REPORT

Cityscape Simcoe Lane Louisville, KY

Traffic Impact Study

Louisville Metro

Revised June 15, 2016



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Introduction

Cityscape is proposing a 249-unit apartment complex on Simcoe Lane in Louisville, KY. **Figure 1** displays a map of the site. Access to the site will be from Simcoe Lane. The purpose of this study is to examine the traffic impacts of the proposed development upon the adjacent highway system. For this study the impact area was defined to be the intersections of KY 22 at Simcoe Lane and at Avish Gardens/Paddock Shops.



Figure 1
Site Location

Existing Conditions

Simcoe Lane is maintained by Metro Louisville with an estimated 2016 ADT of 2,800 vehicles per day, as estimated from the turning movement count. The road is a two lane road with twelve-foot lanes with curb and gutter to the southern shopping center entrance. The posted speed limit is 20 mph. There are sidewalks along both sides, though the west side is missing sidewalks from KY 22 to the first entrance. The intersection with KY 22 is controlled with a stop sign. At the intersection the pavement widens to 36 feet; though a left turn lane is not delineated.

KY 22 is maintained by the Kentucky Transportation Cabinet with an estimated 2016 ADT 33,000 vehicles per day between Hurstbourne Parkway and I 265 as provided by the Kentucky Transportation Cabinet at station V27. The route is a four-lane roadway with twelve-foot lanes, paved shoulders and sidewalks west of Simcoe Lane on the south side and on the north side east of Simcoe Lane. There is a dedicated left turn lane for westbound traffic at Simcoe Lane. The intersection with Avish Gardens/Paddock Shops is controlled with a traffic signal. There are left



and right turn lanes on KY 22. Avish Gardens has a two-lane exit that is marked left/thru and right only. The Paddock Shops has a three-lane exit that is marked left only, left/thru and right only. The traffic signal operates with split phase for the Avish Gardens/Paddock Shops. The posted speed limit is 45 mph.

A.m. and p.m. peak hour traffic counts were obtained at the intersection on February 17 and 25, 2016. The a.m. peak hour occurred between 7:15 and 8:15 and the p.m. peak hour occurred between 4:45 and 5:45 p.m. **Figure 2** illustrates the existing peak hour traffic volumes.

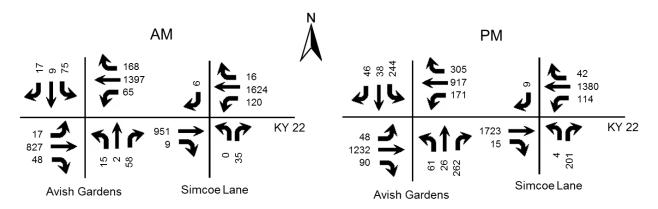


Figure 2 2016 Peak Hour Counts

Future Conditions

The projected completion year for this development is 2019, so the analysis year for this study is 2019. To predict traffic conditions in 2019, two percent annual growth in traffic was added to the thru volumes on KY 22. This was determined by reviewing the previous counts at the intersection. Additionally, the projected traffic from the approved office building adjacent to the Republic Bank building was added to Simcoe Lane. Due to the existing difficulty making a left turn from Simcoe Lane and the crash history, Metro Public Works and the Kentucky Transportation Cabinet have determined that any additional development on Simcoe Lane will be required to restrict Simcoe Lane to a right-out only. Traffic may continue to enter from either direction. **Figure 3** displays the 2019 No Build volumes.

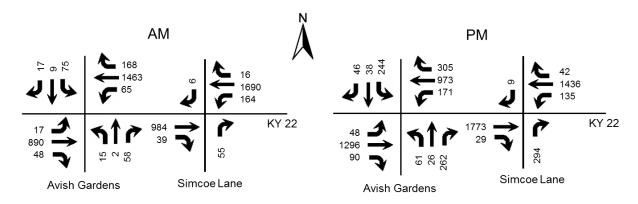


Figure 3 2019 No Build Peak Hour Volumes



Trip Generation

The Institute of Transportation Engineers <u>Trip Generation Manual</u>, 9th Edition contains trip generation rates for a wide range of developments. The land use of "Apartments (220)" best describes this development. The trip generation results are listed in **Table 1**. The results of the trip generation analysis are that this development will generate 126 a.m. peak hour trips and 155 p.m. peak hour trips. The trips were assigned to the highway network with 60 percent from the east and 40 percent from the west. **Figure 4** shows the trips generated by this development and distributed throughout the road network for the year 2019 during the peak hours. **Figure 5** displays the individual turning movements for the year 2019 for the peak hours when the development is completed.

Table 1 - Trip Generation

	AM	Peak Ho	our	PM Peak Hour				
	Total	Enter	Exit	Total	Enter	Exit		
Apartments (249 units)	126	25	101	155	101	54		

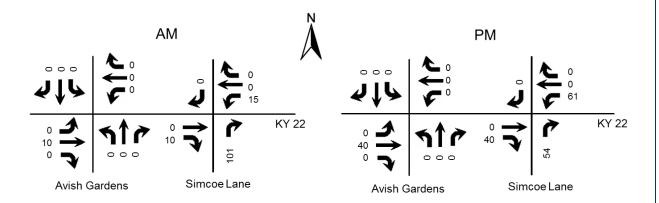


Figure 4
Trip Distribution for Site

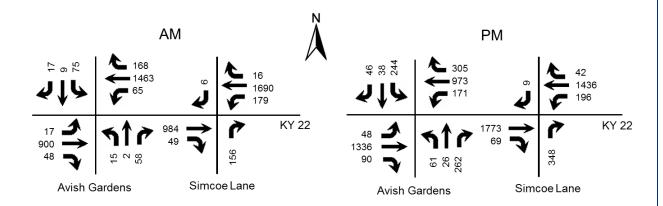


Figure 5 2019 Build Peak Hour Volumes



Analysis

The qualitative measure of operation for a roadway facility or intersection is evaluated by assigning a "Level of Service" or LOS. Level of Service is a ranking scale from A through F with each level representing a range. LOS results depend upon the type of facility that is analyzed. In this case, the LOS is based upon the average vehicle delay each movement experiences at an intersection.

To evaluate the impact of the proposed development, the vehicle delays at the intersection were determined using procedures detailed in the <u>Highway Capacity Manual</u>, 2010 edition. Future delay and Level of Service were determined for the intersection using HCS 2010 Streets and TWSC (version 6.70) software. **Table 2** shows the results of the analysis for the three scenarios analyzed. The full printouts are included in Appendix B.

