final report

July 8, 2020 Revised February 16, 2021

Traffic Impact Study

Apartments 8000 Cedar Creek Road Louisville, KY

Prepared for

Louisville Metro Planning Commission





Table of Contents

INTRODUCTION	2
Figure 1. Site Map	2
EXISTING CONDITIONS	2
Figure 2. Existing Peak Hour Volumes	3
FUTURE CONDITIONS	3
Figure 3. 2023 No Build Peak Hour Volumes	4
TRIP GENERATION	4
Table 1. Peak Hour Trips Generated by Site	4
Figure 4. Trip Distribution Percentages	5
Figure 5. Peak Hour Trips Generated by Site	6
Figure 6. Build Peak Hour Volumes	7
ANALYSIS	7
Table 2. Peak Hour Level of Service	8
CONCLUSIONS	9
APPENDIX	10

INTRODUCTION

The development plan for an apartment community on Cedar Creek Road in Louisville, KY shows 324 apartment units. **Figure 1** displays a map of the site. Access to the community will be from two entrances on the Cedar Creek Road and a proposed access road. The purpose of this study is to examine the traffic impacts of the development upon the adjacent highway system. For this study, the impact area was defined to be the intersections of Bardstown Road with Cedar Creek Road and Southpointe Boulevard, the intersection of Cedar Creek Road at Cedar Garden Drive and the proposed entrances on Cedar Creek Road.



Figure 1. Site Map

EXISTING CONDITIONS

Cedar Creek Road, is a Metro-maintained road with an estimated 2020 ADT of 2,900 vehicles per day between the Bardstown Road and Gentry Lane, as estimated from the Kentucky Transportation 2019 count at station 316. The road has two ten-foot lanes with three-foot shoulders. The speed limit is 35 mph. There are no sidewalks. The intersection with Bardstown Road is controlled with a traffic signal. There is a dedicated left turn lane on each approach at the intersection, and northbound Bardstown Road and westbound Brentlinger Lane have dedicated right turn lanes.

Peak hour traffic counts for the intersections were obtained on Tuesday, March 3, 2020. The a.m. peak hour on Cedar Creek Road was 7:00 to 8:00 and the p.m. peak hour was 4:45 to 5:45. **Figure 2** illustrates the existing a.m. and p.m. peak hour traffic volumes. The Appendix contains the full count data for each intersection.



Figure 2. Existing Peak Hour Volumes

FUTURE CONDITIONS

The project completion date is 2023. An annual growth rate of 1.0 percent was applied to all 2020 volumes except Bardstown Road through traffic; 0.5 percent annual growth was used for Bardstown Road through traffic. This is determined by reviewing 2018 and 2015 counts at the intersection of Cedar Creek Road and Bardstown Road. Additionally, trip generation for 60 additional single-family homes in Cedar Creek Gardens, 88 single family homes on Heights Drive, 116 multifamily units on Brentlinger Lane, Southpointe Commons (approved development plan) and Bartley Drive Credit Union were included. **Figure 3** displays the 2023 No Build peak hour volumes.



Figure 3. 2023 No Build Peak Hour Volumes

TRIP GENERATION

The Institute of Transportation Engineers <u>Trip Generation Manual</u>, 10th Edition contains trip generation rates for a wide range of developments. The land use of "Multifamily Housing Mid-Rise (221)" was reviewed and determined to be the best match. The trip generation results are listed in **Table 1**. The trips were assigned to the highway network with the percentages shown in **Figure 4**. **Figure 5** shows the trips generated by this development and distributed throughout the road network during the peak hours. **Figure 6** displays the individual turning movements for the peak hours when the development is completed.

	A.M. I	Peak	Hour	P.M. F	Peak	Hour
Land Use	Trips	In	Out	Trips	In	Out
Multifamily Housing Mid-Rise (324 units)	108	28	80	137	84	53

Table 1. Peak Hour Trips Generated by Site



Figure 4. Trip Distribution Percentages



Figure 5. Peak Hour Trips Generated by Site



Figure 6. Build Peak Hour Volumes

ANALYSIS

The qualitative measure of operation for a roadway facility or intersection is evaluated by assigning a "Level of Service". Level of Service is a ranking scale from A through F, "A" is the best operating condition and "F" is the worst. Level of Service results depend upon the facility that is analyzed. In this case, the Level of Service is based upon the total delay experienced at an intersection.

To evaluate the impact of the proposed development, the vehicle delays at the intersections were determined using procedures detailed in the <u>Highway Capacity Manual</u>, 6th edition. Future delays and Level of Service were determined for the intersections using the HCS Streets (version 7.9) software. The delays and Level of Service are summarized in **Table 2**. The Build results include an eastbound right turn lane on Cedar Creek Road.

		A.M.			P.M.	
Approach	2020 Existing	2023 No Build	2023 Build	2020 Existing	2023 No Build	2023 Build
Cedar Creek Road at Cedar Creek Gardens						
Cedar Creek Gardens Eastbound	A 9.5	B 10.1	B 10.2	A 9.6	B 10.2	В 10.3
Cedar Creek Gardens Westbound	A 8.8	A 9.1	A 9.1	A 8.7	A 9.1	A 9.1
Cedar Creek Road Northbound (left)	A 7.3	A 7.3	A 7.3	A 7.3	A 7.4	A 7.4
Cedar Creek Road Southbound (left)	A 7.4	A 7.5	A 7.5	A 7.4	A 7.5	A 7.5
Cedar Creek Road at South Entrance						
Entrance Eastbound			A 9.8			В 10.3
Cedar Creek Road Northbound (left)			A 7.3			A 7.6
Cedar Creek Road at North Entrance						
Entrance Eastbound			B 10.1			В 10.8
Cedar Creek Road Northbound (left)			A 7.4			A 7.6
Bardstown Road at Cedar Creek Road	C 22.7	C 28.3	C 31.3	D 46.8	D 35.9	C 32.9
Cedar Creek Road Eastbound	E 73.6	E 78.9	E 79.8	E 74.2	E 76.9	E 77.8
Brentlinger Lane Westbound	E 79.4	E 79.9	E 73.0	F 115.6	F 142.8	F 106.3
Bardstown Road Northbound	B 19.9	C 26.4	C 30.2	C 24.4	C 26.3	C 27.1
Bardstown Road Southbound	A 8.7	A 9.6	B 10.2	D 46.3	B 17.8	В 17.4
Bardstown Road at Bartley/Southpointe		В 19.3	В 17.3		D 39.1	D 42.1
Bartley Drive Eastbound		F 87.9	F 88.0		F 110.4	F 109.2
Southpointe Boulevard Westbound		E 77.5	E 79.7		F 83.7	F 87.6
Bardstown Road Northbound		B 11.9	B 11.5		B 14.7	B 16.3
Bardstown Road Southbound		C 24.9	B 18.7		D 42.2	D 46.2

Table 2.	Peak Hour	Level of	Service
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Key: Level of Service, Delay in seconds per vehicle

The entrance was evaluated for turn lanes using the Kentucky Transportation Cabinet <u>Highway Design Guidance</u> <u>Manual</u> dated September, 2020. Using the volumes in Figure 6, no turn lanes are required at the entrance. See the Appendix for the chart.

CONCLUSIONS

Based upon the volume of traffic generated by the development and the amount of traffic forecasted for the year 2023, there will be a minimal impact to the existing highway network, with the signalized intersections continuing to operate at acceptable levels of service. An eastbound right turn lane on Cedar Creek Road will be constructed.

APPENDIX

Weather

Fair 55° F

Traffic Counts

Jefferson County (Louisville), KY Classified Turn Movement Count

Site 3 of 3 US-150 Bardstown Rd (North) Brentlinger Ln US-150 Bardstown Rd (South) Cedar Creek Rd

Lat/Long

38.134142°, -85.579609°

Date Tuesday, March 3, 2020



41 Peabody Street, Nashville, TN 37210 10 Glenikke Parkway, Sute 130, Atlanta, GA 30328 555 Fayetteville Street, Sute 201, Raleigh, NC 27601 1229 South Shelby Street, Louisville, KY 4003 6565 North MacArthur Boulevard, Suite 225, Dallas, TX 75039

hello@mantraffic.com www.martraffic.com

			South	bound					West	bound					North	bound					East	ound			1
		US-1	50 Bardst	own Rd (North)				Brentin	nger Ln				US-1	50 Bardst	own Rd (South)				Cedar C	reek Rd			
	U-Turn	Left	Thru	Right	Peds	Арр	U-Tum	Left	Thru	Right	Peds	Арр	U-Tum	Left	Thru	Right	Peds	Арр	U-Turn	Left	Thru	Right	Peds	Арр	Int
0700 - 0715	0	25	184	7	0	216	0	4	1	60	0	65	0	1	522	14	0	537	0	45	10	3	0	58	876
0715 - 0730	0	14	222	7	0	243	0	6	1	50	0	57	0	1	556	14	0	571	0	34	10	13	0	57	928
0730 - 0745	0	18	239	13	0	270	0	13	3	46	0	62	0	1	521	22	0	544	0	25	12	4	0	41	917
0745 - 0800	0	36	266	11	0	313	0	11	1	51	0	63	0	2	503	27	1	533	0	23	11	4	0	38	947
0800 - 0815	0	24	254	5	0	283	0	14	2	44	0	60	0	5	510	21	0	536	0	17	6	5	0	28	907
0815 - 0830	0	38	216	9	0	263	0	9	4	35	0	48	0	1	482	21	0	504	0	18	13	4	0	35	850
0830 - 0845	0	29	190	9	0	228	0	13	5	70	0	88	0	4	447	22	0	473	0	26	10	7	0	43	832
0845 - 0900	0	69	187	9	0	265	0	17	10	77	0	104	0	2	376	18	0	396	0	15	12	3	0	30	795
1600 - 1615	0	50	468	17	0	535	0	55	16	69	0	140	0	3	298	7	0	308	0	12	3	6	0	21	1004
1615 - 1630	0	41	509	11	0	561	0	70	9	37	0	116	0	7	350	12	0	369	0	19	8	8	0	35	1081
1630 - 1645	0	38	523	14	0	575	0	57	16	41	0	114	0	5	353	13	0	371	0	20	7	10	0	37	1097
1645 - 1700	0	35	489	14	0	538	0	69	5	35	0	109	1	8	349	16	0	374	0	12	6	12	0	30	1051
1700 - 1715	0	34	536	14	0	584	0	66	9	39	0	114	0	9	362	13	0	384	0	17	9	9	0	35	1117
1715 - 1730	0	48	534	14	0	596	0	69	13	38	0	120	0	6	359	19	0	384	0	8	6	11	0	25	1125
1730 - 1745	0	44	549	14	0	607	0	72	10	36	0	118	0	7	345	15	0	367	0	22	8	8	0	38	1130
1745 - 1800	0	49	441	20	0	510	0	60	19	26	0	105	0	6	318	19	0	343	0	15	4	6	0	25	983

0715 - 0730	0	14	222	7	0	243	0	6	1	50	0	57	0	1	556	14	0	571	0	34	10	13	0	57	928
0730 - 0745	0	18	239	13	0	270	0	13	3	46	0	62	0	1	521	22	0	544	0	25	12	4	0	41	917
0745 - 0800	0	36	266	11	0	313	0	11	1	51	0	63	0	2	503	27	1	533	0	23	11	4	0	38	947
0800 - 0815	0	24	254	5	0	283	0	14	2	44	0	60	0	5	510	21	0	536	0	17	6	5	0	28	907
AM PEAK	0	92	981	36	0	1109	0	44	7	191	0	242	0	9	2090	84	1	2184	0	99	39	26	0	164	3699
1645 - 1700	0	35	489	14	0	538	0	69	5	35	0	109	1	8	349	16	0	374	0	12	6	12	0	30	1051
1700 - 1715	0	34	536	14	0	584	0	66	9	39	0	114	0	9	362	13	0	384	0	17	9	9	0	35	1117
1715 - 1730	0	48	534	14	0	596	0	69	13	38	0	120	0	6	359	19	0	384	0	8	6	11	0	25	1125
1730 - 1745	0	44	549	14	0	607	0	72	10	36	0	118	0	7	345	15	0	367	0	22	8	8	0	38	1130
PM PEAK	0	161	2108	56	0	2325	0	276	37	148	0	461	1	30	1415	63	0	1509	0	59	29	40	0	128	4423

