MEMORANDUM

DATE: September 9, 2017

TO: Raymond Hayhurst, City of Alexandria

CC: Maha Gilini, MSCE, CPM

FROM: Suresh Karre, P.E., PTOE

SUBJECT: King Street Road Diet Traffic Analysis – After Complete Street

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Introduction

As part of the City of Alexandria's Complete Streets Initiative, VA-7 (King Street) has been converted to a two-lane, undivided arterial roadway with curb side bike lanes in both directions between its intersections with Braddock Road to the northwest and Janney's Lane to the southeast. Under this road diet, one through travel lane was removed in each direction, with left-turn bays provided at all intersections along the corridor. A previous study was conducted in December 2015 to analyze the proposed road diet and its impacts on traffic operations along King Street. The city of Alexandria has requested an updated traffic analysis to verify current operations after the road diet was implemented.

This memorandum has been prepared to summarize the updated traffic analysis conducted along King Street between Braddock Road and Highland Place under both Existing (after Complete Street) conditions and No Build conditions (prior to the implementation of the road diet).

Data Collection

The City of Alexandria provided STV with the intersection turning movement counts collected in October 2016 and in May 2017. In addition, queuing observations for each intersection along King Street collected in May 2017 were also provided by the City. Turning movement counts at the intersections of Braddock Road at Quaker Lane, King Street at Braddock Road and King Street at Quaker Road were collected in October 2016. Tube counts along King Street were collected in May 2017, in addition to turning movement counts at the intersections of King Street with Braddock Road and Janney's Lane. All data provided by The City are included as part of **Attachment A**.

These counts along King Street were reviewed and balanced to account for any inconsistencies between different count dates. It should be noted that the new (2016/2017) traffic volumes were generally lower than the previous analysis, which included traffic count data from June 2014. As directed by the City, the through volumes along King Street was increased in both the east- and westbound direction during the AM peak hour to reflect a more conservative analysis. The pedestrian volumes from previous study were maintained at locations without new data.

Traffic Analysis

To compare the impacts of the road diet on traffic operations along King Street, the Existing (after Complete Street) and No Build (before Complete Street) conditions were modeled in Synchro 9.0. The City provided updated signal timing data and adjusted parameters under Existing AM and PM peak hour conditions. Both scenarios reflected an updated speed limit of 25 mph along King Street.

Queue observations provided by the City were compared to the queue lengths derived from the Existing scenario Synchro files to validate the models. The queue lengths derived from the Synchro models were generally consistent with the field-collected queue measurements. Based on an initial review of the models, the City has recommended several adjustments to the models, as identified below:

- Volume increases along both east- and westbound King Street (additional 125 vehicles in each direction in the AM peak hour)
- Lost time adjustments (adjusted to zero)
- Number of pedestrian calls (pedestrian call during every cycle)
- Conflicting bicycles (five in each direction per hour)

The above adjustments resulted in much longer queue lengths compared to the field-collected measurements and reflects a more conservative analysis. A summary table comparing the field-collected and Synchro queue lengths along with all the queue outputs are included as part of **Attachment B**.

Multiple Measures of Effectiveness (MOE) were considered on a comparative basis; the first of these MOE were the intersection approach and overall Level of Service (LOS) and delay at each intersection along the corridor. A summary of the Synchro outputs for intersection LOS and delay is shown in **Table 1**. All intersection LOS and delay outputs are included as part of **Attachment C**.

Table 1: Synchro Intersection LOS and Delay

Intersection	Approach	No Build (Before Complete Street)				Existing (After Complete Street)			
		AM Peak		PM Peak		AM Peak		PM Peak	
		Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS
King Street at Braddock Road	Eastbound	13.3	B	3.8	A	13.3	B	3.8	A
	Westbound	18.3	B	16.2	B	18.3	B	16.2	B
	Northbound	228.5	F	202.4	F	228.5	F	202.4	F
	Southbound	18.4	B	40.9	D	18.4	B	40.9	D
	Overall	**64.4**	**E**	**67.3**	**E**	**64.4**	**E**	**67.3**	**E**
King Street at Kenwood Avenue	Eastbound	17.0	B	15.2	B	16.3	B	17.2	B
	Westbound	26.6	C	16.2	B	38.2	D	37.4	D
	Northbound	22.0	C	19.2	B	42.9	D	31.0	C
	Southbound	33.5	C	38.2	D	41.5	D	53.0	D
	Overall	**23.7**	**C**	**19.7**	**B**	**30.5**	**C**	**32.2**	**C**
King Street at Chinquapin Drive	Eastbound	51.6	D	3.2	A	20.3	C	16.2	B
	Westbound	17.2	B	2.9	A	20.0	C	9.1	A
	Northbound	42.8	D	35.6	D	55.1	E	47.3	D
	Overall	**35.7**	**D**	**4.6**	**A**	**25.0**	**C**	**14.6**	**B**
King Street at Janney's Lane	Eastbound	32.4	C	19.0	B	32.4	C	19.1	B
	Westbound	18.2	B	10.5	B	18.2	B	10.7	B
	Northbound	53.6	D	30.3	C	53.6	D	30.0	C
	Overall	**34.7**	**C**	**17.8**	**B**	**34.7**	**C**	**17.9**	**B**
King Street at Highland Place	Eastbound	7.2	A	6.2	A	4.0	A	12.1	B
	Westbound	7.0	A	7.4	A	7.7	A	13.7	B
	Northbound	24.0	C	22.9	C	27.2	C	14.3	B
	Overall	**7.8**	**A**	**7.1**	**A**	**6.7**	**A**	**13.0**	**B**

As shown in **Table 1**, intersection approach delays generally increase at the intersections impacted by the road diet. All the changes resulting in a LOS change are highlighted in yellow (for increased delay) and green (for reduced delay). For example, the northbound approach delay at the intersection of King Street at Chinquapin Drive during the AM peak hour increased from 42.8 seconds (LOS D) to 55.1 seconds (LOS E). This is highlighted in yellow. However, the overall

intersection delay improves from 35.7 seconds (LOS D) to 25.0 seconds (LOS C) because the exclusive pedestrian phase has been removed under the Existing conditions. This is highlighted in green.

While there are some increases in the individual approach delays, overall intersections appear to operate at a reasonable LOS and delay under Existing conditions (after Complete Street) compared to the No Build conditions (before Complete Street).

Arterial LOS was also considered to measure the corridor-wide impacts of the road diet. Summaries of the Synchro outputs for this MOE for both the AM and PM peak hours are shown in **Table 2** and **Table 3**, respectively. All arterial LOS outputs are included as part of **Attachment D**.

Table 2: Synchro Arterial LOS and Delay - AM Peak Hour

Signal	No Build AM (Before Complete Street)				Existing AM (After Complete Street)			
	Signal Delay (s)	Travel Time (s)	Distance (mi)	Arterial LOS	Signal Delay (s)	Travel Time (s)	Distance (mi)	Arterial LOS
Eastbound King Street								
Kenwood Avenue	20.1	50.0	0.17	D	19.5	49.4	0.17	D
Chinquapin Drive	50.6	73.4	0.13	F	27.9	50.7	0.13	D
Janney's Lane	38.7	174.6	0.94	B	38.7	174.6	0.94	B
Highland	7.4	38.2	0.19	C	4.4	35.2	0.19	B
Overall	***116.8***	***336.2***	***1.43***	***C***	***90.5***	***309.9***	***1.43***	***C***
Westbound King Street								
Janney's Lane	16.5	47.3	0.19	C	16.5	47.3	0.19	C
Chinquapin Drive	14.8	150.7	0.94	B	21.1	157.0	0.94	B
Kenwood Avenue	27.4	50.2	0.13	D	43.9	66.7	0.13	F
Braddock Road	209.0	238.9	0.17	F	209.0	238.9	0.17	F
Overall	***267.7***	***487.1***	***1.43***	***D***	***290.5***	***509.9***	***1.43***	***D***

Table 3: Synchro Arterial LOS and Delay - PM Peak Hour

Signal	No Build PM (Before Complete Street)				Existing PM (After Complete Street)			
	Signal Delay (s)	Travel Time (s)	Distance (mi)	Arterial LOS	Signal Delay (s)	Travel Time (s)	Distance (mi)	Arterial LOS
Eastbound King Street								
Kenwood Avenue	17.2	47.1	0.17	D	18.8	48.7	0.17	D
Chinquapin Drive	3.4	26.2	0.13	C	19.4	42.2	0.13	D
Janney's Lane	23.7	159.6	0.94	B	24.2	160.1	0.94	B
Highland	6.4	37.2	0.19	C	12.6	43.4	0.19	C
Overall	***50.7***	***270.1***	***1.43***	***C***	***75.0***	***294.4***	***1.43***	***C***
Westbound King Street								
Janney's Lane	10.1	40.9	0.19	C	10.4	41.2	0.19	C
Chinquapin Drive	3.5	139.4	0.94	B	10.5	146.4	0.94	B
Kenwood Avenue	16.6	39.4	0.13	D	40.0	62.8	0.13	E
Braddock Road	186.1	216.0	0.17	F	186.1	216.0	0.17	F
Overall	***216.3***	***435.7***	***1.43***	***D***	***247.0***	***466.4***	***1.43***	***D***

As shown in **Table 2** and **Table 3**, the Existing corridor operations along King Street are relatively similar to No Build conditions. For example, the overall signal delay and travel time increase by approximately 23 seconds in the westbound direction during the AM peak hour. However, the same decrease by approximately 27 seconds in the eastbound direction.

The overall signal delay and travel time under Existing Conditions in comparison to No Build differs no more than 30.0 seconds under both AM and PM peak hours. Therefore, no traffic signal timing improvements are recommended at this time. It is also recommended that the traffic operations along this corridor be monitored in the future to address any potential operational issues.

Conclusions

Based on the updated traffic analysis of the King Street corridor, the overall corridor operations under Existing conditions (after complete street) are similar to No Build conditions (before complete street). While there are some increases in the individual approach delays, overall intersections appear to operate at a reasonable LOS and delay under Existing Conditions. In addition, the overall signal delay and travel time under Existing Conditions in comparison to No Build differs no more than 30.0 seconds under both AM and PM peak hours. As such, no traffic signal timing improvements were identified at this time.

Appendix A

Data Provided by City of Alexandria

Turning Movement Counts

City of Alexandria
301 King Street

Alexandria, Virginia, United States 22314
703-746-4087 cuong.nguyen@alexandriava.gov
"Working Today for a Better Tomorrow"

Count Name: King and Chinquapin 05-04-2017
Site Code:
Start Date: 05/04/2017
Page No: 1

Turning Movement Data

Start Time	Westbound St.				Northbound St.				Eastbound St.				
	Westbound				Northbound				Eastbound				
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
7:00 AM	156	4	0	160	7	8	0	15	2	69	0	71	246
7:15 AM	188	9	0	197	5	9	0	14	12	118	0	130	341
7:30 AM	181	8	0	189	7	16	0	23	21	141	1	163	375
7:45 AM	196	42	0	238	9	20	0	29	53	136	0	189	456
Hourly Total	721	63	0	784	28	53	0	81	88	464	1	553	1418
8:00 AM	145	66	0	211	28	51	0	79	104	127	0	231	521
8:15 AM	142	37	0	179	29	59	0	88	63	151	0	214	481
8:30 AM	136	6	0	142	9	16	0	25	14	102	0	116	283
8:45 AM	132	10	0	142	4	15	0	19	12	141	0	153	314
Hourly Total	555	119	0	674	70	141	0	211	193	521	0	714	1599
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	120	7	0	127	8	11	0	19	15	166	0	181	327
4:15 PM	129	6	0	135	9	16	0	25	13	157	0	170	330
4:30 PM	115	5	0	120	7	20	0	27	13	175	0	188	335
4:45 PM	157	8	0	165	2	11	0	13	20	159	0	179	357
Hourly Total	521	26	0	547	26	58	0	84	61	657	0	718	1349
5:00 PM	138	12	0	150	6	11	0	17	15	203	0	218	385
5:15 PM	173	8	0	181	4	9	0	13	12	208	0	220	414
5:30 PM	155	7	0	162	12	12	0	24	27	153	0	180	366
5:45 PM	120	16	0	136	15	13	0	28	21	159	0	180	344
Hourly Total	586	43	0	629	37	45	0	82	75	723	0	798	1509
6:00 PM	149	10	0	159	8	20	0	28	12	157	0	169	356
6:15 PM	120	5	0	125	3	9	0	12	5	146	0	151	288
6:30 PM	102	2	0	104	3	11	0	14	5	108	0	113	231
6:45 PM	94	6	0	100	11	13	0	24	11	123	0	134	258
Hourly Total	465	23	0	488	25	53	0	78	33	534	0	567	1133
Grand Total	2848	274	0	3122	186	350	0	536	450	2899	1	3350	7008
Approach %	91.2	8.8	0.0	-	34.7	65.3	0.0	-	13.4	86.5	0.0	-	-
Total %	40.6	3.9	0.0	44.5	2.7	5.0	0.0	7.6	6.4	41.4	0.0	47.8	-
Lights	2750	272	0	3022	184	343	0	527	444	2784	1	3229	6778
% Lights	96.6	99.3	-	96.8	98.9	98.0	-	98.3	98.7	96.0	100.0	96.4	96.7
Mediums	98	2	0	100	2	7	0	9	6	114	0	120	229
% Mediums	3.4	0.7	-	3.2	1.1	2.0	-	1.7	1.3	3.9	0.0	3.6	3.3
Articulated Trucks	0	0	0	0	0	0	0	0	0	1	0	1	1
% Articulated Trucks	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0

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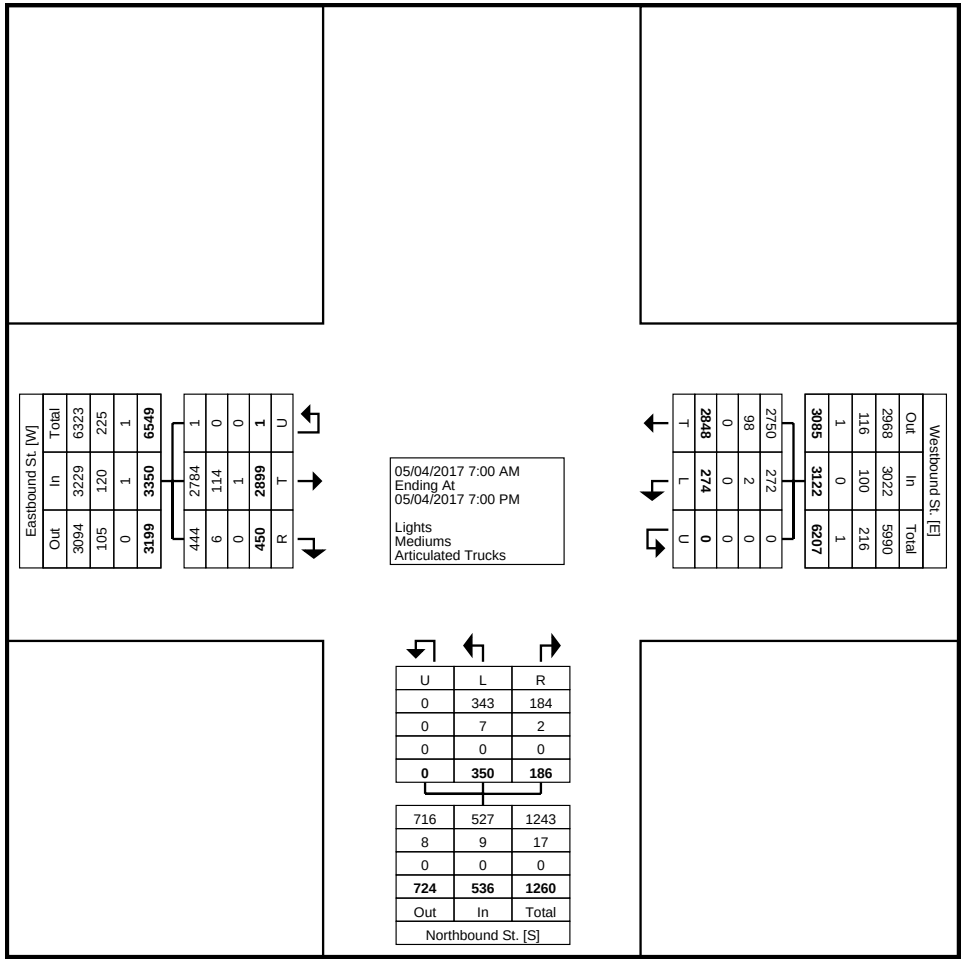

Turning Movement Data Plot

City of Alexandria
301 King Street

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"Working Today for a Better Tomorrow"

Count Name: King and Chinquapin 05-04-2017
Site Code:
Start Date: 05/04/2017

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Westbound St.				Northbound St.				Eastbound St.				
	Westbound				Northbound				Eastbound				
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
7:30 AM	181	8	0	189	7	16	0	23	21	141	1	163	375
7:45 AM	196	42	0	238	9	20	0	29	53	136	0	189	456
8:00 AM	145	66	0	211	28	51	0	79	104	127	0	231	521
8:15 AM	142	37	0	179	29	59	0	88	63	151	0	214	481
Total	664	153	0	817	73	146	0	219	241	555	1	797	1833
Approach %	81.3	18.7	0.0	-	33.3	66.7	0.0	-	30.2	69.6	0.1	-	-
Total %	36.2	8.3	0.0	44.6	4.0	8.0	0.0	11.9	13.1	30.3	0.1	43.5	-
PHF	0.847	0.580	0.000	0.858	0.629	0.619	0.000	0.622	0.579	0.919	0.250	0.863	0.880
Lights	637	152	0	789	73	143	0	216	239	515	1	755	1760
% Lights	95.9	99.3	-	96.6	100.0	97.9	-	98.6	99.2	92.8	100.0	94.7	96.0
Mediums	27	1	0	28	0	3	0	3	2	40	0	42	73
% Mediums	4.1	0.7	-	3.4	0.0	2.1	-	1.4	0.8	7.2	0.0	5.3	4.0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0

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Site Code:
Start Date: 05/04/2017
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Peak Hour Data

05/04/2017 7:30 AM
Ending At
05/04/2017 8:30 AM

Lights
Mediums
Articulated Trucks

Eastbound St. [W]				
	Out	In	Total	
	781	755	1536	
	30	42	72	
	0	0	0	
	811	**797**	**1608**	

239	515	1
2	40	0
0	0	0
241	**555**	**1**
R	T	U

Westbound St. [E]			
	Out	In	Total
	588	789	1377
	40	28	68
	0	0	0
	628	**817**	**1445**

637	152	0
27	1	0
0	0	0
664	**153**	**0**
T	L	U

U	L	R
0	143	73
0	3	0
0	0	0
0	**146**	**73**

391	216	607
3	3	6
0	0	0
394	**219**	**613**
Out	In	Total
Northbound St. [S]		

Turning Movement Peak Hour Data Plot (7:30 AM)

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Count Name: King and Chinquapin 05-04-2017
Site Code:
Start Date: 05/04/2017

Turning Movement Peak Hour Data (4:45 PM)

Start Time	Westbound St.				Northbound St.				Eastbound St.				
	Westbound				Northbound				Eastbound				
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
4:45 PM	157	8	0	165	2	11	0	13	20	159	0	179	357
5:00 PM	138	12	0	150	6	11	0	17	15	203	0	218	385
5:15 PM	173	8	0	181	4	9	0	13	12	208	0	220	414
5:30 PM	155	7	0	162	12	12	0	24	27	153	0	180	366
Total	623	35	0	658	24	43	0	67	74	723	0	797	1522
Approach %	94.7	5.3	0.0	-	35.8	64.2	0.0	-	9.3	90.7	0.0	-	-
Total %	40.9	2.3	0.0	43.2	1.6	2.8	0.0	4.4	4.9	47.5	0.0	52.4	-
PHF	0.900	0.729	0.000	0.909	0.500	0.896	0.000	0.698	0.685	0.869	0.000	0.906	0.919
Lights	607	35	0	642	24	42	0	66	73	702	0	775	1483
% Lights	97.4	100.0	-	97.6	100.0	97.7	-	98.5	98.6	97.1	-	97.2	97.4
Mediums	16	0	0	16	0	1	0	1	1	21	0	22	39
% Mediums	2.6	0.0	-	2.4	0.0	2.3	-	1.5	1.4	2.9	-	2.8	2.6
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0

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Site Code:
Start Date: 05/04/2017
Page No: 6

Peak Hour Data

05/04/2017 4:45 PM
Ending At
05/04/2017 5:45 PM

Lights
Mediums
Articulated Trucks

Eastbound St. [W]			
Out	In	Total	
649	775	1424	
17	22	39	
0	0	0	
666	**797**	**1463**	

73	702	0	U
1	21	0	
0	0	0	
74	**723**	**0**	
R	T	U	

U	L	T	
0	**35**	**623**	
0	0	0	
0	0	16	
0	35	607	
1405	**658**	**747**	
0	0	0	
37	16	21	
1368	642	726	
Total	In	Out	Westbound St. [E]

U	L	R
0	42	24
0	1	0
0	0	0
0	**43**	**24**
108	66	174
1	1	2
0	0	0
109	**67**	**176**
Out	In	Total
Northbound St. [S]		

Turning Movement Peak Hour Data Plot (4:45 PM)

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Site Code:
Start Date: 05/04/2017

City of Alexandria
301 King Street

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"Working Today for a Better Tomorrow"

Count Name: King and Janneys 05-10-2017
Site Code:
Start Date: 05/10/2017
Page No: 1

Turning Movement Data

Start Time	Westbound St. Westbound				Northbound St. Northbound				Eastbound St. Eastbound				
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
6:00 AM	43	3	0	46	4	24	0	28	4	12	0	16	90
6:15 AM	41	4	0	45	9	30	0	39	9	26	0	35	119
6:30 AM	65	8	0	73	12	38	0	50	16	30	0	46	169
6:45 AM	71	13	0	84	18	58	0	76	19	62	0	81	241
Hourly Total	220	28	0	248	43	150	0	193	48	130	0	178	619
7:00 AM	87	19	0	106	17	83	0	100	17	49	0	66	272
7:15 AM	95	24	0	119	31	86	0	117	23	77	0	100	336
7:30 AM	103	33	0	136	51	96	0	147	43	93	0	136	419
7:45 AM	115	27	0	142	30	118	0	148	54	122	0	176	466
Hourly Total	400	103	0	503	129	383	0	512	137	341	0	478	1493
8:00 AM	102	14	0	116	50	154	0	204	53	104	0	157	477
8:15 AM	108	11	0	119	30	105	0	135	81	84	0	165	419
8:30 AM	85	32	0	117	33	74	0	107	73	72	0	145	369
8:45 AM	59	24	0	83	34	62	0	96	44	94	0	138	317
Hourly Total	354	81	0	435	147	395	0	542	251	354	0	605	1582
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	88	23	0	111	26	39	0	65	46	98	0	144	320
4:15 PM	101	29	0	130	19	30	0	49	65	117	0	182	361
4:30 PM	88	33	0	121	27	39	0	66	56	119	0	175	362
4:45 PM	116	31	0	147	20	43	0	63	67	95	0	162	372
Hourly Total	393	116	0	509	92	151	0	243	234	429	0	663	1415
5:00 PM	78	45	0	123	21	47	0	68	93	84	0	177	368
5:15 PM	116	51	0	167	18	47	0	65	97	92	0	189	421
5:30 PM	126	50	0	176	32	46	0	78	86	108	0	194	448
5:45 PM	106	59	0	165	22	73	0	95	91	82	0	173	433
Hourly Total	426	205	0	631	93	213	0	306	367	366	0	733	1670
6:00 PM	114	50	0	164	29	63	0	92	80	108	0	188	444
6:15 PM	117	48	0	165	31	41	0	72	85	132	0	217	454
6:30 PM	112	37	0	149	18	36	0	54	51	94	0	145	348
6:45 PM	101	35	0	136	21	39	0	60	64	96	0	160	356
Hourly Total	444	170	0	614	99	179	0	278	280	430	0	710	1602
Grand Total	2237	703	0	2940	603	1471	0	2074	1317	2050	0	3367	8381
Approach %	76.1	23.9	0.0	-	29.1	70.9	0.0	-	39.1	60.9	0.0	-	-
Total %	26.7	8.4	0.0	35.1	7.2	17.6	0.0	24.7	15.7	24.5	0.0	40.2	-
Lights	2142	655	0	2797	568	1442	0	2010	1274	1969	0	3243	8050
% Lights	95.8	93.2	-	95.1	94.2	98.0	-	96.9	96.7	96.0	-	96.3	96.1
Mediums	95	46	0	141	34	29	0	63	43	79	0	122	326

% Mediums	4.2	6.5	-	4.8	5.6	2.0	-	3.0	3.3	3.9	-	3.6	3.9
Articulated Trucks	0	2	0	2	1	0	0	1	0	2	0	2	5
% Articulated Trucks	0.0	0.3	-	0.1	0.2	0.0	-	0.0	0.0	0.1	-	0.1	0.1

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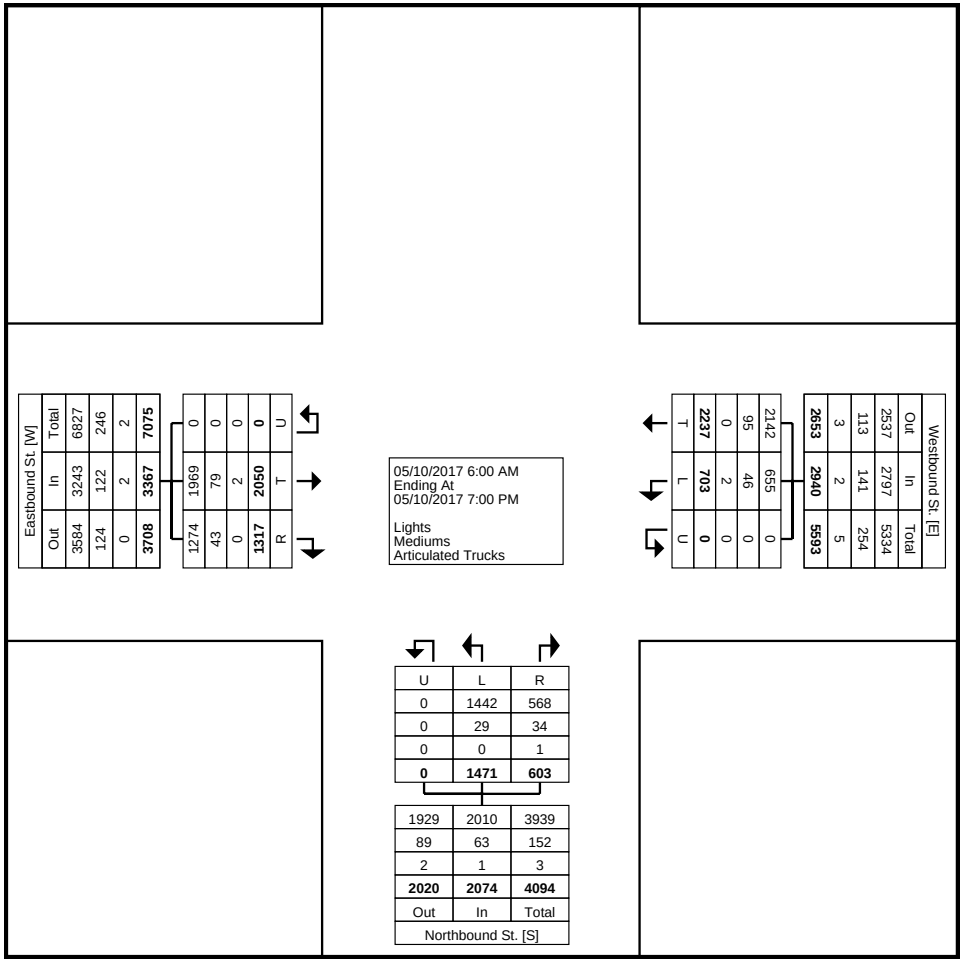

Turning Movement Data Plot

City of Alexandria
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Count Name: King and Janneys 05-10-2017
Site Code:
Start Date: 05/10/2017

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Westbound St.				Northbound St.				Eastbound St.				
	Westbound				Northbound				Eastbound				
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
7:30 AM	103	33	0	136	51	96	0	147	43	93	0	136	419
7:45 AM	115	27	0	142	30	118	0	148	54	122	0	176	466
8:00 AM	102	14	0	116	50	154	0	204	53	104	0	157	477
8:15 AM	108	11	0	119	30	105	0	135	81	84	0	165	419
Total	428	85	0	513	161	473	0	634	231	403	0	634	1781
Approach %	83.4	16.6	0.0	-	25.4	74.6	0.0	-	36.4	63.6	0.0	-	-
Total %	24.0	4.8	0.0	28.8	9.0	26.6	0.0	35.6	13.0	22.6	0.0	35.6	-
PHF	0.930	0.644	0.000	0.903	0.789	0.768	0.000	0.777	0.713	0.826	0.000	0.901	0.933
Lights	412	79	0	491	152	466	0	618	209	383	0	592	1701
% Lights	96.3	92.9	-	95.7	94.4	98.5	-	97.5	90.5	95.0	-	93.4	95.5
Mediums	16	6	0	22	9	7	0	16	22	20	0	42	80
% Mediums	3.7	7.1	-	4.3	5.6	1.5	-	2.5	9.5	5.0	-	6.6	4.5
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0

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Count Name: King and Janneys 05-10-2017
Site Code:
Start Date: 05/10/2017
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Peak Hour Data

05/10/2017 7:30 AM
Ending At
05/10/2017 8:30 AM

Lights
Mediums
Articulated Trucks

Eastbound St. [W]			
Out	In	Total	
878	592	1470	
23	42	65	
0	0	0	
901	**634**	**1535**	

209	383	0
22	20	0
0	0	0
231	**403**	**0**
R	T	U

U	L	R
0	466	152
0	7	9
0	0	0
0	**473**	**161**

288	618	906
28	16	44
0	0	0
316	**634**	**950**
Out	In	Total
Northbound St. [S]		

U	L	T
0	**85**	**428**
0	0	0
0	6	16
0	79	412

Westbound St. [E]		
Total	In	Out
1077	**513**	**564**
0	0	0
51	22	29
1026	491	535

Turning Movement Peak Hour Data Plot (7:30 AM)

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Count Name: King and Janneys 05-10-2017
Site Code:
Start Date: 05/10/2017

Turning Movement Peak Hour Data (5:30 PM)

Start Time	Westbound St.				Northbound St.				Eastbound St.				
	Westbound				Northbound				Eastbound				
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
5:30 PM	126	50	0	176	32	46	0	78	86	108	0	194	448
5:45 PM	106	59	0	165	22	73	0	95	91	82	0	173	433
6:00 PM	114	50	0	164	29	63	0	92	80	108	0	188	444
6:15 PM	117	48	0	165	31	41	0	72	85	132	0	217	454
Total	463	207	0	670	114	223	0	337	342	430	0	772	1779
Approach %	69.1	30.9	0.0	-	33.8	66.2	0.0	-	44.3	55.7	0.0	-	-
Total %	26.0	11.6	0.0	37.7	6.4	12.5	0.0	18.9	19.2	24.2	0.0	43.4	-
PHF	0.919	0.877	0.000	0.952	0.891	0.764	0.000	0.887	0.940	0.814	0.000	0.889	0.980
Lights	448	200	0	648	108	222	0	330	339	417	0	756	1734
% Lights	96.8	96.6	-	96.7	94.7	99.6	-	97.9	99.1	97.0	-	97.9	97.5
Mediums	15	7	0	22	6	1	0	7	3	12	0	15	44
% Mediums	3.2	3.4	-	3.3	5.3	0.4	-	2.1	0.9	2.8	-	1.9	2.5
Articulated Trucks	0	0	0	0	0	0	0	0	0	1	0	1	1
% Articulated Trucks	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.2	-	0.1	0.1

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Count Name: King and Janneys 05-10-2017
Site Code:
Start Date: 05/10/2017
Page No: 7

Peak Hour Data

05/10/2017 5:30 PM
Ending At
05/10/2017 6:30 PM

Lights
Mediums
Articulated Trucks

Eastbound St. [W]			
Out	In	Total	
670	756	1426	
16	15	31	
0	1	1	
686	**772**	**1458**	

339	417	0	
3	12	0	
0	1	0	
342	**430**	**0**	
R	T	U	

U	L	T	
0	**207**	**463**	
0	0	0	
0	7	15	
0	200	448	

Westbound St. [E]		
Out	In	Total
525	648	1173
18	22	40
1	0	1
544	**670**	**1214**

U	L	R
0	222	108
0	1	6
0	0	0
0	**223**	**114**

539	330	869
10	7	17
0	0	0
549	**337**	**886**
Out	In	Total
Northbound St. [S]		

Turning Movement Peak Hour Data Plot (5:30 PM)

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Count Name: King and Janneys 05-11-17
Site Code:
Start Date: 05/11/2017

Turning Movement Data

Start Time	Westbound St.				Northbound St.				Eastbound St.				
	Westbound				Northbound				Eastbound				
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
6:00 AM	32	1	0	33	4	18	0	22	1	13	0	14	69
6:15 AM	39	4	0	43	5	30	0	35	8	23	1	32	110
6:30 AM	61	3	0	64	11	43	0	54	9	34	0	43	161
6:45 AM	84	11	0	95	20	60	0	80	11	58	0	69	244
Hourly Total	216	19	0	235	40	151	0	191	29	128	1	158	584
7:00 AM	80	16	0	96	10	74	0	84	16	62	0	78	258
7:15 AM	97	27	0	124	24	80	0	104	30	63	0	93	321
7:30 AM	118	29	0	147	25	78	0	103	36	84	0	120	370
7:45 AM	130	32	0	162	39	118	0	157	49	103	0	152	471
Hourly Total	425	104	0	529	98	350	0	448	131	312	0	443	1420
8:00 AM	124	31	0	155	28	138	0	166	36	120	0	156	477
8:15 AM	111	26	0	137	51	105	0	156	66	121	0	187	480
8:30 AM	78	33	0	111	34	66	0	100	53	104	0	157	368
8:45 AM	80	18	0	98	22	74	0	96	28	99	0	127	321
Hourly Total	393	108	0	501	135	383	0	518	183	444	0	627	1646
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	68	22	0	90	30	28	0	58	50	85	0	135	283
4:15 PM	106	39	0	145	23	31	0	54	66	100	0	166	365
4:30 PM	105	48	0	153	29	36	0	65	71	113	0	184	402
4:45 PM	105	30	0	135	29	41	0	70	69	100	0	169	374
Hourly Total	384	139	0	523	111	136	0	247	256	398	0	654	1424
5:00 PM	103	43	0	146	30	37	0	67	85	77	0	162	375
5:15 PM	112	41	0	153	11	42	0	53	92	114	0	206	412
5:30 PM	115	34	0	149	26	60	0	86	79	74	0	153	388
5:45 PM	114	51	0	165	16	49	0	65	88	83	0	171	401
Hourly Total	444	169	0	613	83	188	0	271	344	348	0	692	1576
6:00 PM	99	40	0	139	21	35	0	56	75	74	0	149	344
6:15 PM	106	40	0	146	34	50	0	84	60	92	0	152	382
6:30 PM	101	33	0	134	26	33	0	59	49	61	0	110	303
6:45 PM	84	29	0	113	20	28	0	48	55	82	0	137	298
Hourly Total	390	142	0	532	101	146	0	247	239	309	0	548	1327
Grand Total	2252	681	0	2933	568	1354	0	1922	1182	1939	1	3122	7977
Approach %	76.8	23.2	0.0	-	29.6	70.4	0.0	-	37.9	62.1	0.0	-	-
Total %	28.2	8.5	0.0	36.8	7.1	17.0	0.0	24.1	14.8	24.3	0.0	39.1	-
Lights	2159	633	0	2792	535	1335	0	1870	1141	1858	1	3000	7662
% Lights	95.9	93.0	-	95.2	94.2	98.6	-	97.3	96.5	95.8	100.0	96.1	96.1
Mediums	91	47	0	138	33	18	0	51	41	81	0	122	311

% Mediums	4.0	6.9	-	4.7	5.8	1.3	-	2.7	3.5	4.2	0.0	3.9	3.9
Articulated Trucks	2	1	0	3	0	1	0	1	0	0	0	0	4
% Articulated Trucks	0.1	0.1	-	0.1	0.0	0.1	-	0.1	0.0	0.0	0.0	0.0	0.1

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Count Name: King and Janneys 05-11-17
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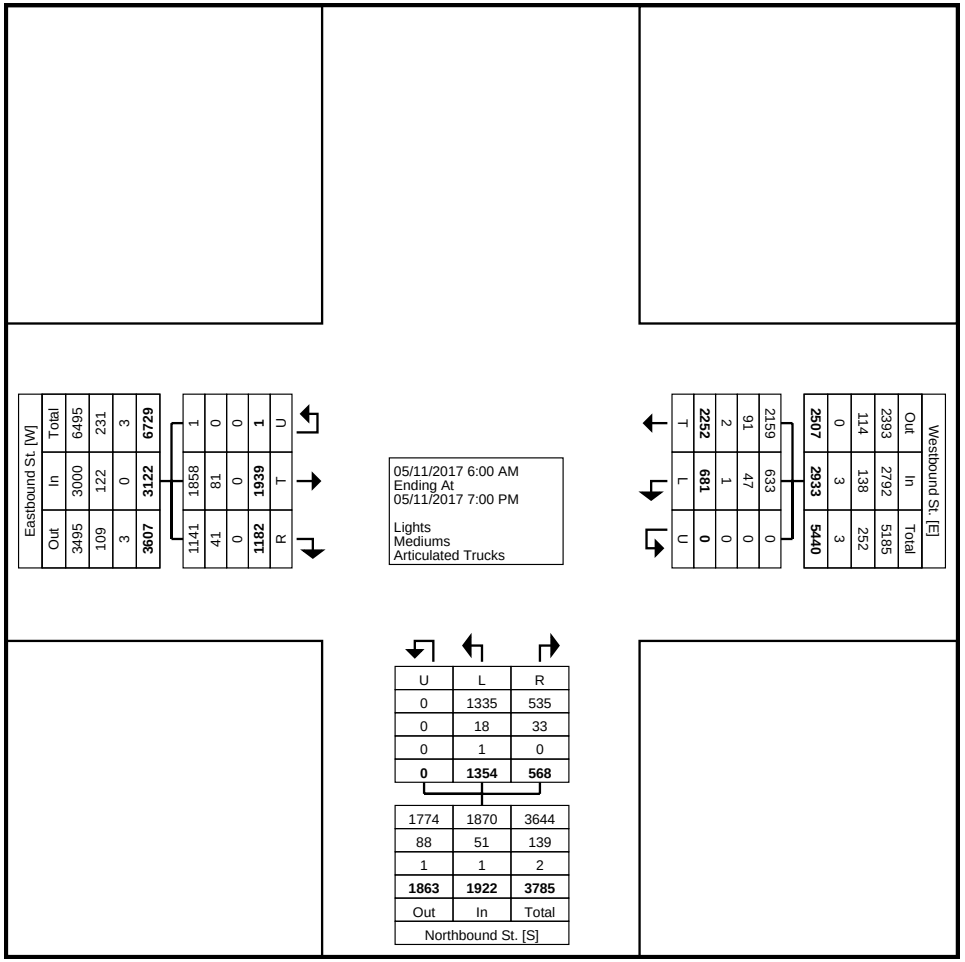

Turning Movement Data Plot

City of Alexandria
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Count Name: King and Janneys 05-11-17
Site Code:
Start Date: 05/11/2017

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Westbound St.				Northbound St.				Eastbound St.				
	Westbound				Northbound				Eastbound				
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
7:30 AM	118	29	0	147	25	78	0	103	36	84	0	120	370
7:45 AM	130	32	0	162	39	118	0	157	49	103	0	152	471
8:00 AM	124	31	0	155	28	138	0	166	36	120	0	156	477
8:15 AM	111	26	0	137	51	105	0	156	66	121	0	187	480
Total	483	118	0	601	143	439	0	582	187	428	0	615	1798
Approach %	80.4	19.6	0.0	-	24.6	75.4	0.0	-	30.4	69.6	0.0	-	-
Total %	26.9	6.6	0.0	33.4	8.0	24.4	0.0	32.4	10.4	23.8	0.0	34.2	-
PHF	0.929	0.922	0.000	0.927	0.701	0.795	0.000	0.877	0.708	0.884	0.000	0.822	0.936
Lights	466	108	0	574	135	434	0	569	170	411	0	581	1724
% Lights	96.5	91.5	-	95.5	94.4	98.9	-	97.8	90.9	96.0	-	94.5	95.9
Mediums	17	9	0	26	8	5	0	13	17	17	0	34	73
% Mediums	3.5	7.6	-	4.3	5.6	1.1	-	2.2	9.1	4.0	-	5.5	4.1
Articulated Trucks	0	1	0	1	0	0	0	0	0	0	0	0	1
% Articulated Trucks	0.0	0.8	-	0.2	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.1

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Count Name: King and Janneys 05-11-17
Site Code:
Start Date: 05/11/2017
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Peak Hour Data

05/11/2017 7:30 AM
Ending At
05/11/2017 8:30 AM

Lights
Mediums
Articulated Trucks

Eastbound St. [W]		
Out	In	Total
900	581	1481
22	34	56
0	0	0
922	**615**	**1537**

170	411	0
17	17	0
0	0	0
187	**428**	**0**
R	T	U

Westbound St. [E]		
Out	In	Total
546	574	1120
25	26	51
0	1	1
571	**601**	**1172**

466	108	0
17	9	0
0	1	0
483	**118**	**0**
T	L	U

278	569	847
26	13	39
1	0	1
305	**582**	**887**
Out	In	Total
Northbound St. [S]		

U	L	R
0	434	135
0	5	8
0	0	0
0	**439**	**143**

Turning Movement Peak Hour Data Plot (7:30 AM)

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Site Code:
Start Date: 05/11/2017

Turning Movement Peak Hour Data (5:00 PM)

Start Time	Westbound St. Westbound				Northbound St. Northbound				Eastbound St. Eastbound				
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
5:00 PM	103	43	0	146	30	37	0	67	85	77	0	162	375
5:15 PM	112	41	0	153	11	42	0	53	92	114	0	206	412
5:30 PM	115	34	0	149	26	60	0	86	79	74	0	153	388
5:45 PM	114	51	0	165	16	49	0	65	88	83	0	171	401
Total	444	169	0	613	83	188	0	271	344	348	0	692	1576
Approach %	72.4	27.6	0.0	-	30.6	69.4	0.0	-	49.7	50.3	0.0	-	-
Total %	28.2	10.7	0.0	38.9	5.3	11.9	0.0	17.2	21.8	22.1	0.0	43.9	-
PHF	0.965	0.828	0.000	0.929	0.692	0.783	0.000	0.788	0.935	0.763	0.000	0.840	0.956
Lights	429	161	0	590	77	186	0	263	338	337	0	675	1528
% Lights	96.6	95.3	-	96.2	92.8	98.9	-	97.0	98.3	96.8	-	97.5	97.0
Mediums	14	8	0	22	6	2	0	8	6	11	0	17	47
% Mediums	3.2	4.7	-	3.6	7.2	1.1	-	3.0	1.7	3.2	-	2.5	3.0
Articulated Trucks	1	0	0	1	0	0	0	0	0	0	0	0	1
% Articulated Trucks	0.2	0.0	-	0.2	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.1