Table 2 - Level of Service Results

	AIV	l Peak Hou	r	PIV	l Peak Hou	r
	2016 Existing	2019 No Build	2019 Build	2016 Existing	2019 No Build	2019 Build
KY 22 at Simcoe Lane						
KY 22 Westbound Left	В	В	В	В	В	С
	10.1	11.3	11.9	11.9	13.6	16.8
Simcoe Lane Northbound	В	В	В	С	D	Е
	10.0	10.2	11.2	21.0	30.6	42.7
Drury Inn Southbound Right only	С	С	С	В	В	В
	18.7	19.5	19.5	13.5	13.5	13.5
KY 22 at Avish Gardens/Paddock Shops	В	В	В	С	D	D
	14.0	14.4	14.4	34.5	36.4	37.2
KY 22 Eastbound	В	В	В	С	С	С
	10.8	10.3	10.3	29.6	31.6	32.5
KY 22 Westbound	В	В	В	С	С	С
	11.4	12.1	12.1	22.7	23.9	24.3
Avish Gardens Northbound	D	Е	Е	E	Е	Е
	49.0	56.5	56.6	60.8	65.7	67.2
Paddock Shops Southbound	D	Е	Е	E	F	F
	53.3	62.1	62.3	76.8	81.9	83.6

Note: Level of Service, delay in seconds

Conclusions

Based upon the volume of traffic generated by the development and the amount of traffic forecasted for the year 2019, there will be an impact to the existing highway network. No highway capacity improvements are recommended at the proposed site entrance or the existing intersection of KY 22 and Simcoe Lane based upon highway capacity analysis.

The existing westbound left turn lane is sufficient in length for the projected queue in 2019.



Appendix A
Traffic Counts

Study Name KY 22 & Simcoe Ln Start Date 02/17/2016 Start Time 7:00 AM Site Code

			Drury Inn KY 22				Simcoe Lane				KY 22						
		South	bound			West	oound			North	bound		Eastbound				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Total
7:00 AM	0	0	0	0	2	288	19	4	3	0	0	0	1	148	0	0	465
7:15 AM	1	0	0	0	2	339	11	5	7	0	0	0	0	218	0	0	583
7:30 AM	1	0	0	0	3	474	21	6	6	0	0	0	3	248	0	0	762
7:45 AM	3	0	0	0	9	452	42	2	7	0	0	0	5	266	0	0	786
8:00 AM	1	0	0	0	2	359	27	6	15	0	0	0	1	219	0	0	630
8:15 AM	2	0	0	0	6	332	38	6	11	0	1	0	5	167	0	0	568
8:30 AM	0	0	0	0	4	322	28	0	14	0	0	0	9	187	0	0	564
8:45 AM	0	0	0	0	3	291	38	1	16	0	0	0	8	170	0	0	527
4:00 PM	1	0	0	0	6	263	36	0	47	0	1	0	6	395	0	0	755
4:15 PM	3	0	0	0	9	334	25	4	34	0	0	0	4	404	0	0	817
4:30 PM	1	0	0	0	7	301	18	0	39	0	1	0	7	433	0	0	807
4:45 PM	3	0	0	0	11	366	30	0	39	0	1	0	4	434	0	0	888
5:00 PM	1	0	0	0	9	327	34	0	52	0	1	0	4	414	0	0	842
5:15 PM	2	0	0	0	8	330	30	1	40	0	0	0	5	468	0	0	884
5:30 PM	3	0	0	0	14	330	19	0	70	0	2	0	2	407	0	0	847
5:45 PM	4	0	0	0	8	301	23	0	37	0	0	0	5	457	0	0	835

		Drur South	y Inn bound			KY West			Simcoe Lane Northbound				KY 22 Eastbound				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Total
7:15 AM	1	0	0	0	2	339	11	5	7	0	0	0	0	218	0	0	583
7:30 AM	1	0	0	0	3	474	21	6	6	0	0	0	3	248	0	0	762
7:45 AM	3	0	0	0	9	452	42	2	7	0	0	0	5	266	0	0	786
8:00 AM	1	0	0	0	2	359	27	6	15	0	0	0	1	219	0	0	630
TOTAL	6	0	0	0	16	1624	101	19	35	0	0	0	9	951	0	0	2761
4:45 PM	3	0	0	0	11	366	30	0	39	0	1	0	4	434	0	0	888
5:00 PM	1	0	0	0	9	327	34	0	52	0	1	0	4	414	0	0	842
5:15 PM	2	0	0	0	8	330	30	1	40	0	0	0	5	468	0	0	884
5:30 PM	3	0	0	0	14	330	19	0	70	0	2	0	2	407	0	0	847
TOTAL	9	0	0	0	42	1353	113	1	201	0	4	0	15	1723	0	0	3461



Study Name KY 22 & The Paddock Start Date 02/25/2016 Start Time 7:00 AM Site Code

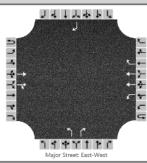
	Sou	thbound Southl	d Appro	ach	Westbound Approach Westbound			ach	Northbound Approach Northbound			Eastbound Approach Eastbound					
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	TOTAL
7:00 AM	13	40	8	0	2	3	1	0	5	34	1	0	3	1	12	0	123
7:15 AM	12	67	13	0	11	1	2	0	2	50	0	0	1	1	1	0	161
7:30 AM	19	99	5	0	9	1	2	0	2	91	3	0	0	0	12	0	243
7:45 AM	21	188	10	1	7	0	3	0	2	125	3	0	3	1	9	0	373
8:00 AM	17	252	13	0	9	1	3	0	8	121	2	0	5	0	14	0	445
8:15 AM	29	307	15	0	19	0	3	0	11	163	4	0	2	2	13	0	568
8:30 AM	54	371	12	0	15	1	3	0	13	215	6	0	3	2	19	0	714
8:45 AM	67	330	19	0	11	0	7	0	17	256	2	1	6	3	22	0	741
4:00 PM	48	219	31	0	50	8	8	0	21	226	12	0	18	6	61	0	708
4:15 PM	70	190	41	0	57	5	14	0	30	248	6	0	11	8	59	0	739
4:30 PM	35	185	44	0	57	8	12	0	21	219	10	0	14	12	46	0	663
4:45 PM	64	190	47	0	62	12	13	0	20	189	18	0	14	18	41	0	688
5:00 PM	45	217	38	0	61	9	16	0	18	248	9	0	7	7	71	0	746
5:15 PM	71	204	49	0	62	5	15	0	21	212	11	0	15	11	52	0	728
5:30 PM	66	227	50	0	65	4	12	0	21	315	14	0	13	7	51	0	845
5:45 PM	67	200	51	0	60	10	23	0	17	267	13	2	15	10	63	0	798

	Sou	ithbound Southl		ach	We	stbound Westl		ach	Noi		d Approa	ach	Ea	stbound Eastb		ach	
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	TOTAL
8:00 AM	17	252	13	0	9	1	3	0	8	121	2	0	5	0	14	0	445
8:15 AM	29	307	15	0	19	0	3	0	11	163	4	0	2	2	13	0	568
8:30 AM	54	371	12	0	15	1	3	0	13	215	6	0	3	2	19	0	714
8:45 AM	67	330	19	0	11	0	7	0	17	256	2	1	6	3	22	0	741
TOTAL	167	1260	59	0	54	2	16	0	49	755	14	1	16	7	68	0	2468
5:00 PM	45	217	38	0	61	9	16	0	18	248	9	0	7	7	71	0	746
5:15 PM	71	204	49	0	62	5	15	0	21	212	11	0	15	11	52	0	728
5:30 PM	66	227	50	0	65	4	12	0	21	315	14	0	13	7	51	0	845
5:45 PM	67	200	51	0	60	10	23	0	17	267	13	2	15	10	63	0	798
TOTAL	249	848	188	0	248	28	66	0	77	1042	47	2	50	35	237	0	3117



