Traffic Impact Study For

Falcon Kenshin Karate Studio PCD File No. PPR-21-067

El Paso County, CO

August 2022

PREPARED FOR: David A. & Gretchen V. Caban 10308 Mount Evans Drive Peyton, CO 80831

PREPARED BY:
Drexel, Barrell & Co.
1800 38th Street
Boulder, CO 80301
Contact:
Derek Schuler, P.E., PTOE

Drexel Barrell Project Number: 21496-00CSCV

Traffic Engineer's Statement

The attached traffic report and supporting information were prepared under my responsible charge and they comport with the standard of care. So far as is consistent with the standard of care, said report was prepared in general conformance with the criteria established by the County for traffic reports.

Out Police	_	8/25/22
Derek Schuler, Colorado P.E. #40125	Date	
		ADO UCCUANTO
Developer's Statement I the Developer have read and will comply with all compitments me	udo on mul	a abalf within this ranget
I, the Developer, have read and will comply with all commitments ma	ide on my i	benan within this report.

Dave Caban, Owner David A. & Gretchen V. Caban 10308 Mount Evans Drive Peyton, CO 80831 Date

1.0 Introduction

This traffic impact study serves to summarize the land use, probable trip generation, and vehicular access to the proposed karate studio. The site is located in the southeast corner of Old Meridian Road and Chicago Avenue in Falcon, CO (not addressed yet). See **Figure 1** in Appendix for vicinity map. The existing 0.82-acre site is currently vacant and two new single-story buildings are proposed. This infill type site is zoned as CC (Commercial Community) and is generally surrounded by commercial/industrial uses. The proposed site will contain 26 parking spaces including 2 handicap accessible spaces. There is one proposed access point to Chicago Ave.

The following streets and intersections have been analyzed in the study. Traffic data collection was completed and found in the Appendix. A response to checklist items in the Engineering Criteria Manual (ECM) is also in the Appendix.

- 1. Old Meridian Rd/Chicago Ave. (Intersection)
- 2. Chicago Avenue (NE leg)
- 3. Old Meridian Rd (SE leg)

2.0 Area Conditions

Old Meridian Road, in front of the subject site, is assumed to be classified as a collector. The county's 2040 Functional Classification Map (from 2040 Major Transportation Corridor Plan) was referenced but streets in Falcon could not be identified at the map's scale. This roadway was recently improved to a 3-lane section (striped as two travel lanes plus two way left turn lane) with curb & gutter and sidewalk on both sides. The recent roadway improvement also modified the access to US-24 to right in/out. A new alignment for Meridian Road with signalized access to US-24 was recently constructed.

The existing 0.82-acre site is currently vacant. This infill type site is zoned as CC (Commercial Community) and is generally surrounded by commercial/industrial uses.

New traffic counts were obtained to analyze streets/intersections identified in the previous section. Average daily traffic (ADT) counts were obtained along Old Meridian Rd (SE leg) and Chicago Avenue (NE leg). A peak hour turning movement count (TMC) was obtained for the Old Meridian Rd/Chicago Ave intersection. All traffic data collected is in the Appendix. Level of Service (LOS) Analysis is presented in **Table 2** later in the report text. Traffic diagrams summarizing all turning movements are in the Appendix.

The existing traffic conditions are summarized by the following. ADT on Old Meridian Road is 463 and 1,256 vehicles per day (vpd) in the northwest and southeast directions respectively. The current traffic is relatively low for a collector street. ADT on Chicago Avenue is 24 and 26 vpd in the southwest and northeast directions respectively. Chicago Ave is stop controlled at Old Meridian Rd. This intersection currently operates at LOS A for all movements.

There is existing sidewalk along the site frontage of Old Meridian Rd which connects to US24 and Meridian Rd. There are currently no sidewalks along Chicago Ave.

3.0 Proposed Development

A karate studio is proposed on the 0.82-acre site in one building. The other building is to be used for warehousing purposes. This infill type site is zoned as CC (Commercial Community) and is generally surrounded by commercial/industrial uses. The proposed site will contain 26 parking spaces including 2 handicap accessible spaces. There is one proposed access point to Chicago Ave. A sidewalk is proposed between the two buildings connecting to the existing sidewalk along Old Meridian Rd.

