



## **Appendix B**

### **Synchro Analysis**

### **Future 2024 No-Build Conditions**



Intersection Capacity Analysis  
1: Merrick Road & Grand Avenue

2024 NO-BUILD CONDITIONS  
WEEKDAY AM PEAK HOUR

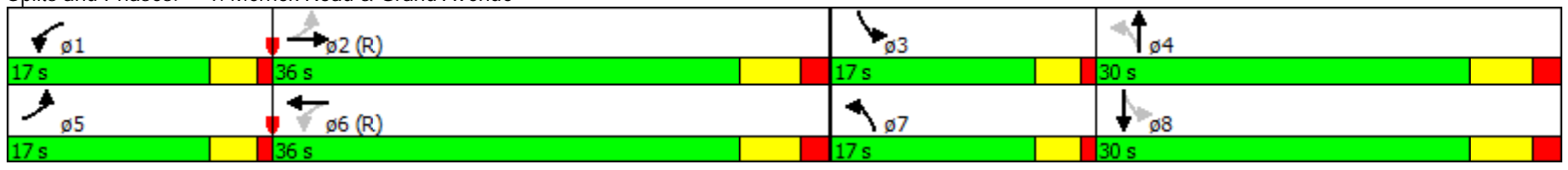
	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑	↗	↖	↑↑	↗	↖	↑↑		↖	↑↑	
Volume (vph)	64	431	119	169	688	83	186	602	159	54	417	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	12	9	11	11	10	10	11	10	10	10
Storage Length (ft)	200		100	100		40	150		0	150		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor			0.99			0.99		0.99			1.00	
Frt			0.850			0.850		0.967			0.975	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1318	2991	1384	1341	2991	1313	1472	2476	0	1417	2298	0
Flt Permitted	0.275			0.307			0.275			0.175		
Satd. Flow (perm)	382	2991	1364	433	2991	1295	426	2476	0	261	2298	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			185			185		34			22	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		687			922			603			707	
Travel Time (s)		15.6			21.0			13.7			16.1	
Confl. Peds. (#/hr)			8			6			17			9
Peak Hour Factor	0.94	0.85	0.84	0.71	0.93	0.78	0.88	0.88	0.83	0.68	0.90	0.85
Heavy Vehicles (%)	15%	5%	5%	9%	5%	7%	3%	6%	5%	7%	15%	17%
Parking (#/hr)								20			20	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	68	507	142	238	740	106	211	876	0	79	557	0
Turn Type	pm+pt	NA	Free	pm+pt	NA	Free	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		Free	6		Free	4			8		
Total Split (s)	17.0	36.0		17.0	36.0		17.0	30.0		17.0	30.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Act Effct Green (s)	38.4	28.1	100.0	46.3	34.4	100.0	44.4	32.3		37.8	27.0	
Actuated g/C Ratio	0.38	0.28	1.00	0.46	0.34	1.00	0.44	0.32		0.38	0.27	
v/c Ratio	0.30	0.60	0.10	0.76	0.72	0.08	0.67	1.07		0.40	0.88	
Control Delay	18.1	34.2	0.2	34.2	33.8	0.1	30.4	84.7		23.4	51.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	18.1	34.2	0.2	34.2	33.8	0.1	30.4	84.7		23.4	51.3	
LOS	B	C	A	C	C	A	C	F		C	D	
Approach Delay		25.9			30.6			74.1			47.9	
Approach LOS		C			C			E			D	
Queue Length 50th (ft)	22	142	0	91	212	0	87	~354		30	180	
Queue Length 95th (ft)	47	183	0	109	295	0	#145	#491		44	#295	
Internal Link Dist (ft)		607			842			523			627	
Turn Bay Length (ft)	200		100	100		40	150			150		
Base Capacity (vph)	286	897	1364	318	1030	1295	325	822		260	636	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.24	0.57	0.10	0.75	0.72	0.08	0.65	1.07		0.30	0.88	

Intersection Summary

Area Type: CBD  
 Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 59.5 (60%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.07  
 Intersection Signal Delay: 46.2  
 Intersection Capacity Utilization 73.3%  
 Analysis Period (min) 15  
 Intersection LOS: D  
 ICU Level of Service D

~ 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: Merrick Road & Grand Avenue



Intersection Capacity Analysis  
2: Grand Avenue & Prospect Street

2024 NO-BUILD CONDITIONS  
WEEKDAY AM PEAK HOUR

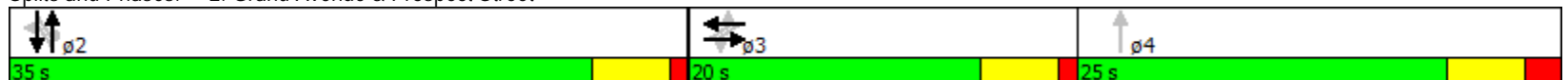


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	ø4
Lane Configurations		↕			↕			↕			↕		
Volume (vph)	42	5	20	1	0	27	3	687	38	39	527	47	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	10	16	10	12	12	12	10	10	10	10	10	10	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95	
Ped Bike Factor		0.99			0.98			1.00			1.00		
Frt		0.970			0.875			0.988			0.983		
Flt Protected		0.966			0.996			0.999			0.996		
Satd. Flow (prot)	0	1773	0	0	1434	0	0	2514	0	0	2387	0	
Flt Permitted		0.768			0.982			0.455			0.844		
Satd. Flow (perm)	0	1402	0	0	1413	0	0	1145	0	0	2021	0	
Right Turn on Red			No			Yes			Yes			Yes	
Satd. Flow (RTOR)					109			22			19		
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		602			588			707			1474		
Travel Time (s)		13.7			13.4			16.1			33.5		
Confl. Peds. (#/hr)	5		4	4		5	5		21	21		5	
Peak Hour Factor	0.54	0.63	0.79	0.25	0.25	0.52	0.38	0.97	0.60	0.66	0.90	0.59	
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	5%	7%	5%	10%	12%	10%	
Parking (#/hr)								20			20		
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	111	0	0	56	0	0	779	0	0	725	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA		
Protected Phases		3			3			2			2		4
Permitted Phases	3			3			2	4		2			
Total Split (s)	20.0	20.0		20.0	20.0		35.0	35.0		35.0	35.0		25.0
Total Lost Time (s)		5.0			5.0			5.0			5.0		
Act Effct Green (s)		15.0			15.0			29.3			29.3		
Actuated g/C Ratio		0.28			0.28			0.54			0.54		
v/c Ratio		0.29			0.12			0.57			0.66		
Control Delay		18.3			1.8			10.1			12.3		
Queue Delay		0.0			0.0			0.0			0.0		
Total Delay		18.3			1.8			10.1			12.3		
LOS		B			A			B			B		
Approach Delay		18.3			1.8			10.1			12.3		
Approach LOS		B			A			B			B		
Queue Length 50th (ft)		29			0			75			76		
Queue Length 95th (ft)		42			0			118			127		
Internal Link Dist (ft)		522			508			627			1394		
Turn Bay Length (ft)													
Base Capacity (vph)		387			469			1400			1126		
Starvation Cap Reductn		0			0			0			0		
Spillback Cap Reductn		0			0			0			0		
Storage Cap Reductn		0			0			0			0		
Reduced v/c Ratio		0.29			0.12			0.56			0.64		

Intersection Summary

Area Type:	CBD
Cycle Length:	80
Actuated Cycle Length:	54.3
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.66
Intersection Signal Delay:	11.3
Intersection Capacity Utilization:	66.8%
Analysis Period (min):	15
Intersection LOS:	B
ICU Level of Service:	C

Splits and Phases: 2: Grand Avenue & Prospect Street



Intersection Capacity Analysis  
3: Sunrise Highway & Grand Avenue

2024 NO-BUILD CONDITIONS  
WEEKDAY AM PEAK HOUR

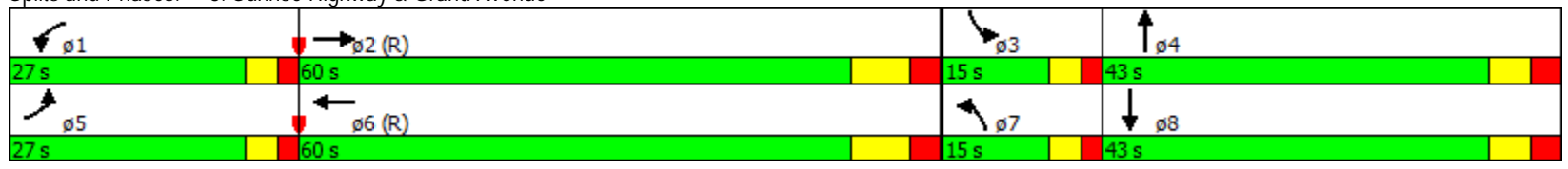


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Volume (vph)	124	1519	40	176	1781	66	104	508	122	82	433	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	10	10	10	10	10	10
Storage Length (ft)	300		0	400		0	150		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00			1.00			0.99			0.99	
Frt		0.996			0.994			0.969			0.964	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1464	4391	0	1464	4190	0	1501	2722	0	1366	2638	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1464	4391	0	1464	4190	0	1501	2722	0	1366	2638	0
Right Turn on Red			Yes			Yes			No			No
Satd. Flow (RTOR)		3			5							
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1155			1126			1474			958	
Travel Time (s)		26.3			25.6			33.5			21.8	
Confl. Peds. (#/hr)			6			2			34			10
Peak Hour Factor	0.91	0.95	0.84	0.82	0.98	0.91	0.94	0.96	0.88	0.88	0.95	0.90
Heavy Vehicles (%)	11%	6%	0%	11%	11%	3%	1%	7%	7%	11%	10%	10%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	1	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	136	1647	0	215	1890	0	111	668	0	93	600	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases												
Total Split (s)	27.0	60.0		27.0	60.0		15.0	43.0		15.0	43.0	
Total Lost Time (s)	5.0	8.4		5.0	8.4		5.0	7.0		5.0	7.0	
Act Effct Green (s)	17.9	51.6		22.0	55.7		10.0	36.0		10.0	36.0	
Actuated g/C Ratio	0.12	0.36		0.15	0.38		0.07	0.25		0.07	0.25	
v/c Ratio	0.75	1.05		0.97	1.17		1.08	0.99		0.99	0.92	
Control Delay	85.7	82.8		113.1	124.4		172.0	86.0		155.6	73.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	85.7	82.8		113.1	124.4		172.0	86.0		155.6	73.0	
LOS	F	F		F	F		F	F		F	E	
Approach Delay		83.1			123.2			98.3			84.1	
Approach LOS		F			F			F			F	
Queue Length 50th (ft)	125	~620		205	~787		~116	333		89	292	
Queue Length 95th (ft)	198	#719		#321	#918		#245	#468		#204	#405	
Internal Link Dist (ft)		1075			1046			1394			878	
Turn Bay Length (ft)	300			400			150			150		
Base Capacity (vph)	222	1564		222	1612		103	675		94	654	
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	0.61	1.05		0.97	1.17		1.08	0.99		0.99	0.92	

Intersection Summary

Area Type: CBD  
 Cycle Length: 145  
 Actuated Cycle Length: 145  
 Offset: 138 (95%), Referenced to phase 2:EBT and 6:WBT, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.17  
 Intersection Signal Delay: 101.2  
 Intersection LOS: F  
 Intersection Capacity Utilization 106.9%  
 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: 3: Sunrise Highway & Grand Avenue



Intersection Capacity Analysis  
4: Grand Avenue & Baldwin Avenue/Miller Place

2024 NO-BUILD CONDITIONS  
WEEKDAY AM PEAK HOUR



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	24	11	27	6	7	4	14	689	11	12	765	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	11	11	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.99			1.00			1.00			0.99	
Frt		0.947			0.973			0.997			0.988	
Flt Protected		0.979			0.985			0.999			0.999	
Satd. Flow (prot)	0	1544	0	0	1601	0	0	2623	0	0	2561	0
Flt Permitted		0.845			0.762			0.914			0.936	
Satd. Flow (perm)	0	1326	0	0	1239	0	0	2399	0	0	2399	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		35			8			3			11	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		721			584			958			838	
Travel Time (s)		16.4			13.3			21.8			19.0	
Confl. Peds. (#/hr)	10		4	1		4	26		40	40		26
Peak Hour Factor	0.64	0.63	0.78	0.50	0.35	0.50	0.65	0.96	0.63	0.69	0.91	0.63
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	5%	7%	5%	5%	8%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	1	0	0	3	0
Parking (#/hr)								20			20	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	90	0	0	40	0	0	757	0	0	931	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		3			2			1			1	
Permitted Phases	3			2			1			1		
Total Split (s)	26.0	26.0		26.0	26.0		28.0	28.0		28.0	28.0	
Total Lost Time (s)		5.5			5.5			5.5			5.5	
Act Effct Green (s)		9.1			9.6			52.9			52.9	
Actuated g/C Ratio		0.11			0.12			0.66			0.66	
v/c Ratio		0.50			0.26			0.48			0.59	
Control Delay		31.0			28.8			13.5			22.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		31.0			28.8			13.5			22.9	
LOS		C			C			B			C	
Approach Delay		31.0			28.8			13.5			22.9	
Approach LOS		C			C			B			C	
Queue Length 50th (ft)		26			15			106			190	
Queue Length 95th (ft)		40			12			#279			#361	
Internal Link Dist (ft)		641			504			878			758	
Turn Bay Length (ft)												
Base Capacity (vph)		365			323			1586			1589	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.25			0.12			0.48			0.59	

Intersection Summary

Area Type: CBD  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 1:NBSB, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.59  
 Intersection Signal Delay: 19.5  
 Intersection LOS: B  
 Intersection Capacity Utilization 50.4%  
 ICU Level of Service A  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 4: Grand Avenue & Baldwin Avenue/Miller Place



Intersection Capacity Analysis  
5: Grand Avenue & Milburn Avenue

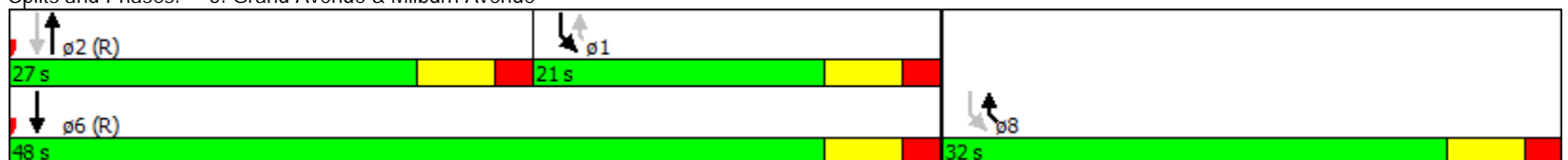
2024 NO-BUILD CONDITIONS  
WEEKDAY AM PEAK HOUR

	↑	↶	↷	↓	↶	↷
Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations	↑↑		↶	↑↑		↶
Volume (vph)	772	1	175	798	0	283
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Storage Length (ft)		0	80		0	0
Storage Lanes		0	1		0	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor	1.00		0.99			0.99
Frt	0.999					0.865
Flt Protected			0.950			
Satd. Flow (prot)	2639	0	1496	2626	0	1409
Flt Permitted			0.341			
Satd. Flow (perm)	2639	0	531	2626	0	1390
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	30			30	30	
Link Distance (ft)	838			379	598	
Travel Time (s)	19.0			8.6	13.6	
Confl. Peds. (#/hr)		17	17			1
Peak Hour Factor	0.94	0.25	0.88	0.98	0.92	0.93
Heavy Vehicles (%)	7%	4%	5%	7%	2%	5%
Bus Blockages (#/hr)	0	0	0	3	0	0
Parking (#/hr)	20			20		
Shared Lane Traffic (%)						
Lane Group Flow (vph)	825	0	199	814	0	304
Turn Type	NA		custom	NA		custom
Protected Phases	2		1	6		8
Permitted Phases			8	2		1
Total Split (s)	27.0		21.0	48.0		32.0
Total Lost Time (s)	6.0		6.0	6.0		6.0
Act Effct Green (s)	25.6		36.4	43.0		36.4
Actuated g/C Ratio	0.32		0.46	0.54		0.46
v/c Ratio	0.98		0.53	0.58		0.48
Control Delay	51.8		14.7	9.5		14.2
Queue Delay	0.0		0.0	0.3		0.0
Total Delay	51.8		14.7	9.8		14.2
LOS	D		B	A		B
Approach Delay	51.8			10.8		
Approach LOS	D			B		
Queue Length 50th (ft)	213		51	94		85
Queue Length 95th (ft)	#353		107	48		127
Internal Link Dist (ft)	758			299	518	
Turn Bay Length (ft)			80			
Base Capacity (vph)	844		445	1411		655
Starvation Cap Reductn	0		0	164		0
Spillback Cap Reductn	0		0	0		0
Storage Cap Reductn	0		0	0		0
Reduced v/c Ratio	0.98		0.45	0.65		0.46

Intersection Summary

Area Type: CBD  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBSB and 6:SBT, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.98  
 Intersection Signal Delay: 27.1  
 Intersection LOS: C  
 Intersection Capacity Utilization 54.6%  
 ICU Level of Service A  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 5: Grand Avenue & Milburn Avenue



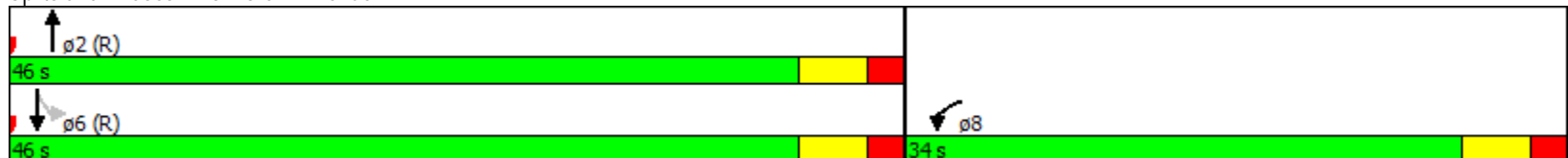


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			L
Volume (vph)	13	10	1046	8	7	1051
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	0.99		1.00			1.00
Frt	0.931		0.998			
Flt Protected	0.976					0.999
Satd. Flow (prot)	1512	0	2630	0	0	2639
Flt Permitted	0.976					0.938
Satd. Flow (perm)	1512	0	2630	0	0	2478
Right Turn on Red		No		Yes		
Satd. Flow (RTOR)			2			
Link Speed (mph)	30		30			30
Link Distance (ft)	918		379			300
Travel Time (s)	20.9		8.6			6.8
Confl. Peds. (#/hr)		2		35	35	
Peak Hour Factor	0.75	0.56	0.83	0.50	0.58	0.92
Heavy Vehicles (%)	2%	2%	7%	6%	6%	7%
Bus Blockages (#/hr)	0	0	1	0	0	0
Parking (#/hr)			20			20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	35	0	1276	0	0	1154
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Total Split (s)	34.0		46.0		46.0	46.0
Total Lost Time (s)	5.5		5.5			5.5
Act Effct Green (s)	9.5		66.3			66.3
Actuated g/C Ratio	0.12		0.83			0.83
v/c Ratio	0.19		0.59			0.56
Control Delay	31.7		5.3			3.7
Queue Delay	0.0		0.2			0.2
Total Delay	31.7		5.5			3.8
LOS	C		A			A
Approach Delay	31.7		5.5			3.8
Approach LOS	C		A			A
Queue Length 50th (ft)	17		87			104
Queue Length 95th (ft)	30		m86			88
Internal Link Dist (ft)	838		299			220
Turn Bay Length (ft)						
Base Capacity (vph)	538		2180			2053
Starvation Cap Reductn	0		228			215
Spillback Cap Reductn	0		139			0
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.07		0.65			0.63