Appendix B HCS Reports

HCS 2010 Two-Way Stop Control Summary Report									
General Information Site Information									
Analyst	Diane Zimmerman	Intersection	KY 22 at Simcoe Lane						
Agency/Co.	CDM Smith	Jurisdiction							
Date Performed	3/1/16	East/West Street	KY 22						
Analysis Year	2016	North/South Street	Simcoe Lane						
Time Analyzed	AM Peak	Peak Hour Factor	0.88						
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25						
Project Description	Simcoe Lane Cityscape								



Vehicle Volumes and Adjustments Approach Eastbound Westbound Northbound Southbound Movement U R U R U R U Priority 1U 3 4U 9 10 11 12 1 2 4 5 6 7 8 0 2 1 1 0 1 0 1 Number of Lanes 0 2 0 0 1 0 Configuration TR L R R L R Volume (veh/h) 101 1624 0 35 951 9 19 16 6 Percent Heavy Vehicles 3 3 3 3 Proportion Time Blocked 0.000 0.000 0.300 0.000 0.000 0.300 0.300 0.000 Right Turn Channelized No No No Yes Median Type Left Only Median Storage 1 Delay, Queue Length, and Level of Service Flow Rate (veh/h) 137 40 7 Capacity 841 118 757 270 v/c Ratio 0.16 0.05 0.03

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95% Queue Length

Control Delay (s/veh)

Level of Service (LOS)

Approach Delay (s/veh)

Approach LOS

HCS 2010™ TWSC Version 6.70 AM 16 NB.xtw

0.6

10.1

В

0.7

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18.7

0.1

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С

0.2

10.0

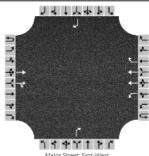
В

35.6

Е



HCS 2010 Two-Way Stop Control Summary Report											
	Site Information										
Diane Zimmerman	Intersection	KY 22 at Simcoe Lane									
CDM Smith	Jurisdiction										
6/15/16	East/West Street	KY 22									
2019	North/South Street	Simcoe Lane									
AM Peak NoBuild Right out	Peak Hour Factor	0.88									
East-West	Analysis Time Period (hrs)	0.25									
Simcoe Lane Cityscape											
	Diane Zimmerman CDM Smith 6/15/16 2019 AM Peak NoBuild Right out East-West	Site Information Diane Zimmerman Intersection CDM Smith Jurisdiction 6/15/16 East/West Street 2019 North/South Street AM Peak NoBuild Right out Peak Hour Factor East-West Analysis Time Period (hrs)									



Major Street: East-West																
Vehicle Volumes and Ad	ljustme	nts														
Approach		Eastb	oound			Westl	bound			North	bound			South	bound	
Movement	U	JLTRULTRULTRU								U	L	Т	R			
Priority	10	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0 0 2 0 0 1 2 1 0 0 1 0 0 1										1				
Configuration		T TR L T R R										R				
Volume (veh/h)		984 39 19 164 1690 16 55 6										6				
Percent Heavy Vehicles					3	3						3				3
Proportion Time Blocked			0.000	0.000		0.300	0.000	0.000				0.300				0.000
Right Turn Channelized		١	10			Ν	lo			N	lo			Υ	'es	
Median Type								Left	Only							
Median Storage		1														
Delay, Queue Length, ar	Delay, Queue Length, and Level of Service															
,																

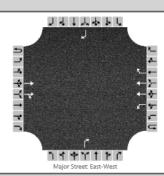
Delay, Queue Length, and	Leve	l of Se	ervice										
Flow Rate (veh/h)					208					62			7
Capacity					777					757			255
v/c Ratio					0.27					0.08			0.03
95% Queue Length					1.1					0.3			0.1
Control Delay (s/veh)					11.3					10.2			19.5
Level of Service (LOS)					В					В			С
Approach Delay (s/veh)					1	.1		10).2		19	9.5	
Approach LOS								-	3		(0	

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	HCS 2010 Two-Way Sto	p Control Summary R	eport					
General Information		Site Information						
Analyst	Diane Zimmerman	Intersection	KY 22 at Simcoe Lane					
Agency/Co.	CDM Smith	Jurisdiction						
Date Performed	6/15/16	East/West Street	KY 22					
Analysis Year	2019	North/South Street	Simcoe Lane					
Time Analyzed	AM Peak Build Right out	Peak Hour Factor	0.88					
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25					
Project Description Simcoe Lane Cityscape								



Vehicle Volumes and Adjustments

Approach		Eastb	oound			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	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Number of Lanes	0	0	2	0	0	1	2	1		0	0	1		0	0	1	
Configuration			Т	TR		L	Т	R				R				R	
Volume (veh/h)			984	49	19	179	1690	16				156				6	
Percent Heavy Vehicles					3	3						3				3	
Proportion Time Blocked			0.000	0.000		0.300	0.000	0.000				0.300				0.000	
Right Turn Channelized		١	10		No					No				Yes			
Median Type		Left Only															

ricalan Type	
Median Storage	

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)			225					177			7
Capacity			746					757			255
v/c Ratio			0.30					0.23			0.03
95% Queue Length			1.3					0.9			0.1
Control Delay (s/veh)			11.9					11.2			19.5
Level of Service (LOS)			В					В			С
Approach Delay (s/veh)			1	.2		11	2		19).5	
Approach LOS						1	3		(2	

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	HCS	5 201	LO Tw	10-W	ay St	ор С	ontro	ol Sui	mma	ry R€	eport					
General Information							Site 1	nforn	nation	1						
Analyst	Diane	Zimmer	man				Inters	ection			KY 22	at Simco	e Lane			
Agency/Co.	CDM :	Smith					Jurisd	iction								
Date Performed	12/16	/2015					East/V	Vest Stre	et		KY 22					
Analysis Year	2016						North	/South S	treet		Simco	e Lane				
Time Analyzed	PM Pe	ak					Peak l	Hour Fac	tor		0.97					
Intersection Orientation	East-V	Vest					Analy	sis Time	Period (ł	nrs)	0.25					
Project Description	Simco	e Lane (Cityscape	:												
Lanes																
Vehicle Volumes and Adjustments																
Approach		Eastb	oound			West	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	T	R	U	L	Т	R	U	L	Т	R
Priority	10	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	1	2	1		1	0	1		0	0	1
Configuration			T	TR		L	Т	R		L		R				R
Volume (veh/h)			1723	15	1	113	1353	42		4		201				9
Percent Heavy Vehicles					3	3				3		3				3
Proportion Time Blocked			0.000	0.000		0.600	0.000	0.000		0.600		0.600				0.600
Right Turn Channelized		N	No.			, N	lo			N	lo			Y	es	
Median Type								Left	Only							
Median Storage								:	1							
Delay, Queue Length, a	nd Level	d Level of Service														
Flow Rate (veh/h)						117				4		207				9
Capacity						639				136		432				432
v/c Ratio						0.18				0.03		0.48				0.02
95% Queue Length						0.7				0.1		2.5				0.1
Control Delay (s/veh)						11.9				32.2		20.7				13.5
			11.9 32.2 20.7 B D C										В			

