18.8		12.1	31.0	2.6	23.4	46.7		53.3	42.1	8.0
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	16.4	18.8		12.1	31.0	2.6	23.4	46.7		53.3	42.1	8.0
LOS	B	B		B	C	A	C	D		D	D	A
Approach Delay	18.3				25.4				37.6		36.9	
Approach LOS	B				C				D		D	
90th %ile Green (s)	15.5	51.7		7.0	43.2	13.5	13.5	26.0		13.5	26.0	15.5
90th %ile Term Code	Max	Hold		Gap	Gap	Max	Max	Hold		Max	Gap	Max
70th %ile Green (s)	15.1	43.4		6.3	34.6	13.5	12.8	19.6		13.5	20.3	15.1
70th %ile Term Code	Gap	Hold		Gap	Gap	Max	Gap	Hold		Max	Gap	Gap
50th %ile Green (s)	14.0	47.1		0.0	29.6	13.5	10.8	16.0		13.5	18.7	14.0
50th %ile Term Code	Gap	Hold		Skip	Gap	Max	Gap	Gap		Max	Hold	Gap
30th %ile Green (s)	11.9	40.3		0.0	24.9	13.5	9.1	13.3		13.5	17.7	11.9
30th %ile Term Code	Gap	Hold		Skip	Gap	Max	Gap	Gap		Max	Hold	Gap
10th %ile Green (s)	9.2	32.6		0.0	19.9	13.5	7.3	10.2		13.5	16.4	9.2
10th %ile Term Code	Gap	Hold		Skip	Gap	Max	Gap	Gap		Max	Hold	Gap
Queue Length 50th (ft)	54	131		6	206	0	53	117		156	132	24
Queue Length 95th (ft)	110	256		20	314	34	115	222		#339	254	91
Internal Link Dist (ft)	2617				768				570		448	
Turn Bay Length (ft)	260		170		300		70		310		150	
Base Capacity (vph)	433	2480		549	2575	858	463	646		390	686	763
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.44	0.30		0.04	0.30	0.21	0.30	0.33		0.89	0.36	0.32

Intersection Summary

Area Type: Other
 Cycle Length: 145
 Actuated Cycle Length: 93.1
 Natural Cycle: 55
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.89
 Intersection Signal Delay: 27.8
 Intersection Capacity Utilization 76.8%
 Analysis Period (min) 15
 90th %ile Actuated Cycle: 117.2
 70th %ile Actuated Cycle: 101.8
 50th %ile Actuated Cycle: 92.1
 30th %ile Actuated Cycle: 82.6
 10th %ile Actuated Cycle: 71.8
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: Munger Rd & Stearns Rd

 Ø1	 Ø2	 Ø3	 Ø4
17 s	38 s	19 s	71 s
 Ø5	 Ø6	 Ø7	 Ø8
17 s	38 s	19 s	71 s

Intersection												
Int Delay, s/veh	23.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↖	↖	↗		↖	↗	
Traffic Vol, veh/h	112	9	116	65	23	146	37	548	26	45	388	27
Future Vol, veh/h	112	9	116	65	23	146	37	548	26	45	388	27
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									
Storage Length	150	-	-	-	-	-	250	-	-	190	-	-
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	100
Heavy Vehicles, %	6	0	4	18	4	19	4	2	15	22	5	41
Mvmt Flow	122	10	126	71	25	159	40	596	28	49	422	27

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	924	1237	224	1004	1237	312	449	0	0	624	0	0
Stage 1	533	533	-	690	690	-	-	-	-	-	-	-
Stage 2	391	704	-	314	547	-	-	-	-	-	-	-
Critical Hdwy	7.62	6.5	6.98	7.86	6.58	7.28	4.18	-	-	4.54	-	-
Critical Hdwy Stg 1	6.62	5.5	-	6.86	5.58	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.62	5.5	-	6.86	5.58	-	-	-	-	-	-	-
Follow-up Hdwy	3.56	4	3.34	3.68	4.04	3.49	2.24	-	-	2.42	-	-
Pot Cap-1 Maneuver	218	177	773	175	172	636	1094	-	-	829	-	-
Stage 1	488	528	-	366	439	-	-	-	-	-	-	-
Stage 2	594	443	-	629	511	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	133	160	773	130	156	636	1094	-	-	829	-	-
Mov Cap-2 Maneuver	133	160	-	130	156	-	-	-	-	-	-	-
Stage 1	470	497	-	353	423	-	-	-	-	-	-	-
Stage 2	404	427	-	486	481	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	63.5	84.6	0.5	0.9
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1094	-	-	133	606	267	829	-	-
HCM Lane V/C Ratio	0.037	-	-	0.915	0.224	0.953	0.059	-	-
HCM Control Delay (s)	8.4	-	-	120.3	12.6	84.6	9.6	-	-
HCM Lane LOS	A	-	-	F	B	F	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	6.1	0.9	9	0.2	-	-

Intersection

Int Delay, s/veh 1.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↘	↑↑	↘	
Traffic Vol, veh/h	426	14	50	726	48	102
Future Vol, veh/h	426	14	50	726	48	102
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	205	360	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	3	18	32	5	13	17
Mvmt Flow	453	15	53	772	51	109

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	453	0	946
Stage 1	-	-	-	-	453
Stage 2	-	-	-	-	493
Critical Hdwy	-	-	4.74	-	7.06
Critical Hdwy Stg 1	-	-	-	-	6.06
Critical Hdwy Stg 2	-	-	-	-	6.06
Follow-up Hdwy	-	-	2.52	-	3.63
Pot Cap-1 Maneuver	-	-	918	-	*461
Stage 1	-	-	-	-	*576
Stage 2	-	-	-	-	*767
Platoon blocked, %	-	-	-	-	1
Mov Cap-1 Maneuver	-	-	918	-	*435
Mov Cap-2 Maneuver	-	-	-	-	*435
Stage 1	-	-	-	-	*576
Stage 2	-	-	-	-	*723

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	13.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	601	-	-	918	-
HCM Lane V/C Ratio	0.266	-	-	0.058	-
HCM Control Delay (s)	13.1	-	-	9.2	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	1.1	-	-	0.2	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Required Submittals for Solar Panel Systems

Project Site Address: _____

Type of Solar System Being Proposed:

A. Photovoltaic _____

Type of Inverter:

_____ Grid Tie Inverter: PV System tied directly to the electrical grid (Remote Disconnect Required for Fire Personnel)

_____ Off Grid Inverter: PV System is stand alone or off electrical grid (Remote Disconnect Required)

_____ On/Off Grid Inverter: PV is tired to the electrical grid and has battery backup (Remote Disconnect Required)

B. Thermal: _____

The Location of Solar Panel System:

A. _____ Ground Mounted

(Provide a plan showing the location that the panel are installed on the roof following the latest edition of the International Fire Code requirements.)

B. _____ Roof Mounted

(Provide a plan showing the location that the panels are installed on the roof following the latest edition of International Fire Code requirements.)

Required Submittals to be Included with the Construction Drawings (Item 2.B. previous page):

1. Provide a copy of the complete cut-sheets of the system to be installed.
2. Provide wiring diagrams of the systems showing the interior/exterior locations of the automatic disconnect for ComEd and the remote disconnect for the fire district. These disconnects are to be marked per the 2017 NEC requirements. Indicate the locations of the plaques and directories required per the 2017 NE requirements (Article 690 and 705)
3. Indicate if the system contains an automatic disconnect if the grid system loses power. If the system contains batteries it will have to have a remote disconnect accessible by the fire district to prevent back-feeds to the rest of the electrical system during an emergency.
4. Provide a copy of the application for the required Interconnect Agreement from ComEd (Appendix B).
<https://www.comed.com/customer-service/rates-pricing/interconnetion/Pages/transmission.aspx>
5. Provide a floor plan of the location the electrical panel/s will be installed in the structure or a utility room.
6. Provide the location of the new wiring for the panel/s. Indicate whether the wiring is on the exterior or interior of the structure and that it will be installed per the 2017 NEC.
7. Does this installation contain a storage battery system? If it does, supply the installation requirements for the batteries and the location of the batteries per the 2018 IBC/IRC.
8. For a roof-mounted system, provide a review of the existing structure, the panels, and the panel anchorage by a State of Illinois licensed architect or structural engineer. This review is to be based on the requirements of the 2018 IBC/2018 IRC (whichever is applicable).
9. Provide a signed Homeowner's Statement of Roof Condition if the age of the roof exceeds the recommended eight (8) years for placement of solar panels.

DRAFT for REVIEW

**WEST BARTLETT ROAD
TRANSPORTATION CORRIDOR STUDY**

**SUBMITTED TO
VILLAGE OF BARTLETT, IL**



January 11, 2021



With assistance from Sam Schwartz

West Bartlett Road Transportation Corridor Study

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1. INTRODUCTION TO THE STUDY

West Bartlett Road serves many diverse local and regional needs. From a residential perspective, West Bartlett Road provides access between residential areas, the downtown area, Metra commuter rail service, and links to access and other destinations further to the east and west. West Bartlett Road is also an important connector for recreational travel including bicycle and pedestrian facilities. From the perspective of regional commerce and general travel network connections, West Bartlett Road provides important access to state roadways and truck routes. Over the years, however, land uses in the vicinity have developed in a diverse fashion that in some ways competes the newer residential uses with heavy industrial uses. West Bartlett Road is under the jurisdiction of the Cook County Department of Transportation and Highways (CCDOTH) to the Cook County/Kane County border, where it is under Kane County jurisdiction.

Fish Transportation Group (FTG) has completed this Existing Conditions and Analysis Report to provide the foundation for completing a comprehensive assessment of current conditions by assessing existing traffic conditions, development activity and growth, and identifying preliminary operational issues and modal conflicts. Additionally, and perhaps most important, the report also identifies future traffic projections, takeaways, and proposed strategies for consideration.

1.1 Objectives of the Study

The study objectives were to collect, organize, and tabulate new data along with data from past studies along West Bartlett Road. These efforts will present a clearer view of the current transportation environment and a projection as to what to expect in the future. The results are to present a planning level assessment of the Corridor transportation factors with a particular focus on truck traffic, and allow the Village to quickly reference key features, data, and improvement plans. This assessment will provide a tool for the Village to identify deficiencies and prioritize future improvements including those that need coordination with CCDOTH who has jurisdiction over West Bartlett Road and other nearby roadways and support the Village's interaction with Village residents.

Additionally, a number of development proposals are approved and/or are under consideration which will impact all modes of transportation along the West Bartlett Road Corridor. Perhaps the most important element of this study is to identify and project the volume of truck traffic and determine how this truck traffic could impact other Corridor modes and land uses. Accordingly, this study will take a "deeper dive" into truck volumes in total for 24-hour periods, by direction, type, and future projected numbers.

1.2 Corridor Environment

A variety of land uses make up the West Bartlett Road Corridor, including industrial/mining uses, business parks, commercial uses, residential, institutional/public uses, open space, and undeveloped land. The Corridor includes four business parks: Brewster Creek Business Park, Bluff City Industrial Park, Blue Heron Business Park, and the Southwind Business Park. Several jurisdictions exercise control over the development of land parcels and roadways along or connecting to the Corridor. Large areas of land, particularly in the business parks are undeveloped.

Many of the new developments planned for the Corridor are commercial or industrial. The one exception is a larger residential development at Naperville Road and West Bartlett Road, although even that development has

a sizable commercial component. These new developments could all lead to an increased number of trucks, both single-unit (1-2 axles) and multi-unit (3 or more axles). The planned new developments along the Corridor are identified below and shown in greater detail later in this report.

- Expansion of the Brewster Creek Industrial Park that includes 400,000 square feet of medical related industrial (McKesson) and 417,000 of other industrial uses.
- New 100,560 square foot industrial use and a 11,500 square foot expansion in the Blue Heron Industrial Park.
- New mixed use residential development at Naperville/Munger Roads with a plan for 350 residential units and a possible 60,000 square feet of commercial.

In addition to these new developments, other factors that impact the corridor traffic flow and travel functionality:

- Existing heavy truck usage due to large industrial uses primarily to the west and south
- Generalized background traffic growth in the area and related improvements to IL 59
- Future growth of industrial/distribution centers
- The mix of non-automotive modes such as pedestrians and cyclists along the Bartlett Shared Use Trail with increased traffic and trucks
- Residential uses on both sides of corridor mixing with industrial
- Existing and proposed expansion of adjacent shared use path

1.3 COVID-19 Impacts

The COVID-19 pandemic has had significant impacts on travel and related traffic volumes in the region. After the initial decrease in traffic of 30 to 40 percent, traffic volumes have rebounded to levels within 10-15 percent of pre-COVID-19 levels with varying characteristics. Recent national studies and regional data, including counts performed for this study, indicate a steady increase in daily traffic but with some variances in traditional peaking characteristics. Rather than the “typical” AM and PM periods, traffic now appears to be gradually building throughout the morning to a more traditional peak in the late afternoon/early evening. Truck traffic declined slightly during the early months of COVID-19, although not to the extent of auto traffic, and has generally returned to pre-COVID-19 levels. These findings are evident in the comparisons of pre-COVID-19 data provided by the Illinois Department of Transportation (IDOT) and data recently collected by Fish Transportation Group (FTG) shown later in this report.

A recent study by CMAP has also found that the decline in traffic as a result of the pandemic was more pronounced for passenger travel than for trucks, reflecting the continued need to ship goods. Specifically, CMAP found that during the first two weeks of the stay-at-home order, average passenger traffic on IDOT arterials and expressways declined by almost one-half and heavy truck (multi-unit) traffic declined 10 percent. Travel by single-unit trucks, which typically serve a more local travel market, initially decreased somewhat more than heavy trucks. However, since late March single-unit truck traffic has recovered steadily, with volumes about 15 percent higher than pre-COVID-19, and heavy truck traffic is now slightly above pre-COVID-19 levels. (*Covid-19 Federal Legislation and Transportation System Impacts*, CMAP, November 19, 2020).

2. EXISTING CONDITIONS

2.1 Study Area

The study area is located at the western portion of the Village between the two major IDOT Strategic Regional Arterial (SRA) roadways of IL 59 and IL 25. The Corridor is a little over 3 miles in length and its location is surrounded by Lake Street (US 20) on the north and Stearns Road on the south. Although not a designated truck route, West Bartlett Road is surrounded by IDOT truck routes on Lake Street and IL 59, and local truck routes on Stearns Road and Illinois 25. The overall study area context, including municipal boundaries and designated truck routes are shown on **Figure 1**. The West Bartlett Road study area is shown on **Figure 2**.