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Count Name: King and Janneys 05-11-17
Site Code:
Start Date: 05/11/2017
Page No: 7

Peak Hour Data

05/11/2017 5:00 PM
Ending At
05/11/2017 6:00 PM

Lights
Mediums
Articulated Trucks

Eastbound St. [W]		
Out	In	Total
615	675	1290
16	17	33
1	0	1
632	**692**	**1324**

338	337	0
6	11	0
0	0	0
344	**348**	**0**
R	T	U

Westbound St. [E]		
Out	In	Total
414	590	1004
17	22	39
0	1	1
431	**613**	**1044**

429	161	0
14	8	0
1	0	0
444	**169**	**0**
T	L	U

U	L	R
0	186	77
0	2	6
0	0	0
0	**188**	**83**

499	263	762
14	8	22
0	0	0
513	**271**	**784**
Out	In	Total
Northbound St. [S]		

Turning Movement Peak Hour Data Plot (5:00 PM)

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Count Name: King and Kenwood 5-10-17
Site Code:
Start Date: 05/10/2017
Page No: 1

Turning Movement Data

Start Time	Southbound St. Southbound					Westbound St. Westbound					Northbound St. Northbound					Eastbound St. Eastbound					
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
6:00 AM	1	0	8	0	9	19	41	2	0	62	0	1	0	0	1	5	30	0	0	35	107
6:15 AM	0	1	11	0	12	26	36	1	0	63	0	1	0	0	1	3	30	0	0	33	109
6:30 AM	0	1	20	0	21	24	64	1	0	89	2	2	1	0	5	6	46	0	0	52	167
6:45 AM	2	0	11	0	13	51	76	2	0	129	1	0	1	0	2	7	60	5	0	72	216
Hourly Total	3	2	50	0	55	120	217	6	0	343	3	4	2	0	9	21	166	5	0	192	599
7:00 AM	1	3	24	0	28	56	100	6	0	162	2	1	3	0	6	16	52	2	0	70	266
7:15 AM	2	9	21	0	32	79	112	7	0	198	1	7	3	0	11	22	86	2	0	110	351
7:30 AM	3	16	49	0	68	59	99	9	0	167	3	12	6	0	21	33	126	4	0	163	419
7:45 AM	12	31	47	0	90	79	117	24	0	220	5	18	6	0	29	40	136	12	0	188	527
Hourly Total	18	59	141	0	218	273	428	46	0	747	11	38	18	0	67	111	400	20	0	531	1563
8:00 AM	19	25	66	0	110	89	104	23	0	216	1	1	1	0	3	41	194	12	0	247	576
8:15 AM	15	35	57	0	107	76	112	18	0	206	3	5	8	0	16	41	158	9	0	208	537
8:30 AM	4	17	34	0	55	59	84	16	0	159	10	31	14	0	55	32	95	3	0	130	399
8:45 AM	3	1	25	0	29	43	83	7	0	133	3	5	8	0	16	16	90	5	0	111	289
Hourly Total	41	78	182	0	301	267	383	64	0	714	17	42	31	0	90	130	537	29	0	696	1801
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	1	5	48	0	54	30	101	5	0	136	12	24	15	0	51	7	94	1	0	102	343
4:15 PM	2	8	62	0	72	31	88	3	0	122	15	25	19	1	60	10	126	10	0	146	400
4:30 PM	4	3	47	0	54	44	100	3	0	147	11	22	9	0	42	9	108	1	0	118	361
4:45 PM	2	3	60	0	65	44	98	2	0	144	7	10	8	0	25	3	121	6	0	130	364
Hourly Total	9	19	217	0	245	149	387	13	0	549	45	81	51	1	178	29	449	18	0	496	1468
5:00 PM	1	2	95	0	98	45	88	0	0	133	6	17	12	0	35	6	96	1	0	103	369
5:15 PM	2	5	96	0	103	58	103	3	0	164	5	11	5	0	21	6	104	7	0	117	405
5:30 PM	2	5	78	0	85	77	94	2	0	173	6	9	8	0	23	11	108	6	0	125	406
5:45 PM	5	5	88	0	98	42	98	2	0	142	5	3	3	0	11	7	91	9	0	107	358
Hourly Total	10	17	357	0	384	222	383	7	0	612	22	40	28	0	90	30	399	23	0	452	1538
6:00 PM	2	3	65	0	70	62	121	6	0	189	2	6	8	0	16	6	147	4	0	157	432
6:15 PM	4	7	60	0	71	47	104	2	0	153	3	4	5	0	12	18	106	8	0	132	368
6:30 PM	1	7	44	0	52	39	106	2	0	147	3	5	7	0	15	16	121	2	0	139	353
6:45 PM	3	8	66	0	77	35	87	5	0	127	1	3	7	0	11	19	103	3	0	125	340
Hourly Total	10	25	235	0	270	183	418	15	0	616	9	18	27	0	54	59	477	17	0	553	1493
Grand Total	91	200	1182	0	1473	1214	2216	151	0	3581	107	223	157	1	488	380	2428	112	0	2920	8462
Approach %	6.2	13.6	80.2	0.0	-	33.9	61.9	4.2	0.0	-	21.9	45.7	32.2	0.2	-	13.0	83.2	3.8	0.0	-	-
Total %	1.1	2.4	14.0	0.0	17.4	14.3	26.2	1.8	0.0	42.3	1.3	2.6	1.9	0.0	5.8	4.5	28.7	1.3	0.0	34.5	-
Lights	61	200	1169	0	1430	1183	2131	149	0	3463	106	222	157	1	486	379	2309	68	0	2756	8135
% Lights	67.0	100.0	98.9	-	97.1	97.4	96.2	98.7	-	96.7	99.1	99.6	100.0	100.0	99.6	99.7	95.1	60.7	-	94.4	96.1
Mediums	29	0	13	0	42	31	84	2	0	117	1	1	0	0	2	1	118	44	0	163	324

% Mediums	31.9	0.0	1.1	-	2.9	2.6	3.8	1.3	-	3.3	0.9	0.4	0.0	0.0	0.4	0.3	4.9	39.3	-	5.6	3.8
Articulated Trucks	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	3
% Articulated Trucks	1.1	0.0	0.0	-	0.1	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0

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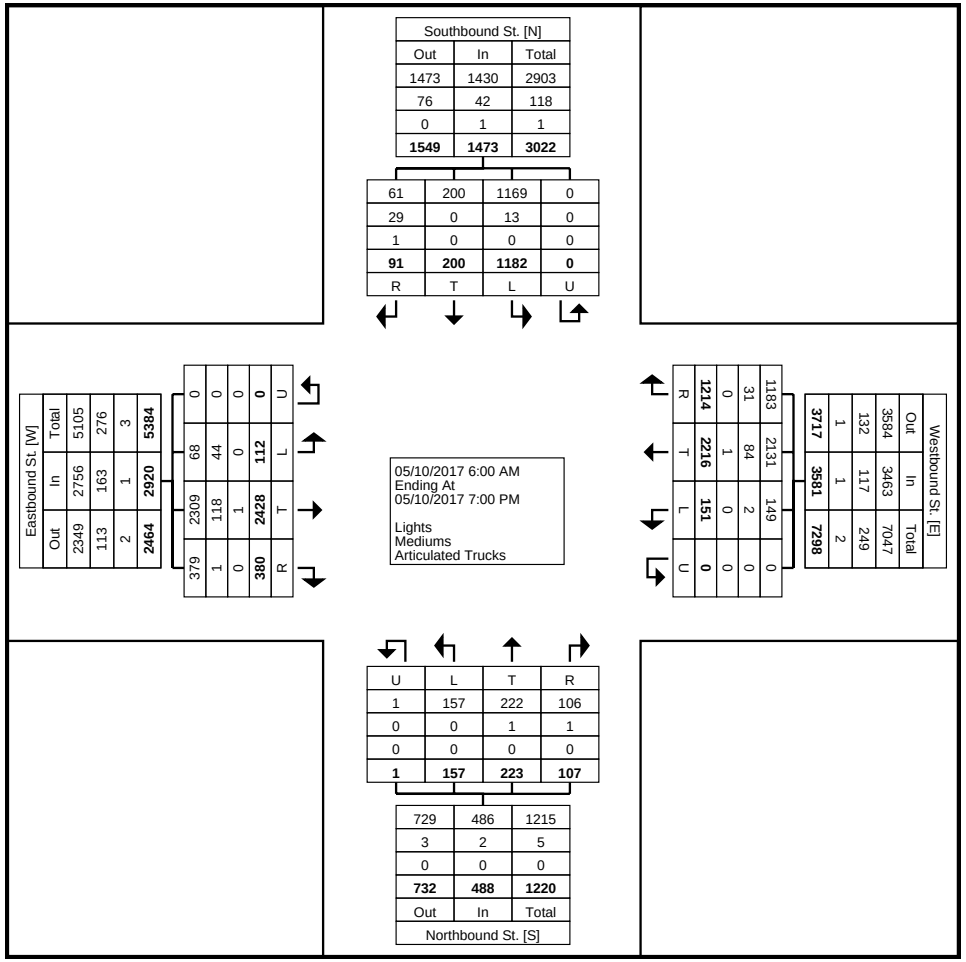

Turning Movement Data Plot

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Count Name: King and Kenwood 5-10-17
Site Code:
Start Date: 05/10/2017

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Southbound St. Southbound					Westbound St. Westbound					Northbound St. Northbound					Eastbound St. Eastbound					
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
7:30 AM	3	16	49	0	68	59	99	9	0	167	3	12	6	0	21	33	126	4	0	163	419
7:45 AM	12	31	47	0	90	79	117	24	0	220	5	18	6	0	29	40	136	12	0	188	527
8:00 AM	19	25	66	0	110	89	104	23	0	216	1	1	1	0	3	41	194	12	0	247	576
8:15 AM	15	35	57	0	107	76	112	18	0	206	3	5	8	0	16	41	158	9	0	208	537
Total	49	107	219	0	375	303	432	74	0	809	12	36	21	0	69	155	614	37	0	806	2059
Approach %	13.1	28.5	58.4	0.0	-	37.5	53.4	9.1	0.0	-	17.4	52.2	30.4	0.0	-	19.2	76.2	4.6	0.0	-	-
Total %	2.4	5.2	10.6	0.0	18.2	14.7	21.0	3.6	0.0	39.3	0.6	1.7	1.0	0.0	3.4	7.5	29.8	1.8	0.0	39.1	-
PHF	0.645	0.764	0.830	0.000	0.852	0.851	0.923	0.771	0.000	0.919	0.600	0.500	0.656	0.000	0.595	0.945	0.791	0.771	0.000	0.816	0.894
Lights	33	107	216	0	356	295	420	73	0	788	11	36	21	0	68	154	577	17	0	748	1960
% Lights	67.3	100.0	98.6	-	94.9	97.4	97.2	98.6	-	97.4	91.7	100.0	100.0	-	98.6	99.4	94.0	45.9	-	92.8	95.2
Mediums	15	0	3	0	18	8	12	1	0	21	1	0	0	0	1	1	37	20	0	58	98
% Mediums	30.6	0.0	1.4	-	4.8	2.6	2.8	1.4	-	2.6	8.3	0.0	0.0	-	1.4	0.6	6.0	54.1	-	7.2	4.8
Articulated Trucks	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Articulated Trucks	2.0	0.0	0.0	-	0.3	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0

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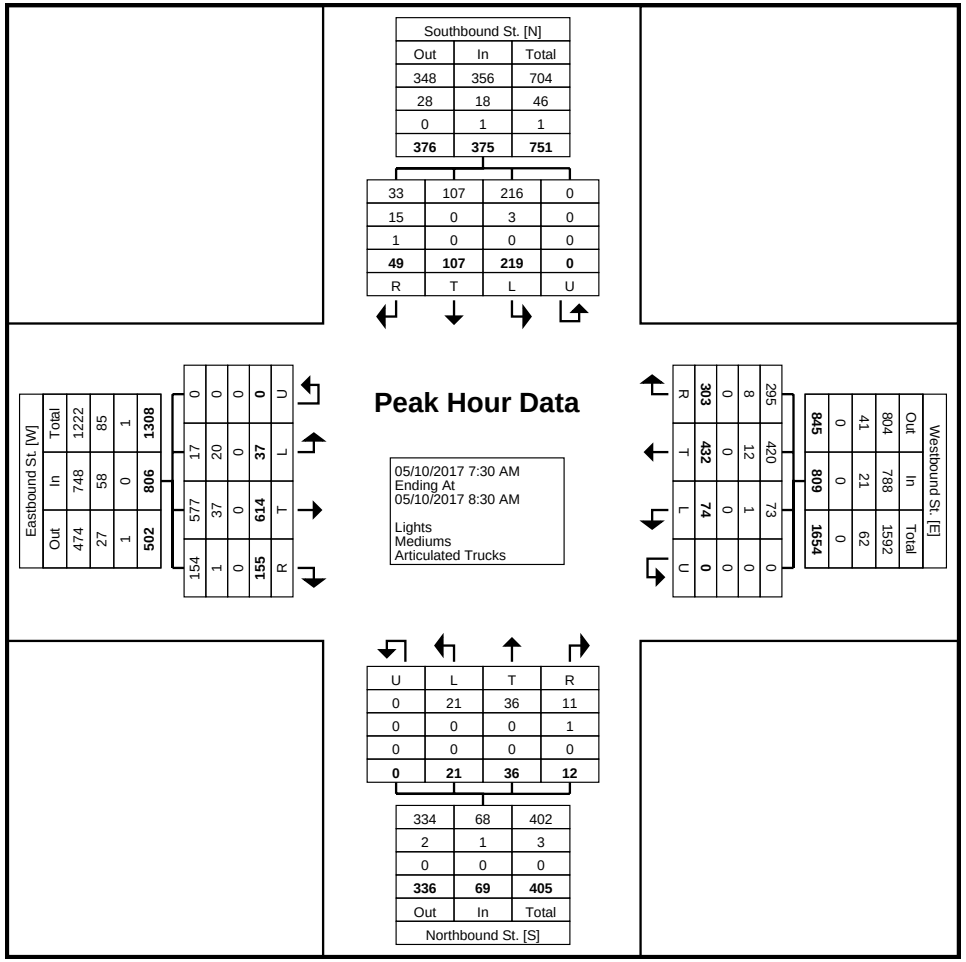

Turning Movement Peak Hour Data Plot (7:30 AM)

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Count Name: King and Kenwood 5-10-17
Site Code:
Start Date: 05/10/2017

Turning Movement Peak Hour Data (5:15 PM)

Start Time	Southbound St. Southbound					Westbound St. Westbound					Northbound St. Northbound					Eastbound St. Eastbound					
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
5:15 PM	2	5	96	0	103	58	103	3	0	164	5	11	5	0	21	6	104	7	0	117	405
5:30 PM	2	5	78	0	85	77	94	2	0	173	6	9	8	0	23	11	108	6	0	125	406
5:45 PM	5	5	88	0	98	42	98	2	0	142	5	3	3	0	11	7	91	9	0	107	358
6:00 PM	2	3	65	0	70	62	121	6	0	189	2	6	8	0	16	6	147	4	0	157	432
Total	11	18	327	0	356	239	416	13	0	668	18	29	24	0	71	30	450	26	0	506	1601
Approach %	3.1	5.1	91.9	0.0	-	35.8	62.3	1.9	0.0	-	25.4	40.8	33.8	0.0	-	5.9	88.9	5.1	0.0	-	-
Total %	0.7	1.1	20.4	0.0	22.2	14.9	26.0	0.8	0.0	41.7	1.1	1.8	1.5	0.0	4.4	1.9	28.1	1.6	0.0	31.6	-
PHF	0.550	0.900	0.852	0.000	0.864	0.776	0.860	0.542	0.000	0.884	0.750	0.659	0.750	0.000	0.772	0.682	0.765	0.722	0.000	0.806	0.927
Lights	9	18	326	0	353	234	406	13	0	653	18	29	24	0	71	30	435	17	0	482	1559
% Lights	81.8	100.0	99.7	-	99.2	97.9	97.6	100.0	-	97.8	100.0	100.0	100.0	-	100.0	100.0	96.7	65.4	-	95.3	97.4
Mediums	2	0	1	0	3	5	10	0	0	15	0	0	0	0	0	0	15	9	0	24	42
% Mediums	18.2	0.0	0.3	-	0.8	2.1	2.4	0.0	-	2.2	0.0	0.0	0.0	-	0.0	0.0	3.3	34.6	-	4.7	2.6
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0

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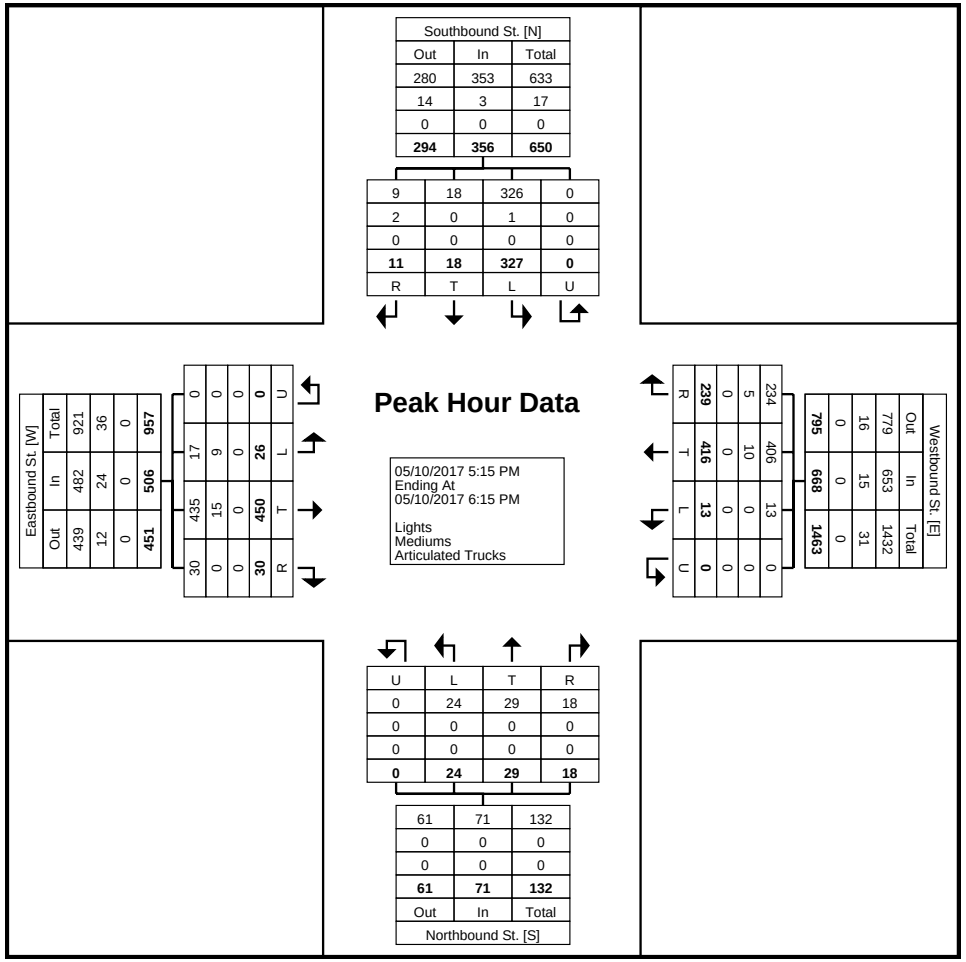

Turning Movement Peak Hour Data Plot (5:15 PM)

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Site Code:
Start Date: 05/11/2017

Turning Movement Data

Start Time	Southbound St. Southbound					Westbound St. Westbound					Northbound St. Northbound					Eastbound St. Eastbound					
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
6:08 AM	1	0	6	0	7	27	33	2	0	62	0	0	0	0	0	3	41	2	0	46	115
6:23 AM	0	0	11	0	11	23	60	2	0	85	0	1	0	0	1	5	39	0	0	44	141
6:38 AM	1	0	16	0	17	46	76	3	0	125	2	1	1	0	4	9	57	5	0	71	217
6:53 AM	1	0	24	0	25	47	95	3	0	145	0	1	0	0	1	7	58	1	0	66	237
Hourly Total	3	0	57	0	60	143	264	10	0	417	2	3	1	0	6	24	195	8	0	227	710
7:08 AM	1	11	24	0	36	60	107	5	0	172	2	5	4	0	11	21	57	1	0	79	298
7:23 AM	2	20	27	0	49	68	116	14	0	198	6	15	5	0	26	23	91	1	0	115	388
7:38 AM	4	28	55	0	87	81	106	17	0	204	4	16	9	0	29	41	104	4	0	149	469
7:53 AM	11	31	60	0	102	103	95	22	0	220	6	15	5	0	26	51	159	14	0	224	572
Hourly Total	18	90	166	0	274	312	424	58	0	794	18	51	23	0	92	136	411	20	0	567	1727
8:08 AM	17	44	53	0	114	80	89	25	0	194	4	19	16	0	39	47	166	13	0	226	573
8:23 AM	10	30	37	0	77	73	99	8	0	180	6	24	27	0	57	77	140	9	1	227	541
8:38 AM	1	17	35	1	54	48	89	7	0	144	4	29	22	0	55	24	96	4	0	124	377
8:53 AM	0	2	9	0	11	20	46	1	0	67	0	1	2	0	3	4	36	2	0	42	123
Hourly Total	28	93	134	1	256	221	323	41	0	585	14	73	67	0	154	152	438	28	1	619	1614
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:53 PM	3	2	26	0	31	16	31	2	0	49	6	11	9	0	26	9	42	1	1	53	159
Hourly Total	3	2	26	0	31	16	31	2	0	49	6	11	9	0	26	9	42	1	1	53	159
4:08 PM	3	7	33	0	43	44	92	3	0	139	9	26	7	0	42	17	105	0	0	122	346
4:23 PM	5	7	56	0	68	40	106	3	0	149	14	25	18	0	57	14	102	10	0	126	400
4:38 PM	3	1	57	0	61	60	98	1	0	159	5	11	5	0	21	6	103	3	0	112	353
4:53 PM	4	3	67	0	74	50	89	1	0	140	6	13	7	0	26	11	89	5	0	105	345
Hourly Total	15	18	213	0	246	194	385	8	0	587	34	75	37	0	146	48	399	18	0	465	1444
5:08 PM	1	3	82	0	86	50	118	2	0	170	1	10	8	0	19	6	112	3	0	121	396
5:23 PM	3	8	77	0	88	47	113	0	0	160	6	10	10	0	26	12	92	7	0	111	385
5:38 PM	1	7	82	0	90	49	111	1	0	161	6	11	8	0	25	12	76	1	0	89	365
5:53 PM	5	7	52	0	64	38	99	3	0	140	3	13	8	0	24	11	91	11	0	113	341
Hourly Total	10	25	293	0	328	184	441	6	0	631	16	44	34	0	94	41	371	22	0	434	1487
6:08 PM	2	0	45	0	47	42	104	0	0	146	1	5	3	0	9	7	78	2	0	87	289
6:23 PM	4	4	51	0	59	28	97	1	0	126	3	4	4	0	11	3	83	3	0	89	285
6:38 PM	1	4	52	0	57	30	95	1	0	126	2	2	0	0	4	8	60	2	0	70	257
6:53 PM	3	1	22	0	26	15	32	2	0	49	4	4	6	0	14	6	35	1	0	42	131
Hourly Total	10	9	170	0	189	115	328	4	0	447	10	15	13	0	38	24	256	8	0	288	962
Grand Total	87	237	1059	1	1384	1185	2196	129	0	3510	100	272	184	0	556	434	2112	105	2	2653	8103
Approach %	6.3	17.1	76.5	0.1	-	33.8	62.6	3.7	0.0	-	18.0	48.9	33.1	0.0	-	16.4	79.6	4.0	0.1	-	-
Total %	1.1	2.9	13.1	0.0	17.1	14.6	27.1	1.6	0.0	43.3	1.2	3.4	2.3	0.0	6.9	5.4	26.1	1.3	0.0	32.7	-
Lights	59	237	1044	1	1341	1152	2127	127	0	3406	99	270	184	0	553	433	2012	65	2	2512	7812

% Lights	67.8	100.0	98.6	100.0	96.9	97.2	96.9	98.4	-	97.0	99.0	99.3	100.0	-	99.5	99.8	95.3	61.9	100.0	94.7	96.4
Mediums	27	0	15	0	42	33	66	2	0	101	1	2	0	0	3	1	100	40	0	141	287
% Mediums	31.0	0.0	1.4	0.0	3.0	2.8	3.0	1.6	-	2.9	1.0	0.7	0.0	-	0.5	0.2	4.7	38.1	0.0	5.3	3.5
Articulated Trucks	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	4
% Articulated Trucks	1.1	0.0	0.0	0.0	0.1	0.0	0.1	0.0	-	0.1	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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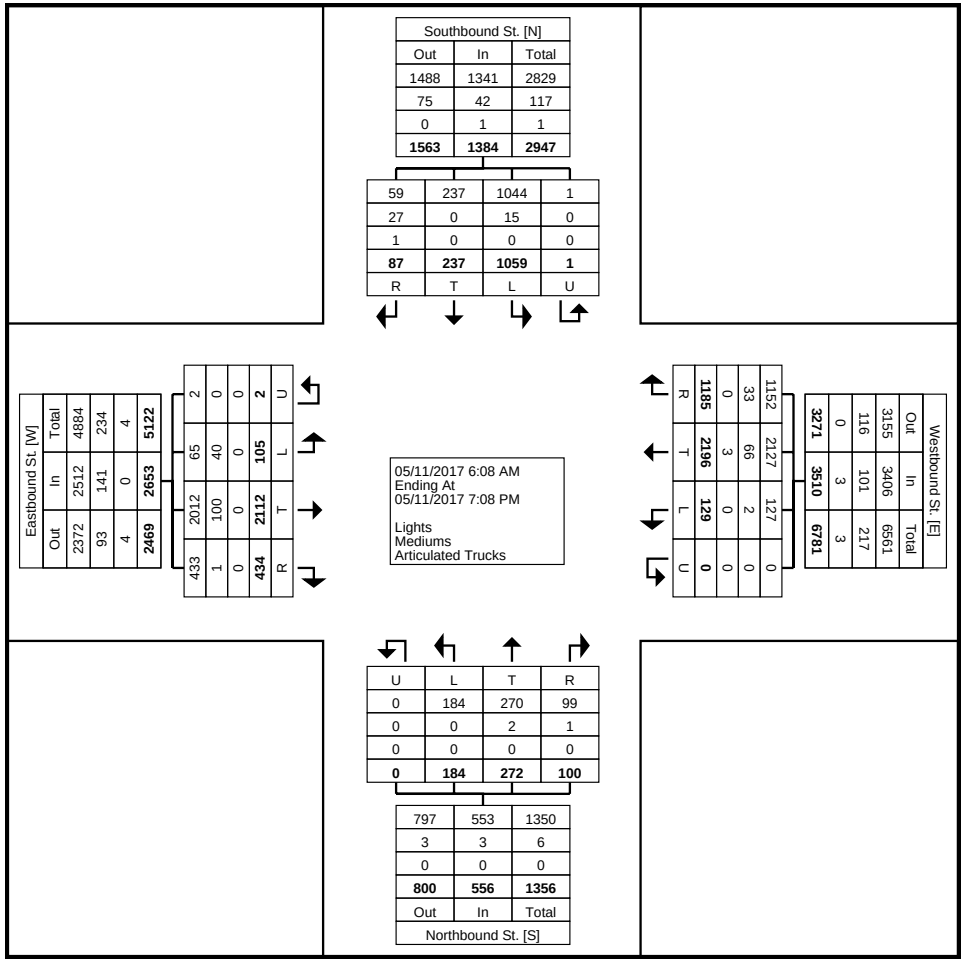

Turning Movement Data Plot

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Turning Movement Peak Hour Data (7:38 AM)

Start Time	Southbound St. Southbound					Westbound St. Westbound					Northbound St. Northbound					Eastbound St. Eastbound					
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
7:38 AM	4	28	55	0	87	81	106	17	0	204	4	16	9	0	29	41	104	4	0	149	469
7:53 AM	11	31	60	0	102	103	95	22	0	220	6	15	5	0	26	51	159	14	0	224	572
8:08 AM	17	44	53	0	114	80	89	25	0	194	4	19	16	0	39	47	166	13	0	226	573
8:23 AM	10	30	37	0	77	73	99	8	0	180	6	24	27	0	57	77	140	9	1	227	541
Total	42	133	205	0	380	337	389	72	0	798	20	74	57	0	151	216	569	40	1	826	2155
Approach %	11.1	35.0	53.9	0.0	-	42.2	48.7	9.0	0.0	-	13.2	49.0	37.7	0.0	-	26.2	68.9	4.8	0.1	-	-
Total %	1.9	6.2	9.5	0.0	17.6	15.6	18.1	3.3	0.0	37.0	0.9	3.4	2.6	0.0	7.0	10.0	26.4	1.9	0.0	38.3	-
PHF	0.618	0.756	0.854	0.000	0.833	0.818	0.917	0.720	0.000	0.907	0.833	0.771	0.528	0.000	0.662	0.701	0.857	0.714	0.250	0.910	0.940
Lights	27	133	203	0	363	331	374	70	0	775	19	73	57	0	149	215	533	25	1	774	2061
% Lights	64.3	100.0	99.0	-	95.5	98.2	96.1	97.2	-	97.1	95.0	98.6	100.0	-	98.7	99.5	93.7	62.5	100.0	93.7	95.6
Mediums	14	0	2	0	16	6	15	2	0	23	1	1	0	0	2	1	36	15	0	52	93
% Mediums	33.3	0.0	1.0	-	4.2	1.8	3.9	2.8	-	2.9	5.0	1.4	0.0	-	1.3	0.5	6.3	37.5	0.0	6.3	4.3
Articulated Trucks	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Articulated Trucks	2.4	0.0	0.0	-	0.3	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Count Name: King and Kenwood 5-11-17
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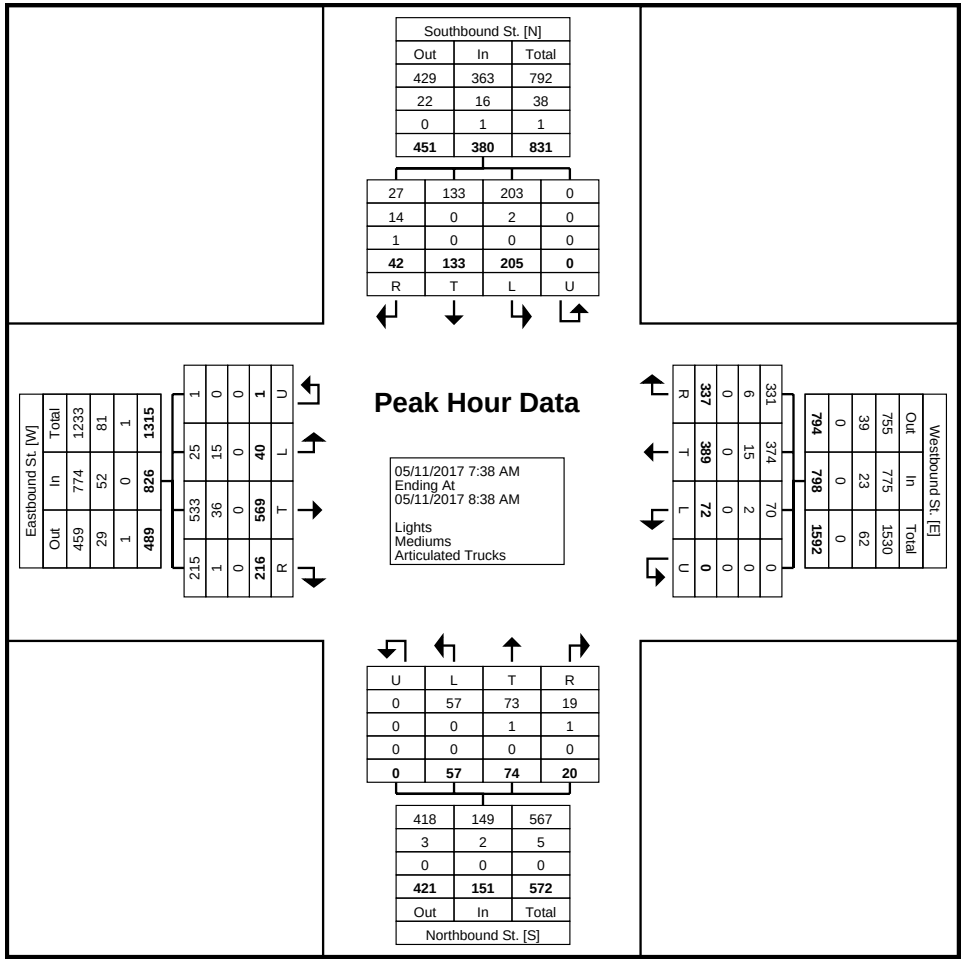

Turning Movement Peak Hour Data Plot (7:38 AM)

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Count Name: King and Kenwood 5-11-17
Site Code:
Start Date: 05/11/2017

Turning Movement Peak Hour Data (4:23 PM)

Start Time	Southbound St. Southbound					Westbound St. Westbound					Northbound St. Northbound					Eastbound St. Eastbound					
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
4:23 PM	5	7	56	0	68	40	106	3	0	149	14	25	18	0	57	14	102	10	0	126	400
4:38 PM	3	1	57	0	61	60	98	1	0	159	5	11	5	0	21	6	103	3	0	112	353
4:53 PM	4	3	67	0	74	50	89	1	0	140	6	13	7	0	26	11	89	5	0	105	345
5:08 PM	1	3	82	0	86	50	118	2	0	170	1	10	8	0	19	6	112	3	0	121	396
Total	13	14	262	0	289	200	411	7	0	618	26	59	38	0	123	37	406	21	0	464	1494
Approach %	4.5	4.8	90.7	0.0	-	32.4	66.5	1.1	0.0	-	21.1	48.0	30.9	0.0	-	8.0	87.5	4.5	0.0	-	-
Total %	0.9	0.9	17.5	0.0	19.3	13.4	27.5	0.5	0.0	41.4	1.7	3.9	2.5	0.0	8.2	2.5	27.2	1.4	0.0	31.1	-
PHF	0.650	0.500	0.799	0.000	0.840	0.833	0.871	0.583	0.000	0.909	0.464	0.590	0.528	0.000	0.539	0.661	0.906	0.525	0.000	0.921	0.934
Lights	9	14	257	0	280	194	397	7	0	598	26	59	38	0	123	37	392	11	0	440	1441
% Lights	69.2	100.0	98.1	-	96.9	97.0	96.6	100.0	-	96.8	100.0	100.0	100.0	-	100.0	100.0	96.6	52.4	-	94.8	96.5
Mediums	4	0	5	0	9	6	13	0	0	19	0	0	0	0	0	0	14	10	0	24	52
% Mediums	30.8	0.0	1.9	-	3.1	3.0	3.2	0.0	-	3.1	0.0	0.0	0.0	-	0.0	0.0	3.4	47.6	-	5.2	3.5
Articulated Trucks	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
% Articulated Trucks	0.0	0.0	0.0	-	0.0	0.0	0.2	0.0	-	0.2	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.1

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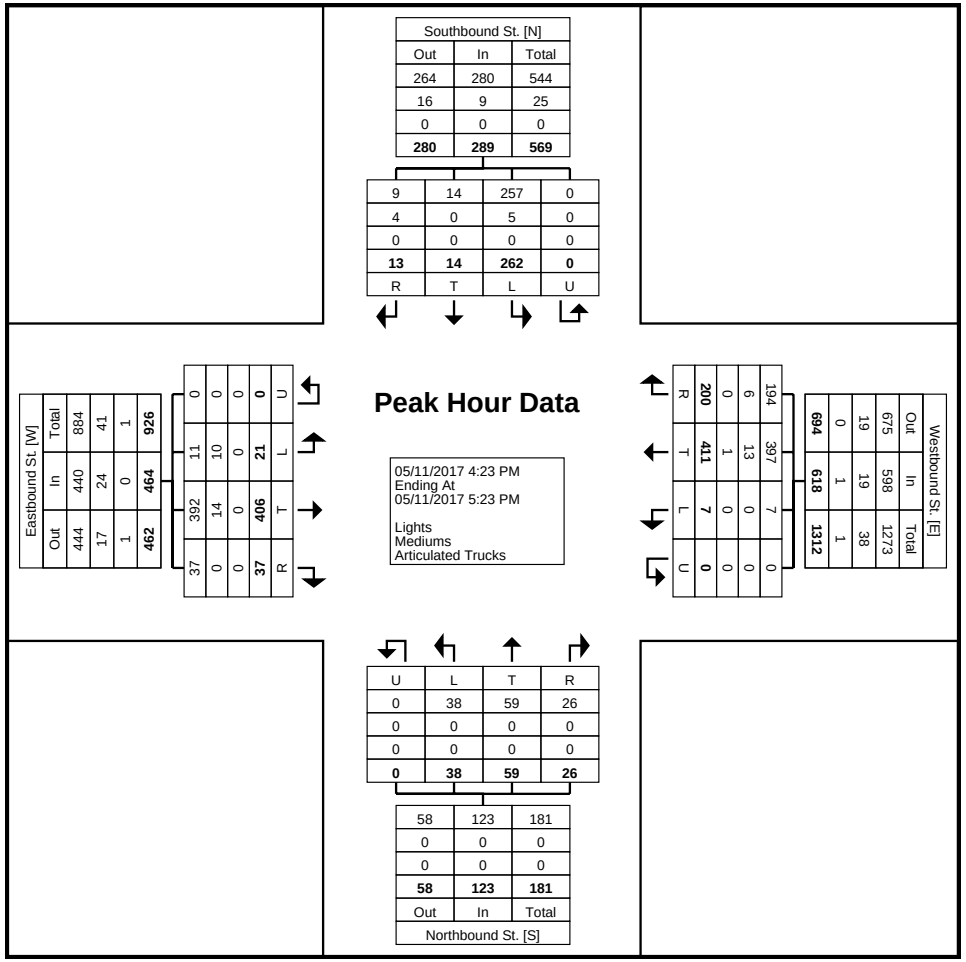

Turning Movement Peak Hour Data Plot (4:23 PM)

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Count Name: King and Braddock 03/24/2017
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Turning Movement Data

Start Time	Southbound St. Southbound					Westbound St. Westbound					Northbound St. Northbound					Eastbound St. Eastbound					
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
8:31 AM	0	84	53	0	137	69	93	0	0	162	0	95	0	0	95	46	88	0	0	134	528
8:46 AM	0	81	52	0	133	66	58	0	0	124	1	66	0	0	67	30	89	1	0	120	444
Hourly Total	0	165	105	0	270	135	151	0	0	286	1	161	0	0	162	76	177	1	0	254	972
9:01 AM	0	67	41	0	108	58	68	0	0	126	0	64	0	0	64	26	76	0	0	102	400
9:16 AM	0	74	32	0	106	48	70	0	0	118	2	84	0	0	86	30	57	0	0	87	397
9:31 AM	0	90	50	0	140	42	49	0	0	91	1	75	0	0	76	24	37	0	0	61	368
9:46 AM	0	90	31	0	121	44	50	0	0	94	0	56	0	0	56	25	43	0	0	68	339
Hourly Total	0	321	154	0	475	192	237	0	0	429	3	279	0	0	282	105	213	0	0	318	1504
10:01 AM	0	69	21	0	90	31	36	0	0	67	1	72	0	0	73	30	35	0	0	65	295
10:16 AM	0	59	38	0	97	41	50	0	0	91	0	50	0	2	52	16	47	0	0	63	303
10:31 AM	0	56	23	0	79	36	54	0	0	90	0	65	1	0	66	16	40	0	0	56	291
10:46 AM	0	58	41	0	99	37	60	0	0	97	1	39	0	0	40	10	47	0	0	57	293
Hourly Total	0	242	123	0	365	145	200	0	0	345	2	226	1	2	231	72	169	0	0	241	1182
11:01 AM	0	58	31	0	89	48	45	0	0	93	0	63	0	0	63	18	43	0	0	61	306
11:16 AM	0	52	29	1	82	56	46	0	0	102	0	56	0	0	56	23	58	0	0	81	321
11:31 AM	0	48	49	0	97	42	56	0	0	98	1	58	0	0	59	24	55	0	0	79	333
11:46 AM	0	72	46	0	118	66	61	0	0	127	1	58	0	0	59	11	53	0	0	64	368
Hourly Total	0	230	155	1	386	212	208	0	0	420	2	235	0	0	237	76	209	0	0	285	1328
12:01 PM	0	80	49	0	129	59	66	0	0	125	1	82	0	0	83	13	67	0	0	80	417
12:16 PM	0	67	32	0	99	60	72	0	0	132	3	62	0	0	65	12	53	0	0	65	361
12:31 PM	0	76	44	0	120	75	60	0	0	135	1	83	0	0	84	15	50	0	0	65	404
12:46 PM	0	55	21	0	76	54	56	0	0	110	1	56	0	0	57	14	45	0	0	59	302
Hourly Total	0	278	146	0	424	248	254	0	0	502	6	283	0	0	289	54	215	0	0	269	1484
1:01 PM	1	70	39	0	110	56	56	0	0	112	0	52	0	0	52	12	42	0	0	54	328
1:16 PM	0	77	22	0	99	57	67	0	0	124	1	62	0	0	63	11	45	0	0	56	342
1:31 PM	0	71	33	0	104	61	61	2	0	124	0	68	0	0	68	30	51	1	0	82	378
1:46 PM	0	70	42	0	112	46	70	0	0	116	0	61	0	0	61	16	47	0	0	63	352
Hourly Total	1	288	136	0	425	220	254	2	0	476	1	243	0	0	244	69	185	1	0	255	1400
2:01 PM	0	76	40	0	116	51	59	0	0	110	0	70	0	1	71	16	48	0	0	64	361
2:16 PM	0	66	38	0	104	57	61	0	0	118	0	48	0	0	48	19	76	0	0	95	365
2:31 PM	0	98	35	0	133	44	73	0	0	117	1	80	0	0	81	20	50	0	0	70	401
2:46 PM	0	69	53	0	122	40	74	0	0	114	0	77	0	0	77	22	68	0	0	90	403
Hourly Total	0	309	166	0	475	192	267	0	0	459	1	275	0	1	277	77	242	0	0	319	1530
3:01 PM	0	124	49	1	174	47	87	0	0	134	0	74	0	0	74	45	79	0	0	124	506
3:16 PM	0	85	28	0	113	66	125	0	0	191	1	97	0	0	98	42	86	0	0	128	530
3:31 PM	0	85	53	1	139	57	125	2	0	184	1	94	0	0	95	25	64	0	0	89	507
3:46 PM	0	73	42	1	116	58	106	1	0	165	1	83	0	0	84	20	72	0	0	92	457

