Transportation Study Appendix

Massachusetts Turnpike Parcel 7 Air Rights, Kenmore/Fenway Area

Submitted to:
Boston Redevelopment Authority
One City Hall Square
Boston, MA 02201

Submitted by:
Meredith Kenmore/Fenway Development Group, LLC

Prepared by:
Vanasse Hangen Brustlin, Inc.
101 Walnut Street
Watertown, MA 02471-9151

In Association with:
Epsilon Associates, Inc.

Project Notification Form

January 14, 2008

VHB Vanasse Hangen Brustlin, Inc.

APPENDIX A-1

Study Area Roadway Network

- Roadway Descriptions
- Intersection Descriptions

Study Area/ Roadway Descriptions

The key roadways in the study area include:

- **I-90, Massachusetts Turnpike** is an eight-lane interstate highway under the jurisdiction of Massachusetts Turnpike Authority. There is no direct access within the immediate project site to or from I-90.
- **Storrow Drive** is a four-lane limited access parkway under the jurisdiction of the Department of Conservation and Recreation (DCR) that is accessed from Commonwealth Avenue and Beacon Street via the Bowker Interchange. Due to its parkway status and the low bridge clearances, trucks are prohibited from Storrow Drive.
- **Brookline Avenue** is an urban principal arterial under City of Boston jurisdiction, and provides connections from Kenmore Square to the Longwood Medical Area. Brookline Avenue is generally a two-lane roadway with on-street parking. Between the Sears Rotary and Lansdowne Street, Brookline Avenue provides one travel lane and a parking lane in each direction. On-street parking is prohibited between Lansdowne Street and Kenmore Square.
- **Beacon Street** is an urban principal arterial under City jurisdiction, and provides connections between downtown Boston to the east and Brookline to the west. East of Kenmore Square, Beacon Street is a one-way roadway traveling westbound with three travel lanes and parking on both curb edges. West of Kenmore Square, Beacon Street is a two-way roadway with two travel lanes in each direction and parking on one curb.
- **Boylston Street** is an urban principal arterial under City jurisdiction, and connects downtown Boston at the eastern end to Sears Rotary at the western end. Boylston Street is one-way eastbound just after Massachusetts Avenue, from Dalton Street to Boston Common. In this segment, the roadway consists of three travel lanes and metered parking on both sides of the roadway. Between Dalton Street and Sears Rotary, Boylston Street is a four-lane roadway, traveling east/west, with metered parking on both sides of the roadway.
- **Commonwealth Avenue** is an urban principal arterial under City jurisdiction, and connects downtown Boston to Back Bay, Allston, Brighton, and Newton. The roadway generally consists of four lanes, with a median separation for the entire length of the roadway. From Kenmore Square west, the MBTA Green Line travels in the median. Parking is permitted on both sides of the roadway.

- **Park Drive**, an urban principal arterial under City jurisdiction, is a two-lane roadway providing northbound travel to the south of Boylston Street. At the Sears Rotary, Park Drive widens to provide four travel lanes. Residential on-street parking is provided on the east side of the street.
- **Fenway** is an urban principal arterial under the jurisdiction of Department of Conservation and Recreation (DCR), and connects the Riverway to the Back Bay Fens. The roadway begins from Riverway at the west end, travels along the southern side of the Fens, and ends at Boylston Street at the east end. Parking is prohibited near Sears Rotary and permitted south of Avenue Louis Pasteur on the western side of the roadway.
- **Arundel Street** is a two-lane local roadway, under City jurisdiction, connecting Mountfort Street and Beacon Street. Parking is permitted on both sides of the street.
- **Deerfield Street** is a minor two-lane local roadway, under City jurisdiction, connecting Commonwealth Avenue to Bay State Road and Back Street. Parking is permitted on the eastern side of the roadway.
- **Fullerton Street** is a two-way local roadway, under City jurisdiction, connecting Brookline Avenue to Miner Street. One travel lane is provided in each direction with parking prohibited on each side of the roadway.
- **Kilmarnock Street** is a two-way local roadway, under City jurisdiction, originally connecting Van Ness Street and Park Drive. The western end of this street was recently extended to connect Brookline Avenue making the intersection of Brookline Avenue, Fullerton Street and Kilmarnock Street a four-leg intersection. One travel lane is provided for each direction generally with parking on both sides of the roadway.
- **Ipswich Street** is a two-way local roadway, under City jurisdiction, connecting Boylston Street to Lansdowne Street and Van Ness Street. Ipswich Street also provides a connection to the Bowker Overpass ramp system. One travel lane is provided for each direction and parking is permitted on both sides of the roadway.
- **Kenmore Street** is a two-way local roadway, under City jurisdiction, with one travel lane in each direction. Kenmore Street connects Commonwealth Avenue and Newbury Street. Parking is permitted on the east side of the roadway

- **Lansdowne Street** is a one-way local roadway, under City jurisdiction, connecting Brookline Avenue to Ipswich Street. Parking is permitted on both sides of the roadway. During Red Sox game days, parking is prohibited along the entire street.
- **Miner Street** is a local minor roadway, under City jurisdiction, connecting Beacon Street and Fullerton Street. Miner Street is a two-way roadway with one travel lane in each direction. Parking is permitted on both sides of the roadway.
- **Mountfort Street** is a local minor roadway, under City jurisdiction, connecting Beacon Street to Park Drive, Commonwealth Avenue, and the Boston University Bridge. The two-way roadway contains one travel in each direction with parking on both sides between Beacon Street and Park Drive.
- **Newbury Street** is a local minor roadway, under City jurisdiction, connecting Brookline Avenue to Kenmore Street and Charles Gate West. The roadway accommodates two-way traffic between Kenmore Street and Brookline Avenue and one-way westbound from Charles Gate West to Kenmore Street. Parking is permitted on the south side only between Kenmore Street and Brookline Avenue, and on both sides between Charles Gate West and Kenmore Street.
- **Raleigh Street** is a local roadway, under City jurisdiction, connecting Commonwealth Avenue and Beacon Street to Bay State Road and Back Street. Raleigh Street is two-way traveling north/south between Beacon Street and Bay State Road, containing one travel lane in each direction with parking on the west side of the road. Between Bay State Road and Back Street, Raleigh Street is one-way northbound with curbside parking permitted on both sides of the roadway.
- **Yawkey Way** is a one-way local roadway from Boylston Street to Brookline Avenue. The roadway is under City jurisdiction, and provides access to Van Ness Street and Fenway Park. Parking is permitted on both sides of the street. During Red Sox game days, Yawkey Way is closed to all vehicular traffic.
- **Overland Street** is a two-way local roadway connecting parcel 7 parking lot and Brookline Avenue. One travel lane is provided in each direction with parking on each side of the roadway.

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Study Area Intersection Descriptions

Intersection geometry and physical characteristics are presented in this section.

1. Beacon Street/Park Drive (Audubon Circle) is a four-way intersection under four-phase traffic signal control. Beacon Street runs east/west and Park Drive runs north/south at this intersection. Three of the four right turns from this intersection are unsignalized (the exception is the eastbound Beacon Street right turn movement, which is signalized). All four approaches are divided by medians. The MBTA Green Line (C Line) runs within the median of Beacon Street west of the intersection, going underground immediately to the west of Park Drive.

In addition to the channelized right turns, each approach consists of two general-purpose lanes, operating effectively as a shared left/through lane and an exclusive through lane; the exception is the eastbound Beacon Street approach, consisting of three general-purpose lanes. Sidewalks are provided along all intersection approaches. On-street parking is permitted on all approaches. Crosswalks are provided in all directions, crossing by way of the medians and the islands separating the channelized right turns. Pedestrians are permitted to cross during a protected pedestrian signal phase, during which no vehicular movements are permitted.

2. Riverway/Park Drive (Sears Rotary) is a signalized intersection with two approaches. The southbound approach (Riverway) consists of two through lanes and a channelized right-turn lane. The westbound approach (Riverway) consists of three through lanes and two channelized left-turn lanes, also under the same traffic signal control. On-street parking is prohibited on all approaches.

Crosswalks are provided across all approaches except the westbound approach. Islands are provided between the channelized right-turn lane and the through lanes on the southbound approach, between the channelized left-turn lanes and the through lanes on the westbound approach, and between River Way and Park Drive to serve as pedestrian refuges.

3. Brookline Avenue/Fenway (Sears Rotary) is a complex five-leg intersection (the fifth leg is the left-turn loop to Park Drive). It operates under two-phase traffic signal control, coordinated with the adjacent intersection of Brookline Avenue, Park Drive and Boylston Street. Brookline Avenue runs north/south, and it approaches from the north with two exclusive through lanes. These continue as two lanes departing the south side of the intersection. From the south, it approaches with two exclusive through and a shared through/right-turn lane. These expand to four lanes on the north side of the intersection, to provide queue storage for the adjacent intersection at Park Drive and Boylston Street.

The Riverway runs eastbound and consists of an exclusive left-turn lane, a shared through/left-turn lane, an exclusive through lane, and an exclusive right-turn lane. On the far side of the intersection, they continue as three lanes eastbound on the Fenway and one diverge lane, looping left to Park Drive. On-street parking is prohibited on all approaches. Sidewalks are provided along Brookline Avenue and the south side of the Fenway, and pathways are provided within the Fens north of the Fenway. Crosswalks are provided across all legs except the northern leg across Brookline Avenue. Pedestrians are permitted to cross during a protected pedestrian signal phase, during which no vehicular movements are permitted.

4. Brookline Avenue/Park Drive/Boylston Street (Sears Rotary) is a signalized intersection making up part of the Sears Rotary. The intersection has five legs and four approaches: Brookline Avenue, from the northeast, consists of two general purpose lanes and one right-turn only lane; Brookline Avenue, from the southwest, consists of two through-only lanes (no left-turns are permitted on this approach) and two right-turn only lanes; Park Drive, from the south, consists of four general purpose lanes; and Boylston Street, from the east, consists of two general purpose lanes and one right-turn only lane leading into a right-turn channel. Park Drive is one-way northbound and hence, the fifth leg at this intersection is the receiving leg of Park Drive approach.

On-street parking is permitted along the east side of the Park Drive approach and along both north and south sides of the east Boylston Street leg. Sidewalks are provided along both sides of Brookline Avenue southbound, both sides of Boylston Street, and the east side of Park Drive. Islands are provided at the northwestern and southwestern corners of the intersection (on the west side of Park Drive) providing either sidewalks or pedestrian pathways. Pedestrians are accommodated in concurrent pedestrian phases. No crosswalk is provided on the west Brookline Avenue leg, since traffic is always traversing that portion of the intersection and it does not serve as a strong pedestrian desire line.

5. Beacon Street/Arundel Street/Miner Street is a four-leg unsignalized intersection. Beacon Street is the major street traveling in the east/west direction. Both approaches on Beacon Street consist of two general-purpose lanes with adjacent on-street parking. The Arundel Street approach, from the north, consists of one general-purpose lane approaching Beacon Street with stop-control at Beacon Street. The Miner Street approach, from the south, consists of one general-purpose lane, and is stop-controlled at its intersection with Beacon Street. Sidewalks are provided adjacent to all approaches, and crosswalks are provided at all approaches except the eastern Beacon Street leg.

6. Beacon Street/Mountfort Street/Maitland Street is a four-leg unsignalized intersection. Beacon Street is the major street traveling in the east/west direction. Both approaches on Beacon Street consist of two general-purpose lanes with adjacent parking. Both Mountfort Street, approaching from the south, and Maitland Street, approaching from the north, consist of one general-purpose lane approaching Beacon Street and are each under stop-sign control. The Maitland Street approach is on an approximate 7.4 percent upgrade. Even though sidewalks are provided adjacent to all approaches, crosswalks are not provided at any of the approaches at the intersection.

7. Brookline Avenue/Fullerton Street/Kilmarnock Street is a four-leg intersection under traffic signal control. Brookline Avenue is the major roadway traveling in the east/west direction. Both approaches on Brookline Avenue consist of one through/right lane and one left-turn storage bay with curb-side parking. Fullerton Street, approaching from the north consists of an exclusive right-turn lane and a shared left-through lane. Kilmarnock Street (recently added as the fourth leg to this intersection), approaching from the south, consists of one general-purpose travel lane. Sidewalks and crosswalks are provided on all approaches. A bus stop is located at the northwest corner of the intersection.

8. Brookline Avenue/Yawkey Way is a three-leg unsignalized intersection. Yawkey Way approaches Brookline Avenue from the south, consisting of separate left- and right-turn lanes, and is under stop-sign control. The east/west approaches on Brookline Avenue consist of one general-purpose lane with adjacent parking. Sidewalks are provided adjacent to all approaches. Crosswalks are provided on the western leg across Brookline Avenue and on the southern leg across Yawkey Way. During Red Sox game day, Yawkey Way is closed to all vehicular traffic.

9. Brookline Avenue/Lansdowne Street is a three-leg intersection with Lansdowne Street providing one-way eastbound travel, away from Brookline Avenue. Brookline Avenue traveling north/south consists of one lane in both directions with parking on both sides on the southern leg of the intersection. Sidewalks are provided adjacent to all approaches, and a crosswalk is provided on the eastern leg across Lansdowne Street. During Red Sox game days, parking around Fenway Park is prohibited.

10/11. Beacon Street/Brookline Avenue/Commonwealth Avenue/Deer field (Kenmore Square) is a five-leg signalized intersection with four approaches to the intersection. The Beacon Street approach, from the west, consists of two general-purpose lanes with metered parking. Brookline Avenue approach, from the south, consists of two right-turn lanes with no adjacent parking. Commonwealth Avenue, from the east, consists of two right-turn lanes, two through lanes, and a left-turn lane. Commonwealth Avenue, from the west, consists of two through lanes and a right-turn lane. Deerfield Street approaches from the north, and consists of one travel lane, restricted to right turns only at Commonwealth Avenue. Meter parking is provided on both Commonwealth Avenue approaches, and metered angular parking is provided on the east side of Deerfield Street. Sidewalks are provide adjacent to all approaches.

12. Brookline Avenue/Newbury Street is a three-leg unsignalized intersection. Brookline Avenue, approaching from the north and south, consists of a single travel lane. The Newbury Street, approach from the east, consists of a single general-purpose lane with parking permitted only on the south side. Sidewalks are provided adjacent to all approaches, and a crosswalk is provided across Newbury Street.

13. Commonwealth Avenue westbound/Kenmore Street/Beacon Street/Raleigh Street is a five-leg signalized intersection with four approaches into the intersection (Commonwealth is one-way westbound at this intersection, hence, the fifth leg are the receiving lanes of the Commonwealth westbound approach.). Commonwealth Avenue westbound approach consists of two travel lanes with adjacent parking. The Beacon Street, approaching from the northeast, consists of three travel lanes with metered parking on both sides of the street. The Kenmore Street, approaching from the south, consists of three travel lanes with no parking on either side of the street. The Raleigh Street, approaching from the north, consists of a single general-purpose lane. Sidewalks are provided adjacent to all approaches, and crosswalks are provided across all approaches except the Kenmore Street approach.

14. Commonwealth Avenue eastbound/Kenmore Street is a four-leg signalized intersection with two approaches into the intersection. The Commonwealth Avenue eastbound approach consists of two travel lanes with adjacent parking. The Kenmore Street northbound approach consists of a single general-purpose lane. Sidewalks and crosswalks are provided on all four legs. Pedestrians are permitted to cross during a protected pedestrian signal phase, during which no vehicular movements are permitted.

15. Newbury Street/Kenmore Street is a three-leg unsignalized intersection. The Kenmore Street approach, from the north, consists of a single lane with parking permitted on the east side. Newbury Street, from the east, accommodates one-way travel from Charles Gate to Kenmore Street and consists of one travel lane with parking permitted on both sides of the street. Newbury Street, from the west, permits two-way travel with parking permitted on the south side of the street. Sidewalks are provided along both sides of Kenmore Street approach, and along the northern side of Newbury Street. A crosswalk is provided on the northern leg across Kenmore Street.

16. Lansdowne Street/Ipswich Street is a three-leg unsignalized intersection. Ipswich Street travels in the north/south direction, and is a wide street (approximately 50 feet, curb to curb) without lane designation striping. Since traffic on this street is fairly light on a typical day, vehicles approach forming one travel lane each direction. However, there is capacity on Ipswich to operate as two travel lanes if the demand increases. Both northbound and southbound approaches consist of a single lane with adjacent parking. The Lansdowne Street approach from the west consists of a single travel lane with parking permitted on both sides of the street. Sidewalks are provided adjacent to all approaches and a crosswalk is provided across Lansdowne Street.

17. Brookline Street/Overland Street is a three-leg unsignalized intersection. Brookline Avenue is the major roadway traveling in the east/west direction. Both approaches on Beacon Street consist of one general-purpose lane with adjacent parking. The Overland Street, approach from the north, consists of a single general-purpose lane in each direction with parking permitted on the each side. Sidewalks are provided adjacent to all approaches, and a crosswalk is provided across Overland Street.

APPENDIX A-2

Traffic Technical Appendix

Traffic Count Data

Trip Generation Calculation

Trip Distribution Calculation

Capacity Analysis

- 2007 Existing Conditions
- 2012 No-Build Conditions
- 2012 Build Conditions
- 2012 Build Conditions with Mitgation

Traffic Count Data
TMC Data

Transportation Data Corporation
P.O. Box 334 Wakefield, MA 01880
Tel. (781) 587-0086 Fax (781) 587-0189

N/S: Park Drive
E/W: Beacon Street
City/State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448AA
Site Code : 09589
Start Date : 10/19/2005
Page No : 1

Groups Printed- Cars & Peds - Trucks & Bikes

	Park Drive From North				Beacon Street From East					Park Drive From South				Beacon Street From West							
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	UTurn	Peds	Right	Thru	Left	Peds	Right	Thru	Left	UTurn	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	2	110	9	9	2	86	26	1	7	8	68	14	8	45	126	8	1	5	31	504	535
07:15 AM	0	124	11	9	2	98	32	0	7	8	78	19	9	64	145	22	4	11	40	603	643
07:30 AM	3	121	10	9	2	117	32	0	10	9	92	20	13	54	167	12	11	15	58	639	697
07:45 AM	1	144	11	20	2	95	35	2	19	9	92	32	22	55	200	20	11	18	92	696	788
Total	6	499	41	47	8	396	125	3	43	34	330	85	52	218	638	62	27	49	221	2442	2663
08:00 AM	5	111	14	12	5	109	32	0	12	5	86	16	17	52	206	21	6	30	77	662	739
08:15 AM	1	109	17	13	2	113	45	1	23	10	84	22	18	69	211	26	14	28	97	709	806
08:30 AM	0	146	15	16	7	124	32	2	27	7	79	13	25	68	174	20	13	25	108	685	793
08:45 AM	2	115	14	11	5	106	24	1	33	14	99	31	22	50	184	20	32	20	119	664	783
Total	8	481	60	52	19	452	133	4	95	36	348	82	82	239	775	87	65	103	401	2720	3121
Grand Total	14	980	101	99	27	848	258	7	138	70	678	167	134	457	1413	149	92	152	622	5162	5784
Apprch %	1.3	89.5	9.2		2.4	74.8	22.8			7.7	74.1	18.3		22.6	70	7.4					
Total %	0.3	19	2		0.5	16.4	5			1.4	13.1	3.2		8.9	27.4	2.9			10.8	89.2	
Cars & Peds	13	975	100		27	838	256			68	651	160		457	1408	148			0	0	5626
% Cars & Peds	92.9	99.5	99	87.9	100	98.8	99.2	100	91.3	97.1	96	95.8	64.9	100	99.6	99.3	97.8	84.2	0	0	97.3
Trucks & Bikes	1	5	1		0	10	2			2	27	7		0	5	1			0	0	158
% Trucks & Bikes	7.1	0.5	1	12.1	0	1.2	0.8	0	8.7	2.9	4	4.2	35.1	0	0.4	0.7	2.2	15.8	0	0	2.7

	Park Drive From North				Beacon Street From East				Park Drive From South				Beacon Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	1	144	11	156	2	95	35	132	9	**92**	**32**	**133**	55	200	20	275	696
08:00 AM	**5**	111	14	130	5	109	32	146	5	86	16	107	52	206	21	279	662
08:15 AM	1	109	**17**	127	2	113	**45**	160	**10**	84	22	116	**69**	**211**	**26**	**306**	**709**
08:30 AM	0	**146**	15	**161**	**7**	**124**	32	**163**	7	79	13	99	68	174	20	262	685
Total Volume	7	510	57	574	16	441	144	601	31	341	83	455	244	791	87	1122	2752
% App. Total	1.2	88.9	9.9		2.7	73.4	24		6.8	74.9	18.2		21.7	70.5	7.8		
PHF	.350	.873	.838	.891	.571	.889	.800	.922	.775	.927	.648	.855	.884	.937	.837	.917	.970
Cars & Peds	6	509	56	571	16	434	144	594	29	321	81	431	244	788	87	1119	2715
% Cars & Peds	85.7	99.8	98.2	99.5	100	98.4	100	98.8	93.5	94.1	97.6	94.7	100	99.6	100	99.7	98.7
Trucks & Bikes	1	1	1	3	0	7	0	7	2	20	2	24	0	3	0	3	37
% Trucks & Bikes	14.3	0.2	1.8	0.5	0	1.6	0	1.2	6.5	5.9	2.4	5.3	0	0.4	0	0.3	1.3

Transportation Data Corporation
P.O. Box 334 Wakefield, MA 01880
Tel. (781) 587-0086 Fax (781) 587-0189

N/S: Park Drive
E/W: Beacon Street
City/State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448AA
Site Code : 09589
Start Date : 10/19/2005
Page No : 1

Groups Printed- Cars & Peds

	Park Drive From North				Beacon Street From East					Park Drive From South				Beacon Street From West							
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	UTurn	Peds	Right	Thru	Left	Peds	Right	Thru	Left	UTurn	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	2	109	9	8	2	85	26	1	6	8	67	14	6	45	126	8	1	5	27	501	528
07:15 AM	0	124	11	7	2	97	32	0	7	8	76	17	8	64	145	22	4	9	35	598	633
07:30 AM	3	120	10	9	2	116	30	0	10	9	90	19	11	54	167	12	10	11	51	632	683
07:45 AM	1	144	10	18	2	92	35	2	19	9	83	32	16	55	200	20	11	17	83	683	766
Total	6	497	40	42	8	390	123	3	42	34	316	82	41	218	638	62	26	42	196	2414	2610
08:00 AM	4	111	14	9	5	107	32	0	11	3	82	16	12	52	205	21	6	25	63	652	715
08:15 AM	1	109	17	13	2	111	45	1	22	10	82	20	8	69	211	26	14	25	83	703	786
08:30 AM	0	145	15	13	7	124	32	2	23	7	74	13	10	68	172	20	12	22	82	677	759
08:45 AM	2	113	14	10	5	106	24	1	28	14	97	29	16	50	182	19	32	14	101	655	756
Total	7	478	60	45	19	448	133	4	84	34	335	78	46	239	770	86	64	86	329	2687	3016
Grand Total	13	975	100	87	27	838	256	7	126	68	651	160	87	457	1408	148	90	128	525	5101	5626
Apprch %	1.2	89.6	9.2		2.4	74.8	22.8			7.7	74.1	18.2		22.7	69.9	7.4					
Total %	0.3	19.1	2		0.5	16.4	5			1.3	12.8	3.1		9	27.6	2.9			9.3	90.7	

	Park Drive From North				Beacon Street From East				Park Drive From South				Beacon Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	1	144	10	155	2	92	35	129	9	**83**	**32**	**124**	55	200	20	275	683
08:00 AM	**4**	111	14	129	5	107	32	144	3	82	16	101	52	205	21	278	652
08:15 AM	1	109	**17**	127	2	111	**45**	158	**10**	82	20	112	**69**	**211**	**26**	**306**	**703**
08:30 AM	0	**145**	15	**160**	**7**	**124**	32	**163**	7	74	13	94	68	172	20	260	677
Total Volume	6	509	56	571	16	434	144	594	29	321	81	431	244	788	87	1119	2715
% App. Total	1.1	89.1	9.8		2.7	73.1	24.2		6.7	74.5	18.8		21.8	70.4	7.8		
PHF	.375	.878	.824	.892	.571	.875	.800	.911	.725	.967	.633	.869	.884	.934	.837	.914	.966

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P.O. Box 334 Wakefield, MA 01880
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	Park Drive From North				Beacon Street From East					Park Drive From South				Beacon Street From West							
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	UTurn	Peds	Right	Thru	Left	Peds	Right	Thru	Left	UTurn	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	1	0	1	0	1	0	0	1	0	1	0	2	0	0	0	0	0	4	3	7
07:15 AM	0	0	0	2	0	1	0	0	0	0	2	2	1	0	0	0	0	2	5	5	10
07:30 AM	0	1	0	0	0	1	2	0	0	0	2	1	2	0	0	0	1	4	7	7	14
07:45 AM	0	0	1	2	0	3	0	0	0	0	9	0	6	0	0	0	0	1	9	13	22
Total	0	2	1	5	0	6	2	0	1	0	14	3	11	0	0	0	1	7	25	28	53
08:00 AM	1	0	0	3	0	2	0	0	1	2	4	0	5	0	1	0	0	5	14	10	24
08:15 AM	0	0	0	0	0	2	0	0	1	0	2	2	10	0	0	0	0	3	14	6	20
08:30 AM	0	1	0	3	0	0	0	0	4	0	5	0	15	0	2	0	1	3	26	8	34
08:45 AM	0	2	0	1	0	0	0	0	5	0	2	2	6	0	2	1	0	6	18	9	27
Total	1	3	0	7	0	4	0	0	11	2	13	4	36	0	5	1	1	17	72	33	105
Grand Total	1	5	1	12	0	10	2	0	12	2	27	7	47	0	5	1	2	24	97	61	158
Apprch %	14.3	71.4	14.3		0	83.3	16.7			5.6	75	19.4		0	83.3	16.7					
Total %	1.6	8.2	1.6		0	16.4	3.3			3.3	44.3	11.5		0	8.2	1.6			61.4	38.6	

	Park Drive From North				Beacon Street From East				Park Drive From South				Beacon Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	**1**	**1**	0	**3**	0	**3**	0	**9**	0	**9**	0	0	0	0	**13**
08:00 AM	**1**	0	0	1	0	2	0	2	**2**	4	0	6	0	1	0	1	10
08:15 AM	0	0	0	0	0	2	0	2	0	2	**2**	4	0	0	0	0	6
08:30 AM	0	**1**	0	1	0	0	0	0	0	5	0	5	0	**2**	0	**2**	8
Total Volume	1	1	1	3	0	7	0	7	2	20	2	24	0	3	0	3	37
% App. Total	33.3	33.3	33.3		0	100	0		8.3	83.3	8.3		0	100	0		
PHF	.250	.250	.250	.750	.000	.583	.000	.583	.250	.556	.250	.667	.000	.375	.000	.375	.712

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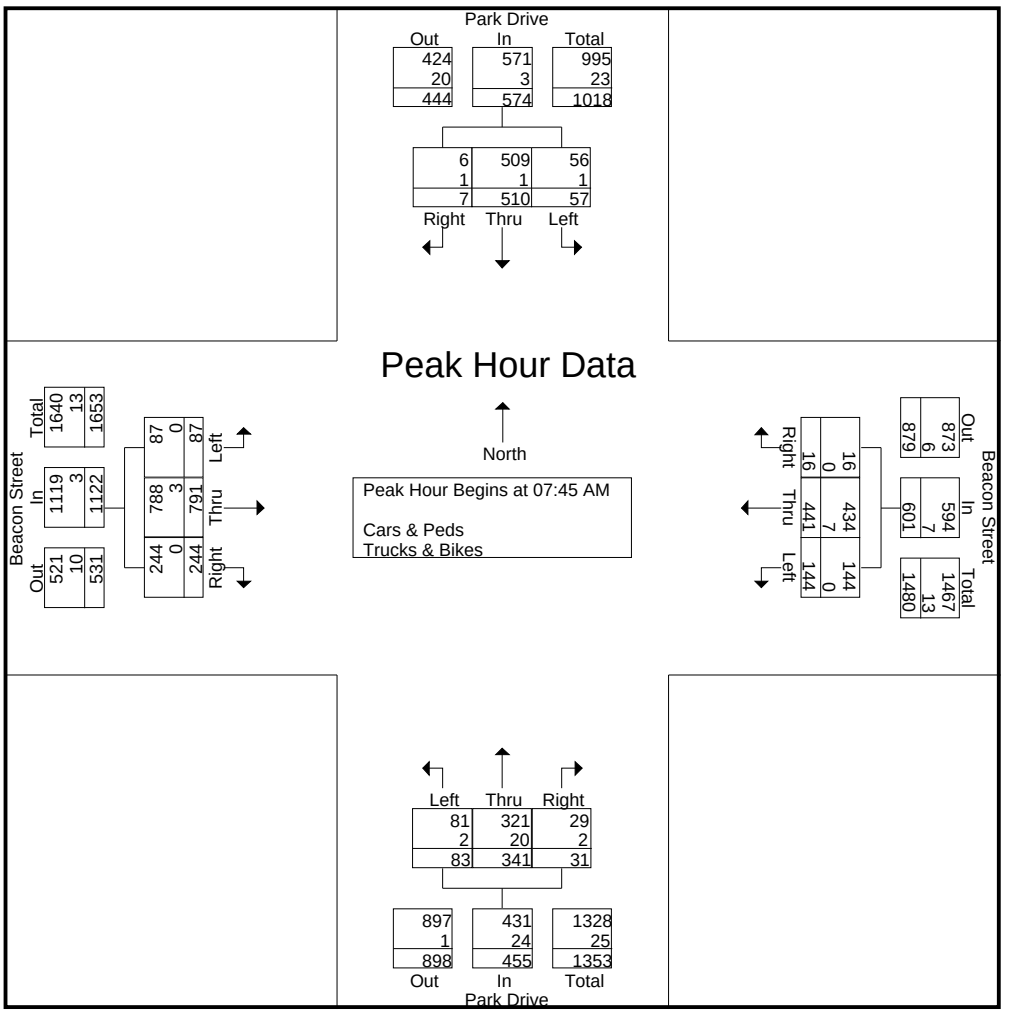
N/S: Park Drive
E/W: Beacon Street
City/State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448AA
Site Code : 09589
Start Date : 10/19/2005
Page No : 1

	Park Drive From North				Beacon Street From East				Park Drive From South				Beacon Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	1	144	11	156	2	95	35	132	9	**92**	**32**	**133**	55	200	20	275	696
08:00 AM	**5**	111	14	130	5	109	32	146	5	86	16	107	52	206	21	279	662
08:15 AM	1	109	**17**	127	2	113	**45**	160	**10**	84	22	116	**69**	**211**	**26**	**306**	**709**
08:30 AM	0	**146**	15	**161**	**7**	**124**	32	**163**	7	79	13	99	68	174	20	262	685
Total Volume	7	510	57	574	16	441	144	601	31	341	83	455	244	791	87	1122	2752
% App. Total	1.2	88.9	9.9		2.7	73.4	24		6.8	74.9	18.2		21.7	70.5	7.8		
PHF	.350	.873	.838	.891	.571	.889	.800	.922	.775	.927	.648	.855	.884	.937	.837	.917	.970
Cars & Peds	6	509	56	571	16	434	144	594	29	321	81	431	244	788	87	1119	2715
% Cars & Peds	85.7	99.8	98.2	99.5	100	98.4	100	98.8	93.5	94.1	97.6	94.7	100	99.6	100	99.7	98.7
Trucks & Bikes	1	1	1	3	0	7	0	7	2	20	2	24	0	3	0	3	37
% Trucks & Bikes	14.3	0.2	1.8	0.5	0	1.6	0	1.2	6.5	5.9	2.4	5.3	0	0.4	0	0.3	1.3



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N/S: Arundel Street/Miner Street
E/W: Beacon Street
City, State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448BB
Site Code : 09589
Start Date : 10/19/2005
Page No : 1

Groups Printed- Cars & Peds - Trucks & Bikes

	Arundel Street From North				Beacon Street From East				Miner Street From South				Beacon Street From West						
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	2	2	1	5	0	107	4	0	1	0	3	11	4	119	1	1	17	244	261
07:15 AM	0	0	0	9	0	124	2	0	2	2	3	10	11	137	2	0	19	283	302
07:30 AM	1	3	0	23	0	134	9	4	1	1	2	23	13	166	0	3	53	330	383
07:45 AM	1	0	0	39	0	123	11	3	0	0	4	33	15	180	1	9	84	335	419
Total	4	5	1	76	0	488	26	7	4	3	12	77	43	602	4	13	173	1192	1365
08:00 AM	1	1	2	15	0	119	4	1	2	1	2	28	15	195	1	4	48	343	391
08:15 AM	1	1	1	18	0	139	5	6	2	0	4	22	20	192	2	5	51	367	418
08:30 AM	2	0	0	35	1	135	14	4	1	2	7	27	27	148	3	25	91	340	431
08:45 AM	1	3	2	44	2	131	4	7	5	2	2	31	30	184	1	12	94	367	461
Total	5	5	5	112	3	524	27	18	10	5	15	108	92	719	7	46	284	1417	1701
Grand Total	9	10	6	188	3	1012	53	25	14	8	27	185	135	1321	11	59	457	2609	3066
Apprch %	36	40	24		0.3	94.8	5		28.6	16.3	55.1		9.2	90	0.7				
Total %	0.3	0.4	0.2		0.1	38.8	2		0.5	0.3	1		5.2	50.6	0.4		14.9	85.1	
Cars & Peds	9	10	6		3	998	53		14	8	27		135	1315	11		0	0	2951
% Cars & Peds	100	100	100	94.1	100	98.6	100	92	100	100	100	57.3	100	99.5	100	94.9	0	0	96.2
Trucks & Bikes	0	0	0		0	14	0		0	0	0		0	6	0		0	0	115
% Trucks & Bikes	0	0	0	5.9	0	1.4	0	8	0	0	0	42.7	0	0.5	0	5.1	0	0	3.8

	Arundel Street From North				Beacon Street From East				Miner Street From South				Beacon Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	1	1	**2**	4	0	119	4	123	2	1	2	5	15	**195**	1	211	343
08:15 AM	1	1	1	3	0	**139**	5	144	2	0	4	6	20	192	2	214	**367**
08:30 AM	**2**	0	0	2	1	135	**14**	**150**	1	**2**	**7**	**10**	27	148	**3**	178	340
08:45 AM	1	**3**	2	**6**	**2**	131	4	137	**5**	2	2	9	**30**	184	1	**215**	367
Total Volume	5	5	5	15	3	524	27	554	10	5	15	30	92	719	7	818	1417
% App. Total	33.3	33.3	33.3		0.5	94.6	4.9		33.3	16.7	50		11.2	87.9	0.9		
PHF	.625	.417	.625	.625	.375	.942	.482	.923	.500	.625	.536	.750	.767	.922	.583	.951	.965

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N/S: Arundel Street/Miner Street
E/W: Beacon Street
City, State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448BB
Site Code : 09589
Start Date : 10/19/2005
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Groups Printed- Cars & Peds

	Arundel Street From North				Beacon Street From East				Miner Street From South				Beacon Street From West						
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	2	2	1	4	0	105	4	0	1	0	3	7	4	119	1	1	12	242	254
07:15 AM	0	0	0	7	0	124	2	0	2	2	3	7	11	137	2	0	14	283	297
07:30 AM	1	3	0	20	0	132	9	4	1	1	2	15	13	166	0	3	42	328	370
07:45 AM	1	0	0	38	0	119	11	2	0	0	4	21	15	179	1	9	70	330	400
Total	4	5	1	69	0	480	26	6	4	3	12	50	43	601	4	13	138	1183	1321
08:00 AM	1	1	2	12	0	119	4	1	2	1	2	16	15	192	1	4	33	340	373
08:15 AM	1	1	1	18	0	136	5	5	2	0	4	12	20	192	2	4	39	364	403
08:30 AM	2	0	0	35	1	133	14	4	1	2	7	12	27	147	3	23	74	337	411
08:45 AM	1	3	2	43	2	130	4	7	5	2	2	16	30	183	1	12	78	365	443
Total	5	5	5	108	3	518	27	17	10	5	15	56	92	714	7	43	224	1406	1630
Grand Total	9	10	6	177	3	998	53	23	14	8	27	106	135	1315	11	56	362	2589	2951
Apprch %	36	40	24		0.3	94.7	5		28.6	16.3	55.1		9.2	90	0.8				
Total %	0.3	0.4	0.2		0.1	38.5	2		0.5	0.3	1		5.2	50.8	0.4		12.3	87.7	

	Arundel Street From North				Beacon Street From East				Miner Street From South				Beacon Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	1	1	**2**	4	0	119	4	123	2	1	2	5	15	**192**	1	208	340
08:15 AM	1	1	1	3	0	**136**	5	141	2	0	4	6	20	192	2	**214**	364
08:30 AM	**2**	0	0	2	1	133	**14**	**148**	1	**2**	**7**	**10**	27	147	**3**	177	337
08:45 AM	1	**3**	2	**6**	**2**	130	4	136	**5**	2	2	9	**30**	183	1	214	**365**
Total Volume	5	5	5	15	3	518	27	548	10	5	15	30	92	714	7	813	1406
% App. Total	33.3	33.3	33.3		0.5	94.5	4.9		33.3	16.7	50		11.3	87.8	0.9		
PHF	.625	.417	.625	.625	.375	.952	.482	.926	.500	.625	.536	.750	.767	.930	.583	.950	.963

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N/S: Arundel Street/Miner Street
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City, State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448BB
Site Code : 09589
Start Date : 10/19/2005
Page No : 1

Groups Printed- Trucks & Bikes

	Arundel Street From North				Beacon Street From East				Miner Street From South				Beacon Street From West						
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	1	0	2	0	0	0	0	0	4	0	0	0	0	5	2	7
07:15 AM	0	0	0	2	0	0	0	0	0	0	0	3	0	0	0	0	5	0	5
07:30 AM	0	0	0	3	0	2	0	0	0	0	0	8	0	0	0	0	11	2	13
07:45 AM	0	0	0	1	0	4	0	1	0	0	0	12	0	1	0	0	14	5	19
Total	0	0	0	7	0	8	0	1	0	0	0	27	0	1	0	0	35	9	44
08:00 AM	0	0	0	3	0	0	0	0	0	0	0	12	0	3	0	0	15	3	18
08:15 AM	0	0	0	0	0	3	0	1	0	0	0	10	0	0	0	1	12	3	15
08:30 AM	0	0	0	0	0	2	0	0	0	0	0	15	0	1	0	2	17	3	20
08:45 AM	0	0	0	1	0	1	0	0	0	0	0	15	0	1	0	0	16	2	18
Total	0	0	0	4	0	6	0	1	0	0	0	52	0	5	0	3	60	11	71
Grand Total	0	0	0	11	0	14	0	2	0	0	0	79	0	6	0	3	95	20	115
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0				
Total %	0	0	0		0	70	0		0	0	0		0	30	0		82.6	17.4	

	Arundel Street From North				Beacon Street From East				Miner Street From South				Beacon Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	0	**4**	0	**4**	0	0	0	0	0	1	0	1	**5**
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**	0	**3**	3
08:15 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
08:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
Total Volume	0	0	0	0	0	9	0	9	0	0	0	0	0	5	0	5	14
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.563	.000	.563	.000	.000	.000	.000	.000	.417	.000	.417	.700

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City, State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448BB
Site Code : 09589
Start Date : 10/19/2005
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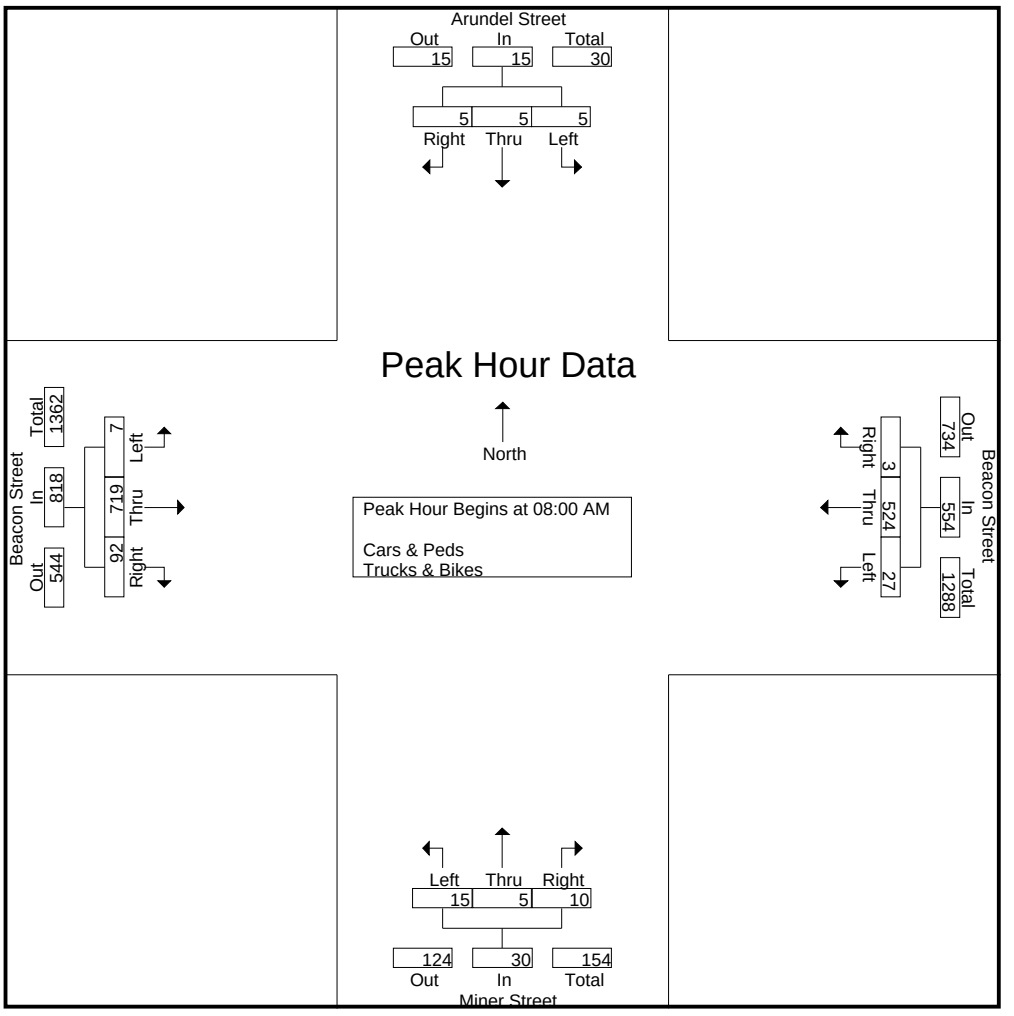
	Arundel Street From North				Beacon Street From East				Miner Street From South				Beacon Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	1	1	**2**	4	0	119	4	123	2	1	2	5	15	**195**	1	211	343
08:15 AM	1	1	1	3	0	**139**	5	144	2	0	4	6	20	192	2	214	**367**
08:30 AM	**2**	0	0	2	1	135	**14**	**150**	1	**2**	**7**	**10**	27	148	**3**	178	340
08:45 AM	1	**3**	2	**6**	**2**	131	4	137	**5**	2	2	9	**30**	184	1	**215**	367
Total Volume	5	5	5	15	3	524	27	554	10	5	15	30	92	719	7	818	1417
% App. Total	33.3	33.3	33.3		0.5	94.6	4.9		33.3	16.7	50		11.2	87.9	0.9		
PHF	.625	.417	.625	.625	.375	.942	.482	.923	.500	.625	.536	.750	.767	.922	.583	.951	.965



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N/S: Mountfort Street/Maitland Street
E/W: Beacon Street
City, State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448CC
Site Code : 09589
Start Date : 10/19/2005
Page No : 1

Groups Printed- Cars & Peds - Trucks & Bikes

	Mountfort Street From North				Beacon Street From East					Maitland Street From South				Beacon Street From West							
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	UTurn	Peds	Right	Thru	Left	Peds	Right	Thru	Left	UTurn	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	1	2	0	8	2	94	12	0	2	0	0	1	7	5	133	0	2	1	20	250	270
07:15 AM	1	0	1	14	3	132	12	2	2	3	0	2	11	8	141	0	0	0	29	303	332
07:30 AM	0	0	1	33	1	145	18	0	4	1	1	0	26	8	178	0	0	4	67	353	420
07:45 AM	0	0	3	67	4	148	11	1	2	2	0	0	55	10	194	0	2	7	134	372	506
Total	2	2	5	122	10	519	53	3	10	6	1	3	99	31	646	0	4	12	250	1278	1528
08:00 AM	0	0	0	37	4	129	12	0	4	0	1	1	37	9	212	1	3	4	85	369	454
08:15 AM	1	0	1	42	2	150	7	0	3	0	0	2	43	10	196	9	0	3	91	378	469
08:30 AM	1	1	1	53	2	155	7	0	4	0	1	0	35	11	171	1	4	3	99	351	450
08:45 AM	1	0	1	69	4	130	9	1	1	0	1	0	52	19	191	2	1	6	130	358	488
Total	3	1	3	201	12	564	35	1	12	0	3	3	167	49	770	13	8	16	405	1456	1861
Grand Total	5	3	8	323	22	1083	88	4	22	6	4	6	266	80	1416	13	12	28	655	2734	3389
Apprch %	31.2	18.8	50		1.8	90.8	7.4			37.5	25	37.5		5.3	93.8	0.9					
Total %	0.2	0.1	0.3		0.8	39.6	3.2			0.2	0.1	0.2		2.9	51.8	0.5			19.3	80.7	
Cars & Peds	5	3	8		20	1036	88			5	4	6		80	1402	13			0	0	3215
% Cars & Peds	100	100	100	93.8	90.9	95.7	100	100	86.4	83.3	100	100	67.3	100	99	100	100	100	0	0	94.9
Trucks & Bikes	0	0	0		2	47	0			1	0	0		0	14	0			0	0	174
% Trucks & Bikes	0	0	0	6.2	9.1	4.3	0	0	13.6	16.7	0	0	32.7	0	1	0	0	0	0	0	5.1

	Mountfort Street From North				Beacon Street From East				Maitland Street From South				Beacon Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	1	1	1	145	**18**	**164**	1	**1**	0	**2**	8	178	0	186	353
07:45 AM	0	0	**3**	**3**	**4**	148	11	163	**2**	0	0	2	**10**	194	0	204	372
08:00 AM	0	0	0	0	4	129	12	145	0	1	1	2	9	**212**	1	**222**	369
08:15 AM	**1**	0	1	2	2	**150**	7	159	0	0	**2**	2	10	196	**9**	215	**378**
Total Volume	1	0	5	6	11	572	48	631	3	2	3	8	37	780	10	827	1472
% App. Total	16.7	0	83.3		1.7	90.6	7.6		37.5	25	37.5		4.5	94.3	1.2		
PHF	.250	.000	.417	.500	.688	.953	.667	.962	.375	.500	.375	1.000	.925	.920	.278	.931	.974

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N/S: Mountfort Street/Maitland Street
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File Name : 03448CC
Site Code : 09589
Start Date : 10/19/2005
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Groups Printed- Cars & Peds

	Mountfort Street From North				Beacon Street From East					Maitland Street From South				Beacon Street From West							
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	UTurn	Peds	Right	Thru	Left	Peds	Right	Thru	Left	UTurn	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	1	2	0	7	2	93	12	0	2	0	0	1	5	5	133	0	2	1	17	249	266
07:15 AM	1	0	1	13	3	128	12	2	2	2	0	2	8	8	139	0	0	0	25	296	321
07:30 AM	0	0	1	28	1	134	18	0	4	1	1	0	18	8	177	0	0	4	54	341	395
07:45 AM	0	0	3	63	2	141	11	1	1	2	0	0	44	10	193	0	2	7	118	362	480
Total	2	2	5	111	8	496	53	3	9	5	1	3	75	31	642	0	4	12	214	1248	1462
08:00 AM	0	0	0	35	4	127	12	0	4	0	1	1	25	9	208	1	3	4	71	363	434
08:15 AM	1	0	1	39	2	140	7	0	3	0	0	2	24	10	194	9	0	3	69	366	435
08:30 AM	1	1	1	52	2	149	7	0	2	0	1	0	17	11	169	1	4	3	78	343	421
08:45 AM	1	0	1	66	4	124	9	1	1	0	1	0	38	19	189	2	1	6	113	350	463
Total	3	1	3	192	12	540	35	1	10	0	3	3	104	49	760	13	8	16	331	1422	1753
Grand Total	5	3	8	303	20	1036	88	4	19	5	4	6	179	80	1402	13	12	28	545	2670	3215
Apprch %	31.2	18.8	50		1.7	90.6	7.7			33.3	26.7	40		5.4	93.8	0.9					
Total %	0.2	0.1	0.3		0.7	38.8	3.3			0.2	0.1	0.2		3	52.5	0.5			17	83	

	Mountfort Street From North				Beacon Street From East				Maitland Street From South				Beacon Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	**3**	**3**	2	141	11	154	**2**	0	0	**2**	10	193	0	203	362
08:00 AM	0	0	0	0	**4**	127	**12**	143	0	**1**	1	2	9	**208**	1	**218**	363
08:15 AM	**1**	0	1	2	2	140	7	149	0	0	**2**	2	10	194	**9**	213	**366**
08:30 AM	1	**1**	1	3	2	**149**	7	**158**	0	1	0	1	**11**	169	1	181	343
Total Volume	2	1	5	8	10	557	37	604	2	2	3	7	40	764	11	815	1434
% App. Total	25	12.5	62.5		1.7	92.2	6.1		28.6	28.6	42.9		4.9	93.7	1.3		
PHF	.500	.250	.417	.667	.625	.935	.771	.956	.250	.500	.375	.875	.909	.918	.306	.935	.980

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N/S: Mountfort Street/Maitland Street
E/W: Beacon Street
City, State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448CC
Site Code : 09589
Start Date : 10/19/2005
Page No : 1

Groups Printed- Trucks & Bikes

	Mountfort Street From North				Beacon Street From East					Maitland Street From South				Beacon Street From West							
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	UTurn	Peds	Right	Thru	Left	Peds	Right	Thru	Left	UTurn	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	1	0	1	0	0	0	0	0	0	2	0	0	0	0	0	3	1	4
07:15 AM	0	0	0	1	0	4	0	0	0	1	0	0	3	0	2	0	0	0	4	7	11
07:30 AM	0	0	0	5	0	11	0	0	0	0	0	0	8	0	1	0	0	0	13	12	25
07:45 AM	0	0	0	4	2	7	0	0	1	0	0	0	11	0	1	0	0	0	16	10	26
Total	0	0	0	11	2	23	0	0	1	1	0	0	24	0	4	0	0	0	36	30	66
08:00 AM	0	0	0	2	0	2	0	0	0	0	0	0	12	0	4	0	0	0	14	6	20
08:15 AM	0	0	0	3	0	10	0	0	0	0	0	0	19	0	2	0	0	0	22	12	34
08:30 AM	0	0	0	1	0	6	0	0	2	0	0	0	18	0	2	0	0	0	21	8	29
08:45 AM	0	0	0	3	0	6	0	0	0	0	0	0	14	0	2	0	0	0	17	8	25
Total	0	0	0	9	0	24	0	0	2	0	0	0	63	0	10	0	0	0	74	34	108
Grand Total	0	0	0	20	2	47	0	0	3	1	0	0	87	0	14	0	0	0	110	64	174
Apprch %	0	0	0		4.1	95.9	0			100	0	0		0	100	0					
Total %	0	0	0		3.1	73.4	0			1.6	0	0		0	21.9	0			63.2	36.8	

	Mountfort Street From North				Beacon Street From East				Maitland Street From South				Beacon Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	**11**	0	**11**	0	0	0	0	0	1	0	1	**12**
07:45 AM	0	0	0	0	**2**	7	0	9	0	0	0	0	0	1	0	1	10
08:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	**4**	0	**4**	6
08:15 AM	0	0	0	0	0	10	0	10	0	0	0	0	0	2	0	2	12
Total Volume	0	0	0	0	2	30	0	32	0	0	0	0	0	8	0	8	40
% App. Total	0	0	0		6.2	93.8	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.250	.682	.000	.727	.000	.000	.000	.000	.000	.500	.000	.500	.833

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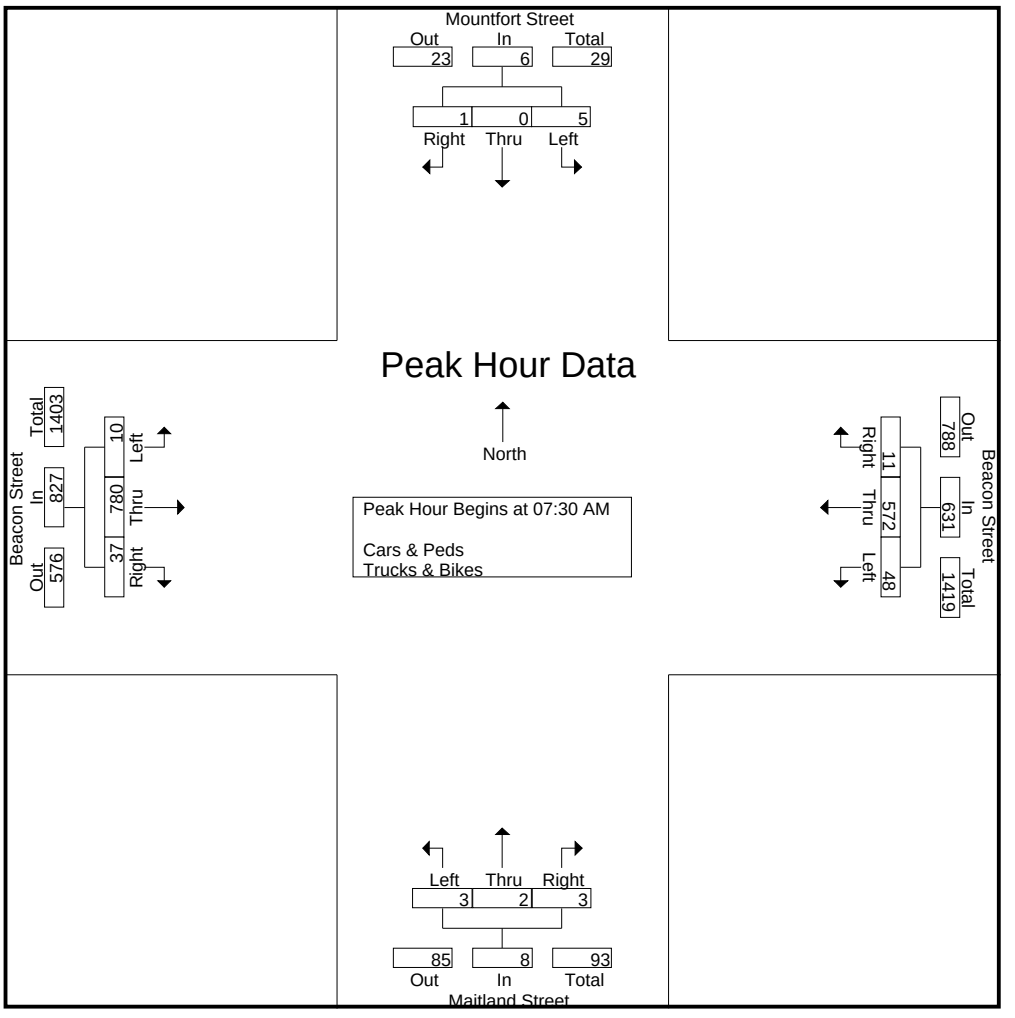
N/S: Mountfort Street/Maitland Street
E/W: Beacon Street
City, State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448CC
Site Code : 09589
Start Date : 10/19/2005
Page No : 1

	Mountfort Street From North				Beacon Street From East				Maitland Street From South				Beacon Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	1	1	1	145	**18**	**164**	1	**1**	0	**2**	8	178	0	186	353
07:45 AM	0	0	**3**	**3**	**4**	148	11	163	**2**	0	0	2	**10**	194	0	204	372
08:00 AM	0	0	0	0	4	129	12	145	0	1	1	2	9	**212**	1	**222**	369
08:15 AM	**1**	0	1	2	2	**150**	7	159	0	0	**2**	2	10	196	**9**	215	**378**
Total Volume	1	0	5	6	11	572	48	631	3	2	3	8	37	780	10	827	1472
% App. Total	16.7	0	83.3		1.7	90.6	7.6		37.5	25	37.5		4.5	94.3	1.2		
PHF	.250	.000	.417	.500	.688	.953	.667	.962	.375	.500	.375	1.000	.925	.920	.278	.931	.974



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N/S: Brookline Avenue
E/W: Yawkey Way/Parking Lot
City, State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448DD
Site Code : 09589
Start Date : 10/18/2005
Page No : 1

Groups Printed- Cars & Peds - Trucks & Bikes

	Brookline Avenue From North				Yawkey Way From East				Brookline Avenue From South				Parking Lot From West						
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	3	86	0	4	8	5	17	12	0	48	9	5	3	0	1	13	34	180	214
07:15 AM	5	110	0	2	14	11	23	21	0	51	4	10	0	0	0	20	53	218	271
07:30 AM	8	105	0	6	15	12	19	17	0	88	5	6	3	0	0	15	44	255	299
07:45 AM	6	115	0	2	17	9	25	19	0	62	5	8	0	0	2	22	51	241	292
Total	22	416	0	14	54	37	84	69	0	249	23	29	6	0	3	70	182	894	1076
08:00 AM	9	129	0	3	19	7	35	31	0	70	9	11	1	0	1	39	84	280	364
08:15 AM	6	118	0	3	20	6	16	38	0	66	2	12	3	0	5	29	82	242	324
08:30 AM	12	115	0	10	15	7	28	30	0	68	4	13	2	0	2	23	76	253	329
08:45 AM	6	82	0	5	12	4	23	29	0	70	8	14	3	0	4	24	72	212	284
Total	33	444	0	21	66	24	102	128	0	274	23	50	9	0	12	115	314	987	1301
Grand Total	55	860	0	35	120	61	186	197	0	523	46	79	15	0	15	185	496	1881	2377
Apprch %	6	94	0		32.7	16.6	50.7		0	91.9	8.1		50	0	50				
Total %	2.9	45.7	0		6.4	3.2	9.9		0	27.8	2.4		0.8	0	0.8		20.9	79.1	
Cars & Peds	54	837	0		112	60	182		0	497	43		15	0	15		0	0	2282
% Cars & Peds	98.2	97.3	0	80	93.3	98.4	97.8	99.5	0	95	93.5	100	100	0	100	88.6	0	0	96
Trucks & Bikes	1	23	0		8	1	4		0	26	3		0	0	0		0	0	95
% Trucks & Bikes	1.8	2.7	0	20	6.7	1.6	2.2	0.5	0	5	6.5	0	0	0	0	11.4	0	0	4

	Brookline Avenue From North				Yawkey Way From East				Brookline Avenue From South				Parking Lot From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	8	105	0	113	15	**12**	19	46	0	**88**	5	**93**	**3**	0	0	3	255
07:45 AM	6	115	0	121	17	9	25	51	0	62	5	67	0	0	2	2	241
08:00 AM	**9**	**129**	0	**138**	19	7	**35**	**61**	0	70	**9**	79	1	0	1	2	**280**
08:15 AM	6	118	0	124	**20**	6	16	42	0	66	2	68	3	0	**5**	**8**	242
Total Volume	29	467	0	496	71	34	95	200	0	286	21	307	7	0	8	15	1018
% App. Total	5.8	94.2	0		35.5	17	47.5		0	93.2	6.8		46.7	0	53.3		
PHF	.806	.905	.000	.899	.888	.708	.679	.820	.000	.813	.583	.825	.583	.000	.400	.469	.909

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N/S: Brookline Avenue
E/W: Yawkey Way/Parking Lot
City, State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448DD
Site Code : 09589
Start Date : 10/18/2005
Page No : 1

Groups Printed- Cars & Peds

	Brookline Avenue From North				Yawkey Way From East				Brookline Avenue From South				Parking Lot From West						
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	3	83	0	2	8	5	17	12	0	44	9	5	3	0	1	12	31	173	204
07:15 AM	5	108	0	1	14	11	23	21	0	51	4	10	0	0	0	16	48	216	264
07:30 AM	8	101	0	6	15	12	19	17	0	82	5	6	3	0	0	14	43	245	288
07:45 AM	6	113	0	2	17	9	24	19	0	61	4	8	0	0	2	21	50	236	286
Total	22	405	0	11	54	37	83	69	0	238	22	29	6	0	3	63	172	870	1042
08:00 AM	9	126	0	3	18	7	33	31	0	64	7	11	1	0	1	36	81	266	347
08:15 AM	6	117	0	3	16	5	15	37	0	62	2	12	3	0	5	26	78	231	309
08:30 AM	12	110	0	7	13	7	28	30	0	64	4	13	2	0	2	22	72	242	314
08:45 AM	5	79	0	4	11	4	23	29	0	69	8	14	3	0	4	17	64	206	270
Total	32	432	0	17	58	23	99	127	0	259	21	50	9	0	12	101	295	945	1240
Grand Total	54	837	0	28	112	60	182	196	0	497	43	79	15	0	15	164	467	1815	2282
Apprch %	6.1	93.9	0		31.6	16.9	51.4		0	92	8		50	0	50				
Total %	3	46.1	0		6.2	3.3	10		0	27.4	2.4		0.8	0	0.8		20.5	79.5	

	Brookline Avenue From North				Yawkey Way From East				Brookline Avenue From South				Parking Lot From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	8	101	0	109	15	**12**	19	46	0	**82**	5	**87**	**3**	0	0	3	245
07:45 AM	6	113	0	119	17	9	24	50	0	61	4	65	0	0	2	2	236
08:00 AM	**9**	**126**	0	**135**	**18**	7	**33**	**58**	0	64	**7**	71	1	0	1	2	**266**
08:15 AM	6	117	0	123	16	5	15	36	0	62	2	64	3	0	**5**	**8**	231
Total Volume	29	457	0	486	66	33	91	190	0	269	18	287	7	0	8	15	978
% App. Total	6	94	0		34.7	17.4	47.9		0	93.7	6.3		46.7	0	53.3		
PHF	.806	.907	.000	.900	.917	.688	.689	.819	.000	.820	.643	.825	.583	.000	.400	.469	.919

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N/S: Brookline Avenue
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City, State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448DD
Site Code : 09589
Start Date : 10/18/2005
Page No : 1

Groups Printed- Trucks & Bikes

	Brookline Avenue From North				Yawkey Way From East				Brookline Avenue From South				Parking Lot From West						
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	3	0	2	0	0	0	0	0	4	0	0	0	0	0	1	3	7	10
07:15 AM	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	4	5	2	7
07:30 AM	0	4	0	0	0	0	0	0	0	6	0	0	0	0	0	1	1	10	11
07:45 AM	0	2	0	0	0	0	1	0	0	1	1	0	0	0	0	1	1	5	6
Total	0	11	0	3	0	0	1	0	0	11	1	0	0	0	0	7	10	24	34
08:00 AM	0	3	0	0	1	0	2	0	0	6	2	0	0	0	0	3	3	14	17
08:15 AM	0	1	0	0	4	1	1	1	0	4	0	0	0	0	0	3	4	11	15
08:30 AM	0	5	0	3	2	0	0	0	0	4	0	0	0	0	0	1	4	11	15
08:45 AM	1	3	0	1	1	0	0	0	0	1	0	0	0	0	0	7	8	6	14
Total	1	12	0	4	8	1	3	1	0	15	2	0	0	0	0	14	19	42	61
Grand Total	1	23	0	7	8	1	4	1	0	26	3	0	0	0	0	21	29	66	95
Apprch %	4.2	95.8	0		61.5	7.7	30.8		0	89.7	10.3		0	0	0				
Total %	1.5	34.8	0		12.1	1.5	6.1		0	39.4	4.5		0	0	0		30.5	69.5	

	Brookline Avenue From North				Yawkey Way From East				Brookline Avenue From South				Parking Lot From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	3	0	3	1	0	**2**	3	0	**6**	**2**	**8**	0	0	0	0	**14**
08:15 AM	0	1	0	1	**4**	**1**	1	**6**	0	4	0	4	0	0	0	0	11
08:30 AM	0	**5**	0	**5**	2	0	0	2	0	4	0	4	0	0	0	0	11
08:45 AM	**1**	3	0	4	1	0	0	1	0	1	0	1	0	0	0	0	6
Total Volume	1	12	0	13	8	1	3	12	0	15	2	17	0	0	0	0	42
% App. Total	7.7	92.3	0		66.7	8.3	25		0	88.2	11.8		0	0	0		
PHF	.250	.600	.000	.650	.500	.250	.375	.500	.000	.625	.250	.531	.000	.000	.000	.000	.750

