APPENDIX L

2017 No Build Highland Avenue Intersection Analysis

	•	→	•	•	4	•	4	†	<i>></i>	\	↓	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	ተ ጉ		7	∱ 1>			र्स	7	ሻ	† }	
Volume (vph)	205	841	54	388	556	295	37	119	223	256	138	23
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	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991			0.948				0.850		0.979	
FIt Protected	0.950			0.950				0.988		0.950		
Satd. Flow (prot)	1770	3507	0	1770	3355	0	0	1840	1583	1770	1824	0
FIt Permitted	0.950			0.950				0.988		0.950		
Satd. Flow (perm)	1770	3507	0	1770	3355	0	0	1840	1583	1770	1824	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			72				242		5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		552			1005			281			235	
Travel Time (s)		12.5			22.8			6.4			5.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	223	914	59	422	604	321	40	129	242	278	150	25
Shared Lane Traffic (%)	220	.017	00	766	004	021	 U	120	· · · · · · · · · · · · · · · · · · ·	2.0	100	
Lane Group Flow (vph)	223	973	0	422	925	0	0	169	242	278	175	
Turn Type	Prot	913	U	Prot	323	U	custom	103		custom	1,70	U
Protected Phases		6		5				8	Custom	4	4	
Permitted Phases	1				2		8	0	8 5	1 12 1	- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	
Detector Phase		6			2 2		8 8		85	4	4	
	1	. 0		5	2		0	8	00	4	4 4 A 4 4	
Switch Phase		40.0		0.0	40.0			0.0			60	
Minimum Initial (s)	4.0	10.0		6.0	10.0		6.0	6.0		6.0	6.0	
Minimum Split (s)	9.0	15.0		11.0	15.0		11.0	11.0	- F0 A	11.0	11.0	
Total Split (s)	15.0	33.0	0.0	31.0	49.0	0.0	27.0	27.0	58.0	29.0	29.0	0.0
Total Split (%)	10.6%	23.2%	0.0%	21.8%	34.5%	0.0%	19.0%	19.0%	40.8%	20.4%	20.4%	0.0%
Maximum Green (s)	10.0	28.0		26.0	44.0		22.0	22.0		24.0	24.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-1.0	-1.0	0.0	-1.0	-1.0	0.0	-1.0	-1.0	-1.0	-1.0	-1.0	0.0
Total Lost 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
Lead/Lag	Lead	Lag		Lead	Lag							
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	
Recall Mode Walk Time (s)	Min	Min		Min	Min		None	None		None	None	
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)	e e e e e e e e e e e e e e e e e e e				45.0				1 17 4	00.4	00.4	
Act Effct Green (s)	11.1	29.4		27.3	45.6			16.6	47.4	23.4	23.4	
Actuated g/C Ratio	0.10	0.25		0.23	0.39			0.14	0.41	0.20	0.20	
v/c Ratio	1.32	1.10		1.01	0.68			0.65	0.31	0.78	0.47	
Control Delay	220.0	101.2		93.4	32.1			60.4	3.4	61.7	46.7	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Delay	220.0	101.2		93.4	32.1			60.4	3.4	61.7	46.7	
LOS	F	F		F	С			Ε	Α	Ε	D	
Approach Delay		123.4			51.3			26.8			55.9	
Approach LOS		F			D			С			Ε	
90th %ile Green (s)	10.0	28.0		26.0	44.0		22.0	22.0		24.0	24.0	