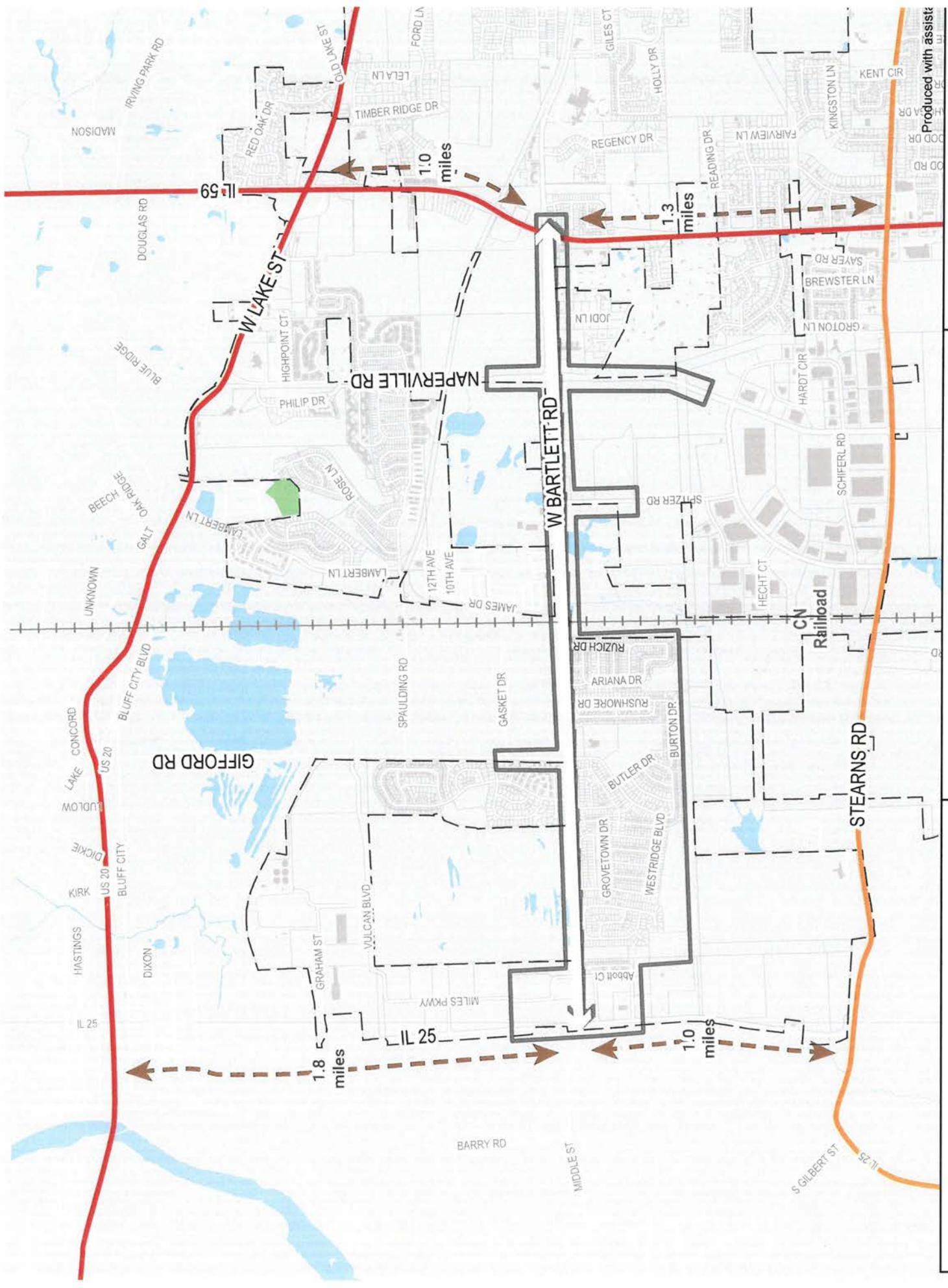


Figure 1:
Study Area Context

**Village of Bartlett
West Bartlett Road**

State Truck Route — **Study Area**

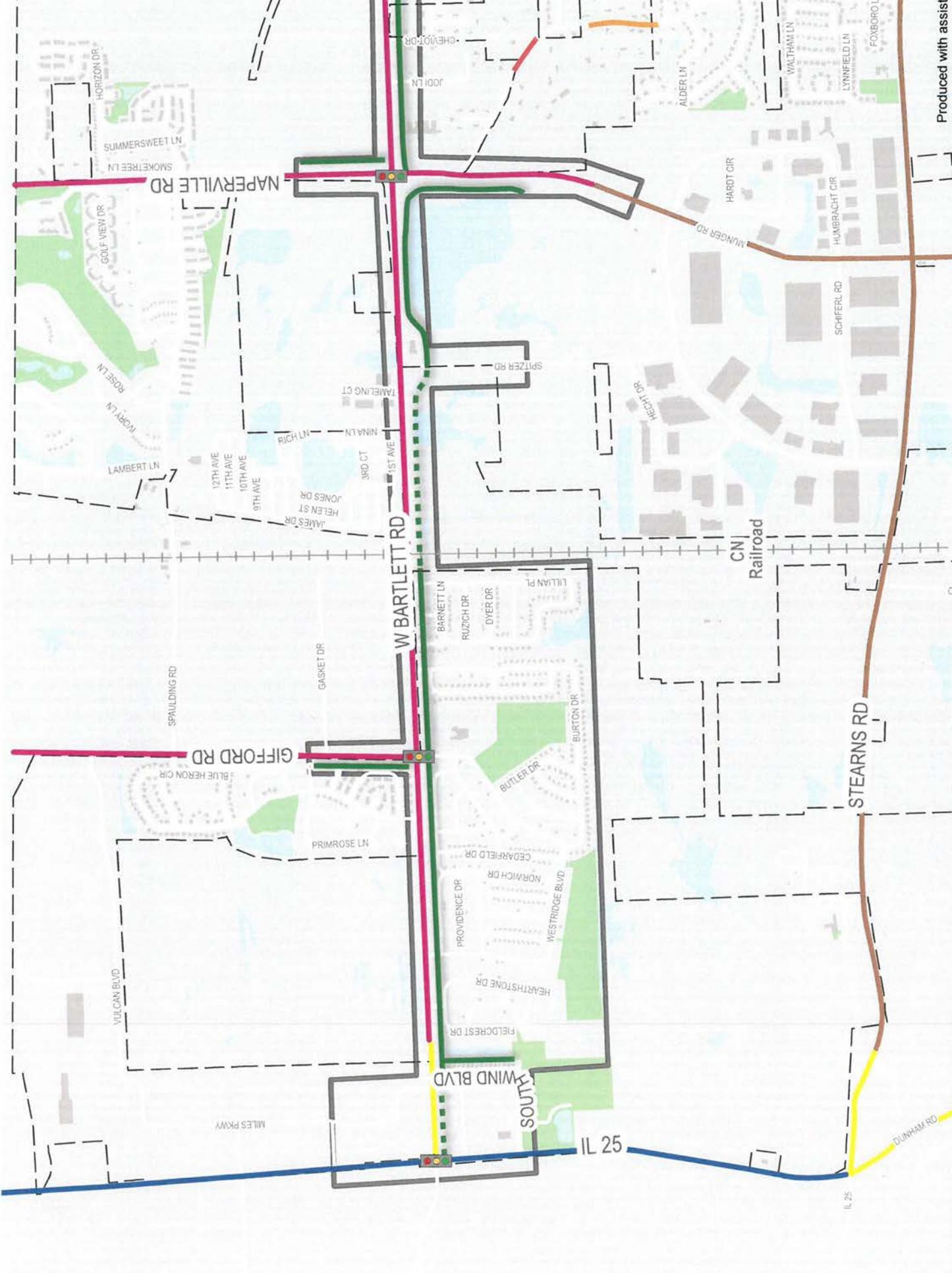


Figure 2:
Study Area &
Village of Bartlett
West Bartlett Road

Produced with assist

- Study Area
- Bike Trail
- Cook County HWY
- Muni Boundaries
- Planned Bike Trail
- IDOT

Due to its location and surrounding land uses, the Corridor provides important connecting access to existing residential, commercial, and industrial uses and facilitates important connections to the state arterial routes of IL 25 to the west and IL 59 to the east. Both of these state routes are designated by IDOT as SRA routes intended to carry large volumes of traffic at higher speeds. As such, they provide key regional connections including routes to the Interstate Highway System. Major transportation facilities intersecting the study area are described below.

Illinois Route 59 is a north-south SRA roadway under the jurisdiction of IDOT that borders the study area on the east. At its intersection with West Bartlett Road, it contains two through travel lanes and a single left turn lane on both the north and south approaches. The roadway generally contains two travel lanes in each direction to just west of Spitzer Road. A posted speed limit of 45 miles per hour exists for the entire corridor. It should be noted that the intersection of West Bartlett Road and IL 59 has been designed for significant improvements including dual left turn lanes on all approaches. The improvements are included in IDOT's Multi-Year plan, but no construction date has been scheduled. The roadway connects the study area north to US Route 20 and the Elgin-O'Hare Expressway (IL 390), as well as neighboring suburban communities and I-90. To the south it intersects other arterials, including Stearns Road, Army Trail Road, and IL 64. Further south it connects the area to I-88.

Naperville-Munger Road is a north-south roadway under the jurisdiction of CCDOTH north of the county line and DuPage County DOT south of the county line. At its signalized intersection with West Bartlett Road, it contains two through travel lanes, single left turn lanes, and an exclusive right turn lane on both approaches. The remainder of the roadway north of West Bartlett Road (Naperville Road) is two undivided lanes widening for left turn lanes at major intersections with a posted speed limit of 45 miles per hour. This section serves large residential subdivisions and an institutional use at Lake Street. South of West Bartlett Road it becomes Munger Road and is primarily a four lane divided roadway with a speed limit of 45 miles per hour. It provides access to Stearns Road, an important arterial designated as a Class II local truck route, and also to the Brewster Creek Industrial Park.

Spitzer Road is a north-south local roadway that intersects West Bartlett Road from the south forming a "T" intersection. Spitzer Road is under Village of Bartlett jurisdiction and contains one travel lane in each direction from West Bartlett Road to Brewster Creek Boulevard. It primarily provides access to the business park and the fire station. The intersections of Spitzer Road/Bartlett Road, Munger Road/Brewster Creek Boulevard, and Brewster Creek Boulevard/Stearns Road are unsignalized.

Gifford Road is a north-south roadway under the jurisdiction of Cook County and City of Elgin. Its intersection with West Bartlett Road is signalized, and south of West Bartlett Road it becomes Westridge Blvd. Gifford Road provides access to both residential uses on the west and to industrial uses on the east. The roadway provides an important connection between West Bartlett Road on the south and US 20 to the north (via Bluff City Blvd.) Additionally, a shared use path exists on the west side of Gifford from West Bartlett Road to just north of Spaulding Rd, providing connections to both the Blue Heron Park trail and the West Bartlett Road shared path.

Illinois Route 25 is a north-south arterial roadway on the west end of the corridor. At its signalized intersection with West Bartlett Road, IL 25 provides an exclusive left-turn lane, a through lane, and an exclusive right-turn lane on the northbound approach. The southbound approach provides an exclusive left-turn lane and a shared

through/right-turn lane. The southbound approach provides a single through lane. At its unsignalized intersection with Southwind Boulevard, IL 25 provides a through lane and an exclusive right-turn lane on the northbound approach while the southbound approach provides an exclusive left-turn lane and a through lane. IL 25 is under the jurisdiction of the IDOT, is classified as an SRA route.

The Canadian National Railway (CN) crosses West Bartlett Road between Spitzer Road and Gifford Road, consisting of one double-tracked mainline and a siding track, for a total of three tracks crossing West Bartlett Road. The crossing includes two cantilever crossbuck gates, bells, and signals. There is not a designated pedestrian or bicycle crossing. According to Illinois Commerce Commission (ICC) data from June 2020, there are 17 freight trains per day at the crossing. West Bartlett Road transitions from a four-lane cross-section to a two-lane just west of the railroad crossing.

Additionally, a multi-use trail is located along the south side of West Bartlett Road. The eastern portion of the trail is mostly complete, with remaining segments to be completed between Spitzer Road and the CN Railroad, and between IL 25 and Southwind Blvd. The trail extends east to downtown Bartlett and north/south connections along Naperville Road, Munger Road, and Gifford Road.

2.2 Average Daily Traffic Volumes (ADT)

Two types of new traffic counts were conducted: 24-hour average daily traffic (ADT) volumes; and intersection turning movements. This section discusses the first type - 24 hour traffic counts using machines that register vehicle volumes by direction, type, and speed. FTG collected 24 hour traffic ADT volumes on October 21, 2020. The ADT volumes were collected at two locations along the Corridor, classified by vehicle type: autos, medium/single-unit trucks, and heavy/multi-unit trucks. The first location was at the east end of the Corridor just to the east of Cheviot Drive, approximately 1,000 feet west of IL 59. The second location was at the western end of the corridor near Blue Heron Way, slightly less than a mile to the east of IL 25. These locations were chosen to capture all vehicles and to classify autos and trucks entering and exiting the corridor from either side. The locations of the counts as well as the directional volumes of total traffic and trucks is shown on **Tables 1 and 2** and **Figure 3** (Note: truck volumes are also included in the total volumes).

Since the new traffic counts were collected during the COVID-19 pandemic, data was also obtained from IDOT's traffic count database for a pre-COVID-19 comparison. **Table 1** and the accompanying graph indicates IDOT 2018 volume counts by hour, direction and in total (detailed truck volumes are not available from this database). **Table 2** and the accompanying graph shows recently collected counts by FTG. **Table 3** shows a side by side comparison of total volumes comparing IDOT 2018 and the current FTG 2020 counts.

Key Takeaways:

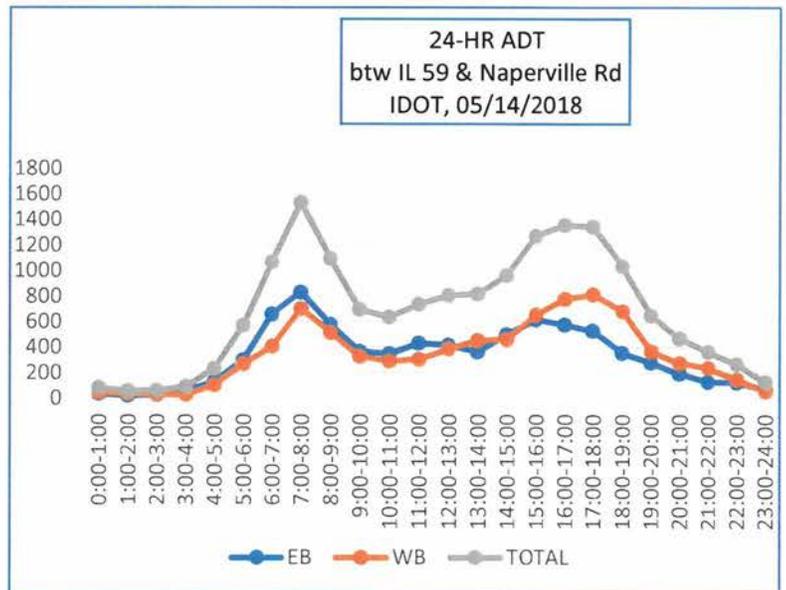
- Total traffic volumes on the east end (at count location) are nearly 70 percent higher than the west end indicating a heavier use of IL 59 to enter and exit the corridor.
- 2020 total traffic volumes are 93% of 2018 pre COVID-19 volumes.
- Truck volumes are nearly 40 percent higher on the east end near IL 59, comprising about 11 percent of daily volumes. On the west end, trucks volumes comprise about 14 percent of daily volumes. While these percentages are not unusually high for a commercial/industrial land use environment, it should be noted

that the area is not solely industrial and mixes with residential. Additionally, the truck volume percentage on West Bartlett Road is only slightly less than the percentage of truck traffic on Stearns Road (13%), which is a designated local truck route.

- This relatively high percentage of heavy trucks is located in a corridor along with an adjacent bike path and residential uses.

Table 1
24-HR Average Daily Traffic, Between IL 59 & Naperville Road
 Source: Illinois Department of Transportation, 05/14/2018

TIME PERIOD	EB	WB	TOTAL
0:00-1:00	37	47	84
1:00-2:00	21	38	59
2:00-3:00	28	32	60
3:00-4:00	62	28	90
4:00-5:00	128	104	232
5:00-6:00	299	271	570
6:00-7:00	658	408	1066
7:00-8:00	831	700	1531
8:00-9:00	578	515	1093
9:00-10:00	367	328	695
10:00-11:00	348	289	637
11:00-12:00	431	305	736
12:00-13:00	418	386	804
13:00-14:00	365	452	817
14:00-15:00	500	461	961
15:00-16:00	617	653	1270
16:00-17:00	576	778	1354
17:00-18:00	529	813	1342
18:00-19:00	354	681	1035
19:00-20:00	281	367	648
20:00-21:00	194	275	469
21:00-22:00	128	237	365
22:00-23:00	123	145	268
23:00-24:00	70	59	129
Total	7943	8372	16315
AM Peak	7:00AM-8:00AM 831	7:00AM-8:00AM 700	7:00AM-8:00AM 1,531
PM Peak	3:00PM-4:00PM 617	5:00PM-6:00PM 813	4:00PM-5:00PM 1,354



Source: IDOT, Traffic Count Database System (TCDS)

Table 2
24-HR Average Daily Traffic between IL 59 & Naperville Road
 Source: FTG Traffic Counts, 10/21/2020

TIME PERIOD	EB	WB	TOTAL
0:00-1:00	53	39	92
1:00-2:00	23	31	54
2:00-3:00	45	31	76
3:00-4:00	32	32	64
4:00-5:00	114	90	204
5:00-6:00	263	207	470
6:00-7:00	437	237	674
7:00-8:00	484	386	870
8:00-9:00	494	348	842
9:00-10:00	377	267	644
10:00-11:00	403	371	774
11:00-12:00	443	415	858
12:00-13:00	454	430	884
13:00-14:00	458	498	956
14:00-15:00	599	555	1154
15:00-16:00	607	596	1203
16:00-17:00	618	656	1274
17:00-18:00	594	654	1248
18:00-19:00	414	554	968
19:00-20:00	278	364	642
20:00-21:00	173	244	417
21:00-22:00	134	253	387
22:00-23:00	146	115	261
23:00-24:00	61	71	132
Total	7704	7444	15148
AM Peak	8:00AM-9:00AM 494	11:00AM-12:00PM 386	7:00AM-8:00AM 870
PM Peak	4:00PM-5:00PM 618	4:00PM-5:00PM 656	4:00PM-5:00PM 1274

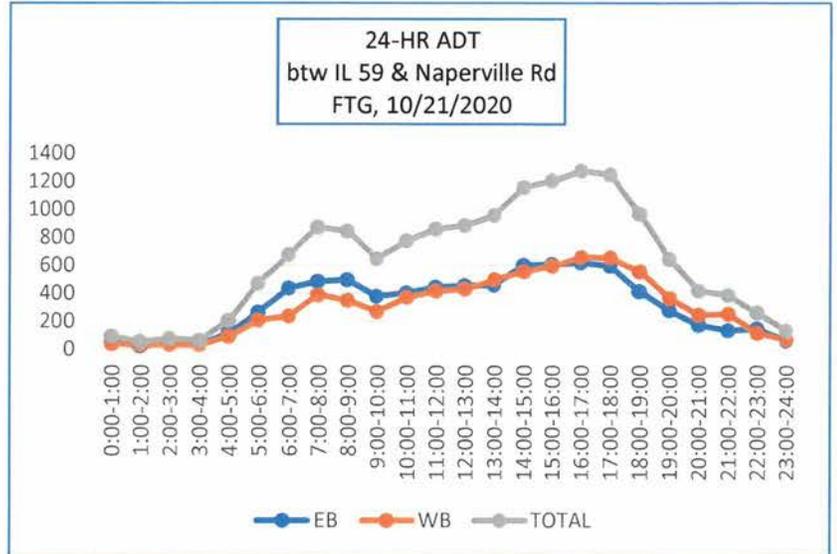
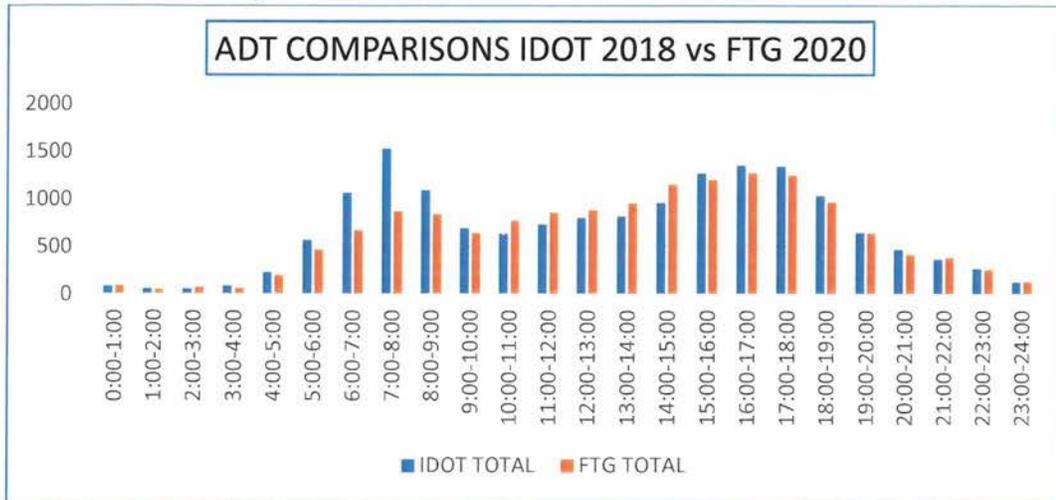


Table 3
Total Volume Comparisons - IDOT 2018 vs FTG 2020



2.3 Truck Regulations and Volumes

A particular focus of this study is the volume, type, and activity of trucks throughout the Corridor. The study area contains a large amount of residential uses which are mixed with the larger commercial/industrial uses. The residential uses are dispersed throughout the Corridor as are the industrial and commercial locations resulting in the mingling of traffic. Because of the location of the larger industrial uses, trucks travel along many of the roadways that also provide access to the residential areas. The relatively high volume of trucks as a percentage of total vehicle trips is reflective of the industrial environment.

Under the Illinois Vehicle Code, the state, counties, and municipalities can designate truck routes. Truck routes are designated as allowable for large trucks and typically designed to accommodate larger vehicles. Previously presented in Figure 1, designated truck routes include: State maintained routes IL 59 and US 20 and locally maintained route Stearns Road. There are three truck route classifications in Illinois that indicates the legal dimension and weight allowed on that route - Class I (Interstates, expressways, tollways), Class II (State and Local designated highways with at least 11 ft. lanes), and Non-Designated (all other State and Local Highways). Illinois Public Act 101-0328 was enacted on January 1, 2020 to simplify truck route classifications and eliminated Class III and Local Preferred Truck Routes, now classified as non-designated. Public Act 101-0328 states that local public agencies should remove Class II and Class III signage. Local public agencies are to report any ordinances or resolutions prohibiting the operation of heavy vehicles on their non-designated highway system to be posted on the IDOT’s website so truck drivers to know which roads they are prohibited from driving

Per IDOT guidance, vehicles over 65 feet in length are allowed access as follows:

- From a Class I highway onto any street or highway for a distance of one highway mile for the purpose of loading, unloading, food, fuel, repairs, and rest, provided there is no sign prohibiting that access.
- From a Class I or Class II highway onto any non-designated highway for a distance of 5 highway miles for the purpose of loading, unloading, food, fuel, repairs, and rest if there is no sign prohibiting that access and the route is not being used as a thoroughfare between Class I or Class II highways.

- Local public agencies will need to continue to pass ordinances or resolutions and install applicable signing where they wish to prohibit TSTs on roadways under their jurisdiction.