Cedar Creek Road Apartments Traffic Impact Study

Jefferson County (Louisville), KY Classified Tum Movement Count Site 2 of 3 Cedar Creek Rd (North) Cedar Garden Dr (Fast)) N Tr	la	rr ortatio	Tr: n Dat	af a Coll	fic	1	41 Peab 10 Glenia 555 Faye 1229 So 6565 No	ody Stree ake Parkw atteville S atteville S atteville Shelby ath MacAr	t, Nashvi vay, Suite treet, Sui v Street, thur Bou	lle, TN 37 a 130, Atla te 201, Ra Louisville, levard, Su	210 anta, GA aleigh, NC KY 4020 ite 225, D	30328 2 27601 3 Dallas, TX	75039							
Cedar Creek Rd (South) Cedar garden Dr (West)												hello@m www.ma	arrtraffic.c	com om											
Lat/Long 38.127684°, -85.587208°	Weather Fair 55°F											1 (800) 6	15-3765												
Date Tuesday, March 3, 2020																									
			0	h a const					10/	in a second					NI - 4h						E ti				
		0	Journ Jack Cree	k Rd (Nor	rth)			C (vvesu dar Gard	on Dr (Ea	et)			0	Nonn dar Creel	Rd (Sou	th)			C .	⊏asu dar garde	ounu on Dr (Ma			
	U-Turn	Left	Thru	Right	Peds	Ann	U-Tum	Left	Thru	Right	Peds	Ann	U-Tum	Left	Thn	Right	Peds	Ann	U-Turn	Left	Thru	Right	Peds	Ann	Int
0700 - 0715	0	0	5	0	0	5	0	0	0	4	0	4	0	0	31	0	0	31	0	3	0	0	0	3	43
0715 - 0730	1	0	4	2	0	7	0	0	0	0	0	0	0	1	30	0	0	31	0	3	0	0	0	3	41
0730 - 0745	0	0	15	0	0	15	0	0	0	4	0	4	0	0	19	0	0	19	0	2	0	0	0	2	40
0745 - 0800	0	1	7	1	0	9	0	0	0	2	0	2	0	1	16	0	0	17	0	2	0	0	0	2	30
0800 - 0815	0	2	7	0	0	9	0	0	0	0	0	0	0	0	18	0	0	18	0	1	0	2	0	3	30
0815 - 0830	0	1	8	0	0	9	0	1	0	2	0	3	0	0	15	0	0	15	0	1	0	0	0	1	28
0830 - 0845	0	1	9	1	0	11	0	0	0	1	0	1	0	0	17	1	0	18	0	3	0	1	0	4	34
0845 - 0900	0	3	10	0	0	13	0	0	0	0	0	0	0	0	18	0	0	18	0	1	0	0	0	1	32
1600 - 1615	0	1	21	2	0	24	0	0	0	1	0	1	0	1	10	0	0	11	0	2	0	0	0	2	38
1615 - 1630	0	1	17	2	1	21	0	1	0	1	0	2	0	2	20	2	0	24	0	2	0	2	0	4	51
1630 - 1645	0	0	11	5	0	16	0	0	0	1	0	1	0	2	21	0	0	23	0	0	0	0	0	0	40
1645 - 1700	0	3	19	4	0	26	0	0	0	0	0	0	0	1	19	1	0	21	0	2	0	0	0	2	49
1700 - 1715	0	1	10	1	0	12	0	0	0	2	0	2	0	1	22	0	0	23	0	2	0	0	0	2	39
1715 - 1730	0	8	12	3	0	23	0	0	0	0	0	0	0	0	16	1	0	17	0	2	0	1	0	3	43
1730 - 1745	0	3	15	3	0	21	0	0	0	0	0	0	0	1	25	0	0	26	0	1	0	1	0	2	49
1745 - 1800	0	5	20	3	0	28	0	0	0	1	0	1	0	2	14	1	0	17	0	2	0	0	0	2	48
0700 0715																									10
0700 - 0715	0	0	5	0	0	5	0	0	0	4	0	4	0	0	31	0	0	31	0	3	0	0	0	3	43
0/15 - 0/30	1	0	4	2	0	1	0	0	0	0	0	0	0	1	30	0	0	31	0	3	0	0	0	3	41
0/30 - 0/45	0	0	15	0	0	15	0	0	0	4	0	4	0	0	19	0	0	19	0	2	0	0	0	2	40
0743 - 0000	1	1	24	2	0	36	0	0	0	10	0	10	0	2	00	0	0	00	0	10	0	0	0	10	154
16/15 - 1700		3	10	3	0	26	0	0	0	0	0	0	0	1	10	1	0	21	0	2	0	0	0	2	/0
1700 - 1715	0	1	10	1	0	12	0	0	0	2	0	2	0	1	22	0	0	23	0	2	0	0	0	2	39
1715 - 1730	0	8	12	3	0	23	0	0	0	0	0	0	0	0	16	1	0	17	0	2	0	1	0	3	43
1730 - 1745	0	3	15	3	0	21	0	0	0	0	0	0	0	1	25	0	0	26	0	-	0	1	0	2	49
PM PEAK	0	15	56	11	0	82	0	0	0	2	0	2	0	3	82	2	0	87	0	7	0	2	0	9	180



HCS Reports

		Н	CS7	Two	-Way	Sto	o-Co	ntrol	Rep	ort						
General Information							Site	Inforr	natio	n						
Analyst	DBZ	_	_	_	_		Inters	ection	_		Ceda	r Creek F	Rd at CC	Gard		
Agency/Co.	Diane	e B Zimm	nerman 1	raffic En	gineerin	g	Jurisc	liction								
Date Performed	7/8/2	020					East/	West Stre	eet		Ceda	r Creek (Garden			
Analysis Year	2020	5					North	n/South S	Street		Ceda	r Creek F	Road			
Time Analyzed	AM P	eak					Peak	Hour Fac	ctor		0.90					
Intersection Orientation	North	n-South					Analy	sis Time	Period (hrs)	0.25					
Project Description	Haga	n Apartr	nents													
Lanes																
				744240 *	ብ ጉ Majo	* * r Street: Nor	th-South	14474PC								
Vehicle Volumes and Adju	ıstme	nts														
Approach		Eastb	ound			West	bound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	10	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		10	0	0		0	0	10		2	96	0		1	31	3
Percent Heavy Vehicles (%)		0	0	0		0	0	0		0				0		
Proportion Time Blocked																
Percent Grade (%)			0				0									
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up He	adwa	ys														
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.50	6.20		4.10				4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.20				2.20		
Delay, Queue Length, and	Leve	l of Se	ervice													
Flow Rate, v (veh/h)	<u> </u>		11				11			2			<u> </u>	1		
Capacity, c (veh/h)			805				953			1586				1497		
v/c Ratio			0.01				0.01			0.00				0.00		
95% Queue Length, Q ₉₅ (veh)			0.0				0.0			0.0				0.0		
Control Delay (s/veh)			9.5				8.8			7.3				7.4		
Level of Service (LOS)			A				A			А				A		
Approach Delay (s/veh)		9	.5			8	.8			0	.2			0	.2	
Approach LOS			Ą				A									
		-						-				-				

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HCSTM TWSC Version 7.8.5 CCG AM 20.xtw Generated: 7/8/2020 5:56:29 PM

		Н	CS7	Two-	-Way	' Stoj	o-Co	ntrol	Rep	ort						
General Information							Site	Inform	natio	n						
Analyst	DBZ						Inters	ection			Ceda	r Creek F	Rd at CC	Gard		
Agency/Co.	Diane	e B Zimm	nerman T	Fraffic En	gineerin	g	Jurisd	liction								
Date Performed	2/16/	21			-	-	East/	West Stre	eet		Ceda	r Creek (Garden			
Analysis Year	2023						North	/South	Street		Ceda	r Creek F	Road			
Time Analyzed	AM P	eak No I	Build				Peak	Hour Fac	tor		0.90					
Intersection Orientation	North	n-South					Analy	sis Time	Period	(hrs)	0.25					
Project Description	Нада	n Apartr	nents													
Lanes																
				J 4 4 7 4 1 4	A 1 Majo	* * * Street: No	th-South	↓ ↓ ↓ ↓ ↓ ↓ ↓								
Vehicle Volumes and Adj	icle Volumes and Adjustments roach Eastbound Westbound Northbound Southbound															
Approach		Eastb	ound			West	bound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	T	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		10	0	0		1	0	21		2	125	1		5	45	3
Percent Heavy Vehicles (%)		0	0	0		0	0	0		0				0		
Proportion Time Blocked																
Percent Grade (%)			0			1	0									
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up He	eadwa	ys														
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.50	6.20		4.10				4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.20				2.20		
Delay, Queue Length, and	d Leve	l of Se	ervice													
Flow Rate, v (veh/h)			11				24			2				6		
Capacity, c (veh/h)			720				905			1565				1456		
v/c Ratio			0.02				0.03			0.00				0.00		
95% Queue Length, Q₂₅ (veh)			0.0				0.1			0.0				0.0		
Control Delay (s/veh)			10.1				9.1			7.3				7.5		
Level of Service (LOS)			В				A			A				A		
Approach Delay (s/veh)		1(0.1			9	0.1			0	0.1			0	.7	
Approach LOS			В				A									
Copyright © 2021 University of Florida	a. All Righ	ts Reser	ved.	I	HCSTMM T	TWSC Ve	ersion 7.9 B.xtw)				Ger	nerated:	2/17/20	21 5:41:5	59 PM

		Н	CS7	Two	-Way	' Stoj	o-Co	ntrol	Rep	ort						
General Information							Site	Inforr	natio	n						
Analyst	DBZ						Inters	ection			Ceda	r Creek F	Rd at CC	Gard		
Agency/Co.	Diane	B Zimm	erman 1	Traffic En	gineerin	g	Juriso	liction								
Date Performed	2/16/	21					East/	West Stre	eet		Ceda	r Creek (Garden			
Analysis Year	2023						North	n/South !	Street		Ceda	r Creek F	Road			
Time Analyzed	AM P	eak Build	ł				Peak	Hour Fac	tor		0.90					
Intersection Orientation	North	n-South					Analy	sis Time	Period ((hrs)	0.25					
Project Description	Haga	n Apartn	nents													
Lanes	-															
Vehicle Volumes and Adj	Image: Section of Section o															
Movement	<u> </u>	1	т	D		I I	т	D			т	D		Journ	т	D
Briority		10	11	12	0	L 7	0	0	111	1	2	2	411		5	6
Number of Lance	+	0	1	0		0	0	9	0	0	1	0	40	4	1	0
Configuration	+	0	ITP				ITP		0		ITP	0	0			
Volume (veh/h)	+	10	0	0		1		21		2	120	1		5	52	2
Percent Heavy Vehicles (%)	+	0	0	0		0	0	0		2	120	· ·		0	55	
Properties Time Placked	+	0	0	0			0	0						0	<u> </u>	<u> </u>
Proportion Time Blocked	+						0									
Picetit Glade (76)	+															
Median Type Storage	+			Undi	vided											
				Unu	viueu											
	adwa	ys	6.5	62		74	6.5	62		44				1.44		
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1	<u> </u>	<u> </u>
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.50	6.20		4.10				4.10		<u> </u>
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2	<u> </u>	<u> </u>
Follow-Up Headway (sec)		3.50	4.00	3.30	<u> </u>	3.50	4.00	3.30		2.20		<u> </u>	<u> </u>	2.20		L
Delay, Queue Length, and	a Leve	I OT Se	ervice													
Flow Rate, v (veh/h)	<u> </u>		11				24			2				6		
Capacity, c (veh/h)			707				901			1554				1452		
v/c Ratio			0.02				0.03			0.00				0.00		
95% Queue Length, Q ₉₅ (veh)	\vdash		0.0				0.1			0.0				0.0		
Control Delay (s/veh)			10.2				9.1			7.3				7.5		
Level of Service (LOS)			В				A			A				A		
Approach Delay (s/veh)		10).2			9	.1			0	.1			0	.6	
Approach LOS			В				A									
Copyright © 2021 University of Florida	. All Righ	ts Reserv	/ed.		HCS10001 CCG	TWSC Ve AM 23 E	rsion 7.9 .xtw)				Ger	nerated:	2/17/20	21 5:43:5	9 PM