Lane Configurations Volume (vph) Ideal Flow (vphpt) Lane Ulii. Factor Fit Fit Fit Fit Fit Fit Fit Fit Control (prot) Fit Permitted Satd. Flow (prot) Link Distance (ft) Travel Time (s) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Turn Type Protected Phases Permitted Phases Detector Phase Switch Phase Minimum Initial (s) Minimum Spit (s) Switch Phase Minimum Initial (s) Minimum Green (s) Total Spit (s) Total Lost Time (s) Lost Time Adjust (s) Total Lost Time (s) Lead/Lag Lead-Lag Optimize? Vehicle Exension (s) Recall Mode None Walk Time (s) Lost Green (s) Addusted g/C Ratio Vehicle Exension Calls (#hr) Add Erict Green (s) Addusted g/C Ratio Veh Ratio Control Delay Oueue Delay Total Delay T	Lane Group	ø9
Ideal Flow (vphpl) Lane Util, Factor Frt Frt Protected Satd. Flow (prot) Fit Permitted Satd. Flow (prot)	Lane Configurations	
Ideal Flow (yphp)	Volume (vph)	
Fit Protected Satd. Flow (prot) Fit Permitted Satd. Flow (perm) Right Turn on Red Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Distance (ft) Travel Time (s) Peak Hour Factor Adj. Flow (vph) Turn Type Urum Type Protected Phases Switch Phases Switch Phase Switch Pha	ldeal Flow (vphpl)	
Fit Protected Satc. Flow (prot) Fit Permitted Satc. Flow (perm) Right Turn on Red Satc. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Turn Type Protected Phases Detector Phases Detector Phases Detector Phases Detector Phase Switch Phase Minimum Initial (s) Minimum Split (s) Total Split (s) Total Split (s) Total Split (s) Total Lane (s) Lost Time (s) Lead/Lag Lead-Lag Optimize? Vehicle Extension (s) Recall Mode Walk Time (s) Lost Flime (s) Lead/Lag Lead-Lag Optimize? Vehicle Extension (s) Recall Mode None Walk Time (s) Lot Effect Green (s) Actuated g/C Ratio V/o Ratio Control Delay Queue Delay Total Delay Lost Slow Control Delay Queue Delay Total Delay Lost Delay Lost Effect Green (s) Actuated g/C Ratio V/o Ratio Control Delay Queue Delay Total Delay Lost Delay L	Lane Util. Factor	
Satd. Flow (perm) Right Turn on Red Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Turn Type Protected Phases Detector Phase Minimum Initial (s) Minimum Split (s) Total Split (%) Maximum Gren (s) Yellow Time (s) All-Red Time (s) Lead/Lag Lead-Lag Lead-Lag Lead-Lag Lead-Lag Charles (s) Rober (s) Rober (s) Recall Mode Walk Time (s) Recall Mode Walk Time (s) Rober (s) Act Left Creen (s) Act Left Creen (s) Act Lead (Cap Chalo Voc Ratio Control Delay Queue Delay Total Delay Los	Frt	
Satic. Flow (pern) Right Turn on Red Satic. Flow (pern) Right Turn on Red Satic. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Peak Hour Factor Adj. Flow (vph) Turn Type Protected Phases Detector Phases Detector Phase Minimum Initial (s) Minimum Split (s) 22.0 Total Split (%) Maximum Green (s) Yellow Time (s) All-Red Time (s) Lead/Lag Lead-Lag Lead-Lag Lead-Lag Lead-Lag Lead-Lag Lead-Lag Charles (s) Rone Walk Time (s) Flash Dont Walk (s) Pedestrian Calls (#hrr) Act Effet Green (s) Actuated g/C Ratio Voc Ratio Control Delay Queue Delay Total Dollay Los Control Delay Queue Delay Total Delay LOS	Flt Protected	
Fit Permitted Statd. Flow (perm) Right Turn on Red Statd. Flow (RTOR) Link Distance (ft) Travel Time (s) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Turn Type Protected Phases 9 Permitted Phases Detector Phase Which Phase Minimum Initial (s) Minimum Split (s) Total Capt Time (s) Lead/Lag Lead-Lag Optimize? Vehicle Extension (s) Recall Mode Walk Time (s) Recall Mode Walk Time (s) Actuated g/C Ratio Vic Ratio Control Delay Queue Delay Total Delay Lost Control Delay Queue Delay Total Delay Lost Control Delay Queue Delay Total Delay Lost	Satd. Flow (prot)	
Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (th) Travel Time (s) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Turn Type Protected Phases Detector Phase Switch Phase Switch Phase Minimum Initial (s) Minimum Spiti (s) 22.0 Total Split (s) 15% Maximum Green (s) 19.0 Vellow Time (s) 1.0 Lost Time Adjust (s) Total Cost Time Adjust (s) Total Lost Time (s) Lead/Lag Lead-Lag Optimize? Vehicle Extension (s) Recall Mode Walk Time (s) Flash Dont Walk (s) Pedestrian Calls (#hr) Act Effct Green (s) Actuated g/C Ratio Vic Ratio Control Delay Queue Delay Total Delay LOS		
Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Turn Type Protected Phases Detector Phases Switch Phase Minimum Initial (s) Minimum Split (s) 22.0 Total Split (s) Total Split (%) Maximum Green (s) Yellow Time (s) Lost Time Adjust (s) Total Lost Time (s) Lead/Lag Lead-Lag Optimize? Vehicle Extension (s) Roal Mode Walk Time (s) Lost Effct Green (s) Actuated g/C Ratio Vic Ratio Control Delay Queue Delay Total Delay LOS	Satd. Flow (perm)	
Satid. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Turm Type Protected Phases Detector Phases Switch Phase Minimum Initial (s) Minimum Spit (s) 12.0 Total Spit (%) Maximum Green (s) Yellow Time (s) Lost Time Adjust (s) Total Lost Time (s) Lead/Lag Lead-Lag Optimize? Vehicle Extension (s) Recall Mode Walk Time (s) G. 0 Flash Dont Walk (s) Pedestrian Calls (#hr) Act Effet Green (s) Act Lost Green (s) Act Carlo Ver Ratio Control Delay Queue Delay Total Delay LOS LOS Los Time John Ver J		
Link Speed (mph) Link Distance (ft) Travel Time (s) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Turn Type Protected Phases Permitted Phases Detector Phase Switch Phase Minimum Initial (s) Minimum Spitt (s) Total Spitt (s) Total Spitt (%) Maximum Green (s) 49.0 Yellow Time (s) Lead/Lag Lead-Lag Optimize? Vehicle Extension (s) Recall Mode Walk Time (s) Flash Dont Walk (s) Pedestrian Calls (#hr) Actuated g/C Ratio Wc Ratio Control Delay Queue Delay Total Delay LoS Total Delay LoS Control Delay Queue Delay Total Delay LoS Lead-Total Delay LoS Control Delay Queue Delay Total Delay LoS	•	
Link Distance (ft) Travel Time (s) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Turn Type Protected Phases Permitted Phases Detector Phase Switch Phase Minimum Initial (s) Minimum Spit (s) 19.0 Minimum Spit (s) 22.0 Total Spit (s) 22.0 Total Spit (s) 15% Maximum Green (s) Yellow Time (s) All-Red Time (s) Lead/Lag Lead-Lag Optimize? Vehicle Extension (s) Recall Mode Walk Time (s) 1.0 Recall Mode None Walk Time (s) 1.0 Pedestrian Calls (#hr) 2 Att Efft Green (s) Actuated g/C Ratio Ve Ratio Control Delay Queue Delay Total Delay LoS		
Travel Time (s) Peak Hour Factor Adj. Flow (yph) Shared Lane Traffic (%) Lane Group Flow (vph) Turn Type Protected Phases Permitted Phases Detector Phase Switch Phase Minimum Initial (s) Minimum Split (s) Total Split (%) 15% Maximum Green (s) 19.0 Yellow Time (s) Lost Time Adjust (s) Total Lost Time (s) Lead/Lag Lead-Lag Optimize? Vehicle Extension (s) Recall Mode Walk Time (s) Solution (s) None Walk Time (s) Lead-Cag Lead-Cag Lead-Cag Cag Lead-Cag Cag Lead-Cag Cag Cag Cag Cag Cag Cag Cag Cag Cag		
Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) I and Group Flow (vph) Turn Type Protected Phases Permitted Phases 9 Detector Phase Switch Phase Minimum Initial (s) 19.0 Minimum Split (s) 22.0 Total Split (%) 22.0 Maximum Green (s) 19.0 Yellow Time (s) 2.0 All-Red Time (s) 1.0 Lost Time Adjust (s) 1.0 Total Lost Time (s) Lead/Lag Lead/Lag Optimize? Vehicle Extension (s) Vehicle Extension (s) 3.0 Recall Mode None Walk Time (s) 6.0 Flash Dont Walk (s) 12.0 Pedestrian Calls (#hr) 2 Act Effict Green (s) Actuated g/C Ratio v/c Ratio Control Delay Queue Delay Total Delay LoS		
Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Turn Type Protected Phases Permitted Phases Detector Phase Switch Phase Minimum Initial (s) Minimum Split (s) Total Split (%) Maximum Green (s) Yellow Time (s) Lost Time Adjust (s) Total Lost Time (s) Lead/Lag Lead-Lag Optimize? Vehicle Extension (s) Racall Mode Walk Time (s) Elead-Lag Optimize? Vehicle Extension (s) Flash Dont Walk (s) Pedestrian Calls (#/hr) Act Effic Green (s) Actuated g/C Ratio v/c Ratio Control Delay Queue Delay Total Delay LOS		