Intersection Summary

Area Type: CBD  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.59  
 Intersection Signal Delay: 5.1  
 Intersection LOS: A  
 Intersection Capacity Utilization 52.6%  
 ICU Level of Service A  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Lorenz Avenue



Intersection Capacity Analysis  
7: Seaman Avenue

2024 NO-BUILD CONDITIONS  
WEEKDAY AM PEAK HOUR

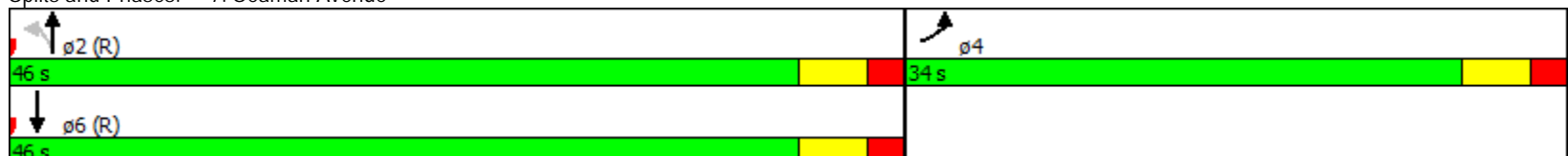


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑↑	↑↑	
Volume (vph)	140	58	50	970	981	113
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	0.99			1.00	0.99	
Frt	0.960				0.980	
Flt Protected	0.966			0.997		
Satd. Flow (prot)	1507	0	0	2589	2563	0
Flt Permitted	0.966			0.751		
Satd. Flow (perm)	1506	0	0	1950	2563	0
Right Turn on Red		No				Yes
Satd. Flow (RTOR)					30	
Link Speed (mph)	30			30	30	
Link Distance (ft)	655			360	196	
Travel Time (s)	14.9			8.2	4.5	
Confl. Peds. (#/hr)	1	7	19			19
Peak Hour Factor	0.80	0.79	0.65	0.89	0.94	0.72
Heavy Vehicles (%)	4%	6%	21%	8%	7%	11%
Parking (#/hr)				20	20	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	248	0	0	1167	1201	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	34.0		46.0	46.0	46.0	
Total Lost Time (s)	5.5			5.5	5.5	
Act Effct Green (s)	18.4			50.6	50.6	
Actuated g/C Ratio	0.23			0.63	0.63	
v/c Ratio	0.71			0.95	0.74	
Control Delay	39.4			26.3	8.2	
Queue Delay	0.0			9.0	44.0	
Total Delay	39.4			35.4	52.2	
LOS	D			D	D	
Approach Delay	39.4			35.4	52.2	
Approach LOS	D			D	D	
Queue Length 50th (ft)	114			131	127	
Queue Length 95th (ft)	147			#460	m124	
Internal Link Dist (ft)	575			280	116	
Turn Bay Length (ft)						
Base Capacity (vph)	536			1232	1630	
Starvation Cap Reductn	0			66	526	
Spillback Cap Reductn	0			69	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.46			1.00	1.09	

Intersection Summary

Area Type: CBD  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.95  
 Intersection Signal Delay: 43.5 Intersection LOS: D  
 Intersection Capacity Utilization 93.1% ICU Level of Service F  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Seaman Avenue





Intersection Capacity Analysis  
8: Seaman Avenue

2024 NO-BUILD CONDITIONS  
WEEKDAY AM PEAK HOUR



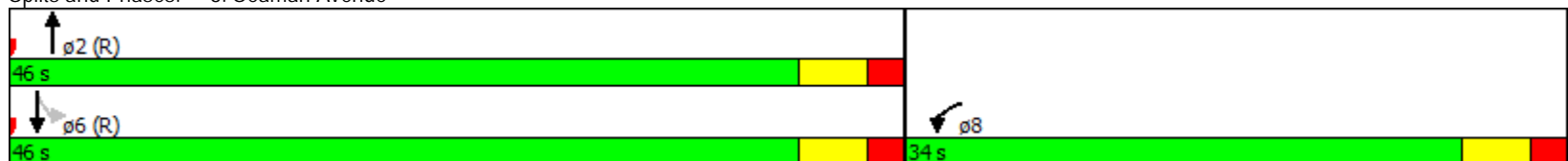
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Volume (vph)	269	81	861	257	61	799
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	1.00		0.97			1.00
Frt	0.970		0.954			
Flt Protected	0.963					0.996
Satd. Flow (prot)	1442	0	2417	0	0	2637
Flt Permitted	0.963					0.654
Satd. Flow (perm)	1442	0	2417	0	0	1730
Right Turn on Red		No		Yes		
Satd. Flow (RTOR)			124			
Link Speed (mph)	30		30			30
Link Distance (ft)	767		196			252
Travel Time (s)	17.4		4.5			5.7
Confl. Peds. (#/hr)		2		48	48	
Peak Hour Factor	0.72	0.76	0.95	0.65	0.84	0.91
Heavy Vehicles (%)	12%	5%	8%	7%	4%	7%
Parking (#/hr)			20			20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	481	0	1301	0	0	951
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Total Split (s)	34.0		46.0		46.0	46.0
Total Lost Time (s)	5.5		5.5			5.5
Act Effct Green (s)	28.0		41.0			41.0
Actuated g/C Ratio	0.35		0.51			0.51
v/c Ratio	0.95		1.00			1.07
Control Delay	58.0		30.8			67.3
Queue Delay	46.6		35.9			10.8
Total Delay	104.6		66.7			78.1
LOS	F		E			E
Approach Delay	104.6		66.7			78.1
Approach LOS	F		E			E
Queue Length 50th (ft)	228		-77			-284
Queue Length 95th (ft)	#264		m#395			#413
Internal Link Dist (ft)	687		116			172
Turn Bay Length (ft)						
Base Capacity (vph)	513		1299			886
Starvation Cap Reductn	0		212			0
Spillback Cap Reductn	153		16			25
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	1.34		1.20			1.10

Intersection Summary

Area Type: CBD  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.07  
 Intersection Signal Delay: 77.3  
 Intersection Capacity Utilization 98.8%  
 Analysis Period (min) 15  
 Intersection LOS: E  
 ICU Level of Service F

~ 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.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Seaman Avenue



Intersection Capacity Analysis  
 9: St Lukes Place & Grand Avenue

2024 NO-BUILD CONDITIONS  
 WEEKDAY AM PEAK HOUR

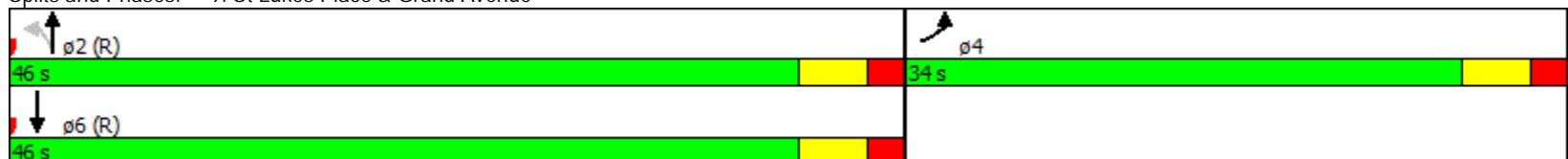


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			T	T	
Volume (vph)	82	49	42	984	810	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	0.99			1.00	1.00	
Frt	0.948				0.986	
Flt Protected	0.970			0.998		
Satd. Flow (prot)	1532	0	0	2639	2601	0
Flt Permitted	0.970			0.856		
Satd. Flow (perm)	1525	0	0	2263	2601	0
Right Turn on Red		No				Yes
Satd. Flow (RTOR)					19	
Link Speed (mph)	30			30	30	
Link Distance (ft)	678			252	852	
Travel Time (s)	15.4			5.7	19.4	
Confl. Peds. (#/hr)	6	4	16			16
Peak Hour Factor	0.80	0.77	0.77	0.89	0.95	0.74
Heavy Vehicles (%)	2%	2%	5%	7%	7%	5%
Parking (#/hr)				20	20	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	166	0	0	1161	938	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	34.0		46.0	46.0	46.0	
Total Lost Time (s)	5.5			5.5	5.5	
Act Effct Green (s)	14.1			54.9	54.9	
Actuated g/C Ratio	0.18			0.69	0.69	
v/c Ratio	0.62			0.75	0.52	
Control Delay	39.7			6.9	2.8	
Queue Delay	0.0			1.2	0.5	
Total Delay	39.7			8.1	3.2	
LOS	D			A	A	
Approach Delay	39.7			8.1	3.2	
Approach LOS	D			A	A	
Queue Length 50th (ft)	78			78	29	
Queue Length 95th (ft)	110			m95	m43	
Internal Link Dist (ft)	598			172	772	
Turn Bay Length (ft)						
Base Capacity (vph)	545			1553	1792	
Starvation Cap Reductn	0			190	0	
Spillback Cap Reductn	0			0	412	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.30			0.85	0.68	

Intersection Summary

Area Type: CBD  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.75  
 Intersection Signal Delay: 8.4 Intersection LOS: A  
 Intersection Capacity Utilization 82.1% ICU Level of Service E  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: St Lukes Place & Grand Avenue



Intersection Capacity Analysis  
10: Grand Avenue & High School Drive

2024 NO-BUILD CONDITIONS  
WEEKDAY AM PEAK HOUR

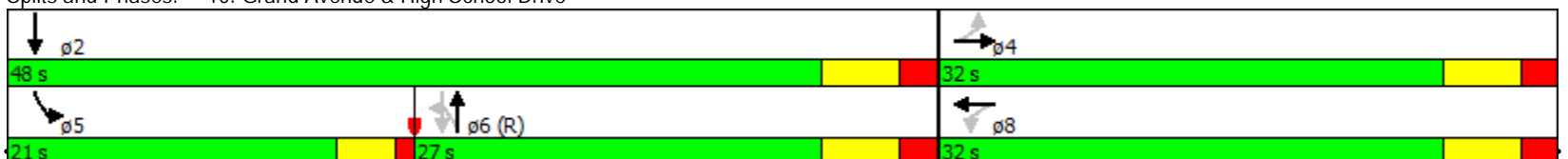
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕		↗	↕	
Volume (vph)	3	0	2	132	0	138	4	791	206	155	754	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	11	11	12	11	11
Storage Length (ft)	0		0	0		0	150		0	200		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.97			0.93		0.96	0.99			1.00	
Fr <sub>t</sub>		0.932			0.923			0.965			0.999	
Fl <sub>t</sub> Protected		0.976			0.979		0.950			0.950		
Satd. Flow (prot)	0	1509	0	0	1414	0	1593	2807	0	1504	2891	0
Fl <sub>t</sub> Permitted		0.852			0.858		0.341			0.950		
Satd. Flow (perm)	0	1285	0	0	1235	0	549	2807	0	1504	2891	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		95			95			48			1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		564			861			852			745	
Travel Time (s)		12.8			19.6			19.4			16.9	
Confl. Peds. (#/hr)	106		9	9		106	66		8			66
Peak Hour Factor	0.75	0.92	0.50	0.81	0.92	0.63	0.50	0.80	0.69	0.51	0.92	0.25
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	6%	8%	8%	7%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	3	0	0	7	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	8	0	0	382	0	8	1288	0	304	824	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Prot	NA	
Protected Phases		4			8			6		5	2	
Permitted Phases	4			8			6				6	
Total Split (s)	32.0	32.0		32.0	32.0		27.0	27.0		21.0	48.0	
Total Lost Time (s)		6.0			6.0		6.0	6.0		4.0	6.0	
Act Effct Green (s)		23.1			23.1		22.9	22.9		18.0	44.9	
Actuated g/C Ratio		0.29			0.29		0.29	0.29		0.22	0.56	
v/c Ratio		0.02			0.90		0.05	1.54		0.90	0.51	
Control Delay		0.0			46.3		29.5	273.5		62.4	13.8	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		0.0			46.3		29.5	273.5		62.4	13.8	
LOS		A			D		C	F		E	B	
Approach Delay		0.0			46.3			272.0			26.9	
Approach LOS		A			D			F			C	
Queue Length 50th (ft)		0			133		3	-511		126	117	
Queue Length 95th (ft)		0			#289		m5	#523		139	165	
Internal Link Dist (ft)		484			781			772			665	
Turn Bay Length (ft)							150			200		
Base Capacity (vph)		481			465		157	838		338	1623	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.02			0.82		0.05	1.54		0.90	0.51	

Intersection Summary

Area Type: CBD  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 6:NBSB, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.54  
 Intersection Signal Delay: 142.3  
 Intersection Capacity Utilization 77.8%  
 Analysis Period (min) 15  
 Intersection LOS: F  
 ICU Level of Service D

~ 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.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Grand Avenue & High School Drive



Intersection Capacity Analysis  
11: Stowe Avenue

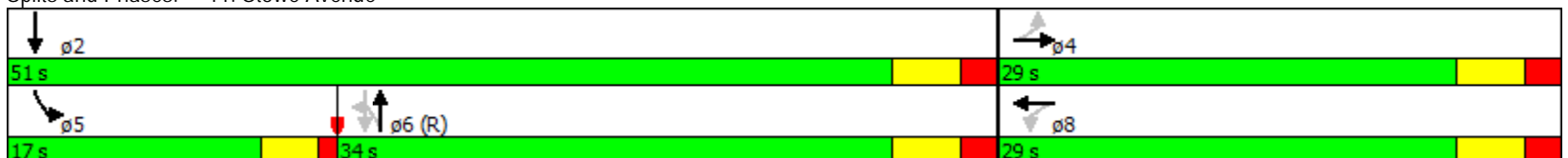
2024 NO-BUILD CONDITIONS  
WEEKDAY AM PEAK HOUR

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	7	34	88	4	40	83	1004	34	27	926	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	11	11	11	11
Storage Length (ft)	0		0	0		0	350		0	120		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99			0.99		1.00	1.00			1.00	
Frt		0.929			0.960			0.995			0.999	
Flt Protected		0.982			0.966		0.950			0.950		
Satd. Flow (prot)	0	1512	0	0	2942	0	1481	2944	0	1481	2960	0
Flt Permitted		0.791			0.757		0.293			0.950		
Satd. Flow (perm)	0	1217	0	0	2292	0	455	2944	0	1481	2960	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		55			55		5			1		
Link Speed (mph)		30			30		30			30		
Link Distance (ft)		653			595		745			408		
Travel Time (s)		14.8			13.5		16.9			9.3		
Confl. Peds. (#/hr)	3		8	8		3	17		15			17
Peak Hour Factor	0.53	0.58	0.62	0.61	0.50	0.73	0.72	0.84	0.80	0.63	0.95	0.75
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	6%	6%	6%	6%	6%	6%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	105	0	0	207	0	115	1237	0	43	979	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Prot	NA	
Protected Phases		4			8			6		5	2	
Permitted Phases	4			8			6				6	
Total Split (s)	29.0	29.0		29.0	29.0		34.0	34.0		17.0	51.0	
Total Lost Time (s)		5.5			5.5		5.5	5.5		4.0	5.5	
Act Effct Green (s)		11.6			11.6		49.5	49.5		7.8	57.4	
Actuated g/C Ratio		0.14			0.14		0.62	0.62		0.10	0.72	
v/c Ratio		0.47			0.55		0.41	0.68		0.30	0.46	
Control Delay		22.6			27.5		19.1	19.8		38.7	5.7	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.1	
Total Delay		22.6			27.5		19.1	19.8		38.7	5.9	
LOS		C			C		B	B		D	A	
Approach Delay		22.6			27.5			19.7			7.2	
Approach LOS		C			C			B			A	
Queue Length 50th (ft)		23			37		33	218		22	68	
Queue Length 95th (ft)		28			26		m29	m155		m35	160	
Internal Link Dist (ft)		573			515			665			328	
Turn Bay Length (ft)							350			120		
Base Capacity (vph)		396			712		281	1824		240	2123	
Starvation Cap Reductn		0			0		0	0		0	291	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.27			0.29		0.41	0.68		0.18	0.53	

Intersection Summary

Area Type: CBD  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 6:NBSB, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.68  
 Intersection Signal Delay: 15.7  
 Intersection LOS: B  
 Intersection Capacity Utilization 71.5%  
 ICU Level of Service C  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 11: Stowe Avenue



Intersection Capacity Analysis  
12: Stanton Avenue & Grand Avenue

2024 NO-BUILD CONDITIONS  
WEEKDAY AM PEAK HOUR



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	25	14	57	74	12	41	16	1006	62	24	834	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	11	11	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.98			0.99			0.99			1.00	
Frt		0.923			0.951			0.989			0.997	
Flt Protected		0.989			0.974			0.999			0.998	
Satd. Flow (prot)	0	1510	0	0	1540	0	0	2889	0	0	2625	0
Flt Permitted		0.896			0.731			0.930			0.869	
Satd. Flow (perm)	0	1365	0	0	1150	0	0	2689	0	0	2285	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		84			35			15			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		666			765			408			549	
Travel Time (s)		15.1			17.4			9.3			12.5	
Confl. Peds. (#/hr)	9		10	10		9	25		55	55		25
Peak Hour Factor	0.75	0.46	0.68	0.80	0.69	0.65	0.75	0.85	0.66	0.72	0.90	0.75
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	6%	6%	6%	6%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	4	0	0	5	0
Parking (#/hr)											20	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	147	0	0	172	0	0	1299	0	0	977	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	34.0	34.0		34.0	34.0		46.0	46.0		46.0	46.0	
Total Lost Time (s)		5.5			5.5			5.5			5.5	
Act Effct Green (s)		14.5			14.5			54.5			54.5	
Actuated g/C Ratio		0.18			0.18			0.68			0.68	
v/c Ratio		0.46			0.73			0.71			0.63	
Control Delay		17.4			40.8			7.2			10.6	
Queue Delay		0.0			0.0			0.2			0.0	
Total Delay		17.4			40.8			7.4			10.6	
LOS		B			D			A			B	
Approach Delay		17.4			40.8			7.4			10.6	
Approach LOS		B			D			A			B	
Queue Length 50th (ft)		27			65			20			121	
Queue Length 95th (ft)		17			80			53			244	
Internal Link Dist (ft)		586			685			328			469	
Turn Bay Length (ft)												
Base Capacity (vph)		540			432			1835			1556	
Starvation Cap Reductn		0			0			89			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.27			0.40			0.74			0.63	