West Bartlett Road is not a designated truck route, but due to its central location is used to provide indirect and direct access to the Village's industrial parks and large industrial/commercial uses that are very truck intensive, including:

- Copart Auto Auction
- Bluff City Materials
- Brewster Creek Business Park (BCBP)
- Blue Herron Business Park

Daily truck volumes along the entire study area indicate a total of 1,686 on the east end, and 1,217 on the west end as shown on **Figure 3**. It should be noted that these numbers represent *truck trips* and are undoubtedly some of the same vehicles entering and exiting the study area. These volumes comprise about 11 percent of daily traffic volumes on the east end and about 14 percent of daily traffic volumes on the west end. These percentages are not unusually high as a percent of total traffic in an industrial/commercial environment but may not be considered a "reasonable" amount of truck volume for a minor arterial roadway serving residential and commercial uses such as West Bartlett Road. Arterial roadways in Cook County that have higher concentrations of industrial uses experience truck volumes in the range of 8 to 13 percent (*Connecting Cook County Freight Plan, 2018*). Stearns Road, which is a Class II local truck route carries about 13 percent truck volumes, indicating that 11 to 14 percent along West Bartlett Road, which includes heavy/multi-unit trucks, is slightly on the high end.

Much of the truck travel begins in the early morning hours but remains fairly constant during the remaining daytime hours - tapering off in the later afternoon. This is shown along with total daily truck traffic and direction of travel below in **Table 4 and Table 5**. An important consideration is not so much related to total truck volumes, but the percentage of heavy trucks - 63 percent of the truck traffic on the east end and 42 percent of the truck traffic on the west end are heavy trucks – those with 3 or more axles.

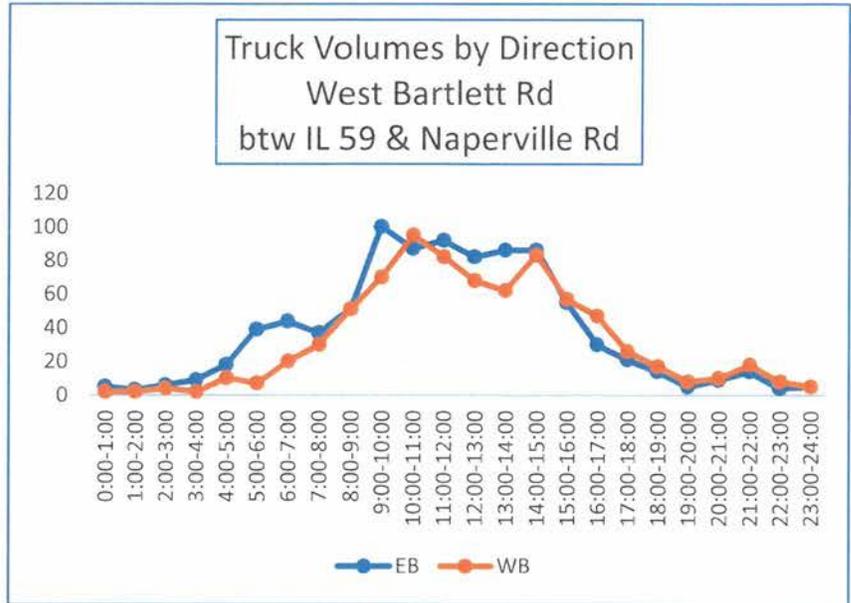
Truck access is essential to the economic viability of the Village, supporting industrial and commercial uses in the Corridor. Continued growth and planned build out of business parks and large industrial uses will continue to generate increased truck traffic. The issue is how to balance the access needs of the business parks with community goals.

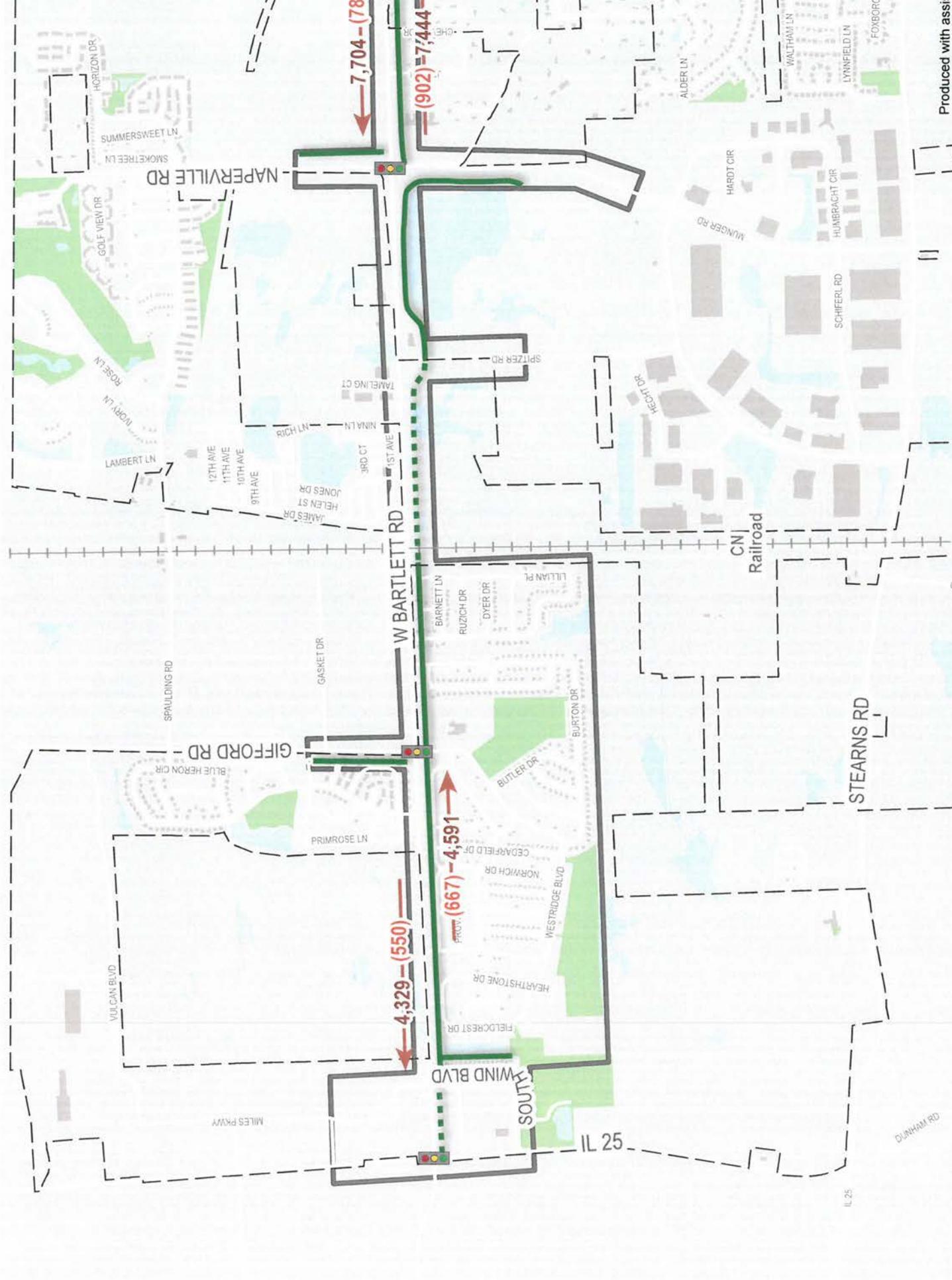
Table 4

24-HR Total Truck Traffic between IL 59 & Naperville Road

Source: FTG Traffic Counts, 10/21/2020

TIME PERIOD	TOTAL	
	EB	WB
0:00-1:00	5	2
1:00-2:00	3	2
2:00-3:00	6	4
3:00-4:00	9	2
4:00-5:00	18	10
5:00-6:00	39	7
6:00-7:00	44	20
7:00-8:00	37	30
8:00-9:00	51	51
9:00-10:00	100	70
10:00-11:00	87	95
11:00-12:00	92	82
12:00-13:00	82	68
13:00-14:00	86	62
14:00-15:00	86	83
15:00-16:00	55	57
16:00-17:00	30	47
17:00-18:00	21	26
18:00-19:00	14	17
19:00-20:00	5	8
20:00-21:00	9	10
21:00-22:00	14	18
22:00-23:00	4	8
23:00-24:00	5	5
TOTAL	902	784





Count Locations xxx Directional ADT

**Village of Bartlett
West Bartlett Road**

**Figure 3:
24-Hr Traffic Volumes**

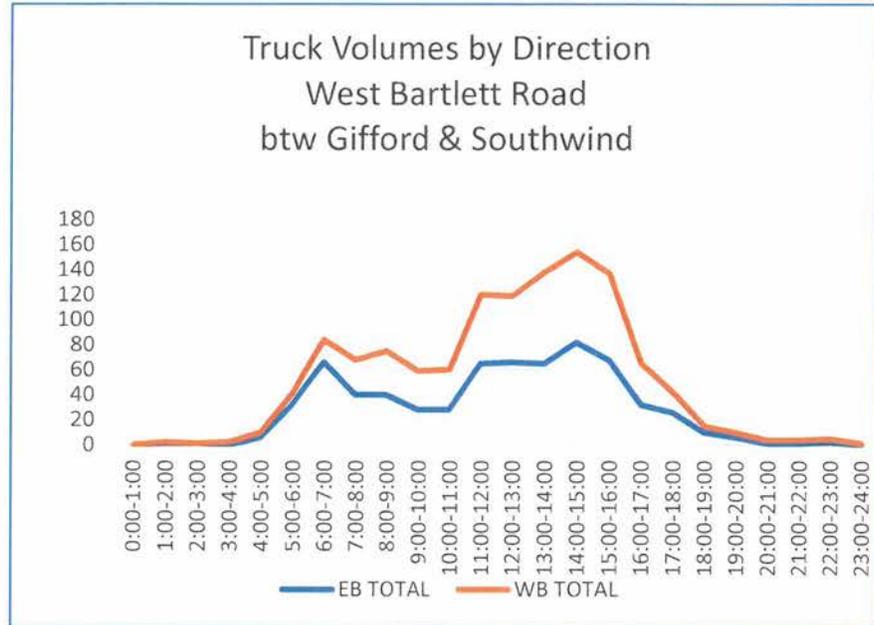
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Table 5

24-Hour Total Truck Traffic between Gifford Rd. and Southwind Blvd.

Source: FTG Traffic Counts, 10/21/2020

TIME PERIOD	TOTAL	
	EB	WB
0:00-1:00	0	0
1:00-2:00	1	1
2:00-3:00	1	0
3:00-4:00	0	2
4:00-5:00	6	4
5:00-6:00	32	9
6:00-7:00	66	18
7:00-8:00	40	28
8:00-9:00	40	35
9:00-10:00	28	31
10:00-11:00	28	32
11:00-12:00	65	55
12:00-13:00	66	53
13:00-14:00	65	73
14:00-15:00	82	72
15:00-16:00	68	69
16:00-17:00	32	33
17:00-18:00	26	16
18:00-19:00	10	5
19:00-20:00	6	4
20:00-21:00	1	3
21:00-22:00	1	3
22:00-23:00	2	3
23:00-24:00	0	1
TOTAL	666	550



Tables 6 and 7 further identifies hourly truck volumes and the types of trucks classified as medium and heavy (tractor-trailer) for both the east and west end.

Table 6

Truck Traffic by Classification East End

West Bartlett Road btw IL 59 & Naperville/Munger Rds.

Source: FTG Traffic Counts, 10/21/2020

TRUCK CLASS	EB	WB	TOTAL	PERCENT	% OF TOTAL ADT (15,148)
Medium Trucks	302	309	611	36%	4.0%
Heavy Trucks	600	475	1075	64%	7.1%
TOTAL	902	784	1686	100%	11.1%

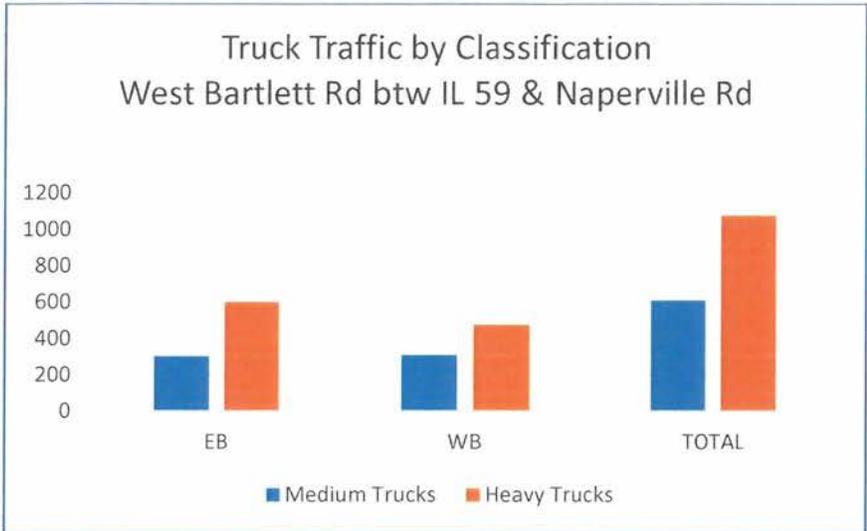
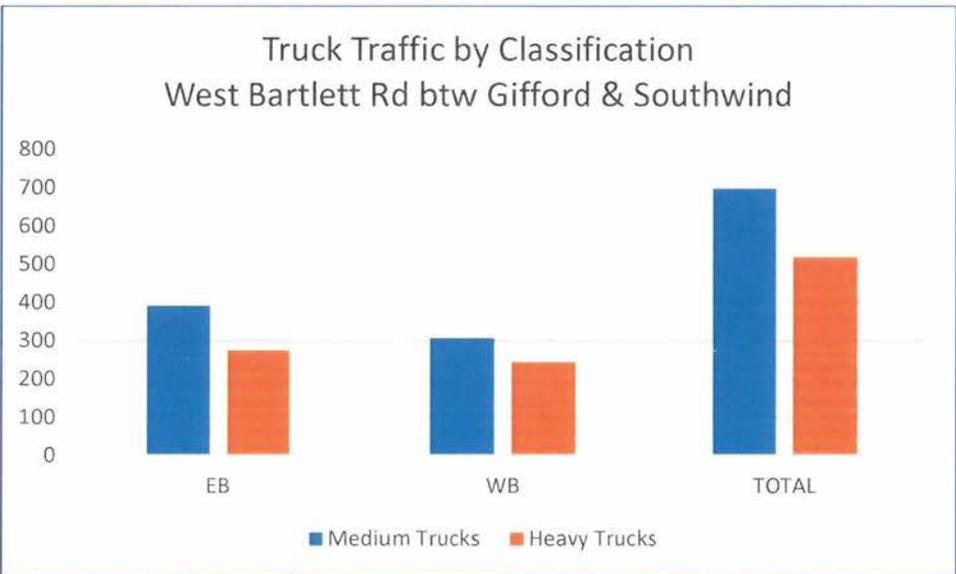


Table 7
Truck Traffic by Classification West End
West Bartlett Road btw Gifford & Southwind
Source: FTG Traffic Counts, 10/21/2020

TRUCK CLASS	EB	WB	TOTAL	PERCENT	% OF TOTAL ADT (8,920)
Medium Trucks	391	306	697	57%	7.8%
Heavy Trucks	275	244	519	43%	5.8%
TOTAL	666	550	1216	100%	13.6%



2.4 Intersection Turning Movement Counts

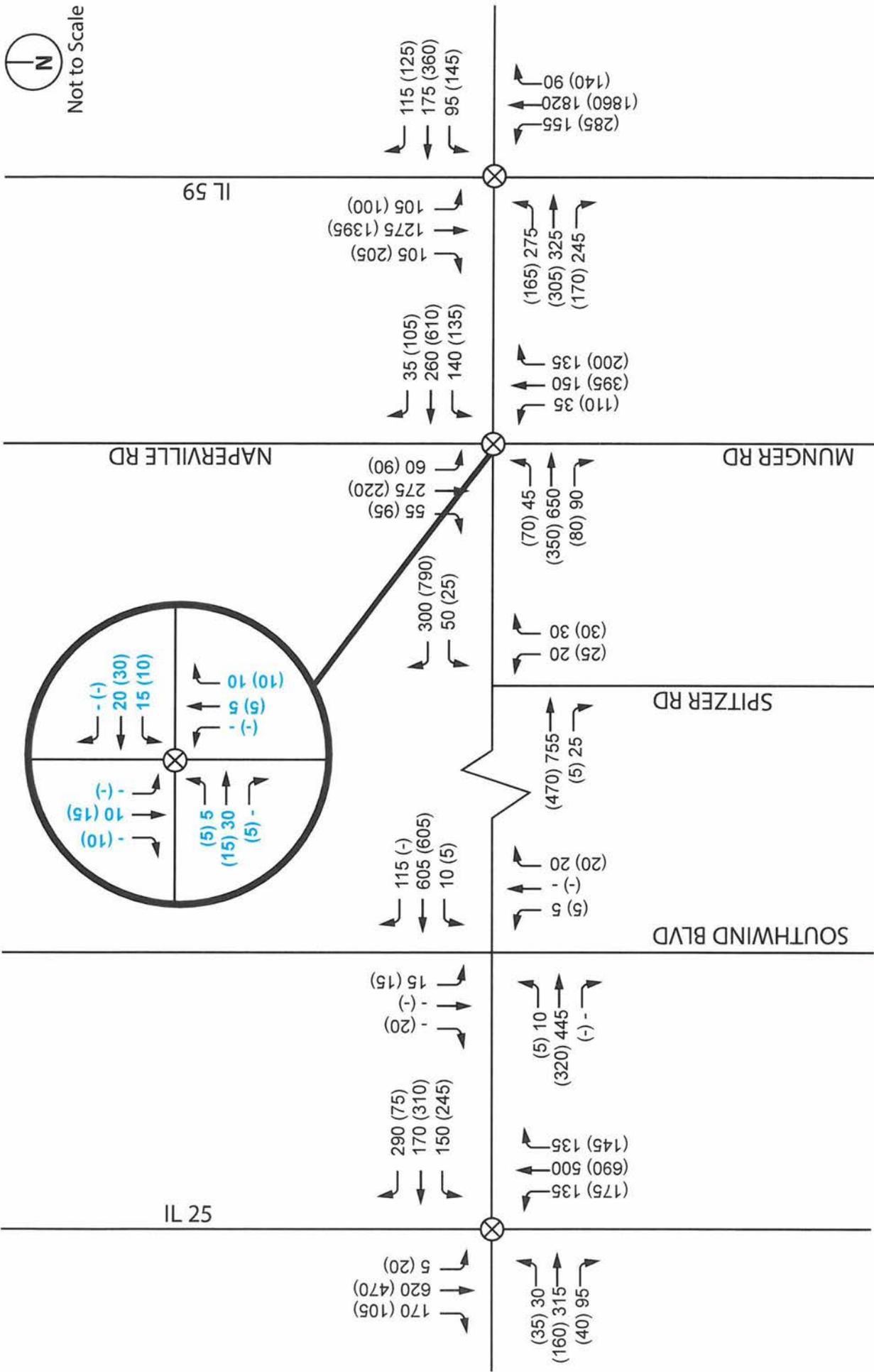
In order to collect model intersection volumes and truck counts FTG performed peak hour turning movement counts for all vehicles and trucks at the key intersection of West Bartlett Road and Naperville/Munger Road on October 21, 2020 for a period of fourteen hours starting at 6:00 AM and ending at 8:00 PM. The volumes and peak hours of the roadway were identified and recorded. For the West Bartlett Road/Naperville/Munger Road intersection, peak hours were 7:00-8:00AM and 4:00-5:00PM. Count data from other traffic impact studies as provided by the Village and IDOT were also recorded and included on **Figure 4 Peak Hour Traffic Volumes**. The other studies included:

- True North - June 2020 (KLOA)
- Brewster Creek Expansion - October 2020 (V3)
- IDOT IL 59 and West Bartlett Road Intersection Design Study (IDS) - January 2017

Note that the FTG numbers are current while the other three studies are from previous dates. Consequently, through volumes on West Bartlett Road did not always match. Therefore, **Figure 4** shows the *actual turning movements* from the counts. Because of the various dates of the studies, the westbound through movements were “balanced” by generally using the IDOT volumes at IL 59 and the Naperville/Munger Road FTG counts and moving west to Spitzer. The eastbound through volumes were balanced using numbers from the KLOA study moving east from IL 25 to Southwind Blvd. Once again the turning movement volumes at West Bartlett Road/Naperville/Munger are current and actual.