Shared Lane Traffic (%) Lane Group Flow (vph) Turn Type Protected Phases Permitted Phases Detector Phase Switch Phase Minimum Initial (s) Minimum Split (s) Total Split (%) Maximum Green (s) Yellow Time (s) Lost Time Adjust (s) Total Split (s) Lost Time (s) Lead/Lag Lead-Lag Optimize? Vehicle Extension (s) Recall Mode Walk Time (s) Halk (s) Pedestrian Calls (#/hr) Act Effic Green (s) Actuated g/C Ratio v/c Ratio Control Delay Queue Delay Total Delay LOS		
Lane Group Flow (vph) Turn Type Protected Phases Permitted Phases Detector Phase Switch Phase Minimum Initial (s) Minimum Split (s) Total Split (%) Maximum Gren (s) Yellow Time (s) Lost Time Adjust (s) Total Lost Time (s) Lead/Lag Lead-Lag Optimize? Vehicle Extension (s) Recall Mode Walk Time (s) 4.0 Flash Dont Walk (s) Pedestrian Calls (#/hr) Act Effet Green (s) Act Lated G/C Ratio V/c Ratio Control Delay Queue Delay Total Delay Lost Total Lost Time Collagy Total Lost Time (s) Total Delay Total Delay Total Delay Total Delay Total Delay Total Delay Los		
Turn Type Protected Phases Permitted Phases Detector Phase Switch Phase Minimum Initial (s) 19.0 Minimum Split (s) 22.0 Total Split (s) 22.0 Total Split (%) 15% Maximum Green (s) 19.0 Yellow Time (s) 2.0 All-Red Time (s) 1.0 Lost Time Adjust (s) Total Lost Time (s) Lead/Lag Lead-Lag Optimize? Vehicle Extension (s) 3.0 Recall Mode None Walk Time (s) 6.0 Flash Dont Walk (s) 12.0 Pedestrian Calls (#/hr) Act Effet Green (s) Actuated g/C Ratio V/c Ratio Control Delay Queue Delay Total Delay LOS		
Protected Phases Permitted Phases Detector Phase Switch Phase Minimum Initial (s) 19.0 Minimum Split (s) 22.0 Total Split (s) 22.0 Total Split (s) 22.0 Total Split (s) 15% Maximum Green (s) 19.0 Yellow Time (s) 1.0 Lost Time (s) 1.0 Lost Time (s) 1.0 Lost Time (s) Lead/Lag Lead-Lag Optimize? Vehicle Extension (s) 3.0 Recall Mode None Walk Time (s) 6.0 Flash Dont Walk (s) 12.0 Pedestrian Calls (#/hr) 2 Act Effet Green (s) Actuated g/C Ratio v/c Ratio Control Delay Queue Delay Total Delay Ucos		
Permitted Phases Detector Phase Switch Phase Minimum Initial (s) 19.0 Minimum Split (s) 22.0 Total Split (s) 22.0 Total Split (s) 15% Maximum Green (s) 19.0 Yellow Time (s) 2.0 All-Red Time (s) 1.0 Lost Time Adjust (s) Total Lost Time (s) Lead/Lag Lead-Lag Optimize? Vehicle Extension (s) 3.0 Recall Mode None Walk Time (s) 6.0 Flash Dont Walk (s) 12.0 Pedestrian Calls (#/hr) 2 Act Effct Green (s) Actuated g/C Ratio V/c Ratio Control Delay Queue Delay Total Delay LOS	• •	ordinal significación de la compansa
Detector Phase Switch Phase Minimum Initial (s) Minimum Split (s) 19.0 Minimum Split (s) 22.0 Total Split (%) 15% Maximum Green (s) 19.0 Yellow Time (s) 2.0 All-Red Time (s) Lost Time Adjust (s) Total Lost Time (s) Lead/Lag Lead-Lag Optimize? Vehicle Extension (s) Recall Mode Walk Time (s) 4.0 Walk Time (s) 5.0 Recall Mode None Walk Time (s) 6.0 Flash Dont Walk (s) 12.0 Pedestrian Calls (#/hr) Actuated g/C Ratio V/c Ratio Control Delay Queue Delay Total Delay LOS		
Switch Phase Minimum Initial (s) 19.0 Minimum Split (s) 22.0 Total Split (s) 22.0 Total Split (%) 15% Maximum Green (s) 19.0 Yellow Time (s) 2.0 All-Red Time (s) 1.0 Lost Time Adjust (s) Total Lost Time (s) Lead/Lag Lead/Lag Lead-Lag Optimize? Vehicle Extension (s) Vehicle Extension (s) 3.0 Recall Mode None Walk Time (s) 6.0 Flash Dont Walk (s) 12.0 Pedestrian Calls (#/hr) 2 Act Effct Green (s) Actuated g/C Ratio v/c Ratio Control Delay Queue Delay Total Delay Los Los		
Minimum Initial (s) 19.0 Minimum Split (s) 22.0 Total Split (s) 22.0 Total Split (%) 15% Maximum Green (s) 19.0 Yellow Time (s) 2.0 All-Red Time (s) 1.0 Lost Time Adjust (s) Total Lost Time (s) Lead/Lag Lead-Lag Optimize? Vehicle Extension (s) 3.0 Recall Mode None Walk Time (s) 6.0 Flash Dont Walk (s) 12.0 Pedestrian Calls (#/hr) 2 Act Effct Green (s) Actuated g/C Ratio V/c Ratio Control Delay Queue Delay Total Delay Lost Lost Time Adjust (s) 1.0 Lost Time (s) 1.0 Lost Tim		
Minimum Split (s) 22.0 Total Split (s) 22.0 Total Split (%) 15% Maximum Green (s) 19.0 Yellow Time (s) 2.0 All-Red Time (s) 1.0 Lost Time Adjust (s) 1.0 Total Lost Time (s) Lead/Lag Lead/Lag Lead/Lag (s) Recall Mode None Walk Time (s) 6.0 Flash Dont Walk (s) 12.0 Pedestrian Calls (#/hr) 2 Act Effct Green (s) Actuated g/C Ratio v/c Ratio Control Delay Queue Delay Total Delay Total Delay Los		9 (1916)
Total Split (s) 22.0 Total Split (%) 15% Maximum Green (s) 19.0 Yellow Time (s) 2.0 All-Red Time (s) 1.0 Lost Time Adjust (s) Total Lost Time (s) Lead/Lag Lead-Lag Optimize? Vehicle Extension (s) 3.0 Recall Mode None Walk Time (s) 6.0 Flash Dont Walk (s) 12.0 Pedestrian Calls (#/hr) 2 Act Effct Green (s) Actuated g/C Ratio v/c Ratio Control Delay Queue Delay Total Delay LOS	• •	
Total Split (%) 15% Maximum Green (s) 19.0 Yellow Time (s) 2.0 All-Red Time (s) 1.0 Lost Time Adjust (s) Total Lost Time (s) Lead/Lag Lead-Lag Optimize? Vehicle Extension (s) 3.0 Recall Mode None Walk Time (s) 6.0 Flash Dont Walk (s) 12.0 Pedestrian Calls (#hr) 2 Act Effct Green (s) Actuated g/C Ratio Vic Ratio Control Delay Queue Delay Total Delay Los Total Los Time (s) 1.0 Total Delay Los Total Delay Los		
Maximum Green (s) 19.0 Yellow Time (s) 2.0 All-Red Time (s) 1.0 Lost Time Adjust (s) 1.0 Total Lost Time (s) Lead/Lag Lead-Lag Optimize? Vehicle Extension (s) Vehicle Extension (s) 3.0 Recall Mode None Walk Time (s) 6.0 Flash Dont Walk (s) 12.0 Pedestrian Calls (#/hr) 2 Act Effct Green (s) Actuated g/C Ratio v/c Ratio Control Delay Queue Delay Total Delay LOS Los		
Yellow Time (s) 2.0 All-Red Time (s) 1.0 Lost Time Adjust (s) Total Lost Time (s) Lead/Lag Lead-Lag Optimize? Vehicle Extension (s) 3.0 Recall Mode None Walk Time (s) 6.0 Flash Dont Walk (s) 12.0 Pedestrian Calls (#/hr) 2 Act Effct Green (s) Actuated g/C Ratio v/c Ratio Control Delay Queue Delay Total Delay LOS LoS		
All-Red Time (s) 1.0 Lost Time Adjust (s) Total Lost Time (s) Lead/Lag Lead-Lag Optimize? Vehicle Extension (s) 3.0 Recall Mode None Walk Time (s) 6.0 Flash Dont Walk (s) 12.0 Pedestrian Calls (#/hr) 2 Act Effct Green (s) Actuated g/C Ratio v/c Ratio Control Delay Queue Delay Total Delay LOS	• •	
Lost Time Adjust (s) Total Lost Time (s) Lead/Lag Lead-Lag Optimize? Vehicle Extension (s) 3.0 Recall Mode None Walk Time (s) 6.0 Flash Dont Walk (s) 12.0 Pedestrian Calls (#/hr) 2 Act Effct Green (s) Actuated g/C Ratio v/c Ratio Control Delay Queue Delay Total Delay LOS		
Total Lost Time (s) Lead/Lag Lead-Lag Optimize? Vehicle Extension (s) 3.0 Recall Mode None Walk Time (s) 6.0 Flash Dont Walk (s) 12.0 Pedestrian Calls (#/hr) 2 Act Effct Green (s) Actuated g/C Ratio v/c Ratio Control Delay Queue Delay Total Delay LOS		
Lead-Lag Optimize? Vehicle Extension (s) 3.0 Recall Mode None Walk Time (s) 6.0 Flash Dont Walk (s) 12.0 Pedestrian Calls (#/hr) 2 Act Effct Green (s) Actuated g/C Ratio v/c Ratio Control Delay Queue Delay Total Delay LOS		
Lead-Lag Optimize? Vehicle Extension (s) 3.0 Recall Mode None Walk Time (s) 6.0 Flash Dont Walk (s) 12.0 Pedestrian Calls (#/hr) 2 Act Effct Green (s) Actuated g/C Ratio v/c Ratio Control Delay Queue Delay Total Delay LOS	. ,	
Vehicle Extension (s) 3.0 Recall Mode None Walk Time (s) 6.0 Flash Dont Walk (s) 12.0 Pedestrian Calls (#/hr) 2 Act Effct Green (s) Actuated g/C Ratio v/c Ratio Control Delay Queue Delay Total Delay LOS	•	
Recall Mode None Walk Time (s) 6.0 Flash Dont Walk (s) 12.0 Pedestrian Calls (#/hr) 2 Act Effct Green (s) Actuated g/C Ratio v/c Ratio Control Delay Queue Delay Total Delay LOS		30
Walk Time (s) 6.0 Flash Dont Walk (s) 12.0 Pedestrian Calls (#/hr) 2 Act Effct Green (s) Actuated g/C Ratio v/c Ratio Control Delay Queue Delay Total Delay LOS		
Flash Dont Walk (s) 12.0 Pedestrian Calls (#/hr) 2 Act Effct Green (s) Actuated g/C Ratio v/c Ratio Control Delay Queue Delay Total Delay LOS		
Pedestrian Calls (#/hr) 2 Act Effct Green (s) Actuated g/C Ratio v/c Ratio Control Delay Queue Delay Total Delay LOS		
Act Effct Green (s) Actuated g/C Ratio v/c Ratio Control Delay Queue Delay Total Delay LOS		2
Actuated g/C Ratio v/c Ratio Control Delay Queue Delay Total Delay LOS		
v/c Ratio Control Delay Queue Delay Total Delay LOS		
Control Delay Queue Delay Total Delay LOS		
Queue Delay Total Delay LOS		
Total Delay LOS	•	
LOS		
· 'PF'		
Approach LOS	Approach LOS	
	90th %ile Green (s)	19.0

