

2020 Left-Turn Prohibition  
1: Trailwood Village Dr. & Kingwood Dr.

AM Peak Hour



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	ø2	ø3	ø4	ø7	ø8
Lane Configurations	↑↑		↖	↑↑	↖	↗					
Volume (vph)	727	76	19	2029	140	49					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900					
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	0.95					
Frt	0.986				0.995	0.850					
Flt Protected			0.950		0.954						
Satd. Flow (prot)	3490	0	1770	3539	1768	1504					
Flt Permitted			0.950		0.954						
Satd. Flow (perm)	3490	0	1770	3539	1768	1504					
Right Turn on Red		Yes				Yes					
Satd. Flow (RTOR)	14				1	56					
Link Speed (mph)	40			40	30						
Link Distance (ft)	225			355	1092						
Travel Time (s)	3.8			6.1	24.8						
Lane Group Flow (vph)	1022	0	24	2580	184	56					
Number of Detectors	2		1	2	1	1					
Detector Template	Thru		Left	Thru	Left	Right					
Leading Detector (ft)	100		20	100	20	20					
Trailing Detector (ft)	0		0	0	0	0					
Detector 1 Position(ft)	0		0	0	0	0					
Detector 1 Size(ft)	6		20	6	20	20					
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					
Detector 1 Channel											
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0					
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0					
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0					
Detector 2 Position(ft)	94			94							
Detector 2 Size(ft)	6			6							
Detector 2 Type	Cl+Ex			Cl+Ex							
Detector 2 Channel											
Detector 2 Extend (s)	0.0			0.0							
Turn Type	NA		Prot	NA	NA	Perm					
Protected Phases	2 7		1	6	3 8		2	3	4	7	8
Permitted Phases						3 8					
Minimum Initial (s)			3.0	2.0			10.0	1.0	5.0	1.0	5.0
Minimum Split (s)			10.0	22.0			29.0	14.5	11.0	7.0	11.0
Total Split (s)			12.0	94.3			82.3	31.7	18.0	18.0	31.7
Total Split (%)			8.3%	65.5%			57%	22%	13%	13%	22%
Maximum Green (s)			6.0	88.3			76.3	25.7	12.0	12.0	25.7
Yellow Time (s)			4.0	4.0			4.0	4.0	4.0	4.0	4.0
All-Red Time (s)			2.0	2.0			2.0	2.0	2.0	2.0	2.0
Total Lost Time (s)			6.0	6.0							
Lead/Lag			Lead				Lag				
Lead-Lag Optimize?			Yes				Yes				
Vehicle Extension (s)			3.0	3.0			3.0	3.0	3.0	3.0	3.0
Recall Mode			None	C-Max			C-Max	None	None	None	None
Walk Time (s)				5.0			5.0				
Flash Dont Walk (s)				11.0			11.0				
Pedestrian Calls (#/hr)				0			0				

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AM Peak Hour



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	ø2	ø3	ø4	ø7	ø8
Act Effect Green (s)	95.5		5.9	88.3	25.7	25.7					
Actuated g/C Ratio	0.66		0.04	0.61	0.18	0.18					
v/c Ratio	0.44		0.33	1.19	0.58	0.18					
Control Delay	2.4		79.7	117.7	62.3	13.4					
Queue Delay	0.0		0.0	0.1	1.8	0.0					
Total Delay	2.4		79.7	117.8	64.1	13.4					
LOS	A		E	F	E	B					
Approach Delay	2.4			117.4	52.2						
Approach LOS	A			F	D						

Intersection Summary

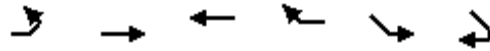
Area Type:	Other
Cycle Length:	144
Actuated Cycle Length:	144
Offset:	0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.20
Intersection Signal Delay:	83.0
Intersection LOS:	F
Intersection Capacity Utilization	85.9%
ICU Level of Service	E
Analysis Period (min)	15

Splits and Phases: 1: Trailwood Village Dr. & Kingwood Dr.

#1 ø1	#1 #53 ø2 (R)	#1 #53 ø3	#53 ø4
12 s	82.3 s	31.7 s	18 s
#1 #53 ø6 (R)		#1 ø8	#1 #53 ø7
94.3 s		31.7 s	18 s

2020 Left-Turn Prohibition  
2: Kingwood Dr.

AM Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑	↑↑			
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	3539	3539	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	3539	3539	0	0	0
Link Speed (mph)		40	40		40	
Link Distance (ft)		799	656		804	
Travel Time (s)		13.6	11.2		13.7	
Lane Group Flow (vph)	0	0	0	0	0	0
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	6.7%
Analysis Period (min)	15
	ICU Level of Service A

2020 Left-Turn Prohibition  
4: Green Oak Dr. & Kingwood Dr.

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	730	62	0	0	0	0	104	25	100	40	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.988							0.850			
Flt Protected										0.950		
Satd. Flow (prot)	1863	3497	0	0	0	0	0	1863	1583	1770	1863	0
Flt Permitted										0.950		
Satd. Flow (perm)	1863	3497	0	0	0	0	0	1863	1583	1770	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11							125			
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		2489			270			515			89	
Travel Time (s)		42.4			4.6			11.7			2.0	
Lane Group Flow (vph)	0	1007	0	0	0	0	0	132	32	127	51	0
Number of Detectors	1	2						2	1	1	2	
Detector Template	Left	Thru						Thru	Right	Left	Thru	
Leading Detector (ft)	20	100						100	20	20	100	
Trailing Detector (ft)	0	0						0	0	0	0	
Detector 1 Position(ft)	0	0						0	0	0	0	
Detector 1 Size(ft)	20	6						6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA						NA	Perm	Prot	NA	
Protected Phases		2						8		1 4	4	
Permitted Phases	2								8			
Minimum Initial (s)	4.0	4.0						5.0	5.0		5.0	
Minimum Split (s)	20.0	20.0						19.0	19.0		11.0	
Total Split (s)	81.0	81.0						19.0	19.0		13.0	
Total Split (%)	61.8%	61.8%						14.5%	14.5%		9.9%	
Maximum Green (s)	75.0	75.0						13.0	13.0		7.0	
Yellow Time (s)	4.0	4.0						4.0	4.0		4.0	
All-Red Time (s)	2.0	2.0						2.0	2.0		2.0	
Total Lost Time (s)	6.0	6.0						6.0	6.0		6.0	
Lead/Lag	Lead	Lead						Lag	Lag		Lead	
Lead-Lag Optimize?	Yes	Yes						Yes	Yes		Yes	
Vehicle Extension (s)	3.0	3.0						3.0	3.0		3.0	
Recall Mode	C-Max	C-Max						None	None		None	

2020 Left-Turn Prohibition  
4: Green Oak Dr. & Kingwood Dr.

AM Peak Hour

Lane Group	ø1	ø6
Lane Configurations		
Volume (vph)		
Ideal Flow (vphpl)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Lane Group Flow (vph)		
Number of Detectors		
Detector Template		
Leading Detector (ft)		
Trailing Detector (ft)		
Detector 1 Position(ft)		
Detector 1 Size(ft)		
Detector 1 Type		
Detector 1 Channel		
Detector 1 Extend (s)		
Detector 1 Queue (s)		
Detector 1 Delay (s)		
Detector 2 Position(ft)		
Detector 2 Size(ft)		
Detector 2 Type		
Detector 2 Channel		
Detector 2 Extend (s)		
Turn Type		
Protected Phases	1	6
Permitted Phases		
Minimum Initial (s)	5.0	4.0
Minimum Split (s)	11.0	10.0
Total Split (s)	18.0	99.0
Total Split (%)	14%	76%
Maximum Green (s)	12.0	93.0
Yellow Time (s)	4.0	4.0
All-Red Time (s)	2.0	2.0
Total Lost Time (s)		
Lead/Lag	Lag	
Lead-Lag Optimize?	Yes	
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	C-Max

2020 Left-Turn Prohibition  
4: Green Oak Dr. & Kingwood Dr.

AM Peak Hour

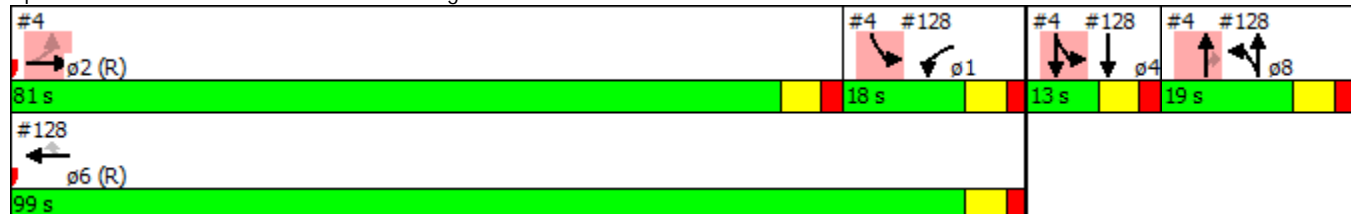


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)	4.0	4.0						6.0	6.0			
Flash Dont Walk (s)	10.0	10.0						7.0	7.0			
Pedestrian Calls (#/hr)	0	0						0	0			
Act Effct Green (s)		75.7						12.3	12.3	25.0	7.0	
Actuated g/C Ratio		0.58						0.09	0.09	0.19	0.05	
v/c Ratio		0.50						0.76	0.12	0.38	0.52	
Control Delay		17.3						84.0	1.0	19.4	37.5	
Queue Delay		0.0						0.0	0.0	0.0	0.0	
Total Delay		17.3						84.0	1.0	19.4	37.5	
LOS		B						F	A	B	D	
Approach Delay		17.3						67.8			24.6	
Approach LOS		B						E			C	

Intersection Summary

Area Type: Other  
 Cycle Length: 131  
 Actuated Cycle Length: 131  
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.93  
 Intersection Signal Delay: 24.4  
 Intersection LOS: C  
 Intersection Capacity Utilization 109.7%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 4: Green Oak Dr. & Kingwood Dr.



Lane Group	ø1	ø6
Walk Time (s)		
Flash Dont Walk (s)		
Pedestrian Calls (#/hr)		
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Intersection Summary		

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2020 Left-Turn Prohibition  
6: Northpark Dr. & Sorters

AM Peak Hour



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	93	120	71	0	362	248
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected	0.950					0.971
Satd. Flow (prot)	1770	1583	1863	0	0	1809
Flt Permitted	0.950					0.971
Satd. Flow (perm)	1770	1583	1863	0	0	1809
Link Speed (mph)	40		30			30
Link Distance (ft)	1488		70			496
Travel Time (s)	25.4		1.6			11.3
Lane Group Flow (vph)	114	147	87	0	0	750
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	56.5%
Analysis Period (min)	15
	ICU Level of Service B



2020 Left-Turn Prohibition  
8: Lake Houston Parkway & Northpark Dr.

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	224	468	246	586	11	495	105	119	10	255	163
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	150		0	150		0
Storage Lanes	1		0	1		0	2		0	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	0.97	0.95	0.95	0.97	0.95	0.95
Frt		0.899			0.997			0.920				0.942
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3182	0	1770	3529	0	3433	3256	0	3433	3334	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3182	0	1770	3529	0	3433	3256	0	3433	3334	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		333			2			146				86
Link Speed (mph)		45			40			30				40
Link Distance (ft)		2785			2651			426				1141
Travel Time (s)		42.2			45.2			9.7				19.4
Lane Group Flow (vph)	47	850	0	302	734	0	608	275	0	12	513	0
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	10.0	22.0		10.0	22.0		10.0	22.0		10.0	22.0	
Total Split (s)	15.0	37.0		39.0	61.0		37.0	58.0		10.0	31.0	
Total Split (%)	10.4%	25.7%		27.1%	42.4%		25.7%	40.3%		6.9%	21.5%	
Maximum Green (s)	9.0	31.0		33.0	55.0		31.0	52.0		4.0	25.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	Max		None	Max	

2020 Left-Turn Prohibition  
 8: Lake Houston Parkway & Northpark Dr.

AM Peak Hour

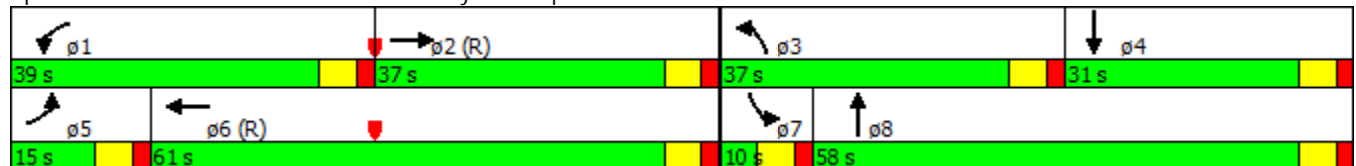


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effect Green (s)	8.1	35.4		28.6	58.2		29.0	58.0		4.0	27.0	
Actuated g/C Ratio	0.06	0.25		0.20	0.40		0.20	0.40		0.03	0.19	
v/c Ratio	0.47	0.90dr		0.86	0.51		0.88	0.20		0.13	0.74	
Control Delay	81.3	38.8		66.0	27.5		70.5	13.8		71.3	53.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	81.3	38.8		66.0	27.5		70.5	13.8		71.3	53.4	
LOS	F	D		E	C		E	B		E	D	
Approach Delay		41.0			38.7			52.8			53.8	
Approach LOS		D			D			D			D	

Intersection Summary

Area Type: Other  
 Cycle Length: 144  
 Actuated Cycle Length: 144  
 Offset: 70 (49%), Referenced to phase 2:EBT and 6:WBT, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.88  
 Intersection Signal Delay: 45.4 Intersection LOS: D  
 Intersection Capacity Utilization 89.3% ICU Level of Service E  
 Analysis Period (min) 15  
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 8: Lake Houston Parkway & Northpark Dr.



2020 Left-Turn Prohibition  
11: Woodland Hills & Northpark Dr.

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	37	537	190	174	1414	79	381	228	140	94	268	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	150		0	150		0
Storage Lanes	1		0	1		0	2		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	0.97	0.95	0.95	1.00	0.95	0.95
Frt		0.961			0.992			0.943			0.947	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3401	0	1770	3511	0	3433	3337	0	1770	3352	0
Flt Permitted	0.062			0.187			0.950			0.950		
Satd. Flow (perm)	115	3401	0	348	3511	0	3433	3337	0	1770	3352	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		43			6			82			60	
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		944			4882			3685			2491	
Travel Time (s)		14.3			74.0			71.8			48.5	
Lane Group Flow (vph)	45	893	0	214	1834	0	468	452	0	115	507	0
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6								
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	10.0	22.0		10.0	22.0		10.0	22.3		10.0	22.3	
Total Split (s)	10.0	67.0		20.0	79.0		25.0	38.0		19.0	32.0	
Total Split (%)	6.8%	45.9%		13.7%	54.1%		17.1%	26.0%		13.0%	21.9%	
Maximum Green (s)	4.0	61.0		14.0	73.0		19.0	32.0		13.0	26.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	Max		None	Max	

2020 Left-Turn Prohibition  
11: Woodland Hills & Northpark Dr.

AM Peak Hour

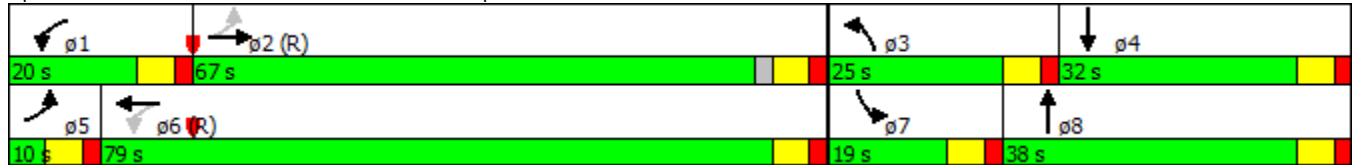


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effect Green (s)	68.1	64.1		83.0	75.0		19.0	32.6		12.4	26.0	
Actuated g/C Ratio	0.47	0.44		0.57	0.51		0.13	0.22		0.08	0.18	
v/c Ratio	0.45	0.59		0.66	1.02		1.05	0.56		0.77	0.78	
Control Delay	30.9	31.5		25.9	60.3		115.8	44.0		96.3	60.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	30.9	31.5		25.9	60.3		115.8	44.0		96.3	60.0	
LOS	C	C		C	E		F	D		F	E	
Approach Delay		31.4			56.7			80.5			66.7	
Approach LOS		C			E			F			E	

Intersection Summary

Area Type: Other  
 Cycle Length: 146  
 Actuated Cycle Length: 146  
 Offset: 52 (36%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.05  
 Intersection Signal Delay: 57.7  
 Intersection LOS: E  
 Intersection Capacity Utilization 96.2%  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 11: Woodland Hills & Northpark Dr.





2020 Left-Turn Prohibition  
 14: US 59 SBFR & Northpark Dr.

AM Peak Hour

Lane Group	ø1	ø3	ø4	ø5	ø6	ø7	ø8	ø11	ø15	ø16	ø21
Lane Configurations											
Volume (vph)											
Ideal Flow (vphpl)											
Storage Length (ft)											
Storage Lanes											
Taper Length (ft)											
Lane Util. Factor											
Frt											
Flt Protected											
Satd. Flow (prot)											
Flt Permitted											
Satd. Flow (perm)											
Right Turn on Red											
Satd. Flow (RTOR)											
Link Speed (mph)											
Link Distance (ft)											
Travel Time (s)											
Lane Group Flow (vph)											
Number of Detectors											
Detector Template											
Leading Detector (ft)											
Trailing Detector (ft)											
Detector 1 Position(ft)											
Detector 1 Size(ft)											
Detector 1 Type											
Detector 1 Channel											
Detector 1 Extend (s)											
Detector 1 Queue (s)											
Detector 1 Delay (s)											
Detector 2 Position(ft)											
Detector 2 Size(ft)											
Detector 2 Type											
Detector 2 Channel											
Detector 2 Extend (s)											
Turn Type											
Protected Phases	1	3	4	5	6	7	8	11	15	16	21
Permitted Phases											
Minimum Initial (s)	3.0	1.0	5.0	2.7	5.0	1.0	1.0	3.0	3.0	4.0	1.0
Minimum Split (s)	21.3	7.0	22.7	8.7	27.0	7.0	8.0	9.0	9.0	20.0	7.0
Total Split (s)	74.0	7.0	30.0	8.7	27.0	7.0	8.0	11.0	30.0	54.0	7.0
Total Split (%)	51%	5%	21%	6%	19%	5%	6%	8%	21%	37%	5%
Maximum Green (s)	68.0	1.0	24.0	2.7	21.0	1.0	2.0	5.0	24.0	48.0	1.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Total Lost Time (s)											
Lead/Lag	Lag	Lead		Lag	Lead	Lead		Lag		Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes		Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	None	None	None	C-Max	None	None	None	None	None	None

2020 Left-Turn Prohibition  
14: US 59 SBFR & Northpark Dr.

AM Peak Hour

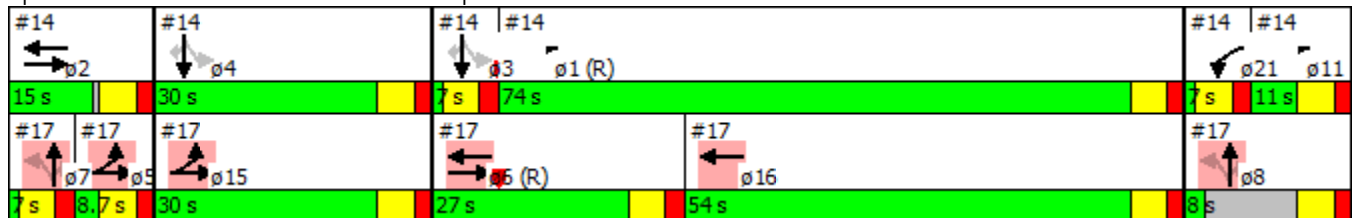


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effect Green (s)		9.7		86.0	88.7					31.0	31.0	31.0
Actuated g/C Ratio		0.07		0.59	0.61					0.21	0.21	0.21
v/c Ratio		1.71dr		1.06	0.19					0.85	0.71	0.28
Control Delay		161.8		51.5	1.1					78.2	57.4	1.4
Queue Delay		0.0		16.0	0.2					0.0	0.0	0.0
Total Delay		161.8		67.5	1.3					78.2	57.4	1.4
LOS		F		E	A					E	E	A
Approach Delay		161.8			57.0						55.6	
Approach LOS		F			E						E	

Intersection Summary

Area Type: Other  
 Cycle Length: 144.7  
 Actuated Cycle Length: 144.7  
 Offset: 110 (76%), Referenced to phase 1:WBTL and 6:, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.20  
 Intersection Signal Delay: 69.6 Intersection LOS: E  
 Intersection Capacity Utilization 81.1% ICU Level of Service D  
 Analysis Period (min) 15  
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 14: US 59 SBFR & Northpark Dr.









2020 Left-Turn Prohibition  
17: US 59 NBFR & Northpark Dr.

AM Peak Hour

Lane Group	ø1	ø2	ø3	ø4	ø5	ø6	ø7	ø8	ø11	ø15	ø16	ø21
Lane Configurations												
Volume (vph)												
Ideal Flow (vphpl)												
Storage Length (ft)												
Storage Lanes												
Taper Length (ft)												
Lane Util. Factor												
Frt												
Flt Protected												
Satd. Flow (prot)												
Flt Permitted												
Satd. Flow (perm)												
Right Turn on Red												
Satd. Flow (RTOR)												
Link Speed (mph)												
Link Distance (ft)												
Travel Time (s)												
Lane Group Flow (vph)												
Number of Detectors												
Detector Template												
Leading Detector (ft)												
Trailing Detector (ft)												
Detector 1 Position(ft)												
Detector 1 Size(ft)												
Detector 1 Type												
Detector 1 Channel												
Detector 1 Extend (s)												
Detector 1 Queue (s)												
Detector 1 Delay (s)												
Detector 2 Position(ft)												
Detector 2 Size(ft)												
Detector 2 Type												
Detector 2 Channel												
Detector 2 Extend (s)												
Turn Type												
Protected Phases	1	2	3	4	5	6	7	8	11	15	16	21
Permitted Phases												
Minimum Initial (s)	3.0	7.0	1.0	5.0	2.7	5.0	1.0	1.0	3.0	3.0	4.0	1.0
Minimum Split (s)	21.3	14.0	7.0	22.7	8.7	27.0	7.0	8.0	9.0	9.0	20.0	7.0
Total Split (s)	74.0	15.0	7.0	30.0	8.7	27.0	7.0	8.0	11.0	30.0	54.0	7.0
Total Split (%)	51%	10%	5%	21%	6%	19%	5%	6%	8%	21%	37%	5%
Maximum Green (s)	68.0	9.0	1.0	24.0	2.7	21.0	1.0	2.0	5.0	24.0	48.0	1.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Total Lost Time (s)												
Lead/Lag	Lag		Lead		Lag	Lead	Lead		Lag		Lag	Lead
Lead-Lag Optimize?	Yes		Yes		Yes	Yes	Yes		Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	None	None	None	None	C-Max	None	None	None	None	None	None

2020 Left-Turn Prohibition  
17: US 59 NBFR & Northpark Dr.

AM Peak Hour

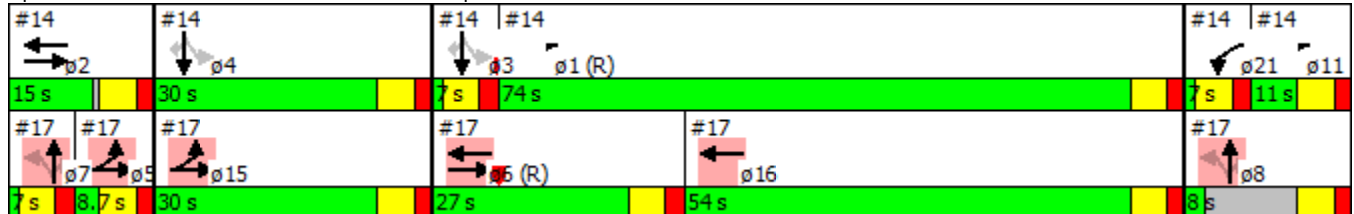


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	32.4	59.7			75.3		19.0	19.0	19.0			
Actuated g/C Ratio	0.22	0.41			0.52		0.13	0.13	0.13			
v/c Ratio	0.11	0.52			0.76		0.40	0.33	0.64			
Control Delay	24.2	1.8			29.3		60.5	59.3	8.3			
Queue Delay	0.0	1.3			0.2		0.0	0.0	0.0			
Total Delay	24.2	3.1			29.5		60.5	59.3	8.3			
LOS	C	A			C		E	E	A			
Approach Delay		5.3			29.5			28.2				
Approach LOS		A			C			C				

Intersection Summary

Area Type: Other  
 Cycle Length: 144.7  
 Actuated Cycle Length: 144.7  
 Offset: 110 (76%), Referenced to phase 1:WBTL and 6:, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.20  
 Intersection Signal Delay: 24.4  
 Intersection LOS: C  
 Intersection Capacity Utilization 81.1%  
 ICU Level of Service D  
 Analysis Period (min) 15


















Splits and Phases: 17: US 59 NBFR & Northpark Dr.