Key Takeaways

- During the evening (PM) **peak hour** approximately 2,465 vehicles traveled through the Naperville Road/West Bartlett Rd. intersection. Of this total PM volume, 105 were trucks representing approximately 4% of the total. During the morning **peak hour** there were 1,930 vehicles travelling through the intersection. Of this total AM volume, 95 were trucks (45 heavy and 50 medium) representing approximately 5% of the total volume. Once again, this is only a peak hour snapshot as truck traffic is very well dispersed in a constant pattern throughout the day (reference Tables 4 and 5).
- During the evening PM **peak hour**, vehicles turning north and south are split with 175 vehicles turning north and 215 turning south. Truck volumes during the same PM peak hour show 5 trucks turn north and 10 trucks turn to the south. The total volume of trucks traveling directly north-south through the intersection shows 15 trucks southbound and only 5 northbound. The AM peak hour is similar.



Produced with assistance from Sam Schwartz



Figure 4:
Peak Hour Traffic Volume

Village of Bartlett
West Bartlett Road
Corridor Transportation Study

- xx AM Peak Hour (All Vehicles)
 - (xx) PM Peak Hour (All Vehicles)
 - xx AM Peak Hour (Trucks)
 - (xx) PM Peak Hour (Trucks)
- Traffic Signal

2.5 Speed Data

In addition to ADT volumes and classification (vehicle type) the 24-hour counts also recorded speed data. The posted speed limit on West Bartlett Road for the entire length of the corridor is 45 mph. Travel speeds were categorized by the average (“mean”) speed and the 85th percentile. Average speed is simply the sum of measured speeds divided by the total number of vehicles. The 85th-percentile speed is the speed below which 85 percent of vehicles travel on a given highway and is used as one of the factors for determining the posted, legal speed limit of a roadway. On many local streets, the speed limit is posted as 25 miles per hour (mph). In all residential and business districts where a limit is not posted, 25 mph this is the implied limit. Speed limits on higher capacity streets such as West Bartlett Road are set based on engineering and traffic surveys that include a review of speed data, design parameters, and operational issues. Traffic engineers may rely on the 85th percentile “rule” to help determine speed limits on nonlocal streets. Typically, the speed limit is set to the speed that separates the bottom 85% of vehicle speeds from the top 15%. For example, if speeds of 100 vehicles are measured and 85 vehicles are traveling at 37 mph or less, the speed limit for the subject street could be set at 35 mph. **Table 8** summarizes the speed data collected on both the west end and east end of the Corridor. As presented below, the 85th percentile speed is higher than the posted speed limit, with 25-30% traveling over the speed limit. However, it should be noted that the 85th percentile speed is only 2-4 miles per hour over the speed limit and barely enforceable.

Table 8
Speed Data – East and West Count Locations

Source: FTG Traffic Counts, 10/21/2020

	East Location	West Location
Posted	45 mph	45 mph
Average/Mean Speed	42 mph	41 mph
85 th Percentile	49 mph	47 mph
% of Vehicles > 45mph	31.0%	24.4%

National and regional research has been conducted regarding the impact of COVID-19 on travel speeds. INRIX, an international company focused on transportation research and analytics, found that freight-heavy corridors in urban areas have seen dramatic travel speed increases, reducing barriers to move goods faster. INRIX identified gains in average travel speeds on all national interstates and regional highways and expressways limited access, including in the Chicago area, with increases in speed on highway facilities identified as 11% in the AM peak and 20% in the PM peak. (*COVID-19’s Impact on Freight: An Analysis of Long-Haul Freight Movement During a Pandemic*, INRIX, April 28, 2020). CMAP’s previously referenced study, *Covid-19 Federal Legislation and Transportation System Impacts*, also found that despite increasing traffic volumes, expressway speeds remain significantly higher than before Illinois’ stay-at-home order. This change is most apparent on IDOT expressways, which typically are more congested. This is important to consider for the West Bartlett Road corridor with a significant amount of heavy truck traffic that travel along many of the roadways that also provide access to the residential areas.

2.6 Crash Data

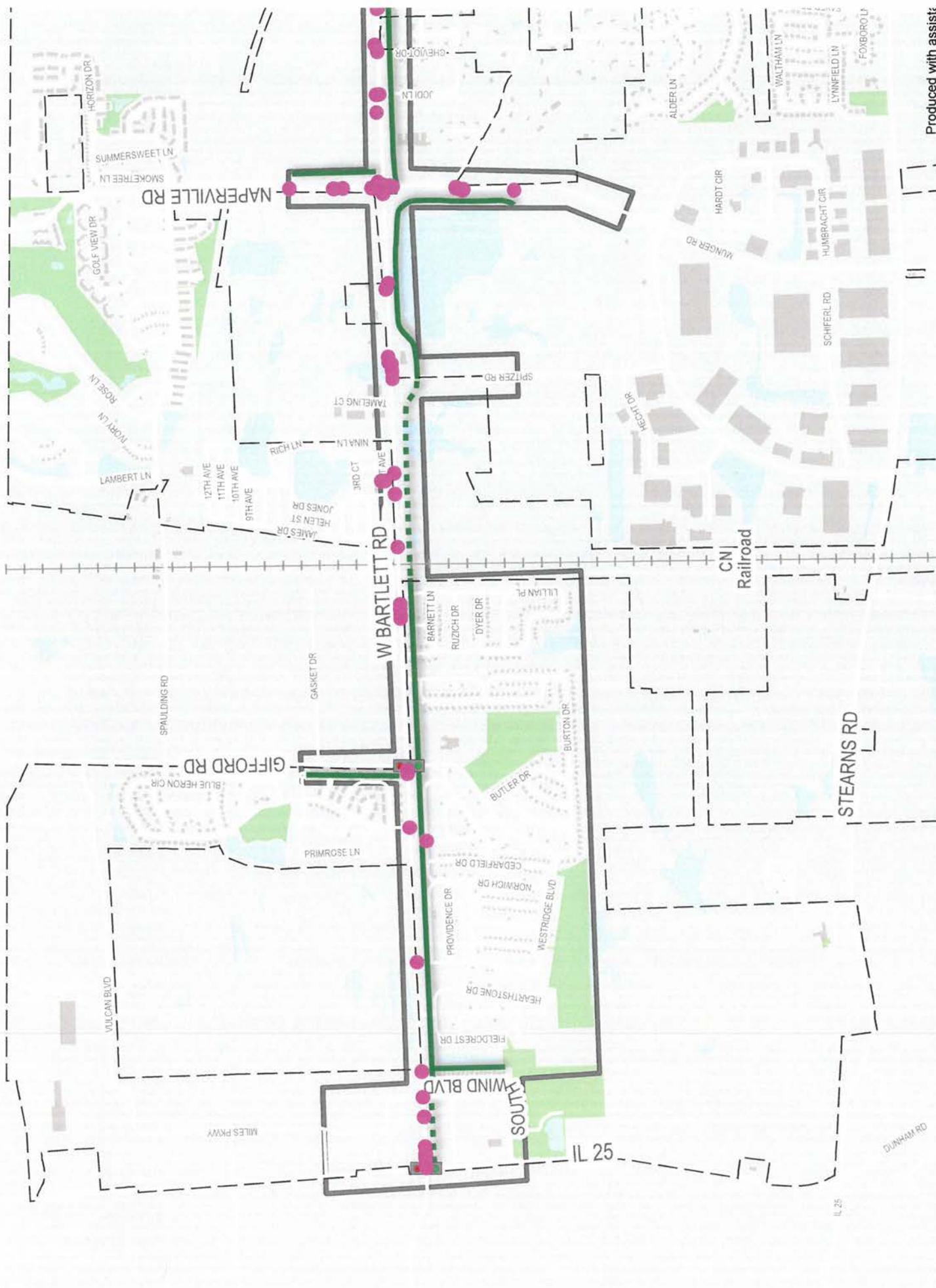
IDOT crash data was also obtained for the most recent available past five years (2014 to 2018) as presented in **Figure 5**. This data shows the locations with the highest number of incidents include West Bartlett Road

intersections with IL 59, Naperville/Munger Roads, and IL 25. (IDOT Disclaimer: The motor vehicle crash data referenced herein was provided by the Illinois Department of Transportation. Any conclusions drawn from analysis of the aforementioned data are the sole responsibility of the data recipient(s). Additionally, for coding years 2015 to present, the Bureau of Data Collection uses the exact latitude/longitude supplied by the investigating law enforcement agency to locate crashes. Therefore, location data may vary in previous years since data prior to 2015 was physically located by bureau personnel).

Additionally, the Bartlett Police Department sent supplemental data recoding accidents from October 2019 – September 2020, as shown in **Table 9**.

Table 9
Crash Data October 2019-September 2020
Bartlett Police Department

Intersection	Number of Crashes	Injuries	Percent of Injury Crashes
West Bartlett Road and IL 59	20	6	30%
West Bartlett rd. and Naperville/Munger Rd.	9	2	22%
Illinois 25 and West Bartlett Road	9	3	33%
West Bartlett Road and Spitzer	2	0	0%



**Village of Bartlett
West Bartlett Road**

● Crash Location, 2014 - 2018
 - - - - - Planned Bike Trail

**Figure 5:
Crash Locations**

Produced with assist

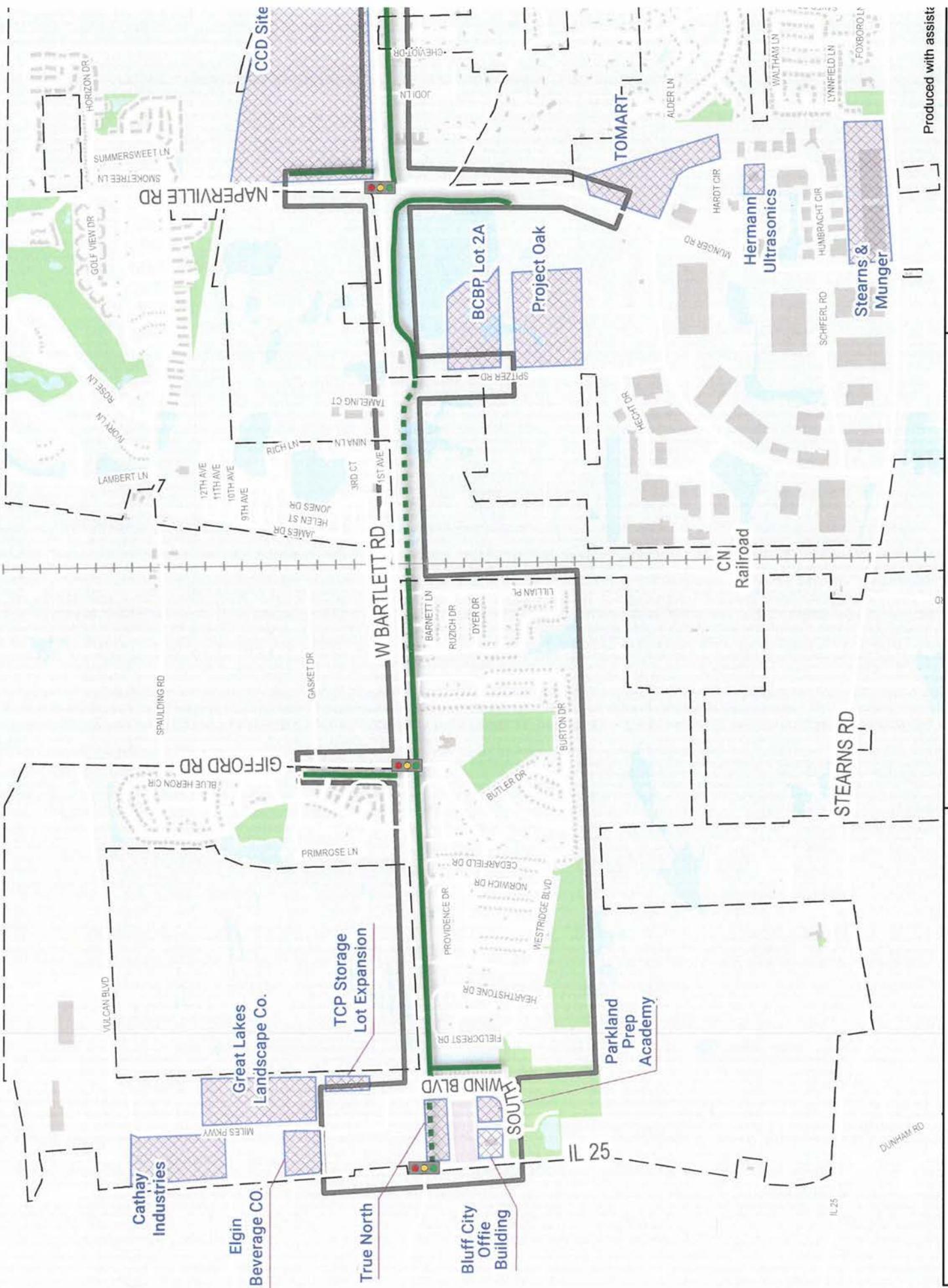
3. RECENT AND PLANNED DEVELOPMENTS

Key to assessing corridor transportation conditions is an understanding of the recent and proposed changes to corridor land uses. The West Bartlett Road Corridor includes four business parks: Brewster Creek Business Park, Bluff City Industrial Park, Blue Heron Business Park, and the Southwind Business Park. Brewster Creek Business Park, created through a tax increment financing (TIF) district in 1999, continues to drive economic development in Bartlett. The TIF is set to expire at the end of 2022. There are currently 43 buildings totaling 4.18 million square feet and includes about 75 businesses. The Southwind Business Park and Blue Heron Business Park were approved as a TIF in 2009 to redevelop the Bluff City Quarry Area into a mixed use business park, similar to Brewster Creek, but with the additional allowance of heavier industrial uses and outside storage. The Blue Heron Business Park is a 125 Acre property located at the northeast corner of West Bartlett Road and IL Route 25.

Two recent traffic studies were completed for new developments as part of existing business park build-out. The True North Traffic Study was completed for a proposed fuel center/truck stop in the Southwind Business Park. The traffic study was limited only to the area around IL 25 and West Bartlett Road. This development was approved by the Village on 9/15/2020 and Kane County approved a curb cut permit on West Bartlett Road just east of IL25. The Brewster Creek Business Park (Chicago Stone Company) traffic study, completed on 10/12/2020, was prepared to estimate the existing vehicle and truck trips that enter and exit the business park and evaluate impacts of the potential future build out. Although the intersection of West Bartlett Road and Munger is a key access point for the business park and the traffic study presents that 50% of new truck traffic will travel to/from the north, this intersection was not analyzed. Additionally, no recommendations were proposed for accommodating future truck volumes.

The Village has continued to promote development along the corridor, including the completion of the West Bartlett Road Corridor Plan (Teska) in 2007 to guide the development and redevelopment of the western area of the Village along West Bartlett Road, and provide a blueprint for the potential use of the land and its design characteristics. The Village's Strategic Plan also focuses on continued development of the business parks, along with the development of commercial areas at IL 59 & W. Bartlett Road. The continued growth and build out of the industrial parks will result in continued growth in truck traffic, indicating a need to work with business partners and CCDOTH to effectively manage this growth.

Based on data provided by the Village, a summary of recently completed and proposed developments along or near the West Bartlett Road Corridor are listed below in **Table 10** and shown in **Figure 6**.