Sight distance at the site access appears adequate and will be verified with the final site plans. The single proposed access is on Chicago Ave, an unposted local street (assumed speed limit is 25-mph). There is no access proposed on Old Meridian Rd which has a posted speed limit of 35-mph.

4.0 Projected Traffic

Trip Generation:

Table 1 below shows the trip generation values for both existing and proposed uses. The table shows the number of expected trips using the latest ITE trip rates. This manual is currently in its 11th edition and is an industry accepted informational report published by the Institute of Transportation Engineers. Land use #492 – Health/Fitness Club, is the best match for the proposed karate studio use as it includes training/exercise classes. Land use #150, Warehousing, is the use of the second building. Using the ITE rates, the proposed site is expected to generate about 172 daily trips, 7 trips (4 in/3 out) in the morning peak hour and 18 trips (10 in/8 out) in the evening peak hour.

				le 1 - Trip G n Kenshin K											
									Trips 0	enerat	ed				
		Trip Ge	neration Ra	tes ¹	Average		AM Pe	ak-Hour	(7 - 9)			PM Pe	ak-Hour	(4 - 6)	
					Weekd ay	Inbo	und	Outbo	ound	Total	Inbo	und	Outbo	ound	Total
ITE Code / Land Use	Size	Avg. Weekday	AM PEAK	PM PEAK	Trips	% Trips	Trips	% Trips	Trips		% Trips	Trips	% Trips	Trips	
#492 - Health/Fitness Club	4.95 KSF	33	1.31	3.45	163	51%	3	49%	3	6	57%	10	43%	7	17
#150 - Warehousing	4.95 KSF	1.71	0.17	0.18	8	77%	1	23%	0	1	28%	0	72%	1	1
				Total Trips	172		4		3	7		10		8	18

¹Source: "Trip Generation" Institute of Transportation Engineers, 11th Edition, 2021. KSF = 1000 Gross Floor Area

Trip Distribution:

Site access is proposed only from Chicago Avenue, a local street. The anticipated distribution of site traffic is 100% onto Old Meridian Road via Chicago Ave. Then 75% to/from the north (full access to Meridian Road) and 25% to/from the south (right in/out access to US- 24). The existing surrounding roadway network is adequate for site traffic distribution.

The traffic conditions will be analyzed for three study horizons: Existing, Site Buildout, and Future (assumed 2045). Traffic growth factors or forecasts are needed for the 2045 traffic models. A conservative 1% growth factor is recommended. This analysis will be provided with the second submission of this study if required.

The site build out opening year is expected to be 2023 and an associated Synchro V10 Traffic Software Model (synchro) was created. Trip generation/distribution from the site was added to this model. The resulting intersection LOS values are in a separate column in Table 2. "AM &

PM" refer to the morning and afternoon peak hour periods. A traffic diagram (**Figure 3**) and synchro reports for this model are included in the Appendix.

5.0 Traffic Analysis

Table 2. All movements are LOS A. The existing two-way stop control is appropriate to remain. The existing lane configuration (including existing signage/striping) on all approaches is also appropriate to remain. The single site access is on Chicago Ave, a local street with very low traffic. A stop sign should be added for exiting vehicles. LOS A is assumed for the site access. The 2045 future traffic columns will be completed with the second submission if required.

	Lev	el of Servi		Table 2 is / Avera	ge Delay i	n Seconds				
			20	22	20	23	20	45	20	45
		Traffic	Exisfing	g Traffic		iffic, Site dout	Future B	G Traffic	Future To	tal Traffic
Intersection	Movement	Control	AM	PM	AM	PM	AM	PM	ΑM	PM
Old Meridian Rd/	Intersection	Stop	A	A	Α	A				
Chicago Ave.	NW-RT		A/0	A/0.1	A/0	A/0.1	l .			
_	SE-LT		A/0.3	A/0	A/7.3	A/7.3	l .			
	SW- AII		A/8.7	A/0	A/8.9	A/8.9	l			

A crash analysis has not been conducted. If required, we request that the county provide crash data for this area. Neighborhood/pubic input issues are not expected. Both issues can be addressed as needed with the second submittal of this report if required.