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N/S: Brookline Avenue
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City, State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448DD
Site Code : 09589
Start Date : 10/18/2005
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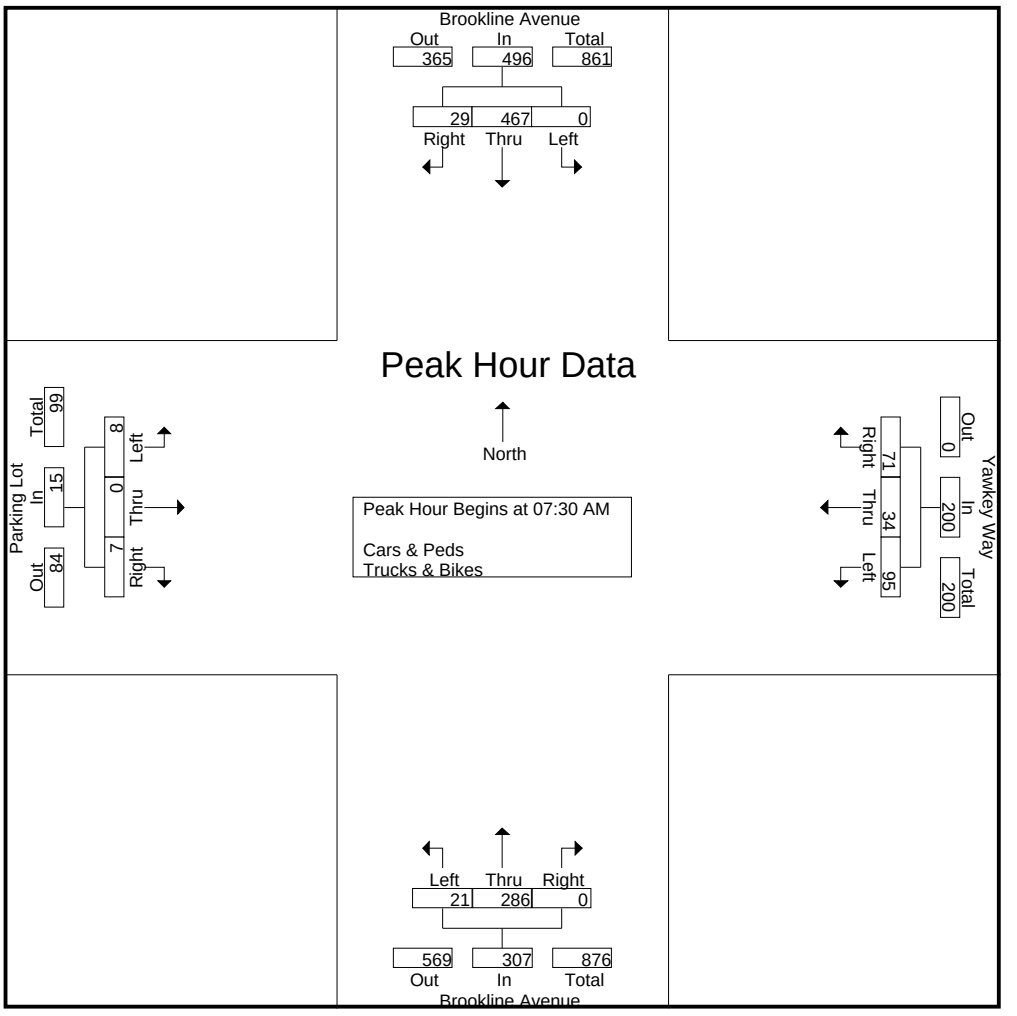
	Brookline Avenue From North				Yawkey Way From East				Brookline Avenue From South				Parking Lot From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	8	105	0	113	15	**12**	19	46	0	**88**	5	**93**	**3**	0	0	3	255
07:45 AM	6	115	0	121	17	9	25	51	0	62	5	67	0	0	2	2	241
08:00 AM	**9**	**129**	0	**138**	19	7	**35**	**61**	0	70	**9**	79	1	0	1	2	**280**
08:15 AM	6	118	0	124	**20**	6	16	42	0	66	2	68	3	0	**5**	**8**	242
Total Volume	29	467	0	496	71	34	95	200	0	286	21	307	7	0	8	15	1018
% App. Total	5.8	94.2	0		35.5	17	47.5		0	93.2	6.8		46.7	0	53.3		
PHF	.806	.905	.000	.899	.888	.708	.679	.820	.000	.813	.583	.825	.583	.000	.400	.469	.909



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N/S: Brookline Avenue
E,W/NE: Park Drive/Boylston Street
City/State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448FF
Site Code : 09589
Start Date : 10/18/2005
Page No : 1

Groups Printed- Cars & Peds - Trucks & Bikes

	Brookline Avenue From North				Boylston Street From Northeast				Park Drive From East					Brookline Avenue From South				Park Drive From West							
Start Time	Right	Thru	Hard Left	Peds	Hard Right	Bear Right	Bear Left	Peds	Hard Right	Right	Thru	Left	Peds	Bear Right	Thru	Left	Peds	Right	Thru	Bear Left	Left	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	21	43	0	33	3	92	139	0	17	13	78	10	10	216	61	0	0	0	0	0	0	6	49	693	742
07:15 AM	34	40	1	31	3	103	143	0	13	20	102	14	6	242	65	1	1	0	0	0	0	1	39	781	820
07:30 AM	25	57	0	24	6	92	148	0	32	32	110	8	5	264	93	1	0	0	0	0	0	3	32	868	900
07:45 AM	46	69	0	55	0	124	151	0	31	23	150	21	7	292	102	0	1	0	0	0	0	21	84	1009	1093
Total	126	209	1	143	12	411	581	0	93	88	440	53	28	1014	321	2	2	0	0	0	0	31	204	3351	3555
08:00 AM	39	58	1	47	5	98	148	0	19	36	134	17	17	270	85	1	5	0	0	0	0	23	92	911	1003
08:15 AM	42	75	0	56	2	100	144	0	14	38	97	13	20	231	92	2	0	0	0	0	0	14	90	850	940
08:30 AM	40	68	0	46	0	101	153	0	16	25	124	21	15	232	95	1	0	0	0	0	0	14	75	876	951
08:45 AM	44	54	0	52	0	91	158	0	14	28	125	14	27	211	102	2	0	0	0	0	0	13	92	843	935
Total	165	255	1	201	7	390	603	0	63	127	480	65	79	944	374	6	5	0	0	0	0	64	349	3480	3829
Grand Total	291	464	2	344	19	801	1184	0	156	215	920	118	107	1958	695	8	7	0	0	0	0	95	553	6831	7384
Apprch %	38.4	61.3	0.3		0.9	40	59.1		11.1	15.3	65.3	8.4		73.6	26.1	0.3		0	0	0	0				
Total %	4.3	6.8	0		0.3	11.7	17.3		2.3	3.1	13.5	1.7		28.7	10.2	0.1		0	0	0	0		7.5	92.5	
Cars & Peds	286	452	2		19	796	1182		156	211	911	114		1946	683	8		0	0	0	0		0	0	7293
% Cars & Peds	98.3	97.4	100	98.3	100	99.4	99.8	0	100	98.1	99	96.6	91.6	99.4	98.3	100	0	0	0	0	0	95.8	0	0	98.8
Trucks & Bikes	5	12	0		0	5	2		0	4	9	4		12	12	0		0	0	0	0		0	0	91
% Trucks & Bikes	1.7	2.6	0	1.7	0	0.6	0.2	0	0	1.9	1	3.4	8.4	0.6	1.7	0	100	0	0	0	0	4.2	0	0	1.2

	Brookline Avenue From North				Boylston Street From Northeast				Park Drive From East					Brookline Avenue From South				Park Drive From West					
Start Time	Right	Thru	Hard Left	App. Total	Hard Right	Bear Right	Bear Left	App. Total	Hard Right	Right	Thru	Left	App. Total	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																							
Peak Hour for Entire Intersection Begins at 07:45 AM																							
07:45 AM	**46**	69	0	115	0	**124**	151	**275**	**31**	23	**150**	**21**	**225**	**292**	**102**	0	**394**	0	0	0	0	0	**1009**
08:00 AM	39	58	**1**	98	**5**	98	148	251	19	36	134	17	206	270	85	1	356	0	0	0	0	0	911
08:15 AM	42	**75**	0	**117**	2	100	144	246	14	**38**	97	13	162	231	92	**2**	325	0	0	0	0	0	850
08:30 AM	40	68	0	108	0	101	**153**	254	16	25	124	21	186	232	95	1	328	0	0	0	0	0	876
Total Volume	167	270	1	438	7	423	596	1026	80	122	505	72	779	1025	374	4	1403	0	0	0	0	0	3646
% App. Total	38.1	61.6	0.2		0.7	41.2	58.1		10.3	15.7	64.8	9.2		73.1	26.7	0.3		0	0	0	0		
PHF	.908	.900	.250	.936	.350	.853	.974	.933	.645	.803	.842	.857	.866	.878	.917	.500	.890	.000	.000	.000	.000	.000	.903
Cars & Peds	165	266	1	432	7	420	595	1022	80	121	501	69	771	1016	370	4	1390	0	0	0	0	0	3615
% Cars & Peds	98.8	98.5	100	98.6	100	99.3	99.8	99.6	100	99.2	99.2	95.8	99.0	99.1	98.9	100	99.1	0	0	0	0	0	99.1
Trucks & Bikes	2	4	0	6	0	3	1	4	0	1	4	3	8	9	4	0	13	0	0	0	0	0	31
% Trucks & Bikes	1.2	1.5	0	1.4	0	0.7	0.2	0.4	0	0.8	0.8	4.2	1.0	0.9	1.1	0	0.9	0	0	0	0	0	0.9

Transportation Data Corporation
P.O. Box 334 Wakefield, MA 01880
Tel. (781) 587-0086 Fax (781) 587-0189

N/S: Brookline Avenue
E,W/NE: Park Drive/Boylston Street
City/State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448FF
Site Code : 09589
Start Date : 10/18/2005
Page No : 1

Groups Printed- Cars & Peds

	Brookline Avenue From North				Boylston Street From Northeast				Park Drive From East					Brookline Avenue From South				Park Drive From West							
Start Time	Right	Thru	Hard Left	Peds	Hard Right	Bear Right	Bear Left	Peds	Hard Right	Right	Thru	Left	Peds	Bear Right	Thru	Left	Peds	Right	Thru	Bear Left	Left	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	20	42	0	32	3	91	139	0	17	13	78	10	8	216	60	0	0	0	0	0	0	6	46	689	735
07:15 AM	34	38	1	30	3	103	142	0	13	18	99	14	5	241	63	1	0	0	0	0	0	1	36	770	806
07:30 AM	25	54	0	24	6	92	148	0	32	31	109	8	5	263	90	1	0	0	0	0	0	2	31	859	890
07:45 AM	45	68	0	54	0	124	151	0	31	23	148	20	7	291	102	0	0	0	0	0	0	20	81	1003	1084
Total	124	202	1	140	12	410	580	0	93	85	434	52	25	1011	315	2	0	0	0	0	0	29	194	3321	3515
08:00 AM	39	57	1	47	5	97	148	0	19	36	134	16	15	268	84	1	0	0	0	0	0	22	84	905	989
08:15 AM	42	73	0	55	2	100	144	0	14	37	96	13	19	230	91	2	0	0	0	0	0	13	87	844	931
08:30 AM	39	68	0	45	0	99	152	0	16	25	123	20	15	227	93	1	0	0	0	0	0	14	74	863	937
08:45 AM	42	52	0	51	0	90	158	0	14	28	124	13	24	210	100	2	0	0	0	0	0	13	88	833	921
Total	162	250	1	198	7	386	602	0	63	126	477	62	73	935	368	6	0	0	0	0	0	62	333	3445	3778
Grand Total	286	452	2	338	19	796	1182	0	156	211	911	114	98	1946	683	8	0	0	0	0	0	91	527	6766	7293
Apprch %	38.6	61.1	0.3		1	39.9	59.2		11.2	15.2	65.4	8.2		73.8	25.9	0.3		0	0	0	0				
Total %	4.2	6.7	0		0.3	11.8	17.5		2.3	3.1	13.5	1.7		28.8	10.1	0.1		0	0	0	0		7.2	92.8	

	Brookline Avenue From North				Boylston Street From Northeast				Park Drive From East					Brookline Avenue From South				Park Drive From West					
Start Time	Right	Thru	Hard Left	App. Total	Hard Right	Bear Right	Bear Left	App. Total	Hard Right	Right	Thru	Left	App. Total	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																							
Peak Hour for Entire Intersection Begins at 07:45 AM																							
07:45 AM	**45**	68	0	113	0	**124**	151	**275**	**31**	23	**148**	**20**	**222**	**291**	**102**	0	**393**	0	0	0	0	0	**1003**
08:00 AM	39	57	**1**	97	**5**	97	148	250	19	36	134	16	205	268	84	1	353	0	0	0	0	0	905
08:15 AM	42	**73**	0	**115**	2	100	144	246	14	**37**	96	13	160	230	91	**2**	323	0	0	0	0	0	844
08:30 AM	39	68	0	107	0	99	**152**	251	16	25	123	20	184	227	93	1	321	0	0	0	0	0	863
Total Volume	165	266	1	432	7	420	595	1022	80	121	501	69	771	1016	370	4	1390	0	0	0	0	0	3615
% App. Total	38.2	61.6	0.2		0.7	41.1	58.2		10.4	15.7	65	8.9		73.1	26.6	0.3		0	0	0	0		
PHF	.917	.911	.250	.939	.350	.847	.979	.929	.645	.818	.846	.863	.868	.873	.907	.500	.884	.000	.000	.000	.000	.000	.901

Transportation Data Corporation
P.O. Box 334 Wakefield, MA 01880
Tel. (781) 587-0086 Fax (781) 587-0189

N/S: Brookline Avenue
E,W/NE: Park Drive/Boylston Street
City/State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448FF
Site Code : 09589
Start Date : 10/18/2005
Page No : 1

Groups Printed- Cars & Peds - Trucks & Bikes

	Brookline Avenue From North				Boylston Street From Northeast				Park Drive From East					Brookline Avenue From South				Park Drive From West							
Start Time	Right	Thru	Hard Left	Peds	Hard Right	Bear Right	Bear Left	Peds	Hard Right	Right	Thru	Left	Peds	Bear Right	Thru	Left	Peds	Right	Thru	Bear Left	Left	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	21	43	0	33	3	92	139	0	17	13	78	10	10	216	61	0	0	0	0	0	0	6	49	693	742
07:15 AM	34	40	1	31	3	103	143	0	13	20	102	14	6	242	65	1	1	0	0	0	0	1	39	781	820
07:30 AM	25	57	0	24	6	92	148	0	32	32	110	8	5	264	93	1	0	0	0	0	0	3	32	868	900
07:45 AM	46	69	0	55	0	124	151	0	31	23	150	21	7	292	102	0	1	0	0	0	0	21	84	1009	1093
Total	126	209	1	143	12	411	581	0	93	88	440	53	28	1014	321	2	2	0	0	0	0	31	204	3351	3555
08:00 AM	39	58	1	47	5	98	148	0	19	36	134	17	17	270	85	1	5	0	0	0	0	23	92	911	1003
08:15 AM	42	75	0	56	2	100	144	0	14	38	97	13	20	231	92	2	0	0	0	0	0	14	90	850	940
08:30 AM	40	68	0	46	0	101	153	0	16	25	124	21	15	232	95	1	0	0	0	0	0	14	75	876	951
08:45 AM	44	54	0	52	0	91	158	0	14	28	125	14	27	211	102	2	0	0	0	0	0	13	92	843	935
Total	165	255	1	201	7	390	603	0	63	127	480	65	79	944	374	6	5	0	0	0	0	64	349	3480	3829
Grand Total	291	464	2	344	19	801	1184	0	156	215	920	118	107	1958	695	8	7	0	0	0	0	95	553	6831	7384
Apprch %	38.4	61.3	0.3		0.9	40	59.1		11.1	15.3	65.3	8.4		73.6	26.1	0.3		0	0	0	0				
Total %	4.3	6.8	0		0.3	11.7	17.3		2.3	3.1	13.5	1.7		28.7	10.2	0.1		0	0	0	0		7.5	92.5	
Cars & Peds	286	452	2		19	796	1182		156	211	911	114		1946	683	8		0	0	0	0		0	0	7293
% Cars & Peds	98.3	97.4	100	98.3	100	99.4	99.8	0	100	98.1	99	96.6	91.6	99.4	98.3	100	0	0	0	0	0	95.8	0	0	98.8
Trucks & Bikes	5	12	0		0	5	2		0	4	9	4		12	12	0		0	0	0	0		0	0	91
% Trucks & Bikes	1.7	2.6	0	1.7	0	0.6	0.2	0	0	1.9	1	3.4	8.4	0.6	1.7	0	100	0	0	0	0	4.2	0	0	1.2

	Brookline Avenue From North				Boylston Street From Northeast				Park Drive From East					Brookline Avenue From South				Park Drive From West					
Start Time	Right	Thru	Hard Left	App. Total	Hard Right	Bear Right	Bear Left	App. Total	Hard Right	Right	Thru	Left	App. Total	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																							
Peak Hour for Entire Intersection Begins at 07:45 AM																							
07:45 AM	**46**	69	0	115	0	**124**	151	**275**	**31**	23	**150**	**21**	**225**	**292**	**102**	0	**394**	0	0	0	0	0	**1009**
08:00 AM	39	58	**1**	98	**5**	98	148	251	19	36	134	17	206	270	85	1	356	0	0	0	0	0	911
08:15 AM	42	**75**	0	**117**	2	100	144	246	14	**38**	97	13	162	231	92	**2**	325	0	0	0	0	0	850
08:30 AM	40	68	0	108	0	101	**153**	254	16	25	124	21	186	232	95	1	328	0	0	0	0	0	876
Total Volume	167	270	1	438	7	423	596	1026	80	122	505	72	779	1025	374	4	1403	0	0	0	0	0	3646
% App. Total	38.1	61.6	0.2		0.7	41.2	58.1		10.3	15.7	64.8	9.2		73.1	26.7	0.3		0	0	0	0		
PHF	.908	.900	.250	.936	.350	.853	.974	.933	.645	.803	.842	.857	.866	.878	.917	.500	.890	.000	.000	.000	.000	.000	.903
Cars & Peds	165	266	1	432	7	420	595	1022	80	121	501	69	771	1016	370	4	1390	0	0	0	0	0	3615
% Cars & Peds	98.8	98.5	100	98.6	100	99.3	99.8	99.6	100	99.2	99.2	95.8	99.0	99.1	98.9	100	99.1	0	0	0	0	0	99.1
Trucks & Bikes	2	4	0	6	0	3	1	4	0	1	4	3	8	9	4	0	13	0	0	0	0	0	31
% Trucks & Bikes	1.2	1.5	0	1.4	0	0.7	0.2	0.4	0	0.8	0.8	4.2	1.0	0.9	1.1	0	0.9	0	0	0	0	0	0.9

Transportation Data Corporation
P.O. Box 334 Wakefield, MA 01880
Tel. (781) 587-0086 Fax (781) 587-0189

N/S: Brookline Avenue
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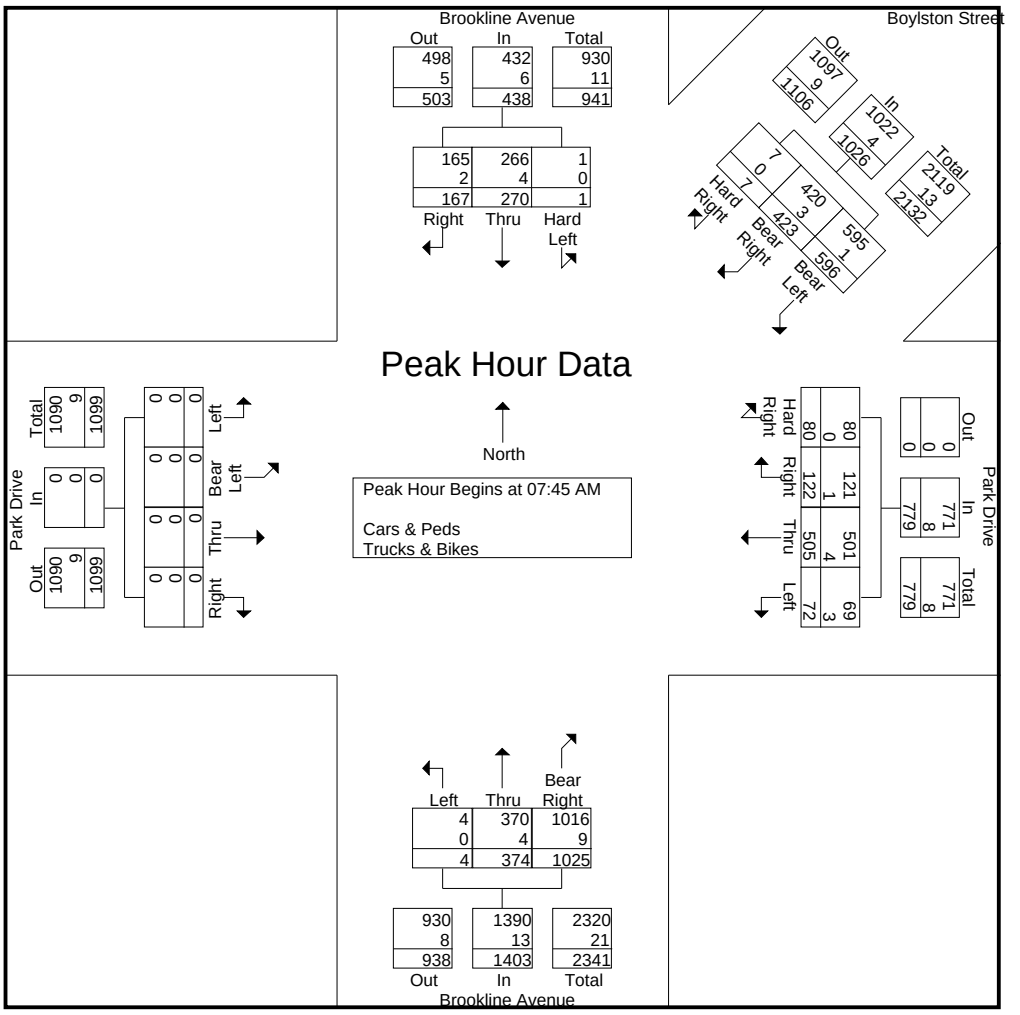
City/State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448FF
Site Code : 09589
Start Date : 10/18/2005
Page No : 1

	Brookline Avenue From North				Boylston Street From Northeast				Park Drive From East					Brookline Avenue From South				Park Drive From West					
Start Time	Right	Thru	Hard Left	App. Total	Hard Right	Bear Right	Bear Left	App. Total	Hard Right	Right	Thru	Left	App. Total	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																							
Peak Hour for Entire Intersection Begins at 07:45 AM																							
07:45 AM	**46**	69	0	115	0	**124**	151	**275**	**31**	23	**150**	**21**	**225**	**292**	**102**	0	**394**	0	0	0	0	0	**1009**
08:00 AM	39	58	**1**	98	**5**	98	148	251	19	36	134	17	206	270	85	1	356	0	0	0	0	0	911
08:15 AM	42	**75**	0	**117**	2	100	144	246	14	**38**	97	13	162	231	92	**2**	325	0	0	0	0	0	850
08:30 AM	40	68	0	108	0	101	**153**	254	16	25	124	21	186	232	95	1	328	0	0	0	0	0	876
Total Volume	167	270	1	438	7	423	596	1026	80	122	505	72	779	1025	374	4	1403	0	0	0	0	0	3646
% App. Total	38.1	61.6	0.2		0.7	41.2	58.1		10.3	15.7	64.8	9.2		73.1	26.7	0.3		0	0	0	0		
PHF	.908	.900	.250	.936	.350	.853	.974	.933	.645	.803	.842	.857	.866	.878	.917	.500	.890	.000	.000	.000	.000	.000	.903
Cars & Peds	165	266	1	432	7	420	595	1022	80	121	501	69	771	1016	370	4	1390	0	0	0	0	0	3615
% Cars & Peds	98.8	98.5	100	98.6	100	99.3	99.8	99.6	100	99.2	99.2	95.8	99.0	99.1	98.9	100	99.1	0	0	0	0	0	99.1
Trucks & Bikes	2	4	0	6	0	3	1	4	0	1	4	3	8	9	4	0	13	0	0	0	0	0	31
% Trucks & Bikes	1.2	1.5	0	1.4	0	0.7	0.2	0.4	0	0.8	0.8	4.2	1.0	0.9	1.1	0	0.9	0	0	0	0	0	0.9



Transportation Data Corporation
P.O. Box 334 Wakefield, MA 01880
Tel. (781) 587-0086 Fax (781) 587-0189

N/S: Brookline Avenue
E/NE/W: Fenway/Park Dr. Loop/Riverway
City/State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448GG
Site Code : 09589
Start Date : 10/18/2005
Page No : 1

Groups Printed- Cars & Peds - Trucks & Bikes

	Brookline Avenue From North			To Park Drive WB From Northeast			Fenway From East			Brookline Avenue From South					Riverway From West							
Start Time	Thru	Left	Peds	Hard Right	Bear Right	Bear Left	Thru	Left	Peds	Right	Bear Right	Thru	Left	Peds	Right	Thru	Bear Left	Left	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	204	1	0	0	0	0	0	0	16	22	16	146	0	16	22	142	16	154	15	47	723	770
07:15 AM	196	0	1	0	0	0	0	0	11	18	11	156	0	19	38	186	25	148	9	40	778	818
07:30 AM	231	0	1	0	0	0	0	0	18	15	20	213	0	31	32	178	23	160	21	71	872	943
07:45 AM	254	3	1	0	0	0	0	0	23	19	10	211	0	40	54	186	29	193	33	97	959	1056
Total	885	4	3	0	0	0	0	0	68	74	57	726	0	106	146	692	93	655	78	255	3332	3587
08:00 AM	227	2	0	0	0	0	0	0	24	17	13	179	0	52	55	168	31	197	46	122	889	1011
08:15 AM	238	0	3	0	0	0	0	0	26	17	10	164	0	57	29	167	29	148	37	123	802	925
08:30 AM	232	1	0	0	0	0	0	0	28	21	20	135	0	69	21	194	34	162	50	147	820	967
08:45 AM	221	2	1	0	0	0	0	0	33	21	12	164	0	71	34	199	22	134	52	157	809	966
Total	918	5	4	0	0	0	0	0	111	76	55	642	0	249	139	728	116	641	185	549	3320	3869
Grand Total	1803	9	7	0	0	0	0	0	179	150	112	1368	0	355	285	1420	209	1296	263	804	6652	7456
Apprch %	99.5	0.5		0	0	0	0	0		9.2	6.9	83.9	0		8.9	44.2	6.5	40.4				
Total %	27.1	0.1		0	0	0	0	0		2.3	1.7	20.6	0		4.3	21.3	3.1	19.5		10.8	89.2	
Cars & Peds	1784	9		0	0	0	0	0		142	107	1343	0		281	1410	208	1291		0	0	7312
% Cars & Peds	98.9	100	71.4	0	0	0	0	0	94.4	94.7	95.5	98.2	0	87.3	98.6	99.3	99.5	99.6	96.2	0	0	98.1
Trucks & Bikes	19	0		0	0	0	0	0		8	5	25	0		4	10	1	5		0	0	144
% Trucks & Bikes	1.1	0	28.6	0	0	0	0	0	5.6	5.3	4.5	1.8	0	12.7	1.4	0.7	0.5	0.4	3.8	0	0	1.9

	Brookline Avenue From North			To Park Drive WB From Northeast				Fenway From East			Brookline Avenue From South					Riverway From West					
Start Time	Thru	Left	App. Total	Hard Right	Bear Right	Bear Left	App. Total	Thru	Left	App. Total	Right	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	231	0	231	0	0	0	0	0	0	0	15	**20**	**213**	0	**248**	32	178	23	160	393	872
07:45 AM	**254**	**3**	**257**	0	0	0	0	0	0	0	**19**	10	211	0	240	54	**186**	29	193	**462**	**959**
08:00 AM	227	2	229	0	0	0	0	0	0	0	17	13	179	0	209	**55**	168	**31**	**197**	451	889
08:15 AM	238	0	238	0	0	0	0	0	0	0	17	10	164	0	191	29	167	29	148	373	802
Total Volume	950	5	955	0	0	0	0	0	0	0	68	53	767	0	888	170	699	112	698	1679	3522
% App. Total	99.5	0.5		0	0	0		0	0		7.7	6	86.4	0		10.1	41.6	6.7	41.6		
PHF	.935	.417	.929	.000	.000	.000	.000	.000	.000	.000	.895	.663	.900	.000	.895	.773	.940	.903	.886	.909	.918
Cars & Peds	938	5	943	0	0	0	0	0	0	0	65	50	756	0	871	167	696	112	695	1670	3484
% Cars & Peds	98.7	100	98.7	0	0	0	0	0	0	0	95.6	94.3	98.6	0	98.1	98.2	99.6	100	99.6	99.5	98.9
Trucks & Bikes	12	0	12	0	0	0	0	0	0	0	3	3	11	0	17	3	3	0	3	9	38
% Trucks & Bikes	1.3	0	1.3	0	0	0	0	0	0	0	4.4	5.7	1.4	0	1.9	1.8	0.4	0	0.4	0.5	1.1

Transportation Data Corporation
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N/S: Brookline Avenue
E/NE/W: Fenway/Park Dr. Loop/Riverway
City/State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448GG
Site Code : 09589
Start Date : 10/18/2005
Page No : 1

Groups Printed- Cars & Peds

	Brookline Avenue From North			To Park Drive WB From Northeast			Fenway From East			Brookline Avenue From South					Riverway From West							
Start Time	Thru	Left	Peds	Hard Right	Bear Right	Bear Left	Thru	Left	Peds	Right	Bear Right	Thru	Left	Peds	Right	Thru	Bear Left	Left	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	204	1	0	0	0	0	0	0	15	19	15	144	0	16	22	141	15	154	15	46	715	761
07:15 AM	193	0	1	0	0	0	0	0	9	18	10	153	0	14	37	185	25	148	9	33	769	802
07:30 AM	226	0	1	0	0	0	0	0	18	15	18	209	0	30	31	177	23	160	21	70	859	929
07:45 AM	252	3	0	0	0	0	0	0	23	19	9	211	0	28	53	184	29	191	32	83	951	1034
Total	875	4	2	0	0	0	0	0	65	71	52	717	0	88	143	687	92	653	77	232	3294	3526
08:00 AM	225	2	0	0	0	0	0	0	20	14	13	176	0	50	54	168	31	196	45	115	879	994
08:15 AM	235	0	2	0	0	0	0	0	26	17	10	160	0	45	29	167	29	148	35	108	795	903
08:30 AM	231	1	0	0	0	0	0	0	27	20	20	129	0	65	21	192	34	160	47	139	808	947
08:45 AM	218	2	1	0	0	0	0	0	31	20	12	161	0	62	34	196	22	134	49	143	799	942
Total	909	5	3	0	0	0	0	0	104	71	55	626	0	222	138	723	116	638	176	505	3281	3786
Grand Total	1784	9	5	0	0	0	0	0	169	142	107	1343	0	310	281	1410	208	1291	253	737	6575	7312
Apprch %	99.5	0.5		0	0	0	0	0		8.9	6.7	84.4	0		8.8	44.2	6.5	40.5				
Total %	27.1	0.1		0	0	0	0	0		2.2	1.6	20.4	0		4.3	21.4	3.2	19.6		10.1	89.9	

	Brookline Avenue From North			To Park Drive WB From Northeast				Fenway From East			Brookline Avenue From South					Riverway From West					
Start Time	Thru	Left	App. Total	Hard Right	Bear Right	Bear Left	App. Total	Thru	Left	App. Total	Right	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	226	0	226	0	0	0	0	0	0	0	15	**18**	209	0	**242**	31	177	23	160	391	859
07:45 AM	**252**	**3**	**255**	0	0	0	0	0	0	0	**19**	9	**211**	0	239	53	**184**	29	191	**457**	**951**
08:00 AM	225	2	227	0	0	0	0	0	0	0	14	13	176	0	203	**54**	168	**31**	**196**	449	879
08:15 AM	235	0	235	0	0	0	0	0	0	0	17	10	160	0	187	29	167	29	148	373	795
Total Volume	938	5	943	0	0	0	0	0	0	0	65	50	756	0	871	167	696	112	695	1670	3484
% App. Total	99.5	0.5		0	0	0		0	0		7.5	5.7	86.8	0		10	41.7	6.7	41.6		
PHF	.931	.417	.925	.000	.000	.000	.000	.000	.000	.000	.855	.694	.896	.000	.900	.773	.946	.903	.886	.914	.916

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Tel. (781) 587-0086 Fax (781) 587-0189

N/S: Brookline Avenue
E/NE/W: Fenway/Park Dr. Loop/Riverway
City/State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448GG
Site Code : 09589
Start Date : 10/18/2005
Page No : 1

Groups Printed- Trucks & Bikes

	Brookline Avenue From North			To Park Drive WB From Northeast			Fenway From East			Brookline Avenue From South					Riverway From West							
Start Time	Thru	Left	Peds	Hard Right	Bear Right	Bear Left	Thru	Left	Peds	Right	Bear Right	Thru	Left	Peds	Right	Thru	Bear Left	Left	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	1	3	1	2	0	0	0	1	1	0	0	1	8	9
07:15 AM	3	0	0	0	0	0	0	0	2	0	1	3	0	5	1	1	0	0	0	7	9	16
07:30 AM	5	0	0	0	0	0	0	0	0	0	2	4	0	1	1	1	0	0	0	1	13	14
07:45 AM	2	0	1	0	0	0	0	0	0	0	1	0	0	12	1	2	0	2	1	14	8	22
Total	10	0	1	0	0	0	0	0	3	3	5	9	0	18	3	5	1	2	1	23	38	61
08:00 AM	2	0	0	0	0	0	0	0	4	3	0	3	0	2	1	0	0	1	1	7	10	17
08:15 AM	3	0	1	0	0	0	0	0	0	0	0	4	0	12	0	0	0	0	2	15	7	22
08:30 AM	1	0	0	0	0	0	0	0	1	1	0	6	0	4	0	2	0	2	3	8	12	20
08:45 AM	3	0	0	0	0	0	0	0	2	1	0	3	0	9	0	3	0	0	3	14	10	24
Total	9	0	1	0	0	0	0	0	7	5	0	16	0	27	1	5	0	3	9	44	39	83
Grand Total	19	0	2	0	0	0	0	0	10	8	5	25	0	45	4	10	1	5	10	67	77	144
Apprch %	100	0		0	0	0	0	0		21.1	13.2	65.8	0		20	50	5	25				
Total %	24.7	0		0	0	0	0	0		10.4	6.5	32.5	0		5.2	13	1.3	6.5		46.5	53.5	

	Brookline Avenue From North			To Park Drive WB From Northeast				Fenway From East			Brookline Avenue From South					Riverway From West					
Start Time	Thru	Left	App. Total	Hard Right	Bear Right	Bear Left	App. Total	Thru	Left	App. Total	Right	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	3	0	3	0	0	0	0	0	0	0	0	1	3	0	4	**1**	1	0	0	2	9
07:30 AM	**5**	0	**5**	0	0	0	0	0	0	0	0	**2**	**4**	0	**6**	1	1	0	0	2	**13**
07:45 AM	2	0	2	0	0	0	0	0	0	0	0	1	0	0	1	1	**2**	0	**2**	**5**	8
08:00 AM	2	0	2	0	0	0	0	0	0	0	**3**	0	3	0	6	1	0	0	1	2	10
Total Volume	12	0	12	0	0	0	0	0	0	0	3	4	10	0	17	4	4	0	3	11	40
% App. Total	100	0		0	0	0		0	0		17.6	23.5	58.8	0		36.4	36.4	0	27.3		
PHF	.600	.000	.600	.000	.000	.000	.000	.000	.000	.000	.250	.500	.625	.000	.708	1.000	.500	.000	.375	.550	.769

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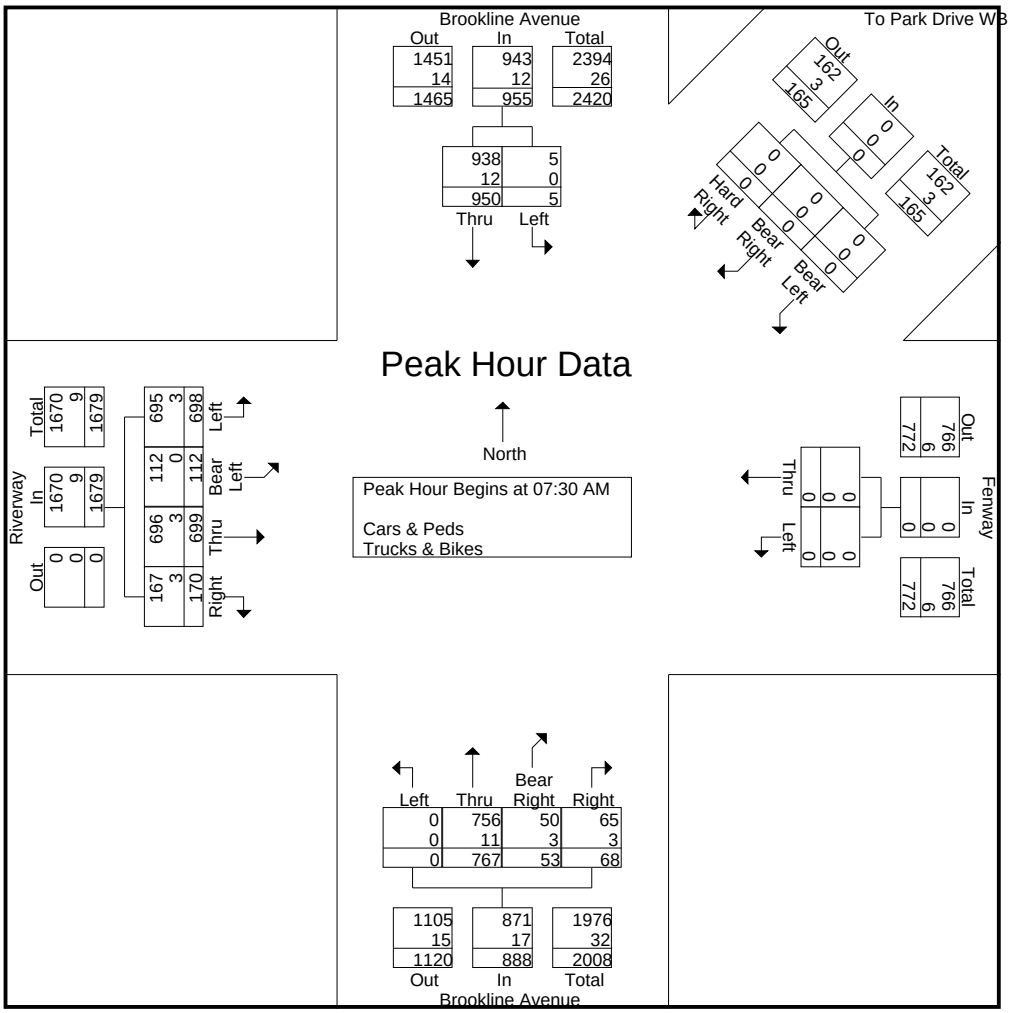
Client: VHB/J. Wanat

File Name : 03448GG
Site Code : 09589
Start Date : 10/18/2005
Page No : 1

	Brookline Avenue From North			To Park Drive WB From Northeast				Fenway From East			Brookline Avenue From South					Riverway From West					
Start Time	Thru	Left	App. Total	Hard Right	Bear Right	Bear Left	App. Total	Thru	Left	App. Total	Right	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	231	0	231	0	0	0	0	0	0	0	15	**20**	**213**	0	**248**	32	178	23	160	393	872
07:45 AM	**254**	**3**	**257**	0	0	0	0	0	0	0	**19**	10	211	0	240	54	**186**	29	193	**462**	**959**
08:00 AM	227	2	229	0	0	0	0	0	0	0	17	13	179	0	209	**55**	168	**31**	**197**	451	889
08:15 AM	238	0	238	0	0	0	0	0	0	0	17	10	164	0	191	29	167	29	148	373	802
Total Volume	950	5	955	0	0	0	0	0	0	0	68	53	767	0	888	170	699	112	698	1679	3522
% App. Total	99.5	0.5		0	0	0		0	0		7.7	6	86.4	0		10.1	41.6	6.7	41.6		
PHF	.935	.417	.929	.000	.000	.000	.000	.000	.000	.000	.895	.663	.900	.000	.895	.773	.940	.903	.886	.909	.918
Cars & Peds	938	5	943	0	0	0	0	0	0	0	65	50	756	0	871	167	696	112	695	1670	3484
% Cars & Peds	98.7	100	98.7	0	0	0	0	0	0	0	95.6	94.3	98.6	0	98.1	98.2	99.6	100	99.6	99.5	98.9
Trucks & Bikes	12	0	12	0	0	0	0	0	0	0	3	3	11	0	17	3	3	0	3	9	38
% Trucks & Bikes	1.3	0	1.3	0	0	0	0	0	0	0	4.4	5.7	1.4	0	1.9	1.8	0.4	0	0.4	0.5	1.1



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S: Riverway
E/W: Park Drive
City/State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448HH
Site Code : 09589
Start Date : 10/18/2005
Page No : 1

Groups Printed- Cars & Peds - Trucks & Bikes

	From North				Park Drive From East					Riverway From South				Park Drive From West						
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	UTurn	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	1	0	0	80	57	1	0	0	0	4	35	97	0	2	65	212	277
07:15 AM	0	0	0	0	0	0	116	65	2	0	0	0	12	40	119	0	1	80	275	355
07:30 AM	0	0	0	0	0	0	91	70	2	0	0	0	13	69	158	0	3	88	318	406
07:45 AM	0	0	0	0	0	0	129	48	2	0	0	0	15	88	150	0	4	69	367	436
Total	0	0	0	1	0	0	416	240	7	0	0	0	44	232	524	0	10	302	1172	1474
08:00 AM	0	0	0	3	0	0	132	67	5	0	0	0	22	64	136	0	14	111	332	443
08:15 AM	0	0	0	0	0	0	100	62	0	0	0	0	20	79	174	0	12	94	353	447
08:30 AM	0	0	0	0	0	0	96	68	0	0	0	0	38	63	169	0	6	112	328	440
08:45 AM	0	0	0	0	0	0	92	74	0	0	0	0	41	52	155	0	12	127	299	426
Total	0	0	0	3	0	0	420	271	5	0	0	0	121	258	634	0	44	444	1312	1756
Grand Total	0	0	0	4	0	0	836	511	12	0	0	0	165	490	1158	0	54	746	2484	3230
Apprch %	0	0	0		0	0	100			0	0	0		29.7	70.3	0				
Total %	0	0	0		0	0	33.7			0	0	0		19.7	46.6	0		23.1	76.9	
Cars & Peds	0	0	0		0	0	834			0	0	0		485	1073	0		0	0	3124
% Cars & Peds	0	0	0	100	0	0	99.8	98.8	91.7	0	0	0	96.4	99	92.7	0	98.1	0	0	96.7
Trucks & Bikes	0	0	0		0	0	2			0	0	0		5	85	0		0	0	106
% Trucks & Bikes	0	0	0	0	0	0	0.2	1.2	8.3	0	0	0	3.6	1	7.3	0	1.9	0	0	3.3

	From North				Park Drive From East				Riverway From South				Park Drive From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	0	0	129	129	0	0	0	0	**88**	150	0	238	**367**
08:00 AM	0	0	0	0	0	0	**132**	**132**	0	0	0	0	64	136	0	200	332
08:15 AM	0	0	0	0	0	0	100	100	0	0	0	0	79	**174**	0	**253**	353
08:30 AM	0	0	0	0	0	0	96	96	0	0	0	0	63	169	0	232	328
Total Volume	0	0	0	0	0	0	457	457	0	0	0	0	294	629	0	923	1380
% App. Total	0	0	0		0	0	100		0	0	0		31.9	68.1	0		
PHF	.000	.000	.000	.000	.000	.000	.866	.866	.000	.000	.000	.000	.835	.904	.000	.912	.940
Cars & Peds	0	0	0	0	0	0	455	455	0	0	0	0	289	573	0	862	1317
% Cars & Peds	0	0	0	0	0	0	99.6	99.6	0	0	0	0	98.3	91.1	0	93.4	95.4
Trucks & Bikes	0	0	0	0	0	0	2	2	0	0	0	0	5	56	0	61	63
% Trucks & Bikes	0	0	0	0	0	0	0.4	0.4	0	0	0	0	1.7	8.9	0	6.6	4.6

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S: Riverway
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Client: VHB/J. Wanat

File Name : 03448HH
Site Code : 09589
Start Date : 10/18/2005
Page No : 1

Groups Printed- Cars & Peds

	From North				Park Drive From East					Riverway From South				Park Drive From West						
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	UTurn	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	1	0	0	80	57	1	0	0	0	3	35	94	0	2	64	209	273
07:15 AM	0	0	0	0	0	0	116	65	1	0	0	0	8	40	115	0	1	75	271	346
07:30 AM	0	0	0	0	0	0	91	68	2	0	0	0	12	69	150	0	3	85	310	395
07:45 AM	0	0	0	0	0	0	129	47	2	0	0	0	15	84	138	0	4	68	351	419
Total	0	0	0	1	0	0	416	237	6	0	0	0	38	228	497	0	10	292	1141	1433
08:00 AM	0	0	0	3	0	0	132	67	5	0	0	0	22	64	123	0	14	111	319	430
08:15 AM	0	0	0	0	0	0	99	61	0	0	0	0	20	79	160	0	12	93	338	431
08:30 AM	0	0	0	0	0	0	95	66	0	0	0	0	38	62	152	0	6	110	309	419
08:45 AM	0	0	0	0	0	0	92	74	0	0	0	0	41	52	141	0	11	126	285	411
Total	0	0	0	3	0	0	418	268	5	0	0	0	121	257	576	0	43	440	1251	1691
Grand Total	0	0	0	4	0	0	834	505	11	0	0	0	159	485	1073	0	53	732	2392	3124
Apprch %	0	0	0		0	0	100			0	0	0		31.1	68.9	0				
Total %	0	0	0		0	0	34.9			0	0	0		20.3	44.9	0		23.4	76.6	

	From North				Park Drive From East				Riverway From South				Park Drive From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	91	91	0	0	0	0	69	150	0	219	310
07:45 AM	0	0	0	0	0	0	129	129	0	0	0	0	**84**	138	0	222	**351**
08:00 AM	0	0	0	0	0	0	**132**	**132**	0	0	0	0	64	123	0	187	319
08:15 AM	0	0	0	0	0	0	99	99	0	0	0	0	79	**160**	0	**239**	338
Total Volume	0	0	0	0	0	0	451	451	0	0	0	0	296	571	0	867	1318
% App. Total	0	0	0		0	0	100		0	0	0		34.1	65.9	0		
PHF	.000	.000	.000	.000	.000	.000	.854	.854	.000	.000	.000	.000	.881	.892	.000	.907	.939

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File Name : 03448HH
Site Code : 09589
Start Date : 10/18/2005
Page No : 1

Groups Printed- Trucks & Bikes

	From North				Park Drive From East					Riverway From South				Park Drive From West						
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	UTurn	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	0	0	1	3	4
07:15 AM	0	0	0	0	0	0	0	0	1	0	0	0	4	0	4	0	0	5	4	9
07:30 AM	0	0	0	0	0	0	0	2	0	0	0	0	1	0	8	0	0	3	8	11
07:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	4	12	0	0	1	16	17
Total	0	0	0	0	0	0	0	3	1	0	0	0	6	4	27	0	0	10	31	41
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0	0	0	13	13
08:15 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	14	0	0	1	15	16
08:30 AM	0	0	0	0	0	0	1	2	0	0	0	0	0	1	17	0	0	2	19	21
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0	1	1	14	15
Total	0	0	0	0	0	0	2	3	0	0	0	0	0	1	58	0	1	4	61	65
Grand Total	0	0	0	0	0	0	2	6	1	0	0	0	6	5	85	0	1	14	92	106
Apprch %	0	0	0		0	0	100			0	0	0		5.6	94.4	0				
Total %	0	0	0		0	0	2.2			0	0	0		5.4	92.4	0		13.2	86.8	

	From North				Park Drive From East				Riverway From South				Park Drive From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	**4**	12	0	16	16
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0	13	13
08:15 AM	0	0	0	0	0	0	**1**	**1**	0	0	0	0	0	14	0	14	15
08:30 AM	0	0	0	0	0	0	1	1	0	0	0	0	1	**17**	0	**18**	**19**
Total Volume	0	0	0	0	0	0	2	2	0	0	0	0	5	56	0	61	63
% App. Total	0	0	0		0	0	100		0	0	0		8.2	91.8	0		
PHF	.000	.000	.000	.000	.000	.000	.500	.500	.000	.000	.000	.000	.313	.824	.000	.847	.829

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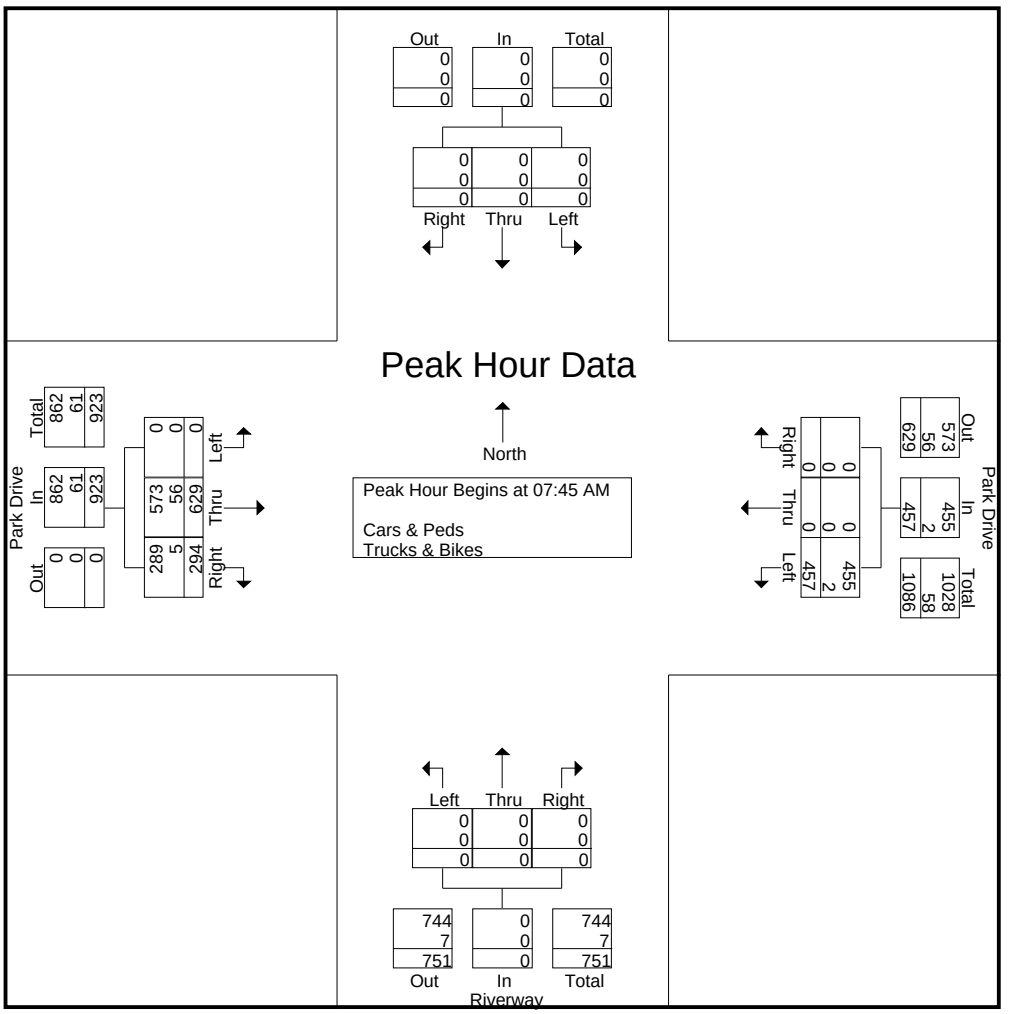
S: Riverway
E/W: Park Drive
City/State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448HH
Site Code : 09589
Start Date : 10/18/2005
Page No : 1

	From North				Park Drive From East				Riverway From South				Park Drive From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	0	0	129	129	0	0	0	0	**88**	150	0	238	**367**
08:00 AM	0	0	0	0	0	0	**132**	**132**	0	0	0	0	64	136	0	200	332
08:15 AM	0	0	0	0	0	0	100	100	0	0	0	0	79	**174**	0	**253**	353
08:30 AM	0	0	0	0	0	0	96	96	0	0	0	0	63	169	0	232	328
Total Volume	0	0	0	0	0	0	457	457	0	0	0	0	294	629	0	923	1380
% App. Total	0	0	0		0	0	100		0	0	0		31.9	68.1	0		
PHF	.000	.000	.000	.000	.000	.000	.866	.866	.000	.000	.000	.000	.835	.904	.000	.912	.940
Cars & Peds	0	0	0	0	0	0	455	455	0	0	0	0	289	573	0	862	1317
% Cars & Peds	0	0	0	0	0	0	99.6	99.6	0	0	0	0	98.3	91.1	0	93.4	95.4
Trucks & Bikes	0	0	0	0	0	0	2	2	0	0	0	0	5	56	0	61	63
% Trucks & Bikes	0	0	0	0	0	0	0.4	0.4	0	0	0	0	1.7	8.9	0	6.6	4.6



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N/S: Park Drive
E/W: Beacon Street
City/State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448AAA
Site Code : 09589
Start Date : 10/19/2005
Page No : 1

Groups Printed- Cars & Peds

	Park Drive From North				Beacon Street From East					Park Drive From South				Beacon Street From West							
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	UTurn	Peds	Right	Thru	Left	Peds	Right	Thru	Left	UTurn	Peds	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	1	103	10	13	2	145	52	1	17	10	98	34	10	25	90	20	10	11	62	590	652
04:15 PM	3	120	7	28	2	131	42	0	16	14	95	23	14	16	87	12	14	12	84	552	636
04:30 PM	2	114	7	7	2	168	59	0	22	18	87	32	35	13	93	11	19	9	92	606	698
04:45 PM	4	128	6	17	2	157	44	2	26	15	87	39	38	17	77	15	22	8	113	591	704
Total	10	465	30	65	8	601	197	3	81	57	367	128	97	71	347	58	65	40	351	2339	2690
05:00 PM	9	151	6	17	1	172	64	0	17	11	103	42	34	12	110	15	13	5	86	696	782
05:15 PM	4	133	9	27	3	170	56	1	24	19	132	45	56	10	93	14	21	20	149	688	837
05:30 PM	2	142	8	45	3	182	37	2	24	15	106	46	46	13	116	10	17	22	156	680	836
05:45 PM	3	114	15	38	4	202	51	1	33	14	108	47	82	16	107	12	20	22	196	693	889
Total	18	540	38	127	11	726	208	4	98	59	449	180	218	51	426	51	71	69	587	2757	3344
Grand Total	28	1005	68	192	19	1327	405	7	179	116	816	308	315	122	773	109	136	109	938	5096	6034
Apprch %	2.5	91.3	6.2		1.1	75.8	23.1			9.4	65.8	24.8		12.2	77	10.9					
Total %	0.5	19.7	1.3		0.4	26	7.9			2.3	16	6		2.4	15.2	2.1			15.5	84.5	

	Park Drive From North				Beacon Street From East				Park Drive From South				Beacon Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**9**	**151**	6	**166**	1	172	**64**	237	11	103	42	156	12	110	**15**	137	**696**
05:15 PM	4	133	9	146	3	170	56	229	**19**	**132**	45	**196**	10	93	14	117	688
05:30 PM	2	142	8	152	3	182	37	222	15	106	46	167	13	**116**	10	**139**	680
05:45 PM	3	114	**15**	132	**4**	**202**	51	**257**	14	108	**47**	169	**16**	107	12	135	693
Total Volume	18	540	38	596	11	726	208	945	59	449	180	688	51	426	51	528	2757
% App. Total	3	90.6	6.4		1.2	76.8	22		8.6	65.3	26.2		9.7	80.7	9.7		
PHF	.500	.894	.633	.898	.688	.899	.813	.919	.776	.850	.957	.878	.797	.918	.850	.950	.990

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N/S: Park Drive
E/W: Beacon Street
City/State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448AAA
Site Code : 09589
Start Date : 10/19/2005
Page No : 1

Groups Printed- Cars & Peds - Trucks & Bikes

	Park Drive From North				Beacon Street From East					Park Drive From South				Beacon Street From West							
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	UTurn	Peds	Right	Thru	Left	Peds	Right	Thru	Left	UTurn	Peds	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	1	103	11	17	2	145	52	1	24	10	98	35	11	25	90	20	10	15	78	592	670
04:15 PM	3	120	7	34	2	132	42	0	24	15	96	23	18	16	88	12	14	21	111	556	667
04:30 PM	2	115	7	13	2	168	60	0	32	18	89	32	37	13	94	11	19	21	122	611	733
04:45 PM	4	129	6	22	2	159	44	2	30	15	87	39	43	17	79	15	22	14	133	596	729
Total	10	467	31	86	8	604	198	3	110	58	370	129	109	71	351	58	65	71	444	2355	2799
05:00 PM	9	152	6	28	1	174	64	0	20	11	105	42	35	13	110	15	13	10	106	702	808
05:15 PM	4	133	9	41	3	170	56	1	31	19	133	45	59	10	93	14	21	28	181	689	870
05:30 PM	3	142	8	58	3	182	37	2	26	15	107	46	47	13	116	10	17	32	182	682	864
05:45 PM	3	114	15	47	4	202	51	1	38	14	111	47	86	16	107	12	20	29	221	696	917
Total	19	541	38	174	11	728	208	4	115	59	456	180	227	52	426	51	71	99	690	2769	3459
Grand Total	29	1008	69	260	19	1332	406	7	225	117	826	309	336	123	777	109	136	170	1134	5124	6258
Apprch %	2.6	91.1	6.2		1.1	75.8	23.1			9.3	66	24.7		12.2	77	10.8					
Total %	0.6	19.7	1.3		0.4	26	7.9			2.3	16.1	6		2.4	15.2	2.1			18.1	81.9	
Cars & Peds	28	1005	68		19	1327	405			116	816	308		122	773	109			0	0	6034
% Cars & Peds	96.6	99.7	98.6	73.8	100	99.6	99.8	100	79.6	99.1	98.8	99.7	93.8	99.2	99.5	100	100	64.1	0	0	96.4
Trucks & Bikes	1	3	1		0	5	1			1	10	1		1	4	0			0	0	224
% Trucks & Bikes	3.4	0.3	1.4	26.2	0	0.4	0.2	0	20.4	0.9	1.2	0.3	6.2	0.8	0.5	0	0	35.9	0	0	3.6

	Park Drive From North				Beacon Street From East				Park Drive From South				Beacon Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**9**	**152**	6	**167**	1	174	**64**	239	11	105	42	158	13	110	**15**	138	**702**
05:15 PM	4	133	9	146	3	170	56	229	**19**	**133**	45	**197**	10	93	14	117	689
05:30 PM	3	142	8	153	3	182	37	222	15	107	46	168	13	**116**	10	**139**	682
05:45 PM	3	114	**15**	132	**4**	**202**	51	**257**	14	111	**47**	172	**16**	107	12	135	696
Total Volume	19	541	38	598	11	728	208	947	59	456	180	695	52	426	51	529	2769
% App. Total	3.2	90.5	6.4		1.2	76.9	22		8.5	65.6	25.9		9.8	80.5	9.6		
PHF	.528	.890	.633	.895	.688	.901	.813	.921	.776	.857	.957	.882	.813	.918	.850	.951	.986
Cars & Peds	18	540	38	596	11	726	208	945	59	449	180	688	51	426	51	528	2757
% Cars & Peds	94.7	99.8	100	99.7	100	99.7	100	99.8	100	98.5	100	99.0	98.1	100	100	99.8	99.6
Trucks & Bikes	1	1	0	2	0	2	0	2	0	7	0	7	1	0	0	1	12
% Trucks & Bikes	5.3	0.2	0	0.3	0	0.3	0	0.2	0	1.5	0	1.0	1.9	0	0	0.2	0.4

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N/S: Park Drive
E/W: Beacon Street
City/State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448AAA
Site Code : 09589
Start Date : 10/19/2005
Page No : 1

Groups Printed- Trucks & Bikes

	Park Drive From North				Beacon Street From East					Park Drive From South				Beacon Street From West							
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	UTurn	Peds	Right	Thru	Left	Peds	Right	Thru	Left	UTurn	Peds	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	1	4	0	0	0	0	7	0	0	1	1	0	0	0	0	4	16	2	18
04:15 PM	0	0	0	6	0	1	0	0	8	1	1	0	4	0	1	0	0	9	27	4	31
04:30 PM	0	1	0	6	0	0	1	0	10	0	2	0	2	0	1	0	0	12	30	5	35
04:45 PM	0	1	0	5	0	2	0	0	4	0	0	0	5	0	2	0	0	6	20	5	25
Total	0	2	1	21	0	3	1	0	29	1	3	1	12	0	4	0	0	31	93	16	109
05:00 PM	0	1	0	11	0	2	0	0	3	0	2	0	1	1	0	0	0	5	20	6	26
05:15 PM	0	0	0	14	0	0	0	0	7	0	1	0	3	0	0	0	0	8	32	1	33
05:30 PM	1	0	0	13	0	0	0	0	2	0	1	0	1	0	0	0	0	10	26	2	28
05:45 PM	0	0	0	9	0	0	0	0	5	0	3	0	4	0	0	0	0	7	25	3	28
Total	1	1	0	47	0	2	0	0	17	0	7	0	9	1	0	0	0	30	103	12	115
Grand Total	1	3	1	68	0	5	1	0	46	1	10	1	21	1	4	0	0	61	196	28	224
Apprch %	20	60	20		0	83.3	16.7			8.3	83.3	8.3		20	80	0					
Total %	3.6	10.7	3.6		0	17.9	3.6			3.6	35.7	3.6		3.6	14.3	0			87.5	12.5	

	Park Drive From North				Beacon Street From East				Park Drive From South				Beacon Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	0	0	0	1	0	1	**1**	1	0	**2**	0	1	0	1	4
04:30 PM	0	**1**	0	**1**	0	0	**1**	1	0	**2**	0	2	0	1	0	1	5
04:45 PM	0	1	0	1	0	**2**	0	**2**	0	0	0	0	0	**2**	0	**2**	5
05:00 PM	0	1	0	1	0	2	0	2	0	2	0	2	**1**	0	0	1	**6**
Total Volume	0	3	0	3	0	5	1	6	1	5	0	6	1	4	0	5	20
% App. Total	0	100	0		0	83.3	16.7		16.7	83.3	0		20	80	0		
PHF	.000	.750	.000	.750	.000	.625	.250	.750	.250	.625	.000	.750	.250	.500	.000	.625	.833

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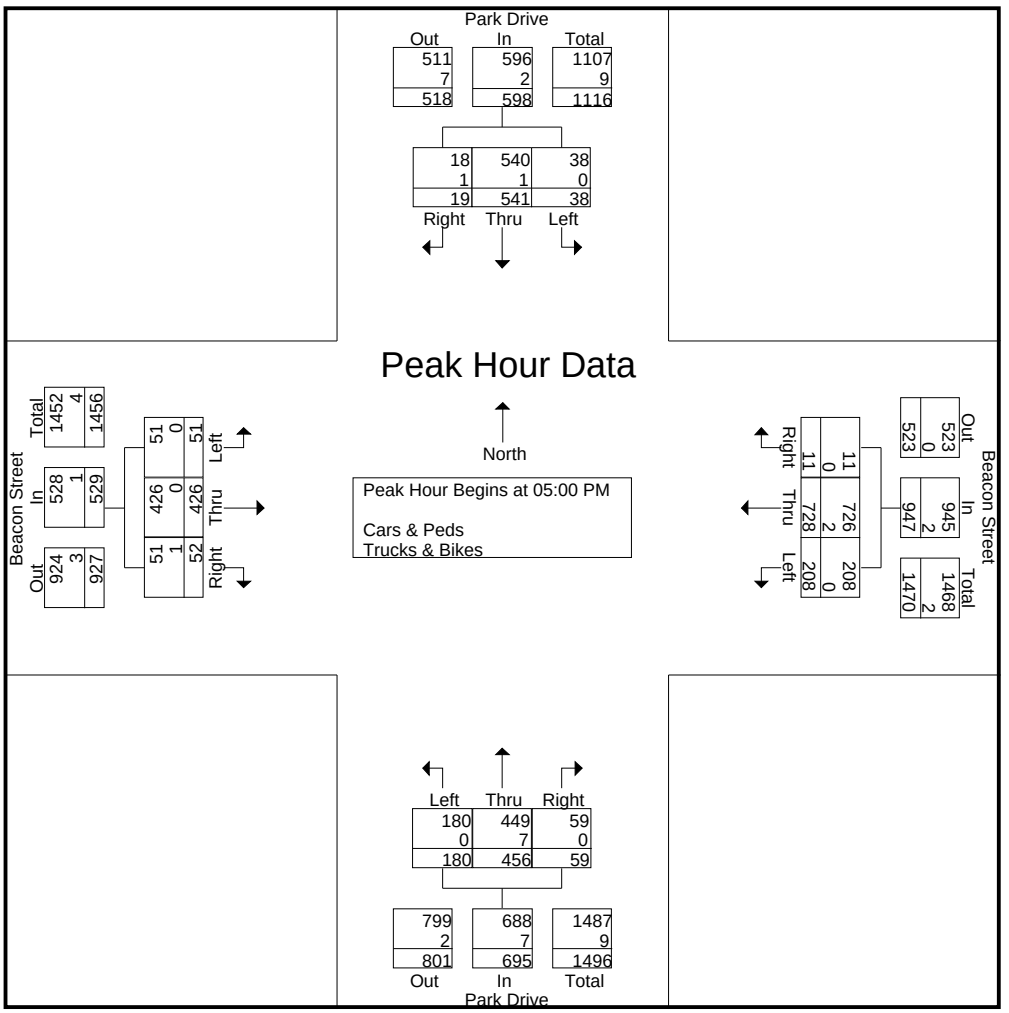
N/S: Park Drive
E/W: Beacon Street
City/State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448AAA
Site Code : 09589
Start Date : 10/19/2005
Page No : 1