**Village of Bartlett
West Bartlett Road**

-  New Developments
-  Planned Bike Trail

**Figure 6:
Future Developments**

Produced with assist

Table 10

Recent/Proposed Developments – West Bartlett Road Corridor

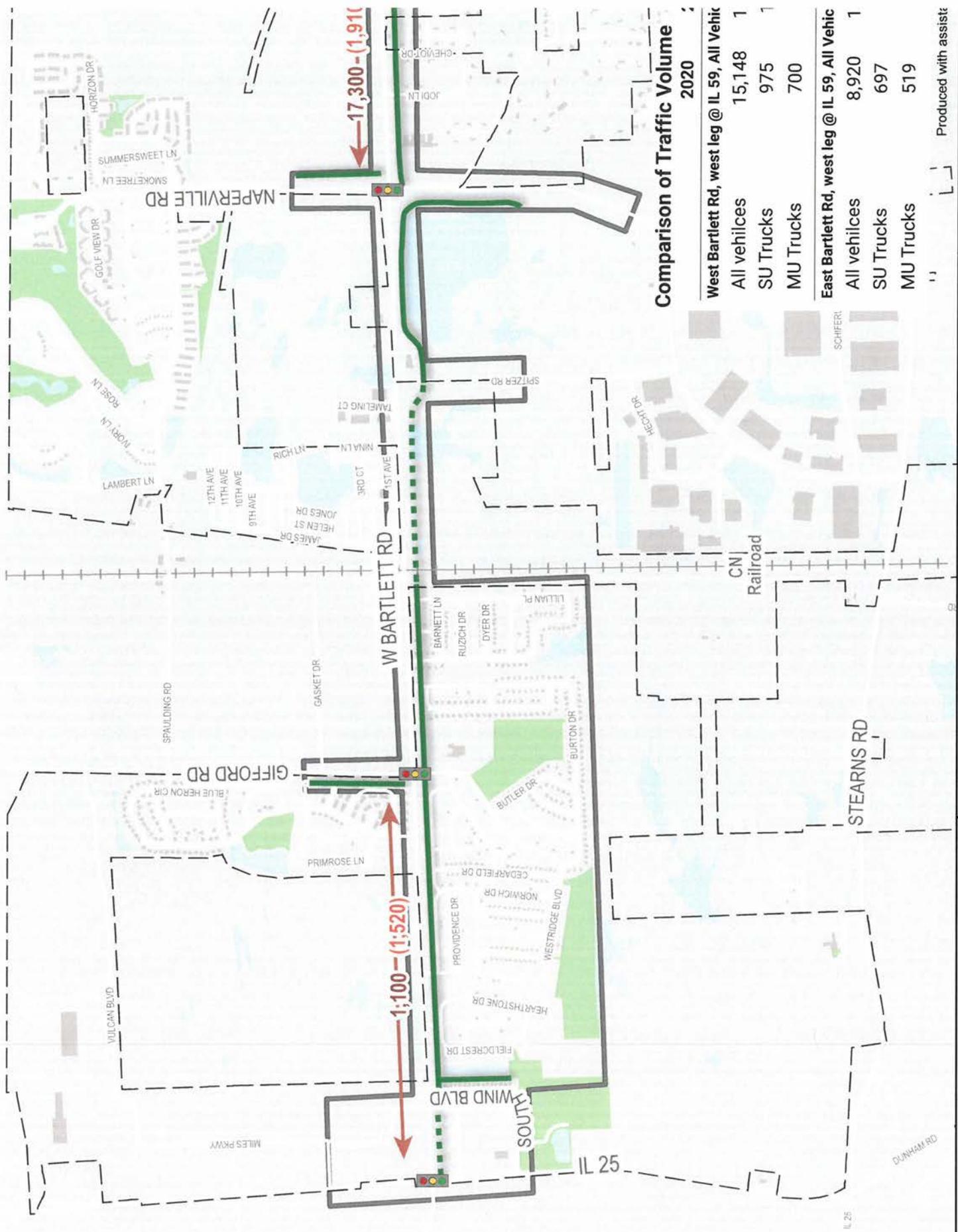
DEVELOPMENT NAME		SIZE	USE	LAND USE	STATUS
Southwind Business Park					
Lot 1	Bluff City Office Bldg.	4.3 ac	62000sf office Bldg	Commercial	approved in 2000
Lot 2	Parkland Prep Academy	20,787sf	Day School	Institutional	under construction
Lot 4	True North	5,000sf	Convenience store + gasoline	Commercial	approved in 2000
Blue Heron Business Park					
Parcel 2	Cathay Industries	100,377sf	industrial bldg.	industrial	under construction
Parcel 4	Elgin Beverage	80,008sf	manufacturing/distribution	industrial	complete
Parcel 8	Traffic Control & Protection	12.3 ac	11,500sf office/warehouse expansion	industrial	
Parcel 10	Great Lakes Landscape Co.	18ac	35,520sf office/warehouse plus truck/trailer storage	industrial	complete
Brewster Creek Business Park					
Project Oak / McKesson		400,000sf	medial office/industrial	industrial	under construction
BCBP Lot 2A		435,692sf	warehouse	industrial	proposed
TOMART		290,000sf	25,000sf industrial office bldg.	industrial	
Hermann Ultrasonics		11,290sf	industrial office bldf. Addition	industrial	
Logistics Property Co - Stearns & Munger		417,000sf	2-207,000sf warehouse bldgs	industrial	under construction
Additional Developments					
Crown Concept Development		181ac.	335 single & multifamily residential units	residential	proposed future plan

4. FUTURE TRAFFIC

Undoubtedly because of the attractiveness of the community, its strategic location, and transportation network the Corridor Study Area will continue to grow. The 2007 *West Bartlett Road Corridor Plan* cites a projected nearly six percent population growth in five years. Accordingly, the Village has included the followings goals and actions in the recent *Strategic Plan*:

- Continue to address the development of the Brewster Creek Business Park.
- Continue to address business development of the Bluff City and Blue Heron business parks.
- Advance the development of commercial areas at Route 59 & Lake Street and Route 59 & W. Bartlett Road.

Significant areas of underdeveloped (subject to turnover) and undeveloped parcels remain along, and nearby the Corridor. This logically indicates more future growth. With this growth comes increased traffic volumes and in the case of industrial/commercial development, more trucks. An important part of this report is to identify the projected future growth in traffic and suggest ways to manage this growth. The Chicago Metropolitan Agency for Planning (CMAP) develops small-area traffic projections based on the agency’s most recent travel-demand analysis. CMAP travel models use adopted regional 2050 socioeconomic projections and assume implementation of **ON TO 2020**, Northeastern Illinois’ Comprehensive Regional Plan. **Figure 7** shows the CMAP projected traffic volumes for year 2050, the horizon year which CMAP established for regional planning. The volumes are also shown in an insert table for quick comparative purposes. The higher increase (25%) will occur in the western portion of the study area where volumes are currently lower that the eastern portion (14%), and as many undeveloped parcels come on-line both within the Village and outside of its borders.



**Comparison of Traffic Volume
2020**

West Bartlett Rd, west leg @ IL 59, All Vehic	
All vehicles	15,148
SU Trucks	975
MU Trucks	700

East Bartlett Rd, west leg @ IL 59, All Vehic	
All vehicles	8,920
SU Trucks	697
MU Trucks	519

Produced with assist

**Village of Bartlett
West Bartlett Road**

**Figure 7:
Future Traffic Volumes**

xxx 2020

5. SUMMARY OF KEY TAKEAWAYS

- Many of the study area roadways are not under Village of Bartlett jurisdiction. Any changes or improvements will require close coordination with other jurisdictions.
- Some parcels of land within the study area are not within Village of Bartlett municipal boundaries. Roadway impacts of these areas, and possible improvements, will require coordination with other jurisdictions.
- West Bartlett Road is not a designated truck route, but due to its central location it is used to provide access to the industrial parks and large industrial/commercial uses both within the Village and in other jurisdictions that are very truck intensive.
- Truck traffic is well dispersed in a constant pattern and volumes throughout the day.
- Based on recent traffic counts, total traffic volumes on the east end (at count location) are nearly 70 percent higher than the west end indicating a heavier use of IL 59 to enter and exit the corridor. Projections of future traffic volumes indicate that the west end will experience more growth in traffic.
- Truck volumes on West Bartlett Road are equal to or higher than other Cook County arterials and only slightly lower than Stearns Road, a local designated truck route.
- Truck volumes on West Bartlett Road are reflective of an arterial serving primarily an industrial area, not a minor arterial serving a mix of uses including residential.
- The 85th percentile speed, used by Traffic Engineers to help determine speed limits, is higher than the posted speed limit of 45mph. 85th percentile speed data shows 25-30% of vehicles traveling over the speed limit, at speeds between 47 and 49mph. However, it should be noted that the excess speed is barely within an enforceable range.
- New industrial developments including the proposed development at Naperville Rd. and West Bartlett Rd. will require addressing the need for additional traffic operations considerations.
- Recent traffic studies for corridor developments and business park build-out lack detailed analyses and/or recommendations regarding freight accommodations, such as access management, roadway improvements, traffic control improvements, truck routings, etc.
- A high percentage of heavy trucks is located in a corridor along with an adjacent bike path and residential uses which requires careful design and operational considerations.
- According to CMAP, since late March 2020, single unit truck traffic is about 15% higher and heavy truck traffic is slightly higher than pre-COVID-19, reflecting the continued and growing demand to ship goods.

- Truck access is essential to the economic viability of the Village, supporting industrial and commercial uses in the Corridor. Continued growth and planned build out of business parks and large industrial uses will continue to generate increased truck traffic. The issue is how to balance the access needs of the business parks with differing land uses and community goals.

These takeaways provide the foundation for completing the comprehensive corridor assessment, including addressing future development and growth in traffic and identifying a potential range of appropriate alternatives to address challenges.

5.0 POTENTIAL IMPROVEMENT STRATEGIES

Major freight facilities such as large industrial, manufacturing, and distribution centers are essential to the economic viability of the Village but can have significant impacts on the Village's transportation system and land use patterns. Freight activity can generate significant amounts of truck and rail traffic, and can affect congestion, condition of roads and bridges, safety, and nuisances such as noise and vibrations. Along West Bartlett Road, the Village is primarily responsible for permitting proposed facilities, although a small portion within the City of Elgin affects Bartlett. However, as previously noted, many major study area roadways are not fully under Village of Bartlett jurisdiction and limit potential strategies. Any future strategy will require close coordination with these other jurisdictions.

Balancing the access needs of the industrial and manufacturing facilities with nearby residential land uses, multiple jurisdictions and community goals can be complex. The Village of Bartlett initiated this study in an effort to address this balance by completing a comprehensive assessment and understanding of current conditions to get a clearer view of the current transportation environment and a projection as to what to expect in the future. Based on the analysis presented in this report, a preliminary range of possible alternatives are presented below. These strategies are intended to enhance overall mobility accommodating multiple modes of transportation, moving people safely and efficiently, and balancing the needs of all users.

5.1 West Bartlett Road Strategies

- Entrance to truck parking facility at Schoen Rd. indicates possible insufficient geometry for truck turning movements.
 - Review if driveway permit is authorized by CCDOTH
 - Determine if there is a need for restricted access (note that this area is within City of Elgin limits)
 - Longer term option - widen West Bartlett Road for left-turn lane and radius improvements
 - Longer term option – change access to West Bartlett Road right-in/right-out (RIRO) and connect to Spitzer Rd.



- Upgrade West Bartlett Road west of CN Railroad from a rural cross-section to urban standards, including pavement, shoulders, roadway markings. Complete continuous shared use path.
- Consider roadway improvements based on a Complete Streets approach which by definition includes trucks. Add traffic calming where needed to direct truck traffic to the appropriate streets such as tighter turning radii and roundabouts; identify locations for enhanced pedestrian crossings such as expanded crosswalks, increased signage, or pedestrian refuge to connect residential areas north of West Bartlett Road to the multiuse path and other locations, such as at West Bartlett Road and Gifford Road; and address roadway and signal improvements for all users when considering new developments.



5.2 Naperville Road Strategies

- Explore potential for roundabout at Spaulding & Naperville Rd. as a potential traffic calming tool. Further study is needed to review design and geometric options along with required and available right-of-way (ROW). Roundabouts can provide operational and safety improvements and can reduce speeds.



- Consider weight limits between West Bartlett Road and US20/Lake St. This section may be a route used by trucks for through travel (not delivery).
- Install consistent truck routing signage/wayfinding on Naperville Road as part of a Village wide effort.

5.3.1 Overall Study Area Strategies

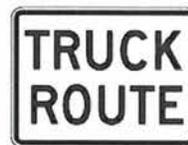
- Develop a network of signage/information and wayfinding markers at key locations and roadways to direct truckers to preferred routes. The IL Manual on Uniform Traffic Control Devices (MUTCD) states that advance signs should be erected at appropriate junctions that will permit the driver of the affected vehicle to choose an alternate route that is legal and suitable with a minimum of inconvenience.



R12-1



R14-5



R14-1

- Establish a multi-jurisdictional freight working group comprised of Bartlett, CCDOTH, DuPage County, Kane County, and Elgin to address:
 - Preferred truck routes
 - Common wayfinding
 - Use of new technology for corridors – directional signage, wayfinding

- Establish business park working group to address:
 - Preferred truck routes
 - wayfinding

- Work with police department to address problem areas, times,

- Coordination of land use & transportation planning efforts for the study area between IL 25 and IL59. The Village already has several tools in place for guiding future developments. Regular review and updating of planning tools should occur.
 - Complete streets policy and guidelines that includes freight planning
 - Access guidelines
 - Design guidelines, (adopted in 2007) for addressing buffering, landscaping, setbacks, lighting, signage, intersections and bike/ped facilities

As development of freight-generating facilities increase and new developments occur along the West Bartlett Road Corridor, these strategies may require updating, along with development of new tools.



Agenda Item Executive Summary

Item Name O'Hare's Pub & Restaurant BEDA Application Committee or Board Committee

BUDGET IMPACT

Amount: \$50,000 Budgeted Yes

List what fund Economic Incentives

EXECUTIVE SUMMARY

Staff has been working with Peggy O'Hare Vance and Bill Vance to relocate and expand O'Hare's Pub & Restaurant from its current location in Bartlett Town Center to Streets of Bartlett. The new location is being built in tandem with Midway Lanes bowling alley and will be the food service provider for that business.

O'Hare's has been a popular venue in the village for the past seven years, first taking over the former Sheep & Fiddle location in Bartlett Square shopping center and then relocating to its current location four years ago.

This current expansion requires a complete build-out of a portion of the long-vacant former grocery store space in Streets of Bartlett. The applicant details costs totaling \$276,492. Since architectural fees are not considered BEDA-eligible, staff values the physical improvements to the space at \$270,000 and recommends a grant in the maximum amount of \$50,000.

This request appeared before the Economic Development Commission at its January 11th meeting, at which time it made a unanimous recommendation to approve a grant in the full amount of \$50,000.

ATTACHMENTS (PLEASE LIST)

Staff Memo, Peggy O'Hare Vance's BEDA grant application, draft minutes from the January 11, 2021 Economic Development Commission meeting.

ACTION REQUESTED

- To review the Petitioner's request and forward to the Village Board for a final vote.
- Resolution
- Ordinance
- Motion

Staff: Tony Fradin, E.D. Coordinator

Date: January 11, 2021

ECONOMIC DEVELOPMENT MEMORANDUM

DATE: January 12, 2021
TO: Paula Schumacher, Village Administrator
FROM: Tony Fradin, Economic Development Coordinator
RE: O'Hare's Pub & Restaurant BEDA application

APPLICANTS: Peggy O'Hare Vance

BACKGROUND: O'Hare's Pub has been operational in the village for over seven years, first opening at the former Sheep & Fiddle location in the Bartlett Square shopping plaza on Army Trail Road in late 2013.

As their business grew, husband and wife Bill and Peggy O'Hare Vance relocated and expanded their business into Bartlett Town Center, where they have operated since late 2016.

Since coming to town, Peggy and Bill have been active members of the Bartlett community in supporting local events like the Fourth of July, Heritage Days, parades and races and are also involved with local groups including the Bartlett Women's Club, Chamber of Commerce and more.

This expansion and relocation, in conjunction with the new bowling alley, will bring the former Bartlett Plaza into near full occupancy after being approximately fifty percent vacant as recently as two years ago prior to its purchase, rehabilitation and rebranding by Mr. Rafidia.

In addition to the significant investment and rejuvenation of the center, Ms. Vance estimates needing eight additional full-time staff and additional part-time staff based on events.

BEDA APPLICATION:

This being the first application under the updated version, Ms. Vance has provided a high level of detail about their business's history including sales numbers, as well as a spreadsheet detailing all expenditures to complete this project.

She has cited the total anticipate project cost at \$276,492 per an updated spreadsheet submitted after the initial application.

Since the village has never included or added architectural costs as eligible BEDA costs, we are considering that number to be reduced by \$6,300, thus the physical improvements amount to an investment of approximately \$270,000.

This number constitutes a full build-out from top to bottom including excavation, flooring, electric, fire suppression, plumbing, framing, a cooler system, a hood, cables, kitchen equipment, painting, a new bar top and more.

RECOMMENDATION:

This project helps complete the renovation and reoccupation of the former Bartlett Fresh Market space in the former Bartlett Plaza. Prior to its renovation, the space had been vacant for over eight years.

It will also help retain a key business in the downtown area and village as a whole by incentivizing O'Hare's to expand within the village. Coupled with a new, state-of-the-art bowling alley, the combination of these two businesses is sure to draw both village residents and those in neighboring communities to the area.

Mr. Rafidia was previously approved for and received two BEDA grants of \$50,000 each, the first one being approved in October of 2018 and the second in September of 2019.

Also, keep in mind that the shopping center is comprised of two separate buildings, each with its own Parcel Identification Number.

With the recent modification allowing a two-year timeframe rather than three, and considering the significant investment that Peggy O'Hare Vance and Bill Vance are making in the community, staff recommends a maximum BEDA grant in the amount of **\$50,000**, to be paid upon proof of all payments having been made, all improvements having been made to the most current Codes, and final approvals on all inspections.

A grant in that amount would be 18.5% of total project costs.

JANUARY 11, 2021 EDC MEETING

This application appeared before the Economic Development Commission at its January 11th meeting.

Following a question and answer session during which the petitioners answered all questions of the commissioners, the EDC recommended in favor of issuing a \$50,000 BEDA grant.

Village of Bartlett Economic Development Assistance Application

Applicant Information:

Applicant(s) Name Peggy O'Hare Vance

Applicant(s) Address: [REDACTED] Bartlett, 60103

E-Mail Address: Peggy@Oharespub.com

Primary Contact for Project: Peggy O'Hare Vance

Cell Phone Number and/or Home Number: [REDACTED]

Applicant is or will be (check all that apply) Tenant Property Owner

Number of Years in Business: 7 Number of Years in Bartlett: 7

Contact Name and Information for Applicant's Agent or Architect (if any):

Manna Rafidia -

(Note: If applicant is a tenant, attach a letter from the property owner granting permission for project)

Property Information:

Project Property Location/Address: 391 Bartlett Plaza 29

This Property is (check all that apply): Retail Restaurant Office

Other (explain)

Number of Businesses on Site: N/A

Names of Other Businesses on Site: N/A

Size of Building (dimensions or total square feet) 91 000

Stories in building: 1 Parking spaces on property:

Last Real Estate Taxes Paid: N/A

Property Tax Index Number(s) (PIN):

County: Cook DuPage Kane

Project Information:

Total Anticipated Project Cost: \$ 259 618.72

Project Scope: Describe and identify all exterior/interior improvements proposed (Use additional paper if necessary to fully describe proposed project)

Per drawings attached - build out new restaurant.

If approved, estimated project completion date: March 1, 2021

Business Plan: For new business ventures, please include a two- to five-page business plan. Contact Tony Fradin with questions about the seven elements of a strong plan.

Please Attach: Contractor Estimates, Receipts; Copies of both sides of cancelled checks, credit card statements or bank accounts from which materials were purchased and contractors paid; Waivers of Lien

Application Statement (Read and Sign Below)

I hereby make application to participate in the Bartlett Economic Development Assistance (BEDA) program. In making this application I understand that the purpose of BEDA is to help encourage and leverage private investment in the Village's business community and help my business bring an underperforming property into more productive use.

I understand that prior to commencing any work, the Village must first approve both my participation and proposed scope of work for the project. Applicants must meet with Economic Development staff prior to paying for improvements in order to review how much, if any, the Village may reimburse for the project.

I understand that all improvements made through the help of BEDA must be in accordance with all Village plans and codes. Moreover, as a condition of approval, I understand the Village may require changes to the scope of work I am proposing. I further understand that any work started or completed prior to approval of the project and my participation in the BEDA program is not eligible for reimbursement.

In making this application, I understand that the BEDA program is competitive, funds are limited and selection for participation is at the sole discretion of the Village of Bartlett. I understand that the Village will review my application and at the Village's discretion may reject or approve my participation in the program. I recognize that a project that enhances the Village's business climate by returning an underutilized property into economic productivity, increases local employment opportunities and includes a larger percentage of private investment than public stands a greater chance of being funded by the Village.

I also understand that if selected for this program, the Village will establish a maximum grant award for the project

I further acknowledge that BEDA operates as a rebate program and, therefore, if selected for participation, Village funds will be disbursed to me at the conclusion of the work, after submittals by me of copies of all bills and satisfactory evidence of their payment, either by lien waivers or bills stamped "Paid" by all contractors. I understand that the actual rebate amount will be calculated at some percentage as recommended by staff in relation to the documented actual costs by me for eligible expenses to complete the agreed upon improvements, up to the maximum grant amount awarded by the Village for the project.

By signing this application, I hereby acknowledge that I have read the above statement and understand these important features about the BEDA Program.