Approach Delay (s/veh)

Approach LOS

HCS 2010™ TWSC Version 6.70 PM 16.xtw

0.9

Α

21.0

С

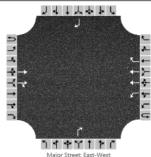
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13.5





			<u> </u>
General Information		Site Information	
Analyst	Diane Zimmerman	Intersection	KY 22 at Simcoe Lane
Agency/Co.	CDM Smith	Jurisdiction	
Date Performed	6/15/16	East/West Street	KY 22
Analysis Year	2019	North/South Street	Simcoe Lane
Time Analyzed	PM Peak NoBuild Right out	Peak Hour Factor	0.97
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Simcoe Lane Cityscape	-	-



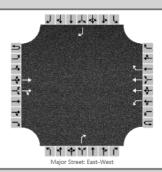
Major Street: East-West																
Vehicle Volumes and Adj	ustme	nts														
Approach		Eastb	oound			West	bound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	10	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	1	2	1		0	0	1		0	0	1
Configuration		T TR L T R R R										R				
Volume (veh/h)		1773 29 1 135 1436 42 294 9										9				
Percent Heavy Vehicles					3	3						3				3
Proportion Time Blocked			0.000	0.000		0.600	0.000	0.000				0.600				0.600
Right Turn Channelized		Ν	10			Ν	lo			Ν	lo			Υ	es	
Median Type								Left	Only							
Median Storage		1														
Delay, Queue Length, an	Delay, Queue Length, and Level of Service															

Delay, Queue Length, and	Leve	of Se	ervice										
Flow Rate (veh/h)					140					303			9
Capacity					559					432			432
v/c Ratio					0.25					0.70			0.02
95% Queue Length					1.0					5.3			0.1
Control Delay (s/veh)					13.6					30.6			13.5
Level of Service (LOS)					В					D			В
Approach Delay (s/veh)					1	.1		3(0.6		13	3.5	
Approach LOS								ı	D			3	

HCS 2010™ TWSC Version 6.80 PM 19 NB ro.xtw Generated: 8/28/2016 3:34:03 PM



	HCS 2010 Two-Way Stop C	ontrol Summary R	eport
General Information		Site Information	
Analyst	Diane Zimmerman	Intersection	KY 22 at Simcoe Lane
Agency/Co.	CDM Smith	Jurisdiction	
Date Performed	6/15/16	East/West Street	KY 22
Analysis Year	2019	North/South Street	Simcoe Lane
Time Analyzed	PM Peak Build Right out	Peak Hour Factor	0.97
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Simcoe Lane Cityscape		



Vehicle Volumes and Adjustments

Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	10	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	1	2	1		0	0	1		0	0	1
Configuration			Т	TR		L	Т	R				R				R
Volume (veh/h)			1773	69	1	196	1436	42				348				9
Percent Heavy Vehicles					3	3						3				3
Proportion Time Blocked			0.000	0.000		0.600	0.000	0.000				0.600				0.600
Right Turn Channelized		Ν	lo			Ν	lo			N	0			Υ	es	
Median Type		<u> </u>					Left	Only								
Median Storage								:	1							

Delay, Queue Length, and Level of Service

3 • 3 • •											
Flow Rate (veh/h)			203					359			9
Capacity			506					432			432
v/c Ratio			0.40					0.83			0.02
95% Queue Length			1.9					7.9			0.1
Control Delay (s/veh)			16.8					42.7			13.5
Level of Service (LOS)			С					E			В
Approach Delay (s/veh)			2.	.0		42	2.7		13	3.5	
Approach LOS						E			E	3	

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Cityscape ● Simcoe Lane Traffic Impact Study
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		HCS 2	010 S	ignali	zed l	nters	ectior	n Re	sults \$	Summ	ary				
General Inforn	nation								Interse	tion In	ormatio	on	_	1 7 4 1	la la
Agency		CDM Smith							Duration	ı, h	0.25		- P		
Analyst		DBZ		Analys	is Date	Mar 1	, 2016		Area Ty	ре	Other	-	<u> </u>		`-
Jurisdiction				Time F	Period	AM P	eak		PHF		0.87		÷	w‡e	\equiv
Urban Street		KY 22		Analys	is Year	2016			Analysis	Period	1> 7:0	00	2		
Intersection		Avish Gardens		File N	ame	AM 16	3.xus							47	Г
Project Descrip	tion	Cityscape Apts											T	11 PT	14
Demand Inform	nation				EB			W	В		NB		T	SB	
Approach Move				L	T	T R	L	T		T	T	R	L	T	R
Demand (v), v				17	817	48	65	120	_	_	2	58	75	9	17
(- /,															
Signal Informa	ition				2	5	J . 2		7	\top					T
Cycle, s	111.6	Reference Phase	2	1	P 6		7#3		542		₩	\frown	Ә┈		4
Offset, s	0	Reference Point	End	Green	27	2.7	69.5	5.8	6.2	0.0		1	¥ 2	3	4
Uncoordinated	Yes	Simult. Gap E/W	On	Yellow	-	0.0	4.3	3.6	-	0.0	_	7	→		stz
Force Mode	Fixed	Simult. Gap N/S	On	Red	3.0	0.0	1.9	2.4		0.0		5	6	7	Y
Timer Results				EBI	-	EBT	WB	L	WBT	NB	L	NBT	SBI	_	SBT
Assigned Phase	е			5		2	1		6			8			4
Case Number				1.1		3.0	1.1		3.0			11.0			10.0
Phase Duration	i, S			9.2		75.7	11.9	9	78.3			12.2			11.8
Change Period	, (Y+R	c), S		6.5		6.2	6.5		6.2			6.0			6.0
Max Allow Head	dway (/	MAH), s		4.0		5.0	4.0		5.0			4.2			4.1
Queue Clearan	ce Time	e (g s), s		2.4		17.4	3.6		30.1			6.4			4.7
Green Extension	n Time	(ge), s		0.0		44.8	0.2		42.0			0.3			0.4
Phase Call Pro	bability			0.45	5	1.00	0.90)	1.00			0.93			0.97
Max Out Proba	bility			0.00		0.25	0.00)	0.30			0.00			0.00
Movement Gro	up Res	sults			EB			WE	3		NB			SB	
Approach Move	ement			L	Т	R	L	Т	R	L	Т	R	L	Т	R
Assigned Move	ment			5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow I	Rate (v), veh/h		20	939	55	75	1459	9 193		20	67	86	30	
		ow Rate (s), veh/h/l	n	1792	1756	1594	1792	1756	6 1594		1802	1594	1740	1683	
Queue Service	Time (g ₃), s		0.4	15.4	1.3	1.6	28.1	1 4.6		1.2	4.4	2.7	1.9	
Cycle Queue C	learanc	e Time (<i>g ₀</i>), s		0.4	15.4	1.3	1.6	28.1	1 4.6		1.2	4.4	2.7	1.9	
Green Ratio (g	/C)			0.65	0.62	0.68	0.67	0.65	0.70		0.06	0.10	0.05	0.05	
Capacity (c), v	eh/h			247	2186	1081	443	2270	0 1114		100	166	182	88	
Volume-to-Capa	acity Ra	atio (X)		0.079	0.430	0.051	0.169	0.64	2 0.173		0.195	0.402	0.474	0.339	
Available Capa	city (c a), veh/h		684	3459	1659	837	3459	9 1653		629	634	1869	904	
Back of Queue	(Q), ve	eh/In (50 th percenti	le)	0.2	5.3	0.5	0.5	9.4	1.7		0.5	1.8	1.2	0.8	
		RQ) (50 th percent		0.02	0.17	0.07	0.08	0.59			0.09	0.29	0.15	0.05	
Uniform Delay	(d 1), s	/veh		10.6	10.9	6.0	7.5	11.9	5.8		50.4	46.8	51.4	51.1	
Incremental De	lay (d 2), s/veh		0.1	0.2	0.0	0.2	0.4	0.1		0.9	1.6	1.9	2.3	
Initial Queue De	elay (d	з), s/veh		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		10.7	11.1	6.0	7.7	12.4	5.9		51.3	48.3	53.3	53.3	
Level of Service	e (LOS)			В	В	Α	Α	В	А		D	D	D	D	
Approach Delay				10.8	3	В	11.4	1	В	49.	0	D	53.3	3	D
Intersection De	lay, s/ve	eh / LOS				14	1.0						В		
Multim 1 - 1 - 2	le -				ED			14/5			NID			0.0	
Multimodal Re		11.00		2.0	EB	D	2.4	WE		2.0	NB		2.0	SB	
Pedestrian LOS				2.2	-	В	2.4	-	В	3.0	-	C	3.0	-	C
Bicycle LOS So	ore / LC	75		1.3		Α	1.9		Α	0.6)	Α	0.7		Α

