

Lanes, Volumes, Timings

1: Commerce Way/Presidential Way & Atlantic Avenue/I-93 Exit 30 On/Off Ramps 07/30/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	39	56	735	153	497	59	117	248	105	146	26
Future Volume (vph)	8	39	56	735	153	497	59	117	248	105	146	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	0.88	0.97	1.00	1.00
Fr't			0.850			0.850			0.850		0.978	
Flt Protected		0.991		0.950			0.950			0.950		
Satd. Flow (prot)	0	1846	1583	3433	1863	1583	1770	1863	2787	3433	1822	0
Flt Permitted		0.899		0.950			0.640			0.950		
Satd. Flow (perm)	0	1675	1583	3433	1863	1583	1192	1863	2787	3433	1822	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			229			540			270		12	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		656			686			333			671	
Travel Time (s)		14.9			15.6			6.5			13.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	42	61	799	166	540	64	127	270	114	159	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	51	61	799	166	540	64	127	270	114	187	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2	1	1	2	1	1	2	
Detector Template		Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)		100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)		0	0	0	0	0	0	0	0	0	0	
Detector 1 Position(ft)		0	0	0	0	0	0	0	0	0	0	
Detector 1 Size(ft)		6	20	20	6	20	20	6	20	20	6	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Free	Prot	NA	Free	Perm	NA	Prot	Prot	NA	
Protected Phases		4		3	8			2	2	1	6	
Permitted Phases	4		Free			Free	2					
Detector Phase	4	4		3	8		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	1.0	1.0		1.0	1.0		4.0	4.0	4.0	5.0	1.0	

AM Peak 12:19 pm 02/18/2025 Baseline

Synchro 12 Report

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Lanes, Volumes, Timings

1: Commerce Way/Presidential Way & Atlantic Avenue/I-93 Exit 30 On/Off Ramps 07/30/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	7.0	7.0		7.0	7.0		10.0	10.0	10.0	11.0	7.0	
Total Split (s)	16.0	16.0		29.0	45.0		30.0	30.0	30.0	25.0	25.0	
Total Split (%)	16.0%	16.0%		29.0%	45.0%		30.0%	30.0%	30.0%	25.0%	25.0%	
Maximum Green (s)	10.0	10.0		23.0	39.0		24.0	24.0	24.0	19.0	19.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Lead/Lag	Lag	Lag		Lead			Lag	Lag	Lag	Lead		
Lead-Lag Optimize?							Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		C-Max	Min		Min	Min	Min	None	None	
Act Effect Green (s)		8.1	100.0	46.5	60.6	100.0	12.7	12.7	12.7	8.7	27.4	
Actuated g/C Ratio		0.08	1.00	0.47	0.61	1.00	0.13	0.13	0.13	0.09	0.27	
v/c Ratio		0.38	0.04	0.50	0.15	0.34	0.43	0.54	0.46	0.38	0.37	
Control Delay (s/veh)		51.0	0.1	21.5	10.1	0.6	47.6	48.5	7.3	46.4	28.3	
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)		51.0	0.1	21.5	10.1	0.6	47.6	48.5	7.3	46.4	28.3	
LOS		D	A	C	B	A	D	D	A	D	C	
Approach Delay (s/veh)		23.2			12.8			24.2			35.1	
Approach LOS		C			B			C			D	
Queue Length 50th (ft)		31	0	176	41	0	39	78	0	36	90	
Queue Length 95th (ft)		68	0	278	89	0	76	127	36	61	134	
Internal Link Dist (ft)		576			606			253			591	
Turn Bay Length (ft)												
Base Capacity (vph)		167	1583	1597	1129	1583	286	447	874	652	898	
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	0.04	0.50	0.15	0.34	0.22	0.28	0.31	0.17	0.21	

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 3:WBL, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.54

Intersection Signal Delay (s/veh): 18.3

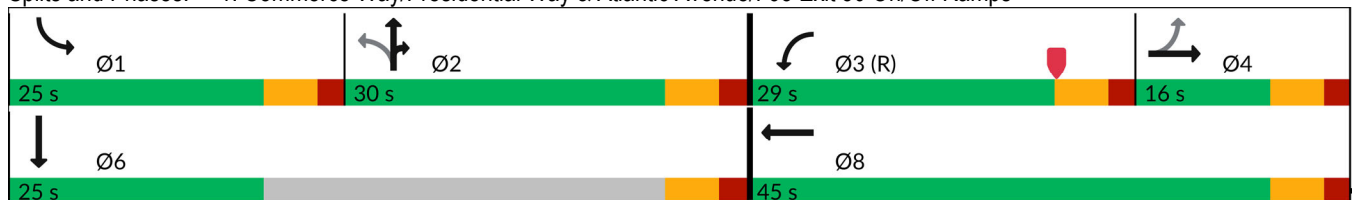
Intersection LOS: B

Intersection Capacity Utilization 55.2%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 1: Commerce Way/Presidential Way & Atlantic Avenue/I-93 Exit 30 On/Off Ramps