	Park Drive From North				Beacon Street From East				Park Drive From South				Beacon Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**9**	**152**	6	**167**	1	174	**64**	239	11	105	42	158	13	110	**15**	138	**702**
05:15 PM	4	133	9	146	3	170	56	229	**19**	**133**	45	**197**	10	93	14	117	689
05:30 PM	3	142	8	153	3	182	37	222	15	107	46	168	13	**116**	10	**139**	682
05:45 PM	3	114	**15**	132	**4**	**202**	51	**257**	14	111	**47**	172	**16**	107	12	135	696
Total Volume	19	541	38	598	11	728	208	947	59	456	180	695	52	426	51	529	2769
% App. Total	3.2	90.5	6.4		1.2	76.9	22		8.5	65.6	25.9		9.8	80.5	9.6		
PHF	.528	.890	.633	.895	.688	.901	.813	.921	.776	.857	.957	.882	.813	.918	.850	.951	.986
Cars & Peds	18	540	38	596	11	726	208	945	59	449	180	688	51	426	51	528	2757
% Cars & Peds	94.7	99.8	100	99.7	100	99.7	100	99.8	100	98.5	100	99.0	98.1	100	100	99.8	99.6
Trucks & Bikes	1	1	0	2	0	2	0	2	0	7	0	7	1	0	0	1	12
% Trucks & Bikes	5.3	0.2	0	0.3	0	0.3	0	0.2	0	1.5	0	1.0	1.9	0	0	0.2	0.4



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N/S: Arundel Street/Miner Street
E/W: Beacon Street
City, State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448BBB
Site Code : 09589
Start Date : 10/19/2005
Page No : 1

Groups Printed- Cars & Peds - Trucks & Bikes

	Arundel Street From North				Beacon Street From East				Miner Street From South				Beacon Street From West						
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	1	1	1	29	2	186	2	5	4	2	6	13	7	105	2	9	56	319	375
04:15 PM	2	0	1	33	2	170	6	8	10	6	14	19	6	106	0	13	73	323	396
04:30 PM	0	3	0	23	0	215	4	7	3	9	12	15	8	98	2	5	50	354	404
04:45 PM	2	1	1	38	1	190	1	4	7	5	10	27	10	98	2	10	79	328	407
Total	5	5	3	123	5	761	13	24	24	22	42	74	31	407	6	37	258	1324	1582
05:00 PM	5	0	1	53	0	223	4	6	6	7	7	24	5	123	0	15	98	381	479
05:15 PM	3	3	0	35	2	219	2	5	5	3	10	29	6	109	1	12	81	363	444
05:30 PM	3	1	1	49	2	216	6	4	5	5	10	28	7	129	3	6	87	388	475
05:45 PM	0	0	0	59	1	244	2	9	2	2	10	32	6	123	3	3	103	393	496
Total	11	4	2	196	5	902	14	24	18	17	37	113	24	484	7	36	369	1525	1894
Grand Total	16	9	5	319	10	1663	27	48	42	39	79	187	55	891	13	73	627	2849	3476
Apprch %	53.3	30	16.7		0.6	97.8	1.6		26.2	24.4	49.4		5.7	92.9	1.4				
Total %	0.6	0.3	0.2		0.4	58.4	0.9		1.5	1.4	2.8		1.9	31.3	0.5		18	82	
Cars & Peds	16	9	5		10	1658	27		42	39	79		55	886	13		0	0	3360
% Cars & Peds	100	100	100	79.9	100	99.7	100	81.2	100	100	100	85	100	99.4	100	93.2	0	0	96.7
Trucks & Bikes	0	0	0		0	5	0		0	0	0		0	5	0		0	0	116
% Trucks & Bikes	0	0	0	20.1	0	0.3	0	18.8	0	0	0	15	0	0.6	0	6.8	0	0	3.3

	Arundel Street From North				Beacon Street From East				Miner Street From South				Beacon Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**5**	0	**1**	**6**	0	223	4	227	**6**	**7**	7	**20**	5	123	0	128	381
05:15 PM	3	**3**	0	6	**2**	219	2	223	5	3	**10**	18	6	109	1	116	363
05:30 PM	3	1	1	5	2	216	**6**	224	5	5	10	20	**7**	**129**	**3**	**139**	388
05:45 PM	0	0	0	0	1	**244**	2	**247**	2	2	10	14	6	123	3	132	**393**
Total Volume	11	4	2	17	5	902	14	921	18	17	37	72	24	484	7	515	1525
% App. Total	64.7	23.5	11.8		0.5	97.9	1.5		25	23.6	51.4		4.7	94	1.4		
PHF	.550	.333	.500	.708	.625	.924	.583	.932	.750	.607	.925	.900	.857	.938	.583	.926	.970

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N/S: Arundel Street/Miner Street
E/W: Beacon Street
City, State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448BBB
Site Code : 09589
Start Date : 10/19/2005
Page No : 1

Groups Printed- Cars & Peds

	Arundel Street From North				Beacon Street From East				Miner Street From South				Beacon Street From West						
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	1	1	1	24	2	186	2	5	4	2	6	12	7	104	2	8	49	318	367
04:15 PM	2	0	1	29	2	169	6	8	10	6	14	16	6	105	0	13	66	321	387
04:30 PM	0	3	0	17	0	215	4	5	3	9	12	11	8	98	2	5	38	354	392
04:45 PM	2	1	1	30	1	188	1	3	7	5	10	24	10	96	2	10	67	324	391
Total	5	5	3	100	5	758	13	21	24	22	42	63	31	403	6	36	220	1317	1537
05:00 PM	5	0	1	43	0	221	4	6	6	7	7	20	5	122	0	14	83	378	461
05:15 PM	3	3	0	27	2	219	2	5	5	3	10	28	6	109	1	10	70	363	433
05:30 PM	3	1	1	37	2	216	6	4	5	5	10	24	7	129	3	5	70	388	458
05:45 PM	0	0	0	48	1	244	2	3	2	2	10	24	6	123	3	3	78	393	471
Total	11	4	2	155	5	900	14	18	18	17	37	96	24	483	7	32	301	1522	1823
Grand Total	16	9	5	255	10	1658	27	39	42	39	79	159	55	886	13	68	521	2839	3360
Apprch %	53.3	30	16.7		0.6	97.8	1.6		26.2	24.4	49.4		5.8	92.9	1.4				
Total %	0.6	0.3	0.2		0.4	58.4	1		1.5	1.4	2.8		1.9	31.2	0.5		15.5	84.5	

	Arundel Street From North				Beacon Street From East				Miner Street From South				Beacon Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**5**	0	**1**	**6**	0	221	4	225	**6**	**7**	7	**20**	5	122	0	127	378
05:15 PM	3	**3**	0	6	**2**	219	2	223	5	3	**10**	18	6	109	1	116	363
05:30 PM	3	1	1	5	2	216	**6**	224	5	5	10	20	**7**	**129**	**3**	**139**	388
05:45 PM	0	0	0	0	1	**244**	2	**247**	2	2	10	14	6	123	3	132	**393**
Total Volume	11	4	2	17	5	900	14	919	18	17	37	72	24	483	7	514	1522
% App. Total	64.7	23.5	11.8		0.5	97.9	1.5		25	23.6	51.4		4.7	94	1.4		
PHF	.550	.333	.500	.708	.625	.922	.583	.930	.750	.607	.925	.900	.857	.936	.583	.924	.968

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File Name : 03448BBB
Site Code : 09589
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Groups Printed- Trucks & Bikes

	Arundel Street From North				Beacon Street From East				Miner Street From South				Beacon Street From West						
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	5	0	0	0	0	0	0	0	1	0	1	0	1	7	1	8
04:15 PM	0	0	0	4	0	1	0	0	0	0	0	3	0	1	0	0	7	2	9
04:30 PM	0	0	0	6	0	0	0	2	0	0	0	4	0	0	0	0	12	0	12
04:45 PM	0	0	0	8	0	2	0	1	0	0	0	3	0	2	0	0	12	4	16
Total	0	0	0	23	0	3	0	3	0	0	0	11	0	4	0	1	38	7	45
05:00 PM	0	0	0	10	0	2	0	0	0	0	0	4	0	1	0	1	15	3	18
05:15 PM	0	0	0	8	0	0	0	0	0	0	0	1	0	0	0	2	11	0	11
05:30 PM	0	0	0	12	0	0	0	0	0	0	0	4	0	0	0	1	17	0	17
05:45 PM	0	0	0	11	0	0	0	6	0	0	0	8	0	0	0	0	25	0	25
Total	0	0	0	41	0	2	0	6	0	0	0	17	0	1	0	4	68	3	71
Grand Total	0	0	0	64	0	5	0	9	0	0	0	28	0	5	0	5	106	10	116
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0				
Total %	0	0	0		0	50	0		0	0	0		0	50	0		91.4	8.6	

	Arundel Street From North				Beacon Street From East				Miner Street From South				Beacon Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	**2**	0	**2**	**4**
05:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
Total Volume	0	0	0	0	0	5	0	5	0	0	0	0	0	4	0	4	9
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.625	.000	.625	.000	.000	.000	.000	.000	.500	.000	.500	.563

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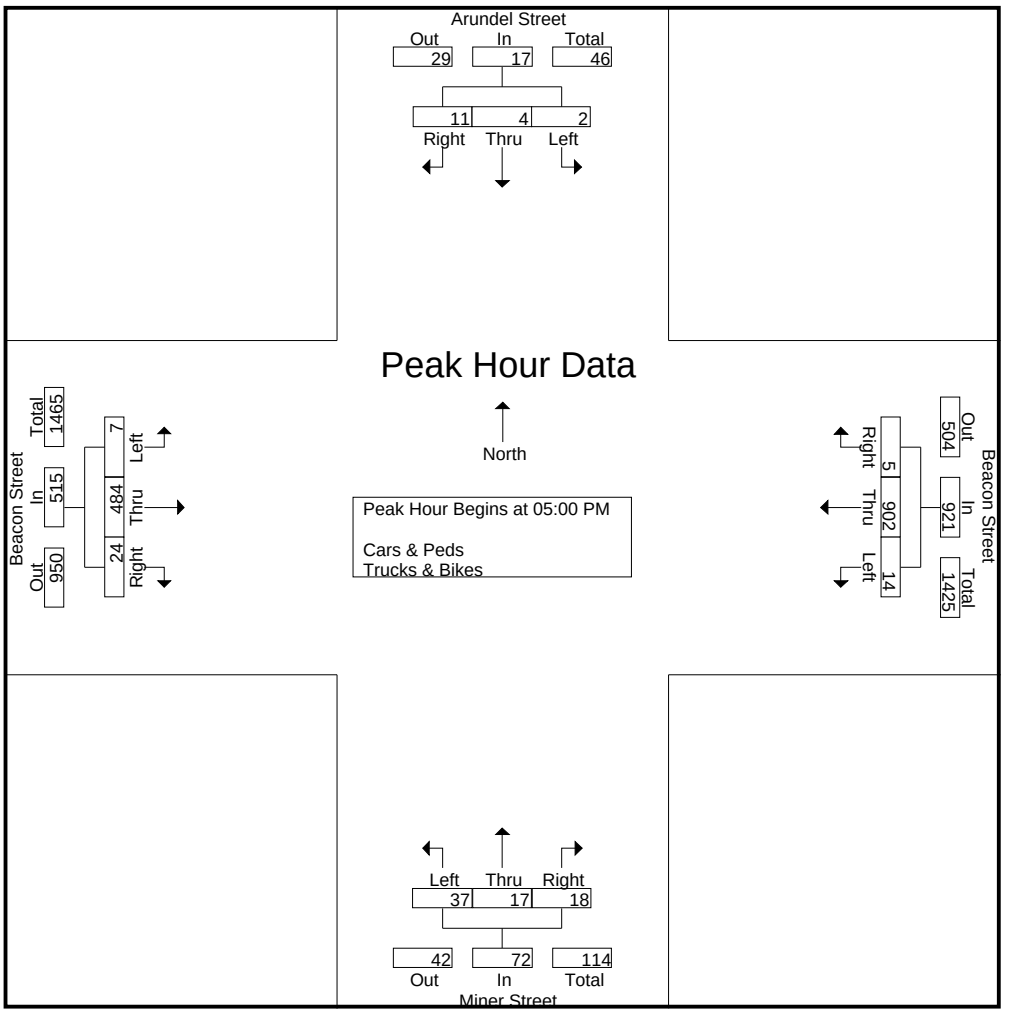
	Arundel Street From North				Beacon Street From East				Miner Street From South				Beacon Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**5**	0	**1**	**6**	0	223	4	227	**6**	**7**	7	**20**	5	123	0	128	381
05:15 PM	3	**3**	0	6	**2**	219	2	223	5	3	**10**	18	6	109	1	116	363
05:30 PM	3	1	1	5	2	216	**6**	224	5	5	10	20	**7**	**129**	**3**	**139**	388
05:45 PM	0	0	0	0	1	**244**	2	**247**	2	2	10	14	6	123	3	132	**393**
Total Volume	11	4	2	17	5	902	14	921	18	17	37	72	24	484	7	515	1525
% App. Total	64.7	23.5	11.8		0.5	97.9	1.5		25	23.6	51.4		4.7	94	1.4		
PHF	.550	.333	.500	.708	.625	.924	.583	.932	.750	.607	.925	.900	.857	.938	.583	.926	.970



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City, State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448CCC
Site Code : 09589
Start Date : 10/19/2005
Page No : 1

Groups Printed- Cars & Peds - Trucks & Bikes

	Mountfort Street From North				Beacon Street From East					Maitland Street From South				Beacon Street From West							
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	UTurn	Peds	Right	Thru	Left	Peds	Right	Thru	Left	UTurn	Peds	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	2	0	3	32	5	189	2	3	2	14	5	13	18	2	102	0	1	3	59	337	396
04:15 PM	1	0	3	41	4	171	2	1	2	5	2	6	20	1	118	2	0	12	76	315	391
04:30 PM	0	0	1	29	4	189	3	3	4	11	5	7	12	4	98	2	2	4	54	324	378
04:45 PM	1	0	1	29	5	186	0	4	3	9	4	13	17	0	113	1	0	6	59	333	392
Total	4	0	8	131	18	735	7	11	11	39	16	39	67	7	431	5	3	25	248	1309	1557
05:00 PM	1	0	1	41	6	208	0	2	1	9	5	15	24	1	121	4	1	14	83	371	454
05:15 PM	2	1	3	41	6	217	0	5	2	7	6	9	24	1	119	0	1	12	85	371	456
05:30 PM	2	0	3	39	10	215	1	2	1	9	5	11	17	2	133	0	3	17	79	391	470
05:45 PM	1	1	5	58	2	223	0	2	2	11	4	9	28	2	135	1	0	11	101	394	495
Total	6	2	12	179	24	863	1	11	6	36	20	44	93	6	508	5	5	54	348	1527	1875
Grand Total	10	2	20	310	42	1598	8	22	17	75	36	83	160	13	939	10	8	79	596	2836	3432
Apprch %	31.2	6.2	62.5		2.5	97	0.5			38.7	18.6	42.8		1.4	97.6	1					
Total %	0.4	0.1	0.7		1.5	56.3	0.3			2.6	1.3	2.9		0.5	33.1	0.4			17.4	82.6	
Cars & Peds	10	2	20		42	1594	8			75	36	83		13	933	10			0	0	3337
% Cars & Peds	100	100	100	79.7	100	99.7	100	100	94.1	100	100	100	86.9	100	99.4	100	100	100	0	0	97.2
Trucks & Bikes	0	0	0		0	4	0			0	0	0		0	6	0			0	0	95
% Trucks & Bikes	0	0	0	20.3	0	0.3	0	0	5.9	0	0	0	13.1	0	0.6	0	0	0	0	0	2.8

	Mountfort Street From North				Beacon Street From East				Maitland Street From South				Beacon Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	1	0	1	2	6	208	0	214	9	5	**15**	**29**	1	121	**4**	126	371
05:15 PM	**2**	**1**	3	6	6	217	0	223	7	**6**	9	22	1	119	0	120	371
05:30 PM	2	0	3	5	**10**	215	**1**	**226**	9	5	11	25	**2**	133	0	135	391
05:45 PM	1	1	**5**	**7**	2	**223**	0	225	**11**	4	9	24	2	**135**	1	**138**	**394**
Total Volume	6	2	12	20	24	863	1	888	36	20	44	100	6	508	5	519	1527
% App. Total	30	10	60		2.7	97.2	0.1		36	20	44		1.2	97.9	1		
PHF	.750	.500	.600	.714	.600	.967	.250	.982	.818	.833	.733	.862	.750	.941	.313	.940	.969

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File Name : 03448CCC
Site Code : 09589
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Groups Printed- Cars & Peds

	Mountfort Street From North				Beacon Street From East					Maitland Street From South				Beacon Street From West							
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	UTurn	Peds	Right	Thru	Left	Peds	Right	Thru	Left	UTurn	Peds	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	2	0	3	28	5	189	2	3	2	14	5	13	16	2	100	0	1	3	53	335	388
04:15 PM	1	0	3	37	4	170	2	1	1	5	2	6	17	1	117	2	0	12	68	313	381
04:30 PM	0	0	1	21	4	189	3	3	4	11	5	7	11	4	97	2	2	4	45	323	368
04:45 PM	1	0	1	23	5	184	0	4	3	9	4	13	14	0	112	1	0	6	50	330	380
Total	4	0	8	109	18	732	7	11	10	39	16	39	58	7	426	5	3	25	216	1301	1517
05:00 PM	1	0	1	33	6	207	0	2	1	9	5	15	19	1	120	4	1	14	70	369	439
05:15 PM	2	1	3	30	6	217	0	5	2	7	6	9	20	1	119	0	1	12	70	371	441
05:30 PM	2	0	3	27	10	215	1	2	1	9	5	11	16	2	133	0	3	17	66	391	457
05:45 PM	1	1	5	48	2	223	0	2	2	11	4	9	26	2	135	1	0	11	89	394	483
Total	6	2	12	138	24	862	1	11	6	36	20	44	81	6	507	5	5	54	295	1525	1820
Grand Total	10	2	20	247	42	1594	8	22	16	75	36	83	139	13	933	10	8	79	511	2826	3337
Apprch %	31.2	6.2	62.5		2.6	97	0.5			38.7	18.6	42.8		1.4	97.6	1					
Total %	0.4	0.1	0.7		1.5	56.4	0.3			2.7	1.3	2.9		0.5	33	0.4			15.3	84.7	

	Mountfort Street From North				Beacon Street From East				Maitland Street From South				Beacon Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	1	0	1	2	6	207	0	213	9	5	**15**	**29**	1	120	**4**	125	369
05:15 PM	**2**	**1**	3	6	6	217	0	223	7	**6**	9	22	1	119	0	120	371
05:30 PM	2	0	3	5	**10**	215	**1**	**226**	9	5	11	25	**2**	133	0	135	391
05:45 PM	1	1	**5**	**7**	2	**223**	0	225	**11**	4	9	24	2	**135**	1	**138**	**394**
Total Volume	6	2	12	20	24	862	1	887	36	20	44	100	6	507	5	518	1525
% App. Total	30	10	60		2.7	97.2	0.1		36	20	44		1.2	97.9	1		
PHF	.750	.500	.600	.714	.600	.966	.250	.981	.818	.833	.733	.862	.750	.939	.313	.938	.968

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Groups Printed- Trucks & Bikes

	Mountfort Street From North				Beacon Street From East					Maitland Street From South				Beacon Street From West							
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	UTurn	Peds	Right	Thru	Left	Peds	Right	Thru	Left	UTurn	Peds	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	4	0	0	0	0	0	0	0	0	2	0	2	0	0	0	6	2	8
04:15 PM	0	0	0	4	0	1	0	0	1	0	0	0	3	0	1	0	0	0	8	2	10
04:30 PM	0	0	0	8	0	0	0	0	0	0	0	0	1	0	1	0	0	0	9	1	10
04:45 PM	0	0	0	6	0	2	0	0	0	0	0	0	3	0	1	0	0	0	9	3	12
Total	0	0	0	22	0	3	0	0	1	0	0	0	9	0	5	0	0	0	32	8	40
05:00 PM	0	0	0	8	0	1	0	0	0	0	0	0	5	0	1	0	0	0	13	2	15
05:15 PM	0	0	0	11	0	0	0	0	0	0	0	0	4	0	0	0	0	0	15	0	15
05:30 PM	0	0	0	12	0	0	0	0	0	0	0	0	1	0	0	0	0	0	13	0	13
05:45 PM	0	0	0	10	0	0	0	0	0	0	0	0	2	0	0	0	0	0	12	0	12
Total	0	0	0	41	0	1	0	0	0	0	0	0	12	0	1	0	0	0	53	2	55
Grand Total	0	0	0	63	0	4	0	0	1	0	0	0	21	0	6	0	0	0	85	10	95
Apprch %	0	0	0		0	100	0			0	0	0		0	100	0					
Total %	0	0	0		0	40	0			0	0	0		0	60	0			89.5	10.5	

	Mountfort Street From North				Beacon Street From East				Maitland Street From South				Beacon Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	0	**2**	2
04:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:45 PM	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	1	0	1	**3**
Total Volume	0	0	0	0	0	3	0	3	0	0	0	0	0	5	0	5	8
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.000	.000	.000	.625	.000	.625	.667

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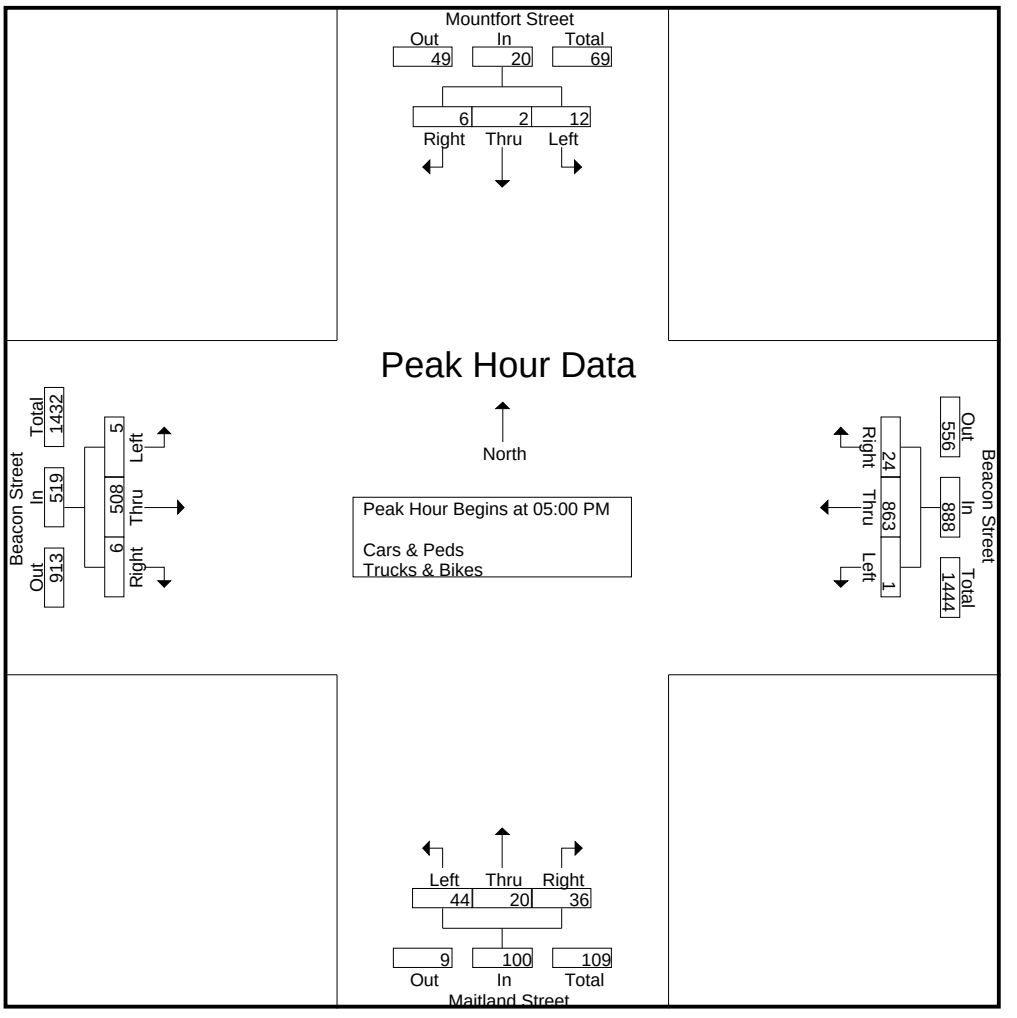
	Mountfort Street From North				Beacon Street From East				Maitland Street From South				Beacon Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	1	0	1	2	6	208	0	214	9	5	**15**	**29**	1	121	**4**	126	371
05:15 PM	**2**	**1**	3	6	6	217	0	223	7	**6**	9	22	1	119	0	120	371
05:30 PM	2	0	3	5	**10**	215	**1**	**226**	9	5	11	25	**2**	133	0	135	391
05:45 PM	1	1	**5**	**7**	2	**223**	0	225	**11**	4	9	24	2	**135**	1	**138**	**394**
Total Volume	6	2	12	20	24	863	1	888	36	20	44	100	6	508	5	519	1527
% App. Total	30	10	60		2.7	97.2	0.1		36	20	44		1.2	97.9	1		
PHF	.750	.500	.600	.714	.600	.967	.250	.982	.818	.833	.733	.862	.750	.941	.313	.940	.969



Transportation Data Corporation
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N/S: Brookline Avenue
E/W: Yawkey Way/Parking Lot
City, State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448DDD
Site Code : 09589
Start Date : 10/18/2005
Page No : 1

Groups Printed- Cars & Peds - Trucks & Bikes

	Brookline Avenue From North				Yawkey Way From East				Brookline Avenue From South				Parking Lot From West						
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	1	85	0	6	17	0	12	69	0	113	0	17	6	0	9	39	131	243	374
04:15 PM	2	68	0	5	9	0	14	41	0	101	1	28	2	0	8	49	123	205	328
04:30 PM	1	89	0	6	18	0	22	55	0	110	1	26	4	0	6	72	159	251	410
04:45 PM	3	82	0	9	16	0	19	54	0	115	1	25	1	0	9	58	146	246	392
Total	7	324	0	26	60	0	67	219	0	439	3	96	13	0	32	218	559	945	1504
05:00 PM	1	90	0	15	20	1	28	47	0	86	1	25	2	0	4	74	161	233	394
05:15 PM	1	87	0	7	17	0	16	43	0	112	0	16	2	0	11	62	128	246	374
05:30 PM	0	69	0	6	13	1	15	48	0	93	2	38	5	0	5	69	161	203	364
05:45 PM	4	85	0	4	10	0	16	53	0	89	3	12	6	0	8	69	138	221	359
Total	6	331	0	32	60	2	75	191	0	380	6	91	15	0	28	274	588	903	1491
Grand Total	13	655	0	58	120	2	142	410	0	819	9	187	28	0	60	492	1147	1848	2995
Apprch %	1.9	98.1	0		45.5	0.8	53.8		0	98.9	1.1		31.8	0	68.2				
Total %	0.7	35.4	0		6.5	0.1	7.7		0	44.3	0.5		1.5	0	3.2		38.3	61.7	
Cars & Peds	13	644	0		116	2	140		0	801	9		28	0	60		0	0	2898
% Cars & Peds	100	98.3	0	94.8	96.7	100	98.6	94.4	0	97.8	100	98.4	100	0	100	93.3	0	0	96.8
Trucks & Bikes	0	11	0		4	0	2		0	18	0		0	0	0		0	0	97
% Trucks & Bikes	0	1.7	0	5.2	3.3	0	1.4	5.6	0	2.2	0	1.6	0	0	0	6.7	0	0	3.2

	Brookline Avenue From North				Yawkey Way From East				Brookline Avenue From South				Parking Lot From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	1	89	0	90	18	0	22	40	0	110	**1**	111	**4**	0	6	10	**251**
04:45 PM	**3**	82	0	85	16	0	19	35	0	**115**	1	**116**	1	0	9	10	246
05:00 PM	1	**90**	0	**91**	**20**	**1**	**28**	**49**	0	86	1	87	2	0	4	6	233
05:15 PM	1	87	0	88	17	0	16	33	0	112	0	112	2	0	**11**	**13**	246
Total Volume	6	348	0	354	71	1	85	157	0	423	3	426	9	0	30	39	976
% App. Total	1.7	98.3	0		45.2	0.6	54.1		0	99.3	0.7		23.1	0	76.9		
PHF	.500	.967	.000	.973	.888	.250	.759	.801	.000	.920	.750	.918	.563	.000	.682	.750	.972

Transportation Data Corporation
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N/S: Brookline Avenue
E/W: Yawkey Way/Parking Lot
City, State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448DDD
Site Code : 09589
Start Date : 10/18/2005
Page No : 1

Groups Printed- Cars & Peds

	Brookline Avenue From North				Yawkey Way From East				Brookline Avenue From South				Parking Lot From West						
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	1	85	0	4	15	0	12	66	0	109	0	17	6	0	9	34	121	237	358
04:15 PM	2	63	0	5	9	0	13	39	0	99	1	28	2	0	8	48	120	197	317
04:30 PM	1	88	0	6	17	0	22	51	0	106	1	25	4	0	6	66	148	245	393
04:45 PM	3	80	0	8	16	0	19	51	0	110	1	25	1	0	9	56	140	239	379
Total	7	316	0	23	57	0	66	207	0	424	3	95	13	0	32	204	529	918	1447
05:00 PM	1	88	0	15	19	1	28	42	0	86	1	25	2	0	4	69	151	230	381
05:15 PM	1	87	0	7	17	0	15	41	0	110	0	14	2	0	11	58	120	243	363
05:30 PM	0	69	0	6	13	1	15	47	0	92	2	38	5	0	5	62	153	202	355
05:45 PM	4	84	0	4	10	0	16	50	0	89	3	12	6	0	8	66	132	220	352
Total	6	328	0	32	59	2	74	180	0	377	6	89	15	0	28	255	556	895	1451
Grand Total	13	644	0	55	116	2	140	387	0	801	9	184	28	0	60	459	1085	1813	2898
Apprch %	2	98	0		45	0.8	54.3		0	98.9	1.1		31.8	0	68.2				
Total %	0.7	35.5	0		6.4	0.1	7.7		0	44.2	0.5		1.5	0	3.3		37.4	62.6	

	Brookline Avenue From North				Yawkey Way From East				Brookline Avenue From South				Parking Lot From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	1	**88**	0	**89**	17	0	22	39	0	106	**1**	107	**4**	0	6	10	**245**
04:45 PM	**3**	80	0	83	16	0	19	35	0	**110**	1	**111**	1	0	9	10	239
05:00 PM	1	88	0	89	**19**	**1**	**28**	**48**	0	86	1	87	2	0	4	6	230
05:15 PM	1	87	0	88	17	0	15	32	0	110	0	110	2	0	**11**	**13**	243
Total Volume	6	343	0	349	69	1	84	154	0	412	3	415	9	0	30	39	957
% App. Total	1.7	98.3	0		44.8	0.6	54.5		0	99.3	0.7		23.1	0	76.9		
PHF	.500	.974	.000	.980	.908	.250	.750	.802	.000	.936	.750	.935	.563	.000	.682	.750	.977

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N/S: Brookline Avenue
E/W: Yawkey Way/Parking Lot
City, State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448DDD
Site Code : 09589
Start Date : 10/18/2005
Page No : 1

Groups Printed- Trucks & Bikes

	Brookline Avenue From North				Yawkey Way From East				Brookline Avenue From South				Parking Lot From West						
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	2	2	0	0	3	0	4	0	0	0	0	0	5	10	6	16
04:15 PM	0	5	0	0	0	0	1	2	0	2	0	0	0	0	0	1	3	8	11
04:30 PM	0	1	0	0	1	0	0	4	0	4	0	1	0	0	0	6	11	6	17
04:45 PM	0	2	0	1	0	0	0	3	0	5	0	0	0	0	0	2	6	7	13
Total	0	8	0	3	3	0	1	12	0	15	0	1	0	0	0	14	30	27	57
05:00 PM	0	2	0	0	1	0	0	5	0	0	0	0	0	0	0	5	10	3	13
05:15 PM	0	0	0	0	0	0	1	2	0	2	0	2	0	0	0	4	8	3	11
05:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	7	8	1	9
05:45 PM	0	1	0	0	0	0	0	3	0	0	0	0	0	0	0	3	6	1	7
Total	0	3	0	0	1	0	1	11	0	3	0	2	0	0	0	19	32	8	40
Grand Total	0	11	0	3	4	0	2	23	0	18	0	3	0	0	0	33	62	35	97
Apprch %	0	100	0		66.7	0	33.3		0	100	0		0	0	0				
Total %	0	31.4	0		11.4	0	5.7		0	51.4	0		0	0	0		63.9	36.1	

	Brookline Avenue From North				Yawkey Way From East				Brookline Avenue From South				Parking Lot From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	**2**	0	0	**2**	0	4	0	4	0	0	0	0	6
04:15 PM	0	**5**	0	**5**	0	0	**1**	1	0	2	0	2	0	0	0	0	**8**
04:30 PM	0	1	0	1	1	0	0	1	0	4	0	4	0	0	0	0	6
04:45 PM	0	2	0	2	0	0	0	0	0	**5**	0	**5**	0	0	0	0	7
Total Volume	0	8	0	8	3	0	1	4	0	15	0	15	0	0	0	0	27
% App. Total	0	100	0		75	0	25		0	100	0		0	0	0		
PHF	.000	.400	.000	.400	.375	.000	.250	.500	.000	.750	.000	.750	.000	.000	.000	.000	.844

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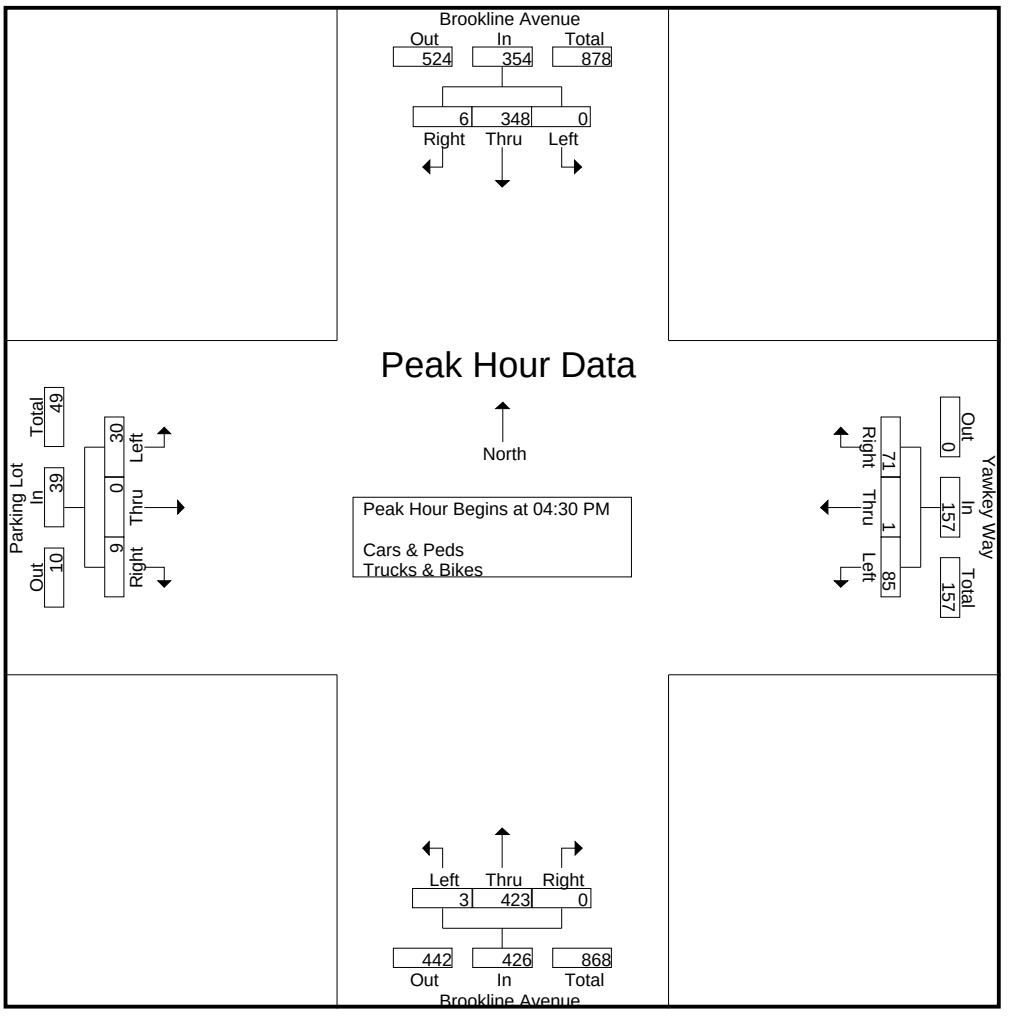
N/S: Brookline Avenue
E/W: Yawkey Way/Parking Lot
City, State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448DDD
Site Code : 09589
Start Date : 10/18/2005
Page No : 1

	Brookline Avenue From North				Yawkey Way From East				Brookline Avenue From South				Parking Lot From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	1	89	0	90	18	0	22	40	0	110	**1**	111	**4**	0	6	10	**251**
04:45 PM	**3**	82	0	85	16	0	19	35	0	**115**	1	**116**	1	0	9	10	246
05:00 PM	1	**90**	0	**91**	**20**	**1**	**28**	**49**	0	86	1	87	2	0	4	6	233
05:15 PM	1	87	0	88	17	0	16	33	0	112	0	112	2	0	**11**	**13**	246
Total Volume	6	348	0	354	71	1	85	157	0	423	3	426	9	0	30	39	976
% App. Total	1.7	98.3	0		45.2	0.6	54.1		0	99.3	0.7		23.1	0	76.9		
PHF	.500	.967	.000	.973	.888	.250	.759	.801	.000	.920	.750	.918	.563	.000	.682	.750	.972



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N/S: Brookline Avenue
E,W/NE: Park Drive/Boylston Street
City/State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448FFF
Site Code : 09589
Start Date : 10/18/2005
Page No : 1

Groups Printed- Cars & Peds - Trucks & Bikes

	Brookline Avenue From North				Boylston Street From Northeast				Park Drive From East					Brookline Avenue From South				Park Drive From West							
Start Time	Right	Thru	Hard Left	Peds	Hard Right	Bear Right	Bear Left	Peds	Hard Right	Right	Thru	Left	Peds	Bear Right	Thru	Left	Peds	Right	Thru	Bear Left	Left	Peds	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	56	52	0	91	0	151	106	0	22	21	148	7	58	243	75	0	3	0	0	0	0	46	198	881	1079
04:15 PM	79	54	0	105	2	114	96	0	12	18	129	9	74	256	58	2	1	0	0	0	0	34	214	829	1043
04:30 PM	100	73	0	89	0	132	91	0	25	24	128	9	53	236	75	0	1	0	0	0	0	69	212	893	1105
04:45 PM	67	70	0	97	1	120	105	0	22	25	146	10	63	257	79	2	2	0	0	0	0	42	204	904	1108
Total	302	249	0	382	3	517	398	0	81	88	551	35	248	992	287	4	7	0	0	0	0	191	828	3507	4335
05:00 PM	65	81	0	126	0	142	111	0	17	9	150	14	70	246	59	2	4	0	0	0	0	62	262	896	1158
05:15 PM	75	76	0	106	3	134	88	0	24	23	191	8	61	272	109	2	3	0	0	0	0	29	199	1005	1204
05:30 PM	86	77	0	132	1	144	129	0	20	12	182	4	60	264	71	2	0	0	0	0	0	35	227	992	1219
05:45 PM	62	62	0	87	0	122	123	0	17	23	146	3	50	240	71	4	0	0	0	0	0	48	185	873	1058
Total	288	296	0	451	4	542	451	0	78	67	669	29	241	1022	310	10	7	0	0	0	0	174	873	3766	4639
Grand Total	590	545	0	833	7	1059	849	0	159	155	1220	64	489	2014	597	14	14	0	0	0	0	365	1701	7273	8974
Apprch %	52	48	0		0.4	55.3	44.3		9.9	9.7	76.3	4		76.7	22.7	0.5		0	0	0	0				
Total %	8.1	7.5	0		0.1	14.6	11.7		2.2	2.1	16.8	0.9		27.7	8.2	0.2		0	0	0	0		19	81	
Cars & Peds	589	539	0		7	1058	847		159	154	1217	64		2008	592	14		0	0	0	0		0	0	8862
% Cars & Peds	99.8	98.9	0	97.1	100	99.9	99.8	0	100	99.4	99.8	100	90.4	99.7	99.2	100	0	0	0	0	0	99.5	0	0	98.8
Trucks & Bikes	1	6	0		0	1	2		0	1	3	0		6	5	0		0	0	0	0		0	0	112
% Trucks & Bikes	0.2	1.1	0	2.9	0	0.1	0.2	0	0	0.6	0.2	0	9.6	0.3	0.8	0	100	0	0	0	0	0.5	0	0	1.2

	Brookline Avenue From North				Boylston Street From Northeast				Park Drive From East					Brookline Avenue From South				Park Drive From West					
Start Time	Right	Thru	Hard Left	App. Total	Hard Right	Bear Right	Bear Left	App. Total	Hard Right	Right	Thru	Left	App. Total	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																							
Peak Hour for Entire Intersection Begins at 04:45 PM																							
04:45 PM	67	70	0	137	1	120	105	226	22	**25**	146	10	203	257	79	**2**	338	0	0	0	0	0	904
05:00 PM	65	**81**	0	146	0	142	111	253	17	9	150	**14**	190	246	59	2	307	0	0	0	0	0	896
05:15 PM	75	76	0	151	**3**	134	88	225	**24**	23	**191**	8	**246**	**272**	**109**	2	**383**	0	0	0	0	0	**1005**
05:30 PM	**86**	77	0	**163**	1	**144**	**129**	**274**	20	12	182	4	218	264	71	2	337	0	0	0	0	0	992
Total Volume	293	304	0	597	5	540	433	978	83	69	669	36	857	1039	318	8	1365	0	0	0	0	0	3797
% App. Total	49.1	50.9	0		0.5	55.2	44.3		9.7	8.1	78.1	4.2		76.1	23.3	0.6		0	0	0	0		
PHF	.852	.938	.000	.916	.417	.938	.839	.892	.865	.690	.876	.643	.871	.955	.729	1.000	.891	.000	.000	.000	.000	.000	.945
Cars & Peds	293	301	0	594	5	540	433	978	83	68	666	36	853	1037	317	8	1362	0	0	0	0	0	3787
% Cars & Peds	100	99.0	0	99.5	100	100	100	100	100	98.6	99.6	100	99.5	99.8	99.7	100	99.8	0	0	0	0	0	99.7
Trucks & Bikes	0	3	0	3	0	0	0	0	0	1	3	0	4	2	1	0	3	0	0	0	0	0	10
% Trucks & Bikes	0	1.0	0	0.5	0	0	0	0	0	1.4	0.4	0	0.5	0.2	0.3	0	0.2	0	0	0	0	0	0.3

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N/S: Brookline Avenue
E,W/NE: Park Drive/Boylston Street
City/State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448FFF
Site Code : 09589
Start Date : 10/18/2005
Page No : 1

Groups Printed- Cars & Peds

	Brookline Avenue From North				Boylston Street From Northeast				Park Drive From East					Brookline Avenue From South				Park Drive From West							
Start Time	Right	Thru	Hard Left	Peds	Hard Right	Bear Right	Bear Left	Peds	Hard Right	Right	Thru	Left	Peds	Bear Right	Thru	Left	Peds	Right	Thru	Bear Left	Left	Peds	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	56	52	0	89	0	150	104	0	22	21	148	7	53	243	73	0	0	0	0	0	0	46	188	876	1064
04:15 PM	78	53	0	104	2	114	96	0	12	18	129	9	66	255	56	2	0	0	0	0	0	34	204	824	1028
04:30 PM	100	71	0	87	0	132	91	0	25	24	128	9	46	233	75	0	0	0	0	0	0	69	202	888	1090
04:45 PM	67	70	0	95	1	120	105	0	22	24	145	10	58	255	79	2	0	0	0	0	0	42	195	900	1095
Total	301	246	0	375	3	516	396	0	81	87	550	35	223	986	283	4	0	0	0	0	0	191	789	3488	4277
05:00 PM	65	79	0	121	0	142	111	0	17	9	148	14	64	246	59	2	0	0	0	0	0	60	245	892	1137
05:15 PM	75	75	0	103	3	134	88	0	24	23	191	8	52	272	108	2	0	0	0	0	0	29	184	1003	1187
05:30 PM	86	77	0	123	1	144	129	0	20	12	182	4	57	264	71	2	0	0	0	0	0	35	215	992	1207
05:45 PM	62	62	0	87	0	122	123	0	17	23	146	3	46	240	71	4	0	0	0	0	0	48	181	873	1054
Total	288	293	0	434	4	542	451	0	78	67	667	29	219	1022	309	10	0	0	0	0	0	172	825	3760	4585
Grand Total	589	539	0	809	7	1058	847	0	159	154	1217	64	442	2008	592	14	0	0	0	0	0	363	1614	7248	8862
Apprch %	52.2	47.8	0		0.4	55.3	44.3		10	9.7	76.3	4		76.8	22.6	0.5		0	0	0	0				
Total %	8.1	7.4	0		0.1	14.6	11.7		2.2	2.1	16.8	0.9		27.7	8.2	0.2		0	0	0	0		18.2	81.8	

	Brookline Avenue From North				Boylston Street From Northeast				Park Drive From East					Brookline Avenue From South				Park Drive From West					
Start Time	Right	Thru	Hard Left	App. Total	Hard Right	Bear Right	Bear Left	App. Total	Hard Right	Right	Thru	Left	App. Total	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																							
Peak Hour for Entire Intersection Begins at 04:45 PM																							
04:45 PM	67	70	0	137	1	120	105	226	22	**24**	145	10	201	255	79	**2**	336	0	0	0	0	0	900
05:00 PM	65	**79**	0	144	0	142	111	253	17	9	148	**14**	188	246	59	2	307	0	0	0	0	0	892
05:15 PM	75	75	0	150	**3**	134	88	225	**24**	23	**191**	8	**246**	**272**	**108**	2	**382**	0	0	0	0	0	**1003**
05:30 PM	**86**	77	0	**163**	1	**144**	**129**	**274**	20	12	182	4	218	264	71	2	337	0	0	0	0	0	992
Total Volume	293	301	0	594	5	540	433	978	83	68	666	36	853	1037	317	8	1362	0	0	0	0	0	3787
% App. Total	49.3	50.7	0		0.5	55.2	44.3		9.7	8	78.1	4.2		76.1	23.3	0.6		0	0	0	0		
PHF	.852	.953	.000	.911	.417	.938	.839	.892	.865	.708	.872	.643	.867	.953	.734	1.000	.891	.000	.000	.000	.000	.000	.944

Transportation Data Corporation
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N/S: Brookline Avenue
E,W/NE: Park Drive/Boylston Street
City/State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448FFF
Site Code : 09589
Start Date : 10/18/2005

Groups Printed- Trucks & Bikes

	Brookline Avenue From North				Boylston Street From Northeast				Park Drive From East					Brookline Avenue From South				Park Drive From West							
Start Time	Right	Thru	Hard Left	Peds	Hard Right	Bear Right	Bear Left	Peds	Hard Right	Right	Thru	Left	Peds	Bear Right	Thru	Left	Peds	Right	Thru	Bear Left	Left	Peds	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	2	0	1	2	0	0	0	0	0	5	0	2	0	3	0	0	0	0	0	10	5	15
04:15 PM	1	1	0	1	0	0	0	0	0	0	0	0	8	1	2	0	1	0	0	0	0	0	10	5	15
04:30 PM	0	2	0	2	0	0	0	0	0	0	0	0	7	3	0	0	1	0	0	0	0	0	10	5	15
04:45 PM	0	0	0	2	0	0	0	0	0	1	1	0	5	2	0	0	2	0	0	0	0	0	9	4	13
Total	1	3	0	7	0	1	2	0	0	1	1	0	25	6	4	0	7	0	0	0	0	0	39	19	58
05:00 PM	0	2	0	5	0	0	0	0	0	0	2	0	6	0	0	0	4	0	0	0	0	2	17	4	21
05:15 PM	0	1	0	3	0	0	0	0	0	0	0	0	9	0	1	0	3	0	0	0	0	0	15	2	17
05:30 PM	0	0	0	9	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	12	0	12
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	4	0	4
Total	0	3	0	17	0	0	0	0	0	0	2	0	22	0	1	0	7	0	0	0	0	2	48	6	54
Grand Total	1	6	0	24	0	1	2	0	0	1	3	0	47	6	5	0	14	0	0	0	0	2	87	25	112
Apprch %	14.3	85.7	0		0	33.3	66.7		0	25	75	0		54.5	45.5	0		0	0	0	0				
Total %	4	24	0		0	4	8		0	4	12	0		24	20	0		0	0	0	0		77.7	22.3	

	Brookline Avenue From North				Boylston Street From Northeast				Park Drive From East					Brookline Avenue From South				Park Drive From West					
Start Time	Right	Thru	Hard Left	App. Total	Hard Right	Bear Right	Bear Left	App. Total	Hard Right	Right	Thru	Left	App. Total	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																							
Peak Hour for Entire Intersection Begins at 04:00 PM																							
04:00 PM	0	0	0	0	0	**1**	**2**	**3**	0	0	0	0	0	0	**2**	0	2	0	0	0	0	0	**5**
04:15 PM	**1**	1	0	**2**	0	0	0	0	0	0	0	0	0	1	2	0	**3**	0	0	0	0	0	5
04:30 PM	0	**2**	0	2	0	0	0	0	0	0	0	0	0	**3**	0	0	3	0	0	0	0	0	5
04:45 PM	0	0	0	0	0	0	0	0	0	**1**	**1**	0	**2**	2	0	0	2	0	0	0	0	0	4
Total Volume	1	3	0	4	0	1	2	3	0	1	1	0	2	6	4	0	10	0	0	0	0	0	19
% App. Total	25	75	0		0	33.3	66.7		0	50	50	0		60	40	0		0	0	0	0		
PHF	.250	.375	.000	.500	.000	.250	.250	.250	.000	.250	.250	.000	.250	.500	.500	.000	.833	.000	.000	.000	.000	.000	.950

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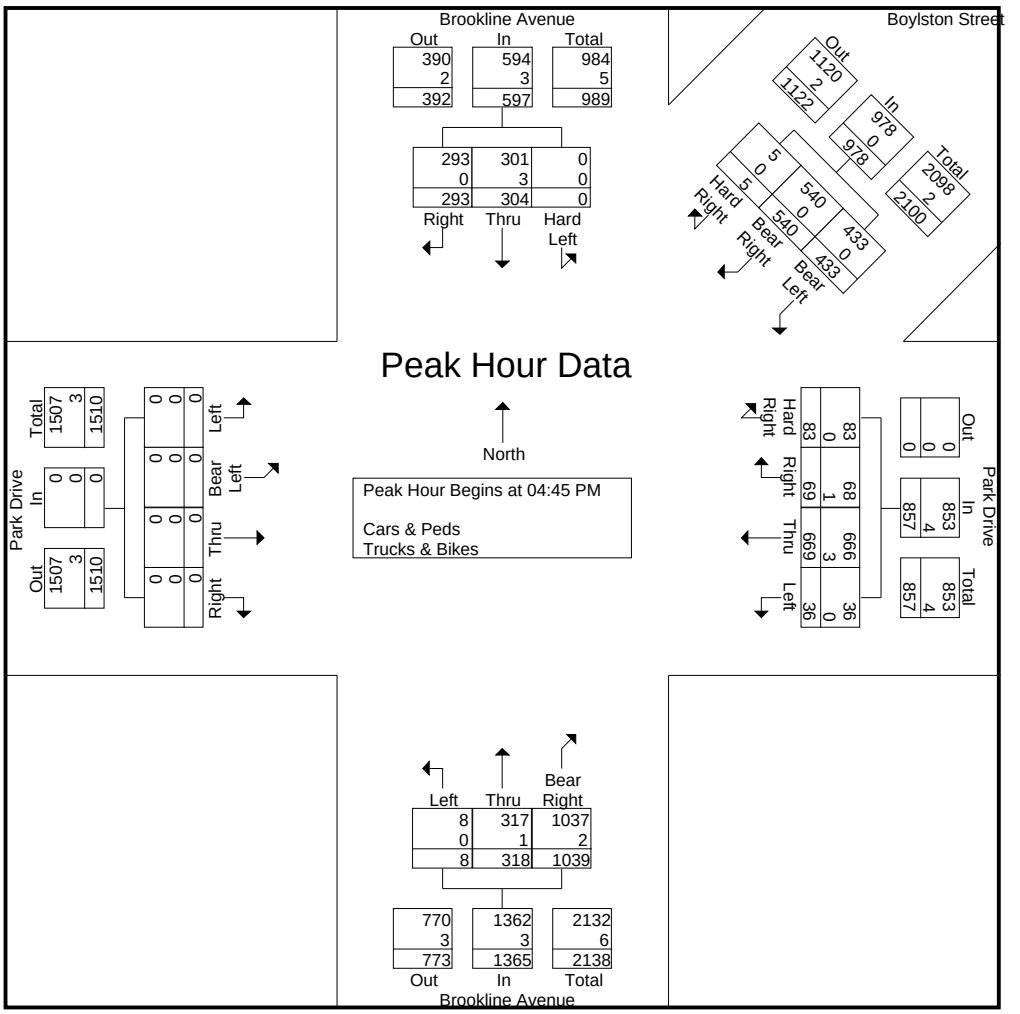
N/S: Brookline Avenue
E,W/NE: Park Drive/Boylston Street
City/State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448FFF
Site Code : 09589
Start Date : 10/18/2005
Page No : 1

	Brookline Avenue From North				Boylston Street From Northeast				Park Drive From East					Brookline Avenue From South				Park Drive From West					
Start Time	Right	Thru	Hard Left	App. Total	Hard Right	Bear Right	Bear Left	App. Total	Hard Right	Right	Thru	Left	App. Total	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																							
Peak Hour for Entire Intersection Begins at 04:45 PM																							
04:45 PM	67	70	0	137	1	120	105	226	22	**25**	146	10	203	257	79	**2**	338	0	0	0	0	0	904
05:00 PM	65	**81**	0	146	0	142	111	253	17	9	150	**14**	190	246	59	2	307	0	0	0	0	0	896
05:15 PM	75	76	0	151	**3**	134	88	225	**24**	23	**191**	8	**246**	**272**	**109**	2	**383**	0	0	0	0	0	**1005**
05:30 PM	**86**	77	0	**163**	1	**144**	**129**	**274**	20	12	182	4	218	264	71	2	337	0	0	0	0	0	992
Total Volume	293	304	0	597	5	540	433	978	83	69	669	36	857	1039	318	8	1365	0	0	0	0	0	3797
% App. Total	49.1	50.9	0		0.5	55.2	44.3		9.7	8.1	78.1	4.2		76.1	23.3	0.6		0	0	0	0		
PHF	.852	.938	.000	.916	.417	.938	.839	.892	.865	.690	.876	.643	.871	.955	.729	1.000	.891	.000	.000	.000	.000	.000	.945
Cars & Peds	293	301	0	594	5	540	433	978	83	68	666	36	853	1037	317	8	1362	0	0	0	0	0	3787
% Cars & Peds	100	99.0	0	99.5	100	100	100	100	100	98.6	99.6	100	99.5	99.8	99.7	100	99.8	0	0	0	0	0	99.7
Trucks & Bikes	0	3	0	3	0	0	0	0	0	1	3	0	4	2	1	0	3	0	0	0	0	0	10
% Trucks & Bikes	0	1.0	0	0.5	0	0	0	0	0	1.4	0.4	0	0.5	0.2	0.3	0	0.2	0	0	0	0	0	0.3



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Tel. (781) 587-0086 Fax (781) 587-0189

N/S: Brookline Avenue
E/NE/W: Fenway/Park Dr. Loop/Riverway
City/State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448GGG
Site Code : 09589
Start Date : 10/18/2005
Page No : 1

Groups Printed- Cars & Peds - Trucks & Bikes

	Brookline Avenue From North			To Park Drive WB From Northeast			Fenway From East			Brookline Avenue From South					Riverway From West							
Start Time	Thru	Left	Peds	Hard Right	Bear Right	Bear Left	Thru	Left	Peds	Right	Bear Right	Thru	Left	Peds	Right	Thru	Bear Left	Left	Peds	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	128	2	0	0	0	0	0	0	55	8	20	164	0	90	22	149	34	140	73	218	667	885
04:15 PM	156	2	8	0	0	0	0	0	77	17	13	199	0	70	37	128	40	145	71	226	737	963
04:30 PM	187	3	0	0	0	0	0	0	46	21	16	208	0	71	30	152	37	126	100	217	780	997
04:45 PM	209	1	4	0	0	0	0	0	54	11	20	226	0	112	20	145	34	156	88	258	822	1080
Total	680	8	12	0	0	0	0	0	232	57	69	797	0	343	109	574	145	567	332	919	3006	3925
05:00 PM	203	2	1	0	0	0	0	0	88	11	20	200	0	97	23	137	39	166	118	304	801	1105
05:15 PM	180	0	0	0	0	0	0	0	77	10	23	238	0	107	38	164	40	164	96	280	857	1137
05:30 PM	204	3	5	0	0	0	0	0	55	18	24	176	0	62	28	153	39	157	77	199	802	1001
05:45 PM	171	3	6	0	0	0	0	0	54	11	17	160	0	56	26	114	38	137	79	195	677	872
Total	758	8	12	0	0	0	0	0	274	50	84	774	0	322	115	568	156	624	370	978	3137	4115
Grand Total	1438	16	24	0	0	0	0	0	506	107	153	1571	0	665	224	1142	301	1191	702	1897	6143	8040
Apprch %	98.9	1.1		0	0	0	0	0		5.8	8.4	85.8	0		7.8	40	10.5	41.7				
Total %	23.4	0.3		0	0	0	0	0		1.7	2.5	25.6	0		3.6	18.6	4.9	19.4		23.6	76.4	
Cars & Peds	1430	16		0	0	0	0	0		106	153	1559	0		221	1141	300	1190		0	0	7910
% Cars & Peds	99.4	100	75	0	0	0	0	0	95.1	99.1	100	99.2	0	93.5	98.7	99.9	99.7	99.9	95.9	0	0	98.4
Trucks & Bikes	8	0		0	0	0	0	0		1	0	12	0		3	1	1	1		0	0	130
% Trucks & Bikes	0.6	0	25	0	0	0	0	0	4.9	0.9	0	0.8	0	6.5	1.3	0.1	0.3	0.1	4.1	0	0	1.6

	Brookline Avenue From North			To Park Drive WB From Northeast				Fenway From East			Brookline Avenue From South					Riverway From West					
Start Time	Thru	Left	App. Total	Hard Right	Bear Right	Bear Left	App. Total	Thru	Left	App. Total	Right	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	**209**	1	**210**	0	0	0	0	0	0	0	11	20	226	0	257	20	145	34	156	355	822
05:00 PM	203	2	205	0	0	0	0	0	0	0	11	20	200	0	231	23	137	39	**166**	365	801
05:15 PM	180	0	180	0	0	0	0	0	0	0	10	23	**238**	0	**271**	**38**	**164**	**40**	164	**406**	**857**
05:30 PM	204	**3**	207	0	0	0	0	0	0	0	**18**	**24**	176	0	218	28	153	39	157	377	802
Total Volume	796	6	802	0	0	0	0	0	0	0	50	87	840	0	977	109	599	152	643	1503	3282
% App. Total	99.3	0.7		0	0	0		0	0		5.1	8.9	86	0		7.3	39.9	10.1	42.8		
PHF	.952	.500	.955	.000	.000	.000	.000	.000	.000	.000	.694	.906	.882	.000	.901	.717	.913	.950	.968	.925	.957
Cars & Peds	792	6	798	0	0	0	0	0	0	0	50	87	837	0	974	106	599	152	642	1499	3271
% Cars & Peds	99.5	100	99.5	0	0	0	0	0	0	0	100	100	99.6	0	99.7	97.2	100	100	99.8	99.7	99.7
Trucks & Bikes	4	0	4	0	0	0	0	0	0	0	0	0	3	0	3	3	0	0	1	4	11
% Trucks & Bikes	0.5	0	0.5	0	0	0	0	0	0	0	0	0	0.4	0	0.3	2.8	0	0	0.2	0.3	0.3

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City/State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448GGG
Site Code : 09589
Start Date : 10/18/2005
Page No : 1

Groups Printed- Cars & Peds

	Brookline Avenue From North			To Park Drive WB From Northeast			Fenway From East			Brookline Avenue From South					Riverway From West							
Start Time	Thru	Left	Peds	Hard Right	Bear Right	Bear Left	Thru	Left	Peds	Right	Bear Right	Thru	Left	Peds	Right	Thru	Bear Left	Left	Peds	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	127	2	0	0	0	0	0	0	51	8	20	161	0	88	22	149	33	140	72	211	662	873
04:15 PM	154	2	8	0	0	0	0	0	74	16	13	195	0	64	37	127	40	145	69	215	729	944
04:30 PM	186	3	0	0	0	0	0	0	45	21	16	206	0	64	30	152	37	126	96	205	777	982
04:45 PM	209	1	1	0	0	0	0	0	50	11	20	224	0	111	18	145	34	155	83	245	817	1062
Total	676	8	9	0	0	0	0	0	220	56	69	786	0	327	107	573	144	566	320	876	2985	3861
05:00 PM	200	2	0	0	0	0	0	0	85	11	20	199	0	88	22	137	39	166	115	288	796	1084
05:15 PM	179	0	0	0	0	0	0	0	72	10	23	238	0	97	38	164	40	164	92	261	856	1117
05:30 PM	204	3	5	0	0	0	0	0	51	18	24	176	0	57	28	153	39	157	69	182	802	984
05:45 PM	171	3	4	0	0	0	0	0	53	11	17	160	0	53	26	114	38	137	77	187	677	864
Total	754	8	9	0	0	0	0	0	261	50	84	773	0	295	114	568	156	624	353	918	3131	4049
Grand Total	1430	16	18	0	0	0	0	0	481	106	153	1559	0	622	221	1141	300	1190	673	1794	6116	7910
Apprch %	98.9	1.1		0	0	0	0	0		5.8	8.4	85.8	0		7.7	40	10.5	41.7				
Total %	23.4	0.3		0	0	0	0	0		1.7	2.5	25.5	0		3.6	18.7	4.9	19.5		22.7	77.3	

	Brookline Avenue From North			To Park Drive WB From Northeast				Fenway From East			Brookline Avenue From South					Riverway From West					
Start Time	Thru	Left	App. Total	Hard Right	Bear Right	Bear Left	App. Total	Thru	Left	App. Total	Right	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	**209**	1	**210**	0	0	0	0	0	0	0	11	20	224	0	255	18	145	34	155	352	817
05:00 PM	200	2	202	0	0	0	0	0	0	0	11	20	199	0	230	22	137	39	**166**	364	796
05:15 PM	179	0	179	0	0	0	0	0	0	0	10	23	**238**	0	**271**	**38**	**164**	**40**	164	**406**	**856**
05:30 PM	204	**3**	207	0	0	0	0	0	0	0	**18**	**24**	176	0	218	28	153	39	157	377	802
Total Volume	792	6	798	0	0	0	0	0	0	0	50	87	837	0	974	106	599	152	642	1499	3271
% App. Total	99.2	0.8		0	0	0		0	0		5.1	8.9	85.9	0		7.1	40	10.1	42.8		
PHF	.947	.500	.950	.000	.000	.000	.000	.000	.000	.000	.694	.906	.879	.000	.899	.697	.913	.950	.967	.923	.955

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File Name : 03448GGG
Site Code : 09589
Start Date : 10/18/2005
Page No : 1

Groups Printed- Trucks & Bikes

	Brookline Avenue From North			To Park Drive WB From Northeast			Fenway From East			Brookline Avenue From South					Riverway From West							
Start Time	Thru	Left	Peds	Hard Right	Bear Right	Bear Left	Thru	Left	Peds	Right	Bear Right	Thru	Left	Peds	Right	Thru	Bear Left	Left	Peds	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	1	0	0	0	0	0	0	0	4	0	0	3	0	2	0	0	1	0	1	7	5	12
04:15 PM	2	0	0	0	0	0	0	0	3	1	0	4	0	6	0	1	0	0	2	11	8	19
04:30 PM	1	0	0	0	0	0	0	0	1	0	0	2	0	7	0	0	0	0	4	12	3	15
04:45 PM	0	0	3	0	0	0	0	0	4	0	0	2	0	1	2	0	0	1	5	13	5	18
Total	4	0	3	0	0	0	0	0	12	1	0	11	0	16	2	1	1	1	12	43	21	64
05:00 PM	3	0	1	0	0	0	0	0	3	0	0	1	0	9	1	0	0	0	3	16	5	21
05:15 PM	1	0	0	0	0	0	0	0	5	0	0	0	0	10	0	0	0	0	4	19	1	20
05:30 PM	0	0	0	0	0	0	0	0	4	0	0	0	0	5	0	0	0	0	8	17	0	17
05:45 PM	0	0	2	0	0	0	0	0	1	0	0	0	0	3	0	0	0	0	2	8	0	8
Total	4	0	3	0	0	0	0	0	13	0	0	1	0	27	1	0	0	0	17	60	6	66
Grand Total	8	0	6	0	0	0	0	0	25	1	0	12	0	43	3	1	1	1	29	103	27	130
Apprch %	100	0		0	0	0	0	0		7.7	0	92.3	0		50	16.7	16.7	16.7				
Total %	29.6	0		0	0	0	0	0		3.7	0	44.4	0		11.1	3.7	3.7	3.7		79.2	20.8	