2020 Left-Turn Prohibition  
19: US 59 NBFR & Hamblen

AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								 				
Volume (vph)	3	43	0	0	0	217	0	637	125	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Frt						0.865			0.850			
Flt Protected		0.997										
Satd. Flow (prot)	0	1857	0	0	0	1611	0	3539	1583	0	0	0
Flt Permitted		0.997										
Satd. Flow (perm)	0	1857	0	0	0	1611	0	3539	1583	0	0	0
Link Speed (mph)		35			35			55			55	
Link Distance (ft)		168			123			612			7207	
Travel Time (s)		3.3			2.4			7.6			89.3	
Lane Group Flow (vph)	0	57	0	0	0	267	0	782	154	0	0	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	48.4%
Analysis Period (min)	15
	ICU Level of Service A

2020 Left-Turn Prohibition  
20: Loop 494 & Northpark Dr.

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	862	108	191	1731	72	40	60	146	148	166	174
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	150		150	150		150
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.983			0.994				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3479	0	1770	3518	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3479	0	1770	3518	0	1770	1863	1583	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			5				205			159
Link Speed (mph)		45			45			30				30
Link Distance (ft)		1797			1638			3315				2861
Travel Time (s)		27.2			24.8			75.3				65.0
Lane Group Flow (vph)	49	1192	0	235	2214	0	49	74	179	182	204	214
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7		4
Permitted Phases									8			4
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0		10.0	22.0		10.3	22.3	22.3	10.3	22.3	22.3
Total Split (s)	10.0	64.0		33.0	87.0		12.8	25.0	25.0	22.0	34.2	34.2
Total Split (%)	6.9%	44.4%		22.9%	60.4%		8.9%	17.4%	17.4%	15.3%	23.8%	23.8%
Maximum Green (s)	4.0	58.0		27.0	81.0		6.8	19.0	19.0	16.0	28.2	28.2
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max		None	C-Max		None	Max	Max	None	Max	Max

2020 Left-Turn Prohibition  
20: Loop 494 & Northpark Dr.

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effect Green (s)	4.0	61.8		23.2	81.0		6.6	19.0	19.0	16.0	30.8	30.8
Actuated g/C Ratio	0.03	0.43		0.16	0.56		0.05	0.13	0.13	0.11	0.21	0.21
v/c Ratio	1.00	0.80		0.83	1.12		0.60	0.30	0.46	0.93	0.51	0.46
Control Delay	195.8	40.8		81.8	82.1		96.6	60.2	8.3	110.6	56.5	18.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	195.8	40.8		81.8	82.1		96.6	60.2	8.3	110.6	56.5	18.1
LOS	F	D		F	F		F	E	A	F	E	B
Approach Delay		46.9			82.1			35.4			59.2	
Approach LOS		D			F			D			E	

Intersection Summary

Area Type: Other  
 Cycle Length: 144  
 Actuated Cycle Length: 144  
 Offset: 83 (58%), Referenced to phase 2:EBT and 6:WBT, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.12  
 Intersection Signal Delay: 66.5  
 Intersection LOS: E  
 Intersection Capacity Utilization 93.2%  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 20: Loop 494 & Northpark Dr.



2020 Left-Turn Prohibition  
23: Brookdale & Northpark Dr.

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	55	684	22	7	1255	27	28	16	14	34	42	177
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.995			0.997			0.964			0.895	
Flt Protected	0.950			0.950				0.977			0.993	
Satd. Flow (prot)	1770	3522	0	1770	3529	0	0	3333	0	0	3145	0
Flt Permitted	0.085			0.300				0.727			0.897	
Satd. Flow (perm)	158	3522	0	559	3529	0	0	2480	0	0	2841	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			3			17			82	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		4882			2785			1365			843	
Travel Time (s)		74.0			42.2			31.0			19.2	
Lane Group Flow (vph)	68	867	0	9	1574	0	0	71	0	0	311	0
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	10.0	22.0		10.0	22.0		10.0	22.0		10.0	22.0	
Total Split (s)	12.0	99.0		10.0	95.0		10.0	29.0		10.0	29.0	
Total Split (%)	8.1%	66.9%		6.8%	64.2%		6.8%	19.6%		6.8%	19.6%	
Maximum Green (s)	6.0	93.0		4.0	89.0		4.0	23.0		4.0	23.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	Max		None	Max	



2020 Left-Turn Prohibition  
23: Brookdale & Northpark Dr.

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effect Green (s)	102.2	101.0		96.6	93.4			33.0			33.0	
Actuated g/C Ratio	0.69	0.68		0.65	0.63			0.22			0.22	
v/c Ratio	0.39	0.36		0.02	0.71			0.13			0.45	
Control Delay	13.7	10.7		7.2	20.9			35.5			38.3	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	13.7	10.7		7.2	20.9			35.5			38.3	
LOS	B	B		A	C			D			D	
Approach Delay		10.9			20.8			35.5			38.3	
Approach LOS		B			C			D			D	

Intersection Summary

Area Type: Other  
 Cycle Length: 148  
 Actuated Cycle Length: 148  
 Offset: 41 (28%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.71  
 Intersection Signal Delay: 19.9  
 Intersection LOS: B  
 Intersection Capacity Utilization 75.8%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 23: Brookdale & Northpark Dr.



2020 Left-Turn Prohibition  
26: Northpark Dr. & Mills Branch

AM Peak Hour



Lane Group	WBL	WBR	SBL	SBR	SEL	SER	NEL	NER
Lane Configurations								
Volume (vph)	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt								
Flt Protected								
Satd. Flow (prot)	0	0	0	0	0	0	0	0
Flt Permitted								
Satd. Flow (perm)	0	0	0	0	0	0	0	0
Right Turn on Red	Yes		Yes			Yes		Yes
Satd. Flow (RTOR)								
Link Speed (mph)	30		30		30		40	
Link Distance (ft)	8307		16732		3268		1785	
Travel Time (s)	188.8		380.3		74.3		30.4	
Lane Group Flow (vph)	0	0	0	0	0	0	0	0
Turn Type								
Protected Phases								
Permitted Phases								
Minimum Split (s)								
Total Split (s)								
Total Split (%)								
Maximum Green (s)								
Yellow Time (s)								
All-Red Time (s)								
Total Lost Time (s)								
Lead/Lag								
Lead-Lag Optimize?								
Act Effect Green (s)								
Actuated g/C Ratio								
v/c Ratio								
Control Delay								
Queue Delay								
Total Delay								
LOS								
Approach Delay								
Approach LOS								
<b>Intersection Summary</b>								
Area Type:	Other							
Cycle Length:	3							
Actuated Cycle Length:	3							
Offset:	0 (0%), Referenced to phase 2: and 6:, Start of Green							
Control Type:	Pretimed							
Maximum v/c Ratio:	0.00							
Intersection Signal Delay:	0.0				Intersection LOS: A			
Intersection Capacity Utilization	0.0%				ICU Level of Service A			
Analysis Period (min)	15							

2020 Left-Turn Prohibition  
26: Northpark Dr. & Mills Branch

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AM Peak Hour

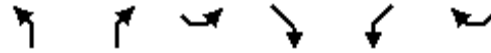
Splits and Phases: 26: Northpark Dr. & Mills Branch

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2020 Left-Turn Prohibition  
 28: Kingwood Dr. & Mills Branch & Kingwood Dr.

AM Peak Hour



Lane Group	NBL	NBR	SEL	SER	SWL	SWR
Lane Configurations						
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.88	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	3278	0	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	3278	0	0	0	0
Link Speed (mph)	40		30		40	
Link Distance (ft)	1387		71		344	
Travel Time (s)	23.6		1.6		5.9	
Lane Group Flow (vph)	0	0	0	0	0	0
Sign Control	Stop		Stop		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	0.0% ICU Level of Service A
Analysis Period (min)	15

2020 Left-Turn Prohibition  
29: Northpark Dr. & Rock Springs

AM Peak Hour



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑		↖	↑↑					↖	↑↑	
Volume (vph)	0	60	216	64	109	0	0	0	0	6	497	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt		0.883									0.979	
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	3125	0	1770	3539	0	0	0	0	1770	3465	0
Flt Permitted				0.950						0.950		
Satd. Flow (perm)	0	3125	0	1770	3539	0	0	0	0	1770	3465	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		265										15
Link Speed (mph)		30			30			40				40
Link Distance (ft)		292			173			576				1785
Travel Time (s)		6.6			3.9			9.8				30.4
Lane Group Flow (vph)	0	339	0	79	134	0	0	0	0	7	708	0
Number of Detectors		2		1	2					1	2	
Detector Template		Thru		Left	Thru					Left	Thru	
Leading Detector (ft)		100		20	100					20	100	
Trailing Detector (ft)		0		0	0					0	0	
Detector 1 Position(ft)		0		0	0					0	0	
Detector 1 Size(ft)		6		20	6					20	6	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Detector 2 Position(ft)		94			94							94
Detector 2 Size(ft)		6			6							6
Detector 2 Type		Cl+Ex			Cl+Ex							Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							0.0
Turn Type		NA		Prot	NA					Prot	NA	
Protected Phases		4		15	8					1	6	
Permitted Phases												
Minimum Initial (s)		5.0			5.0					5.0	4.0	
Minimum Split (s)		22.0			21.0					11.0	18.0	
Total Split (s)		31.0			24.0					15.0	62.0	
Total Split (%)		21.5%			16.7%					10.4%	43.1%	
Maximum Green (s)		25.0			18.0					9.0	56.0	
Yellow Time (s)		4.0			4.0					4.0	4.0	
All-Red Time (s)		2.0			2.0					2.0	2.0	
Total Lost Time (s)		6.0			6.0					6.0	6.0	
Lead/Lag		Lead			Lag					Lag		
Lead-Lag Optimize?		Yes			Yes					Yes		
Vehicle Extension (s)		3.0			3.0					3.0	3.0	
Recall Mode		None			Max					Max	C-Max	
Walk Time (s)		5.0			5.0						5.0	
Flash Dont Walk (s)		11.0			10.0						7.0	
Pedestrian Calls (#/hr)		0			0						0	

2020 Left-Turn Prohibition  
 29: Northpark Dr. & Rock Springs

AM Peak Hour

Lane Group	ø2	ø15
Lane Configurations		
Volume (vph)		
Ideal Flow (vphp)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Lane Group Flow (vph)		
Number of Detectors		
Detector Template		
Leading Detector (ft)		
Trailing Detector (ft)		
Detector 1 Position(ft)		
Detector 1 Size(ft)		
Detector 1 Type		
Detector 1 Channel		
Detector 1 Extend (s)		
Detector 1 Queue (s)		
Detector 1 Delay (s)		
Detector 2 Position(ft)		
Detector 2 Size(ft)		
Detector 2 Type		
Detector 2 Channel		
Detector 2 Extend (s)		
Turn Type		
Protected Phases	2	15
Permitted Phases		
Minimum Initial (s)	4.0	5.0
Minimum Split (s)	18.0	11.0
Total Split (s)	47.0	27.0
Total Split (%)	33%	19%
Maximum Green (s)	41.0	21.0
Yellow Time (s)	4.0	4.0
All-Red Time (s)	2.0	2.0
Total Lost Time (s)		
Lead/Lag	Lead	
Lead-Lag Optimize?	Yes	
Vehicle Extension (s)	3.0	3.0
Recall Mode	C-Max	Max
Walk Time (s)	5.0	
Flash Dont Walk (s)	7.0	
Pedestrian Calls (#/hr)	0	

2020 Left-Turn Prohibition  
 29: Northpark Dr. & Rock Springs

AM Peak Hour

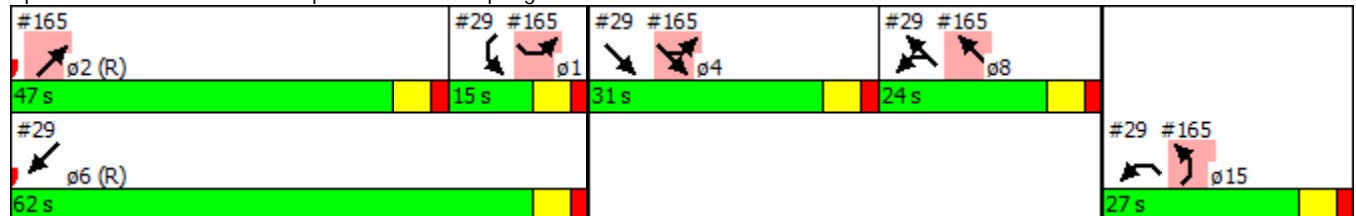


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Act Effect Green (s)		9.9		60.1	33.1					9.0	56.0	
Actuated g/C Ratio		0.07		0.42	0.23					0.06	0.39	
v/c Ratio		0.73		0.11	0.16					0.06	0.52	
Control Delay		25.2		2.7	47.9					65.0	34.7	
Queue Delay		0.0		1.1	1.3					0.0	0.0	
Total Delay		25.2		3.8	49.2					65.0	34.7	
LOS		C		A	D					E	C	
Approach Delay		25.2			32.4						35.0	
Approach LOS		C			C						C	

Intersection Summary

Area Type:	Other
Cycle Length:	144
Actuated Cycle Length:	144
Offset:	114 (79%), Referenced to phase 2:NET and 6:, Start of Green
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.73
Intersection Signal Delay:	31.9
Intersection LOS:	C
Intersection Capacity Utilization	47.3%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 29: Northpark Dr. & Rock Springs



Lane Group	ø2	ø15
Act Effect Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Intersection Summary		

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2020 Left-Turn Prohibition  
35: Russel Palmer & Northpark Dr.

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑						↑	↗		↖	
Volume (vph)	0	900	86	0	0	0	0	126	74	11	66	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	150		150	0		0
Storage Lanes	0		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.987							0.850			
Flt Protected												0.993
Satd. Flow (prot)	0	3493	0	0	0	0	0	1863	1583	0	1850	0
Flt Permitted												0.939
Satd. Flow (perm)	0	3493	0	0	0	0	0	1863	1583	0	1749	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13							91			
Link Speed (mph)		45			45			30				30
Link Distance (ft)		117			2967			1145				106
Travel Time (s)		1.8			45.0			26.0				2.4
Lane Group Flow (vph)	0	1211	0	0	0	0	0	155	91	0	95	0
Number of Detectors		2						2	1	1	2	
Detector Template		Thru						Thru	Right	Left	Thru	
Leading Detector (ft)		100						100	20	20	100	
Trailing Detector (ft)		0						0	0	0	0	
Detector 1 Position(ft)		0						0	0	0	0	
Detector 1 Size(ft)		6						6	20	20	6	
Detector 1 Type		Cl+Ex						Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0						0.0	0.0	0.0	0.0	
Detector 1 Queue (s)		0.0						0.0	0.0	0.0	0.0	
Detector 1 Delay (s)		0.0						0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type		NA						NA	Perm	Perm	NA	
Protected Phases		2						8			4	
Permitted Phases									8	4		
Minimum Initial (s)		15.0						5.0	5.0	5.0	5.0	
Minimum Split (s)		21.3						11.6	11.6	11.3	11.3	
Total Split (s)		95.0						28.0	28.0	28.0	28.0	
Total Split (%)		66.0%						19.4%	19.4%	19.4%	19.4%	
Maximum Green (s)		89.0						22.0	22.0	22.0	22.0	
Yellow Time (s)		4.0						4.0	4.0	4.0	4.0	
All-Red Time (s)		2.0						2.0	2.0	2.0	2.0	
Total Lost Time (s)		6.0						6.0	6.0		6.0	
Lead/Lag		Lag										
Lead-Lag Optimize?		Yes										
Vehicle Extension (s)		3.0						3.0	3.0	3.0	3.0	
Recall Mode		C-Max						Max	Max	None	None	

2020 Left-Turn Prohibition  
 35: Russel Palmer & Northpark Dr.

AM Peak Hour

Lane Group	ø1	ø6
Lane Configurations		
Volume (vph)		
Ideal Flow (vphpl)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Lane Group Flow (vph)		
Number of Detectors		
Detector Template		
Leading Detector (ft)		
Trailing Detector (ft)		
Detector 1 Position(ft)		
Detector 1 Size(ft)		
Detector 1 Type		
Detector 1 Channel		
Detector 1 Extend (s)		
Detector 1 Queue (s)		
Detector 1 Delay (s)		
Detector 2 Position(ft)		
Detector 2 Size(ft)		
Detector 2 Type		
Detector 2 Channel		
Detector 2 Extend (s)		
Turn Type		
Protected Phases	1	6
Permitted Phases		
Minimum Initial (s)	5.0	15.0
Minimum Split (s)	11.3	21.3
Total Split (s)	21.0	116.0
Total Split (%)	15%	81%
Maximum Green (s)	15.0	110.0
Yellow Time (s)	4.0	4.0
All-Red Time (s)	2.0	2.0
Total Lost Time (s)		
Lead/Lag	Lead	
Lead-Lag Optimize?	Yes	
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	C-Max

2020 Left-Turn Prohibition  
 35: Russel Palmer & Northpark Dr.

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)		91.6						22.0	22.0		22.0	
Actuated g/C Ratio		0.64						0.15	0.15		0.15	
v/c Ratio		0.54						0.55	0.29		0.36	
Control Delay		15.8						64.4	12.4		117.3	
Queue Delay		0.0						0.0	0.0		125.3	
Total Delay		15.8						64.4	12.4		242.6	
LOS		B						E	B		F	
Approach Delay		15.8						45.2			242.6	
Approach LOS		B						D			F	

Intersection Summary

Area Type:	Other
Cycle Length:	144
Actuated Cycle Length:	144
Offset:	0 (0%), Referenced to phase 2:EBT and 6:, Start of Green
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.85
Intersection Signal Delay:	34.4
Intersection LOS:	C
Intersection Capacity Utilization	56.0%
ICU Level of Service	B
Analysis Period (min)	15

Splits and Phases: 35: Russel Palmer & Northpark Dr.

#159 ← ϕ1 21 s	#35 → ϕ2 (R) 95 s	#35 ↓ ϕ4 28 s
#159 ← ϕ6 (R) 116 s		#35 #159 ↑ ϕ8 28 s

2020 Left-Turn Prohibition  
35: Russel Palmer & Northpark Dr.

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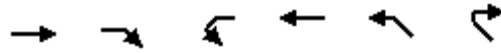
AM Peak Hour

Lane Group	ø1	ø6
Act Effect Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Intersection Summary		

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2020 Left-Turn Prohibition  
36: Northpark Dr.

AM Peak Hour



Lane Group	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations	↑↑			↑↑		
Volume (vph)	1156	0	0	1994	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	3539	0	0	3539	0	0
Flt Permitted						
Satd. Flow (perm)	3539	0	0	3539	0	0
Link Speed (mph)	45			40	45	
Link Distance (ft)	1638			2834	2834	
Travel Time (s)	24.8			48.3	42.9	
Lane Group Flow (vph)	1420	0	0	2449	0	0
Sign Control	Free			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	69.1%
Analysis Period (min)	15
	ICU Level of Service C

2020 Left-Turn Prohibition  
43: Sorters Rd & US 59 SBFR

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑		↖	↑↑						↖↑	↖
Volume (vph)	0	21	183	221	182	0	0	0	0	77	2	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	200		0	0		0	0		150
Storage Lanes	0		1	1		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.866										0.850
Flt Protected				0.950							0.953	
Satd. Flow (prot)	0	4404	0	1770	3539	0	0	0	0	0	3373	1583
Flt Permitted				0.590							0.953	
Satd. Flow (perm)	0	4404	0	1099	3539	0	0	0	0	0	3373	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		225										74
Link Speed (mph)		35			35			55				55
Link Distance (ft)		893			863			983				6715
Travel Time (s)		17.4			16.8			12.2				83.2
Lane Group Flow (vph)	0	251	0	271	224	0	0	0	0	0	97	25
Turn Type		NA		Perm	NA					Perm	NA	Perm
Protected Phases		4			8							6
Permitted Phases				8						6		6
Minimum Split (s)		22.0		22.0	22.0					22.0	22.0	22.0
Total Split (s)		22.0		22.0	22.0					22.0	22.0	22.0
Total Split (%)		50.0%		50.0%	50.0%					50.0%	50.0%	50.0%
Maximum Green (s)		16.0		16.0	16.0					16.0	16.0	16.0
Yellow Time (s)		4.0		4.0	4.0					4.0	4.0	4.0
All-Red Time (s)		2.0		2.0	2.0					2.0	2.0	2.0
Total Lost Time (s)		6.0		6.0	6.0						6.0	6.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0					0	0	0
Act Effect Green (s)		16.0		16.0	16.0						16.0	16.0
Actuated g/C Ratio		0.36		0.36	0.36						0.36	0.36
v/c Ratio		0.14		0.68	0.17						0.08	0.04
Control Delay		2.7		18.7	4.2						3.7	0.3
Queue Delay		0.0		0.0	0.0						0.0	0.0
Total Delay		2.7		18.7	4.2						3.7	0.3
LOS		A		B	A						A	A
Approach Delay		2.7			12.2						3.0	
Approach LOS		A			B						A	

Intersection Summary

Area Type: Other  
 Cycle Length: 44  
 Actuated Cycle Length: 44  
 Offset: 0 (0%), Referenced to phase 2: and 6:SBTL, Start of Green  
 Control Type: Pretimed

2020 Left-Turn Prohibition  
43: Sorters Rd & US 59 SBFR

AM Peak Hour

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 8.1

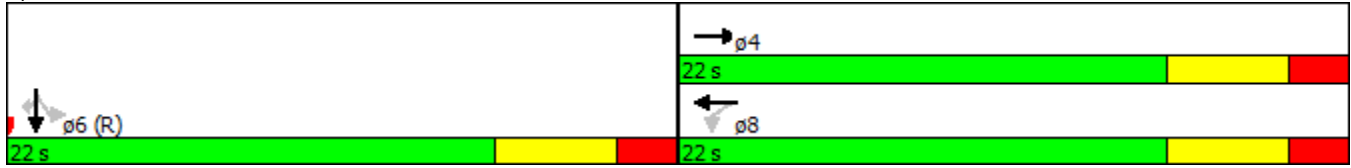
Intersection LOS: A

Intersection Capacity Utilization 38.8%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 43: Sorters Rd & US 59 SBFR



2020 Left-Turn Prohibition  
45: Loop 494 & Sorters Rd

AM Peak Hour



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	61	42	317	492	22	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	150	180			225
Storage Lanes	2	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	0.88	0.97	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	2787	3433	3539	3539	1583
Flt Permitted	0.950		0.739			
Satd. Flow (perm)	3433	2787	2671	3539	3539	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		52				106
Link Speed (mph)	35			45	45	
Link Distance (ft)	863			804	572	
Travel Time (s)	16.8			12.2	8.7	
Lane Group Flow (vph)	75	52	389	604	27	106
Turn Type	NA	Perm	Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases		4	2			6
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	22.0	22.0	22.0	22.0	22.0	22.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	16.0	16.0	16.0	16.0	16.0	16.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effect Green (s)	16.0	16.0	16.0	16.0	16.0	16.0
Actuated g/C Ratio	0.36	0.36	0.36	0.36	0.36	0.36
v/c Ratio	0.06	0.05	0.40	0.47	0.02	0.16
Control Delay	5.6	2.3	12.0	12.2	9.1	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.6	2.3	12.0	12.2	9.1	3.5
LOS	A	A	B	B	A	A
Approach Delay	4.3			12.1	4.6	
Approach LOS	A			B	A	