	*	→	→ •	- +	•	4	†	<i>></i>	/	↓	4
Lane Group	EBL	EBT	EBR WE	L WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
90th %ile Term Code	Max	Max	Ma	ıx Max		Max	Max		Max	Max	
70th %ile Green (s)	10.0	28.0	26.	.0 44.0		17.9	17.9		24.0	24.0	
70th %ile Term Code	Max	Max	Ma	x Hold		Gap	Gap		Max	Max	
50th %ile Green (s)	10.0	28.0	26.	0 44.0		15.6	15.6		24.0	24.0	
50th %ile Term Code	Max	Max	Ma	x Hold		Gap	Gap		Max	Max	
30th %ile Green (s)	10.0	28.0	26.	0 44.0		13.4	13.4		22.0	22.0	
30th %ile Term Code	Max	Max	Ma	x Hold		Gap	Gap		Gap	Gap	
10th %ile Green (s)	10.0	28.0	26.	0 44.0		10.2	10.2		17.3	17.3	
10th %ile Term Code	Max	Max	Ma	x Hold		Gap	Gap		Gap	Gap	
Queue Length 50th (ft)	~209	~420	~31	2 267			118	0	189	108	
Queue Length 95th (ft)	#467	#758	#69	9 477			226	41	#418	226	
Internal Link Dist (ft)		472		925			201			155	
Turn Bay Length (ft)											
Base Capacity (vph)	169	887	41	6 1356			368	787	385	400	
Starvation Cap Reductn	0	0		0 0			0	0	0	0	
Spillback Cap Reductn	0	0		0 0			0	0	0	0	
Storage Cap Reductn	0	0		0 0			0	0	0	0	
Reduced v/c Ratio	1.32	1.10	1.0	1 0.68			0.46	0.31	0.72	0.44	