Intersection Summary

Area Type: CBD  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.73  
 Intersection Signal Delay: 11.4  
 Intersection Capacity Utilization 70.6%  
 Analysis Period (min) 15  
 Intersection LOS: B  
 ICU Level of Service C

Splits and Phases: 12: Stanton Avenue & Grand Avenue



Intersection Capacity Analysis  
1: Merrick Road & Grand Avenue

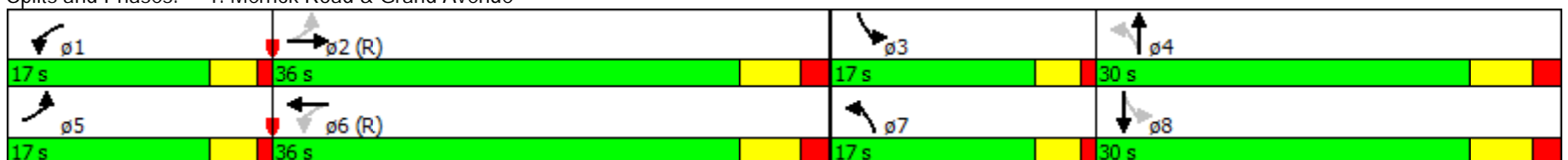
2024 NO-BUILD CONDITIONS  
WEEKDAY MIDDAY PEAK HOUR

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑	↗	↖	↑↑	↗	↖	↑↑		↖	↑↑	
Volume (vph)	94	415	125	137	453	100	121	405	114	89	383	119
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	12	9	11	11	10	10	11	10	10	10
Storage Length (ft)	200		100	100		40	150		0	150		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor			0.99			0.98		0.99			0.99	
Frt			0.850			0.850		0.958			0.960	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1458	2945	1398	1406	2945	1351	1430	2469	0	1458	2477	0
Flt Permitted	0.393			0.391			0.273			0.303		
Satd. Flow (perm)	603	2945	1379	579	2945	1330	411	2469	0	465	2477	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			185			185		55			49	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		687			922			603			707	
Travel Time (s)		15.6			21.0			13.7			16.1	
Confl. Peds. (#/hr)			4			13			5			9
Peak Hour Factor	0.79	0.88	0.89	0.84	0.88	0.91	0.96	0.98	0.70	0.82	0.89	0.76
Heavy Vehicles (%)	4%	6%	4%	4%	6%	4%	6%	5%	4%	4%	5%	3%
Bus Blockages (#/hr)	0	3	0	0	3	0	0	3	0	0	3	0
Parking (#/hr)								20			20	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	119	472	140	163	515	110	126	576	0	109	587	0
Turn Type	pm+pt	NA	Free	pm+pt	NA	Free	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		Free	6		Free	4			8		
Total Split (s)	17.0	36.0		17.0	36.0		17.0	30.0		17.0	30.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Act Effct Green (s)	43.7	31.6	100.0	46.1	32.8	100.0	39.9	27.2		38.4	26.5	
Actuated g/C Ratio	0.44	0.32	1.00	0.46	0.33	1.00	0.40	0.27		0.38	0.26	
v/c Ratio	0.34	0.51	0.10	0.45	0.53	0.08	0.46	0.81		0.39	0.85	
Control Delay	18.2	31.5	0.1	20.1	31.2	0.1	23.0	41.0		21.3	44.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	18.2	31.5	0.1	20.1	31.2	0.1	23.0	41.0		21.3	44.9	
LOS	B	C	A	C	C	A	C	D		C	D	
Approach Delay		23.3			24.5			37.8			41.2	
Approach LOS		C			C			D			D	
Queue Length 50th (ft)	44	137	0	62	147	0	46	155		39	164	
Queue Length 95th (ft)	64	178	0	92	195	0	88	#277		70	#282	
Internal Link Dist (ft)		607			842			523			627	
Turn Bay Length (ft)	200		100	100		40	150			150		
Base Capacity (vph)	390	976	1379	380	992	1330	304	718		321	701	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.31	0.48	0.10	0.43	0.52	0.08	0.41	0.80		0.34	0.84	

Intersection Summary

Area Type: CBD  
 Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 59.5 (60%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.85  
 Intersection Signal Delay: 31.4  
 Intersection LOS: C  
 Intersection Capacity Utilization 67.6%  
 ICU Level of Service C  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Merrick Road & Grand Avenue



Intersection Capacity Analysis  
2: Grand Avenue & Prospect Street

2024 NO-BUILD CONDITIONS  
WEEKDAY MIDDAY PEAK HOUR

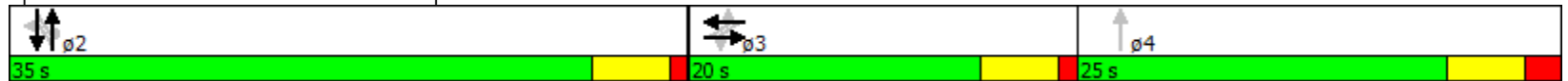


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	ø4
Lane Configurations		↕			↕			↕			↕		
Volume (vph)	27	2	6	8	1	39	2	530	19	58	561	29	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	10	16	10	12	12	12	10	10	10	10	10	10	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95	
Ped Bike Factor		1.00			0.99			1.00			1.00		
Frt		0.974			0.898			0.991			0.991		
Flt Protected		0.964			0.990			0.999			0.995		
Satd. Flow (prot)	0	1784	0	0	1472	0	0	2573	0	0	2567	0	
Flt Permitted		0.773			0.948			0.455			0.846		
Satd. Flow (perm)	0	1426	0	0	1409	0	0	1172	0	0	2181	0	
Right Turn on Red			No			Yes			Yes			Yes	
Satd. Flow (RTOR)					63			16			10		
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		602			588			707			1474		
Travel Time (s)		13.7			13.4			16.1			33.5		
Confl. Peds. (#/hr)	3					3	4		9	9		4	
Peak Hour Factor	0.57	0.50	0.50	0.50	0.25	0.62	0.25	0.93	0.50	0.81	0.86	0.61	
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	5%	3%	3%	5%	3%	
Parking (#/hr)								20			20		
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	63	0	0	83	0	0	616	0	0	772	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA		
Protected Phases		3			3			2			2		4
Permitted Phases	3			3			2	4		2			
Total Split (s)	20.0	20.0		20.0	20.0		35.0	35.0		35.0	35.0		25.0
Total Lost Time (s)		5.0			5.0			5.0			5.0		
Act Effct Green (s)		15.0			15.0			28.8			28.8		
Actuated g/C Ratio		0.28			0.28			0.53			0.53		
v/c Ratio		0.16			0.19			0.45			0.66		
Control Delay		16.6			8.0			8.6			12.1		
Queue Delay		0.0			0.0			0.0			0.0		
Total Delay		16.6			8.0			8.6			12.1		
LOS		B			A			A			B		
Approach Delay		16.6			8.0			8.6			12.1		
Approach LOS		B			A			A			B		
Queue Length 50th (ft)		16			5			54			81		
Queue Length 95th (ft)		21			0			86			122		
Internal Link Dist (ft)		522			508			627			1394		
Turn Bay Length (ft)													
Base Capacity (vph)		397			438			1442			1221		
Starvation Cap Reductn		0			0			0			0		
Spillback Cap Reductn		0			0			0			0		
Storage Cap Reductn		0			0			0			0		
Reduced v/c Ratio		0.16			0.19			0.43			0.63		

Intersection Summary

Area Type:	CBD
Cycle Length:	80
Actuated Cycle Length:	53.9
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.66
Intersection Signal Delay:	10.7
Intersection Capacity Utilization:	62.2%
Analysis Period (min):	15
Intersection LOS:	B
ICU Level of Service:	B

Splits and Phases: 2: Grand Avenue & Prospect Street



Intersection Capacity Analysis  
3: Sunrise Highway & Grand Avenue

2024 NO-BUILD CONDITIONS  
WEEKDAY MIDDAY PEAK HOUR

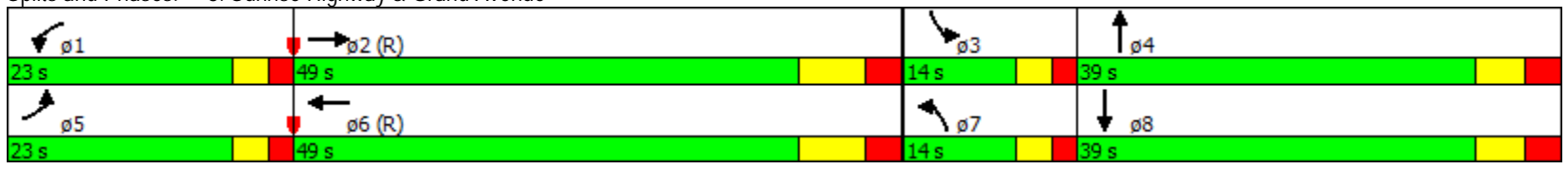
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑		↖	↑↑	
Volume (vph)	188	1165	65	163	951	58	79	388	163	121	429	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	10	10	10	10	10	10
Storage Length (ft)	300		0	400		0	150		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00			1.00			0.99			0.99	
Frt		0.991			0.989			0.954			0.965	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1504	4112	0	1577	4067	0	1404	2760	0	1444	2773	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1504	4112	0	1577	4067	0	1404	2760	0	1444	2773	0
Right Turn on Red			Yes			Yes			No			No
Satd. Flow (RTOR)		8			10							
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1155			1126			1474			958	
Travel Time (s)		26.3			25.6			33.5			21.8	
Confl. Peds. (#/hr)			7			6			16			16
Peak Hour Factor	0.94	0.89	0.81	0.92	0.95	0.76	0.84	0.95	0.91	0.84	0.82	0.72
Heavy Vehicles (%)	8%	13%	2%	3%	14%	5%	8%	3%	5%	5%	4%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	0	0	2	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	200	1389	0	177	1077	0	94	587	0	144	684	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases												
Total Split (s)	23.0	49.0		23.0	49.0		14.0	39.0		14.0	39.0	
Total Lost Time (s)	5.0	8.4		5.0	8.4		5.0	7.0		5.0	7.0	
Act Effct Green (s)	17.9	41.8		16.8	40.7		9.0	32.0		9.0	32.0	
Actuated g/C Ratio	0.14	0.33		0.13	0.33		0.07	0.26		0.07	0.26	
v/c Ratio	0.93	1.01		0.83	0.81		0.93	0.83		1.40	0.96	
Control Delay	99.0	67.3		83.6	44.0		130.1	55.4		269.3	72.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	99.0	67.3		83.6	44.0		130.1	55.4		269.3	72.4	
LOS	F	E		F	D		F	E		F	E	
Approach Delay		71.3			49.6			65.7			106.6	
Approach LOS		E			D			E			F	
Queue Length 50th (ft)	162	-441		140	289		77	237		-155	288	
Queue Length 95th (ft)	#311	#528		#255	348		#169	#325		#266	#349	
Internal Link Dist (ft)		1075			1046			1394			878	
Turn Bay Length (ft)	300			400			150			150		
Base Capacity (vph)	216	1380		227	1330		101	706		103	709	
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	0.93	1.01		0.78	0.81		0.93	0.83		1.40	0.96	

Intersection Summary

Area Type: CBD  
 Cycle Length: 125  
 Actuated Cycle Length: 125  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.40  
 Intersection Signal Delay: 70.9  
 Intersection Capacity Utilization 92.2%  
 Analysis Period (min) 15  
 Intersection LOS: E  
 ICU Level of Service F

~ 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: 3: Sunrise Highway & Grand Avenue





Intersection Capacity Analysis  
4: Grand Avenue & Baldwin Avenue/Miller Place

2024 NO-BUILD CONDITIONS  
WEEKDAY MIDDAY PEAK HOUR



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	15	6	24	5	5	7	13	551	13	8	684	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	11	11	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.99			1.00			1.00			1.00	
Frt		0.934			0.966			0.995			0.996	
Flt Protected		0.981			0.988			0.998			0.999	
Satd. Flow (prot)	0	1524	0	0	1593	0	0	2662	0	0	2692	0
Flt Permitted		0.859			0.784			0.916			0.944	
Satd. Flow (perm)	0	1331	0	0	1264	0	0	2443	0	0	2543	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		33			8			4			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		721			584			958			838	
Travel Time (s)		16.4			13.3			21.8			19.0	
Confl. Peds. (#/hr)	5		4	7		4	12		26	26		12
Peak Hour Factor	0.58	0.75	0.72	0.63	0.31	0.88	0.60	0.90	0.60	0.67	0.90	0.55
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	5%	2%	3%	4%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	0	0	2	0
Parking (#/hr)								20			20	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	67	0	0	32	0	0	656	0	0	794	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		3			2			1			1	
Permitted Phases	3			2			1			1		
Total Split (s)	26.0	26.0		26.0	26.0		28.0	28.0		28.0	28.0	
Total Lost Time (s)		5.5			5.5			5.5			5.5	
Act Effct Green (s)		8.0			9.3			54.2			54.2	
Actuated g/C Ratio		0.10			0.12			0.68			0.68	
v/c Ratio		0.41			0.21			0.40			0.46	
Control Delay		27.6			26.6			10.9			20.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		27.6			26.6			10.9			20.3	
LOS		C			C			B			C	
Approach Delay		27.6			26.6			10.9			20.3	
Approach LOS		C			C			B			C	
Queue Length 50th (ft)		16			11			80			160	
Queue Length 95th (ft)		40			8			197			248	
Internal Link Dist (ft)		641			504			878			758	
Turn Bay Length (ft)												
Base Capacity (vph)		365			329			1656			1724	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.18			0.10			0.40			0.46	

Intersection Summary

Area Type: CBD  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 1:NBSB, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.46  
 Intersection Signal Delay: 16.7  
 Intersection Capacity Utilization 43.4%  
 Analysis Period (min) 15  
 Intersection LOS: B  
 ICU Level of Service A

Splits and Phases: 4: Grand Avenue & Baldwin Avenue/Miller Place



Intersection Capacity Analysis  
5: Grand Avenue & Milburn Avenue

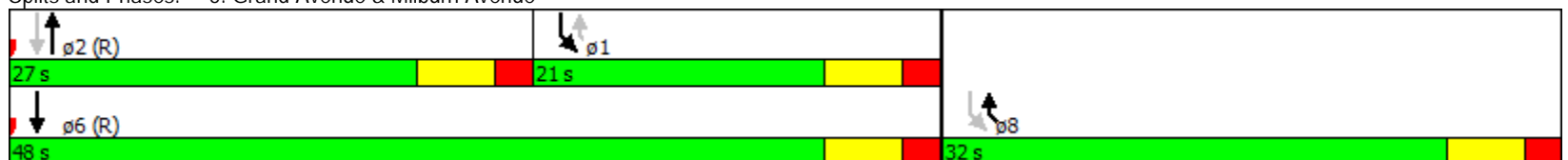
2024 NO-BUILD CONDITIONS  
WEEKDAY MIDDAY PEAK HOUR

	↑	↶	↷	↓	↶	↷
Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations	↑↑		↶	↑↑		↶
Volume (vph)	620	0	191	760	0	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Storage Length (ft)		0	80		0	0
Storage Lanes		0	1		0	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor			0.99			0.99
Frt						0.865
Flt Protected			0.950			
Satd. Flow (prot)	2692	0	1510	2707	0	1409
Flt Permitted			0.401			
Satd. Flow (perm)	2692	0	630	2707	0	1390
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	30			30	30	
Link Distance (ft)	838			379	603	
Travel Time (s)	19.0			8.6	13.7	
Confl. Peds. (#/hr)		14	14			1
Peak Hour Factor	0.94	0.25	0.88	0.93	0.92	0.94
Heavy Vehicles (%)	5%	2%	4%	4%	2%	5%
Bus Blockages (#/hr)	0	0	0	2	0	0
Parking (#/hr)	20			20		
Shared Lane Traffic (%)						
Lane Group Flow (vph)	660	0	217	817	0	250
Turn Type	NA		custom	NA		custom
Protected Phases	2		1	6		8
Permitted Phases			8	2		1
Total Split (s)	27.0		21.0	48.0		32.0
Total Lost Time (s)	6.0		6.0	6.0		6.0
Act Effct Green (s)	25.3		36.7	43.0		36.7
Actuated g/C Ratio	0.32		0.46	0.54		0.46
v/c Ratio	0.78		0.52	0.56		0.39
Control Delay	30.2		15.0	10.0		12.5
Queue Delay	0.0		0.0	0.2		0.0
Total Delay	30.2		15.0	10.2		12.5
LOS	C		B	B		B
Approach Delay	30.2			11.2		
Approach LOS	C			B		
Queue Length 50th (ft)	157		56	73		66
Queue Length 95th (ft)	#247		130	42		102
Internal Link Dist (ft)	758			299	523	
Turn Bay Length (ft)			80			
Base Capacity (vph)	851		478	1455		660
Starvation Cap Reductn	0		0	167		0
Spillback Cap Reductn	0		0	0		0
Storage Cap Reductn	0		0	0		0
Reduced v/c Ratio	0.78		0.45	0.63		0.38

Intersection Summary

Area Type: CBD  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBSB and 6:SBT, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.78  
 Intersection Signal Delay: 17.8  
 Intersection LOS: B  
 Intersection Capacity Utilization 49.9%  
 ICU Level of Service A  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 5: Grand Avenue & Milburn Avenue



Intersection Capacity Analysis  
6: Lorenz Avenue

2024 NO-BUILD CONDITIONS  
WEEKDAY MIDDAY PEAK HOUR



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↶		↶↷			↶↷
Volume (vph)	6	5	793	6	11	948
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	0.99		1.00			1.00
Frt	0.946		0.998			
Flt Protected	0.971					0.999
Satd. Flow (prot)	1531	0	2650	0	0	2715
Flt Permitted	0.971					0.937
Satd. Flow (perm)	1531	0	2650	0	0	2546
Right Turn on Red		No		Yes		
Satd. Flow (RTOR)			2			
Link Speed (mph)	30		30			30
Link Distance (ft)	918		379			300
Travel Time (s)	20.9		8.6			6.8
Confl. Peds. (#/hr)		2		21	21	
Peak Hour Factor	0.50	0.63	0.91	0.50	0.63	0.89
Heavy Vehicles (%)	2%	2%	6%	5%	5%	4%
Bus Blockages (#/hr)	0	0	2	0	0	0
Parking (#/hr)			20			20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	20	0	883	0	0	1082
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Total Split (s)	34.0		46.0		46.0	46.0
Total Lost Time (s)	5.5		5.5			5.5
Act Effct Green (s)	9.2		70.1			70.1
Actuated g/C Ratio	0.12		0.88			0.88
v/c Ratio	0.11		0.38			0.48
Control Delay	30.1		2.9			3.3
Queue Delay	0.0		0.0			0.0
Total Delay	30.1		2.9			3.4
LOS	C		A			A
Approach Delay	30.1		2.9			3.4
Approach LOS	C		A			A
Queue Length 50th (ft)	10		0			0
Queue Length 95th (ft)	13		56			84
Internal Link Dist (ft)	838		299			220
Turn Bay Length (ft)						
Base Capacity (vph)	545		2323			2232
Starvation Cap Reductn	0		108			14
Spillback Cap Reductn	0		0			0
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.04		0.40			0.49