Y. O'Hare Vance

Applicant Signature

1-3-2021

Date

Return this completed application with attachments to:

Tony Fradin, Economic Development Coordinator

Village of Bartlett

228 S. Main Street

Bartlett, IL 60103

January 3, 2021

A New Year begins and a New O'Hare's Pub & Restaurant begins! We welcome 2021.

O'Hare's Pub & Restaurant wishes to be considered for Economic Development Assistance through the Village of Bartlett BEDA Grant Program.

This is the third location for O'Hare's Pub & Restaurant in Bartlett. Our first location was when we first moved here in 2013 to be near our son and his family and twin boys. The job market was difficult since we were from Michigan so we decided to invest our future in Bartlett. In November of 2013, we took over Sheep & Fiddle at 1085 West Army Trail Road. At that location, we did well and better than any other business there but we were a destination. Due to an agreement by the landlord and Blackhawk Gaming Company we were only allowed 3 video gaming machines. We felt our potential to grow was limited at this location. When the lease was up for renewal in 2016, we decided to take a leap of faith and move to Bartlett Town Center so we had more opportunities to grow our business.

We were not wrong! Our second location opened at 207 S. Main Street at the end of 2016 and O'Hare's quadrupled in sales within a year in the new downtown location taking us to just shy of 1MM in restaurant sales. We were able to accommodate over 80 people when we were full. We were able to bring a bit of Irish and weeklong St. Patrick's celebrations to downtown Bartlett. Many people from outside Bartlett came to O'Hare's for our celebrations.

Additionally, we were able to be much more involved in the community in supporting Fourth of July events, Bartlett Heritage Days, the Halloween Parade, the Lions Club Run, and the Bike Race. Since I am involved with Bartlett Women's Club, VFW Auxiliary, and the Bartlett Area Chamber, we were able to host quite a few events.

The downtown location provided the opportunity for 5 video gaming machines at first and then we increased to 6 machines gaming a monthly income of approximately \$5M. An example of the money played it is on Illinois Gaming Board website. O'Hare's had activity from Jan 2020 – Nov 2020 of \$1,678,219.00 was "played" in its video gaming machines even during a pandemic year.

Although our location has been tremendous, we have another opportunity to move to Bartlett Plaza under the management of Manny and Jeremy Rafidia. The new location, which is part of the grocery store space, we believe will help us grow again by nature of location, capacity for guest's increases by 24 inside and 24 outside, and family activity of an adjoining bowling alley that we will also manage. There is opportunity to create outdoor events with the other businesses as well, helping everyone in Bartlett Plaza to grow business.

With the new location, we have no hesitation in stating our sales will grow to \$3MM per year because O'Hare's Pub & Restaurant will be the food and beverage sole supplier for the bowling alley and all the activities of the bowling alley such as the leagues, events, and parties. O'Hare's will have seating capacity indoor and outdoor for 120 guests.

Additional revenue will come from having 6 new-upgraded video gaming machines in a new special designed area that will be separated from the dining area and from anywhere young people will be.

Pre-Covid-19 we expected to have video gaming income of \$6M per month. In the new location, we expect to double that amount.

As excited as we are for the new location, it has been another leap of faith in managing the costs involved especially during a pandemic. In our heart's we know this is as good a time as any since we are closed at 207 S Main Street. With only carryout food orders to support the restaurant it was a challenge meeting our monthly bills. Therefore, we made an agreement with the landlord to vacate and we brought in a new breakfast diner to take over the space allowing us to take this opportunity for O'Hare's at Bartlett Plaza.

Attached you will find a spreadsheet with our expenses to date and the expenses yet to be taken to bring our investment to approximately \$260,393.72, estimated grand total to Open 391 Bartlett Plaza.

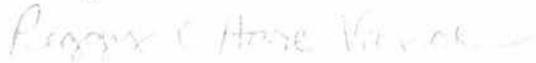
We are waiting for a third quote for flooring in an attempt to reduce the \$40,000 price tag on flooring. We are also waiting for a quote on painting and removing our old sign and putting it up at Bartlett Plaza.

The spreadsheet illustrates the expenses and we have mentioned the increase in sales. What is important to the community are jobs too. Our location is walkable and it is close to the train station for future employees. We expect to have 30 employees if not more. Our opportunity to be open at 11 am daily allows for 2 full shifts. Daytime shift will be approximately 8-10 staff and our nighttime shift will be 12-20 staff depending on staff needed for the bowling alley and parties.

We should add that the bowling alley is expected to garner \$600M in sales its first year just from bowling. There will also be arcade games, pool tables, and air hockey tables.

We welcome consideration of the BEDA Funds for O'Hare's Pub & Restaurant. Should you need any further information please do not hesitate to contact me at peggy@oharespub.com or call [REDACTED]

Sincerely,



Peggy O'Hare Vance, owner O'Hare's Pub & Restaurant

Synopsis of O'Hare's Pub & Restaurant new location

- 391 Bartlett Plaza
 - Between Magnolia Weddings & Events Venue and Midway Lanes Bowling Alley.
- Magnolia Weddings does not have a kitchen and we will work with them closely for opportunities to cater to them as well as the other restaurants in Bartlett.
- Midway Lanes does not have a kitchen and we will supply all food and drink to the bowling alley.
- O'Hare's sales are expected to be \$3M within 3 years.
- It is expected that we will need 8 full time staff and will continue to use part time staff of approximately 15-20. It will vary based on events.
 - O'Hare's employs 3 full time staff and 17 part time staff currently.
- O'Hare's new location will allow for 100 indoor seating and 24 outdoor seating compared to 81 with 12 seats on the patio.
- We will continue to support Bartlett and working with Magnolia Wedding & Events, Lisa's School of Dance and other businesses in the Plaza to bring outdoor events to Bartlett Plaza. Of course, with necessary permissions.

Peggy

O'Hare's Pub Restaurant

New Build-Out at 351 Bartlett Plaza

Service	Company	Phone	Address	City	Contact	QUOTE	PD TO DATE	BALANCE
HVAC	ABC Heating & Cooling	888-316-6061				\$ 9,500.00	\$ 9,500.00	\$ -
Architect	Purnell Architect					\$ 6,000.00	\$ 3,000.00	\$ -
						\$ 300.00	\$ 3,000.00	\$ -
Alarm System	Advanced Fire Equipment	847-233-0100	10358 Front Street	Franklin Park, IL 60131		\$ 4,150.00	\$ 1,900.00	\$ 2,250.00
Fire Alarm system	SCG Protection (Santoro)	(947) 515-6269	1253 Cobblestone	Woodstock, IL 60098		\$ 5,330.53	\$ 3,000.00	\$ 2,330.53
Sprinkler System	Atlantic American Fire	(947) 886-1660	18 North State Street	Elgin, IL 60123	Brad Nolan	\$ 6,600.00	\$ 3,000.00	\$ 3,600.00
Bench	Allison Thorngren					\$ 850.00	\$ 850.00	\$ -
Framing Drywall	Infinite Construction Group	(847) 651-7008			Ramone	\$ 10,000.00	\$ 10,000.00	\$ -
Electrician	Arcadio Fariss				Arcadio	\$ 18,000.00	\$ 6,000.00	\$ 3,500.00
						\$ 4,000.00	\$ 2,350.00	\$ 9,650.00
						\$ 2,500.00		\$ 4,000.00
								\$ 2,500.00
Lights	Habitat for Humanity	630-640-8003				\$ 485.00	\$ 485.00	\$ -
Plumbing	Hall & One (quote \$17,500.00)	(630) 277-0675	671 W. Miller Ave	Hinckley, IL 60520	Lenny Hall	\$ 17,500.00	\$ 5,000.00	\$ -
						\$ 2,500.00	\$ 7,500.00	\$ 2,500.00
Hood	S S Fabrication	708-717-7545	8317 W. 118th St	Palos Park, IL 60464		\$ 10,000.00	\$ 7,500.00	\$ 5,000.00
Construction Frame	L&W Supply					\$ 3,086.08	\$ 3,066.08	\$ -
Electrical Supply	Amperage Electrical Supply					\$ 102.72	\$ 192.72	\$ -
						\$ 3,650.72	\$ 3,650.72	\$ -
						\$ 95.07	\$ 95.07	\$ -
						\$ 897.33	\$ 897.33	\$ -
						\$ 682.31	\$ 592.31	\$ -
						\$ 523.93	\$ 523.93	\$ -
Plumbing	WM F Meyer Co	630-851-4441				\$ 613.33	\$ 613.33	\$ -
						\$ 8,107.15	\$ 8,107.15	\$ -
						\$ 1,916.89	\$ 1,916.89	\$ -

INVOICE

A.B.C. HEATING & COOLING, REFRIGERATION

Date: January 5, 2021
Invoice # 210105
A.B.C. Heating & Cooling,
Refrigeration
(773) 434-0500
(708) 444-2505

TO O'Hares Pub & Restaurant
391 Bartlett Plaza
Bartlett, IL 60103

SALESPERSON	JOB
	391 Bartlett Plaza, Bartlett, IL 60103 Tenant: O'Hares Pub

PAYMENT TERMS	DUE DATE
Due on receipt	

QTY	DESCRIPTION	TOTAL
	Install new duct work per the blueprints dated 12/30/2020 prepared by Shawn Purnell Architect. Total for labor and materials.	9,500.00

PAID IN FULL

SUBTOTAL	\$9,500.00
SALES TAX	None
TOTAL	\$9,500.00

Make all checks payable to A.B.C. Heating & Cooling
Thank you for your business!

INVOICE

PADILLAS CONSTRUCTION

Date: December 30, 2020
Invoice # 0391-15

Padillas Construction
1717 Cascade Ridge Dr.
Plainfield, IL 60586
(630) 809-0900

TO: MMAJ, LLC
134 Bartlett Plaza
Bartlett, IL 60103
(847) 921-9200

SALESPERSON	JOB	PAYMENT TERMS	DUPLICATE
	501 Bartlett Plaza, Bartlett, IL 60103 Tennet, O'Leary	Due on receipt	

QTY	DESCRIPTION	LINE TOTAL
	Excavated and concrete refill for plumbing requirements in flooring, 250 feet long x 3 feet wide x 4 feet deep.	13,000.00

PAID IN FULL

SUBTOTAL	\$13,000.00
SALES TAX	None

A R A D I O F A R I A S / 4 5 7 6 W . M O N T A N A

RECEIPT

DATE 12/15/2000

RECEIVED FROM ESHTAOSHAD TNO \$ 8,250

RECEIVED BY

DOLLARS

FOR RENT
FOR

ACCOUNT	
PAYMENT	
BAL DUE	

- CASH
- CHECK
- MONEY ORDER
- CREDIT CARD

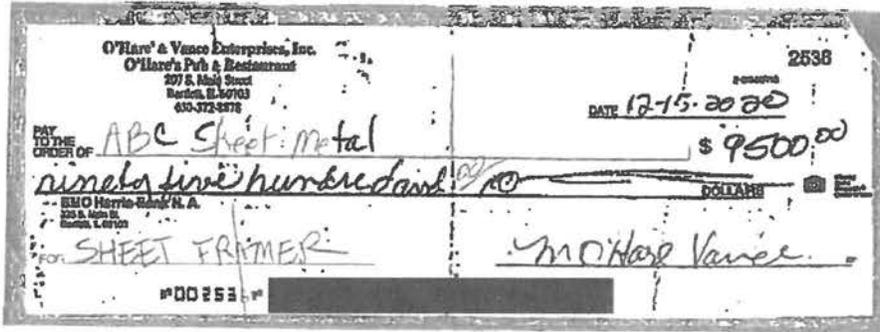
FROM 12/15/2000 TO 12/15/2000

A-2701
T-16800

Total original contract \$18,000
 Additional work requested by Bill + Peggy \$2,350
 3 220 Links and 9 additional plugs over per \$2,000 @
 Amount Paid \$8,350
 Balance Due 14,000

Transaction details

Check #2536



Description:	Regular Check
From account:	
Amount:	\$9500
Status:	Posted
Date:	2020-12-21

Transaction details

Check #2243

O'Hare & Vance Enterprises Inc 2243
O'Hare's Pub & Restaurant
207 S Main Street
Barrington, IL 60010
info@oharepub.com

DATE 9-19-2020 2566710

PAY TO THE ORDER OF Russell Architects Inc. \$3,000.00
Three thousand and 00/100

BMO  Harris Bank
BMO Harris Bank N.A.
Chicago, Illinois

FOR cash m. O'Hare Vance

⑆002243⑆



For Deposit Only - JPMC

Handwritten: # 518223133
deposited + clearing

Description:	Regular Check
From account:	
Amount:	\$3000
Status:	Posted
Date:	2020-09-21

201 *Boyle's Plaza*
VINCENT O'HARE 0202 788
PK. 810-25-0251
3112 AITKEN RD.
LEXINGTON, MI 48450-0214
DATE *10-13-2020*
PAY TO THE ORDER OF *Rumell Architect* \$ *3,000.00*
Three Thousand and 00/100 DOLLARS
Eastern Michigan Bank
Lansing, Michigan 48106
Architect
Margarit O'Hare Vance

For Deposit Only - JPMC

518223133
Deposit
check

Transaction details

Check #2537

O'Hare's & Vance Enterprises, Inc.
 O'Hare's Pub & Restaurant
 207 S. Main Street
 Pontiac, IL 60180
 616-772-8476

2537

DATE 12-31-2020

AMOUNT \$ 300 00

TO THE ORDER OF Piuspall Architect
 Three hundred and 00/100

BMO Harris Bank N.A.
 200 S. Main St.
 Pontiac, IL 60180

FOR Architect

M. O'Hare Vance

⑈002537⑈

⑈102566⑈ DD 2537 For Deposit Only - JPNC
 ⑈483998675⑈

Security Features covered primary standards and include:
 • Application: Blending patterns and colors
 • Size: 3 1/2" x 5 1/2" (91.4 mm x 139.7 mm)
 • Ink: Water-based, solvent-free, and eco-friendly
 • Paper: 100% recycled, acid-free, and lignin-free
 • Security: Microprint, color shift, and other features
 • Durability: Resistant to fading, staining, and tampering
 • Authenticity: Features that are difficult to replicate

Do not cash if:
 • Any of the features listed above are missing or appear altered
 • Features that are hard to read or difficult to see
 • Paper shows signs of water damage or other tampering
 • The check is not a valid check

JPNC

Description: Regular Check
 From account: XXXXXXXXXX
 Amount: \$300
 Status: Posted
 Date: 2020-12-31

Transaction details

Check #9999

O'Hare's Pub
391 Bartlett Plaza

check 3

2288/710
DATE *10-29-2020*

PAY TO THE ORDER OF *Advanced Fire Equipment* \$ *1900.00*
nineteen hundred and 00/100 DOLLARS

BMO  Harris Bank
BMO Harris Bank N.A.
Chicago, Illinois

MEMO *ANSEL SYSTEM* *M. O'Hare Vance*

[REDACTED]

ENDORSE HERE

FOR DEPOSIT ONLY

CHECK HERE AFTER DEPOSIT OR REDEEM DEPOSIT

Security Features: Watermark, Microprint, Security Thread, Color Shifting Ink, and more.

© 2020 FEDERAL RESERVE BOARD OF GOVERNORS REG. U.S.

of 0

Description:	Regular Check
From account:	[REDACTED]
Amount:	\$1900
Status:	Posted
Date:	2020-11-03

check #502 in memo

Transaction details

Check #502

O'Hare's Pub 2

2-2556/710
DATE 10-29-2020

PAY TO THE ORDER OF SCG Fire Alarm \$3000.⁰⁰
Three thousand & 00/100 DOLLARS

BMO  Harris Bank
BMO Harris Bank, S.A.
Chicago, Illinois

MEMO FIRE ALARM Maitane Vane

AMERICAN COMMUNITY BANK & TR-RI-Num=071828045<
-ItemNum=042182642045Br=4
-SerTrm= 4:35:46 PM-TrID=41

NO POSTING STATE OR CITY OFFICIALS
FOR DEPOSIT ONLY
DATE 000027424

Endorse Here
Pay to The Order Of
American Community Bank & Trust
Huntley, IL 60142
071828045
For Deposit Only
Sapura, Communications, Group four

Account Number: 2182642045

Description: Regular Check
From account: [REDACTED]
Amount: \$3000
Status: Posted
Date: 2020-11-04



SANTORO COMMUNICATIONS GROUP, INC.
BILL McEVILLY
1253 COBBLESTONE WAY
WOODSTOCK, IL 60098
PH: (847) 515.6269
FAX: (847) 380-1297
BILL@SANTOROGROUP.COM

FIRE ALARM SYSTEM FIT-OUT

October 22, 2020

PROJECT NAME: Fire Alarm System Tenant Modification
O'Hare's Pub
391 Bartlett Plaza
Bartlett, IL 60103

PROJECT # OPFAB1022200551

PROJECT SCOPE: Santoro Communications Group, Inc. proposes to provide fire alarm modifications to meet local fire codes and meet NFPA 72 standards. SCG will provide and install all conduit, wire and devices to completion. SCG will design and engineer a submittal package for approval from Bartlett Fire Prevention Bureau.

INVESTMENT: Santoro Communications Group, Inc. proposes to provide the materials and scope identified in this proposal for a lump sum investment of:

10/30/20
Total Material: \$ 5,330.53
PAID ✓ - \$ 3,000 — received 10/21/20
BAL 2,330.53

AUTHORIZATION: This proposal may be accepted by signing below and returning one copy to our attention within 30 days.

Accepted By:

Prepared By:

Date

Bill McEvilly

10/22/20

Date

Transaction details

Check #2509

O'Hare' & Vance Enterprises, Inc.
O'Hare's Pub & Restaurant
207 E. Main Street
Evanston, IL 60120
630-373-8978

DATE 11/4/20 2509

PAY TO THE ORDER OF Allyson's Fine Antiques \$ 3000 -

Three thousand dollars DOLLARS

BMO Harris Bank N.A.
250 S. LaSalle St.
Evanston, IL 60120

FOR Spa/Hotel Sybil William A. Clavel

⑆002509⑆



20201105 753288-0700 8942807 1
FTCH023 02485 114719480 1716
5/3 Bank 042000314-

Atlantic American Fire
Protection Company, Inc.
For Deposit Only

Description: Regular Check
From account: 
Amount: \$3000
Status: Posted
Date: 2020-11-09



Pd 3,000 on 11/03/2020

25051

Fire Sprinkler Proposal

**Ohare's Pub
391 Bartlett Plaza
Bartlett, IL**

After reviewing plans of the above mentioned project, Atlantic American Fire Protection Company is proposing to perform the following work:

- Add/relocate sprinkler heads to accommodate new tenant layout.
- Sprinkler heads shall be semi-recessed type chrome trim in ceilings.
- Price includes design and submittal.
- All work shall be performed during normal hours per NFPA-13.

Total Cost:	\$5,950.00
Lift rental (if required):	

The following items are not included in the above mentioned price:

- Raising/relocating existing sprinkler mains/branch lines
- Technical submittal
- Plan review/permit fees
- Electrical wiring/zoning

If you accept this proposal, please sign and send back so that we may begin scheduling your work. If you have any questions, please do not hesitate to call. We look forward to working with you in the near future.