	Brookline Avenue From North			To Park Drive WB From Northeast				Fenway From East			Brookline Avenue From South					Riverway From West					
Start Time	Thru	Left	App. Total	Hard Right	Bear Right	Bear Left	App. Total	Thru	Left	App. Total	Right	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	1	0	1	0	0	0	0	0	0	0	0	0	3	0	3	0	0	**1**	0	1	5
04:15 PM	**2**	0	**2**	0	0	0	0	0	0	0	**1**	0	**4**	0	**5**	0	**1**	0	0	1	**8**
04:30 PM	1	0	1	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	3
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	**2**	0	0	**1**	**3**	5
Total Volume	4	0	4	0	0	0	0	0	0	0	1	0	11	0	12	2	1	1	1	5	21
% App. Total	100	0		0	0	0		0	0		8.3	0	91.7	0		40	20	20	20		
PHF	.500	.000	.500	.000	.000	.000	.000	.000	.000	.000	.250	.000	.688	.000	.600	.250	.250	.250	.250	.417	.656

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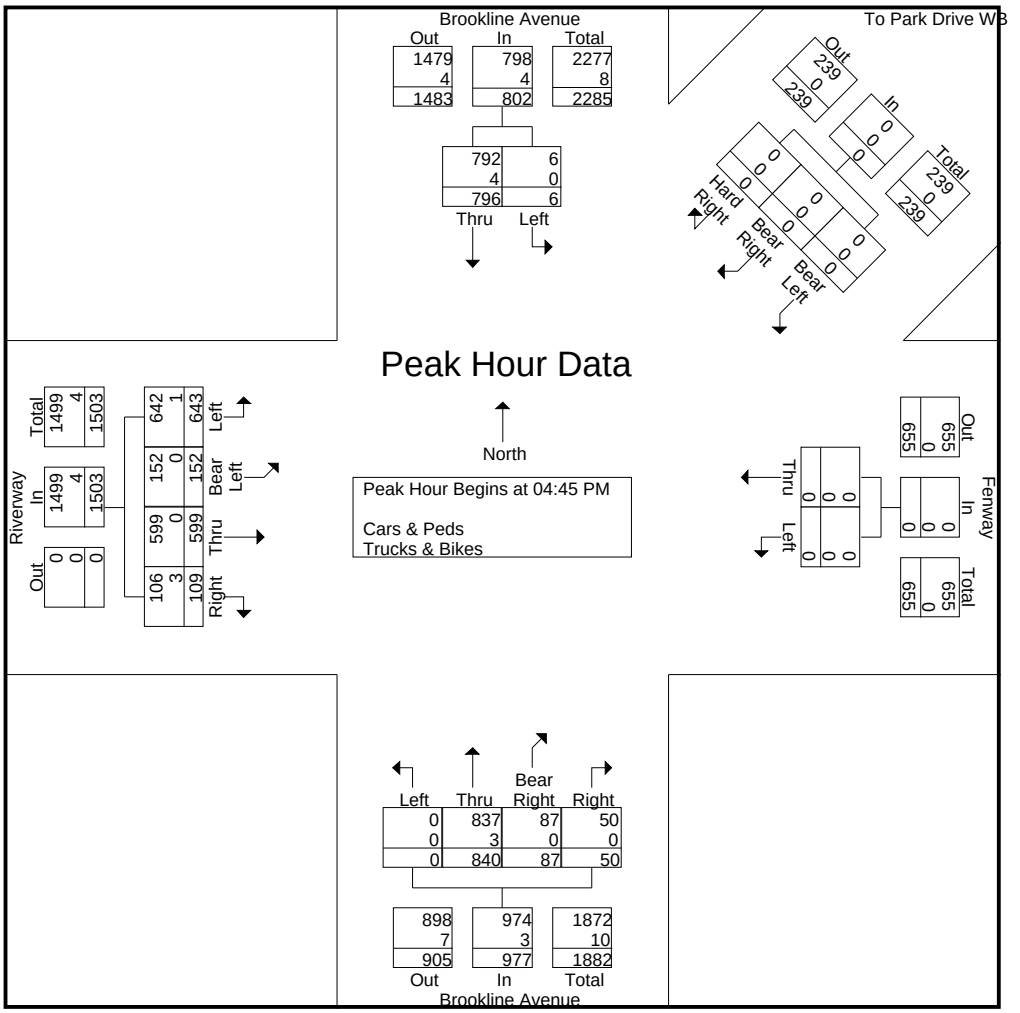
N/S: Brookline Avenue
E/NE/W: Fenway/Park Dr. Loop/Riverway
City/State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448GGG
Site Code : 09589
Start Date : 10/18/2005
Page No : 1

	Brookline Avenue From North			To Park Drive WB From Northeast				Fenway From East			Brookline Avenue From South					Riverway From West					
Start Time	Thru	Left	App. Total	Hard Right	Bear Right	Bear Left	App. Total	Thru	Left	App. Total	Right	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	**209**	1	**210**	0	0	0	0	0	0	0	11	20	226	0	257	20	145	34	156	355	822
05:00 PM	203	2	205	0	0	0	0	0	0	0	11	20	200	0	231	23	137	39	**166**	365	801
05:15 PM	180	0	180	0	0	0	0	0	0	0	10	23	**238**	0	**271**	**38**	**164**	**40**	164	**406**	**857**
05:30 PM	204	**3**	207	0	0	0	0	0	0	0	**18**	**24**	176	0	218	28	153	39	157	377	802
Total Volume	796	6	802	0	0	0	0	0	0	0	50	87	840	0	977	109	599	152	643	1503	3282
% App. Total	99.3	0.7		0	0	0		0	0		5.1	8.9	86	0		7.3	39.9	10.1	42.8		
PHF	.952	.500	.955	.000	.000	.000	.000	.000	.000	.000	.694	.906	.882	.000	.901	.717	.913	.950	.968	.925	.957
Cars & Peds	792	6	798	0	0	0	0	0	0	0	50	87	837	0	974	106	599	152	642	1499	3271
% Cars & Peds	99.5	100	99.5	0	0	0	0	0	0	0	100	100	99.6	0	99.7	97.2	100	100	99.8	99.7	99.7
Trucks & Bikes	4	0	4	0	0	0	0	0	0	0	0	0	3	0	3	3	0	0	1	4	11
% Trucks & Bikes	0.5	0	0.5	0	0	0	0	0	0	0	0	0	0.4	0	0.3	2.8	0	0	0.2	0.3	0.3



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S: Riverway
E/W: Park Drive
City/State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448HHH
Site Code : 09589
Start Date : 10/18/2005
Page No : 1

Groups Printed- Cars & Peds - Trucks & Bikes

	From North				Park Drive From East					Riverway From South				Park Drive From West						
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	UTurn	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	1	0	0	217	72	4	0	0	0	27	86	111	0	16	120	414	534
04:15 PM	0	0	0	0	0	0	178	71	1	0	0	0	24	70	130	0	7	103	378	481
04:30 PM	0	0	0	1	0	0	198	80	2	0	0	0	21	98	112	0	8	112	408	520
04:45 PM	0	0	0	0	0	0	197	64	5	0	0	0	26	85	106	0	7	102	388	490
Total	0	0	0	2	0	0	790	287	12	0	0	0	98	339	459	0	38	437	1588	2025
05:00 PM	0	2	0	0	0	0	194	80	4	0	0	0	52	71	102	0	8	144	369	513
05:15 PM	0	0	0	0	0	0	196	95	2	0	0	0	40	83	142	0	13	150	421	571
05:30 PM	0	4	0	0	0	0	182	73	6	0	0	0	31	89	122	0	6	116	397	513
05:45 PM	0	0	0	0	0	0	161	54	2	0	0	0	28	69	124	0	6	90	354	444
Total	0	6	0	0	0	0	733	302	14	0	0	0	151	312	490	0	33	500	1541	2041
Grand Total	0	6	0	2	0	0	1523	589	26	0	0	0	249	651	949	0	71	937	3129	4066
Apprch %	0	100	0		0	0	100			0	0	0		40.7	59.3	0				
Total %	0	0.2	0		0	0	48.7			0	0	0		20.8	30.3	0		23	77	
Cars & Peds	0	0	0		0	0	1523			0	0	0		651	921	0		0	0	4005
% Cars & Peds	0	0	0	100	0	0	100	100	96.2	0	0	0	94	100	97	0	84.5	0	0	98.5
Trucks & Bikes	0	6	0		0	0	0			0	0	0		0	28	0		0	0	61
% Trucks & Bikes	0	100	0	0	0	0	0	0	3.8	0	0	0	6	0	3	0	15.5	0	0	1.5

	From North				Park Drive From East				Riverway From South				Park Drive From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	0	**217**	**217**	0	0	0	0	86	111	0	197	**414**
04:15 PM	0	0	0	0	0	0	178	178	0	0	0	0	70	**130**	0	200	378
04:30 PM	0	0	0	0	0	0	198	198	0	0	0	0	**98**	112	0	**210**	408
04:45 PM	0	0	0	0	0	0	197	197	0	0	0	0	85	106	0	191	388
Total Volume	0	0	0	0	0	0	790	790	0	0	0	0	339	459	0	798	1588
% App. Total	0	0	0		0	0	100		0	0	0		42.5	57.5	0		
PHF	.000	.000	.000	.000	.000	.000	.910	.910	.000	.000	.000	.000	.865	.883	.000	.950	.959
Cars & Peds	0	0	0	0	0	0	790	790	0	0	0	0	339	451	0	790	1580
% Cars & Peds	0	0	0	0	0	0	100	100	0	0	0	0	100	98.3	0	99.0	99.5
Trucks & Bikes	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	8	8
% Trucks & Bikes	0	0	0	0	0	0	0	0	0	0	0	0	0	1.7	0	1.0	0.5

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S: Riverway
E/W: Park Drive
City/State: Boston, MA
Client: VHB/J. Wanat

File Name : 03448HHH
Site Code : 09589
Start Date : 10/18/2005
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Groups Printed- Cars & Peds

	From North				Park Drive From East					Riverway From South				Park Drive From West						
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	UTurn	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	1	0	0	217	72	4	0	0	0	27	86	111	0	15	119	414	533
04:15 PM	0	0	0	0	0	0	178	71	1	0	0	0	23	70	125	0	7	102	373	475
04:30 PM	0	0	0	1	0	0	198	80	2	0	0	0	19	98	110	0	7	109	406	515
04:45 PM	0	0	0	0	0	0	197	64	4	0	0	0	26	85	105	0	6	100	387	487
Total	0	0	0	2	0	0	790	287	11	0	0	0	95	339	451	0	35	430	1580	2010
05:00 PM	0	0	0	0	0	0	194	80	4	0	0	0	44	71	100	0	6	134	365	499
05:15 PM	0	0	0	0	0	0	196	95	2	0	0	0	38	83	136	0	10	145	415	560
05:30 PM	0	0	0	0	0	0	182	73	6	0	0	0	30	89	113	0	6	115	384	499
05:45 PM	0	0	0	0	0	0	161	54	2	0	0	0	27	69	121	0	3	86	351	437
Total	0	0	0	0	0	0	733	302	14	0	0	0	139	312	470	0	25	480	1515	1995
Grand Total	0	0	0	2	0	0	1523	589	25	0	0	0	234	651	921	0	60	910	3095	4005
Apprch %	0	0	0		0	0	100			0	0	0		41.4	58.6	0				
Total %	0	0	0		0	0	49.2			0	0	0		21	29.8	0		22.7	77.3	

	From North				Park Drive From East				Riverway From South				Park Drive From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	0	**217**	**217**	0	0	0	0	86	111	0	197	**414**
04:15 PM	0	0	0	0	0	0	178	178	0	0	0	0	70	**125**	0	195	373
04:30 PM	0	0	0	0	0	0	198	198	0	0	0	0	**98**	110	0	**208**	406
04:45 PM	0	0	0	0	0	0	197	197	0	0	0	0	85	105	0	190	387
Total Volume	0	0	0	0	0	0	790	790	0	0	0	0	339	451	0	790	1580
% App. Total	0	0	0		0	0	100		0	0	0		42.9	57.1	0		
PHF	.000	.000	.000	.000	.000	.000	.910	.910	.000	.000	.000	.000	.865	.902	.000	.950	.954

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Client: VHB/J. Wanat

File Name : 03448HHH
Site Code : 09589
Start Date : 10/18/2005
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Groups Printed- Trucks & Bikes

	From North				Park Drive From East					Riverway From South				Park Drive From West						
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	UTurn	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	5	0	0	1	5	6
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	1	3	2	5
04:45 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1	2	1	3
Total	0	0	0	0	0	0	0	0	1	0	0	0	3	0	8	0	3	7	8	15
05:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	8	0	2	0	2	10	4	14
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	6	0	3	5	6	11
05:30 PM	0	4	0	0	0	0	0	0	0	0	0	0	1	0	9	0	0	1	13	14
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	0	3	4	3	7
Total	0	6	0	0	0	0	0	0	0	0	0	0	12	0	20	0	8	20	26	46
Grand Total	0	6	0	0	0	0	0	0	1	0	0	0	15	0	28	0	11	27	34	61
Apprch %	0	100	0		0	0	0			0	0	0		0	100	0				
Total %	0	17.6	0		0	0	0			0	0	0		0	82.4	0		44.3	55.7	

	From North				Park Drive From East				Riverway From South				Park Drive From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	2	0	2	4
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	6
05:30 PM	0	**4**	0	**4**	0	0	0	0	0	0	0	0	0	**9**	0	**9**	**13**
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
Total Volume	0	6	0	6	0	0	0	0	0	0	0	0	0	20	0	20	26
% App. Total	0	100	0		0	0	0		0	0	0		0	100	0		
PHF	.000	.375	.000	.375	.000	.000	.000	.000	.000	.000	.000	.000	.000	.556	.000	.556	.500

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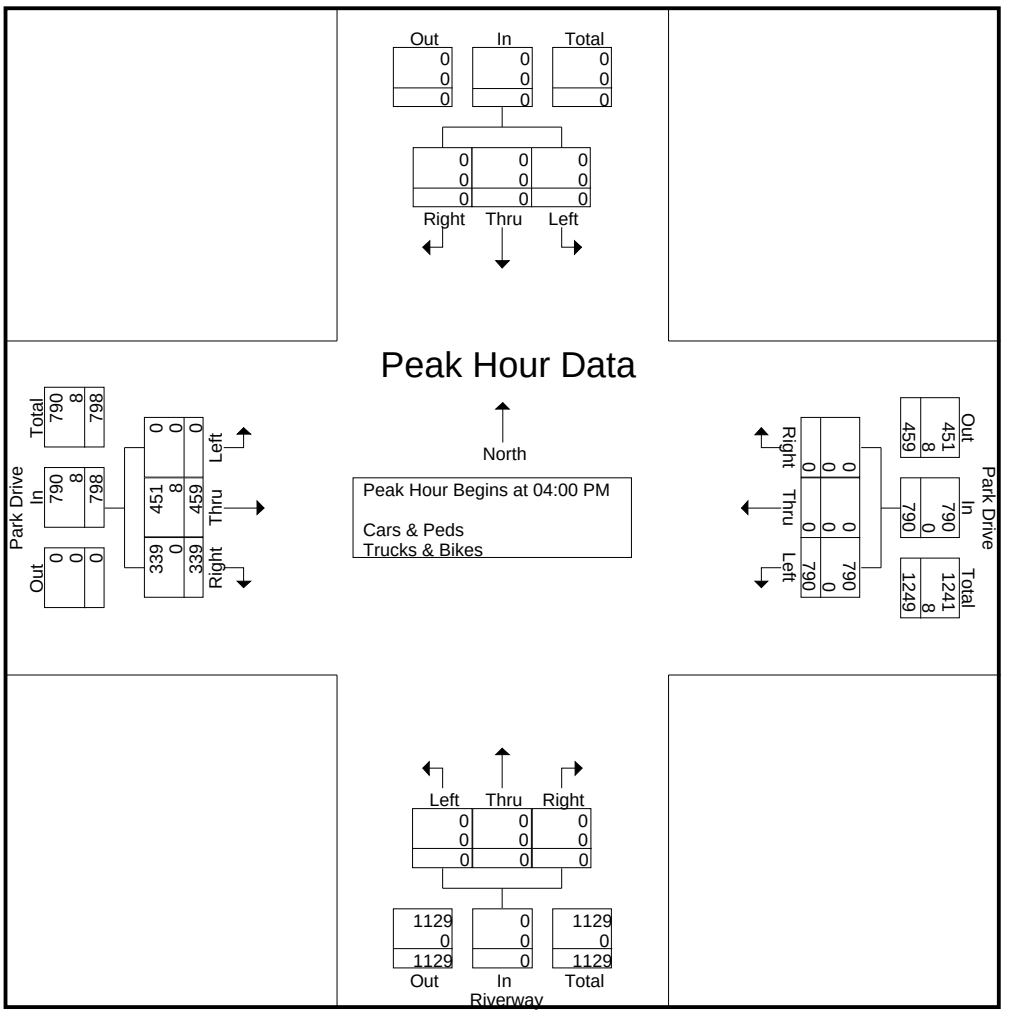
	From North				Park Drive From East				Riverway From South				Park Drive From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	0	**217**	**217**	0	0	0	0	86	111	0	197	**414**
04:15 PM	0	0	0	0	0	0	178	178	0	0	0	0	70	**130**	0	200	378
04:30 PM	0	0	0	0	0	0	198	198	0	0	0	0	**98**	112	0	**210**	408
04:45 PM	0	0	0	0	0	0	197	197	0	0	0	0	85	106	0	191	388
Total Volume	0	0	0	0	0	0	790	790	0	0	0	0	339	459	0	798	1588
% App. Total	0	0	0		0	0	100		0	0	0		42.5	57.5	0		
PHF	.000	.000	.000	.000	.000	.000	.910	.910	.000	.000	.000	.000	.865	.883	.000	.950	.959
Cars & Peds	0	0	0	0	0	0	790	790	0	0	0	0	339	451	0	790	1580
% Cars & Peds	0	0	0	0	0	0	100	100	0	0	0	0	100	98.3	0	99.0	99.5
Trucks & Bikes	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	8	8
% Trucks & Bikes	0	0	0	0	0	0	0	0	0	0	0	0	0	1.7	0	1.0	0.5



Trip Generation Calculation

ITE TRIP GENERATION WORKSHEET
(7th Edition, Updated January 2004)

LANDUSE: Shopping Center (non-Christmas)
LANDUSE CODE: 820 Independent Variable --- 1,000 square feet GLA

JOB NAME:
JOB NUMBER:

SIZE (ksf): 75.2

WEEKDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Total Trip Ends Low	Total Trip Ends High	Independent Variable Range Average	Independent Variable Range Low	Independent Variable Range High	Directional Distribution Enter	Directional Distribution Exit
DAILY	302	0.78	42.94	12.50	270.89	328	0	1600	50%	50%
AM PEAK	98	0.52	1.03	0.10	9.05	287	0	1600	61%	39%
PM PEAK	407	0.81	3.75	0.68	29.27	379	0	2400	48%	52%

TRIPS:

	BY AVERAGE Total	BY AVERAGE Enter	BY AVERAGE Exit
DAILY	3,229	1,614	1,614
AM PEAK (ADJACENT ST)	77	47	30
PM PEAK (ADJACENT ST)	282	135	147

SATURDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Total Trip Ends Low	Total Trip Ends High	Independent Variable Range Average	Independent Variable Range Low	Independent Variable Range High	Directional Distribution Enter	Directional Distribution Exit
DAILY	123	0.82	49.97	16.70	227.50	450	0	1600	50%	50%
PEAK OF GENERATOR	124	0.84	4.97	1.46	18.32	447	0	1600	52%	48%

TRIPS:

	BY AVERAGE Total	BY AVERAGE Enter	BY AVERAGE Exit
DAILY	3,757	1,879	1,879
PEAK OF GENERATOR	374	194	179

SUNDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Total Trip Ends Low	Total Trip Ends High	Independent Variable Range Average	Independent Variable Range Low	Independent Variable Range High	Directional Distribution Enter	Directional Distribution Exit
DAILY	77	0.52	25.24	4.15	148.15	439	0	1600	50%	50%
PEAK OF GENERATOR	39	---	3.12	0.39	12.40	369	0	1300	49%	51%

TRIPS:

	BY AVERAGE Total	BY AVERAGE Enter	BY AVERAGE Exit
DAILY	1,898	949	949
PEAK OF GENERATOR	235	115	120

ITE TRIP GENERATION WORKSHEET
(7th Edition, Updated January 2004)

LANDUSE: General Office Building
LANDUSE CODE: 710 Independent Variable --- 1,000 Sq. Feet Gross Floor Area

JOB NAME:
JOB NUMBER:

FLOOR AREA (KSF): 195.5

WEEKDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Low	High	Independent Variable Range Average	Low	High	Directional Distribution Enter	Exit
DAILY	78	0.80	11.01	3.58	28.80	199	10	1,300	50%	50%
AM PEAK	217	0.83	1.55	0.60	5.98	223	10	2,400	88%	12%
PM PEAK	235	0.82	1.49	0.49	6.39	216	10	2,400	17%	83%

TRIPS:

	BY AVERAGE Total	Enter	Exit	BY REGRESSION Total	Enter	Exit
DAILY	2,153	1,076	1,076	2236	1118	1118
AM PEAK (ADJACENT ST)	303	267	36	321	282	38
PM PEAK (ADJACENT ST)	291	50	242	298	51	247

SATURDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Low	High	Independent Variable Range Average	Low	High	Directional Distribution Enter	Exit
DAILY	17	0.66	2.37	0.59	14.67	78	3	183	50%	50%
PEAK OF GENERATOR	10	0.59	0.41	0.16	1.57	97	10	183	54%	46%

TRIPS:

	BY AVERAGE Total	Enter	Exit	BY REGRESSION Total	Enter	Exit
DAILY	463	232	232	437	218	218
PEAK OF GENERATOR	80	43	37	64	34	29

SUNDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Low	High	Independent Variable Range Average	Low	High	Directional Distribution Enter	Exit
DAILY	17	0.50	0.98	0.19	7.33	78	5	183	50%	50%
PEAK OF GENERATOR	10	0.56	0.14	0.06	0.37	97	10	183	58%	42%

TRIPS:

	BY AVERAGE Total	Enter	Exit	BY REGRESSION Total	Enter	Exit
DAILY	192	96	96	127	64	64
PEAK OF GENERATOR	27	16	11	20	12	8

ITE TRIP GENERATION WORKSHEET
(7th Edition, Updated January 2004)

LANDUSE: Apartment
LANDUSE CODE: 220

Independent Variable --- Number of Units

JOB NAME:
JOB NUMBER:

UNITS (#): 96

WEEKDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Total Trip Ends Low	Total Trip Ends High	Independent Variable Range Average	Independent Variable Range Low	Independent Variable Range High	Directional Distribution Enter	Directional Distribution Exit
DAILY	86	0.88	6.72	2.00	12.50	212	0	1000	50%	50%
AM PEAK (ADJACENT ST)	78	0.83	0.51	0.10	1.02	235	0	1100	20%	80%
PM PEAK (ADJACENT ST)	90	0.77	0.62	0.10	1.64	233	0	1100	65%	35%

TRIPS:

	BY AVERAGE		
	Total	Enter	Exit
DAILY	645	323	323
AM PEAK (ADJACENT ST)	49	10	39
PM PEAK (ADJACENT ST)	60	39	21

SATURDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Total Trip Ends Low	Total Trip Ends High	Independent Variable Range Average	Independent Variable Range Low	Independent Variable Range High	Directional Distribution Enter	Directional Distribution Exit
DAILY	15	0.85	6.39	2.84	8.40	175	65	360	50%	50%
PEAK OF GENERATOR	14	0.56	0.52	0.26	1.05	178	65	360	*Peak Distribution Not Availble*	

TRIPS:

	BY AVERAGE		
	Total	Enter	Exit
DAILY	613	307	307
PEAK OF GENERATOR	50	NA	NA

SUNDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Total Trip Ends Low	Total Trip Ends High	Independent Variable Range Average	Independent Variable Range Low	Independent Variable Range High	Directional Distribution Enter	Directional Distribution Exit
DAILY	14	0.82	5.86	3.21	7.53	182	90	360	50%	50%
PEAK OF GENERATOR	13	--	0.51	0.26	1.43	186	90	380	*Peak Distribution Not Availble*	

TRIPS:

	BY AVERAGE		
	Total	Enter	Exit
DAILY	563	281	281
PEAK OF GENERATOR	49	NA	NA

ITE TRIP GENERATION WORKSHEET
(7th Edition, Updated January 2004)

LANDUSE: Shopping Center (non-Christmas)
LANDUSE CODE: 820 Independent Variable --- 1,000 square feet GLA

JOB NAME:
JOB NUMBER:

SIZE (ksf): 13.1

WEEKDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Low	High	Independent Variable Range Average	Low	High	Directional Distribution Enter	Exit
DAILY	302	0.78	42.94	12.50	270.89	328	0	1600	50%	50%
AM PEAK	98	0.52	1.03	0.10	9.05	287	0	1600	61%	39%
PM PEAK	407	0.81	3.75	0.68	29.27	379	0	2400	48%	52%

TRIPS:

	BY AVERAGE		
	Total	Enter	Exit
DAILY	562	281	281
AM PEAK (ADJACENT ST)	13	8	5
PM PEAK (ADJACENT ST)	49	24	26

SATURDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Low	High	Independent Variable Range Average	Low	High	Directional Distribution Enter	Exit
DAILY	123	0.82	49.97	16.70	227.50	450	0	1600	50%	50%
PEAK OF GENERATOR	124	0.84	4.97	1.46	18.32	447	0	1600	52%	48%

TRIPS:

	BY AVERAGE		
	Total	Enter	Exit
DAILY	654	327	327
PEAK OF GENERATOR	65	34	31

SUNDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Low	High	Independent Variable Range Average	Low	High	Directional Distribution Enter	Exit
DAILY	77	0.52	25.24	4.15	148.15	439	0	1600	50%	50%
PEAK OF GENERATOR	39	---	3.12	0.39	12.40	369	0	1300	49%	51%

TRIPS:

	BY AVERAGE		
	Total	Enter	Exit
DAILY	331	165	165
PEAK OF GENERATOR	41	20	21

ITE TRIP GENERATION WORKSHEET
(7th Edition, Updated January 2004)

LANDUSE: General Office Building
LANDUSE CODE: 710 Independent Variable --- 1,000 Sq. Feet Gross Floor Area

JOB NAME:
JOB NUMBER:

FLOOR AREA (KSF): 146.3

WEEKDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Low	High	Independent Variable Range Average	Low	High	Directional Distribution Enter	Exit
DAILY	78	0.80	11.01	3.58	28.80	199	10	1,300	50%	50%
AM PEAK	217	0.83	1.55	0.60	5.98	223	10	2,400	88%	12%
PM PEAK	235	0.82	1.49	0.49	6.39	216	10	2,400	17%	83%

TRIPS:

	BY AVERAGE Total	Enter	Exit	BY REGRESSION Total	Enter	Exit
DAILY	1,611	806	806	1788	894	894
AM PEAK (ADJACENT ST)	227	200	27	254	224	31
PM PEAK (ADJACENT ST)	218	37	181	243	41	201

SATURDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Low	High	Independent Variable Range Average	Low	High	Directional Distribution Enter	Exit
DAILY	17	0.66	2.37	0.59	14.67	78	3	183	50%	50%
PEAK OF GENERATOR	10	0.59	0.41	0.16	1.57	97	10	183	54%	46%

TRIPS:

	BY AVERAGE Total	Enter	Exit	BY REGRESSION Total	Enter	Exit
DAILY	347	173	173	332	166	166
PEAK OF GENERATOR	60	32	28	50	27	23

SUNDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Low	High	Independent Variable Range Average	Low	High	Directional Distribution Enter	Exit
DAILY	17	0.50	0.98	0.19	7.33	78	5	183	50%	50%
PEAK OF GENERATOR	10	0.56	0.14	0.06	0.37	97	10	183	58%	42%

TRIPS:

	BY AVERAGE Total	Enter	Exit	BY REGRESSION Total	Enter	Exit
DAILY	143	72	72	99	50	50
PEAK OF GENERATOR	20	12	9	17	10	7

ITE TRIP GENERATION WORKSHEET
(7th Edition, Updated January 2004)

LANDUSE: Apartment
LANDUSE CODE: 220

Independent Variable --- Number of Units

JOB NAME:
JOB NUMBER:

UNITS (#): 108

WEEKDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Total Trip Ends Low	Total Trip Ends High	Independent Variable Range Average	Independent Variable Range Low	Independent Variable Range High	Directional Distribution Enter	Directional Distribution Exit
DAILY	86	0.88	6.72	2.00	12.50	212	0	1000	50%	50%
AM PEAK (ADJACENT ST)	78	0.83	0.51	0.10	1.02	235	0	1100	20%	80%
PM PEAK (ADJACENT ST)	90	0.77	0.62	0.10	1.64	233	0	1100	65%	35%

TRIPS:

	BY AVERAGE		
	Total	Enter	Exit
DAILY	726	363	363
AM PEAK (ADJACENT ST)	55	11	44
PM PEAK (ADJACENT ST)	67	44	23

SATURDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Total Trip Ends Low	Total Trip Ends High	Independent Variable Range Average	Independent Variable Range Low	Independent Variable Range High	Directional Distribution Enter	Directional Distribution Exit
DAILY	15	0.85	6.39	2.84	8.40	175	65	360	50%	50%
PEAK OF GENERATOR	14	0.56	0.52	0.26	1.05	178	65	360	*Peak Distribution Not Availble*	

TRIPS:

	BY AVERAGE		
	Total	Enter	Exit
DAILY	690	345	345
PEAK OF GENERATOR	56	NA	NA

SUNDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Total Trip Ends Low	Total Trip Ends High	Independent Variable Range Average	Independent Variable Range Low	Independent Variable Range High	Directional Distribution Enter	Directional Distribution Exit
DAILY	14	0.82	5.86	3.21	7.53	182	90	360	50%	50%
PEAK OF GENERATOR	13	--	0.51	0.26	1.43	186	90	380	*Peak Distribution Not Availble*	

TRIPS:

	BY AVERAGE		
	Total	Enter	Exit
DAILY	633	316	316
PEAK OF GENERATOR	55	NA	NA

ITE TRIP GENERATION WORKSHEET
(7th Edition, Updated January 2004)

LANDUSE: Shopping Center (non-Christmas)
LANDUSE CODE: 820 Independent Variable --- 1,000 square feet GLA

JOB NAME:
JOB NUMBER:

SIZE (ksf): 12.4

WEEKDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Total Trip Ends Low	Total Trip Ends High	Independent Variable Range Average	Independent Variable Range Low	Independent Variable Range High	Directional Distribution Enter	Directional Distribution Exit
DAILY	302	0.78	42.94	12.50	270.89	328	0	1600	50%	50%
AM PEAK	98	0.52	1.03	0.10	9.05	287	0	1600	61%	39%
PM PEAK	407	0.81	3.75	0.68	29.27	379	0	2400	48%	52%

TRIPS:

	BY AVERAGE Total	BY AVERAGE Enter	BY AVERAGE Exit
DAILY	532	266	266
AM PEAK (ADJACENT ST)	13	8	5
PM PEAK (ADJACENT ST)	47	22	24

SATURDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Total Trip Ends Low	Total Trip Ends High	Independent Variable Range Average	Independent Variable Range Low	Independent Variable Range High	Directional Distribution Enter	Directional Distribution Exit
DAILY	123	0.82	49.97	16.70	227.50	450	0	1600	50%	50%
PEAK OF GENERATOR	124	0.84	4.97	1.46	18.32	447	0	1600	52%	48%

TRIPS:

	BY AVERAGE Total	BY AVERAGE Enter	BY AVERAGE Exit
DAILY	620	310	310
PEAK OF GENERATOR	62	32	30

SUNDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Total Trip Ends Low	Total Trip Ends High	Independent Variable Range Average	Independent Variable Range Low	Independent Variable Range High	Directional Distribution Enter	Directional Distribution Exit
DAILY	77	0.52	25.24	4.15	148.15	439	0	1600	50%	50%
PEAK OF GENERATOR	39	---	3.12	0.39	12.40	369	0	1300	49%	51%

TRIPS:

	BY AVERAGE Total	BY AVERAGE Enter	BY AVERAGE Exit
DAILY	313	156	156
PEAK OF GENERATOR	39	19	20

ITE TRIP GENERATION WORKSHEET
(7th Edition, Updated January 2004)

LANDUSE: Apartment
LANDUSE CODE: 220

Independent Variable --- Number of Units

JOB NAME:
JOB NUMBER:

UNITS (#): 78

WEEKDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Total Trip Ends Low	Total Trip Ends High	Independent Variable Range Average	Independent Variable Range Low	Independent Variable Range High	Directional Distribution Enter	Directional Distribution Exit
DAILY	86	0.88	6.72	2.00	12.50	212	0	1000	50%	50%
AM PEAK (ADJACENT ST)	78	0.83	0.51	0.10	1.02	235	0	1100	20%	80%
PM PEAK (ADJACENT ST)	90	0.77	0.62	0.10	1.64	233	0	1100	65%	35%

TRIPS:

	BY AVERAGE		
	Total	Enter	Exit
DAILY	524	262	262
AM PEAK (ADJACENT ST)	40	8	32
PM PEAK (ADJACENT ST)	48	31	17

SATURDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Total Trip Ends Low	Total Trip Ends High	Independent Variable Range Average	Independent Variable Range Low	Independent Variable Range High	Directional Distribution Enter	Directional Distribution Exit
DAILY	15	0.85	6.39	2.84	8.40	175	65	360	50%	50%
PEAK OF GENERATOR	14	0.56	0.52	0.26	1.05	178	65	360	*Peak Distribution Not Availble*	

TRIPS:

	BY AVERAGE		
	Total	Enter	Exit
DAILY	498	249	249
PEAK OF GENERATOR	41	NA	NA

SUNDAY

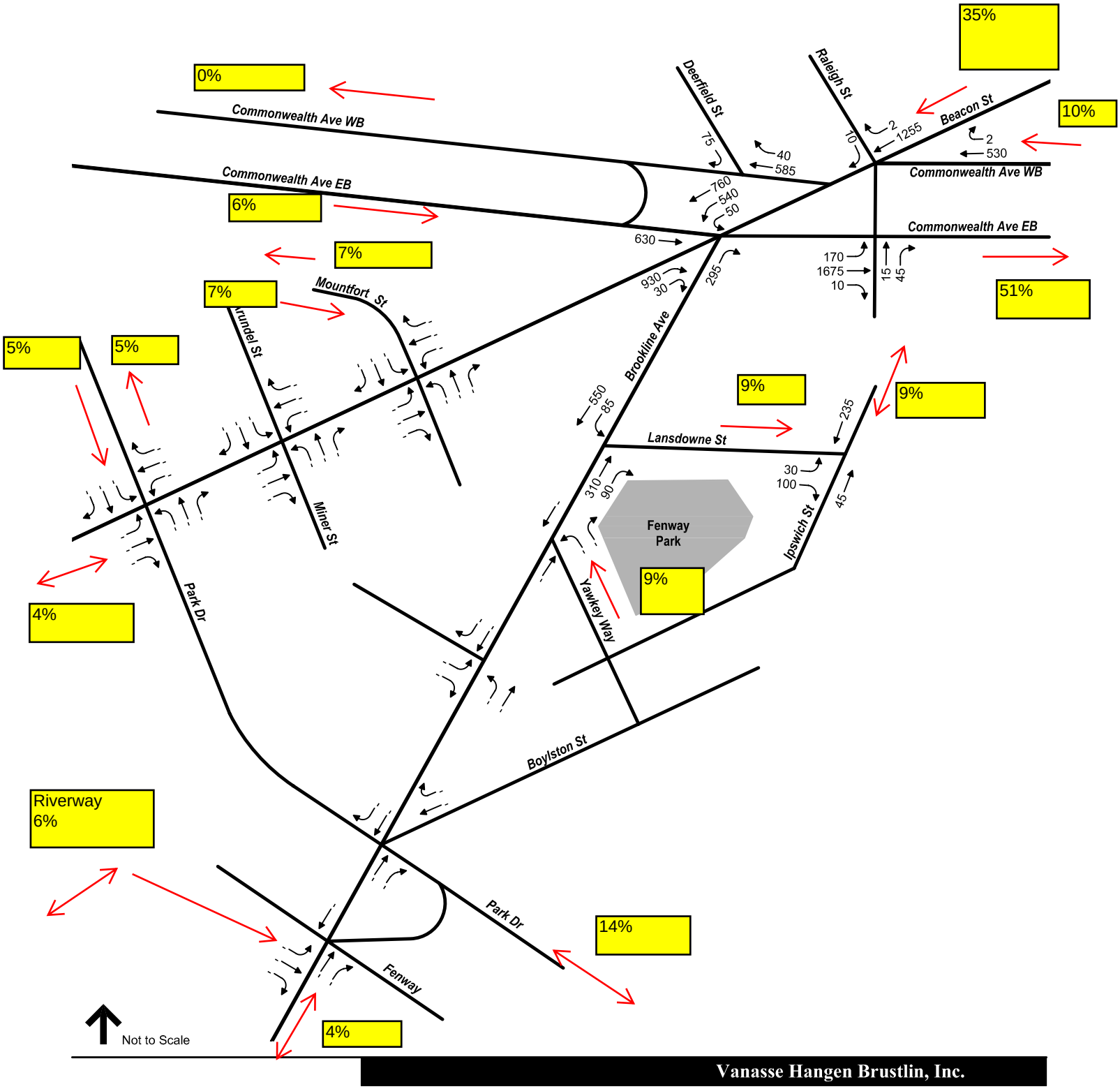
RATES:

	# Studies	R^2	Total Trip Ends Average	Total Trip Ends Low	Total Trip Ends High	Independent Variable Range Average	Independent Variable Range Low	Independent Variable Range High	Directional Distribution Enter	Directional Distribution Exit
DAILY	14	0.82	5.86	3.21	7.53	182	90	360	50%	50%
PEAK OF GENERATOR	13	--	0.51	0.26	1.43	186	90	380	*Peak Distribution Not Availble*	

TRIPS:

	BY AVERAGE		
	Total	Enter	Exit
DAILY	457	229	229
PEAK OF GENERATOR	40	NA	NA

Trip Distribution Calculation



Vanasse Hangen Brustlin, Inc.

Trip Distribution

PARCEL 7 TRIP DISTRIBUTION
SOURCE: BTD DEVELOPMENT REVIEW GUIDELINES

AM/PM Peak Non-game Day Distribution

	Parcel 7 - Brookline Avenue								
	A	B	C	D	E	F	G	H	BCtoal
AM ORIGIN FINAL DISTRIBUTION	8.4	4.2	47.2	9.3	4.6	4.8	7.4	14.1	100
AM DEST FINAL DISTRIBUTION	10.3	3.2	44.9	8.7	6.9	4.1	8.4	13.5	100
PM ORIGIN FINAL DISTRIBUTION	10.6	3.9	43.8	8.6	6.6	4.6	8.6	13.4	100
PM DEST FINAL DISTRIBUTION	9.6	4.6	44.1	8.9	5.3	5.0	8.3	14.3	100
AVERAGE	**10.0**	**4.0**	**45.0**	**9.0**	**6.0**	**4.0**	**8.0**	**14.0**	**100**

Driveway/Route	Parcel
A	Comm Ave. (west)
B	Beacon (west)
C	Comm Ave/Beacon (east)
D	Ipswitch/Boylston
E	Riverway
F	Brookojne Ave (west)
G	Mountfort
H	Park Dr (south)

		Parcel 7 - Brookline Avenue								
	AUTO TRIPS STARTING IN ZONE 4	A	B	C	D	E	F	G	H	BCtoal
To/From Zone	AM (%)									
1	3.2			100%						100%
2	7.7			100%						100%
3	3.6			80%	20%					100%
4	15.6	10%	15%	35%	15%		10%	5%	10%	100%
5	4.8					10%	20%		70%	100%
6	1.4					10%	20%		70%	100%
7	0.5			100%						100%
8	2.2			30%	35%				35%	100%
9	1.1			30%	35%				35%	100%
10	2.1	40%	35%					25%		100%
11	0.7			80%				20%		100%
12	0.5					50%	25%		25%	100%
13	2.3			30%	35%				35%	100%
14	1.1			5%	10%	15%	10%		60%	100%
15	4.8			15%	25%				60%	100%
16	0.4					50%	25%		25%	100%
17	1.5			70%			30%			100%
18	0.4			30%	35%				35%	100%
19	1.0					50%	25%		25%	100%
20	3.3			100%						100%
RBO	3.7			100%						100%
RGR	9.5	20%		50%				30%		100%
RCD	5.8	10%	20%	10%	20%	20%	10%	10%		100%
RMR	2.1			30%	35%				35%	100%
BNE	0.9			100%						100%
BNO	1.5			80%				20%		100%
BNW	3.2	30%		40%				30%		100%
CN	3.8	10%		80%				10%		100%
CW	4.7	30%		40%		20%		10%		100%
CSW	3.9	20%		30%		20%	10%	10%	10%	100%
CSE	2.7			30%	35%				35%	100%
	100.0									

		Parcel 7 - Brookline Avenue								
	AUTO TRIPS ENDING IN ZONE 4	A	B	C	D	E	F	G	H	BCtoal
To/From Zone	AM (%)									
1	1.0			100%						100%
2	1.5			100%						100%
3	1.0			80%	20%					100%
4	6.0	10%	15%	35%	15%		10%	5%	10%	100%
5	2.3					10%	20%		70%	100%
6	1.7					10%	20%		70%	100%
7	0.8			100%						100%
8	1.2			30%	35%				35%	100%
9	1.6			30%	35%				35%	100%
10	2.8	40%	35%					25%		100%
11	0.5			80%				20%		100%
12	0.9					50%	25%		25%	100%
13	0.9			30%	35%				35%	100%
14	2.0			5%	10%	15%	10%		60%	100%
15	3.7			15%	25%				60%	100%
16	0.7					50%	25%		25%	100%
17	1.0			70%			30%			100%
18	0.4			30%	35%				35%	100%
19	1.6					50%	25%		25%	100%
20	1.0			100%						100%
RBO	7.0			100%						100%
RGR	6.6	20%		50%				30%		100%
RCD	6.5	10%	20%	10%	20%	20%	10%	10%		100%
RMR	3.1			30%	35%				35%	100%
BNE	2.3			100%						100%
BNO	3.0			80%				20%		100%
BNW	4.5	30%		40%				30%		100%
CN	10.2	10%		80%				10%		100%
CW	9.5	30%		40%		20%		10%		100%
CSW	7.1	20%		30%		20%	10%	10%	10%	100%
CSE	7.6			30%	35%				35%	100%
	100.0									

		Parcel 7 - Brookline Avenue								
	AUTO TRIPS STARTING IN ZONE 4	A	B	C	D	E	F	G	H	BCtoal
To/From Zone	AM (%)									
1	1.0			100%						100%
2	1.6			100%						100%
3	1.0			80%	20%					100%
4	9.2	10%	15%	35%	15%		10%	5%	10%	100%
5	3.1					10%	20%		70%	100%
6	1.8					10%	20%		70%	100%
7	0.6			100%						100%
8	1.4			30%	35%				35%	100%
9	1.6			30%	35%				35%	100%
10	3.1	40%	35%					25%		100%
11	0.4			80%				20%		100%
12	0.7					50%	25%		25%	100%
13	1.0			30%	35%				35%	100%
14	1.7			5%	10%	15%	10%		60%	100%
15	3.8			15%	25%				60%	100%
16	0.6					50%	25%		25%	100%
17	1.3			70%			30%			100%
18	0.5			30%	35%				35%	100%
19	1.4					50%	25%		25%	100%
20	1.5			100%						100%
RBO	6.8			100%						100%
RGR	8.4	20%		50%				30%		100%
RCD	7.2	10%	20%	10%	20%	20%	10%	10%		100%
RMR	2.7			30%	35%				35%	100%
BNE	1.8			100%						100%
BNO	2.3			80%				20%		100%
BNW	3.9	30%		40%				30%		100%
CN	8.7	10%		80%				10%		100%
CW	8.5	30%		40%		20%		10%		100%
CSW	7.0	20%		30%		20%	10%	10%	10%	100%
CSE	5.4			30%	35%				35%	100%
	100.0									

	AUTO TRIPS ENDING IN ZONE 4	Parcel 7 - Brookline Avenue								
		A	B	C	D	E	F	G	H	BCtoal
To/From Zone	AM (%)									
1	2.0			100%						100%
2	3.9			100%						100%
3	2.1			80%	20%					100%
4	14.8	10%	15%	35%	15%		10%	5%	10%	100%
5	4.6					10%	20%		70%	100%
6	1.7					10%	20%		70%	100%
7	0.5			100%						100%
8	2.0			30%	35%				35%	100%
9	1.4			30%	35%				35%	100%
10	2.9	40%	35%					25%		100%
11	0.5			80%				20%		100%
12	0.5					50%	25%		25%	100%
13	1.3			30%	35%				35%	100%
14	1.5			5%	10%	15%	10%		60%	100%
15	4.9			15%	25%				60%	100%
16	0.4					50%	25%		25%	100%
17	1.6			70%			30%			100%
18	0.6			30%	35%				35%	100%
19	1.2					50%	25%		25%	100%
20	2.4			100%						100%
RBO	5.4			100%						100%
RGR	10.7	20%		50%				30%		100%
RCD	6.7	10%	20%	10%	20%	20%	10%	10%		100%
RMR	2.0			30%	35%				35%	100%
BNE	1.1			100%						100%
BNO	1.6			80%				20%		100%
BNW	3.3	30%		40%				30%		100%
CN	5.4	10%		80%				10%		100%
CW	5.8	30%		40%		20%		10%		100%
CSW	4.3	20%		30%		20%	10%	10%	10%	100%
CSE	2.9			30%	35%				35%	100%
	100.0									

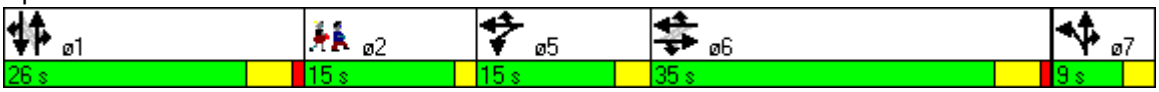
Capacity Analysis
2007 Existing Conditions
2012 No Build Conditions
2012 Build Conditions
2012 Build Conditions with Mitigation

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	920	285	165	510	20	95	395	35	65	590	10
Lane Group Flow (vph)	109	1000	310	179	554	22	0	500	36	0	736	11
Turn Type	Perm		Prot	D.P+P		Prot	D.P+P		Prot	Perm		Prot
Protected Phases		6	6	5	5 6	5 6	7	1 7	1 7		1	1
Permitted Phases	6			6			1			1		
Detector Phases	6	6	6	5	5 6	5 6	7	1 7	1 7	1	1	1
Minimum Initial (s)	10.0	10.0	10.0	2.0			2.0			10.0	10.0	10.0
Minimum Split (s)	15.0	15.0	15.0	10.0			10.0			15.0	15.0	15.0
Total Split (s)	35.0	35.0	35.0	15.0	50.0	50.0	9.0	35.0	35.0	26.0	26.0	26.0
Total Split (%)	35.0%	35.0%	35.0%	15.0%	50.0%	50.0%	9.0%	35.0%	35.0%	26.0%	26.0%	26.0%
Yellow Time (s)	4.0	4.0	4.0	3.0			3.0			4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	0.0			0.0			1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lag	Lead						Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes						Yes	Yes	Yes
Recall Mode	Min	Min	Min	None			None			C-Min	C-Min	C-Min
v/c Ratio	0.59	1.00	0.56	0.73	0.37	0.03		0.75	0.06		1.07	0.02
Control Delay	44.0	64.6	18.5	28.3	16.9	9.6		35.8	8.6		101.3	37.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Delay	44.0	64.6	18.5	28.3	16.9	9.6		35.8	8.6		101.3	37.9
Queue Length 50th (ft)	58	~335	79	58	140	3		105	0		246	3
Queue Length 95th (ft)	#131	#478	168	m128	m203	m12		#244	23		#473	m10
Internal Link Dist (ft)		968			408			639			270	
Turn Bay Length (ft)	50		100			100			100			100
Base Capacity (vph)	186	997	552	244	1480	674		671	575		685	451
Starvation Cap Reductn	0	0	0	0	0	0		0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0		0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0		0	0		0	0
Reduced v/c Ratio	0.59	1.00	0.56	0.73	0.37	0.03		0.75	0.06		1.07	0.02

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 77 (77%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Beacon St & Park Dr



Lane Group	ø2
Lane Configurations	
Volume (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	2
Permitted Phases	
Detector Phases	
Minimum Initial (s)	2.0
Minimum Split (s)	15.0
Total Split (s)	15.0
Total Split (%)	15%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Recall Mode	None
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Flpb, ped/bikes	0.80	1.00	1.00	1.00	1.00	1.00		1.00	1.00		0.99	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99	1.00		1.00	1.00
Satd. Flow (prot)	1284	3217	1439	1608	3217	1439		3065	1384		3176	1439
Flt Permitted	0.44	1.00	1.00	0.13	1.00	1.00		0.58	1.00		0.78	1.00
Satd. Flow (perm)	601	3217	1439	218	3217	1439		1808	1384		2474	1439
Volume (vph)	100	920	285	165	510	20	95	395	35	65	590	10
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.98	0.98	0.98	0.89	0.89	0.89
Adj. Flow (vph)	109	1000	310	179	554	22	97	403	36	73	663	11
RTOR Reduction (vph)	0	0	106	0	0	12	0	0	22	0	0	5
Lane Group Flow (vph)	109	1000	204	179	554	10	0	500	14	0	736	6
Confl. Peds. (#/hr)	61		82	82		61	101		81	81		101
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	5%	5%	5%	1%	1%	1%
Turn Type	Perm		Prot	D.P+P		Prot	D.P+P		Prot	Perm		Prot
Protected Phases		6	6	5	5 6	5 6	7	1 7	1 7		1	1
Permitted Phases	6			6			1			1		
Actuated Green, G (s)	30.0	30.0	30.0	42.0	45.0	45.0		34.8	37.8		28.8	28.8
Effective Green, g (s)	31.0	31.0	31.0	42.0	46.0	46.0		34.8	38.8		29.8	29.8
Actuated g/C Ratio	0.31	0.31	0.31	0.42	0.46	0.46		0.35	0.39		0.30	0.30
Clearance Time (s)	5.0	5.0	5.0	3.0							5.0	5.0
Vehicle Extension (s)	2.0	2.0	2.0	2.0							2.0	2.0
Lane Grp Cap (vph)	186	997	446	244	1480	662		692	537		737	429
v/s Ratio Prot		c0.31	0.14	c0.08	0.17	0.01		c0.04	0.01			0.00
v/s Ratio Perm	0.18			0.23				0.22			c0.30	
v/c Ratio	0.59	1.00	0.46	0.73	0.37	0.02		0.72	0.03		1.00	0.01
Uniform Delay, d1	29.1	34.5	27.7	22.6	17.6	14.7		28.4	18.9		35.1	24.7
Progression Factor	1.00	1.00	1.00	0.83	0.93	1.55		1.00	1.00		1.56	1.83
Incremental Delay, d2	3.0	29.2	0.3	5.3	0.0	0.0		3.2	0.0		29.7	0.0
Delay (s)	32.1	63.7	28.0	24.0	16.4	22.8		31.6	18.9		84.5	45.5
Level of Service	C	E	C	C	B	C		C	B		F	D
Approach Delay (s)		53.5			18.4			30.7			83.9	
Approach LOS		D			B			C			F	

Intersection Summary			
HCM Average Control Delay	48.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	23.2
Intersection Capacity Utilization	87.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBL	WBT	SBT	SBR
Lane Configurations				
Volume (vph)	285	530	730	340
Lane Group Flow (vph)	300	558	768	358
Turn Type	Split			Prot
Protected Phases	1	1	5	5
Permitted Phases				
Detector Phases	1	1	5	5
Minimum Initial (s)	10.0	10.0	13.0	13.0
Minimum Split (s)	20.0	20.0	23.0	23.0
Total Split (s)	50.0	50.0	40.0	40.0
Total Split (%)	55.6%	55.6%	44.4%	44.4%
Yellow Time (s)	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	C-Min	C-Min	None	None
v/c Ratio	0.16	0.20	0.74	0.77
Control Delay	8.1	8.0	31.0	37.9
Queue Delay	0.4	0.3	0.0	0.0
Total Delay	8.5	8.4	31.0	37.9
Queue Length 50th (ft)	30	41	206	186
Queue Length 95th (ft)	46	55	213	230
Internal Link Dist (ft)		105	199	
Turn Bay Length (ft)				100
Base Capacity (vph)	1893	2804	1333	597
Starvation Cap Reductn	1144	1592	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.40	0.46	0.58	0.60

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 84 (93%), Referenced to phase 1:WBTL, Start of Green
Natural Cycle: 45
Control Type: Actuated-Coordinated

Splits and Phases: 2: Riverway & Park Dr

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0						4.0	4.0
Lane Util. Factor				0.97	0.91						0.95	1.00
Frpb, ped/bikes				1.00	1.00						1.00	1.00
Flpb, ped/bikes				1.00	1.00						1.00	1.00
Frt				1.00	1.00						1.00	0.85
Flt Protected				0.95	1.00						1.00	1.00
Satd. Flow (prot)				3152	4668						3249	1454
Flt Permitted				0.95	1.00						1.00	1.00
Satd. Flow (perm)				3152	4668						3249	1454
Volume (vph)	0	0	0	285	530	0	0	0	0	0	730	340
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	300	558	0	0	0	0	0	768	358
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	300	558	0	0	0	0	0	768	358
Confl. Peds. (#/hr)												65
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type				Split								Prot
Protected Phases				1	1						5	5
Permitted Phases												
Actuated Green, G (s)				52.1	52.1						27.9	27.9
Effective Green, g (s)				53.1	53.1						28.9	28.9
Actuated g/C Ratio				0.59	0.59						0.32	0.32
Clearance Time (s)				5.0	5.0						5.0	5.0
Vehicle Extension (s)				2.0	2.0						2.0	2.0
Lane Grp Cap (vph)				1860	2754						1043	467
v/s Ratio Prot				0.10	c0.12						0.24	c0.25
v/s Ratio Perm												
v/c Ratio				0.16	0.20						0.74	0.77
Uniform Delay, d1				8.4	8.6						27.2	27.5
Progression Factor				0.80	0.80						1.00	1.00
Incremental Delay, d2				0.2	0.2						2.4	6.7
Delay (s)				6.8	7.0						29.5	34.2
Level of Service				A	A						C	C
Approach Delay (s)		0.0			6.9			0.0			31.0	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM Average Control Delay	20.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	SEL2	SET	SER	NET	NER	SWT	ø2
Lane Configurations							
Volume (vph)	820	830	185	820	65	1105	
Lane Group Flow (vph)	632	1319	201	965	147	1188	
Turn Type	custom		Prot		Perm		
Protected Phases	5	5	5	1		1	2
Permitted Phases	5				1		
Detector Phases	5	5	5	1	1	1	
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	7.0
Minimum Split (s)	15.0	15.0	15.0	15.0	15.0	15.0	24.0
Total Split (s)	39.0	39.0	39.0	27.0	27.0	27.0	24.0
Total Split (%)	43.3%	43.3%	43.3%	30.0%	30.0%	30.0%	27%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	2.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	0.0
Lead/Lag				Lead	Lead	Lead	Lag
Lead-Lag Optimize?				Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	C-Max	C-Max	C-Max	None
v/c Ratio	1.11	1.12	0.36	0.73	0.25	0.89	
Control Delay	96.8	90.1	18.2	30.4	23.0	27.2	
Queue Delay	15.1	16.1	0.0	1.0	0.0	196.3	
Total Delay	111.9	106.2	18.2	31.5	23.0	223.5	
Queue Length 50th (ft)	~467	~490	56	187	42	152	
Queue Length 95th (ft)	#694	#626	m137	#432	117	m#413	
Internal Link Dist (ft)		261		23		182	
Turn Bay Length (ft)							
Base Capacity (vph)	569	1178	560	1323	592	1337	
Starvation Cap Reductn	0	0	0	0	0	511	
Spillback Cap Reductn	18	38	0	152	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	1.15	1.16	0.36	0.82	0.25	1.44	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 1:NESW, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Fenway Loop & Brookline Ave

Movement	SEL2	SEL	SET	SER	NET	NER	NER2	SWT
Lane Configurations								
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0		4.0
Lane Util. Factor	0.91		0.91	1.00	0.95	1.00		0.95
Frt	1.00		1.00	0.85	1.00	0.85		1.00
Flt Protected	0.95		0.98	1.00	1.00	1.00		1.00
Satd. Flow (prot)	1464		3030	1439	3185	1425		3217
Flt Permitted	0.95		0.98	1.00	1.00	1.00		1.00
Satd. Flow (perm)	1464		3030	1439	3185	1425		3217
Volume (vph)	820	145	830	185	820	65	60	1105
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.85	0.85	0.85	0.93
Adj. Flow (vph)	891	158	902	201	965	76	71	1188
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	632	0	1319	201	965	147	0	1188
Heavy Vehicles (%)	1%	2%	1%	1%	2%	2%	2%	1%
Turn Type	custom	Perm		Prot		Perm		
Protected Phases	5		5	5	1			1
Permitted Phases	5	5				1		
Actuated Green, G (s)	34.0		34.0	34.0	35.2	35.2		35.2
Effective Green, g (s)	35.0		35.0	35.0	36.2	36.2		36.2
Actuated g/C Ratio	0.39		0.39	0.39	0.40	0.40		0.40
Clearance Time (s)	5.0		5.0	5.0	5.0	5.0		5.0
Vehicle Extension (s)	2.0		2.0	2.0	2.0	2.0		2.0
Lane Grp Cap (vph)	569		1178	560	1281	573		1294
v/s Ratio Prot	0.43			0.14	0.30			c0.37
v/s Ratio Perm			0.44			0.10		
v/c Ratio	1.11		1.12	0.36	0.75	0.26		0.92
Uniform Delay, d1	27.5		27.5	19.5	23.1	17.9		25.5
Progression Factor	0.84		0.84	0.82	1.00	1.00		0.85
Incremental Delay, d2	71.4		65.3	1.7	4.1	1.1		1.4
Delay (s)	94.6		88.6	17.7	27.2	19.0		23.0
Level of Service	F		F	B	C	B		C
Approach Delay (s)			83.7		26.1			23.0
Approach LOS			F		C			C

Intersection Summary			
HCM Average Control Delay	53.1	HCM Level of Service	D
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.8
Intersection Capacity Utilization	90.3%	ICU Level of Service	E
Analysis Period (min)	15		

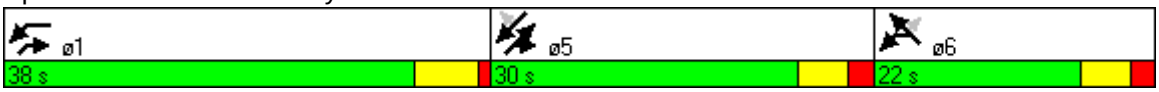
c Critical Lane Group

Lane Group	WBL	NWT	NWR	NET	NER	SWT	SWR
Lane Configurations							
Volume (vph)	690	585	140	440	1190	320	195
Lane Group Flow (vph)	1242	770	270	494	1337	340	207
Turn Type			Perm		pt+ov		Perm
Protected Phases	1	6		5	1 5	5	
Permitted Phases			6				5
Detector Phases	1	6	6	5	1 5	5	5
Minimum Initial (s)	10.0	10.0	10.0	10.0		10.0	10.0
Minimum Split (s)	19.0	21.0	21.0	19.0		19.0	19.0
Total Split (s)	38.0	22.0	22.0	30.0	68.0	30.0	30.0
Total Split (%)	42.2%	24.4%	24.4%	33.3%	75.6%	33.3%	33.3%
Yellow Time (s)	5.0	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	2.0		2.0	2.0
Lead/Lag		Lag	Lag	Lead		Lead	Lead
Lead-Lag Optimize?		Yes	Yes	Yes		Yes	Yes
Recall Mode	C-Max	Max	Max	Max		Max	Max
v/c Ratio	1.43	0.83	1.36	0.53	0.74	0.37	0.50
Control Delay	222.6	43.6	224.3	28.6	9.6	26.9	31.7
Queue Delay	253.6	0.2	0.0	3.3	6.3	0.0	0.0
Total Delay	476.2	43.8	224.3	31.9	15.9	26.9	31.7
Queue Length 50th (ft)	~504	154	~204	134	353	80	98
Queue Length 95th (ft)	#615	193	#341	m163	m119	119	167
Internal Link Dist (ft)	668	176		182		648	
Turn Bay Length (ft)							150
Base Capacity (vph)	867	928	198	929	1801	920	412
Starvation Cap Reductn	0	0	0	328	413	0	0
Spillback Cap Reductn	245	9	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	2.00	0.84	1.36	0.82	0.96	0.37	0.50

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 70 (78%), Referenced to phase 1:WBL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Boylston St & Brookline Ave



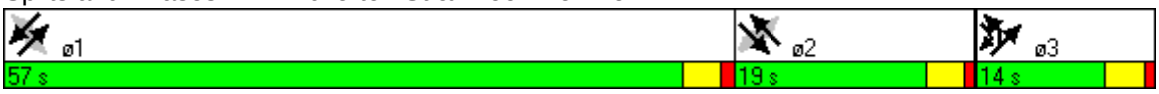
Movement	WBL	WBR	WBR2	NWL	NWT	NWR	NWR2	NET	NER	SWT	SWR
Lane Configurations											
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0				4.0	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.97				0.91	1.00		0.95	0.88	0.95	1.00
Frpb, ped/bikes	0.76				1.00	0.68		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	0.94				1.00	0.85		1.00	0.85	1.00	0.85
Flt Protected	0.97				0.99	1.00		1.00	1.00	1.00	1.00
Satd. Flow (prot)	2297				4639	990		3217	2533	3185	1425
Flt Permitted	0.97				0.99	1.00		1.00	1.00	1.00	1.00
Satd. Flow (perm)	2297				4639	990		3217	2533	3185	1425
Volume (vph)	690	490	10	85	585	140	95	440	1190	320	195
Peak-hour factor, PHF	0.98	0.93	0.93	0.87	0.87	0.87	0.87	0.89	0.89	0.94	0.94
Adj. Flow (vph)	704	527	11	98	672	161	109	494	1337	340	207
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	1242	0	0	0	770	270	0	494	1337	340	207
Confl. Peds. (#/hr)			204				204				
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	1%	2%	2%
Turn Type				Split		Perm			pt+ov		Perm
Protected Phases	1			6	6			5	1 5	5	
Permitted Phases						6					5
Actuated Green, G (s)	32.0				16.0	16.0		24.0	62.0	24.0	24.0
Effective Green, g (s)	34.0				18.0	18.0		26.0	64.0	26.0	26.0
Actuated g/C Ratio	0.38				0.20	0.20		0.29	0.71	0.29	0.29
Clearance Time (s)	6.0				6.0	6.0		6.0		6.0	6.0
Vehicle Extension (s)	3.0				3.0	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	868				928	198		929	1801	920	412
v/s Ratio Prot	c0.54				0.17			0.15	c0.53	0.11	
v/s Ratio Perm						c0.27					0.15
v/c Ratio	1.43				0.83	1.36		0.53	0.74	0.37	0.50
Uniform Delay, d1	28.0				34.5	36.0		26.9	8.0	25.5	26.6
Progression Factor	0.70				1.00	1.00		1.02	1.01	1.00	1.00
Incremental Delay, d2	199.7				8.5	192.6		0.9	1.1	1.1	4.3
Delay (s)	219.3				43.0	228.6		28.3	9.2	26.6	30.9
Level of Service	F				D	F		C	A	C	C
Approach Delay (s)	219.3				91.2			14.3		28.3	
Approach LOS	F				F			B		C	