Hourly Total	0	367	172	3	542	228	443	3	0	674	3	348	0	0	351	132	301	0	0	433	2000
4:01 PM	0	70	49	0	119	42	109	0	0	151	1	66	0	0	67	29	69	0	0	98	435
4:16 PM	0	125	62	0	187	67	110	0	0	177	0	94	0	0	94	26	76	0	0	102	560
4:31 PM	10	85	54	0	149	59	96	0	1	156	0	104	0	0	104	29	90	0	0	119	528
4:46 PM	2	78	58	0	138	61	115	0	0	176	1	80	0	0	81	29	57	0	0	86	481
Hourly Total	12	358	223	0	593	229	430	0	1	660	2	344	0	0	346	113	292	0	0	405	2004
5:01 PM	0	91	60	0	151	74	135	0	0	209	1	112	0	0	113	24	80	0	0	104	577
5:16 PM	2	53	46	0	101	54	164	0	0	218	1	67	0	0	68	20	90	0	0	110	497
5:31 PM	0	93	63	0	156	87	130	0	0	217	0	100	0	0	100	30	69	0	0	99	572
5:46 PM	0	79	50	0	129	72	118	0	0	190	0	93	0	0	93	38	76	0	0	114	526
Hourly Total	2	316	219	0	537	287	547	0	0	834	2	372	0	0	374	112	315	0	0	427	2172
6:01 PM	0	63	60	0	123	58	127	0	0	185	0	90	0	0	90	25	86	0	0	111	509
6:16 PM	0	88	41	0	129	51	112	0	0	163	1	81	0	0	82	26	78	0	0	104	478
6:31 PM	0	81	40	0	121	48	109	0	0	157	0	59	0	0	59	19	79	0	0	98	435
6:46 PM	0	68	43	0	111	42	81	0	0	123	0	71	0	0	71	15	56	0	0	71	376
Hourly Total	0	300	184	0	484	199	429	0	0	628	1	301	0	0	302	85	299	0	0	384	1798
Grand Total	15	3174	1783	4	4976	2287	3420	5	1	5713	24	3067	1	3	3095	971	2617	2	0	3590	17374
Approach %	0.3	63.8	35.8	0.1	-	40.0	59.9	0.1	0.0	-	0.8	99.1	0.0	0.1	-	27.0	72.9	0.1	0.0	-	-
Total %	0.1	18.3	10.3	0.0	28.6	13.2	19.7	0.0	0.0	32.9	0.1	17.7	0.0	0.0	17.8	5.6	15.1	0.0	0.0	20.7	-
Lights	14	3023	1742	4	4783	2219	3249	4	1	5473	23	2914	1	3	2941	885	2522	2	0	3409	16606
% Lights	93.3	95.2	97.7	100.0	96.1	97.0	95.0	80.0	100.0	95.8	95.8	95.0	100.0	100.0	95.0	91.1	96.4	100.0	-	95.0	95.6
Mediums	1	149	39	0	189	65	169	1	0	235	1	148	0	0	149	82	95	0	0	177	750
% Mediums	6.7	4.7	2.2	0.0	3.8	2.8	4.9	20.0	0.0	4.1	4.2	4.8	0.0	0.0	4.8	8.4	3.6	0.0	-	4.9	4.3
Articulated Trucks	0	2	2	0	4	3	2	0	0	5	0	5	0	0	5	4	0	0	0	4	18
% Articulated Trucks	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.2	0.4	0.0	0.0	-	0.1	0.1

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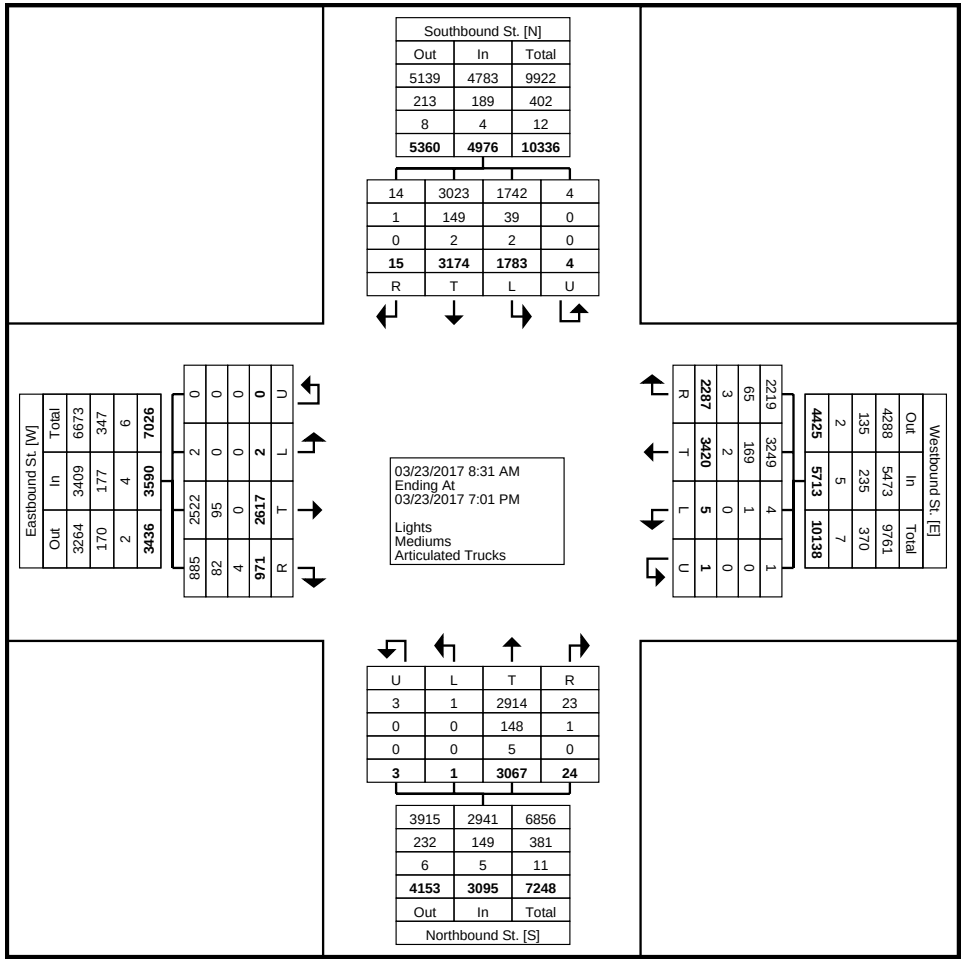

Turning Movement Data Plot

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Count Name: King and Braddock 03/24/2017
Site Code:
Start Date: 03/23/2017

Turning Movement Peak Hour Data (8:31 AM)

Start Time	Southbound St. Southbound					Westbound St. Westbound					Northbound St. Northbound					Eastbound St. Eastbound					
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
8:31 AM	0	84	53	0	137	69	93	0	0	162	0	95	0	0	95	46	88	0	0	134	528
8:46 AM	0	81	52	0	133	66	58	0	0	124	1	66	0	0	67	30	89	1	0	120	444
9:01 AM	0	67	41	0	108	58	68	0	0	126	0	64	0	0	64	26	76	0	0	102	400
9:16 AM	0	74	32	0	106	48	70	0	0	118	2	84	0	0	86	30	57	0	0	87	397
Total	0	306	178	0	484	241	289	0	0	530	3	309	0	0	312	132	310	1	0	443	1769
Approach %	0.0	63.2	36.8	0.0	-	45.5	54.5	0.0	0.0	-	1.0	99.0	0.0	0.0	-	29.8	70.0	0.2	0.0	-	-
Total %	0.0	17.3	10.1	0.0	27.4	13.6	16.3	0.0	0.0	30.0	0.2	17.5	0.0	0.0	17.6	7.5	17.5	0.1	0.0	25.0	-
PHF	0.000	0.911	0.840	0.000	0.883	0.873	0.777	0.000	0.000	0.818	0.375	0.813	0.000	0.000	0.821	0.717	0.871	0.250	0.000	0.826	0.838
Lights	0	295	173	0	468	232	276	0	0	508	3	284	0	0	287	125	292	1	0	418	1681
% Lights	-	96.4	97.2	-	96.7	96.3	95.5	-	-	95.8	100.0	91.9	-	-	92.0	94.7	94.2	100.0	-	94.4	95.0
Mediums	0	11	5	0	16	9	13	0	0	22	0	20	0	0	20	7	18	0	0	25	83
% Mediums	-	3.6	2.8	-	3.3	3.7	4.5	-	-	4.2	0.0	6.5	-	-	6.4	5.3	5.8	0.0	-	5.6	4.7
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	5
% Articulated Trucks	-	0.0	0.0	-	0.0	0.0	0.0	-	-	0.0	0.0	1.6	-	-	1.6	0.0	0.0	0.0	-	0.0	0.3

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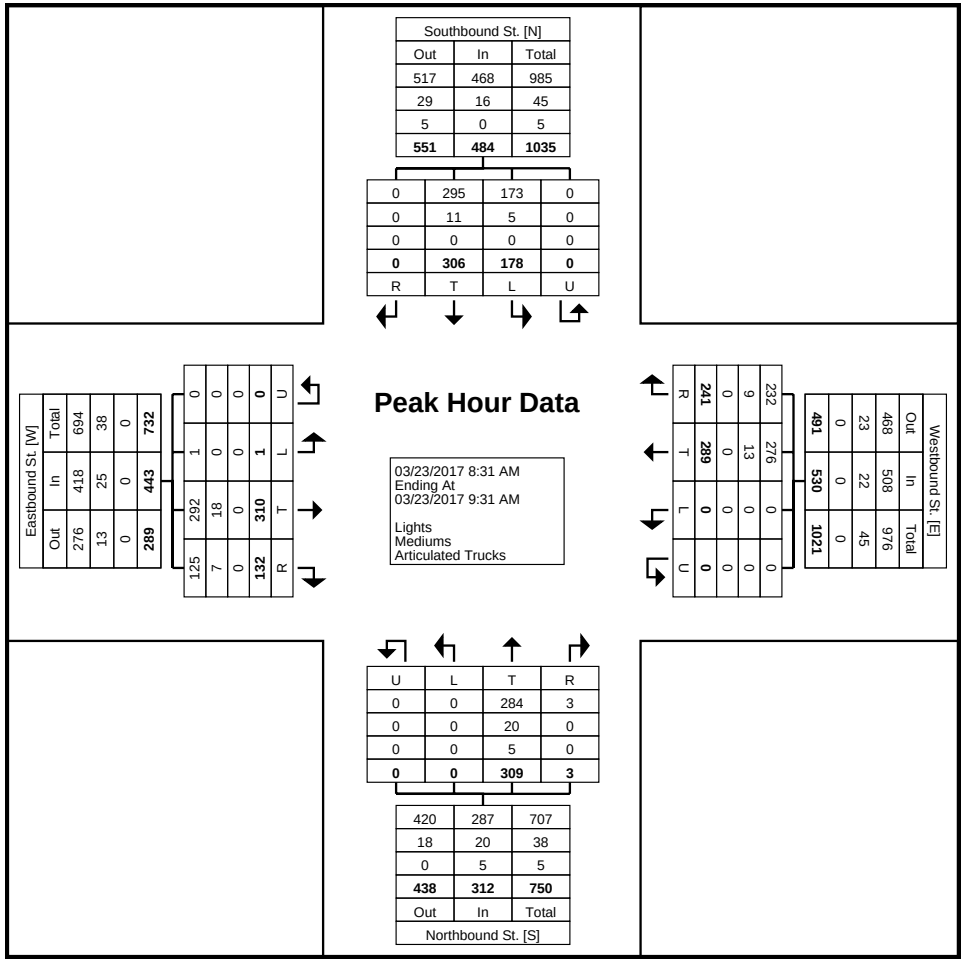

Turning Movement Peak Hour Data Plot (8:31 AM)

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Turning Movement Peak Hour Data (5:01 PM)

Start Time	Southbound St. Southbound					Westbound St. Westbound					Northbound St. Northbound					Eastbound St. Eastbound					
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
5:01 PM	0	91	60	0	151	74	135	0	0	209	1	112	0	0	113	24	80	0	0	104	577
5:16 PM	2	53	46	0	101	54	164	0	0	218	1	67	0	0	68	20	90	0	0	110	497
5:31 PM	0	93	63	0	156	87	130	0	0	217	0	100	0	0	100	30	69	0	0	99	572
5:46 PM	0	79	50	0	129	72	118	0	0	190	0	93	0	0	93	38	76	0	0	114	526
Total	2	316	219	0	537	287	547	0	0	834	2	372	0	0	374	112	315	0	0	427	2172
Approach %	0.4	58.8	40.8	0.0	-	34.4	65.6	0.0	0.0	-	0.5	99.5	0.0	0.0	-	26.2	73.8	0.0	0.0	-	-
Total %	0.1	14.5	10.1	0.0	24.7	13.2	25.2	0.0	0.0	38.4	0.1	17.1	0.0	0.0	17.2	5.2	14.5	0.0	0.0	19.7	-
PHF	0.250	0.849	0.869	0.000	0.861	0.825	0.834	0.000	0.000	0.956	0.500	0.830	0.000	0.000	0.827	0.737	0.875	0.000	0.000	0.936	0.941
Lights	2	299	219	0	520	281	536	0	0	817	1	355	0	0	356	105	308	0	0	413	2106
% Lights	100.0	94.6	100.0	-	96.8	97.9	98.0	-	-	98.0	50.0	95.4	-	-	95.2	93.8	97.8	-	-	96.7	97.0
Mediums	0	16	0	0	16	5	10	0	0	15	1	17	0	0	18	7	7	0	0	14	63
% Mediums	0.0	5.1	0.0	-	3.0	1.7	1.8	-	-	1.8	50.0	4.6	-	-	4.8	6.3	2.2	-	-	3.3	2.9
Articulated Trucks	0	1	0	0	1	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	3
% Articulated Trucks	0.0	0.3	0.0	-	0.2	0.3	0.2	-	-	0.2	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.1

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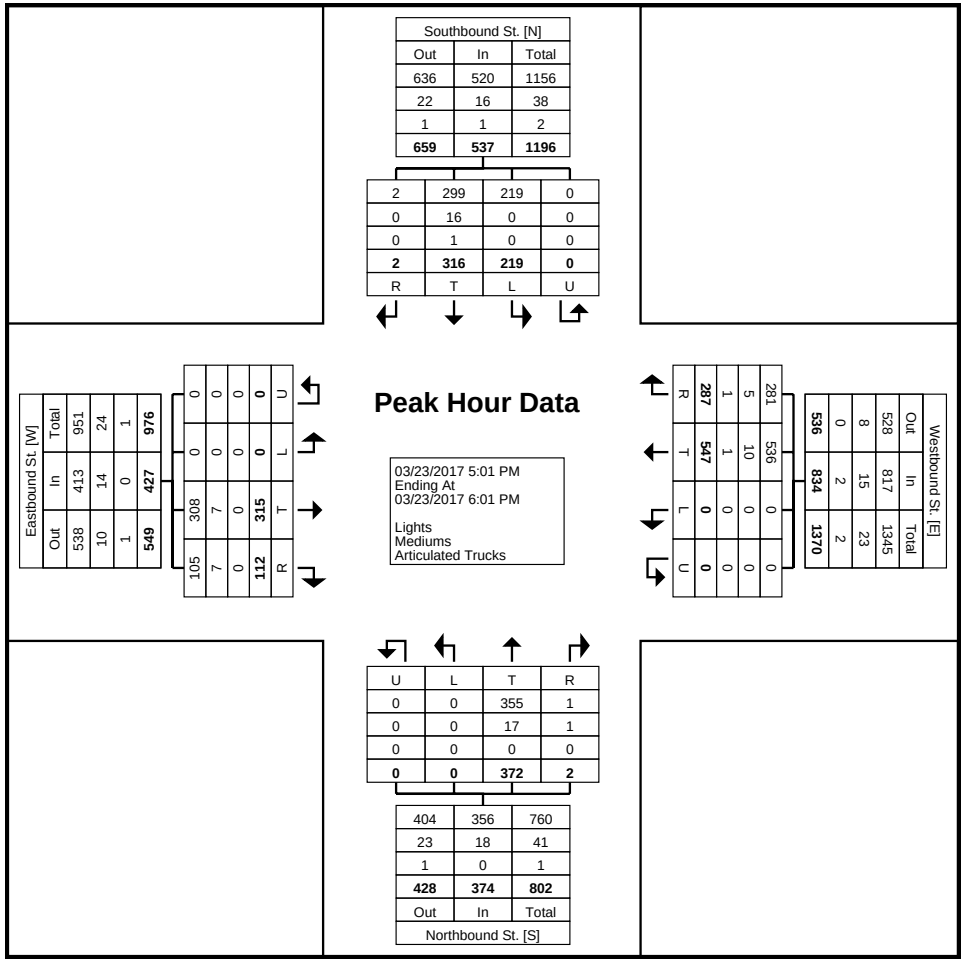
"Working Today for a Better Tomorrow"

Count Name: King and Braddock 03/24/2017
Site Code:
Start Date: 03/23/2017
Page No: 7



Turning Movement Peak Hour Data Plot (5:01 PM)

City of Alexandria
301 King Street

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"Working Today for a Better Tomorrow"

Count Name: King and Braddock 03/24/2017
Site Code:
Start Date: 03/23/2017

City of Alexandria
301 King Street

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Count Name: King and Braddock 03/25/2017
Site Code:
Start Date: 03/25/2017
Page No: 1

Turning Movement Data

Start Time	Southbound St. Southbound					Westbound St. Westbound					Northbound St. Northbound					Eastbound St. Eastbound					
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
9:00 AM	0	61	33	0	94	51	50	0	0	101	2	42	0	0	44	23	55	0	0	78	317
9:15 AM	0	72	40	0	112	50	55	0	0	105	0	54	0	0	54	20	61	0	0	81	352
9:30 AM	0	89	42	0	131	56	55	0	0	111	1	58	0	0	59	19	44	0	0	63	364
9:45 AM	0	71	49	0	120	55	71	0	0	126	3	59	0	0	62	21	52	0	0	73	381
Hourly Total	0	293	164	0	457	212	231	0	0	443	6	213	0	0	219	83	212	0	0	295	1414
10:00 AM	2	84	37	0	123	48	58	1	0	107	2	64	0	0	66	20	65	0	0	85	381
10:15 AM	0	83	52	0	135	59	60	1	0	120	1	73	0	0	74	26	61	0	0	87	416
10:30 AM	3	60	36	0	99	72	80	0	0	152	1	83	0	0	84	12	55	0	0	67	402
10:45 AM	0	83	33	0	116	53	72	0	0	125	1	47	0	0	48	20	71	0	0	91	380
Hourly Total	5	310	158	0	473	232	270	2	0	504	5	267	0	0	272	78	252	0	0	330	1579
11:00 AM	4	87	45	0	136	65	71	0	0	136	1	63	0	0	64	16	52	0	0	68	404
11:15 AM	1	77	49	0	127	71	77	0	0	148	1	84	0	0	85	24	53	0	0	77	437
11:30 AM	0	77	37	0	114	66	70	0	0	136	1	70	0	0	71	18	39	0	0	57	378
11:45 AM	0	100	47	0	147	66	76	1	0	143	0	95	0	0	95	22	68	0	1	91	476
Hourly Total	5	341	178	0	524	268	294	1	0	563	3	312	0	0	315	80	212	0	1	293	1695
12:00 PM	0	91	41	0	132	63	97	0	0	160	2	97	0	0	99	21	64	0	0	85	476
12:15 PM	1	95	53	0	149	88	80	0	0	168	2	86	0	0	88	18	41	0	0	59	464
12:30 PM	1	86	41	1	129	53	77	0	0	130	0	91	0	0	91	21	62	0	0	83	433
12:45 PM	0	94	41	0	135	63	82	0	0	145	1	78	0	0	79	20	68	0	1	89	448
Hourly Total	2	366	176	1	545	267	336	0	0	603	5	352	0	0	357	80	235	0	1	316	1821
1:00 PM	3	90	52	0	145	76	66	0	0	142	1	85	0	0	86	24	58	0	0	82	455
1:15 PM	1	86	38	0	125	47	72	0	0	119	1	83	0	0	84	17	85	0	0	102	430
1:30 PM	1	96	37	0	134	62	65	0	0	127	2	95	0	0	97	15	74	0	0	89	447
1:45 PM	0	81	37	0	118	56	55	0	0	111	1	84	0	0	85	18	55	0	0	73	387
Hourly Total	5	353	164	0	522	241	258	0	0	499	5	347	0	0	352	74	272	0	0	346	1719
2:00 PM	1	78	44	0	123	70	81	0	0	151	2	65	0	0	67	25	46	0	0	71	412
2:15 PM	3	104	42	0	149	58	73	0	0	131	1	114	1	0	116	18	50	0	0	68	464
2:30 PM	1	92	31	0	124	77	67	0	0	144	2	95	0	0	97	20	80	0	0	100	465
2:45 PM	3	104	44	0	151	63	75	0	0	138	4	99	0	0	103	16	46	0	0	62	454
Hourly Total	8	378	161	0	547	268	296	0	0	564	9	373	1	0	383	79	222	0	0	301	1795
3:00 PM	0	105	40	0	145	68	85	0	0	153	3	83	0	0	86	13	46	1	0	60	444
3:15 PM	0	95	36	0	131	52	70	0	0	122	2	76	0	0	78	18	60	0	0	78	409
3:30 PM	0	74	27	0	101	62	91	0	0	153	0	88	0	0	88	20	59	0	0	79	421
3:45 PM	2	101	51	0	154	52	62	0	0	114	2	89	0	0	91	23	60	0	0	83	442
Hourly Total	2	375	154	0	531	234	308	0	0	542	7	336	0	0	343	74	225	1	0	300	1716
4:00 PM	1	93	38	0	132	49	61	0	0	110	3	74	0	0	77	21	57	0	0	78	397
4:15 PM	2	84	36	0	122	67	66	0	0	133	3	57	0	0	60	18	71	0	0	89	404

4:30 PM	2	86	28	0	116	55	68	0	0	123	4	77	0	0	81	28	69	0	0	97	417
4:45 PM	0	70	43	0	113	62	61	0	0	123	4	79	0	0	83	13	78	0	0	91	410
Hourly Total	5	333	145	0	483	233	256	0	0	489	14	287	0	0	301	80	275	0	0	355	1628
5:00 PM	0	81	43	0	124	58	52	0	0	110	4	79	2	0	85	21	51	0	0	72	391
5:15 PM	0	75	31	0	106	61	50	0	0	111	3	58	0	0	61	10	51	0	0	61	339
5:30 PM	0	76	33	0	109	62	48	0	0	110	1	72	0	0	73	10	41	0	0	51	343
5:45 PM	0	80	36	0	116	57	85	0	0	142	0	67	0	0	67	13	58	0	0	71	396
Hourly Total	0	312	143	0	455	238	235	0	0	473	8	276	2	0	286	54	201	0	0	255	1469
6:00 PM	0	74	42	0	116	53	103	1	0	157	1	78	0	0	79	14	45	0	0	59	411
6:15 PM	0	72	38	0	110	47	61	0	0	108	0	76	0	0	76	12	42	0	0	54	348
6:30 PM	0	62	46	1	109	46	49	0	0	95	1	57	0	0	58	17	48	0	0	65	327
6:45 PM	0	57	33	0	90	39	45	1	0	85	0	66	0	0	66	12	40	1	0	53	294
Hourly Total	0	265	159	1	425	185	258	2	0	445	2	277	0	0	279	55	175	1	0	231	1380
Grand Total	32	3326	1602	2	4962	2378	2742	5	0	5125	64	3040	3	0	3107	737	2281	2	2	3022	16216
Approach %	0.6	67.0	32.3	0.0	-	46.4	53.5	0.1	0.0	-	2.1	97.8	0.1	0.0	-	24.4	75.5	0.1	0.1	-	-
Total %	0.2	20.5	9.9	0.0	30.6	14.7	16.9	0.0	0.0	31.6	0.4	18.7	0.0	0.0	19.2	4.5	14.1	0.0	0.0	18.6	-
Lights	32	3264	1587	2	4885	2354	2694	5	0	5053	64	2978	2	0	3044	702	2265	2	2	2971	15953
% Lights	100.0	98.1	99.1	100.0	98.4	99.0	98.2	100.0	-	98.6	100.0	98.0	66.7	-	98.0	95.3	99.3	100.0	100.0	98.3	98.4
Mediums	0	61	15	0	76	24	48	0	0	72	0	62	1	0	63	35	16	0	0	51	262
% Mediums	0.0	1.8	0.9	0.0	1.5	1.0	1.8	0.0	-	1.4	0.0	2.0	33.3	-	2.0	4.7	0.7	0.0	0.0	1.7	1.6
Articulated Trucks	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Articulated Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0

City of Alexandria
301 King Street

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Count Name: King and Braddock 03/25/2017
Site Code:
Start Date: 03/25/2017
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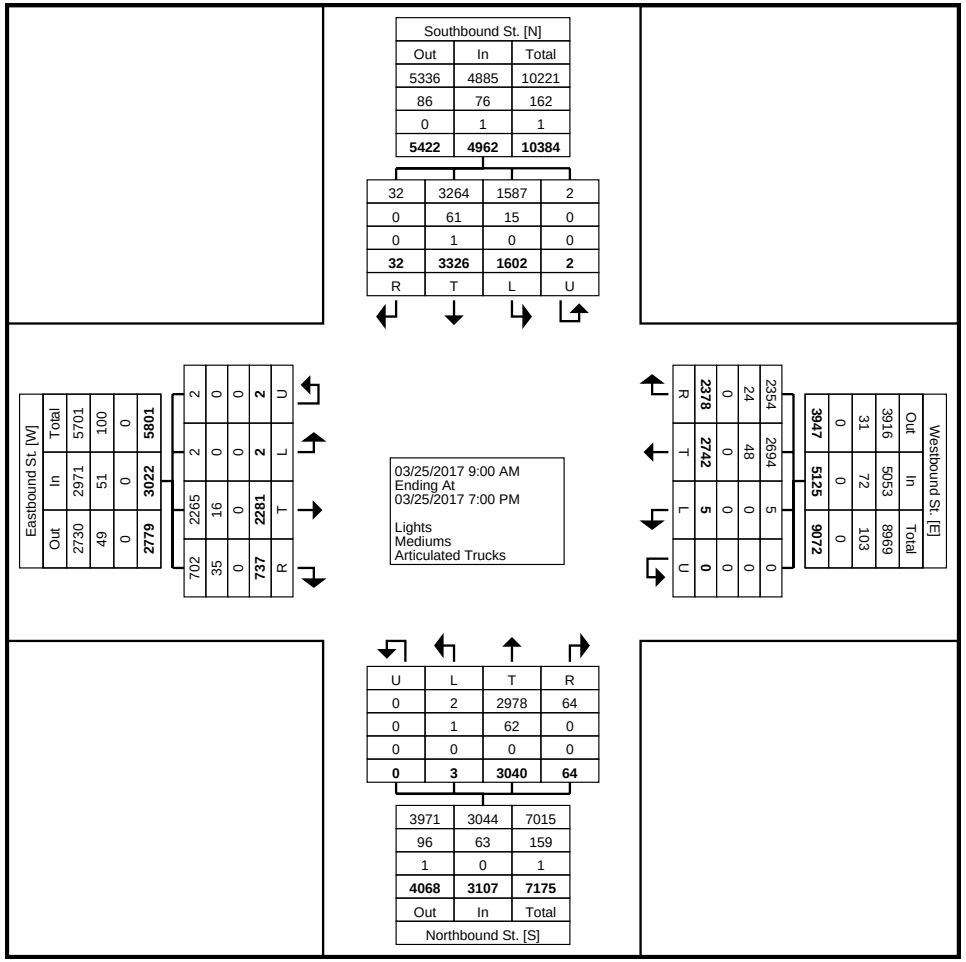

Turning Movement Data Plot

City of Alexandria
301 King Street

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Count Name: King and Braddock 03/25/2017
Site Code:
Start Date: 03/25/2017

Turning Movement Peak Hour Data (11:00 AM)

Start Time	Southbound St. Southbound					Westbound St. Westbound					Northbound St. Northbound					Eastbound St. Eastbound					
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
11:00 AM	4	87	45	0	136	65	71	0	0	136	1	63	0	0	64	16	52	0	0	68	404
11:15 AM	1	77	49	0	127	71	77	0	0	148	1	84	0	0	85	24	53	0	0	77	437
11:30 AM	0	77	37	0	114	66	70	0	0	136	1	70	0	0	71	18	39	0	0	57	378
11:45 AM	0	100	47	0	147	66	76	1	0	143	0	95	0	0	95	22	68	0	1	91	476
Total	5	341	178	0	524	268	294	1	0	563	3	312	0	0	315	80	212	0	1	293	1695
Approach %	1.0	65.1	34.0	0.0	-	47.6	52.2	0.2	0.0	-	1.0	99.0	0.0	0.0	-	27.3	72.4	0.0	0.3	-	-
Total %	0.3	20.1	10.5	0.0	30.9	15.8	17.3	0.1	0.0	33.2	0.2	18.4	0.0	0.0	18.6	4.7	12.5	0.0	0.1	17.3	-
PHF	0.313	0.853	0.908	0.000	0.891	0.944	0.955	0.250	0.000	0.951	0.750	0.821	0.000	0.000	0.829	0.833	0.779	0.000	0.250	0.805	0.890
Lights	5	332	176	0	513	261	290	1	0	552	3	305	0	0	308	77	210	0	1	288	1661
% Lights	100.0	97.4	98.9	-	97.9	97.4	98.6	100.0	-	98.0	100.0	97.8	-	-	97.8	96.3	99.1	-	100.0	98.3	98.0
Mediums	0	9	2	0	11	7	4	0	0	11	0	7	0	0	7	3	2	0	0	5	34
% Mediums	0.0	2.6	1.1	-	2.1	2.6	1.4	0.0	-	2.0	0.0	2.2	-	-	2.2	3.8	0.9	-	0.0	1.7	2.0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	0.0	0.0	0.0

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Count Name: King and Braddock 03/25/2017
Site Code:
Start Date: 03/25/2017
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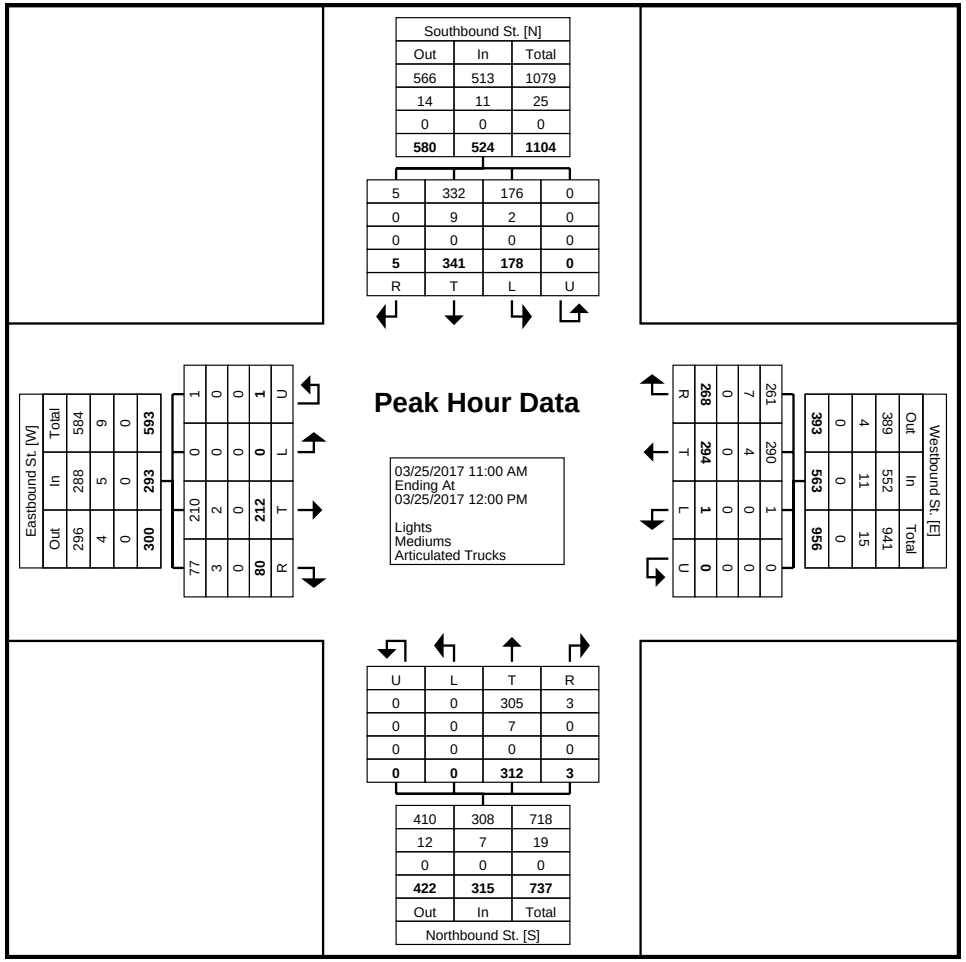

Turning Movement Peak Hour Data Plot (11:00 AM)

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301 King Street

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Count Name: King and Braddock 03/25/2017
Site Code:
Start Date: 03/25/2017

Turning Movement Peak Hour Data (2:15 PM)

Start Time	Southbound St. Southbound					Westbound St. Westbound					Northbound St. Northbound					Eastbound St. Eastbound					
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
2:15 PM	3	104	42	0	149	58	73	0	0	131	1	114	1	0	116	18	50	0	0	68	464
2:30 PM	1	92	31	0	124	77	67	0	0	144	2	95	0	0	97	20	80	0	0	100	465
2:45 PM	3	104	44	0	151	63	75	0	0	138	4	99	0	0	103	16	46	0	0	62	454
3:00 PM	0	105	40	0	145	68	85	0	0	153	3	83	0	0	86	13	46	1	0	60	444
Total	7	405	157	0	569	266	300	0	0	566	10	391	1	0	402	67	222	1	0	290	1827
Approach %	1.2	71.2	27.6	0.0	-	47.0	53.0	0.0	0.0	-	2.5	97.3	0.2	0.0	-	23.1	76.6	0.3	0.0	-	-
Total %	0.4	22.2	8.6	0.0	31.1	14.6	16.4	0.0	0.0	31.0	0.5	21.4	0.1	0.0	22.0	3.7	12.2	0.1	0.0	15.9	-
PHF	0.583	0.964	0.892	0.000	0.942	0.864	0.882	0.000	0.000	0.925	0.625	0.857	0.250	0.000	0.866	0.838	0.694	0.250	0.000	0.725	0.982
Lights	7	400	154	0	561	262	296	0	0	558	10	385	0	0	395	65	221	1	0	287	1801
% Lights	100.0	98.8	98.1	-	98.6	98.5	98.7	-	-	98.6	100.0	98.5	0.0	-	98.3	97.0	99.5	100.0	-	99.0	98.6
Mediums	0	5	3	0	8	4	4	0	0	8	0	6	1	0	7	2	1	0	0	3	26
% Mediums	0.0	1.2	1.9	-	1.4	1.5	1.3	-	-	1.4	0.0	1.5	100.0	-	1.7	3.0	0.5	0.0	-	1.0	1.4
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	0.0	0.0	0.0	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0

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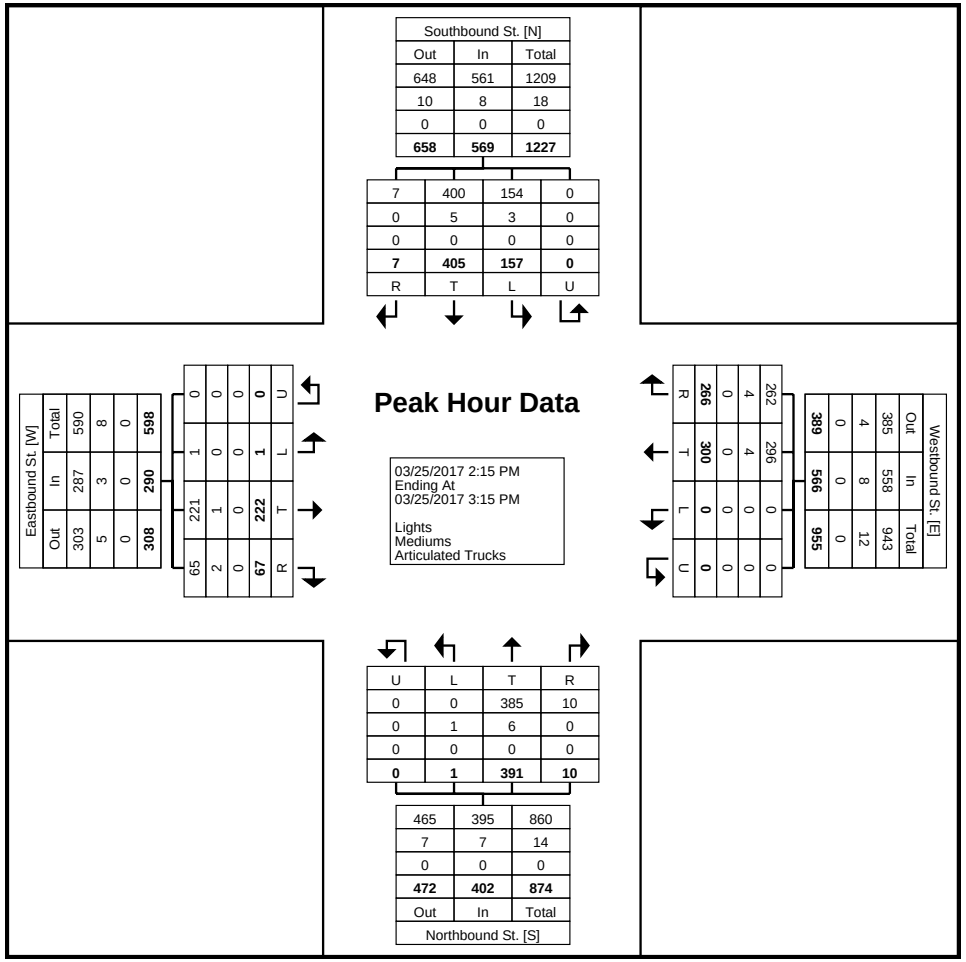

Turning Movement Peak Hour Data Plot (2:15 PM)

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"Working Today for a Better Tomorrow"

Count Name: Quaker Ln and Braddock Rd
10/25/2016
Site Code:
Start Date: 10/25/2016
Page No: 1

Turning Movement Data

Start Time	Southbound St. Southbound						Westbound St. Westbound					Northbound St. Northbound						Eastbound St. Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	7	104	0	0	0	111	30	3	0	0	33	9	197	18	0	4	224	22	75	28	0	4	125	493
7:15 AM	11	112	0	0	0	123	40	7	0	1	47	11	184	5	0	2	200	10	77	33	1	2	121	491
7:30 AM	15	123	0	0	0	138	75	25	0	1	100	22	154	14	0	5	190	20	116	37	0	4	173	601
7:45 AM	9	121	0	0	0	130	93	32	0	0	125	31	146	18	0	4	195	26	156	34	0	5	216	666
Hourly Total	42	460	0	0	0	502	238	67	0	2	305	73	681	55	0	15	809	78	424	132	1	15	635	2251
8:00 AM	24	104	0	0	4	128	91	25	0	0	116	31	161	22	0	24	214	18	157	49	0	14	224	682
8:15 AM	27	121	0	0	5	148	101	27	0	1	128	21	167	14	0	25	202	15	188	40	0	6	243	721
8:30 AM	16	126	0	0	2	142	71	10	0	0	81	23	167	16	0	15	206	20	119	21	0	6	160	589
8:45 AM	17	136	0	0	0	153	63	20	1	1	84	15	143	18	0	5	176	20	112	19	0	4	151	564
Hourly Total	84	487	0	0	11	571	326	82	1	2	409	90	638	70	0	69	798	73	576	129	0	30	778	2556
9:00 AM	8	106	0	0	1	114	57	16	0	0	73	13	117	21	0	5	151	33	67	23	0	5	123	461
9:15 AM	15	93	0	0	1	108	71	14	0	0	85	11	140	22	0	9	173	20	67	15	0	4	102	468
9:30 AM	15	96	0	0	0	111	30	11	0	1	41	12	148	19	0	5	179	13	33	23	0	3	69	400
9:45 AM	16	94	0	0	0	110	44	17	0	0	61	23	136	13	0	8	172	8	44	6	0	6	58	401
Hourly Total	54	389	0	0	2	443	202	58	0	1	260	59	541	75	0	27	675	74	211	67	0	18	352	1730
10:00 AM	16	81	0	0	0	97	27	6	0	0	33	18	119	12	0	3	149	15	36	16	0	3	67	346
10:15 AM	13	94	1	0	0	108	39	13	0	0	52	12	132	10	0	7	154	15	25	14	0	5	54	368
10:30 AM	12	88	0	0	0	100	43	14	0	0	57	17	110	15	0	0	142	13	27	10	0	2	50	349
10:45 AM	17	74	0	0	3	91	48	9	0	1	57	17	112	21	1	2	151	14	19	7	0	3	40	339
Hourly Total	58	337	1	0	3	396	157	42	0	1	199	64	473	58	1	12	596	57	107	47	0	13	211	1402
11:00 AM	13	85	0	1	3	99	39	8	0	0	47	15	99	27	0	1	141	16	33	12	0	1	61	348
11:15 AM	21	79	0	0	2	100	37	9	0	0	46	21	117	20	0	4	158	18	38	10	0	1	66	370
11:30 AM	10	102	0	0	2	112	40	9	0	0	49	15	117	12	0	1	144	16	36	13	0	1	65	370
11:45 AM	10	92	0	0	1	102	52	21	0	0	73	12	126	26	1	5	165	14	42	10	0	5	66	406
Hourly Total	54	358	0	1	8	413	168	47	0	0	215	63	459	85	1	11	608	64	149	45	0	8	258	1494
12:00 PM	10	100	0	0	1	110	59	12	0	0	71	22	115	16	0	4	153	20	41	16	0	7	77	411
12:15 PM	21	94	0	0	1	115	41	10	0	0	51	18	95	11	0	2	124	22	25	14	0	1	61	351
12:30 PM	20	99	1	0	0	120	54	11	0	0	65	17	114	18	0	1	149	14	46	11	0	1	71	405
12:45 PM	16	105	0	0	0	121	54	12	1	0	67	21	105	22	0	0	148	21	52	17	0	1	90	426
Hourly Total	67	398	1	0	2	466	208	45	1	0	254	78	429	67	0	7	574	77	164	58	0	10	299	1593
1:00 PM	19	117	0	0	0	136	52	17	0	1	69	9	105	19	0	5	133	12	31	8	0	1	51	389
1:15 PM	10	117	0	0	0	127	57	19	0	0	76	15	96	23	0	1	134	8	51	14	0	4	73	410
1:30 PM	15	126	0	0	2	141	48	14	0	0	62	16	113	10	0	4	139	11	28	16	0	6	55	397
1:45 PM	23	111	0	0	6	134	58	21	0	0	79	23	85	13	0	16	121	12	45	15	2	6	74	408
Hourly Total	67	471	0	0	8	538	215	71	0	1	286	63	399	65	0	26	527	43	155	53	2	17	253	1604
2:00 PM	19	113	0	0	0	132	60	23	0	0	83	31	126	19	0	9	176	17	43	13	0	5	73	464