6.0 Road Impact Fee

This site is subject to a county road impact fee. The specific land uses fall under the General Commercial category. The fee is calculated as 9.9 KSF x 4,958/KSF = 49,084.20. There are no fee credits associated with this development.

7.0 Conclusions and Recommendations

This report shows that the proposed site traffic can be accommodated by the surrounding street network. No additional traffic improvements are recommended.

APPENDIX

- 1. ECM Appendix B Checklist Items/Responses
- 2. Traffic Figures

- 3. Traffic Counts
- 4. Synchro Reports

Appendix: ECM Appendix B Checklist Items

B.2.4.C Evaluation Elements for an Intermediate TIS

The key elements of the project impact assessment shall be specified by The ECM Administrator from the following list:

- Conformity with the adopted MTCP and ECM; YES REPORT SECTIONS 2&3
- Peak hour link volume and LOS; YES SECTION 5, FIGURES
- Peak hour intersection and access LOS; YES SECT 5
- Appropriateness of access locations; YES SECT 5
- Location and requirements for turn lanes or acceleration/deceleration lanes at accesses or intersections, including recommendations for taper lengths, storage length, acceleration/deceleration lengths, and other geometric design requirements; YES SECT 5
- Sight distance evaluations and recommendations (intersection, stopping, passing); YES SECT 3
- Continuity and adequacy of pedestrian and bicycle facilities to the nearest attraction (existing or planned) within the study area; YES SECT 2 & 3
- Recommended traffic control devices for intersections, which may include two-way stop control, four-way stop control or yield signs, school flashers, school crossing guards, crosswalks, traffic signals, or roundabouts; YES SECT 5
- Traffic signal and stop sign warrants; N/A
- Progression analysis for signalized intersections; N/A
- Appropriateness of the existing roadway signing and striping; YES SECT 5
- Safety and accident analysis; SECT 5 SAYS ADDRESS WITH 2ND SUBMITTAL IF NEEDED.
- Other items as requested by the ECM Administrator in the Scoping Meeting; and

• Neighborhood and public input issues. SECT 5 – SAYS ADDRESS WITH 2^{ND} SUBMITTAL IF NEEDED.

B.8. Traffic Report Standards

Proposed classifications of all proposed internal roadways (e.g. "rural local road", "rural local low volume road", "urban minor arterial", etc.) N/A

- Classification of all adjacent or impacted roadways per the MTCP. (e.g. "rural local road", "rural local low volume road", "urban minor arterial", etc.) YES SECT 2
- Trigger points for the construction of all required future improvements including but not limited to turn lanes, signals, widenings, and openings or closings of accesses. ("Trigger points" are the conditions that, when met, will call for the construction of said improvements.) Cost estimates and escrow amounts can be determined at the final plat stage. N/A
- For final plats, state definitively what improvements the developer will be constructing with the project. YES SECT 5
- Clearly state in text and in supporting documents what the ADT and peak hour traffic levels are at all accesses currently, at full development, and long term (twenty years out.) Include intermediate stages for phased development. YES SECT 5, FIGURES
- State whether or not any improvements affected by the project are reimbursable under the current Major Transportation Corridors Plan (MTCP). DISCUSSED IN SECT 6
- State whether the MTCP or other approved corridor study calls for the construction of improvements in the immediate area. DISCUSSED IN SECT 6
- List ECM criteria for stacking, storage, and taper for every affected auxiliary lane and access and state whether this access can be met. If it cannot be met, state the required modifications so that it can be met. YES SECT 5
- State what the sight distance is for every affected access and whether it can be met. If it cannot be met, state the required modifications so that it can be met. YES SECT 3
- State what the current applicable Transportation Impact Fees are and what option the developer will be selecting for payment. If the site is in s special district, so state and summarize the applicable fees. YES SECT 6
- List other traffic studies by the consultant in the area of study within the past five years, in addition to any reports identified by County staff or that the applicant is aware of. State whether the current study is consistent with those studies and explain any discrepancies. NONE BY DBC.