Intersection Summary

Area Type: Other  
 Cycle Length: 44  
 Actuated Cycle Length: 44  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Control Type: Pretimed



2020 Left-Turn Prohibition  
45: Loop 494 & Sorters Rd

AM Peak Hour

Maximum v/c Ratio: 0.47

Intersection Signal Delay: 10.5

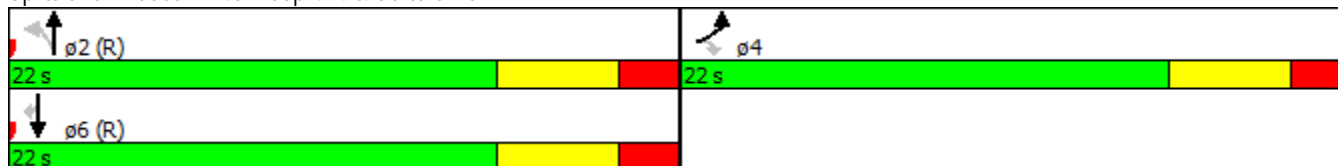
Intersection LOS: B

Intersection Capacity Utilization 30.2%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 45: Loop 494 & Sorters Rd



2020 Left-Turn Prohibition  
49: Hamblen & Laurel Springs

AM Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	36	136	422	18	17	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.994		0.881	
Flt Protected		0.990			0.994	
Satd. Flow (prot)	0	1844	1852	0	1631	0
Flt Permitted		0.990			0.994	
Satd. Flow (perm)	0	1844	1852	0	1631	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		1799	1596		734	
Travel Time (s)		35.0	31.1		16.7	
Lane Group Flow (vph)	0	211	540	0	173	0
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	56.4%
Analysis Period (min)	15
	ICU Level of Service B

2020 Left-Turn Prohibition  
53: Kingwood Dr. & Woodland Grove Dr.

AM Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	ø1	ø3	ø4	ø6	ø7	ø8
Lane Configurations												
Volume (vph)	0	691	1976	46	20	239						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900						
Lane Util. Factor	1.00	0.95	0.95	0.95	0.97	0.95						
Frt			0.997		0.861							
Flt Protected					0.996							
Satd. Flow (prot)	1863	3539	3529	0	3099	0						
Flt Permitted					0.996							
Satd. Flow (perm)	1863	3539	3529	0	3099	0						
Right Turn on Red				Yes		Yes						
Satd. Flow (RTOR)			7		18							
Link Speed (mph)		40	40		30							
Link Distance (ft)		315	225		626							
Travel Time (s)		5.4	3.8		14.2							
Lane Group Flow (vph)	0	879	2571	0	329	0						
Number of Detectors	1	2	2		1							
Detector Template	Left	Thru	Thru		Left							
Leading Detector (ft)	20	100	100		20							
Trailing Detector (ft)	0	0	0		0							
Detector 1 Position(ft)	0	0	0		0							
Detector 1 Size(ft)	20	6	6		20							
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex							
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0							
Detector 1 Queue (s)	0.0	0.0	0.0		0.0							
Detector 1 Delay (s)	0.0	0.0	0.0		0.0							
Detector 2 Position(ft)		94	94									
Detector 2 Size(ft)		6	6									
Detector 2 Type		Cl+Ex	Cl+Ex									
Detector 2 Channel												
Detector 2 Extend (s)		0.0	0.0									
Turn Type	Perm	NA	NA		NA							
Protected Phases		2	3 6		4 7		1	3	4	6	7	8
Permitted Phases	2											
Minimum Initial (s)	10.0	10.0					3.0	1.0	5.0	2.0	1.0	5.0
Minimum Split (s)	29.0	29.0					10.0	14.5	11.0	22.0	7.0	11.0
Total Split (s)	82.3	82.3					12.0	31.7	18.0	94.3	18.0	31.7
Total Split (%)	57.2%	57.2%					8%	22%	13%	65%	13%	22%
Maximum Green (s)	76.3	76.3					6.0	25.7	12.0	88.3	12.0	25.7
Yellow Time (s)	4.0	4.0					4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0					2.0	2.0	2.0	2.0	2.0	2.0
Total Lost Time (s)	6.0	6.0										
Lead/Lag	Lag	Lag					Lead					
Lead-Lag Optimize?	Yes	Yes					Yes					
Vehicle Extension (s)	3.0	3.0					3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max					None	None	None	C-Max	None	None
Walk Time (s)	5.0	5.0								5.0		
Flash Dont Walk (s)	11.0	11.0								11.0		
Pedestrian Calls (#/hr)	0	0								0		

2020 Left-Turn Prohibition  
53: Kingwood Dr. & Woodland Grove Dr.

AM Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	ø1	ø3	ø4	ø6	ø7	ø8
Act Effect Green (s)		81.1	120.0		12.0							
Actuated g/C Ratio		0.56	0.83		0.08							
v/c Ratio		0.44	0.87		2.03dr							
Control Delay		19.9	5.9		170.7							
Queue Delay		0.0	43.6		0.0							
Total Delay		19.9	49.5		170.7							
LOS		B	D		F							
Approach Delay		19.9	49.5		170.7							
Approach LOS		B	D		F							

Intersection Summary

Area Type: Other  
 Cycle Length: 144  
 Actuated Cycle Length: 144  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.20  
 Intersection Signal Delay: 53.1  
 Intersection Capacity Utilization 85.2%  
 Analysis Period (min) 15  
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 53: Kingwood Dr. & Woodland Grove Dr.

#1 ø1	#1 #53 ø2 (R)	#1 #53 ø3	#53 ø4
12 s	82.3 s	31.7 s	18 s
#1 #53 ø6 (R)	#1 ø8	#1 #53 ø7	
94.3 s	31.7 s	18 s	

2020 Left-Turn Prohibition  
54: Woodland Hills & Hamblen

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	0	0	4	0	0	0	6	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865							
Flt Protected											0.950	
Satd. Flow (prot)	1863	0	0	0	1611	0	0	1863	0	0	1770	0
Flt Permitted											0.950	
Satd. Flow (perm)	1863	0	0	0	1611	0	0	1863	0	0	1770	0
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		6657			997			912			3265	
Travel Time (s)		129.7			19.4			17.8			63.6	
Lane Group Flow (vph)	0	0	0	0	5	0	0	0	0	0	7	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.3%
Analysis Period (min)	15
	ICU Level of Service A

2020 Left-Turn Prohibition  
57: Redbud & Hamblen

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	5	28	2	6	2	14	77	1	0	89	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.947			0.975			0.999			0.998	
Flt Protected		0.974			0.991			0.993				
Satd. Flow (prot)	0	1718	0	0	1800	0	0	1848	0	0	1859	0
Flt Permitted		0.974			0.991			0.993				
Satd. Flow (perm)	0	1718	0	0	1800	0	0	1848	0	0	1859	0
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		753			6657			361			271	
Travel Time (s)		14.7			129.7			8.2			6.2	
Lane Group Flow (vph)	0	87	0	0	11	0	0	113	0	0	111	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	29.3%
Analysis Period (min)	15
	ICU Level of Service A

2020 Left-Turn Prohibition  
60: Forest Cove & Hamblen

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	62	62	5	1	96	3	12	7	2	3	19	242
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.995			0.996			0.990			0.876	
Flt Protected		0.977						0.972			0.999	
Satd. Flow (prot)	0	1811	0	0	1855	0	0	1792	0	0	1630	0
Flt Permitted		0.977						0.972			0.999	
Satd. Flow (perm)	0	1811	0	0	1855	0	0	1792	0	0	1630	0
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		1966			1019			472			603	
Travel Time (s)		38.3			19.9			10.7			13.7	
Lane Group Flow (vph)	0	158	0	0	123	0	0	26	0	0	324	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	39.4%
Analysis Period (min)	15
	ICU Level of Service A

2020 Left-Turn Prohibition  
64: Woodland Hills & Kingwood Dr.

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	669	36	143	1353	221	43	103	112	84	126	416
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	150		0	150		0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.979				0.850			0.850
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	1863	3511	0	1770	3465	0	1770	1863	1583	1770	1863	1583
Flt Permitted				0.262			0.607			0.650		
Satd. Flow (perm)	1863	3511	0	488	3465	0	1131	1863	1583	1211	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			22				142			23
Link Speed (mph)		40			40			35				35
Link Distance (ft)		266			1473			2549				2207
Travel Time (s)		4.5			25.1			49.7				43.0
Lane Group Flow (vph)	0	897	0	182	2002	0	55	131	142	107	160	529
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2			6			8				4
Permitted Phases	2			6			8		8	4		4
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	91.0	91.0		91.0	91.0		53.0	53.0	53.0	53.0	53.0	53.0
Total Split (%)	63.2%	63.2%		63.2%	63.2%		36.8%	36.8%	36.8%	36.8%	36.8%	36.8%
Maximum Green (s)	85.0	85.0		85.0	85.0		47.0	47.0	47.0	47.0	47.0	47.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effect Green (s)		85.0		85.0	85.0		47.0	47.0	47.0	47.0	47.0	47.0
Actuated g/C Ratio		0.59		0.59	0.59		0.33	0.33	0.33	0.33	0.33	0.33
v/c Ratio		0.43		0.63	0.97		0.15	0.22	0.23	0.27	0.26	0.99
Control Delay		16.9		31.4	43.0		35.8	36.4	6.0	38.2	37.2	83.6
Queue Delay		0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		16.9		31.4	43.0		35.8	36.4	6.0	38.2	37.2	83.6
LOS		B		C	D		D	D	A	D	D	F
Approach Delay		16.9			42.1			23.1				68.2
Approach LOS		B			D			C				E

Intersection Summary

Area Type: Other  
 Cycle Length: 144  
 Actuated Cycle Length: 144  
 Offset: 39 (27%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Control Type: Pretimed



2020 Left-Turn Prohibition  
64: Woodland Hills & Kingwood Dr.

AM Peak Hour

Maximum v/c Ratio: 0.99

Intersection Signal Delay: 40.2

Intersection LOS: D

Intersection Capacity Utilization 100.5%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 64: Woodland Hills & Kingwood Dr.



2020 Left-Turn Prohibition  
69: Kingwood Dr. & High Valley

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	56	43	0	0	163	68	7	290	43	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00
Frt					0.956			0.981				
Flt Protected	0.950	0.993						0.999				
Satd. Flow (prot)	1681	1757	0	0	3383	0	0	3468	0	0	0	0
Flt Permitted	0.950	0.993						0.999				
Satd. Flow (perm)	1681	1757	0	0	3383	0	0	3468	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					38			16				
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		93			765			1292			1387	
Travel Time (s)		2.1			17.4			22.0			23.6	
Lane Group Flow (vph)	60	62	0	0	284	0	0	418	0	0	0	0
Turn Type	Prot	NA			NA		Prot	NA				
Protected Phases	1 4	4			8		15	2				
Permitted Phases												
Minimum Split (s)		11.0			19.0		11.0	20.0				
Total Split (s)		17.0			28.0		16.0	67.0				
Total Split (%)		11.8%			19.4%		11.1%	46.5%				
Maximum Green (s)		11.0			22.0		10.0	61.0				
Yellow Time (s)		4.0			4.0		4.0	4.0				
All-Red Time (s)		2.0			2.0		2.0	2.0				
Total Lost Time (s)		6.0			6.0			6.0				
Lead/Lag		Lead			Lag			Lead				
Lead-Lag Optimize?		Yes			Yes			Yes				
Walk Time (s)					6.0			4.0				
Flash Dont Walk (s)					7.0			10.0				
Pedestrian Calls (#/hr)					0			0				
Act Effct Green (s)	27.0	27.0			22.0			71.0				
Actuated g/C Ratio	0.19	0.19			0.15			0.49				
v/c Ratio	0.19	0.19			0.52			0.44				
Control Delay	24.8	24.7			52.1			25.1				
Queue Delay	0.0	0.0			0.0			0.0				
Total Delay	24.8	24.7			52.1			25.1				
LOS	C	C			D			C				
Approach Delay		24.7			52.1			25.1				
Approach LOS		C			D			C				

Intersection Summary

Area Type:	Other
Cycle Length:	144
Actuated Cycle Length:	144
Offset:	90 (63%), Referenced to phase 2:NBT and 6:, Start of Green
Control Type:	Pretimed
Maximum v/c Ratio:	0.54
Intersection Signal Delay:	34.3
Intersection LOS:	C
Intersection Capacity Utilization:	53.4%
ICU Level of Service:	A

2020 Left-Turn Prohibition  
 69: Kingwood Dr. & High Valley

AM Peak Hour

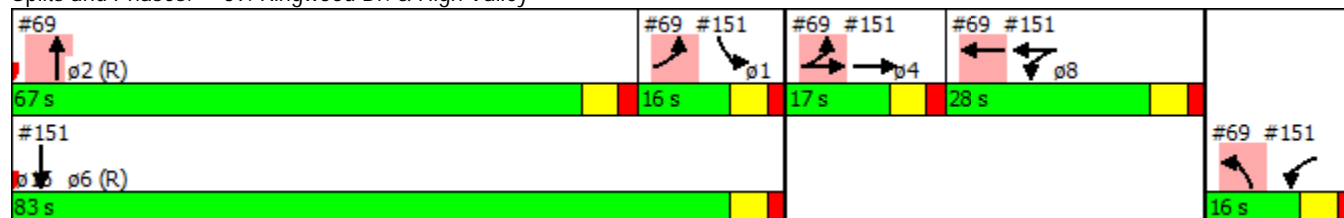
Lane Group	ø1	ø6
Lane Configurations		
Volume (vph)		
Ideal Flow (vphpl)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	1	6
Permitted Phases		
Minimum Split (s)	11.0	10.0
Total Split (s)	16.0	83.0
Total Split (%)	11%	58%
Maximum Green (s)	10.0	77.0
Yellow Time (s)	4.0	4.0
All-Red Time (s)	2.0	2.0
Total Lost Time (s)		
Lead/Lag	Lag	
Lead-Lag Optimize?	Yes	
Walk Time (s)		
Flash Dont Walk (s)		
Pedestrian Calls (#/hr)		
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
<b>Intersection Summary</b>		

2020 Left-Turn Prohibition  
 69: Kingwood Dr. & High Valley

AM Peak Hour

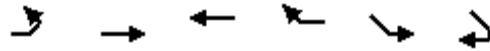
Analysis Period (min) 15

Splits and Phases: 69: Kingwood Dr. & High Valley



2020 Left-Turn Prohibition  
73: Kingwood Dr.

AM Peak Hour



















Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑	↑↑			
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	3539	3539	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	3539	3539	0	0	0
Link Speed (mph)		40	40		40	
Link Distance (ft)		291	315		343	
Travel Time (s)		5.0	5.4		5.8	
Lane Group Flow (vph)	0	0	0	0	0	0
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	0.0% ICU Level of Service A
Analysis Period (min)	15

2020 Left-Turn Prohibition  
74: Kingwood Dr. & Willow Terrace

AM Peak Hour

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	24	297	185	0	0	0	16	39	0	0	446	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	0		0	0		0
Storage Lanes	2		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	0.95
Frt		0.942									0.989	
Flt Protected	0.950							0.986				
Satd. Flow (prot)	1770	3334	0	0	0	0	0	3490	0	0	3500	0
Flt Permitted	0.950							0.986				
Satd. Flow (perm)	1770	3334	0	0	0	0	0	3490	0	0	3500	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		94										5
Link Speed (mph)		40			40			30				30
Link Distance (ft)		1403			525			105				533
Travel Time (s)		23.9			8.9			2.4				12.1
Lane Group Flow (vph)	29	592	0	0	0	0	0	68	0	0	590	0
Turn Type	Prot	NA						Prot	NA		NA	
Protected Phases	15	2					1 4	4			8	
Permitted Phases												
Minimum Split (s)	11.0	20.0						11.0			19.0	
Total Split (s)	25.0	48.0						14.0			42.0	
Total Split (%)	17.4%	33.3%						9.7%			29.2%	
Maximum Green (s)	19.0	42.0						8.0			36.0	
Yellow Time (s)	4.0	4.0						4.0			4.0	
All-Red Time (s)	2.0	2.0						2.0			2.0	
Total Lost Time (s)	6.0	6.0						6.0			6.0	
Lead/Lag		Lead						Lead			Lag	
Lead-Lag Optimize?		Yes						Yes			Yes	
Walk Time (s)		4.0									6.0	
Flash Dont Walk (s)		10.0									7.0	
Pedestrian Calls (#/hr)		0									0	
Act Effect Green (s)	19.0	42.0						23.0			36.0	
Actuated g/C Ratio	0.13	0.29						0.16			0.25	
v/c Ratio	0.12	0.57						0.12			0.67	
Control Delay	48.0	74.9						15.8			52.7	
Queue Delay	0.0	0.0						2.4			0.0	
Total Delay	48.0	74.9						18.2			52.7	
LOS	D	E						B			D	
Approach Delay		73.7						18.2			52.7	
Approach LOS		E						B			D	
<b>Intersection Summary</b>												
Area Type:	Other											
Cycle Length:	144											
Actuated Cycle Length:	144											
Offset:	12 (8%), Referenced to phase 2:NBT and 6:, Start of Green											
Control Type:	Pre-timed											

2020 Left-Turn Prohibition  
 74: Kingwood Dr. & Willow Terrace

AM Peak Hour

Lane Group	ø1	ø6
Lane Configurations		
Volume (vph)		
Ideal Flow (vphpl)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	1	6
Permitted Phases		
Minimum Split (s)	11.0	10.0
Total Split (s)	15.0	63.0
Total Split (%)	10%	44%
Maximum Green (s)	9.0	57.0
Yellow Time (s)	4.0	4.0
All-Red Time (s)	2.0	2.0
Total Lost Time (s)		
Lead/Lag	Lag	
Lead-Lag Optimize?	Yes	
Walk Time (s)		
Flash Dont Walk (s)		
Pedestrian Calls (#/hr)		
Act Effect Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
<b>Intersection Summary</b>		

2020 Left-Turn Prohibition  
 74: Kingwood Dr. & Willow Terrace

AM Peak Hour

Maximum v/c Ratio: 0.67

Intersection Signal Delay: 61.0

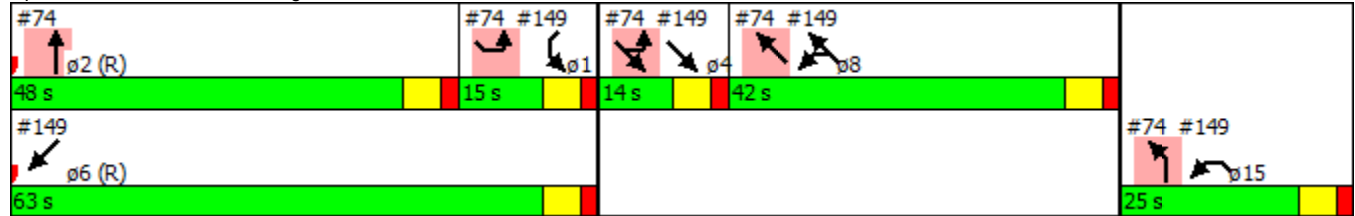
Intersection LOS: E

Intersection Capacity Utilization 41.2%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 74: Kingwood Dr. & Willow Terrace





2020 Left-Turn Prohibition  
77: Timber Shade Dr. & Kingwood Dr.

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	31	476	23	0	0	0	0	44	3	12	13	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	1.00
Frt		0.993						0.990				
Flt Protected	0.950										0.976	
Satd. Flow (prot)	1770	3514	0	0	0	0	0	3504	0	0	3454	0
Flt Permitted	0.950										0.976	
Satd. Flow (perm)	1770	3514	0	0	0	0	0	3504	0	0	3454	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5						4				
Link Speed (mph)		40			40			30				30
Link Distance (ft)		814			1647			741				83
Travel Time (s)		13.9			28.1			16.8				1.9
Lane Group Flow (vph)	38	613	0	0	0	0	0	58	0	0	31	0
Turn Type	Prot	NA						NA		Prot	NA	
Protected Phases	15	2						8		1 4	4	
Permitted Phases												
Minimum Split (s)	11.0	20.0						19.0			11.0	
Total Split (s)	17.0	78.0						20.0			16.0	
Total Split (%)	11.8%	54.2%						13.9%			11.1%	
Maximum Green (s)	11.0	72.0						14.0			10.0	
Yellow Time (s)	4.0	4.0						4.0			4.0	
All-Red Time (s)	2.0	2.0						2.0			2.0	
Total Lost Time (s)	6.0	6.0						6.0			6.0	
Lead/Lag		Lead						Lag			Lead	
Lead-Lag Optimize?		Yes						Yes			Yes	
Walk Time (s)		4.0						6.0				
Flash Dont Walk (s)		10.0						7.0				
Pedestrian Calls (#/hr)		0						0				
Act Effect Green (s)	11.0	72.0						14.0			23.0	
Actuated g/C Ratio	0.08	0.50						0.10			0.16	
v/c Ratio	0.28	0.35						0.17			0.06	
Control Delay	68.6	22.3						56.9			20.7	
Queue Delay	0.0	0.0						0.0			0.0	
Total Delay	68.6	22.3						56.9			20.7	
LOS	E	C						E			C	
Approach Delay		25.0						56.9			20.7	
Approach LOS		C						E			C	

Intersection Summary

Area Type: Other  
 Cycle Length: 144  
 Actuated Cycle Length: 144  
 Offset: 12 (8%), Referenced to phase 2:EBT and 6:, Start of Green  
 Control Type: Pretimed

2020 Left-Turn Prohibition  
 77: Timber Shade Dr. & Kingwood Dr.

AM Peak Hour

Lane Group	ø1	ø6
Lane Configurations		
Volume (vph)		
Ideal Flow (vphpl)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	1	6
Permitted Phases		
Minimum Split (s)	11.0	10.0
Total Split (s)	13.0	91.0
Total Split (%)	9%	63%
Maximum Green (s)	7.0	85.0
Yellow Time (s)	4.0	4.0
All-Red Time (s)	2.0	2.0
Total Lost Time (s)		
Lead/Lag	Lag	
Lead-Lag Optimize?	Yes	
Walk Time (s)		
Flash Dont Walk (s)		
Pedestrian Calls (#/hr)		
Act Effect Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
<b>Intersection Summary</b>		

2020 Left-Turn Prohibition  
 77: Timber Shade Dr. & Kingwood Dr.

AM Peak Hour

Maximum v/c Ratio: 0.59

Intersection Signal Delay: 27.3

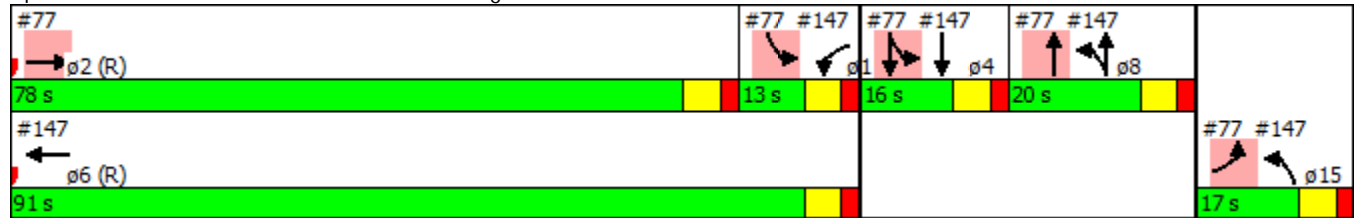
Intersection LOS: C

Intersection Capacity Utilization 33.1%

ICU Level of Service A

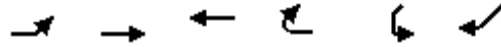
Analysis Period (min) 15

Splits and Phases: 77: Timber Shade Dr. & Kingwood Dr.