		Н	CS7	Two	-Way	/ Stoj	p-Co	ntrol	Rep	ort						
General Information							Site	Inforr	natio	n						
Analyst	DBZ						Inters	ection			Ceda	r Creek I	Rd at CC	Gard		
Agency/Co.	Diane	e B Zimm	nerman 1	Fraffic En	gineerin	ıg	Jurisc	liction								
Date Performed	7/8/2	020			-	-	East/	West Stre	eet		Ceda	r Creek (Garden			
Analysis Year	2020	ł					North	n/South S	Street		Ceda	r Creek I	Road			
Time Analyzed	PM P	eak					Peak	Hour Fac	ctor		0.92					
Intersection Orientation	North	n-South					Analy	sis Time	Period (hrs)	0.25					
Project Description	Haga	n Apartr	nents				1									
Lanes																
				7417444 4	ብ ጉ _{Majo}	+ + + r Street: No	rtn-South	14474PC								
Vehicle Volumes and Ad	justme	nts														
Approach		Eastb	ound			West	bound			North	bound			South	bound	
Movement	U	L	T	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		7	0	2		0	0	2		3	82	2		15	56	11
Percent Heavy Vehicles (%)		0	0	0		0	0	0		0				0		
Proportion Time Blocked																
Percent Grade (%)	_		0				0									
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.50	6.20		4.10				4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.20				2.20		
Delay, Queue Length, an	d Leve	l of Se	ervice	•												
Flow Rate, v (veh/h)	Τ		10				2			3				16		
Capacity, c (veh/h)			800				973			1540				1516		
v/c Ratio			0.01				0.00			0.00				0.01		
95% Queue Length, Q ₉₅ (veh)			0.0				0.0			0.0				0.0		
			9.6				8.7			7.3				7.4		
Control Delay (s/veh)			1	<u> </u>			1						Î	1		
Control Delay (s/veh) Level of Service (LOS)			A				A			A				A		
Control Delay (s/veh) Level of Service (LOS) Approach Delay (s/veh)		9	A .6			8	A 3.7			A 0	0.3			A 1	.4	

		Н	CS7	Two	-Way	' Stoj	o-Co	ntrol	Rep	ort						
General Information							Site	Inform	natio	n						
Analyst	DBZ						Inters	ection			Ceda	r Creek F	Rd at CC	Gard		
Agency/Co.	Diane	B Zimm	nerman 1	Fraffic En	gineerin	g	Juriso	liction								
Date Performed	2/16/	21			-	-	East/	West Stre	eet		Ceda	r Creek (Garden			
Analysis Year	2023						North	/South	Street		Ceda	r Creek F	Road			
Time Analyzed	PM P	eak No E	Build				Peak	Hour Fac	tor		0.92					
Intersection Orientation	North	n-South					Analy	sis Time	Period	(hrs)	0.25					
Project Description	Нада	n Apartn	nents													
Lanes																
				J 4 4 7 4 1 *	ח ח Majo	* • • Street: No	th-South	ע גע גע אין גע איגע אין								
Vehicle Volumes and Adj	cle Volumes and Adjustments oach Eastbound Westbound Northbound Southbound															
Approach		Eastb	ound			West	bound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	10	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		7	0	2		1	0	7		3	105	3		25	87	11
Percent Heavy Vehicles (%)		0	0	0		0	0	0		0				0		
Proportion Time Blocked																
Percent Grade (%)		(0			1	0									
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up He	eadwa	ys														
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.50	6.20		4.10				4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.20				2.20		
Delay, Queue Length, and	d Leve	l of Se	ervice													
Flow Rate, v (veh/h)			10				9			3				27		
Capacity, c (veh/h)			708				895			1497				1484		
v/c Ratio			0.01				0.01			0.00				0.02		
95% Queue Length, Q₃₅ (veh)			0.0				0.0			0.0				0.1		
Control Delay (s/veh)			10.2				9.1			7.4				7.5		
Level of Service (LOS)			В				A			A				A		
Approach Delay (s/veh)		1(0.2			9	0.1			C	.2			1	.6	
Approach LOS			В				A									
Copyright © 2021 University of Florida	. All Righ	ts Reserv	ved.	I	HCSTNM T CCG F	TWSC Ve PM 23 N	ersion 7.9 B.xtw)				Ger	nerated:	2/17/20	21 5:45:0)7 PM

		Н	CS7	Two-	-Way	' Stoj	o-Co	ntrol	Rep	ort						
General Information							Site	Inforr	natio	n						
Analyst	DBZ						Inters	ection			Ceda	r Creek F	Rd at CC	Gard		
Agency/Co.	Diane	e B Zimm	ierman 1	Traffic En	gineerin	g	Jurisc	liction								
Date Performed	2/16/	20			-	-	East/	Nest Stre	eet		Ceda	r Creek (Garden			
Analysis Year	2023						North	/South S	Street		Ceda	r Creek F	Road			
Time Analyzed	PM P	eak Build	ł				Peak	Hour Fac	tor		0.92					
Intersection Orientation	North	n-South					Analy	sis Time	Period (hrs)	0.25					
Project Description	Haga	n Apartn	nents													
Lanes																
				J 4 4 7 4 1 4 ◆	<mark>ค</mark> า _{Majo}	+ + • Fitreet: Nor	th-South	14 + X + + 1								
Vehicle Volumes and Adjustments Approach Eastbound Westbound Northbound Southbound																
Approach	pproach Eastbound Westbound Northbound Southbound															
Movement	U	Eastbound Westbound Northbound Southbound U L T R U L T L														R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		7	0	2		1	0	7		3	113	3		25	92	11
Percent Heavy Vehicles (%)		0	0	0		0	0	0		0				0		
Proportion Time Blocked																
Percent Grade (%)		(D				0									
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up He	adwa	ys														
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.50	6.20		4.10				4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.20				2.20		
Delay, Queue Length, and	Leve	l of Se	ervice	r.												
Flow Rate, v (veh/h)			10				9			3				27		
Capacity, c (veh/h)			695				884			1490				1473		
v/c Ratio			0.01				0.01			0.00				0.02		
95% Queue Length, Q ₉₅ (veh)			0.0				0.0			0.0				0.1		
Control Delay (s/veh)			10.3				9.1			7.4				7.5		
Level of Service (LOS)			В				A			A				A		
Approach Delay (s/veh)		1().3			9	0.1			0	.2			. 1	.6	
Approach LOS		1	В				A									
Copyright © 2021 University of Florida	. All Righ	ts Reserv	ved.	1	HCS10001 CCG	FWSC Ve PM 23 B	ersion 7.9 8.xtw)				Gei	nerated:	2/17/20	21 5:46:1	14 PM

		Н	CS7	Two-	-Way	v Stoj	p-Co	ntrol	Rep	ort						
General Information							Site	Inform	natio	n						
Analyst	DBZ						Inters	section			Ceda	r Creek a	at Entrar	ice		
Agency/Co.	Diane	e B Zimm	erman 1	Traffic En	gineerin	ıg	Juriso	diction								
Date Performed	2/16/	21					East/	West Str	eet		Entra	nce				
Analysis Year	2023						North	n/South	Street		Ceda	r Creek I	Road			
Time Analyzed	AM P	eak					Peak	Hour Fa	ctor		0.90					
Intersection Orientation	North	n-South					Analy	/sis Time	Period	hrs)	0.25					
Project Description	Haga	n Apt														
Lanes																
				74484 7	ብ ኪ _{Majo}	1 1 + + Y r Street: No	th-South	レイキンキャル								
Vehicle Volumes and Ad	justme	nts														
Approach		Eastb	ound			West	bound			North	bound			South	nbound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	10	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		36		4						2	157				12	57
Percent Heavy Vehicles (%)		0		0						0						
Proportion Time Blocked																
Percent Grade (%))													
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.40		6.20						4.10						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.50		3.30						2.20						
		l of Se	ervice													
Delay, Queue Length, an	d Leve										1	1	1	1	T	
Delay, Queue Length, an Flow Rate, v (veh/h)	d Leve		44							2	1		1	1	1	
Delay, Queue Length, an Flow Rate, v (veh/h) Capacity, c (veh/h)			44 788							2 1535						
Delay, Queue Length, an Flow Rate, v (veh/h) Capacity, c (veh/h) v/c Ratio			44 788 0.06							2 1535 0.00						
Delay, Queue Length, an Flow Rate, v (veh/h) Capacity, c (veh/h) v/c Ratio 95% Queue Length, Q ₉₅ (veh)			44 788 0.06 0.2							2 1535 0.00 0.0						
Delay, Queue Length, an Flow Rate, v (veh/h) Capacity, c (veh/h) v/c Ratio 95% Queue Length, Q ₉₅ (veh) Control Delay (s/veh)			44 788 0.06 0.2 9.8							2 1535 0.00 0.0 7.3						
Delay, Queue Length, and Flow Rate, v (veh/h) Capacity, c (veh/h) v/c Ratio 95% Queue Length, Q ₉₅ (veh) Control Delay (s/veh) Level of Service (LOS)			44 788 0.06 0.2 9.8 A							2 1535 0.00 0.0 7.3 A						
Delay, Queue Length, and Flow Rate, v (veh/h) Capacity, c (veh/h) v/c Ratio 95% Queue Length, Q ₉₅ (veh) Control Delay (s/veh) Level of Service (LOS) Approach Delay (s/veh)		9	44 788 0.06 0.2 9.8 A 8							2 1535 0.00 0.0 7.3 A	0.1					

		Н	CS7	Two	-Way	' Sto	p-Co	ntrol	Rep	ort						
General Information							Site	Inform	natio	n						
Analyst	DBZ						Inters	section			Ceda	r Creek a	at Entrar	ice		
Agency/Co.	Diane	e B Zimm	nerman 1	Traffic En	gineerin	g	Juriso	diction								
Date Performed	2/16/	21					East/	West Str	eet		Entra	nce				
Analysis Year	2023						North	n/South :	Street		Ceda	r Creek	Road			
Time Analyzed	PM P	eak					Peak	Hour Fac	ctor		0.92					
Intersection Orientation	North	n-South					Analy	/sis Time	Period ((hrs)	0.25					
Project Description	Haga	n Apt														
Lanes																
				14174PL	ח ה Majo	1 1 4 4 Y r Street: No	rth-South	74 474 86								
Vehicle Volumes and Ad	justme	nts														
Approach		Eastb	ound			West	bound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	T	R	U	L	Т	R	U	L	T	R
Priority		10	11	12		7	8	9	10	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		24		3						4	123				125	38
Percent Heavy Vehicles (%)		0		0						0						
Proportion Time Blocked																
Percent Grade (%)			0													
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.40		6.20						4.10						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.50		3.30						2.20						
Delay, Queue Length, an	d Leve	l of Se	ervice	•												
Flow Rate, v (veh/h)			29							4						
Capacity, c (veh/h)			712							1411						
v/c Ratio			0.04							0.00						
95% Queue Length, Q ₉₅ (veh)			0.1							0.0						
Control Delay (s/veh)			10.3							7.6						
Level of Convice (LOC)			В							А						
Level of Service (LOS)																
Approach Delay (s/veh)		10	0.3							C).3					