- List all deviations from the County Engineering Criteria that the applicant will be making. Include supporting information, together with a signed and stamped deviation request form. NOT APPLICABLE
- Include LOS for all affected intersections. YES, SECT 5
- Show total traffic generated by the proposed development using ITE trip generation figures. YES SECT 4
- If an intersection does not meet LOS D or better, discuss what steps can be taken to bring the intersection to a satisfactory level. N/A
- Include an engineer's certification page with the engineer's stamp, signature, and date. The statement must read as follows: YES- REPORT 2ND PAGE.
- "The attached traffic report and supporting information were prepared under my responsible charge and they comport with the standard of care. So far as is consistent with the standard of care, said report was prepared in general conformance with the criteria established by the County for traffic reports."
- Include a developer's statement on the certification page. The statement must read as follows: OK
- "I, the Developer, have read and will comply with all commitments made on my behalf within this report." Include a printed or typed developer name and address as well as a signature block.



VICINITY MAP
FALCON KENSHIN KARATE STUDIO
FALCON, COLORADO

Drexel, Barrell & Co.
Engineers • Surveyors

ATE: | Dwg. No.

DATE: 8/24/2022 JOB NO: 21496-00

FIGURE 1

TRAFFIC COUNTS CONDUCTED WEDNESDAY, 3-22-2022

LEGEND:

= 24 HOUR TRAFFIC VOLUME



= WEEKDAY AM/PM PEAK-HOUR TRAFFIC

= LANE MOVEMENT



= STOP SIGN



= TRAFFIC SIGNAL



2022 EXISTING TRAFFIC FALCON KENSHIN KARATE STUDIO FALCON, COLORADO

Drexel, Barrell & Co. Engineers • Surveyors

21496-00

DWG. NO. FIGURE 2

SITE TRAFFIC DISTIBUITION:

100% ONTO OLD MERIDIAN ROAD VIA CHICAGO AVENUE.

OLD MERIDIAN ROAD DISTRIBUTION:

75% TO/FROM THE NORTH (FULL ACCESS TO MERIDIAN ROAD)

25% TO/FROM THE SOUTH (RIGHT IN/OUT ACCESS TO US-24)

TOTAL SITE TRIP GENERATION:

AM 4 3 PM 10 8

LEGEND:

XX%

= TRAFFIC DISTRIBUTION

- = LANE MOVEMENT

= WEEKDAY AM/PM PEAK-HOUR TRAFFIC

STOP VRV

= TRAFFIC SIGNAL

= STOP SIGN





DISTRIBUTION & SITE GENERATED TRAFFIC FALCON KENSHIN KARATE STUDIO FALCON, COLORADO Drexel, Barrell & Co.
Engineers • Surveyors

DATE: 8/24/2022 JOB NO: 21496-00

FIGURE 3

DWG. NO.

TRAFFIC COUNTS CONDUCTED WEDNESDAY, 3-22-2022

LEGEND:

= 24 HOUR TRAFFIC VOLUME

= LANE MOVEMENT = WEEKDAY AM/PM PEAK-HOUR TRAFFIC



= STOP SIGN

= TRAFFIC SIGNAL



TOTAL TRAFFIC FALCON KENSHIN KARATE STUDIO FALCON, COLORADO

Drexel, Barrell & Co. Engineers • Surveyors DWG. NO.

21496-00

FIGURE 4

All Traffic Data Services

www.alltrafficdata.net

Date Start: 02-Mar-22 Site Code: 2 Station ID: 2 OLD MERIDIAN RD S.O. CHICAGO AVE

Start	02-Mar-22									
Time	Wed	NB	SB							Total
12:00 AM		1	3							4
01:00		0	1							1
02:00		2	1							3
03:00		0	0							0
04:00		1	4							5
05:00		1	14							15
06:00		5	60							65
07:00		13	79							92
08:00		19	75							94
09:00		39	113							152
10:00		44	75							119
11:00		49	106							155
12:00 PM		61	121							182
01:00		42	84							126
02:00		29	96							125
03:00		45	104							149
04:00		49	102							151
05:00		39	90							129
06:00		14	44							58
07:00		4	29							58 33
08:00		1	14							15
09:00		3	16							19
10:00		1	19							20
11:00		1	6							7
Total		463	1256							1719
Percent		26.9%	73.1%							
AM Peak	-	11:00	09:00	-	-	-	-	-	-	11:00
Vol.	-	49	113	-	-	-	-	-	-	155
PM Peak	-	12:00	12:00	-	-	-	-	-	-	12:00
Vol.	<u> </u>	61	121							182
Grand Total		463	1256							1719
Percent		26.9%	73.1%							
ADT		ADT 1,719		AADT 1,719						