2020 Left-Turn Prohibition  
80: Kingwood Dr.

AM Peak Hour












Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations	TT					TT
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	0.88
Frt						
Flt Protected						
Satd. Flow (prot)	3614	0	0	0	0	3278
Flt Permitted						
Satd. Flow (perm)	3614	0	0	0	0	3278
Link Speed (mph)		40	40		40	
Link Distance (ft)		583	814		839	
Travel Time (s)		9.9	13.9		14.3	
Lane Group Flow (vph)	0	0	0	0	0	0
Sign Control		Free	Free		Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	0.0% ICU Level of Service A
Analysis Period (min)	15

2020 Left-Turn Prohibition  
81: US 59 SBFR

AM Peak Hour

							
Lane Group	NBT	NBR	SBU	SBL	SBT	NWL	NWR
Lane Configurations							
Volume (vph)	0	0	131	0	887	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.81	1.00	1.00
Frt							
Flt Protected			0.950				
Satd. Flow (prot)	0	0	1770	0	7544	0	0
Flt Permitted			0.950				
Satd. Flow (perm)	0	0	1770	0	7544	0	0
Link Speed (mph)	55				55	30	
Link Distance (ft)	255				1812	318	
Travel Time (s)	3.2				22.5	7.2	
Lane Group Flow (vph)	0	0	161	0	1089	0	0
Sign Control	Stop				Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	24.1%
Analysis Period (min)	15
	ICU Level of Service A

2020 Left-Turn Prohibition  
83: US 59 NBFR

AM Peak Hour



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	131	0	0	423	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.91	1.00	1.00
Frt						
Flt Protected	0.950					
Satd. Flow (prot)	1770	0	0	5085	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	1770	0	0	5085	0	0
Link Speed (mph)	30			55	55	
Link Distance (ft)	318			309	1638	
Travel Time (s)	7.2			3.8	20.3	
Lane Group Flow (vph)	161	0	0	520	0	0
Sign Control	Yield			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	24.1%
Analysis Period (min)	15
	ICU Level of Service A

2020 Left-Turn Prohibition  
84: US 59 SBFR

AM Peak Hour



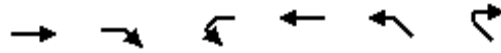
Lane Group	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations							6		1	
Volume (vph)	0	0	0	0	0	0	2267	0	233	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.76	1.00	1.00	1.00
Frt										
Flt Protected									0.950	
Satd. Flow (prot)	0	0	0	0	0	0	8494	0	1770	0
Flt Permitted									0.950	
Satd. Flow (perm)	0	0	0	0	0	0	8494	0	1770	0
Link Speed (mph)	30			55			55		30	
Link Distance (ft)	48			6181			398		362	
Travel Time (s)	1.1			76.6			4.9		8.2	
Lane Group Flow (vph)	0	0	0	0	0	0	2784	0	286	0
Sign Control	Stop			Stop			Free		Yield	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	46.0%
Analysis Period (min)	15
	ICU Level of Service A

2020 Left-Turn Prohibition  
87: Kingwood Dr.

AM Peak Hour



Lane Group	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations		↑↑		↑↑		
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.88	1.00	0.95	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	3278	0	3539	0	0
Flt Permitted						
Satd. Flow (perm)	0	3278	0	3539	0	0
Link Speed (mph)	40			40	30	
Link Distance (ft)	1473			523	4245	
Travel Time (s)	25.1			8.9	96.5	
Lane Group Flow (vph)	0	0	0	0	0	0
Sign Control	Free			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	0.0% ICU Level of Service A
Analysis Period (min)	15



2020 Left-Turn Prohibition  
88: Kingwood Dr. & Kingwood High School

AM Peak Hour



Lane Group	SEL	SER	NEL	NET	SWT	SWR	ø6	ø8	ø15
Lane Configurations	↖↗		↖	↖↗					
Volume (vph)	94	0	72	893	0	0			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900			
Lane Util. Factor	0.97	1.00	1.00	0.95	1.00	1.00			
Frt									
Flt Protected	0.950		0.950						
Satd. Flow (prot)	3433	0	1770	3539	0	0			
Flt Permitted	0.950		0.950						
Satd. Flow (perm)	3433	0	1770	3539	0	0			
Right Turn on Red		Yes				Yes			
Satd. Flow (RTOR)									
Link Speed (mph)	30			40	40				
Link Distance (ft)	110			162	902				
Travel Time (s)	2.5			2.8	15.4				
Lane Group Flow (vph)	115	0	88	1097	0	0			
Turn Type	NA		Prot	NA					
Protected Phases	4		5	2			6	8	15
Permitted Phases									
Minimum Split (s)	11.0		11.0	10.0			10.0	11.0	11.0
Total Split (s)	13.0		18.0	109.0			91.0	12.0	11.0
Total Split (%)	9.0%		12.4%	75.2%			63%	8%	8%
Maximum Green (s)	7.0		12.0	103.0			85.0	6.0	5.0
Yellow Time (s)	4.0		4.0	4.0			4.0	4.0	4.0
All-Red Time (s)	2.0		2.0	2.0			2.0	2.0	2.0
Total Lost Time (s)	6.0		6.0	6.0					
Lead/Lag	Lead		Lead				Lag	Lag	
Lead-Lag Optimize?	Yes		Yes				Yes	Yes	
Act Effect Green (s)	7.0		12.0	103.0					
Actuated g/C Ratio	0.05		0.08	0.71					
v/c Ratio	0.70		0.60	0.44					
Control Delay	44.2		82.0	9.5					
Queue Delay	2.1		125.0	0.0					
Total Delay	46.3		206.9	9.5					
LOS	D		F	A					
Approach Delay	46.3			24.1					
Approach LOS	D			C					

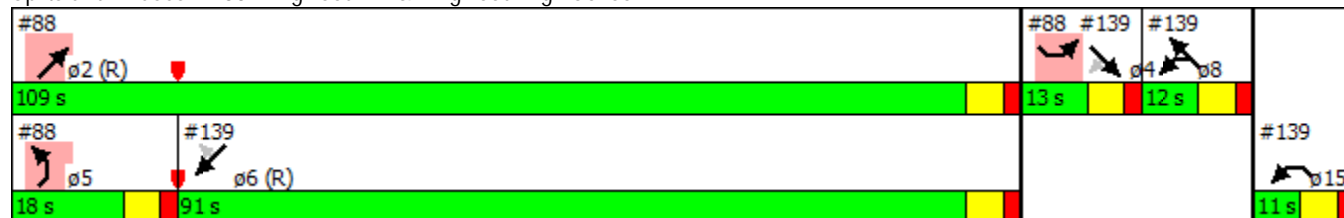
Intersection Summary

Area Type:	Other
Cycle Length:	145
Actuated Cycle Length:	145
Offset:	0 (0%), Referenced to phase 2:NET and 6:, Start of Green
Control Type:	Pretimed
Maximum v/c Ratio:	0.90
Intersection Signal Delay:	26.1
Intersection LOS:	C
Intersection Capacity Utilization:	42.1%
ICU Level of Service:	A
Analysis Period (min):	15

2020 Left-Turn Prohibition  
 88: Kingwood Dr. & Kingwood High School

AM Peak Hour

Splits and Phases: 88: Kingwood Dr. & Kingwood High School



2020 Left-Turn Prohibition  
90: Kingwood Dr.

AM Peak Hour



Lane Group	EBU	EBL	SBL	SBR	SWR
Lane Configurations	0	893	0	0	0
Volume (vph)	0	893	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900
Storage Length (ft)		100	0	0	0
Storage Lanes		2	0	0	0
Taper Length (ft)		25	25		
Lane Util. Factor	1.00	0.97	1.00	1.00	1.00
Frt					
Flt Protected		0.950			
Satd. Flow (prot)	1863	3433	0	0	0
Flt Permitted		0.950			
Satd. Flow (perm)	1863	3433	0	0	0
Link Speed (mph)		40	30		40
Link Distance (ft)		380	137		162
Travel Time (s)		6.5	3.1		2.8
Lane Group Flow (vph)	0	1097	0	0	0
Sign Control		Free	Stop		Free
<b>Intersection Summary</b>					
Area Type:	Other				
Control Type:	Unsignalized				
Intersection Capacity Utilization	38.8%		ICU Level of Service A		
Analysis Period (min)	15				

2020 Left-Turn Prohibition  
91: Lake Kingwood Trail & Kingwood Dr.

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	797	38	0	0	0	0	46	24	77	11	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	1.00
Frt		0.993						0.949				
Flt Protected												0.958
Satd. Flow (prot)	1863	3514	0	0	0	0	0	3359	0	0	3391	0
Flt Permitted												0.958
Satd. Flow (perm)	1863	3514	0	0	0	0	0	3359	0	0	3391	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4						29				
Link Speed (mph)		40			40			30				30
Link Distance (ft)		985			1267			554				108
Travel Time (s)		16.8			21.6			12.6				2.5
Lane Group Flow (vph)	0	1026	0	0	0	0	0	85	0	0	109	0
Number of Detectors	1	2						2		1	2	
Detector Template	Left	Thru						Thru		Left	Thru	
Leading Detector (ft)	20	100						100		20	100	
Trailing Detector (ft)	0	0						0		0	0	
Detector 1 Position(ft)	0	0						0		0	0	
Detector 1 Size(ft)	20	6						6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0		0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA						NA		Prot	NA	
Protected Phases		2						8		1 4	4	
Permitted Phases	2											
Minimum Initial (s)	4.0	4.0						5.0			5.0	
Minimum Split (s)	20.0	20.0						19.0			11.0	
Total Split (s)	36.0	36.0						30.0			30.0	
Total Split (%)	30.0%	30.0%						25.0%			25.0%	
Maximum Green (s)	30.0	30.0						24.0			24.0	
Yellow Time (s)	4.0	4.0						4.0			4.0	
All-Red Time (s)	2.0	2.0						2.0			2.0	
Total Lost Time (s)	6.0	6.0						6.0			6.0	
Lead/Lag	Lead	Lead						Lag			Lead	
Lead-Lag Optimize?	Yes	Yes						Yes			Yes	
Vehicle Extension (s)	3.0	3.0						3.0			3.0	
Recall Mode	C-Max	C-Max						None			None	

2020 Left-Turn Prohibition  
 91: Lake Kingwood Trail & Kingwood Dr.

AM Peak Hour

Lane Group	ø1	ø6
Lane Configurations		
Volume (vph)		
Ideal Flow (vphpl)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Lane Group Flow (vph)		
Number of Detectors		
Detector Template		
Leading Detector (ft)		
Trailing Detector (ft)		
Detector 1 Position(ft)		
Detector 1 Size(ft)		
Detector 1 Type		
Detector 1 Channel		
Detector 1 Extend (s)		
Detector 1 Queue (s)		
Detector 1 Delay (s)		
Detector 2 Position(ft)		
Detector 2 Size(ft)		
Detector 2 Type		
Detector 2 Channel		
Detector 2 Extend (s)		
Turn Type		
Protected Phases	1	6
Permitted Phases		
Minimum Initial (s)	5.0	4.0
Minimum Split (s)	11.0	10.0
Total Split (s)	24.0	60.0
Total Split (%)	20%	50%
Maximum Green (s)	18.0	54.0
Yellow Time (s)	4.0	4.0
All-Red Time (s)	2.0	2.0
Total Lost Time (s)		
Lead/Lag	Lag	
Lead-Lag Optimize?	Yes	
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	C-Max

2020 Left-Turn Prohibition  
 91: Lake Kingwood Trail & Kingwood Dr.

AM Peak Hour

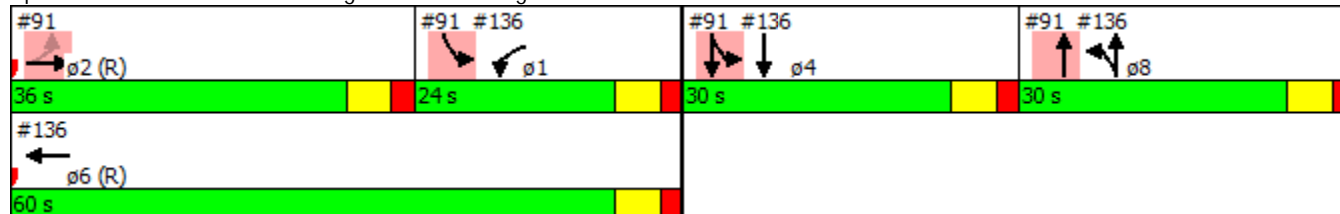


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)	4.0	4.0						6.0				
Flash Dont Walk (s)	10.0	10.0						7.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)		61.3						7.5			33.2	
Actuated g/C Ratio		0.51						0.06			0.28	
v/c Ratio		0.57						0.36			0.12	
Control Delay		22.3						40.3			2.0	
Queue Delay		0.0						0.0			0.1	
Total Delay		22.3						40.3			2.2	
LOS		C						D			A	
Approach Delay		22.3						40.3			2.2	
Approach LOS		C						D			A	

Intersection Summary

Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.74  
 Intersection Signal Delay: 21.8  
 Intersection LOS: C  
 Intersection Capacity Utilization 47.7%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 91: Lake Kingwood Trail & Kingwood Dr.



2020 Left-Turn Prohibition  
91: Lake Kingwood Trail & Kingwood Dr.

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AM Peak Hour

Lane Group	ø1	ø6
Walk Time (s)		
Flash Dont Walk (s)		
Pedestrian Calls (#/hr)		
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Intersection Summary		

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2020 Left-Turn Prohibition  
96: Chestnut Ridge Dr. & Kingwood Dr.

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	839	55	0	0	0	0	84	62	19	100	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991						0.943				
Flt Protected												0.992
Satd. Flow (prot)	1863	3507	0	0	0	0	0	1757	0	0	1848	0
Flt Permitted												0.992
Satd. Flow (perm)	1863	3507	0	0	0	0	0	1757	0	0	1848	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7						24				
Link Speed (mph)		40			40			30				30
Link Distance (ft)		532			2489			973				98
Travel Time (s)		9.1			42.4			22.1				2.2
Lane Group Flow (vph)	0	1137	0	0	0	0	0	186	0	0	151	0
Number of Detectors	1	2						2		1	2	
Detector Template	Left	Thru						Thru		Left	Thru	
Leading Detector (ft)	20	100						100		20	100	
Trailing Detector (ft)	0	0						0		0	0	
Detector 1 Position(ft)	0	0						0		0	0	
Detector 1 Size(ft)	20	6						6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0		0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA						NA		Prot	NA	
Protected Phases		2						8		1 4	4	
Permitted Phases	2											
Minimum Initial (s)	4.0	4.0						5.0			5.0	
Minimum Split (s)	20.0	20.0						19.0			11.0	
Total Split (s)	69.0	69.0						21.0			16.0	
Total Split (%)	54.3%	54.3%						16.5%			12.6%	
Maximum Green (s)	63.0	63.0						15.0			10.0	
Yellow Time (s)	4.0	4.0						4.0			4.0	
All-Red Time (s)	2.0	2.0						2.0			2.0	
Total Lost Time (s)	6.0	6.0						6.0			6.0	
Lead/Lag	Lead	Lead						Lag			Lead	
Lead-Lag Optimize?	Yes	Yes						Yes			Yes	
Vehicle Extension (s)	3.0	3.0						3.0			3.0	
Recall Mode	C-Max	C-Max						None			None	



2020 Left-Turn Prohibition  
 96: Chestnut Ridge Dr. & Kingwood Dr.

AM Peak Hour

Lane Group	ø1	ø6
Lane Configurations		
Volume (vph)		
Ideal Flow (vphpl)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Lane Group Flow (vph)		
Number of Detectors		
Detector Template		
Leading Detector (ft)		
Trailing Detector (ft)		
Detector 1 Position(ft)		
Detector 1 Size(ft)		
Detector 1 Type		
Detector 1 Channel		
Detector 1 Extend (s)		
Detector 1 Queue (s)		
Detector 1 Delay (s)		
Detector 2 Position(ft)		
Detector 2 Size(ft)		
Detector 2 Type		
Detector 2 Channel		
Detector 2 Extend (s)		
Turn Type		
Protected Phases	1	6
Permitted Phases		
Minimum Initial (s)	5.0	4.0
Minimum Split (s)	11.0	10.0
Total Split (s)	21.0	90.0
Total Split (%)	17%	71%
Maximum Green (s)	15.0	84.0
Yellow Time (s)	4.0	4.0
All-Red Time (s)	2.0	2.0
Total Lost Time (s)		
Lead/Lag	Lag	
Lead-Lag Optimize?	Yes	
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	C-Max

2020 Left-Turn Prohibition  
 96: Chestnut Ridge Dr. & Kingwood Dr.

AM Peak Hour

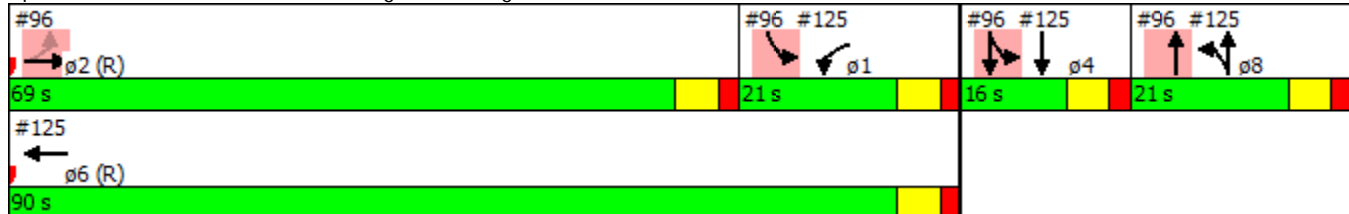


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)	4.0	4.0						6.0				
Flash Dont Walk (s)	10.0	10.0						7.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)		64.4						14.3			30.3	
Actuated g/C Ratio		0.51						0.11			0.24	
v/c Ratio		0.64						0.85			0.34	
Control Delay		25.0						80.2			8.1	
Queue Delay		0.0						0.7			0.0	
Total Delay		25.0						80.9			8.1	
LOS		C						F			A	
Approach Delay		25.0						80.9			8.1	
Approach LOS		C						F			A	

Intersection Summary

Area Type: Other  
 Cycle Length: 127  
 Actuated Cycle Length: 127  
 Offset: 20 (16%), Referenced to phase 2:EBTL and 6:, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.96  
 Intersection Signal Delay: 30.4  
 Intersection LOS: C  
 Intersection Capacity Utilization 61.2%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 96: Chestnut Ridge Dr. & Kingwood Dr.



Lane Group	ø1	ø6
Walk Time (s)		
Flash Dont Walk (s)		
Pedestrian Calls (#/hr)		
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Intersection Summary		

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2020 Left-Turn Prohibition  
102: Kingwood Dr.

AM Peak Hour



Lane Group	WBL	WBR	NET	NER	SWL	SWT
Lane Configurations						
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.95
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	0	0	3539
Flt Permitted						
Satd. Flow (perm)	1863	0	0	0	0	3539
Link Speed (mph)	30		40			40
Link Distance (ft)	137		129			202
Travel Time (s)	3.1		2.2			3.4
Lane Group Flow (vph)	0	0	0	0	0	0
Sign Control	Yield		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	38.8%
Analysis Period (min)	15
	ICU Level of Service A



2020 Left-Turn Prohibition  
 104: US 59 SBFR & Kingwood Dr.

AM Peak Hour

Lane Group	ø1	ø3	ø4	ø5	ø6	ø7	ø8	ø11	ø15	ø16	ø21
Lane Configurations											
Volume (vph)											
Ideal Flow (vphpl)											
Lane Util. Factor											
Frt											
Flt Protected											
Satd. Flow (prot)											
Flt Permitted											
Satd. Flow (perm)											
Right Turn on Red											
Satd. Flow (RTOR)											
Link Speed (mph)											
Link Distance (ft)											
Travel Time (s)											
Lane Group Flow (vph)											
Number of Detectors											
Detector Template											
Leading Detector (ft)											
Trailing Detector (ft)											
Detector 1 Position(ft)											
Detector 1 Size(ft)											
Detector 1 Type											
Detector 1 Channel											
Detector 1 Extend (s)											
Detector 1 Queue (s)											
Detector 1 Delay (s)											
Detector 2 Position(ft)											
Detector 2 Size(ft)											
Detector 2 Type											
Detector 2 Channel											
Detector 2 Extend (s)											
Turn Type											
Protected Phases	1	3	4	5	6	7	8	11	15	16	21
Permitted Phases											
Minimum Initial (s)	3.0	1.0	5.0	3.0	8.0	1.0	1.0	3.0	3.0	4.0	1.0
Minimum Split (s)	9.0	7.0	11.7	9.0	26.0	7.0	26.7	9.0	9.0	10.0	7.0
Total Split (s)	43.0	7.0	44.0	13.0	27.0	7.0	26.7	23.0	44.0	23.0	7.0
Total Split (%)	30%	5%	31%	9%	19%	5%	19%	16%	31%	16%	5%
Maximum Green (s)	37.0	1.0	38.0	7.0	21.0	1.0	20.7	17.0	38.0	17.0	1.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Total Lost Time (s)											
Lead/Lag	Lag	Lead		Lag	Lead	Lead		Lag		Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes		Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	None	None	None	C-Max	Max	None	None	None	None	None
Walk Time (s)					5.0		6.0				
Flash Dont Walk (s)					15.0		14.0				
Pedestrian Calls (#/hr)					0		0				

2020 Left-Turn Prohibition  
104: US 59 SBFR & Kingwood Dr.

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)		14.0		69.5	76.5					42.5	42.5	42.5
Actuated g/C Ratio		0.10		0.48	0.53					0.30	0.30	0.30
v/c Ratio		0.52		1.12	0.49					0.52	0.53	0.35
Control Delay		51.4		75.2	2.6					46.3	40.6	3.3
Queue Delay		0.0		0.5	1.1					70.8	55.5	4.0
Total Delay		51.4		75.7	3.7					117.1	96.1	7.3
LOS		D		E	A					F	F	A
Approach Delay		51.4			51.8						84.4	
Approach LOS		D			D						F	

Intersection Summary

Area Type:	Other
Cycle Length:	144
Actuated Cycle Length:	144
Offset:	0 (0%), Referenced to phase 1:WBTL and 6:, Start of Green
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.12
Intersection Signal Delay:	60.4
Intersection LOS:	E
Intersection Capacity Utilization	80.0%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 104: US 59 SBFR & Kingwood Dr.

#104 ← ρ2 20 s	#104 ↓ ρ4 44 s	#104 ↓ ρ3 7 s	#104 ← ρ1 (R) 43 s	#104 ↙ ρ21 7 s	#104 ↘ ρ11 23 s
#105 ↑ ρ7 7 s	#105 ↗ ρ5 13 s	#105 ↗ ρ15 44 s	#105 ← ρ5 (R) 27 s	#105 ← ρ16 23 s	#105 ↑ ρ8 26.7 s







2020 Left-Turn Prohibition  
 105: US 59 NBFR & Kingwood Dr.

AM Peak Hour

Lane Group	ø1	ø2	ø3	ø4	ø5	ø6	ø7	ø8	ø11	ø15	ø16	ø21
Lane Configurations												
Volume (vph)												
Ideal Flow (vphpl)												
Lane Util. Factor												
Frt												
Flt Protected												
Satd. Flow (prot)												
Flt Permitted												
Satd. Flow (perm)												
Right Turn on Red												
Satd. Flow (RTOR)												
Link Speed (mph)												
Link Distance (ft)												
Travel Time (s)												
Lane Group Flow (vph)												
Number of Detectors												
Detector Template												
Leading Detector (ft)												
Trailing Detector (ft)												
Detector 1 Position(ft)												
Detector 1 Size(ft)												
Detector 1 Type												
Detector 1 Channel												
Detector 1 Extend (s)												
Detector 1 Queue (s)												
Detector 1 Delay (s)												
Detector 2 Position(ft)												
Detector 2 Size(ft)												
Detector 2 Type												
Detector 2 Channel												
Detector 2 Extend (s)												
Turn Type												
Protected Phases	1	2	3	4	5	6	7	8	11	15	16	21
Permitted Phases												
Minimum Initial (s)	3.0	7.0	1.0	5.0	3.0	8.0	1.0	1.0	3.0	3.0	4.0	1.0
Minimum Split (s)	9.0	13.0	7.0	11.7	9.0	26.0	7.0	26.7	9.0	9.0	10.0	7.0
Total Split (s)	43.0	20.0	7.0	44.0	13.0	27.0	7.0	26.7	23.0	44.0	23.0	7.0
Total Split (%)	30%	14%	5%	31%	9%	19%	5%	19%	16%	31%	16%	5%
Maximum Green (s)	37.0	14.0	1.0	38.0	7.0	21.0	1.0	20.7	17.0	38.0	17.0	1.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Total Lost Time (s)												
Lead/Lag	Lag		Lead		Lag	Lead	Lead		Lag		Lag	Lead
Lead-Lag Optimize?	Yes		Yes		Yes	Yes	Yes		Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	None	None	None	None	C-Max	Max	None	None	None	None	None
Walk Time (s)						5.0		6.0				
Flash Dont Walk (s)						15.0		14.0				
Pedestrian Calls (#/hr)						0		0				

2020 Left-Turn Prohibition  
 105: US 59 NBFR & Kingwood Dr.

AM Peak Hour

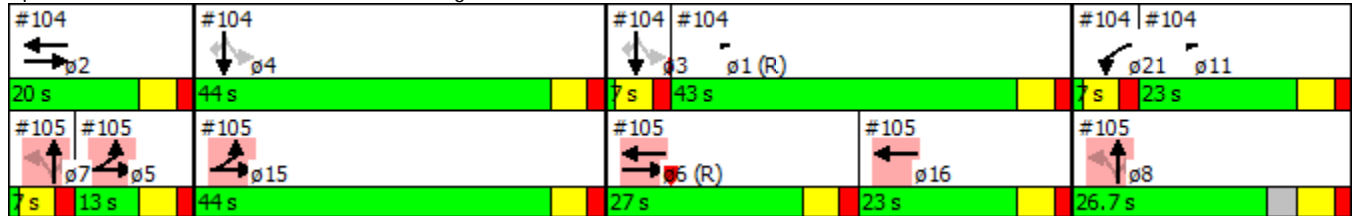


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	42.8	78.0			52.2		31.0	31.0	31.0			
Actuated g/C Ratio	0.30	0.54			0.36		0.22	0.22	0.22			
v/c Ratio	0.09	0.29			1.03		0.85	0.40	0.54			
Control Delay	10.7	2.8			71.5		77.8	49.9	5.6			
Queue Delay	0.0	0.5			28.0		62.4	50.6	1.8			
Total Delay	10.7	3.2			99.6		140.2	100.5	7.4			
LOS	B	A			F		F	F	A			
Approach Delay		4.3			99.6			67.4				
Approach LOS		A			F			E				

Intersection Summary

Area Type:	Other
Cycle Length:	144
Actuated Cycle Length:	144
Offset:	0 (0%), Referenced to phase 1:WBTL and 6:, Start of Green
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.12
Intersection Signal Delay:	75.6
Intersection LOS:	E
Intersection Capacity Utilization	80.0%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 105: US 59 NBFR & Kingwood Dr.