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General Inforn	nation							Ti	nterse	ction Inf	ormatic	on	Į.	47441	
Agency		CDM Smith							Duration	n, h	0.25			411	
Analyst		DBZ		Analys	sis Date	Jun 1	5, 2016		Area Ty	pe	Other	r	Δ		٠.
Jurisdiction				Time F	eriod	AM P	eak		PHF		0.87		*	₩¥F	=
Urban Street		KY 22		Analys	sis Yea	r 2019	No Build	i	Analysis	Period	1> 7:	00			-
Intersection		Avish Gardens		File N		-	NB.xu							40	
Project Descrip	tion	Cityscape Apts											- B	বাক্স	1
Damand Infam					EB		1	WE			NB			SB	
Demand Inform						T 5		_				Τ.		_	
Approach Move				L 47	T	R	L	T	R	L	T	R	L	T	R
Demand (v), v	/en/n			17	890	48	65	146	3 168	15	2	58	75	9	17
Signal Informa	ation				2	B	J 5	الال	, R	$\overline{}$					I
Cycle, s	127.4	Reference Phase	2	1	P 8	4 5	743		12		_ ₩	∕ ⊐-	4		4
Offset, s	0	Reference Point	End	Green	20	26	04.0	E 0	7.0			1	2	3	
Uncoordinated	Yes	Simult. Gap E/W	On	Yellow	-	0.0	84.3 4.3	5.9 3.6	7.0	-	_	7	}		κŤ
Force Mode	Fixed	Simult. Gap N/S	On	Red	3.0	0.0	1.9	2.4	2.4			5	6	7	Y
Timer Results				EBI	-	EBT	WB	L	WBT	NB	L	NBT	SBI	-	SBT
Assigned Phas	е			5	_	2	1	\perp	6		_	8	_	_	4
Case Number				1.1	_	3.0	1.1	-	3.0	-	-	11.0			10.0
Phase Duration				9.5 6.5	-	90.5	12.1	-	93.0	-		13.0		_	11.9
	nange Period, (Y+R 。), s				_	6.2	6.5	-	6.2			6.0			6.0
Max Allow Hea				4.0	-	4.9	4.0	-	4.9			4.2			4.1
Queue Clearan				2.4	_	19.7	3.6	_	39.3	_		7.0		_	5.1
Green Extension		(ge), s		0.0	-	55.2	0.2	-	47.5	—	_	0.3			0.4
Phase Call Pro				0.50	-	1.00	0.93	-	1.00	-	-	0.95		_	0.98
Max Out Proba	bility			0.00)	0.42	0.00)	0.51			0.00			0.00
Movement Gro	oup Res	sults			EB			WB			NB			SB	
Approach Move				L	Т	R	L	Т	R	L	Т	R	L	Т	R
Assigned Move	ment			5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow I), veh/h		20	1023	55	75	1682	193		20	67	86	30	\vdash
		ow Rate (s), veh/h/l	ln	1792	1756	1594	1792	1756	1594		1802	1594	1740	1683	
Queue Service				0.4	17.7	1.3	1.6	37.3	4.8		1.3	5.0	3.1	2.2	
		e Time (g o), s		0.4	17.7	1.3	1.6	37.3	4.8		1.3	5.0	3.1	2.2	
Green Ratio (g				0.69	0.66	0.72	0.71	0.68	0.73		0.05	0.10	0.05	0.05	
Capacity (c), v				209	2323	1142	425	2394	1161		98	157	161	78	
Volume-to-Cap		atio (X)		0.093	0.440	0.048	0.176	0.702	0.166		0.198	0.425	0.535	0.383	
		/In (50 th percentile)	4	156.9	12.3	14	323.9	43.4		15.6	51.7	35.2	24.8	
Back of Queue	(Q), ve	eh/ln (50 th percent	ile)	0.2	6.1	0.5	0.6	12.7	1.7		0.6	2.0	1.4	1.0	
		RQ) (50 th percen		0.02	0.20	0.07	0.08	0.79	0.25		0.10	0.34	0.18	0.06	
Uniform Delay				12.0	10.3	5.3	7.2	12.4	5.4		57.6	54.1	59.4	59.0	
Incremental De				0.2	0.2	0.0	0.2	0.7	0.1		1.0	1.8	2.7	3.1	
Initial Queue D				0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	
Control Delay (12.2	10.5	5.3	7.4	13.1	5.5		58.6	55.9	62.2	62.1	
Level of Service				В	В	Α	Α	В	Α		E	Е	Е	Е	
Approach Delay				10.3	3	В	12.1		В	56.	5	Е	62.1	î	E
Intersection De						14	1.4						В		
Multimodal Re					EB			WB			NB			SB	
Pedestrian LOS				2.2		В	2.4		В	3.0		С	3.0	-	С
Bicycle LOS So	ore / LC	OS		1.4		Α	2.1		В	0.6		Α	0.7		Α