All Traffic Data Services

www.alltrafficdata.net

Date Start: 02-Mar-22 Site Code: 3

Station ID: 3

CHICAGO AVE E.O. OLD MERIDIAN RD

Start	02-Mar-22									
Time	Wed	EB	WB							Total
12:00 AM		0	0							0
01:00		0	0							0
02:00		0	0							0
03:00		0	0							0
04:00		0	0							0
05:00		0	0							0
06:00		0	0							0
07:00		0	1							1
08:00		5	2							7
09:00		1	4							5
10:00		1	0							1
11:00		3	4							7
12:00 PM		1	2							3
01:00		5	3							3 8 7
02:00		4	3							7
03:00		3	3							6
04:00		0	0							0
05:00		2	2							4
06:00		0	0							0
07:00		1	0							1
08:00		0	0							0
09:00		0	0							0
10:00		0	0							0
11:00		0	0							0
Total		26	24							50
Percent		52.0%	48.0%							
AM Peak	-	08:00	09:00	-	-	-	-	-	-	08:00
Vol.	-	5	4	-	-	-	-	-	-	7
PM Peak	-	13:00	13:00	-	-	-	-	-	-	13:00
Vol.	-	5	3	-	- ,	-	-	-	-	8
Grand Total		26	24							50
Percent		52.0%	48.0%							
ADT		ADT 50		AADT 50						

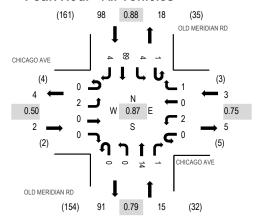


Location: 1 OLD MERIDIAN RD & CHICAGO AVE AM

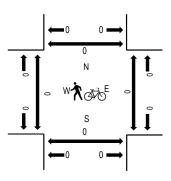
Date: Wednesday, March 2, 2022 Peak Hour: 07:45 AM - 08:45 AM

Peak 15-Minutes: 08:00 AM - 08:15 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

_																							
		C	HICAG	O AVI	E	Cl	HICAG	O AVE		OLI) MERI	DIAN F	RD	OLI) MERI	DIAN F	RD						
	Interval		Eastb	ound			Westb	ound			Northb	ound			Southb	ound			Rolling	Ped	estrian	Crossin	gs
	Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South N	√orth
	7:00 AM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	14	0	17	92	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	19	0	22	109	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	5	0	0	0	17	0	22	113	0	0	0	0
	7:45 AM	0	0	0	0	0	1	0	0	0	0	2	0	0	0	28	0	31	118	0	0	0	0
	8:00 AM	0	1	0	0	0	1	0	0	0	0	5	0	1	1	24	1	34	106	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	3	1	0	3	18	1	26		0	0	0	0
	8:30 AM	0	1	0	0	0	0	0	1	0	0	4	0	0	0	19	2	27		0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	13	0	19		0	0	0	0
	Count Total	0	2	0	0	0	2	() 1	0	0	31	1	1	4	152	4	198		0	0	0	0
	Peak Hour	0	2	0	0	0	2	() 1	0	0	14	1	1	4	89		1 118	3	0	0	0	0