2020 Left-Turn Prohibition  
107: Kingwood Dr.

AM Peak Hour



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	10	245	114	17	56	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.870		0.982			
Flt Protected	0.998					0.987
Satd. Flow (prot)	1617	0	1829	0	0	1839
Flt Permitted	0.998					0.987
Satd. Flow (perm)	1617	0	1829	0	0	1839
Link Speed (mph)	40		35			35
Link Distance (ft)	2012		3652			1853
Travel Time (s)	34.3		71.1			36.1
Lane Group Flow (vph)	313	0	161	0	0	268
Sign Control	Stop		Stop			Stop

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	48.8% ICU Level of Service A
Analysis Period (min)	15

2020 Left-Turn Prohibition  
110: Hidden Pines & Northpark Dr.

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑						↑	↗	↘	↑	
Volume (vph)	42	875	49	0	0	0	0	125	65	32	62	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992							0.850			
Flt Protected		0.998								0.950		
Satd. Flow (prot)	0	3504	0	0	0	0	0	1863	1583	1770	1863	0
Flt Permitted		0.998								0.950		
Satd. Flow (perm)	0	3504	0	0	0	0	0	1863	1583	1770	1863	0
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		2967			1422			1041			125	
Travel Time (s)		45.0			21.5			23.7			2.8	
Lane Group Flow (vph)	0	1187	0	0	0	0	0	154	80	39	76	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	112.9%
Analysis Period (min)	15
	ICU Level of Service H

2020 Left-Turn Prohibition  
111: Lake Houston Parkway & Rustic Woods

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑		↑	↑↑				
Volume (vph)	24	33	0	0	131	28	72	854	30	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	150		0	0		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Frt					0.974			0.995				
Flt Protected		0.980					0.950					
Satd. Flow (prot)	0	3468	0	0	3447	0	1770	3522	0	0	0	0
Flt Permitted		0.980					0.950					
Satd. Flow (perm)	0	3468	0	0	3447	0	1770	3522	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					14			3				
Link Speed (mph)		30			30			40				40
Link Distance (ft)		82			559			1308				4598
Travel Time (s)		1.9			12.7			22.3				78.4
Lane Group Flow (vph)	0	70	0	0	195	0	88	1086	0	0	0	0
Turn Type	Prot	NA			NA		Prot	NA				
Protected Phases	1 4	4			8		15	2				
Permitted Phases												
Minimum Split (s)		11.0			19.0		11.0	20.0				
Total Split (s)		17.0			21.0		22.0	71.0				
Total Split (%)		11.8%			14.6%		15.3%	49.3%				
Maximum Green (s)		11.0			15.0		16.0	65.0				
Yellow Time (s)		4.0			4.0		4.0	4.0				
All-Red Time (s)		2.0			2.0		2.0	2.0				
Total Lost Time (s)		6.0			6.0		6.0	6.0				
Lead/Lag		Lead			Lag			Lead				
Lead-Lag Optimize?		Yes			Yes			Yes				
Walk Time (s)					6.0			4.0				
Flash Dont Walk (s)					7.0			10.0				
Pedestrian Calls (#/hr)					0			0				
Act Effect Green (s)		24.0			15.0		16.0	65.0				
Actuated g/C Ratio		0.17			0.10		0.11	0.45				
v/c Ratio		0.12			0.53		0.45	0.68				
Control Delay		27.0			62.2		67.8	34.0				
Queue Delay		0.0			0.0		0.0	0.0				
Total Delay		27.0			62.2		67.8	34.0				
LOS		C			E		E	C				
Approach Delay		27.0			62.2			36.5				
Approach LOS		C			E			D				

Intersection Summary

Area Type: Other  
 Cycle Length: 144  
 Actuated Cycle Length: 144  
 Offset: 90 (63%), Referenced to phase 2:NBT and 6:, Start of Green  
 Control Type: Pretimed

2020 Left-Turn Prohibition  
 111: Lake Houston Parkway & Rustic Woods

AM Peak Hour

Lane Group	ø1	ø6
Lane Configurations		
Volume (vph)		
Ideal Flow (vphpl)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	1	6
Permitted Phases		
Minimum Split (s)	11.0	10.0
Total Split (s)	13.0	84.0
Total Split (%)	9%	58%
Maximum Green (s)	7.0	78.0
Yellow Time (s)	4.0	4.0
All-Red Time (s)	2.0	2.0
Total Lost Time (s)		
Lead/Lag	Lag	
Lead-Lag Optimize?	Yes	
Walk Time (s)		
Flash Dont Walk (s)		
Pedestrian Calls (#/hr)		
Act Effect Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
<b>Intersection Summary</b>		



2020 Left-Turn Prohibition  
 111: Lake Houston Parkway & Rustic Woods

AM Peak Hour

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 39.5

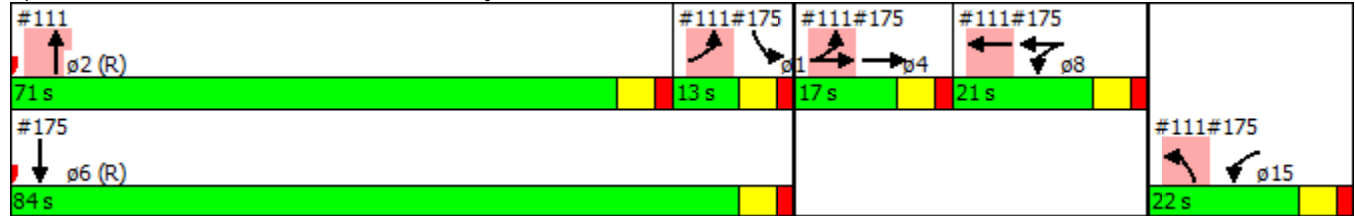
Intersection LOS: D

Intersection Capacity Utilization 52.0%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 111: Lake Houston Parkway & Rustic Woods



2020 Left-Turn Prohibition  
115: Loop 494 & Kingwood Dr.

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	711	95	161	1707	77	16	41	264	88	168	224
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	150		150	160		0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.982			0.994				0.850			0.850
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	1863	3476	0	1770	3518	0	1770	1863	1583	1770	1863	1583
Flt Permitted				0.104			0.576			0.671		
Satd. Flow (perm)	1863	3476	0	194	3518	0	1073	1863	1583	1250	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19			8				311			182
Link Speed (mph)		40			40			45				45
Link Distance (ft)		1514			523			675				922
Travel Time (s)		25.8			8.9			10.2				14.0
Lane Group Flow (vph)	0	1025	0	205	2269	0	20	52	336	112	214	285
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		2		1	6		3	8		7		4
Permitted Phases	2			6			8		8	4		4
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0		4.0
Minimum Split (s)	22.0	22.0		10.0	22.0		10.0	22.0	22.0	10.0		22.0
Total Split (s)	41.0	41.0		17.0	58.0		10.0	22.0	22.0	10.0		22.0
Total Split (%)	45.6%	45.6%		18.9%	64.4%		11.1%	24.4%	24.4%	11.1%		24.4%
Maximum Green (s)	35.0	35.0		11.0	52.0		4.0	16.0	16.0	4.0		16.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0		4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0		2.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0		6.0
Lead/Lag	Lag	Lag		Lead			Lead	Lag	Lag	Lead		Lag
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes	Yes	Yes		Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0		3.0
Recall Mode	C-Max	C-Max		None	C-Max		None	Max	Max	None		Max

2020 Left-Turn Prohibition  
115: Loop 494 & Kingwood Dr.

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)	5.0	5.0			5.0			5.0	5.0		5.0	5.0
Flash Dont Walk (s)	11.0	11.0			11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0			0			0	0		0	0
Act Effect Green (s)		36.2		52.0	52.0		21.2	18.0	18.0	23.6	22.0	22.0
Actuated g/C Ratio		0.40		0.58	0.58		0.24	0.20	0.20	0.26	0.24	0.24
v/c Ratio		0.73		0.72	1.11		0.07	0.14	0.59	0.32	0.47	0.54
Control Delay		26.3		30.2	80.0		23.9	32.6	10.3	28.7	34.8	16.6
Queue Delay		0.0		0.0	0.3		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		26.3		30.2	80.3		23.9	32.6	10.3	28.7	34.8	16.6
LOS		C		C	F		C	C	B	C	C	B
Approach Delay		26.3			76.2			13.8			25.2	
Approach LOS		C			E			B			C	

Intersection Summary

Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.11  
 Intersection Signal Delay: 52.3      Intersection LOS: D  
 Intersection Capacity Utilization 92.6%      ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 115: Loop 494 & Kingwood Dr.



2020 Left-Turn Prohibition  
118: Royal Forest /Royal Forest & Kingwood Dr.

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1038	44	18	1813	168	33	5	8	1	2	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	150		0	0		0	0		0
Storage Lanes	1		1	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.987				0.850		0.870	
Flt Protected				0.950				0.958				
Satd. Flow (prot)	1863	3539	1583	1770	3493	0	0	1785	1583	0	1621	0
Flt Permitted				0.950				0.474			0.998	
Satd. Flow (perm)	1863	3539	1583	1770	3493	0	0	883	1583	0	1617	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			68		25				68			22
Link Speed (mph)		40			40			30				30
Link Distance (ft)		523			284			392				750
Travel Time (s)		8.9			4.8			8.9				17.0
Lane Group Flow (vph)	0	1320	56	23	2520	0	0	48	10	0	116	0
Number of Detectors	1	2	1	1	2		1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2		1	6			8			4	
Permitted Phases	2		2				8		8	4		
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	22.0	22.0	22.0	10.0	22.0		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	110.0	110.0	110.0	12.0	122.0		22.0	22.0	22.0	22.0	22.0	
Total Split (%)	76.4%	76.4%	76.4%	8.3%	84.7%		15.3%	15.3%	15.3%	15.3%	15.3%	
Maximum Green (s)	104.0	104.0	104.0	6.0	116.0		16.0	16.0	16.0	16.0	16.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	C-Max	C-Max	C-Max	None	C-Max		None	None	None	Max	Max	

2020 Left-Turn Prohibition  
 118: Royal Forest /Royal Forest & Kingwood Dr.

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)	5.0	5.0	5.0		5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0	11.0		11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0		0		0	0	0	0	0	
Act Effect Green (s)		108.8	108.8	5.9	116.0			16.0	16.0			16.0
Actuated g/C Ratio		0.76	0.76	0.04	0.81			0.11	0.11			0.11
v/c Ratio		0.49	0.05	0.32	0.89			0.49	0.04			0.58
Control Delay		8.2	1.0	79.0	15.2			78.0	0.3			61.7
Queue Delay		1.1	0.0	0.0	0.0			0.0	0.0			0.0
Total Delay		9.3	1.0	79.0	15.2			78.0	0.3			61.7
LOS		A	A	E	B			E	A			E
Approach Delay		8.9			15.8			64.6				61.7
Approach LOS		A			B			E				E

Intersection Summary

Area Type: Other  
 Cycle Length: 144  
 Actuated Cycle Length: 144  
 Offset: 100 (69%), Referenced to phase 2:EBTL and 6:WBT, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.89  
 Intersection Signal Delay: 15.5  
 Intersection LOS: B  
 Intersection Capacity Utilization 84.0%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 118: Royal Forest /Royal Forest & Kingwood Dr.



2020 Left-Turn Prohibition  
121: US 59 SBFR

AM Peak Hour



Lane Group	NBT	NBR	SBU	SBL	SBT	NWL	NWR
Lane Configurations			⬇		⬆⬆⬆⬆		
Volume (vph)	0	0	104	0	918	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.81	1.00	1.00
Frt							
Flt Protected			0.950				
Satd. Flow (prot)	0	0	1770	0	7544	0	0
Flt Permitted			0.950				
Satd. Flow (perm)	0	0	1770	0	7544	0	0
Right Turn on Red		Yes		Yes		Yes	Yes
Satd. Flow (RTOR)							
Link Speed (mph)	55				55	30	
Link Distance (ft)	202				6181	296	
Travel Time (s)	2.5				76.6	6.7	
Lane Group Flow (vph)	0	0	128	0	1128	0	0
Turn Type			Perm		NA		
Protected Phases					6		
Permitted Phases			6				
Minimum Split (s)			22.0		22.0		
Total Split (s)			22.0		22.0		
Total Split (%)			100.0%		100.0%		
Maximum Green (s)			16.0		16.0		
Yellow Time (s)			4.0		4.0		
All-Red Time (s)			2.0		2.0		
Total Lost Time (s)			6.0		6.0		
Lead/Lag							
Lead-Lag Optimize?							
Walk Time (s)			5.0		5.0		
Flash Dont Walk (s)			11.0		11.0		
Pedestrian Calls (#/hr)			0		0		
Act Effect Green (s)			22.0		22.0		
Actuated g/C Ratio			1.00		1.00		
v/c Ratio			0.07		0.15		
Control Delay			0.1		0.0		
Queue Delay			0.0		0.0		
Total Delay			0.1		0.0		
LOS			A		A		
Approach Delay					0.0		
Approach LOS					A		

Intersection Summary

Area Type:	Other
Cycle Length:	22
Actuated Cycle Length:	22
Offset:	0 (0%), Referenced to phase 2: and 6:SBTU, Start of Green
Control Type:	Pretimed
Maximum v/c Ratio:	0.15
Intersection Signal Delay:	0.0
Intersection LOS:	A
Intersection Capacity Utilization:	46.0%
ICU Level of Service:	A

2020 Left-Turn Prohibition  
121: US 59 SBFR

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AM Peak Hour

Analysis Period (min) 15

Splits and Phases: 121: US 59 SBFR



2020 Left-Turn Prohibition  
122: US 59 NBFR

AM Peak Hour



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	104	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.91	1.00	1.00
Frt						
Flt Protected	0.950					
Satd. Flow (prot)	1770	0	0	5085	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	1770	0	0	5085	0	0
Right Turn on Red	Yes	Yes				Yes
Satd. Flow (RTOR)	1091					
Link Speed (mph)	30			55	55	
Link Distance (ft)	296			199	6172	
Travel Time (s)	6.7			2.5	76.5	
Lane Group Flow (vph)	128	0	0	0	0	0
Turn Type	NA					
Protected Phases	4			2		
Permitted Phases						
Minimum Split (s)	22.0			22.0		
Total Split (s)	22.0			22.0		
Total Split (%)	50.0%			50.0%		
Maximum Green (s)	16.0			16.0		
Yellow Time (s)	4.0			4.0		
All-Red Time (s)	2.0			2.0		
Total Lost Time (s)	6.0			6.0		
Lead/Lag						
Lead-Lag Optimize?						
Walk Time (s)	5.0			5.0		
Flash Dont Walk (s)	11.0			11.0		
Pedestrian Calls (#/hr)	0			0		
Act Effct Green (s)	16.0					
Actuated g/C Ratio	0.36					
v/c Ratio	0.10					
Control Delay	0.1					
Queue Delay	0.0					
Total Delay	0.1					
LOS	A					
Approach Delay	0.1					
Approach LOS	A					

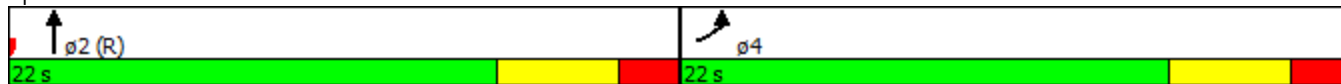
Intersection Summary

Area Type:	Other
Cycle Length:	44
Actuated Cycle Length:	44
Offset:	0 (0%), Referenced to phase 2:NBT and 6:, Start of Green
Control Type:	Pretimed
Maximum v/c Ratio:	0.10
Intersection Signal Delay:	0.1
Intersection Capacity Utilization	19.8%
Intersection LOS:	A
ICU Level of Service	A



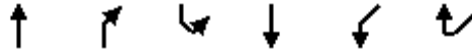
Analysis Period (min) 15

Splits and Phases: 122: US 59 NBFR



2020 Left-Turn Prohibition  
123: US 59 SBFR

AM Peak Hour



Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations				↑↑↑	↘	
Volume (vph)	0	0	0	1888	317	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.91	1.00	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	0	0	5085	1770	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	0	0	5085	1770	0
Right Turn on Red		Yes			Yes	Yes
Satd. Flow (RTOR)						
Link Speed (mph)	55			55	30	
Link Distance (ft)	6715			184	304	
Travel Time (s)	83.2			2.3	6.9	
Lane Group Flow (vph)	0	0	0	2319	389	0
Turn Type				NA	NA	
Protected Phases				6	8	
Permitted Phases						
Minimum Split (s)				22.0	22.0	
Total Split (s)				22.0	22.0	
Total Split (%)				50.0%	50.0%	
Maximum Green (s)				16.0	16.0	
Yellow Time (s)				4.0	4.0	
All-Red Time (s)				2.0	2.0	
Total Lost Time (s)				6.0	6.0	
Lead/Lag						
Lead-Lag Optimize?						
Walk Time (s)				5.0	5.0	
Flash Dont Walk (s)				11.0	11.0	
Pedestrian Calls (#/hr)				0	0	
Act Effect Green (s)				16.0	16.0	
Actuated g/C Ratio				0.36	0.36	
v/c Ratio				1.25	0.60	
Control Delay				137.8	16.3	
Queue Delay				0.9	0.0	
Total Delay				138.7	16.3	
LOS				F	B	
Approach Delay				138.7	16.3	
Approach LOS				F	B	

Intersection Summary

Area Type:	Other
Cycle Length:	44
Actuated Cycle Length:	44
Offset:	0 (0%), Referenced to phase 2: and 6:SBT, Start of Green
Control Type:	Pretimed
Maximum v/c Ratio:	1.25
Intersection Signal Delay:	121.1
Intersection LOS:	F
Intersection Capacity Utilization:	62.2%
ICU Level of Service:	B

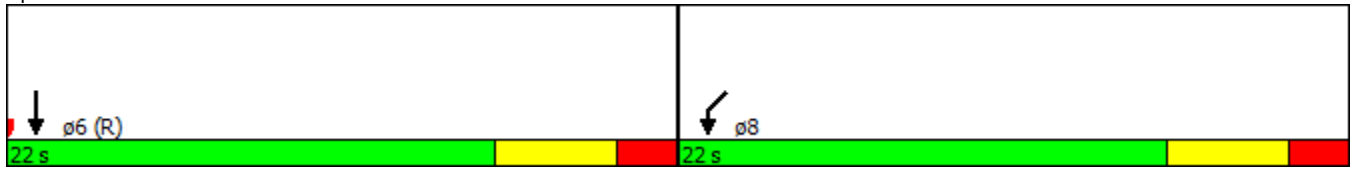
2020 Left-Turn Prohibition  
123: US 59 SBFR

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AM Peak Hour

Analysis Period (min) 15

Splits and Phases: 123: US 59 SBFR



2020 Left-Turn Prohibition  
124: US 59 NBFR

AM Peak Hour



Lane Group	NBU	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations	<b>A</b>		<b>B</b>				
Volume (vph)	317	0	1002	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.76	1.00	1.00	1.00	1.00
Frt							
Flt Protected	0.950						
Satd. Flow (prot)	1770	0	8494	0	0	0	0
Flt Permitted	0.950						
Satd. Flow (perm)	1770	0	8494	0	0	0	0
Right Turn on Red		Yes			Yes	Yes	Yes
Satd. Flow (RTOR)							
Link Speed (mph)			55	55		30	
Link Distance (ft)			423	180		304	
Travel Time (s)			5.2	2.2		6.9	
Lane Group Flow (vph)	389	0	1231	0	0	0	0
Turn Type	Perm		NA				
Protected Phases			2				
Permitted Phases	2						
Minimum Split (s)	22.0		22.0				
Total Split (s)	22.0		22.0				
Total Split (%)	100.0%		100.0%				
Maximum Green (s)	16.0		16.0				
Yellow Time (s)	4.0		4.0				
All-Red Time (s)	2.0		2.0				
Total Lost Time (s)	6.0		6.0				
Lead/Lag							
Lead-Lag Optimize?							
Walk Time (s)	5.0		5.0				
Flash Dont Walk (s)	11.0		11.0				
Pedestrian Calls (#/hr)	0		0				
Act Effct Green (s)	22.0		22.0				
Actuated g/C Ratio	1.00		1.00				
v/c Ratio	0.22		0.14				
Control Delay	0.3		0.0				
Queue Delay	0.0		0.0				
Total Delay	0.3		0.0				
LOS	A		A				
Approach Delay			0.1				
Approach LOS			A				

Intersection Summary

Area Type:	Other
Cycle Length:	22
Actuated Cycle Length:	22
Offset:	0 (0%), Referenced to phase 2:NBTU and 6:, Start of Green
Control Type:	Pretimed
Maximum v/c Ratio:	0.22
Intersection Signal Delay:	0.1
Intersection Capacity Utilization	62.2%
Intersection LOS:	A
ICU Level of Service	B