2:15 PM	12	138	1	0	0	151	42	20	0	0	62	29	87	19	0	5	135	19	40	23	0	3	82	430
2:30 PM	18	132	0	0	0	150	69	13	0	0	82	15	120	15	0	2	150	17	50	23	0	0	90	472
2:45 PM	16	146	1	0	0	163	52	15	0	0	67	25	124	25	0	6	174	17	60	17	0	3	94	498
Hourly Total	65	529	2	0	0	596	223	71	0	0	294	100	457	78	0	22	635	70	193	76	0	11	339	1864
3:00 PM	22	118	0	0	5	140	71	26	0	0	97	18	108	25	0	17	151	8	88	22	0	18	118	506
3:15 PM	21	165	0	0	8	186	76	28	0	2	104	25	126	27	0	47	178	16	86	22	0	20	124	592
3:30 PM	26	153	0	0	4	179	73	37	0	0	110	29	125	20	0	42	174	19	85	28	0	33	132	595
3:45 PM	25	128	0	0	1	153	108	29	0	0	137	21	135	31	0	25	187	31	85	21	0	9	137	614
Hourly Total	94	564	0	0	18	658	328	120	0	2	448	93	494	103	0	131	690	74	344	93	0	80	511	2307
4:00 PM	25	158	0	0	0	183	69	22	0	0	91	27	142	24	0	17	193	20	91	20	0	13	131	598
4:15 PM	22	131	0	0	2	153	111	36	0	0	147	20	105	17	0	12	142	33	76	19	0	2	128	570
4:30 PM	20	159	0	0	3	179	109	22	0	0	131	13	161	24	0	15	198	31	102	20	1	7	154	662
4:45 PM	33	193	0	0	0	226	95	26	0	0	121	32	149	24	0	7	205	35	81	17	0	9	133	685
Hourly Total	100	641	0	0	5	741	384	106	0	0	490	92	557	89	0	51	738	119	350	76	1	31	546	2515
5:00 PM	20	153	0	0	0	173	87	29	0	0	116	21	141	20	0	9	182	36	97	27	0	9	160	631
5:15 PM	29	177	0	0	3	206	105	35	0	0	140	28	165	30	0	6	223	28	106	25	0	6	159	728
5:30 PM	32	158	0	0	0	190	142	29	0	0	171	28	156	20	0	7	204	44	71	22	0	3	137	702
5:45 PM	26	155	0	0	0	181	140	22	0	0	162	27	154	27	0	9	208	36	97	34	0	2	167	718
Hourly Total	107	643	0	0	3	750	474	115	0	0	589	104	616	97	0	31	817	144	371	108	0	20	623	2779
6:00 PM	33	146	0	0	1	179	112	29	0	0	141	18	161	22	0	11	201	36	86	29	0	5	151	672
6:15 PM	31	158	0	0	0	189	98	20	0	1	118	21	154	22	0	9	197	36	69	22	0	8	127	631
6:30 PM	24	152	0	0	0	176	89	15	0	0	104	15	131	14	0	1	160	31	81	15	0	3	127	567
6:45 PM	23	153	0	0	0	176	85	18	0	0	103	29	121	18	0	1	168	31	84	10	1	1	126	573
Hourly Total	111	609	0	0	1	720	384	82	0	1	466	83	567	76	0	22	726	134	320	76	1	17	531	2443
Grand Total	903	5886	4	1	61	6794	3307	906	2	10	4215	962	6311	918	2	424	8193	1007	3364	960	5	270	5336	24538
Approach %	13.3	86.6	0.1	0.0	-	-	78.5	21.5	0.0	-	-	11.7	77.0	11.2	0.0	-	-	18.9	63.0	18.0	0.1	-	-	-
Total %	3.7	24.0	0.0	0.0	-	27.7	13.5	3.7	0.0	-	17.2	3.9	25.7	3.7	0.0	-	33.4	4.1	13.7	3.9	0.0	-	21.7	-
Lights	862	5721	3	1	-	6587	3190	840	2	-	4032	880	6121	883	2	-	7886	981	3217	920	5	-	5123	23628
% Lights	95.5	97.2	75.0	100.0	-	97.0	96.5	92.7	100.0	-	95.7	91.5	97.0	96.2	100.0	-	96.3	97.4	95.6	95.8	100.0	-	96.0	96.3
Mediums	34	156	1	0	-	191	113	66	0	-	179	80	179	35	0	-	294	25	142	37	0	-	204	868
% Mediums	3.8	2.7	25.0	0.0	-	2.8	3.4	7.3	0.0	-	4.2	8.3	2.8	3.8	0.0	-	3.6	2.5	4.2	3.9	0.0	-	3.8	3.5
Articulated Trucks	6	7	0	0	-	13	3	0	0	-	3	2	10	0	0	-	12	1	0	2	0	-	3	31
% Articulated Trucks	0.7	0.1	0.0	0.0	-	0.2	0.1	0.0	0.0	-	0.1	0.2	0.2	0.0	0.0	-	0.1	0.1	0.0	0.2	0.0	-	0.1	0.1
Bicycles on Road	1	2	0	0	-	3	1	0	0	-	1	0	1	0	0	-	1	0	5	1	0	-	6	11
% Bicycles on Road	0.1	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.1	0.1	0.0	-	0.1	0.0
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	0	-	-	-	-	-	13	-	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	1.6	-	-	-	-	0.0	-	-	-	-	-	3.1	-	-	-	-	-	0.4	-	-
Pedestrians	-	-	-	-	60	-	-	-	-	10	-	-	-	-	-	411	-	-	-	-	-	269	-	-
% Pedestrians	-	-	-	-	98.4	-	-	-	-	100.0	-	-	-	-	-	96.9	-	-	-	-	-	99.6	-	-

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Site Code:
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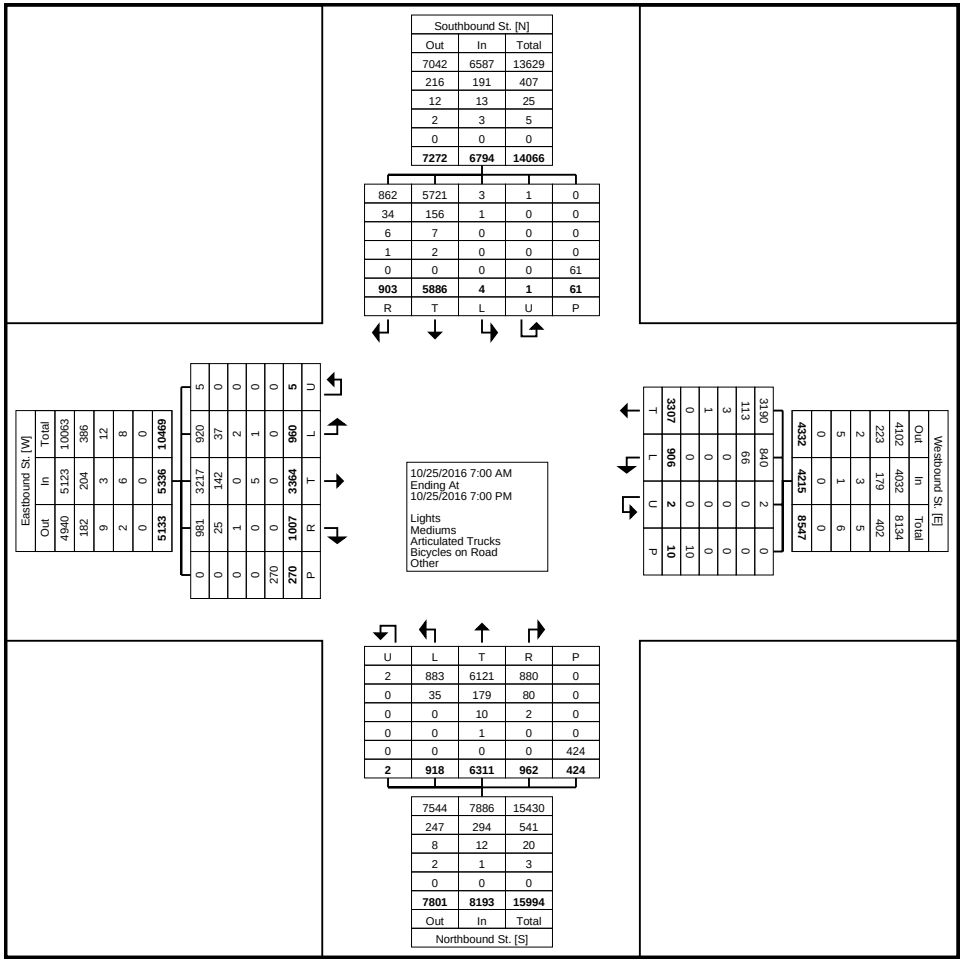

Turning Movement Data Plot

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301 King Street

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Count Name: Quaker Ln and Braddock Rd
10/25/2016
Site Code:
Start Date: 10/25/2016

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Southbound St. Southbound						Westbound St. Westbound					Northbound St. Northbound						Eastbound St. Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:30 AM	15	123	0	0	0	138	75	25	0	1	100	22	154	14	0	5	190	20	116	37	0	4	173	601
7:45 AM	9	121	0	0	0	130	93	32	0	0	125	31	146	18	0	4	195	26	156	34	0	5	216	666
8:00 AM	24	104	0	0	4	128	91	25	0	0	116	31	161	22	0	24	214	18	157	49	0	14	224	682
8:15 AM	27	121	0	0	5	148	101	27	0	1	128	21	167	14	0	25	202	15	188	40	0	6	243	721
Total	75	469	0	0	9	544	360	109	0	2	469	105	628	68	0	58	801	79	617	160	0	29	856	2670
Approach %	13.8	86.2	0.0	0.0	-	-	76.8	23.2	0.0	-	-	13.1	78.4	8.5	0.0	-	-	9.2	72.1	18.7	0.0	-	-	-
Total %	2.8	17.6	0.0	0.0	-	20.4	13.5	4.1	0.0	-	17.6	3.9	23.5	2.5	0.0	-	30.0	3.0	23.1	6.0	0.0	-	32.1	-
PHF	0.694	0.953	0.000	0.000	-	0.919	0.891	0.852	0.000	-	0.916	0.847	0.940	0.773	0.000	-	0.936	0.760	0.820	0.816	0.000	-	0.881	0.926
Lights	69	446	0	0	-	515	346	88	0	-	434	99	613	65	0	-	777	75	591	148	0	-	814	2540
% Lights	92.0	95.1	-	-	-	94.7	96.1	80.7	-	-	92.5	94.3	97.6	95.6	-	-	97.0	94.9	95.8	92.5	-	-	95.1	95.1
Mediums	6	23	0	0	-	29	14	21	0	-	35	6	15	3	0	-	24	4	26	10	0	-	40	128
% Mediums	8.0	4.9	-	-	-	5.3	3.9	19.3	-	-	7.5	5.7	2.4	4.4	-	-	3.0	5.1	4.2	6.3	-	-	4.7	4.8
Articulated Trucks	0	0	0	0	-	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	1
% Articulated Trucks	0.0	0.0	-	-	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.6	-	-	0.1	0.0
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	1
% Bicycles on Road	0.0	0.0	-	-	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.6	-	-	0.1	0.0
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	0	-	-	-	-	-	5	-	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	11.1	-	-	-	-	0.0	-	-	-	-	-	8.6	-	-	-	-	-	3.4	-	-
Pedestrians	-	-	-	-	8	-	-	-	-	2	-	-	-	-	-	53	-	-	-	-	-	28	-	-
% Pedestrians	-	-	-	-	88.9	-	-	-	-	100.0	-	-	-	-	-	91.4	-	-	-	-	-	96.6	-	-

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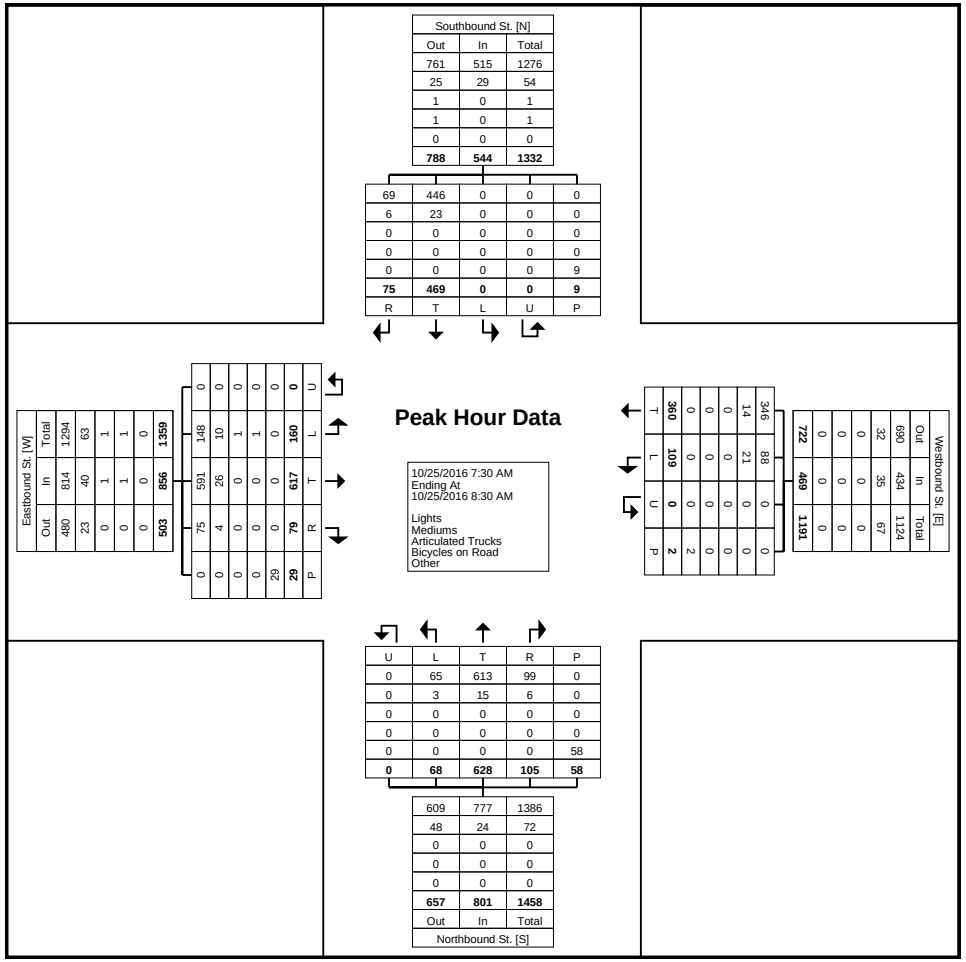

Turning Movement Peak Hour Data Plot (7:30 AM)

City of Alexandria
301 King Street

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"Working Today for a Better Tomorrow"

Count Name: Quaker Ln and Braddock Rd
10/25/2016
Site Code:
Start Date: 10/25/2016

Turning Movement Peak Hour Data (5:15 PM)

Start Time	Southbound St. Southbound						Westbound St. Westbound					Northbound St. Northbound						Eastbound St. Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
5:15 PM	29	177	0	0	3	206	105	35	0	0	140	28	165	30	0	6	223	28	106	25	0	6	159	728
5:30 PM	32	158	0	0	0	190	142	29	0	0	171	28	156	20	0	7	204	44	71	22	0	3	137	702
5:45 PM	26	155	0	0	0	181	140	22	0	0	162	27	154	27	0	9	208	36	97	34	0	2	167	718
6:00 PM	33	146	0	0	1	179	112	29	0	0	141	18	161	22	0	11	201	36	86	29	0	5	151	672
Total	120	636	0	0	4	756	499	115	0	0	614	101	636	99	0	33	836	144	360	110	0	16	614	2820
Approach %	15.9	84.1	0.0	0.0	-	-	81.3	18.7	0.0	-	-	12.1	76.1	11.8	0.0	-	-	23.5	58.6	17.9	0.0	-	-	-
Total %	4.3	22.6	0.0	0.0	-	26.8	17.7	4.1	0.0	-	21.8	3.6	22.6	3.5	0.0	-	29.6	5.1	12.8	3.9	0.0	-	21.8	-
PHF	0.909	0.898	0.000	0.000	-	0.917	0.879	0.821	0.000	-	0.898	0.902	0.964	0.825	0.000	-	0.937	0.818	0.849	0.809	0.000	-	0.919	0.968
Lights	116	627	0	0	-	743	491	113	0	-	604	97	630	98	0	-	825	144	350	108	0	-	602	2774
% Lights	96.7	98.6	-	-	-	98.3	98.4	98.3	-	-	98.4	96.0	99.1	99.0	-	-	98.7	100.0	97.2	98.2	-	-	98.0	98.4
Mediums	3	8	0	0	-	11	8	2	0	-	10	4	5	1	0	-	10	0	10	2	0	-	12	43
% Mediums	2.5	1.3	-	-	-	1.5	1.6	1.7	-	-	1.6	4.0	0.8	1.0	-	-	1.2	0.0	2.8	1.8	-	-	2.0	1.5
Articulated Trucks	0	0	0	0	-	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	1
% Articulated Trucks	0.0	0.0	-	-	-	0.0	0.0	0.0	-	-	0.0	0.0	0.2	0.0	-	-	0.1	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Road	1	1	0	0	-	2	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	2
% Bicycles on Road	0.8	0.2	-	-	-	0.3	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	6.1	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	4	-	-	-	-	0	-	-	-	-	-	31	-	-	-	-	-	16	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	93.9	-	-	-	-	-	100.0	-	-

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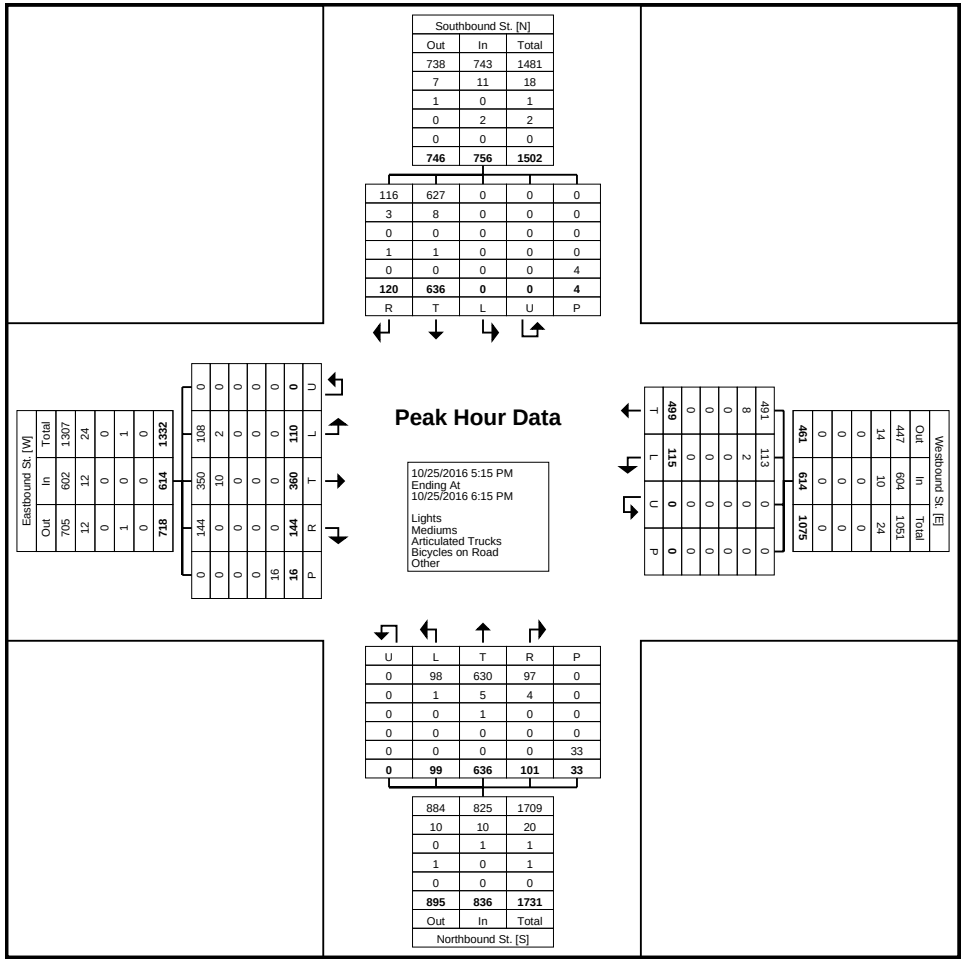

Turning Movement Peak Hour Data Plot (5:15 PM)

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10/29/2016
Site Code:
Start Date: 10/29/2016
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Turning Movement Data

Start Time	Southbound St. Southbound						Westbound St. Westbound					Northbound St. Northbound				Eastbound St. Eastbound					
	Right	Thru	Left	U-Turn	Peds	App. Total	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	App. Total	Thru	Left	U-Turn	Peds	App. Total	Int. Total
9:00 AM	20	93	0	0	0	113	55	11	0	0	66	13	113	22	148	52	16	1	0	69	396
9:15 AM	17	85	0	0	0	102	47	9	0	0	56	17	88	18	123	73	17	0	0	90	371
9:30 AM	22	99	0	0	0	121	43	14	0	0	57	16	114	24	154	66	18	0	0	84	416
9:45 AM	27	105	0	0	0	132	56	27	0	0	83	34	130	22	186	71	15	0	0	86	487
Hourly Total	86	382	0	0	0	468	201	61	0	0	262	80	445	86	611	262	66	1	0	329	1670
10:00 AM	17	90	0	0	0	107	51	23	0	0	74	21	156	29	206	52	17	0	1	69	456
10:15 AM	13	121	0	0	0	134	58	22	0	0	80	25	152	30	207	77	15	0	2	92	513
10:30 AM	23	97	0	0	0	120	50	21	0	0	71	13	152	24	189	82	13	0	2	95	475
10:45 AM	25	126	0	0	0	151	53	16	0	1	69	28	168	25	221	88	25	1	7	114	555
Hourly Total	78	434	0	0	0	512	212	82	0	1	294	87	628	108	823	299	70	1	12	370	1999
11:00 AM	22	125	0	0	1	147	80	39	0	0	119	29	147	26	202	68	19	0	1	87	555
11:15 AM	18	120	0	0	0	138	73	20	0	0	93	25	122	23	170	74	24	0	3	98	499
11:30 AM	26	134	0	0	1	160	64	13	0	0	77	26	135	32	193	90	16	0	5	106	536
11:45 AM	30	143	0	0	0	173	60	20	0	0	80	20	149	27	196	65	12	1	2	78	527
Hourly Total	96	522	0	0	2	618	277	92	0	0	369	100	553	108	761	297	71	1	11	369	2117
12:00 PM	36	119	0	1	3	156	73	24	1	0	98	27	120	40	187	75	24	1	6	100	541
12:15 PM	29	141	0	0	0	170	78	18	0	0	96	23	159	34	216	66	18	0	3	84	566
12:30 PM	29	131	0	0	0	160	72	24	0	0	96	26	122	21	169	74	27	0	8	101	526
12:45 PM	29	123	0	0	0	152	56	23	0	0	79	36	165	30	231	85	24	0	3	109	571
Hourly Total	123	514	0	1	3	638	279	89	1	0	369	112	566	125	803	300	93	1	20	394	2204
1:00 PM	36	143	0	0	5	179	77	16	0	0	93	30	143	22	195	81	17	0	1	98	565
1:15 PM	24	126	1	0	0	151	74	16	0	0	90	22	133	33	188	86	24	0	1	110	539
1:30 PM	32	137	0	0	0	169	58	24	0	0	82	30	140	26	196	75	25	0	1	100	547
1:45 PM	24	122	0	0	0	146	62	22	0	0	84	19	135	20	174	67	24	0	15	91	495
Hourly Total	116	528	1	0	5	645	271	78	0	0	349	101	551	101	753	309	90	0	18	399	2146
2:00 PM	17	115	1	0	0	133	68	20	0	0	88	26	144	32	202	82	19	1	1	102	525
2:15 PM	16	155	0	0	0	171	48	18	0	0	66	20	165	33	218	64	30	0	1	94	549
2:30 PM	28	124	0	0	0	152	74	26	0	0	100	25	145	14	184	59	19	0	3	78	514
2:45 PM	17	114	0	0	0	131	78	19	0	0	97	24	152	29	205	58	30	0	12	88	521
Hourly Total	78	508	1	0	0	587	268	83	0	0	351	95	606	108	809	263	98	1	17	362	2109
3:00 PM	10	143	0	1	7	154	47	25	0	0	72	27	160	23	210	65	27	0	15	92	528
3:15 PM	16	140	0	0	0	156	63	16	0	0	79	14	139	18	171	81	30	1	7	112	518
3:30 PM	24	175	0	0	0	199	69	21	0	0	90	29	162	28	219	54	18	1	2	73	581
3:45 PM	16	133	0	0	7	149	101	44	0	1	145	15	150	22	187	77	25	0	27	102	583
Hourly Total	66	591	0	1	14	658	280	106	0	1	386	85	611	91	787	277	100	2	51	379	2210
4:00 PM	18	132	0	0	7	150	86	30	0	0	116	25	167	18	210	71	23	0	5	94	570
4:15 PM	26	141	1	0	19	168	78	18	0	1	96	19	166	17	202	82	24	0	10	106	572

4:30 PM	13	172	0	0	10	185	57	17	0	1	74	29	153	12	194	73	21	0	1	94	547
4:45 PM	16	104	0	0	7	120	63	12	0	0	75	23	139	30	192	85	29	0	3	114	501
Hourly Total	73	549	1	0	43	623	284	77	0	2	361	96	625	77	798	311	97	0	19	408	2190
5:00 PM	21	133	0	0	11	154	45	13	0	1	58	19	151	17	187	59	31	0	1	90	489
5:15 PM	18	115	0	0	0	133	52	19	0	0	71	18	128	16	162	55	18	0	3	73	439
5:30 PM	28	130	0	0	0	158	50	16	0	0	66	30	173	17	220	49	26	0	7	75	519
5:45 PM	10	127	0	0	0	137	52	15	0	0	67	18	140	14	172	44	17	1	0	62	438
Hourly Total	77	505	0	0	11	582	199	63	0	1	262	85	592	64	741	207	92	1	11	300	1885
6:00 PM	28	108	0	0	5	136	90	33	0	0	123	18	157	28	203	51	21	0	9	72	534
6:15 PM	21	156	0	0	0	177	45	28	0	0	73	20	149	17	186	46	13	0	0	59	495
6:30 PM	10	92	0	0	6	102	38	10	0	0	48	19	118	13	150	53	22	1	0	76	376
6:45 PM	19	100	0	0	0	119	39	6	0	0	45	17	156	20	193	54	20	0	2	74	431
Hourly Total	78	456	0	0	11	534	212	77	0	0	289	74	580	78	732	204	76	1	11	281	1836
Grand Total	871	4989	3	2	89	5865	2483	808	1	5	3292	915	5757	946	7618	2729	853	9	170	3591	20366
Approach %	14.9	85.1	0.1	0.0	-	-	75.4	24.5	0.0	-	-	12.0	75.6	12.4	-	76.0	23.8	0.3	-	-	-
Total %	4.3	24.5	0.0	0.0	-	28.8	12.2	4.0	0.0	-	16.2	4.5	28.3	4.6	37.4	13.4	4.2	0.0	-	17.6	-
Lights	861	4943	3	2	-	5809	2432	798	1	-	3231	903	5704	937	7544	2679	845	9	-	3533	20117
% Lights	98.9	99.1	100.0	100.0	-	99.0	97.9	98.8	100.0	-	98.1	98.7	99.1	99.0	99.0	98.2	99.1	100.0	-	98.4	98.8
Mediums	7	42	0	0	-	49	47	8	0	-	55	11	48	8	67	45	4	0	-	49	220
% Mediums	0.8	0.8	0.0	0.0	-	0.8	1.9	1.0	0.0	-	1.7	1.2	0.8	0.8	0.9	1.6	0.5	0.0	-	1.4	1.1
Articulated Trucks	2	3	0	0	-	5	0	1	0	-	1	0	1	0	1	0	2	0	-	2	9
% Articulated Trucks	0.2	0.1	0.0	0.0	-	0.1	0.0	0.1	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	-	0.1	0.0
Bicycles on Road	1	1	0	0	-	2	4	1	0	-	5	1	4	1	6	5	2	0	-	7	20
% Bicycles on Road	0.1	0.0	0.0	0.0	-	0.0	0.2	0.1	0.0	-	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.0	-	0.2	0.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	0.0	-	-	-	-	-	-	-	-	0.6	-	-
Pedestrians	-	-	-	-	89	-	-	-	-	5	-	-	-	-	-	-	-	-	169	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	-	-	-	99.4	-	-

City of Alexandria
301 King Street

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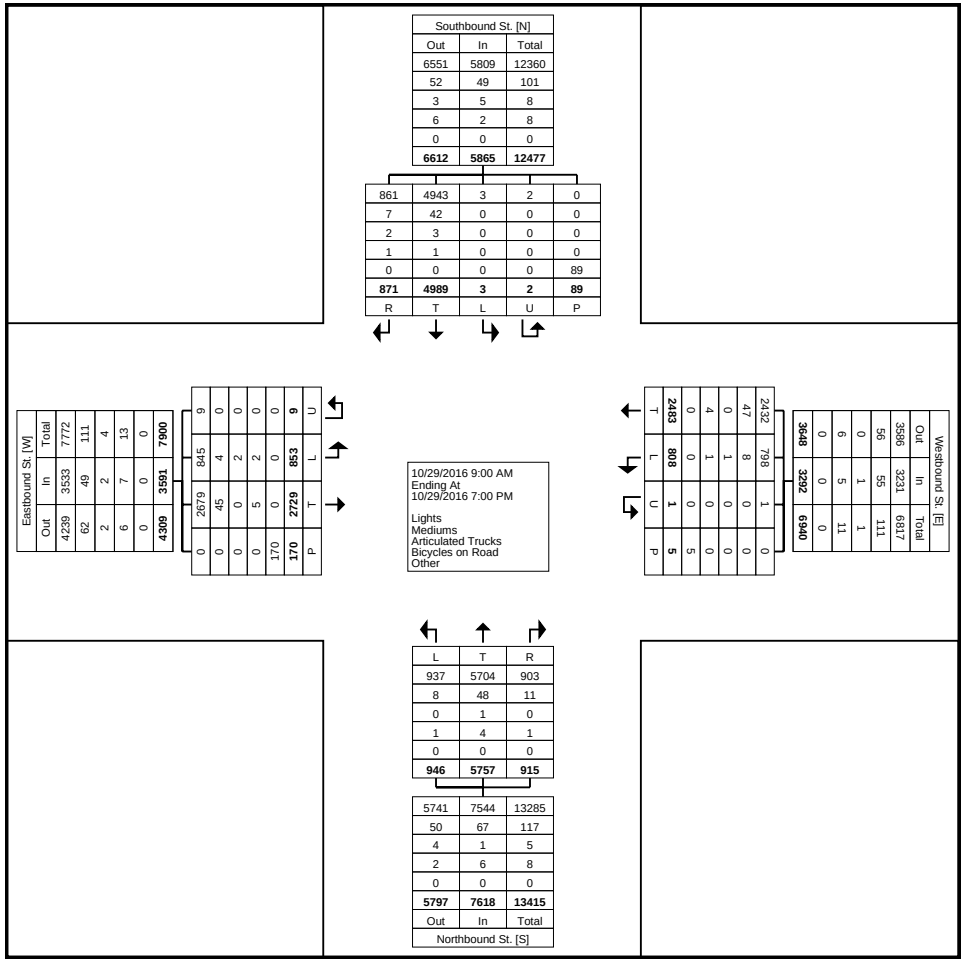

Turning Movement Data Plot

City of Alexandria
301 King Street

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Count Name: Quaker Ln and Braddock Rd
10/29/2016
Site Code:
Start Date: 10/29/2016

Turning Movement Peak Hour Data (10:45 AM)

Start Time	Southbound St. Southbound						Westbound St. Westbound					Northbound St. Northbound				Eastbound St. Eastbound					
	Right	Thru	Left	U-Turn	Peds	App. Total	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	App. Total	Thru	Left	U-Turn	Peds	App. Total	Int. Total
10:45 AM	25	126	0	0	0	151	53	16	0	1	69	28	168	25	221	88	25	1	7	114	555
11:00 AM	22	125	0	0	1	147	80	39	0	0	119	29	147	26	202	68	19	0	1	87	555
11:15 AM	18	120	0	0	0	138	73	20	0	0	93	25	122	23	170	74	24	0	3	98	499
11:30 AM	26	134	0	0	1	160	64	13	0	0	77	26	135	32	193	90	16	0	5	106	536
Total	91	505	0	0	2	596	270	88	0	1	358	108	572	106	786	320	84	1	16	405	2145
Approach %	15.3	84.7	0.0	0.0	-	-	75.4	24.6	0.0	-	-	13.7	72.8	13.5	-	79.0	20.7	0.2	-	-	-
Total %	4.2	23.5	0.0	0.0	-	27.8	12.6	4.1	0.0	-	16.7	5.0	26.7	4.9	36.6	14.9	3.9	0.0	-	18.9	-
PHF	0.875	0.942	0.000	0.000	-	0.931	0.844	0.564	0.000	-	0.752	0.931	0.851	0.828	0.889	0.889	0.840	0.250	-	0.888	0.966
Lights	87	498	0	0	-	585	267	87	0	-	354	107	564	105	776	317	83	1	-	401	2116
% Lights	95.6	98.6	-	-	-	98.2	98.9	98.9	-	-	98.9	99.1	98.6	99.1	98.7	99.1	98.8	100.0	-	99.0	98.6
Mediums	3	6	0	0	-	9	3	1	0	-	4	1	7	1	9	3	1	0	-	4	26
% Mediums	3.3	1.2	-	-	-	1.5	1.1	1.1	-	-	1.1	0.9	1.2	0.9	1.1	0.9	1.2	0.0	-	1.0	1.2
Articulated Trucks	1	1	0	0	-	2	0	0	0	-	0	0	0	0	0	0	0	0	-	0	2
% Articulated Trucks	1.1	0.2	-	-	-	0.3	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	0.1
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	0	1	0	1	0	0	0	-	0	1
% Bicycles on Road	0.0	0.0	-	-	-	0.0	0.0	0.0	-	-	0.0	0.0	0.2	0.0	0.1	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	0.0	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	2	-	-	-	-	1	-	-	-	-	-	-	-	-	16	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	-	-	-	100.0	-	-

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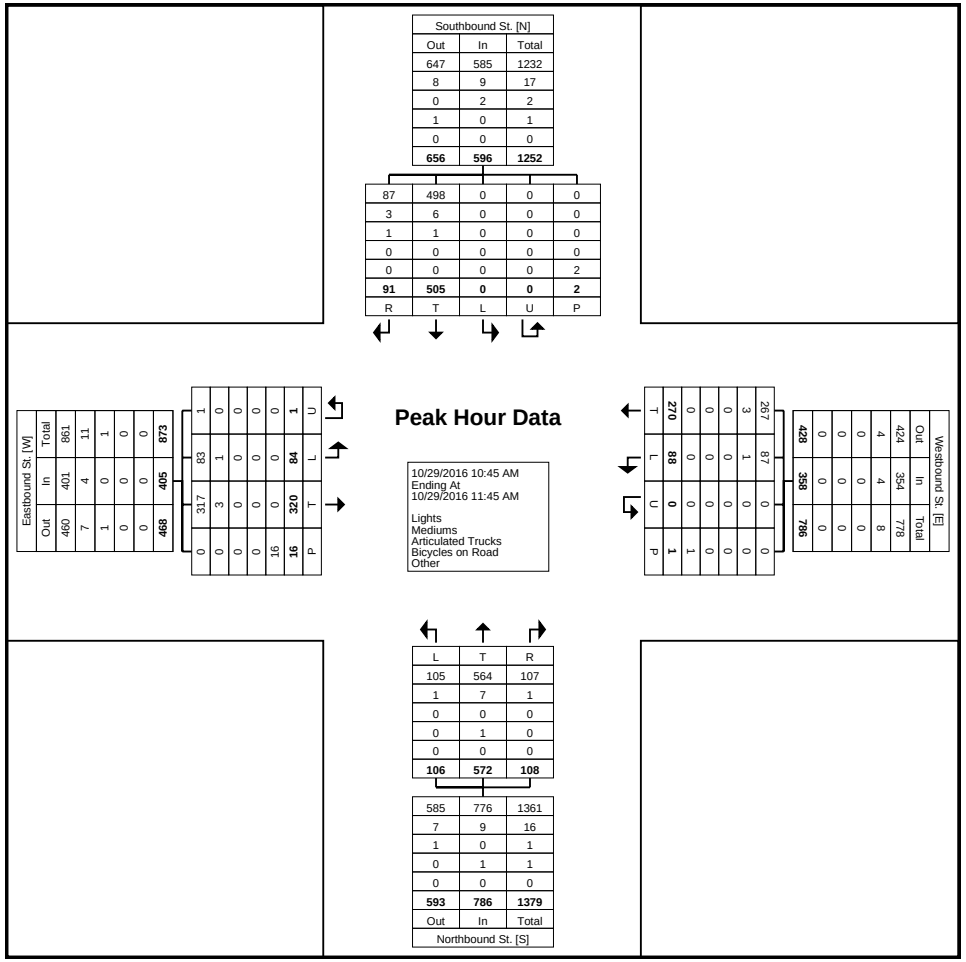

Turning Movement Peak Hour Data Plot (10:45 AM)

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Count Name: Quaker Ln and Braddock Rd
10/29/2016
Site Code:
Start Date: 10/29/2016

Turning Movement Peak Hour Data (3:30 PM)

Start Time	Southbound St. Southbound						Westbound St. Westbound					Northbound St. Northbound				Eastbound St. Eastbound					
	Right	Thru	Left	U-Turn	Peds	App. Total	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	App. Total	Thru	Left	U-Turn	Peds	App. Total	Int. Total
3:30 PM	24	175	0	0	0	199	69	21	0	0	90	29	162	28	219	54	18	1	2	73	581
3:45 PM	16	133	0	0	7	149	101	44	0	1	145	15	150	22	187	77	25	0	27	102	583
4:00 PM	18	132	0	0	7	150	86	30	0	0	116	25	167	18	210	71	23	0	5	94	570
4:15 PM	26	141	1	0	19	168	78	18	0	1	96	19	166	17	202	82	24	0	10	106	572
Total	84	581	1	0	33	666	334	113	0	2	447	88	645	85	818	284	90	1	44	375	2306
Approach %	12.6	87.2	0.2	0.0	-	-	74.7	25.3	0.0	-	-	10.8	78.9	10.4	-	75.7	24.0	0.3	-	-	-
Total %	3.6	25.2	0.0	0.0	-	28.9	14.5	4.9	0.0	-	19.4	3.8	28.0	3.7	35.5	12.3	3.9	0.0	-	16.3	-
PHF	0.808	0.830	0.250	0.000	-	0.837	0.827	0.642	0.000	-	0.771	0.759	0.966	0.759	0.934	0.866	0.900	0.250	-	0.884	0.989
Lights	84	575	1	0	-	660	330	111	0	-	441	88	642	85	815	278	90	1	-	369	2285
% Lights	100.0	99.0	100.0	-	-	99.1	98.8	98.2	-	-	98.7	100.0	99.5	100.0	99.6	97.9	100.0	100.0	-	98.4	99.1
Mediums	0	5	0	0	-	5	4	2	0	-	6	0	3	0	3	4	0	0	-	4	18
% Mediums	0.0	0.9	0.0	-	-	0.8	1.2	1.8	-	-	1.3	0.0	0.5	0.0	0.4	1.4	0.0	0.0	-	1.1	0.8
Articulated Trucks	0	0	0	0	-	0	0	0	0	-	0	0	0	0	0	0	0	0	-	0	0
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	1	0	0	-	1	0	0	0	-	0	0	0	0	0	2	0	0	-	2	3
% Bicycles on Road	0.0	0.2	0.0	-	-	0.2	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	-	0.5	0.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	0.0	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	33	-	-	-	-	2	-	-	-	-	-	-	-	-	44	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	-	-	-	100.0	-	-

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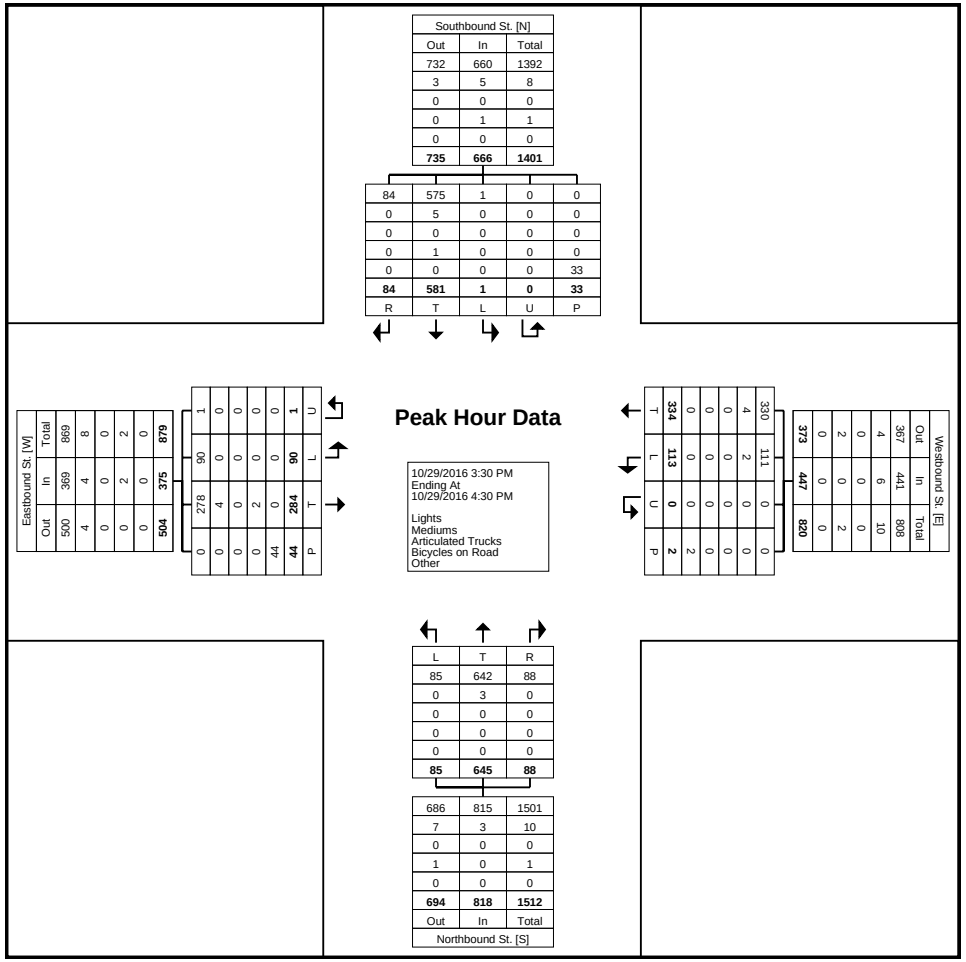