Intersection Summary			
HCM Average Control Delay	87.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	SEL	SET	SER	NWL	NWT	NEL	NET	SWL	SWT
Lane Configurations									
Volume (vph)	20	20	55	60	50	190	365	30	400
Lane Group Flow (vph)	0	44	60	0	146	207	435	33	593
Turn Type	Perm		pm+ov	Perm		D.P+P		Perm	
Protected Phases		2	3		2	3	1 3		1
Permitted Phases	2		2	2		1		1	
Detector Phases	2	2	3	2	2	3	1 3	1	1
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0		8.0	8.0
Minimum Split (s)	24.0	24.0	8.0	24.0	24.0	8.0		23.0	23.0
Total Split (s)	19.0	19.0	14.0	19.0	19.0	14.0	71.0	57.0	57.0
Total Split (%)	21.1%	21.1%	15.6%	21.1%	21.1%	15.6%	78.9%	63.3%	63.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0
Lead/Lag	Lag	Lag		Lag	Lag			Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes			Yes	Yes
Recall Mode	None	None	None	None	None	None		None	None
v/c Ratio		0.18	0.12		0.60	0.42	0.38	0.56	0.72
Control Delay		29.6	6.7		38.7	6.5	5.0	51.1	17.6
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		29.6	6.7		38.7	6.5	5.0	51.1	17.6
Queue Length 50th (ft)		13	0		45	23	56	9	163
Queue Length 95th (ft)		53	27		#153	49	110	#56	278
Internal Link Dist (ft)		352			75		648		198
Turn Bay Length (ft)									
Base Capacity (vph)		329	512		324	520	1236	81	1116
Starvation Cap Reductn		0	0		0	0	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		0.13	0.12		0.45	0.40	0.35	0.41	0.53

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 60.4
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Fullerton St & Brookline Ave



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	16	12	12	12	12	12	10	10	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00	0.98		0.97		1.00	0.99		1.00	0.98	
Flpb, ped/bikes		0.95	1.00		0.99		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.98		1.00	0.99		1.00	0.96	
Flt Protected		0.98	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1559	1394		1532		1486	1526		1593	1732	
Flt Permitted		0.85	1.00		0.84		0.26	1.00		0.14	1.00	
Satd. Flow (perm)		1360	1394		1308		411	1526		238	1732	
Volume (vph)	20	20	55	60	50	25	190	365	35	30	400	145
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	22	60	65	54	27	207	397	38	33	435	158
RTOR Reduction (vph)	0	0	41	0	9	0	0	4	0	0	18	0
Lane Group Flow (vph)	0	44	19	0	137	0	207	431	0	33	575	0
Confl. Peds. (#/hr)	71		32	32		71			63	63		34
Turn Type	Perm		pm+ov	Perm			D.P+P			Perm		
Protected Phases		2	3		2		3	1 3			1	
Permitted Phases	2		2	2			1			1		
Actuated Green, G (s)		8.8	19.3		8.8		38.7	42.7		28.2	28.2	
Effective Green, g (s)		8.8	19.3		8.8		38.7	42.7		28.2	28.2	
Actuated g/C Ratio		0.15	0.32		0.15		0.65	0.72		0.47	0.47	
Clearance Time (s)		4.0	4.0		4.0		4.0			4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0			3.0	3.0	
Lane Grp Cap (vph)		201	546		193		457	1095		113	821	
v/s Ratio Prot			0.01				c0.08	0.28			c0.33	
v/s Ratio Perm		0.03	0.01		c0.10		0.21			0.14		
v/c Ratio		0.22	0.04		0.71		0.45	0.39		0.29	0.70	
Uniform Delay, d1		22.3	13.7		24.1		5.8	3.3		9.6	12.3	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.6	0.0		11.2		0.7	0.2		1.4	2.6	
Delay (s)		22.9	13.8		35.4		6.5	3.5		11.0	14.9	
Level of Service		C	B		D		A	A		B	B	
Approach Delay (s)		17.6			35.4			4.5			14.7	
Approach LOS		B			D			A			B	

Intersection Summary			
HCM Average Control Delay	12.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	59.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR2	NBR2	SBR2	NER	SWL	SWT	SWR
Lane Configurations								
Volume (vph)	630	20	295	75	930	540	760	585
Lane Group Flow (vph)	880	27	339	82	990	609	784	646
Turn Type		Perm	custom	Free	custom	Split		custom
Protected Phases	2				3	1	1	6
Permitted Phases		2	2	Free				
Detector Phases	2	2	2		3	1	1	6
Minimum Initial (s)	8.0	8.0	8.0		8.0	8.0	8.0	8.0
Minimum Split (s)	29.0	29.0	29.0		30.0	30.0	30.0	30.0
Total Split (s)	36.0	36.0	36.0	0.0	34.0	30.0	30.0	66.0
Total Split (%)	36.0%	36.0%	36.0%	0.0%	34.0%	30.0%	30.0%	66.0%
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag	Lag			Lead	Lead	
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max		Min	C-Min	C-Min	Min
v/c Ratio	0.69	0.12	1.01	0.06	1.30	1.51	0.98	0.43
Control Delay	49.7	33.4	82.4	0.1	161.5	269.8	59.8	11.9
Queue Delay	0.0	0.0	4.5	0.0	38.1	179.7	0.0	0.0
Total Delay	49.7	33.4	86.9	0.1	199.6	449.5	59.8	11.9
Queue Length 50th (ft)	224	13	~189	0	~477	~533	256	141
Queue Length 95th (ft)	m222	m31	#353	0	m#457	#746	#381	125
Internal Link Dist (ft)	169						1	
Turn Bay Length (ft)		40						
Base Capacity (vph)	1276	230	334	1405	762	402	797	1505
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	5	0	47	84	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.12	1.03	0.06	1.38	1.92	0.98	0.43

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 28 (28%), Referenced to phase 1:SWTL, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 11: Commonwealth Ave & Beacon St

Movement	EBT	EBR	EBR2	NBR2	SBR2	NER	NER2	SWL2	SWL	SWT	SWR	SWR2
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0			4.0	4.0	4.0	
Lane Util. Factor	0.86		0.86	1.00	1.00	0.88			1.00	0.95	0.88	
Frpb, ped/bikes	0.98		0.77	0.87	0.97	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	1.00	
Frt	0.99		0.85	0.86	0.86	0.85			1.00	1.00	0.85	
Flt Protected	1.00		1.00	1.00	1.00	1.00			0.95	1.00	1.00	
Satd. Flow (prot)	3989		695	905	1405	2533			1533	3065	2419	
Flt Permitted	1.00		1.00	1.00	1.00	1.00			0.95	1.00	1.00	
Satd. Flow (perm)	3989		695	905	1405	2533			1533	3065	2419	
Volume (vph)	630	30	20	295	75	930	30	50	540	760	585	40
Peak-hour factor, PHF	0.75	0.75	0.75	0.87	0.92	0.97	0.97	0.97	0.97	0.97	0.97	0.92
Adj. Flow (vph)	840	40	27	339	82	959	31	52	557	784	603	43
RTOR Reduction (vph)	0	0	7	45	0	2	0	0	4	0	5	0
Lane Group Flow (vph)	880	0	20	294	82	988	0	0	605	784	641	0
Confl. Peds. (#/hr)		170	174	98	64	98	170	98	170		64	
Heavy Vehicles (%)	8%	8%	8%	10%	2%	1%	1%	6%	6%	6%	6%	2%
Parking (#/hr)			25	25			25					
Turn Type			Perm	custom	Free	custom		Split	Split		custom	
Protected Phases	2					3		1	1	1	6	
Permitted Phases			2	2	Free							
Actuated Green, G (s)	31.0		31.0	31.0	100.0	29.0			25.0	25.0	61.0	
Effective Green, g (s)	32.0		32.0	32.0	100.0	30.0			26.0	26.0	62.0	
Actuated g/C Ratio	0.32		0.32	0.32	1.00	0.30			0.26	0.26	0.62	
Clearance Time (s)	5.0		5.0	5.0		5.0			5.0	5.0	5.0	
Vehicle Extension (s)	3.0		3.0	3.0		3.0			3.0	3.0	3.0	
Lane Grp Cap (vph)	1276		222	290	1405	760			399	797	1500	
v/s Ratio Prot	0.22					c0.39			c0.39	0.26	0.26	
v/s Ratio Perm			0.03	c0.33	0.06							
v/c Ratio	0.69		0.09	1.01	0.06	1.30			1.52	0.98	0.43	
Uniform Delay, d1	29.7		23.8	34.0	0.0	35.0			37.0	36.8	9.8	
Progression Factor	1.57		1.88	1.00	1.00	0.53			0.93	0.93	1.14	
Incremental Delay, d2	2.6		0.6	56.5	0.1	140.2			242.6	24.5	0.2	
Delay (s)	49.2		45.3	90.5	0.1	158.6			277.0	58.6	11.4	
Level of Service	D		D	F	A	F			F	E	B	
Approach Delay (s)	49.0									108.9		
Approach LOS	D									F		

Intersection Summary			
HCM Average Control Delay	104.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	139.1%	ICU Level of Service	H
Analysis Period (min)	15		

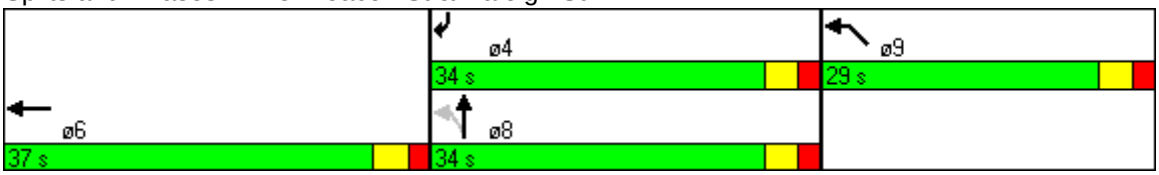
c Critical Lane Group

Lane Group	WBT	NBL	NBT	SBR	NWL
Lane Configurations					
Volume (vph)	1280	155	30	10	530
Lane Group Flow (vph)	1396	168	33	11	581
Turn Type		Perm		custom	
Protected Phases	6		8	4	9
Permitted Phases	6	8			
Detector Phases	6	8	8	4	9
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	21.0	21.0	21.0	22.0
Total Split (s)	37.0	34.0	34.0	34.0	29.0
Total Split (%)	37.0%	34.0%	34.0%	34.0%	29.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	None	None	None	None
v/c Ratio	0.60	0.52	0.18	0.06	0.73
Control Delay	13.2	28.9	30.3	8.5	42.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	13.2	28.9	30.3	8.5	42.1
Queue Length 50th (ft)	150	45	22	0	185
Queue Length 95th (ft)	235	59	m29	10	219
Internal Link Dist (ft)	563		100		528
Turn Bay Length (ft)					
Base Capacity (vph)	2340	795	503	450	854
Starvation Cap Reductn	0	29	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.60	0.22	0.07	0.02	0.68

Intersection Summary

Cycle Length: 100
Actual Cycle Length: 100
Offset: 19 (19%), Referenced to phase 6:WBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 13: Beacon St & Raleigh St



Movement	WBT	WBR	NBL	NBT	SBR	NWL	NWR
Lane Configurations							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor	0.91		0.97	1.00	1.00	0.97	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00		0.82	1.00	1.00	1.00	
Frt	1.00		1.00	1.00	0.86	1.00	
Flt Protected	1.00		0.95	1.00	1.00	0.95	
Satd. Flow (prot)	4566		2545	1676	1450	3095	
Flt Permitted	1.00		0.95	1.00	1.00	0.95	
Satd. Flow (perm)	4566		2545	1676	1450	3095	
Volume (vph)	1280	5	155	30	10	530	5
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1391	5	168	33	11	576	5
RTOR Reduction (vph)	0	0	40	0	10	0	0
Lane Group Flow (vph)	1396	0	128	33	1	581	0
Confl. Peds. (#/hr)		151	94		94		
Confl. Bikes (#/hr)							
Turn Type			Perm		custom		
Protected Phases	6			8	4	9	
Permitted Phases	6		8				
Actuated Green, G (s)	50.3		10.0	10.0	10.0	24.7	
Effective Green, g (s)	51.3		11.0	11.0	11.0	25.7	
Actuated g/C Ratio	0.51		0.11	0.11	0.11	0.26	
Clearance Time (s)	5.0		5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	2342		280	184	160	795	
v/s Ratio Prot	c0.31			0.02	0.00	c0.19	
v/s Ratio Perm			c0.05				
v/c Ratio	0.60		0.46	0.18	0.01	0.73	
Uniform Delay, d1	17.1		41.7	40.4	39.6	34.0	
Progression Factor	0.65		0.79	0.73	1.00	1.09	
Incremental Delay, d2	0.9		1.0	0.4	0.0	3.5	
Delay (s)	12.0		34.1	29.9	39.7	40.5	
Level of Service	B		C	C	D	D	
Approach Delay (s)	12.0			33.4		40.5	
Approach LOS	B			C		D	

Intersection Summary			
HCM Average Control Delay	21.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	NBT	ø5
Lane Configurations			
Volume (vph)	1675	15	
Lane Group Flow (vph)	2017	65	
Turn Type			
Protected Phases	2	8	5
Permitted Phases			
Detector Phases	2	8	
Minimum Initial (s)	12.0	4.0	4.0
Minimum Split (s)	20.0	18.0	23.0
Total Split (s)	56.0	21.0	23.0
Total Split (%)	56.0%	21.0%	23%
Yellow Time (s)	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	C-Max	None	None
v/c Ratio	0.57	0.38	
Control Delay	14.5	24.0	
Queue Delay	1.5	0.0	
Total Delay	16.0	24.0	
Queue Length 50th (ft)	202	10	
Queue Length 95th (ft)	m412	50	
Internal Link Dist (ft)	448	192	
Turn Bay Length (ft)			
Base Capacity (vph)	3567	297	
Starvation Cap Reductn	1280	0	
Spillback Cap Reductn	0	0	
Storage Cap Reductn	0	0	
Reduced v/c Ratio	0.88	0.22	

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 26 (26%), Referenced to phase 2:EBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 14: Commonwealth Ave & Kenmore St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0				
Lane Util. Factor		0.91						1.00				
Frt		1.00						0.90				
Flt Protected		1.00						1.00				
Satd. Flow (prot)		4552						1506				
Flt Permitted		1.00						1.00				
Satd. Flow (perm)		4552						1506				
Volume (vph)	170	1675	10	0	0	0	0	15	45	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	185	1821	11	0	0	0	0	16	49	0	0	0
RTOR Reduction (vph)	0	7	0	0	0	0	0	46	0	0	0	0
Lane Group Flow (vph)	0	2010	0	0	0	0	0	19	0	0	0	0
Turn Type	Split											
Protected Phases	2	2						8				
Permitted Phases												
Actuated Green, G (s)		72.5						6.1				
Effective Green, g (s)		73.5						7.1				
Actuated g/C Ratio		0.74						0.07				
Clearance Time (s)		5.0						5.0				
Vehicle Extension (s)		3.0						3.0				
Lane Grp Cap (vph)		3346						107				
v/s Ratio Prot		c0.44						c0.01				
v/s Ratio Perm												
v/c Ratio		0.60						0.18				
Uniform Delay, d1		6.3						43.7				
Progression Factor		1.91						1.00				
Incremental Delay, d2		0.1						0.8				
Delay (s)		12.1						44.5				
Level of Service		B						D				
Approach Delay (s)		12.1			0.0			44.5			0.0	
Approach LOS		B			A			D			A	

Intersection Summary			
HCM Average Control Delay	13.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	19.4
Intersection Capacity Utilization	50.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	10	830	90	40	600	1	20	5	22	5	1	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	902	98	43	652	1	22	5	24	5	1	5
Pedestrians		110			110			110			107	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		9			9			9			9	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		488										
pX, platoon unblocked				0.73			0.73	0.73	0.73	0.73	0.73	
vC, conflicting volume	760			1110			1612	1930	720	1456	1978	544
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	760			776			1466	1904	240	1252	1970	544
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			92			48	85	95	90	97	99
cM capacity (veh/h)	772			552			42	37	457	53	34	400

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	462	549	370	327	51	12
Volume Left	11	0	43	0	22	5
Volume Right	0	98	0	1	24	5
cSH	772	1700	552	1700	71	81
Volume to Capacity	0.01	0.32	0.08	0.19	0.72	0.15
Queue Length 95th (ft)	1	0	6	0	83	12
Control Delay (s)	0.4	0.0	2.5	0.0	135.5	57.3
Lane LOS	A		A		F	F
Approach Delay (s)	0.2		1.3		135.5	57.3
Approach LOS					F	F

Intersection Summary			
Average Delay	4.9		
Intersection Capacity Utilization	71.8%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	20	895	45	45	675	45	5	1	1	5	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.50	0.95	0.95	0.95
Hourly flow rate (vph)	21	942	47	47	711	47	5	1	2	5	1	1
Pedestrians		199			199			170			199	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		17			17			14			17	
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage veh)								0			0	
Upstream signal (ft)		929										
pX, platoon unblocked				0.78			0.78	0.78	0.78	0.78	0.78	
vC, conflicting volume	957			1159			1828	2230	864	1743	2230	777
vC1, stage 1 conf vol							1178	1178		1028	1028	
vC2, stage 2 conf vol							651	1052		715	1202	
vCu, unblocked vol	957			924			1780	2294	546	1671	2294	777
tC, single (s)	4.1			4.2			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			90			94	99	99	94	99	100
cM capacity (veh/h)	601			485			84	80	273	92	73	239

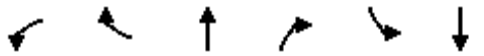
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	492	518	403	403	8	7
Volume Left	21	0	47	0	5	5
Volume Right	0	47	0	47	2	1
cSH	601	1700	485	1700	100	97
Volume to Capacity	0.04	0.30	0.10	0.24	0.08	0.08
Queue Length 95th (ft)	3	0	8	0	7	6
Control Delay (s)	1.0	0.0	3.0	0.0	44.3	45.3
Lane LOS	A		A		E	E
Approach Delay (s)	0.5		1.5		44.3	45.3
Approach LOS					E	E

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	77.6%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	WBL	WBR	WBR2	SEL2	SEL	SER	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control	Stop				Stop			Free			Free	
Grade	0%				0%			0%			0%	
Volume (veh/h)	120	35	80	10	0	5	25	310	0	0	570	40
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	126	37	84	11	0	5	26	326	0	0	600	42
Pedestrians					113			118			118	
Lane Width (ft)					12.0			12.0			12.0	
Walking Speed (ft/s)					4.0			4.0			4.0	
Percent Blockage					9			10			10	
Right turn flare (veh)												
Median type	None				None							
Median storage veh)												
Upstream signal (ft)								898			872	
pX, platoon unblocked												
vC, conflicting volume	1123	1134	444	1334	1113	852	755			326		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1123	1134	444	1334	1113	852	755			326		
tC, single (s)	7.1	6.5	6.2	7.2	6.6	6.3	4.2			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.1	3.4	2.3			2.2		
p0 queue free %	14	79	85	85	100	98	97			100		
cM capacity (veh/h)	148	179	557	68	179	289	759			1233		

Direction, Lane #	WB 1	SE 1	SE 2	NE 1	SW 1
Volume Total	247	11	5	353	642
Volume Left	126	11	0	26	0
Volume Right	84	0	5	0	42
cSH	204	68	289	759	1700
Volume to Capacity	1.21	0.15	0.02	0.03	0.38
Queue Length 95th (ft)	318	13	1	3	0
Control Delay (s)	180.0	67.5	17.7	1.1	0.0
Lane LOS	F	F	C	A	
Approach Delay (s)	180.0	50.9		1.1	0.0
Approach LOS	F	F			

Intersection Summary				
Average Delay	36.3			
Intersection Capacity Utilization	82.5%	ICU Level of Service	E	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	0	0	310	90	85	610
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	326	95	89	642
Pedestrians	232					
Lane Width (ft)	0.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)			1073			697
pX, platoon unblocked						
vC, conflicting volume	1427	606			653	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1427	606			653	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			90	
cM capacity (veh/h)	135	497			934	

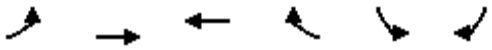
Direction, Lane #	NB 1	SB 1
Volume Total	421	732
Volume Left	0	89
Volume Right	95	0
cSH	1700	934
Volume to Capacity	0.25	0.10
Queue Length 95th (ft)	0	8
Control Delay (s)	0.0	2.4
Lane LOS		A
Approach Delay (s)	0.0	2.4
Approach LOS		

Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	290	20	10	640	55	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	315	22	11	696	60	5
Pedestrians	299			299	299	
Lane Width (ft)	16.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	33			25	25	
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				208		
pX, platoon unblocked						
vC, conflicting volume			636		1641	924
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			636		1641	924
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		0	97
cM capacity (veh/h)			711		54	184

Direction, Lane #	NB 1	SB 1	NW 1
Volume Total	337	707	65
Volume Left	0	11	60
Volume Right	22	0	5
cSH	1700	711	58
Volume to Capacity	0.20	0.02	1.13
Queue Length 95th (ft)	0	1	136
Control Delay (s)	0.0	0.4	277.2
Lane LOS		A	F
Approach Delay (s)	0.0	0.4	277.2
Approach LOS			F

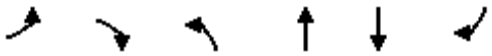
Intersection Summary			
Average Delay	16.6		
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Stop	Stop		Stop	
Volume (vph)	25	0	50	35	0	10
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	26	0	53	37	0	11

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total (vph)	26	89	11
Volume Left (vph)	26	0	0
Volume Right (vph)	0	37	11
Hadj (s)	0.23	-0.21	-0.57
Departure Headway (s)	4.2	3.7	3.6
Degree Utilization, x	0.03	0.09	0.01
Capacity (veh/h)	839	955	966
Control Delay (s)	7.4	7.1	6.6
Approach Delay (s)	7.4	7.1	6.6
Approach LOS	A	A	A

Intersection Summary			
Delay	7.1		
HCM Level of Service	A		
Intersection Capacity Utilization	20.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	30	100	0	45	235	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	33	109	0	49	255	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)				880		
pX, platoon unblocked						
vC, conflicting volume	304	255	255			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	304	255	255			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	86	100			
cM capacity (veh/h)	688	783	1310			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	141	49	255
Volume Left	33	0	0
Volume Right	109	0	0
cSH	759	1700	1700
Volume to Capacity	0.19	0.03	0.15
Queue Length 95th (ft)	17	0	0
Control Delay (s)	10.8	0.0	0.0
Lane LOS	B		
Approach Delay (s)	10.8	0.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	3.4		
Intersection Capacity Utilization	29.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	1	35	37	340	640	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	38	40	370	696	14
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)				442		
pX, platoon unblocked						
vC, conflicting volume	1153	703	710			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1153	703	710			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	91	95			
cM capacity (veh/h)	208	438	889			

Direction, Lane #	SE 1	NE 1	SW 1
Volume Total	39	410	710
Volume Left	1	40	0
Volume Right	38	0	14
cSH	425	889	1700
Volume to Capacity	0.09	0.05	0.42
Queue Length 95th (ft)	8	4	0
Control Delay (s)	14.3	1.4	0.0
Lane LOS	B	A	
Approach Delay (s)	14.3	1.4	0.0
Approach LOS	B		

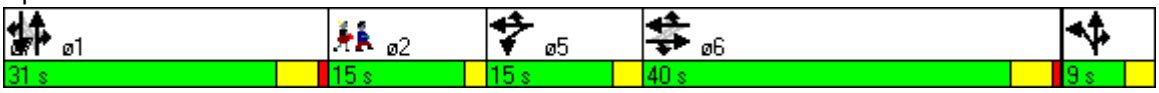
Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	58.8%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	145	460	60	235	795	10	200	500	70	35	645	25
Lane Group Flow (vph)	156	495	65	250	846	11	0	833	83	0	747	27
Turn Type	Perm		Prot	D.P+P		Prot	D.P+P		Prot	Perm		Prot
Protected Phases		6	6	5	5 6	5 6	7	1 7	1 7		1	1
Permitted Phases	6			6			1			1		
Detector Phases	6	6	6	5	5 6	5 6	7	1 7	1 7	1	1	1
Minimum Initial (s)	10.0	10.0	10.0	2.0			2.0			10.0	10.0	10.0
Minimum Split (s)	15.0	15.0	15.0	10.0			10.0			15.0	15.0	15.0
Total Split (s)	40.0	40.0	40.0	15.0	55.0	55.0	9.0	40.0	40.0	31.0	31.0	31.0
Total Split (%)	36.4%	36.4%	36.4%	13.6%	50.0%	50.0%	8.2%	36.4%	36.4%	28.2%	28.2%	28.2%
Yellow Time (s)	4.0	4.0	4.0	3.0			3.0			4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	0.0			0.0			1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lag	Lead						Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes						Yes	Yes	Yes
Recall Mode	Min	Min	Min	None			None			C-Min	C-Min	C-Min
v/c Ratio	1.05	0.47	0.13	0.73	0.56	0.02		1.60dl	0.14		1.21	0.06
Control Delay	127.4	31.2	8.0	35.1	22.5	9.7		153.2	13.9		131.3	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Delay	127.4	31.2	8.0	35.1	22.5	9.7		153.2	13.9		131.3	5.4
Queue Length 50th (ft)	~121	145	2	75	113	1		~423	18		~382	7
Queue Length 95th (ft)	#255	196	33	m76	m109	m1		#496	49		#506	m7
Internal Link Dist (ft)		968			408			638			275	
Turn Bay Length (ft)	50		100			100			100			100
Base Capacity (vph)	148	1053	512	342	1506	678		670	578		617	443
Starvation Cap Reductn	0	0	0	0	0	0		0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0		0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0		0	0		0	0
Reduced v/c Ratio	1.05	0.47	0.13	0.73	0.56	0.02		1.24	0.14		1.21	0.06

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 77 (70%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
~ 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.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 1: Beacon Street & Park Dr



Lane Group	ø2
Lane Configurations	
Volume (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	2
Permitted Phases	
Detector Phases	
Minimum Initial (s)	2.0
Minimum Split (s)	15.0
Total Split (s)	15.0
Total Split (%)	14%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Recall Mode	None
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Flpb, ped/bikes	0.81	1.00	1.00	0.97	1.00	1.00		1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99	1.00		1.00	1.00
Satd. Flow (prot)	1302	3217	1439	1569	3249	1454		3172	1439		3209	1439
Flt Permitted	0.33	1.00	1.00	0.36	1.00	1.00		0.53	1.00		0.72	1.00
Satd. Flow (perm)	453	3217	1439	594	3249	1454		1694	1439		2317	1439
Volume (vph)	145	460	60	235	795	10	200	500	70	35	645	25
Peak-hour factor, PHF	0.93	0.93	0.93	0.94	0.94	0.94	0.84	0.84	0.84	0.91	0.91	0.91
Adj. Flow (vph)	156	495	65	250	846	11	238	595	83	38	709	27
RTOR Reduction (vph)	0	0	41	0	0	4	0	0	29	0	0	11
Lane Group Flow (vph)	156	495	24	250	846	7	0	833	54	0	747	16
Confl. Peds. (#/hr)	149		184	184		149	84		107	107		84
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Turn Type	Perm		Prot	D.P+P		Prot	D.P+P		Prot	Perm		Prot
Protected Phases		6	6	5	5 6	5 6	7	1 7	1 7		1	1
Permitted Phases	6			6			1			1		
Actuated Green, G (s)	35.0	35.0	35.0	47.0	50.0	50.0		37.2	40.2		31.2	31.2
Effective Green, g (s)	36.0	36.0	36.0	47.0	51.0	51.0		37.2	41.2		32.2	32.2
Actuated g/C Ratio	0.33	0.33	0.33	0.43	0.46	0.46		0.34	0.37		0.29	0.29
Clearance Time (s)	5.0	5.0	5.0	3.0							5.0	5.0
Vehicle Extension (s)	2.0	2.0	2.0	2.0							2.0	2.0
Lane Grp Cap (vph)	148	1053	471	351	1506	674		640	539		678	421
v/s Ratio Prot		0.15	0.02	c0.07	0.26	0.00		c0.06	0.04			0.01
v/s Ratio Perm	c0.34			0.23				c0.38			0.32	
v/c Ratio	1.05	0.47	0.05	0.71	0.56	0.01		1.60dl	0.10		1.10	0.04
Uniform Delay, d1	37.0	29.4	25.3	22.5	21.4	15.9		36.4	22.4		38.9	27.8
Progression Factor	1.00	1.00	1.00	1.44	1.01	0.96		1.00	1.00		0.56	0.26
Incremental Delay, d2	89.1	0.1	0.0	2.1	0.1	0.0		146.9	0.0		61.8	0.1
Delay (s)	126.1	29.5	25.3	34.6	21.8	15.2		183.3	22.4		83.4	7.5
Level of Service	F	C	C	C	C	B		F	C		F	A
Approach Delay (s)		50.2			24.6			168.7			80.7	
Approach LOS		D			C			F			F	

Intersection Summary			
HCM Average Control Delay	79.8	HCM Level of Service	E
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	25.8
Intersection Capacity Utilization	89.4%	ICU Level of Service	E
Analysis Period (min)	15		

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

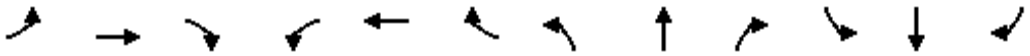
c Critical Lane Group

Lane Group	WBL	WBT	SBT	SBR
Lane Configurations				
Volume (vph)	360	890	550	380
Lane Group Flow (vph)	375	927	573	396
Turn Type	Split			Prot
Protected Phases	1	1	5	5
Permitted Phases				
Detector Phases	1	1	5	5
Minimum Initial (s)	10.0	10.0	13.0	13.0
Minimum Split (s)	20.0	20.0	23.0	23.0
Total Split (s)	40.0	40.0	50.0	50.0
Total Split (%)	44.4%	44.4%	55.6%	55.6%
Yellow Time (s)	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	C-Min	C-Min	None	None
v/c Ratio	0.20	0.34	0.55	0.85
Control Delay	8.8	9.1	26.3	44.9
Queue Delay	0.5	0.4	0.0	0.0
Total Delay	9.3	9.5	26.3	44.9
Queue Length 50th (ft)	39	71	141	211
Queue Length 95th (ft)	59	92	152	262
Internal Link Dist (ft)		105	209	
Turn Bay Length (ft)				100
Base Capacity (vph)	1863	2759	1661	743
Starvation Cap Reductn	1029	1161	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.45	0.58	0.34	0.53

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 85 (94%), Referenced to phase 1:WBTL, Start of Green
Natural Cycle: 45
Control Type: Actuated-Coordinated

Splits and Phases: 2: Riverway & Park Drive



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0						4.0	4.0
Lane Util. Factor				0.97	0.91						0.95	1.00
Frpb, ped/bikes				1.00	1.00						1.00	1.00
Flpb, ped/bikes				1.00	1.00						1.00	1.00
Frt				1.00	1.00						1.00	0.85
Flt Protected				0.95	1.00						1.00	1.00
Satd. Flow (prot)				3152	4668						3249	1454
Flt Permitted				0.95	1.00						1.00	1.00
Satd. Flow (perm)				3152	4668						3249	1454
Volume (vph)	0	0	0	360	890	0	0	0	0	0	550	380
Peak-hour factor, PHF	0.95	0.95	0.95	0.96	0.96	0.96	0.95	0.95	0.95	0.96	0.96	0.96
Adj. Flow (vph)	0	0	0	375	927	0	0	0	0	0	573	396
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	375	927	0	0	0	0	0	573	396
Confl. Peds. (#/hr)				20		40						40
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type				Split								Prot
Protected Phases				1	1						5	5
Permitted Phases												
Actuated Green, G (s)				52.2	52.2						27.8	27.8
Effective Green, g (s)				53.2	53.2						28.8	28.8
Actuated g/C Ratio				0.59	0.59						0.32	0.32
Clearance Time (s)				5.0	5.0						5.0	5.0
Vehicle Extension (s)				2.0	2.0						2.0	2.0
Lane Grp Cap (vph)				1863	2759						1040	465
v/s Ratio Prot				0.12	c0.20						0.18	c0.27
v/s Ratio Perm												
v/c Ratio				0.20	0.34						0.55	0.85
Uniform Delay, d1				8.5	9.4						25.3	28.6
Progression Factor				0.84	0.82						1.00	1.00
Incremental Delay, d2				0.2	0.3						0.4	13.5
Delay (s)				7.4	8.0						25.6	42.1
Level of Service				A	A						C	D
Approach Delay (s)		0.0			7.8			0.0			32.4	
Approach LOS		A			A			A			C	

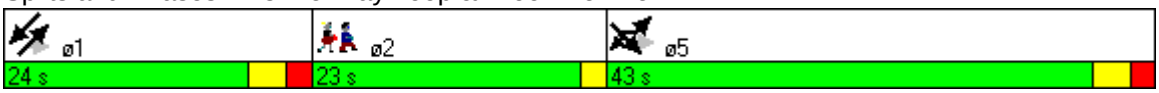
Intersection Summary			
HCM Average Control Delay	18.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	93.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	SEL2	SET	SER	NET	NER	SWT	ø2
Lane Configurations							
Volume (vph)	745	695	125	970	100	910	
Lane Group Flow (vph)	563	1173	134	1078	178	958	
Turn Type	custom		Prot		Perm		
Protected Phases	5	5	5	1		1	2
Permitted Phases	5				1		
Detector Phases	5	5	5	1	1	1	
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	7.0
Minimum Split (s)	15.0	15.0	15.0	15.0	15.0	15.0	24.0
Total Split (s)	43.0	43.0	43.0	24.0	24.0	24.0	23.0
Total Split (%)	47.8%	47.8%	47.8%	26.7%	26.7%	26.7%	26%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	2.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	0.0
Lead/Lag				Lead	Lead	Lead	Lag
Lead-Lag Optimize?				Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	C-Max	C-Max	C-Max	None
v/c Ratio	0.88	0.89	0.21	0.88	0.33	0.79	
Control Delay	38.5	30.9	14.8	40.2	26.3	29.3	
Queue Delay	1.7	1.1	0.0	12.8	0.0	228.7	
Total Delay	40.2	32.0	14.8	53.0	26.3	258.0	
Queue Length 50th (ft)	312	325	33	241	58	132	
Queue Length 95th (ft)	#545	#476	92	#576	158	m200	
Internal Link Dist (ft)		268		23		183	
Turn Bay Length (ft)							
Base Capacity (vph)	640	1324	630	1220	546	1220	
Starvation Cap Reductn	0	0	0	0	0	584	
Spillback Cap Reductn	20	41	0	146	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.91	0.91	0.21	1.00	0.33	1.51	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 15 (17%), Referenced to phase 1:NESW, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Fenway Loop & Brookline Ave



Movement	SEL2	SEL	SET	SER	NET	NER	NER2	SWT
Lane Configurations								
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0		4.0
Lane Util. Factor	0.91		0.91	1.00	0.95	1.00		0.95
Frt	1.00		1.00	0.85	1.00	0.85		1.00
Flt Protected	0.95		0.98	1.00	1.00	1.00		1.00
Satd. Flow (prot)	1478		3057	1454	3249	1454		3249
Flt Permitted	0.95		0.98	1.00	1.00	1.00		1.00
Satd. Flow (perm)	1478		3057	1454	3249	1454		3249
Volume (vph)	745	175	695	125	970	100	60	910
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.90	0.90	0.90	0.95
Adj. Flow (vph)	801	188	747	134	1078	111	67	958
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	563	0	1173	134	1078	178	0	958
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	custom	Perm		Prot		Perm		
Protected Phases	5		5	5	1			1
Permitted Phases	5	5				1		
Actuated Green, G (s)	38.0		38.0	38.0	31.6	31.6		31.6
Effective Green, g (s)	39.0		39.0	39.0	32.6	32.6		32.6
Actuated g/C Ratio	0.43		0.43	0.43	0.36	0.36		0.36
Clearance Time (s)	5.0		5.0	5.0	5.0	5.0		5.0
Vehicle Extension (s)	2.0		2.0	2.0	2.0	2.0		2.0
Lane Grp Cap (vph)	640		1325	630	1177	527		1177
v/s Ratio Prot	0.38			0.09	c0.33			0.29
v/s Ratio Perm			0.38			0.12		
v/c Ratio	0.88		0.89	0.21	0.92	0.34		0.81
Uniform Delay, d1	23.4		23.4	15.9	27.4	20.9		26.0
Progression Factor	0.90		0.90	0.86	1.00	1.00		0.96
Incremental Delay, d2	15.7		8.8	0.8	12.5	1.7		0.6
Delay (s)	36.8		30.0	14.5	39.9	22.6		25.4
Level of Service	D		C	B	D	C		C
Approach Delay (s)			30.9		37.5			25.4
Approach LOS			C		D			C

Intersection Summary			
HCM Average Control Delay	31.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.4
Intersection Capacity Utilization	70.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBL	NWT	NWR	NEL	NET	NER	SWT	SWR
Lane Configurations								
Volume (vph)	515	950	80	5	330	1175	355	340
Lane Group Flow (vph)	1309	1138	201	0	377	1320	386	370
Turn Type			Prot	Perm		pt+ov		Perm
Protected Phases	1	6	6		5	1 5	5	
Permitted Phases				5				5
Detector Phases	1	6	6	5	5	1 5	5	5
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		10.0	10.0
Minimum Split (s)	19.0	21.0	21.0	19.0	19.0		19.0	19.0
Total Split (s)	29.0	27.0	27.0	34.0	34.0	63.0	34.0	34.0
Total Split (%)	32.2%	30.0%	30.0%	37.8%	37.8%	70.0%	37.8%	37.8%
Yellow Time (s)	5.0	4.0	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	2.0	2.0		2.0	2.0
Lead/Lag		Lag	Lag	Lead	Lead		Lead	Lead
Lead-Lag Optimize?		Yes	Yes	Yes	Yes		Yes	Yes
Recall Mode	C-Max	Max	Max	Max	Max		Max	Max
v/c Ratio	3.15dr	0.96	0.54		0.37	0.79	0.36	1.14
Control Delay	769.9	51.4	35.3		20.9	11.9	19.9	116.2
Queue Delay	0.0	0.0	0.0		1.2	30.4	0.0	0.0
Total Delay	769.9	51.4	35.3		22.1	42.3	19.9	116.2
Queue Length 50th (ft)	~681	233	99		96	361	85	~238
Queue Length 95th (ft)	#770	#306	163		m92	m191	m127	m#409
Internal Link Dist (ft)	668	176			183		648	
Turn Bay Length (ft)								150
Base Capacity (vph)	492	1191	372		1017	1661	1062	325
Starvation Cap Reductn	0	0	0		421	411	0	0
Spillback Cap Reductn	27	0	0		0	0	0	0
Storage Cap Reductn	0	0	0		0	0	0	0
Reduced v/c Ratio	2.82	0.96	0.54		0.63	1.06	0.36	1.14

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 89 (99%), Referenced to phase 1:WBL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
~ 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.
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 4: Boylston St & Brookline Ave

Movement	WBL	WBR	WBR2	NWL	NWT	NWR	NWR2	NEL	NET	NER	SWT	SWR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0				4.0	4.0			4.0	4.0	4.0	4.0
Lane Util. Factor	0.97				0.91	1.00			0.95	0.88	0.95	1.00
Frpb, ped/bikes	0.60				1.00	1.00			1.00	1.00	1.00	0.68
Flpb, ped/bikes	1.00				1.00	1.00			1.00	1.00	1.00	1.00
Frt	0.92				1.00	0.85			1.00	0.85	1.00	0.85
Flt Protected	0.98				1.00	1.00			1.00	1.00	1.00	1.00
Satd. Flow (prot)	1772				4659	1454			3214	2533	3185	975
Flt Permitted	0.98				1.00	1.00			0.95	1.00	1.00	1.00
Satd. Flow (perm)	1772				4659	1454			3050	2533	3185	975
Volume (vph)	515	625	25	40	950	80	95	5	330	1175	355	340
Peak-hour factor, PHF	0.89	0.89	0.89	0.87	0.87	0.87	0.87	0.89	0.89	0.89	0.92	0.92
Adj. Flow (vph)	579	702	28	46	1092	92	109	6	371	1320	386	370
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	1309	0	0	0	1138	201	0	0	377	1320	386	370
Confl. Peds. (#/hr)			461									168
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	1%	1%	2%	2%
Turn Type				Split		Prot		Perm		pt+ov		Perm
Protected Phases	1			6	6	6			5	1 5	5	
Permitted Phases								5				5
Actuated Green, G (s)	23.0				21.0	21.0			28.0	57.0	28.0	28.0
Effective Green, g (s)	25.0				23.0	23.0			30.0	59.0	30.0	30.0
Actuated g/C Ratio	0.28				0.26	0.26			0.33	0.66	0.33	0.33
Clearance Time (s)	6.0				6.0	6.0			6.0		6.0	6.0
Vehicle Extension (s)	3.0				3.0	3.0			3.0		3.0	3.0
Lane Grp Cap (vph)	492				1191	372			1017	1661	1062	325
v/s Ratio Prot	c0.74				c0.24	0.14				0.52	0.12	
v/s Ratio Perm									0.12			c0.38
v/c Ratio	3.15dr				0.96	0.54			0.37	0.79	0.36	1.14
Uniform Delay, d1	32.5				33.0	28.9			22.8	11.1	22.8	30.0
Progression Factor	0.74				1.00	1.00			0.89	0.86	0.83	0.82
Incremental Delay, d2	752.4				17.4	5.5			0.5	1.8	0.8	89.2
Delay (s)	776.6				50.4	34.5			20.7	11.4	19.7	113.6
Level of Service	F				D	C			C	B	B	F
Approach Delay (s)	776.6				48.0				13.4		65.7	
Approach LOS	F				D				B		E	

Intersection Summary			
HCM Average Control Delay	226.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.57		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.9%	ICU Level of Service	E
Analysis Period (min)	15		

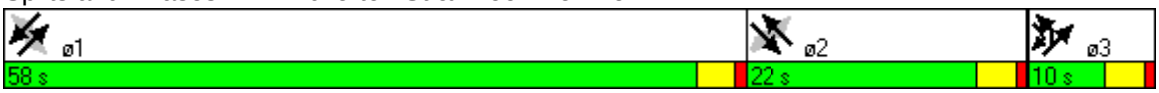
dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

Lane Group	SEL	SET	SER	NWL	NWT	NEL	NET	SWL	SWT
Lane Configurations									
Volume (vph)	85	45	240	100	40	125	345	25	355
Lane Group Flow (vph)	0	139	261	0	173	136	401	26	435
Turn Type	Perm		pm+ov	Perm		D.P+P		Perm	
Protected Phases		2	3		2	3	1 3		1
Permitted Phases	2		2	2		1		1	
Detector Phases	2	2	3	2	2	3	1 3	1	1
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.0	20.0	10.0	20.0	20.0	10.0		58.0	58.0
Total Split (s)	22.0	22.0	10.0	22.0	22.0	10.0	68.0	58.0	58.0
Total Split (%)	24.4%	24.4%	11.1%	24.4%	24.4%	11.1%	75.6%	64.4%	64.4%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0
Lead/Lag	Lag	Lag		Lag	Lag			Lead	Lead
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	None		Max	Max
v/c Ratio		0.74	0.63		0.81	0.33	0.36	0.35	0.43
Control Delay		59.1	26.4		62.4	8.2	6.1	25.2	11.0
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		59.1	26.4		62.4	8.2	6.1	25.2	11.0
Queue Length 50th (ft)		74	87		89	16	47	7	118
Queue Length 95th (ft)		#165	164		#198	m37	m64	35	183
Internal Link Dist (ft)		352			75		648		198
Turn Bay Length (ft)									
Base Capacity (vph)		195	415		221	412	1116	74	1014
Starvation Cap Reductn		0	0		0	0	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		0.71	0.63		0.78	0.33	0.36	0.35	0.43

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 27 (30%), Referenced to phase 6:, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Fullerton St & Brookline Ave



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	16	12	12	12	12	12	10	10	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	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	0.93	
Flpb, ped/bikes		0.82	1.00		1.00		0.89	1.00		1.00	1.00	
Frt		1.00	0.85		0.98		1.00	0.99		1.00	0.98	
Flt Protected		0.97	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1334	1362		1594		1324	1549		1593	1681	
Flt Permitted		0.71	1.00		0.65		0.44	1.00		0.07	1.00	
Satd. Flow (perm)		974	1362		1062		612	1549		124	1681	
Volume (vph)	85	45	240	100	40	25	125	345	25	25	355	45
Peak-hour factor, PHF	0.92	0.95	0.92	0.95	0.95	0.95	0.92	0.92	0.95	0.95	0.92	0.92
Adj. Flow (vph)	92	47	261	105	42	26	136	375	26	26	386	49
RTOR Reduction (vph)	0	0	52	0	7	0	0	3	0	0	5	0
Lane Group Flow (vph)	0	139	209	0	166	0	136	398	0	26	430	0
Confl. Peds. (#/hr)	162		30				423					423
Turn Type	Perm		pm+ov	Perm			D.P+P			Perm		
Protected Phases		2	3		2		3	1 3			1	
Permitted Phases	2		2	2			1			1		
Actuated Green, G (s)		17.3	24.0		17.3		60.7	64.7		54.0	54.0	
Effective Green, g (s)		17.3	24.0		17.3		60.7	64.7		54.0	54.0	
Actuated g/C Ratio		0.19	0.27		0.19		0.67	0.72		0.60	0.60	
Clearance Time (s)		4.0	4.0		4.0		4.0			4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0			3.0	3.0	
Lane Grp Cap (vph)		187	424		204		466	1114		74	1009	
v/s Ratio Prot			c0.04				0.02	0.26			c0.26	
v/s Ratio Perm		0.14	0.12		c0.16		0.18			0.21		
v/c Ratio		0.74	0.49		0.81		0.29	0.36		0.35	0.43	
Uniform Delay, d1		34.3	27.9		34.8		5.7	4.8		9.1	9.7	
Progression Factor		1.00	1.00		1.00		1.46	1.08		1.00	1.00	
Incremental Delay, d2		14.7	0.9		21.2		0.3	0.2		12.6	1.3	
Delay (s)		49.0	28.8		56.0		8.7	5.3		21.8	11.0	
Level of Service		D	C		E		A	A		C	B	
Approach Delay (s)		35.8			56.0			6.2			11.6	
Approach LOS		D			E			A			B	

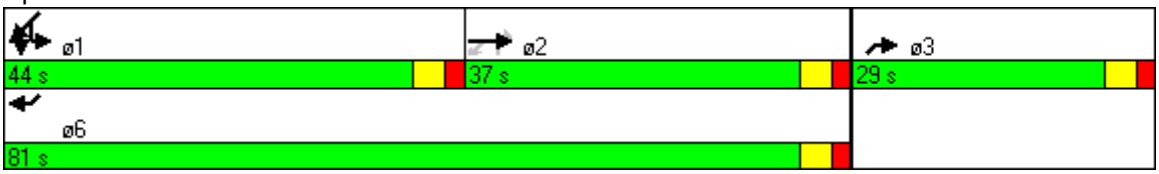
Intersection Summary			
HCM Average Control Delay	20.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR2	NBR2	SBR2	NER	SWL	SWT	SWR
Lane Configurations								
Volume (vph)	665	40	440	80	635	335	1125	690
Lane Group Flow (vph)	940	53	506	87	723	402	1223	810
Turn Type		Perm	custom	Free	custom	Split		custom
Protected Phases	2				3	1	1	6
Permitted Phases		2	2	Free				
Detector Phases	2	2	2		3	1	1	6
Minimum Initial (s)	8.0	8.0	8.0		4.0	4.0	4.0	8.0
Minimum Split (s)	30.0	30.0	30.0		29.0	9.0	9.0	30.0
Total Split (s)	37.0	37.0	37.0	0.0	29.0	44.0	44.0	81.0
Total Split (%)	33.6%	33.6%	33.6%	0.0%	26.4%	40.0%	40.0%	73.6%
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag	Lag			Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes			Yes	Yes	
Recall Mode	None	None	None		None	C-Min	C-Min	None
v/c Ratio	0.80	0.24	1.30	0.06	1.25	0.72	1.10	0.48
Control Delay	24.2	9.3	178.1	0.1	168.8	29.0	81.4	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.2	9.3	178.1	0.1	168.8	29.0	81.4	7.7
Queue Length 50th (ft)	194	6	~372	0	~371	155	~504	117
Queue Length 95th (ft)	170	m11	#550	0	m#495	m299	#639	115
Internal Link Dist (ft)	211						1	
Turn Bay Length (ft)		40						
Base Capacity (vph)	1174	218	388	1420	579	561	1115	1694
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.24	1.30	0.06	1.25	0.72	1.10	0.48

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 81 (74%), Referenced to phase 1:SWTL, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 11: Commonwealth Ave & Beacon Street



Movement	EBT	EBR	EBR2	NBR2	SBR2	NER	NER2	SWL2	SWL	SWT	SWR	SWR2
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0			4.0	4.0	4.0	
Lane Util. Factor	0.86		0.86	1.00	1.00	0.88			1.00	0.95	0.88	
Frpb, ped/bikes	0.97		0.76	0.86	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	1.00	1.00	
Frt	0.99		0.85	0.86	0.86	0.85			1.00	1.00	0.85	
Flt Protected	1.00		1.00	1.00	1.00	1.00			0.95	1.00	1.00	
Satd. Flow (prot)	3910		684	898	1420	2533			1533	3065	2413	
Flt Permitted	1.00		1.00	1.00	1.00	1.00			0.95	1.00	1.00	
Satd. Flow (perm)	3910		684	898	1420	2533			1533	3065	2413	
Volume (vph)	665	40	40	440	80	635	30	35	335	1125	690	55
Peak-hour factor, PHF	0.75	0.75	0.75	0.87	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	887	53	53	506	87	690	33	38	364	1223	750	60
RTOR Reduction (vph)	0	0	13	119	0	3	0	0	3	0	5	0
Lane Group Flow (vph)	940	0	40	387	87	720	0	0	399	1223	805	0
Confl. Peds. (#/hr)		470	174	98	96	98	170	98	170		98	170
Heavy Vehicles (%)	8%	8%	8%	10%	0%	1%	1%	6%	6%	6%	6%	6%
Parking (#/hr)			25	25			25					
Turn Type			Perm	custom	Free	custom		Split	Split		custom	
Protected Phases	2					3		1	1	1	6	
Permitted Phases			2	2	Free							
Actuated Green, G (s)	32.0		32.0	32.0	110.0	24.0			39.0	39.0	76.0	
Effective Green, g (s)	33.0		33.0	33.0	110.0	25.0			40.0	40.0	77.0	
Actuated g/C Ratio	0.30		0.30	0.30	1.00	0.23			0.36	0.36	0.70	
Clearance Time (s)	5.0		5.0	5.0		5.0			5.0	5.0	5.0	
Vehicle Extension (s)	3.0		3.0	3.0		3.0			3.0	3.0	3.0	
Lane Grp Cap (vph)	1173		205	269	1420	576			557	1115	1689	
v/s Ratio Prot	0.24					c0.28			0.26	c0.40	0.33	
v/s Ratio Perm			0.06	c0.43	0.06							
v/c Ratio	0.80		0.20	1.44	0.06	1.25			0.72	1.10	0.48	
Uniform Delay, d1	35.5		28.6	38.5	0.0	42.5			30.1	35.0	7.4	
Progression Factor	0.57		0.35	1.00	1.00	1.26			0.75	0.73	0.94	
Incremental Delay, d2	2.6		0.3	217.3	0.1	125.7			6.0	54.7	0.2	
Delay (s)	22.9		10.3	255.8	0.1	179.3			28.7	80.4	7.1	
Level of Service	C		B	F	A	F			C	F	A	
Approach Delay (s)	22.2									47.5		
Approach LOS	C									D		

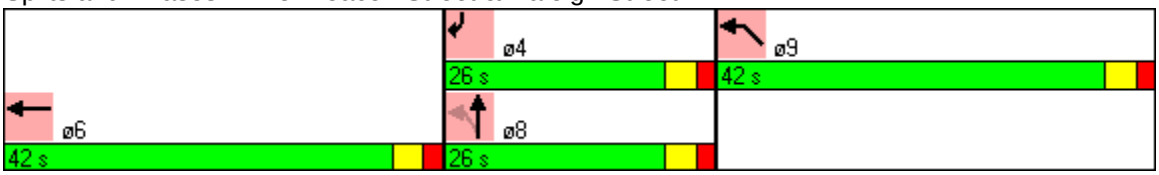
Intersection Summary			
HCM Average Control Delay	83.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.25		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	124.9%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBT	NBL	NBT	SBR	NWL
Lane Configurations					
Volume (vph)	1360	125	25	10	745
Lane Group Flow (vph)	1479	136	27	11	821
Turn Type		Perm		custom	
Protected Phases	6		8	4	9
Permitted Phases	6	8			
Detector Phases	6	8	8	4	9
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	19.0	21.0	21.0	13.0	21.0
Total Split (s)	42.0	26.0	26.0	26.0	42.0
Total Split (%)	38.2%	23.6%	23.6%	23.6%	38.2%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	None	None	None	None
v/c Ratio	0.57	0.47	0.18	0.08	0.80
Control Delay	15.4	46.6	57.6	46.9	31.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	15.4	46.6	57.6	46.9	31.2
Queue Length 50th (ft)	189	29	20	7	206
Queue Length 95th (ft)	m348	63	m38	25	212
Internal Link Dist (ft)	511		111		478
Turn Bay Length (ft)					
Base Capacity (vph)	2589	644	373	322	1222
Starvation Cap Reductn	0	21	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.57	0.22	0.07	0.03	0.67

Intersection Summary
Cycle Length: 110
Actual Cycle Length: 110
Offset: 94 (85%), Referenced to phase 6:WBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 13: Beacon Street & Raleigh Street



Movement	WBT	WBR	NBL	NBT	SBR	NWL	NWR
Lane Configurations							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor	0.91		0.97	1.00	1.00	0.97	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	0.99	
Flpb, ped/bikes	1.00		0.88	1.00	1.00	1.00	
Frt	1.00		1.00	1.00	0.86	1.00	
Flt Protected	1.00		0.95	1.00	1.00	0.95	
Satd. Flow (prot)	5083		3029	1863	1611	3413	
Flt Permitted	1.00		0.95	1.00	1.00	0.95	
Satd. Flow (perm)	5083		3029	1863	1611	3413	
Volume (vph)	1360	1	125	25	10	745	10
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1478	1	136	27	11	810	11
RTOR Reduction (vph)	0	0	44	0	0	0	0
Lane Group Flow (vph)	1479	0	92	27	11	821	0
Confl. Peds. (#/hr)		175	57		57		175
Turn Type			Perm		custom		
Protected Phases	6			8	4	9	
Permitted Phases	6		8				
Actuated Green, G (s)	55.0		8.0	8.0	8.0	32.0	
Effective Green, g (s)	56.0		9.0	9.0	9.0	33.0	
Actuated g/C Ratio	0.51		0.08	0.08	0.08	0.30	
Clearance Time (s)	5.0		5.0	5.0	5.0	5.0	
Vehicle Extension (s)	2.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	2588		248	152	132	1024	
v/s Ratio Prot	c0.29			0.01	0.01	c0.24	
v/s Ratio Perm			c0.03				
v/c Ratio	0.57		0.37	0.18	0.08	0.80	
Uniform Delay, d1	18.7		47.8	47.1	46.7	35.5	
Progression Factor	0.72		1.37	1.20	1.00	0.71	
Incremental Delay, d2	0.6		0.8	0.5	0.3	4.6	
Delay (s)	14.0		66.3	56.7	47.0	29.8	
Level of Service	B		E	E	D	C	
Approach Delay (s)	14.0			64.7		29.8	
Approach LOS	B			E		C	

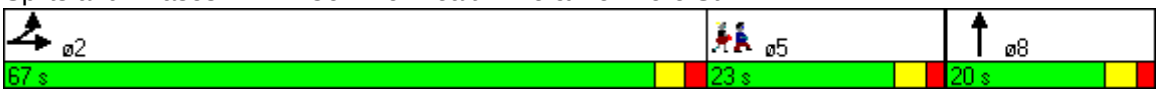
Intersection Summary			
HCM Average Control Delay	22.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	NBT	ø5
Lane Configurations			
Volume (vph)	1625	15	
Lane Group Flow (vph)	1929	76	
Turn Type			
Protected Phases	2	8	5
Permitted Phases			
Detector Phases	2	8	
Minimum Initial (s)	4.0	8.0	4.0
Minimum Split (s)	21.0	20.0	23.0
Total Split (s)	67.0	20.0	23.0
Total Split (%)	60.9%	18.2%	21%
Yellow Time (s)	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	C-Max	None	None
v/c Ratio	0.53	0.41	
Control Delay	6.9	23.3	
Queue Delay	0.2	0.0	
Total Delay	7.0	23.3	
Queue Length 50th (ft)	131	11	
Queue Length 95th (ft)	m206	55	
Internal Link Dist (ft)	453	193	
Turn Bay Length (ft)			
Base Capacity (vph)	3613	269	
Starvation Cap Reductn	635	0	
Spillback Cap Reductn	0	0	
Storage Cap Reductn	0	0	
Reduced v/c Ratio	0.65	0.28	

Intersection Summary
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 107 (97%), Referenced to phase 2:EBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

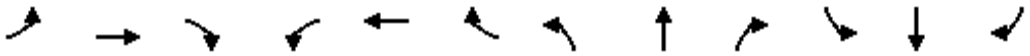
Splits and Phases: 14: Commonwealth Ave & Kenmore St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0				
Lane Util. Factor		0.91						1.00				
Frt		1.00						0.89				
Flt Protected		1.00						1.00				
Satd. Flow (prot)		4552						1498				
Flt Permitted		1.00						1.00				
Satd. Flow (perm)		4552						1498				
Volume (vph)	130	1625	20	0	0	0	0	15	55	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.95	0.95	0.95	0.92	0.92	0.92	0.95	0.95	0.95
Adj. Flow (vph)	141	1766	22	0	0	0	0	16	60	0	0	0
RTOR Reduction (vph)	0	5	0	0	0	0	0	56	0	0	0	0
Lane Group Flow (vph)	0	1924	0	0	0	0	0	20	0	0	0	0
Heavy Vehicles (%)	2%	2%	2%	0%	0%	0%	0%	2%	2%	0%	0%	0%
Turn Type	Split											
Protected Phases	2	2						8				
Permitted Phases												
Actuated Green, G (s)		81.5						7.1				
Effective Green, g (s)		82.5						8.1				
Actuated g/C Ratio		0.75						0.07				
Clearance Time (s)		5.0						5.0				
Vehicle Extension (s)		3.0						3.0				
Lane Grp Cap (vph)		3414						110				
v/s Ratio Prot		c0.42						c0.01				
v/s Ratio Perm												
v/c Ratio		0.56						0.19				
Uniform Delay, d1		6.0						47.9				
Progression Factor		0.98						1.00				
Incremental Delay, d2		0.1						0.8				
Delay (s)		5.9						48.7				
Level of Service		A						D				
Approach Delay (s)		5.9			0.0			48.7			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM Average Control Delay	7.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	19.4
Intersection Capacity Utilization	51.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	5	530	30	15	985	5	45	25	25	5	5	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	576	33	16	1071	5	49	27	27	5	5	16
Pedestrians		175			175			108			175	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		15			15			9			15	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		488										
pX, platoon unblocked				0.89			0.89	0.89	0.89	0.89	0.89	
vC, conflicting volume	1251			717			1473	1995	587	1796	2009	888
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1251			565			1411	1994	420	1771	2010	888
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			98			0	34	93	58	87	92
cM capacity (veh/h)	476			822			47	41	408	13	40	212

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	293	321	552	541	103	27
Volume Left	5	0	16	0	49	5
Volume Right	0	33	0	5	27	16
cSH	476	1700	822	1700	58	43
Volume to Capacity	0.01	0.19	0.02	0.32	1.77	0.64
Queue Length 95th (ft)	1	0	2	0	241	59
Control Delay (s)	0.4	0.0	0.5	0.0	522.3	182.7
Lane LOS	A		A		F	F
Approach Delay (s)	0.2		0.3		522.3	182.7
Approach LOS					F	F

Intersection Summary			
Average Delay	32.3		
Intersection Capacity Utilization	62.8%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	10	565	5	15	960	30	55	25	40	10	0	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	11	595	5	16	1011	32	58	26	42	11	0	5
Pedestrians		150			150			82			150	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		12			12			7			12	
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage veh)								0			0	
Upstream signal (ft)		929										
pX, platoon unblocked				0.92			0.92	0.92	0.92	0.92	0.92	
vC, conflicting volume	1192			682			1393	1924	532	1732	1911	821
vC1, stage 1 conf vol							700	700		1208	1208	
vC2, stage 2 conf vol							692	1224		524	703	
vCu, unblocked vol	1192			571			1341	1918	408	1709	1903	821
tC, single (s)	4.2			4.1			7.6	6.6	7.0	7.8	6.8	7.2
tC, 2 stage (s)							6.6	5.6		6.8	5.8	
tF (s)	2.2			2.2			3.6	4.1	3.4	3.6	4.1	3.4
p0 queue free %	98			98			58	75	90	87	100	98
cM capacity (veh/h)	504			857			140	104	437	79	102	226

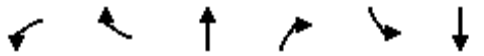
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	308	303	521	537	126	16
Volume Left	11	0	16	0	58	11
Volume Right	0	5	0	32	42	5
cSH	504	1700	857	1700	165	101
Volume to Capacity	0.02	0.18	0.02	0.32	0.76	0.16
Queue Length 95th (ft)	2	0	1	0	122	13
Control Delay (s)	0.7	0.0	0.5	0.0	75.4	47.0
Lane LOS	A		A		F	E
Approach Delay (s)	0.4		0.3		75.4	47.0
Approach LOS					F	E

Intersection Summary			
Average Delay	5.9		
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	WBL	WBR	WBR2	SEL2	SEL	SER	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control	Stop				Stop			Free			Free	
Grade	0%				0%			0%			0%	
Volume (veh/h)	90	0	75	35	0	10	5	470	0	0	390	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	95	0	79	37	0	11	5	495	0	0	411	5
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None				None							
Median storage veh)												
Upstream signal (ft)								898			923	
pX, platoon unblocked												
vC, conflicting volume	929	921	495	997	918	413	416			495		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	929	921	495	997	918	413	416			495		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	61	100	86	81	100	98	100			100		
cM capacity (veh/h)	244	270	577	193	272	643	1143			1074		

Direction, Lane #	WB 1	SE 1	SE 2	NE 1	SW 1
Volume Total	174	37	11	500	416
Volume Left	95	37	0	5	0
Volume Right	79	0	11	0	5
cSH	331	193	643	1143	1700
Volume to Capacity	0.53	0.19	0.02	0.00	0.24
Queue Length 95th (ft)	72	17	1	0	0
Control Delay (s)	27.3	28.0	10.7	0.1	0.0
Lane LOS	D	D	B	A	
Approach Delay (s)	27.3	24.1		0.1	0.0
Approach LOS	D	C			

Intersection Summary				
Average Delay	5.2			
Intersection Capacity Utilization	55.9%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	0	0	455	130	65	395
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	479	137	68	416
Pedestrians	367					
Lane Width (ft)	0.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)			1073			748
pX, platoon unblocked						
vC, conflicting volume	1467	914			983	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1467	914			983	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			90	
cM capacity (veh/h)	128	334			703	

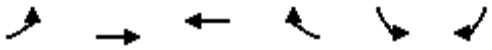
Direction, Lane #	NB 1	SB 1
Volume Total	616	484
Volume Left	0	68
Volume Right	137	0
cSH	1700	703
Volume to Capacity	0.36	0.10
Queue Length 95th (ft)	0	8
Control Delay (s)	0.0	2.7
Lane LOS		A
Approach Delay (s)	0.0	2.7
Approach LOS		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	71.2%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	430	25	5	425	35	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	467	27	5	462	38	11
Pedestrians	471			471	471	
Lane Width (ft)	16.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	52			39	39	
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				259		
pX, platoon unblocked						
vC, conflicting volume			966		1896	1423
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			966		1896	1423
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		0	82
cM capacity (veh/h)			433		22	61

Direction, Lane #	NB 1	SB 1	NW 1
Volume Total	495	467	49
Volume Left	0	5	38
Volume Right	27	0	11
cSH	1700	433	26
Volume to Capacity	0.29	0.01	1.92
Queue Length 95th (ft)	0	1	150
Control Delay (s)	0.0	0.4	757.3
Lane LOS		A	F
Approach Delay (s)	0.0	0.4	757.3
Approach LOS			F

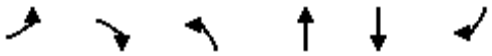
Intersection Summary			
Average Delay	36.8		
Intersection Capacity Utilization	49.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Stop	Stop		Stop	
Volume (vph)	35	0	30	35	0	20
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	37	0	32	37	0	21

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total (vph)	37	68	21
Volume Left (vph)	37	0	0
Volume Right (vph)	0	37	21
Hadj (s)	0.23	-0.29	-0.57
Departure Headway (s)	4.2	3.7	3.5
Degree Utilization, x	0.04	0.07	0.02
Capacity (veh/h)	838	964	974
Control Delay (s)	7.4	7.0	6.6
Approach Delay (s)	7.4	7.0	6.6
Approach LOS	A	A	A

Intersection Summary			
Delay		7.0	
HCM Level of Service		A	
Intersection Capacity Utilization		29.0%	ICU Level of Service A
Analysis Period (min)		15	