Intersection Summary

Area Type: CBD  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.48  
 Intersection Signal Delay: 3.4  
 Intersection LOS: A  
 Intersection Capacity Utilization 52.6%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 6: Lorenz Avenue



Intersection Capacity Analysis  
7: Seaman Avenue

2024 NO-BUILD CONDITIONS  
WEEKDAY MIDDAY PEAK HOUR

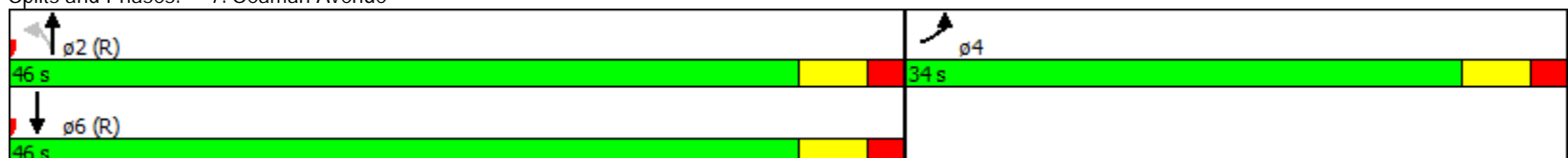


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	104	68	50	663	918	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	0.99			1.00	1.00	
Frt	0.941				0.985	
Flt Protected	0.973			0.996		
Satd. Flow (prot)	1447	0	0	2640	2654	0
Flt Permitted	0.973			0.791		
Satd. Flow (perm)	1447	0	0	2096	2654	0
Right Turn on Red		No				Yes
Satd. Flow (RTOR)					21	
Link Speed (mph)	30			30	30	
Link Distance (ft)	655			360	196	
Travel Time (s)	14.9			8.2	4.5	
Confl. Peds. (#/hr)		4	16			16
Peak Hour Factor	0.84	0.70	0.78	0.81	0.95	0.88
Heavy Vehicles (%)	7%	8%	9%	6%	4%	3%
Bus Blockages (#/hr)	0	0	0	2	3	0
Parking (#/hr)				20	20	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	221	0	0	883	1072	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	34.0		46.0	46.0	46.0	
Total Lost Time (s)	5.5			5.5	5.5	
Act Effct Green (s)	17.5			51.5	51.5	
Actuated g/C Ratio	0.22			0.64	0.64	
v/c Ratio	0.70			0.66	0.63	
Control Delay	39.9			11.4	6.3	
Queue Delay	0.0			0.5	2.0	
Total Delay	39.9			11.8	8.3	
LOS	D			B	A	
Approach Delay	39.9			11.8	8.3	
Approach LOS	D			B	A	
Queue Length 50th (ft)	102			69	96	
Queue Length 95th (ft)	143			36	m78	
Internal Link Dist (ft)	575			280	116	
Turn Bay Length (ft)						
Base Capacity (vph)	515			1348	1714	
Starvation Cap Reductn	0			38	463	
Spillback Cap Reductn	0			141	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.43			0.73	0.86	

Intersection Summary

Area Type: CBD  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.70  
 Intersection Signal Delay: 12.9  
 Intersection LOS: B  
 Intersection Capacity Utilization 79.2%  
 ICU Level of Service D  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Seaman Avenue



Intersection Capacity Analysis  
8: Seaman Avenue

2024 NO-BUILD CONDITIONS  
WEEKDAY MIDDAY PEAK HOUR

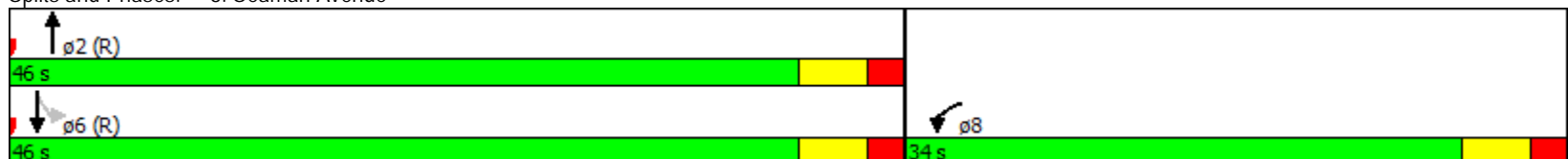


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Volume (vph)	115	107	768	125	89	889
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	0.99		0.98			1.00
Frt	0.937		0.977			
Flt Protected	0.974					0.995
Satd. Flow (prot)	1499	0	2561	0	0	2699
Flt Permitted	0.974					0.721
Satd. Flow (perm)	1499	0	2561	0	0	1951
Right Turn on Red		No		Yes		
Satd. Flow (RTOR)			38			
Link Speed (mph)	30		30			30
Link Distance (ft)	767		196			252
Travel Time (s)	17.4		4.5			5.7
Confl. Peds. (#/hr)		2		64	64	
Peak Hour Factor	0.80	0.84	0.92	0.81	0.88	0.94
Heavy Vehicles (%)	2%	5%	4%	9%	2%	4%
Bus Blockages (#/hr)	0	0	3	0	0	2
Parking (#/hr)			20			20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	271	0	989	0	0	1047
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Total Split (s)	34.0		46.0		46.0	46.0
Total Lost Time (s)	5.5		5.5			5.5
Act Effct Green (s)	19.7		49.3			49.3
Actuated g/C Ratio	0.25		0.62			0.62
v/c Ratio	0.73		0.62			0.87
Control Delay	39.1		6.9			18.8
Queue Delay	0.0		0.7			1.0
Total Delay	39.1		7.6			19.8
LOS	D		A			B
Approach Delay	39.1		7.6			19.8
Approach LOS	D		A			B
Queue Length 50th (ft)	125		80			198
Queue Length 95th (ft)	156		83			#407
Internal Link Dist (ft)	687		116			172
Turn Bay Length (ft)						
Base Capacity (vph)	534		1592			1202
Starvation Cap Reductn	0		275			40
Spillback Cap Reductn	0		0			13
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.51		0.75			0.90

Intersection Summary

Area Type: CBD  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.87  
 Intersection Signal Delay: 16.8  
 Intersection LOS: B  
 Intersection Capacity Utilization 87.2%  
 ICU Level of Service E  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 8: Seaman Avenue



Intersection Capacity Analysis  
 9: St Lukes Place & Grand Avenue

2024 NO-BUILD CONDITIONS  
 WEEKDAY MIDDAY PEAK HOUR

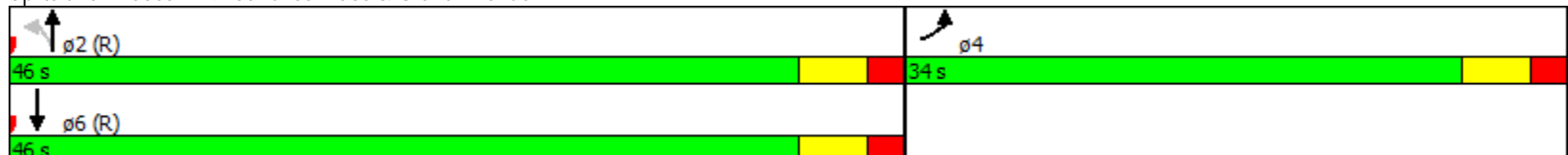


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			T	T	
Volume (vph)	96	31	34	828	937	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	1.00			1.00	1.00	
Frt	0.962				0.985	
Flt Protected	0.965			0.998		
Satd. Flow (prot)	1551	0	0	2711	2671	0
Flt Permitted	0.965			0.846		
Satd. Flow (perm)	1551	0	0	2298	2671	0
Right Turn on Red		No				Yes
Satd. Flow (RTOR)					21	
Link Speed (mph)	30			30	30	
Link Distance (ft)	678			252	852	
Travel Time (s)	15.4			5.7	19.4	
Confl. Peds. (#/hr)		1	13			13
Peak Hour Factor	0.80	0.66	0.73	0.88	0.94	0.85
Heavy Vehicles (%)	2%	2%	5%	4%	4%	3%
Parking (#/hr)				20	20	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	167	0	0	988	1106	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	34.0		46.0	46.0	46.0	
Total Lost Time (s)	5.5			5.5	5.5	
Act Effct Green (s)	14.1			54.9	54.9	
Actuated g/C Ratio	0.18			0.69	0.69	
v/c Ratio	0.61			0.63	0.60	
Control Delay	39.5			7.6	4.2	
Queue Delay	0.0			0.1	0.3	
Total Delay	39.5			7.7	4.4	
LOS	D			A	A	
Approach Delay	39.5			7.7	4.4	
Approach LOS	D			A	A	
Queue Length 50th (ft)	78			118	50	
Queue Length 95th (ft)	111			82	2	
Internal Link Dist (ft)	598			172	772	
Turn Bay Length (ft)						
Base Capacity (vph)	552			1577	1840	
Starvation Cap Reductn	0			61	0	
Spillback Cap Reductn	0			0	213	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.30			0.65	0.68	

Intersection Summary

Area Type: CBD  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.63  
 Intersection Signal Delay: 8.4  
 Intersection LOS: A  
 Intersection Capacity Utilization 70.6%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 9: St Lukes Place & Grand Avenue



Intersection Capacity Analysis  
10: Grand Avenue & High School Drive

2024 NO-BUILD CONDITIONS  
WEEKDAY MIDDAY PEAK HOUR

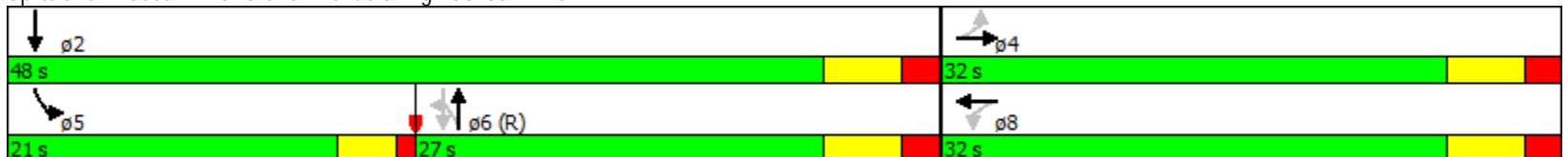


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕		↗	↕	↖
Volume (vph)	1	0	7	16	0	12	6	922	23	12	1055	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	11	11	12	11	11
Storage Length (ft)	0		0	0		0	150		0	200		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.97			0.96		0.98	1.00			1.00	
Frt		0.899			0.937			0.996			0.998	
Flt Protected		0.988			0.974		0.950			0.950		
Satd. Flow (prot)	0	1475	0	0	1470	0	1562	2984	0	1562	3000	0
Flt Permitted		0.931			0.831		0.242			0.950		
Satd. Flow (perm)	0	1366	0	0	1254	0	391	2984	0	1562	3000	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		95			95			4			2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		564			861			852			745	
Travel Time (s)		12.8			19.6			19.4			16.9	
Confl. Peds. (#/hr)	73		1	1		73	49		23			49
Peak Hour Factor	0.25	0.50	0.58	0.63	0.55	0.55	0.50	0.94	0.79	0.55	0.91	0.50
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	3	0	0	2	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	16	0	0	47	0	12	1010	0	22	1171	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Prot	NA	
Protected Phases		4			8			6		5	2	
Permitted Phases	4			8			6				6	
Total Split (s)	32.0	32.0		32.0	32.0		27.0	27.0		21.0	48.0	
Total Lost Time (s)		6.0			6.0		6.0	6.0		4.0	6.0	
Act Effct Green (s)		15.6			15.6		56.4	56.4		6.7	61.2	
Actuated g/C Ratio		0.20			0.20		0.70	0.70		0.08	0.76	
v/c Ratio		0.05			0.15		0.04	0.48		0.17	0.51	
Control Delay		0.2			1.9		20.2	17.7		37.8	8.7	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		0.2			1.9		20.2	17.7		37.8	8.7	
LOS		A			A		C	B		D	A	
Approach Delay		0.3			1.9			17.7			9.2	
Approach LOS		A			A			B			A	
Queue Length 50th (ft)		0			0		3	155		11	113	
Queue Length 95th (ft)		0			0		m8	#296		m20	217	
Internal Link Dist (ft)		484			781			772			665	
Turn Bay Length (ft)							150			200		
Base Capacity (vph)		508			471		275	2105		331	2295	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.03			0.10		0.04	0.48		0.07	0.51	

Intersection Summary

Area Type: CBD  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 6:NBSB, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.51  
 Intersection Signal Delay: 12.8  
 Intersection LOS: B  
 Intersection Capacity Utilization 61.6%  
 ICU Level of Service B  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Grand Avenue & High School Drive



Intersection Capacity Analysis  
11: Grand Avenue & Stowe Avenue

2024 NO-BUILD CONDITIONS  
WEEKDAY MIDDAY PEAK HOUR

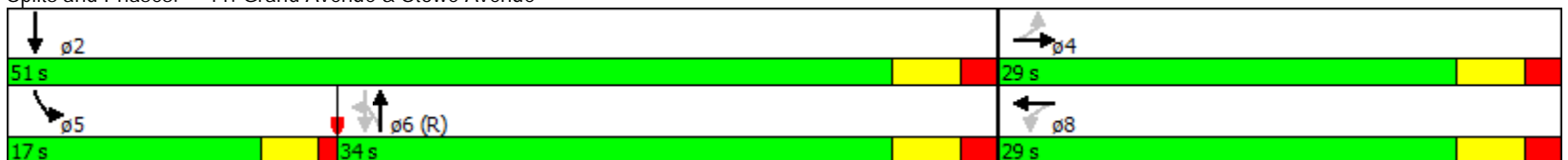


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↕		↕	↕		↕	↕	
Volume (vph)	87	8	111	48	11	27	138	960	15	28	835	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	11	11	11	11
Storage Length (ft)	0		0	0		0	350		0	120		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.98			0.99		0.99	1.00			1.00	
Frt		0.929			0.950			0.998			0.992	
Flt Protected		0.980			0.975		0.950			0.950		
Satd. Flow (prot)	0	1497	0	0	2935	0	1510	3040	0	1510	2963	0
Flt Permitted		0.810			0.666		0.289			0.950		
Satd. Flow (perm)	0	1236	0	0	1990	0	455	3040	0	1510	2963	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		70			39			2			12	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		653			595			745			408	
Travel Time (s)		14.8			13.5			16.9			9.3	
Confl. Peds. (#/hr)	3		21	21		3	44		45			44
Peak Hour Factor	0.79	0.50	0.80	0.80	0.63	0.69	0.86	0.82	0.88	0.59	0.89	0.56
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	4%	3%	3%	4%	5%	4%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	265	0	0	116	0	160	1188	0	47	990	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Prot	NA	
Protected Phases		4			8			6		5	2	
Permitted Phases	4			8			6				6	
Total Split (s)	29.0	29.0		29.0	29.0		34.0	34.0		17.0	51.0	
Total Lost Time (s)		5.5			5.5		5.5	5.5		4.0	5.5	
Act Effct Green (s)		17.6			17.6		43.4	43.4		8.0	51.4	
Actuated g/C Ratio		0.22			0.22		0.54	0.54		0.10	0.64	
v/c Ratio		0.81			0.25		0.65	0.72		0.31	0.52	
Control Delay		40.3			17.2		31.6	18.3		44.7	8.4	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.2	
Total Delay		40.3			17.2		31.6	18.3		44.7	8.5	
LOS		D			B		C	B		D	A	
Approach Delay		40.3			17.2			19.9			10.2	
Approach LOS		D			B			B			B	
Queue Length 50th (ft)		92			16		66	261		25	87	
Queue Length 95th (ft)		62			21		#175	#372		m39	163	
Internal Link Dist (ft)		573			515			665			328	
Turn Bay Length (ft)							350			120		
Base Capacity (vph)		412			612		246	1650		245	1907	
Starvation Cap Reductn		0			0		0	0		0	245	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.64			0.19		0.65	0.72		0.19	0.60	

Intersection Summary

Area Type: CBD  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 6:NBSB, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.81  
 Intersection Signal Delay: 18.1  
 Intersection LOS: B  
 Intersection Capacity Utilization 78.3%  
 ICU Level of Service D  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 11: Grand Avenue & Stowe Avenue





Intersection Capacity Analysis  
12: Stanton Avenue & Grand Avenue

2024 NO-BUILD CONDITIONS  
WEEKDAY MIDDAY PEAK HOUR



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	17	8	25	56	4	34	18	883	70	32	1050	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	11	11	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.99			0.99			1.00			1.00	
Frt		0.937			0.953			0.989			0.997	
Flt Protected		0.981			0.972			0.999			0.998	
Satd. Flow (prot)	0	1530	0	0	1540	0	0	2986	0	0	2690	0
Flt Permitted		0.854			0.833			0.895			0.843	
Satd. Flow (perm)	0	1326	0	0	1317	0	0	2675	0	0	2272	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		37			37			14			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		666			765			408			549	
Travel Time (s)		15.1			17.4			9.3			12.5	
Confl. Peds. (#/hr)	11		3	3		11	41		20	20		41
Peak Hour Factor	0.57	0.67	0.67	0.88	0.50	0.89	0.61	0.93	0.92	0.58	0.98	0.55
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	3%	3%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	3	0	0	2	0
Parking (#/hr)											20	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	79	0	0	110	0	0	1055	0	0	1148	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	34.0	34.0		34.0	34.0		46.0	46.0		46.0	46.0	
Total Lost Time (s)		5.5			5.5			5.5			5.5	
Act Effct Green (s)		11.2			11.2			61.2			61.2	
Actuated g/C Ratio		0.14			0.14			0.76			0.76	
v/c Ratio		0.36			0.51			0.52			0.66	
Control Delay		21.9			28.6			3.0			9.8	
Queue Delay		0.0			0.0			0.1			0.0	
Total Delay		21.9			28.6			3.0			9.8	
LOS		C			C			A			A	
Approach Delay		21.9			28.6			3.0			9.8	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)		19			34			25			127	
Queue Length 95th (ft)		33			30			43			314	
Internal Link Dist (ft)		586			685			328			469	
Turn Bay Length (ft)												
Base Capacity (vph)		496			493			2048			1737	
Starvation Cap Reductn		0			0			144			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.16			0.22			0.55			0.66	

Intersection Summary

Area Type: CBD  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.66  
 Intersection Signal Delay: 8.1  
 Intersection Capacity Utilization 80.2%  
 Analysis Period (min) 15  
 Intersection LOS: A  
 ICU Level of Service D