Turning Movement Peak Hour Data Plot (3:30 PM)

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10/29/2016
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Turning Movement Data

Start Time	Southbound St. Southbound						Westbound St. Westbound						Northbound St. Northbound						Eastbound St. Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	17	52	0	0	0	69	4	95	0	0	0	99	1	142	42	0	0	185	24	95	30	0	0	149	502
7:15 AM	22	71	0	0	0	93	5	127	0	0	0	132	1	179	30	0	0	210	39	131	21	0	0	191	626
7:30 AM	23	86	0	0	0	109	7	135	0	0	1	142	0	130	47	1	0	178	39	167	43	0	1	249	678
7:45 AM	27	91	0	0	1	118	9	130	0	0	0	139	0	142	40	0	0	182	22	156	54	0	1	232	671
Hourly Total	89	300	0	0	1	389	25	487	0	0	1	512	2	593	159	1	0	755	124	549	148	0	2	821	2477
8:00 AM	44	81	0	0	1	125	9	120	0	0	0	129	0	148	44	0	0	192	17	182	53	0	0	252	698
8:15 AM	46	93	0	0	0	139	15	137	0	0	0	152	0	111	45	0	0	156	31	185	49	0	0	265	712
8:30 AM	37	77	0	0	2	114	8	148	0	0	0	156	3	86	50	0	0	139	41	178	49	0	0	268	677
8:45 AM	30	87	0	0	4	117	4	111	0	0	0	115	0	126	52	0	0	178	30	144	26	0	2	200	610
Hourly Total	157	338	0	0	7	495	36	516	0	0	0	552	3	471	191	0	0	665	119	689	177	0	2	985	2697
9:00 AM	37	80	0	0	0	117	8	116	0	0	0	124	0	102	52	0	0	154	28	151	44	0	0	223	618
9:15 AM	25	53	0	0	1	78	8	134	0	0	1	142	0	116	46	0	0	162	31	104	29	0	0	164	546
9:30 AM	30	79	0	0	0	109	9	86	0	0	0	95	0	116	47	0	1	163	25	96	33	0	0	154	521
9:45 AM	27	65	0	0	0	92	11	81	0	0	0	92	0	92	28	0	0	120	22	113	45	2	0	182	486
Hourly Total	119	277	0	0	1	396	36	417	0	0	1	453	0	426	173	0	1	599	106	464	151	2	0	723	2171
10:00 AM	30	79	1	0	0	110	3	88	0	0	0	91	0	124	44	0	0	168	18	92	25	0	0	135	504
10:15 AM	33	75	0	0	7	108	11	99	0	0	0	110	0	86	29	0	0	115	26	97	35	0	0	158	491
10:30 AM	27	55	0	0	1	82	7	91	0	0	0	98	0	93	48	0	0	141	24	96	25	0	2	145	466
10:45 AM	23	65	0	0	0	88	14	75	0	0	1	89	0	89	43	0	0	132	42	102	40	0	0	184	493
Hourly Total	113	274	1	0	8	388	35	353	0	0	1	388	0	392	164	0	0	556	110	387	125	0	2	622	1954
11:00 AM	41	49	0	0	1	90	12	103	0	0	0	115	0	72	43	0	0	115	35	107	25	0	1	167	487
11:15 AM	26	84	0	1	0	111	10	85	0	0	0	95	1	122	38	0	0	161	25	97	33	0	0	155	522
11:30 AM	38	78	0	0	0	116	11	109	0	0	1	120	0	95	29	0	0	124	23	103	38	0	1	164	524
11:45 AM	36	57	0	0	1	93	17	133	0	0	0	150	3	102	30	0	0	135	32	100	33	0	1	165	543
Hourly Total	141	268	0	1	2	410	50	430	0	0	1	480	4	391	140	0	0	535	115	407	129	0	3	651	2076
12:00 PM	42	67	1	0	1	110	8	127	0	0	0	135	0	99	37	0	0	136	34	121	45	0	0	200	581
12:15 PM	49	66	0	0	2	115	13	104	0	0	2	117	0	77	40	0	0	117	37	110	28	1	3	176	525
12:30 PM	57	73	0	0	0	130	9	109	0	0	0	118	0	89	38	0	0	127	31	107	35	1	0	174	549
12:45 PM	36	68	0	0	1	104	8	85	0	0	0	93	0	66	29	0	0	95	37	100	46	1	0	184	476
Hourly Total	184	274	1	0	4	459	38	425	0	0	2	463	0	331	144	0	0	475	139	438	154	3	3	734	2131
1:00 PM	37	58	1	0	0	96	7	107	0	0	1	114	0	70	33	0	0	103	39	104	42	0	0	185	498
1:15 PM	35	85	0	0	3	120	10	104	0	0	0	114	0	89	35	0	0	124	44	97	41	1	0	183	541
1:30 PM	35	94	0	0	0	129	15	98	0	0	0	113	1	85	27	0	0	113	44	116	46	1	0	207	562
1:45 PM	44	69	0	0	0	113	10	117	0	0	0	127	0	104	40	0	6	144	35	106	32	0	0	173	557
Hourly Total	151	306	1	0	3	458	42	426	0	0	1	468	1	348	135	0	6	484	162	423	161	2	0	748	2158
2:00 PM	44	82	0	0	0	126	13	99	0	0	0	112	0	96	35	0	0	131	47	115	47	0	1	209	578

2:15 PM	31	88	1	0	0	120	4	117	0	0	2	121	0	91	25	0	1	116	37	135	41	0	1	213	570
2:30 PM	36	116	0	0	0	152	12	104	0	0	1	116	1	78	43	0	1	122	43	120	43	0	0	206	596
2:45 PM	52	101	0	0	0	153	11	110	0	0	1	121	1	96	49	0	0	146	32	131	31	0	0	194	614
Hourly Total	163	387	1	0	0	551	40	430	0	0	4	470	2	361	152	0	2	515	159	501	162	0	2	822	2358
3:00 PM	46	118	0	0	3	164	5	105	0	0	0	110	2	98	41	1	0	142	44	119	43	0	2	206	622
3:15 PM	56	113	0	0	4	169	7	140	0	0	0	147	0	88	33	0	0	121	40	146	33	0	2	219	656
3:30 PM	47	91	0	0	0	138	6	159	0	0	0	165	1	120	41	0	0	162	44	124	31	0	2	199	664
3:45 PM	67	119	0	0	1	186	7	163	0	0	0	170	1	133	46	0	0	180	55	129	37	0	2	221	757
Hourly Total	216	441	0	0	8	657	25	567	0	0	0	592	4	439	161	1	0	605	183	518	144	0	8	845	2699
4:00 PM	53	118	0	0	2	171	14	123	0	0	0	137	0	116	44	0	1	160	41	115	34	0	0	190	658
4:15 PM	45	120	0	0	2	165	11	151	0	0	0	162	1	105	35	0	0	141	53	155	33	0	1	241	709
4:30 PM	46	142	0	0	0	188	4	155	0	0	0	159	1	125	48	0	0	174	39	153	34	0	0	226	747
4:45 PM	56	133	0	0	0	189	16	150	0	0	0	166	0	108	47	0	0	155	49	165	50	0	0	264	774
Hourly Total	200	513	0	0	4	713	45	579	0	0	0	624	2	454	174	0	1	630	182	588	151	0	1	921	2888
5:00 PM	36	122	0	0	0	158	12	161	0	0	0	173	1	129	56	0	0	186	41	140	32	0	0	213	730
5:15 PM	70	151	0	0	1	221	19	180	0	0	0	199	1	152	50	0	0	203	40	146	37	0	0	223	846
5:30 PM	44	125	0	0	1	169	14	212	0	0	0	226	0	119	45	0	0	164	55	134	40	0	1	229	788
5:45 PM	63	152	0	0	1	215	15	176	0	0	2	191	1	153	56	0	0	210	48	118	42	0	0	208	824
Hourly Total	213	550	0	0	3	763	60	729	0	0	2	789	3	553	207	0	0	763	184	538	151	0	1	873	3188
6:00 PM	53	143	0	0	5	196	8	156	0	0	0	164	0	116	41	0	0	157	48	153	32	0	0	233	750
6:15 PM	55	101	0	0	0	156	18	148	0	0	0	166	0	114	47	0	0	161	54	133	43	1	0	231	714
6:30 PM	50	121	0	0	1	171	10	101	0	0	0	111	0	120	34	0	0	154	43	151	41	0	0	235	671
6:45 PM	28	113	0	0	2	141	20	114	0	0	0	134	0	80	28	0	0	108	34	163	36	0	0	233	616
Hourly Total	186	478	0	0	8	664	56	519	0	0	0	575	0	430	150	0	0	580	179	600	152	1	0	932	2751
Grand Total	1932	4406	4	1	49	6343	488	5878	0	0	13	6366	21	5189	1950	2	10	7162	1762	6102	1805	8	24	9677	29548
Approach %	30.5	69.5	0.1	0.0	-	-	7.7	92.3	0.0	0.0	-	-	0.3	72.5	27.2	0.0	-	-	18.2	63.1	18.7	0.1	-	-	-
Total %	6.5	14.9	0.0	0.0	-	21.5	1.7	19.9	0.0	0.0	-	21.5	0.1	17.6	6.6	0.0	-	24.2	6.0	20.7	6.1	0.0	-	32.8	-
Lights	1899	4296	4	1	-	6200	471	5661	0	0	-	6132	20	5046	1873	2	-	6941	1692	5883	1761	8	-	9344	28617
% Lights	98.3	97.5	100.0	100.0	-	97.7	96.5	96.3	-	-	-	96.3	95.2	97.2	96.1	100.0	-	96.9	96.0	96.4	97.6	100.0	-	96.6	96.8
Mediums	32	100	0	0	-	132	15	204	0	0	-	219	0	136	70	0	-	206	61	204	40	0	-	305	862
% Mediums	1.7	2.3	0.0	0.0	-	2.1	3.1	3.5	-	-	-	3.4	0.0	2.6	3.6	0.0	-	2.9	3.5	3.3	2.2	0.0	-	3.2	2.9
Articulated Trucks	1	4	0	0	-	5	1	13	0	0	-	14	1	6	6	0	-	13	7	12	3	0	-	22	54
% Articulated Trucks	0.1	0.1	0.0	0.0	-	0.1	0.2	0.2	-	-	-	0.2	4.8	0.1	0.3	0.0	-	0.2	0.4	0.2	0.2	0.0	-	0.2	0.2
Bicycles on Road	0	6	0	0	-	6	1	0	0	0	-	1	0	1	1	0	-	2	2	3	1	0	-	6	15
% Bicycles on Road	0.0	0.1	0.0	0.0	-	0.1	0.2	0.0	-	-	-	0.0	0.0	0.0	0.1	0.0	-	0.0	0.1	0.0	0.1	0.0	-	0.1	0.1
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	2.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	4.2	-	-
Pedestrians	-	-	-	-	48	-	-	-	-	-	13	-	-	-	-	-	10	-	-	-	-	-	23	-	-
% Pedestrians	-	-	-	-	98.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	95.8	-	-

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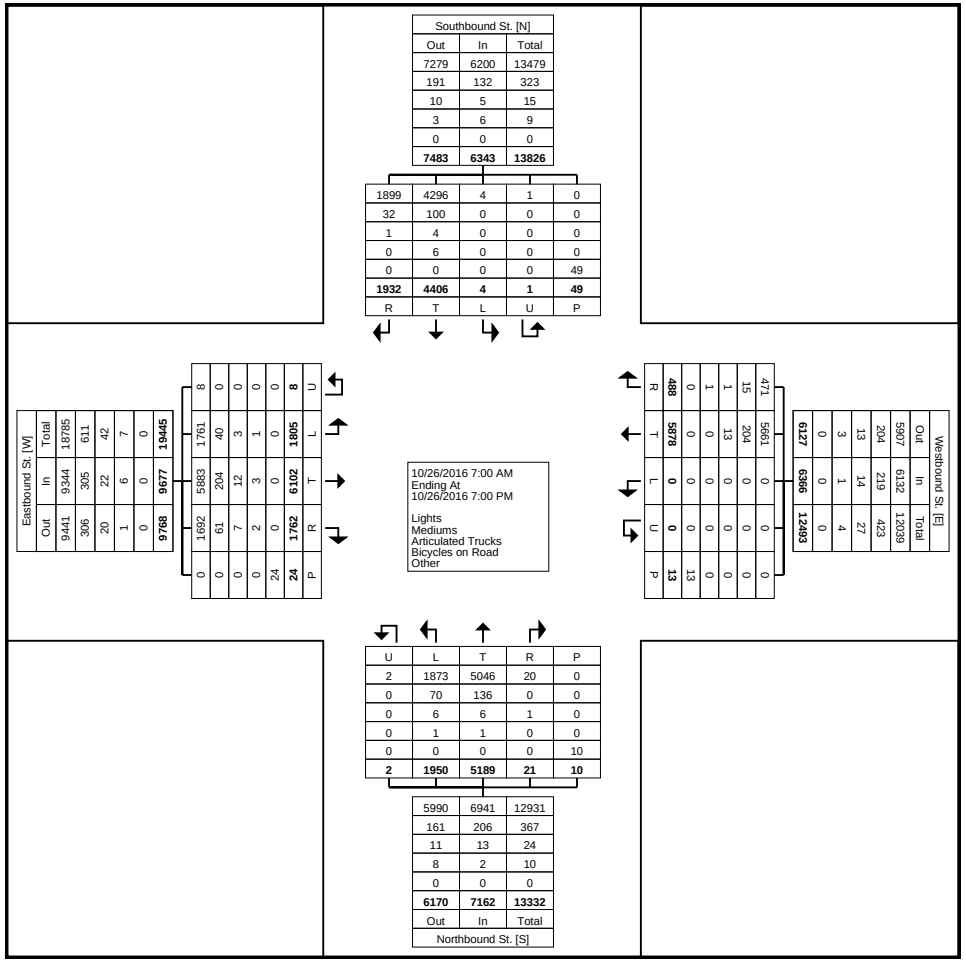

Turning Movement Data Plot

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Count Name: Quaker Ln and King St 10/26/2016
Site Code:
Start Date: 10/26/2016

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Southbound St. Southbound						Westbound St. Westbound						Northbound St. Northbound						Eastbound St. Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:30 AM	23	86	0	0	0	109	7	135	0	0	1	142	0	130	47	1	0	178	39	167	43	0	1	249	678
7:45 AM	27	91	0	0	1	118	9	130	0	0	0	139	0	142	40	0	0	182	22	156	54	0	1	232	671
8:00 AM	44	81	0	0	1	125	9	120	0	0	0	129	0	148	44	0	0	192	17	182	53	0	0	252	698
8:15 AM	46	93	0	0	0	139	15	137	0	0	0	152	0	111	45	0	0	156	31	185	49	0	0	265	712
Total	140	351	0	0	2	491	40	522	0	0	1	562	0	531	176	1	0	708	109	690	199	0	2	998	2759
Approach %	28.5	71.5	0.0	0.0	-	-	7.1	92.9	0.0	0.0	-	-	0.0	75.0	24.9	0.1	-	-	10.9	69.1	19.9	0.0	-	-	-
Total %	5.1	12.7	0.0	0.0	-	17.8	1.4	18.9	0.0	0.0	-	20.4	0.0	19.2	6.4	0.0	-	25.7	4.0	25.0	7.2	0.0	-	36.2	-
PHF	0.761	0.944	0.000	0.000	-	0.883	0.667	0.953	0.000	0.000	-	0.924	0.000	0.897	0.936	0.250	-	0.922	0.699	0.932	0.921	0.000	-	0.942	0.969
Lights	137	340	0	0	-	477	37	498	0	0	-	535	0	513	166	1	-	680	107	662	192	0	-	961	2653
% Lights	97.9	96.9	-	-	-	97.1	92.5	95.4	-	-	-	95.2	-	96.6	94.3	100.0	-	96.0	98.2	95.9	96.5	-	-	96.3	96.2
Mediums	3	11	0	0	-	14	3	23	0	0	-	26	0	16	10	0	-	26	2	24	7	0	-	33	99
% Mediums	2.1	3.1	-	-	-	2.9	7.5	4.4	-	-	-	4.6	-	3.0	5.7	0.0	-	3.7	1.8	3.5	3.5	-	-	3.3	3.6
Articulated Trucks	0	0	0	0	-	0	0	1	0	0	-	1	0	1	0	0	-	1	0	3	0	0	-	3	5
% Articulated Trucks	0.0	0.0	-	-	-	0.0	0.0	0.2	-	-	-	0.2	-	0.2	0.0	0.0	-	0.1	0.0	0.4	0.0	-	-	0.3	0.2
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	0	1	0	0	-	1	2
% Bicycles on Road	0.0	0.0	-	-	-	0.0	0.0	0.0	-	-	-	0.0	-	0.2	0.0	0.0	-	0.1	0.0	0.1	0.0	-	-	0.1	0.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

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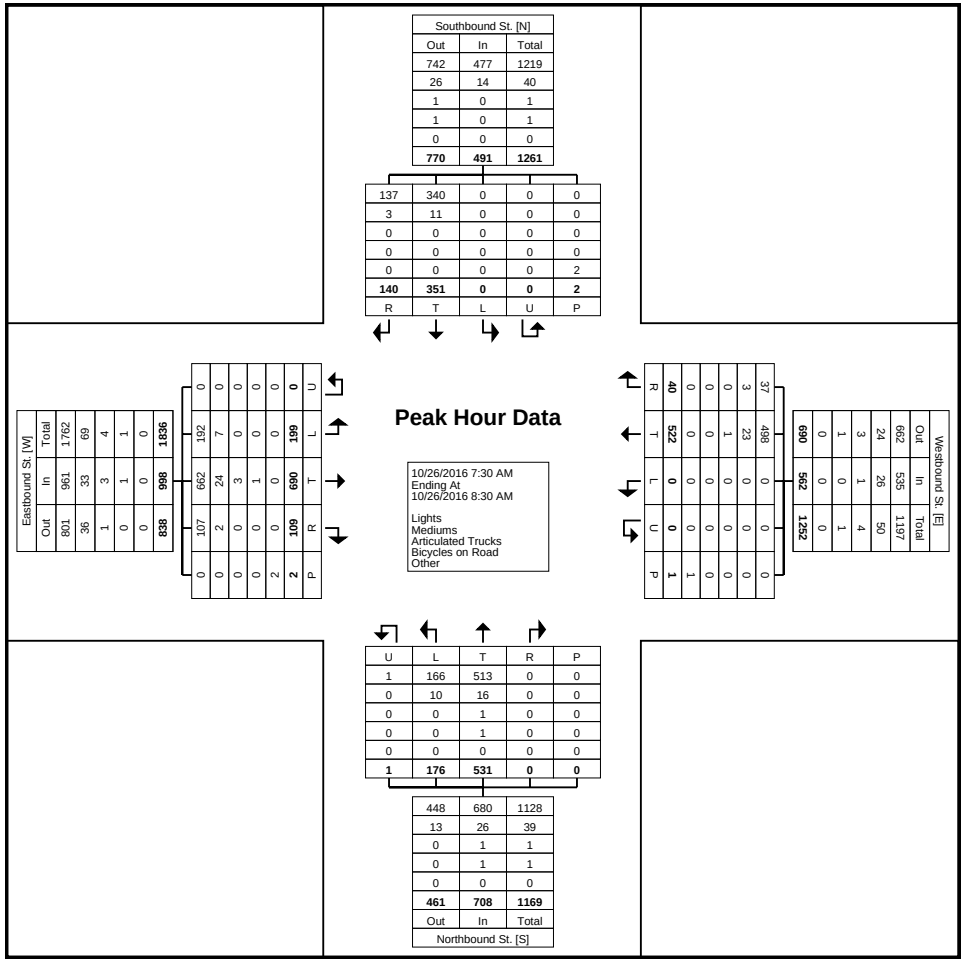

Turning Movement Peak Hour Data Plot (7:30 AM)

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Count Name: Quaker Ln and King St 10/26/2016
Site Code:
Start Date: 10/26/2016

Turning Movement Peak Hour Data (5:15 PM)

Start Time	Southbound St. Southbound						Westbound St. Westbound						Northbound St. Northbound						Eastbound St. Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
5:15 PM	70	151	0	0	1	221	19	180	0	0	0	199	1	152	50	0	0	203	40	146	37	0	0	223	846
5:30 PM	44	125	0	0	1	169	14	212	0	0	0	226	0	119	45	0	0	164	55	134	40	0	1	229	788
5:45 PM	63	152	0	0	1	215	15	176	0	0	2	191	1	153	56	0	0	210	48	118	42	0	0	208	824
6:00 PM	53	143	0	0	5	196	8	156	0	0	0	164	0	116	41	0	0	157	48	153	32	0	0	233	750
Total	230	571	0	0	8	801	56	724	0	0	2	780	2	540	192	0	0	734	191	551	151	0	1	893	3208
Approach %	28.7	71.3	0.0	0.0	-	-	7.2	92.8	0.0	0.0	-	-	0.3	73.6	26.2	0.0	-	-	21.4	61.7	16.9	0.0	-	-	-
Total %	7.2	17.8	0.0	0.0	-	25.0	1.7	22.6	0.0	0.0	-	24.3	0.1	16.8	6.0	0.0	-	22.9	6.0	17.2	4.7	0.0	-	27.8	-
PHF	0.821	0.939	0.000	0.000	-	0.906	0.737	0.854	0.000	0.000	-	0.863	0.500	0.882	0.857	0.000	-	0.874	0.868	0.900	0.899	0.000	-	0.958	0.948
Lights	228	568	0	0	-	796	56	705	0	0	-	761	2	535	190	0	-	727	184	538	151	0	-	873	3157
% Lights	99.1	99.5	-	-	-	99.4	100.0	97.4	-	-	-	97.6	100.0	99.1	99.0	-	-	99.0	96.3	97.6	100.0	-	-	97.8	98.4
Mediums	2	2	0	0	-	4	0	18	0	0	-	18	0	5	2	0	-	7	7	12	0	0	-	19	48
% Mediums	0.9	0.4	-	-	-	0.5	0.0	2.5	-	-	-	2.3	0.0	0.9	1.0	-	-	1.0	3.7	2.2	0.0	-	-	2.1	1.5
Articulated Trucks	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	0	1	0	0	-	1	2
% Articulated Trucks	0.0	0.0	-	-	-	0.0	0.0	0.1	-	-	-	0.1	0.0	0.0	0.0	-	-	0.0	0.0	0.2	0.0	-	-	0.1	0.1
Bicycles on Road	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1
% Bicycles on Road	0.0	0.2	-	-	-	0.1	0.0	0.0	-	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	8	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

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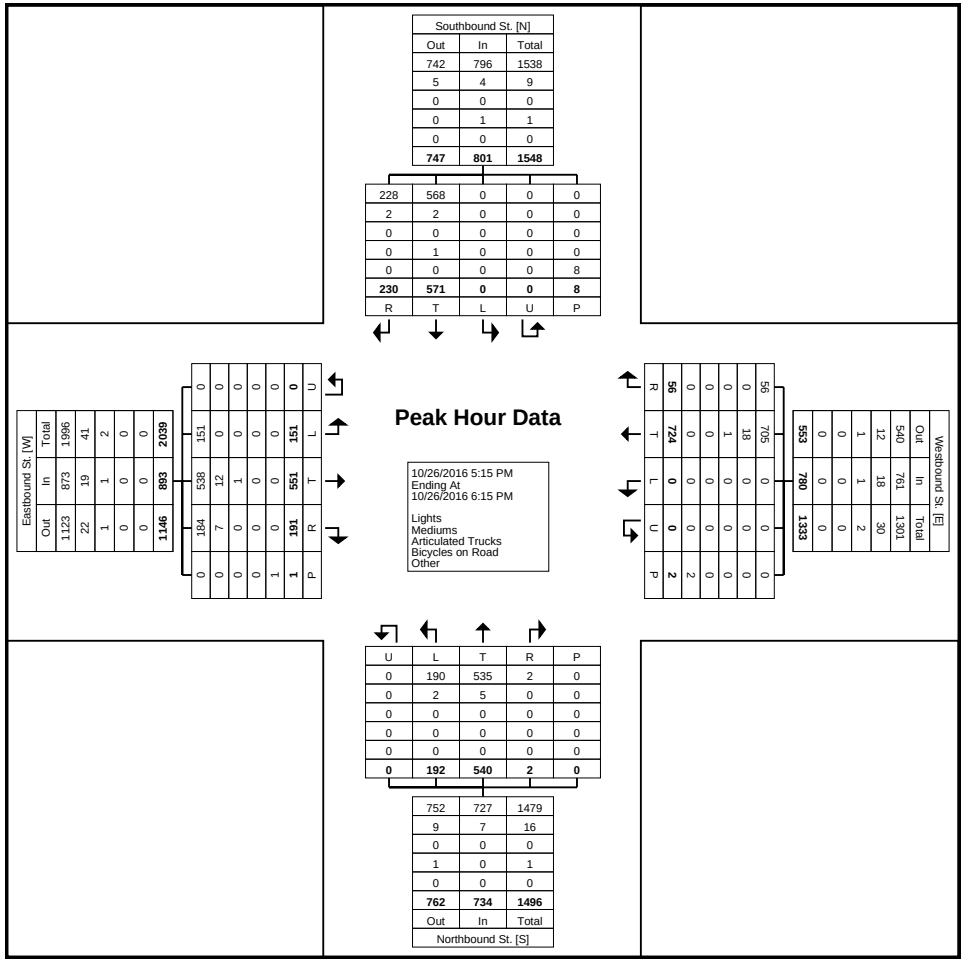

Turning Movement Peak Hour Data Plot (5:15 PM)

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Count Name: Quaker Ln and King St 10/29/2016
Site Code:
Start Date: 10/29/2016

Turning Movement Data

Start Time	Southbound St. Southbound						Westbound St. Westbound						Northbound St. Northbound						Eastbound St. Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
9:00 AM	28	58	1	0	1	87	10	119	0	0	1	129	0	87	36	0	0	123	23	123	28	0	0	174	513
9:15 AM	30	72	0	0	1	102	12	102	0	0	0	114	0	72	29	0	0	101	21	87	38	0	0	146	463
9:30 AM	34	87	0	0	3	121	13	102	0	0	0	115	0	119	38	0	0	157	30	95	30	1	0	156	549
9:45 AM	40	75	0	0	1	115	11	122	0	0	2	133	1	109	51	0	0	161	37	133	30	0	0	200	609
Hourly Total	132	292	1	0	6	425	46	445	0	0	3	491	1	387	154	0	0	542	111	438	126	1	0	676	2134
10:00 AM	34	68	0	0	2	102	14	115	0	0	0	129	0	111	47	0	0	158	35	101	30	1	0	167	556
10:15 AM	45	99	0	0	2	144	10	106	0	0	0	116	3	123	48	0	0	174	29	132	44	0	0	205	639
10:30 AM	39	80	0	0	0	119	16	138	0	0	0	154	2	108	49	0	0	159	38	128	50	0	0	216	648
10:45 AM	33	93	0	0	0	126	9	104	0	0	1	113	1	143	49	0	0	193	29	112	38	0	0	179	611
Hourly Total	151	340	0	0	4	491	49	463	0	0	1	512	6	485	193	0	0	684	131	473	162	1	0	767	2454
11:00 AM	42	110	0	0	0	152	16	163	0	0	0	179	0	103	46	0	0	149	40	117	37	1	0	195	675
11:15 AM	43	69	0	0	3	112	12	132	0	0	0	144	0	97	42	0	0	139	31	134	41	0	2	206	601
11:30 AM	45	103	0	0	7	148	23	114	0	0	0	137	1	109	43	0	0	153	39	99	40	0	1	178	616
11:45 AM	60	104	0	0	2	164	20	133	0	0	0	153	1	107	43	0	0	151	50	162	40	0	0	252	720
Hourly Total	190	386	0	0	12	576	71	542	0	0	0	613	2	416	174	0	0	592	160	512	158	1	3	831	2612
12:00 PM	57	102	0	0	3	159	12	185	0	0	0	197	0	119	35	0	0	154	35	137	49	1	0	222	732
12:15 PM	66	115	0	0	3	181	11	131	0	0	0	142	0	126	51	0	0	177	34	140	52	0	1	226	726
12:30 PM	52	89	0	0	1	141	9	140	0	0	0	149	0	111	43	0	0	154	44	174	49	0	0	267	711
12:45 PM	46	100	0	0	2	146	11	128	1	0	0	140	2	139	41	0	0	182	30	115	40	0	0	185	653
Hourly Total	221	406	0	0	9	627	43	584	1	0	0	628	2	495	170	0	0	667	143	566	190	1	1	900	2822
1:00 PM	45	124	0	0	1	169	13	148	0	0	0	161	1	123	39	1	0	164	51	140	56	0	1	247	741
1:15 PM	55	87	0	0	4	142	16	133	0	0	0	149	0	109	55	0	0	164	33	151	46	0	0	230	685
1:30 PM	36	103	0	0	4	139	12	116	0	0	0	128	0	117	47	0	0	164	40	122	55	0	1	217	648
1:45 PM	44	109	0	0	3	153	16	122	0	0	0	138	0	116	42	0	0	158	30	148	58	0	0	236	685
Hourly Total	180	423	0	0	12	603	57	519	0	0	0	576	1	465	183	1	0	650	154	561	215	0	2	930	2759
2:00 PM	42	85	0	0	1	127	22	141	0	0	0	163	0	107	52	0	4	159	34	125	35	1	0	195	644
2:15 PM	27	104	0	0	1	131	18	106	0	0	0	124	0	152	46	0	0	198	40	126	45	1	0	212	665
2:30 PM	35	81	0	0	0	116	25	158	0	0	0	183	2	112	48	0	0	162	34	145	52	1	0	232	693
2:45 PM	44	100	0	0	2	144	23	153	0	0	0	176	1	134	46	0	0	181	33	108	44	4	0	189	690
Hourly Total	148	370	0	0	4	518	88	558	0	0	0	646	3	505	192	0	4	700	141	504	176	7	0	828	2692
3:00 PM	38	104	0	0	0	142	16	130	0	0	0	146	0	125	40	1	0	166	36	139	47	0	0	222	676
3:15 PM	31	102	0	0	0	133	17	162	0	0	0	179	0	126	46	0	1	172	41	126	43	0	0	210	694
3:30 PM	44	125	1	0	0	170	9	139	0	0	0	148	0	142	50	2	0	194	38	137	35	0	0	210	722
3:45 PM	39	85	1	0	0	125	13	182	0	0	0	195	0	130	35	0	3	165	45	135	44	1	0	225	710
Hourly Total	152	416	2	0	0	570	55	613	0	0	0	668	0	523	171	3	4	697	160	537	169	1	0	867	2802
4:00 PM	32	79	0	0	1	111	14	147	0	1	1	162	1	133	51	0	0	185	43	125	48	0	0	216	674

4:15 PM	50	68	0	0	1	118	16	113	0	0	1	129	0	142	57	0	4	199	45	108	41	0	0	194	640
4:30 PM	40	125	0	0	1	165	13	116	0	0	0	129	1	121	38	0	3	160	41	139	60	0	1	240	694
4:45 PM	35	55	0	0	0	90	16	107	0	0	0	123	0	147	38	0	0	185	39	152	57	1	6	249	647
Hourly Total	157	327	0	0	3	484	59	483	0	1	2	543	2	543	184	0	7	729	168	524	206	1	7	899	2655
5:00 PM	54	109	0	0	3	163	19	120	0	0	0	139	0	117	57	0	0	174	34	112	43	0	0	189	665
5:15 PM	44	87	0	0	3	131	11	100	0	0	0	111	0	119	35	0	0	154	38	112	44	0	0	194	590
5:30 PM	42	92	0	0	0	134	5	121	0	0	0	126	0	131	45	0	0	176	34	113	35	1	0	183	619
5:45 PM	42	87	0	0	2	129	15	121	0	0	2	136	0	132	46	0	0	178	42	125	39	0	0	206	649
Hourly Total	182	375	0	0	8	557	50	462	0	0	2	512	0	499	183	0	0	682	148	462	161	1	0	772	2523
6:00 PM	57	99	0	0	3	156	7	149	0	0	2	156	0	119	54	0	0	173	39	114	37	1	0	191	676
6:15 PM	26	104	0	0	1	130	12	98	0	0	1	110	2	126	46	1	0	175	46	104	33	0	0	183	598
6:30 PM	18	61	0	0	0	79	13	116	0	0	0	129	0	110	42	0	0	152	39	99	40	0	0	178	538
6:45 PM	24	75	0	0	1	99	11	66	0	0	0	77	0	106	54	0	0	160	26	73	26	1	0	126	462
Hourly Total	125	339	0	0	5	464	43	429	0	0	3	472	2	461	196	1	0	660	150	390	136	2	0	678	2274
Grand Total	1638	3674	3	0	63	5315	561	5098	1	1	11	5661	19	4779	1800	5	15	6603	1466	4967	1699	16	13	8148	25727
Approach %	30.8	69.1	0.1	0.0	-	-	9.9	90.1	0.0	0.0	-	-	0.3	72.4	27.3	0.1	-	-	18.0	61.0	20.9	0.2	-	-	-
Total %	6.4	14.3	0.0	0.0	-	20.7	2.2	19.8	0.0	0.0	-	22.0	0.1	18.6	7.0	0.0	-	25.7	5.7	19.3	6.6	0.1	-	31.7	-
Lights	1631	3638	3	0	-	5272	558	5010	1	1	-	5570	19	4732	1777	5	-	6533	1449	4870	1681	16	-	8016	25391
% Lights	99.6	99.0	100.0	-	-	99.2	99.5	98.3	100.0	100.0	-	98.4	100.0	99.0	98.7	100.0	-	98.9	98.8	98.0	98.9	100.0	-	98.4	98.7
Mediums	7	33	0	0	-	40	3	86	0	0	-	89	0	42	21	0	-	63	13	95	17	0	-	125	317
% Mediums	0.4	0.9	0.0	-	-	0.8	0.5	1.7	0.0	0.0	-	1.6	0.0	0.9	1.2	0.0	-	1.0	0.9	1.9	1.0	0.0	-	1.5	1.2
Articulated Trucks	0	1	0	0	-	1	0	2	0	0	-	2	0	1	2	0	-	3	4	1	1	0	-	6	12
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.1	0.0	-	0.0	0.3	0.0	0.1	0.0	-	0.1	0.0
Bicycles on Road	0	2	0	0	-	2	0	0	0	0	-	0	0	4	0	0	-	4	0	1	0	0	-	1	7
% Bicycles on Road	0.0	0.1	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.1	0.0	0.0	-	0.1	0.0	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	1.6	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	7.7	-	-
Pedestrians	-	-	-	-	62	-	-	-	-	-	11	-	-	-	-	-	15	-	-	-	-	-	12	-	-
% Pedestrians	-	-	-	-	98.4	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	92.3	-	-

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Site Code:
Start Date: 10/29/2016
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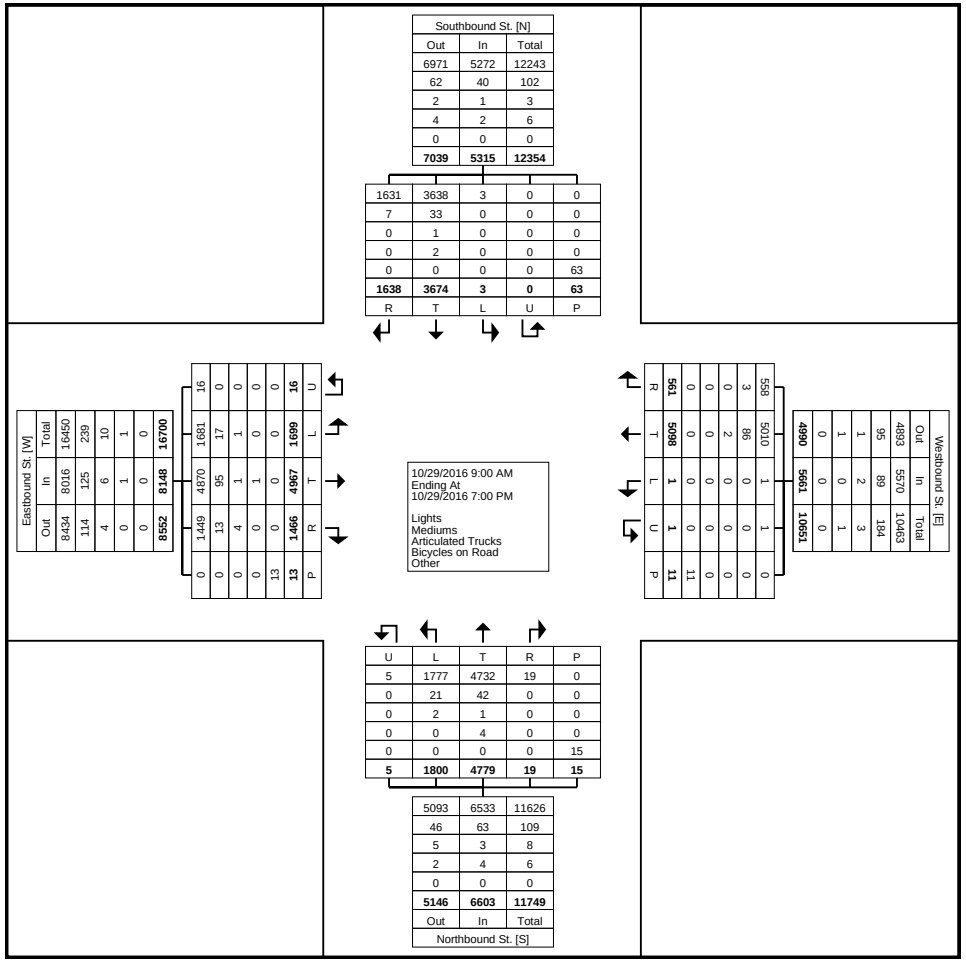

Turning Movement Data Plot

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Count Name: Quaker Ln and King St 10/29/2016
Site Code:
Start Date: 10/29/2016

Turning Movement Peak Hour Data (11:00 AM)

Start Time	Southbound St. Southbound						Westbound St. Westbound						Northbound St. Northbound						Eastbound St. Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
11:00 AM	42	110	0	0	0	152	16	163	0	0	0	179	0	103	46	0	0	149	40	117	37	1	0	195	675
11:15 AM	43	69	0	0	3	112	12	132	0	0	0	144	0	97	42	0	0	139	31	134	41	0	2	206	601
11:30 AM	45	103	0	0	7	148	23	114	0	0	0	137	1	109	43	0	0	153	39	99	40	0	1	178	616
11:45 AM	60	104	0	0	2	164	20	133	0	0	0	153	1	107	43	0	0	151	50	162	40	0	0	252	720
Total	190	386	0	0	12	576	71	542	0	0	0	613	2	416	174	0	0	592	160	512	158	1	3	831	2612
Approach %	33.0	67.0	0.0	0.0	-	-	11.6	88.4	0.0	0.0	-	-	0.3	70.3	29.4	0.0	-	-	19.3	61.6	19.0	0.1	-	-	-
Total %	7.3	14.8	0.0	0.0	-	22.1	2.7	20.8	0.0	0.0	-	23.5	0.1	15.9	6.7	0.0	-	22.7	6.1	19.6	6.0	0.0	-	31.8	-
PHF	0.792	0.877	0.000	0.000	-	0.878	0.772	0.831	0.000	0.000	-	0.856	0.500	0.954	0.946	0.000	-	0.967	0.800	0.790	0.963	0.250	-	0.824	0.907
Lights	190	378	0	0	-	568	70	536	0	0	-	606	2	410	173	0	-	585	157	502	156	1	-	816	2575
% Lights	100.0	97.9	-	-	-	98.6	98.6	98.9	-	-	-	98.9	100.0	98.6	99.4	-	-	98.8	98.1	98.0	98.7	100.0	-	98.2	98.6
Mediums	0	7	0	0	-	7	1	5	0	0	-	6	0	6	1	0	-	7	1	8	2	0	-	11	31
% Mediums	0.0	1.8	-	-	-	1.2	1.4	0.9	-	-	-	1.0	0.0	1.4	0.6	-	-	1.2	0.6	1.6	1.3	0.0	-	1.3	1.2
Articulated Trucks	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	2	1	0	0	-	3	4
% Articulated Trucks	0.0	0.0	-	-	-	0.0	0.0	0.2	-	-	-	0.2	0.0	0.0	0.0	-	-	0.0	1.3	0.2	0.0	0.0	-	0.4	0.2
Bicycles on Road	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	2
% Bicycles on Road	0.0	0.3	-	-	-	0.2	0.0	0.0	-	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.2	0.0	0.0	-	0.1	0.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	12	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	3	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

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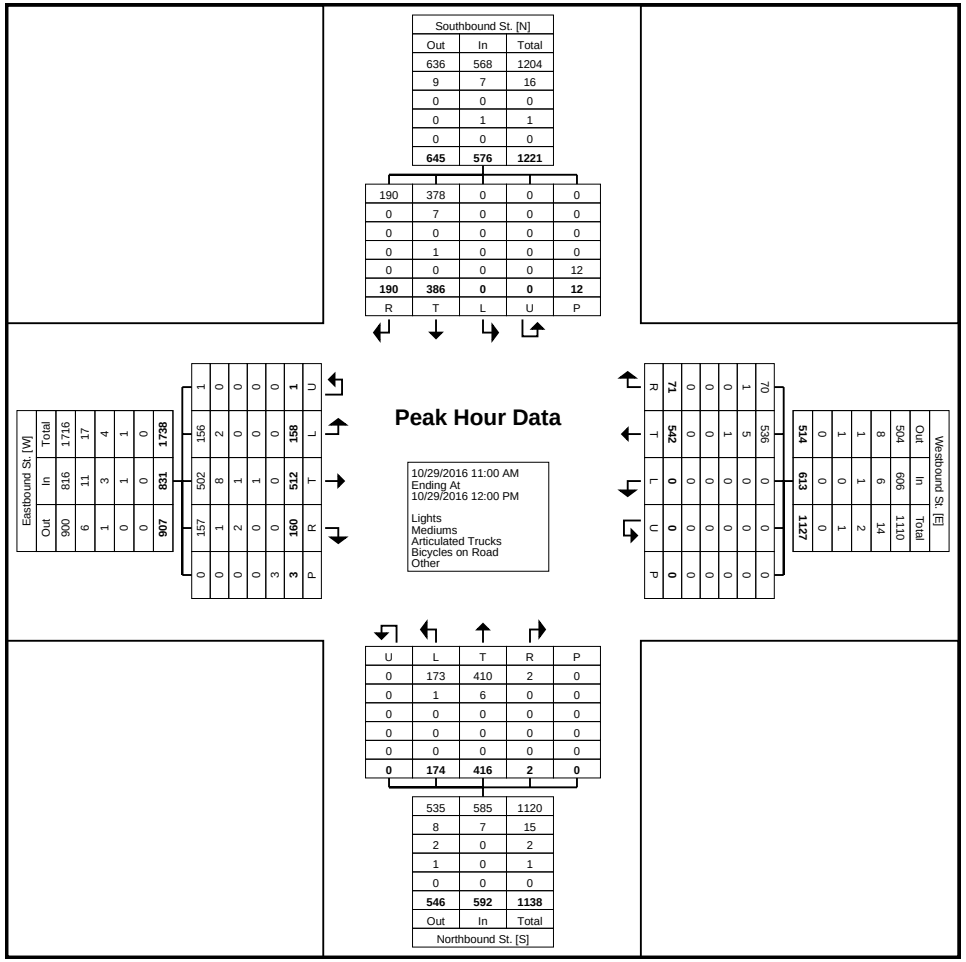