Area Type:

Cycle Length: 142

Actuated Cycle Length: 116.5

Natural Cycle: 140

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.32 Intersection Signal Delay: 74.2 Intersection Capacity Utilization 82.3%

Intersection LOS: E ICU Level of Service E

Analysis Period (min) 15 90th %ile Actuated Cycle: 142 70th %ile Actuated Cycle: 115.9 50th %ile Actuated Cycle: 113.6 30th %ile Actuated Cycle: 109.4 10th %ile Actuated Cycle: 101.5

~ Volume exceeds capacity, queue is theoretically infinite.

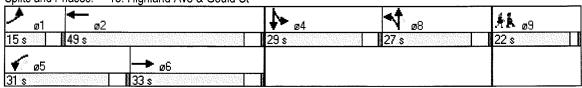
Other

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 15: Highland Ave & Gould St



Lane Group	ø9
90th %ile Term Code	A COMMAX OF THE REPORT OF THE PROPERTY OF THE
70th %ile Green (s)	0.0
70th %ile Term Code	
50th %ile Green (s)	
50th %ile Term Code	The KSkip 트로프를 보고를 보고되었습니다. (Ph. 12) - Help (Passes) 보고 보고 있다.
30th %ile Green (s)	
30th %ile Term Code	마스 BuSkip 프로그램 프랑스 그런 그들은 그를 모르는 모르는 모르는 그들은 모든 모든 전쟁을 되었다.
10th %ile Green (s)	
10th %ile Term Code	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

	-	•	•	←	4	<i>*</i>	
Movement	EBT	EBR	WBL	WBT	NBL	. NBR	
Lane Configurations	† \$			† †		7	
Volume (veh/h)	1797	946	0	1051	0		
Sign Control	Free			Free	Stop		
Grade	0%			0%	0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92		
Hourly flow rate (vph)	1953	1028	0	1142	0		
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage Right turn flare (veh)							
Median type	None			None			
Median storage veh)	110110			110110			
Upstream signal (ft)				767			
pX, platoon unblocked					0.96		
vC, conflicting volume			2982		3039	0.42 /1491	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol			2982		3040		
tC, single (s)			4.1		6.8		
tC, 2 stage (s)					. 0.5		
tF (s)			2.2		3.5 100		
p0 queue free % cM capacity (veh/h)			100 115		100		
							\$2001.000P\$
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1		
Volume Total	1302	1679	571	571	74		
Volume Left	0	0	0	0	0		
Volume Right cSH	0 1700	1028 1700	0 1700	0 1700	74 113		
Volume to Capacity	0.77	0.99	0.34	0.34	0.66		
Queue Length 95th (ft)	0.77	0.33	0.54	0.54	84		
Control Delay (s)	0.0	0.0	0.0	0.0	83.7		
Lane LOS	0.0	0.0	0.0	0.0	F		
Approach Delay (s)	0.0		0.0		83.7		
Approach LOS					F		
Intersection Summary							
Average Delay			1.5				uotassatiki (i
Intersection Capacity Ut	ilization		90.8%	10	CU Level	el of Service	
Analysis Period (min)			15	·			