		Н	CS7	Two	-Way	' Sto	p-Co	ntrol	Rep	ort						
General Information		_	_	_	_	_	Site	Infor	natio	n	_	_	_	_		
Analyst	DBZ						Inter	section			Ceda	r Creek a	at Entrar	ice N		
Agency/Co.	Diane	B Zimm	ierman 1	Traffic En	gineerin	g	Juriso	diction								
Date Performed	2/16/	21			-	-	East/	West Str	eet		Entra	nce				
Analysis Year	2023						Nort	n/South	Street		Ceda	r Creek F	Road			
Time Analyzed	AM P	eak					Peak	Hour Fa	ctor		0.90					
Intersection Orientation	North	n-South					Analy	/sis Time	Period	(hrs)	0.25					
Project Description	Haga	n Apt														
Lanes																
				J 4 4 7 4 1 4	<mark>ค</mark> า _{Majo}	1 1 + Y r Street: No	rth-South	リイキスキャレ								
Vehicle Volumes and Adj	ustme	nts														
Approach		Eastb	ound	_		West	bound	_		North	bound	_		South	bound	_
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		36		4						1	192				13	65
Percent Heavy Vehicles (%)		0		0						0						
Proportion Time Blocked																
Percent Grade (%)			D													
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.40		6.20						4.10						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.50		3.30						2.20						
Delay, Queue Length, an	d Leve	l of Se	ervice													
Flow Rate, v (veh/h)			44							1						
Capacity, c (veh/h)			748							1522						
v/c Ratio			0.06							0.00						
95% Queue Length, Q ₉₅ (veh)			0.2							0.0						
Control Delay (s/veh)			10.1							7.4						
Level of Service (LOS)			В							A				1		
Approach Delay (s/veh)		1().1							C	.0				-	-
Approach LOS		1	В													
Approach LOS Copyright © 2021 University of Florida	a. All Righ	ts Reser	ed.		HCS11001	TWSC Ve	ersion 7.9	9				Ger	nerated:	2/17/20)21 5:48:	29 PN

		Н	CS7	Two-	-Way	/ Sto	p-Co	ntrol	Rep	ort						
General Information							Site	Inform	natio	n						
Analyst	DBZ						Inter	section			Ceda	r Creek a	at Entran	ice N		
Agency/Co.	Diane	e B Zimm	ierman 1	Traffic En	gineerin	ng	Juriso	diction								
Date Performed	2/16/	21					East/	West Str	eet		Entra	nce				
Analysis Year	2023						Nort	h/South	Street		Ceda	r Creek F	Road			
Time Analyzed	PM P	eak					Peak	Hour Fa	ctor		0.92					
Intersection Orientation	North	n-South					Analy	/sis Time	Period	(hrs)	0.25					
Project Description	Haga	n Apt														
Lanes																
				14 4 Y 4 Y 4 Y 4	ח ר _{Majo}	1 1 PT r Street: No	rth-South	14 + X + F								
Vehicle Volumes and Adjustments Approach Eastbound Westbound Northbound Southbound																
Approach Eastbound Westbound Northbound South														bound		
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		24		2						4	143				161	38
Percent Heavy Vehicles (%)		0		0						0						
Proportion Time Blocked																
Percent Grade (%)		(D													
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up He	eadwa	ys														
Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.40		6.20						4.10						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.50		3.30						2.20						
Delay, Queue Length, and	d Leve	l of Se	ervice													
Flow Rate, v (veh/h)			28							4						
Capacity, c (veh/h)			653							1365						
v/c Ratio			0.04							0.00						
95% Queue Length, Q ₉₅ (veh)			0.1							0.0						
Control Delay (s/veh)			10.8							7.6						
Level of Service (LOS)			В							A						
Approach Delay (s/veh)		1().8							C	.2					
Approach LOS		I	В													
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		HCS	7 Sig	nalize	d Int	ersec	tion F	Resu	lts Sur	nmar	у				
Concerct Inform								T		tion luf			T b		10
General Inform	ation								Intersec		ormatic	n	- 1	414	
Agency		DBZ Traffic						-	Duration	, h	0.250		2		1
Analyst		DBZ		Analys	sis Date	Jul 6,	2020		Area Typ	e	Other		÷		< <u></u>
Jurisdiction				Time F	Period	AM P	eak		PHF		0.98		1 - V		+ - +
Urban Street		Bardstown Road		Analys	sis Year	2020			Analysis	Period	1> 7:	15	1 1		¥ (
Intersection		Brentlinger/Cedar C	Creek	File Na	ame	Bards	stown AN	/ 20.xi	JS					httr	
Project Descrip	tion	Cedar Creek Apt											1	4149	2.4
Demand Inform	nation				EB			WE	3		NB		1	SB	
Approach Move	ement			L	Т	R	L	Т	R	L	Т	R	L	Т	R
Demand (v), v	eh/h			99	39	26	44	7	191	9	2090	84	92	981	36
				1		an a					1		1		
Signal Informa	tion				5	1215			5			L			
Cycle, s	180.0	Reference Phase	2	1	2		R.		è			2	Ψ.		-
Offset, s	0	Reference Point	End	Green	22	37	129.0	2 24	2 00	0.0		1	2	3	¥ 4
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.5	0.0	5.1	3.6	0.0	0.0					\rightarrow
Force Mode	Fixed	Simult. Gap N/S	On	Red	3.0	0.0	1.7	3.0	0.0	0.0		5	6	7	8
Times Desults				EDI		EDT			MOT	ND		NDT	ODI		ODT
Timer Results	_			EDI	-	EDI	VVD		VVD1	ND	-		SDL	-	SDI
Assigned Phase	e				_	4	<u> </u>	_	8	5		2	1		6
Case Number						6.0		_	5.0	1.1		3.0	1.1		4.0
Phase Duration	, S					30.8	<u> </u>		30.8	8.7	1	36.7	12.5	5 1	40.5
Change Period,	, (Y+R	c), S		<u> </u>		6.6		_	6.6	6.5		6.8	6.5		6.8
Max Allow Head	dway (/	MAH), s		<u> </u>		5.2		_	5.2	5.0		0.0	5.0		0.0
Queue Clearan	ce Time	e (gs), s		8	_	14.9		_	23.2	2.3			4.5		
Green Extensio	n Time	(g e), s			_	1.9	<u> </u>	_	1.0	0.0	_	0.0	0.3		0.0
Phase Call Pro	bability					1.00		_	1.00	0.37	/		0.99)	
Max Out Proba	bility					0.07			0.99	0.00)		0.00)	
Movement Gro	oup Res	ults			EB			WB			NB			SB	
Approach Move	ement			L	Т	R	L	Т	R	L	Т	R	L	Т	R
Assigned Move	ment			7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow F	Rate (v), veh/h		101	66		45	7	195	9	2133	86	96	534	527
Adjusted Satura	ation Flo	ow Rate (s), veh/h/l	n	1386	1717		1282	1900	1572	1344	1781	1610	1781	1841	1817
Queue Service	Time (gs), s		12.3	6.3		5.9	0.6	21.2	0.3	74.8	1.5	2.5	12.6	12.5
Cycle Queue C	learanc	e Time (<i>g</i> c), s		12.9	6.3		12.1	0.6	21.2	0.3	74.8	1.5	2.5	12.6	12.5
Green Ratio (g	/C)			0.13	0.13		0.13	0.13	0.17	0.73	0.72	0.86	0.75	0.74	0.74
Capacity (c), v	/eh/h			222	231		168	256	264	322	2570	1379	157	1367	1349
Volume-to-Capa	acity Ra	itio (X)		0.455	0.287		0.267	0.028	0.739	0.029	0.830	0.062	0.612	0.391	0.391
Back of Queue	(Q), ft	In (95 th percentile))	204.7	130.1		94.3	13	360.8	5.4	951.7	43.5	157.9	190.5	184.4
Back of Queue	(Q), V	eh/In (95 th percenti	le)	7.9	5.0		3.6	0.5	14.1	0.2	37.5	1.7	6.2	7.4	7.3
Queue Storage	Ratio (RQ) (95 th percent	ile)	1.36	0.13		0.31	0.04	1.60	0.03	1.36	0.22	0.79	0.27	0.27
Uniform Delay ((d1), s	/veh		73.2	70.1		75.6	67.6	71.2	6.7	17.4	2.0	37.8	4.8	4.8
Incremental De	lay (d 2), s/veh		2.1	1.0		1.2	0.1	9.2	0.1	3.3	0.1	5.1	0.8	0.8
Initial Queue De	elay (d	3), s/veh		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/ve	eh		75.3	71.1		76.8	67.7	80.4	6.8	20.6	2.0	42.9	5.6	5.6
Level of Service	e (LOS)			E	Е		E	E	F	Α	С	Α	D	А	A
Approach Delay	y, s/veh	/LOS		73.6	3	E	79.4	+	E	19.9	9	В	8.7		А
Intersection De	lay, s/ve	eh / LOS				2	2.7						С		
Multimodal Ba	eulte				EB						NB			C P	
Redestrian L OC	Soore	/1.08		2.40	20	B	0.00		P	2.07		B	1 07	3D	B
Bicycle LOS So	ore / L	1 203		0.76		Δ	2.30		Δ	2.01	2	B	1.07	, –	Δ
Convright © 2020 I		v of Florida All Rights	Reserve	- 0.70		HCST	Streets \	/ersion	785	2.00		Generat	ed: 7/10/2	020 3.46	-37 PM