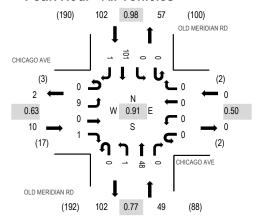


Location: 1 OLD MERIDIAN RD & CHICAGO AVE PM

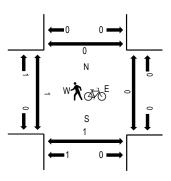
Date: Wednesday, March 2, 2022 Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:00 PM - 04:15 PM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval	С	HICAG		Ξ	С	HICAG Westb			OLI	O MERI Northb		RD	OLI	O MER South		RD		Rolling	Ped	lestriar	Crossii	ngs
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru F	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
4:00 PM	0	1	0	1	0	0	0	0	0	0	16	0	0	0	26	0	44	161	1	0	0	0
4:15 PM	0	1	0	0	0	0	0	0	0	1	11	0	0	0	24	0	37	158	0	0	0	0
4:30 PM	0	4	0	0	0	0	0	0	0	0	10	0	0	0	25	1	40	152	0	0	1	0
4:45 PM	0	3	0	0	0	0	0	0	0	0	11	0	0	0	26	0	40	151	0	0	0	0
5:00 PM	0	1	0	0	0	0	0	0	0	0	16	0	1	0	23	0	41	136	1	0	0	0
5:15 PM	0	0	0	0	0	1	0	0	0	0	4	1	0	1	24	0	31		1	0	1	0
5:30 PM	0	2	0	3	0	0	0	0	0	0	11	0	0	0	23	0	39		0	0	0	1
5:45 PM	0	1	0	0	0	1	0	0	0	0	7	0	0	0	15	1	25		0	0	1	0
Count Total	0	13	0	4	0	2	0	0	0	1	86	1	1	1	186	2	297		3	0	3	1
Peak Hour	0	9	0	1	0	0	0	0	0	1	48	0	0	0	101		1 161		1	0	1	0

Intersection												
Int Delay, s/veh	0.6											
	CEI	SET	CED	NI\A/I	NI\A/T	NIMD	NEI	NET	NED	CIVII	CWT	CIVID
Movement Lang Configurations	SEL 1		SER	NWL	NWT	NWR	NEL		NER	SWL	SWT	SWR
Lane Configurations	<u>។</u>	1 → 89	4	0	4	1	2	4	۸	2	4	1
Traffic Vol, veh/h Future Vol, veh/h	4	89	4	0	14	1	2	0	0	2	0	1
Conflicting Peds, #/hr	0	09	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	-	-	None	Stop -	Slop -	None	Stop -	Stop -	None
Storage Length	100	_	-	_	_	-			110116		_	110116
Veh in Median Storage		0	_	_	0	_	_	0	_	_	0	_
Grade, %	;, # - -	0	_	_	0	_	_	0		_	0	_
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mymt Flow	4	97	4	0	15	1	2	0	0	2	0	1
	-		- T		- 10	1						1
Major/Minor	Maiart			Maisro			Minera			Minaro		
	Major1			Major2			Minor1	404		Minor2	400	40
Conflicting Flow All	16	0	0	101	0	0	124	124	99	124	126	16
Stage 1	-	-	-	-	-	-	108	108	-	16	16	-
Stage 2	4.40	-	-	4.40	-	-	16	16	-	108	110	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	2 210	-	-	2.218	-	-	6.12	5.52	2 240	6.12	5.52	3.318
Follow-up Hdwy	2.218	-	-	1491	-	-	3.518 850	4.018 766	3.318 957	3.518 850	4.018 764	1063
Pot Cap-1 Maneuver	1002	_	-	1491	-	-	897	806	901	1004	882	1003
Stage 1 Stage 2	-	_	_	_	-	-	1004	882	-	897	804	-
Platoon blocked, %	-	-	-	-	-	-	1004	002	-	097	004	-
Mov Cap-1 Maneuver	1602	-	-	1491	-	-	848	764	957	848	762	1063
Mov Cap-1 Maneuver	1002	-	-	1491	-	-	848	764	301	848	762	1003
Stage 1	-	-	-	<u>-</u>	-	-	895	804	_	1001	882	-
Stage 2	-		_	_	_	-	1003	882		895	802	-
Staye Z	<u>-</u>	_	_	<u>-</u>	_	<u>-</u>	1003	002	-	090	002	<u>-</u>
										6111		
Approach	SE			NW			NE			SW		
HCM Control Delay, s	0.3			0			9.3			9		
HCM LOS							Α			Α		
Minor Lane/Major Mvm	nt	NELn1	NWL	NWT	NWR	SEL	SET	SERS	SWLn1			
Capacity (veh/h)		848	1491	-	-	1602	-	-	909			
HCM Lane V/C Ratio		0.003	-	-		0.003	-	-	0.004			
HCM Control Delay (s)		9.3	0	-	-	7.3	-	-	9			
HCM Lane LOS		Α	Α	-	-	Α	-	-	Α			
HCM 95th %tile Q(veh))	0	0	-	-	0	-	-	0			