	۶	→	•	•	4	4	1	†	~	/		4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		414		J.	↑ ↑		7		7		4	7
Volume (vph)	36	805	506	448	600	174	380	18	234	59	31	5
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	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Frt		0.944			0.966				0.850			0.850
Flt Protected		0.999		0.950			0.950	0.957			0.968	
Satd. Flow (prot)	0	3338	0	1770	3419	0	1681	1694	1583	0	1803	1583
FIt Permitted		0.899		0.062			0.950	0.957			0.968	
Satd. Flow (perm)	0	3004	0	115	3419	0	1681	1694	1583	0	1803	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		132			67				254			5
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		767			913			427			522	
Travel Time (s)		17.4			20.8			9.7			11.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	39	875	550	487	652	189	413	20	254	64	34	5
Shared Lane Traffic (%)							48%					
Lane Group Flow (vph)	0	1464	0	487	841	0	215	218	254	0	98	5
Turn Type	Perm			pm+pt			custom		Perm	custom		Perm
Protected Phases		6		5	2		8	8		4	4	
Permitted Phases	6			2			8		8	4		4
Detector Phase	6	6		5	2		8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	4.0	4.0		3.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	40.0	40.0		8.0	21.0		12.0	12.0	12.0	8.0	8.0	8.0
Total Split (s)	64.0	64.0	0.0	28.0	92.0	0.0	26.0	26.0	26.0	10.0	10.0	10.0
Total Split (%)	50.0%	50.0%	0.0%	21.9%	71.9%	0.0%	20.3%	20.3%	20.3%	7.8%	7.8%	7.8%
Maximum Green (s)	59.0	59.0		23.0	87.0		21.0	21.0	21.0	6.0	6.0	6.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	0.0	-1.0	-1.0	0.0	-1.0	-1.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.0	4.0	4.0	4.0
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	3.0	3.0
Recall Mode	C-Min	C-Min		None	C-Min		None	None	None	None	None	None
Walk Time (s)	6.0	6.0					6.0	6.0	6.0			
Flash Dont Walk (s)	24.0	24.0					14.0	14.0	14.0			
Pedestrian Calls (#/hr)	4	4					4	4	4			
Act Effct Green (s)		60.0		89.6	89.6		20.4	20.4	19.4		6.0	6.0
Actuated g/C Ratio		0.47		0.70	0.70		0.16	0.16	0.15		0.05	0.05
v/c Ratio		0.99		1.18	0.35		0.81	0.81	0.56		1.15	0.06
Control Delay		52.2		140.6	7.5		74.0	74.4	10.6		197.2	35.8
Queue Delay		0.0		0.0	0.0		0.0	0.0	0.0		0.0	0.0
Total Delay		52.2		140.6	7.5		74.0	74.4	10.6		197.2	35.8
LOS		D		F	Α		Ε	Ε	В		F	D
Approach Delay		52.2			56.3			50.7			189.4	
Approach LOS		D			E			D			F	
90th %ile Green (s)	59.0	59.0		23.0	87.0		21.0	21.0	21.0	6.0	6.0	6.0

	•	→	>	←	•	4	†	1	/	↓	4
Lane Group	EBL	EBT	EBR WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
90th %ile Term Code	Coord	Coord	Max	Coord		Max	Max	Max	Max	Max	Max
70th %ile Green (s)	59.0	59.0	23.0	87.0		21.0	21.0	21.0	6.0	6.0	6.0
70th %ile Term Code	Coord	Coord	Max	Coord		Max	Max	Max	Max	Max	Max
50th %ile Green (s)	59.0	59.0	23.0	87.0		21.0	21.0	21.0	6.0	6.0	6.0
50th %ile Term Code	Coord	Coord	Max	Coord		Max	Max	Max	Max	Max	Max
30th %ile Green (s)	59.0	59.0	24.9	88.9		19.1	19.1	19.1	6.0	6.0	6.0
30th %ile Term Code	Coord	Coord	Max	Coord		Gap	Gap	Gap	Max	Max	Max
10th %ile Green (s)	59.0	59.0	29.3	93.3		14.7	14.7	14.7	6.0	6.0	6.0
10th %ile Term Code	Coord	Coord	Max	Coord		Gap	Gap	Gap	Max	Max	Max
Queue Length 50th (ft)		583	~455	125		180	183	0		~96	0
Queue Length 95th (ft)		#766	#674	158		#298	#302	77		#213	15
Internal Link Dist (ft)		687		833			347			442	
Turn Bay Length (ft)											
Base Capacity (vph)		1478	412	2415		289	291	472		85	79
Starvation Cap Reductn		0	0	0		0	0	0		0	0
Spillback Cap Reductn		0	0	0		0	0	0		0	0
Storage Cap Reductn		0	0	0		0	0	0		0	0
Reduced v/c Ratio		0.99	1.18	0.35		0.74	0.75	0.54		1.15	0.06

Area Type:

Other

Cycle Length: 128

Actuated Cycle Length: 128

Offset: 20 (16%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.18 Intersection Signal Delay: 57.4 Intersection Capacity Utilization 92.0%

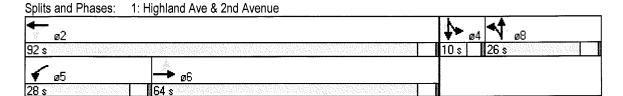
Intersection LOS: E ICU Level of Service F

Analysis Period (min) 15

Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.



	•	→	•	1	4—	4	1	†	<i>></i>	1	↓	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	† \$		75	↑ Ъ			स	7	ሻ	1→	
Volume (vph)	57 [°]	653	50	473	698	194	23	130	384	328	169	55
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	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989			0.967				0.850		0.963	
FIt Protected	0.950			0.950				0.993		0.950		
Satd. Flow (prot)	1770	3500	0	1770	3422	0	0	1850	1583	1770	1794	0
FIt Permitted	0.950			0.950				0.993		0.950		
Satd. Flow (perm)	1770	3500	0	1770	3422	0	0	1850	1583	1770	1794	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			27				316		10	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		552			1005			281			235	
Travel Time (s)		12.5			22.8			6.4			5.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	62	710	54	514	759	211	25	141	417	357	184	60
Shared Lane Traffic (%)												
Lane Group Flow (vph)	62	764	0	514	970	0	0	166	417	357	244	0
Turn Type	Prot			Prot			custom		custom	custom		
Protected Phases	1	6		5	2		8	8		4	4	
Permitted Phases		6			2		8		8 5	4		
Detector Phase	1	6		5	2		8	8	8 5	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		6.0	10.0		6.0	6.0		6.0	6.0	
Minimum Split (s)	9.0	15.0		11.0	15.0		11.0	11.0		11.0	11.0	
Total Split (s)	11.0	35.0	0.0	35.0	59.0	0.0	17.0	17.0	52.0	41.0	41.0	0.0
Total Split (%)	7.3%	23.3%	0.0%	23.3%	39.3%	0.0%	11.3%	11.3%	34.7%	27.3%	27.3%	0.0%
Maximum Green (s)	6.0	30.0		30.0	54.0		12.0	12.0		36.0	36.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-1.0	-1.0	0.0	-1.0	-1.0	0.0	-1.0	-1.0	-1.0	-1.0	-1.0	0.0
Total Lost 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
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes					0.0		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Min		None	Min		None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)	7.4	04.0		04.0				40.4	47.0	00.0	00.0	
Act Effet Green (s)	7.1	31.3		31.3	55.5			13.1	47.8	30.8	30.8	
Actuated g/C Ratio	0.06	0.25		0.25	0.44			0.10	0.38	0.24	0.24	
v/c Ratio	0.63	0.88		1.17	0.64			0.86	0.52	0.83	0.55	
Control Delay	87.6	58.5		141.5	31.0			94.2	10.0	62.7	45.7	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Delay LOS	87.6 F	58.5		141.5	31.0			94.2	10.0	62.7	45.7	
	r	E 60.7		F	C			F	Α	E	D 55.0	
Approach LOS		60.7			69.2			33.9			55.8	
Approach LOS 90th %ile Green (s)	6.0	E 30.0		30.0	E 54.0		12.0	C 12.0		36.0	E 36.0	
JOHN JOHN GIRCH (8)	0.0	30.0		30.0	04.0		12.0	12.0		30.0	30.0	