	HCS	7 Sig	nalize	ed In	terse	ect	tion R	lesu	Its Su	nmar	у				
General Information	on								Intersec	tion Inf	ormatio	on	- 🏻	111	210
Agency	DBZ Traffic								Duration	, h	0.250		12		2
Analyst	DBZ		Analys	sis Da	te Fel	b 17	7, 2021		Area Typ	e	Other		Å →		 ▲ ▲
Jurisdiction			Time F	Period	AM	1 Pe	eak		PHF		0.98		* *		↓ ↓
Urban Street	Bardstown Road		Analys	sis Yea	ar 202	23 1	No Build	ł	Analysis	Period	1> 7:	15	14		¥ (
Intersection	Brentlinger/Cedar C	reek	File Na	ame	Ba	rdst	town AN	1 23 1	NB.xus					httr	
Project Description	Cedar Creek Apt												h	4149	21
									_						
Demand Informati	ion			EE	3	_		W	В	-	NB		.	SB	
Approach Moveme	nt		L	1		R	L		R	L	-	R	L	1	R
Demand (v), veh/r	n	_	150	61	3	39	52	1	0 197	13	2289	87	103	1029	57
Signal Information	n			ΙI					6			t			
Cycle s 18	0.0 Reference Phase	2	1	2	1 4 61	12	A RAN		Ę			, -	N		A
Offset s	Reference Point	End		ĥ			<u>_</u>	P S				1	2	3	Y 4
Uncoordinated N	lo Simult Gan E/W	On	Green	2.9	3.1	1	129.1	1 25	.1 0.0	0.0	_				ð-
Force Mode Fix	ed Simult Gap N/S	On	Red	3.5	0.0	0	5.1	3.6	$\frac{0.0}{0.0}$	0.0	_	` ₅ *	6	7	¥ 8
		OII	Tteu	0.0	10.0	0	1.7	10.0	0.0	0.0					
Timer Results			EBI		EBT		WB	L	WBT	NB		NBT	SBL		SBT
Assigned Phase					4				8	5		2	1		6
Case Number				-	6.0			-	5.0	1.1		3.0	1.1		4.0
Phase Duration, s					31.7				31.7	9.4	. 1	35.9	12.5	; ·	138.9
Change Period, (Y	ange Period, (Y+R c), s							-	6.6	6.5		6.8	6.5		6.8
Max Allow Headwar	x Allow Headway (<i>MAH</i>), s								5.2	5.0		0.0	5.0		0.0
Queue Clearance T	ax Allow Headway (<i>MAH</i>), s							-	23.8	2.5			5.4		
Green Extension Ti	ime (q e), s				1.5				1.2	0.0		0.0	0.3		0.0
Phase Call Probabi	ility			\rightarrow	1.00			+	1.00	0.48	3		0.99)	
Max Out Probability	y y				0.77				1.00	0.00)		0.01		
								1							
Movement Group	Results			EB				WE	}		NB			SB	
Approach Moveme	nt		L	Т	R	2	L	Т	R	L	Т	R	L	Т	R
Assigned Movemer	nt		7	4	14	4	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate	e (v), veh/h		153	102			53	10	201	13	2336	89	101	537	527
Adjusted Saturation	n Flow Rate (s), veh/h/l	n	1382	1720	2		1241	190	1572	1344	1781	1610	1781	1841	1806
Queue Service Tim	ie (gs), s		19.4	9.8			7.4	0.8	21.8	0.5	97.0	1.5	3.4	9.6	9.5
Cycle Queue Clear	ance Time (g c), s		20.2	9.8		_	17.1	0.8	21.8	0.5	97.0	1.5	3.4	9.6	9.5
Green Ratio (g/C)			0.14	0.14	•	_	0.14	0.14	0.17	0.73	0.72	0.86	0.75	0.73	0.73
Capacity (c), veh/l	h		226	239		_	145	264	271	329	2554	1379	126	1351	1326
Volume-to-Capacity	y Ratio (X)		0.677	0.42	6	_	0.365	0.03	9 0.742	0.040	0.915	0.064	0.798	0.398	0.398
Back of Queue (Q), ft/ln (95 th percentile)		302.3	202.	1		115.3	18.5	370.5	7.8	1229.	46.4	175.8	139	131.7
Back of Queue (Q) veh/ln (95 th percenti	le)	11.7	7.8	-	-	44	0.7	14.5	0.2	48.4	19	6.9	54	52
Queue Storage Pat	tio (RQ) (95 th percent	ile)	2.02	0.20		-	0.38	0.0	1 65	0.04	1 76	0.23	0.88	0.20	0.19
Uniform Delay (d a), s/veh		75.8	70 0)	-	78.7	67 1	70.7	6.7	20.9	20	52.8	34	3.3
Incremental Delay	(d 2), s/veh		7.3	17		-	22	01	9.6	0.1	6.5	0.1	13.8	0.8	0.8
Initial Queue Delay	(d3), s/veh		0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d)		83.1	72 6	3		80.9	67 1	80.3	6.7	27.4	2.1	66.6	4.2	4.2	
Level of Service (L	OS)		F	F	-	-	F	F	F	A	C	A	E	A	A
Approach Delay s/		78.9		E		79.9		E	26.4	1 T	C	9.6	Ť	A	
Intersection Delay	Intersection Delay, s/veh / LOS						3.3		-	20.		~	C		
state of the bolidy,													-		
Multimodal Result	Multimodal Results							WE	3		NB			SB	
Pedestrian LOS Sc	ore / LOS		2.48	3	В		2.33	3	В	2.07	7	В	1.87	'	В
Bicycle LOS Score	/ LOS		0.91	1	А		0.92	2	А	2.50)	В	1.49)	Α
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		HCS	7 Sig	nalize	d Int	tersec	tion F	Resu	lts Sur	nmar	у				
General Inform	nation								Intersec	tion Inf	ormatic	on	- 1	111	
Agency		DBZ Traffic							Duration	, h	0.250		-8		2
Analyst		DBZ		Analys	sis Dat	e Feb 1	6, 2021		Area Typ	e	Other				▲ 30
Jurisdiction				Time F	Period	AM P	eak		PHF	D i i	0.98				
Urban Street		Bardstown Road		Analys	sis Yea	r 2023	Build		Analysis	Period	1> 7:	15	- D		4
Intersection		Brentlinger/Cedar C	reek	File Na	ame	Bards	town AN	И 23 В	R.xus				_	<u>httr</u>	
Project Descrip	tion	Cedar Creek Apt Ri	ght											41971	810
Demand Inform	nation				EB			W	3		NB			SB	
Approach Move	ement			L	Т	R	L	Т	R	L	Т	R	L	Т	R
Demand (v), v	eh/h			193	78	51	52	14	197	17	2289	87	103	1029	74
Signal Informa	tion				5	226		2	2		ι	Ĺ			-
Cycle, s	180.0	Reference Phase	2		5		51	₽Ř.	6.1			>	\mathbf{Y}_{2}	3	€ ₄
Offset, s	0	Reference Point	End	Green	3.5	2.7	125.5	5 28.	4 0.0	0.0					5
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.5	0.0	5.1	3.6	0.0	0.0		5 4			2
Force Mode	Fixed	Simult. Gap N/S	On	Red	3.0	0.0	1.7	3.0	0.0	0.0		5	6	7	8
			_	50		EDT	14/17		MOT			NET	0.01	_	ODT
Timer Results				EBI	-	EBT	WB		WBT	NB	-	NBT	SBL	-	SBT
Assigned Phase	e				_	4		\rightarrow	8	5	_	2	1	_	6
Case Number						5.0			5.0	1.1		3.0	1.1		4.0
Phase Duration	i, s				_	35.0		\rightarrow	35.0	10.0) 1	32.3	12.7		35.0
Change Period	hange Period, (Y+R c), s					6.6		_	6.6	6.5		6.8	6.5		6.8
Max Allow Head	ax Allow Headway (MAH), s					5.2		_	5.2	5.0		0.0	5.0		0.0
Queue Clearan	ce Time	e (gs), s				28.5			23.3	2.7			6.0		
Green Extensio	n Time	(ge), S			_	0.0		\rightarrow	1.6	0.0		0.0	0.2		0.0
Phase Call Pro	bability					1.00			1.00	0.58	3		0.99)	
Max Out Proba	bility					1.00			1.00	0.00)		0.15		
Movement Gro	oup Res	sults			EB			WB			NB			SB	
Approach Move	ement			L	Т	R	L	Т	R	L	Т	R	L	Т	R
Assigned Move	ment			7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow I	Rate (v), veh/h		197	80	52	53	14	201	17	2336	89	100	540	527
Adjusted Satura	ation Flo	ow Rate (s), veh/h/l	n	1377	1841	1610	1267	1900	1572	1344	1781	1610	1781	1841	1797
Queue Service	Time (g	g s), S		25.3	6.8	5.1	6.9	1.1	21.3	0.7	101.9	1.5	4.0	9.5	9.3
Cycle Queue C	learanc	e Time (g c), s		26.5	6.8	5.1	13.7	1.1	21.3	0.7	101.9	1.5	4.0	9.5	9.3
Green Ratio (g	/C)			0.16	0.16	0.16	0.16	0.16	0.19	0.72	0.70	0.86	0.73	0.71	0.71
Capacity (c), v	/eh/h			256	301	254	192	300	302	324	2503	1377	121	1311	1280
Volume-to-Capa	acity Ra	atio (X)		0.769	0.265	0.205	0.276	0.048	3 0.665	0.053	0.933	0.064	0.822	0.412	0.412
Back of Queue	(Q), ft/	/In (95 th percentile)		390.8	152.2	96	110.4	25.6	359.7	10.8	1288. 9	49.5	225.4	134.5	125.8
Back of Queue	(Q), Ve	eh/In (95 th percenti	le)	15.1	5.9	3.8	4.2	1.0	14.0	0.3	50.7	2.0	8.9	5.2	5.0
Queue Storage	Ratio (RQ) (95 th percent	ile)	2.61	0.15	0.00	0.37	0.09	1.60	0.05	1.84	0.25	1.13	0.19	0.18
Uniform Delay	(d1), s	/veh		74.6	65.8	66.0	72.7	64.3	67.3	7.6	23.5	2.0	56.1	3.5	3.4
Incremental De	lay (<i>d</i> 2	e), s/veh		14.0	0.7	0.6	1.1	0.1	6.1	0.1	7.9	0.1	17.1	0.9	0.9
Initial Queue De	elay (d	3), s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/ve	eh		88.6	66.5	66.5	73.8	64.4	73.5	7.6	31.4	2.1	73.2	4.4	4.3
Level of Service	e (LOS)			F	E	E	E	E	E	Α	C	Α	E	Α	Α
Approach Delay	y, s/veh	/LOS		79.8	3	E	73.0)	E	30.2	2	С	10.2	2	В
Intersection De	lay, s/ve	eh / LOS				31	1.3						С		
Multimodal Re	Aultimodal Results							WB			NB			SB	
Pedestrian LOS	S Score	/LOS		2.48	3	В	2.32	2	В	2.07	7	В	2.07	,	В
Bicycle LOS So	ore / LC	DS		1.03	3	A	0.93	3	A	2.50		С	1.50)	В
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		HCS	7 Sig	nalize	d Int	ersec	tion F	Resu	lts Sur	nmar	у				
Conoral Inform	action								Interneo	tion Inf	ormatic		1 1		10
General Inform	auon	DD7 T. (C.							Intersec	uon m		л	- 1	416	
Agency		DBZ Traffic				1		-	Duration	, n	0.250		200		
Analyst		DBZ		Analys	sis Date	Jul 10), 2020	_	Area Typ	e	Other				~
Jurisdiction				Time F	Period	PM P	eak		PHF		0.98	7/24	*		÷-
Urban Street		Bardstown Road		Analys	sis Year	2020			Analysis	Period	1> 4:4	15	5		4 C
Intersection		Brentlinger/Cedar C	reek	File Na	ame	Bards	stown Pl	VI 20.X	us					httr	1
Project Descrip	tion	Cedar Creek Apartn	nents											41491	810
Demand Inform	nation				EB			WE	3		NB			SB	
Approach Move	ement			L	Т	R	L	Т	R	L	Т	R	L	Т	R
Demand (v), v	eh/h			59	29	40	276	37	148	31	1415	63	161	2108	56
Signal Informa	tion			1		1 111		1	5	r		†	1	1	
Cycle	225.0	Reference Phase	2		7	1612	C RAR		£		ļ	<u> </u>	STZ.		2
Offect o	223.0	Reference Priase	End		5		- 1		2			1	2	3	Y 4
Unseedingtod	No	Simult Con EAM	On	Green	5.2	5.3	146.2	2 48.	4 0.0	0.0					A
Chicoordinated	Tixed	Simult, Gap N/C	On	Yellow	3.5	0.0	5.1	3.6	0.0	0.0	_	<u>۲</u>			¥.
Force Mode	Fixed	Simult. Gap N/S	On	Rea	3.0	0.0	1.7	3.0	0.0	[0.0		5	6	1	8
Timer Results				EBI	-	EBT	WB	L	WBT	NB	L	NBT	SBI	-	SBT
Assigned Phase	е					4			8	5		2	1		6
Case Number			_			6.0			5.0	1.1		3.0	1.1		4.0
Phase Duration	1, S					55.0			55.0	11.7	7 1	153.0	17.0) 1	58.3
Change Period	(Y+R	c), S	a.	1		6.6	1		6.6	6.5		6.8	6.5		6.8
Max Allow Head	ange Period, (Y+R c), s ax Allow Headway (<i>MAH</i>), s					5.1			5.1	5.0		0.0	5.0		0.0
Queue Clearan	ce Time	e (gs), s				13.9			51.4	3.3			10.0)	
Green Extensio	on Time	(g e), s				3.7	1		0.0	0.1		0.0	0.5		0.0
Phase Call Pro	bability					1.00			1.00	0.86	3		1.00)	
Max Out Proba	bility					0.00			1.00	0.00)		0.14	1	
Movement Gro	oup Res	ults			EB	-		WB			NB			SB	
Approach Move	ement			L	Т	R	L	Т	R	L	Т	R	L	Т	R
Assigned Move	ment			7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow	Rate (v), veh/h		60	70		282	38	151	32	1444	64	186	1251	1251
Adjusted Satura	ation Flo	ow Rate (s), veh/h/l	n	1370	1680		1351	1900	1610	1810	1781	1572	1810	1885	1868
Queue Service	Time (qs), S		8.3	7.7		41.7	3.6	17.2	1.3	53.7	1.3	8.0	142.5	146.6
Cycle Queue C	learanc	e Time (g c), s		11.9	7.7		49.4	3.6	17.2	1.3	53.7	1.3	8.0	142.5	146.6
Green Ratio (g	/C)			0.22	0.22		0.22	0.22	0.26	0.67	0.65	0.86	0.70	0.68	0.68
Capacity (c), v	/eh/h			305	361		282	409	421	75	2314	1360	271	1278	1266
Volume-to-Capa	acity Ra	itio (X)		0.197	0.195		0.998	0.092	2 0.358	0.420	0.624	0.047	0.688	0.979	0.988
Back of Queue	(Q), ft/	/In (95 th percentile)		135.5	155.7		705.3	79.6	289.4	57.7	774.2	57.8	168.3	1881.6	1937.1
Back of Queue	(Q), Ve	eh/In (95 th percenti	le)	5.3	6.1		28.2	3.2	11.6	2.3	30.5	2.3	6.7	74.7	76.3
Queue Storage	Ratio (RQ) (95 th percent	ile)	0.90	0.16		2.35	0.27	1.29	0.29	1.11	0.29	0.84	2.35	2.40
Uniform Delay	(d1), s	/veh		75.5	72.3		94.0	70.3	67.7	59.7	23.2	2.1	23.7	33.5	33.3
Incremental De	lay (<i>d</i> 2), s/veh		0.4	0.4		52.9	0.1	0.7	5.2	1.3	0.1	2.8	13.5	15.3
Initial Queue De	elay (d	3), s/veh		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/ve	eh		75.9	72.7		146.9	70.5	68.4	64.9	24.5	2.2	26.5	47.0	48.6
Level of Service	e (LOS)	(1.0.0		E	E	_	F	E	I E	E	C	A	C	D	D
Approach Delay	y, s/veh	/LOS		74.2	2	E	115.	6	F	24.4	+	С	46.3	5	D
Intersection De	iay, s/ve		in and the			4	6.8						U		
Multimodal Re	sults				EB			WB			NB			SB	
Pedestrian LOS	S Score	/LOS		2.48	3	В	2.33	3	В	2.09)	В	1.90)	В
Bicycle LOS Sc	ore / LC	DS		0.70)	А	1.26	3	А	1.76	3	В	2.44	1	В
Copyright © 2020	Universit	v of Florida, All Rights	Reserve	ed.		HCS™	Streets \	/ersion	7.8.5			Generat	ed: 7/10/2	2020 5:07	:03 PM