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		HCS 2	010 S	ignali	zed l	nterse	ection	Res	sults S	umm	ary				
General Inform	nation								Intersec	tion Inf	ormatio	on	_ #	41741	la lu
Agency		CDM Smith							Duration,	h	0.25			400	
Analyst		DBZ		Analys	sis Date	Jun 1	5, 2016		Area Typ	е	Other	-	<u>_</u>		• • · ·
Jurisdiction				Time F	Period	AM P	eak		PHF		0.87			v‡e	= =
Urban Street		KY 22		Analys	is Year	2019	Build		Analysis	Period	1> 7:0	00			
Intersection		Avish Gardens		File Na	ame	AM 19	B.xus							47	
Project Descrip	tion	Cityscape Apts											h	বাক্স	P (
Demand Inform	nation				EB			WE	3		NB		1	SB	
Approach Move				L	T T	l R	L	T	R	L	T	R	L	T	R
Demand (v), v				17	900	48	65	146	_	15	2	58	75	9	17
Demand (V), V	CII/II			- 17	300	1 40	00	140	100	10		30	13		17
Signal Informa	tion				2	5	J _ 5		2 R	\top		\blacksquare			$\overline{\bot}$
Cycle, s	127.7	Reference Phase	2	1	P 6	- 2	7#3		12 A		×	\frown	4		₹Þ
Offset, s	0	Reference Point	End	Green	3 0	2.6	84.5	5.9	7.0	0.0		1	¥ 2	3	4
Uncoordinated	Yes	Simult. Gap E/W	On	Yellow	-	0.0	4.3	3.6	3.6	0.0	_	7	→		sta
Force Mode	Fixed	Simult. Gap N/S	On	Red	3.0	0.0	1.9	2.4		0.0		5	6	7	Ys
Timer Results				EBI	-	EBT	WB	L	WBT	NBI	-	NBT	SBI	-	SBT
Assigned Phase	е			5		2	1		6			8			4
Case Number				1.1		3.0	1.1		3.0			11.0			10.0
Phase Duration	, s			9.5		90.7	12.1	1	93.3			13.0			11.9
Change Period,	(Y+R	c), S		6.5		6.2	6.5		6.2			6.0			6.0
Max Allow Head	dway (/	MAH), s		4.0		4.9	4.0		4.9			4.2			4.1
Queue Clearan	ce Time	e (g s), s		2.4		20.0	3.6		39.3			7.0			5.1
Green Extensio	n Time	(ge), s		0.0		55.4	0.2		47.8			0.3			0.4
Phase Call Prol	bability			0.50)	1.00	0.93	3	1.00			0.95			0.98
Max Out Proba	bility			0.00)	0.42	0.00)	0.51			0.00			0.00
Movement Gro	un Res	sults			EB			WB			NB			SB	
Approach Move	_			L	T	R	L	T	R	L	T	R	L	T	R
Assigned Move				5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow F		r) veh/h		20	1034	55	75	1682	_		20	67	86	30	
		ow Rate (s), veh/h/l	n	1792	1756	1594	1792	1756	-		1802	1594	1740	1683	
Queue Service		. , ,,		0.4	18.0	1.3	1.6	37.3	_		1.3	5.0	3.1	2.2	
Cycle Queue C				0.4	18.0	1.3	1.6	37.3			1.3	5.0	3.1	2.2	
Green Ratio (g		(30),0		0.69	0.66	0.72	0.71	0.68	_		0.05	0.10	0.05	0.05	
Capacity (c), v				209	2325	1143	421	2396	-		98	157	161	78	
Volume-to-Capa		atio (X)		0.093	0.445		0.178	_	_		0.199	0.425	0.536	0.384	
		/In (50 th percentile))	4.1	159.4	12.3	14	323.9			15.6	51.8	35.3	24.9	
		eh/ln (50 th percenti		0.2	6.2	0.5	0.6	12.7	$\overline{}$		0.6	2.1	1.4	1.0	
		RQ) (50 th percent		0.02	0.20	0.07	0.08	0.79			0.10	0.34	0.18	0.06	
Uniform Delay (-	12.0	10.3	5.3	7.2	12.4	5.4		57.7	54.2	59.6	59.1	1
Incremental De				0.2	0.2	0.0	0.2	0.7	0.1		1.0	1.8	2.8	3.1	
Initial Queue De				0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	
Control Delay (12.2	10.5	5.3	7.4	13.1	-		58.7	56.0	62.3	62.2	
Level of Service				В	В	Α	Α	В	Α		Е	Е	E	Е	
Approach Delay				10.3	3	В	12.1	i	В	56.6	3	Е	62.3	3	E
Intersection De						14	1.4						В		
Multimodal Re					EB	_		WB			NB			SB	
Pedestrian LOS				2.2	-	В	2.4	_	В	3.0	-	С	3.0	-	С
Bicycle LOS Sc	ore / LC	OS		1.4		Α	2.1		В	0.6		Α	0.7		Α