Lane Group	90
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor Frt	
Flt Protected	
Satd. Flow (prot)	
Fit Permitted Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase Minimum Initial (s)	19.0
Minimum Split (s)	22.0
Total Split (s)	22.0
Total Split (%)	15%
Maximum Green (s)	19.0
Yellow Time (s)	2.0 1.0
All-Red Time (s) Lost Time Adjust (s)	in the control of the
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s) Recall Mode	3.0 None
Walk Time (s)	6.0
Flash Dont Walk (s)	12.0 a 1. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Pedestrian Calls (#/hr)	2
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	19.0
· · · · · · · · · · · · · · · · · · ·	

	۶	→	•	•	←	*	4	†	<i>></i>	>	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
90th %ile Term Code	Max	Max		Max	Max	11.479	Max	Max		Max	Max	
70th %ile Green (s)	6.0	30.0		30.0	54.0		12.0	12.0		35.7	35.7	
70th %ile Term Code	Max	Max		Max	Hold		Max	Max		Gap	Gap	
50th %ile Green (s)	6.0	30.0		30.0	54.0		12.0	12.0		30.4	30.4	
50th %ile Term Code	Max	Max		Max	Hold		Max	Max		Gap	Gap	
30th %ile Green (s)	6.0	30.0		30.0	54.0		12.0	12.0		26.4	26.4	
30th %ile Term Code	Max	Max		Max	Hold		Max	Max		Gap	Gap	
10th %ile Green (s)	6.0	30.0		30.0	54.0		12.0	12.0		21.1	21.1	
10th %ile Term Code	Max	Max		Max	Hold		Max	Max		Gap	Gap	
Queue Length 50th (ft)	49	302		~477	294			131	51	264	159	
Queue Length 95th (ft)	#145	#560		#901	513			#330	141	#486	294	
Internal Link Dist (ft)		472			925			201			155	
Turn Bay Length (ft)												
Base Capacity (vph)	99	871		438	1519			192	795	523	538	
Starvation Cap Reductn	0	0		0	0			0	0	0	0	
Spillback Cap Reductn	0	0		0	0			0	0	0	0	
Storage Cap Reductn	0	0		0	0			0	0	0	0	
Reduced v/c Ratio	0.63	0.88		1.17	0.64			0.86	0.52	0.68	0.45	

Area Type:

Other

Cycle Length: 150

Actuated Cycle Length: 126.3

Natural Cycle: 150

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.17 Intersection Signal Delay: 59.0 Intersection Capacity Utilization 85.5%

Intersection LOS: E ICU Level of Service E

Analysis Period (min) 15
90th %ile Actuated Cycle: 150
70th %ile Actuated Cycle: 127.7
50th %ile Actuated Cycle: 122.4
30th %ile Actuated Cycle: 118.4
10th %ile Actuated Cycle: 113.1

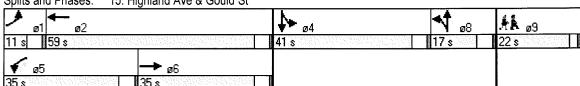
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 15: Highland Ave & Gould St



Lane Group	ø9	
90th %ile Term Code	Max	
70th %ile Green (s)	0.0	
70th %ile Term Code	Skip	
50th %ile Green (s)	0.0	
50th %ile Term Code	Skip	
30th %ile Green (s)	0.0	
30th %ile Term Code	Skip	
10th %ile Green (s)	0.0	
10th %ile Term Code	Skip	
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		
Intersection Summary		

	-	•	✓	←	1	<i>></i>	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	^		(1) 1 (1) (1) (1) (1) (1) (1) (1) (1) (1	^		7	
Volume (veh/h)	1065	396	0	2472	0	133	
Sign Control	Free			Free	Stop		
Grade Peak Hour Factor	0% 0.92	0.92	0.92	0 % 0.92	0% 0.92	0.92	
Hourly flow rate (vph)	1158	430	0.92	2687	0.92	145	
Pedestrians	1,00	400	. 0	20,01		140	
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None			None			
Median storage veh) Upstream signal (ft)				767			
pX, platoon unblocked				101	0.84		
vC, conflicting volume			1588		2716	794	
vC1, stage 1 conf vol			, , , , ,				
vC2, stage 2 conf vol							
vCu, unblocked vol			1588		2662	794	
tC, single (s)			4.1		6.8	6.9	
tC, 2 stage (s)			2.2		2 5	2.2	
tF (s) p0 queue free %			100		3.5 100	3.3 56	
cM capacity (veh/h)			409		15	331	
•	ED 4	ED 0		MD 0		001	
Direction, Lane # Volume Total	EB 1 772	EB 2 816	WB 1 1343	WB 2 1343	NB 1 145		
Volume Left	0	010	1343	1343	0		
Volume Right	0	430	Ö	0	145		
cSH	1700	1700	1700	1700	331		
Volume to Capacity	0.45	0.48	0.79	0.79	0.44		
Queue Length 95th (ft)	0	0	0	0	53		
Control Delay (s)	0.0	0.0	0.0	0.0	24.1		
Lane LOS					С		
Approach Delay (s)	0.0		0.0		24.1		
Approach LOS					С		
Intersection Summary							
Average Delay			0.8				_
Intersection Capacity Utilization	n		71.7%	IC	U Level	of Service	e C
Analysis Period (min)			15				