		HCS	7 Sig	nalize	ed In	terse	ction	Resi	ults	s Sun	nmar	у				
General Inforn	nation								In	tersect	ion Inf	ormatio	on	- 1	A AAAAAAAA AAAAAAAAAAAAAAAAAAAAAAAAAAA	N U
Agency		DBZ Traffic							D	uration,	h	0.250		R		N.
Analyst		DBZ		Analys	sis Da	te Feb	17, 202	1	Ar	rea Typ	е	Other	×	÷		<- [▲]
Jurisdiction				Time F	Period	PM F	Peak		Pł	HF		0.98		* *		+ - +
Urban Street		Bardstown Road		Analys	sis Yea	ar 2023	No Bu	ld	Ar	nalysis	Period	1> 4:4	15	2		¥ (
Intersection		Brentlinger/Cedar C	reek	File Na	ame	Bard	stown F	PM 23	NB	.xus					<u>httr</u>	
Project Descrip	tion	Cedar Creek Apartn	nents											1	41491	N N
Demand Inform	nation				EB			V	/B			NB			SB	
Approach Move	ement			L	Т	R	1	1	Т	R	L	T	R	L	Т	R
Demand (v), v	/eh/h			81	40	57	28	3 6	64	152	51	1576	65	193	2393	99
Signal Informa	ation				ι	211			. 54	<u> </u>		l	Ĺ			_
Cycle, s	225.0	Reference Phase	2		5			₽Ħ	Ë				¥	Y	-	- €.
Offset, s	0	Reference Point	End	Green	5.8	4.0	146	.9 48	3.4	0.0	0.0					K
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.5	0.0	5.1	3.	6	0.0	0.0		5 4			*
Force Mode	Fixed	Simult. Gap N/S	On	Red	3.0	0.0	1.7	3.	0	0.0	0.0		5	6	7	8
Timor Bosulto				ERI		CRT		21	V	NPT	NR		NRT	CRI		CRT
Assigned Dhos				EDI	-	EDI	VV		V	<u>о</u>	INDI	-			-	6
Assigned Phase	e				-	4	-	-	_	0	C 1 1	-	2	1		6
Case Number					-	6.0	-		5	5.0	1.1		3.0	1.1		4.0
Change Duration	nange Period, (Y+R c), s					55.0	-		0	0.0	12.3	>	0.0	10.0	,	0.0
Max Allow Hear	ange Period, (Y+R c), s ax Allow Headway (MAH), s					5.2	-	-	_	5.2	5.0		0.0	5.0		0.0
Queue Clearan	ce Time	$(a_s)_s$			+	20.3	-	-+	5	51.4	4.1	-	0.0	9.2		0.0
Green Extensio	n Time	(ge),s			-	4.3	-	-		0.0	0.1		0.0	0.6		0.0
Phase Call Pro	bability	(90),0			-	1.00	-	-+	1	1.00	0.96	3	0.0	1.00)	0.0
Max Out Proba	bility					0.01			1	1.00	0.00)		0.09)	
	, í														1	
Movement Gro	oup Res	sults			EB			W	B			NB			SB	
Approach Move	ement			L	T	R	L	Т		R	L	T	R	L	T	R
Assigned Move	ement			7	4	14	3	8		18	5	2	12	1	6	16
Adjusted Flow	Rate (v), veh/h		83	99		294	65	5	155	52	1608	66	183	1178	1178
Adjusted Satura	ation Flo	ow Rate (s), veh/h/l	n	1336	1678	3	1317	190	00	1610	1810	1781	1572	1810	1885	1859
Queue Service	Time (g	g s), S		12.1	11.1		38.3	6.3	3	17.8	2.1	64.3	1.3	7.2	100.3	106.4
Cycle Queue C	learance	e Time (<i>g</i> c), s		18.3	11.1		49.4	6.3	3	17.8	2.1	64.3	1.3	7.2	100.3	106.4
Green Ratio (g	/C)			0.22	361		256	0.2	2	0.20	107	0.00	1365	228	1273	1255
Volume to Can	acity Ra	tio (X)		0.202	0.27	1	1 14	7 0 16	30	0 373	0.484	0.691	0.049	0.800	0.926	0.939
Back of Oueue	(0) ft	(In (95 th percentile)		102.0	216	7	810 /	130	8	297.6	0.404	905.5	59	212.2	824 7	850.9
Back of Queue	(0, 10)	ah/in (95 th percenti	ام)	7.6	84	2	32.4	56	3	11 9	3.7	35.6	23	8.5	32.7	33.5
	Ratio (RO) (95 th percent	ile)	1 29	0.4		2 70	0.4	7	1 32	0.47	1 29	0.29	1.06	1.03	1.06
Liniform Delay	(d_{4}) s	/veh	iic)	79.2	73.7		95.7	71	4	68.4	48.1	24.7	2.0	35.4	13.8	13.6
Incremental De	$(\mathbf{u}_{1}), \mathbf{s}$) s/veh		0.8	0.6	-	101 (2	0.8	4 7	17	0.1	2.0	2.4	2.9
Initial Queue De	elav (d	3) s/veh		0.0	0.0	-	0.0	0.0	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (hitial Queue Delay (d ₃), s/veh						197.4	71.	6	69.2	52.8	26.4	2.1	37.5	16.1	16.5
Level of Service	evel of Service (LOS)						F	E	-	F	D	C	A	D	B	B
Approach Delay	pproach Delay, s/veh / LOS					E	143	.8	_	F	26.3		C	17.8		В
Intersection De	ntersection Delay, s/ven / LOS					-	35.9		-		Lon		-	D		-
	.,															
Multimodal Re	ultimodal Results							W	В			NB			SB	
Pedestrian LOS	S Score	/LOS		2.48	3	В	2.3	33		В	2.09)	В	1.90)	В
Bicycle LOS So	core / LC	DS		0.79	9	А	1.3	34		Α	1.91		В	2.75	5	С
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		HCS	7 Sig	nalize	d Int	ersec	tion F	Resu	ts Sur	nmar	у				
	41										41				
General Inforn	nation							\rightarrow	Intersec	tion inf	ormatic	on	- í	111	
Agency		DBZ Traffic						\rightarrow	Duration	, h	0.250		-8		1
Analyst		DBZ		Analys	sis Date	Feb 1	7, 2021		Area Typ	e	Other				∼
Jurisdiction				Time F	Period	PM P	eak	\rightarrow	PHF		0.98		* →		+ - -
Urban Street		Bardstown Road		Analys	sis Yea	r 2023	Build		Analysis	Period	1> 4:4	45	1 H		1 4
Intersection		Brentlinger/Cedar C	Creek	File Na	ame	Bards	town PN	И 23 B	R.xus					httr	
Project Descrip	tion	Cedar Creek Apartr	nents										1	41441	alin.
Demand Inform	nation				EB			WE	3		NB			SB	
Approach Move	ement			L	Т	R	L	Т	R	L	Т	R	L	Т	R
Demand (v), v	/eh/h			103	51	72	288	87	152	70	1576	65	193	2393	133
Signal Informa	ation				1 1				8			t			
Cycle s	225.0	Reference Phase	2	1	2	9812	C K+A) H			<u> </u>	512		X
Offset s	0	Reference Point	End		ĥ		_ ^ î	٦Fi	-			1	2	3	
Uncoordinated	No	Simult Gan E/W	On	Green	5.9	3.8	147.0) 48.	4 0.0	0.0	_				ð-
Force Mode	Fixed	Simult, Gap N/S	On	Red	3.0	0.0	1.7	3.6	0.0	0.0	_	〕₅ ►	6	7	₩ 8
						1			1.000						
Timer Results				EBI	-	EBT	WB	L	WBT	NB	_	NBT	SBI	-	SBT
Assigned Phas	е					4			8	5		2	1		6
Case Number						5.0			5.0	1.1		3.0	1.1		4.0
Phase Duration	1, S					55.0			55.0	12.4	i 1	153.8	16.2	2 1	157.6
Change Period	hange Period, ($Y+Rc$), s					6.6			6.6	6.5		6.8	6.5		6.8
Max Allow Hea	dway (/	ИАН), s				5.2			5.2	5.0	_	0.0	5.0		0.0
Queue Clearan	ce Time	e (g s), s				26.8	<u> </u>	_	51.4	5.0		0.0	9.2		0.0
Green Extensio	on Time	(ge), s		<u> </u>	_	4.6	<u> </u>	_	0.0	0.2		0.0	0.5		0.0
Phase Call Pro	bability			<u> </u>		1.00	<u> </u>	_	1.00	0.99)		1.00)	
Max Out Proba	Dility					0.06			1.00	0.00)		0.05)	
Movement Gro	oup Res	ults			EB			WB			NB			SB	
Approach Move	ement			L	Т	R	L	Т	R	L	Т	R	L	Т	R
Assigned Move	ement			7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow I	Rate (v), veh/h		105	52	73	294	89	155	71	1608	66	182	1191	1191
Adjusted Satura	ation Flo	ow Rate (s), veh/h/l	n	1308	1856	1610	1374	1900	1610	1810	1781	1572	1810	1885	1850
Queue Service	Time (g	gs), s		16.2	5.1	8.4	44.3	8.7	17.8	3.0	64.3	1.3	7.2	104.4	113.8
Cycle Queue C	learanc	e Time (g c), s		24.8	5.1	8.4	49.4	8.7	17.8	3.0	64.3	1.3	7.2	104.4	113.8
Green Ratio (g	1/C)			0.22	0.22	0.22	0.22	0.22	0.26	0.68	0.65	0.87	0.70	0.67	0.67
Capacity (c), v	/eh/h			263	399	346	303	409	416	103	2326	1365	228	1272	1248
Volume-to-Cap	acity Ra	itio (X)		0.400	0.130	0.212	0.971	0.217	0.373	0.694	0.691	0.049	0.798	0.936	0.954
Back of Queue	(Q), ft/	In (95 th percentile))	241.8	114.4	161	717.2	193.3	300.1	133.6	896.3	58.3	201	765.1	793.3
Back of Queue	(Q), Ve	eh/In (95 th percent	ile)	9.5	4.5	6.4	28.7	1.1	12.0	5.3	35.3	2.3	8.0	30.4	31.2
Queue Storage	Ratio	RQ) (95 th percent	tile)	1.61	0.11	0.00	2.39	0.64	1.33	0.67	1.00	0.29	1.01	0.85	0.87
Uniform Delay	(a 1), s	/ven		82.9	/1.3	72.6	92.1	72.3	68.5	54.3	24.7	2.0	35.3	13.6	13.5
Initial Queue D	elav (d 2			1.4	0.2	0.4	44.0	0.4	0.0	0.0	1.7	0.1	1.5	2.0	2.0
Control Delay (d) s/v	-h		84.3	71.5	73.0	136.1	72.7	69.3	65.6	26.4	2.1	36.8	15.6	16.3
Level of Service		511		F	F	F	F	72.7 F	F	60.0	C	Δ	D.0	B	B
Approach Delay	v s/veh	/1.05		77.8		F	106	3	F	27 4		C	17.4		R
Intersection De	lay, s/ven	h / LOS		11.0		- 32	2.9	- I		21.		0	C		-
	,,														
Multimodal Re	sults				EB			WB			NB			SB	
Pedestrian LOS	S Score	/LOS		2.48	3	В	2.33	3	В	2.09)	В	2.09)	В
Bicycle LOS So	core / LC	DS		0.87		A	1.37	/	A	1.93	3	В	2.78	3	С
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		HCS	7 Sig	nalize	d In	terse	ction F	Resu	lts Su	mmar	у				
O an anal Inform	4:								Interes	4: a m 1 m 6					NT.
General Inform	nation								Intersec		ormatic	on	- 1	4111	
Agency		DBZ Traffic							Duration	, h	0.250		2		5
Analyst		DBZ		Analys	sis Dat	e Feb	17, 2021		Area Typ	be	Other		- ÷		
Jurisdiction				Time F	Period	AMF	Peak		PHF		0.95		*		*
Urban Street		Bardstown Road		Analys	sis Yea	r 2023	No Buil	d	Analysis	Period	1> 7:	15	2		1
Intersection		Bartley/Southpointe		File Na	ame	Bard	stown A	M 23 M	VB.xus					<u>sttt</u>	r
Project Descrip	tion	Cedar Creek Apt											1	4149	8.1
Demand Inform	nation				EB			W	В		NB			SB	
Approach Move	ement			L	T	R	L	Т	R	L	Т	R	L	Т	R
Demand (v), v	/eh/h			22	4	9	33	2	2 139	11	2485	5 140	117	1147	10
														1	
Signal Informa	ation				5	22	R	1	2			Ĺ	•	_	
Cycle, s	180.0	Reference Phase	2		2		1	, K	ě.			Y	P	∠ ⊢-	- -
Offset, s	0	Reference Point	End	Green	2.6	2.9	128	8 5 (11 9		_	1	Z	3	¥ 4
Uncoordinated	No	Simult. Gap E/W	On	Yellow	4.0	0.0	5.1	4.0) 3.6	0.0	-	< 4		~	÷
Force Mode	Fixed	Simult. Gap N/S	On	Red	3.0	0.0	3.0	3.0) 3.0	0.0		5	6	7	8
									MOT	L ID		NET			
Timer Results				EBI		EBI	WE	SL	WBI	NB		NBI	SBI	-	SBT
Assigned Phase	e				-	4	-	-	8	5	_	2	1	_	6
Case Number						10.0		_	9.0	2.0		3.0	1.1		4.0
Phase Duration	hase Duration, s nange Period, ($Y+R_c$), s					12.0		_	18.5	9.6		136.9	12.5	5 1	139.8
Change Period	hange Period, (Y+R c), s					7.0		_	6.6	7.0		8.1	6.5		8.1
Max Allow Head	ax Allow Headway (<i>MAH</i>), s					3.2		\rightarrow	5.3	3.1		0.0	5.1	_	0.0
Queue Clearan	ce Time	e (gs), s				4.3		\rightarrow	10.9	3.1			3.6		
Green Extensio	on Time	(ge), s				0.0		_	1.0	0.0		0.0	0.6		0.0
Phase Call Pro	bability					0.84			1.00	0.43	3		1.00		
Max Out Proba	bility					0.00			0.00	0.0)		0.00)	_
Movement Gro	oup Res	ults	_		EB	_		WE	3		NB	_		SB	