Splits and Phases: 12: Stanton Avenue & Grand Avenue



Intersection Capacity Analysis  
1: Merrick Road & Grand Avenue

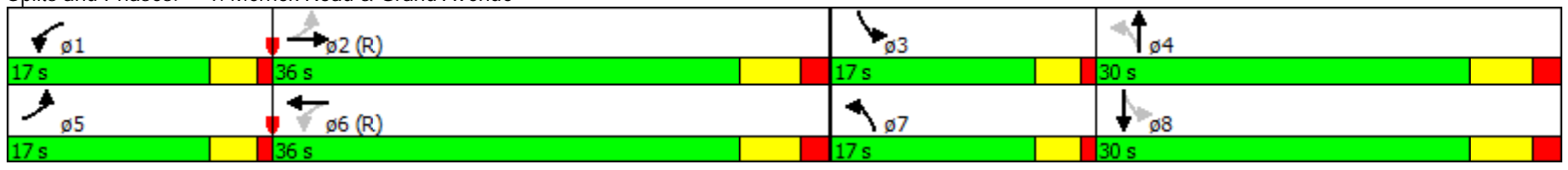
2024 NO-BUILD CONDITIONS  
WEEKDAY PM PEAK HOUR

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑	↗	↖	↑↑	↗	↖	↑↑		↖	↑↑	
Volume (vph)	137	769	196	230	545	95	117	451	145	156	584	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	12	9	11	11	10	10	11	10	10	10
Storage Length (ft)	200		100	100		40	150		0	150		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor			0.98			0.98		0.99			1.00	
Frt			0.850			0.850		0.965			0.975	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1430	3049	1425	1433	3049	1391	1501	2514	0	1516	2581	0
Flt Permitted	0.328			0.132			0.181			0.217		
Satd. Flow (perm)	494	3049	1403	199	3049	1365	286	2514	0	346	2581	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			185			185		38			22	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		687			922			603			707	
Travel Time (s)		15.6			21.0			13.7			16.1	
Confl. Peds. (#/hr)			11			24			31			10
Peak Hour Factor	0.92	0.91	0.86	0.92	0.90	0.88	0.83	0.90	0.95	0.89	0.96	0.81
Heavy Vehicles (%)	6%	3%	2%	2%	3%	1%	1%	3%	5%	0%	3%	1%
Parking (#/hr)								20			20	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	149	845	228	250	606	108	141	654	0	175	731	0
Turn Type	pm+pt	NA	Free	pm+pt	NA	Free	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		Free	6		Free	4			8		
Total Split (s)	17.0	36.0		17.0	36.0		17.0	30.0		17.0	30.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Act Effct Green (s)	42.6	29.6	100.0	46.4	31.7	100.0	38.7	25.8		40.1	26.5	
Actuated g/C Ratio	0.43	0.30	1.00	0.46	0.32	1.00	0.39	0.26		0.40	0.26	
v/c Ratio	0.48	0.94	0.16	0.99	0.63	0.08	0.58	0.97		0.64	1.04	
Control Delay	20.3	53.0	0.2	81.5	32.9	0.1	28.4	63.9		29.8	82.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	20.3	53.0	0.2	81.5	32.9	0.1	28.4	63.9		29.8	82.8	
LOS	C	D	A	F	C	A	C	E		C	F	
Approach Delay		39.2			41.9			57.6			72.5	
Approach LOS		D			D			E			E	
Queue Length 50th (ft)	52	273	0	114	172	0	55	-226		70	-270	
Queue Length 95th (ft)	91	#394	0	#279	238	0	88	#342		117	#404	
Internal Link Dist (ft)		607			842			523			627	
Turn Bay Length (ft)	200		100	100		40	150			150		
Base Capacity (vph)	341	914	1403	252	965	1365	274	676		294	700	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.44	0.92	0.16	0.99	0.63	0.08	0.51	0.97		0.60	1.04	

Intersection Summary

Area Type: CBD  
 Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 59.5 (60%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.04  
 Intersection Signal Delay: 51.4  
 Intersection LOS: D  
 Intersection Capacity Utilization 83.7%  
 ICU Level of Service E  
 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: Merrick Road & Grand Avenue



Intersection Capacity Analysis  
2: Grand Avenue & Prospect Street

2024 NO-BUILD CONDITIONS  
WEEKDAY PM PEAK HOUR

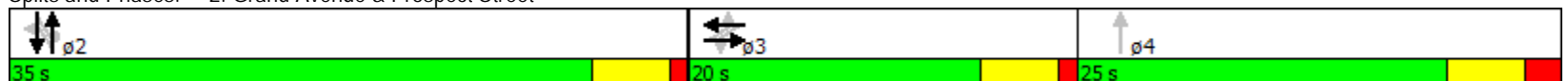


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	ø4
Lane Configurations		↕			↕			↕			↕		
Volume (vph)	42	13	7	17	4	70	4	603	53	93	808	34	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	10	16	10	12	12	12	10	10	10	10	10	10	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95	
Ped Bike Factor		0.99			0.98			1.00			1.00		
Frt		0.973			0.903			0.982			0.992		
Flt Protected		0.972			0.990			0.999			0.995		
Satd. Flow (prot)	0	1790	0	0	1474	0	0	2569	0	0	2587	0	
Flt Permitted		0.782			0.932			0.455			0.804		
Satd. Flow (perm)	0	1433	0	0	1386	0	0	1170	0	0	2089	0	
Right Turn on Red			No			Yes			Yes			Yes	
Satd. Flow (RTOR)					106			36			8		
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		602			588			707			1474		
Travel Time (s)		13.7			13.4			16.1			33.5		
Confl. Peds. (#/hr)	7		5	5		7	21		22	22		21	
Peak Hour Factor	0.92	0.75	0.44	0.57	0.33	0.66	0.50	0.91	0.57	0.92	0.85	0.59	
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	4%	2%	3%	4%	3%	
Parking (#/hr)								20			20		
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	79	0	0	148	0	0	764	0	0	1110	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA		
Protected Phases		3			3			2			2		4
Permitted Phases	3			3			2	4		2			
Total Split (s)	20.0	20.0		20.0	20.0		35.0	35.0		35.0	35.0		25.0
Total Lost Time (s)		5.0			5.0			5.0			5.0		
Act Effct Green (s)		15.0			15.0			30.0			30.0		
Actuated g/C Ratio		0.27			0.27			0.55			0.55		
v/c Ratio		0.20			0.33			0.54			0.97		
Control Delay		17.1			8.5			9.4			35.6		
Queue Delay		0.0			0.0			0.0			0.0		
Total Delay		17.1			8.5			9.4			35.6		
LOS		B			A			A			D		
Approach Delay		17.1			8.5			9.4			35.6		
Approach LOS		B			A			A			D		
Queue Length 50th (ft)		20			10			71			163		
Queue Length 95th (ft)		39			0			112			#281		
Internal Link Dist (ft)		522			508			627			1394		
Turn Bay Length (ft)													
Base Capacity (vph)		390			455			1417			1143		
Starvation Cap Reductn		0			0			0			0		
Spillback Cap Reductn		0			0			0			0		
Storage Cap Reductn		0			0			0			0		
Reduced v/c Ratio		0.20			0.33			0.54			0.97		

Intersection Summary

Area Type: CBD  
 Cycle Length: 80  
 Actuated Cycle Length: 55  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.97  
 Intersection Signal Delay: 23.5  
 Intersection LOS: C  
 Intersection Capacity Utilization 74.8%  
 ICU Level of Service D  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 2: Grand Avenue & Prospect Street



Intersection Capacity Analysis  
3: Sunrise Highway & Grand Avenue

2024 NO-BUILD CONDITIONS  
WEEKDAY PM PEAK HOUR

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	175	1988	40	277	1647	74	74	461	179	115	532	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	10	10	10	10	10	10
Storage Length (ft)	300		0	400		0	150		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00			1.00			0.99			0.99	
Frt		0.997			0.993			0.957			0.975	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1577	4354	0	1504	4381	0	1516	2738	0	1417	2766	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1577	4354	0	1504	4381	0	1516	2738	0	1417	2766	0
Right Turn on Red			Yes			Yes			No			No
Satd. Flow (RTOR)		3			6							
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1155			1126			1474			958	
Travel Time (s)		26.3			25.6			33.5			21.8	
Confl. Peds. (#/hr)			9			4			32			29
Peak Hour Factor	0.88	0.96	0.86	0.90	0.97	0.92	0.88	0.96	0.92	0.90	0.87	0.96
Heavy Vehicles (%)	3%	7%	0%	8%	6%	0%	0%	5%	4%	7%	6%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	3	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	199	2118	0	308	1778	0	84	675	0	128	731	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases												
Total Split (s)	30.0	72.0		30.0	72.0		14.0	34.0		14.0	34.0	
Total Lost Time (s)	5.0	8.4		5.0	8.4		5.0	7.0		5.0	7.0	
Act Effct Green (s)	22.5	63.6		25.0	66.1		9.0	27.0		9.0	27.0	
Actuated g/C Ratio	0.15	0.42		0.17	0.44		0.06	0.18		0.06	0.18	
v/c Ratio	0.85	1.15		1.23	0.92		0.93	1.37		1.51	1.47	
Control Delay	91.0	112.4		184.1	48.3		146.1	224.4		323.1	264.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	91.0	112.4		184.1	48.3		146.1	224.4		323.1	264.1	
LOS	F	F		F	D		F	F		F	F	
Approach Delay		110.5			68.4			215.8			272.9	
Approach LOS		F			E			F			F	
Queue Length 50th (ft)	189	-889		-371	606		83	-457		-173	-514	
Queue Length 95th (ft)	#291	#981		#565	#723		#190	#586		#313	#616	
Internal Link Dist (ft)		1075			1046			1394			878	
Turn Bay Length (ft)	300			400			150			150		
Base Capacity (vph)	262	1847		250	1935		90	492		85	497	
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	0.76	1.15		1.23	0.92		0.93	1.37		1.51	1.47	

Intersection Summary

Area Type: CBD  
 Cycle Length: 150  
 Actuated Cycle Length: 150  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.51  
 Intersection Signal Delay: 132.4  
 Intersection Capacity Utilization 122.0%  
 Analysis Period (min) 15  
 Intersection LOS: F  
 ICU Level of Service H

~ 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: 3: Sunrise Highway & Grand Avenue



Intersection Capacity Analysis  
4: Grand Avenue & Baldwin Avenue/Miller Place

2024 NO-BUILD CONDITIONS  
WEEKDAY PM PEAK HOUR



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	31	14	20	1	8	7	24	727	36	11	818	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	11	11	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.99			0.99			0.99			1.00	
Frt		0.956			0.949			0.986			0.996	
Flt Protected		0.977			0.994			0.998			0.999	
Satd. Flow (prot)	0	1554	0	0	1567	0	0	2628	0	0	2665	0
Flt Permitted		0.832			0.905			0.867			0.926	
Satd. Flow (perm)	0	1323	0	0	1427	0	0	2283	0	0	2469	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		29			12			14			4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		721			584			958			837	
Travel Time (s)		16.4			13.3			21.8			19.0	
Confl. Peds. (#/hr)			10			10	23		69	69		23
Peak Hour Factor	0.73	0.81	0.68	0.25	0.50	0.58	0.64	0.95	0.43	0.50	0.81	0.71
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	4%	4%	4%	4%	5%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	0	0	2	0
Parking (#/hr)								20			20	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	88	0	0	32	0	0	887	0	0	1062	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		3			2			1			1	
Permitted Phases	3			2			1			1		
Total Split (s)	26.0	26.0		26.0	26.0		28.0	28.0		28.0	28.0	
Total Lost Time (s)		5.5			5.5			5.5			5.5	
Act Effct Green (s)		9.2			9.2			53.1			53.1	
Actuated g/C Ratio		0.12			0.12			0.66			0.66	
v/c Ratio		0.49			0.18			0.58			0.65	
Control Delay		32.5			23.0			15.7			26.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		32.5			23.0			15.7			26.2	
LOS		C			C			B			C	
Approach Delay		32.5			23.0			15.7			26.2	
Approach LOS		C			C			B			C	
Queue Length 50th (ft)		28			10			134			256	
Queue Length 95th (ft)		59			13			#369			#368	
Internal Link Dist (ft)		641			504			878			757	
Turn Bay Length (ft)												
Base Capacity (vph)		360			374			1519			1639	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.24			0.09			0.58			0.65	

Intersection Summary

Area Type: CBD  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 1:NBSB, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.65  
 Intersection Signal Delay: 21.9  
 Intersection Capacity Utilization 63.5%  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 4: Grand Avenue & Baldwin Avenue/Miller Place



Intersection Capacity Analysis  
5: Grand Avenue & Milburn Avenue

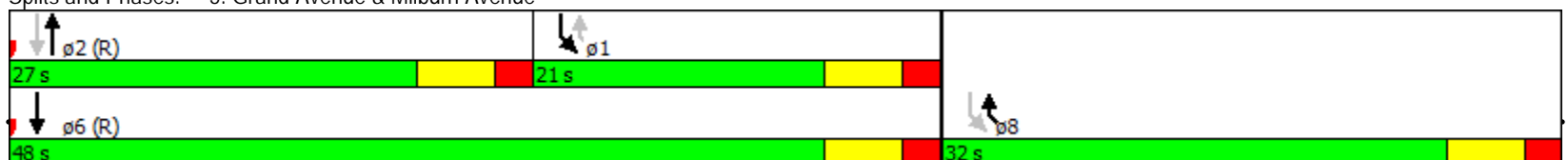
2024 NO-BUILD CONDITIONS  
WEEKDAY PM PEAK HOUR

	↑	↖	↙	↓	↘	↗
Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations	↑↑		↖	↑↑		↗
Volume (vph)	786	1	283	911	0	352
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Storage Length (ft)		0	80		0	0
Storage Lanes		0	1		0	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor	1.00		0.99			
Frt	0.999					0.865
Flt Protected			0.950			
Satd. Flow (prot)	2715	0	1525	2702	0	1422
Flt Permitted			0.330			
Satd. Flow (perm)	2715	0	523	2702	0	1422
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	30			30	30	
Link Distance (ft)	837			380	600	
Travel Time (s)	19.0			8.6	13.6	
Confl. Peds. (#/hr)		22	22			
Peak Hour Factor	0.92	0.25	0.94	0.92	0.89	0.89
Heavy Vehicles (%)	4%	2%	3%	4%	2%	4%
Bus Blockages (#/hr)	0	0	0	3	0	0
Parking (#/hr)	20			20		
Shared Lane Traffic (%)						
Lane Group Flow (vph)	858	0	301	990	0	396
Turn Type	NA		custom	NA		custom
Protected Phases	2		1	6		8
Permitted Phases			8	2		1
Total Split (s)	27.0		21.0	48.0		32.0
Total Lost Time (s)	6.0		6.0	6.0		6.0
Act Effct Green (s)	23.7		38.3	43.0		44.3
Actuated g/C Ratio	0.30		0.48	0.54		0.55
v/c Ratio	1.07		0.72	0.68		0.50
Control Delay	77.3		19.3	10.7		13.4
Queue Delay	0.0		0.0	0.6		0.0
Total Delay	77.3		19.3	11.3		13.4
LOS	E		B	B		B
Approach Delay	77.3			13.2		
Approach LOS	E			B		
Queue Length 50th (ft)	-263		58	126		110
Queue Length 95th (ft)	#365		m159	51		174
Internal Link Dist (ft)	757			300	520	
Turn Bay Length (ft)			80			
Base Capacity (vph)	804		449	1452		805
Starvation Cap Reductn	0		0	167		0
Spillback Cap Reductn	0		0	0		0
Storage Cap Reductn	0		0	0		0
Reduced v/c Ratio	1.07		0.67	0.77		0.49

Intersection Summary

Area Type: CBD  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBSB and 6:SBT, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.07  
 Intersection Signal Delay: 34.8  
 Intersection LOS: C  
 Intersection Capacity Utilization 58.4%  
 ICU Level of Service B  
 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.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Grand Avenue & Milburn Avenue



Intersection Capacity Analysis  
6: Lorenz Avenue

2024 NO-BUILD CONDITIONS  
WEEKDAY PM PEAK HOUR

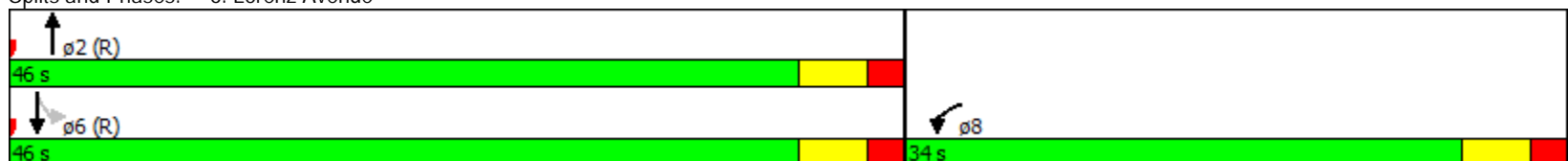


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Volume (vph)	8	6	1231	10	18	1503
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor			1.00			1.00
Frt	0.932		0.999			
Flt Protected	0.976					0.999
Satd. Flow (prot)	1525	0	2699	0	0	2742
Flt Permitted	0.976					0.880
Satd. Flow (perm)	1525	0	2699	0	0	2415
Right Turn on Red		No		Yes		
Satd. Flow (RTOR)			2			
Link Speed (mph)	30		30			30
Link Distance (ft)	918		380			300
Travel Time (s)	20.9		8.6			6.8
Confl. Peds. (#/hr)				14	14	
Peak Hour Factor	1.00	0.75	0.90	0.75	0.47	0.94
Heavy Vehicles (%)	2%	2%	4%	2%	2%	3%
Bus Blockages (#/hr)	0	0	3	0	0	0
Parking (#/hr)			20			20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	16	0	1381	0	0	1637
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Total Split (s)	34.0		46.0		46.0	46.0
Total Lost Time (s)	5.5		5.5			5.5
Act Effct Green (s)	9.1		70.2			70.2
Actuated g/C Ratio	0.11		0.88			0.88
v/c Ratio	0.09		0.58			0.77
Control Delay	29.6		5.1			9.7
Queue Delay	0.0		0.1			0.0
Total Delay	29.6		5.2			9.7
LOS	C		A			A
Approach Delay	29.6		5.2			9.7
Approach LOS	C		A			A
Queue Length 50th (ft)	8		31			27
Queue Length 95th (ft)	21		m110			m#554
Internal Link Dist (ft)	838		300			220
Turn Bay Length (ft)						
Base Capacity (vph)	543		2368			2119
Starvation Cap Reductn	0		91			0
Spillback Cap Reductn	0		186			0
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.03		0.63			0.77

Intersection Summary

Area Type: CBD  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.77  
 Intersection Signal Delay: 7.8  
 Intersection LOS: A  
 Intersection Capacity Utilization 74.4%  
 ICU Level of Service D  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Lorenz Avenue