	۶	-	*	1	+	•	4	†	~	>		4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		414		75	↑ ↑		ሻ	4	7*		4	7
Volume (vph)	40	757	251	158	797	109	1115	30	300	96	48	28
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	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Frt		0.964			0.982				0.850			0.850
FIt Protected		0.998		0.950			0.950	0.955			0.968	
Satd. Flow (prot)	0	3405	0	1770	3476	0	1681	1690	1583	0	1803	1583
FIt Permitted		0.873		0.096			0.950	0.955			0.968	
Satd. Flow (perm)	0	2979	0	179	3476	0	1681	1690	1583	0	1803	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		59			24				152			30
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		767			913			427			522	
Travel Time (s)		17.4			20.8			9.7			11.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	823	273	172	866	118	1212	33	326	104	52	30
Shared Lane Traffic (%)							49%					
Lane Group Flow (vph)	0	1139	0	172	984	0	618	627	326	0	156	30
Turn Type	Perm			custom			custom		Perm	custom		Perm
Protected Phases		6		5	25		8	8		4	4	
Permitted Phases	6			2			8		8	4		4
Detector Phase	6	6		5	25		8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	4.0	4.0		3.0			4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0		8.0			12.0	12.0	12.0	8.0	8.0	8.0
Total Split (s)	42.5	42.5	0.0	8.0	50.5	0.0	30.5	30.5	30.5	9.0	9.0	9.0
Total Split (%)	47.2%	47.2%	0.0%	8.9%	56.1%	0.0%	33.9%	33.9%	33.9%	10.0%	10.0%	10.0%
Maximum Green (s)	37.5	37.5		3.0			25.5	25.5	25.5	5.0	5.0	5.0
Yellow Time (s)	4.0	4.0		4.0			4.0	4.0	4.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0			1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	0.0	-1.0	-1.0	0.0	-1.0	-1.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.0	4.0	4.0	4.0
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	3.0
Recall Mode	C-Min	C-Min		None			None	None	None	None	None	None
Walk Time (s)	6.0	6.0					6.0	6.0	6.0			
Flash Dont Walk (s)	24.0	24.0					14.0	14.0	14.0			
Pedestrian Calls (#/hr)	4	4					4	4	4			
Act Effct Green (s)		37.5		45.5	45.5		26.5	26.5	25.5		6.0	6.0
Actuated g/C Ratio		0.42		0.51	0.51		0.29	0.29	0.28		0.07	0.07
v/c Ratio		0.89		1.07	0.56		1.25	1.26	0.59		1.29	0.22
Control Delay		33.5		111.1	16.2		158.1	162.2	19.2		217.5	19.4
Queue Delay		0.0		0.0	0.0		0.0	0.0	0.0		0.0	0.0
Total Delay		33.5		111.1	16.2		158.1	162.2	19.2		217.5	19.4
LOS		С		F	В		F	F	В		F	В
Approach Delay		33.5		•	30.3		•	130.9	_		185.5	_
Approach LOS		C			C			F			F	
90th %ile Green (s)	37.5	37.5		3.0	_		25.5	25.5	25.5	5.0	5.0	5.0

Lane Group	ø2	
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)		
Peak Hour Factor		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	2	
Permitted Phases	_	
Detector Phase		
Switch Phase		
Minimum Initial (s)	4.0	
Minimum Split (s)	21.0	
Total Split (s)	42.5	
Total Split (%)	47%	
Maximum Green (s)	37.5	
Yellow Time (s)	4.0	
All-Red Time (s)	1.0	
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	
Recall Mode	C-Min	
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		
90th %ile Green (s)	45.5	
	101	

	•	-	* *	~ ◆	- 4	٠ ٦	†	/	/	ļ	1
Lane Group	EBL	EBT	EBR WI	BL WE	ST WE	BR NB	L NBT	NBR	SBL	SBT	SBR
90th %ile Term Code	Coord	Coord	М	эх	114	Ma	x Max	Max	Max	Max	Max
70th %ile Green (s)	37.5	37.5	3	.0		25.	5 25.5	25.5	5.0	5.0	5.0
70th %ile Term Code	Coord	Coord	M	ах		Ma	x Max	Max	Max	Max	Max
50th %ile Green (s)	37.5	37.5	3	.0		25.	5 25.5	25.5	5.0	5.0	5.0
50th %ile Term Code	Coord	Coord	M	ax		Ma	x Max	Max	Max	Max	Max
30th %ile Green (s)	37.2	37.2	3	.0		25.	5 25.5	25.5	5.3	5.3	5.3
30th %ile Term Code	Coord	Coord	M	ax		Ma	x Max	Max	Max	Max	Max
10th %ile Green (s)	32.6	32.6	3	.0		25.	5 25.5	25.5	9.9	9.9	9.9
10th %ile Term Code	Coord	Coord	M	ЭX		Ma	x Max	Max	Max	Max	Max
Queue Length 50th (ft)		288	~;	55 18	32	~46	6 ~475	81		~127	0
Queue Length 95th (ft)		#421	#1:	59 23	8	#68	1 #692	170		#247	27
Internal Link Dist (ft)		687		- 83	3		347			442	
Turn Bay Length (ft)											
Base Capacity (vph)		1308	16	31 180	8	49	5 498	557		121	134
Starvation Cap Reductn		0		0	0	(0 0	0		0	0
Spillback Cap Reductn		0		0	0	1	0 0	0		0	0
Storage Cap Reductn		0		0	0	(0 0	0		0	0
Reduced v/c Ratio		0.87	1.0	0.5	54	1.2	5 1.26	0.59		1.29	0.22

Area Type:

Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 20 (22%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.29 Intersection Signal Delay: 77.3 Intersection Capacity Utilization 104.0%

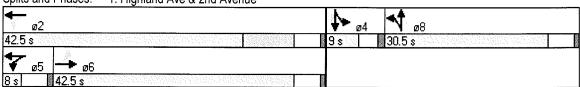
Intersection LOS: E ICU Level of Service G

Analysis Period (min) 15

- Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.

 Queue shown is maximum after two cycles.

Splits and Phases: 1: Highland Ave & 2nd Avenue



Lane Group	ø2	
90th %ile Term Code	Coord	
70th %ile Green (s)	45.5	
70th %ile Term Code	Coord	
50th %ile Green (s)	45.5	
50th %ile Term Code	Coord	
30th %ile Green (s)	45.2	
30th %ile Term Code	Coord	
10th %ile Green (s)	40.6	
10th %ile Term Code	Coord	
Queue Length 50th (ft) Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		
Intersection Summary		