Approach Move	ement			L	Т	R	L	Т	R	L	Т	R	L	Т	R
Assigned Move	ement			7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow I	Rate (v), veh/h		23	14		35	2	146	11	2536	143	114	566	565
Adjusted Satura	ation Flo	ow Rate (s), veh/h/l	n	1781	1663		1781	187	0 1403	1781	1698	1585	1702	1870	1865
Queue Service	Time (g	g s), S		2.3	1.5		3.3	0.2	8.9	1.1	44.9	2.3	1.6	31.9	31.7
Cycle Queue C	learanc	e Time (g c), s		2.3	1.5		3.3	0.2	8.9	1.1	44.9	2.3	1.6	31.9	31.7
Green Ratio (g	1/C)			0.03	0.03		0.07	0.07	7 0.10	0.01	0.72	0.78	0.75	0.73	0.73
Capacity (c), v	/eh/h			50	47		118	124	279	26	3647	1240	309	1369	1365
Volume-to-Capa	acity Ra	itio (X)		0.463	0.293	3	0.294	0.01	7 0.524	0.440	0.695	0.115	0.370	0.414	0.414
Back of Queue	(Q), ft/	In (95 th percentile)		50.4	29.5		73.5	4.3	151.7	24.6	482.7	30.3	45.8	544.7	539.6
Back of Queue	(Q), Ve	eh/In (95 th percenti	le)	2.0	1.2		2.9	0.2	6.0	1.0	19.0	1.2	1.8	21.4	21.2
Queue Storage	Ratio (RQ) (95 th percent	ile)	0.17	0.10		0.49	0.02	2 0.38	0.16	0.44	0.15	0.11	0.61	0.60
Uniform Delay	(d1), s	/veh		86.1	85.7		80.0	78.5	5 77.0	88.9	11.2	2.6	15.6	18.2	17.9
Incremental De	lay (d 2), s/veh		2.5	1.3		1.9	0.1	2.2	1.5	0.4	0.1	1.0	0.9	0.9
Initial Queue De	elay (<i>d</i>	3), s/veh		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (Control Delay (d), s/veh						82.0	78.6	3 79.1	90.4	11.6	2.7	16.6	19.0	18.8
Level of Service	evel of Service (LOS)						F	E	E	F	В	A	В	В	В
Approach Delay	pproach Delay, s/veh / LOS					F	79.	7	E	11.	5	В	18.7	7	В
Intersection De	ntersection Delay, s/veh / LOS						7.3						В		
														6.5	
Multimodal Re	ultimodal Results							WE	3		NB	-		SB	_
Pedestrian LOS	s Score	/ LOS		2.63	5	C	2.6	3	С	2.3	9	В	1.87		В
Bicycle LOS Sc	core / LC	DS		0.55		A	0.7	9	A	2.0	1	В	1.59)	В
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HCS7 Signalized Intersection Results Summary																
			Interpretion Information													
General Information										tion Inf	ormatic	on	- i	1111		
Agency DB2 Traffic										, h	0.250		2		N	
Analyst DB2				Analys	Feb 1	6, 2021	\rightarrow	Area Typ	e Other			÷				
Jurisdiction				Time Period AM Pe			eak		PHF	0.95			1		± ≠	
Urban Street Bardstown Road				Analys	sis Year	2023	Build		Analysis	Period	1> 7:	15	14 D		2.4	
Intersection Bartley/Southpointe				File Na	ame	Bards	stown Al	VI 23 E	R.xus			51111				
Project Description Cedar Creek Apt Right						1414797										
Demand Information					EB						/B NB					
Approach Movement					Т	R	L	Т	R	L	Т	TR		Т	R	
Demand (v), veh/h					4	9	33	2	139	11	2528	140	117	1164	10	
						1 111			3			+				
Cycle c	180.0	Poforonco Phase	2		2	0 212		Y¥ L₂ ⋛			_ <i>ر</i>	_	sta			
Offect o	180.0	Reference Pridse	Z End		5				2			- 1				
Unseed up	No	Simult Con E/M	Off	Green	2.6	1.8	126.0	6 5.0	11.8	0.0	_			_	<u>A</u>	
Eoreo Modo	Fixed	Simult Cap N/S	On	Pedlow	4.0	3.5	5.1	4.0	3.6	0.0	_	∖ ¦⁴	_	~ ,	¥ .	
Force Mode	Fixed	Simult. Gap N/S	OII	Reu	0.0	3.0	3.0	3.0	3.0	0.0		5	0	1	0	
Timer Results				EBL	-	EBT	WB	WBL		NB	L	NBT	SBL		SBT	
Assigned Phase	е					4			8	5		2	1		6	
Case Number						10.0			9.0	1.1		3.0	2.0		4.0	
Phase Duration, s						12.0			18.4	6.6	1	34.7	14.9		143.0	
Change Period,	, (Y+R)	c), S				7.0			6.6	4.0		8.1	6.5		8.1	
Max Allow Head	dway (<i>I</i>	<i>MAH</i>), s				3.2			5.3	3.0		0.0	5.0		0.0	
Queue Clearan	ce Time	e (g s), s				4.3			10.8	2.3			7.9			
Green Extension Time (g e), s						0.0			1.0			0.0	0.6		0.0	
Phase Call Probability						0.84	4		1.00		3		1.00)		
Max Out Proba	bility					0.00		0.00		0.00			0.00			
Movement Gro	oup Res	ults			EB			WB			NB					
Approach Move	ement			L	Т	R	L	Т	R	L	Т	R	L	Т	R	
Assigned Move	ment			7	4	14	3	8	18	5	2	12	1	6	16	
Adjusted Flow F	Rate (v), veh/h		23	14		35	2	146	11	2580	143	113	567	565	
Adjusted Satura	ation Flo	ow Rate (s), veh/h/l	n	1810	1689		1781	1900	1403	1781	1698	1585	1702	1870	1865	
Queue Service	Time (g	g s), S		2.3	1.4		3.3	0.2	8.8	0.3	47.9	2.2	5.9	31.9	31.7	
Cycle Queue C	learance	e Time (g c), s		2.3	1.4		3.3	0.2	8.8	0.3	47.9	2.2	5.9	31.9	31.7	
Green Ratio (g	/C)			0.03	0.03		0.07	0.07	0.11	0.72	0.70	0.77	0.72	0.75	0.75	
Capacity (c), v	/eh/h			51	47		117	125	315	344	3582	1218	159	1401	1397	
Volume-to-Capacity Ratio (X)				0.456	0.289		0.297	0.01	7 0.465	0.033	0.720	0.117	0.712	0.405	0.405	
Back of Queue	(Q), ft/	In (95 th percentile)		49.5	29		73.6	4.3	148.6	5.4	467.7	27	124.5	536	530.2	
Back of Queue (Q), veh/ln (95 th percentile)					1.2		2.9	0.2	5.9	0.2	18.4	1.1	4.8	21.1	20.9	
Queue Storage	Ratio (RQ) (95 th percent	ile)	0.17	0.10		0.49	0.02	0.37	0.04	0.43	0.13	0.31	0.60	0.59	
Uniform Delay (d 1), s/veh					85.7		80.1	78.7	74.8	9.2	12.0	2.6	83.0	17.6	17.4	
Incremental Delay (d 2), s/veh				2.4	1.2		2.0	0.1	1.5	0.0	0.4	0.1	7.7	0.8	0.8	
Initial Queue Delay (d 3), s/veh					0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Level of Service (LOS)					86.9		82.1	78.7	76.4	9.2	12.4	2.1	90.7	18.4	18.2	
Approach Dolou chich (LOS)							F		E	A	В	A	F	В	В	
Approach Delay, s/ven / LOS				87.9	,	F	17.8	0	E	11.9	11.9 B			1	C	
Intersection Delay, s/veh / LOS						1	9.3						В	3		
Multimodal Results					EB			WB			NB			SB		
Pedestrian LOS Score / LOS				2.63		С	2.63	3	С	2.39	9	В	1.87	7	В	
Bicycle LOS Score / LOS				0.55	;	А	0.79	9	А	2.04	1	В	1.61		В	
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HCS7 Signalized Intersection Results Summary																				
O an and informati				Intersection Information																
General Informati							Int	tersect		ormatic	1111									
Agency DBZ Traffic										uration,	h	0.250		2		1				
Analyst DBZ				Analys	is Date	e Feb	17, 202	1	Ar	еа Тур	e	Other				1. A				
Jurisdiction				Time F	Peak		PH	HF		0.96		**		* *						
Urban Street Bardstown Road					Analysis Year 2023 No Bui					nalysis	Period	1> 4:4	15	12		2				
Intersection Bartley/Wingfield				File Na	ame	Bard	stown F	M 23	NB.	.xus					<u>httt</u>					
Project Description	n	Cedar Creek Apartn	nents													1414797				
Demand Informat				W	/B				SB											
Approach Moveme		L	Т	R	L		r R		LT			L	Т	TR						
Demand (v), veh/	/h			40	8	14	37	3 6	3	298	23	1550	211	521	2223	0				
Signal Information	n				L.	211			2	_			ΙĹ		_					
Cycle, s 22	25.0	Reference Phase	2]	2			R+7		-			2	Ψ	∠ →-	÷				
Offset, s	0	Reference Point	End	Green	4.6	26.8	126	2 7	1 28.5		0.0	_	1	2	3	Y 4				
Uncoordinated N	No	Simult. Gap E/W	Off	Yellow	3.5	3.5	4.7	3.0	6	3.6	0.0	-			~	\rightarrow				
Force Mode Fix	ixed	Simult. Gap N/S	On	Red	2.7	2.7	1.5	3.	0	3.0	0.0		5	6	7	8				
Times Decults				EDI	-	CDT	14/	21	10	VDT	ND		NDT	ODI		ODT				
Timer Results				EBL	•	EDI	VV	5L	V	ИВТ	NB	-		SBL		SBI				
Assigned Phase						4			8		5	_	2	1		6				
Case Number						10.0	-	_	9.0		1.1		3.0	2.0		4.0				
Phase Duration, s						13.7			35.1		10.8	3 1	32.4	43.8		65.4				
Change Period, ()	Y+R c	.), S				6.6	-	_	6.6		6.2		6.2	6.2		6.2				
Max Allow Headwa	ay (N	1AH), s				3.2		_	3.2		3.1		0.0	3.1		0.0				
Queue Clearance	Time	(gs), s				7.2			26.9		3.3			36.4	1					
Green Extension Time (g e), s						0.0			1	1.6	0.0		0.0	1.3		0.0				
Phase Call Probability						0.98		1		.00	0.77			1.00)					
Max Out Probabilit	ty					0.01		0.00		0.00	0.00)		0.00						
Movement Group	Res	ults			EB			WB			NB				SB					
Approach Moveme	ent			L	Т	R	L	Т	Т	R	L	Т	R	L	Т	R				
Assigned Moveme	ent			7	4	14	3	8		18	5	2	12	1	6	16				
Adjusted Flow Rate	te (v), veh/h		42	23		201	202	2	310	24	1604	218	537	2291	0				
Adjusted Saturation	n Flo	w Rate (s), veh/h/l	n	1781	1678		1781	178	5	1403	1781	1698	1585	1730	1885	0				
Queue Service Tim	ne (g	(s), S		5.2	3.0		24.9	24.	9	19.8	1.3	29.5	4.1	34.4	106.3	0.0				
Cycle Queue Clear	rance	Time (g c), s		5.2	3.0		24.9	24.	9	19.8	1.3	29.5	4.1	34.4	106.3	0.0				
Green Ratio (g/C))			0.03	0.03		0.13	0.1	3	0.30	0.58	0.56	0.69	0.92	0.71					
Capacity (c), veh/	/h			64	53		234	234	1	825	105	2857	1090	594	2684					
Volume-to-Capacit	ty Rat	tio (X)		0.650	0.433		0.862	0.86	62	0.376	0.226	0.561	0.200	0.904	0.854	0.000				
Back of Queue (Q	2), ft/l	In (95 th percentile)		114.8	62.4		444.9	445	.9	293.6	26.3	368.2	59.2	457.5	1314.1	0				
Back of Queue (Q	le)	4.5	2.5		17.5	17.	6	11.6	1.0	14.5	2.3	18.0	52.1	0.0						
Queue Storage Ra	atio (I	RQ) (95 th percent	ile)	0.38	0.21		1.48	1.4	9	0.73	0.18	0.41	0.30	1.14	1.10	0.00				
Uniform Delay (d 1), s/veh					107.0		95.8	95.	8	63.1	35.5	15.3	3.9	94.4	29.2					
Incremental Delay (d 2), s/veh				4.1	2.1		3.8	3.8	3	0.1	0.3	0.6	0.3	1.0	0.5	0.0				
Initial Queue Delay (d 3), s/veh				0.0	0.0		0.0	0.0)	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Control Delay (d), s/veh					109.0		99.5	99.	5	63.2	35.8	15.8	4.2	95.4	29.7					
Level of Service (LOS)					F		F	F		E	D	В	A	F	С					
Approach Delay, s/veh / LOS					4	F	F 83		33.7 F		14.7	7	В	42.2	2	D				
Intersection Delay, s/veh / LOS						3	9.1							D)					
					50			1.4.7-	2			NE								
Multimodal Results				0.00	6		WE	В		0.11	NB	NB		SB	_					
Pedestrian LOS So		2.63		0	2.6	4			2.43		В	1.89	1	в						
Bicycle LOS Score	Dee	0.59	0.00 A 1.00 D 1.01 D 2.00									24.54								