AM Peak 12:19 pm 02/18/2025 Baseline

Synchro 12 Report

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Lanes, Volumes, Timings

1: Commerce Way/Presidential Way & Atlantic Avenue/I-93 Exit 30 On/Off Ramps 07/30/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	48	26	398	84	163	57	146	865	537	206	33
Future Volume (vph)	6	48	26	398	84	163	57	146	865	537	206	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	0.88	0.97	1.00	1.00
Frt		0.850				0.850			0.850		0.979	
Flt Protected		0.994		0.950			0.950			0.950		
Satd. Flow (prot)	0	1852	1583	3433	1863	1583	1770	1863	2787	3433	1824	0
Flt Permitted		0.950		0.950			0.599			0.950		
Satd. Flow (perm)	0	1770	1583	3433	1863	1583	1116	1863	2787	3433	1824	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			229			229			940			11
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		656			686			333			671	
Travel Time (s)		14.9			15.6			6.5			13.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	7	52	28	433	91	177	62	159	940	584	224	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	59	28	433	91	177	62	159	940	584	260	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	Free	Prot	NA	Free	Perm	NA	Prot	Prot	NA	
Protected Phases		4		3		8		2		2		1
Permitted Phases	4		Free			Free	2					
Minimum Split (s)	7.0	7.0		7.0	7.0		10.0	10.0	10.0	11.0	7.0	
Total Split (s)	16.0	16.0		29.0	45.0		30.0	30.0	30.0	25.0	25.0	
Total Split (%)	16.0%	16.0%		29.0%	45.0%		30.0%	30.0%	30.0%	25.0%	25.0%	
Maximum Green (s)	10.0	10.0		23.0	39.0		24.0	24.0	24.0	19.0	19.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		0.0		0.0		0.0		0.0		0.0
Total Lost Time (s)		6.0		6.0		6.0		6.0		6.0		6.0
Lead/Lag	Lag	Lag		Lead			Lag	Lag	Lag	Lead		
Lead-Lag Optimize?							Yes	Yes	Yes	Yes		
Act Effect Green (s)		10.0	100.0	23.0	39.0	100.0	24.0	24.0	24.0	19.0	49.0	
Actuated g/C Ratio		0.10	1.00	0.23	0.39	1.00	0.24	0.24	0.24	0.19	0.49	
v/c Ratio		0.33	0.02	0.55	0.13	0.11	0.23	0.36	0.68	0.90	0.29	
Control Delay (s/veh)		47.6	0.0	37.0	20.2	0.1	33.5	34.3	5.0	57.6	15.6	
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)		47.6	0.0	37.0	20.2	0.1	33.5	34.3	5.0	57.6	15.6	
LOS		D	A	D	C	A	C	C	A	E	B	
Approach Delay (s/veh)		32.3			25.5			10.5			44.7	
Approach LOS		C			C			B			D	

PM Peak 12:10 pm 02/19/2025 Baseline

Synchro 12 Report

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Lanes, Volumes, Timings

1: Commerce Way/Presidential Way & Atlantic Avenue/I-93 Exit 30 On/Off Ramps 07/30/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		36	0	125	37	0	32	85	0	189	90	
Queue Length 95th (ft)		76	0	175	70	0	69	144	52	#285	144	
Internal Link Dist (ft)		576			606			253			591	
Turn Bay Length (ft)												
Base Capacity (vph)		177	1583	789	726	1583	267	447	1383	652	899	
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		0.33	0.02	0.55	0.13	0.11	0.23	0.36	0.68	0.90	0.29	

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 3:WBL, Start of Yellow

Natural Cycle: 60

Control Type: Pretimed

Maximum v/c Ratio: 0.90

Intersection Signal Delay (s/veh): 25.3

Intersection LOS: C

Intersection Capacity Utilization 63.9%

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.

Splits and Phases: 1: Commerce Way/Presidential Way & Atlantic Avenue/I-93 Exit 30 On/Off Ramps