Intersection Capacity Analysis  
7: Seaman Avenue

2024 NO-BUILD CONDITIONS  
WEEKDAY PM PEAK HOUR

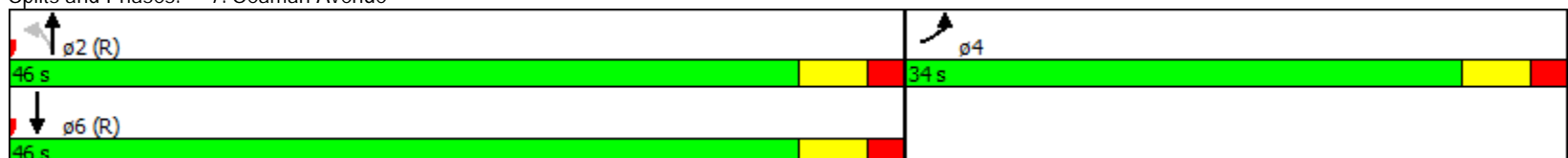


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑↑	↑↑	
Volume (vph)	200	85	56	1005	1163	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	0.99			1.00	1.00	
Frt	0.959				0.986	
Flt Protected	0.966			0.997		
Satd. Flow (prot)	1492	0	0	2683	2665	0
Flt Permitted	0.966			0.694		
Satd. Flow (perm)	1492	0	0	1868	2665	0
Right Turn on Red		No				Yes
Satd. Flow (RTOR)					20	
Link Speed (mph)	30			30	30	
Link Distance (ft)	655			360	196	
Travel Time (s)	14.9			8.2	4.5	
Confl. Peds. (#/hr)		8	14			14
Peak Hour Factor	0.80	0.79	0.88	0.95	0.89	0.93
Heavy Vehicles (%)	4%	9%	11%	4%	4%	0%
Bus Blockages (#/hr)	0	0	0	3	3	0
Parking (#/hr)				20	20	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	358	0	0	1122	1442	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	34.0		46.0	46.0	46.0	
Total Lost Time (s)	5.5			5.5	5.5	
Act Effct Green (s)	23.5			45.5	45.5	
Actuated g/C Ratio	0.29			0.57	0.57	
v/c Ratio	0.82			1.06	0.95	
Control Delay	41.5			57.5	14.5	
Queue Delay	0.4			18.1	45.0	
Total Delay	41.9			75.6	59.4	
LOS	D			E	E	
Approach Delay	41.9			75.6	59.4	
Approach LOS	D			E	E	
Queue Length 50th (ft)	162			~320	156	
Queue Length 95th (ft)	206			#477	m98	
Internal Link Dist (ft)	575			280	116	
Turn Bay Length (ft)						
Base Capacity (vph)	531			1063	1525	
Starvation Cap Reductn	0			0	470	
Spillback Cap Reductn	23			107	54	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.70			1.17	1.37	

Intersection Summary

Area Type: CBD  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.06  
 Intersection Signal Delay: 63.5  
 Intersection LOS: E  
 Intersection Capacity Utilization 104.7%  
 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.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Seaman Avenue





Intersection Capacity Analysis  
8: Seaman Avenue

2024 NO-BUILD CONDITIONS  
WEEKDAY PM PEAK HOUR



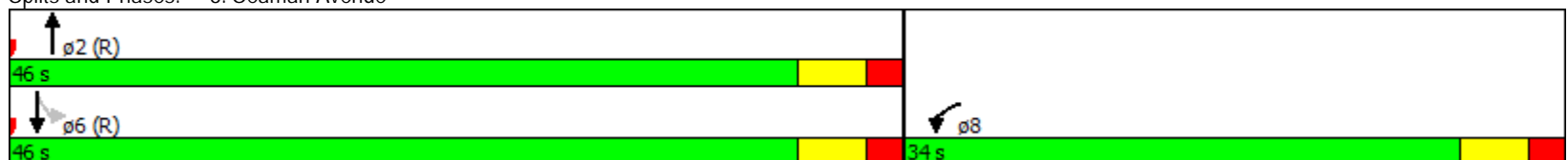
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑↑			↑↑
Volume (vph)	211	119	914	335	113	1035
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	0.99		0.98			1.00
Frt	0.948		0.958			
Flt Protected	0.970					0.995
Satd. Flow (prot)	1526	0	2577	0	0	2699
Flt Permitted	0.970					0.564
Satd. Flow (perm)	1526	0	2577	0	0	1529
Right Turn on Red		No		Yes		
Satd. Flow (RTOR)			106			
Link Speed (mph)	30		30			30
Link Distance (ft)	767		196			252
Travel Time (s)	17.4		4.5			5.7
Confl. Peds. (#/hr)		3		20	20	
Peak Hour Factor	0.92	0.82	0.96	0.89	0.88	0.96
Heavy Vehicles (%)	4%	0%	3%	2%	0%	4%
Bus Blockages (#/hr)	0	0	3	0	0	3
Parking (#/hr)			20			20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	374	0	1328	0	0	1206
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Total Split (s)	34.0		46.0		46.0	46.0
Total Lost Time (s)	5.5		5.5			5.5
Act Effct Green (s)	23.8		45.2			45.2
Actuated g/C Ratio	0.30		0.56			0.56
v/c Ratio	0.83		0.88			1.40
Control Delay	41.4		12.7			199.9
Queue Delay	50.2		47.0			0.8
Total Delay	91.6		59.7			200.7
LOS	F		E			F
Approach Delay	91.6		59.7			200.7
Approach LOS	F		E			F
Queue Length 50th (ft)	170		93			-444
Queue Length 95th (ft)	255		m95			#575
Internal Link Dist (ft)	687		116			172
Turn Bay Length (ft)						
Base Capacity (vph)	543		1502			864
Starvation Cap Reductn	0		326			0
Spillback Cap Reductn	198		98			114
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	1.08		1.13			1.61

Intersection Summary

Area Type: CBD  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.40  
 Intersection Signal Delay: 122.3  
 Intersection Capacity Utilization 110.9%  
 Analysis Period (min) 15  
 Intersection LOS: F  
 ICU Level of Service H

~ 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.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Seaman Avenue



Intersection Capacity Analysis  
 9: St Lukes Place & Grand Avenue

2024 NO-BUILD CONDITIONS  
 WEEKDAY PM PEAK HOUR

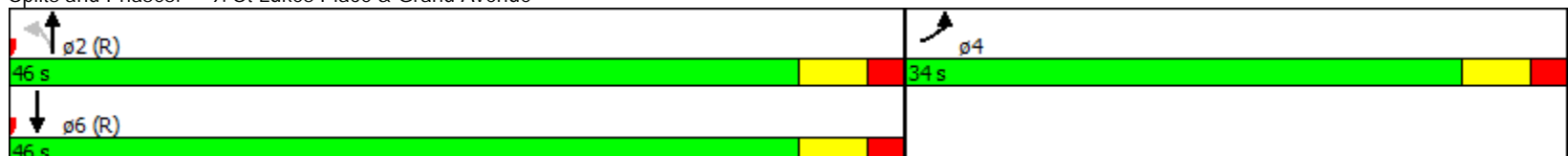


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑↑	↑↑	
Volume (vph)	148	45	41	1020	1093	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	1.00			1.00	1.00	
Frt	0.964				0.981	
Flt Protected	0.965			0.997		
Satd. Flow (prot)	1554	0	0	2710	2660	0
Flt Permitted	0.965			0.759		
Satd. Flow (perm)	1554	0	0	2063	2660	0
Right Turn on Red		No				Yes
Satd. Flow (RTOR)					29	
Link Speed (mph)	30			30	30	
Link Distance (ft)	678			252	852	
Travel Time (s)	15.4			5.7	19.4	
Confl. Peds. (#/hr)		1	9			9
Peak Hour Factor	0.85	0.70	0.61	0.88	0.93	0.79
Heavy Vehicles (%)	2%	2%	4%	4%	4%	3%
Parking (#/hr)				20	20	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	238	0	0	1226	1345	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	34.0		46.0	46.0	46.0	
Total Lost Time (s)	5.5			5.5	5.5	
Act Effct Green (s)	17.6			51.4	51.4	
Actuated g/C Ratio	0.22			0.64	0.64	
v/c Ratio	0.70			0.92	0.78	
Control Delay	39.2			18.6	6.2	
Queue Delay	0.0			1.2	48.6	
Total Delay	39.2			19.8	54.9	
LOS	D			B	D	
Approach Delay	39.2			19.8	54.9	
Approach LOS	D			B	D	
Queue Length 50th (ft)	110			95	21	
Queue Length 95th (ft)	154			m#447	#50	
Internal Link Dist (ft)	598			172	772	
Turn Bay Length (ft)						
Base Capacity (vph)	553			1326	1720	
Starvation Cap Reductn	0			26	0	
Spillback Cap Reductn	0			0	581	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.43			0.94	1.18	

Intersection Summary

Area Type: CBD  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.92  
 Intersection Signal Delay: 38.2 Intersection LOS: D  
 Intersection Capacity Utilization 86.2% ICU Level of Service E  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: St Lukes Place & Grand Avenue



Intersection Capacity Analysis  
10: Grand Avenue & High School Drive

2024 NO-BUILD CONDITIONS  
WEEKDAY PM PEAK HOUR

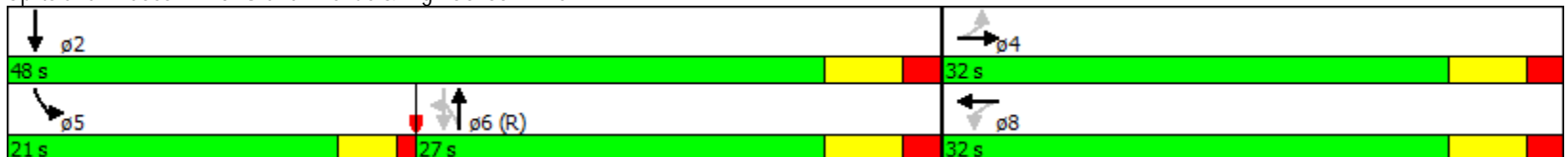


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕		↗	↕	
Volume (vph)	3	0	3	68	1	41	6	1015	161	72	1284	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	11	11	12	11	11
Storage Length (ft)	0		0	0		0	150		0	200		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.96			0.96		0.99	0.99			1.00	
Frt		0.946			0.947			0.974				
Flt Protected		0.971			0.972		0.950			0.950		
Satd. Flow (prot)	0	1530	0	0	1349	0	1593	2877	0	1377	3001	0
Flt Permitted		0.810			0.809		0.201			0.950		
Satd. Flow (perm)	0	1232	0	0	1120	0	333	2877	0	1377	3001	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		95			44			29			1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		564			861			852			745	
Travel Time (s)		12.8			19.6			19.4			16.9	
Confl. Peds. (#/hr)	80		4	4		80	45		24			45
Peak Hour Factor	0.25	0.92	0.38	0.64	0.25	0.57	0.38	0.91	0.70	0.74	0.95	0.50
Heavy Vehicles (%)	2%	2%	2%	20%	2%	2%	2%	2%	18%	18%	4%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	0	0	3	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	20	0	0	182	0	16	1345	0	97	1356	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Prot	NA	
Protected Phases		4			8			6		5	2	
Permitted Phases	4			8			6				6	
Total Split (s)	32.0	32.0		32.0	32.0		27.0	27.0		21.0	48.0	
Total Lost Time (s)		6.0			6.0		6.0	6.0		4.0	6.0	
Act Effct Green (s)		17.1			17.1		38.0	38.0		10.9	50.9	
Actuated g/C Ratio		0.21			0.21		0.48	0.48		0.14	0.64	
v/c Ratio		0.06			0.66		0.10	0.97		0.52	0.71	
Control Delay		0.3			32.5		28.7	42.2		42.1	13.1	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		0.3			32.5		28.7	42.2		42.1	13.1	
LOS		A			C		C	D		D	B	
Approach Delay		0.3			32.5			42.1			15.0	
Approach LOS		A			C			D			B	
Queue Length 50th (ft)		0			65		6	298		48	180	
Queue Length 95th (ft)		0			14		m8	m#561		m74	270	
Internal Link Dist (ft)		484			781			772			665	
Turn Bay Length (ft)							150			200		
Base Capacity (vph)		464			393		158	1381		292	1909	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.04			0.46		0.10	0.97		0.33	0.71	

Intersection Summary

Area Type: CBD  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 6:NBSB, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.97  
 Intersection Signal Delay: 28.2  
 Intersection Capacity Utilization 90.6%  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Grand Avenue & High School Drive



Intersection Capacity Analysis  
11: Grand Avenue & Stowe Avenue

2024 NO-BUILD CONDITIONS  
WEEKDAY PM PEAK HOUR



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Volume (vph)	98	12	176	75	14	47	193	1188	48	46	923	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	11	11	11	11
Storage Length (ft)	0		0	0		0	350		0	120		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.98			0.99		0.99	0.99			1.00	
Frt		0.920			0.952			0.994			0.995	
Flt Protected		0.982			0.973		0.950			0.950		
Satd. Flow (prot)	0	1483	0	0	2936	0	1510	2983	0	1496	2973	0
Flt Permitted		0.806			0.609		0.282			0.950		
Satd. Flow (perm)	0	1216	0	0	1827	0	444	2983	0	1496	2973	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		89			51			6			7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		653			595			745			408	
Travel Time (s)		14.8			13.5			16.9			9.3	
Confl. Peds. (#/hr)	3		20	20		3	46		97			46
Peak Hour Factor	0.74	0.92	0.84	0.85	0.65	0.92	0.81	0.84	0.80	0.77	0.94	0.75
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	4%	4%	4%	5%	5%	5%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	355	0	0	161	0	238	1474	0	60	1015	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Prot	NA	
Protected Phases		4			8			6		5	2	
Permitted Phases	4			8			6				6	
Total Split (s)	29.0	29.0		29.0	29.0		34.0	34.0		17.0	51.0	
Total Lost Time (s)		5.5			5.5		5.5	5.5		4.0	5.5	
Act Effct Green (s)		21.4			21.4		39.1	39.1		8.6	47.6	
Actuated g/C Ratio		0.27			0.27		0.49	0.49		0.11	0.60	
v/c Ratio		0.91			0.31		1.10	1.01		0.37	0.57	
Control Delay		50.0			16.6		108.6	44.8		38.4	11.8	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.4	
Total Delay		50.0			16.6		108.6	44.8		38.4	12.1	
LOS		D			B		F	D		D	B	
Approach Delay		50.0			16.6			53.7			13.6	
Approach LOS		D			B			D			B	
Queue Length 50th (ft)		127			21		-151	-464		31	137	
Queue Length 95th (ft)		#281			28		m#196	m#525		m33	m154	
Internal Link Dist (ft)		573			515			665			328	
Turn Bay Length (ft)							350			120		
Base Capacity (vph)		420			572		217	1461		243	1771	
Starvation Cap Reductn		0			0		0	0		0	276	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.85			0.28		1.10	1.01		0.25	0.68	

Intersection Summary

Area Type: CBD  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 6:NBSB, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.10  
 Intersection Signal Delay: 38.4  
 Intersection LOS: D  
 Intersection Capacity Utilization 86.3%  
 ICU Level of Service E  
 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.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 11: Grand Avenue & Stowe Avenue



Intersection Capacity Analysis  
12: Stanton Avenue & Grand Avenue

2024 NO-BUILD CONDITIONS  
WEEKDAY PM PEAK HOUR

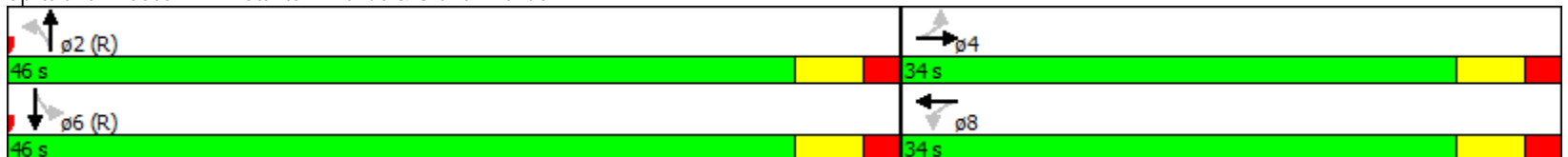


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	24	15	40	88	20	31	18	1056	99	46	1264	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	11	11	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.98			0.98			0.99			1.00	
Frt		0.937			0.969			0.986			0.996	
Flt Protected		0.985			0.971			0.999			0.998	
Satd. Flow (prot)	0	1517	0	0	1564	0	0	2887	0	0	2707	0
Flt Permitted		0.873			0.784			0.893			0.850	
Satd. Flow (perm)	0	1338	0	0	1243	0	0	2581	0	0	2304	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			21			19			5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		666			765			408			549	
Travel Time (s)		15.1			17.4			9.3			12.5	
Confl. Peds. (#/hr)	21		26	26		21	47		116	116		47
Peak Hour Factor	0.72	0.58	0.79	0.72	0.53	0.66	0.71	0.95	0.86	0.90	0.88	0.86
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	5%	5%	5%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	4	0	0	3	0
Parking (#/hr)											20	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	110	0	0	207	0	0	1252	0	0	1525	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	34.0	34.0		34.0	34.0		46.0	46.0		46.0	46.0	
Total Lost Time (s)		5.5			5.5			5.5			5.5	
Act Effct Green (s)		17.6			17.6			51.4			51.4	
Actuated g/C Ratio		0.22			0.22			0.64			0.64	
v/c Ratio		0.36			0.71			0.75			1.03	
Control Delay		23.2			38.5			8.0			49.6	
Queue Delay		0.0			0.0			0.5			0.0	
Total Delay		23.2			38.5			8.5			49.6	
LOS		C			D			A			D	
Approach Delay		23.2			38.5			8.5			49.6	
Approach LOS		C			D			A			D	
Queue Length 50th (ft)		39			86			33			-436	
Queue Length 95th (ft)		41			68			m63			#614	
Internal Link Dist (ft)		586			685			328			469	
Turn Bay Length (ft)												
Base Capacity (vph)		488			456			1663			1480	
Starvation Cap Reductn		0			0			121			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.23			0.45			0.81			1.03	

Intersection Summary

Area Type: CBD  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.03  
 Intersection Signal Delay: 31.3  
 Intersection LOS: C  
 Intersection Capacity Utilization 102.8%  
 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.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 12: Stanton Avenue & Grand Avenue