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	65	190	0	50	220	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	68	200	0	53	232	0
Pedestrians				19	19	
Lane Width (ft)				14.0	14.0	
Walking Speed (ft/s)				4.0	4.0	
Percent Blockage				2	2	
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)				880		
pX, platoon unblocked						
vC, conflicting volume	303	251	232			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	303	251	232			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	90	74	100			
cM capacity (veh/h)	676	774	1348			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	268	53	232
Volume Left	68	0	0
Volume Right	200	0	0
cSH	746	1700	1700
Volume to Capacity	0.36	0.03	0.14
Queue Length 95th (ft)	41	0	0
Control Delay (s)	12.5	0.0	0.0
Lane LOS	B		
Approach Delay (s)	12.5	0.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	6.1		
Intersection Capacity Utilization	37.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	17	22	28	440	450	22
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	18	23	29	463	474	23
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)				492		
pX, platoon unblocked	0.96					
vC, conflicting volume	1007	485	497			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1008	485	497			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	93	96	97			
cM capacity (veh/h)	248	582	1067			

Direction, Lane #	SE 1	NE 1	SW 1
Volume Total	41	493	497
Volume Left	18	29	0
Volume Right	23	0	23
cSH	367	1067	1700
Volume to Capacity	0.11	0.03	0.29
Queue Length 95th (ft)	9	2	0
Control Delay (s)	16.0	0.8	0.0
Lane LOS	C	A	
Approach Delay (s)	16.0	0.8	0.0
Approach LOS	C		

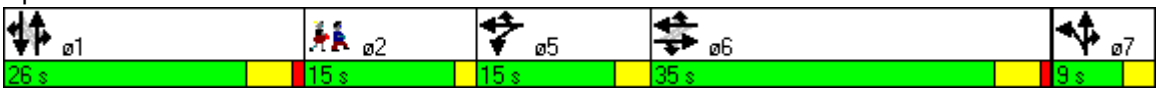
Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	56.1%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	131	930	300	170	515	25	111	506	36	71	827	10
Lane Group Flow (vph)	142	1011	326	185	560	27	0	629	37	0	1009	11
Turn Type	Perm		Prot	D.P+P		Prot	D.P+P		Prot	Perm		Prot
Protected Phases		6	6	5	5 6	5 6	7	1 7	1 7		1	1
Permitted Phases	6			6			1			1		
Detector Phases	6	6	6	5	5 6	5 6	7	1 7	1 7	1	1	1
Minimum Initial (s)	10.0	10.0	10.0	2.0			2.0			10.0	10.0	10.0
Minimum Split (s)	15.0	15.0	15.0	10.0			10.0			15.0	15.0	15.0
Total Split (s)	35.0	35.0	35.0	15.0	50.0	50.0	9.0	35.0	35.0	26.0	26.0	26.0
Total Split (%)	35.0%	35.0%	35.0%	15.0%	50.0%	50.0%	9.0%	35.0%	35.0%	26.0%	26.0%	26.0%
Yellow Time (s)	4.0	4.0	4.0	3.0			3.0			4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	0.0			0.0			1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lag	Lead						Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes						Yes	Yes	Yes
Recall Mode	Min	Min	Min	None			None			C-Min	C-Min	C-Min
v/c Ratio	0.76	1.01	0.59	0.76	0.38	0.04		0.92	0.06		1.66	0.02
Control Delay	59.3	67.2	19.2	30.0	17.0	9.3		51.3	11.2		334.8	41.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Delay	59.3	67.2	19.2	30.0	17.0	9.3		51.3	11.2		334.8	41.1
Queue Length 50th (ft)	81	~346	85	60	140	3		138	3		~453	5
Queue Length 95th (ft)	#188	#487	178	m131	m204	m13		#368	27		m#684	m7
Internal Link Dist (ft)		968			408			639			270	
Turn Bay Length (ft)	50		100			100			100			100
Base Capacity (vph)	186	997	556	244	1480	677		682	571		607	450
Starvation Cap Reductn	0	0	0	0	0	0		0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0		0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0		0	0		0	0
Reduced v/c Ratio	0.76	1.01	0.59	0.76	0.38	0.04		0.92	0.06		1.66	0.02

Intersection Summary

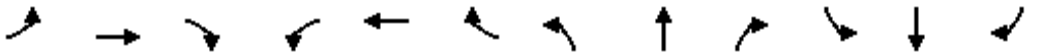
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 77 (77%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Beacon St & Park Dr



Lane Group	ø2
Lane Configurations	
Volume (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	2
Permitted Phases	
Detector Phases	
Minimum Initial (s)	2.0
Minimum Split (s)	15.0
Total Split (s)	15.0
Total Split (%)	15%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Recall Mode	None
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Flpb, ped/bikes	0.80	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99	1.00		1.00	1.00
Satd. Flow (prot)	1286	3217	1439	1608	3217	1439		3067	1384		3204	1439
Flt Permitted	0.44	1.00	1.00	0.13	1.00	1.00		0.52	1.00		0.71	1.00
Satd. Flow (perm)	599	3217	1439	218	3217	1439		1622	1384		2292	1439
Volume (vph)	131	930	300	170	515	25	111	506	36	71	827	10
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.98	0.98	0.98	0.89	0.89	0.89
Adj. Flow (vph)	142	1011	326	185	560	27	113	516	37	80	929	11
RTOR Reduction (vph)	0	0	110	0	0	15	0	0	18	0	0	4
Lane Group Flow (vph)	142	1011	216	185	560	12	0	629	19	0	1009	7
Confl. Peds. (#/hr)	61		82	82		61	101		81	81		101
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	5%	5%	5%	1%	1%	1%
Turn Type	Perm		Prot	D.P+P		Prot	D.P+P		Prot	Perm		Prot
Protected Phases		6	6	5	5 6	5 6	7	1 7	1 7		1	1
Permitted Phases	6			6			1			1		
Actuated Green, G (s)	30.0	30.0	30.0	42.0	45.0	45.0		34.8	37.8		28.8	28.8
Effective Green, g (s)	31.0	31.0	31.0	42.0	46.0	46.0		34.8	38.8		29.8	29.8
Actuated g/C Ratio	0.31	0.31	0.31	0.42	0.46	0.46		0.35	0.39		0.30	0.30
Clearance Time (s)	5.0	5.0	5.0	3.0							5.0	5.0
Vehicle Extension (s)	2.0	2.0	2.0	2.0							2.0	2.0
Lane Grp Cap (vph)	186	997	446	244	1480	662		637	537		683	429
v/s Ratio Prot		c0.31	0.15	c0.08	0.17	0.01		c0.05	0.01			0.01
v/s Ratio Perm	0.24			0.23				0.29			c0.44	
v/c Ratio	0.76	1.01	0.48	0.76	0.38	0.02		0.99	0.04		1.48	0.02
Uniform Delay, d1	31.2	34.5	28.0	22.7	17.7	14.7		32.4	19.0		35.1	24.8
Progression Factor	1.00	1.00	1.00	0.82	0.93	1.64		1.00	1.00		1.52	1.79
Incremental Delay, d2	15.3	32.0	0.3	6.5	0.0	0.0		32.1	0.0		219.6	0.0
Delay (s)	46.5	66.5	28.3	25.2	16.4	24.1		64.5	19.0		272.8	44.4
Level of Service	D	E	C	C	B	C		E	B		F	D
Approach Delay (s)		56.2			18.8			61.9			270.4	
Approach LOS		E			B			E			F	

Intersection Summary			
HCM Average Control Delay	105.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	23.2
Intersection Capacity Utilization	99.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBL	WBT	SBT	SBR
Lane Configurations				
Volume (vph)	291	537	946	351
Lane Group Flow (vph)	306	565	996	369
Turn Type	Split			Prot
Protected Phases	1	1	5	5
Permitted Phases				
Detector Phases	1	1	5	5
Minimum Initial (s)	10.0	10.0	13.0	13.0
Minimum Split (s)	20.0	20.0	23.0	23.0
Total Split (s)	50.0	50.0	40.0	40.0
Total Split (%)	55.6%	55.6%	44.4%	44.4%
Yellow Time (s)	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	C-Min	C-Min	None	None
v/c Ratio	0.19	0.23	0.78	0.65
Control Delay	10.0	9.9	28.2	26.9
Queue Delay	0.4	0.3	0.0	0.0
Total Delay	10.4	10.2	28.2	26.9
Queue Length 50th (ft)	29	39	263	172
Queue Length 95th (ft)	54	64	251	200
Internal Link Dist (ft)		105	199	
Turn Bay Length (ft)				100
Base Capacity (vph)	1739	2576	1404	628
Starvation Cap Reductn	969	1349	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.40	0.46	0.71	0.59

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 84 (93%), Referenced to phase 1:WBTL, Start of Green
Natural Cycle: 45
Control Type: Actuated-Coordinated

Splits and Phases: 2: Riverway & Park Dr

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0						4.0	4.0
Lane Util. Factor				0.97	0.91						0.95	1.00
Frpb, ped/bikes				1.00	1.00						1.00	1.00
Flpb, ped/bikes				1.00	1.00						1.00	1.00
Frt				1.00	1.00						1.00	0.85
Flt Protected				0.95	1.00						1.00	1.00
Satd. Flow (prot)				3152	4668						3249	1454
Flt Permitted				0.95	1.00						1.00	1.00
Satd. Flow (perm)				3152	4668						3249	1454
Volume (vph)	0	0	0	291	537	0	0	0	0	0	946	351
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	306	565	0	0	0	0	0	996	369
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	306	565	0	0	0	0	0	996	369
Confl. Peds. (#/hr)												65
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type				Split								Prot
Protected Phases				1	1						5	5
Permitted Phases												
Actuated Green, G (s)				45.8	45.8						34.2	34.2
Effective Green, g (s)				46.8	46.8						35.2	35.2
Actuated g/C Ratio				0.52	0.52						0.39	0.39
Clearance Time (s)				5.0	5.0						5.0	5.0
Vehicle Extension (s)				2.0	2.0						2.0	2.0
Lane Grp Cap (vph)				1639	2427						1271	569
v/s Ratio Prot				0.10	c0.12						c0.31	0.25
v/s Ratio Perm												
v/c Ratio				0.19	0.23						0.78	0.65
Uniform Delay, d1				11.5	11.8						24.1	22.4
Progression Factor				0.73	0.72						1.00	1.00
Incremental Delay, d2				0.2	0.2						3.0	1.9
Delay (s)				8.6	8.7						27.0	24.3
Level of Service				A	A						C	C
Approach Delay (s)		0.0			8.7			0.0			26.3	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM Average Control Delay	19.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	SEL2	SET	SER	NET	NER	SWT	ø2
Lane Configurations							
Volume (vph)	960	958	305	901	101	1478	
Lane Group Flow (vph)	765	1516	332	1060	220	1589	
Turn Type	custom		Prot		Perm		
Protected Phases	5	5	5	1		1	2
Permitted Phases	5				1		
Detector Phases	5	5	5	1	1	1	
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	7.0
Minimum Split (s)	15.0	15.0	15.0	15.0	15.0	15.0	24.0
Total Split (s)	39.0	39.0	39.0	27.0	27.0	27.0	24.0
Total Split (%)	43.3%	43.3%	43.3%	30.0%	30.0%	30.0%	27%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	2.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	0.0
Lead/Lag				Lead	Lead	Lead	Lag
Lead-Lag Optimize?				Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	C-Max	C-Max	C-Max	None
v/c Ratio	1.34	1.59dl	0.59	0.80	0.59	1.19	
Control Delay	190.2	263.2	23.0	33.0	34.5	108.6	
Queue Delay	29.9	33.9	0.0	3.9	0.0	329.7	
Total Delay	220.1	297.1	23.0	36.9	34.5	438.3	
Queue Length 50th (ft)	~639	~679	95	215	75	181	
Queue Length 95th (ft)	#893	#827	m239	#492	#242	m#453	
Internal Link Dist (ft)		261		23		182	
Turn Bay Length (ft)							
Base Capacity (vph)	569	996	560	1323	375	1337	
Starvation Cap Reductn	0	0	0	0	0	511	
Spillback Cap Reductn	27	47	0	186	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	1.41	1.60	0.59	0.93	0.59	1.92	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 1:NESW, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
~ 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.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 3: Fenway Loop & Brookline Ave

Movement	SEL2	SEL	SET	SER	NET	NER	NER2	SWT
Lane Configurations								
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0		4.0
Lane Util. Factor	0.91		0.91	1.00	0.95	1.00		0.95
Frpb, ped/bikes	1.00		1.00	1.00	1.00	0.68		1.00
Flpb, ped/bikes	1.00		0.84	1.00	1.00	1.00		1.00
Frt	1.00		1.00	0.85	1.00	0.85		1.00
Flt Protected	0.95		0.98	1.00	1.00	1.00		1.00
Satd. Flow (prot)	1464		2560	1439	3185	963		3217
Flt Permitted	0.95		0.98	1.00	1.00	1.00		1.00
Satd. Flow (perm)	1464		2560	1439	3185	963		3217
Volume (vph)	960	181	958	305	901	101	86	1478
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.85	0.85	0.85	0.93
Adj. Flow (vph)	1043	197	1041	332	1060	119	101	1589
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	765	0	1516	332	1060	220	0	1589
Confl. Peds. (#/hr)	140	245		290		265	260	
Heavy Vehicles (%)	1%	2%	1%	1%	2%	2%	2%	1%
Turn Type	custom	Perm		Prot		Perm		
Protected Phases	5		5	5	1			1
Permitted Phases	5	5				1		
Actuated Green, G (s)	34.0		34.0	34.0	35.2	35.2		35.2
Effective Green, g (s)	35.0		35.0	35.0	36.2	36.2		36.2
Actuated g/C Ratio	0.39		0.39	0.39	0.40	0.40		0.40
Clearance Time (s)	5.0		5.0	5.0	5.0	5.0		5.0
Vehicle Extension (s)	2.0		2.0	2.0	2.0	2.0		2.0
Lane Grp Cap (vph)	569		996	560	1281	387		1294
v/s Ratio Prot	0.52			0.23	0.33			c0.49
v/s Ratio Perm			0.59			0.23		
v/c Ratio	1.34		1.59dl	0.59	0.83	0.57		1.23
Uniform Delay, d1	27.5		27.5	21.8	24.1	20.8		26.9
Progression Factor	0.82		0.82	0.82	1.00	1.00		0.71
Incremental Delay, d2	166.1		239.9	4.4	6.2	5.9		103.3
Delay (s)	188.8		262.6	22.3	30.3	26.8		122.5
Level of Service	F		F	C	C	C		F
Approach Delay (s)			210.4		29.7			122.5
Approach LOS			F		C			F

Intersection Summary			
HCM Average Control Delay	142.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.37		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.8
Intersection Capacity Utilization	96.2%	ICU Level of Service	F
Analysis Period (min)	15		

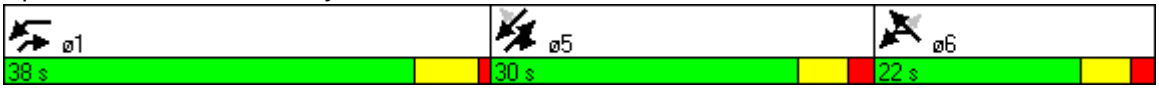
dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Lane Group	WBL	NWT	NWR	NET	NER	SWT	SWR
Lane Configurations							
Volume (vph)	1015	702	209	507	1335	405	273
Lane Group Flow (vph)	1663	923	366	570	1500	431	290
Turn Type			Perm		pt+ov		Perm
Protected Phases	1	6		5	1 5	5	
Permitted Phases			6				5
Detector Phases	1	6	6	5	1 5	5	5
Minimum Initial (s)	10.0	10.0	10.0	10.0		10.0	10.0
Minimum Split (s)	19.0	21.0	21.0	19.0		19.0	19.0
Total Split (s)	38.0	22.0	22.0	30.0	68.0	30.0	30.0
Total Split (%)	42.2%	24.4%	24.4%	33.3%	75.6%	33.3%	33.3%
Yellow Time (s)	5.0	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	2.0		2.0	2.0
Lead/Lag		Lag	Lag	Lead		Lead	Lead
Lead-Lag Optimize?		Yes	Yes	Yes		Yes	Yes
Recall Mode	C-Max	Max	Max	Max		Max	Max
v/c Ratio	2.07dr	0.99	2.10	0.61	0.83	0.47	1.05
Control Delay	488.8	65.5	538.6	29.4	11.4	28.4	101.0
Queue Delay	207.7	29.0	0.0	10.4	44.4	0.0	0.0
Total Delay	696.5	94.5	538.6	39.9	55.8	28.4	101.0
Queue Length 50th (ft)	~767	193	~333	156	414	105	~181
Queue Length 95th (ft)	#908	#268	#484	m170	m138	151	#336
Internal Link Dist (ft)	668	176		182		648	
Turn Bay Length (ft)							150
Base Capacity (vph)	817	928	174	929	1801	920	277
Starvation Cap Reductn	0	0	0	329	428	0	0
Spillback Cap Reductn	297	75	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	3.20	1.08	2.10	0.95	1.09	0.47	1.05

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 70 (78%), Referenced to phase 1:WBL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
~ 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.
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 4: Boylston St & Brookline Ave



Movement	WBL	WBR	WBR2	NWL	NWT	NWR	NWR2	NET	NER	SWT	SWR
Lane Configurations											
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0				4.0	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.97				0.91	1.00		0.95	0.88	0.95	1.00
Frpb, ped/bikes	0.71				1.00	0.60		1.00	1.00	1.00	0.67
Flpb, ped/bikes	1.00				1.00	1.00		1.00	1.00	1.00	1.00
Frt	0.94				1.00	0.85		1.00	0.85	1.00	0.85
Flt Protected	0.97				0.99	1.00		1.00	1.00	1.00	1.00
Satd. Flow (prot)	2163				4639	870		3217	2533	3185	960
Flt Permitted	0.97				0.99	1.00		1.00	1.00	1.00	1.00
Satd. Flow (perm)	2163				4639	870		3217	2533	3185	960
Volume (vph)	1015	573	10	101	702	209	110	507	1335	405	273
Peak-hour factor, PHF	0.98	0.93	0.93	0.87	0.87	0.87	0.87	0.89	0.89	0.94	0.94
Adj. Flow (vph)	1036	616	11	116	807	240	126	570	1500	431	290
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	1663	0	0	0	923	366	0	570	1500	431	290
Confl. Peds. (#/hr)	161	206	310	64		213	225		161		194
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	1%	2%	2%
Turn Type				Split		Perm			pt+ov		Perm
Protected Phases	1			6	6			5	1 5	5	
Permitted Phases						6					5
Actuated Green, G (s)	32.0				16.0	16.0		24.0	62.0	24.0	24.0
Effective Green, g (s)	34.0				18.0	18.0		26.0	64.0	26.0	26.0
Actuated g/C Ratio	0.38				0.20	0.20		0.29	0.71	0.29	0.29
Clearance Time (s)	6.0				6.0	6.0		6.0		6.0	6.0
Vehicle Extension (s)	3.0				3.0	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	817				928	174		929	1801	920	277
v/s Ratio Prot	c0.77				0.20			0.18	0.59	0.14	
v/s Ratio Perm						c0.42					c0.30
v/c Ratio	2.07dr				0.99	2.10		0.61	0.83	0.47	1.05
Uniform Delay, d1	28.0				36.0	36.0		27.7	9.2	26.3	32.0
Progression Factor	0.72				1.00	1.00		1.04	1.10	1.00	1.00
Incremental Delay, d2	468.9				28.3	515.5		0.3	0.4	1.7	66.9
Delay (s)	489.2				64.2	551.5		29.0	10.6	28.0	98.9
Level of Service	F				E	F		C	B	C	F
Approach Delay (s)	489.2				202.6			15.7		56.5	
Approach LOS	F				F			B		E	

Intersection Summary			
HCM Average Control Delay	199.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.72		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	100.9%	ICU Level of Service	G
Analysis Period (min)	15		

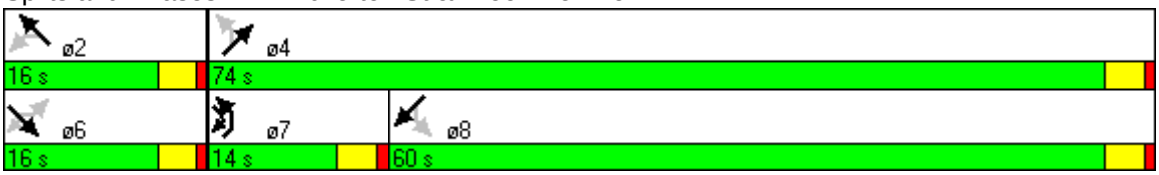
dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

Lane Group	SEL	SET	SER	NWL	NWT	NEL	NET	SWL	SWT
Lane Configurations									
Volume (vph)	20	20	56	61	51	192	415	32	438
Lane Group Flow (vph)	0	44	61	0	154	209	489	35	635
Turn Type	Perm		pm+ov	Perm		pm+pt		Perm	
Protected Phases		6	7		2	7	4		8
Permitted Phases	6		6	2		4		8	
Detector Phases	6	6	7	2	2	7	4	8	8
Minimum Initial (s)	8.0	8.0	4.0	4.0	4.0	4.0	8.0	7.0	7.0
Minimum Split (s)	20.0	20.0	8.0	24.0	24.0	8.0	23.0	25.0	25.0
Total Split (s)	16.0	16.0	14.0	16.0	16.0	14.0	74.0	60.0	60.0
Total Split (%)	17.8%	17.8%	15.6%	17.8%	17.8%	15.6%	82.2%	66.7%	66.7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag			Lead			Lead		Lag	Lag
Lead-Lag Optimize?			Yes			Yes		Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
v/c Ratio		0.22	0.16		0.58	0.49	0.53	0.10	0.87
Control Delay		30.4	6.7		37.3	8.0	7.3	9.7	27.9
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		30.4	6.7		37.3	8.0	7.3	9.7	27.9
Queue Length 50th (ft)		14	0		49	24	68	7	194
Queue Length 95th (ft)		52	26		#174	52	139	22	353
Internal Link Dist (ft)		352			75		648		198
Turn Bay Length (ft)									
Base Capacity (vph)		224	392		266	443	1153	520	1016
Starvation Cap Reductn		0	0		0	0	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		0.20	0.16		0.58	0.47	0.42	0.07	0.63

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 61.3
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Fullerton St & Brookline Ave



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	16	12	12	12	12	12	10	10	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00	0.87		0.93		1.00	0.98		1.00	0.92	
Flpb, ped/bikes		0.89	1.00		0.93		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.97		1.00	0.99		1.00	0.96	
Flt Protected		0.98	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1457	1244		1375		1486	1508		1593	1633	
Flt Permitted		0.85	1.00		0.86		0.18	1.00		0.49	1.00	
Satd. Flow (perm)		1264	1244		1207		279	1508		813	1633	
Volume (vph)	20	20	56	61	51	30	192	415	35	32	438	146
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	22	61	66	55	33	209	451	38	35	476	159
RTOR Reduction (vph)	0	0	39	0	10	0	0	5	0	0	19	0
Lane Group Flow (vph)	0	44	22	0	144	0	209	484	0	35	616	0
Confl. Peds. (#/hr)	160		160	160		160			160			160
Turn Type	Perm		pm+ov	Perm			pm+pt			Perm		
Protected Phases		6	7		2		7	4			8	
Permitted Phases	6		6	2			4			8		
Actuated Green, G (s)		14.3	21.6		14.3		38.9	38.9		27.6	27.6	
Effective Green, g (s)		14.3	21.6		14.3		38.9	38.9		27.6	27.6	
Actuated g/C Ratio		0.23	0.35		0.23		0.64	0.64		0.45	0.45	
Clearance Time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		2.0	3.0		3.0		3.0	3.0		2.0	2.0	
Lane Grp Cap (vph)		295	520		282		321	959		367	736	
v/s Ratio Prot			0.00				c0.08	0.32			c0.38	
v/s Ratio Perm		0.03	0.01		c0.12		0.34			0.04		
v/c Ratio		0.15	0.04		0.51		0.65	0.50		0.10	0.84	
Uniform Delay, d1		18.6	13.0		20.4		8.7	6.0		9.6	14.8	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1	0.0		1.6		4.7	0.4		0.0	7.9	
Delay (s)		18.7	13.0		22.0		13.4	6.4		9.7	22.7	
Level of Service		B	B		C		B	A		A	C	
Approach Delay (s)		15.4			22.0			8.5			22.0	
Approach LOS		B			C			A			C	

Intersection Summary			
HCM Average Control Delay	15.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	61.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR2	NBR2	SBR2	NER	SWL	SWT	SWR
Lane Configurations								
Volume (vph)	642	20	312	76	941	581	769	591
Lane Group Flow (vph)	923	27	359	83	1001	652	793	652
Turn Type		Perm	custom	Free	custom	Split		custom
Protected Phases	2				3	1	1	6
Permitted Phases		2	2	Free				
Detector Phases	2	2	2		3	1	1	6
Minimum Initial (s)	8.0	8.0	8.0		8.0	8.0	8.0	8.0
Minimum Split (s)	30.0	30.0	30.0		30.0	30.0	30.0	30.0
Total Split (s)	36.0	36.0	36.0	0.0	34.0	30.0	30.0	66.0
Total Split (%)	36.0%	36.0%	36.0%	0.0%	34.0%	30.0%	30.0%	66.0%
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag	Lag			Lead	Lead	
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max		Min	C-Min	C-Min	Min
v/c Ratio	0.73	0.12	1.07	0.06	1.31	1.62	0.99	0.43
Control Delay	49.6	32.4	99.5	0.1	167.2	315.7	62.3	11.7
Queue Delay	0.0	0.0	7.3	0.0	48.3	192.6	0.0	0.0
Total Delay	49.6	32.4	106.8	0.1	215.5	508.3	62.3	11.7
Queue Length 50th (ft)	236	15	~225	0	~485	~592	260	145
Queue Length 95th (ft)	m232	m31	#383	0	m#445	#811	#390	114
Internal Link Dist (ft)	169						1	
Turn Bay Length (ft)		40						
Base Capacity (vph)	1258	229	334	1405	762	402	797	1504
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	6	0	58	84	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.12	1.09	0.06	1.42	2.05	0.99	0.43

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 28 (28%), Referenced to phase 1:SWTL, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 11: Commonwealth Ave & Beacon St

Movement	EBT	EBR	EBR2	NBR2	SBR2	NER	NER2	SWL2	SWL	SWT	SWR	SWR2
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0			4.0	4.0	4.0	
Lane Util. Factor	0.86		0.86	1.00	1.00	0.88			1.00	0.95	0.88	
Frpb, ped/bikes	0.97		0.77	0.87	0.97	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	1.00	
Frt	0.99		0.85	0.86	0.86	0.85			1.00	1.00	0.85	
Flt Protected	1.00		1.00	1.00	1.00	1.00			0.95	1.00	1.00	
Satd. Flow (prot)	3933		695	905	1405	2533			1533	3065	2419	
Flt Permitted	1.00		1.00	1.00	1.00	1.00			0.95	1.00	1.00	
Satd. Flow (perm)	3933		695	905	1405	2533			1533	3065	2419	
Volume (vph)	642	50	20	312	76	941	30	51	581	769	591	40
Peak-hour factor, PHF	0.75	0.75	0.75	0.87	0.92	0.97	0.97	0.97	0.97	0.97	0.97	0.92
Adj. Flow (vph)	856	67	27	359	83	970	31	53	599	793	609	43
RTOR Reduction (vph)	0	0	7	45	0	2	0	0	3	0	5	0
Lane Group Flow (vph)	923	0	20	314	83	999	0	0	649	793	647	0
Confl. Peds. (#/hr)		170	174	98	64	98	170	98	170		64	
Heavy Vehicles (%)	8%	8%	8%	10%	2%	1%	1%	6%	6%	6%	6%	2%
Parking (#/hr)			25	25			25					
Turn Type			Perm	custom	Free	custom		Split	Split		custom	
Protected Phases	2					3		1	1	1	6	
Permitted Phases			2	2	Free							
Actuated Green, G (s)	31.0		31.0	31.0	100.0	29.0			25.0	25.0	61.0	
Effective Green, g (s)	32.0		32.0	32.0	100.0	30.0			26.0	26.0	62.0	
Actuated g/C Ratio	0.32		0.32	0.32	1.00	0.30			0.26	0.26	0.62	
Clearance Time (s)	5.0		5.0	5.0		5.0			5.0	5.0	5.0	
Vehicle Extension (s)	3.0		3.0	3.0		3.0			3.0	3.0	3.0	
Lane Grp Cap (vph)	1259		222	290	1405	760			399	797	1500	
v/s Ratio Prot	0.23					c0.39			c0.42	0.26	0.27	
v/s Ratio Perm			0.03	c0.35	0.06							
v/c Ratio	0.73		0.09	1.08	0.06	1.31			1.63	0.99	0.43	
Uniform Delay, d1	30.2		23.8	34.0	0.0	35.0			37.0	36.9	9.9	
Progression Factor	1.52		1.75	1.00	1.00	0.53			0.93	0.93	1.12	
Incremental Delay, d2	3.1		0.7	76.8	0.1	145.9			290.7	26.6	0.2	
Delay (s)	49.0		42.4	110.8	0.1	164.5			325.2	61.0	11.2	
Level of Service	D		D	F	A	F			F	E	B	
Approach Delay (s)	48.8									127.7		
Approach LOS	D									F		

Intersection Summary			
HCM Average Control Delay	115.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	143.3%	ICU Level of Service	H
Analysis Period (min)	15		

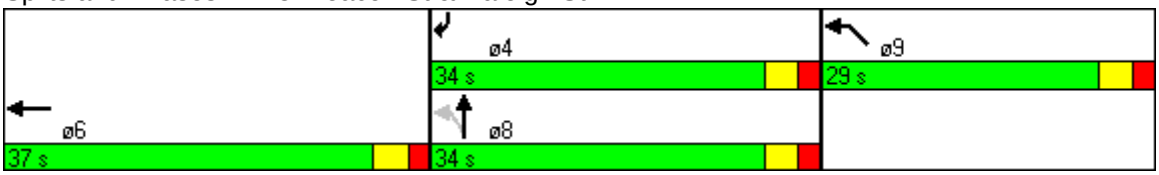
c Critical Lane Group

Lane Group	WBT	NBL	NBT	SBR	NWL
Lane Configurations					
Volume (vph)	1321	157	30	10	544
Lane Group Flow (vph)	1441	171	33	11	596
Turn Type		Perm		custom	
Protected Phases	6		8	4	9
Permitted Phases	6	8			
Detector Phases	6	8	8	4	9
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	21.0	21.0	21.0	22.0
Total Split (s)	37.0	34.0	34.0	34.0	29.0
Total Split (%)	37.0%	34.0%	34.0%	34.0%	29.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	None	None	None	None
v/c Ratio	0.62	0.53	0.18	0.06	0.73
Control Delay	13.8	29.6	29.8	10.1	41.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	13.8	29.7	29.8	10.1	41.5
Queue Length 50th (ft)	161	47	22	0	189
Queue Length 95th (ft)	249	60	m27	11	223
Internal Link Dist (ft)	563		100		528
Turn Bay Length (ft)					
Base Capacity (vph)	2307	792	503	449	866
Starvation Cap Reductn	0	28	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.62	0.22	0.07	0.02	0.69

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 19 (19%), Referenced to phase 6:WBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 13: Beacon St & Raleigh St



Movement	WBT	WBR	NBL	NBT	SBR	NWL	NWR
Lane Configurations							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor	0.91		0.97	1.00	1.00	0.97	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00		0.82	1.00	1.00	1.00	
Frt	1.00		1.00	1.00	0.86	1.00	
Flt Protected	1.00		0.95	1.00	1.00	0.95	
Satd. Flow (prot)	4567		2545	1676	1450	3095	
Flt Permitted	1.00		0.95	1.00	1.00	0.95	
Satd. Flow (perm)	4567		2545	1676	1450	3095	
Volume (vph)	1321	5	157	30	10	544	5
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1436	5	171	33	11	591	5
RTOR Reduction (vph)	0	0	36	0	10	0	0
Lane Group Flow (vph)	1441	0	135	33	1	596	0
Confl. Peds. (#/hr)		151	94		94		
Confl. Bikes (#/hr)							
Turn Type			Perm		custom		
Protected Phases	6			8	4	9	
Permitted Phases	6		8				
Actuated Green, G (s)	49.5		10.2	10.2	10.2	25.3	
Effective Green, g (s)	50.5		11.2	11.2	11.2	26.3	
Actuated g/C Ratio	0.50		0.11	0.11	0.11	0.26	
Clearance Time (s)	5.0		5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	2306		285	188	162	814	
v/s Ratio Prot	c0.32			0.02	0.00	c0.19	
v/s Ratio Perm			c0.05				
v/c Ratio	0.62		0.47	0.18	0.01	0.73	
Uniform Delay, d1	17.9		41.6	40.2	39.5	33.6	
Progression Factor	0.65		0.78	0.72	1.00	1.09	
Incremental Delay, d2	1.1		1.0	0.4	0.0	3.4	
Delay (s)	12.6		33.6	29.3	39.5	40.0	
Level of Service	B		C	C	D	D	
Approach Delay (s)	12.6			32.9		40.0	
Approach LOS	B			C		D	

Intersection Summary			
HCM Average Control Delay	21.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	NBT	ø5
Lane Configurations			
Volume (vph)	1714	15	
Lane Group Flow (vph)	2061	65	
Turn Type			
Protected Phases	2	8	5
Permitted Phases			
Detector Phases	2	8	
Minimum Initial (s)	12.0	4.0	4.0
Minimum Split (s)	20.0	18.0	23.0
Total Split (s)	56.0	21.0	23.0
Total Split (%)	56.0%	21.0%	23%
Yellow Time (s)	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	C-Max	None	None
v/c Ratio	0.58	0.38	
Control Delay	14.8	24.0	
Queue Delay	1.9	0.0	
Total Delay	16.7	24.0	
Queue Length 50th (ft)	212	10	
Queue Length 95th (ft)	m416	50	
Internal Link Dist (ft)	448	192	
Turn Bay Length (ft)			
Base Capacity (vph)	3567	297	
Starvation Cap Reductn	1289	0	
Spillback Cap Reductn	0	0	
Storage Cap Reductn	0	0	
Reduced v/c Ratio	0.90	0.22	

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 26 (26%), Referenced to phase 2:EBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 14: Commonwealth Ave & Kenmore St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0				
Lane Util. Factor		0.91						1.00				
Frt		1.00						0.90				
Flt Protected		1.00						1.00				
Satd. Flow (prot)		4552						1506				
Flt Permitted		1.00						1.00				
Satd. Flow (perm)		4552						1506				
Volume (vph)	172	1714	10	0	0	0	0	15	45	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	187	1863	11	0	0	0	0	16	49	0	0	0
RTOR Reduction (vph)	0	7	0	0	0	0	0	46	0	0	0	0
Lane Group Flow (vph)	0	2054	0	0	0	0	0	19	0	0	0	0
Turn Type	Split											
Protected Phases	2	2						8				
Permitted Phases												
Actuated Green, G (s)		72.5						6.1				
Effective Green, g (s)		73.5						7.1				
Actuated g/C Ratio		0.74						0.07				
Clearance Time (s)		5.0						5.0				
Vehicle Extension (s)		3.0						3.0				
Lane Grp Cap (vph)		3346						107				
v/s Ratio Prot		c0.45						c0.01				
v/s Ratio Perm												
v/c Ratio		0.61						0.18				
Uniform Delay, d1		6.4						43.7				
Progression Factor		1.91						1.00				
Incremental Delay, d2		0.1						0.8				
Delay (s)		12.3						44.5				
Level of Service		B						D				
Approach Delay (s)		12.3			0.0			44.5			0.0	
Approach LOS		B			A			D			A	

Intersection Summary			
HCM Average Control Delay	13.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	19.4
Intersection Capacity Utilization	51.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	10	838	92	41	606	1	24	6	24	5	1	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	911	100	45	659	1	26	7	26	5	1	5
Pedestrians		110			110			110			107	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		9			9			9			9	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		488										
pX, platoon unblocked				0.73			0.73	0.73	0.73	0.73	0.73	
vC, conflicting volume	767			1121			1627	1949	725	1472	1998	547
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	767			790			1487	1929	245	1273	1997	547
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			92			35	82	94	89	97	99
cM capacity (veh/h)	767			545			40	36	452	49	32	398

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	466	555	374	330	59	12
Volume Left	11	0	45	0	26	5
Volume Right	0	100	0	1	26	5
cSH	767	1700	545	1700	66	76
Volume to Capacity	0.01	0.33	0.08	0.19	0.89	0.16
Queue Length 95th (ft)	1	0	7	0	107	13
Control Delay (s)	0.4	0.0	2.5	0.0	185.2	61.3
Lane LOS	A		A		F	F
Approach Delay (s)	0.2		1.3		185.2	61.3
Approach LOS					F	F

Intersection Summary			
Average Delay	7.1		
Intersection Capacity Utilization	72.9%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	20	906	45	45	683	45	5	1	1	5	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.50	0.95	0.95	0.95
Hourly flow rate (vph)	21	954	47	47	719	47	5	1	2	5	1	1
Pedestrians		199			199			170			199	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		17			17			14			17	
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage veh)								0			0	
Upstream signal (ft)		929										
pX, platoon unblocked				0.78			0.78	0.78	0.78	0.78	0.78	
vC, conflicting volume	965			1171			1844	2250	870	1757	2250	781
vC1, stage 1 conf vol							1189	1189		1036	1036	
vC2, stage 2 conf vol							655	1060		720	1213	
vCu, unblocked vol	965			937			1800	2320	551	1688	2320	781
tC, single (s)	4.1			4.2			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			90			94	99	99	94	99	100
cM capacity (veh/h)	597			478			83	78	270	90	72	238

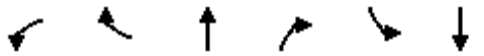
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	498	524	407	407	8	7
Volume Left	21	0	47	0	5	5
Volume Right	0	47	0	47	2	1
cSH	597	1700	478	1700	98	95
Volume to Capacity	0.04	0.31	0.10	0.24	0.08	0.08
Queue Length 95th (ft)	3	0	8	0	7	6
Control Delay (s)	1.0	0.0	3.0	0.0	45.0	45.9
Lane LOS	A		A		E	E
Approach Delay (s)	0.5		1.5		45.0	45.9
Approach LOS					E	E

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	78.2%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	WBL	WBR	WBR2	SEL2	SEL	SER	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control	Stop				Stop			Free			Free	
Grade	0%				0%			0%			0%	
Volume (veh/h)	121	35	82	10	0	5	25	327	0	0	632	40
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	127	37	86	11	0	5	26	344	0	0	665	42
Pedestrians					113			118			118	
Lane Width (ft)					12.0			12.0			12.0	
Walking Speed (ft/s)					4.0			4.0			4.0	
Percent Blockage					9			10			10	
Right turn flare (veh)												
Median type	None				None							
Median storage veh)												
Upstream signal (ft)								898			872	
pX, platoon unblocked												
vC, conflicting volume	1206	1217	462	1419	1196	917	820			344		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1206	1217	462	1419	1196	917	820			344		
tC, single (s)	7.1	6.5	6.2	7.2	6.6	6.3	4.2			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.1	3.4	2.3			2.2		
p0 queue free %	1	77	84	82	100	98	96			100		
cM capacity (veh/h)	129	159	544	57	159	265	717			1215		

Direction, Lane #	WB 1	SE 1	SE 2	NE 1	SW 1
Volume Total	251	11	5	371	707
Volume Left	127	11	0	26	0
Volume Right	86	0	5	0	42
cSH	182	57	265	717	1700
Volume to Capacity	1.38	0.18	0.02	0.04	0.42
Queue Length 95th (ft)	372	15	2	3	0
Control Delay (s)	249.2	81.5	18.9	1.2	0.0
Lane LOS	F	F	C	A	
Approach Delay (s)	249.2	60.6		1.2	0.0
Approach LOS	F	F			

Intersection Summary				
Average Delay	47.5			
Intersection Capacity Utilization	83.7%	ICU Level of Service	E	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	0	0	328	91	86	672
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	345	96	91	707
Pedestrians	232					
Lane Width (ft)	0.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)			1073			697
pX, platoon unblocked						
vC, conflicting volume	1514	625			673	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1514	625			673	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			90	
cM capacity (veh/h)	119	485			918	

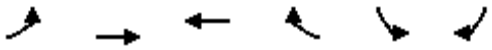
Direction, Lane #	NB 1	SB 1
Volume Total	441	798
Volume Left	0	91
Volume Right	96	0
cSH	1700	918
Volume to Capacity	0.26	0.10
Queue Length 95th (ft)	0	8
Control Delay (s)	0.0	2.5
Lane LOS		A
Approach Delay (s)	0.0	2.5
Approach LOS		

Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	78.3%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	307	20	10	702	56	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	334	22	11	763	61	5
Pedestrians	299			299	299	
Lane Width (ft)	16.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	33			25	25	
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				208		
pX, platoon unblocked						
vC, conflicting volume			654		1727	943
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			654		1727	943
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		0	97
cM capacity (veh/h)			700		48	180

Direction, Lane #	NB 1	SB 1	NW 1
Volume Total	355	774	66
Volume Left	0	11	61
Volume Right	22	0	5
cSH	1700	700	51
Volume to Capacity	0.21	0.02	1.30
Queue Length 95th (ft)	0	1	151
Control Delay (s)	0.0	0.4	355.7
Lane LOS		A	F
Approach Delay (s)	0.0	0.4	355.7
Approach LOS			F

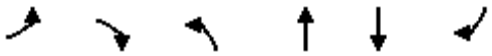
Intersection Summary			
Average Delay	20.0		
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Stop	Stop		Stop	
Volume (vph)	25	0	51	35	0	10
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	26	0	54	37	0	11

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total (vph)	26	91	11
Volume Left (vph)	26	0	0
Volume Right (vph)	0	37	11
Hadj (s)	0.23	-0.21	-0.57
Departure Headway (s)	4.2	3.7	3.6
Degree Utilization, x	0.03	0.09	0.01
Capacity (veh/h)	839	955	965
Control Delay (s)	7.4	7.1	6.6
Approach Delay (s)	7.4	7.1	6.6
Approach LOS	A	A	A

Intersection Summary			
Delay	7.1		
HCM Level of Service	A		
Intersection Capacity Utilization	20.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	30	101	0	45	237	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	33	110	0	49	258	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)				880		
pX, platoon unblocked						
vC, conflicting volume	307	258	258			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	307	258	258			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	86	100			
cM capacity (veh/h)	686	781	1307			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	142	49	258
Volume Left	33	0	0
Volume Right	110	0	0
cSH	757	1700	1700
Volume to Capacity	0.19	0.03	0.15
Queue Length 95th (ft)	17	0	0
Control Delay (s)	10.9	0.0	0.0
Lane LOS	B		
Approach Delay (s)	10.9	0.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	3.4		
Intersection Capacity Utilization	29.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	1	35	37	399	703	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	38	40	434	764	14
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)				464	1306	
pX, platoon unblocked						
vC, conflicting volume	1285	771	778			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1285	771	778			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	90	95			
cM capacity (veh/h)	173	400	838			

Direction, Lane #	SE 1	NE 1	SW 1
Volume Total	39	474	778
Volume Left	1	40	0
Volume Right	38	0	14
cSH	386	838	1700
Volume to Capacity	0.10	0.05	0.46
Queue Length 95th (ft)	8	4	0
Control Delay (s)	15.4	1.4	0.0
Lane LOS	C	A	
Approach Delay (s)	15.4	1.4	0.0
Approach LOS	C		

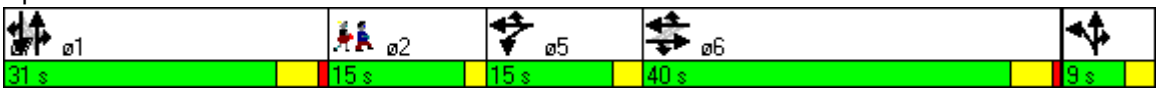
Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	246	555	161	256	805	40	224	550	101	44	738	25
Lane Group Flow (vph)	265	597	173	272	856	43	0	922	120	0	859	27
Turn Type	Perm		Prot	D.P+P		Prot	D.P+P		Prot	Perm		Prot
Protected Phases		6	6	5	5 6	5 6	7	1 7	1 7		1	1
Permitted Phases	6			6			1			1		
Detector Phases	6	6	6	5	5 6	5 6	7	1 7	1 7	1	1	1
Minimum Initial (s)	10.0	10.0	10.0	2.0			2.0			10.0	10.0	10.0
Minimum Split (s)	15.0	15.0	15.0	10.0			10.0			15.0	15.0	15.0
Total Split (s)	40.0	40.0	40.0	15.0	55.0	55.0	9.0	40.0	40.0	31.0	31.0	31.0
Total Split (%)	36.4%	36.4%	36.4%	13.6%	50.0%	50.0%	8.2%	36.4%	36.4%	28.2%	28.2%	28.2%
Yellow Time (s)	4.0	4.0	4.0	3.0			3.0			4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	0.0			0.0			1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lag	Lead						Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes						Yes	Yes	Yes
Recall Mode	Min	Min	Min	None			None			C-Min	C-Min	C-Min
v/c Ratio	1.80	0.57	0.31	0.84	0.57	0.06		1.79dl	0.20		1.59	0.06
Control Delay	413.1	33.1	9.3	44.6	22.6	8.5		196.1	14.7		293.8	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Delay	413.1	33.1	9.3	44.6	22.6	8.5		196.1	14.7		293.8	5.0
Queue Length 50th (ft)	~282	182	19	103	116	3		~487	30		~499	6
Queue Length 95th (ft)	#446	240	70	m102	m111	m3		#560	66		m#544	m6
Internal Link Dist (ft)		968			408			638			275	
Turn Bay Length (ft)	50		100			100			100			100
Base Capacity (vph)	147	1053	561	323	1506	690		684	586		539	441
Starvation Cap Reductn	0	0	0	0	0	0		0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0		0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0		0	0		0	0
Reduced v/c Ratio	1.80	0.57	0.31	0.84	0.57	0.06		1.35	0.20		1.59	0.06

Intersection Summary

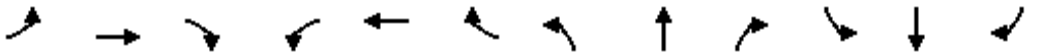
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 77 (70%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 1: Beacon Street & Park Dr



Lane Group	ø2
Lane Configurations	
Volume (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	2
Permitted Phases	
Detector Phases	
Minimum Initial (s)	2.0
Minimum Split (s)	15.0
Total Split (s)	15.0
Total Split (%)	14%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Recall Mode	None
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Flpb, ped/bikes	0.82	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99	1.00		1.00	1.00
Satd. Flow (prot)	1313	3217	1439	1624	3249	1454		3171	1439		3208	1439
Flt Permitted	0.32	1.00	1.00	0.29	1.00	1.00		0.54	1.00		0.64	1.00
Satd. Flow (perm)	448	3217	1439	493	3249	1454		1722	1439		2058	1439
Volume (vph)	246	555	161	256	805	40	224	550	101	44	738	25
Peak-hour factor, PHF	0.93	0.93	0.93	0.94	0.94	0.94	0.84	0.84	0.84	0.91	0.91	0.91
Adj. Flow (vph)	265	597	173	272	856	43	267	655	120	48	811	27
RTOR Reduction (vph)	0	0	90	0	0	16	0	0	38	0	0	9
Lane Group Flow (vph)	265	597	83	272	856	27	0	922	82	0	859	18
Confl. Peds. (#/hr)	149		184	184		149	84		107	107		84
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Turn Type	Perm		Prot	D.P+P		Prot	D.P+P		Prot	Perm		Prot
Protected Phases		6	6	5	5 6	5 6	7	1 7	1 7		1	1
Permitted Phases	6			6			1			1		
Actuated Green, G (s)	35.0	35.0	35.0	47.0	50.0	50.0		37.2	40.2		31.2	31.2
Effective Green, g (s)	36.0	36.0	36.0	47.0	51.0	51.0		37.2	41.2		32.2	32.2
Actuated g/C Ratio	0.33	0.33	0.33	0.43	0.46	0.46		0.34	0.37		0.29	0.29
Clearance Time (s)	5.0	5.0	5.0	3.0							5.0	5.0
Vehicle Extension (s)	2.0	2.0	2.0	2.0							2.0	2.0
Lane Grp Cap (vph)	147	1053	471	324	1506	674		648	539		602	421
v/s Ratio Prot		0.19	0.06	c0.08	0.26	0.02		c0.06	0.06			0.01
v/s Ratio Perm	c0.59			0.27				0.42			c0.42	
v/c Ratio	1.80	0.57	0.18	0.84	0.57	0.04		1.79dl	0.15		1.43	0.04
Uniform Delay, d1	37.0	30.6	26.4	24.2	21.5	16.1		36.4	22.8		38.9	27.9
Progression Factor	1.00	1.00	1.00	1.59	1.01	1.03		1.00	1.00		0.49	0.23
Incremental Delay, d2	386.9	0.4	0.1	7.0	0.1	0.0		199.2	0.0		197.2	0.1
Delay (s)	423.9	31.0	26.5	45.5	21.8	16.6		235.6	22.9		216.3	6.5
Level of Service	F	C	C	D	C	B		F	C		F	A
Approach Delay (s)		130.8			27.1			211.1			209.9	
Approach LOS		F			C			F			F	

Intersection Summary			
HCM Average Control Delay	138.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.51		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	25.8
Intersection Capacity Utilization	101.4%	ICU Level of Service	G
Analysis Period (min)	15		

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

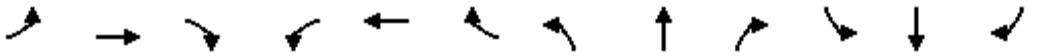
c Critical Lane Group

Lane Group	WBL	WBT	SBT	SBR
Lane Configurations				
Volume (vph)	430	904	860	445
Lane Group Flow (vph)	448	942	896	464
Turn Type	Split			Prot
Protected Phases	1	1	5	5
Permitted Phases				
Detector Phases	1	1	5	5
Minimum Initial (s)	10.0	10.0	13.0	13.0
Minimum Split (s)	20.0	20.0	23.0	23.0
Total Split (s)	40.0	40.0	50.0	50.0
Total Split (%)	44.4%	44.4%	55.6%	55.6%
Yellow Time (s)	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	C-Min	C-Min	None	None
v/c Ratio	0.27	0.38	0.72	0.83
Control Delay	21.0	21.2	26.0	36.8
Queue Delay	1.5	2.8	0.0	0.0
Total Delay	22.5	24.0	26.0	36.8
Queue Length 50th (ft)	90	135	224	235
Queue Length 95th (ft)	133	179	210	265
Internal Link Dist (ft)		105	209	
Turn Bay Length (ft)				100
Base Capacity (vph)	1675	2480	1680	752
Starvation Cap Reductn	1008	1385	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.67	0.86	0.53	0.62

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 85 (94%), Referenced to phase 1:WBTL, Start of Green
Natural Cycle: 45
Control Type: Actuated-Coordinated

Splits and Phases: 2: Riverway & Park Dr



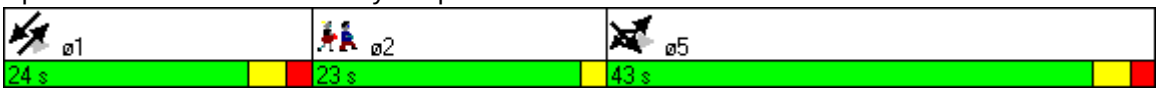
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0						4.0	4.0
Lane Util. Factor				0.97	0.91						0.95	1.00
Frpb, ped/bikes				1.00	1.00						1.00	1.00
Flpb, ped/bikes				1.00	1.00						1.00	1.00
Frt				1.00	1.00						1.00	0.85
Flt Protected				0.95	1.00						1.00	1.00
Satd. Flow (prot)				3152	4668						3249	1454
Flt Permitted				0.95	1.00						1.00	1.00
Satd. Flow (perm)				3152	4668						3249	1454
Volume (vph)	0	0	0	430	904	0	0	0	0	0	860	445
Peak-hour factor, PHF	0.95	0.95	0.95	0.96	0.96	0.96	0.95	0.95	0.95	0.96	0.96	0.96
Adj. Flow (vph)	0	0	0	448	942	0	0	0	0	0	896	464
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	448	942	0	0	0	0	0	896	464
Confl. Peds. (#/hr)				20		40						40
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type				Split								Prot
Protected Phases				1	1						5	5
Permitted Phases												
Actuated Green, G (s)				46.3	46.3						33.7	33.7
Effective Green, g (s)				47.3	47.3						34.7	34.7
Actuated g/C Ratio				0.53	0.53						0.39	0.39
Clearance Time (s)				5.0	5.0						5.0	5.0
Vehicle Extension (s)				2.0	2.0						2.0	2.0
Lane Grp Cap (vph)				1657	2453						1253	561
v/s Ratio Prot				0.14	c0.20						0.28	c0.32
v/s Ratio Perm												
v/c Ratio				0.27	0.38						0.72	0.83
Uniform Delay, d1				11.8	12.7						23.5	24.9
Progression Factor				1.46	1.42						1.00	1.00
Incremental Delay, d2				0.3	0.4						1.6	9.3
Delay (s)				17.6	18.4						25.1	34.2
Level of Service				B	B						C	C
Approach Delay (s)		0.0			18.1			0.0			28.2	
Approach LOS		A			B			A			C	

Intersection Summary			
HCM Average Control Delay	23.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	SEL2	SET	SER	NET	NER	SWT	ø2
Lane Configurations							
Volume (vph)	771	853	192	1391	190	1159	
Lane Group Flow (vph)	638	1331	206	1546	284	1220	
Turn Type	custom		Prot		Perm		
Protected Phases	5	5	5	1		1	2
Permitted Phases	5				1		
Detector Phases	5	5	5	1	1	1	
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	7.0
Minimum Split (s)	15.0	15.0	15.0	15.0	15.0	15.0	24.0
Total Split (s)	43.0	43.0	43.0	24.0	24.0	24.0	23.0
Total Split (%)	47.8%	47.8%	47.8%	26.7%	26.7%	26.7%	26%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	2.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	0.0
Lead/Lag				Lead	Lead	Lead	Lag
Lead-Lag Optimize?				Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	C-Max	C-Max	C-Max	None
v/c Ratio	1.00	1.00	0.33	1.27	0.52	1.00	
Control Delay	58.9	48.6	16.1	154.2	31.1	37.8	
Queue Delay	59.8	63.3	0.0	21.7	0.0	370.7	
Total Delay	118.7	111.9	16.1	175.9	31.1	408.5	
Queue Length 50th (ft)	412	~431	55	442	101	172	
Queue Length 95th (ft)	#658	#586	m141	#880	#301	m#315	
Internal Link Dist (ft)		268		23		183	
Turn Bay Length (ft)							
Base Capacity (vph)	640	1329	630	1220	546	1220	
Starvation Cap Reductn	0	0	0	0	0	561	
Spillback Cap Reductn	90	186	0	45	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	1.16	1.16	0.33	1.32	0.52	1.85	

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 15 (17%), Referenced to phase 1:NESW, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Fenway Loop & Brookline Ave



Movement	SEL2	SEL	SET	SER	NET	NER	NER2	SWT
Lane Configurations								
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0		4.0
Lane Util. Factor	0.91		0.91	1.00	0.95	1.00		0.95
Frt	1.00		1.00	0.85	1.00	0.85		1.00
Flt Protected	0.95		0.98	1.00	1.00	1.00		1.00
Satd. Flow (prot)	1478		3065	1454	3249	1454		3249
Flt Permitted	0.95		0.98	1.00	1.00	1.00		1.00
Satd. Flow (perm)	1478		3065	1454	3249	1454		3249
Volume (vph)	771	207	853	192	1391	190	66	1159
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.90	0.90	0.90	0.95
Adj. Flow (vph)	829	223	917	206	1546	211	73	1220
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	638	0	1331	206	1546	284	0	1220
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	custom	Perm		Prot		Perm		
Protected Phases	5		5	5	1			1
Permitted Phases	5	5				1		
Actuated Green, G (s)	38.0		38.0	38.0	31.6	31.6		31.6
Effective Green, g (s)	39.0		39.0	39.0	32.6	32.6		32.6
Actuated g/C Ratio	0.43		0.43	0.43	0.36	0.36		0.36
Clearance Time (s)	5.0		5.0	5.0	5.0	5.0		5.0
Vehicle Extension (s)	2.0		2.0	2.0	2.0	2.0		2.0
Lane Grp Cap (vph)	640		1328	630	1177	527		1177
v/s Ratio Prot	0.43			0.14	c0.48			0.38
v/s Ratio Perm			0.43			0.20		
v/c Ratio	1.00		1.00	0.33	1.31	0.54		1.04
Uniform Delay, d1	25.4		25.5	16.8	28.7	22.7		28.7
Progression Factor	0.88		0.88	0.85	1.00	1.00		0.90
Incremental Delay, d2	34.1		24.8	1.3	147.2	3.9		19.7
Delay (s)	56.5		47.2	15.7	175.9	26.7		45.4
Level of Service	E		D	B	F	C		D
Approach Delay (s)			46.9		152.8			45.4
Approach LOS			D		F			D

Intersection Summary			
HCM Average Control Delay	83.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.4
Intersection Capacity Utilization	87.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBL	NWT	NWR	NET	NER	SWT	SWR
Lane Configurations							
Volume (vph)	649	1000	110	490	1672	435	320
Lane Group Flow (vph)	1497	1235	248	551	1879	473	348
Turn Type			Prot		pt+ov		Perm
Protected Phases	1	6	6	5	1 5	5	
Permitted Phases							5
Detector Phases	1	6	6	5	1 5	5	5
Minimum Initial (s)	10.0	10.0	10.0	10.0		10.0	10.0
Minimum Split (s)	19.0	21.0	21.0	19.0		19.0	19.0
Total Split (s)	29.0	27.0	27.0	34.0	63.0	34.0	34.0
Total Split (%)	32.2%	30.0%	30.0%	37.8%	70.0%	37.8%	37.8%
Yellow Time (s)	5.0	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	2.0		2.0	2.0
Lead/Lag		Lag	Lag	Lead		Lead	Lead
Lead-Lag Optimize?		Yes	Yes	Yes		Yes	Yes
Recall Mode	C-Max	Max	Max	Max		Max	Max
v/c Ratio	3.31dr	1.04	0.67	0.51	1.13	0.45	1.07
Control Delay	863.6	70.7	40.2	19.8	76.7	22.0	94.0
Queue Delay	0.0	53.5	0.0	7.5	128.3	0.3	0.0
Total Delay	863.6	124.2	40.2	27.3	205.0	22.3	94.0
Queue Length 50th (ft)	~759	~280	127	139	~720	110	~213
Queue Length 95th (ft)	#888	#349	201	m97	m189	m153	m#377
Internal Link Dist (ft)	668	176		183		648	
Turn Bay Length (ft)							150
Base Capacity (vph)	521	1189	372	1072	1661	1062	325
Starvation Cap Reductn	0	0	0	470	337	0	0
Spillback Cap Reductn	102	132	0	0	0	183	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	3.57	1.17	0.67	0.92	1.42	0.54	1.07

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 89 (99%), Referenced to phase 1:WBL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
~ 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.
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 4: Boylston St & Brookline Ave

Movement	WBL	WBR	WBR2	NWL	NWT	NWR	NWR2	NET	NER	SWT	SWR
Lane Configurations											
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0				4.0	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.97				0.91	1.00		0.95	0.88	0.95	1.00
Frpb, ped/bikes	0.63				1.00	1.00		1.00	1.00	1.00	0.68
Flpb, ped/bikes	1.00				1.00	1.00		1.00	1.00	1.00	1.00
Frt	0.92				1.00	0.85		1.00	0.85	1.00	0.85
Flt Protected	0.98				1.00	1.00		1.00	1.00	1.00	1.00
Satd. Flow (prot)	1878				4652	1454		3217	2533	3185	975
Flt Permitted	0.98				1.00	1.00		1.00	1.00	1.00	1.00
Satd. Flow (perm)	1878				4652	1454		3217	2533	3185	975
Volume (vph)	649	678	5	75	1000	110	106	490	1672	435	320
Peak-hour factor, PHF	0.89	0.89	0.89	0.87	0.87	0.87	0.87	0.89	0.89	0.92	0.92
Adj. Flow (vph)	729	762	6	86	1149	126	122	551	1879	473	348
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	1497	0	0	0	1235	248	0	551	1879	473	348
Confl. Peds. (#/hr)			461								168
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	1%	2%	2%
Turn Type				Split		Prot			pt+ov		Perm
Protected Phases	1			6	6	6		5	1 5	5	
Permitted Phases											5
Actuated Green, G (s)	23.0				21.0	21.0		28.0	57.0	28.0	28.0
Effective Green, g (s)	25.0				23.0	23.0		30.0	59.0	30.0	30.0
Actuated g/C Ratio	0.28				0.26	0.26		0.33	0.66	0.33	0.33
Clearance Time (s)	6.0				6.0	6.0		6.0		6.0	6.0
Vehicle Extension (s)	3.0				3.0	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	522				1189	372		1072	1661	1062	325
v/s Ratio Prot	c0.80				c0.27	0.17		0.17	c0.74	0.15	
v/s Ratio Perm											0.36
v/c Ratio	3.31dr				1.04	0.67		0.51	1.13	0.45	1.07
Uniform Delay, d1	32.5				33.5	30.1		24.1	15.5	23.5	30.0
Progression Factor	0.78				1.00	1.00		0.80	0.85	0.88	0.86
Incremental Delay, d2	844.5				36.7	9.1		0.2	59.9	1.1	65.5
Delay (s)	869.9				70.2	39.2		19.6	73.1	21.8	91.2
Level of Service	F				E	D		B	E	C	F
Approach Delay (s)	869.9				65.0			60.9		51.2	
Approach LOS	F				E			E		D	

Intersection Summary			
HCM Average Control Delay	255.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.61		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	97.7%	ICU Level of Service	F
Analysis Period (min)	15		

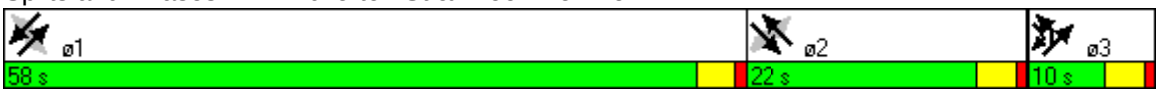
dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

Lane Group	SEL	SET	SER	NWL	NWT	NEL	NET	SWL	SWT
Lane Configurations									
Volume (vph)	86	45	242	101	40	126	376	32	407
Lane Group Flow (vph)	0	140	263	0	179	137	435	34	491
Turn Type	Perm		pm+ov	Perm		D.P+P		Perm	
Protected Phases		2	3		2	3	1 3		1
Permitted Phases	2		2	2		1		1	
Detector Phases	2	2	3	2	2	3	1 3	1	1
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.0	20.0	10.0	20.0	20.0	10.0		58.0	58.0
Total Split (s)	22.0	22.0	10.0	22.0	22.0	10.0	68.0	58.0	58.0
Total Split (%)	24.4%	24.4%	11.1%	24.4%	24.4%	11.1%	75.6%	64.4%	64.4%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0
Lead/Lag	Lag	Lag		Lag	Lag			Lead	Lead
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	None		Max	Max
v/c Ratio		0.74	0.64		0.83	0.34	0.39	0.46	0.48
Control Delay		59.3	28.1		64.2	8.7	6.1	34.8	11.8
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		59.3	28.1		64.2	8.7	6.1	34.8	11.8
Queue Length 50th (ft)		75	93		93	15	48	10	140
Queue Length 95th (ft)		#168	171		#206	m40	m71	#58	215
Internal Link Dist (ft)		352			75		648		198
Turn Bay Length (ft)									
Base Capacity (vph)		194	408		222	398	1115	74	1024
Starvation Cap Reductn		0	0		0	0	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		0.72	0.64		0.81	0.34	0.39	0.46	0.48

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 27 (30%), Referenced to phase 6:, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Fullerton St & Brookline Ave



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	16	12	12	12	12	12	10	10	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	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	0.94	
Flpb, ped/bikes		0.83	1.00		1.00		0.92	1.00		1.00	1.00	
Frt		1.00	0.85		0.98		1.00	0.99		1.00	0.99	
Flt Protected		0.97	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1339	1361		1590		1363	1551		1593	1700	
Flt Permitted		0.70	1.00		0.65		0.40	1.00		0.07	1.00	
Satd. Flow (perm)		966	1361		1064		572	1551		124	1700	
Volume (vph)	86	45	242	101	40	29	126	376	25	32	407	45
Peak-hour factor, PHF	0.92	0.95	0.92	0.95	0.95	0.95	0.92	0.92	0.95	0.95	0.92	0.92
Adj. Flow (vph)	93	47	263	106	42	31	137	409	26	34	442	49
RTOR Reduction (vph)	0	0	45	0	8	0	0	3	0	0	4	0
Lane Group Flow (vph)	0	140	218	0	171	0	137	432	0	34	487	0
Confl. Peds. (#/hr)	162		30				423					423
Turn Type	Perm		pm+ov	Perm			D.P+P			Perm		
Protected Phases		2	3		2		3	1 3			1	
Permitted Phases	2		2	2			1			1		
Actuated Green, G (s)		17.5	24.0		17.5		60.5	64.5		54.0	54.0	
Effective Green, g (s)		17.5	24.0		17.5		60.5	64.5		54.0	54.0	
Actuated g/C Ratio		0.19	0.27		0.19		0.67	0.72		0.60	0.60	
Clearance Time (s)		4.0	4.0		4.0		4.0			4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0			3.0	3.0	
Lane Grp Cap (vph)		188	423		207		442	1112		74	1020	
v/s Ratio Prot			c0.04				0.02	0.28			c0.29	
v/s Ratio Perm		0.15	0.12		c0.16		0.19			0.27		
v/c Ratio		0.74	0.51		0.83		0.31	0.39		0.46	0.48	
Uniform Delay, d1		34.1	28.0		34.8		6.0	5.0		9.9	10.1	
Progression Factor		1.00	1.00		1.00		1.55	1.02		1.00	1.00	
Incremental Delay, d2		14.8	1.1		22.8		0.3	0.2		19.2	1.6	
Delay (s)		48.9	29.1		57.5		9.6	5.3		29.1	11.7	
Level of Service		D	C		E		A	A		C	B	
Approach Delay (s)		36.0			57.5			6.3			12.8	
Approach LOS		D			E			A			B	