2020 Left-Turn Prohibition  
124: US 59 NBFR

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AM Peak Hour

Analysis Period (min) 15

Splits and Phases: 124: US 59 NBFR



2020 Left-Turn Prohibition  
125: Chestnut Ridge Dr. & Kingwood Dr.

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	90	1676	107	64	10	0	0	29	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	150		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.991							0.895
Flt Protected				0.950				0.959				
Satd. Flow (prot)	0	0	0	1770	3507	0	0	1786	0	0	1667	0
Flt Permitted				0.950				0.959				
Satd. Flow (perm)	0	0	0	1770	3507	0	0	1786	0	0	1667	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					11							84
Link Speed (mph)		40			40			30				30
Link Distance (ft)		502			1926			98				368
Travel Time (s)		8.6			32.8			2.2				8.4
Lane Group Flow (vph)	0	0	0	114	2267	0	0	94	0	0	167	0
Number of Detectors				1	2		1	2				2
Detector Template				Left	Thru		Left	Thru				Thru
Leading Detector (ft)				20	100		20	100				100
Trailing Detector (ft)				0	0		0	0				0
Detector 1 Position(ft)				0	0		0	0				0
Detector 1 Size(ft)				20	6		20	6				6
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex				Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0				0.0
Detector 1 Queue (s)				0.0	0.0		0.0	0.0				0.0
Detector 1 Delay (s)				0.0	0.0		0.0	0.0				0.0
Detector 2 Position(ft)					94			94				94
Detector 2 Size(ft)					6			6				6
Detector 2 Type					Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0				0.0
Turn Type				Prot	NA		Split	NA				NA
Protected Phases				1	6		8	8				4
Permitted Phases												
Minimum Initial (s)				5.0	4.0		5.0	5.0				5.0
Minimum Split (s)				11.0	10.0		19.0	19.0				11.0
Total Split (s)				21.0	90.0		21.0	21.0				16.0
Total Split (%)				16.5%	70.9%		16.5%	16.5%				12.6%
Maximum Green (s)				15.0	84.0		15.0	15.0				10.0
Yellow Time (s)				4.0	4.0		4.0	4.0				4.0
All-Red Time (s)				2.0	2.0		2.0	2.0				2.0
Total Lost Time (s)				6.0	6.0			6.0				6.0
Lead/Lag				Lag			Lag	Lag				Lead
Lead-Lag Optimize?				Yes			Yes	Yes				Yes
Vehicle Extension (s)				3.0	3.0		3.0	3.0				3.0
Recall Mode				None	C-Max		None	None				None

2020 Left-Turn Prohibition  
 125: Chestnut Ridge Dr. & Kingwood Dr.

AM Peak Hour

Lane Group	ø2
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	2
Permitted Phases	
Minimum Initial (s)	4.0
Minimum Split (s)	20.0
Total Split (s)	69.0
Total Split (%)	54%
Maximum Green (s)	63.0
Yellow Time (s)	4.0
All-Red Time (s)	2.0
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	C-Max

2020 Left-Turn Prohibition  
125: Chestnut Ridge Dr. & Kingwood Dr.

AM Peak Hour

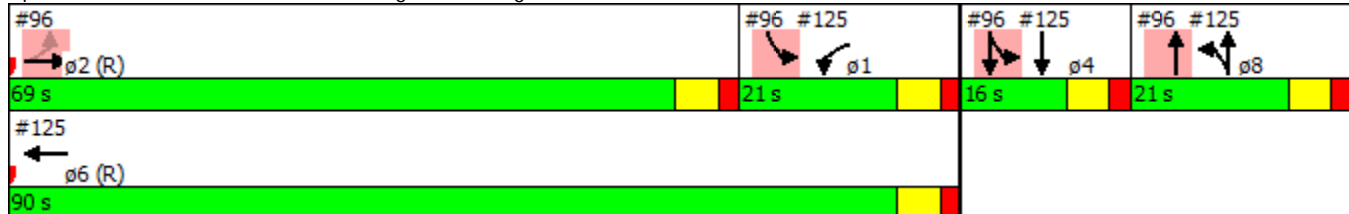


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)							6.0	6.0				
Flash Dont Walk (s)							7.0	7.0				
Pedestrian Calls (#/hr)							0	0				
Act Effect Green (s)				15.0	85.4			14.3			9.3	
Actuated g/C Ratio				0.12	0.67			0.11			0.07	
v/c Ratio				0.55	0.96			0.47			0.83	
Control Delay				63.4	31.4			19.8			61.3	
Queue Delay				0.0	0.0			0.0			0.0	
Total Delay				63.4	31.4			19.8			61.3	
LOS				E	C			B			E	
Approach Delay					32.9			19.8			61.3	
Approach LOS					C			B			E	

Intersection Summary

Area Type:	Other
Cycle Length:	127
Actuated Cycle Length:	127
Offset:	20 (16%), Referenced to phase 2:EBTL and 6:, Start of Green
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.96
Intersection Signal Delay:	34.2
Intersection LOS:	C
Intersection Capacity Utilization	87.1%
ICU Level of Service	E
Analysis Period (min)	15

Splits and Phases: 125: Chestnut Ridge Dr. & Kingwood Dr.





2020 Left-Turn Prohibition  
125: Chestnut Ridge Dr. & Kingwood Dr.

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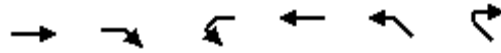
AM Peak Hour

Lane Group	ø2
Walk Time (s)	4.0
Flash Dont Walk (s)	10.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

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2020 Left-Turn Prohibition  
126: Kingwood Dr.

AM Peak Hour



Lane Group	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations	↑↑			↑↑		
Volume (vph)	832	0	0	1842	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	3539	0	0	3539	0	0
Flt Permitted						
Satd. Flow (perm)	3539	0	0	3539	0	0
Link Speed (mph)	40			40	40	
Link Distance (ft)	1032			502	532	
Travel Time (s)	17.6			8.6	9.1	
Lane Group Flow (vph)	1022	0	0	2262	0	0
Sign Control	Free			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	60.9% ICU Level of Service B
Analysis Period (min)	15

2020 Left-Turn Prohibition  
128: Green Oak Dr. & Kingwood Dr.

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	72	1718	413	79	75	0	0	112	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	150		150	0		0	0		0
Storage Lanes	0		0	1		1	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt						0.850						0.959
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	0	0	1770	3539	1583	1770	1863	0	0	3394	0
Flt Permitted				0.950			0.950					
Satd. Flow (perm)	0	0	0	1770	3539	1583	1770	1863	0	0	3394	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						303						31
Link Speed (mph)		40			40			30				30
Link Distance (ft)		558			1500			89				282
Travel Time (s)		9.5			25.6			2.0				6.4
Lane Group Flow (vph)	0	0	0	92	2185	525	100	95	0	0	195	0
Number of Detectors				1	2	1	1	2				2
Detector Template				Left	Thru	Right	Left	Thru				Thru
Leading Detector (ft)				20	100	20	20	100				100
Trailing Detector (ft)				0	0	0	0	0				0
Detector 1 Position(ft)				0	0	0	0	0				0
Detector 1 Size(ft)				20	6	20	20	6				6
Detector 1 Type				Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0	0.0	0.0	0.0				0.0
Detector 1 Queue (s)				0.0	0.0	0.0	0.0	0.0				0.0
Detector 1 Delay (s)				0.0	0.0	0.0	0.0	0.0				0.0
Detector 2 Position(ft)					94			94				94
Detector 2 Size(ft)					6			6				6
Detector 2 Type					Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0				0.0
Turn Type				Prot	NA	Perm	Split	NA				NA
Protected Phases				1	6		8	8				4
Permitted Phases						6						
Minimum Initial (s)				5.0	4.0	4.0	5.0	5.0				5.0
Minimum Split (s)				11.0	10.0	10.0	19.0	19.0				11.0
Total Split (s)				18.0	99.0	99.0	19.0	19.0				13.0
Total Split (%)				13.7%	75.6%	75.6%	14.5%	14.5%				9.9%
Maximum Green (s)				12.0	93.0	93.0	13.0	13.0				7.0
Yellow Time (s)				4.0	4.0	4.0	4.0	4.0				4.0
All-Red Time (s)				2.0	2.0	2.0	2.0	2.0				2.0
Total Lost Time (s)				6.0	6.0	6.0	6.0	6.0				6.0
Lead/Lag				Lag			Lag	Lag				Lead
Lead-Lag Optimize?				Yes			Yes	Yes				Yes
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0				3.0
Recall Mode				None	C-Max	C-Max	None	None				None

2020 Left-Turn Prohibition  
 128: Green Oak Dr. & Kingwood Dr.

AM Peak Hour

Lane Group	ø2
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	2
Permitted Phases	
Minimum Initial (s)	4.0
Minimum Split (s)	20.0
Total Split (s)	81.0
Total Split (%)	62%
Maximum Green (s)	75.0
Yellow Time (s)	4.0
All-Red Time (s)	2.0
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	C-Max

2020 Left-Turn Prohibition  
128: Green Oak Dr. & Kingwood Dr.

AM Peak Hour

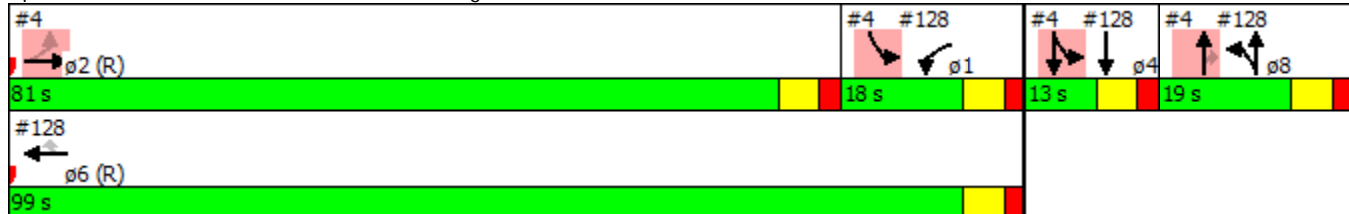


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)							6.0	6.0				
Flash Dont Walk (s)							7.0	7.0				
Pedestrian Calls (#/hr)							0	0				
Act Effect Green (s)				12.0	93.7	93.7	12.3	12.3			7.0	
Actuated g/C Ratio				0.09	0.72	0.72	0.09	0.09			0.05	
v/c Ratio				0.57	0.86	0.43	0.60	0.55			0.93	
Control Delay				71.4	18.9	4.1	37.1	33.9			97.5	
Queue Delay				13.8	0.0	0.0	0.0	0.0			5.7	
Total Delay				85.2	18.9	4.1	37.1	33.9			103.2	
LOS				F	B	A	D	C			F	
Approach Delay					18.3			35.5			103.2	
Approach LOS					B			D			F	

Intersection Summary

Area Type:	Other
Cycle Length:	131
Actuated Cycle Length:	131
Offset:	0 (0%), Referenced to phase 2:EBTL and 6:, Start of Green
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.93
Intersection Signal Delay:	24.5
Intersection LOS:	C
Intersection Capacity Utilization	109.7%
ICU Level of Service	H
Analysis Period (min)	15

Splits and Phases: 128: Green Oak Dr. & Kingwood Dr.



2020 Left-Turn Prohibition  
128: Green Oak Dr. & Kingwood Dr.

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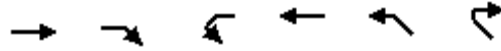
AM Peak Hour

Lane Group	ø2
Walk Time (s)	4.0
Flash Dont Walk (s)	10.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

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2020 Left-Turn Prohibition  
130: Kingwood Dr.

AM Peak Hour



Lane Group	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations		↑↑		↑↑		
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.88	1.00	0.95	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	3278	0	3539	0	0
Flt Permitted						
Satd. Flow (perm)	0	3278	0	3539	0	0
Link Speed (mph)	40			30	40	
Link Distance (ft)	355			392	393	
Travel Time (s)	6.1			8.9	6.7	
Lane Group Flow (vph)	0	0	0	0	0	0
Sign Control	Free			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	6.7% ICU Level of Service A
Analysis Period (min)	15

2020 Left-Turn Prohibition  
132: Kingwood Dr.

AM Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑				
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	3539	0	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	3539	0	0	0	0
Link Speed (mph)		40	40		30	
Link Distance (ft)		393	799		60	
Travel Time (s)		6.7	13.6		1.4	
Lane Group Flow (vph)	0	0	0	0	0	0
Sign Control		Free	Stop		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	6.7% ICU Level of Service A
Analysis Period (min)	15



2020 Left-Turn Prohibition  
133: Kingwood Dr.

AM Peak Hour



Lane Group	NBL	NBR	NET	NER	SWL	SWT
Lane Configurations		↑↑				↑↑
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.88	1.00	1.00	1.00	0.95
Frt						
Flt Protected						
Satd. Flow (prot)	0	3278	0	0	0	3539
Flt Permitted						
Satd. Flow (perm)	0	3278	0	0	0	3539
Link Speed (mph)	40		30			40
Link Distance (ft)	902		887			1898
Travel Time (s)	15.4		20.2			32.4
Lane Group Flow (vph)	0	0	0	0	0	0
Sign Control	Free		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	0.0% ICU Level of Service A
Analysis Period (min)	15

2020 Left-Turn Prohibition  
136: Lake Kingwood Trail & Kingwood Dr.

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	75	1409	89	40	6	0	0	88	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	150		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	0.95	0.95
Frt					0.991							0.988
Flt Protected				0.950				0.958				
Satd. Flow (prot)	0	0	0	1770	3507	0	0	3391	0	0	3497	0
Flt Permitted				0.950				0.958				
Satd. Flow (perm)	0	0	0	1770	3507	0	0	3391	0	0	3497	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					7							6
Link Speed (mph)		40			40			30				30
Link Distance (ft)		950			732			108				289
Travel Time (s)		16.2			12.5			2.5				6.6
Lane Group Flow (vph)	0	0	0	92	1840	0	0	56	0	0	117	0
Number of Detectors				1	2		1	2				2
Detector Template				Left	Thru		Left	Thru				Thru
Leading Detector (ft)				20	100		20	100				100
Trailing Detector (ft)				0	0		0	0				0
Detector 1 Position(ft)				0	0		0	0				0
Detector 1 Size(ft)				20	6		20	6				6
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex				Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0				0.0
Detector 1 Queue (s)				0.0	0.0		0.0	0.0				0.0
Detector 1 Delay (s)				0.0	0.0		0.0	0.0				0.0
Detector 2 Position(ft)					94			94				94
Detector 2 Size(ft)					6			6				6
Detector 2 Type					Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0				0.0
Turn Type				Prot	NA		Split	NA				NA
Protected Phases				1	6		8	8				4
Permitted Phases												
Minimum Initial (s)				5.0	4.0		5.0	5.0				5.0
Minimum Split (s)				11.0	10.0		19.0	19.0				11.0
Total Split (s)				24.0	60.0		30.0	30.0				30.0
Total Split (%)				20.0%	50.0%		25.0%	25.0%				25.0%
Maximum Green (s)				18.0	54.0		24.0	24.0				24.0
Yellow Time (s)				4.0	4.0		4.0	4.0				4.0
All-Red Time (s)				2.0	2.0		2.0	2.0				2.0
Total Lost Time (s)				6.0	6.0			6.0				6.0
Lead/Lag				Lag			Lag	Lag				Lead
Lead-Lag Optimize?				Yes			Yes	Yes				Yes
Vehicle Extension (s)				3.0	3.0		3.0	3.0				3.0
Recall Mode				None	C-Max		None	None				None

2020 Left-Turn Prohibition  
 136: Lake Kingwood Trail & Kingwood Dr.

AM Peak Hour

Lane Group	ø2
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	2
Permitted Phases	
Minimum Initial (s)	4.0
Minimum Split (s)	20.0
Total Split (s)	36.0
Total Split (%)	30%
Maximum Green (s)	30.0
Yellow Time (s)	4.0
All-Red Time (s)	2.0
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	C-Max

2020 Left-Turn Prohibition  
 136: Lake Kingwood Trail & Kingwood Dr.

AM Peak Hour

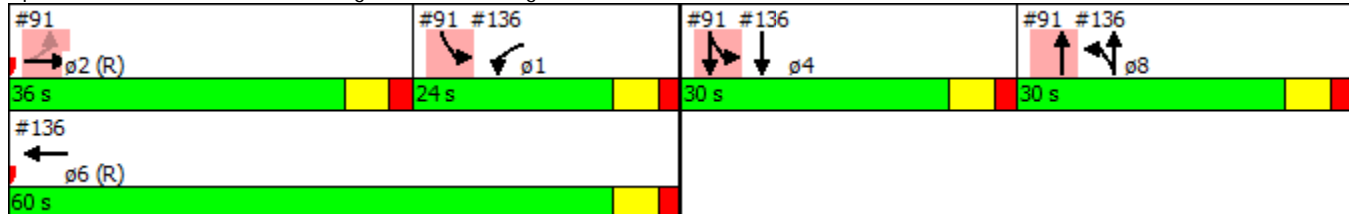


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)							6.0	6.0				
Flash Dont Walk (s)							7.0	7.0				
Pedestrian Calls (#/hr)							0	0				
Act Effect Green (s)				18.0	85.3			7.5			9.2	
Actuated g/C Ratio				0.15	0.71			0.06			0.08	
v/c Ratio				0.35	0.74			0.26			0.43	
Control Delay				49.9	13.4			20.2			54.6	
Queue Delay				0.0	0.0			0.0			0.0	
Total Delay				49.9	13.4			20.2			54.6	
LOS				D	B			C			D	
Approach Delay					15.1			20.2			54.6	
Approach LOS					B			C			D	

Intersection Summary

Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.74  
 Intersection Signal Delay: 17.4  
 Intersection LOS: B  
 Intersection Capacity Utilization 66.4%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 136: Lake Kingwood Trail & Kingwood Dr.



2020 Left-Turn Prohibition  
136: Lake Kingwood Trail & Kingwood Dr.

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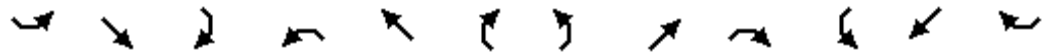
AM Peak Hour

Lane Group	ø2
Walk Time (s)	4.0
Flash Dont Walk (s)	10.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

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2020 Left-Turn Prohibition  
139: Kingwood Dr. & Kingwood High School

AM Peak Hour



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑	↑		↑						↑↑	↑
Volume (vph)	0	94	33	1	73	0	0	0	0	0	1525	354
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		150
Storage Lanes	0		1	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Frt			0.850									0.850
Flt Protected					0.999							
Satd. Flow (prot)	0	3539	1583	0	1861	0	0	0	0	0	3539	1583
Flt Permitted					0.999							
Satd. Flow (perm)	0	3539	1583	0	1861	0	0	0	0	0	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			158									185
Link Speed (mph)		30			30			40			30	
Link Distance (ft)		317			110			202			887	
Travel Time (s)		7.2			2.5			3.4			20.2	
Lane Group Flow (vph)	0	115	41	0	91	0	0	0	0	0	1873	435
Turn Type		NA	Perm	Prot	NA						NA	Perm
Protected Phases		4		15	8						6	
Permitted Phases			4									6
Minimum Split (s)		11.0	11.0		11.0						10.0	10.0
Total Split (s)		13.0	13.0		12.0						91.0	91.0
Total Split (%)		9.0%	9.0%		8.3%						62.8%	62.8%
Maximum Green (s)		7.0	7.0		6.0						85.0	85.0
Yellow Time (s)		4.0	4.0		4.0						4.0	4.0
All-Red Time (s)		2.0	2.0		2.0						2.0	2.0
Total Lost Time (s)		6.0	6.0		6.0						6.0	6.0
Lead/Lag		Lead	Lead		Lag						Lag	Lag
Lead-Lag Optimize?		Yes	Yes		Yes						Yes	Yes
Act Effect Green (s)		7.0	7.0		17.0						85.0	85.0
Actuated g/C Ratio		0.05	0.05		0.12						0.59	0.59
v/c Ratio		0.68	0.18		0.42						0.90	0.43
Control Delay		87.5	1.8		122.8						33.9	10.4
Queue Delay		0.6	0.0		126.6						0.0	0.0
Total Delay		88.1	1.8		249.4						33.9	10.4
LOS		F	A		F						C	B
Approach Delay		65.4			249.4						29.4	
Approach LOS		E			F						C	

Intersection Summary

Area Type:	Other
Cycle Length:	145
Actuated Cycle Length:	145
Offset:	0 (0%), Referenced to phase 2:NET and 6:, Start of Green
Control Type:	Pretimed
Maximum v/c Ratio:	0.90
Intersection Signal Delay:	39.5
Intersection LOS:	D
Intersection Capacity Utilization:	71.2%
ICU Level of Service:	C

Lane Group	ø2	ø5	ø15
Lane Configurations			
Volume (vph)			
Ideal Flow (vphpl)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Lane Util. Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	2	5	15
Permitted Phases			
Minimum Split (s)	10.0	11.0	11.0
Total Split (s)	109.0	18.0	11.0
Total Split (%)	75%	12%	8%
Maximum Green (s)	103.0	12.0	5.0
Yellow Time (s)	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0
Total Lost Time (s)			
Lead/Lag		Lead	
Lead-Lag Optimize?		Yes	
Act Effect Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Intersection Summary			

2020 Left-Turn Prohibition  
 139: Kingwood Dr. & Kingwood High School

AM Peak Hour

Analysis Period (min) 15

Splits and Phases: 139: Kingwood Dr. & Kingwood High School





2020 Left-Turn Prohibition  
141: Lake Houston Parkway & Kingwood Dr.

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	452	331	154	791	289	450	642	60	169	807	265
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	3614	3539	1583	3433	3539	1583	3433	3539	1583	3433	3539	1583
Flt Permitted				0.950			0.950			0.950		
Satd. Flow (perm)	3614	3539	1583	3433	3539	1583	3433	3539	1583	3433	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			316			188			114			159
Link Speed (mph)		40			40			40				40
Link Distance (ft)		513			546			450				568
Travel Time (s)		8.7			9.3			7.7				9.7
Lane Group Flow (vph)	0	555	407	189	972	355	553	789	74	208	991	325
Turn Type	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		2		1	6		3	8		7		4
Permitted Phases	2		2			6			8			4
Minimum Split (s)	22.0	22.0	22.0	10.0	22.0	22.0	10.0	22.0	22.0	10.0	22.0	22.0
Total Split (s)	39.0	39.0	39.0	18.0	57.0	57.0	35.0	68.0	68.0	19.0	52.0	52.0
Total Split (%)	27.1%	27.1%	27.1%	12.5%	39.6%	39.6%	24.3%	47.2%	47.2%	13.2%	36.1%	36.1%
Maximum Green (s)	33.0	33.0	33.0	12.0	51.0	51.0	29.0	62.0	62.0	13.0	46.0	46.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)	5.0	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0		0	0		0	0
Act Effect Green (s)		33.0	33.0	12.0	51.0	51.0	29.0	62.0	62.0	13.0	46.0	46.0
Actuated g/C Ratio		0.23	0.23	0.08	0.35	0.35	0.20	0.43	0.43	0.09	0.32	0.32
v/c Ratio		0.68	0.67	0.66	0.78	0.52	0.80	0.52	0.10	0.67	0.88	0.53
Control Delay		55.8	17.7	76.8	42.3	17.0	64.5	31.6	1.2	75.0	56.3	23.2
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		55.8	17.7	76.8	42.3	17.0	64.5	31.6	1.2	75.0	56.3	23.2
LOS		E	B	E	D	B	E	C	A	E	E	C
Approach Delay		39.7			40.7			42.9			51.8	
Approach LOS		D			D			D			D	

**Intersection Summary**  
 Area Type: Other  
 Cycle Length: 144  
 Actuated Cycle Length: 144  
 Offset: 67 (47%), Referenced to phase 2:EBTL and 6:WBT, Start of Green  
 Control Type: Pretimed

2020 Left-Turn Prohibition  
141: Lake Houston Parkway & Kingwood Dr.

AM Peak Hour

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 44.2

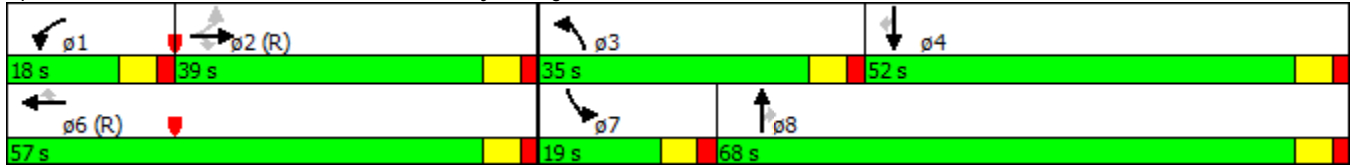
Intersection LOS: D

Intersection Capacity Utilization 87.8%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 141: Lake Houston Parkway & Kingwood Dr.