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								,							
General Inforn	nation								Interse	ction In		on	- 6	1 L	
Agency		CDM Smith						$\overline{}$	Duration		0.25		-		
Analyst		DBZ		Analys	is Date	Mar 1	2016	- 4	Area Ty	ре	Other	-			•
Jurisdiction				Time F	Period	PM Pe	eak		PHF		0.94		*	₩] =	
Urban Street		KY 22		Analys	is Year	2016			Analysis	Period	1> 5:0	00	7		
Intersection		Avish Gardens		File Na	ame	PM 16	3.xus							14	
Project Descrip	tion	Cityscape Apts											ħ	ነ ተ ነ ት ነ	11
Demand Inforr	nation				EB			WE	3		NB			SB	
Approach Move				L	T	R	L	T	R	L	T	R	L	T	F
Demand (v), v				48	1200	90	171	917	_	_	26	262	244	38	4
Demand (V), V	CII/II			40	1200	30	17.1	311	300	01	20	202	277	30	
Signal Informa	tion				2	2	_ 5		y R	\top					I
Cycle, s	164.8	Reference Phase	2	1	P 6	- 2	7#3 2		12		×		4		4
Offset, s	0	Reference Point	End	Green	5.4	5.0	84.6	15.	[[[]] 5 29.	6 0.0		1	¥ 2	3	
Uncoordinated	Yes	Simult. Gap E/W	On	Yellow		0.0	4.3	3.6	3.6		_	7	}		K.
Force Mode	Fixed	Simult. Gap N/S	On	Red	3.0	0.0	1.9	2.4	2.4			5	6	7	
Timer Results				EBI	-	EBT	WB	L	WBT	NB	L	NBT	SBL	-	SBT
Assigned Phase	е			5		2	1		6			8			4
Case Number				1.1		3.0	1.1		3.0			11.0			10.0
Phase Duration	i, S			11.9) !	90.8	16.9	<u> </u>	95.8			35.6			21.5
Change Period	Change Period, (Y+R o), s					6.2	6.5		6.2			6.0			6.0
Max Allow Head	dway (I	MAH), s		4.0		5.0	4.0		5.0			4.2			4.0
Queue Clearan	ce Time	e (gs), s		4.2		47.8	9.8		30.9			28.5			14.1
Green Extension	n Time	(ge), s		0.1		36.7	0.5		41.5			1.0			1.4
Phase Call Pro	bability			0.90)	1.00	1.00)	1.00			1.00			1.00
Max Out Proba	bility			0.00)	0.41	0.00)	0.31			0.05			0.00
		- 14 -			ED			WD			NID			OD	
Movement Gro	_	suits			EB	В		WB	T D		NB T	D	.	SB	T -
Approach Move					T	R	L	T 6	R	L	_	R	L	T 4	F
Assigned Move		\ 1.4			2	12	1		16	3	8	18	_	-	14
Adjusted Flow I		••		51	1277	96	182	976	324		93	279	260	89	-
		ow Rate (s), veh/h/l	n	1792	1756	1594	1792	1756	-		1817	1594	1740	1712	-
Queue Service				2.2	45.8	3.2	7.8	28.9			7.3	26.5	12.1	8.2	\vdash
Cycle Queue C		e nme (g c), s		2.2	45.8	3.2	7.8	28.9	-		7.3	26.5	12.1	8.2	-
Green Ratio (g				0.55	0.51	0.69	0.58	0.54	-		0.18	0.24	0.09	0.09	-
Capacity (c), v		£- / W)		309	1804	1105	259	1910	_	-	326	387	327	161	₩
Volume-to-Capa				0.165 576	0.708	0.087	0.702 472	0.511 2342		-	0.283	0.720 477	0.794 1265	0.555 623	\vdash
Available Capa			ila)						-			-			-
		eh/ln (95 th percent		1.7	26.2	3.5	6.1	17.4			6.1	16.4	9.4	6.7	-
		RQ) (95 th percent	iiie)	0.17	0.85	0.50	0.89	1.09			1.00	2.70	1.18	0.42	-
Uniform Delay				19.7	30.7	8.3	27.4	23.8	$\overline{}$		_	57.3	73.2	71.4	-
Incremental De				0.2	0.9	0.0	3.4	0.3	0.3		0.5	4.0	4.4	3.0	-
Initial Queue De				0.0 19.9	0.0 31.6	0.0 8.3	0.0 30.9	0.0 24.1	13.8		0.0 59.0	0.0 61.4	77.6	74.4	-
Control Delay (19.9 B	31.6 C	-	30.9 C	24.1 C	13.8 B		59.0 E	61.4 E	77.6 E	74.4 E	-
Level of Service Approach Delay						C	-			60			_		_
				29.6	'		22.7		С	60.	0	Е	76.8	,	Е
Intersection De	ıay, S/VE	ai / LOS				34	F.O						С		
Multimodal Re	sults				EB			WB			NB			SB	
Pedestrian LOS		/LOS		2.3		В	2.4		В	3.0		С	3.0	_	С
i oucoulan LUc	COUC	, 200		2.3	_		2.4	_		J 5.0		~	3.0	\rightarrow	

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		HCS 2	010 S	ignali	ized I	nters	ectior	ı Res	ults S	umm	ary				
								1.						14 A 4 1	KTE
General Inforn	nation	T						\rightarrow	Intersec		_	on	- i	100	× 14
Agency		CDM Smith				1.		\rightarrow	Duration,		0.25				
Analyst		DBZ		_		Jun 1		$\overline{}$	Area Typ	e	Other	-			-
Jurisdiction				Time F		AM P		-	PHF		0.87			w‡r	· ÷
Urban Street		KY 22		Analys	sis Year	r 2019	Build	/	Analysis	Period	1> 7:0	00	V 5		
Intersection		Avish Gardens		File N	ame	AM 19	9 B.xus							11	
Project Descrip	tion	Cityscape Apts											1	MITT	1 1
							,			,			_		
Demand Infor					EB			WE	_	-	NB			SB	
Approach Move				L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), v	reh/h			17	900	48	65	146	3 168	15	2	58	75	9	17
Signal Informa	tion				12	1 5			_	_					
Cycle, s	127.7	Reference Phase	2	1	7 /	- 3	7.2		2 6		~		A	,	4
Offset, s	0	Reference Point	End		7	1 7	ı S	100	Tr'				Y 2	3	
Uncoordinated		Simult. Gap E/W	On	Green		2.6	84.5	5.9	7.0	0.0			A		
Force Mode	_		On	Yellow Red	3.5	0.0	1.9	3.6 2.4	3.6 2.4	0.0		^ [Y	7	Ψ
roice Mode	Fixed	Simult. Gap N/S	On	reu	J.U	10.0	1.8	2.4	2.4	0.0		3	6		
Timer Results				EBI		EBT	WB	L	WBT	NBI		NBT	SBI		SBT
Assigned Phas	e			5		2	1		6	- 115		8			4
Case Number				1.1		3.0	1.1		3.0			11.0		_	10.0
Phase Duration	1 S			9.5	-	90.7	12.	-	93.3		-	13.0		_	11.9
Change Period		a) s		6.5	-	6.2	6.5	-	6.2		-	6.0		_	6.0
Max Allow Hea		• • • • • • • • • • • • • • • • • • • •		4.0	$\overline{}$	4.9	4.0	-	4.9		_	4.2	_	_	4.1
Queue Clearan				2.4	-	20.0	3.6	-	39.3	_	_	7.0	_	_	5.1
Green Extension				0.0	-	55.4	0.2	_	47.8		_	0.3		_	0.4
Phase Call Pro		(ye), 3		0.50	-	1.00	0.93	-	1.00			0.95		_	0.98
Max Out Proba				0.00	-	0.42	0.00	_	0.51		-	0.00		_	0.00
max out robu	Z.iiity			0.00		0.12	0.00		0.01			0.00			
Movement Gro	oup Res	sults			EB			WB			NB			SB	
Approach Move	ement			L	T	R	L	T	R	L	Т	R	L	T	R
Assigned Move	ment			5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow	Rate (v), veh/h		20	1034	55	75	1682	193		20	67	86	30	
Adjusted Satura	ation Flo	ow Rate (s), veh/h/l	n	1792	1756	1594	1792	1756	1594		1802	1594	1740	1683	
Queue Service	Time (g	g ₃), s		0.4	18.0	1.3	1.6	37.3	4.8		1.3	5.0	3.1	2.2	
Cycle Queue C	learanc	e Time (<i>g</i> ℴ), s		0.4	18.0	1.3	1.6	37.3	4.8		1.3	5.0	3.1	2.2	
Green Ratio (g	/C)			0.69	0.66	0.72	0.71	0.68	0.73		0.05	0.10	0.05	0.05	
Capacity (c), v	/eh/h			209	2325	1143	421	2396	1161		98	157	161	78	
Volume-to-Cap	acity Ra	atio (X)		0.093	0.445	0.048	0.178	0.702	0.166		0.199	0.425	0.536	0.384	
Back of Queue	(Q), ft	/In (50 th percentile)		4.1	159.4	12.3	14	323.9	43.4		15.6	51.8	35.3	24.9	
Back of Queue	(Q), ve	eh/In (50 th percenti	le)	0.2	6.2	0.5	0.6	12.7	1.7		0.6	2.1	1.4	1.0	
Queue Storage	Ratio (RQ) (50 th percent	ile)	0.02	0.20	0.07	0.08	0.79	0.25		0.10	0.34	0.18	0.06	
Uniform Delay	(d 1), s	/veh		12.0	10.3	5.3	7.2	12.4	5.4		57.7	54.2	59.6	59.1	
Incremental De	lay (d 2), s/veh		0.2	0.2	0.0	0.2	0.7	0.1		1.0	1.8	2.8	3.1	
Initial Queue D	elay (d	з), s/veh		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		12.2	10.5	5.3	7.4	13.1	5.5		58.7	56.0	62.3	62.2	
Level of Service	e (LOS)			В	В	Α	Α	В	Α		Е	Е	Е	Е	
Approach Dela	y, s/veh	/ LOS		10.3	3	В	12.1	1	В	56.6	3	E	62.3	3	E
Intersection De	lay, s/ve	eh / LOS				1-	4.4						В		
Multimodal Re					EB			WB			NB			SB	
Pedestrian LOS				2.2	-	В	2.4	_	В	3.0	-	С	3.0	-	С
Bicycle LOS So	ore / LC	OS		1.4		Α	2.1		В	0.6		Α	0.7		Α