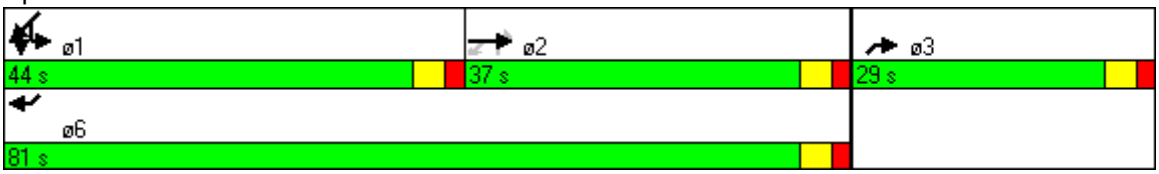
Intersection Summary			
HCM Average Control Delay	20.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR2	NBR2	SBR2	NER	SWL	SWT	SWR
Lane Configurations								
Volume (vph)	688	40	496	81	642	349	1140	697
Lane Group Flow (vph)	980	53	570	88	731	417	1239	819
Turn Type		Perm	custom	Free	custom	Split		custom
Protected Phases	2				3	1	1	6
Permitted Phases		2	2	Free				
Detector Phases	2	2	2		3	1	1	6
Minimum Initial (s)	8.0	8.0	8.0		4.0	4.0	4.0	8.0
Minimum Split (s)	30.0	30.0	30.0		29.0	9.0	9.0	30.0
Total Split (s)	37.0	37.0	37.0	0.0	29.0	44.0	44.0	81.0
Total Split (%)	33.6%	33.6%	33.6%	0.0%	26.4%	40.0%	40.0%	73.6%
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag	Lag			Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes			Yes	Yes	
Recall Mode	None	None	None		None	C-Min	C-Min	None
v/c Ratio	0.84	0.24	1.47	0.06	1.26	0.74	1.11	0.48
Control Delay	27.6	10.8	247.8	0.1	173.2	32.9	88.6	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.6	10.8	247.8	0.1	173.2	32.9	88.6	7.3
Queue Length 50th (ft)	239	9	~468	0	~378	160	~517	116
Queue Length 95th (ft)	181	m11	#651	0	m#496	330	#652	104
Internal Link Dist (ft)	211						1	
Turn Bay Length (ft)		40						
Base Capacity (vph)	1165	217	388	1420	579	561	1115	1694
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.24	1.47	0.06	1.26	0.74	1.11	0.48

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 81 (74%), Referenced to phase 1:SWTL, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 11: Commonwealth Ave & Beacon Street



Movement	EBT	EBR	EBR2	NBR2	SBR2	NER	NER2	SWL2	SWL	SWT	SWR	SWR2
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0			4.0	4.0	4.0	
Lane Util. Factor	0.86		0.86	1.00	1.00	0.88			1.00	0.95	0.88	
Frpb, ped/bikes	0.96		0.76	0.86	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	1.00	1.00	
Frt	0.99		0.85	0.86	0.86	0.85			1.00	1.00	0.85	
Flt Protected	1.00		1.00	1.00	1.00	1.00			0.95	1.00	1.00	
Satd. Flow (prot)	3886		684	898	1420	2533			1533	3065	2413	
Flt Permitted	1.00		1.00	1.00	1.00	1.00			0.95	1.00	1.00	
Satd. Flow (perm)	3886		684	898	1420	2533			1533	3065	2413	
Volume (vph)	688	47	40	496	81	642	30	35	349	1140	697	56
Peak-hour factor, PHF	0.75	0.75	0.75	0.87	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	917	63	53	570	88	698	33	38	379	1239	758	61
RTOR Reduction (vph)	0	0	12	119	0	3	0	0	3	0	5	0
Lane Group Flow (vph)	980	0	41	451	88	728	0	0	414	1239	814	0
Confl. Peds. (#/hr)		470	174	98	96	98	170	98	170		98	170
Heavy Vehicles (%)	8%	8%	8%	10%	0%	1%	1%	6%	6%	6%	6%	6%
Parking (#/hr)			25	25			25					
Turn Type			Perm	custom	Free	custom		Split	Split		custom	
Protected Phases	2					3		1	1	1	6	
Permitted Phases			2	2	Free							
Actuated Green, G (s)	32.0		32.0	32.0	110.0	24.0			39.0	39.0	76.0	
Effective Green, g (s)	33.0		33.0	33.0	110.0	25.0			40.0	40.0	77.0	
Actuated g/C Ratio	0.30		0.30	0.30	1.00	0.23			0.36	0.36	0.70	
Clearance Time (s)	5.0		5.0	5.0		5.0			5.0	5.0	5.0	
Vehicle Extension (s)	3.0		3.0	3.0		3.0			3.0	3.0	3.0	
Lane Grp Cap (vph)	1166		205	269	1420	576			557	1115	1689	
v/s Ratio Prot	0.25					c0.29			0.27	c0.40	0.34	
v/s Ratio Perm			0.06	c0.50	0.06							
v/c Ratio	0.84		0.20	1.68	0.06	1.26			0.74	1.11	0.48	
Uniform Delay, d1	36.0		28.7	38.5	0.0	42.5			30.5	35.0	7.5	
Progression Factor	0.62		0.41	1.00	1.00	1.24			0.85	0.80	0.88	
Incremental Delay, d2	3.7		0.3	320.2	0.1	131.0			6.7	60.2	0.2	
Delay (s)	25.9		12.0	358.7	0.1	183.9			32.5	88.2	6.7	
Level of Service	C		B	F	A	F			C	F	A	
Approach Delay (s)	25.2									51.8		
Approach LOS	C									D		

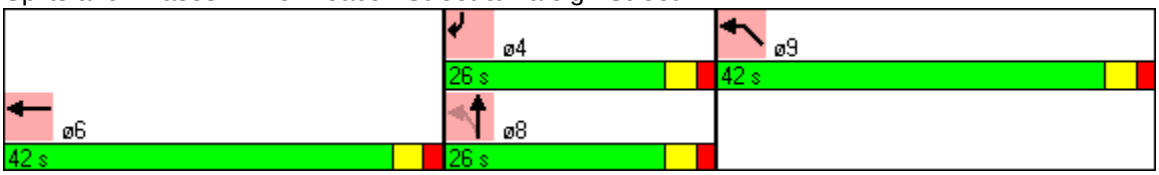
Intersection Summary			
HCM Average Control Delay	100.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.34		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	129.9%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBT	NBL	NBT	SBR	NWL
Lane Configurations					
Volume (vph)	1386	126	25	10	755
Lane Group Flow (vph)	1508	137	27	11	832
Turn Type		Perm		custom	
Protected Phases	6		8	4	9
Permitted Phases		8			
Detector Phases	6	8	8	4	9
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	19.0	21.0	21.0	13.0	21.0
Total Split (s)	42.0	26.0	26.0	26.0	42.0
Total Split (%)	38.2%	23.6%	23.6%	23.6%	38.2%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	None	None	None	None
v/c Ratio	0.62	0.47	0.18	0.08	0.75
Control Delay	18.0	46.9	56.8	46.7	26.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	18.0	47.0	56.8	46.7	26.8
Queue Length 50th (ft)	207	30	20	7	201
Queue Length 95th (ft)	m372	64	m35	25	205
Internal Link Dist (ft)	511		111		478
Turn Bay Length (ft)					
Base Capacity (vph)	2448	643	373	322	1271
Starvation Cap Reductn	0	21	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.62	0.22	0.07	0.03	0.65

Intersection Summary
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 94 (85%), Referenced to phase 6:WBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 13: Beacon Street & Raleigh Street



Movement	WBT	WBR	NBL	NBT	SBR	NWL	NWR
Lane Configurations							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor	0.91		0.97	1.00	1.00	0.97	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	0.99	
Flpb, ped/bikes	1.00		0.88	1.00	1.00	1.00	
Frt	1.00		1.00	1.00	0.86	1.00	
Flt Protected	1.00		0.95	1.00	1.00	0.95	
Satd. Flow (prot)	5083		3029	1863	1611	3413	
Flt Permitted	1.00		0.95	1.00	1.00	0.95	
Satd. Flow (perm)	5083		3029	1863	1611	3413	
Volume (vph)	1386	1	126	25	10	755	10
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1507	1	137	27	11	821	11
RTOR Reduction (vph)	0	0	42	0	0	0	0
Lane Group Flow (vph)	1508	0	95	27	11	832	0
Confl. Peds. (#/hr)		175	57		57		175
Turn Type			Perm		custom		
Protected Phases	6			8	4	9	
Permitted Phases			8				
Actuated Green, G (s)	52.0		8.0	8.0	8.0	35.0	
Effective Green, g (s)	53.0		9.0	9.0	9.0	36.0	
Actuated g/C Ratio	0.48		0.08	0.08	0.08	0.33	
Clearance Time (s)	5.0		5.0	5.0	5.0	5.0	
Vehicle Extension (s)	2.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	2449		248	152	132	1117	
v/s Ratio Prot	c0.30			0.01	0.01	c0.24	
v/s Ratio Perm			c0.03				
v/c Ratio	0.62		0.38	0.18	0.08	0.74	
Uniform Delay, d1	21.0		47.9	47.1	46.7	32.9	
Progression Factor	0.74		1.35	1.18	1.00	0.70	
Incremental Delay, d2	0.8		0.8	0.5	0.3	2.7	
Delay (s)	16.3		65.3	56.1	47.0	25.6	
Level of Service	B		E	E	D	C	
Approach Delay (s)	16.3			63.7		25.6	
Approach LOS	B			E		C	

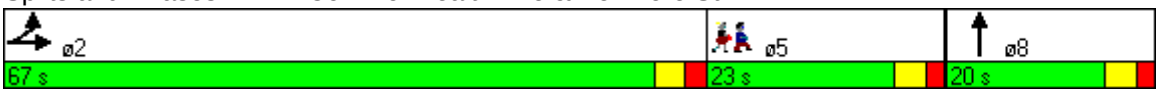
Intersection Summary			
HCM Average Control Delay	22.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		

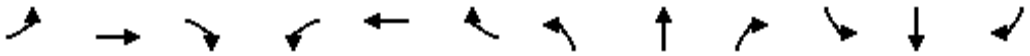
c Critical Lane Group

Lane Group	EBT	NBT	ø5
Lane Configurations			
Volume (vph)	1710	15	
Lane Group Flow (vph)	2023	77	
Turn Type			
Protected Phases	2	8	5
Permitted Phases			
Detector Phases	2	8	
Minimum Initial (s)	4.0	8.0	4.0
Minimum Split (s)	21.0	20.0	23.0
Total Split (s)	67.0	20.0	23.0
Total Split (%)	60.9%	18.2%	21%
Yellow Time (s)	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	C-Max	None	None
v/c Ratio	0.56	0.41	
Control Delay	7.2	23.2	
Queue Delay	0.2	0.0	
Total Delay	7.4	23.2	
Queue Length 50th (ft)	147	11	
Queue Length 95th (ft)	m207	56	
Internal Link Dist (ft)	453	193	
Turn Bay Length (ft)			
Base Capacity (vph)	3617	270	
Starvation Cap Reductn	650	0	
Spillback Cap Reductn	0	0	
Storage Cap Reductn	0	0	
Reduced v/c Ratio	0.68	0.29	

Intersection Summary
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 107 (97%), Referenced to phase 2:EBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 14: Commonwealth Ave & Kenmore St

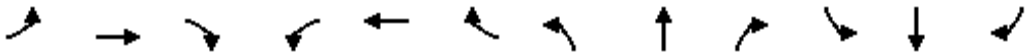




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0				
Lane Util. Factor		0.91						1.00				
Frt		1.00						0.89				
Flt Protected		1.00						1.00				
Satd. Flow (prot)		4553						1497				
Flt Permitted		1.00						1.00				
Satd. Flow (perm)		4553						1497				
Volume (vph)	131	1710	20	0	0	0	0	15	56	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.95	0.95	0.95	0.92	0.92	0.92	0.95	0.95	0.95
Adj. Flow (vph)	142	1859	22	0	0	0	0	16	61	0	0	0
RTOR Reduction (vph)	0	5	0	0	0	0	0	57	0	0	0	0
Lane Group Flow (vph)	0	2018	0	0	0	0	0	20	0	0	0	0
Heavy Vehicles (%)	2%	2%	2%	0%	0%	0%	0%	2%	2%	0%	0%	0%
Turn Type	Split											
Protected Phases	2	2						8				
Permitted Phases												
Actuated Green, G (s)		81.5						7.1				
Effective Green, g (s)		82.5						8.1				
Actuated g/C Ratio		0.75						0.07				
Clearance Time (s)		5.0						5.0				
Vehicle Extension (s)		3.0						3.0				
Lane Grp Cap (vph)		3415						110				
v/s Ratio Prot		c0.44						c0.01				
v/s Ratio Perm												
v/c Ratio		0.59						0.19				
Uniform Delay, d1		6.2						47.9				
Progression Factor		0.98						1.00				
Incremental Delay, d2		0.1						0.8				
Delay (s)		6.1						48.7				
Level of Service		A						D				
Approach Delay (s)		6.1			0.0			48.7			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM Average Control Delay	7.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	19.4
Intersection Capacity Utilization	53.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	5	535	34	19	995	5	48	25	26	5	6	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	582	37	21	1082	5	52	27	28	5	7	16
Pedestrians		175			175			108			175	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		15			15			9			15	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		488										
pX, platoon unblocked				0.89			0.89	0.89	0.89	0.89	0.89	
vC, conflicting volume	1262			726			1496	2022	592	1819	2038	893
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1262			567			1433	2025	416	1796	2043	893
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			97			0	30	93	52	83	92
cM capacity (veh/h)	472			815			43	39	408	11	38	210

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	296	328	561	546	108	28
Volume Left	5	0	21	0	52	5
Volume Right	0	37	0	5	28	16
cSH	472	1700	815	1700	55	39
Volume to Capacity	0.01	0.19	0.03	0.32	1.97	0.73
Queue Length 95th (ft)	1	0	2	0	262	67
Control Delay (s)	0.4	0.0	0.7	0.0	616.3	223.0
Lane LOS	A		A		F	F
Approach Delay (s)	0.2		0.4		616.3	223.0
Approach LOS					F	F

Intersection Summary			
Average Delay	39.2		
Intersection Capacity Utilization	66.9%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	10	572	5	15	974	30	56	25	40	10	0	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	11	602	5	16	1025	32	59	26	42	11	0	5
Pedestrians		150			150			82			150	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		12			12			7			12	
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage veh)								0			0	
Upstream signal (ft)		929										
pX, platoon unblocked				0.94			0.94	0.94	0.94	0.94	0.94	
vC, conflicting volume	1207			689			1407	1946	536	1750	1933	828
vC1, stage 1 conf vol							708	708		1223	1223	
vC2, stage 2 conf vol							699	1238		527	710	
vCu, unblocked vol	1207			603			1368	1943	439	1733	1929	828
tC, single (s)	4.2			4.1			7.6	6.6	7.0	7.8	6.8	7.2
tC, 2 stage (s)							6.6	5.6		6.8	5.8	
tF (s)	2.2			2.2			3.6	4.1	3.4	3.6	4.1	3.4
p0 queue free %	98			98			57	74	90	86	100	98
cM capacity (veh/h)	497			848			137	102	424	77	100	224

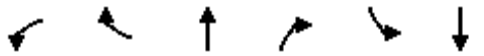
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	312	306	528	544	127	16
Volume Left	11	0	16	0	59	11
Volume Right	0	5	0	32	42	5
cSH	497	1700	848	1700	162	99
Volume to Capacity	0.02	0.18	0.02	0.32	0.79	0.16
Queue Length 95th (ft)	2	0	1	0	127	14
Control Delay (s)	0.7	0.0	0.5	0.0	80.6	48.2
Lane LOS	A		A		F	E
Approach Delay (s)	0.4		0.3		80.6	48.2
Approach LOS					F	E

Intersection Summary			
Average Delay	6.3		
Intersection Capacity Utilization	63.0%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	WBL	WBR	WBR2	SEL2	SEL	SER	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control	Stop				Stop			Free			Free	
Grade	0%				0%			0%			0%	
Volume (veh/h)	91	1	75	35	0	10	5	527	0	0	412	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	96	1	79	37	0	11	5	555	0	0	434	5
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None				None							
Median storage veh)												
Upstream signal (ft)								898			923	
pX, platoon unblocked												
vC, conflicting volume	1012	1004	555	1081	1002	436	439			555		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1012	1004	555	1081	1002	436	439			555		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	55	100	85	78	100	98	100			100		
cM capacity (veh/h)	214	242	533	167	243	624	1121			1021		

Direction, Lane #	WB 1	SE 1	SE 2	NE 1	SW 1
Volume Total	176	37	11	560	439
Volume Left	96	37	0	5	0
Volume Right	79	0	11	0	5
cSH	293	167	624	1121	1700
Volume to Capacity	0.60	0.22	0.02	0.00	0.26
Queue Length 95th (ft)	90	20	1	0	0
Control Delay (s)	34.1	32.6	10.9	0.1	0.0
Lane LOS	D	D	B	A	
Approach Delay (s)	34.1	27.8		0.1	0.0
Approach LOS	D	D			

Intersection Summary				
Average Delay	6.0			
Intersection Capacity Utilization	59.4%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	0	0	512	131	66	417
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	539	138	69	439
Pedestrians	367					
Lane Width (ft)	0.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)			1073			748
pX, platoon unblocked						
vC, conflicting volume	1553	975			1044	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1553	975			1044	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			90	
cM capacity (veh/h)	113	308			666	

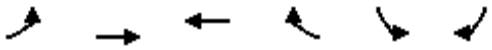
Direction, Lane #	NB 1	SB 1
Volume Total	677	508
Volume Left	0	69
Volume Right	138	0
cSH	1700	666
Volume to Capacity	0.40	0.10
Queue Length 95th (ft)	0	9
Control Delay (s)	0.0	2.8
Lane LOS		A
Approach Delay (s)	0.0	2.8
Approach LOS		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	75.7%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	486	25	5	447	35	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	528	27	5	486	38	11
Pedestrians	471			471	471	
Lane Width (ft)	16.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	52			39	39	
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				259		
pX, platoon unblocked						
vC, conflicting volume			1026		1981	1484
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1026		1981	1484
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		0	81
cM capacity (veh/h)			411		19	57

Direction, Lane #	NB 1	SB 1	NW 1
Volume Total	555	491	49
Volume Left	0	5	38
Volume Right	27	0	11
cSH	1700	411	23
Volume to Capacity	0.33	0.01	2.16
Queue Length 95th (ft)	0	1	156
Control Delay (s)	0.0	0.4	896.2
Lane LOS		A	F
Approach Delay (s)	0.0	0.4	896.2
Approach LOS			F

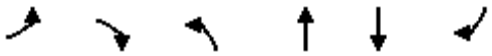
Intersection Summary			
Average Delay	40.2		
Intersection Capacity Utilization	50.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Stop	Stop		Stop	
Volume (vph)	35	0	30	35	0	20
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	37	0	32	37	0	21

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total (vph)	37	68	21
Volume Left (vph)	37	0	0
Volume Right (vph)	0	37	21
Hadj (s)	0.23	-0.29	-0.57
Departure Headway (s)	4.2	3.7	3.5
Degree Utilization, x	0.04	0.07	0.02
Capacity (veh/h)	838	964	974
Control Delay (s)	7.4	7.0	6.6
Approach Delay (s)	7.4	7.0	6.6
Approach LOS	A	A	A

Intersection Summary			
Delay	7.0		
HCM Level of Service	A		
Intersection Capacity Utilization	29.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	66	192	0	51	222	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	69	202	0	54	234	0
Pedestrians				19	19	
Lane Width (ft)				14.0	14.0	
Walking Speed (ft/s)				4.0	4.0	
Percent Blockage				2	2	
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)				880		
pX, platoon unblocked						
vC, conflicting volume	306	253	234			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	306	253	234			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	90	74	100			
cM capacity (veh/h)	673	771	1346			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	272	54	234
Volume Left	69	0	0
Volume Right	202	0	0
cSH	744	1700	1700
Volume to Capacity	0.37	0.03	0.14
Queue Length 95th (ft)	42	0	0
Control Delay (s)	12.6	0.0	0.0
Lane LOS	B		
Approach Delay (s)	12.6	0.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	6.1		
Intersection Capacity Utilization	38.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	17	22	28	490	480	22
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	18	23	29	516	505	23
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)				506	1315	
pX, platoon unblocked	0.94					
vC, conflicting volume	1092	517	528			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1098	517	528			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	92	96	97			
cM capacity (veh/h)	215	558	1039			

Direction, Lane #	SE 1	NE 1	SW 1
Volume Total	41	545	528
Volume Left	18	29	0
Volume Right	23	0	23
cSH	329	1039	1700
Volume to Capacity	0.12	0.03	0.31
Queue Length 95th (ft)	11	2	0
Control Delay (s)	17.5	0.8	0.0
Lane LOS	C	A	
Approach Delay (s)	17.5	0.8	0.0
Approach LOS	C		

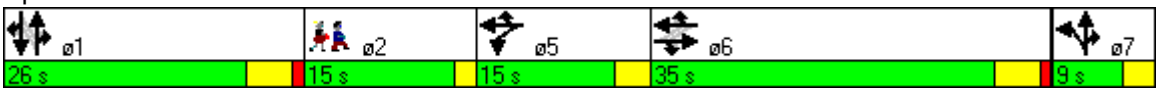
Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	58.7%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	131	943	300	172	517	28	111	506	36	109	827	10
Lane Group Flow (vph)	142	1025	326	187	562	30	0	629	37	0	1051	11
Turn Type	Perm		Prot	D.P+P		Prot	D.P+P		Prot	Perm		Prot
Protected Phases		6	6	5	5 6	5 6	7	1 7	1 7		1	1
Permitted Phases	6			6			1			1		
Detector Phases	6	6	6	5	5 6	5 6	7	1 7	1 7	1	1	1
Minimum Initial (s)	10.0	10.0	10.0	2.0			2.0			10.0	10.0	10.0
Minimum Split (s)	15.0	15.0	15.0	10.0			10.0			15.0	15.0	15.0
Total Split (s)	35.0	35.0	35.0	15.0	50.0	50.0	9.0	35.0	35.0	26.0	26.0	26.0
Total Split (%)	35.0%	35.0%	35.0%	15.0%	50.0%	50.0%	9.0%	35.0%	35.0%	26.0%	26.0%	26.0%
Yellow Time (s)	4.0	4.0	4.0	3.0			3.0			4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	0.0			0.0			1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lag	Lead						Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes						Yes	Yes	Yes
Recall Mode	Min	Min	Min	None			None			C-Min	C-Min	C-Min
v/c Ratio	0.77	1.03	0.59	0.77	0.38	0.04		0.92	0.06		1.82	0.02
Control Delay	59.8	70.9	19.4	29.7	16.6	8.1		51.3	11.2		403.6	39.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Delay	59.8	70.9	19.4	29.7	16.6	8.1		51.3	11.2		403.6	39.9
Queue Length 50th (ft)	81	~369	87	62	133	3		138	3		~496	4
Queue Length 95th (ft)	#189	#497	180	m120	m181	m14		#368	27		m#726	m7
Internal Link Dist (ft)		968			408			639			270	
Turn Bay Length (ft)	50		100			100			100			100
Base Capacity (vph)	185	997	555	244	1480	678		682	571		577	450
Starvation Cap Reductn	0	0	0	0	0	0		0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0		0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0		0	0		0	0
Reduced v/c Ratio	0.77	1.03	0.59	0.77	0.38	0.04		0.92	0.06		1.82	0.02

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 77 (77%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Beacon St & Park Dr



Lane Group	ø2
Lane Configurations	
Volume (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	2
Permitted Phases	
Detector Phases	
Minimum Initial (s)	2.0
Minimum Split (s)	15.0
Total Split (s)	15.0
Total Split (%)	15%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Recall Mode	None
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Flpb, ped/bikes	0.80	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)	1287	3217	1439	1608	3217	1439		3067	1384		3198	1439
Flt Permitted	0.44	1.00	1.00	0.13	1.00	1.00		0.53	1.00		0.64	1.00
Satd. Flow (perm)	598	3217	1439	218	3217	1439		1630	1384		2065	1439
Volume (vph)	131	943	300	172	517	28	111	506	36	109	827	10
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.98	0.98	0.98	0.89	0.89	0.89
Adj. Flow (vph)	142	1025	326	187	562	30	113	516	37	122	929	11
RTOR Reduction (vph)	0	0	109	0	0	16	0	0	18	0	0	4
Lane Group Flow (vph)	142	1025	217	187	562	14	0	629	19	0	1051	7
Confl. Peds. (#/hr)	61		82	82		61	101		81	81		101
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	5%	5%	5%	1%	1%	1%
Turn Type	Perm		Prot	D.P+P		Prot	D.P+P		Prot	Perm		Prot
Protected Phases		6	6	5	5 6	5 6	7	1 7	1 7		1	1
Permitted Phases	6			6			1			1		
Actuated Green, G (s)	30.0	30.0	30.0	42.0	45.0	45.0		34.8	37.8		28.8	28.8
Effective Green, g (s)	31.0	31.0	31.0	42.0	46.0	46.0		34.8	38.8		29.8	29.8
Actuated g/C Ratio	0.31	0.31	0.31	0.42	0.46	0.46		0.35	0.39		0.30	0.30
Clearance Time (s)	5.0	5.0	5.0	3.0							5.0	5.0
Vehicle Extension (s)	2.0	2.0	2.0	2.0							2.0	2.0
Lane Grp Cap (vph)	185	997	446	244	1480	662		639	537		615	429
v/s Ratio Prot		c0.32	0.15	c0.08	0.17	0.01		c0.05	0.01			0.01
v/s Ratio Perm	0.24			0.24				0.29			c0.51	
v/c Ratio	0.77	1.03	0.49	0.77	0.38	0.02		0.98	0.04		1.71	0.02
Uniform Delay, d1	31.2	34.5	28.0	22.9	17.7	14.7		32.3	19.0		35.1	24.8
Progression Factor	1.00	1.00	1.00	0.80	0.90	1.48		1.00	1.00		1.50	1.73
Incremental Delay, d2	15.7	35.9	0.3	6.7	0.0	0.0		31.3	0.0		323.5	0.0
Delay (s)	46.9	70.4	28.3	25.1	16.0	21.8		63.7	19.0		376.1	43.0
Level of Service	D	E	C	C	B	C		E	B		F	D
Approach Delay (s)		59.0			18.4			61.2			372.6	
Approach LOS		E			B			E			F	

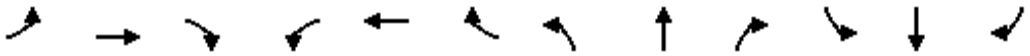
Intersection Summary			
HCM Average Control Delay	134.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.25		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	23.2
Intersection Capacity Utilization	100.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBL	WBT	SBT	SBR
Lane Configurations				
Volume (vph)	301	540	946	353
Lane Group Flow (vph)	317	568	996	372
Turn Type	Split			Prot
Protected Phases	1	1	5	5
Permitted Phases				
Detector Phases	1	1	5	5
Minimum Initial (s)	10.0	10.0	13.0	13.0
Minimum Split (s)	20.0	20.0	23.0	23.0
Total Split (s)	50.0	50.0	40.0	40.0
Total Split (%)	55.6%	55.6%	44.4%	44.4%
Yellow Time (s)	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	C-Min	C-Min	None	None
v/c Ratio	0.19	0.23	0.78	0.65
Control Delay	10.0	9.9	28.2	27.1
Queue Delay	0.4	0.3	0.0	0.0
Total Delay	10.4	10.2	28.2	27.1
Queue Length 50th (ft)	31	40	263	174
Queue Length 95th (ft)	56	66	251	203
Internal Link Dist (ft)		105	199	
Turn Bay Length (ft)				100
Base Capacity (vph)	1739	2576	1404	628
Starvation Cap Reductn	960	1346	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.41	0.46	0.71	0.59

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 84 (93%), Referenced to phase 1:WBTL, Start of Green
Natural Cycle: 45
Control Type: Actuated-Coordinated

Splits and Phases: 2: Riverway & Park Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0						4.0	4.0
Lane Util. Factor				0.97	0.91						0.95	1.00
Frpb, ped/bikes				1.00	1.00						1.00	1.00
Flpb, ped/bikes				1.00	1.00						1.00	1.00
Frt				1.00	1.00						1.00	0.85
Flt Protected				0.95	1.00						1.00	1.00
Satd. Flow (prot)				3152	4668						3249	1454
Flt Permitted				0.95	1.00						1.00	1.00
Satd. Flow (perm)				3152	4668						3249	1454
Volume (vph)	0	0	0	301	540	0	0	0	0	0	946	353
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	317	568	0	0	0	0	0	996	372
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	317	568	0	0	0	0	0	996	372
Confl. Peds. (#/hr)												65
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type				Split								Prot
Protected Phases				1	1						5	5
Permitted Phases												
Actuated Green, G (s)				45.8	45.8						34.2	34.2
Effective Green, g (s)				46.8	46.8						35.2	35.2
Actuated g/C Ratio				0.52	0.52						0.39	0.39
Clearance Time (s)				5.0	5.0						5.0	5.0
Vehicle Extension (s)				2.0	2.0						2.0	2.0
Lane Grp Cap (vph)				1639	2427						1271	569
v/s Ratio Prot				0.10	c0.12						c0.31	0.26
v/s Ratio Perm												
v/c Ratio				0.19	0.23						0.78	0.65
Uniform Delay, d1				11.5	11.8						24.1	22.4
Progression Factor				0.72	0.72						1.00	1.00
Incremental Delay, d2				0.2	0.2						3.0	2.1
Delay (s)				8.6	8.7						27.0	24.5
Level of Service				A	A						C	C
Approach Delay (s)		0.0			8.7			0.0			26.3	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM Average Control Delay	19.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	84.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	SEL2	SET	SER	NET	NER	SWT	ø2
Lane Configurations							
Volume (vph)	979	978	305	914	101	1480	
Lane Group Flow (vph)	779	1545	332	1075	220	1591	
Turn Type	custom		Prot		Perm		
Protected Phases	5	5	5	1		1	2
Permitted Phases	5				1		
Detector Phases	5	5	5	1	1	1	
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	7.0
Minimum Split (s)	15.0	15.0	15.0	15.0	15.0	15.0	24.0
Total Split (s)	39.0	39.0	39.0	27.0	27.0	27.0	24.0
Total Split (%)	43.3%	43.3%	43.3%	30.0%	30.0%	30.0%	27%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	2.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	0.0
Lead/Lag				Lead	Lead	Lead	Lag
Lead-Lag Optimize?				Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	C-Max	C-Max	C-Max	None
v/c Ratio	1.37	1.61dl	0.59	0.81	0.59	1.19	
Control Delay	200.7	275.4	23.1	33.5	34.5	109.3	
Queue Delay	30.5	35.2	0.0	4.8	0.0	330.2	
Total Delay	231.2	310.6	23.1	38.3	34.5	439.4	
Queue Length 50th (ft)	~658	~698	96	220	75	181	
Queue Length 95th (ft)	#910	#848	m239	#501	#242	m#454	
Internal Link Dist (ft)		261		23		182	
Turn Bay Length (ft)							
Base Capacity (vph)	569	997	560	1323	375	1337	
Starvation Cap Reductn	0	0	0	0	0	511	
Spillback Cap Reductn	27	48	0	186	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	1.44	1.63	0.59	0.95	0.59	1.93	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 1:NESW, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
~ 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.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 3: Fenway Loop & Brookline Ave

Movement	SEL2	SEL	SET	SER	NET	NER	NER2	SWT
Lane Configurations								
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0		4.0
Lane Util. Factor	0.91		0.91	1.00	0.95	1.00		0.95
Frpb, ped/bikes	1.00		1.00	1.00	1.00	0.68		1.00
Flpb, ped/bikes	1.00		0.85	1.00	1.00	1.00		1.00
Frt	1.00		1.00	0.85	1.00	0.85		1.00
Flt Protected	0.95		0.98	1.00	1.00	1.00		1.00
Satd. Flow (prot)	1464		2562	1439	3185	963		3217
Flt Permitted	0.95		0.98	1.00	1.00	1.00		1.00
Satd. Flow (perm)	1464		2562	1439	3185	963		3217
Volume (vph)	979	181	978	305	914	101	86	1480
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.85	0.85	0.85	0.93
Adj. Flow (vph)	1064	197	1063	332	1075	119	101	1591
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	779	0	1545	332	1075	220	0	1591
Confl. Peds. (#/hr)	140	245		290		265	260	
Heavy Vehicles (%)	1%	2%	1%	1%	2%	2%	2%	1%
Turn Type	custom	Perm		Prot		Perm		
Protected Phases	5		5	5	1			1
Permitted Phases	5	5				1		
Actuated Green, G (s)	34.0		34.0	34.0	35.2	35.2		35.2
Effective Green, g (s)	35.0		35.0	35.0	36.2	36.2		36.2
Actuated g/C Ratio	0.39		0.39	0.39	0.40	0.40		0.40
Clearance Time (s)	5.0		5.0	5.0	5.0	5.0		5.0
Vehicle Extension (s)	2.0		2.0	2.0	2.0	2.0		2.0
Lane Grp Cap (vph)	569		996	560	1281	387		1294
v/s Ratio Prot	0.53			0.23	0.34			c0.49
v/s Ratio Perm			0.60			0.23		
v/c Ratio	1.37		1.61dl	0.59	0.84	0.57		1.23
Uniform Delay, d1	27.5		27.5	21.8	24.3	20.8		26.9
Progression Factor	0.83		0.83	0.82	1.00	1.00		0.72
Incremental Delay, d2	176.7		252.9	4.4	6.7	5.9		104.0
Delay (s)	199.5		275.6	22.4	31.0	26.8		123.2
Level of Service	F		F	C	C	C		F
Approach Delay (s)			221.6		30.3			123.2
Approach LOS			F		C			F

Intersection Summary			
HCM Average Control Delay	148.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.39		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.8
Intersection Capacity Utilization	97.1%	ICU Level of Service	F
Analysis Period (min)	15		

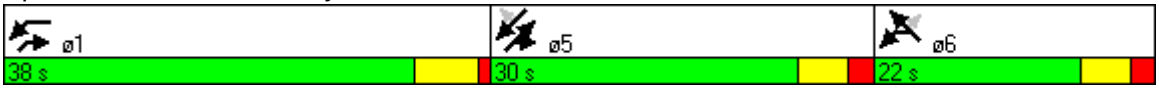
dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Lane Group	WBL	NWT	NWR	NET	NER	SWT	SWR
Lane Configurations							
Volume (vph)	1015	702	254	539	1335	407	286
Lane Group Flow (vph)	1663	923	418	606	1500	433	304
Turn Type			Perm		pt+ov		Perm
Protected Phases	1	6		5	1 5	5	
Permitted Phases			6				5
Detector Phases	1	6	6	5	1 5	5	5
Minimum Initial (s)	10.0	10.0	10.0	10.0		10.0	10.0
Minimum Split (s)	19.0	21.0	21.0	19.0		19.0	19.0
Total Split (s)	38.0	22.0	22.0	30.0	68.0	30.0	30.0
Total Split (%)	42.2%	24.4%	24.4%	33.3%	75.6%	33.3%	33.3%
Yellow Time (s)	5.0	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	2.0		2.0	2.0
Lead/Lag		Lag	Lag	Lead		Lead	Lead
Lead-Lag Optimize?		Yes	Yes	Yes		Yes	Yes
Recall Mode	C-Max	Max	Max	Max		Max	Max
v/c Ratio	2.07dr	0.99	2.40	0.65	0.83	0.47	1.10
Control Delay	488.8	65.5	669.1	30.0	11.4	28.4	115.9
Queue Delay	207.7	29.5	0.0	21.1	49.1	0.0	0.0
Total Delay	696.5	95.0	669.1	51.0	60.6	28.4	115.9
Queue Length 50th (ft)	~767	193	~396	166	414	106	~198
Queue Length 95th (ft)	#908	#268	#552	m182	m135	151	#357
Internal Link Dist (ft)	668	176		182		648	
Turn Bay Length (ft)							150
Base Capacity (vph)	817	928	174	929	1801	920	277
Starvation Cap Reductn	0	0	0	328	442	0	0
Spillback Cap Reductn	297	76	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	3.20	1.08	2.40	1.01	1.10	0.47	1.10

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 70 (78%), Referenced to phase 1:WBL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
~ 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.
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 4: Boylston St & Brookline Ave



Movement	WBL	WBR	WBR2	NWL	NWT	NWR	NWR2	NET	NER	SWT	SWR
Lane Configurations											
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0				4.0	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.97				0.91	1.00		0.95	0.88	0.95	1.00
Frpb, ped/bikes	0.71				1.00	0.60		1.00	1.00	1.00	0.67
Flpb, ped/bikes	1.00				1.00	1.00		1.00	1.00	1.00	1.00
Frt	0.94				1.00	0.85		1.00	0.85	1.00	0.85
Flt Protected	0.97				0.99	1.00		1.00	1.00	1.00	1.00
Satd. Flow (prot)	2163				4639	870		3217	2533	3185	960
Flt Permitted	0.97				0.99	1.00		1.00	1.00	1.00	1.00
Satd. Flow (perm)	2163				4639	870		3217	2533	3185	960
Volume (vph)	1015	573	10	101	702	254	110	539	1335	407	286
Peak-hour factor, PHF	0.98	0.93	0.93	0.87	0.87	0.87	0.87	0.89	0.89	0.94	0.94
Adj. Flow (vph)	1036	616	11	116	807	292	126	606	1500	433	304
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	1663	0	0	0	923	418	0	606	1500	433	304
Confl. Peds. (#/hr)	161	206	310	64		213	225		161		194
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	1%	2%	2%
Turn Type				Split		Perm			pt+ov		Perm
Protected Phases	1			6	6			5	1 5	5	
Permitted Phases						6					5
Actuated Green, G (s)	32.0				16.0	16.0		24.0	62.0	24.0	24.0
Effective Green, g (s)	34.0				18.0	18.0		26.0	64.0	26.0	26.0
Actuated g/C Ratio	0.38				0.20	0.20		0.29	0.71	0.29	0.29
Clearance Time (s)	6.0				6.0	6.0		6.0		6.0	6.0
Vehicle Extension (s)	3.0				3.0	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	817				928	174		929	1801	920	277
v/s Ratio Prot	c0.77				0.20			0.19	0.59	0.14	
v/s Ratio Perm						c0.48					c0.32
v/c Ratio	2.07dr				0.99	2.40		0.65	0.83	0.47	1.10
Uniform Delay, d1	28.0				36.0	36.0		28.0	9.2	26.3	32.0
Progression Factor	0.72				1.00	1.00		1.04	1.10	1.00	1.00
Incremental Delay, d2	468.9				28.3	648.3		0.3	0.4	1.7	82.7
Delay (s)	489.2				64.2	684.3		29.6	10.6	28.1	114.7
Level of Service	F				E	F		C	B	C	F
Approach Delay (s)	489.2				257.5			16.1		63.8	
Approach LOS	F				F			B		E	

Intersection Summary			
HCM Average Control Delay	212.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.81		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	101.9%	ICU Level of Service	G
Analysis Period (min)	15		

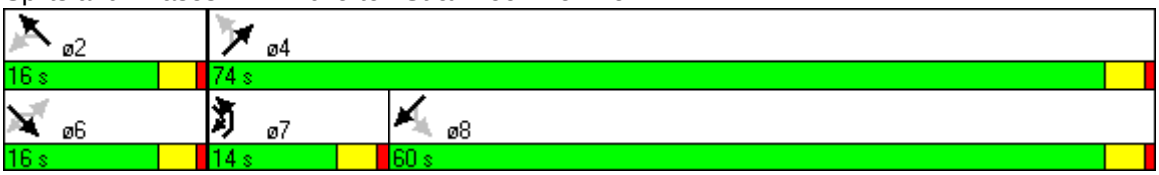
dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

Lane Group	SEL	SET	SER	NWL	NWT	NEL	NET	SWL	SWT
Lane Configurations									
Volume (vph)	20	20	56	61	51	192	492	32	453
Lane Group Flow (vph)	0	44	61	0	154	209	573	35	651
Turn Type	Perm		pm+ov	Perm		pm+pt		Perm	
Protected Phases		6	7		2	7	4		8
Permitted Phases	6		6	2		4		8	
Detector Phases	6	6	7	2	2	7	4	8	8
Minimum Initial (s)	8.0	8.0	4.0	4.0	4.0	4.0	8.0	7.0	7.0
Minimum Split (s)	20.0	20.0	8.0	24.0	24.0	8.0	23.0	25.0	25.0
Total Split (s)	16.0	16.0	14.0	16.0	16.0	14.0	74.0	60.0	60.0
Total Split (%)	17.8%	17.8%	15.6%	17.8%	17.8%	15.6%	82.2%	66.7%	66.7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag			Lead			Lead		Lag	Lag
Lead-Lag Optimize?			Yes			Yes		Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
v/c Ratio		0.23	0.17		0.59	0.50	0.61	0.10	0.88
Control Delay		31.1	6.9		38.4	8.2	8.5	9.7	28.0
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		31.1	6.9		38.4	8.2	8.5	9.7	28.0
Queue Length 50th (ft)		14	0		50	24	87	7	202
Queue Length 95th (ft)		53	27		#178	52	178	22	366
Internal Link Dist (ft)		352			75		648		198
Turn Bay Length (ft)									
Base Capacity (vph)		221	387		262	437	1161	482	1020
Starvation Cap Reductn		0	0		0	0	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		0.20	0.16		0.59	0.48	0.49	0.07	0.64

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 62.2
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Fullerton St & Brookline Ave



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	16	12	12	12	12	12	10	10	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00	0.87		0.93		1.00	0.98		1.00	0.92	
Flpb, ped/bikes		0.89	1.00		0.92		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.97		1.00	0.99		1.00	0.96	
Flt Protected		0.98	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1456	1242		1372		1486	1516		1593	1636	
Flt Permitted		0.85	1.00		0.86		0.17	1.00		0.45	1.00	
Satd. Flow (perm)		1261	1242		1203		273	1516		752	1636	
Volume (vph)	20	20	56	61	51	30	192	492	35	32	453	146
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	22	61	66	55	33	209	535	38	35	492	159
RTOR Reduction (vph)	0	0	40	0	10	0	0	5	0	0	18	0
Lane Group Flow (vph)	0	44	21	0	144	0	209	568	0	35	633	0
Confl. Peds. (#/hr)	160		160	160		160			160			160
Turn Type	Perm		pm+ov	Perm			pm+pt			Perm		
Protected Phases		6	7		2		7	4			8	
Permitted Phases	6		6	2			4			8		
Actuated Green, G (s)		14.2	21.5		14.2		39.9	39.9		28.6	28.6	
Effective Green, g (s)		14.2	21.5		14.2		39.9	39.9		28.6	28.6	
Actuated g/C Ratio		0.23	0.35		0.23		0.64	0.64		0.46	0.46	
Clearance Time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		2.0	3.0		3.0		3.0	3.0		2.0	2.0	
Lane Grp Cap (vph)		288	510		275		318	974		346	753	
v/s Ratio Prot			0.00				0.08	c0.37			c0.39	
v/s Ratio Perm		0.03	0.01		c0.12		0.35			0.05		
v/c Ratio		0.15	0.04		0.52		0.66	0.58		0.10	0.84	
Uniform Delay, d1		19.1	13.5		21.0		8.9	6.3		9.5	14.7	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1	0.0		1.8		4.8	0.9		0.0	8.0	
Delay (s)		19.2	13.5		22.8		13.7	7.2		9.5	22.8	
Level of Service		B	B		C		B	A		A	C	
Approach Delay (s)		15.9			22.8			9.0			22.1	
Approach LOS		B			C			A			C	

Intersection Summary			
HCM Average Control Delay	15.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	62.1	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			

Lane Group	EBT	EBR2	NBR2	SBR2	NER	SWL	SWT	SWR
Lane Configurations								
Volume (vph)	642	39	320	76	971	610	885	591
Lane Group Flow (vph)	923	52	368	83	1032	682	912	652
Turn Type		Perm	custom	Free	custom	Split		custom
Protected Phases	2				3	1	1	6
Permitted Phases		2	2	Free				
Detector Phases	2	2	2		3	1	1	6
Minimum Initial (s)	8.0	8.0	8.0		8.0	8.0	8.0	8.0
Minimum Split (s)	30.0	30.0	30.0		30.0	30.0	30.0	30.0
Total Split (s)	36.0	36.0	36.0	0.0	34.0	30.0	30.0	66.0
Total Split (%)	36.0%	36.0%	36.0%	0.0%	34.0%	30.0%	30.0%	66.0%
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag	Lag			Lead	Lead	
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max		Min	C-Min	C-Min	Min
v/c Ratio	0.73	0.22	1.10	0.06	1.35	1.70	1.14	0.43
Control Delay	49.5	33.5	108.2	0.1	185.8	347.0	108.2	10.9
Queue Delay	0.0	0.0	7.9	0.0	58.4	201.6	0.0	0.0
Total Delay	49.5	33.5	116.1	0.1	244.2	548.5	108.2	10.9
Queue Length 50th (ft)	236	29	~239	0	~509	~633	~352	150
Queue Length 95th (ft)	m232	m54	#398	0	m#455	#851	#475	83
Internal Link Dist (ft)	169						1	
Turn Bay Length (ft)		40						
Base Capacity (vph)	1258	236	334	1405	762	402	797	1504
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	6	0	67	84	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.22	1.12	0.06	1.48	2.14	1.14	0.43

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 28 (28%), Referenced to phase 1:SWTL, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 11: Commonwealth Ave & Beacon St

Movement	EBT	EBR	EBR2	NBR2	SBR2	NER	NER2	SWL2	SWL	SWT	SWR	SWR2
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0			4.0	4.0	4.0	
Lane Util. Factor	0.86		0.86	1.00	1.00	0.88			1.00	0.95	0.88	
Frpb, ped/bikes	0.97		0.77	0.87	0.97	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	1.00	
Frt	0.99		0.85	0.86	0.86	0.85			1.00	1.00	0.85	
Flt Protected	1.00		1.00	1.00	1.00	1.00			0.95	1.00	1.00	
Satd. Flow (prot)	3933		695	905	1405	2533			1533	3065	2419	
Flt Permitted	1.00		1.00	1.00	1.00	1.00			0.95	1.00	1.00	
Satd. Flow (perm)	3933		695	905	1405	2533			1533	3065	2419	
Volume (vph)	642	50	39	320	76	971	30	51	610	885	591	40
Peak-hour factor, PHF	0.75	0.75	0.75	0.87	0.92	0.97	0.97	0.97	0.97	0.97	0.97	0.92
Adj. Flow (vph)	856	67	52	368	83	1001	31	53	629	912	609	43
RTOR Reduction (vph)	0	0	14	44	0	2	0	0	3	0	5	0
Lane Group Flow (vph)	923	0	38	324	83	1030	0	0	679	912	647	0
Confl. Peds. (#/hr)		170	174	98	64	98	170	98	170		64	
Heavy Vehicles (%)	8%	8%	8%	10%	2%	1%	1%	6%	6%	6%	6%	2%
Parking (#/hr)			25	25			25					
Turn Type			Perm	custom	Free	custom		Split	Split		custom	
Protected Phases	2					3		1	1	1	6	
Permitted Phases			2	2	Free							
Actuated Green, G (s)	31.0		31.0	31.0	100.0	29.0			25.0	25.0	61.0	
Effective Green, g (s)	32.0		32.0	32.0	100.0	30.0			26.0	26.0	62.0	
Actuated g/C Ratio	0.32		0.32	0.32	1.00	0.30			0.26	0.26	0.62	
Clearance Time (s)	5.0		5.0	5.0		5.0			5.0	5.0	5.0	
Vehicle Extension (s)	3.0		3.0	3.0		3.0			3.0	3.0	3.0	
Lane Grp Cap (vph)	1259		222	290	1405	760			399	797	1500	
v/s Ratio Prot	0.23					c0.41			c0.44	0.30	0.27	
v/s Ratio Perm			0.06	c0.36	0.06							
v/c Ratio	0.73		0.17	1.12	0.06	1.36			1.70	1.14	0.43	
Uniform Delay, d1	30.2		24.5	34.0	0.0	35.0			37.0	37.0	9.9	
Progression Factor	1.52		1.78	1.00	1.00	0.58			0.90	0.90	1.04	
Incremental Delay, d2	3.1		1.4	87.9	0.1	163.5			323.4	75.8	0.1	
Delay (s)	48.9		45.0	121.9	0.1	183.8			356.7	109.1	10.4	
Level of Service	D		D	F	A	F			F	F	B	
Approach Delay (s)	48.7									155.6		
Approach LOS	D									F		

Intersection Summary			
HCM Average Control Delay	134.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.37		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	146.8%	ICU Level of Service	H
Analysis Period (min)	15		

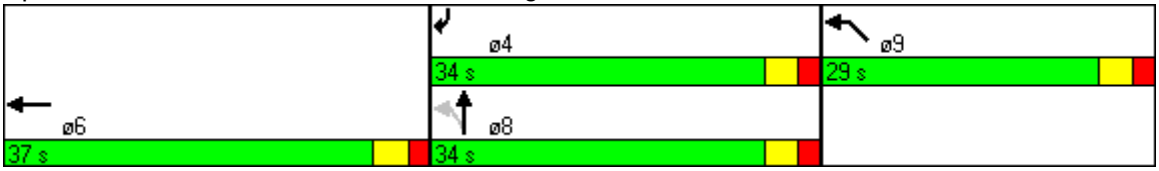
c Critical Lane Group

Lane Group	WBT	NBL	NBT	SBR	NWL
Lane Configurations					
Volume (vph)	1433	157	30	10	577
Lane Group Flow (vph)	1563	171	33	11	632
Turn Type		Perm		custom	
Protected Phases	6		8	4	9
Permitted Phases	6	8			
Detector Phases	6	8	8	4	9
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	21.0	21.0	21.0	22.0
Total Split (s)	37.0	34.0	34.0	34.0	29.0
Total Split (%)	37.0%	34.0%	34.0%	34.0%	29.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	None	None	None	None
v/c Ratio	0.71	0.54	0.17	0.06	0.72
Control Delay	17.5	31.6	29.8	14.4	39.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.5	31.6	29.8	14.4	39.7
Queue Length 50th (ft)	193	50	22	0	196
Queue Length 95th (ft)	#438	63	m27	13	233
Internal Link Dist (ft)	563		100		528
Turn Bay Length (ft)					
Base Capacity (vph)	2210	786	503	446	907
Starvation Cap Reductn	0	30	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.71	0.23	0.07	0.02	0.70

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 19 (19%), Referenced to phase 6:WBT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 13: Beacon St & Raleigh St



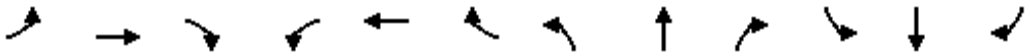
Movement	WBT	WBR	NBL	NBT	SBR	NWL	NWR
Lane Configurations							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor	0.91		0.97	1.00	1.00	0.97	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00		0.82	1.00	1.00	1.00	
Frt	1.00		1.00	1.00	0.86	1.00	
Flt Protected	1.00		0.95	1.00	1.00	0.95	
Satd. Flow (prot)	4568		2545	1676	1450	3095	
Flt Permitted	1.00		0.95	1.00	1.00	0.95	
Satd. Flow (perm)	4568		2545	1676	1450	3095	
Volume (vph)	1433	5	157	30	10	577	5
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1558	5	171	33	11	627	5
RTOR Reduction (vph)	0	0	28	0	10	0	0
Lane Group Flow (vph)	1563	0	143	33	1	632	0
Confl. Peds. (#/hr)		151	94		94		
Confl. Bikes (#/hr)							
Turn Type			Perm		custom		
Protected Phases	6			8	4	9	
Permitted Phases	6		8				
Actuated Green, G (s)	47.3		10.4	10.4	10.4	27.3	
Effective Green, g (s)	48.3		11.4	11.4	11.4	28.3	
Actuated g/C Ratio	0.48		0.11	0.11	0.11	0.28	
Clearance Time (s)	5.0		5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	2206		290	191	165	876	
v/s Ratio Prot	c0.34			0.02	0.00	c0.20	
v/s Ratio Perm			c0.06				
v/c Ratio	0.71		0.49	0.17	0.01	0.72	
Uniform Delay, d1	20.3		41.6	40.0	39.3	32.3	
Progression Factor	0.68		0.79	0.72	1.00	1.09	
Incremental Delay, d2	1.7		1.1	0.4	0.0	2.9	
Delay (s)	15.4		33.9	29.4	39.3	38.3	
Level of Service	B		C	C	D	D	
Approach Delay (s)	15.4			33.1		38.3	
Approach LOS	B			C		D	

Intersection Summary			
HCM Average Control Delay	23.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	64.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	NBT	ø5
Lane Configurations			
Volume (vph)	1752	15	
Lane Group Flow (vph)	2102	65	
Turn Type			
Protected Phases	2	8	5
Permitted Phases			
Detector Phases	2	8	
Minimum Initial (s)	12.0	4.0	4.0
Minimum Split (s)	20.0	18.0	23.0
Total Split (s)	56.0	21.0	23.0
Total Split (%)	56.0%	21.0%	23%
Yellow Time (s)	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	C-Max	None	None
v/c Ratio	0.59	0.38	
Control Delay	14.9	24.0	
Queue Delay	2.5	0.0	
Total Delay	17.4	24.0	
Queue Length 50th (ft)	214	10	
Queue Length 95th (ft)	m417	50	
Internal Link Dist (ft)	448	192	
Turn Bay Length (ft)			
Base Capacity (vph)	3570	297	
Starvation Cap Reductn	1295	0	
Spillback Cap Reductn	0	0	
Storage Cap Reductn	0	0	
Reduced v/c Ratio	0.92	0.22	

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 26 (26%), Referenced to phase 2:EBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 14: Commonwealth Ave & Kenmore St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0				
Lane Util. Factor		0.91						1.00				
Frt		1.00						0.90				
Flt Protected		1.00						1.00				
Satd. Flow (prot)		4553						1506				
Flt Permitted		1.00						1.00				
Satd. Flow (perm)		4553						1506				
Volume (vph)	172	1752	10	0	0	0	0	15	45	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	187	1904	11	0	0	0	0	16	49	0	0	0
RTOR Reduction (vph)	0	7	0	0	0	0	0	46	0	0	0	0
Lane Group Flow (vph)	0	2095	0	0	0	0	0	19	0	0	0	0
Turn Type	Split											
Protected Phases	2	2						8				
Permitted Phases												
Actuated Green, G (s)		72.5						6.1				
Effective Green, g (s)		73.5						7.1				
Actuated g/C Ratio		0.74						0.07				
Clearance Time (s)		5.0						5.0				
Vehicle Extension (s)		3.0						3.0				
Lane Grp Cap (vph)		3346						107				
v/s Ratio Prot		c0.46						c0.01				
v/s Ratio Perm												
v/c Ratio		0.63						0.18				
Uniform Delay, d1		6.5						43.7				
Progression Factor		1.89						1.00				
Incremental Delay, d2		0.1						0.8				
Delay (s)		12.4						44.5				
Level of Service		B						D				
Approach Delay (s)		12.4			0.0			44.5			0.0	
Approach LOS		B			A			D			A	

Intersection Summary			
HCM Average Control Delay	13.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	19.4
Intersection Capacity Utilization	52.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	10	889	92	41	613	1	24	6	24	5	1	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	966	100	45	666	1	26	7	26	5	1	5
Pedestrians		110			110			110			107	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		9			9			9			9	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		488										
pX, platoon unblocked				0.72			0.72	0.72	0.72	0.72	0.72	
vC, conflicting volume	774			1176			1686	2012	753	1507	2061	551
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	774			862			1567	2016	277	1319	2084	551
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			91			24	79	94	88	96	99
cM capacity (veh/h)	762			510			35	31	430	44	28	396

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	494	583	378	334	59	12
Volume Left	11	0	45	0	26	5
Volume Right	0	100	0	1	26	5
cSH	762	1700	510	1700	57	68
Volume to Capacity	0.01	0.34	0.09	0.20	1.03	0.18
Queue Length 95th (ft)	1	0	7	0	120	15
Control Delay (s)	0.4	0.0	2.7	0.0	244.2	69.1
Lane LOS	A		A		F	F
Approach Delay (s)	0.2		1.4		244.2	69.1
Approach LOS					F	F

Intersection Summary			
Average Delay	8.8		
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	20	938	64	116	684	47	11	5	24	5	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.50	0.95	0.95	0.95
Hourly flow rate (vph)	21	987	67	122	720	49	12	5	48	5	1	1
Pedestrians		199			199			170			199	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		17			17			14			17	
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage veh)								0			0	
Upstream signal (ft)		929										
pX, platoon unblocked				0.77			0.77	0.77	0.77	0.77	0.77	
vC, conflicting volume	968			1225			2038	2446	896	1973	2455	783
vC1, stage 1 conf vol							1233	1233		1188	1188	
vC2, stage 2 conf vol							805	1213		785	1267	
vCu, unblocked vol	968			997			2049	2577	572	1966	2589	783
tC, single (s)	4.1			4.2			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			73			82	91	81	90	97	100
cM capacity (veh/h)	595			450			64	59	259	51	37	237

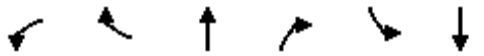
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	515	561	482	409	65	7
Volume Left	21	0	122	0	12	5
Volume Right	0	67	0	49	48	1
cSH	595	1700	450	1700	142	54
Volume to Capacity	0.04	0.33	0.27	0.24	0.46	0.14
Queue Length 95th (ft)	3	0	27	0	52	11
Control Delay (s)	1.0	0.0	8.2	0.0	50.0	81.4
Lane LOS	A		A		F	F
Approach Delay (s)	0.5		4.4		50.0	81.4
Approach LOS					F	F

Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	82.3%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	WBL	WBR	WBR2	SEL2	SEL	SER	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control	Stop				Stop			Free			Free	
Grade	0%				0%			0%			0%	
Volume (veh/h)	121	43	104	0	0	0	17	382	0	0	637	47
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	127	45	109	0	0	0	18	402	0	0	671	49
Pedestrians					113			118			118	
Lane Width (ft)					12.0			12.0			12.0	
Walking Speed (ft/s)					4.0			4.0			4.0	
Percent Blockage					9			10			10	
Right turn flare (veh)												
Median type	None				None							
Median storage veh)												
Upstream signal (ft)								898			872	
pX, platoon unblocked												
vC, conflicting volume	1251	1271	520	1496	1246	926	833			402		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1251	1271	520	1496	1246	926	833			402		
tC, single (s)	7.1	6.5	6.2	7.2	6.6	6.3	4.2			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.1	3.4	2.3			2.2		
p0 queue free %	0	70	78	100	100	100	97			100		
cM capacity (veh/h)	124	150	505	44	151	261	709			1157		

Direction, Lane #	WB 1	SE 1	SE 2	NE 1	SW 1
Volume Total	282	0	0	420	720
Volume Left	127	0	0	18	0
Volume Right	109	0	0	0	49
cSH	182	1700	1700	709	1700
Volume to Capacity	1.55	0.00	0.00	0.03	0.42
Queue Length 95th (ft)	457	0	0	2	0
Control Delay (s)	318.6	0.0	0.0	0.8	0.0
Lane LOS	F	A	A	A	
Approach Delay (s)	318.6	0.0		0.8	0.0
Approach LOS	F	A			

Intersection Summary				
Average Delay	63.4			
Intersection Capacity Utilization	84.9%	ICU Level of Service	E	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	0	0	389	97	88	683
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	409	102	93	719
Pedestrians	232					
Lane Width (ft)	0.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)			1073			697
pX, platoon unblocked						
vC, conflicting volume	1597	693			744	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1597	693			744	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			89	
cM capacity (veh/h)	105	444			864	

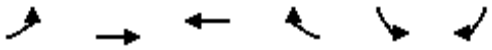
Direction, Lane #	NB 1	SB 1
Volume Total	512	812
Volume Left	0	93
Volume Right	102	0
cSH	1700	864
Volume to Capacity	0.30	0.11
Queue Length 95th (ft)	0	9
Control Delay (s)	0.0	2.7
Lane LOS		A
Approach Delay (s)	0.0	2.7
Approach LOS		

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	82.9%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	315	20	10	731	56	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	342	22	11	795	61	5
Pedestrians	299			299	299	
Lane Width (ft)	16.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	33			25	25	
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				208		
pX, platoon unblocked						
vC, conflicting volume			663		1768	951
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			663		1768	951
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		0	97
cM capacity (veh/h)			695		45	178

Direction, Lane #	NB 1	SB 1	NW 1
Volume Total	364	805	66
Volume Left	0	11	61
Volume Right	22	0	5
cSH	1700	695	48
Volume to Capacity	0.21	0.02	1.37
Queue Length 95th (ft)	0	1	156
Control Delay (s)	0.0	0.4	393.6
Lane LOS		A	F
Approach Delay (s)	0.0	0.4	393.6
Approach LOS			F

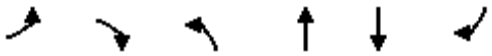
Intersection Summary			
Average Delay	21.4		
Intersection Capacity Utilization	71.6%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Stop	Stop		Stop	
Volume (vph)	25	0	51	35	0	10
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	26	0	54	37	0	11

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total (vph)	26	91	11
Volume Left (vph)	26	0	0
Volume Right (vph)	0	37	11
Hadj (s)	0.23	-0.21	-0.57
Departure Headway (s)	4.2	3.7	3.6
Degree Utilization, x	0.03	0.09	0.01
Capacity (veh/h)	839	955	965
Control Delay (s)	7.4	7.1	6.6
Approach Delay (s)	7.4	7.1	6.6
Approach LOS	A	A	A

Intersection Summary			
Delay	7.1		
HCM Level of Service	A		
Intersection Capacity Utilization	20.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	38	101	0	45	267	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	41	110	0	49	290	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)				880		
pX, platoon unblocked						
vC, conflicting volume	339	290	290			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	339	290	290			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	94	85	100			
cM capacity (veh/h)	657	749	1272			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	151	49	290
Volume Left	41	0	0
Volume Right	110	0	0
cSH	721	1700	1700
Volume to Capacity	0.21	0.03	0.17
Queue Length 95th (ft)	20	0	0
Control Delay (s)	11.3	0.0	0.0
Lane LOS	B		
Approach Delay (s)	11.3	0.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	3.5		
Intersection Capacity Utilization	31.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	20	50	86	427	703	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	54	93	464	764	14
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)				492	1278	
pX, platoon unblocked	0.90					
vC, conflicting volume	1422	771	778			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1468	771	778			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	81	86	89			
cM capacity (veh/h)	113	400	838			

Direction, Lane #	SE 1	NE 1	SW 1
Volume Total	76	558	778
Volume Left	22	93	0
Volume Right	54	0	14
cSH	232	838	1700
Volume to Capacity	0.33	0.11	0.46
Queue Length 95th (ft)	34	9	0
Control Delay (s)	28.0	2.9	0.0
Lane LOS	D	A	
Approach Delay (s)	28.0	2.9	0.0
Approach LOS	D		

Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	935	32	64	743	3	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1016	35	70	808	3	8
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				419		
pX, platoon unblocked					0.77	
vC, conflicting volume			1051		1577	526
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1051		1448	526
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			89		96	98
cM capacity (veh/h)			658		84	497

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	678	374	339	538	11
Volume Left	0	0	70	0	3
Volume Right	0	35	0	0	8
cSH	1700	1700	658	1700	200
Volume to Capacity	0.40	0.22	0.11	0.32	0.05
Queue Length 95th (ft)	0	0	9	0	4
Control Delay (s)	0.0	0.0	3.4	0.0	24.0
Lane LOS			A		C
Approach Delay (s)	0.0		1.3		24.0
Approach LOS					C

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	5	7	58	331	765	22
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	8	63	360	832	24
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					436	
pX, platoon unblocked						
vC, conflicting volume	1329	843	855			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1329	843	855			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	98	92			
cM capacity (veh/h)	157	363	785			

Direction, Lane #	SE 1	NE 1	SW 1
Volume Total	13	423	855
Volume Left	5	63	0
Volume Right	8	0	24
cSH	235	785	1700
Volume to Capacity	0.06	0.08	0.50
Queue Length 95th (ft)	4	7	0
Control Delay (s)	21.2	2.4	0.0
Lane LOS	C	A	
Approach Delay (s)	21.2	2.4	0.0
Approach LOS	C		