2020 Left-Turn Prohibition  
144: Forest Garden Dr. & Kingwood Dr.

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	124	437	44	10	1006	80	107	44	16	78	30	239
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.986			0.989			0.985			0.897	
Flt Protected	0.950			0.950				0.969			0.989	
Satd. Flow (prot)	1770	3490	0	1770	3500	0	0	3378	0	0	3140	0
Flt Permitted	0.150			0.429				0.617			0.824	
Satd. Flow (perm)	279	3490	0	799	3500	0	0	2151	0	0	2616	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		27			21			15			74	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		821			549			426			481	
Travel Time (s)		14.0			9.4			9.7			10.9	
Lane Group Flow (vph)	152	591	0	12	1334	0	0	205	0	0	427	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Minimum Split (s)	22.0	22.0		22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	50.0	50.0		50.0	50.0		22.0	22.0		22.0	22.0	
Total Split (%)	69.4%	69.4%		69.4%	69.4%		30.6%	30.6%		30.6%	30.6%	
Maximum Green (s)	44.0	44.0		44.0	44.0		16.0	16.0		16.0	16.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)	44.0	44.0		44.0	44.0		16.0	16.0		16.0	16.0	
Actuated g/C Ratio	0.61	0.61		0.61	0.61		0.22	0.22		0.22	0.22	
v/c Ratio	0.89	0.28		0.02	0.62		0.42	0.42		0.42	0.67	
Control Delay	87.8	14.6		5.7	10.2		25.3	25.3		25.3	26.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	87.8	14.6		5.7	10.2		25.3	25.3		25.3	26.9	
LOS	F	B		A	B		C	C		C	C	
Approach Delay		29.6			10.2		25.3	25.3		25.3	26.9	
Approach LOS		C			B		C	C		C	C	

Intersection Summary

Area Type: Other  
 Cycle Length: 72  
 Actuated Cycle Length: 72  
 Offset: 22 (31%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Control Type: Pretimed

2020 Left-Turn Prohibition  
144: Forest Garden Dr. & Kingwood Dr.

AM Peak Hour

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 19.2

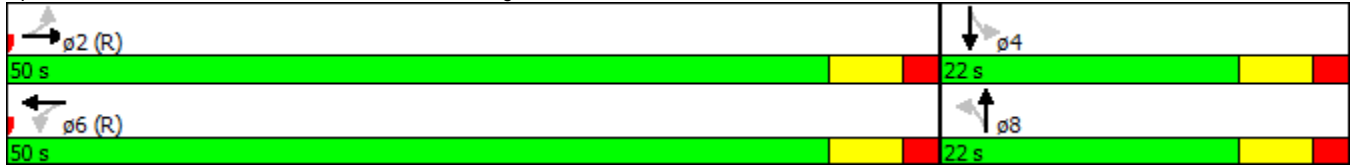
Intersection LOS: B

Intersection Capacity Utilization 81.0%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 144: Forest Garden Dr. & Kingwood Dr.



2020 Left-Turn Prohibition  
 146: Northpark Dr. & Woodridge Pkwy

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑↑		↑	↑			↑	↑
Volume (vph)	0	0	0	82	1875	49	122	40	0	0	10	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.996							0.850
Flt Protected					0.998		0.950					
Satd. Flow (prot)	0	0	0	0	3518	0	1770	1863	0	0	1863	1583
Flt Permitted					0.998		0.950					
Satd. Flow (perm)	0	0	0	0	3518	0	1770	1863	0	0	1863	1583
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		2961			325			125			384	
Travel Time (s)		44.9			4.9			2.8			8.7	
Lane Group Flow (vph)	0	0	0	0	2464	0	150	49	0	0	12	12
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other  
 Control Type: Unsignalized  
 Intersection Capacity Utilization 112.9% ICU Level of Service H  
 Analysis Period (min) 15

2020 Left-Turn Prohibition  
147: Timber Shade Dr. & Kingwood Dr.

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	11	994	11	36	38	0	0	16	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	150		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	0.95	0.95
Frt					0.998							0.875
Flt Protected				0.950				0.976				
Satd. Flow (prot)	0	0	0	1770	3532	0	0	3454	0	0	3097	0
Flt Permitted				0.950				0.976				
Satd. Flow (perm)	0	0	0	1770	3532	0	0	3454	0	0	3097	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					1							99
Link Speed (mph)		40			40			30				30
Link Distance (ft)		839			1628			83				459
Travel Time (s)		14.3			27.8			1.9				10.4
Lane Group Flow (vph)	0	0	0	14	1235	0	0	91	0	0	119	0
Turn Type				Prot	NA		Prot	NA			NA	
Protected Phases				1	6		15	8			4	
Permitted Phases												
Minimum Split (s)				11.0	10.0			19.0			11.0	
Total Split (s)				13.0	91.0			20.0			16.0	
Total Split (%)				9.0%	63.2%			13.9%			11.1%	
Maximum Green (s)				7.0	85.0			14.0			10.0	
Yellow Time (s)				4.0	4.0			4.0			4.0	
All-Red Time (s)				2.0	2.0			2.0			2.0	
Total Lost Time (s)				6.0	6.0			6.0			6.0	
Lead/Lag				Lag				Lag			Lead	
Lead-Lag Optimize?				Yes				Yes			Yes	
Walk Time (s)								6.0				
Flash Dont Walk (s)								7.0				
Pedestrian Calls (#/hr)								0				
Act Effect Green (s)				7.0	85.0			31.0			10.0	
Actuated g/C Ratio				0.05	0.59			0.22			0.07	
v/c Ratio				0.16	0.59			0.12			0.39	
Control Delay				51.6	9.7			4.7			20.7	
Queue Delay				0.0	0.0			0.0			0.0	
Total Delay				51.6	9.7			4.7			20.7	
LOS				D	A			A			C	
Approach Delay					10.2			4.7			20.7	
Approach LOS					B			A			C	

Intersection Summary

Area Type: Other  
 Cycle Length: 144  
 Actuated Cycle Length: 144  
 Offset: 12 (8%), Referenced to phase 2:EBT and 6:, Start of Green  
 Control Type: Pretimed

2020 Left-Turn Prohibition  
 147: Timber Shade Dr. & Kingwood Dr.

AM Peak Hour

Lane Group	ø2	ø15
Lane Configurations		
Volume (vph)		
Ideal Flow (vphpl)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	2	15
Permitted Phases		
Minimum Split (s)	20.0	11.0
Total Split (s)	78.0	17.0
Total Split (%)	54%	12%
Maximum Green (s)	72.0	11.0
Yellow Time (s)	4.0	4.0
All-Red Time (s)	2.0	2.0
Total Lost Time (s)		
Lead/Lag	Lead	
Lead-Lag Optimize?	Yes	
Walk Time (s)	4.0	
Flash Dont Walk (s)	10.0	
Pedestrian Calls (#/hr)	0	
Act Effect Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
<b>Intersection Summary</b>		

2020 Left-Turn Prohibition  
 147: Timber Shade Dr. & Kingwood Dr.

AM Peak Hour

Maximum v/c Ratio: 0.59

Intersection Signal Delay: 10.7

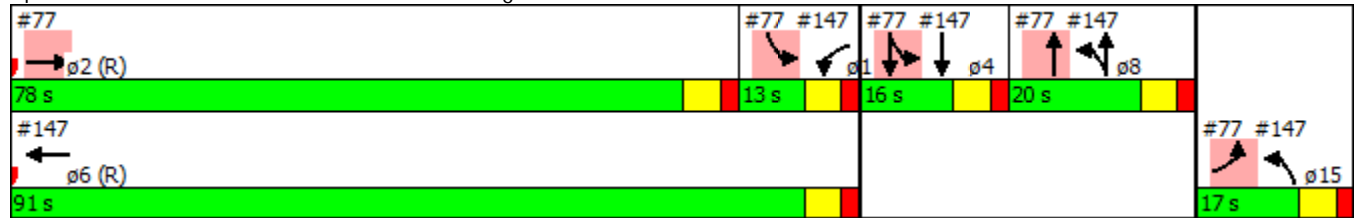
Intersection LOS: B

Intersection Capacity Utilization 50.4%

ICU Level of Service A

Analysis Period (min) 15

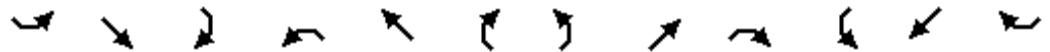
Splits and Phases: 147: Timber Shade Dr. & Kingwood Dr.





2020 Left-Turn Prohibition  
149: Kingwood Dr. & Willow Terrace

AM Peak Hour



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↓		↔	↔					↔	↑↓	
Volume (vph)	0	23	52	424	40	0	0	0	0	32	574	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	150		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt		0.896									0.996	
Flt Protected				0.950	0.960					0.950		
Satd. Flow (prot)	0	3171	0	1681	1699	0	0	0	0	1770	3525	0
Flt Permitted				0.950	0.960					0.950		
Satd. Flow (perm)	0	3171	0	1681	1699	0	0	0	0	1770	3525	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		64										2
Link Speed (mph)		30			30			40				40
Link Distance (ft)		359			105			1388				466
Travel Time (s)		8.2			2.4			23.7				7.9
Lane Group Flow (vph)	0	92	0	281	289	0	0	0	0	39	726	0
Turn Type		NA		Prot	NA					Prot	NA	
Protected Phases		4		15	8					1	6	
Permitted Phases												
Minimum Split (s)		11.0			19.0					11.0	10.0	
Total Split (s)		14.0			42.0					15.0	63.0	
Total Split (%)		9.7%			29.2%					10.4%	43.8%	
Maximum Green (s)		8.0			36.0					9.0	57.0	
Yellow Time (s)		4.0			4.0					4.0	4.0	
All-Red Time (s)		2.0			2.0					2.0	2.0	
Total Lost Time (s)		6.0			6.0					6.0	6.0	
Lead/Lag		Lead			Lag					Lag		
Lead-Lag Optimize?		Yes			Yes					Yes		
Walk Time (s)					6.0							
Flash Dont Walk (s)					7.0							
Pedestrian Calls (#/hr)					0							
Act Effect Green (s)		8.0		61.0	61.0					9.0	57.0	
Actuated g/C Ratio		0.06		0.42	0.42					0.06	0.40	
v/c Ratio		0.39		0.39	0.40					0.35	0.52	
Control Delay		29.5		1.7	1.8					79.0	39.0	
Queue Delay		0.0		1.5	1.5					0.0	0.0	
Total Delay		29.5		3.2	3.2					79.0	39.0	
LOS		C		A	A					E	D	
Approach Delay		29.5			3.2						41.0	
Approach LOS		C			A						D	

Intersection Summary

Area Type:	Other
Cycle Length:	144
Actuated Cycle Length:	144
Offset:	12 (8%), Referenced to phase 2:NBT and 6:, Start of Green
Control Type:	Pretimed

2020 Left-Turn Prohibition  
 149: Kingwood Dr. & Willow Terrace

AM Peak Hour

Lane Group	ø2	ø15
Lane Configurations		
Volume (vph)		
Ideal Flow (vphpl)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	2	15
Permitted Phases		
Minimum Split (s)	20.0	11.0
Total Split (s)	48.0	25.0
Total Split (%)	33%	17%
Maximum Green (s)	42.0	19.0
Yellow Time (s)	4.0	4.0
All-Red Time (s)	2.0	2.0
Total Lost Time (s)		
Lead/Lag	Lead	
Lead-Lag Optimize?	Yes	
Walk Time (s)	4.0	
Flash Dont Walk (s)	10.0	
Pedestrian Calls (#/hr)	0	
Act Effect Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Intersection Summary		

2020 Left-Turn Prohibition  
 149: Kingwood Dr. & Willow Terrace

AM Peak Hour

Maximum v/c Ratio: 0.67

Intersection Signal Delay: 25.2

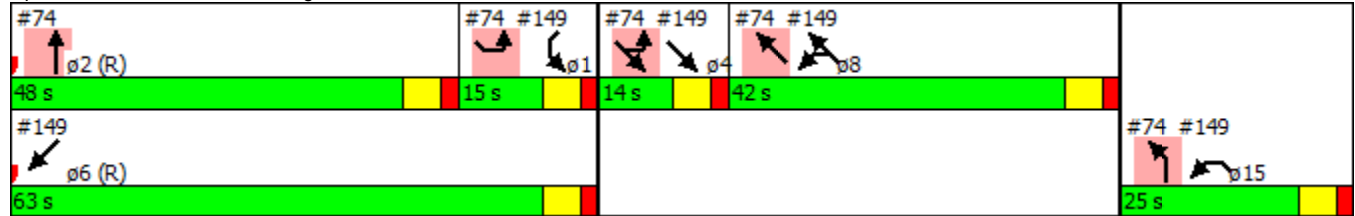
Intersection LOS: C

Intersection Capacity Utilization 49.7%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 149: Kingwood Dr. & Willow Terrace



2020 Left-Turn Prohibition  
151: Kingwood Dr. & High Valley

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↓		↔	↔						↑↓	
Volume (vph)	0	65	31	143	18	0	0	0	0	31	397	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.952										0.991
Flt Protected				0.950	0.963							0.997
Satd. Flow (prot)	0	3369	0	1681	1704	0	0	0	0	0	3497	0
Flt Permitted				0.950	0.963							0.997
Satd. Flow (perm)	0	3369	0	1681	1704	0	0	0	0	0	3497	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		38										7
Link Speed (mph)		30			30			40				40
Link Distance (ft)		302			93			1305				1436
Travel Time (s)		6.9			2.1			22.2				24.5
Lane Group Flow (vph)	0	118	0	99	99	0	0	0	0	0	559	0
Turn Type		NA		Prot	NA						Prot	NA
Protected Phases		4		15	8						1	6
Permitted Phases												
Minimum Split (s)		11.0			19.0					11.0	10.0	
Total Split (s)		17.0			28.0					16.0	83.0	
Total Split (%)		11.8%			19.4%					11.1%	57.6%	
Maximum Green (s)		11.0			22.0					10.0	77.0	
Yellow Time (s)		4.0			4.0					4.0	4.0	
All-Red Time (s)		2.0			2.0					2.0	2.0	
Total Lost Time (s)		6.0			6.0						6.0	
Lead/Lag		Lead			Lag						Lag	
Lead-Lag Optimize?		Yes			Yes						Yes	
Walk Time (s)					6.0							
Flash Dont Walk (s)					7.0							
Pedestrian Calls (#/hr)					0							
Act Effect Green (s)		11.0		38.0	38.0						77.0	
Actuated g/C Ratio		0.08		0.26	0.26						0.53	
v/c Ratio		0.40		0.22	0.22						0.54	
Control Delay		47.1		7.9	7.8						25.5	
Queue Delay		0.0		0.0	0.0						0.6	
Total Delay		47.2		7.9	7.8						26.0	
LOS		D		A	A						C	
Approach Delay		47.2			7.8						26.0	
Approach LOS		D			A						C	

Intersection Summary

Area Type:	Other
Cycle Length:	144
Actuated Cycle Length:	144
Offset:	90 (63%), Referenced to phase 2:NBT and 6:, Start of Green
Control Type:	Pretimed
Maximum v/c Ratio:	0.54
Intersection Signal Delay:	24.8
Intersection LOS:	C
Intersection Capacity Utilization:	53.4%
ICU Level of Service:	A

2020 Left-Turn Prohibition  
 151: Kingwood Dr. & High Valley

AM Peak Hour

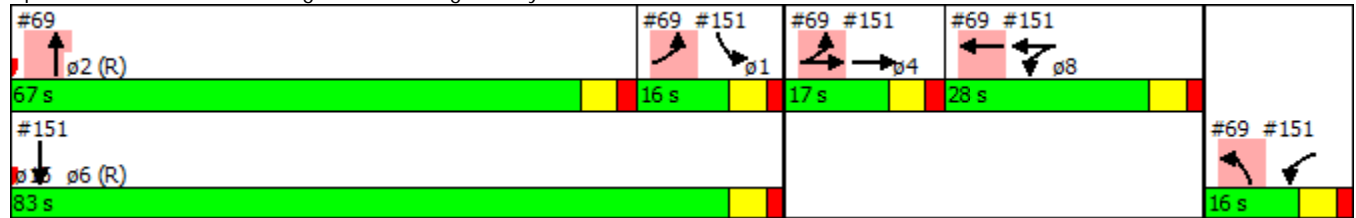
Lane Group	ø2	ø15
Lane Configurations		
Volume (vph)		
Ideal Flow (vphpl)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	2	15
Permitted Phases		
Minimum Split (s)	20.0	11.0
Total Split (s)	67.0	16.0
Total Split (%)	47%	11%
Maximum Green (s)	61.0	10.0
Yellow Time (s)	4.0	4.0
All-Red Time (s)	2.0	2.0
Total Lost Time (s)		
Lead/Lag	Lead	
Lead-Lag Optimize?	Yes	
Walk Time (s)	4.0	
Flash Dont Walk (s)	10.0	
Pedestrian Calls (#/hr)	0	
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Intersection Summary		

2020 Left-Turn Prohibition  
 151: Kingwood Dr. & High Valley

AM Peak Hour

Analysis Period (min) 15

Splits and Phases: 151: Kingwood Dr. & High Valley



2020 Left-Turn Prohibition  
154: Kingwood Dr. & Mills Branch

AM Peak Hour



Lane Group	EBL	EBR	NBL	NBR	NWL	NWR	SWL	SWR
Lane Configurations								
Volume (vph)	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt								
Flt Protected								
Satd. Flow (prot)	0	0	0	0	0	0	0	0
Flt Permitted								
Satd. Flow (perm)	0	0	0	0	0	0	0	0
Right Turn on Red	Yes		Yes			Yes		Yes
Satd. Flow (RTOR)								
Link Speed (mph)	30		40		30		40	
Link Distance (ft)	8307		1436		71		286	
Travel Time (s)	188.8		24.5		1.6		4.9	
Lane Group Flow (vph)	0	0	0	0	0	0	0	0
Turn Type								
Protected Phases								
Permitted Phases								
Minimum Split (s)								
Total Split (s)								
Total Split (%)								
Maximum Green (s)								
Yellow Time (s)								
All-Red Time (s)								
Total Lost Time (s)								
Lead/Lag								
Lead-Lag Optimize?								
Act Effect Green (s)								
Actuated g/C Ratio								
v/c Ratio								
Control Delay								
Queue Delay								
Total Delay								
LOS								
Approach Delay								
Approach LOS								
<b>Intersection Summary</b>								
Area Type:	Other							
Cycle Length:	3							
Actuated Cycle Length:	3							
Offset:	0 (0%), Referenced to phase 2: and 6:, Start of Green							
Control Type:	Pretimed							
Maximum v/c Ratio:	0.00							
Intersection Signal Delay:	0.0				Intersection LOS: A			
Intersection Capacity Utilization	0.0%				ICU Level of Service A			
Analysis Period (min)	15							

2020 Left-Turn Prohibition  
154: Kingwood Dr. & Mills Branch

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AM Peak Hour

Splits and Phases: 154: Kingwood Dr. & Mills Branch

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2020 Left-Turn Prohibition  
157: US 59 NBFR

AM Peak Hour



Lane Group	NBU	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations	<b>A</b>	<b>B</b>					
Volume (vph)	233	705	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.76	1.00	1.00	1.00	1.00	1.00
Frt							
Flt Protected	0.950						
Satd. Flow (prot)	1770	8494	0	0	0	0	0
Flt Permitted	0.950						
Satd. Flow (perm)	1770	8494	0	0	0	0	0
Link Speed (mph)		55			30	55	
Link Distance (ft)		6172			362	365	
Travel Time (s)		76.5			8.2	4.5	
Lane Group Flow (vph)	286	866	0	0	0	0	0
Sign Control		Free			Stop	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	33.0%
Analysis Period (min)	15
	ICU Level of Service A

2020 Left-Turn Prohibition  
159: Russel Palmer & Northpark Dr.

AM Peak Hour



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	ø2	ø4
Lane Configurations								
Volume (vph)	0	0	77	1865	126	0		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Storage Length (ft)		0	150		0	0		
Storage Lanes		0	1		1	0		
Taper Length (ft)			25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00		
Frt								
Flt Protected			0.950		0.950			
Satd. Flow (prot)	0	0	1770	3539	1770	0		
Flt Permitted			0.950		0.950			
Satd. Flow (perm)	0	0	1770	3539	1770	0		
Right Turn on Red		Yes				Yes		
Satd. Flow (RTOR)								
Link Speed (mph)	45			45	30			
Link Distance (ft)	128			2961	106			
Travel Time (s)	1.9			44.9	2.4			
Lane Group Flow (vph)	0	0	95	2291	155	0		
Number of Detectors			1	2	1			
Detector Template			Left	Thru	Left			
Leading Detector (ft)			20	100	20			
Trailing Detector (ft)			0	0	0			
Detector 1 Position(ft)			0	0	0			
Detector 1 Size(ft)			20	6	20			
Detector 1 Type			Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel								
Detector 1 Extend (s)			0.0	0.0	0.0			
Detector 1 Queue (s)			0.0	0.0	0.0			
Detector 1 Delay (s)			0.0	0.0	0.0			
Detector 2 Position(ft)				94				
Detector 2 Size(ft)				6				
Detector 2 Type				Cl+Ex				
Detector 2 Channel								
Detector 2 Extend (s)				0.0				
Turn Type								
			custom	NA	NA			
Protected Phases				6	8		2	4
Permitted Phases			1					
Minimum Initial (s)			5.0	15.0	5.0		15.0	5.0
Minimum Split (s)			11.3	21.3	11.6		21.3	11.3
Total Split (s)			21.0	116.0	28.0		95.0	28.0
Total Split (%)			14.6%	80.6%	19.4%		66%	19%
Maximum Green (s)			15.0	110.0	22.0		89.0	22.0
Yellow Time (s)			4.0	4.0	4.0		4.0	4.0
All-Red Time (s)			2.0	2.0	2.0		2.0	2.0
Total Lost Time (s)			6.0	6.0	6.0			
Lead/Lag								
			Lead				Lag	
Lead-Lag Optimize?			Yes				Yes	
Vehicle Extension (s)			3.0	3.0	3.0		3.0	3.0
Recall Mode			None	C-Max	Max		C-Max	None

2020 Left-Turn Prohibition  
 159: Russel Palmer & Northpark Dr.

AM Peak Hour



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	ø2	ø4
Act Effect Green (s)			12.4	110.0	22.0			
Actuated g/C Ratio			0.09	0.76	0.15			
v/c Ratio			0.62	0.85	0.57			
Control Delay			80.9	15.4	9.7			
Queue Delay			125.2	0.0	0.2			
Total Delay			206.1	15.4	9.9			
LOS			F	B	A			
Approach Delay				23.0	9.9			
Approach LOS				C	A			

Intersection Summary

Area Type:	Other
Cycle Length:	144
Actuated Cycle Length:	144
Offset:	0 (0%), Referenced to phase 2:EBT and 6:, Start of Green
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.85
Intersection Signal Delay:	22.2
Intersection LOS:	C
Intersection Capacity Utilization	76.1%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 159: Russel Palmer & Northpark Dr.