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General Inform	nation	lonuo :						$\overline{}$	ntersect		_	n	- i	111	
Agency		CDM Smith		۱ <u>.</u> .		Tr	F 0010	$\overline{}$	Duration,		0.25				
Analyst		DBZ		-		Jun 1	<u> </u>	\rightarrow	Area Typ	e	Other				÷
Jurisdiction				Time F		PM P		-	PHF		0.94				÷
Urban Street		KY 22		_		2019		1	Analysis	Period	1> 5:0	00	7		
Intersection		Avish Gardens		File N	ame	PM 19	B.xus							া	
Project Descrip	tion	Cityscape Apts												4 1 4 7 1	rin
Demand Infor	mation				EB			WB		T	NB			SB	
Approach Mov				L	T	l R	L	T	R	L	T	R	L	T	R
Demand (v), v				48	1336	-	171	973		61	26	262	244	38	46
Demand (V), V	ren/n		_	40	1330	90	171	9/3	303	01	20	202	244	30	40
Signal Informa	ation				2	1 8		JIL		$\overline{}$					т
Cycle, s	178.8	Reference Phase	2	1	7 6	- 2			. ~		×	<u> </u>	a		Φ.
Offset, s	0	Reference Point	End		7	7	ı Si	20	IT'				2	3	
Uncoordinated		Simult. Gap E/W	On	Green		5.2 0.0	95.1	16.5	31.8 3.6	0.0		,	}		-4
Force Mode	Fixed	Simult. Gap N/S	On	Yellow Red	3.0	0.0	1.9	3.6 2.4	2.4	0.0		5	6	7	Y
. 5.00000		Zandia Sup 14/5	311						-						
Timer Results				EBI	$\overline{}$	EBT	WB	L	WBT	NBI		NBT	SBI		SBT
Assigned Phas				5		2	1		6			8			4
Case Number				1.1	\rightarrow	3.0	1.1		3.0			11.0			10.0
Phase Duration	1.5			12.0	-	101.3	17.2	-	106.5		-	37.8		-	22.5
Change Period		c) S		6.5	-	6.2	6.5	-	6.2			6.0			6.0
Max Allow Hea		••		4.0	$\overline{}$	5.0	4.0	-	5.0		_	4.2		_	4.0
Queue Clearar				4.3	-	59.0	10.2	-	34.9			30.9			15.1
Green Extension				0.1	-	36.0	0.5	_	46.1			0.9			1.4
Phase Call Pro		(9-7, 5		0.92	-	1.00	1.00	_	1.00		-	1.00			1.00
Max Out Proba				0.00	-	0.58	0.00	-	0.44		-	0.16		-	0.00
max out robb	ty			0.00		0.00	0.00		5			0.10			0.00
Movement Gre	oup Res	ults			EB			WB			NB			SB	
Approach Mov	ement			L	Т	R	L	Т	R	L	Т	R	L	Т	R
Assigned Move	ement			5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow	Rate (v), veh/h		51	1421	96	182	1035	324		93	279	260	89	
Adjusted Satur	ation Flo	w Rate (s), veh/h/l	n	1792	1756	1594	1792	1756	1594		1817	1594	1740	1712	
Queue Service	Time (g s), S		2.3	57.0	3.3	8.2	32.9	15.9		7.9	28.9	13.1	8.9	
Cycle Queue C	learanc	e Time (<i>g ₀</i>), s		2.3	57.0	3.3	8.2	32.9	15.9		7.9	28.9	13.1	8.9	
Green Ratio (g	/C)			0.56	0.53	0.71	0.60	0.56	0.65		0.18	0.24	0.09	0.09	
Capacity (c),	veh/h			296	1867	1131	228	1969	1041		324	380	321	158	
Volume-to-Cap	acity Ra	itio (X)		0.172	0.761	0.085	0.797	0.526	0.312		0.286	0.734	0.808	0.565	
Back of Queue	(Q), ft	In (95 th percentile))	44.3	819	91.7	204.2	499.8	302.7		167	450	253.8	183.9	
Back of Queue	(Q), ve	eh/ln (95 th percenti	le)	1.8	32.0	3.6	8.1	19.5	12.0		6.6	17.9	10.1	7.3	
		RQ) (95 th percent		0.18	1.04	0.52	1.17	1.22	1.73		1.09	2.94	1.27	0.46	
Uniform Delay	(d 1), s	/veh		20.3	33.0	8.0	33.5	24.5	13.5		63.7	63.0	79.7	77.8	
Incremental De	lay (d 2), s/veh		0.3	1.6	0.0	6.3	0.3	0.2		0.5	5.3	4.8	3.1	
Initial Queue D	elay (d	з), s/veh		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	
Control Delay (20.6	34.6	8.1	39.8	24.8	13.8		64.2	68.2	84.5	80.9	
Level of Servic	e (LOS)			С	С	Α	D	С	В		Е	Е	F	F	
Approach Dela				32.5	5	С	24.3	3	С	67.2	2	Е	83.6	3	F
Intersection De	lay, s/ve	h / LOS				37	7.2						D		
	- Ic				F.5.			14.5			NE			65	
	e i ilée				EB			WB			NB			SB	
Multimodal Re Pedestrian LOS				2.3		В	2.4		В	3.0		С	3.0		С

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