Baseline Synchro 10 Report Page 1

Interception												
Intersection	1											
Int Delay, s/veh	•											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	*	7			4			4			4	
Traffic Vol, veh/h	7	89	4	0	14	2	2	0	0	3	0	3
Future Vol, veh/h	7	89	4	0	14	2	2	0	0	3	0	3
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	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage	e, # -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	97	4	0	15	2	2	0	0	3	0	3
Major/Minor I	Major1		ı	Major2		_	Minor1			Minor2		
Conflicting Flow All	17	0	0	101	0	0	132	131	99	130	132	16
Stage 1	- 17	-	U	101	-	-	114	114	-	16	16	-
Stage 2	-	-	-	-	-	-	114	17	-	114	116	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	4.12	-	_	4.12	-	-	6.12	5.52	0.22	6.12	5.52	0.22
Critical Hdwy Stg 2	-	<u>-</u>	-	<u>-</u>		-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	_	_	2.218	_	_	3.518		3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1600	<u>-</u>	_	1491		-	840	760	957	843	759	1063
Stage 1	1000	-	_	1431	_	-	891	801	951	1004	882	1003
Stage 2	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	-	-	1001	881	_	891	800	-
Platoon blocked, %	_	-	_	_	_	_	1001	001		031	000	
Mov Cap-1 Maneuver	1600	-	-	1491	-	-	834	756	957	840	755	1063
Mov Cap-1 Maneuver	1000	-	-	1491	-	-	834	756	901	840	755	1003
Stage 1	-	<u>-</u>	-	_	-		887	797	_	999	882	-
Stage 2		-	_	_	-	_	998	881	_	887	796	-
Staye 2	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	_	<u>-</u>	930	001	-	007	1 30	<u>-</u>
Approach	SE			NW			NE			SW		
HCM Control Delay, s	0.5			0			9.3			8.9		
HCM LOS							Α			Α		
Minor Lane/Major Mvm	nt t	NELn1	NWL	NWT	NWR	SEL	SET	SFR	SWLn1			
Capacity (veh/h)		834	1491	-	-	1600	-	-	938			
HCM Lane V/C Ratio		0.003	1431	_		0.005	<u> </u>		0.007			
HCM Control Delay (s)		9.3	0	-	-	7.3	-		8.9			
HCM Lane LOS		9.5 A	A		-	7.3 A	-	-	6.9 A			
HCM 95th %tile Q(veh)		0	0	-	-	0		-	0			
How your wille Q(ven)		U	U	-	-	U	-		U			