Turning Movement Peak Hour Data Plot (11:00 AM)

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Count Name: Quaker Ln and King St 10/29/2016
Site Code:
Start Date: 10/29/2016

Turning Movement Peak Hour Data (12:15 PM)

Start Time	Southbound St. Southbound						Westbound St. Westbound						Northbound St. Northbound						Eastbound St. Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
12:15 PM	66	115	0	0	3	181	11	131	0	0	0	142	0	126	51	0	0	177	34	140	52	0	1	226	726
12:30 PM	52	89	0	0	1	141	9	140	0	0	0	149	0	111	43	0	0	154	44	174	49	0	0	267	711
12:45 PM	46	100	0	0	2	146	11	128	1	0	0	140	2	139	41	0	0	182	30	115	40	0	0	185	653
1:00 PM	45	124	0	0	1	169	13	148	0	0	0	161	1	123	39	1	0	164	51	140	56	0	1	247	741
Total	209	428	0	0	7	637	44	547	1	0	0	592	3	499	174	1	0	677	159	569	197	0	2	925	2831
Approach %	32.8	67.2	0.0	0.0	-	-	7.4	92.4	0.2	0.0	-	-	0.4	73.7	25.7	0.1	-	-	17.2	61.5	21.3	0.0	-	-	-
Total %	7.4	15.1	0.0	0.0	-	22.5	1.6	19.3	0.0	0.0	-	20.9	0.1	17.6	6.1	0.0	-	23.9	5.6	20.1	7.0	0.0	-	32.7	-
PHF	0.792	0.863	0.000	0.000	-	0.880	0.846	0.924	0.250	0.000	-	0.919	0.375	0.897	0.853	0.250	-	0.930	0.779	0.818	0.879	0.000	-	0.866	0.955
Lights	208	422	0	0	-	630	43	539	1	0	-	583	3	493	173	1	-	670	158	555	195	0	-	908	2791
% Lights	99.5	98.6	-	-	-	98.9	97.7	98.5	100.0	-	-	98.5	100.0	98.8	99.4	100.0	-	99.0	99.4	97.5	99.0	-	-	98.2	98.6
Mediums	1	6	0	0	-	7	1	7	0	0	-	8	0	6	0	0	-	6	1	14	2	0	-	17	38
% Mediums	0.5	1.4	-	-	-	1.1	2.3	1.3	0.0	-	-	1.4	0.0	1.2	0.0	0.0	-	0.9	0.6	2.5	1.0	-	-	1.8	1.3
Articulated Trucks	0	0	0	0	-	0	0	1	0	0	-	1	0	0	1	0	-	1	0	0	0	0	-	0	2
% Articulated Trucks	0.0	0.0	-	-	-	0.0	0.0	0.2	0.0	-	-	0.2	0.0	0.0	0.6	0.0	-	0.1	0.0	0.0	0.0	-	-	0.0	0.1
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	7	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

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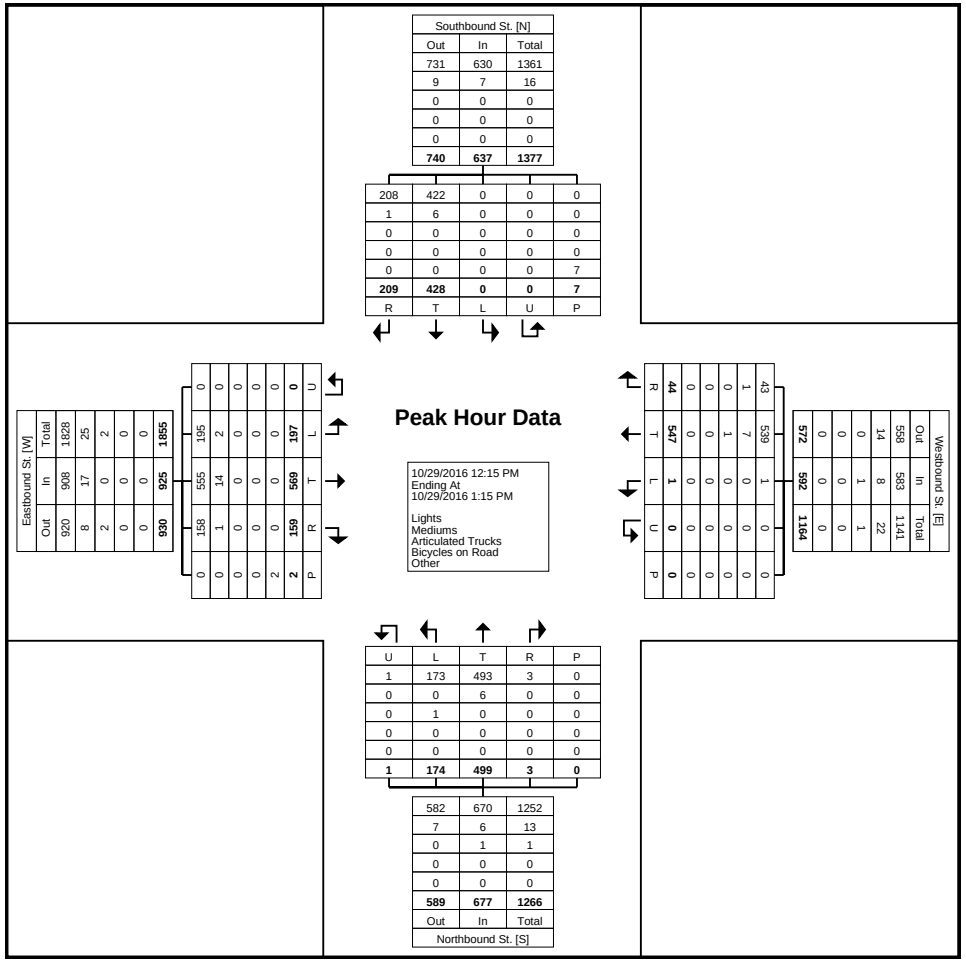

Turning Movement Peak Hour Data Plot (12:15 PM)

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Count Name: Quaker Ln and King St 10/29/2016
Site Code:
Start Date: 10/29/2016

Tube Counts

between
Albany and Hermitage

Site: King Street
5/2/2017
Tuesday

Daily Speed

EB

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200	Avg.
12:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1:00 PM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2:00 PM	489	11	12	28	69	246	97	19	5	1	0	1	0	0	32.1
3:00 PM	659	15	20	53	100	294	141	21	7	0	1	1	2	4	32.0
4:00 PM	670	29	20	32	111	297	136	25	5	3	3	2	3	4	32.1
5:00 PM	698	34	16	53	117	293	135	25	4	0	3	1	5	12	32.2
6:00 PM	650	25	20	77	103	255	107	18	5	3	6	4	8	19	32.9
7:00 PM	556	21	20	96	70	182	93	14	3	5	1	4	11	36	34.1
8:00 PM	383	7	16	83	60	96	58	8	3	2	4	11	11	24	34.7
9:00 PM	295	2	8	82	27	66	40	10	4	0	8	3	16	29	37.6
10:00 PM	167	2	9	46	28	28	14	5	3	3	4	6	5	14	35.4
11:00 PM	87	1	3	27	11	16	2	5	1	1	1	4	0	15	39.1
Total	4654	147	144	577	696	1773	823	150	40	18	31	37	61	157	33.3
%		3.2	3.1	12.4	15.0	38.1	17.7	3.2	0.9	0.4	0.7	0.8	1.3	3.4	

Average (Mean) 33.3 mph **Minimum** 10.0 mph **Maximum** 89.9 mph **Pace Range** 27.6 - 37.6 mph 2802 vehicles (60.2 %)

Percentile Speeds	10%	15%	50%	85%	90%
(mph)	22.0	23.7	32.3	38.0	40.4

Speeds Exceeded	25 mph	35 mph	45 mph	55 mph	65 mph	75 mph
	81.3 % (3786)	28.3 % (1317)	7.4 % (344)	6.1 % (286)	4.7 % (218)	2.1 % (99)

between
Albany and Hermitage

Site: King Street
5/3/2017
Wednesday

Daily Speed

EB

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200	Avg.
12:00 AM	43	0	1	11	9	9	5	0	0	1	1	1	2	3	35.9
1:00 AM	21	0	0	6	6	5	1	1	0	0	0	0	0	2	33.3
2:00 AM	7	0	0	2	2	0	1	0	0	0	0	1	1	0	38.5
3:00 AM	8	0	0	2	2	0	2	0	0	0	0	0	0	2	40.7
4:00 AM	28	1	0	8	5	2	2	1	0	1	1	3	2	2	39.1
5:00 AM	87	0	4	29	9	8	8	4	2	2	4	5	1	11	38.7
6:00 AM	251	15	18	70	30	36	20	10	8	6	8	2	3	25	34.6
7:00 AM	499	42	34	123	47	102	47	12	9	11	8	13	11	40	34.0
8:00 AM	567	47	39	117	91	132	58	16	9	8	11	7	8	24	31.5
9:00 AM	477	12	13	59	51	193	100	8	6	5	2	3	2	23	34.0
10:00 AM	314	8	10	16	35	155	67	10	4	1	1	0	2	5	33.1
11:00 AM	376	8	7	42	53	128	98	22	4	1	3	1	2	7	33.3
12:00 PM	380	2	8	43	43	149	93	19	4	0	2	1	4	12	34.3
1:00 PM	462	15	15	68	76	153	80	18	6	3	1	5	7	15	33.1
2:00 PM	528	27	22	93	84	161	73	17	8	9	9	6	2	17	32.2
3:00 PM	657	38	37	130	87	192	73	18	8	9	18	6	11	30	32.8
4:00 PM	706	39	30	155	96	203	74	12	4	12	13	11	14	43	33.3
5:00 PM	756	44	39	190	92	200	72	17	6	10	12	10	17	47	33.0
6:00 PM	693	46	43	191	65	154	54	15	11	9	15	14	17	59	33.9
7:00 PM	748	32	47	232	68	121	56	16	17	21	27	18	20	73	35.8
8:00 PM	466	14	21	143	47	99	29	5	10	10	12	13	22	41	36.0
9:00 PM	338	6	15	115	25	52	28	4	5	9	12	12	20	35	37.6
10:00 PM	188	5	6	68	12	19	14	7	1	4	9	11	7	25	39.1
11:00 PM	100	1	2	37	12	9	7	2	4	0	4	2	2	18	39.2
Total	8700	402	411	1950	1047	2282	1062	234	126	132	173	145	177	559	34.1
%		4.6	4.7	22.4	12.0	26.2	12.2	2.7	1.4	1.5	2.0	1.7	2.0	6.4	

Average (Mean) 34.1 mph **Minimum** 10.0 mph **Maximum** 89.9 mph **Pace Range** 27.9 - 37.9 mph 3636 vehicles (41.8 %)

Percentile Speeds	10%	15%	50%	85%	90%
(mph)	20.2	21.4	31.3	45.1	60.3

Speeds Exceeded	25 mph	35 mph	45 mph	55 mph	65 mph	75 mph
	68.2 % (5937)	30.0 % (2608)	15.1 % (1312)	12.1 % (1054)	8.5 % (736)	4.3 % (372)

between
Albany and Hermitage

Site: King Street
5/4/2017
Thursday

Daily Speed

EB

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200	Avg.
12:00 AM	64	2	3	20	9	6	5	2	1	2	1	4	2	7	37.3
1:00 AM	37	0	1	13	5	7	0	1	0	1	0	1	2	6	39.0
2:00 AM	21	0	0	9	3	1	0	0	0	0	1	1	1	5	42.9
3:00 AM	11	0	0	3	1	2	1	1	0	0	0	1	0	2	42.3
4:00 AM	36	0	0	15	6	4	1	0	0	1	1	0	1	7	38.2
5:00 AM	70	0	2	27	5	8	2	2	1	1	2	6	5	9	41.1
6:00 AM	252	11	8	98	23	18	12	5	6	9	4	20	5	33	38.0
7:00 AM	531	33	56	149	45	79	33	13	10	22	15	22	19	35	34.2
8:00 AM	656	39	57	206	62	94	42	11	17	17	19	18	15	59	34.2
9:00 AM	546	21	43	117	81	143	47	18	14	8	8	13	13	20	32.8
10:00 AM	412	20	16	84	62	115	49	6	12	9	5	8	6	20	33.3
11:00 AM	375	7	14	72	70	82	76	21	6	6	2	3	2	14	33.3
12:00 PM	441	18	21	56	66	180	55	15	4	3	9	2	4	8	31.9
1:00 PM	443	15	21	75	76	134	68	11	7	3	4	4	2	23	33.0
2:00 PM	491	19	26	84	64	156	65	18	6	2	7	3	13	28	34.1
3:00 PM	673	31	54	126	130	177	59	15	12	7	10	6	12	34	32.4
4:00 PM	799	55	63	174	93	210	74	13	15	13	20	17	16	36	32.4
5:00 PM	817	62	76	157	117	224	56	13	22	14	15	11	18	32	31.8
6:00 PM	621	32	40	159	70	147	67	13	5	13	18	10	12	35	33.1
7:00 PM	584	32	31	162	61	119	41	10	11	17	14	24	19	43	35.1
8:00 PM	388	8	21	126	37	53	18	7	11	13	19	17	15	43	37.8
9:00 PM	341	1	21	140	19	12	12	4	12	13	20	19	10	58	40.7
10:00 PM	225	2	16	96	11	3	5	7	5	5	11	13	15	36	40.4
11:00 PM	108	1	3	51	2	1	2	0	1	8	12	7	4	16	41.0
Total	8942	409	593	2219	1118	1975	790	206	178	187	217	230	211	609	34.2
%		4.6	6.6	24.8	12.5	22.1	8.8	2.3	2.0	2.1	2.4	2.6	2.4	6.8	

Average (Mean) 34.2 mph **Minimum** 10.0 mph **Maximum** 89.9 mph **Pace Range** 20.1 - 30.1 mph 3344 vehicles (37.4 %)

Percentile Speeds	10%	15%	50%	85%	90%
(mph)	19.7	20.8	30.4	53.4	63.2

Speeds Exceeded	25 mph	35 mph	45 mph	55 mph	65 mph	75 mph
	64.0 % (5721)	29.4 % (2628)	18.3 % (1632)	14.2 % (1267)	9.2 % (820)	4.6 % (411)

between
Albany and Hermitage

Site: King Street
5/5/2017
Friday

Daily Speed

EB

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200	Avg.
12:00 AM	84	0	4	37	5	4	0	1	2	4	3	3	7	14	41.0
1:00 AM	28	0	0	12	6	1	0	0	0	1	1	1	1	5	39.2
2:00 AM	10	0	2	3	0	1	0	0	2	0	0	0	1	1	38.1
3:00 AM	10	0	0	3	1	1	1	0	1	0	0	0	0	3	45.0
4:00 AM	38	0	2	12	9	2	2	0	0	1	0	1	2	7	39.0
5:00 AM	68	1	7	25	2	4	2	2	2	4	4	3	7	5	38.7
6:00 AM	261	4	19	85	28	22	22	8	4	7	16	16	11	19	36.8
7:00 AM	583	34	50	196	35	52	51	6	22	8	29	32	24	44	35.4
8:00 AM	754	40	50	114	98	237	100	31	22	13	23	5	8	13	32.1
9:00 AM	650	28	13	50	112	256	150	24	6	4	1	2	1	3	31.8
10:00 AM	503	18	20	43	61	181	128	18	10	8	9	0	2	5	33.0
11:00 AM	525	18	24	97	52	138	104	20	11	13	13	9	4	22	34.1
12:00 PM	529	16	25	124	81	125	64	12	10	8	12	10	7	35	34.2
Total	4043	159	216	801	490	1024	624	122	92	71	111	82	75	176	33.9
%		3.9	5.3	19.8	12.1	25.3	15.4	3.0	2.3	1.8	2.7	2.0	1.9	4.4	

Average (Mean) 33.9 mph **Minimum** 10.1 mph **Maximum** 89.9 mph **Pace Range** 28.2 - 38.2 mph 1761 vehicles (43.6 %)

Percentile Speeds	10%	15%	50%	85%	90%
(mph)	20.1	21.2	31.8	45.0	56.6

Speeds Exceeded	25 mph	35 mph	45 mph	55 mph	65 mph	75 mph
	70.9 % (2867)	33.5 % (1353)	15.0 % (607)	11.0 % (444)	6.2 % (251)	2.6 % (106)

between
Albany and Hermitage

Site: King Street
5/2/2017
Tuesday

Daily Speed

WB

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200	Avg.
12:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1:00 PM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2:00 PM	392	10	2	27	150	149	37	10	2	1	2	0	2	0	30.4
3:00 PM	437	6	4	22	170	150	62	13	2	0	5	0	3	0	31.3
4:00 PM	546	17	3	17	196	218	61	8	2	1	2	9	5	7	31.9
5:00 PM	635	19	13	45	234	224	62	4	3	4	3	6	6	12	31.3
6:00 PM	532	19	9	43	180	191	60	9	3	3	5	4	2	4	30.9
7:00 PM	398	8	1	19	155	147	30	3	4	2	5	8	7	9	32.9
8:00 PM	313	5	2	9	119	123	36	4	3	2	1	5	1	3	31.9
9:00 PM	194	4	0	14	55	83	24	3	0	1	2	2	1	5	32.7
10:00 PM	158	0	1	17	41	66	25	0	1	0	1	2	1	3	32.4
11:00 PM	87	0	0	10	30	33	11	0	0	0	1	0	1	1	31.6
Total	3692	88	35	223	1330	1384	408	54	20	14	27	36	29	44	31.6
%		2.4	0.9	6.0	36.0	37.5	11.1	1.5	0.5	0.4	0.7	1.0	0.8	1.2	

Average (Mean) 31.6 mph **Minimum** 10.0 mph **Maximum** 89.9 mph **Pace Range** 25.3 - 35.3 mph 2735 vehicles (74.1 %)

Percentile Speeds	10%	15%	50%	85%	90%
(mph)	25.2	26.1	30.6	35.4	37.0

Speeds Exceeded	25 mph	35 mph	45 mph	55 mph	65 mph	75 mph
	90.6 % (3346)	17.1 % (632)	4.6 % (170)	3.7 % (136)	2.0 % (73)	0.6 % (23)

between
Albany and Hermitage

Site: King Street
5/3/2017
Wednesday

Daily Speed

WB

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200	Avg.
12:00 AM	29	0	0	0	9	11	7	1	1	0	0	0	0	0	32.7
1:00 AM	23	0	1	1	4	12	2	2	1	0	0	0	0	0	32.5
2:00 AM	11	0	0	1	5	4	1	0	0	0	0	0	0	0	30.3
3:00 AM	9	0	0	0	3	5	1	0	0	0	0	0	0	0	31.9
4:00 AM	14	0	0	1	5	4	2	0	0	0	0	1	1	0	35.2
5:00 AM	117	0	0	6	42	39	16	10	2	1	0	1	0	0	32.3
6:00 AM	340	5	5	20	129	112	42	4	0	2	5	7	1	8	32.6
7:00 AM	849	16	10	106	333	256	35	5	13	6	9	24	10	26	32.3
8:00 AM	804	37	16	166	299	160	38	7	6	11	13	8	20	23	31.0
9:00 AM	464	8	4	16	190	174	46	5	2	2	3	5	7	2	31.6
10:00 AM	357	9	2	21	130	137	47	5	2	1	0	1	1	1	30.7
11:00 AM	349	6	0	19	154	131	28	2	1	0	2	1	2	3	30.7
12:00 PM	371	3	8	19	129	138	56	11	0	1	1	1	2	2	31.3
1:00 PM	351	8	3	10	152	122	32	7	0	3	1	4	1	8	31.8
2:00 PM	420	5	3	24	166	148	34	5	4	3	7	7	5	9	32.6
3:00 PM	525	10	2	36	208	160	39	10	7	9	12	9	7	16	33.4
4:00 PM	554	13	9	20	202	184	62	6	3	5	12	11	12	15	33.6
5:00 PM	676	25	6	52	248	233	41	2	7	14	7	10	12	19	32.4
6:00 PM	626	11	13	31	185	215	79	3	9	10	19	18	14	19	34.7
7:00 PM	429	8	6	23	147	144	47	7	6	4	5	13	9	10	33.8
8:00 PM	371	2	5	18	128	151	25	6	6	7	1	7	4	11	33.4
9:00 PM	232	3	1	16	89	73	24	5	1	5	5	4	0	6	33.0
10:00 PM	181	1	1	8	67	67	17	5	2	1	1	1	2	8	33.5
11:00 PM	94	0	2	6	28	36	18	2	0	1	0	0	0	1	31.7
Total	8196	170	97	620	3052	2716	739	110	73	86	103	133	110	187	32.5
%		2.1	1.2	7.6	37.2	33.1	9.0	1.3	0.9	1.0	1.3	1.6	1.3	2.3	

Average (Mean) 32.5 mph **Minimum** 10.0 mph **Maximum** 89.0 mph **Pace Range** 24.9 - 34.9 mph 5784 vehicles (70.6 %)

Percentile Speeds	10%	15%	50%	85%	90%
(mph)	24.8	25.9	30.2	36.2	39.8

Speeds Exceeded	25 mph	35 mph	45 mph	55 mph	65 mph	75 mph
	89.2 % (7309)	18.8 % (1541)	8.4 % (692)	6.5 % (533)	3.6 % (297)	1.0 % (81)

between
Albany and Hermitage

Site: King Street
5/4/2017
Thursday

Daily Speed

WB

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200	Avg.
12:00 AM	50	0	0	1	16	18	10	2	0	0	0	0	1	2	34.7
1:00 AM	18	0	0	1	6	8	2	0	0	0	0	0	0	1	33.7
2:00 AM	16	0	0	0	4	6	3	1	2	0	0	0	0	0	34.7
3:00 AM	9	0	0	0	1	5	1	2	0	0	0	0	0	0	34.9
4:00 AM	21	1	0	1	10	7	0	2	0	0	0	0	0	0	30.0
5:00 AM	93	1	1	3	27	36	19	4	0	1	0	0	1	0	32.3
6:00 AM	357	3	4	14	109	127	58	11	1	4	2	9	1	14	34.3
7:00 AM	774	31	25	75	334	196	30	2	5	10	10	13	18	25	31.6
8:00 AM	797	40	9	57	302	256	37	6	6	9	17	18	15	25	32.5
9:00 AM	447	13	5	35	194	131	34	6	1	5	3	7	4	9	31.4
10:00 AM	375	3	3	23	130	128	50	6	4	7	5	4	4	8	33.2
11:00 AM	376	2	2	25	176	133	23	2	0	4	1	4	3	1	30.7
12:00 PM	372	8	3	53	104	141	36	2	2	4	0	4	6	9	32.0
1:00 PM	400	6	4	34	159	140	28	4	1	1	4	6	6	7	31.8
2:00 PM	448	7	4	33	180	157	32	6	5	6	4	3	3	8	31.7
3:00 PM	503	9	9	40	182	155	59	2	5	7	4	13	7	11	32.8
4:00 PM	559	19	8	24	161	236	49	6	4	10	6	13	9	14	33.3
5:00 PM	688	25	10	34	224	245	47	3	6	13	19	19	26	17	34.0
6:00 PM	557	17	11	36	202	176	45	10	6	8	14	11	11	10	33.0
7:00 PM	381	5	4	34	96	142	47	4	5	8	7	11	9	9	34.4
8:00 PM	314	2	0	39	97	112	33	3	1	2	6	6	4	9	33.1
9:00 PM	209	1	0	15	75	85	20	1	2	2	1	2	1	4	32.3
10:00 PM	155	0	1	8	67	53	16	3	1	2	0	3	0	1	31.7
11:00 PM	96	0	2	9	39	31	12	1	0	1	0	1	0	0	30.4
Total	8015	193	105	594	2895	2724	691	89	57	104	103	147	129	184	32.6
%		2.4	1.3	7.4	36.1	34.0	8.6	1.1	0.7	1.3	1.3	1.8	1.6	2.3	

Average (Mean) 32.6 mph **Minimum** 10.0 mph **Maximum** 89.7 mph **Pace Range** 24.9 - 34.9 mph 5642 vehicles (70.4 %)

Percentile Speeds	10%	15%	50%	85%	90%
(mph)	24.7	25.8	30.3	36.2	40.3

Speeds Exceeded	25 mph	35 mph	45 mph	55 mph	65 mph	75 mph
	88.9 % (7123)	18.8 % (1504)	9.0 % (724)	7.0 % (563)	3.9 % (313)	1.0 % (79)

between
Albany and Hermitage

Site: King Street
5/5/2017
Friday

Daily Speed

WB

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200	Avg.
12:00 AM	53	1	0	3	22	18	9	0	0	0	0	0	0	0	30.4
1:00 AM	24	0	0	2	10	9	2	1	0	0	0	0	0	0	30.8
2:00 AM	15	0	0	1	5	6	2	1	0	0	0	0	0	0	31.6
3:00 AM	8	0	0	0	1	3	2	2	0	0	0	0	0	0	34.6
4:00 AM	16	0	0	0	7	7	2	0	0	0	0	0	0	0	31.3
5:00 AM	93	0	0	6	40	29	12	3	0	1	0	0	0	2	32.0
6:00 AM	282	4	2	14	95	113	42	6	1	0	1	1	0	3	31.6
7:00 AM	724	21	4	57	331	234	29	3	5	3	2	6	7	22	31.1
8:00 AM	681	30	15	105	314	156	35	7	1	1	5	6	3	3	28.6
9:00 AM	455	8	0	26	189	194	36	2	0	0	0	0	0	0	29.9
10:00 AM	370	9	7	20	152	139	38	4	0	0	1	0	0	0	29.9
11:00 AM	369	6	4	39	134	132	45	5	1	0	0	1	1	1	30.2
12:00 PM	322	4	3	16	123	126	36	5	1	1	1	2	1	3	31.3
Total	3412	83	35	289	1423	1166	290	39	9	6	10	16	12	34	30.3
%		2.4	1.0	8.5	41.7	34.2	8.5	1.1	0.3	0.2	0.3	0.5	0.4	1.0	

Average (Mean) 30.3 mph **Minimum** 10.0 mph **Maximum** 85.8 mph **Pace Range** 24.6 - 34.6 mph 2602 vehicles (76.3 %)

Percentile Speeds	10%	15%	50%	85%	90%
(mph)	24.5	25.5	29.7	34.3	35.6

Speeds Exceeded	25 mph	35 mph	45 mph	55 mph	65 mph	75 mph
	88.1 % (3005)	12.2 % (416)	2.5 % (87)	2.1 % (72)	1.3 % (46)	0.4 % (14)

between
Albany and Hermitage

Site: King Street

Seven Day Volume, per Channel

EB

Interval Start	Tue 5/2/2017	Wed 5/3/2017	Thu 5/4/2017	Fri 5/5/2017	Sat 5/6/2017	Sun 5/7/2017	Mon 5/8/2017	Mon - Fri Average	7 Day Average
12:00 AM	-	43	64	84	-	-	-	63.7	63.7
1:00 AM	-	21	37	28	-	-	-	28.7	28.7
2:00 AM	-	7	21	10	-	-	-	12.7	12.7
3:00 AM	-	8	11	10	-	-	-	9.7	9.7
4:00 AM	-	28	36	38	-	-	-	34.0	34.0
5:00 AM	-	87	70	68	-	-	-	75.0	75.0
6:00 AM	-	251	252	261	-	-	-	254.7	254.7
7:00 AM	-	499	531	583	-	-	-	537.7	537.7
8:00 AM	-	567	656	754	-	-	-	659.0	659.0
9:00 AM	-	477	546	650	-	-	-	557.7	557.7
10:00 AM	-	314	412	503	-	-	-	409.7	409.7
11:00 AM	-	376	375	525	-	-	-	425.3	425.3
12:00 PM	-	380	441	529	-	-	-	450.0	450.0
1:00 PM	89	462	443	302	-	-	-	452.5	452.5
2:00 PM	489	528	491	-	-	-	-	502.7	502.7
3:00 PM	659	657	673	-	-	-	-	663.0	663.0
4:00 PM	670	706	799	-	-	-	-	725.0	725.0
5:00 PM	698	756	817	-	-	-	-	757.0	757.0
6:00 PM	650	693	621	-	-	-	-	654.7	654.7
7:00 PM	556	748	584	-	-	-	-	629.3	629.3
8:00 PM	383	466	388	-	-	-	-	412.3	412.3
9:00 PM	295	338	341	-	-	-	-	324.7	324.7
10:00 PM	167	188	225	-	-	-	-	193.3	193.3
11:00 PM	87	100	108	-	-	-	-	98.3	98.3
Totals	4743	8700	8942	4345	0	0	0	8930.5	8930.5
				Peak Hours					
12:00 AM - 12:00 PM	-	7:30 AM	7:30 AM	7:45 AM	-	-	-	7:45 AM	7:45 AM
Volume	-	624	694	778	-	-	-	687.7	687.7
Factor	-	0.89	0.91	0.87	-	-	-	0.94	0.94
12:00 PM - 12:00 AM	4:30 PM	4:15 PM	4:45 PM	12:00 PM	-	-	-	4:45 PM	4:45 PM
Volume	748	777	856	529	-	-	-	784.7	784.7
Factor	0.93	0.94	0.85	0.90	-	-	-	0.92	0.92

between
Albany and Hermitage

Site: King Street

Seven Day Volume, per Channel

WB

Interval Start	Tue 5/2/2017	Wed 5/3/2017	Thu 5/4/2017	Fri 5/5/2017	Sat 5/6/2017	Sun 5/7/2017	Mon 5/8/2017	Mon - Fri Average	7 Day Average
12:00 AM	-	29	50	53	-	-	-	44.0	44.0
1:00 AM	-	23	18	24	-	-	-	21.7	21.7
2:00 AM	-	11	16	15	-	-	-	14.0	14.0
3:00 AM	-	9	9	8	-	-	-	8.7	8.7
4:00 AM	-	14	21	16	-	-	-	17.0	17.0
5:00 AM	-	117	93	93	-	-	-	101.0	101.0
6:00 AM	-	340	357	282	-	-	-	326.3	326.3
7:00 AM	-	849	774	724	-	-	-	782.3	782.3
8:00 AM	-	804	797	681	-	-	-	760.7	760.7
9:00 AM	-	464	447	455	-	-	-	455.3	455.3
10:00 AM	-	357	375	370	-	-	-	367.3	367.3
11:00 AM	-	349	376	369	-	-	-	364.7	364.7
12:00 PM	-	371	372	322	-	-	-	355.0	355.0
1:00 PM	98	351	400	244	-	-	-	375.5	375.5
2:00 PM	392	420	448	-	-	-	-	420.0	420.0
3:00 PM	437	525	503	-	-	-	-	488.3	488.3
4:00 PM	546	554	559	-	-	-	-	553.0	553.0
5:00 PM	635	676	688	-	-	-	-	666.3	666.3
6:00 PM	532	626	557	-	-	-	-	571.7	571.7
7:00 PM	398	429	381	-	-	-	-	402.7	402.7
8:00 PM	313	371	314	-	-	-	-	332.7	332.7
9:00 PM	194	232	209	-	-	-	-	211.7	211.7
10:00 PM	158	181	155	-	-	-	-	164.7	164.7
11:00 PM	87	94	96	-	-	-	-	92.3	92.3
Totals	3790	8196	8015	3656	0	0	0	7896.8	7896.8
				Peak Hours					
12:00 AM - 12:00 PM	-	7:15 AM	7:30 AM	7:15 AM	-	-	-	7:15 AM	7:15 AM
Volume	-	955	892	841	-	-	-	895.0	895.0
Factor	-	0.82	0.84	0.84	-	-	-	0.83	0.83
12:00 PM - 12:00 AM	5:00 PM	5:30 PM	5:00 PM	12:15 PM	-	-	-	5:00 PM	5:00 PM
Volume	635	681	688	334	-	-	-	666.3	666.3
Factor	0.93	0.94	0.93	0.83	-	-	-	0.95	0.95

between
Radford and Kenwood

Site: King Street

Seven Day Volume, per Channel

WB

Interval Start	Tue 5/2/2017	Wed 5/3/2017	Thu 5/4/2017	Fri 5/5/2017	Sat 5/6/2017	Sun 5/7/2017	Mon 5/8/2017	Mon - Fri Average	7 Day Average
12:00 AM	-	28	45	59	-	-	-	44.0	44.0
1:00 AM	-	24	17	27	-	-	-	22.7	22.7
2:00 AM	-	12	17	15	-	-	-	14.7	14.7
3:00 AM	-	7	5	6	-	-	-	6.0	6.0
4:00 AM	-	14	16	11	-	-	-	13.7	13.7
5:00 AM	-	57	60	49	-	-	-	55.3	55.3
6:00 AM	-	192	188	156	-	-	-	178.7	178.7
7:00 AM	-	402	408	364	-	-	-	391.3	391.3
8:00 AM	-	372	418	434	-	-	-	408.0	408.0
9:00 AM	-	328	293	300	-	-	-	307.0	307.0
10:00 AM	-	294	277	300	-	-	-	290.3	290.3
11:00 AM	-	284	288	306	-	-	-	292.7	292.7
12:00 PM	-	311	341	292	-	-	-	314.7	314.7
1:00 PM	156	315	324	170	-	-	-	319.5	319.5
2:00 PM	340	319	390	-	-	-	-	349.7	349.7
3:00 PM	337	392	410	-	-	-	-	379.7	379.7
4:00 PM	421	413	394	-	-	-	-	409.3	409.3
5:00 PM	435	427	448	-	-	-	-	436.7	436.7
6:00 PM	390	439	412	-	-	-	-	413.7	413.7
7:00 PM	348	371	331	-	-	-	-	350.0	350.0
8:00 PM	290	431	260	-	-	-	-	327.0	327.0
9:00 PM	192	249	178	-	-	-	-	206.3	206.3
10:00 PM	141	142	140	-	-	-	-	141.0	141.0
11:00 PM	80	86	87	-	-	-	-	84.3	84.3
Totals	3130	5909	5747	2489	0	0	0	5756.2	5756.2

Peak Hours

12:00 AM - 12:00 PM	-	7:00 AM	7:30 AM	7:45 AM	-	-	-	7:45 AM	7:45 AM
Volume	-	402	448	446	-	-	-	423.0	423.0
Factor	-	0.90	0.97	0.87	-	-	-	0.93	0.93
12:00 PM - 12:00 AM	4:30 PM	5:15 PM	4:30 PM	12:30 PM	-	-	-	5:30 PM	5:30 PM
Volume	437	477	449	300	-	-	-	440.0	440.0
Factor	0.94	0.95	0.95	0.80	-	-	-	0.93	0.93

between
Radford and Kenwood

Site: King Street

Seven Day Volume, per Channel

EB

Interval Start	Tue 5/2/2017	Wed 5/3/2017	Thu 5/4/2017	Fri 5/5/2017	Sat 5/6/2017	Sun 5/7/2017	Mon 5/8/2017	Mon - Fri Average	7 Day Average
12:00 AM	-	25	27	22	-	-	-	24.7	24.7
1:00 AM	-	16	11	10	-	-	-	12.3	12.3
2:00 AM	-	5	8	1	-	-	-	4.7	4.7
3:00 AM	-	3	3	4	-	-	-	3.3	3.3
4:00 AM	-	21	20	17	-	-	-	19.3	19.3
5:00 AM	-	57	35	25	-	-	-	39.0	39.0
6:00 AM	-	177	143	111	-	-	-	143.7	143.7
7:00 AM	-	377	259	230	-	-	-	288.7	288.7
8:00 AM	-	578	278	272	-	-	-	376.0	376.0
9:00 AM	-	349	245	214	-	-	-	269.3	269.3
10:00 AM	-	283	187	168	-	-	-	212.7	212.7
11:00 AM	-	326	167	152	-	-	-	215.0	215.0
12:00 PM	-	309	171	120	-	-	-	200.0	200.0
1:00 PM	166	330	181	53	-	-	-	255.5	255.5
2:00 PM	334	316	214	-	-	-	-	288.0	288.0
3:00 PM	427	261	211	-	-	-	-	299.7	299.7
4:00 PM	388	262	269	-	-	-	-	306.3	306.3
5:00 PM	401	265	234	-	-	-	-	300.0	300.0
6:00 PM	346	257	208	-	-	-	-	270.3	270.3
7:00 PM	333	248	190	-	-	-	-	257.0	257.0
8:00 PM	219	145	138	-	-	-	-	167.3	167.3
9:00 PM	165	130	95	-	-	-	-	130.0	130.0
10:00 PM	110	65	63	-	-	-	-	79.3	79.3
11:00 PM	57	42	36	-	-	-	-	45.0	45.0
Totals	2946	4847	3393	1399	0	0	0	4207.2	4207.2
Peak Hours									
12:00 AM - 12:00 PM	-	7:45 AM	7:30 AM	7:45 AM	-	-	-	7:45 AM	7:45 AM
Volume	-	608	289	278	-	-	-	389.3	389.3
Factor	-	0.87	0.87	0.85	-	-	-	0.92	0.92
12:00 PM - 12:00 AM	3:15 PM	1:30 PM	4:00 PM	12:00 PM	-	-	-	4:30 PM	4:30 PM
Volume	428	344	269	120	-	-	-	315.3	315.3
Factor	0.88	0.91	0.95	0.79	-	-	-	0.98	0.98

between
Radford and Kenwood

Site: King Street
5/2/2017
Tuesday

Daily Speed

WB

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200	Avg.
12:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1:00 PM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2:00 PM	340	7	14	81	186	45	6	0	0	0	1	0	0	0	26.5
3:00 PM	337	13	18	100	150	48	7	0	0	0	0	0	1	0	26.0
4:00 PM	421	8	24	104	200	68	14	0	0	2	1	0	0	0	26.7
5:00 PM	435	16	21	122	182	86	7	1	0	0	0	0	0	0	26.2
6:00 PM	390	12	19	98	169	77	12	1	1	1	0	0	0	0	26.6
7:00 PM	348	11	10	99	162	56	5	2	0	1	0	0	1	1	26.6
8:00 PM	290	5	9	79	140	48	6	2	1	0	0	0	0	0	26.8
9:00 PM	192	2	2	49	90	34	10	2	1	1	0	0	1	0	28.0
10:00 PM	141	1	1	21	72	38	6	1	0	0	1	0	0	0	28.6
11:00 PM	80	0	1	9	45	21	4	0	0	0	0	0	0	0	28.3
Total	2974	75	119	762	1396	521	77	9	3	5	3	0	3	1	26.7
%		2.5	4.0	25.6	46.9	17.5	2.6	0.3	0.1	0.2	0.1	0.0	0.1	0.0	

Average (Mean) 26.7 mph **Minimum** 10.0 mph **Maximum** 75.9 mph **Pace Range** 21.7 - 31.7 mph 2337 vehicles (78.6 %)

Percentile Speeds	10%	15%	50%	85%	90%
(mph)	21.5	22.6	26.8	31.0	32.0

Speeds Exceeded	25 mph	35 mph	45 mph	55 mph	65 mph	75 mph
	67.9 % (2018)	3.4 % (101)	0.5 % (15)	0.2 % (7)	0.1 % (4)	0.0 % (1)

between
Radford and Kenwood

Site: King Street
5/3/2017
Wednesday

Daily Speed

WB

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200	Avg.
12:00 AM	28	0	0	1	11	13	3	0	0	0	0	0	0	0	31.1
1:00 AM	24	0	1	4	10	4	4	0	0	0	0	1	0	0	29.7
2:00 AM	12	0	0	1	5	3	0	3	0	0	0	0	0	0	32.1
3:00 AM	7	0	0	0	3	2	1	0	1	0	0	0	0	0	32.7
4:00 AM	14	0	0	2	8	4	0	0	0	0	0	0	0	0	28.3
5:00 AM	57	0	1	6	21	21	6	2	0	0	0	0	0	0	30.6
6:00 AM	192	5	3	33	83	58	7	3	0	0	0	0	0	0	28.4
7:00 AM	402	13	14	81	191	87	9	2	2	0	0	2	0	1	27.6
8:00 AM	372	47	62	112	112	29	4	0	1	3	1	1	0	0	23.2
9:00 AM	328	7	18	86	144	61	7	1	2	0	0	1	0	1	26.7
10:00 AM	294	10	8	75	153	44	2	2	0	0	0	0	0	0	26.3
11:00 AM	284	2	5	54	161	55	6	0	0	0	0	1	0	0	27.6
12:00 PM	311	4	7	73	149	66	11	0	0	0	0	0	0	1	27.5
1:00 PM	315	2	13	75	159	55	8	2	1	0	0	0	0	0	27.2
2:00 PM	319	9	6	101	146	51	5	0	0	1	0	0	0	0	26.3
3:00 PM	392	26	39	123	152	46	5	0	1	0	0	0	0	0	24.7
4:00 PM	413	19	28	107	186	63	6	0	0	0	1	0	2	1	26.1
5:00 PM	427	23	41	136	173	51	1	0	0	0	0	2	0	0	24.9
6:00 PM	439	17	38	136	188	50	7	1	0	1	0	1	0	0	25.4
7:00 PM	371	18	27	118	163	39	4	0	0	1	0	1	0	0	25.2
8:00 PM	431	15	46	168	161	38	2	0	0	0	0	0	0	1	24.5
9:00 PM	249	5	9	83	107	40	3	0	2	0	0	0	0	0	26.4
10:00 PM	142	0	2	23	66	44	7	0	0	0	0	0	0	0	28.8
11:00 PM	86	0	2	11	46	22	4	1	0	0	0	0	0	0	28.6
Total	5909	222	370	1609	2598	946	112	17	10	6	2	10	2	5	26.2
%		3.8	6.3	27.2	44.0	16.0	1.9	0.3	0.2	0.1	0.0	0.2	0.0	0.1	