Intersection Capacity Analysis  
1: Merrick Road & Grand Avenue

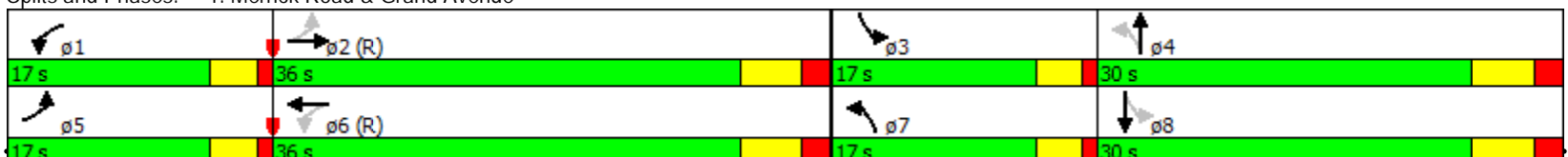
2024 NO-BUILD CONDITIONS  
SATURDAY MIDDAY PEAK HOUR

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↙	↗	↘	↖	↗		↖	↗	
Volume (vph)	142	453	139	159	496	149	168	520	150	119	503	132
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	12	9	11	11	10	10	11	10	10	10
Storage Length (ft)	200		100	100		40	150		0	150		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor			0.99			0.99		0.99			1.00	
Frt			0.850			0.850		0.964			0.968	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1501	3061	1454	1433	3042	1378	1501	2564	0	1516	2534	0
Flt Permitted	0.243			0.381			0.153			0.233		
Satd. Flow (perm)	384	3061	1434	575	3042	1357	242	2564	0	372	2534	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			185			185		40			32	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		687			922			603			707	
Travel Time (s)		15.6			21.0			13.7			16.1	
Confl. Peds. (#/hr)			4			10			20			5
Peak Hour Factor	0.70	0.95	0.86	0.82	0.76	0.86	0.86	0.98	0.88	0.76	0.82	0.79
Heavy Vehicles (%)	1%	2%	0%	2%	2%	2%	1%	1%	2%	0%	3%	3%
Bus Blockages (#/hr)	0	3	0	0	6	0	0	2	0	0	4	0
Parking (#/hr)								20			20	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	203	477	162	194	653	173	195	701	0	157	780	0
Turn Type	pm+pt	NA	Free	pm+pt	NA	Free	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		Free	6		Free	4			8		
Total Split (s)	17.0	36.0		17.0	36.0		17.0	30.0		17.0	30.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Act Effct Green (s)	41.9	27.8	100.0	41.9	27.8	100.0	43.4	29.1		40.8	27.8	
Actuated g/C Ratio	0.42	0.28	1.00	0.42	0.28	1.00	0.43	0.29		0.41	0.28	
v/c Ratio	0.69	0.56	0.11	0.56	0.77	0.13	0.75	0.91		0.57	1.07	
Control Delay	29.3	33.5	0.2	23.3	40.0	0.2	39.9	50.9		25.8	90.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	29.3	33.5	0.2	23.3	40.0	0.2	39.9	50.9		25.8	90.1	
LOS	C	C	A	C	D	A	D	D		C	F	
Approach Delay		26.0			30.1			48.5			79.3	
Approach LOS		C			C			D			E	
Queue Length 50th (ft)	77	136	0	73	200	0	76	221		60	~313	
Queue Length 95th (ft)	90	183	0	104	207	0	#167	#373		88	#380	
Internal Link Dist (ft)		607			842			523			627	
Turn Bay Length (ft)	200		100	100		40	150			150		
Base Capacity (vph)	309	918	1434	357	912	1357	274	773		307	727	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.66	0.52	0.11	0.54	0.72	0.13	0.71	0.91		0.51	1.07	

Intersection Summary

Area Type: CBD  
 Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 59.5 (60%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.07  
 Intersection Signal Delay: 46.1  
 Intersection LOS: D  
 Intersection Capacity Utilization 75.4%  
 ICU Level of Service D  
 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: Merrick Road & Grand Avenue



Intersection Capacity Analysis  
2: Grand Avenue & Prospect Street

2024 NO-BUILD CONDITIONS  
SATURDAY MIDDAY PEAK HOUR

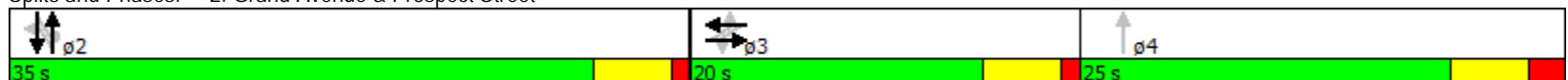


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	ø4
Lane Configurations		↕			↕			↕			↕		
Volume (vph)	59	8	8	7	5	72	3	733	33	111	797	30	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	10	16	10	12	12	12	10	10	10	10	10	10	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95	
Ped Bike Factor		0.99			0.97			1.00			1.00		
Frt		0.982			0.890			0.991			0.995		
Flt Protected		0.965			0.995						0.994		
Satd. Flow (prot)	0	1795	0	0	1445	0	0	2671	0	0	2643	0	
Flt Permitted		0.722			0.966			0.455			0.709		
Satd. Flow (perm)	0	1327	0	0	1402	0	0	1215	0	0	1884	0	
Right Turn on Red			No			Yes			Yes			Yes	
Satd. Flow (RTOR)					89			15			5		
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		602			588			707			1474		
Travel Time (s)		13.7			13.4			16.1			33.5		
Confl. Peds. (#/hr)	13		6	6		13	14		17	17		14	
Peak Hour Factor	0.68	0.50	0.50	0.58	0.63	0.81	0.75	0.91	0.65	0.82	0.91	0.90	
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	1%	2%	2%	2%	2%	
Parking (#/hr)								20			20		
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	119	0	0	109	0	0	860	0	0	1044	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA		
Protected Phases		3			3			2			2		4
Permitted Phases	3			3			2	4		2			
Total Split (s)	20.0	20.0		20.0	20.0		35.0	35.0		35.0	35.0		25.0
Total Lost Time (s)		5.0			5.0			5.0			5.0		
Act Effct Green (s)		15.0			15.0			30.0			30.0		
Actuated g/C Ratio		0.27			0.27			0.55			0.55		
v/c Ratio		0.33			0.24			0.59			1.01		
Control Delay		19.1			7.4			10.3			47.9		
Queue Delay		0.0			0.0			0.0			0.0		
Total Delay		19.1			7.4			10.3			47.9		
LOS		B			A			B			D		
Approach Delay		19.1			7.4			10.3			47.9		
Approach LOS		B			A			B			D		
Queue Length 50th (ft)		31			5			86			~168		
Queue Length 95th (ft)		35			17			132			#306		
Internal Link Dist (ft)		522			508			627			1394		
Turn Bay Length (ft)													
Base Capacity (vph)		361			447			1463			1029		
Starvation Cap Reductn		0			0			0			0		
Spillback Cap Reductn		0			0			0			0		
Storage Cap Reductn		0			0			0			0		
Reduced v/c Ratio		0.33			0.24			0.59			1.01		

Intersection Summary

Area Type: CBD  
 Cycle Length: 80  
 Actuated Cycle Length: 55  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.01  
 Intersection Signal Delay: 29.0  
 Intersection Capacity Utilization 78.0%  
 Analysis Period (min) 15  
 Intersection LOS: C  
 ICU Level of Service D  
 ~ 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: 2: Grand Avenue & Prospect Street



Intersection Capacity Analysis  
3: Sunrise Highway & Grand Avenue

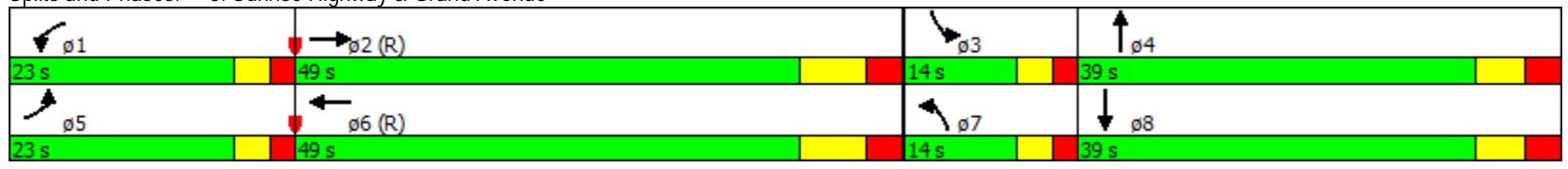
2024 NO-BUILD CONDITIONS  
SATURDAY MIDDAY PEAK HOUR

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑		↖	↑↑	
Volume (vph)	214	1292	88	252	1179	75	71	548	244	123	551	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	10	10	10	10	10	10
Storage Length (ft)	300		0	400		0	150		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00			1.00			0.99			0.99	
Frt		0.990			0.990			0.954			0.967	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1608	4369	0	1577	4491	0	1516	2816	0	1472	2835	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1608	4369	0	1577	4491	0	1516	2816	0	1472	2835	0
Right Turn on Red			Yes			Yes			No			No
Satd. Flow (RTOR)		10			10							
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1155			1126			1474			958	
Travel Time (s)		26.3			25.6			33.5			21.8	
Confl. Peds. (#/hr)			5			3			11			14
Peak Hour Factor	0.84	0.95	0.88	0.90	0.97	0.85	0.88	0.92	0.94	0.76	0.93	0.81
Heavy Vehicles (%)	1%	6%	1%	3%	3%	0%	0%	2%	1%	3%	2%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	0	0	2	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	255	1460	0	280	1303	0	81	856	0	162	762	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases												
Total Split (s)	23.0	49.0		23.0	49.0		14.0	39.0		14.0	39.0	
Total Lost Time (s)	5.0	8.4		5.0	8.4		5.0	7.0		5.0	7.0	
Act Effct Green (s)	18.0	40.6		18.0	40.6		8.8	32.0		9.0	32.2	
Actuated g/C Ratio	0.14	0.32		0.14	0.32		0.07	0.26		0.07	0.26	
v/c Ratio	1.10	1.02		1.23	0.89		0.76	1.19		1.54	1.04	
Control Delay	138.9	71.6		181.5	48.5		97.5	139.5		323.9	90.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	138.9	71.6		181.5	48.5		97.5	139.5		323.9	90.2	
LOS	F	E		F	D		F	F		F	F	
Approach Delay		81.6			72.0			135.8			131.2	
Approach LOS		F			E			F			F	
Queue Length 50th (ft)	~234	~458		~280	363		65	~438		~183	~353	
Queue Length 95th (ft)	#365	#556		#456	428		#145	#568		#261	#479	
Internal Link Dist (ft)		1075			1046			1394			878	
Turn Bay Length (ft)	300			400			150			150		
Base Capacity (vph)	231	1425		227	1465		109	720		105	730	
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	1.10	1.02		1.23	0.89		0.74	1.19		1.54	1.04	

Intersection Summary

Area Type: CBD  
 Cycle Length: 125  
 Actuated Cycle Length: 125  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.54  
 Intersection Signal Delay: 97.4  
 Intersection LOS: F  
 Intersection Capacity Utilization 104.1%  
 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: 3: Sunrise Highway & Grand Avenue





Intersection Capacity Analysis  
4: Grand Avenue & Baldwin Avenue/Miller Place

2024 NO-BUILD CONDITIONS  
SATURDAY MIDDAY PEAK HOUR



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	27	10	31	10	8	11	11	824	11	6	898	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	11	11	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.99			0.99			1.00			1.00	
Frt		0.928			0.955			0.997			0.995	
Flt Protected		0.985			0.983			0.999				
Satd. Flow (prot)	0	1519	0	0	1565	0	0	2748	0	0	2744	0
Flt Permitted		0.877			0.668			0.928			0.948	
Satd. Flow (perm)	0	1352	0	0	1064	0	0	2553	0	0	2602	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		60			17			2			4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		721			584			958			838	
Travel Time (s)		16.4			13.3			21.8			19.0	
Confl. Peds. (#/hr)			4	5		4	8		11	11		8
Peak Hour Factor	0.78	0.56	0.52	0.56	0.50	0.63	0.63	0.96	0.63	0.75	0.93	0.56
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	1%	2%	1%	1%	2%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	0	0	2	0
Parking (#/hr)								20			20	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	113	0	0	51	0	0	892	0	0	1008	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		3			2			1			1	
Permitted Phases	3			2			1			1		
Total Split (s)	26.0	26.0		26.0	26.0		28.0	28.0		28.0	28.0	
Total Lost Time (s)		5.5			5.5			5.5			5.5	
Act Effct Green (s)		9.1			9.8			52.6			52.6	
Actuated g/C Ratio		0.11			0.12			0.66			0.66	
v/c Ratio		0.55			0.35			0.53			0.59	
Control Delay		27.1			28.3			14.9			24.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		27.1			28.3			14.9			24.9	
LOS		C			C			B			C	
Approach Delay		27.1			28.3			14.9			24.9	
Approach LOS		C			C			B			C	
Queue Length 50th (ft)		25			16			133			226	
Queue Length 95th (ft)		30			19			#350			#393	
Internal Link Dist (ft)		641			504			878			758	
Turn Bay Length (ft)												
Base Capacity (vph)		391			285			1678			1711	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.29			0.18			0.53			0.59	

Intersection Summary

Area Type: CBD  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 1:NBSB, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.59  
 Intersection Signal Delay: 20.8  
 Intersection LOS: C  
 Intersection Capacity Utilization 50.0%  
 ICU Level of Service A  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 4: Grand Avenue & Baldwin Avenue/Miller Place



Intersection Capacity Analysis  
5: Grand Avenue & Milburn Avenue

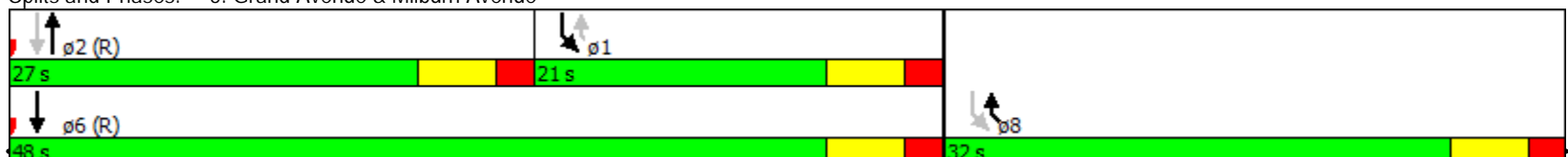
2024 NO-BUILD CONDITIONS  
SATURDAY MIDDAY PEAK HOUR

	↑	↶	↷	↓	↶	↷
Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations	↑↑		↶	↑↑		↶
Volume (vph)	812	1	223	885	0	244
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Storage Length (ft)		0	80		0	0
Storage Lanes		0	1		0	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor	1.00		0.99			0.99
Frt	0.999					0.865
Flt Protected			0.950			
Satd. Flow (prot)	2795	0	1555	2755	0	1436
Flt Permitted			0.308			
Satd. Flow (perm)	2795	0	500	2755	0	1416
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	30			30	30	
Link Distance (ft)	838			379	601	
Travel Time (s)	19.0			8.6	13.7	
Confl. Peds. (#/hr)		14	14			2
Peak Hour Factor	0.88	0.25	0.88	0.91	0.81	0.81
Heavy Vehicles (%)	1%	2%	1%	2%	1%	3%
Bus Blockages (#/hr)	0	0	0	3	0	0
Parking (#/hr)	20			20		
Shared Lane Traffic (%)						
Lane Group Flow (vph)	927	0	253	973	0	301
Turn Type	NA		custom	NA		custom
Protected Phases	2		1	6		8
Permitted Phases			8	2		1
Total Split (s)	27.0		21.0	48.0		32.0
Total Lost Time (s)	6.0		6.0	6.0		6.0
Act Effct Green (s)	24.7		37.3	43.0		37.3
Actuated g/C Ratio	0.31		0.47	0.54		0.47
v/c Ratio	1.08		0.64	0.66		0.45
Control Delay	79.0		18.3	10.4		13.1
Queue Delay	0.0		0.0	0.4		0.0
Total Delay	79.0		18.3	10.8		13.1
LOS	E		B	B		B
Approach Delay	79.0			12.3		
Approach LOS	E			B		
Queue Length 50th (ft)	-281		79	102		80
Queue Length 95th (ft)	#384		142	57		107
Internal Link Dist (ft)	758			299	521	
Turn Bay Length (ft)			80			
Base Capacity (vph)	861		447	1480		685
Starvation Cap Reductn	0		0	141		0
Spillback Cap Reductn	0		0	0		0
Storage Cap Reductn	0		0	0		0
Reduced v/c Ratio	1.08		0.57	0.73		0.44

Intersection Summary

Area Type: CBD  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBSB and 6:SBT, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.08  
 Intersection Signal Delay: 37.6  
 Intersection LOS: D  
 Intersection Capacity Utilization 56.0%  
 ICU Level of Service B  
 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: 5: Grand Avenue & Milburn Avenue



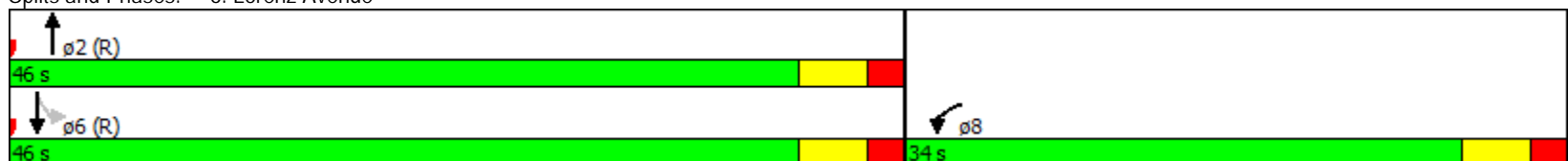


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T	R		L
Volume (vph)	19	8	1214	11	11	1188
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	0.99		1.00			1.00
Frt	0.953		0.998			
Flt Protected	0.968					0.999
Satd. Flow (prot)	1533	0	2775	0	0	2768
Flt Permitted	0.968					0.935
Satd. Flow (perm)	1533	0	2775	0	0	2591
Right Turn on Red		No		Yes		
Satd. Flow (RTOR)			2			
Link Speed (mph)	30		30			30
Link Distance (ft)	918		379			300
Travel Time (s)	20.9		8.6			6.8
Confl. Peds. (#/hr)		12		14	14	
Peak Hour Factor	0.64	0.50	0.89	0.63	0.83	0.95
Heavy Vehicles (%)	2%	2%	1%	1%	2%	2%
Bus Blockages (#/hr)	0	0	3	0	0	0
Parking (#/hr)			20			20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	46	0	1381	0	0	1264
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Total Split (s)	34.0		46.0		46.0	46.0
Total Lost Time (s)	5.5		5.5			5.5
Act Effct Green (s)	9.9		66.0			66.0
Actuated g/C Ratio	0.12		0.82			0.82
v/c Ratio	0.24		0.60			0.59
Control Delay	32.4		5.8			3.7
Queue Delay	0.0		0.2			0.0
Total Delay	32.4		6.0			3.8
LOS	C		A			A
Approach Delay	32.4		6.0			3.8
Approach LOS	C		A			A
Queue Length 50th (ft)	22		48			55
Queue Length 95th (ft)	30		m81			93
Internal Link Dist (ft)	838		299			220
Turn Bay Length (ft)						
Base Capacity (vph)	546		2291			2139
Starvation Cap Reductn	0		283			59
Spillback Cap Reductn	0		116			0
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.08		0.69			0.61