Baseline Synchro 10 Report
Page 1

Intersection												
Int Delay, s/veh	0.7											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	*	1>			4			4			4	
Traffic Vol, veh/h	0	101	1	1	48	0	9	0	1	0	0	0
Future Vol, veh/h	0	101	1	1	48	0	9	0	1	0	0	0
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	-	-	None	_	_	None	_	_	None
Storage Length	100	_	-	_	-	-	-	-	-	-	-	-
Veh in Median Storage,		0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	_	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	110	1	1	52	0	10	0	1	0	0	0
Majar/Minar	1-11		_	Mais =0			Min a saf			Air s = 0		
	/ajor1			Major2			Minor1	401		Minor2	40=	
Conflicting Flow All	52	0	0	111	0	0	164	164	110	165	165	52
Stage 1	-	-	-	-	-	-	110	110	-	54	54	-
Stage 2	-	-	-	- 4.40	-	-	54	54	-	111	111	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
. ,	2.218	-	-	2.218	-	-	3.518		3.318	3.518	4.018	
Pot Cap-1 Maneuver	1554	-	-	1479	-	-	801	729	943	800	728	1016
Stage 1	-	-	-	-	-	-	895	804	-	958	850	-
Stage 2	-	-	-	-	-	-	958	850	-	894	804	-
Platoon blocked, %	4==4	-	-	4.4==	-	-	0.00		0.10			1015
Mov Cap-1 Maneuver	1554	-	-	1479	-	-	800	728	943	798	727	1016
Mov Cap-2 Maneuver	-	-	-	-	-	-	800	728	-	798	727	-
Stage 1	-	-	-	-	-	-	895	804	-	958	849	-
Stage 2	-	-	-	-	-	-	957	849	-	893	804	-
Approach	SE			NW			NE			SW		
HCM Control Delay, s	0			0.2			9.5			0		
HCM LOS				J.L			Α			A		
1.0111 200							, \			,\		
		.=				0=1	0==	0==				
Minor Lane/Major Mvmt	: N	NELn1	NWL	NWT	NWR	SEL	SET	SERS	SWLn1			
Capacity (veh/h)		812		-	-	1554	-	-	-			
HCM Lane V/C Ratio		0.013		-	-	-	-	-	-			
HCM Control Delay (s)		9.5	7.4	0	-	0	-	-	0			
HCM Lane LOS HCM 95th %tile Q(veh)		Α	Α	Α	-	Α	-	-	Α			
1 1/ 'N/I ()[He ()/ Hile ()/e.		0	0	_	_	0	_	_	_			

Synchro 10 Report Page 1 Baseline

Intersection												
Int Delay, s/veh	1.3											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
			SER	INVVL		INVVIX	INCL		INER	SVVL		SWK
Lane Configurations	ሻ	101	4	1	40	2	٥	4	4	0	4	c
Traffic Vol, veh/h	8	101	1	1	48	2	9	0	1	2	0	6
Future Vol, veh/h	8	101	1	1	48	2	9	0	1	2	0	6
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	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage		0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	110	1	1	52	2	10	0	1	2	0	7
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	54	0	0	111	0	0	187	185	110	183	183	53
Stage 1	-	-	_	- 111	-	-	128	128	-	55	55	-
Stage 2	_	_	_	_	_	_	59	57	_	128	128	_
Critical Hdwy	4.12	_	_	4.12	_	_	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	- 1.12	_	_	- 1.12	_	_	6.12	5.52	- U.LL	6.12	5.52	- U.L.L.
Critical Hdwy Stg 2	_	_	_	_	_	_	6.12	5.52	_	6.12	5.52	_
Follow-up Hdwy	2.218	_	_	2.218	_	_	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1551			1479			774	709	943	778	711	1014
Stage 1	1001	_		1713			876	790	J -1 J	957	849	1014
Stage 2	_	-				_	953	847		876	790	
Platoon blocked, %		_		_		_	333	047		010	130	
Mov Cap-1 Maneuver	1551	-	<u>-</u>	1479	-	_	765	704	943	773	706	1014
Mov Cap-1 Maneuver	1001	_		1713		_	765	704	343	773	706	1014
Stage 1	_	-	<u>-</u>	<u>-</u>	-	-	871	785	_	951	848	<u>-</u>
Stage 2							946	846	_	870	785	_
Staye 2	-	<u>-</u>	_	<u>-</u>	-	-	340	040	-	010	100	<u>-</u>
Approach	SE			NW			NE			SW		
HCM Control Delay, s	0.5			0.1			9.7			8.9		
HCM LOS							Α			Α		
Minor Lane/Major Mvm	nt	NELn1	NWL	NWT	NWR	SEL	SET	SER	SWLn1			
Capacity (veh/h)		780	1479	-	-	44	OLI	JLING	941			
HCM Lane V/C Ratio		0.014	0.001	-		0.006	-	-	0.009			
HCM Control Delay (s)		9.7	7.4	0	-	7.3		<u>-</u>	8.9			
HCM Lane LOS		9.7 A		A	-	7.3 A			6.9 A			
HCM 95th %tile Q(veh)	١	0	A 0	- A	-	0	-	-	0			
HOW SOUT WITH W(VEI))	U	U	-	-	U	-	-	U			

Synchro 10 Report Page 1 Baseline