#159 ø1 21 s	#35 ø2 (R) 95 s	#35 ø4 28 s
#159 ø6 (R) 116 s		#35 #159 ø8 28 s

2020 Left-Turn Prohibition  
161: Northpark Dr.

AM Peak Hour

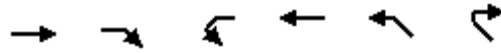


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕↑				
Volume (vph)	41	986	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt						
Flt Protected		0.998				
Satd. Flow (prot)	0	3532	0	0	0	0
Flt Permitted		0.998				
Satd. Flow (perm)	0	3532	0	0	0	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		2834	117		111	
Travel Time (s)		42.9	1.8		2.5	
Lane Group Flow (vph)	0	1261	0	0	0	0
Sign Control		Free	Stop		Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	97.9% ICU Level of Service F
Analysis Period (min)	15

2020 Left-Turn Prohibition  
162: Northpark Dr.

AM Peak Hour



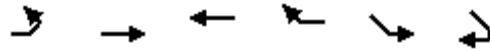
Lane Group	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations				↑↑	↑	
Volume (vph)	0	0	0	1891	41	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	0	0	3539	1770	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	0	0	3539	1770	0
Link Speed (mph)	45			45	30	
Link Distance (ft)	2834			128	111	
Travel Time (s)	42.9			1.9	2.5	
Lane Group Flow (vph)	0	0	0	2323	50	0
Sign Control	Free			Free	Yield	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	69.1% ICU Level of Service C
Analysis Period (min)	15

2020 Left-Turn Prohibition  
163: Northpark Dr.

AM Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑	↑↑			
Volume (vph)	0	764	1940	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	3539	3539	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	3539	3539	0	0	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		1422	944		1100	
Travel Time (s)		21.5	14.3		25.0	
Lane Group Flow (vph)	0	938	2383	0	0	0
Sign Control		Free	Free		Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	63.9%
Analysis Period (min)	15
	ICU Level of Service B

2020 Left-Turn Prohibition  
164: Northpark Dr.

AM Peak Hour




















Lane Group	WBL	WBR	NET	NER	SWL	SWT
Lane Configurations			↑↑			↑↑
Volume (vph)	0	0	360	0	0	561
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt						
Flt Protected						
Satd. Flow (prot)	0	0	3539	0	0	3539
Flt Permitted						
Satd. Flow (perm)	0	0	3539	0	0	3539
Link Speed (mph)	40		40			40
Link Distance (ft)	609		2651			576
Travel Time (s)	10.4		45.2			9.8
Lane Group Flow (vph)	0	0	442	0	0	689
Sign Control	Free		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	20.9%
Analysis Period (min)	15
	ICU Level of Service A

2020 Left-Turn Prohibition  
165: Northpark Dr. & Rock Springs

AM Peak Hour

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	44	25	0	0	96	17	76	250	34	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	150		0	0		0
Storage Lanes	1		0	0		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Fr <sub>t</sub>					0.977			0.982				
Fl <sub>t</sub> Protected	0.950						0.950					
Satd. Flow (prot)	1770	3539	0	0	3458	0	1770	3476	0	0	0	0
Fl <sub>t</sub> Permitted	0.950						0.950					
Satd. Flow (perm)	1770	3539	0	0	3458	0	1770	3476	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					12			10				
Link Speed (mph)		30			30			40				40
Link Distance (ft)		173			1130			609				1786
Travel Time (s)		3.9			25.7			10.4				30.4
Lane Group Flow (vph)	54	31	0	0	139	0	93	349	0	0	0	0
Number of Detectors	1	2			2		1	2				
Detector Template	Left	Thru			Thru		Left	Thru				
Leading Detector (ft)	20	100			100		20	100				
Trailing Detector (ft)	0	0			0		0	0				
Detector 1 Position(ft)	0	0			0		0	0				
Detector 1 Size(ft)	20	6			6		20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Prot	NA			NA		Prot	NA				
Protected Phases	1 4	4			8		15	2				
Permitted Phases												
Minimum Initial (s)		5.0			5.0		5.0	4.0				
Minimum Split (s)		22.0			21.0		11.0	18.0				
Total Split (s)		31.0			24.0		27.0	47.0				
Total Split (%)		21.5%			16.7%		18.8%	32.6%				
Maximum Green (s)		25.0			18.0		21.0	41.0				
Yellow Time (s)		4.0			4.0		4.0	4.0				
All-Red Time (s)		2.0			2.0		2.0	2.0				
Total Lost Time (s)		6.0			6.0		6.0	6.0				
Lead/Lag		Lead			Lag			Lead				
Lead-Lag Optimize?		Yes			Yes			Yes				
Vehicle Extension (s)		3.0			3.0		3.0	3.0				
Recall Mode		None			Max		Max	C-Max				



2020 Left-Turn Prohibition  
 165: Northpark Dr. & Rock Springs

AM Peak Hour

Lane Group	ø1	ø6
Lane Configurations		
Volume (vph)		
Ideal Flow (vphpl)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Lane Group Flow (vph)		
Number of Detectors		
Detector Template		
Leading Detector (ft)		
Trailing Detector (ft)		
Detector 1 Position(ft)		
Detector 1 Size(ft)		
Detector 1 Type		
Detector 1 Channel		
Detector 1 Extend (s)		
Detector 1 Queue (s)		
Detector 1 Delay (s)		
Detector 2 Position(ft)		
Detector 2 Size(ft)		
Detector 2 Type		
Detector 2 Channel		
Detector 2 Extend (s)		
Turn Type		
Protected Phases	1	6
Permitted Phases		
Minimum Initial (s)	5.0	4.0
Minimum Split (s)	11.0	18.0
Total Split (s)	15.0	62.0
Total Split (%)	10%	43%
Maximum Green (s)	9.0	56.0
Yellow Time (s)	4.0	4.0
All-Red Time (s)	2.0	2.0
Total Lost Time (s)		
Lead/Lag	Lag	
Lead-Lag Optimize?	Yes	
Vehicle Extension (s)	3.0	3.0
Recall Mode	Max	C-Max

2020 Left-Turn Prohibition  
165: Northpark Dr. & Rock Springs

AM Peak Hour



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Walk Time (s)		5.0			5.0			5.0				
Flash Dont Walk (s)		11.0			10.0			7.0				
Pedestrian Calls (#/hr)		0			0			0				
Act Effect Green (s)	24.9	9.9			33.1		21.0	41.0				
Actuated g/C Ratio	0.17	0.07			0.23		0.15	0.28				
v/c Ratio	0.18	0.13			0.17		0.36	0.35				
Control Delay	35.5	42.7			42.5		60.0	40.9				
Queue Delay	0.3	0.0			0.0		0.0	0.0				
Total Delay	35.8	42.7			42.5		60.0	40.9				
LOS	D	D			D		E	D				
Approach Delay		38.3			42.5			44.9				
Approach LOS		D			D			D				

Intersection Summary

Area Type: Other

Cycle Length: 144

Actuated Cycle Length: 144

Offset: 114 (79%), Referenced to phase 2:NET and 6:, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 43.6

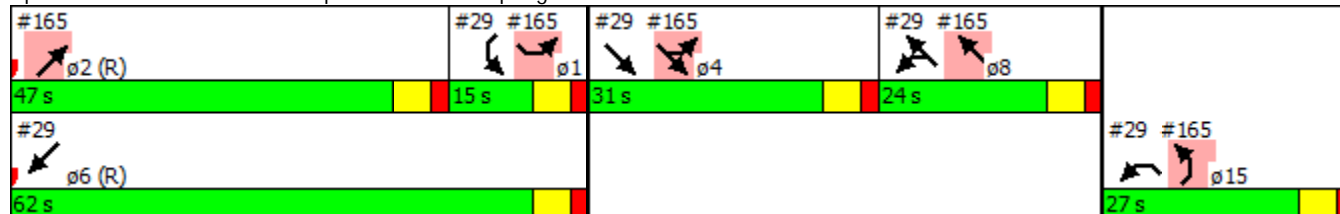
Intersection LOS: D

Intersection Capacity Utilization 47.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 165: Northpark Dr. & Rock Springs



2020 Left-Turn Prohibition  
165: Northpark Dr. & Rock Springs

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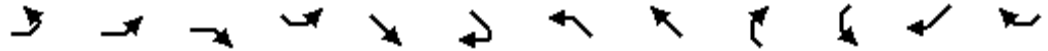
AM Peak Hour

Lane Group	ø1	ø6
Walk Time (s)		5.0
Flash Dont Walk (s)		7.0
Pedestrian Calls (#/hr)		0
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Intersection Summary		

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2020 Left-Turn Prohibition  
168: W Lake Houston Pkwy & Kings Crossing

AM Peak Hour



Lane Group	EBL2	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR	SWR2
Lane Configurations		<del>4T</del>						<del>4T</del>			<del>7T</del>	
Volume (vph)	57	28	0	0	0	0	11	1070	155	0	290	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.97	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.88	1.00
Frt								0.981			0.850	
Flt Protected		0.950										
Satd. Flow (prot)	0	3433	0	0	0	0	0	3472	0	0	2787	0
Flt Permitted		0.950										
Satd. Flow (perm)	0	3433	0	0	0	0	0	3472	0	0	2787	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)								17			157	
Link Speed (mph)		30			40			40		30		
Link Distance (ft)		148			829			954		813		
Travel Time (s)		3.4			14.1			16.3		18.5		
Lane Group Flow (vph)	0	104	0	0	0	0	0	1518	0	0	397	0
Turn Type	Prot	NA					Prot	NA			custom	
Protected Phases	1 4	4					15	2			8	
Permitted Phases												
Minimum Split (s)		22.0					11.0	17.0			22.0	
Total Split (s)		22.0					11.0	80.0			22.0	
Total Split (%)		15.1%					7.5%	54.8%			15.1%	
Maximum Green (s)		16.0					5.0	74.0			16.0	
Yellow Time (s)		4.0					4.0	4.0			4.0	
All-Red Time (s)		2.0					2.0	2.0			2.0	
Total Lost Time (s)		6.0						6.0			6.0	
Lead/Lag		Lead					Lead				Lag	
Lead-Lag Optimize?		Yes					Yes				Yes	
Walk Time (s)		5.0					4.0	4.0			4.0	
Flash Dont Walk (s)		11.0					7.0	7.0			12.0	
Pedestrian Calls (#/hr)		0					0	0			0	
Act Effct Green (s)		27.0					79.0	79.0			16.0	
Actuated g/C Ratio		0.18					0.54	0.54			0.11	
v/c Ratio		0.16					2.68dr	2.68dr			0.89	
Control Delay		46.4					282.5	282.5			61.2	
Queue Delay		3.9					0.3	0.3			30.2	
Total Delay		50.3					282.7	282.7			91.4	
LOS		D					F	F			F	
Approach Delay		50.3					282.7	282.7				
Approach LOS		D					F	F				

Intersection Summary

Area Type:	Other
Cycle Length:	146
Actuated Cycle Length:	146
Offset:	48 (33%), Referenced to phase 2:NWT and 6:, Start of Green
Control Type:	Pretimed
Maximum v/c Ratio:	1.56
Intersection Signal Delay:	233.1
Intersection Capacity Utilization:	62.1%
Intersection LOS:	F
ICU Level of Service:	B

2020 Left-Turn Prohibition  
 168: W Lake Houston Pkwy & Kings Crossing

AM Peak Hour

Lane Group	ø1	ø6
Lane Configurations		
Volume (vph)		
Ideal Flow (vphpl)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	1	6
Permitted Phases		
Minimum Split (s)	11.0	17.0
Total Split (s)	11.0	91.0
Total Split (%)	8%	62%
Maximum Green (s)	5.0	85.0
Yellow Time (s)	4.0	4.0
All-Red Time (s)	2.0	2.0
Total Lost Time (s)		
Lead/Lag	Lag	
Lead-Lag Optimize?	Yes	
Walk Time (s)		4.0
Flash Dont Walk (s)		7.0
Pedestrian Calls (#/hr)		0
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
<b>Intersection Summary</b>		

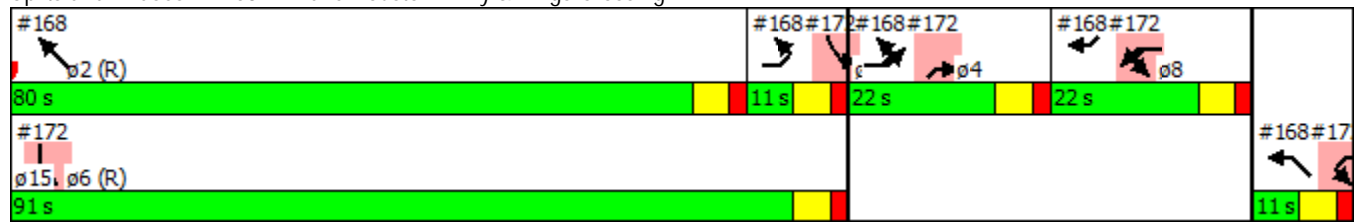
2020 Left-Turn Prohibition  
 168: W Lake Houston Pkwy & Kings Crossing

AM Peak Hour

Analysis Period (min) 15









dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 168: W Lake Houston Pkwy & Kings Crossing



2020 Left-Turn Prohibition  
171: Lake Houston Parkway

AM Peak Hour

						
Lane Group	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations						
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	0.88
Frt						
Flt Protected						
Satd. Flow (prot)	0	3539	0	0	0	3278
Flt Permitted						
Satd. Flow (perm)	0	3539	0	0	0	3278
Link Speed (mph)		40	40		40	
Link Distance (ft)		568	1308		1315	
Travel Time (s)		9.7	22.3		22.4	
Lane Group Flow (vph)	0	0	0	0	0	0
Sign Control		Free	Free		Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	0.0% ICU Level of Service A
Analysis Period (min)	15

2020 Left-Turn Prohibition  
172: Kings Crossing & W Lake Houston Pkwy

AM Peak Hour



Lane Group	WBL2	WBL	WBR	SBL2	SBL	SBR	NWL	NWR	NEL	NER	NER2	ø2
Lane Configurations		<del>LT</del>			<del>LT</del>					<del>RT</del>		
Volume (vph)	284	31	0	27	1080	18	0	0	0	59	4	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	0.95	0.97	1.00	0.95	0.97	0.95	1.00	1.00	1.00	0.88	1.00	
Frt					0.998					0.850		
Flt Protected		0.950			0.953							
Satd. Flow (prot)	0	3433	0	0	3437	0	0	0	0	2787	0	
Flt Permitted		0.950			0.953							
Satd. Flow (perm)	0	3433	0	0	3437	0	0	0	0	2787	0	
Right Turn on Red			Yes			Yes						Yes
Satd. Flow (RTOR)					112					157		
Link Speed (mph)		30			40		40		30			
Link Distance (ft)		148			871		719		472			
Travel Time (s)		3.4			14.8		12.3		10.7			
Lane Group Flow (vph)	0	387	0	0	1382	0	0	0	0	77	0	
Turn Type	Prot	NA		Prot	NA					custom		
Protected Phases	15 8	8		1	6					4		2
Permitted Phases												
Minimum Split (s)		22.0		11.0	17.0					22.0		17.0
Total Split (s)		22.0		11.0	91.0					22.0		80.0
Total Split (%)		15.1%		7.5%	62.3%					15.1%		55%
Maximum Green (s)		16.0		5.0	85.0					16.0		74.0
Yellow Time (s)		4.0		4.0	4.0					4.0		4.0
All-Red Time (s)		2.0		2.0	2.0					2.0		2.0
Total Lost Time (s)		6.0			6.0					6.0		
Lead/Lag		Lag		Lag						Lead		Lead
Lead-Lag Optimize?		Yes		Yes						Yes		Yes
Walk Time (s)		4.0			4.0					5.0		4.0
Flash Dont Walk (s)		12.0			7.0					11.0		7.0
Pedestrian Calls (#/hr)		0			0					0		0
Act Effct Green (s)		27.0			85.0					16.0		
Actuated g/C Ratio		0.18			0.58					0.11		
v/c Ratio		1.07dl			1.30					0.17		
Control Delay		27.4			171.2					0.8		
Queue Delay		38.1			0.3					0.0		
Total Delay		65.5			171.5					0.9		
LOS		E			F					A		
Approach Delay		65.5			171.5							
Approach LOS		E			F							

Intersection Summary

Area Type:	Other
Cycle Length:	146
Actuated Cycle Length:	146
Offset:	48 (33%), Referenced to phase 2:NWT and 6:, Start of Green
Control Type:	Pretimed
Maximum v/c Ratio:	1.56
Intersection Signal Delay:	142.2
Intersection LOS:	F
Intersection Capacity Utilization	64.1%
ICU Level of Service	C



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Lane Group	ø15
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	15
Permitted Phases	
Minimum Split (s)	11.0
Total Split (s)	11.0
Total Split (%)	8%
Maximum Green (s)	5.0
Yellow Time (s)	4.0
All-Red Time (s)	2.0
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

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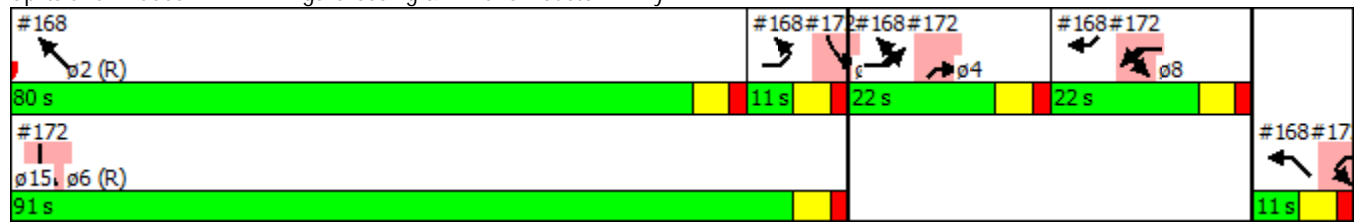
2020 Left-Turn Prohibition  
 172: Kings Crossing & W Lake Houston Pkwy

AM Peak Hour

Analysis Period (min) 15









dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 172: Kings Crossing & W Lake Houston Pkwy



2020 Left-Turn Prohibition  
174:

AM Peak Hour

						
Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	0.88
Frt						
Flt Protected						
Satd. Flow (prot)	0	0	0	3539	0	3278
Flt Permitted						
Satd. Flow (perm)	0	0	0	3539	0	3278
Link Speed (mph)	40			40	30	
Link Distance (ft)	672			450	712	
Travel Time (s)	11.5			7.7	16.2	
Lane Group Flow (vph)	0	0	0	0	0	0
Sign Control	Free			Free	Free	
<b>Intersection Summary</b>						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	0.0%			ICU Level of Service A		
Analysis Period (min)	15					

2020 Left-Turn Prohibition  
175: Rustic Woods

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↓			↑↓					↑	↑↓	
Volume (vph)	0	42	134	113	92	0	0	0	0	15	1093	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	150		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt		0.886										0.998
Flt Protected					0.973					0.950		
Satd. Flow (prot)	0	3136	0	0	3444	0	0	0	0	1770	3532	0
Flt Permitted					0.973					0.950		
Satd. Flow (perm)	0	3136	0	0	3444	0	0	0	0	1770	3532	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		165										1
Link Speed (mph)		30			30			40				40
Link Distance (ft)		576			82			1315				563
Travel Time (s)		13.1			1.9			22.4				9.6
Lane Group Flow (vph)	0	217	0	0	252	0	0	0	0	18	1357	0
Turn Type		NA		Prot	NA					Prot	NA	
Protected Phases		4		15	8					1	6	
Permitted Phases												
Minimum Split (s)		11.0			19.0					11.0	10.0	
Total Split (s)		17.0			21.0					13.0	84.0	
Total Split (%)		11.8%			14.6%					9.0%	58.3%	
Maximum Green (s)		11.0			15.0					7.0	78.0	
Yellow Time (s)		4.0			4.0					4.0	4.0	
All-Red Time (s)		2.0			2.0					2.0	2.0	
Total Lost Time (s)		6.0			6.0					6.0	6.0	
Lead/Lag		Lead			Lag					Lag		
Lead-Lag Optimize?		Yes			Yes					Yes		
Walk Time (s)					6.0							
Flash Dont Walk (s)					7.0							
Pedestrian Calls (#/hr)					0							
Act Effect Green (s)		11.0			37.0					7.0	78.0	
Actuated g/C Ratio		0.08			0.26					0.05	0.54	
v/c Ratio		0.55			0.29					0.21	0.71	
Control Delay		23.3			3.5					71.8	27.1	
Queue Delay		0.0			0.0					0.0	0.0	
Total Delay		23.3			3.5					71.8	27.1	
LOS		C			A					E	C	
Approach Delay		23.3			3.5						27.7	
Approach LOS		C			A						C	

Intersection Summary

Area Type: Other  
 Cycle Length: 144  
 Actuated Cycle Length: 144  
 Offset: 90 (63%), Referenced to phase 2:NBT and 6:, Start of Green  
 Control Type: Pretimed

Lane Group	ø2	ø15
Lane Configurations		
Volume (vph)		
Ideal Flow (vphpl)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	2	15
Permitted Phases		
Minimum Split (s)	20.0	11.0
Total Split (s)	71.0	22.0
Total Split (%)	49%	15%
Maximum Green (s)	65.0	16.0
Yellow Time (s)	4.0	4.0
All-Red Time (s)	2.0	2.0
Total Lost Time (s)		
Lead/Lag	Lead	
Lead-Lag Optimize?	Yes	
Walk Time (s)	4.0	
Flash Dont Walk (s)	10.0	
Pedestrian Calls (#/hr)	0	
Act Effect Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Intersection Summary		

2020 Left-Turn Prohibition  
175: Rustic Woods

AM Peak Hour

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 23.9

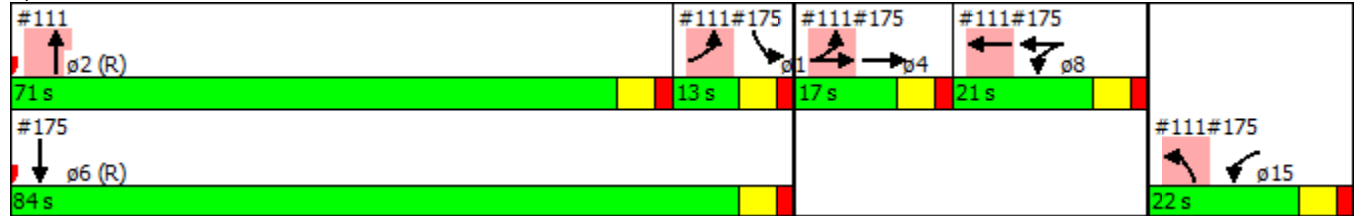
Intersection LOS: C

Intersection Capacity Utilization 62.9%

ICU Level of Service B

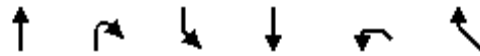
Analysis Period (min) 15

Splits and Phases: 175: Rustic Woods



2020 Left-Turn Prohibition  
178: Lake Houston Parkway

AM Peak Hour



Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations			TT			TT
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.97	1.00	1.00	0.88
Frt						
Flt Protected						
Satd. Flow (prot)	0	0	3614	0	0	3278
Flt Permitted						
Satd. Flow (perm)	0	0	3614	0	0	3278
Link Speed (mph)	40			40	40	
Link Distance (ft)	216			426	4598	
Travel Time (s)	3.7			7.3	78.4	
Lane Group Flow (vph)	0	0	0	0	0	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	0.0% ICU Level of Service A
Analysis Period (min)	15

2020 Left-Turn Prohibition  
185: Hamblen

AM Peak Hour



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	121	4	305	217	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	150		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.996					
Flt Protected			0.950			
Satd. Flow (prot)	1855	0	1770	1863	1863	0
Flt Permitted			0.950			
Satd. Flow (perm)	1855	0	1770	1863	1863	0
Link Speed (mph)	35			35	30	
Link Distance (ft)	123			358	309	
Travel Time (s)	2.4			7.0	7.0	
Lane Group Flow (vph)	154	0	375	267	0	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	33.2%
ICU Level of Service	A
Analysis Period (min)	15



2020 Left-Turn Prohibition  
188: Sorters & Northpark Dr.

AM Peak Hour



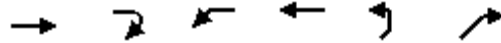
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↔			↑
Volume (vph)	0	0	71	15	0	341
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.977			
Flt Protected						
Satd. Flow (prot)	0	0	1820	0	0	1863
Flt Permitted						
Satd. Flow (perm)	0	0	1820	0	0	1863
Link Speed (mph)	40		35			30
Link Distance (ft)	1492		3855			70
Travel Time (s)	25.4		75.1			1.6
Lane Group Flow (vph)	0	0	105	0	0	419
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	23.6%
Analysis Period (min)	15
	ICU Level of Service A

2020 Left-Turn Prohibition  
189: Northpark Dr.

AM Peak Hour



Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations				↑↑		↑↑
Volume (vph)	0	0	0	213	0	377
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	0.88
Frt						0.850
Flt Protected						
Satd. Flow (prot)	0	0	0	3539	0	2787
Flt Permitted						
Satd. Flow (perm)	0	0	0	3539	0	2787
Link Speed (mph)	40			40	30	
Link Distance (ft)	1488			3907	1492	
Travel Time (s)	25.4			66.6	33.9	
Lane Group Flow (vph)	0	0	0	262	0	463
Sign Control	Free			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	18.2% ICU Level of Service A
Analysis Period (min)	15

2020 Left-Turn Prohibition  
190: Kingwood Dr.

AM Peak Hour



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations				↑↑		
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	0	0	3539	0	0
Flt Permitted						
Satd. Flow (perm)	0	0	0	3539	0	0
Link Speed (mph)	40			40	30	
Link Distance (ft)	392			804	60	
Travel Time (s)	6.7			13.7	1.4	
Lane Group Flow (vph)	0	0	0	0	0	0
Sign Control	Stop			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	6.7% ICU Level of Service A
Analysis Period (min)	15