Average (Mean) 26.2 mph **Minimum** 10.0 mph **Maximum** 76.2 mph **Pace Range** 21.5 - 31.5 mph 4398 vehicles (74.4 %)

Percentile Speeds	10%	15%	50%	85%	90%
(mph)	20.0	21.6	26.4	30.7	31.8

Speeds Exceeded	25 mph	35 mph	45 mph	55 mph	65 mph	75 mph
	62.8 % (3708)	2.8 % (164)	0.6 % (35)	0.3 % (19)	0.1 % (7)	0.0 % (1)

between
Radford and Kenwood

Site: King Street
5/4/2017
Thursday

Daily Speed

WB

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200	Avg.
12:00 AM	45	0	0	5	22	16	2	0	0	0	0	0	0	0	29.3
1:00 AM	17	0	0	3	8	6	0	0	0	0	0	0	0	0	28.2
2:00 AM	17	0	0	2	9	3	3	0	0	0	0	0	0	0	29.4
3:00 AM	5	0	0	0	1	3	1	0	0	0	0	0	0	0	32.5
4:00 AM	16	0	0	0	6	9	1	0	0	0	0	0	0	0	30.4
5:00 AM	60	0	1	6	16	32	4	0	0	1	0	0	0	0	30.6
6:00 AM	188	1	1	16	85	75	10	0	0	0	0	0	0	0	29.3
7:00 AM	408	17	17	98	181	83	8	2	1	0	1	0	0	0	26.6
8:00 AM	418	40	59	128	150	30	8	1	1	0	0	1	0	0	23.7
9:00 AM	293	5	3	89	157	33	5	0	0	1	0	0	0	0	26.5
10:00 AM	277	8	13	71	128	47	9	1	0	0	0	0	0	0	26.4
11:00 AM	288	4	11	73	137	55	7	0	0	0	0	0	0	1	27.1
12:00 PM	341	2	8	96	177	55	3	0	0	0	0	0	0	0	26.7
1:00 PM	324	6	22	88	160	45	3	0	0	0	0	0	0	0	26.0
2:00 PM	390	5	29	154	164	35	3	0	0	0	0	0	0	0	25.2
3:00 PM	410	23	43	181	127	32	3	0	1	0	0	0	0	0	23.9
4:00 PM	394	16	40	131	154	48	4	0	0	0	0	0	0	1	25.0
5:00 PM	448	23	41	140	183	57	2	1	0	0	1	0	0	0	24.9
6:00 PM	412	10	33	131	165	66	4	1	0	1	0	0	0	1	25.8
7:00 PM	331	5	24	104	147	49	2	0	0	0	0	0	0	0	25.7
8:00 PM	260	2	20	56	132	45	5	0	0	0	0	0	0	0	26.4
9:00 PM	178	2	3	46	97	27	2	0	0	0	0	0	0	1	27.0
10:00 PM	140	2	1	37	78	19	3	0	0	0	0	0	0	0	26.8
11:00 PM	87	0	3	20	44	19	1	0	0	0	0	0	0	0	27.2
Total	5747	171	372	1675	2528	889	93	6	3	3	2	1	0	4	25.9
%		3.0	6.5	29.1	44.0	15.5	1.6	0.1	0.1	0.1	0.0	0.0	0.0	0.1	

Average (Mean) 25.9 mph **Minimum** 10.0 mph **Maximum** 83.8 mph **Pace Range** 21.3 - 31.3 mph 4347 vehicles (75.6 %)

Percentile Speeds	10%	15%	50%	85%	90%
(mph)	20.2	21.6	26.2	30.4	31.4

Speeds Exceeded	25 mph	35 mph	45 mph	55 mph	65 mph	75 mph
	61.4 % (3529)	1.9 % (112)	0.2 % (13)	0.1 % (7)	0.1 % (4)	0.1 % (3)

between
Radford and Kenwood

Site: King Street
5/5/2017
Friday

Daily Speed

WB

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200	Avg.
12:00 AM	59	0	2	10	25	20	2	0	0	0	0	0	0	0	28.4
1:00 AM	27	0	0	4	13	5	4	1	0	0	0	0	0	0	29.9
2:00 AM	15	0	0	4	8	2	1	0	0	0	0	0	0	0	28.2
3:00 AM	6	0	0	0	4	2	0	0	0	0	0	0	0	0	29.9
4:00 AM	11	0	0	0	9	1	1	0	0	0	0	0	0	0	29.0
5:00 AM	49	0	0	9	26	12	2	0	0	0	0	0	0	0	28.3
6:00 AM	156	1	0	18	80	48	7	2	0	0	0	0	0	0	29.0
7:00 AM	364	9	21	95	178	53	8	0	0	0	0	0	0	0	26.2
8:00 AM	434	54	68	149	135	25	3	0	0	0	0	0	0	0	22.7
9:00 AM	300	6	15	86	160	28	3	1	0	0	0	0	1	0	25.9
10:00 AM	300	8	9	85	146	42	9	0	0	0	1	0	0	0	26.4
11:00 AM	306	8	11	84	141	57	5	0	0	0	0	0	0	0	26.5
12:00 PM	292	11	8	78	144	43	7	0	0	0	0	0	1	0	26.5
Total	2319	97	134	622	1069	338	52	4	0	0	1	0	2	0	26.0
%		4.2	5.8	26.8	46.1	14.6	2.2	0.2	0.0	0.0	0.0	0.0	0.1	0.0	

Average (Mean) 26.0 mph **Minimum** 10.1 mph **Maximum** 65.5 mph **Pace Range** 21.6 - 31.6 mph 1766 vehicles (76.2 %)

Percentile Speeds	10%	15%	50%	85%	90%
(mph)	20.0	21.7	26.4	30.3	31.5

Speeds Exceeded	25 mph	35 mph	45 mph	55 mph	65 mph	75 mph
	63.2 % (1466)	2.5 % (59)	0.1 % (3)	0.1 % (3)	0.1 % (2)	0 % (0)

between
Radford and Kenwood

Site: King Street
5/2/2017
Tuesday

Daily Speed

EB

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200	Avg.
12:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1:00 PM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2:00 PM	334	22	22	35	90	99	53	12	1	0	0	0	0	0	28.9
3:00 PM	427	30	37	85	110	125	34	4	1	0	0	0	0	1	27.1
4:00 PM	388	40	34	63	110	101	34	4	0	0	1	0	1	0	26.8
5:00 PM	401	29	44	65	91	89	65	17	0	1	0	0	0	0	27.9
6:00 PM	346	25	29	56	82	83	55	13	1	1	0	0	0	1	28.3
7:00 PM	333	20	18	55	77	96	55	11	0	0	0	1	0	0	28.9
8:00 PM	219	3	18	22	53	74	43	4	2	0	0	0	0	0	30.0
9:00 PM	165	2	0	8	34	68	43	8	0	1	1	0	0	0	32.8
10:00 PM	110	1	1	12	31	43	17	4	1	0	0	0	0	0	31.0
11:00 PM	57	0	0	2	11	22	17	4	1	0	0	0	0	0	33.7
Total	2780	172	203	403	689	800	416	81	7	3	2	1	1	2	28.6
%		6.2	7.3	14.5	24.8	28.8	15.0	2.9	0.3	0.1	0.1	0.0	0.0	0.1	

Average (Mean) 28.6 mph **Minimum** 10.0 mph **Maximum** 78.5 mph **Pace Range** 26.2 - 36.2 mph 1518 vehicles (54.6 %)

Percentile Speeds	10%	15%	50%	85%	90%
(mph)	17.9	20.7	29.5	35.8	37.0

Speeds Exceeded	25 mph	35 mph	45 mph	55 mph	65 mph	75 mph
	72.0 % (2002)	18.5 % (513)	0.6 % (16)	0.2 % (6)	0.1 % (3)	0.0 % (1)

between
Radford and Kenwood

Site: King Street
5/3/2017
Wednesday

Daily Speed

EB

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200	Avg.
12:00 AM	25	0	0	2	4	7	10	1	1	0	0	0	0	0	33.8
1:00 AM	16	0	0	0	4	8	2	2	0	0	0	0	0	0	33.4
2:00 AM	5	0	0	0	0	0	3	2	0	0	0	0	0	0	38.7
3:00 AM	3	0	0	0	0	0	2	0	1	0	0	0	0	0	40.3
4:00 AM	21	0	0	1	6	8	3	3	0	0	0	0	0	0	32.5
5:00 AM	57	1	0	0	18	20	15	3	0	0	0	0	0	0	32.5
6:00 AM	177	4	4	10	44	72	35	7	1	0	0	0	0	0	31.5
7:00 AM	377	18	22	38	107	126	49	11	4	1	1	0	0	0	29.6
8:00 AM	578	77	71	132	138	121	29	8	2	0	0	0	0	0	24.9
9:00 AM	349	21	13	31	72	132	68	10	2	0	0	0	0	0	30.1
10:00 AM	283	3	8	28	70	111	53	9	1	0	0	0	0	0	30.9
11:00 AM	326	7	9	29	89	99	74	17	2	0	0	0	0	0	31.0
12:00 PM	309	10	16	48	83	99	45	4	2	1	1	0	0	0	29.2
1:00 PM	330	22	21	51	79	109	41	7	0	0	0	0	0	0	28.1
2:00 PM	316	30	54	60	77	61	27	5	1	0	0	0	1	0	25.6
3:00 PM	261	51	60	48	48	33	18	1	0	1	0	0	0	1	23.0
4:00 PM	262	50	41	42	51	48	24	4	1	0	0	0	1	0	24.5
5:00 PM	265	62	39	41	45	53	18	5	1	1	0	0	0	0	23.8
6:00 PM	257	55	38	40	50	47	20	5	1	0	0	0	0	1	24.1
7:00 PM	248	42	36	41	53	42	27	6	0	0	1	0	0	0	25.0
8:00 PM	145	24	18	25	31	31	14	2	0	0	0	0	0	0	25.0
9:00 PM	130	17	15	14	29	35	14	4	1	1	0	0	0	0	26.8
10:00 PM	65	2	10	9	15	18	8	3	0	0	0	0	0	0	28.2
11:00 PM	42	5	1	4	7	15	7	3	0	0	0	0	0	0	29.9
Total	4847	501	476	694	1120	1295	606	122	21	5	3	0	2	2	27.3
%		10.3	9.8	14.3	23.1	26.7	12.5	2.5	0.4	0.1	0.1	0.0	0.0	0.0	

Average (Mean) 27.3 mph **Minimum** 10.0 mph **Maximum** 76.0 mph **Pace Range** 25.1 - 35.1 mph 2437 vehicles (50.3 %)

Percentile Speeds	10%	15%	50%	85%	90%
(mph)	14.8	17.5	28.6	35.1	36.6

Speeds Exceeded	25 mph	35 mph	45 mph	55 mph	65 mph	75 mph
	65.5 % (3176)	15.7 % (761)	0.7 % (33)	0.1 % (7)	0.1 % (4)	0.0 % (1)

between
Radford and Kenwood

Site: King Street
5/4/2017
Thursday

Daily Speed

EB

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200	Avg.
12:00 AM	27	3	5	0	8	7	3	1	0	0	0	0	0	0	27.3
1:00 AM	11	0	2	2	1	4	2	0	0	0	0	0	0	0	28.8
2:00 AM	8	0	1	0	3	2	2	0	0	0	0	0	0	0	29.4
3:00 AM	3	0	0	0	1	2	0	0	0	0	0	0	0	0	30.3
4:00 AM	20	0	1	0	4	8	3	2	1	1	0	0	0	0	34.4
5:00 AM	35	3	2	6	6	10	7	0	1	0	0	0	0	0	28.8
6:00 AM	143	12	16	14	37	44	15	3	1	0	0	1	0	0	27.9
7:00 AM	259	44	38	44	46	40	32	12	1	0	0	1	0	1	25.7
8:00 AM	278	71	62	66	36	27	12	2	0	2	0	0	0	0	21.4
9:00 AM	245	30	31	39	50	57	32	4	0	2	0	0	0	0	26.4
10:00 AM	187	18	25	29	45	43	14	9	1	2	0	1	0	0	26.9
11:00 AM	167	8	20	30	39	46	18	5	1	0	0	0	0	0	27.7
12:00 PM	171	8	26	51	49	25	9	2	0	1	0	0	0	0	25.4
1:00 PM	181	14	21	26	55	39	19	6	1	0	0	0	0	0	27.2
2:00 PM	214	20	29	32	45	58	23	6	1	0	0	0	0	0	26.8
3:00 PM	211	29	35	42	45	38	19	3	0	0	0	0	0	0	24.6
4:00 PM	269	36	34	64	55	53	21	4	1	0	1	0	0	0	25.1
5:00 PM	234	28	34	45	46	50	29	0	0	1	1	0	0	0	25.8
6:00 PM	208	15	21	43	45	53	27	2	2	0	0	0	0	0	27.3
7:00 PM	190	23	31	37	40	42	15	2	0	0	0	0	0	0	25.1
8:00 PM	138	1	4	12	52	39	25	4	0	1	0	0	0	0	30.5
9:00 PM	95	7	2	16	27	33	10	0	0	0	0	0	0	0	28.5
10:00 PM	63	3	8	14	14	16	7	1	0	0	0	0	0	0	27.0
11:00 PM	36	2	0	1	12	16	3	2	0	0	0	0	0	0	30.2
Total	3393	375	448	613	761	752	347	70	11	10	2	3	0	1	26.2
%		11.1	13.2	18.1	22.4	22.2	10.2	2.1	0.3	0.3	0.1	0.1	0.0	0.0	

Average (Mean) 26.2 mph **Minimum** 10.0 mph **Maximum** 77.3 mph **Pace Range** 24.7 - 34.7 mph 1540 vehicles (45.4 %)

Percentile Speeds	10%	15%	50%	85%	90%
(mph)	14.6	16.4	27.1	34.5	35.9

Speeds Exceeded	25 mph	35 mph	45 mph	55 mph	65 mph	75 mph
	57.7 % (1957)	13.1 % (444)	0.8 % (27)	0.2 % (6)	0.0 % (1)	0.0 % (1)

between
Radford and Kenwood

Site: King Street
5/5/2017
Friday

Daily Speed

EB

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200	Avg.
12:00 AM	22	0	2	1	8	6	5	0	0	0	0	0	0	0	30.2
1:00 AM	10	0	0	0	2	7	1	0	0	0	0	0	0	0	31.8
2:00 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	28.6
3:00 AM	4	0	0	0	1	1	2	0	0	0	0	0	0	0	34.7
4:00 AM	17	0	0	1	3	7	5	1	0	0	0	0	0	0	33.0
5:00 AM	25	0	1	2	9	8	5	0	0	0	0	0	0	0	30.3
6:00 AM	111	2	1	14	45	35	13	1	0	0	0	0	0	0	29.2
7:00 AM	230	14	11	29	71	81	21	2	0	0	1	0	0	0	28.5
8:00 AM	272	70	64	74	35	19	7	1	1	0	0	1	0	0	20.7
9:00 AM	214	23	23	30	56	57	18	5	1	0	0	1	0	0	26.9
10:00 AM	168	8	16	32	37	52	15	5	2	0	1	0	0	0	28.1
11:00 AM	152	28	60	43	15	5	0	0	0	0	0	0	0	1	19.7
12:00 PM	120	49	57	12	1	0	1	0	0	0	0	0	0	0	15.9
Total	1346	194	235	238	284	278	93	15	4	0	2	2	0	1	24.7
%		14.4	17.5	17.7	21.1	20.7	6.9	1.1	0.3	0.0	0.1	0.1	0.0	0.1	

Average (Mean) 24.7 mph **Minimum** 10.0 mph **Maximum** 78.2 mph **Pace Range** 24.3 - 34.3 mph 573 vehicles (42.6 %)

Percentile Speeds	10%	15%	50%	85%	90%
(mph)	13.6	15.1	25.1	33.2	34.4

Speeds Exceeded	25 mph	35 mph	45 mph	55 mph	65 mph	75 mph
	50.4 % (679)	8.7 % (117)	0.7 % (9)	0.4 % (5)	0.1 % (1)	0.1 % (1)

Queue Observations

King Street Queuing Observation AM Peak

Intersection with	Date	Time	NB	SB	WB	EB
Braddock	5/31/2017	7:00	100	100	80	80
		7:15	100	120	100	100
		7:30	200	80	120	80
		7:45	140	120	120	120
		8:00	240	120	200	100
		8:15	240	120	200	140
		8:30	180	100	160	100
Kenwood	5/31/2017	7:00	40	100	140	100
		7:15	40	100	120	120
		7:30	40	120	160	180
		7:45	40	140	220	160
		8:00	40	160	300	220
		8:15	40	80	320	160
		8:30	20	80	140	100
Chinquapin	6/1/2017	7:00	40	X	100	80
		7:15	20	X	100	100
		7:30	40	X	80	200
		7:45	40	X	120	260
		8:00	20	X	220	260
		8:15	160	X	160	140
		8:30	40	X	100	120
Janneys	6/6/2017	7:00	180	X	140	120
		7:15	200	X	160	160
		7:30	220	X	180	220
		7:45	300	X	220	160
		8:00	320	X	240	280
		8:15	140	X	120	160
		8:30	100	X	120	140
Highland	6/7/2017	7:00	20	X	100	160
		7:15	40	X	120	160
		7:30	20	X	100	140
		7:45	20	X	3	140
		8:00	20	X	140	180
		8:15	20	X	60	60
		8:30	20	X	100	120

Note:

NB and SB on King Street
WB and EB on Braddock Road
The queue length's unit is in feet

King Street Queuing Observation PM Peak

Intersection with	Date	Time	NB	SB	WB	EB
Braddock	5/31/2017	4:30	160	100	60	80
		4:45	18	80	200	60
		5:00	100	240	200	100
		5:15	200	240	100	100
		5:30	160	240	120	60
		5:45	200	240	200	120
Kenwood	5/31/2017	4:30	40	80	260	60
		4:45	80	80	200	120
		5:00	40	160	100	80
		5:15	40	140	300	100
		5:30	40	120	280	60
		5:45	40	120	300	60
Chinquapin	6/1/2017	4:30	100	X	140	200
		4:45	60	X	240	180
		5:00	40	X	160	220
		5:15	40	X	140	160
		5:30	60	X	200	200
		5:45	40	X	180	200
Janneys	6/6/2017	4:30	80	X	100	180
		4:45	120	X	180	180
		5:00	120	X	120	260
		5:15	100	X	120	160
		5:30	100	X	200	180
		5:45	120	X	260	220
Highland	6/7/2017	4:30	20	X	60	100
		4:45	20	X	80	180
		5:00	20	X	100	160
		5:15	20	X	80	200
		5:30	20	X	240	200
		5:45	20	X	280	200

Note:

NB and SB on King Street
WB and EB on Braddock Road
The queue length's unit is in feet

Appendix B

Synchro Queue Summary and Outputs

King Street Road Diet Traffic Analysis

Synchro Queue Summary

Intersection	Approach	Queue Observations[1] (ft)		Existing (After Complete Street)[2] (ft)		Existing (After Complete Street)[3] (ft)	
		AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
King Street at Braddock Road	Eastbound	140	120	100	60	140	60
	Westbound	200	200	160	200	180	200
	Northbound	120	200	320	320	600#	580#
	Southbound	240	240	280	400#	300	460#
King Street at Kenwood Avenue	Eastbound	220	120	160	120	300	230
	Westbound	320	300	520	480	1080#	960#
	Northbound	40	80	100	80	160	80
	Southbound	160	160	160m	200m	200m	360m#
King Street at Chinquapin Drive	Eastbound	260	220	280	360	820#	600#
	Westbound	220	240	260	220	680	440
	Northbound	160	100	220	80	200	80
King Street at Janney's Lane	Eastbound	280	260	240	220	420	380
	Westbound	240	260	200	160	340	300
	Northbound	320	120	320	140	420#	160
King Street at Highland Place	Eastbound	180	200	80	120	160	220
	Westbound	140	280	240	260	320	320
	Northbound	40	20	40	20	40	20

[1] Longest queue length observed within each peak hour

[2] 95th percentile queue per approach (without City adjustments)

[3] 95th percentile queue per approach (with City adjustments)

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

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

Existing Conditions (After Complete Street) without adjustments

AM Peak Hour

Queues
21: CHINQUAPIN DR. & KING ST

06/27/2017

Lane Group	EBT	EBR	WBL	WBT	NBL
Lane Group Flow (vph)	579	241	153	658	219
v/c Ratio	0.52	0.23	0.31	0.48	0.69
Control Delay	13.7	1.4	6.7	6.3	54.1
Queue Delay	0.3	0.0	0.0	0.0	0.0
Total Delay	13.9	1.4	6.7	6.3	54.1
Queue Length 50th (ft)	222	11	29	144	147
Queue Length 95th (ft)	274	20	60	266	218
Internal Link Dist (ft)	590			4174	206
Turn Bay Length (ft)			125		
Base Capacity (vph)	1109	1040	543	1365	526
Starvation Cap Reductn	127	0	0	0	0
Spillback Cap Reductn	0	0	0	30	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.59	0.23	0.28	0.49	0.42

Intersection Summary

Lane Group	EBT	EBR	WBT	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	310	405	469	263	469	178	512
v/c Ratio	0.27	0.40	0.23	0.26	0.69	0.51	0.33
Control Delay	2.4	5.2	15.8	2.1	70.7	31.0	4.5
Queue Delay	1.0	1.2	0.0	0.0	0.0	14.8	0.6
Total Delay	3.4	6.5	15.9	2.1	70.7	45.8	5.1
Queue Length 50th (ft)	34	67	121	0	258	182	81
Queue Length 95th (ft)	45	96	152	38	324	270	81
Internal Link Dist (ft)	178		261		798		127
Turn Bay Length (ft)							
Base Capacity (vph)	1130	1024	2056	1025	678	349	1547
Starvation Cap Reductn	567	401	0	0	0	149	653
Spillback Cap Reductn	0	0	364	88	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.65	0.28	0.28	0.69	0.89	0.57

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	631	186	73	731	110	212	211
v/c Ratio	0.28	0.18	0.16	0.63	0.34	0.78	0.52
Control Delay	7.4	2.1	8.9	12.6	37.5	55.0	33.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.4	2.1	8.9	12.7	37.5	55.0	33.2
Queue Length 50th (ft)	76	1	18	327	68	132	106
Queue Length 95th (ft)	157	33	43	528	103	m162	m136
Internal Link Dist (ft)	798			590	213		112
Turn Bay Length (ft)		100	110				
Base Capacity (vph)	2261	1031	460	1158	515	443	642
Starvation Cap Reductn	0	0	0	14	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.18	0.16	0.64	0.21	0.48	0.33

Intersection Summary

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

Lane Group	EBT	WBT	NBL
Lane Group Flow (vph)	568	560	60
v/c Ratio	0.34	0.37	0.26
Control Delay	2.2	8.1	21.1
Queue Delay	0.0	0.0	0.0
Total Delay	2.2	8.1	21.1
Queue Length 50th (ft)	32	135	15
Queue Length 95th (ft)	78	239	42
Internal Link Dist (ft)	692	494	182
Turn Bay Length (ft)			
Base Capacity (vph)	1648	1514	545
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.34	0.37	0.11

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	416	209	102	456	456	152
v/c Ratio	0.45	0.26	0.23	0.44	0.69	0.32
Control Delay	18.7	3.2	9.7	11.9	30.6	26.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.7	3.2	9.7	11.9	30.6	26.2
Queue Length 50th (ft)	161	0	24	137	214	66
Queue Length 95th (ft)	243	38	47	210	320	116
Internal Link Dist (ft)	651			134	900	
Turn Bay Length (ft)		210				50
Base Capacity (vph)	926	798	466	1039	737	543
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	0.45	0.26	0.22	0.44	0.62	0.28

Intersection Summary

PM Peak Hour

Queues
21: CHINQUAPIN DR. & KING ST

06/27/2017

Lane Group	EBT	EBR	WBL	WBT	NBL
Lane Group Flow (vph)	723	74	36	623	67
v/c Ratio	0.58	0.07	0.08	0.41	0.33
Control Delay	8.7	0.6	3.5	3.5	37.0
Queue Delay	0.4	0.0	0.0	0.0	0.0
Total Delay	9.0	0.6	3.5	3.5	37.0
Queue Length 50th (ft)	128	0	4	66	32
Queue Length 95th (ft)	364	m4	16	214	70
Internal Link Dist (ft)	590			4174	206
Turn Bay Length (ft)			125		
Base Capacity (vph)	1250	1087	474	1513	638
Starvation Cap Reductn	152	0	0	0	0
Spillback Cap Reductn	0	0	0	2	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.66	0.07	0.08	0.41	0.11

Intersection Summary

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

Lane Group	EBT	EBR	WBT	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	315	146	581	287	479	219	334
v/c Ratio	0.27	0.14	0.29	0.28	0.69	0.87	0.23
Control Delay	4.0	0.4	16.9	2.1	69.2	65.0	7.7
Queue Delay	0.4	0.5	0.3	0.1	0.0	53.8	0.8
Total Delay	4.5	0.9	17.1	2.2	69.2	118.9	8.5
Queue Length 50th (ft)	50	0	156	0	258	235	78
Queue Length 95th (ft)	54	4	192	40	324	#392	83
Internal Link Dist (ft)	178		261		798		127
Turn Bay Length (ft)							
Base Capacity (vph)	1174	1039	2031	1025	690	251	1454
Starvation Cap Reductn	469	593	0	0	0	58	802
Spillback Cap Reductn	0	0	796	152	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.33	0.47	0.33	0.69	1.13	0.51

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	504	34	10	656	97	295	28
v/c Ratio	0.24	0.04	0.02	0.58	0.20	0.85	0.06
Control Delay	9.1	4.1	9.5	14.0	27.9	51.1	13.6
Queue Delay	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Total Delay	9.1	4.1	9.5	14.1	27.9	51.1	13.6
Queue Length 50th (ft)	74	0	3	267	50	160	7
Queue Length 95th (ft)	127	16	m8	474	84	m195	m15
Internal Link Dist (ft)	798			590	213		112
Turn Bay Length (ft)		100	110				
Base Capacity (vph)	2125	935	508	1140	683	482	656
Starvation Cap Reductn	0	0	0	70	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.04	0.02	0.61	0.14	0.61	0.04

Intersection Summary

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

Lane Group	EBT	WBT	NBL
Lane Group Flow (vph)	488	642	24
v/c Ratio	0.40	0.63	0.05
Control Delay	7.2	12.8	10.6
Queue Delay	0.0	0.0	0.0
Total Delay	7.2	12.8	10.6
Queue Length 50th (ft)	78	155	3
Queue Length 95th (ft)	128	253	16
Internal Link Dist (ft)	692	494	182
Turn Bay Length (ft)			
Base Capacity (vph)	1206	1021	502
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.40	0.63	0.05

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	389	343	188	454	206	99
v/c Ratio	0.37	0.36	0.34	0.34	0.40	0.30
Control Delay	13.1	2.8	7.8	5.5	25.0	27.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.1	2.8	7.8	5.5	25.0	27.8
Queue Length 50th (ft)	94	0	27	58	78	39
Queue Length 95th (ft)	216	46	76	163	138	81
Internal Link Dist (ft)	651			134	900	
Turn Bay Length (ft)		210				50
Base Capacity (vph)	1061	944	607	1318	844	612
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	0.37	0.36	0.31	0.34	0.24	0.16

Intersection Summary

Existing Conditions (After Complete Street) with adjustments

AM Peak Hour

Lane Group	EBT	EBR	WBL	WBT	NBL
Lane Group Flow (vph)	823	280	178	910	353
v/c Ratio	0.87	0.31	0.69	0.79	0.81
Control Delay	27.9	2.9	26.8	21.1	55.8
Queue Delay	0.6	0.0	0.0	33.9	0.0
Total Delay	28.5	2.9	26.8	55.0	55.8
Queue Length 50th (ft)	265	12	46	452	245
Queue Length 95th (ft)	#823	29	111	675	207
Internal Link Dist (ft)	590			4174	206
Turn Bay Length (ft)			125		
Base Capacity (vph)	943	901	284	1145	526
Starvation Cap Reductn	17	0	0	0	0
Spillback Cap Reductn	0	0	0	287	3
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.89	0.31	0.63	1.06	0.67

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBT	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	373	488	572	321	747	202	610
v/c Ratio	0.35	0.51	0.29	0.32	1.32	0.68	0.43
Control Delay	6.7	15.5	19.0	2.4	209.0	43.5	10.3
Queue Delay	2.0	3.7	0.2	70.0	0.6	42.8	1.0
Total Delay	8.7	19.2	19.2	72.3	209.5	86.4	11.3
Queue Length 50th (ft)	60	99	165	0	~556	212	126
Queue Length 95th (ft)	109	149	182	26	#600	299	126
Internal Link Dist (ft)	178		261		798		127
Turn Bay Length (ft)							
Base Capacity (vph)	1074	949	1954	1012	565	298	1428
Starvation Cap Reductn	538	363	0	0	0	104	525
Spillback Cap Reductn	0	0	565	861	40	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.83	0.41	2.13	1.42	1.04	0.68

Intersection Summary

~ 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.

Lane Group	EBT	EBR	WBL	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	922	227	80	941	228	255	255
v/c Ratio	0.64	0.26	0.30	1.00	0.66	0.85	0.50
Control Delay	19.5	13.7	12.6	43.9	46.2	55.9	32.8
Queue Delay	0.1	0.0	0.0	5.5	0.0	0.0	0.0
Total Delay	19.6	13.7	12.6	49.4	46.2	55.9	32.8
Queue Length 50th (ft)	260	88	20	~826	144	141	136
Queue Length 95th (ft)	299	128	m32	#1086	150	m209	m174
Internal Link Dist (ft)	798			590	213		112
Turn Bay Length (ft)		100	110				
Base Capacity (vph)	1437	868	267	943	423	369	619
Starvation Cap Reductn	0	0	0	19	0	0	0
Spillback Cap Reductn	62	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.26	0.30	1.02	0.54	0.69	0.41

Intersection Summary

~ 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.

Lane Group	EBT	WBT	NBL
Lane Group Flow (vph)	697	685	60
v/c Ratio	0.45	0.44	0.26
Control Delay	4.4	9.1	21.1
Queue Delay	0.0	0.0	0.0
Total Delay	4.4	9.1	21.1
Queue Length 50th (ft)	81	184	15
Queue Length 95th (ft)	169	325	42
Internal Link Dist (ft)	692	494	182
Turn Bay Length (ft)			
Base Capacity (vph)	1554	1572	545
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.45	0.44	0.11

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	665	255	113	646	585	195
v/c Ratio	0.86	0.33	0.38	0.64	0.98	0.38
Control Delay	38.7	4.7	14.0	16.5	65.4	27.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.7	4.7	14.0	16.5	65.4	27.1
Queue Length 50th (ft)	343	7	27	230	330	87
Queue Length 95th (ft)	426	41	59	345	#425	124
Internal Link Dist (ft)	651			134	900	
Turn Bay Length (ft)		210				50
Base Capacity (vph)	773	772	301	1015	596	518
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	0.86	0.33	0.38	0.64	0.98	0.38

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

PM Peak Hour

Queues
21: CHINQUAPIN DR. & KING ST

09/08/2017

Lane Group	EBT	EBR	WBL	WBT	NBL
Lane Group Flow (vph)	932	81	40	822	95
v/c Ratio	0.82	0.08	0.15	0.64	0.33
Control Delay	19.4	3.4	5.8	10.5	35.4
Queue Delay	0.0	0.0	0.0	1.5	0.0
Total Delay	19.5	3.4	5.8	12.0	35.4
Queue Length 50th (ft)	384	1	8	310	46
Queue Length 95th (ft)	#604	m18	18	445	70
Internal Link Dist (ft)	590			4174	206
Turn Bay Length (ft)			125		
Base Capacity (vph)	1141	990	266	1284	639
Starvation Cap Reductn	2	0	0	0	0
Spillback Cap Reductn	0	0	0	275	3
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.82	0.08	0.15	0.81	0.15

Intersection Summary

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.

Lane Group	EBT	EBR	WBT	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	335	155	605	299	727	255	533
v/c Ratio	0.30	0.16	0.30	0.29	1.26	1.02	0.40
Control Delay	5.7	0.5	17.0	2.1	186.1	97.9	14.2
Queue Delay	0.7	0.6	0.4	66.5	1.2	31.6	1.7
Total Delay	6.3	1.1	17.4	68.6	187.2	129.5	15.9
Queue Length 50th (ft)	60	2	163	0	~516	~285	138
Queue Length 95th (ft)	67	5	201	41	#573	#450	137
Internal Link Dist (ft)	178		261		798		127
Turn Bay Length (ft)							
Base Capacity (vph)	1117	990	2031	1030	575	251	1333
Starvation Cap Reductn	465	553	0	0	0	67	601
Spillback Cap Reductn	0	0	877	845	79	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.35	0.52	1.62	1.47	1.39	0.73

Intersection Summary

~ 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.

Lane Group	EBT	EBR	WBL	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	777	42	11	888	179	343	33
v/c Ratio	0.54	0.05	0.04	0.95	0.31	0.93	0.06
Control Delay	18.8	13.6	7.9	40.0	30.9	58.9	20.5
Queue Delay	0.0	0.0	0.0	3.1	0.0	0.7	0.0
Total Delay	18.8	13.6	7.9	43.1	30.9	59.6	20.5
Queue Length 50th (ft)	196	14	3	673	101	175	15
Queue Length 95th (ft)	230	30	m5	#962	87	m#367	m26
Internal Link Dist (ft)	798			590	213		112
Turn Bay Length (ft)		100	110				
Base Capacity (vph)	1450	833	309	936	664	420	648
Starvation Cap Reductn	0	0	0	23	0	0	0
Spillback Cap Reductn	0	0	0	0	14	9	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.05	0.04	0.97	0.28	0.83	0.05

Intersection Summary

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.

Lane Group	EBT	WBT	NBL
Lane Group Flow (vph)	613	767	24
v/c Ratio	0.59	0.73	0.05
Control Delay	12.6	14.3	10.6
Queue Delay	0.0	0.0	0.0
Total Delay	12.6	14.3	10.6
Queue Length 50th (ft)	137	195	3
Queue Length 95th (ft)	224	319	16
Internal Link Dist (ft)	692	494	182
Turn Bay Length (ft)			
Base Capacity (vph)	1041	1054	502
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.59	0.73	0.05

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	612	408	202	623	261	125
v/c Ratio	0.69	0.43	0.47	0.53	0.62	0.35
Control Delay	24.2	3.5	10.4	10.4	35.0	28.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.2	3.5	10.4	10.4	35.0	28.8
Queue Length 50th (ft)	234	1	33	140	118	53
Queue Length 95th (ft)	381	41	81	301	162	85
Internal Link Dist (ft)	651			134	900	
Turn Bay Length (ft)		210				50
Base Capacity (vph)	885	943	443	1168	683	583
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	0.69	0.43	0.46	0.53	0.38	0.21

Intersection Summary

Appendix C

Synchro Intersection LOS and Delay Outputs

No Build Conditions (Before Complete Street)

AM Peak Hour

HCM Signalized Intersection Capacity Analysis
21: CHINQUAPIN DR. & KING ST

07/11/2017

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	708	241	153	783	146	73
Future Volume (vph)	708	241	153	783	146	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	12	11	12	16	12
Grade (%)	-2%			3%	-3%	
Total Lost time (s)	6.0			6.0	5.5	
Lane Util. Factor	0.95			0.95	1.00	
Frpb, ped/bikes	0.99			1.00	1.00	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.96			1.00	0.95	
Flt Protected	1.00			0.99	0.97	
Satd. Flow (prot)	3286			3266	1924	
Flt Permitted	1.00			0.51	0.97	
Satd. Flow (perm)	3286			1665	1924	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.62	0.62
Adj. Flow (vph)	823	280	178	910	235	118
RTOR Reduction (vph)	29	0	0	0	14	0
Lane Group Flow (vph)	1074	0	0	1088	339	0
Confl. Peds. (#/hr)		12			2	
Confl. Bikes (#/hr)		8				
Heavy Vehicles (%)	2%	2%	8%	8%	5%	5%
Turn Type	NA		pm+pt	NA	Prot	
Protected Phases	2		1	6	3	
Permitted Phases			6			
Actuated Green, G (s)	40.0			74.1	29.4	
Effective Green, g (s)	40.0			74.1	29.4	
Actuated g/C Ratio	0.35			0.64	0.26	
Clearance Time (s)	6.0			6.0	5.5	
Vehicle Extension (s)	0.2			0.2	3.0	
Lane Grp Cap (vph)	1142			1477	491	
v/s Ratio Prot	c0.33			c0.19	c0.18	
v/s Ratio Perm				0.29		
v/c Ratio	0.94			0.74	0.69	
Uniform Delay, d1	36.3			13.8	38.7	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	15.7			3.3	4.2	
Delay (s)	52.0			17.2	42.8	
Level of Service	D			B	D	
Approach Delay (s)	52.0			17.2	42.8	
Approach LOS	D			B	D	

Intersection Summary			
HCM 2000 Control Delay	35.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	19.5
Intersection Capacity Utilization	80.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	310	405	0	469	263	0	609	3	178	537	0
Future Volume (vph)	0	310	405	0	469	263	0	609	3	178	537	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	11	11	11	12	11	12	11	11	12
Total Lost time (s)		6.0	6.0		6.0	6.0		6.0		6.0	6.0	
Lane Util. Factor		1.00	1.00		0.95	1.00		0.95		1.00	0.95	
Frpb, ped/bikes		1.00	0.99		1.00	1.00		1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00		1.00	1.00	
Frt		1.00	0.85		1.00	0.85		1.00		1.00	1.00	
Flt Protected		1.00	1.00		1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		1881	1578		3421	1531		3800		1728	4000	
Flt Permitted		1.00	1.00		1.00	1.00		1.00		0.95	1.00	
Satd. Flow (perm)		1881	1578		3421	1531		3452		1728	3455	
Peak-hour factor, PHF	0.83	0.83	0.83	0.82	0.82	0.82	0.82	0.82	0.82	0.88	0.88	0.88
Adj. Flow (vph)	0	373	488	0	572	321	0	743	4	202	610	0
RTOR Reduction (vph)	0	0	48	0	0	138	0	0	0	0	0	0
Lane Group Flow (vph)	0	373	440	0	572	183	0	747	0	202	610	0
Confl. Peds. (#/hr)			2	2			2		2	1		2
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	1%	1%	1%
Turn Type		NA	Perm		NA	Perm		NA		Prot	NA	
Protected Phases		1 2 7 8			1 2 7 8			3		4	3 4	
Permitted Phases		6	1 2 7 8		6	1 2 7 8						
Actuated Green, G (s)		96.0	96.0		96.0	96.0		25.0		29.0	60.0	
Effective Green, g (s)		96.0	96.0		96.0	96.0		25.0		29.0	60.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.15		0.17	0.36	
Clearance Time (s)								6.0		6.0		
Vehicle Extension (s)								4.0		2.0		
Lane Grp Cap (vph)		1074	901		1954	874		565		298	1428	
v/s Ratio Prot		0.20			0.17			c0.20		c0.12	0.15	
v/s Ratio Perm			c0.28			0.12						
v/c Ratio		0.35	0.49		0.29	0.21		1.32		0.68	0.43	
Uniform Delay, d1		19.2	21.4		18.5	17.5		71.5		65.1	41.0	
Progression Factor		0.31	0.86		1.00	1.00		1.00		0.51	0.23	
Incremental Delay, d2		0.1	0.3		0.1	0.1		157.0		9.9	0.8	
Delay (s)		6.2	18.7		18.6	17.7		228.5		43.1	10.3	
Level of Service		A	B		B	B		F		D	B	
Approach Delay (s)		13.3			18.3			228.5			18.4	
Approach LOS		B			B			F			B	