Intersection Summary

Area Type: CBD  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.60  
 Intersection Signal Delay: 5.4  
 Intersection LOS: A  
 Intersection Capacity Utilization 63.1%  
 ICU Level of Service B  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Lorenz Avenue



Intersection Capacity Analysis  
7: Seaman Avenue

2024 NO-BUILD CONDITIONS  
SATURDAY MIDDAY PEAK HOUR

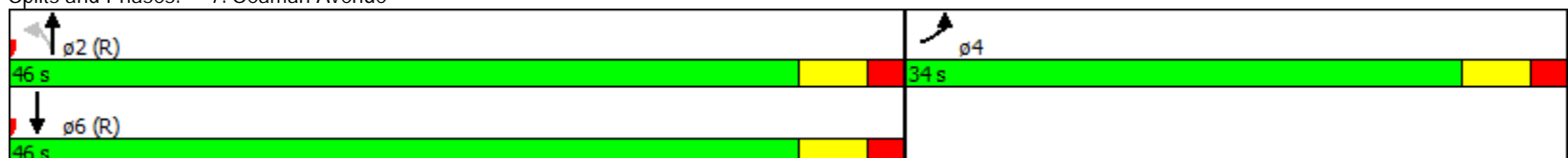


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	131	66	39	1134	1120	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	0.99			1.00	1.00	
Frt	0.954				0.988	
Flt Protected	0.968			0.998		
Satd. Flow (prot)	1545	0	0	2780	2716	0
Flt Permitted	0.968			0.819		
Satd. Flow (perm)	1545	0	0	2281	2716	0
Right Turn on Red		No				Yes
Satd. Flow (RTOR)					16	
Link Speed (mph)	30			30	30	
Link Distance (ft)	655			360	196	
Travel Time (s)	14.9			8.2	4.5	
Confl. Peds. (#/hr)		12	15			15
Peak Hour Factor	0.77	0.76	0.71	0.92	0.93	0.89
Heavy Vehicles (%)	1%	2%	3%	1%	2%	1%
Bus Blockages (#/hr)	0	0	0	2	3	0
Parking (#/hr)				20	20	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	257	0	0	1288	1305	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	34.0		46.0	46.0	46.0	
Total Lost Time (s)	5.5			5.5	5.5	
Act Effct Green (s)	18.6			50.4	50.4	
Actuated g/C Ratio	0.23			0.63	0.63	
v/c Ratio	0.72			0.90	0.76	
Control Delay	39.0			18.9	6.0	
Queue Delay	0.1			2.7	49.0	
Total Delay	39.0			21.6	55.0	
LOS	D			C	D	
Approach Delay	39.0			21.6	55.0	
Approach LOS	D			C	D	
Queue Length 50th (ft)	118			137	72	
Queue Length 95th (ft)	144			#488	m57	
Internal Link Dist (ft)	575			280	116	
Turn Bay Length (ft)						
Base Capacity (vph)	550			1437	1717	
Starvation Cap Reductn	0			0	635	
Spillback Cap Reductn	12			77	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.48			0.95	1.21	

Intersection Summary

Area Type: CBD  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.90  
 Intersection Signal Delay: 38.4  
 Intersection LOS: D  
 Intersection Capacity Utilization 89.7%  
 ICU Level of Service E  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Seaman Avenue



Intersection Capacity Analysis  
8: Seaman Avenue

2024 NO-BUILD CONDITIONS  
SATURDAY MIDDAY PEAK HOUR



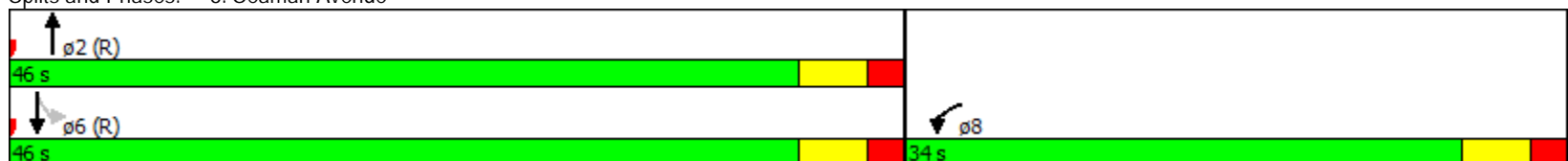
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙		↑	↘	↙	↑
Volume (vph)	128	121	1115	161	116	1067
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor			0.99			
Frt	0.933		0.980			
Flt Protected	0.976					0.994
Satd. Flow (prot)	1549	0	2715	0	0	2736
Flt Permitted	0.976					0.556
Satd. Flow (perm)	1549	0	2715	0	0	1530
Right Turn on Red		No		Yes		
Satd. Flow (RTOR)			31			
Link Speed (mph)	30		30			30
Link Distance (ft)	767		196			252
Travel Time (s)	17.4		4.5			5.7
Confl. Peds. (#/hr)				13	13	
Peak Hour Factor	0.88	0.84	0.95	0.88	0.80	0.92
Heavy Vehicles (%)	0%	1%	1%	1%	1%	2%
Bus Blockages (#/hr)	0	0	2	0	0	4
Parking (#/hr)			20			20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	289	0	1357	0	0	1305
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Total Split (s)	34.0		46.0		46.0	46.0
Total Lost Time (s)	5.5		5.5			5.5
Act Effct Green (s)	20.2		48.8			48.8
Actuated g/C Ratio	0.25		0.61			0.61
v/c Ratio	0.74		0.81			1.40
Control Delay	38.6		10.3			200.2
Queue Delay	0.0		6.9			0.1
Total Delay	38.6		17.1			200.3
LOS	D		B			F
Approach Delay	38.6		17.1			200.3
Approach LOS	D		B			F
Queue Length 50th (ft)	133		80			-468
Queue Length 95th (ft)	187		m#162			#629
Internal Link Dist (ft)	687		116			172
Turn Bay Length (ft)						
Base Capacity (vph)	551		1669			934
Starvation Cap Reductn	0		274			0
Spillback Cap Reductn	0		15			21
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.52		0.97			1.43

Intersection Summary

Area Type: CBD  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.40  
 Intersection Signal Delay: 100.2  
 Intersection Capacity Utilization 106.5%  
 Analysis Period (min) 15  
 Intersection LOS: F  
 ICU Level of Service G

~ 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.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Seaman Avenue



Intersection Capacity Analysis  
 9: St Lukes Place & Grand Avenue

2024 NO-BUILD CONDITIONS  
 SATURDAY MIDDAY PEAK HOUR

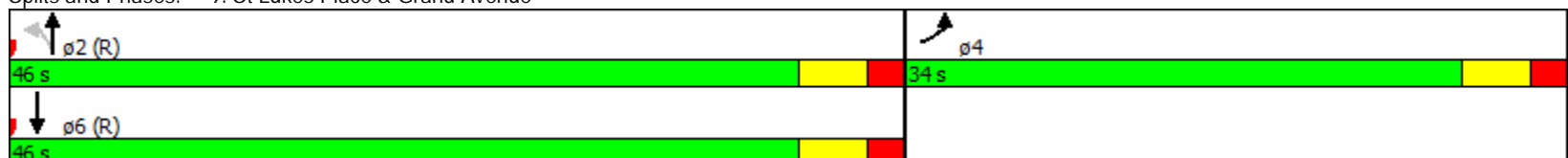


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			T	T	
Volume (vph)	114	29	27	1191	1204	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	1.00			1.00	1.00	
Frt	0.974				0.985	
Flt Protected	0.961			0.999		
Satd. Flow (prot)	1565	0	0	2796	2720	0
Flt Permitted	0.961			0.861		
Satd. Flow (perm)	1565	0	0	2410	2720	0
Right Turn on Red		No				Yes
Satd. Flow (RTOR)					22	
Link Speed (mph)	30			30	30	
Link Distance (ft)	678			252	852	
Travel Time (s)	15.4			5.7	19.4	
Confl. Peds. (#/hr)		1	14			14
Peak Hour Factor	0.79	0.84	0.69	0.90	0.94	0.73
Heavy Vehicles (%)	2%	2%	1%	1%	2%	2%
Parking (#/hr)				20	20	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	179	0	0	1362	1425	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	34.0		46.0	46.0	46.0	
Total Lost Time (s)	5.5			5.5	5.5	
Act Effct Green (s)	14.4			54.6	54.6	
Actuated g/C Ratio	0.18			0.68	0.68	
v/c Ratio	0.63			0.83	0.77	
Control Delay	40.0			9.4	6.8	
Queue Delay	0.0			0.0	46.3	
Total Delay	40.0			9.4	53.1	
LOS	D			A	D	
Approach Delay	40.0			9.4	53.1	
Approach LOS	D			A	D	
Queue Length 50th (ft)	84			86	190	
Queue Length 95th (ft)	116			#461	41	
Internal Link Dist (ft)	598			172	772	
Turn Bay Length (ft)						
Base Capacity (vph)	557			1644	1862	
Starvation Cap Reductn	0			6	0	
Spillback Cap Reductn	0			0	561	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.32			0.83	1.10	

Intersection Summary

Area Type: CBD  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.83  
 Intersection Signal Delay: 32.2 Intersection LOS: C  
 Intersection Capacity Utilization 76.5% ICU Level of Service D  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 9: St Lukes Place & Grand Avenue



Intersection Capacity Analysis  
10: Grand Avenue & High School Drive

2024 NO-BUILD CONDITIONS  
SATURDAY MIDDAY PEAK HOUR

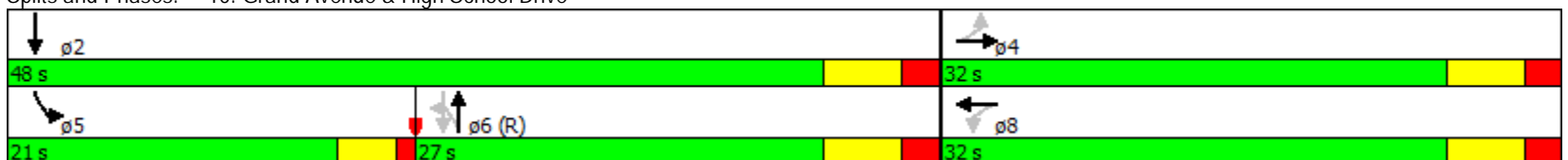


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑↑		↕	↑↑	
Volume (vph)	3	0	5	34	0	14	5	1284	25	14	1241	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	11	11	12	11	11
Storage Length (ft)	0		0	0		0	150		0	200		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99			0.99		0.99	1.00			1.00	
Frt		0.932			0.952			0.995			0.999	
Flt Protected		0.976			0.969		0.950			0.950		
Satd. Flow (prot)	0	1525	0	0	1525	0	1608	3075	0	1577	3050	0
Flt Permitted		0.842			0.796		0.208			0.950		
Satd. Flow (perm)	0	1300	0	0	1253	0	349	3075	0	1577	3050	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		95			95			4			2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		564			861			852			745	
Travel Time (s)		12.8			19.6			19.4			16.9	
Confl. Peds. (#/hr)	27					27	25		21			25
Peak Hour Factor	0.38	0.50	0.63	0.73	0.55	0.54	0.31	0.98	0.55	0.65	0.96	0.58
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	1%	1%	2%	3%	2%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	0	0	4	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	16	0	0	73	0	16	1355	0	22	1305	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Prot	NA	
Protected Phases		4			8			6		5	2	
Permitted Phases	4			8			6				6	
Total Split (s)	32.0	32.0		32.0	32.0		27.0	27.0		21.0	48.0	
Total Lost Time (s)		6.0			6.0		6.0	6.0		4.0	6.0	
Act Effct Green (s)		12.8			12.8		54.8	54.8		6.7	59.6	
Actuated g/C Ratio		0.16			0.16		0.68	0.68		0.08	0.74	
v/c Ratio		0.06			0.26		0.07	0.64		0.17	0.57	
Control Delay		0.4			5.8		17.2	18.6		35.7	8.8	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		0.4			5.8		17.2	18.6		35.7	8.8	
LOS		A			A		B	B		D	A	
Approach Delay		0.4			5.8			18.6			9.3	
Approach LOS		A			A			B			A	
Queue Length 50th (ft)		0			0		3	260		11	151	
Queue Length 95th (ft)		0			0		8	#538		m18	234	
Internal Link Dist (ft)		484			781			772			665	
Turn Bay Length (ft)							150			200		
Base Capacity (vph)		486			471		239	2108		335	2272	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.03			0.15		0.07	0.64		0.07	0.57	

Intersection Summary

Area Type: CBD  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 6:NBSB, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.64  
 Intersection Signal Delay: 13.7  
 Intersection Capacity Utilization 65.6%  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Grand Avenue & High School Drive



Intersection Capacity Analysis  
11: Grand Avenue & Stowe Avenue

2024 NO-BUILD CONDITIONS  
SATURDAY MIDDAY PEAK HOUR

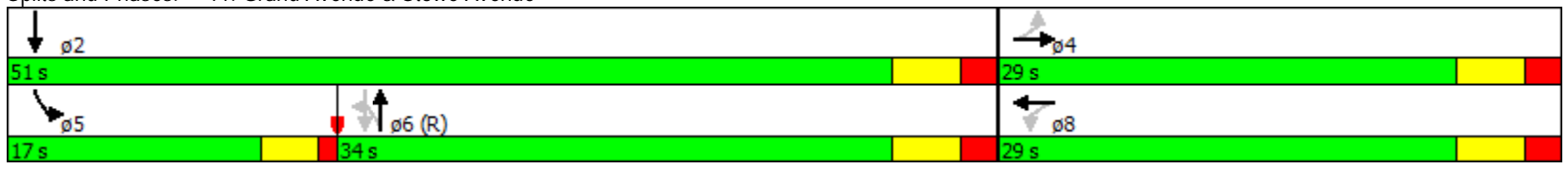


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Volume (vph)	44	18	31	115	12	205	47	1156	54	219	1196	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	11	11	11	11
Storage Length (ft)	0		0	0		0	350		0	120		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99			0.98		1.00	1.00			1.00	
Frt		0.948			0.907			0.993			0.994	
Flt Protected		0.981			0.984		0.950			0.950		
Satd. Flow (prot)	0	1540	0	0	2805	0	1540	3079	0	1555	3058	0
Flt Permitted		0.580			0.766		0.209			0.950		
Satd. Flow (perm)	0	908	0	0	2173	0	337	3079	0	1555	3058	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		40			233			7			9	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		653			595			745			408	
Travel Time (s)		14.8			13.5			16.9			9.3	
Confl. Peds. (#/hr)	8		17	17		8	29		23			29
Peak Hour Factor	0.68	0.47	0.48	0.92	0.69	0.88	0.92	0.94	0.91	0.95	0.95	0.73
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	1%	2%	1%	2%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	168	0	0	375	0	51	1289	0	231	1314	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Prot	NA	
Protected Phases		4			8			6		5	2	
Permitted Phases	4			8			6				6	
Total Split (s)	29.0	29.0		29.0	29.0		34.0	34.0		17.0	51.0	
Total Lost Time (s)		5.5			5.5		5.5	5.5		4.0	5.5	
Act Effct Green (s)		14.4			14.4		34.0	34.0		16.6	54.6	
Actuated g/C Ratio		0.18			0.18		0.42	0.42		0.21	0.68	
v/c Ratio		0.86			0.64		0.36	0.98		0.72	0.63	
Control Delay		58.8			16.0		18.4	41.1		45.4	9.1	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.4	
Total Delay		58.8			16.0		18.4	41.1		45.4	9.5	
LOS		E			B		B	D		D	A	
Approach Delay		58.8			16.0			40.3			14.9	
Approach LOS		E			B			D			B	
Queue Length 50th (ft)		63			33		19	-367		123	143	
Queue Length 95th (ft)		44			35		m14	#509		m144	m205	
Internal Link Dist (ft)		573			515			665			328	
Turn Bay Length (ft)							350			120		
Base Capacity (vph)		294			802		143	1311		323	2089	
Starvation Cap Reductn		0			0		0	0		0	325	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.57			0.47		0.36	0.98		0.72	0.74	

Intersection Summary

Area Type: CBD  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 6:NBSB, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.98  
 Intersection Signal Delay: 27.1  
 Intersection LOS: C  
 Intersection Capacity Utilization 97.1%  
 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.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 11: Grand Avenue & Stowe Avenue





Intersection Capacity Analysis  
12: Stanton Avenue & Grand Avenue

2024 NO-BUILD CONDITIONS  
SATURDAY MIDDAY PEAK HOUR



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	36	7	38	83	14	44	50	1173	123	40	1271	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	11	11	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.98			0.98			1.00			1.00	
Frt		0.935			0.953			0.981			0.994	
Flt Protected		0.978			0.973			0.998			0.998	
Satd. Flow (prot)	0	1514	0	0	1539	0	0	3007	0	0	2729	0
Flt Permitted		0.784			0.790			0.744			0.814	
Satd. Flow (perm)	0	1206	0	0	1241	0	0	2241	0	0	2226	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		27			33			28			8	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		666			765			408			549	
Travel Time (s)		15.1			17.4			9.3			12.5	
Confl. Peds. (#/hr)	15		12	12		15	30		19	19		30
Peak Hour Factor	0.71	0.88	0.69	0.93	0.81	0.79	0.65	0.92	0.64	0.79	0.96	0.70
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	1%	2%	1%	2%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	3	0	0	3	0
Parking (#/hr)											20	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	114	0	0	162	0	0	1544	0	0	1434	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	34.0	34.0		34.0	34.0		46.0	46.0		46.0	46.0	
Total Lost Time (s)		5.5			5.5			5.5			5.5	
Act Effct Green (s)		13.9			13.9			55.1			55.1	
Actuated g/C Ratio		0.17			0.17			0.69			0.69	
v/c Ratio		0.49			0.67			0.99			0.93	
Control Delay		28.7			37.0			31.3			26.2	
Queue Delay		0.0			0.0			14.1			0.0	
Total Delay		28.7			37.0			45.5			26.2	
LOS		C			D			D			C	
Approach Delay		28.7			37.0			45.5			26.2	
Approach LOS		C			D			D			C	
Queue Length 50th (ft)		39			60			164			276	
Queue Length 95th (ft)		77			96			m#526			#557	
Internal Link Dist (ft)		586			685			328			469	
Turn Bay Length (ft)												
Base Capacity (vph)		447			463			1552			1536	
Starvation Cap Reductn		0			0			70			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.26			0.35			1.04			0.93	

Intersection Summary

Area Type: CBD  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.99  
 Intersection Signal Delay: 35.9  
 Intersection LOS: D  
 Intersection Capacity Utilization 105.4%  
 ICU Level of Service G  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 12: Stanton Avenue & Grand Avenue