Sincerely,



Signature

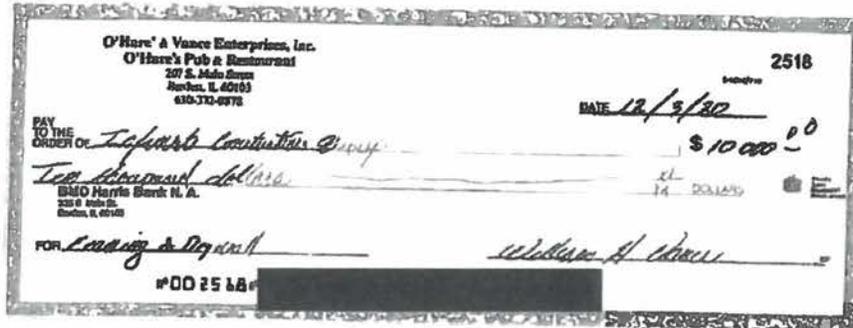
Date

Brad Nolan
Sales Manager
Atlantic American Fire Protection Co. Inc.

Phone (847) 888-1660 • FAX (847) 742-4786
18 North State Street • Elgin, Illinois • 60123 • Email: Atlanticfire@sbcglobal.net

Transaction details

Check #2518



Description: Regular Check
From account: 
Amount: \$10000
Status: Posted
Date: 2020-12-04

Transaction details

Check #5001

Electrician

O'Hare's Pub & Restaurant
871 Eastern Plaza
Berwyn, IL 60105

5001

DATE 10-9-2020 1-2588710

PAY TO THE ORDER OF Arcadio Inrias \$ 6,000.⁰⁰

Wing Henderson and Co

DOLLARS

HARRIS
Member since 1998

FOR Electrician Wing Henderson

#005001#

VOID IS THE WORD OF MILLIKEN INC. VOID IS THE WORD OF VIKMERICKS COPY.

7739193280

Description:	Regular Check
From account:	[REDACTED]
Amount:	\$6000
Status:	Posted
Date:	2020-12-09

Transaction details

Check #2534

Electrician

O'Hare's Pub & Restaurant, Inc.
O'Hare's Pub & Restaurant
207 S. Main Street
Evanston, IL 60120
630-572-8778

DATE 12-15-2020

2534

PAY TO THE ORDER OF Aracadio Fariña \$ 2350

Two thousand three hundred fifty and 00/100 DOLLARS

FOR Electrician Yn O'Hare Nance

POD 2534



MULTIPLE USE
11-2012
Endorsement: Write
For deposit only
Agent of Interest

number LLC

79 9693250

Description:	Regular Check
From account:	[REDACTED]
Amount:	\$2350
Status:	Posted
Date:	2020-12-28

Habitat for Humanity-ReStore AH
955 East Rand Road
Arlington Heights, IL 60004
(630) 940-8003

Cashier: Cami C. *In Store* Oct 7, 2020
Receipt: 389J *NEW SITE LIGHTS* 3:28 PM

Item(s)		
Electric	\$50.00 x 9	\$450.00
<hr/>		
Subtotal		\$450.00
Sales Tax (10%)		\$45.00
Total		\$495.00

Amount Charged \$495.00
VISA Credit - CHIP
Card Holder: MARGARET O'HARE VANCE
Card #: *****
Auth Code: 02712G
AID: A0000000031010
ARQC: BBED5D32/E9A93BE

Approved

Signature



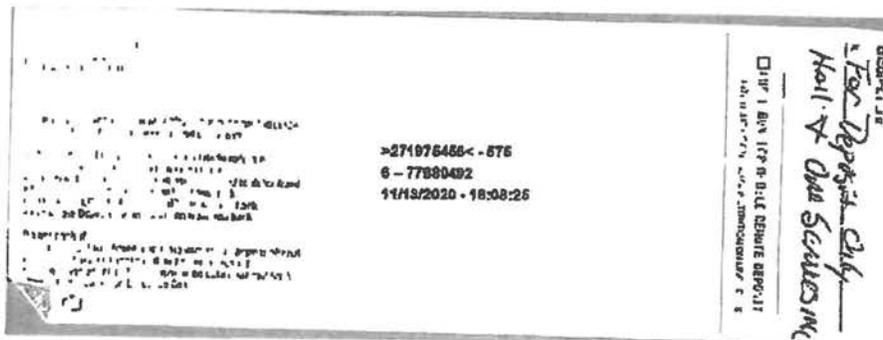
IMPORTANT - RETAIN FOR YOUR RECORDS
10/07/2020 15:27:58

Customer Copy

HFHNFV and ReStore AH are not liable for personal injury or property damage that occurs while shopping or through the use of the products purchased at the ReStore.
Thank you for supporting the Habitat for Humanity!

Transaction details

Check #2505



Description:	Regular Check
From account:	
Amount:	\$5000
Status:	Posted
Date:	2020-11-16

Limmy Plumbing

W.M. F. Meyer Co.
Plumbing & Piping Supplies
 1855 E NEW YORK ST
 AURORA, IL 60507
 630-851-4441 Fax 630-851-4043

**** INVOICE ****

INVOICE DATE: 12/19/20 INVOICE NUMBER: S3944710.002
 REMIT TO: WM F MEYER COMPANY PO BOX 37 AURORA, IL 60507
 PAGE NO. 1

BILL TO:
 P CONSTRUCTION
 427 BLUE RIDGE DR
 OSWEGO, IL 60543

SHIP TO:
 P CONSTRUCTION
 427 BLUE RIDGE DR
 OSWEGO, IL 60543

ORDER DATE	CUSTOMER POS/JOB NAME	RELEASE NUMBER	SALESPERSON	
12/19/20	OHARE		House Account	
SHIP DATE	SHIP VIA	TERMS	WRITER	
12/19/20	WC WILL CALL	Cash Only	Edricke Richmond	
DESCRIPTION	ORDER QTY	SHIP QTY	UNIT PRICE	
ZMBCA08 2 BLK MI CAP	2	2	5.093ea	10.19
ZNB08CL 2XCLOSE BLK STEEL NIPPLE	2	2	2.870ea	5.74
ZNB083 2X3 BLK STEEL NIPPLE	2	2	3.292ea	6.58
ZMBT08 2 BLK MI TEE	1	1	14.990ea	14.99
ZMBL9008 2 BLK MI 90 ELL	6	6	10.418ea	62.51
1331 2" X 21' DOMESTIC BLK T&C	84	84	5.045ft	423.80
SCH40 A53 CW PIPE				
ZMBCPR0805 2X1 BLK MI REDUCER	1	1	8.248ea	8.25
ZNB05CL 1XCLOSE BLK STEEL NIPPLE	6	6	1.336ea	8.02
ZNB05212 1X2-1/2 BLK STEEL NIPPLE	4	4	1.546ea	6.18
ZMBL9004 3/4 BLK MI 90 ELL	2	2	1.620ea	3.24
ZMBL9005 1 BLK MI 90 ELL	2	2	2.843ea	5.69
MIL-R 76011 1/2 PT 8OZ BLUE MONSTER THRD SEAL COMPOUND	1	1	11.400ea	11.40

***** Credit Card Information *****

* Merchant ID# : 11753605 Time/Date: 12:13:31 19 DEC 2020 *
 * Card Number : 38533853 Card Type: Exp.: 1124 *
 * Card Holder : P CONSTRUCTION Auth Code: 08269G *
 * Charge Amount: \$613.33 Charge Date: 12/19/2020 *
 * * * * *

* Signature : _____ *
 * * * * *

* I agree to pay above total amount according to card issuer agreement. *

Amount paid today # S3944710.001

PLEASE REMIT YOUR PAYMENT TO: PO
 BOX 37 AURORA, IL 60507 THANK YOU
 FOR YOUR BUSINESS!

-613.33

All claims for shortage or errors must be made at once, returns require written authorization and are subject to handling charges. Special orders are non-returnable. Past due invoices will be charged 18% APR finance charge

Subtotal -46.74
 S&H CHGS 0.00
 Sales Tax 46.74
 Amount Due 0.00



N
10/11/2023
10/11/2023
10/11/2023



NEW SITE
EXPENSE

Bill and Peggy Vance

Proposal

391 Bartlett Plaza

October 12, 2020

Bartlett, IL

PH: Peggy O'Hare Vance [REDACTED] Bill Vance [REDACTED]

Job: 391 Bartlett plaza ✓

Hall and One Services, agrees to supply all labor (Only), Equipment. All Material supplied by (Others)

Included

1. Copper will be type L.
2. PVC pipe for waste and vent.
3. Install Gas piping.
4. Will trim all plumbing fixtures.

Total: 17,500.00

Not Included

1. Permits and Fees, Bonds
2. Plumbing accessories, Painting, Site work, Concrete work and electric.
3. Hauling Excavated Materials from site (BY OTHERS).
4. NO winter provisions. NO saw cutting or coring, gravel
5. All work to be done on regular time 7am to 3:30 pm

Thank you

Lenny Hall

Transaction details

Check #9999

Ottavari's Pubs Check # 2

10/29/20
DATE 10-29-2020

Pay to the order of SS Fabrication \$5,000.00

five thousand and 00/100 DOLLARS

BMO Harris Bank
200 Randolph St.
Chicago, Illinois

MEMO HOOD 15 FT Ymo/tare/Vance



The accuracy of this information is not guaranteed by the issuer. It is the responsibility of the user to verify the accuracy of this information. For more information, please visit www.fdic.gov. FDIC. Member FDIC.

BMO HARRIS BANK N A
10/30/2020
>071000280<
Mobile Deposit

ENDORSE HERE

PAY TO THE ORDER OF
BMO HARRIS BANK N.A.
CHICAGO ILLINOIS 60601
⑆ 071000280 ⑆
FOR DEPOSIT ONLY

DO NOT WRITE, STAMP OR SIGN BELOW THIS LINE
MICROFILM CHIP/15-25 CONTACT US AT 800-368-5623

Description:	Regular Check
From account:	
Amount:	\$5000
Status:	Posted
Date:	2020-10-30

Stainless Steel Fabrication

8317 W. 118th St
 Palos Park, IL 60464 (708) 717-7545

Statement
 DATE 10/29/2020 TERMS

TO
 O'Hare's Pub
 391 Bartlett Plaza
 Bartlett, IL 60103

IN ACCOUNT WITH

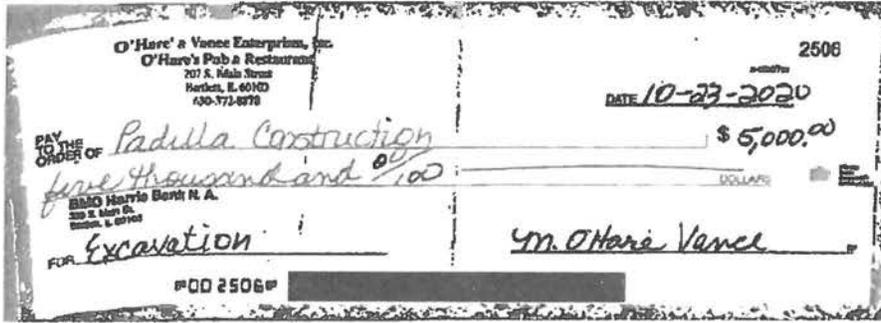
1	15 Ft. stainless steel hood			
2	exhaust fans (2 - pieces)			
\$	fresh air return			
1	stainless steel covering under hood			
1	all including labor + material			
Total amount		\$10,000		
Down payment check #2		\$5,000		
Balance		\$5,000		
CURRENT	OVER 30 DAYS	OVER 60 DAYS	TOTAL AMOUNT	

X-1000 hood

Excavation

Transaction details

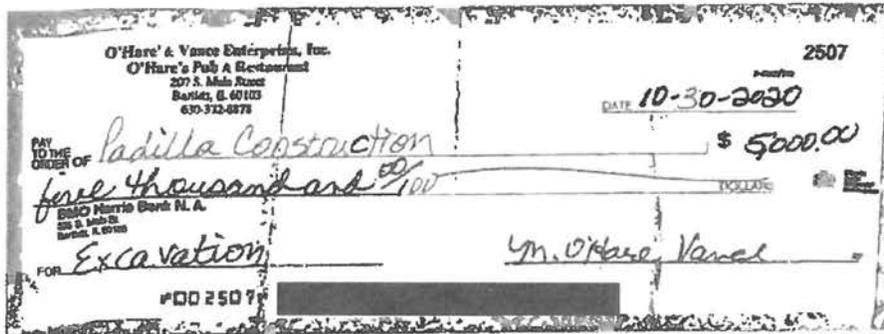
Check #2506



Description:	Regular Check
From account:	
Amount:	\$5000
Status:	Posted
Date:	2020-11-09

Transaction details

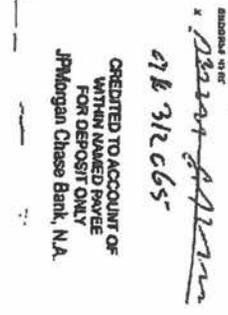
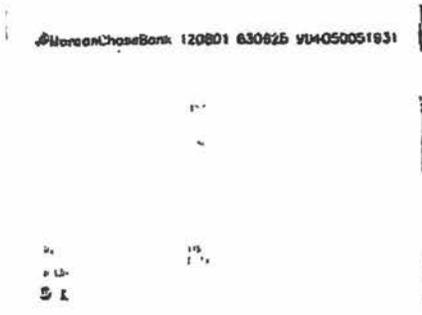
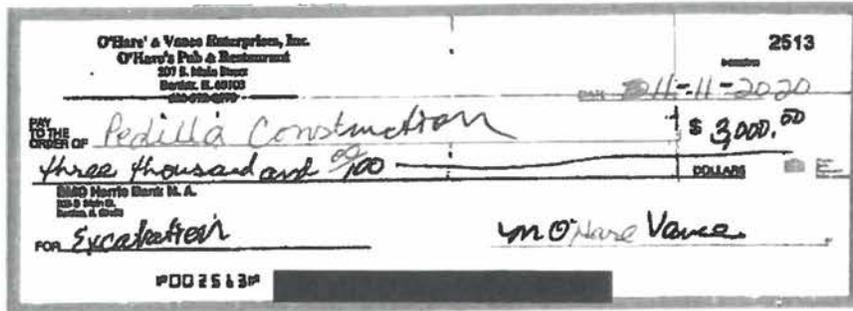
Check #2507



Description:	Regular Check
From account:	[REDACTED]
Amount:	\$5000
Status:	Posted
Date:	2020-11-09

Transaction details

Check #2513



Description:	Regular Check
From account:	
Amount:	\$3000
Status:	Posted
Date:	2020-12-09

FROM DRAFT OF JANUARY 11, 2021 EDC MINUTES:

O'HARE'S PUB & RESTAURANT BEDA APPLICATION

Mr. Fradin stated that O'Hare's Pub has been operational in the village for over seven years, first opening at the former Sheep & Fiddle location in the Bartlett Square shopping plaza on Army Trail Road in late 2013. As their business grew, husband and wife Bill and Peggy O'Hare-Vance expanded into Bartlett Town Center, where they have operated since late 2016.

Since coming to town, Peggy and Bill have been active and supportive members of the Bartlett community in supporting local events like the Fourth of July, Heritage Days, parades and races and are also involved with local groups including the Bartlett Women's Club, Chamber of Commerce and more. This expansion and relocation, in conjunction with the new bowling alley, will bring the former Bartlett Plaza into near full occupancy after being approximately fifty percent vacant as recently as two years ago prior to its purchase, rehabilitation and rebranding by Mr. Rafidia. In addition to the significant investment and rejuvenation of the center, Ms. Vance estimates needing eight additional full-time staff and additional part-time staff based on events.

Mr. Fradin stated that with this being the first application under the updated version, Ms. Vance has provided a high level of detail about their business's history including sales numbers, as well as a spreadsheet detailing all expenditures to complete this project.

She has cited the total anticipated project cost at \$276,492 per an updated spreadsheet submitted after the initial application. Since the village has never included or added architectural costs as eligible BEDA costs, we are considering that number to be reduced by \$6,300, thus the physical improvements amount to an investment of approximately \$270,000. This number constitutes a full build-out from top to bottom including excavation, flooring, electric, fire suppression, plumbing, framing, a cooler system, a hood, cables, kitchen equipment, painting, a new bar top and more.

This project helps complete the renovation and reoccupation of the former Bartlett Fresh Market space in the former Bartlett Plaza. Prior to its renovation, the space had been vacant for over eight years.

It will also help retain a key business in the downtown area and the village as a whole by incentivizing O'Hare's to expand within the village. Coupled with a new, state-of-the-art bowling alley, the combination of these two businesses is sure to draw both village residents and those in neighboring communities to the area. Mr. Rafidia was previously approved for and received two BEDA grants of \$50,000 each, the first one being approved in October of 2018 and the second in September of 2019.

Also, keep in mind that the shopping center is comprised of two separate buildings, each with its own Parcel Identification Number.

Mr. Fradin stated that with the recent modification allowing a two-year timeframe rather than three, and considering the large investment that Peggy O'Hare-Vance and Bill Vance are making in the community, we recommend a maximum BEDA grant in the amount of \$50,000, to be paid upon proof of all payments having been made, all improvements having been made to the most current codes, and final approvals on all inspections. A grant in that amount would be 18.5% of total project costs.

Ms. O'Hare-Vance introduced herself, husband and son to the commissioners. She stated that they are hopeful to open by March 1, in time for Saint Patrick's Day. She also walked through the details of the bowling alley, adding that it will be an open concept and looking to be family friendly to the community.

Mr. Vance added that they are excited for their business to grow.

Assistant Administrator Skrycki added that they will have pool tables and a kid's party area.

Ms. O'Hare-Vance elaborated on the different amenities they will have such as including the different games and activities for adults and children as well.

Commissioner Smodilla stated that they have enjoyed their business and are excited for the growth. She asked how they expect to cover the expenses of the buildout with the COVID limitations, specifically asking about their revenues throughout the pandemic.

Ms. O'Hare-Vance stated that if they had not been forced to close, it would have been well over one million dollars in revenues for the year. She added that they did as much as they could over the summer given the limitations.

Commissioner Smodilla asked if they are confident to do well given no more forced government closures.

Ms. O'Hare-Vance stated that she is. She added that she has worked with other business owners to turn the center into a destination with activities, compared to where it was.

Commissioner Smodilla expressed optimism with the BEDA Program, and was grateful in its ability to combat pressures and limitations put forth by the Governor.

Commissioner LaPorte expressed optimism in the timing of the project.

Assistant Administrator Skrycki stated that Commissioner Smodilla hit the nail on the head, but added that the village does not take \$50,000 lightly, and looks at these projects through a 10-year lens.

Mr. Vance stated that he is also optimistic about the timeline given the circumstances of the pandemic.

Commissioner Gorski asked about the layout of the tables.

Ms. O'Hare-Vance emphasized that the tables will be well spaced out, and that they are prepared for further limitations.

Mr. Vance walked the commissioners through the layout of the entire restaurant.

Commissioner Hughes asked what outdoor seating will look like in the new space.

Mr. Vance stated that they will have a covered patio, and are considering outdoor TV's that can seat about 20 or so.

Commissioner Erickson asked about their video gaming machines, and asked about how important that is financially.