Intersection Summary			
HCM 2000 Control Delay	64.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	168.0	Sum of lost time (s)	36.0
Intersection Capacity Utilization	58.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	717	186	73	536	320	57	74	20	212	120	91
Future Volume (vph)	39	717	186	73	536	320	57	74	20	212	120	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	11	12	12	12	16	16	16	12	12	16
Grade (%)		0%			0%			0%			-5%	
Total Lost time (s)		6.0	6.0		6.0			6.0			6.0	6.0
Lane Util. Factor		*0.95	1.00		0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.93		0.98			1.00			1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00			1.00			1.00	1.00
Frt		1.00	0.85		0.95			0.98			1.00	0.85
Flt Protected		1.00	1.00		1.00			0.98			0.97	1.00
Satd. Flow (prot)		3600	1448		3134			1989			1842	1813
Flt Permitted		0.81	1.00		0.73			0.57			0.68	1.00
Satd. Flow (perm)		2941	1448		2305			1158			1284	1813
Peak-hour factor, PHF	0.82	0.82	0.82	0.91	0.91	0.91	0.66	0.66	0.66	0.83	0.83	0.83
Adj. Flow (vph)	48	874	227	80	589	352	86	112	30	255	145	110
RTOR Reduction (vph)	0	0	83	0	68	0	0	6	0	0	0	0
Lane Group Flow (vph)	0	922	144	0	953	0	0	222	0	0	400	110
Confl. Peds. (#/hr)	17		30	30		17	2		9	9		2
Confl. Bikes (#/hr)			8			1						
Heavy Vehicles (%)	0%	0%	0%	5%	5%	5%	4%	4%	4%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	9	0	0	0	0	0	0	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		6			2			8			4	
Permitted Phases	6		6	2			8			4		4
Actuated Green, G (s)		40.4	40.4		40.4			30.5			30.5	30.5
Effective Green, g (s)		40.4	40.4		40.4			30.5			30.5	30.5
Actuated g/C Ratio		0.49	0.49		0.49			0.37			0.37	0.37
Clearance Time (s)		6.0	6.0		6.0			6.0			6.0	6.0
Vehicle Extension (s)		3.0	3.0		3.0			4.0			4.0	4.0
Lane Grp Cap (vph)		1433	705		1123			426			472	667
v/s Ratio Prot												
v/s Ratio Perm		0.31	0.10		c0.41			0.19			c0.31	0.06
v/c Ratio		0.64	0.20		0.85			0.52			0.85	0.16
Uniform Delay, d1		15.9	12.1		18.6			20.5			24.1	17.6
Progression Factor		1.00	1.00		1.00			1.00			1.00	1.00
Incremental Delay, d2		2.2	0.7		8.1			1.5			13.7	0.2
Delay (s)		18.1	12.8		26.6			22.0			37.8	17.8
Level of Service		B	B		C			C			D	B
Approach Delay (s)		17.0			26.6			22.0			33.5	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	23.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	82.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	689	8	4	681	44	16
Future Volume (vph)	689	8	4	681	44	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	15	11	12	16	11	12
Grade (%)	0%			1%	-2%	
Total Lost time (s)	5.0			5.0	4.5	
Lane Util. Factor	1.00			1.00	1.00	
Frpb, ped/bikes	1.00			1.00	0.99	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	1.00			1.00	0.96	
Flt Protected	1.00			1.00	0.96	
Satd. Flow (prot)	1893			1919	1712	
Flt Permitted	1.00			1.00	0.96	
Satd. Flow (perm)	1893			1915	1712	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	689	8	4	681	44	16
RTOR Reduction (vph)	1	0	0	0	13	0
Lane Group Flow (vph)	696	0	0	685	47	0
Confl. Peds. (#/hr)		10	10		1	3
Confl. Bikes (#/hr)		8				
Heavy Vehicles (%)	4%	4%	4%	4%	0%	0%
Bus Blockages (#/hr)	14	0	0	17	0	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	1			1	2	
Permitted Phases			1			
Actuated Green, G (s)	45.0			45.0	12.0	
Effective Green, g (s)	45.0			45.0	12.0	
Actuated g/C Ratio	0.68			0.68	0.18	
Clearance Time (s)	5.0			5.0	4.5	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	1280			1295	308	
v/s Ratio Prot	c0.37				c0.03	
v/s Ratio Perm				0.36		
v/c Ratio	0.54			0.53	0.15	
Uniform Delay, d1	5.5			5.4	23.0	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	1.7			1.5	1.0	
Delay (s)	7.2			7.0	24.0	
Level of Service	A			A	C	
Approach Delay (s)	7.2			7.0	24.0	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	7.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	66.5	Sum of lost time (s)	9.5
Intersection Capacity Utilization	53.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	545	209	102	581	456	152
Future Volume (vph)	545	209	102	581	456	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	15	15
Grade (%)	-2%			-2%	0%	
Total Lost time (s)	5.5	5.5	5.0	5.5	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.96	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	2000	1489	1678	1767	1928	1676
Flt Permitted	1.00	1.00	0.11	1.00	0.95	1.00
Satd. Flow (perm)	1819	1489	202	1767	1928	1676
Peak-hour factor, PHF	0.82	0.82	0.90	0.90	0.78	0.78
Adj. Flow (vph)	665	255	113	646	585	195
RTOR Reduction (vph)	0	156	0	0	0	0
Lane Group Flow (vph)	665	99	113	646	585	195
Confl. Peds. (#/hr)		7	7			
Confl. Bikes (#/hr)		8				
Heavy Vehicles (%)	2%	2%	5%	5%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	7
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	2		1	2 1	3	
Permitted Phases		2	2 1			3
Actuated Green, G (s)	35.0	35.0	47.0	52.0	28.0	28.0
Effective Green, g (s)	35.0	35.0	47.0	47.0	28.0	28.0
Actuated g/C Ratio	0.39	0.39	0.52	0.52	0.31	0.31
Clearance Time (s)	5.5	5.5	5.0		5.0	5.0
Vehicle Extension (s)	4.0	4.0	0.2		4.0	4.0
Lane Grp Cap (vph)	773	575	300	917	596	518
v/s Ratio Prot	c0.33		0.05	c0.37	c0.30	
v/s Ratio Perm		0.07	0.15			0.12
v/c Ratio	0.86	0.17	0.38	0.70	0.98	0.38
Uniform Delay, d1	25.5	18.2	15.8	16.5	31.0	24.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	12.0	0.6	0.3	2.0	32.1	0.6
Delay (s)	37.5	18.9	16.1	18.5	63.1	25.1
Level of Service	D	B	B	B	E	C
Approach Delay (s)	32.4			18.2	53.6	
Approach LOS	C			B	D	

Intersection Summary			
HCM 2000 Control Delay	34.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	90.5	Sum of lost time (s)	15.5
Intersection Capacity Utilization	73.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

PM Peak Hour

HCM Signalized Intersection Capacity Analysis
21: CHINQUAPIN DR. & KING ST

07/11/2017

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	848	74	36	748	43	24
Future Volume (vph)	848	74	36	748	43	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	12	11	12	16	12
Grade (%)	-2%			3%	-3%	
Total Lost time (s)	6.0			6.0	5.5	
Lane Util. Factor	0.95			0.95	1.00	
Frpb, ped/bikes	1.00			1.00	1.00	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.99			1.00	0.95	
Flt Protected	1.00			1.00	0.97	
Satd. Flow (prot)	3406			3285	1919	
Flt Permitted	1.00			0.87	0.97	
Satd. Flow (perm)	3406			2855	1919	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.70	0.70
Adj. Flow (vph)	932	81	40	822	61	34
RTOR Reduction (vph)	2	0	0	0	19	0
Lane Group Flow (vph)	1011	0	0	862	76	0
Confl. Peds. (#/hr)		12			2	
Confl. Bikes (#/hr)		3				
Heavy Vehicles (%)	2%	2%	8%	8%	5%	5%
Turn Type	NA		pm+pt	NA	Prot	
Protected Phases	2		1	6	3	
Permitted Phases			6			
Actuated Green, G (s)	59.9			59.9	5.9	
Effective Green, g (s)	59.9			59.9	5.9	
Actuated g/C Ratio	0.77			0.77	0.08	
Clearance Time (s)	6.0			6.0	5.5	
Vehicle Extension (s)	0.2			0.2	0.2	
Lane Grp Cap (vph)	2639			2212	146	
v/s Ratio Prot	0.30				c0.04	
v/s Ratio Perm				c0.30		
v/c Ratio	0.38			0.39	0.52	
Uniform Delay, d1	2.8			2.8	34.3	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	0.4			0.1	1.3	
Delay (s)	3.2			2.9	35.6	
Level of Service	A			A	D	
Approach Delay (s)	3.2			2.9	35.6	
Approach LOS	A			A	D	

Intersection Summary			
HCM 2000 Control Delay	4.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	77.3	Sum of lost time (s)	19.5
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	315	146	0	581	287	0	602	2	219	457	2
Future Volume (vph)	0	315	146	0	581	287	0	602	2	219	457	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	11	11	11	12	11	12	11	11	12
Total Lost time (s)		6.0	6.0		6.0	6.0		6.0		6.0	6.0	
Lane Util. Factor		1.00	1.00		0.95	1.00		0.95		1.00	0.95	
Frpb, ped/bikes		1.00	0.99		1.00	1.00		1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00		1.00	1.00	
Frt		1.00	0.85		1.00	0.85		1.00		1.00	1.00	
Flt Protected		1.00	1.00		1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		1881	1578		3421	1531		3800		1728	4000	
Flt Permitted		1.00	1.00		1.00	1.00		1.00		0.95	1.00	
Satd. Flow (perm)		1881	1578		3421	1531		3453		1728	3453	
Peak-hour factor, PHF	0.94	0.94	0.94	0.96	0.96	0.96	0.83	0.83	0.83	0.86	0.86	0.86
Adj. Flow (vph)	0	335	155	0	605	299	0	725	2	255	531	2
RTOR Reduction (vph)	0	0	53	0	0	121	0	0	0	0	0	0
Lane Group Flow (vph)	0	335	102	0	605	178	0	727	0	255	533	0
Confl. Peds. (#/hr)			2	2			2		2			2
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	1%	1%	1%
Turn Type		NA	Perm		NA	Perm		NA		Prot	NA	
Protected Phases		1 2 7 8			1 2 7 8			3		4	3 4	
Permitted Phases		6	1 2 7 8		6	1 2 7 8						
Actuated Green, G (s)		98.0	98.0		98.0	98.0		25.0		24.0	55.0	
Effective Green, g (s)		98.0	98.0		98.0	98.0		25.0		24.0	55.0	
Actuated g/C Ratio		0.59	0.59		0.59	0.59		0.15		0.15	0.33	
Clearance Time (s)								6.0		6.0		
Vehicle Extension (s)								4.0		2.0		
Lane Grp Cap (vph)		1117	937		2031	909		575		251	1333	
v/s Ratio Prot		c0.18			0.18			c0.19		c0.15	0.13	
v/s Ratio Perm			0.06			0.12						
v/c Ratio		0.30	0.11		0.30	0.20		1.26		1.02	0.40	
Uniform Delay, d1		16.6	14.5		16.5	15.4		70.0		70.5	42.3	
Progression Factor		0.30	0.06		1.00	1.00		1.00		0.58	0.32	
Incremental Delay, d2		0.1	0.0		0.1	0.1		132.4		56.1	0.8	
Delay (s)		5.1	1.0		16.6	15.5		202.4		96.8	14.1	
Level of Service		A	A		B	B		F		F	B	
Approach Delay (s)		3.8			16.2			202.4			40.9	
Approach LOS		A			B			F			D	

Intersection Summary			
HCM 2000 Control Delay	67.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	165.0	Sum of lost time (s)	36.0
Intersection Capacity Utilization	64.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	605	34	10	561	220	31	44	22	295	16	12
Future Volume (vph)	24	605	34	10	561	220	31	44	22	295	16	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	11	12	12	12	16	16	16	12	12	16
Grade (%)		0%			0%			0%			-5%	
Total Lost time (s)		6.0	6.0		6.0			6.0			6.0	6.0
Lane Util. Factor		0.95	1.00		0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.97		0.99			0.99			1.00	0.98
Flpb, ped/bikes		1.00	1.00		1.00			1.00			0.98	1.00
Frt		1.00	0.85		0.96			0.97			1.00	0.85
Flt Protected		1.00	1.00		1.00			0.98			0.95	1.00
Satd. Flow (prot)		3498	1470		3292			1996			1792	1809
Flt Permitted		0.89	1.00		0.94			0.74			0.63	1.00
Satd. Flow (perm)		3123	1470		3107			1494			1178	1809
Peak-hour factor, PHF	0.81	0.81	0.81	0.88	0.88	0.88	0.54	0.54	0.54	0.86	0.86	0.86
Adj. Flow (vph)	30	747	42	11	638	250	57	81	41	343	19	14
RTOR Reduction (vph)	0	0	18	0	40	0	0	13	0	0	0	0
Lane Group Flow (vph)	0	777	24	0	859	0	0	166	0	0	362	14
Confl. Peds. (#/hr)	7		5	5		7	4		21	21		4
Confl. Bikes (#/hr)			3			11						
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	9	0	0	0	0	0	0	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		6			2			8			4	
Permitted Phases	6		6	2			8			4		4
Actuated Green, G (s)		40.4	40.4		40.4			29.9			29.9	29.9
Effective Green, g (s)		40.4	40.4		40.4			29.9			29.9	29.9
Actuated g/C Ratio		0.49	0.49		0.49			0.36			0.36	0.36
Clearance Time (s)		6.0	6.0		6.0			6.0			6.0	6.0
Vehicle Extension (s)		3.0	3.0		3.0			4.0			4.0	4.0
Lane Grp Cap (vph)		1533	721		1525			542			427	657
v/s Ratio Prot												
v/s Ratio Perm		0.25	0.02		c0.28			0.11			c0.31	0.01
v/c Ratio		0.51	0.03		0.56			0.31			0.85	0.02
Uniform Delay, d1		14.2	10.8		14.7			18.8			24.1	16.8
Progression Factor		1.00	1.00		1.00			1.00			1.00	1.00
Incremental Delay, d2		1.2	0.1		1.5			0.4			15.0	0.0
Delay (s)		15.4	10.9		16.3			19.2			39.1	16.8
Level of Service		B	B		B			B			D	B
Approach Delay (s)		15.2			16.3			19.2			38.2	
Approach LOS		B			B			B			D	

Intersection Summary			
HCM 2000 Control Delay	19.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	82.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	605	8	12	755	12	12
Future Volume (vph)	605	8	12	755	12	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	15	11	12	16	11	12
Grade (%)	0%			1%	-2%	
Total Lost time (s)	5.0			5.0	4.5	
Lane Util. Factor	1.00			1.00	1.00	
Frpb, ped/bikes	1.00			1.00	1.00	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	1.00			1.00	0.93	
Flt Protected	1.00			1.00	0.98	
Satd. Flow (prot)	1971			2015	1563	
Flt Permitted	1.00			0.99	0.98	
Satd. Flow (perm)	1971			1997	1563	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	605	8	12	755	12	12
RTOR Reduction (vph)	1	0	0	0	10	0
Lane Group Flow (vph)	612	0	0	767	14	0
Confl. Peds. (#/hr)		10	10		2	
Confl. Bikes (#/hr)		3				
Heavy Vehicles (%)	2%	2%	2%	2%	8%	8%
Bus Blockages (#/hr)	9	0	0	10	0	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	1			1	2	
Permitted Phases			1			
Actuated Green, G (s)	45.0			45.0	12.0	
Effective Green, g (s)	45.0			45.0	12.0	
Actuated g/C Ratio	0.68			0.68	0.18	
Clearance Time (s)	5.0			5.0	4.5	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	1333			1351	282	
v/s Ratio Prot	0.31				c0.01	
v/s Ratio Perm				c0.38		
v/c Ratio	0.46			0.57	0.05	
Uniform Delay, d1	5.0			5.6	22.5	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	1.1			1.7	0.3	
Delay (s)	6.2			7.4	22.9	
Level of Service	A			A	C	
Approach Delay (s)	6.2			7.4	22.9	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	7.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	66.5	Sum of lost time (s)	9.5
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	514	343	188	579	206	99
Future Volume (vph)	514	343	188	579	206	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	15	15
Grade (%)	-2%			-2%	0%	
Total Lost time (s)	5.5	5.5	5.0	5.5	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.97	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	2000	1498	1727	1819	1928	1647
Flt Permitted	1.00	1.00	0.22	1.00	0.95	1.00
Satd. Flow (perm)	1819	1498	405	1819	1928	1647
Peak-hour factor, PHF	0.84	0.84	0.93	0.93	0.79	0.79
Adj. Flow (vph)	612	408	202	623	261	125
RTOR Reduction (vph)	0	226	0	0	0	0
Lane Group Flow (vph)	612	182	202	623	261	125
Confl. Peds. (#/hr)		8	8			1
Confl. Bikes (#/hr)		3				
Heavy Vehicles (%)	2%	2%	2%	2%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	6
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	2		1	2 1	3	
Permitted Phases		2	2 1			3
Actuated Green, G (s)	35.2	35.2	46.6	51.6	16.9	16.9
Effective Green, g (s)	35.2	35.2	46.6	46.6	16.9	16.9
Actuated g/C Ratio	0.45	0.45	0.59	0.59	0.21	0.21
Clearance Time (s)	5.5	5.5	5.0		5.0	5.0
Vehicle Extension (s)	4.0	4.0	0.2		4.0	4.0
Lane Grp Cap (vph)	891	667	429	1072	412	352
v/s Ratio Prot	c0.31		0.07	c0.34	c0.14	
v/s Ratio Perm		0.12	0.21			0.08
v/c Ratio	0.69	0.27	0.47	0.58	0.63	0.36
Uniform Delay, d1	17.5	13.8	10.0	10.1	28.2	26.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.3	1.0	0.3	0.5	3.6	0.8
Delay (s)	21.8	14.8	10.3	10.6	31.8	27.3
Level of Service	C	B	B	B	C	C
Approach Delay (s)	19.0			10.5	30.3	
Approach LOS	B			B	C	

Intersection Summary			
HCM 2000 Control Delay	17.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	79.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	62.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Existing Conditions (After Complete Street)

AM Peak Hour

HCM Signalized Intersection Capacity Analysis
21: CHINQUAPIN DR. & KING ST

09/08/2017

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	708	241	153	783	146	73
Future Volume (vph)	708	241	153	783	146	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	12	10	11	16	12
Grade (%)	-2%			3%	-3%	
Total Lost time (s)	6.5	6.5	6.5	6.5	5.1	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.94	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.95	
Flt Protected	1.00	1.00	0.95	1.00	0.97	
Satd. Flow (prot)	1756	1496	1536	1675	1924	
Flt Permitted	1.00	1.00	0.12	1.00	0.97	
Satd. Flow (perm)	1756	1496	196	1675	1924	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.62	0.62
Adj. Flow (vph)	823	280	178	910	235	118
RTOR Reduction (vph)	0	98	0	0	16	0
Lane Group Flow (vph)	823	182	178	910	337	0
Confl. Peds. (#/hr)		12			2	
Confl. Bikes (#/hr)		5				
Heavy Vehicles (%)	2%	2%	8%	8%	5%	5%
Turn Type	NA	Perm	pm+pt	NA	Prot	
Protected Phases	2		1	6	3	
Permitted Phases		2	6			
Actuated Green, G (s)	64.5	64.5	82.1	82.1	26.3	
Effective Green, g (s)	64.5	64.5	82.1	82.1	26.3	
Actuated g/C Ratio	0.54	0.54	0.68	0.68	0.22	
Clearance Time (s)	6.5	6.5	6.5	6.5	5.1	
Vehicle Extension (s)	0.2	0.2	0.2	0.2	4.0	
Lane Grp Cap (vph)	943	804	258	1145	421	
v/s Ratio Prot	c0.47		0.06	c0.54	c0.17	
v/s Ratio Perm		0.12	0.41			
v/c Ratio	0.87	0.23	0.69	0.79	0.80	
Uniform Delay, d1	24.2	14.6	20.0	13.1	44.4	
Progression Factor	0.67	0.45	1.00	1.00	1.00	
Incremental Delay, d2	8.6	0.5	6.0	5.7	10.8	
Delay (s)	24.9	7.0	26.0	18.8	55.1	
Level of Service	C	A	C	B	E	
Approach Delay (s)	20.3			20.0	55.1	
Approach LOS	C			C	E	

Intersection Summary			
HCM 2000 Control Delay	25.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.1
Intersection Capacity Utilization	73.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	310	405	0	469	263	0	609	3	178	537	0
Future Volume (vph)	0	310	405	0	469	263	0	609	3	178	537	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	11	11	11	12	12	14	11	11	12
Total Lost time (s)		6.0	6.0		6.0	6.0		6.0		6.0	6.0	
Lane Util. Factor		1.00	1.00		0.95	1.00		0.95		1.00	0.95	
Frpb, ped/bikes		1.00	0.99		1.00	1.00		1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00		1.00	1.00	
Frt		1.00	0.85		1.00	0.85		1.00		1.00	1.00	
Flt Protected		1.00	1.00		1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		1881	1578		3421	1531		3800		1728	4000	
Flt Permitted		1.00	1.00		1.00	1.00		1.00		0.95	1.00	
Satd. Flow (perm)		1881	1578		3421	1531		3571		1728	3455	
Peak-hour factor, PHF	0.83	0.83	0.83	0.82	0.82	0.82	0.82	0.82	0.82	0.88	0.88	0.88
Adj. Flow (vph)	0	373	488	0	572	321	0	743	4	202	610	0
RTOR Reduction (vph)	0	0	48	0	0	138	0	0	0	0	0	0
Lane Group Flow (vph)	0	373	440	0	572	183	0	747	0	202	610	0
Confl. Peds. (#/hr)			2	2			2		2	1		2
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	1%	1%	1%
Turn Type		NA	Perm		NA	Perm		NA		Prot	NA	
Protected Phases		1 2 7 8			1 2 7 8			3		4	3 4	
Permitted Phases		6	1 2 7 8		6	1 2 7 8						
Actuated Green, G (s)		96.0	96.0		96.0	96.0		25.0		29.0	60.0	
Effective Green, g (s)		96.0	96.0		96.0	96.0		25.0		29.0	60.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.15		0.17	0.36	
Clearance Time (s)								6.0		6.0		
Vehicle Extension (s)								4.0		2.0		
Lane Grp Cap (vph)		1074	901		1954	874		565		298	1428	
v/s Ratio Prot		0.20			0.17			c0.20		c0.12	0.15	
v/s Ratio Perm			c0.28			0.12						
v/c Ratio		0.35	0.49		0.29	0.21		1.32		0.68	0.43	
Uniform Delay, d1		19.2	21.4		18.5	17.5		71.5		65.1	41.0	
Progression Factor		0.31	0.86		1.00	1.00		1.00		0.51	0.23	
Incremental Delay, d2		0.1	0.3		0.1	0.1		157.0		9.9	0.8	
Delay (s)		6.2	18.7		18.6	17.7		228.5		43.1	10.3	
Level of Service		A	B		B	B		F		D	B	
Approach Delay (s)		13.3			18.3			228.5			18.4	
Approach LOS		B			B			F			B	

Intersection Summary			
HCM 2000 Control Delay	64.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	168.0	Sum of lost time (s)	36.0
Intersection Capacity Utilization	58.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	717	186	73	536	320	57	74	20	212	120	91
Future Volume (vph)	39	717	186	73	536	320	57	74	20	212	120	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	11	12	16	16	16	12	12	16
Grade (%)		0%			0%			0%			-5%	
Total Lost time (s)		7.0	7.0	7.0	7.0			6.1		6.1	6.1	
Lane Util. Factor		*0.95	1.00	1.00	1.00			1.00		1.00	1.00	
Frpb, ped/bikes		1.00	0.92	1.00	0.98			1.00		1.00	0.99	
Flpb, ped/bikes		1.00	1.00	0.99	1.00			1.00		0.99	1.00	
Frt		1.00	0.85	1.00	0.94			0.98		1.00	0.94	
Flt Protected		1.00	1.00	0.95	1.00			0.98		0.95	1.00	
Satd. Flow (prot)		3481	1434	1582	1558			1990		1805	1775	
Flt Permitted		0.68	1.00	0.27	1.00			0.60		0.56	1.00	
Satd. Flow (perm)		2375	1434	442	1558			1212		1057	1775	
Peak-hour factor, PHF	0.82	0.82	0.82	0.91	0.91	0.91	0.66	0.66	0.66	0.83	0.83	0.83
Adj. Flow (vph)	48	874	227	80	589	352	86	112	30	255	145	110
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	922	227	80	941	0	0	228	0	255	255	0
Confl. Peds. (#/hr)	17		30	30		17	2		9	9		2
Confl. Bikes (#/hr)			5			5						
Heavy Vehicles (%)	0%	0%	0%	5%	5%	5%	4%	4%	4%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	9	0	0	0	0	0	0	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			2			8			4	
Permitted Phases	6		6	2			8			4		
Actuated Green, G (s)		72.7	72.7	72.7	72.7			34.2		34.2	34.2	
Effective Green, g (s)		72.7	72.7	72.7	72.7			34.2		34.2	34.2	
Actuated g/C Ratio		0.61	0.61	0.61	0.61			0.29		0.29	0.29	
Clearance Time (s)		7.0	7.0	7.0	7.0			6.1		6.1	6.1	
Vehicle Extension (s)		0.2	0.2	0.2	0.2			4.0		2.5	2.5	
Lane Grp Cap (vph)		1438	868	267	943			345		301	505	
v/s Ratio Prot					c0.60						0.14	
v/s Ratio Perm		0.39	0.16	0.18				0.19		c0.24		
v/c Ratio		0.64	0.26	0.30	1.00			0.66		0.85	0.50	
Uniform Delay, d1		15.2	11.1	11.4	23.6			37.8		40.4	35.8	
Progression Factor		1.00	1.00	0.73	0.77			1.00		0.86	0.86	
Incremental Delay, d2		2.2	0.7	1.8	22.5			5.2		17.1	0.5	
Delay (s)		17.4	11.8	10.0	40.6			42.9		51.7	31.2	
Level of Service		B	B	B	D			D		D	C	
Approach Delay (s)		16.3			38.2			42.9			41.5	
Approach LOS		B			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	30.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.1
Intersection Capacity Utilization	104.9%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	689	8	4	681	44	16
Future Volume (vph)	689	8	4	681	44	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	15	11	12	16	11	12
Grade (%)	0%			1%	-2%	
Total Lost time (s)	5.3			5.3	4.3	
Lane Util. Factor	1.00			1.00	1.00	
Frpb, ped/bikes	1.00			1.00	0.99	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	1.00			1.00	0.96	
Flt Protected	1.00			1.00	0.96	
Satd. Flow (prot)	1893			1919	1713	
Flt Permitted	1.00			1.00	0.96	
Satd. Flow (perm)	1893			1915	1713	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	689	8	4	681	44	16
RTOR Reduction (vph)	0	0	0	0	15	0
Lane Group Flow (vph)	697	0	0	685	45	0
Confl. Peds. (#/hr)		10	10		1	3
Confl. Bikes (#/hr)		5				
Heavy Vehicles (%)	4%	4%	4%	4%	0%	0%
Bus Blockages (#/hr)	14	0	0	17	0	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			4	2	
Permitted Phases			4			
Actuated Green, G (s)	45.4			45.4	5.0	
Effective Green, g (s)	45.4			45.4	5.0	
Actuated g/C Ratio	0.76			0.76	0.08	
Clearance Time (s)	5.3			5.3	4.3	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	1432			1449	142	
v/s Ratio Prot	c0.37				c0.03	
v/s Ratio Perm				0.36		
v/c Ratio	0.49			0.47	0.32	
Uniform Delay, d1	2.8			2.8	25.9	
Progression Factor	1.00			2.41	1.00	
Incremental Delay, d2	1.2			1.0	1.3	
Delay (s)	4.0			7.7	27.2	
Level of Service	A			A	C	
Approach Delay (s)	4.0			7.7	27.2	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	6.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.6
Intersection Capacity Utilization	53.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	545	209	102	581	456	152
Future Volume (vph)	545	209	102	581	456	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	14	11	11	15	15
Grade (%)	-2%			-2%	0%	
Total Lost time (s)	5.5	5.5	5.0	5.5	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.95	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	2000	1626	1678	1767	1928	1676
Flt Permitted	1.00	1.00	0.11	1.00	0.95	1.00
Satd. Flow (perm)	1819	1626	202	1767	1928	1676
Peak-hour factor, PHF	0.82	0.82	0.90	0.90	0.78	0.78
Adj. Flow (vph)	665	255	113	646	585	195
RTOR Reduction (vph)	0	144	0	0	0	0
Lane Group Flow (vph)	665	111	113	646	585	195
Confl. Peds. (#/hr)		7	7			
Confl. Bikes (#/hr)		5				
Heavy Vehicles (%)	2%	2%	5%	5%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	7
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	2		1	2 1	3	
Permitted Phases		2	2 1			3
Actuated Green, G (s)	35.0	35.0	47.0	52.0	28.0	28.0
Effective Green, g (s)	35.0	35.0	47.0	47.0	28.0	28.0
Actuated g/C Ratio	0.39	0.39	0.52	0.52	0.31	0.31
Clearance Time (s)	5.5	5.5	5.0		5.0	5.0
Vehicle Extension (s)	4.0	4.0	0.2		4.0	4.0
Lane Grp Cap (vph)	773	628	300	917	596	518
v/s Ratio Prot	c0.33		0.05	c0.37	c0.30	
v/s Ratio Perm		0.07	0.15			0.12
v/c Ratio	0.86	0.18	0.38	0.70	0.98	0.38
Uniform Delay, d1	25.5	18.3	15.8	16.5	31.0	24.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	12.0	0.6	0.3	2.0	32.1	0.6
Delay (s)	37.5	18.9	16.1	18.5	63.1	25.1
Level of Service	D	B	B	B	E	C
Approach Delay (s)	32.4			18.2	53.6	
Approach LOS	C			B	D	

Intersection Summary			
HCM 2000 Control Delay	34.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	90.5	Sum of lost time (s)	15.5
Intersection Capacity Utilization	73.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

PM Peak Hour

HCM Signalized Intersection Capacity Analysis
21: CHINQUAPIN DR. & KING ST

09/08/2017

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	848	74	36	748	43	24
Future Volume (vph)	848	74	36	748	43	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	12	10	11	16	12
Grade (%)	-2%			3%	-3%	
Total Lost time (s)	6.5	6.5	6.5	6.5	5.1	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.94	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.95	
Flt Protected	1.00	1.00	0.95	1.00	0.97	
Satd. Flow (prot)	1756	1496	1536	1675	1919	
Flt Permitted	1.00	1.00	0.15	1.00	0.97	
Satd. Flow (perm)	1756	1496	242	1675	1919	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.70	0.70
Adj. Flow (vph)	932	81	40	822	61	34
RTOR Reduction (vph)	0	19	0	0	22	0
Lane Group Flow (vph)	932	62	40	822	73	0
Confl. Peds. (#/hr)		12			2	
Confl. Bikes (#/hr)		5				
Heavy Vehicles (%)	2%	2%	8%	8%	5%	5%
Turn Type	NA	Perm	pm+pt	NA	Prot	
Protected Phases	2		1	6	3	
Permitted Phases		2	6			
Actuated Green, G (s)	78.0	78.0	92.0	92.0	16.4	
Effective Green, g (s)	78.0	78.0	92.0	92.0	16.4	
Actuated g/C Ratio	0.65	0.65	0.77	0.77	0.14	
Clearance Time (s)	6.5	6.5	6.5	6.5	5.1	
Vehicle Extension (s)	0.2	0.2	0.2	0.2	4.0	
Lane Grp Cap (vph)	1141	972	266	1284	262	
v/s Ratio Prot	c0.53		0.01	c0.49	c0.04	
v/s Ratio Perm		0.04	0.11			
v/c Ratio	0.82	0.06	0.15	0.64	0.28	
Uniform Delay, d1	15.7	7.7	12.5	6.4	46.5	
Progression Factor	0.76	0.78	1.00	1.00	1.00	
Incremental Delay, d2	5.2	0.1	1.2	2.5	0.8	
Delay (s)	17.1	6.1	13.7	8.9	47.3	
Level of Service	B	A	B	A	D	
Approach Delay (s)	16.2			9.1	47.3	
Approach LOS	B			A	D	

Intersection Summary			
HCM 2000 Control Delay	14.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.1
Intersection Capacity Utilization	60.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	315	146	0	581	287	0	602	2	219	457	2
Future Volume (vph)	0	315	146	0	581	287	0	602	2	219	457	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	11	11	11	12	12	14	11	11	12
Total Lost time (s)		6.0	6.0		6.0	6.0		6.0		6.0	6.0	
Lane Util. Factor		1.00	1.00		0.95	1.00		0.95		1.00	0.95	
Frpb, ped/bikes		1.00	0.99		1.00	1.00		1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00		1.00	1.00	
Frt		1.00	0.85		1.00	0.85		1.00		1.00	1.00	
Flt Protected		1.00	1.00		1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		1881	1578		3421	1531		3800		1728	4000	
Flt Permitted		1.00	1.00		1.00	1.00		1.00		0.95	1.00	
Satd. Flow (perm)		1881	1578		3421	1531		3573		1728	3453	
Peak-hour factor, PHF	0.94	0.94	0.94	0.96	0.96	0.96	0.83	0.83	0.83	0.86	0.86	0.86
Adj. Flow (vph)	0	335	155	0	605	299	0	725	2	255	531	2
RTOR Reduction (vph)	0	0	53	0	0	121	0	0	0	0	0	0
Lane Group Flow (vph)	0	335	102	0	605	178	0	727	0	255	533	0
Confl. Peds. (#/hr)			2	2			2		2			2
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	1%	1%	1%
Turn Type		NA	Perm		NA	Perm		NA		Prot	NA	
Protected Phases		1 2 7 8			1 2 7 8			3		4	3 4	
Permitted Phases		6	1 2 7 8		6	1 2 7 8						
Actuated Green, G (s)		98.0	98.0		98.0	98.0		25.0		24.0	55.0	
Effective Green, g (s)		98.0	98.0		98.0	98.0		25.0		24.0	55.0	
Actuated g/C Ratio		0.59	0.59		0.59	0.59		0.15		0.15	0.33	
Clearance Time (s)								6.0		6.0		
Vehicle Extension (s)								4.0		2.0		
Lane Grp Cap (vph)		1117	937		2031	909		575		251	1333	
v/s Ratio Prot		c0.18			0.18			c0.19		c0.15	0.13	
v/s Ratio Perm			0.06			0.12						
v/c Ratio		0.30	0.11		0.30	0.20		1.26		1.02	0.40	
Uniform Delay, d1		16.6	14.5		16.5	15.4		70.0		70.5	42.3	
Progression Factor		0.30	0.06		1.00	1.00		1.00		0.58	0.32	
Incremental Delay, d2		0.1	0.0		0.1	0.1		132.4		56.1	0.8	
Delay (s)		5.1	1.0		16.6	15.5		202.4		96.8	14.1	
Level of Service		A	A		B	B		F		F	B	
Approach Delay (s)		3.8			16.2			202.4			40.9	
Approach LOS		A			B			F			D	

Intersection Summary			
HCM 2000 Control Delay	67.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	165.0	Sum of lost time (s)	36.0
Intersection Capacity Utilization	64.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	605	34	10	561	220	31	44	22	295	16	12
Future Volume (vph)	24	605	34	10	561	220	31	44	22	295	16	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	11	12	16	16	16	12	12	16
Grade (%)		0%			0%			0%			-5%	
Total Lost time (s)		7.0	7.0	7.0	7.0			6.1		6.1	6.1	
Lane Util. Factor		0.95	1.00	1.00	1.00			1.00		1.00	1.00	
Frpb, ped/bikes		1.00	0.97	1.00	0.99			0.99		1.00	0.99	
Flpb, ped/bikes		1.00	1.00	1.00	1.00			1.00		0.99	1.00	
Frt		1.00	0.85	1.00	0.96			0.97		1.00	0.94	
Flt Protected		1.00	1.00	0.95	1.00			0.98		0.95	1.00	
Satd. Flow (prot)		3381	1466	1647	1645			1998		1789	1773	
Flt Permitted		0.75	1.00	0.31	1.00			0.89		0.61	1.00	
Satd. Flow (perm)		2550	1466	545	1645			1816		1148	1773	
Peak-hour factor, PHF	0.81	0.81	0.81	0.88	0.88	0.88	0.54	0.54	0.54	0.86	0.86	0.86
Adj. Flow (vph)	30	747	42	11	638	250	57	81	41	343	19	14
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	777	42	11	888	0	0	179	0	343	33	0
Confl. Peds. (#/hr)	7		5	5		7	4		21	21		4
Confl. Bikes (#/hr)			5			5						5
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	9	0	0	0	0	0	0	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			2			8			4	
Permitted Phases	6		6	2			8			4		
Actuated Green, G (s)		68.2	68.2	68.2	68.2			38.7		38.7	38.7	
Effective Green, g (s)		68.2	68.2	68.2	68.2			38.7		38.7	38.7	
Actuated g/C Ratio		0.57	0.57	0.57	0.57			0.32		0.32	0.32	
Clearance Time (s)		7.0	7.0	7.0	7.0			6.1		6.1	6.1	
Vehicle Extension (s)		0.2	0.2	0.2	0.2			4.0		2.5	2.5	
Lane Grp Cap (vph)		1449	833	309	934			585		370	571	
v/s Ratio Prot					c0.54						0.02	
v/s Ratio Perm		0.30	0.03	0.02				0.10		c0.30		
v/c Ratio		0.54	0.05	0.04	0.95			0.31		0.93	0.06	
Uniform Delay, d1		16.1	11.5	11.4	24.3			30.6		39.3	28.1	
Progression Factor		1.00	1.00	0.55	0.86			1.00		0.77	0.79	
Incremental Delay, d2		1.4	0.1	0.2	17.0			0.4		25.8	0.0	
Delay (s)		17.5	11.6	6.5	37.8			31.0		55.9	22.1	
Level of Service		B	B	A	D			C		E	C	
Approach Delay (s)		17.2			37.4			31.0			53.0	
Approach LOS		B			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	32.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.1
Intersection Capacity Utilization	103.3%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	605	8	12	755	12	12
Future Volume (vph)	605	8	12	755	12	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	15	11	12	16	11	12
Grade (%)	0%			1%	-2%	
Total Lost time (s)	5.3			5.3	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frpb, ped/bikes	1.00			1.00	1.00	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	1.00			1.00	0.93	
Flt Protected	1.00			1.00	0.98	
Satd. Flow (prot)	1971			2015	1563	
Flt Permitted	1.00			0.99	0.98	
Satd. Flow (perm)	1971			1995	1563	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	605	8	12	755	12	12
RTOR Reduction (vph)	1	0	0	0	8	0
Lane Group Flow (vph)	612	0	0	767	16	0
Confl. Peds. (#/hr)		10	10		2	
Confl. Bikes (#/hr)		5				
Heavy Vehicles (%)	2%	2%	2%	2%	8%	8%
Bus Blockages (#/hr)	9	0	0	10	0	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			4	2	
Permitted Phases			4			
Actuated Green, G (s)	31.7			31.7	19.0	
Effective Green, g (s)	31.7			31.7	19.0	
Actuated g/C Ratio	0.53			0.53	0.32	
Clearance Time (s)	5.3			5.3	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	1041			1054	494	
v/s Ratio Prot	0.31				c0.01	
v/s Ratio Perm				c0.38		
v/c Ratio	0.59			0.73	0.03	
Uniform Delay, d1	9.7			10.8	14.2	
Progression Factor	1.00			0.89	1.00	
Incremental Delay, d2	2.4			4.0	0.1	
Delay (s)	12.1			13.7	14.3	
Level of Service	B			B	B	
Approach Delay (s)	12.1			13.7	14.3	
Approach LOS	B			B	B	

Intersection Summary			
HCM 2000 Control Delay	13.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.3
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	514	343	188	579	206	99
Future Volume (vph)	514	343	188	579	206	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	14	11	11	15	15
Grade (%)	-2%			-2%	0%	
Total Lost time (s)	5.5	5.5	5.0	5.5	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.95	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	2000	1627	1728	1819	1928	1647
Flt Permitted	1.00	1.00	0.22	1.00	0.95	1.00
Satd. Flow (perm)	1819	1627	402	1819	1928	1647
Peak-hour factor, PHF	0.84	0.84	0.93	0.93	0.79	0.79
Adj. Flow (vph)	612	408	202	623	261	125
RTOR Reduction (vph)	0	226	0	0	0	0
Lane Group Flow (vph)	612	182	202	623	261	125
Confl. Peds. (#/hr)		8	8			1
Confl. Bikes (#/hr)		5				
Heavy Vehicles (%)	2%	2%	2%	2%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	6
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	2		1	2 1	3	
Permitted Phases		2	2 1			3
Actuated Green, G (s)	35.2	35.2	46.6	51.6	17.2	17.2
Effective Green, g (s)	35.2	35.2	46.6	46.6	17.2	17.2
Actuated g/C Ratio	0.44	0.44	0.59	0.59	0.22	0.22
Clearance Time (s)	5.5	5.5	5.0		5.0	5.0
Vehicle Extension (s)	4.0	4.0	0.2		4.0	4.0
Lane Grp Cap (vph)	887	722	426	1068	418	357
v/s Ratio Prot	c0.31		0.07	c0.34	c0.14	
v/s Ratio Perm		0.11	0.21			0.08
v/c Ratio	0.69	0.25	0.47	0.58	0.62	0.35
Uniform Delay, d1	17.7	13.8	10.1	10.3	28.1	26.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.4	0.8	0.3	0.5	3.3	0.8
Delay (s)	22.1	14.6	10.5	10.8	31.4	27.1
Level of Service	C	B	B	B	C	C
Approach Delay (s)	19.1			10.7	30.0	
Approach LOS	B			B	C	

Intersection Summary			
HCM 2000 Control Delay	17.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	79.3	Sum of lost time (s)	15.5
Intersection Capacity Utilization	62.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Appendix D

Synchro Arterial LOS Outputs

No Build Conditions (Before Complete Street)

AM Peak Hour

Arterial Level of Service: EB KING ST

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
KENWOOD AV	IV	25	29.9	20.1	50.0	0.17	12.0	D
CHINQUAPIN DR.	IV	25	22.8	50.6	73.4	0.13	6.2	F
JANNEY'S LN	IV	25	135.9	38.7	174.6	0.94	19.5	B
Highland	IV	25	30.8	7.4	38.2	0.19	17.6	C
Total	IV		219.4	116.8	336.2	1.42	15.2	C

Arterial Level of Service: WB KING ST

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
JANNEY'S LN	IV	25	30.8	16.5	47.3	0.19	14.2	C
CHINQUAPIN DR.	IV	25	135.9	14.8	150.7	0.94	22.6	B
KENWOOD AV	IV	25	22.8	27.4	50.2	0.13	9.1	D
BRADDOCK RD	IV	25	29.9	209.0	238.9	0.17	2.5	F
Total	IV		219.4	267.7	487.1	1.42	10.5	D

PM Peak Hour

Arterial Level of Service: EB KING ST

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
KENWOOD AV	IV	25	29.9	17.2	47.1	0.17	12.7	D
CHINQUAPIN DR.	IV	25	22.8	3.4	26.2	0.13	17.4	C
JANNEY'S LN	IV	25	135.9	23.7	159.6	0.94	21.3	B
Highland	IV	25	30.8	6.4	37.2	0.19	18.1	C
Total	IV		219.4	50.7	270.1	1.42	19.0	C

Arterial Level of Service: WB KING ST

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
JANNEY'S LN	IV	25	30.8	10.1	40.9	0.19	16.4	C
CHINQUAPIN DR.	IV	25	135.9	3.5	139.4	0.94	24.4	B
KENWOOD AV	IV	25	22.8	16.6	39.4	0.13	11.6	D
BRADDOCK RD	IV	25	29.9	186.1	216.0	0.17	2.8	F
Total	IV		219.4	216.3	435.7	1.42	11.8	D

Existing Conditions (After Complete Street)

AM Peak Hour

Arterial Level of Service: EB KING ST

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
KENWOOD AV	IV	25	29.9	19.5	49.4	0.17	12.1	D
CHINQUAPIN DR.	IV	25	22.8	27.9	50.7	0.13	9.0	D
JANNEY'S LN	IV	25	135.9	38.7	174.6	0.94	19.5	B
Highland	IV	25	30.8	4.4	35.2	0.19	19.1	B
Total	IV		219.4	90.5	309.9	1.42	16.5	C

Arterial Level of Service: WB KING ST

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
JANNEY'S LN	IV	25	30.8	16.5	47.3	0.19	14.2	C
CHINQUAPIN DR.	IV	25	135.9	21.1	157.0	0.94	21.6	B
KENWOOD AV	IV	25	22.8	43.9	66.7	0.13	6.8	F
BRADDOCK RD	IV	25	29.9	209.0	238.9	0.17	2.5	F
Total	IV		219.4	290.5	509.9	1.42	10.1	D

PM Peak Hour

Arterial Level of Service: EB KING ST

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
KENWOOD AV	IV	25	29.9	18.8	48.7	0.17	12.3	D
CHINQUAPIN DR.	IV	25	22.8	19.4	42.2	0.13	10.8	D
JANNEY'S LN	IV	25	135.9	24.2	160.1	0.94	21.2	B
Highland	IV	25	30.8	12.6	43.4	0.19	15.5	C
Total	IV		219.4	75.0	294.4	1.42	17.4	C

Arterial Level of Service: WB KING ST

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
JANNEY'S LN	IV	25	30.8	10.4	41.2	0.19	16.3	C
CHINQUAPIN DR.	IV	25	135.9	10.5	146.4	0.94	23.2	B
KENWOOD AV	IV	25	22.8	40.0	62.8	0.13	7.3	E
BRADDOCK RD	IV	25	29.9	186.1	216.0	0.17	2.8	F
Total	IV		219.4	247.0	466.4	1.42	11.0	D