HCS7 Signalized Intersection Results Summary																			
General Inform								Interse	ctio	n Info	- 1	1111							
Agency DBZ Traffic								Duratio			n, h		0.250	(****			
Analyst DBZ			Analysis Date			Feb 17, 2021			Area T	/pe		Other		*		× 4			
Jurisdiction			Time Period			PM Peak			PHF			0.96		1		*			
Urban Street Bardstown Road			Analysis Year 20			2023	Build		Analys	s Pe	eriod	1> 4:45		*		* *			
Intersection Bartley/Wingfield				File Na	Bards	town PN	1 23	B R.xus						<u>h</u> ttt	r				
Project Description Cedar Creek Apartments															1474187				
Demand Information					EB			WB					NB		SB				
Approach Movement				L T R		LT		Г Б		L	Т	R	L T		R				
Demand (v), veh/h					8		14	379	8	3 29	8	23	1602	206	503	2326	12		
														•					
Signal Informa	tion	Defense Dhase	0		5	7 10	215					(L			sta				
Cycle, s	225.0	Reference Phase	2		5	5		I MAR		22			1		¥2	- ⊾-			
Unset, s	0	Reference Point	End	Green	4.6	.6 24.3		126.6	3 9.4	4 28.2		0.0					5		
Encoordinated	INO Eixod	Simult Cap N/S	On	Yellow	3.5	\rightarrow	3.5	4.7	3.6	$\frac{3}{3}$	3	0.0	_	$\sum a$	_	<u>∽ ,</u>	Y.		
Force Mode	Fixed	Simult. Gap N/S	OII	Reu	2.1		2.1	1.5	5.0	5 5.0	J	0.0		5	0	1	0		
Timer Results			_	EBI	-	E	BT	WB	L	WBT	Т	NBL		NBT	SBL		SBT		
Assigned Phase	е					4					Т	5		2	1		6		
Case Number						10.0				9.0	\top	1.1		3.0	2.0		4.0		
Phase Duration, s					16.0				34.8	Т	10.8		132.8		3 1	63.3			
Change Period, (Y+R c), s					6.	.6			6.6		6.2		6.2	6.2		6.2			
Max Allow Headway (MAH), s						3.	.2		3.		Т	3.0		0.0	3.0		0.0		
Queue Clearance Time (g s), s						11	.4				Т	3.3							
Green Extensio	n Time	(ge), s				0.	.0		1		Т	0.0		0.0	1.0		0.0		
Phase Call Pro	bability					0.9	98		1.00		Т	0.77			1.00)			
Max Out Proba	bility					1.0	00			0.00		0.00)		0.00)			
Movement Gro	oup Res	ults			EB	3		WB			Т		NB		SB				
Approach Move	ement			L	Т	Т	R	L	Т	R	Т	L	Т	R	L	Т	R		
Assigned Move	ment			7	4	+	14	3	8	18	+	5	2	12	1	6	16		
Adjusted Flow I	Rate (v), veh/h		42	23			201	202	2 310	Т	23	1635	210	501	1164	1164		
Adjusted Satura	ation Flo	ow Rate (s), veh/h/l	n	1795	169	1		1795	179	9 1414	¥ 1	781	1698	1585	1730	1885	1882		
Queue Service Time ($g s$), s			5.1	3.0)		24.7	24.	7 19.9	1	1.3	32.2	4.3	32.1	115.3	115.6			
Cycle Queue C	learanc	e Time (g c), s		5.1	3.0)		24.7	24.	7 19.9		1.3	32.2	4.3	32.1	115.3	115.6		
Green Ratio (g	/C)			0.04	0.04	4		0.13	0.13	3 0.29	0	0.58	0.56	0.69	0.91	0.70	0.70		
Capacity (c), v	/eh/h			75	71			233	234	1 796		96	2868	1091	555	1325	1323		
Volume-to-Capa	acity Ra	itio (X)		0.555	0.32	24		0.863	0.86	3 0.39	0.0	.245	0.570	0.193	0.902	0.878	0.880		
Back of Queue	(Q), ft/	In (95 th percentile)		114.9	60.7	7		451.6	452.	.4 295.	5 2	26.8	385.2	60.1	427.2	1413.8	1424.3		
Back of Queue (Q), veh/In (95 th percentile)				4.6	2.4	-		17.9	18.0	0 11.7		1.1	15.2	2.4	16.8	56.1	56.1		
Queue Storage Ratio (RQ) (95 th percentile)			ile)	0.38	0.20	0		1.51	1.5	1 0.74	0	0.18	0.48	0.30	1.07	1.18	1.18		
Uniform Delay (<i>d</i> 1), s/veh				105.8	104.	./		95.9	95.9	9 65.2	4	10.5	16.8	4.3	96.4	34.3	33.8		
Incremental Delay (d 2), s/ven				5.3	1.0	, 		0.7	0.7	0.1		0.3	0.0	0.3	1.2	1.1	1.1		
Control Delay (d) s/yeh				111 1	105	7		104.7	104	7 65 2		0.0	17.4	0.0	0.0	25.4	25.0		
Level of Service (LOS)					105.	./		F	104. E	- 00.0	4	D	R	4.0	57.0 F	D	00.0		
Approach Delay, s/yeb / LOS					F F		=	87.6		E	+	16.3		B	46.1				
Intersection Delay, s/ven / LOS					2		42	2.1		- F	╋	10.3		D	40.2 U				
Multimodal Results					EB	3				3	Γ	NB			SB				
Pedestrian LOS Score / LOS				2.63	3	C	0	2.64	+	С		2.43	3	В	1.89)	В		
Bicycle LOS Score / LOS				0.59 A			1.66 B				1.54 B			2.93 C					
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