Ms. O'Hare-Vance stated they will have 6, the maximum by the state. She stated that the location of it will help double the income of the machines, at minimum. She added that Mr. Rafidia is very confident about that from his experience in other centers. She expressed gratitude in the support that Bartlett has shown.

Commissioner Smodilla moved to recommend a BEDA Grant in the amount of \$50,000 to O'Hare's Pub & Restaurant to the Village Board that motion was seconded by Commissioner LaPorte.

AYES: Commissioners Erickson, Kubaszko, Gorski, Gudenkauf, Hughes, LaPorte, Smodilla

NAYS: None

ABSENT: Commissioners Perri, Lewensky

MOTION CARRIED

PLANNING AND DEVELOPMENT SERVICES MEMORANDUM
21-3

DATE: January 7, 2021
TO: Paula Schumacher, Village Administrator
FROM: Roberta Grill, Planning & Development Services Director *RBG*
RE: **(CP #20-01) Puckett Reserve Concept Plan**

PETITIONER

Kevin Lange

SUBJECT SITE

East side of Naperville Road approximately 2,000 feet south of Lake Street

REQUEST

Concept Plan Review (A conceptual review of a proposed development project in which the Petitioner requests input and direction from the Village Board Committee prior to their full submittal of an application.)

SURROUNDING LAND USES

	<u>Land Use</u>	<u>Comprehensive Plan</u>	<u>Zoning</u>
Subject Site	Single Family	Attached Residential (Low Density 5-8 d.u./acre)	R-4*
North	Townhomes	Attached Residential (Low Density 5-8 d.u./acre)	SR-5 PUD
South	Single Family	Suburban Residential	SR-5 PUD/SR-6 PUD
East	Townhomes	Attached Residential (Low Density 5-8 d.u./acre)	SR-6 PUD
West	Golf Course	Open Space	P-1
	Townhomes	Attached Residential (Low Density 5-8 d.u./acre)	PD

*Cook County – Single Family Residence

DISCUSSION

1. The Petitioner is requesting a Concept Plan Review for a medium density development on 15 acres located on the east side of Naperville Road. The

development would consist of 146 apartments divided into 4 two-story buildings. Each building would have a mix of studios (8), 1-bedroom (64), 2-bedroom (66) and 3-bedroom units (8).

2. A 10,000 sq. ft. building is proposed at the northwest corner of the development fronting Naperville Road that would allow micro-office/event rentals for the residents' use. Two courtyard outdoor amenity areas which may contain swimming pools are also proposed for the development's residents.
3. This Concept Plan identifies a public road/boulevard with full access on Naperville Road which would require approval from the Cook Department of Transportation and Highways. (Naperville Road is under the jurisdiction of Cook County.) The road would connect with Tamarack Drive (Timberline Subdivision) to the north providing for a second point of ingress/egress.
4. The Petitioner would install a public 10-ft wide bike path along the east side of Naperville Road, which would connect to the existing paths to the north and south. A private 5-ft wide path is provided around the perimeter of the apartment development which would connect to the public bike path on Naperville Road.
5. The Petitioner would be requesting, at the time of a full application submittal, to annex the property into the Village and to rezone (upon annexation) to the SR-6 PUD (Suburban Residence- Multiple family – Medium Density) Zoning District.
6. **The Comprehensive Plan designates the Subject Property as Attached Residential – Low Density (5-8 dwelling units per net acre).** The Site Plan identifies a gross density of 9.7 dwelling units per acre and a **net density (excluding right of way and the micro-office building) of 11.6** dwelling units per acre. Below is a chart of the surrounding subdivision densities.

Subdivision Name	Gross Density	Net Density
PUCKETT RESERVE (apartments)	9.7	11.6
North - Timberline Sub. (townhomes)	5.3	6.8
East - Eagles Ridge Sub. (townhomes)	2.0 (includes 47 acres of wetland/floodplain)	7.6
South - Amber Grove Unit 4 (single-family)	4.7	6.2
South - Amber Grove Unit 5 (townhomes)	7.0	8.2

7. The Zoning Ordinance requires a total of 309 parking spaces for this development, 260 for residents (based on bedroom counts) and an additional 49 parking spaces for guests (1 space per 3 units). The development provides

a total of 310 parking spaces - 138 within garages and 172 uncovered parking spaces located primarily along the north and south property lines. A variation would be required to allow parking within the required 40-foot perimeter setbacks. The Petitioner is proposing to install decorative walls along the north and south property lines to screen the headlights and noise from the surrounding properties.

8. The development identifies a 1.25-acre park site towards the east side of the development. Staff directed the Petitioner to also contact the Park District for their review of the proposed park site size and location and the required dedications associated with this development.
9. If the Petitioner chooses to move forward with a formal application, they would be requesting annexation, rezoning (upon annexation), a preliminary subdivision/PUD plan, a special use for a PUD and a variation to allow parking in the setbacks.
10. Stormwater detention requirements would be determined at the time of a formal application submittal.

RECOMMENDATION

1. If the Village Board Committee gives a favorable review of this Concept Plan, the Petitioner could proceed with a full development application submittal.
2. A copy of the Concept Plan and additional background information are attached for your review.

PUCKETT RESERVE of BARTLETT

Project Narrative

Puckett Reserve of Bartlett located at 9N249 & 9N281 Naperville Road will be a marker of new housing opportunity and a unique enhancement to the Village of Bartlett, IL. Aimed to attract and retain a multitude of generations from Baby Boomers to Millennial, Puckett Reserve of Bartlett is a unique product type that blends old world and new world design features with high-end amenities, family oriented common areas, health & wellness, micro-office, community outreach/engagement on a tranquil campus that allows for its tenants to retreat from the real world "hustle & bustle."

Based on local market research, we strongly believe there is more than enough demand for a new type of apartment community in Bartlett, of which the product type is known as "horizontal big-house." As surrounding cities continue to build denser "average style" apartment and town home communities, we feel that Bartlett will capture and retain residents fleeing Chicago and that are moving to nearby sub-markets like South Elgin, St. Charles, Hanover Park and Schaumburg. However, we strongly encourage a new type of product...a destination environment; a campus "sanctuary" community that speaks to and embraces the empty-nester, tech-savvy, startup families and remote-workers.

We, the Puckett family, have owned our property for close to 60 years, since Elmer Puckett Sr. purchased it in 1961. We were raised here, played here and grew our families here. It was, and still is, a place for children, grandchildren, great grandchildren and friends to bond, share stories, laugh and play. The Christmases were filled with lights and decorations, the summers with 4-wheelers and walks in the field, and throughout the year a place where people of all walks of life could view, and sometimes purchase, some of the most beautiful classic cars collected by our family. Our land will always be home. We will always have these memories, but its time now that we share them with others. Our proposed site plan and design is meant to enrich the lives of others, engage the community through art and display, and weave the mindsets of different generations for years to come.

Puckett Reserve of Bartlett is a 2-story, 146-unit multifamily "horizontal big-house" project targeted to provide a new housing alternative for Bartlett's current and future residents. The project, consisting of four two-story buildings and shared amenity space, would have a density of 9.74 units/acre and will require a zoning of SR-6; consistent with the zoning of its adjacent eastern and southern neighboring parcels. The project will have a very generous front setback of which will allow for maximum privacy, both for the residents of the project as well as their neighbors, less ingress/egress traffic and help to preserve the beautiful existing landscaping and trees along the western portion of the site. The perimeter will be made of of block wall and oversize mature trees that will block all traffic headlights entering and parking on-site.

The residences will average 1,000 SF each and provide a range of options from Studios to 3-Bedrooms, with a primary focus on 1 and 2 Bedrooms. Large, double-heighten lobby space and naturally lit corridors will contribute to luxurious, comfortable

and open communal space. The Residences will provide parking in excess of the 284 parking spaces required, and over 50% of those spaces will be fully protected and integrated in one of the lower floors of the buildings for the convenience and comfort of the residents. Ways to shelter the remaining spaces are also being explored, including covered and heated canopy stalls.

The layout of the site will aim to protect and maintain existing vegetation where possible and create ample open and green space for the residents. A retention area located on the eastern-most area of the site will also aid in this as we envision an open field for athletics and dog park, although not specifically designed for this use. Existing landscape and vegetation will remain in order to help with views of neighboring communities, as well aid in water flow to the detention area and help with water absorption throughout the site. Amenities will be designed not only with the residents in mind, but the community as a whole. With arts, music, theater and agriculture in mind, we would like to create a showroom area for local schools (elementary to high school) to display and curate their designs and projects – education and community engagement is of high priority to us. Site amenities like a meandering perimeter walk-run/bridle path, large playground and open common area space throughout will help residents and visitors to engage in the beauty of the area.

A separate shared amenity building will provide spaces for fitness, cyber-café, micro-office, shared conference rooms, locker rooms, event space (indoor and out) and potentially a rooftop terrace for residents to relax and enjoy eastern and western sunrise and sunset views.

We are respectfully asking for a zoning of SR-6 to support up to 146 units that will be equally divided into four (4) buildings. Although 15 acres could very easily support over 300 units, we do not want to overpopulate a community that is designed for peace, tranquility and fun. Our design will incorporate a great deal of common area/open space, beautiful entrance to the property, unique class A design features (old world meets new world), lush landscape and joyous amenities that will not only attract residents, but retain them for succeeding years. From our family to yours, we would like to welcome you to The Puckett Reserve of Bartlett.

Best Regards,

Puckett Reserve Dev Partners, LLC

Kevin Lange, Dean Puckett, Linda Puckett and Kenny Lange



VILLAGE OF BARTLETT CONCEPT PLAN APPLICATION

(Please type or complete in blue or black ink.)

For Office Use Only
Case # CP20-01

PROJECT NAME Puckett Reserve of Bartlett

PETITIONER INFORMATION (PRIMARY CONTACT)

Name: Kevin Lange

Street Address: [REDACTED]

City, State: [REDACTED]

Zip Code: 85016

Email Address: [REDACTED]

Phone Number: [REDACTED]

Preferred Method to be contacted: Email

PROPERTY OWNER INFORMATION

Name: Elmer Dean Puckett & Linda Nadine Puckett

Street Address: [REDACTED]

City, State: [REDACTED]

Zip Code: [REDACTED]

Phone Number: [REDACTED]

OWNER'S SIGNATURE: Elmer D. Puckett Date: 1/4/21
(OWNER'S SIGNATURE IS REQUIRED or A LETTER AUTHORIZING THE PETITION SUBMITTAL.) Linda Puckett 1/4/21

PROPERTY INFORMATION

Common Address/General Location of Property: 9N249 & 9N281 Naperville Road

Property Index Number ("Tax PIN"/"Parcel ID"): 06-28-102-013 & 06-28-102-012

Acreage: 15 acres No. of Lots/Units: 2
** unincorporated Cook County*

Zoning: Existing: SR-4 Land Use: Existing: See Dropdown Residential
(Refer to Official Zoning Map)

Proposed: SR-6 PUD Proposed: See Dropdown Residential

Comprehensive Plan Designation for this Property: See Dropdown Attached Residential - Medium Density
(Refer to Future Land Use Map)

APPLICANT'S EXPERTS (If applicable, including name, address, phone and email)

Attorney

Engineer

Architect & Engineer

Other

DAVIS Design Solutions (www.TheDavisExperience.com)

111 E. Chestnut Street, Suite 44K, Chicago, IL 60611. [REDACTED]

Attn: Taylor Davis Sonoskey [REDACTED]

Developer & Design

Reveal Concepts Co. and Wuy L.A. Creative
2390 E. Camelback Road, #203
Phoenix, AZ 85016

Attn: Kevin Lange

Email: [REDACTED]

cell: [REDACTED]

web: www.RevealConceptsCo.com

ACKNOWLEDGEMENT

I understand that by signing this form, that the property in question may be visited by village staff and Board/Commission members throughout the petition process and that the petitioner listed above will be the primary contact for all correspondence issued by the village.

I certify that the information and exhibits submitted are true and correct to the best of my knowledge and that I am to file this application and act on behalf of the above signatures.

Any late, incomplete or non-conforming application submittal will not be processed until ALL materials and fees have been submitted.

SIGNATURE OF PETITIONER: E. Kevin Lange

PRINT NAME: E. Kevin Lange

DATE: 1/4/21

REIMBURSEMENT OF CONSULTANT FEES AGREEMENT

The undersigned hereby acknowledges his/her obligation to reimburse the Village of Bartlett for all necessary and reasonable expenses incurred by the Village for review and processing of the application. Further, the undersigned acknowledges that he/she understands that these expenses will be billed on an ongoing basis as they are incurred and will be due within thirty days. All reviews of the petition will be discontinued if the expenses have not been paid within that period. Such expenses may include, but are not limited to: attorney's fees, engineer fees, public advertising expenses, and recording fees. Please complete the information below and sign.

NAME OF PERSON TO BE BILLED: Puckett Reserve Dev Partners, LLC

ADDRESS: [REDACTED]
[REDACTED]

PHONE NUMBER: [REDACTED]

EMAIL: [REDACTED]

SIGNATURE: E. Kevin Lange

DATE: 1/4/21



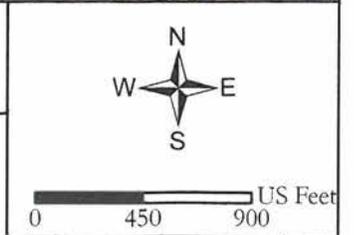
Source: Planning Department

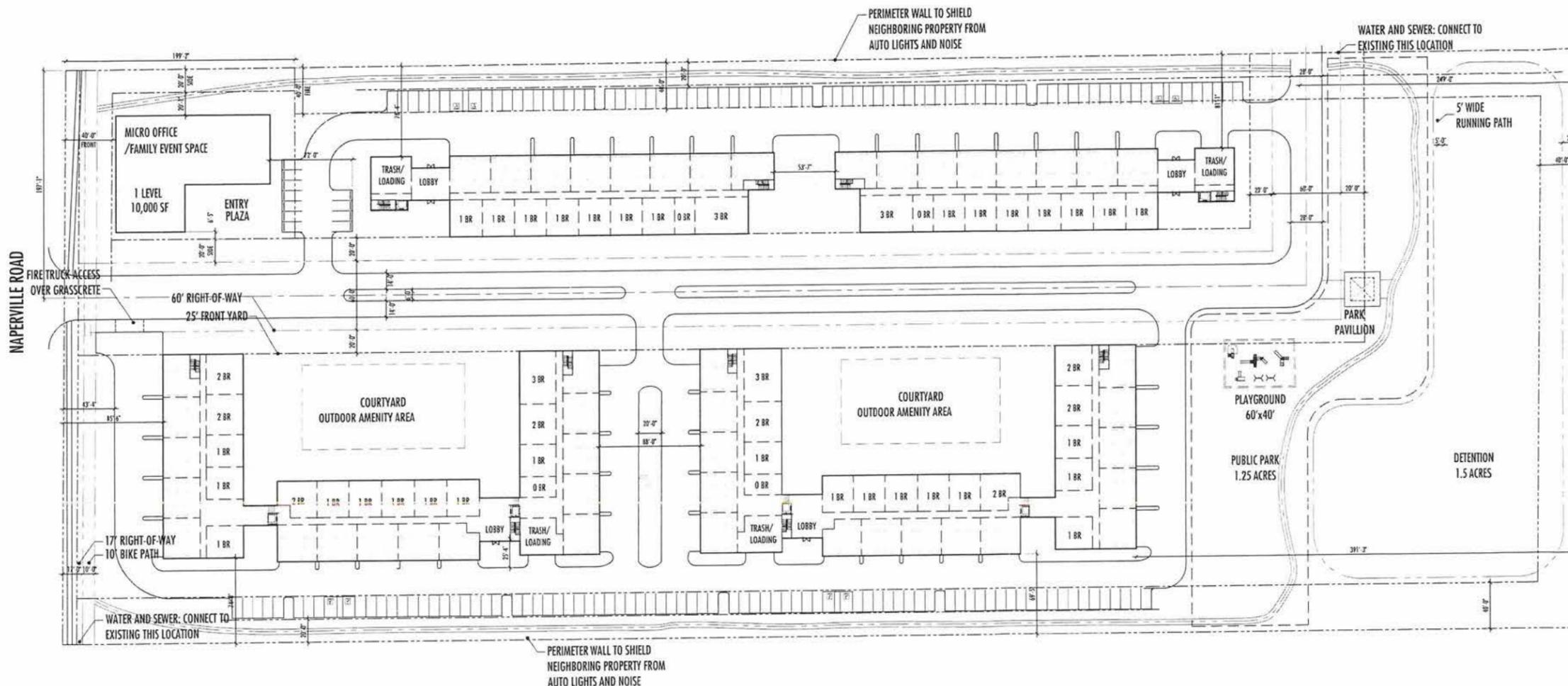


Location Map

CP# 20-01 Puckett Reserve
Concept Plan

2021





SITE DATA
 SITE AREA: 15 ACRES
 (13.12 ACRES EXCLUSIVE OF 60' ROW
 THRU SITE AND 17' ROW ALONG
 NAPERVILLE ROAD)
 UNIT COUNT: 146 UNITS
 DENSITY: 9.7 UNITS/ACRE
 (11.1 UNITS/ACRE EXCLUSIVE OF ROWS)

UNIT DATA:
 0 BR (576 SF): 8; 5% OF TOTAL
 1 BR (896 SF): 64; 44% OF TOTAL
 2 BR (1108 SF): 66; 46% OF TOTAL
 3 BR (1472 SF): 8; 5% OF TOTAL
 AVG UNIT SIZE: 1,002 SF

TOTAL GSF (INC ENCL. PRKG): 234,562 SF
 TOTAL RENTABLE/SALEABLE SF: 139,692 SF

PARKING DATA:
 RESIDENTIAL PARKING REQ'D:
 1.5 SPACES/0&1 BR (72 UNITS) = 108 SPACES
 2 SPACES/2 BR (66 UNITS) = 132 SPACES
 2.5 SPACES/3 BR (8 UNITS) = 20 SPACES
 ADDITIONAL 1 PER 3 DWELLING UNIT (146) = 49 SPACES
 TOTAL RESIDENTIAL REQ'D = 309 SPACES

RESIDENTIAL PARKING PROVIDED:
 COVERED SPACES = 138 SPACES
 UNCOVERED SPACES = 172 SPACES
 TOTAL PROVIDED = 310 SPACES

*PENDING VARIANCE APPROVAL FOR PARKING
 ENCROACHMENTS INTO SETBACKS

DETENTION AREA ACREAGE:
 1.5 ACRES PROVIDED TOTAL

PUCKETT RESERVE of BARTLETT- 9N249 & 9N281 Naperville Road, Bartlett, Illinois



APARTMENT DESIGN SCHEMES - Bartlett, Illinois

CONCEPT C - MODERN PRAIRIE

20100.000 - 08/18/2020



APARTMENT DESIGN SCHEMES - Bartlett, Illinois

CONCEPT C - MODERN PRAIRIE

20100.000 - 08/18/2020





C



APARTMENT DESIGN SCHEMES - Bartlett, Illinois

CONCEPT C - MODERN PRAIRIE

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APARTMENT DESIGN SCHEMES - Bartlett, Illinois

CONCEPT C - MODERN PRAIRIE

20100-000 08 18 2020





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APARTMENT DESIGN SCHEMES - Bartlett, Illinois

CONCEPT C - MODERN PRAIRIE

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