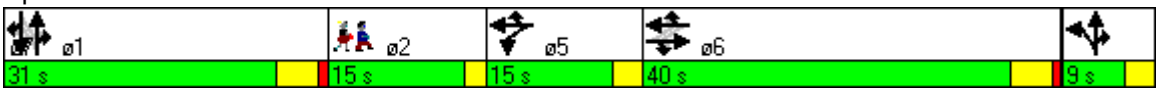
Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	246	560	161	266	818	56	224	550	101	61	738	25
Lane Group Flow (vph)	265	602	173	283	870	60	0	922	120	0	878	27
Turn Type	Perm		Prot	D.P+P		Prot	D.P+P		Prot	Perm		Prot
Protected Phases		6	6	5	5 6	5 6	7	1 7	1 7		1	1
Permitted Phases	6			6			1			1		
Detector Phases	6	6	6	5	5 6	5 6	7	1 7	1 7	1	1	1
Minimum Initial (s)	10.0	10.0	10.0	2.0			2.0			10.0	10.0	10.0
Minimum Split (s)	15.0	15.0	15.0	10.0			10.0			15.0	15.0	15.0
Total Split (s)	40.0	40.0	40.0	15.0	55.0	55.0	9.0	40.0	40.0	31.0	31.0	31.0
Total Split (%)	36.4%	36.4%	36.4%	13.6%	50.0%	50.0%	8.2%	36.4%	36.4%	28.2%	28.2%	28.2%
Yellow Time (s)	4.0	4.0	4.0	3.0			3.0			4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	0.0			0.0			1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lag	Lead						Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes						Yes	Yes	Yes
Recall Mode	Min	Min	Min	None			None			C-Min	C-Min	C-Min
v/c Ratio	1.83	0.57	0.31	0.88	0.58	0.09		1.79dl	0.20		1.78	0.06
Control Delay	424.0	33.2	9.4	47.6	22.9	8.4		193.8	14.7		374.9	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Delay	424.0	33.2	9.4	47.6	22.9	8.4		193.8	14.7		374.9	4.7
Queue Length 50th (ft)	~284	184	19	111	123	4		~486	30		~521	6
Queue Length 95th (ft)	#447	243	71	m108	m115	m4		#558	66		m#567	m0
Internal Link Dist (ft)		968			408			638			275	
Turn Bay Length (ft)	50		100			100			100			100
Base Capacity (vph)	145	1053	560	322	1506	696		687	586		494	441
Starvation Cap Reductn	0	0	0	0	0	0		0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0		0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0		0	0		0	0
Reduced v/c Ratio	1.83	0.57	0.31	0.88	0.58	0.09		1.34	0.20		1.78	0.06

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 77 (70%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
~ 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.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 1: Beacon Street & Park Dr



Lane Group	ø2
Lane Configurations	
Volume (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	2
Permitted Phases	
Detector Phases	
Minimum Initial (s)	2.0
Minimum Split (s)	15.0
Total Split (s)	15.0
Total Split (%)	14%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Recall Mode	None
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Flpb, ped/bikes	0.83	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99	1.00		1.00	1.00
Satd. Flow (prot)	1328	3217	1439	1624	3249	1454		3171	1439		3205	1439
Flt Permitted	0.32	1.00	1.00	0.29	1.00	1.00		0.54	1.00		0.58	1.00
Satd. Flow (perm)	442	3217	1439	488	3249	1454		1727	1439		1873	1439
Volume (vph)	246	560	161	266	818	56	224	550	101	61	738	25
Peak-hour factor, PHF	0.93	0.93	0.93	0.94	0.94	0.94	0.84	0.84	0.84	0.91	0.91	0.91
Adj. Flow (vph)	265	602	173	283	870	60	267	655	120	67	811	27
RTOR Reduction (vph)	0	0	89	0	0	21	0	0	38	0	0	9
Lane Group Flow (vph)	265	602	84	283	870	39	0	922	82	0	878	18
Confl. Peds. (#/hr)	149		184	184		149	84		107	107		84
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Turn Type	Perm		Prot	D.P+P		Prot	D.P+P		Prot	Perm		Prot
Protected Phases		6	6	5	5 6	5 6	7	1 7	1 7		1	1
Permitted Phases	6			6			1			1		
Actuated Green, G (s)	35.0	35.0	35.0	47.0	50.0	50.0		37.2	40.2		31.2	31.2
Effective Green, g (s)	36.0	36.0	36.0	47.0	51.0	51.0		37.2	41.2		32.2	32.2
Actuated g/C Ratio	0.33	0.33	0.33	0.43	0.46	0.46		0.34	0.37		0.29	0.29
Clearance Time (s)	5.0	5.0	5.0	3.0							5.0	5.0
Vehicle Extension (s)	2.0	2.0	2.0	2.0							2.0	2.0
Lane Grp Cap (vph)	145	1053	471	322	1506	674		650	539		548	421
v/s Ratio Prot		0.19	0.06	c0.09	0.27	0.03		c0.06	0.06			0.01
v/s Ratio Perm	c0.60			0.29				0.42			c0.47	
v/c Ratio	1.83	0.57	0.18	0.88	0.58	0.06		1.79dl	0.15		1.60	0.04
Uniform Delay, d1	37.0	30.6	26.4	25.0	21.6	16.3		36.4	22.8		38.9	27.9
Progression Factor	1.00	1.00	1.00	1.57	1.02	1.08		1.00	1.00		0.49	0.21
Incremental Delay, d2	398.1	0.5	0.1	10.2	0.1	0.0		197.3	0.0		275.7	0.1
Delay (s)	435.1	31.1	26.5	49.4	22.1	17.6		233.7	22.9		294.7	6.1
Level of Service	F	C	C	D	C	B		F	C		F	A
Approach Delay (s)		133.3			28.2			209.4			286.1	
Approach LOS		F			C			F			F	

Intersection Summary			
HCM Average Control Delay	154.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.59		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	25.8
Intersection Capacity Utilization	102.4%	ICU Level of Service	G
Analysis Period (min)	15		

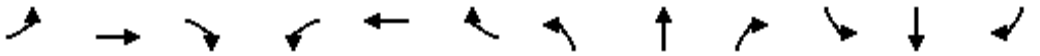
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

Lane Group	WBL	WBT	SBT	SBR
Lane Configurations				
Volume (vph)	475	914	860	455
Lane Group Flow (vph)	495	952	896	474
Turn Type	Split			Prot
Protected Phases	1	1	5	5
Permitted Phases				
Detector Phases	1	1	5	5
Minimum Initial (s)	10.0	10.0	13.0	13.0
Minimum Split (s)	20.0	20.0	23.0	23.0
Total Split (s)	40.0	40.0	50.0	50.0
Total Split (%)	44.4%	44.4%	55.6%	55.6%
Yellow Time (s)	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	C-Min	C-Min	None	None
v/c Ratio	0.30	0.39	0.70	0.83
Control Delay	22.3	22.4	25.2	36.3
Queue Delay	2.0	3.4	0.0	0.0
Total Delay	24.3	25.8	25.2	36.3
Queue Length 50th (ft)	109	150	221	240
Queue Length 95th (ft)	146	182	203	265
Internal Link Dist (ft)		105	209	
Turn Bay Length (ft)				100
Base Capacity (vph)	1659	2458	1688	755
Starvation Cap Reductn	984	1381	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.73	0.88	0.53	0.63

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 85 (94%), Referenced to phase 1:WBTL, Start of Green
Natural Cycle: 45
Control Type: Actuated-Coordinated

Splits and Phases: 2: Riverway & Park Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0						4.0	4.0
Lane Util. Factor				0.97	0.91						0.95	1.00
Frpb, ped/bikes				1.00	1.00						1.00	1.00
Flpb, ped/bikes				1.00	1.00						1.00	1.00
Frt				1.00	1.00						1.00	0.85
Flt Protected				0.95	1.00						1.00	1.00
Satd. Flow (prot)				3152	4668						3249	1454
Flt Permitted				0.95	1.00						1.00	1.00
Satd. Flow (perm)				3152	4668						3249	1454
Volume (vph)	0	0	0	475	914	0	0	0	0	0	860	455
Peak-hour factor, PHF	0.95	0.95	0.95	0.96	0.96	0.96	0.95	0.95	0.95	0.96	0.96	0.96
Adj. Flow (vph)	0	0	0	495	952	0	0	0	0	0	896	474
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	495	952	0	0	0	0	0	896	474
Confl. Peds. (#/hr)				20		40						40
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type				Split								Prot
Protected Phases				1	1						5	5
Permitted Phases												
Actuated Green, G (s)				45.6	45.6						34.4	34.4
Effective Green, g (s)				46.6	46.6						35.4	35.4
Actuated g/C Ratio				0.52	0.52						0.39	0.39
Clearance Time (s)				5.0	5.0						5.0	5.0
Vehicle Extension (s)				2.0	2.0						2.0	2.0
Lane Grp Cap (vph)				1632	2417						1278	572
v/s Ratio Prot				0.16	c0.20						0.28	c0.33
v/s Ratio Perm												
v/c Ratio				0.30	0.39						0.70	0.83
Uniform Delay, d1				12.4	13.1						22.9	24.6
Progression Factor				1.48	1.45						1.00	1.00
Incremental Delay, d2				0.4	0.4						1.4	9.2
Delay (s)				18.8	19.4						24.3	33.8
Level of Service				B	B						C	C
Approach Delay (s)		0.0			19.2			0.0			27.6	
Approach LOS		A			B			A			C	

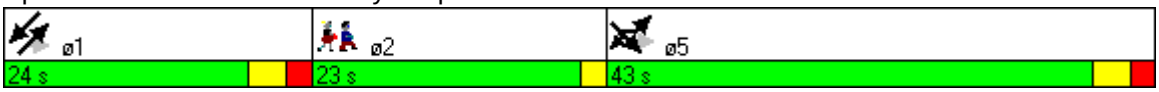
Intersection Summary			
HCM Average Control Delay	23.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	SEL2	SET	SER	NET	NER	SWT	ø2
Lane Configurations							
Volume (vph)	779	898	192	1396	190	1172	
Lane Group Flow (vph)	657	1370	206	1551	284	1234	
Turn Type	custom		Prot		Perm		
Protected Phases	5	5	5	1		1	2
Permitted Phases	5				1		
Detector Phases	5	5	5	1	1	1	
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	7.0
Minimum Split (s)	15.0	15.0	15.0	15.0	15.0	15.0	24.0
Total Split (s)	43.0	43.0	43.0	24.0	24.0	24.0	23.0
Total Split (%)	47.8%	47.8%	47.8%	26.7%	26.7%	26.7%	26%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	2.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	0.0
Lead/Lag				Lead	Lead	Lead	Lag
Lead-Lag Optimize?				Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	C-Max	C-Max	C-Max	None
v/c Ratio	1.03	1.03	0.33	1.27	0.52	1.01	
Control Delay	66.5	56.4	16.2	155.9	31.1	40.8	
Queue Delay	65.7	69.3	0.0	23.3	0.0	377.4	
Total Delay	132.2	125.7	16.2	179.2	31.1	418.2	
Queue Length 50th (ft)	~452	~473	57	445	101	177	
Queue Length 95th (ft)	#691	#618	m144	#883	#301	m#325	
Internal Link Dist (ft)		268		23		183	
Turn Bay Length (ft)							
Base Capacity (vph)	640	1329	630	1220	546	1220	
Starvation Cap Reductn	0	0	0	0	0	561	
Spillback Cap Reductn	89	185	0	48	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	1.19	1.20	0.33	1.32	0.52	1.87	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 15 (17%), Referenced to phase 1:NESW, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Fenway Loop & Brookline Ave



Movement	SEL2	SEL	SET	SER	NET	NER	NER2	SWT
Lane Configurations								
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0		4.0
Lane Util. Factor	0.91		0.91	1.00	0.95	1.00		0.95
Frt	1.00		1.00	0.85	1.00	0.85		1.00
Flt Protected	0.95		0.99	1.00	1.00	1.00		1.00
Satd. Flow (prot)	1478		3067	1454	3249	1454		3249
Flt Permitted	0.95		0.99	1.00	1.00	1.00		1.00
Satd. Flow (perm)	1478		3067	1454	3249	1454		3249
Volume (vph)	779	207	898	192	1396	190	66	1172
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.90	0.90	0.90	0.95
Adj. Flow (vph)	838	223	966	206	1551	211	73	1234
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	657	0	1370	206	1551	284	0	1234
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	custom	Perm		Prot		Perm		
Protected Phases	5		5	5	1			1
Permitted Phases	5	5				1		
Actuated Green, G (s)	38.0		38.0	38.0	31.6	31.6		31.6
Effective Green, g (s)	39.0		39.0	39.0	32.6	32.6		32.6
Actuated g/C Ratio	0.43		0.43	0.43	0.36	0.36		0.36
Clearance Time (s)	5.0		5.0	5.0	5.0	5.0		5.0
Vehicle Extension (s)	2.0		2.0	2.0	2.0	2.0		2.0
Lane Grp Cap (vph)	640		1329	630	1177	527		1177
v/s Ratio Prot	0.44			0.14	c0.48			0.38
v/s Ratio Perm			0.45			0.20		
v/c Ratio	1.03		1.03	0.33	1.32	0.54		1.05
Uniform Delay, d1	25.5		25.5	16.8	28.7	22.7		28.7
Progression Factor	0.87		0.87	0.86	1.00	1.00		0.91
Incremental Delay, d2	41.8		32.5	1.3	149.1	3.9		24.4
Delay (s)	64.1		54.7	15.8	177.8	26.7		50.6
Level of Service	E		D	B	F	C		D
Approach Delay (s)			53.9		154.4			50.6
Approach LOS			D		F			D

Intersection Summary			
HCM Average Control Delay	87.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.4
Intersection Capacity Utilization	89.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBL	NWT	NWR	NET	NER	SWT	SWR
Lane Configurations							
Volume (vph)	649	1000	129	503	1672	448	375
Lane Group Flow (vph)	1497	1235	270	565	1879	487	408
Turn Type			Prot		pt+ov		Perm
Protected Phases	1	6	6	5	1 5	5	
Permitted Phases							5
Detector Phases	1	6	6	5	1 5	5	5
Minimum Initial (s)	10.0	10.0	10.0	10.0		10.0	10.0
Minimum Split (s)	19.0	21.0	21.0	19.0		19.0	19.0
Total Split (s)	29.0	27.0	27.0	34.0	63.0	34.0	34.0
Total Split (%)	32.2%	30.0%	30.0%	37.8%	70.0%	37.8%	37.8%
Yellow Time (s)	5.0	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	2.0		2.0	2.0
Lead/Lag		Lag	Lag	Lead		Lead	Lead
Lead-Lag Optimize?		Yes	Yes	Yes		Yes	Yes
Recall Mode	C-Max	Max	Max	Max		Max	Max
v/c Ratio	3.31dr	1.04	0.73	0.53	1.13	0.46	1.26
Control Delay	863.6	70.7	43.6	20.1	76.7	23.9	161.5
Queue Delay	0.0	53.5	0.0	9.5	130.7	0.3	0.0
Total Delay	863.6	124.2	43.6	29.6	207.4	24.3	161.5
Queue Length 50th (ft)	~759	~280	141	143	~721	116	~287
Queue Length 95th (ft)	#888	#349	#237	m99	m173	m159	m#461
Internal Link Dist (ft)	668	176		183		648	
Turn Bay Length (ft)							150
Base Capacity (vph)	521	1189	372	1072	1661	1062	325
Starvation Cap Reductn	0	0	0	470	342	0	0
Spillback Cap Reductn	122	132	0	0	0	181	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	3.75	1.17	0.73	0.94	1.42	0.55	1.26

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 89 (99%), Referenced to phase 1:WBL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
~ 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.
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 4: Boylston St & Brookline Ave

Movement	WBL	WBR	WBR2	NWL	NWT	NWR	NWR2	NET	NER	SWT	SWR
Lane Configurations											
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0				4.0	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.97				0.91	1.00		0.95	0.88	0.95	1.00
Frpb, ped/bikes	0.63				1.00	1.00		1.00	1.00	1.00	0.68
Flpb, ped/bikes	1.00				1.00	1.00		1.00	1.00	1.00	1.00
Frt	0.92				1.00	0.85		1.00	0.85	1.00	0.85
Flt Protected	0.98				1.00	1.00		1.00	1.00	1.00	1.00
Satd. Flow (prot)	1878				4652	1454		3217	2533	3185	975
Flt Permitted	0.98				1.00	1.00		1.00	1.00	1.00	1.00
Satd. Flow (perm)	1878				4652	1454		3217	2533	3185	975
Volume (vph)	649	678	5	75	1000	129	106	503	1672	448	375
Peak-hour factor, PHF	0.89	0.89	0.89	0.87	0.87	0.87	0.87	0.89	0.89	0.92	0.92
Adj. Flow (vph)	729	762	6	86	1149	148	122	565	1879	487	408
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	1497	0	0	0	1235	270	0	565	1879	487	408
Confl. Peds. (#/hr)			461								168
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	1%	2%	2%
Turn Type				Split		Prot			pt+ov		Perm
Protected Phases	1			6	6	6		5	1 5	5	
Permitted Phases											5
Actuated Green, G (s)	23.0				21.0	21.0		28.0	57.0	28.0	28.0
Effective Green, g (s)	25.0				23.0	23.0		30.0	59.0	30.0	30.0
Actuated g/C Ratio	0.28				0.26	0.26		0.33	0.66	0.33	0.33
Clearance Time (s)	6.0				6.0	6.0		6.0		6.0	6.0
Vehicle Extension (s)	3.0				3.0	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	522				1189	372		1072	1661	1062	325
v/s Ratio Prot	c0.80				c0.27	0.19		0.18	0.74	0.15	
v/s Ratio Perm											c0.42
v/c Ratio	3.31dr				1.04	0.73		0.53	1.13	0.46	1.26
Uniform Delay, d1	32.5				33.5	30.6		24.3	15.5	23.6	30.0
Progression Factor	0.78				1.00	1.00		0.81	0.85	0.95	0.92
Incremental Delay, d2	844.5				36.7	11.7		0.2	59.9	1.1	133.6
Delay (s)	869.9				70.2	42.3		19.8	73.1	23.6	161.1
Level of Service	F				E	D		B	E	C	F
Approach Delay (s)	869.9				65.2			60.8		86.3	
Approach LOS	F				E			E		F	

Intersection Summary			
HCM Average Control Delay	256.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.71		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	98.1%	ICU Level of Service	F
Analysis Period (min)	15		

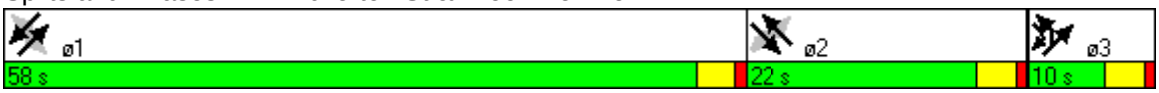
dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

Lane Group	SEL	SET	SER	NWL	NWT	NEL	NET	SWL	SWT
Lane Configurations									
Volume (vph)	86	45	242	101	40	126	408	32	475
Lane Group Flow (vph)	0	140	263	0	179	137	469	34	565
Turn Type	Perm		pm+ov	Perm		D.P+P		Perm	
Protected Phases		2	3		2	3	1 3		1
Permitted Phases	2		2	2		1		1	
Detector Phases	2	2	3	2	2	3	1 3	1	1
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.0	20.0	10.0	20.0	20.0	10.0		58.0	58.0
Total Split (s)	22.0	22.0	10.0	22.0	22.0	10.0	68.0	58.0	58.0
Total Split (%)	24.4%	24.4%	11.1%	24.4%	24.4%	11.1%	75.6%	64.4%	64.4%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0
Lead/Lag	Lag	Lag		Lag	Lag			Lead	Lead
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	None		Max	Max
v/c Ratio		0.75	0.66		0.84	0.36	0.42	0.46	0.55
Control Delay		60.0	29.7		65.1	9.7	6.8	34.8	13.0
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		60.0	29.7		65.1	9.7	6.8	34.8	13.0
Queue Length 50th (ft)		75	98		93	17	59	10	172
Queue Length 95th (ft)		#168	177		#206	m38	m79	#58	262
Internal Link Dist (ft)		352			75		648		198
Turn Bay Length (ft)									
Base Capacity (vph)		194	401		222	379	1117	74	1034
Starvation Cap Reductn		0	0		0	0	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		0.72	0.66		0.81	0.36	0.42	0.46	0.55

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 27 (30%), Referenced to phase 6:, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Fullerton St & Brookline Ave



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	16	12	12	12	12	12	10	10	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	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	0.94	
Flpb, ped/bikes		0.83	1.00		1.00		0.94	1.00		1.00	1.00	
Frt		1.00	0.85		0.98		1.00	0.99		1.00	0.99	
Flt Protected		0.97	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1339	1362		1590		1404	1552		1593	1718	
Flt Permitted		0.70	1.00		0.65		0.35	1.00		0.07	1.00	
Satd. Flow (perm)		964	1362		1061		514	1552		124	1718	
Volume (vph)	86	45	242	101	40	29	126	408	25	32	475	45
Peak-hour factor, PHF	0.92	0.95	0.92	0.95	0.95	0.95	0.92	0.92	0.95	0.95	0.92	0.92
Adj. Flow (vph)	93	47	263	106	42	31	137	443	26	34	516	49
RTOR Reduction (vph)	0	0	38	0	8	0	0	2	0	0	4	0
Lane Group Flow (vph)	0	140	225	0	171	0	137	467	0	34	561	0
Confl. Peds. (#/hr)	162		30				423					423
Turn Type	Perm		pm+ov	Perm			D.P+P			Perm		
Protected Phases		2	3		2		3	1 3			1	
Permitted Phases	2		2	2			1			1		
Actuated Green, G (s)		17.3	24.0		17.3		60.7	64.7		54.0	54.0	
Effective Green, g (s)		17.3	24.0		17.3		60.7	64.7		54.0	54.0	
Actuated g/C Ratio		0.19	0.27		0.19		0.67	0.72		0.60	0.60	
Clearance Time (s)		4.0	4.0		4.0		4.0			4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0			3.0	3.0	
Lane Grp Cap (vph)		185	424		204		413	1116		74	1031	
v/s Ratio Prot			c0.04				0.02	0.30			c0.33	
v/s Ratio Perm		0.15	0.13		c0.16		0.20			0.27		
v/c Ratio		0.76	0.53		0.84		0.33	0.42		0.46	0.54	
Uniform Delay, d1		34.4	28.2		35.0		6.4	5.1		9.9	10.7	
Progression Factor		1.00	1.00		1.00		1.74	1.09		1.00	1.00	
Incremental Delay, d2		16.1	1.3		24.8		0.4	0.2		19.2	2.1	
Delay (s)		50.5	29.5		59.8		11.5	5.8		29.1	12.8	
Level of Service		D	C		E		B	A		C	B	
Approach Delay (s)		36.8			59.8			7.1			13.7	
Approach LOS		D			E			A			B	

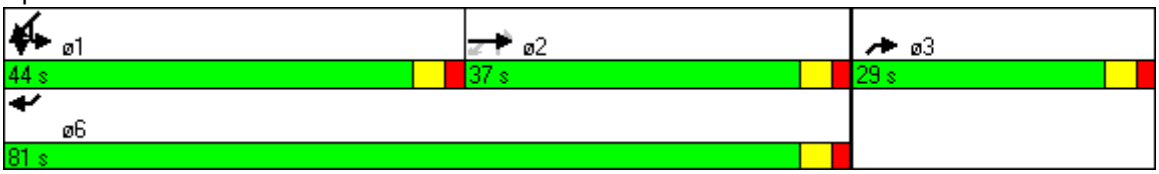
Intersection Summary			
HCM Average Control Delay	21.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR2	NBR2	SBR2	NER	SWL	SWT	SWR
Lane Configurations								
Volume (vph)	688	48	529	81	776	361	1187	697
Lane Group Flow (vph)	980	64	608	88	876	430	1290	819
Turn Type		Perm	custom	Free	custom	Split		custom
Protected Phases	2				3	1	1	6
Permitted Phases		2	2	Free				
Detector Phases	2	2	2		3	1	1	6
Minimum Initial (s)	8.0	8.0	8.0		4.0	4.0	4.0	8.0
Minimum Split (s)	30.0	30.0	30.0		29.0	9.0	9.0	30.0
Total Split (s)	37.0	37.0	37.0	0.0	29.0	44.0	44.0	81.0
Total Split (%)	33.6%	33.6%	33.6%	0.0%	26.4%	40.0%	40.0%	73.6%
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag	Lag			Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes			Yes	Yes	
Recall Mode	None	None	None		None	C-Min	C-Min	None
v/c Ratio	0.84	0.29	1.57	0.06	1.52	0.77	1.16	0.48
Control Delay	27.6	11.3	290.0	0.1	275.4	33.3	106.1	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.6	11.3	290.0	0.1	275.4	33.3	106.1	7.1
Queue Length 50th (ft)	239	11	~525	0	~503	166	~558	115
Queue Length 95th (ft)	181	m16	#709	0	m#618	m338	#692	103
Internal Link Dist (ft)	211						1	
Turn Bay Length (ft)		40						
Base Capacity (vph)	1165	219	388	1420	578	559	1115	1694
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.29	1.57	0.06	1.52	0.77	1.16	0.48

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 81 (74%), Referenced to phase 1:SWTL, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 11: Commonwealth Ave & Beacon Street



Movement	EBT	EBR	EBR2	NBR2	SBR2	NER	NER2	SWL2	SWL	SWT	SWR	SWR2
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0			4.0	4.0	4.0	
Lane Util. Factor	0.86		0.86	1.00	1.00	0.88			1.00	0.95	0.88	
Frpb, ped/bikes	0.96		0.76	0.86	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	1.00	1.00	
Frt	0.99		0.85	0.86	0.86	0.85			1.00	1.00	0.85	
Flt Protected	1.00		1.00	1.00	1.00	1.00			0.95	1.00	1.00	
Satd. Flow (prot)	3886		684	898	1420	2533			1533	3065	2413	
Flt Permitted	1.00		1.00	1.00	1.00	1.00			0.95	1.00	1.00	
Satd. Flow (perm)	3886		684	898	1420	2533			1533	3065	2413	
Volume (vph)	688	47	48	529	81	776	30	35	361	1187	697	56
Peak-hour factor, PHF	0.75	0.75	0.75	0.87	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	917	63	64	608	88	843	33	38	392	1290	758	61
RTOR Reduction (vph)	0	0	14	119	0	2	0	0	2	0	5	0
Lane Group Flow (vph)	980	0	50	489	88	874	0	0	428	1290	814	0
Confl. Peds. (#/hr)		470	174	98	96	98	170	98	170		98	170
Heavy Vehicles (%)	8%	8%	8%	10%	0%	1%	1%	6%	6%	6%	6%	6%
Parking (#/hr)			25	25			25					
Turn Type			Perm	custom	Free	custom		Split	Split		custom	
Protected Phases	2					3		1	1	1	6	
Permitted Phases			2	2	Free							
Actuated Green, G (s)	32.0		32.0	32.0	110.0	24.0			39.0	39.0	76.0	
Effective Green, g (s)	33.0		33.0	33.0	110.0	25.0			40.0	40.0	77.0	
Actuated g/C Ratio	0.30		0.30	0.30	1.00	0.23			0.36	0.36	0.70	
Clearance Time (s)	5.0		5.0	5.0		5.0			5.0	5.0	5.0	
Vehicle Extension (s)	3.0		3.0	3.0		3.0			3.0	3.0	3.0	
Lane Grp Cap (vph)	1166		205	269	1420	576			557	1115	1689	
v/s Ratio Prot	0.25					c0.34			0.28	c0.42	0.34	
v/s Ratio Perm			0.07	c0.54	0.06							
v/c Ratio	0.84		0.24	1.82	0.06	1.52			0.77	1.16	0.48	
Uniform Delay, d1	36.0		29.1	38.5	0.0	42.5			30.9	35.0	7.5	
Progression Factor	0.61		0.41	1.00	1.00	1.18			0.81	0.78	0.86	
Incremental Delay, d2	3.7		0.4	382.3	0.1	240.8			7.4	78.5	0.2	
Delay (s)	25.9		12.3	420.8	0.1	290.8			32.5	105.7	6.6	
Level of Service	C		B	F	A	F			C	F	A	
Approach Delay (s)	25.0									61.3		
Approach LOS	C									E		

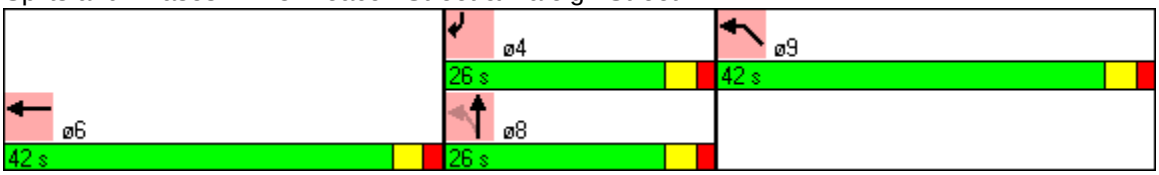
Intersection Summary			
HCM Average Control Delay	134.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.47		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	138.1%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBT	NBL	NBT	SBR	NWL
Lane Configurations					
Volume (vph)	1431	126	25	10	769
Lane Group Flow (vph)	1556	137	27	11	847
Turn Type		Perm		custom	
Protected Phases	6		8	4	9
Permitted Phases		8			
Detector Phases	6	8	8	4	9
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	19.0	21.0	21.0	13.0	21.0
Total Split (s)	42.0	26.0	26.0	26.0	42.0
Total Split (%)	38.2%	23.6%	23.6%	23.6%	38.2%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	None	None	None	None
v/c Ratio	0.63	0.47	0.17	0.08	0.78
Control Delay	18.0	45.2	53.7	46.5	28.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	18.0	45.2	53.7	46.5	28.7
Queue Length 50th (ft)	216	31	19	7	207
Queue Length 95th (ft)	m392	65	m31	25	210
Internal Link Dist (ft)	511		111		478
Turn Bay Length (ft)					
Base Capacity (vph)	2481	640	373	322	1247
Starvation Cap Reductn	0	23	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.63	0.22	0.07	0.03	0.68

Intersection Summary
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 94 (85%), Referenced to phase 6:WBT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 13: Beacon Street & Raleigh Street



Movement	WBT	WBR	NBL	NBT	SBR	NWL	NWR
Lane Configurations							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor	0.91		0.97	1.00	1.00	0.97	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	0.99	
Flpb, ped/bikes	1.00		0.88	1.00	1.00	1.00	
Frt	1.00		1.00	1.00	0.86	1.00	
Flt Protected	1.00		0.95	1.00	1.00	0.95	
Satd. Flow (prot)	5083		3029	1863	1611	3413	
Flt Permitted	1.00		0.95	1.00	1.00	0.95	
Satd. Flow (perm)	5083		3029	1863	1611	3413	
Volume (vph)	1431	1	126	25	10	769	10
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1555	1	137	27	11	836	11
RTOR Reduction (vph)	0	0	39	0	0	0	0
Lane Group Flow (vph)	1556	0	98	27	11	847	0
Confl. Peds. (#/hr)		175	57		57		175
Turn Type			Perm		custom		
Protected Phases	6			8	4	9	
Permitted Phases			8				
Actuated Green, G (s)	52.7		8.2	8.2	8.2	34.1	
Effective Green, g (s)	53.7		9.2	9.2	9.2	35.1	
Actuated g/C Ratio	0.49		0.08	0.08	0.08	0.32	
Clearance Time (s)	5.0		5.0	5.0	5.0	5.0	
Vehicle Extension (s)	2.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	2481		253	156	135	1089	
v/s Ratio Prot	c0.31			0.01	0.01	c0.25	
v/s Ratio Perm			c0.03				
v/c Ratio	0.63		0.39	0.17	0.08	0.78	
Uniform Delay, d1	20.8		47.7	46.9	46.5	33.9	
Progression Factor	0.74		1.26	1.12	1.00	0.70	
Incremental Delay, d2	0.8		0.8	0.4	0.3	3.5	
Delay (s)	16.3		61.0	53.1	46.8	27.3	
Level of Service	B		E	D	D	C	
Approach Delay (s)	16.3			59.7		27.3	
Approach LOS	B			E		C	

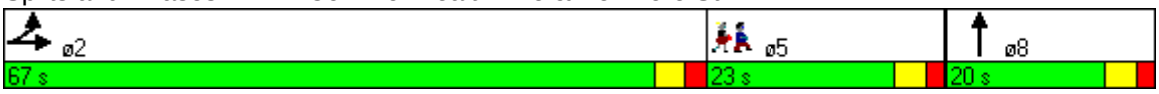
Intersection Summary			
HCM Average Control Delay	22.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	NBT	ø5
Lane Configurations			
Volume (vph)	1877	15	
Lane Group Flow (vph)	2204	77	
Turn Type			
Protected Phases	2	8	5
Permitted Phases			
Detector Phases	2	8	
Minimum Initial (s)	4.0	8.0	4.0
Minimum Split (s)	21.0	20.0	23.0
Total Split (s)	67.0	20.0	23.0
Total Split (%)	60.9%	18.2%	21%
Yellow Time (s)	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	C-Max	None	None
v/c Ratio	0.61	0.41	
Control Delay	8.7	23.2	
Queue Delay	0.3	0.0	
Total Delay	8.9	23.2	
Queue Length 50th (ft)	247	11	
Queue Length 95th (ft)	m226	56	
Internal Link Dist (ft)	453	193	
Turn Bay Length (ft)			
Base Capacity (vph)	3619	270	
Starvation Cap Reductn	646	0	
Spillback Cap Reductn	0	0	
Storage Cap Reductn	0	0	
Reduced v/c Ratio	0.74	0.29	

Intersection Summary
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 107 (97%), Referenced to phase 2:EBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 14: Commonwealth Ave & Kenmore St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0				
Lane Util. Factor		0.91						1.00				
Frt		1.00						0.89				
Flt Protected		1.00						1.00				
Satd. Flow (prot)		4555						1497				
Flt Permitted		1.00						1.00				
Satd. Flow (perm)		4555						1497				
Volume (vph)	131	1877	20	0	0	0	0	15	56	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.95	0.95	0.95	0.92	0.92	0.92	0.95	0.95	0.95
Adj. Flow (vph)	142	2040	22	0	0	0	0	16	61	0	0	0
RTOR Reduction (vph)	0	5	0	0	0	0	0	57	0	0	0	0
Lane Group Flow (vph)	0	2200	0	0	0	0	0	20	0	0	0	0
Heavy Vehicles (%)	2%	2%	2%	0%	0%	0%	0%	2%	2%	0%	0%	0%
Turn Type	Split											
Protected Phases	2	2						8				
Permitted Phases												
Actuated Green, G (s)		81.5						7.1				
Effective Green, g (s)		82.5						8.1				
Actuated g/C Ratio		0.75						0.07				
Clearance Time (s)		5.0						5.0				
Vehicle Extension (s)		3.0						3.0				
Lane Grp Cap (vph)		3416						110				
v/s Ratio Prot		c0.48						c0.01				
v/s Ratio Perm												
v/c Ratio		0.64						0.19				
Uniform Delay, d1		6.6						47.9				
Progression Factor		1.09						1.00				
Incremental Delay, d2		0.1						0.8				
Delay (s)		7.3						48.7				
Level of Service		A						D				
Approach Delay (s)		7.3			0.0			48.7			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM Average Control Delay	8.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	19.4
Intersection Capacity Utilization	57.1%	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												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	5	557	34	19	1034	5	48	25	26	5	6	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	605	37	21	1124	5	52	27	28	5	7	16
Pedestrians		175			175			108			175	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		15			15			9			15	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		488										
pX, platoon unblocked				0.89			0.89	0.89	0.89	0.89	0.89	
vC, conflicting volume	1304			750			1541	2088	604	1873	2104	915
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1304			590			1482	2100	425	1857	2118	915
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			97			0	22	93	35	81	92
cM capacity (veh/h)	454			797			39	35	402	8	34	204

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	308	340	583	567	108	28
Volume Left	5	0	21	0	52	5
Volume Right	0	37	0	5	28	16
cSH	454	1700	797	1700	49	30
Volume to Capacity	0.01	0.20	0.03	0.33	2.19	0.93
Queue Length 95th (ft)	1	0	2	0	275	78
Control Delay (s)	0.4	0.0	0.7	0.0	727.7	329.1
Lane LOS	A		A		F	F
Approach Delay (s)	0.2		0.4		727.7	329.1
Approach LOS					F	F

Intersection Summary			
Average Delay	45.6		
Intersection Capacity Utilization	68.1%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	10	580	19	50	1003	46	66	32	117	10	0	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	11	611	20	53	1056	48	69	34	123	11	0	5
Pedestrians		150			150			82			150	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		12			12			7			12	
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage veh)								0			0	
Upstream signal (ft)		929										
pX, platoon unblocked				0.93			0.93	0.93	0.93	0.93	0.93	
vC, conflicting volume	1254			713			1512	2083	547	1952	2069	852
vC1, stage 1 conf vol							724	724		1335	1335	
vC2, stage 2 conf vol							788	1359		616	734	
vCu, unblocked vol	1254			621			1477	2089	444	1948	2074	852
tC, single (s)	4.2			4.1			7.6	6.6	7.0	7.8	6.8	7.2
tC, 2 stage (s)							6.6	5.6		6.8	5.8	
tF (s)	2.2			2.2			3.6	4.1	3.4	3.6	4.1	3.4
p0 queue free %	98			94			42	61	71	80	100	98
cM capacity (veh/h)	477			831			120	87	419	54	84	215

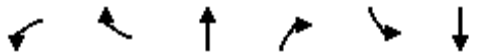
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	316	325	581	576	226	16
Volume Left	11	0	53	0	69	11
Volume Right	0	20	0	48	123	5
cSH	477	1700	831	1700	179	72
Volume to Capacity	0.02	0.19	0.06	0.34	1.26	0.22
Queue Length 95th (ft)	2	0	5	0	315	19
Control Delay (s)	0.8	0.0	1.7	0.0	205.9	68.8
Lane LOS	A		A		F	F
Approach Delay (s)	0.4		0.8		205.9	68.8
Approach LOS					F	F

Intersection Summary			
Average Delay	24.0		
Intersection Capacity Utilization	80.2%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	WBL	WBR	WBR2	SEL2	SEL	SER	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control	Stop				Stop			Free			Free	
Grade	0%				0%			0%			0%	
Volume (veh/h)	91	9	78	0	0	0	3	601	0	0	438	11
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	96	9	82	0	0	0	3	633	0	0	461	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None				None							
Median storage veh)												
Upstream signal (ft)								898			922	
pX, platoon unblocked												
vC, conflicting volume	1106	1112	633	1193	1106	467	473			633		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1106	1112	633	1193	1106	467	473			633		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	49	95	83	100	100	100	100			100		
cM capacity (veh/h)	188	209	482	132	212	600	1089			955		

Direction, Lane #	WB 1	SE 1	SE 2	NE 1	SW 1
Volume Total	187	0	0	636	473
Volume Left	96	0	0	3	0
Volume Right	82	0	0	0	12
cSH	259	1700	1700	1089	1700
Volume to Capacity	0.72	0.00	0.00	0.00	0.28
Queue Length 95th (ft)	126	0	0	0	0
Control Delay (s)	48.5	0.0	0.0	0.1	0.0
Lane LOS	E	A	A	A	
Approach Delay (s)	48.5	0.0		0.1	0.0
Approach LOS	E	A			

Intersection Summary				
Average Delay	7.0			
Intersection Capacity Utilization	56.0%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	0	0	535	150	76	449
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	563	158	80	473
Pedestrians	367					
Lane Width (ft)	0.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)			1073			747
pX, platoon unblocked						
vC, conflicting volume	1642	1009			1088	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1642	1009			1088	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			88	
cM capacity (veh/h)	97	294			641	

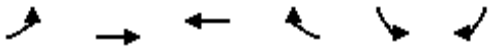
Direction, Lane #	NB 1	SB 1
Volume Total	721	553
Volume Left	0	80
Volume Right	158	0
cSH	1700	641
Volume to Capacity	0.42	0.12
Queue Length 95th (ft)	0	11
Control Delay (s)	0.0	3.3
Lane LOS		A
Approach Delay (s)	0.0	3.3
Approach LOS		

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	81.0%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	519	25	5	459	35	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	564	27	5	499	38	11
Pedestrians	471			471	471	
Lane Width (ft)	16.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	52			39	39	
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				259		
pX, platoon unblocked						
vC, conflicting volume			1062		2030	1520
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1062		2030	1520
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		0	80
cM capacity (veh/h)			398		18	54

Direction, Lane #	NB 1	SB 1	NW 1
Volume Total	591	504	49
Volume Left	0	5	38
Volume Right	27	0	11
cSH	1700	398	21
Volume to Capacity	0.35	0.01	2.31
Queue Length 95th (ft)	0	1	159
Control Delay (s)	0.0	0.4	985.2
Lane LOS		A	F
Approach Delay (s)	0.0	0.4	985.2
Approach LOS			F

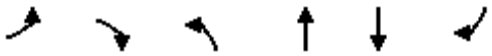
Intersection Summary			
Average Delay	42.3		
Intersection Capacity Utilization	52.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Stop	Stop		Stop	
Volume (vph)	35	0	30	35	0	20
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	37	0	32	37	0	21

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total (vph)	37	68	21
Volume Left (vph)	37	0	0
Volume Right (vph)	0	37	21
Hadj (s)	0.23	-0.29	-0.57
Departure Headway (s)	4.2	3.7	3.5
Degree Utilization, x	0.04	0.07	0.02
Capacity (veh/h)	838	964	974
Control Delay (s)	7.4	7.0	6.6
Approach Delay (s)	7.4	7.0	6.6
Approach LOS	A	A	A

Intersection Summary			
Delay	7.0		
HCM Level of Service	A		
Intersection Capacity Utilization	29.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	95	192	0	51	234	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	100	202	0	54	246	0
Pedestrians				19	19	
Lane Width (ft)				14.0	14.0	
Walking Speed (ft/s)				4.0	4.0	
Percent Blockage				2	2	
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)				880		
pX, platoon unblocked						
vC, conflicting volume	319	265	246			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	319	265	246			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	85	73	100			
cM capacity (veh/h)	662	759	1331			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	302	54	246
Volume Left	100	0	0
Volume Right	202	0	0
cSH	724	1700	1700
Volume to Capacity	0.42	0.03	0.14
Queue Length 95th (ft)	52	0	0
Control Delay (s)	13.5	0.0	0.0
Lane LOS	B		
Approach Delay (s)	13.5	0.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	6.8		
Intersection Capacity Utilization	40.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	64	74	52	498	496	22
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	67	78	55	524	522	23
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)				506	1314	
pX, platoon unblocked	0.95					
vC, conflicting volume	1167	534	545			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1177	534	545			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	64	86	95			
cM capacity (veh/h)	189	546	1024			

Direction, Lane #	SE 1	NE 1	SW 1
Volume Total	145	579	545
Volume Left	67	55	0
Volume Right	78	0	23
cSH	292	1024	1700
Volume to Capacity	0.50	0.05	0.32
Queue Length 95th (ft)	65	4	0
Control Delay (s)	29.0	1.4	0.0
Lane LOS	D	A	
Approach Delay (s)	29.0	1.4	0.0
Approach LOS	D		

Intersection Summary			
Average Delay	4.0		
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	698	8	20	1168	45	57
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	735	8	21	1229	47	60
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				498		
pX, platoon unblocked					0.67	
vC, conflicting volume			743		1396	372
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			743		1092	372
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		65	90
cM capacity (veh/h)			860		136	626

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	490	253	431	820	107
Volume Left	0	0	21	0	47
Volume Right	0	8	0	0	60
cSH	1700	1700	860	1700	241
Volume to Capacity	0.29	0.15	0.02	0.48	0.45
Queue Length 95th (ft)	0	0	2	0	53
Control Delay (s)	0.0	0.0	0.7	0.0	31.4
Lane LOS			A		D
Approach Delay (s)	0.0		0.3		31.4
Approach LOS					D

Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	59.1%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	23	36	13	522	487	6
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	24	38	14	549	513	6
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					495	
pX, platoon unblocked						
vC, conflicting volume	1093	516	519			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1093	516	519			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	90	93	99			
cM capacity (veh/h)	234	559	1047			

Direction, Lane #	SE 1	NE 1	SW 1
Volume Total	62	563	519
Volume Left	24	14	0
Volume Right	38	0	6
cSH	363	1047	1700
Volume to Capacity	0.17	0.01	0.31
Queue Length 95th (ft)	15	1	0
Control Delay (s)	17.0	0.4	0.0
Lane LOS	C	A	
Approach Delay (s)	17.0	0.4	0.0
Approach LOS	C		

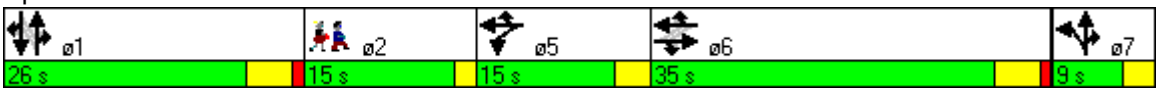
Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	48.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	131	943	300	172	517	28	111	506	36	52	827	10
Lane Group Flow (vph)	142	1025	326	187	562	30	0	629	37	0	987	11
Turn Type	Perm		Prot	D.P+P		Prot	D.P+P		Prot	Perm		Prot
Protected Phases		6	6	5	5 6	5 6	7	1 7	1 7		1	1
Permitted Phases	6			6			1			1		
Detector Phases	6	6	6	5	5 6	5 6	7	1 7	1 7	1	1	1
Minimum Initial (s)	10.0	10.0	10.0	2.0			2.0			10.0	10.0	10.0
Minimum Split (s)	15.0	15.0	15.0	10.0			10.0			15.0	15.0	15.0
Total Split (s)	35.0	35.0	35.0	15.0	50.0	50.0	9.0	35.0	35.0	26.0	26.0	26.0
Total Split (%)	35.0%	35.0%	35.0%	15.0%	50.0%	50.0%	9.0%	35.0%	35.0%	26.0%	26.0%	26.0%
Yellow Time (s)	4.0	4.0	4.0	3.0			3.0			4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	0.0			0.0			1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lag	Lead						Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes						Yes	Yes	Yes
Recall Mode	Min	Min	Min	None			None			C-Min	C-Min	C-Min
v/c Ratio	0.77	1.03	0.59	0.77	0.38	0.04		0.92	0.06		1.49	0.02
Control Delay	59.8	70.9	19.4	42.3	18.6	5.6		51.3	11.2		259.9	41.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Delay	59.8	70.9	19.4	42.3	18.6	5.6		51.3	11.2		259.9	41.4
Queue Length 50th (ft)	81	~369	87	71	119	0		138	3		~413	5
Queue Length 95th (ft)	#189	#497	180	#178	161	16		#368	27		m#651	m6
Internal Link Dist (ft)		968			408			639			270	
Turn Bay Length (ft)	50		100			100			100			100
Base Capacity (vph)	185	997	555	244	1480	678		682	571		664	450
Starvation Cap Reductn	0	0	0	0	0	0		0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0		0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0		0	0		0	0
Reduced v/c Ratio	0.77	1.03	0.59	0.77	0.38	0.04		0.92	0.06		1.49	0.02

Intersection Summary

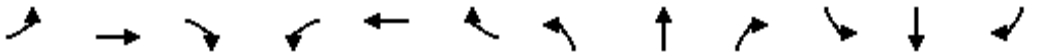
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 77 (77%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Beacon St & Park Dr



Lane Group	ø2
Lane Configurations	
Volume (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	2
Permitted Phases	
Detector Phases	
Minimum Initial (s)	2.0
Minimum Split (s)	15.0
Total Split (s)	15.0
Total Split (%)	15%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Recall Mode	None
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Flpb, ped/bikes	0.80	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99	1.00		1.00	1.00
Satd. Flow (prot)	1287	3217	1439	1608	3217	1439		3067	1384		3207	1439
Flt Permitted	0.44	1.00	1.00	0.13	1.00	1.00		0.52	1.00		0.78	1.00
Satd. Flow (perm)	598	3217	1439	218	3217	1439		1618	1384		2497	1439
Volume (vph)	131	943	300	172	517	28	111	506	36	52	827	10
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.98	0.98	0.98	0.89	0.89	0.89
Adj. Flow (vph)	142	1025	326	187	562	30	113	516	37	58	929	11
RTOR Reduction (vph)	0	0	109	0	0	16	0	0	18	0	0	4
Lane Group Flow (vph)	142	1025	217	187	562	14	0	629	19	0	987	7
Confl. Peds. (#/hr)	61		82	82		61	101		81	81		101
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	5%	5%	5%	1%	1%	1%
Turn Type	Perm		Prot	D.P+P		Prot	D.P+P		Prot	Perm		Prot
Protected Phases		6	6	5	5 6	5 6	7	1 7	1 7		1	1
Permitted Phases	6			6			1			1		
Actuated Green, G (s)	30.0	30.0	30.0	42.0	45.0	45.0		34.8	37.8		28.8	28.8
Effective Green, g (s)	31.0	31.0	31.0	42.0	46.0	46.0		34.8	38.8		29.8	29.8
Actuated g/C Ratio	0.31	0.31	0.31	0.42	0.46	0.46		0.35	0.39		0.30	0.30
Clearance Time (s)	5.0	5.0	5.0	3.0							5.0	5.0
Vehicle Extension (s)	2.0	2.0	2.0	2.0							2.0	2.0
Lane Grp Cap (vph)	185	997	446	244	1480	662		636	537		744	429
v/s Ratio Prot		c0.32	0.15	c0.08	0.17	0.01		c0.05	0.01			0.01
v/s Ratio Perm	0.24			0.24				0.29			c0.40	
v/c Ratio	0.77	1.03	0.49	0.77	0.38	0.02		0.99	0.04		1.33	0.02
Uniform Delay, d1	31.2	34.5	28.0	22.9	17.7	14.7		32.4	19.0		35.1	24.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.53	1.80
Incremental Delay, d2	15.7	35.9	0.3	12.1	0.1	0.0		32.5	0.0		152.5	0.0
Delay (s)	46.9	70.4	28.3	35.0	17.7	14.7		64.9	19.0		206.3	44.7
Level of Service	D	E	C	D	B	B		E	B		F	D
Approach Delay (s)		59.0			21.8			62.3			204.5	
Approach LOS		E			C			E			F	

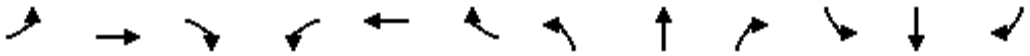
Intersection Summary			
HCM Average Control Delay	89.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	23.2
Intersection Capacity Utilization	99.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	ø9
Lane Configurations									
Volume (vph)	20	895	116	684	11	5	48	15	
Lane Group Flow (vph)	0	1016	0	891	0	65	0	68	
Turn Type	Perm		Perm		Perm		Perm		
Protected Phases		4		8		2		6	9
Permitted Phases	4		8		2		6		
Detector Phases	4	4	8	8	2	2	6	6	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	31.0
Total Split (s)	48.0	48.0	48.0	48.0	21.0	21.0	21.0	21.0	31.0
Total Split (%)	48.0%	48.0%	48.0%	48.0%	21.0%	21.0%	21.0%	21.0%	31%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	C-Max	C-Max	C-Max	C-Max	Min	Min	Min	Min	None
v/c Ratio		0.52		0.77		0.38		0.51	
Control Delay		3.3		22.5		22.2		52.7	
Queue Delay		0.0		0.0		0.0		0.0	
Total Delay		3.3		22.5		22.2		52.7	
Queue Length 50th (ft)		14		131		10		40	
Queue Length 95th (ft)		m41		m#436		48		81	
Internal Link Dist (ft)		361		861		154		514	
Turn Bay Length (ft)									
Base Capacity (vph)		1970		1157		223		188	
Starvation Cap Reductn		0		0		0		0	
Spillback Cap Reductn		0		0		0		0	
Storage Cap Reductn		0		0		0		0	
Reduced v/c Ratio		0.52		0.77		0.29		0.36	

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 53 (53%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Beacon St & Maitland St/Garage Access



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frpb, ped/bikes		0.99			0.99			0.76			0.99	
Flpb, ped/bikes		1.00			1.00			0.95			0.79	
Frt		0.99			0.99			0.90			1.00	
Flt Protected		1.00			0.99			0.99			0.96	
Satd. Flow (prot)		3161			3036			1099			1300	
Flt Permitted		0.93			0.64			0.94			0.75	
Satd. Flow (perm)		2929			1956			1043			1015	
Volume (vph)	20	895	50	116	684	47	11	5	24	48	15	1
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.50	0.95	0.95	0.95
Adj. Flow (vph)	21	942	53	122	720	49	12	5	48	51	16	1
RTOR Reduction (vph)	0	2	0	0	3	0	0	42	0	0	1	0
Lane Group Flow (vph)	0	1014	0	0	888	0	0	23	0	0	67	0
Confl. Peds. (#/hr)	199		170	170		199	170		170	199		199
Heavy Vehicles (%)	1%	1%	1%	4%	4%	4%	0%	0%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		63.5			63.5			11.1			11.1	
Effective Green, g (s)		64.5			64.5			12.1			12.1	
Actuated g/C Ratio		0.64			0.64			0.12			0.12	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1889			1262			126			123	
v/s Ratio Prot												
v/s Ratio Perm		0.35			c0.45			0.02			c0.07	
v/c Ratio		0.54			0.70			0.18			0.55	
Uniform Delay, d1		9.6			11.5			39.5			41.4	
Progression Factor		0.22			1.13			1.00			1.00	
Incremental Delay, d2		0.4			1.8			0.7			4.9	
Delay (s)		2.6			14.8			40.2			46.2	
Level of Service		A			B			D			D	
Approach Delay (s)		2.6			14.8			40.2			46.2	
Approach LOS		A			B			D			D	

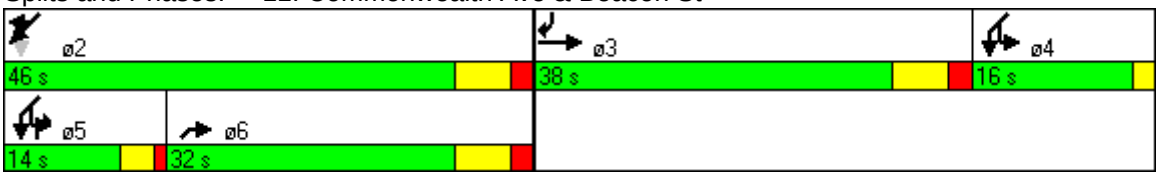
Intersection Summary			
HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	23.4
Intersection Capacity Utilization	80.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	NBR2	SBR2	NER	SWL	SWT	SWR	ø4
Lane Configurations								
Volume (vph)	642	320	76	971	610	885	591	
Lane Group Flow (vph)	923	368	83	1032	682	1094	470	
Turn Type		custom	custom	custom	pm+pt		Prot	
Protected Phases	3	5!	3	6	4 5	2	2	4
Permitted Phases					2			
Detector Phases	3	5	3	6	4 5	2	2	
Minimum Initial (s)	8.0	8.0	8.0	8.0		8.0	8.0	8.0
Minimum Split (s)	24.0	14.0	24.0	21.0		21.0	21.0	16.0
Total Split (s)	38.0	14.0	38.0	32.0	30.0	46.0	46.0	16.0
Total Split (%)	38.0%	14.0%	38.0%	32.0%	30.0%	46.0%	46.0%	16%
Yellow Time (s)	5.0	3.0	5.0	5.0		5.0	5.0	2.0
All-Red Time (s)	2.0	1.0	2.0	2.0		2.0	2.0	0.0
Lead/Lag	Lead	Lead	Lead	Lag				Lag
Lead-Lag Optimize?								
Recall Mode	Min	Min	Min	C-Max		C-Max	C-Max	Min
v/c Ratio	0.93	1.38	0.11	1.45	0.88	0.92	0.89	
Control Delay	44.7	224.1	0.3	232.2	26.1	32.5	37.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	44.7	224.1	0.3	232.2	26.1	32.5	37.9	
Queue Length 50th (ft)	333	~156	0	~528	124	224	190	
Queue Length 95th (ft)	m328	#247	0	#636	#312	#489	#502	
Internal Link Dist (ft)	169					390		
Turn Bay Length (ft)								
Base Capacity (vph)	992	266	775	712	779	1192	530	
Starvation Cap Reductn	0	0	0	0	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	0.93	1.38	0.11	1.45	0.88	0.92	0.89	

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:SWTL and 6:NER, Start of Green, Master Intersection
Natural Cycle: 150
Control Type: Actuated-Coordinated
~ 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.
! Phase conflict between lane groups.

Splits and Phases: 11: Commonwealth Ave & Beacon St



Movement	EBT	EBR	NBR2	SBR2	NER	NER2	SWL2	SWL	SWT	SWR	SWR2
Lane Configurations											
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0			4.0	4.0	4.0	
Lane Util. Factor	0.95		0.88	1.00	0.88			1.00	0.91	0.91	
Frpb, ped/bikes	0.98		1.00	1.00	1.00			1.00	0.99	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00			0.78	1.00	1.00	
Frt	0.99		0.85	0.86	0.85			1.00	0.98	0.85	
Flt Protected	1.00		1.00	1.00	1.00			0.95	1.00	1.00	
Satd. Flow (prot)	2918		2064	1450	2533			1197	2836	1252	
Flt Permitted	1.00		1.00	1.00	1.00			0.95	1.00	1.00	
Satd. Flow (perm)	2918		2064	1450	2533			1197	2836	1252	
Volume (vph)	642	50	320	76	971	30	51	610	885	591	40
Peak-hour factor, PHF	0.75	0.75	0.87	0.92	0.97	0.97	0.97	0.97	0.97	0.97	0.92
Adj. Flow (vph)	856	67	368	83	1001	31	53	629	912	609	43
RTOR Reduction (vph)	0	0	59	55	2	0	0	3	0	3	0
Lane Group Flow (vph)	923	0	309	28	1030	0	0	679	1094	467	0
Confl. Peds. (#/hr)		170	98	64	98	170	98	170		64	
Heavy Vehicles (%)	8%	8%	10%	2%	1%	1%	6%	6%	6%	6%	2%
Parking (#/hr)			25			25					
Turn Type			custom	custom	custom		Prot	pm+pt		Prot	
Protected Phases	3		5!	3	6		4 5!	4 5	2	2	
Permitted Phases								2			
Actuated Green, G (s)	31.0		10.0	31.0	25.0			55.0	39.0	39.0	
Effective Green, g (s)	34.0		10.0	34.0	28.0			58.0	42.0	42.0	
Actuated g/C Ratio	0.34		0.10	0.34	0.28			0.58	0.42	0.42	
Clearance Time (s)	7.0		4.0	7.0	7.0				7.0	7.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0				3.0	3.0	
Lane Grp Cap (vph)	992		206	493	709			694	1191	526	
v/s Ratio Prot	c0.32		c0.15	0.02	c0.41			c0.25	0.39	0.37	
v/s Ratio Perm								0.31			
v/c Ratio	0.93		1.50	0.06	1.45			0.98	0.92	0.89	
Uniform Delay, d1	31.9		45.0	22.2	36.0			20.4	27.4	26.8	
Progression Factor	0.94		1.00	1.00	0.59			0.89	0.79	0.79	
Incremental Delay, d2	12.5		247.9	0.0	210.6			23.7	9.8	15.1	
Delay (s)	42.4		292.9	22.3	232.0			41.9	31.6	36.3	
Level of Service	D		F	C	F			D	C	D	
Approach Delay (s)	42.4								35.7		
Approach LOS	D								D		

Intersection Summary			
HCM Average Control Delay	100.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	Err%	ICU Level of Service	H
Analysis Period (min)	15		

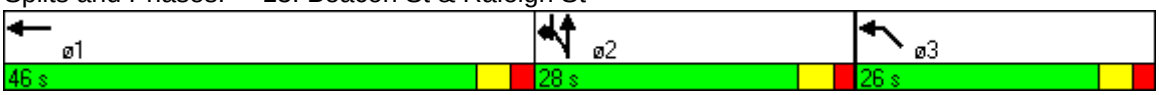
! Phase conflict between lane groups.

c Critical Lane Group

Lane Group	WBT	NBL	NBT	SBR	NWL
Lane Configurations					
Volume (vph)	1433	157	30	10	577
Lane Group Flow (vph)	1563	171	33	11	632
Turn Type		Split		custom	
Protected Phases	1	2!	2	2!	3
Permitted Phases					
Detector Phases	1	2	2	2	3
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	16.0	18.0	18.0	18.0	16.0
Total Split (s)	46.0	28.0	28.0	28.0	26.0
Total Split (%)	46.0%	28.0%	28.0%	28.0%	26.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	
Recall Mode	C-Max	None	None	None	None
v/c Ratio	0.69	0.59	0.11	0.04	0.68
Control Delay	26.4	39.8	30.8	18.6	41.1
Queue Delay	0.0	5.6	0.0	0.0	0.0
Total Delay	26.4	45.5	30.8	18.6	41.1
Queue Length 50th (ft)	285	107	19	1	136
Queue Length 95th (ft)	376	180	m37	15	178
Internal Link Dist (ft)	563		100		528
Turn Bay Length (ft)					
Base Capacity (vph)	2279	391	402	355	1008
Starvation Cap Reductn	0	163	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.69	0.75	0.08	0.03	0.63

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 96 (96%), Referenced to phase 1:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.
! Phase conflict between lane groups.

Splits and Phases: 13: Beacon St & Raleigh St



Movement	WBT	WBR	NBL	NBT	SBR	NWL	NWR
Lane Configurations							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor	0.91		1.00	1.00	1.00	0.94	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00	
Frt	1.00		1.00	1.00	0.86	1.00	
Flt Protected	1.00		0.95	1.00	1.00	0.95	
Satd. Flow (prot)	4572		1593	1676	1450	4499	
Flt Permitted	1.00		0.95	1.00	1.00	0.95	
Satd. Flow (perm)	4572		1593	1676	1450	4499	
Volume (vph)	1433	5	157	30	10	577	5
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1558	5	171	33	11	627	5
RTOR Reduction (vph)	1	0	10	0	7	0	0
Lane Group Flow (vph)	1562	0	161	33	4	632	0
Confl. Peds. (#/hr)		151	94		94		
Confl. Bikes (#/hr)							
Turn Type			Split		custom		
Protected Phases	1		2!	2	2!	3	
Permitted Phases							
Actuated Green, G (s)	48.8		16.5	16.5	16.5	19.7	
Effective Green, g (s)	49.8		17.5	17.5	17.5	20.7	
Actuated g/C Ratio	0.50		0.18	0.18	0.18	0.21	
Clearance Time (s)	5.0		5.0	5.0	5.0	5.0	
Vehicle Extension (s)	4.0		4.0	4.0	4.0	4.0	
Lane Grp Cap (vph)	2277		279	293	254	931	
v/s Ratio Prot	c0.34		c0.10	0.02	0.00	c0.14	
v/s Ratio Perm							
v/c Ratio	0.69		0.58	0.11	0.01	0.68	
Uniform Delay, d1	19.1		37.9	34.7	34.1	36.6	
Progression Factor	1.20		0.94	0.93	1.00	1.02	
Incremental Delay, d2	1.5		3.0	0.2	0.0	2.2	
Delay (s)	24.5		38.6	32.4	34.1	39.5	
Level of Service	C		D	C	C	D	
Approach Delay (s)	24.5			37.6		39.5	
Approach LOS	C			D		D	

Intersection Summary			
HCM Average Control Delay	29.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		

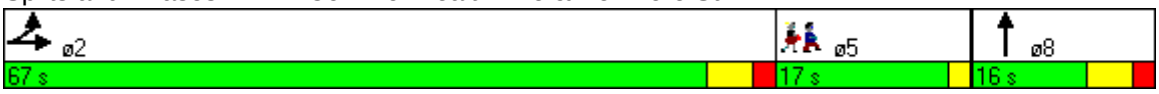
! Phase conflict between lane groups.

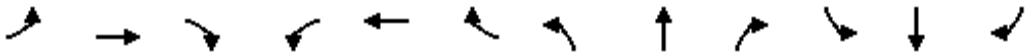
c Critical Lane Group

Lane Group	EBT	NBT	ø5
Lane Configurations			
Volume (vph)	1752	15	
Lane Group Flow (vph)	2102	65	
Turn Type			
Protected Phases	2	8	5
Permitted Phases			
Detector Phases	2	8	
Minimum Initial (s)	12.0	4.0	4.0
Minimum Split (s)	20.0	23.0	17.0
Total Split (s)	67.0	16.0	17.0
Total Split (%)	67.0%	16.0%	17%
Yellow Time (s)	4.0	4.0	2.0
All-Red Time (s)	2.0	2.0	0.0
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	C-Max	None	Ped
v/c Ratio	0.54	0.36	
Control Delay	9.2	22.6	
Queue Delay	0.2	0.0	
Total Delay	9.5	22.6	
Queue Length 50th (ft)	161	10	
Queue Length 95th (ft)	m136	49	
Internal Link Dist (ft)	448	192	
Turn Bay Length (ft)			
Base Capacity (vph)	3927	224	
Starvation Cap Reductn	854	0	
Spillback Cap Reductn	233	4	
Storage Cap Reductn	0	0	
Reduced v/c Ratio	0.68	0.30	

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 84 (84%), Referenced to phase 2:EBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 14: Commonwealth Ave & Kenmore St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0				
Lane Util. Factor		0.86						1.00				
Frt		1.00						0.90				
Flt Protected		1.00						1.00				
Satd. Flow (prot)		5737						1506				
Flt Permitted		1.00						1.00				
Satd. Flow (perm)		5737						1506				
Volume (vph)	172	1752	10	0	0	0	0	15	45	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	187	1904	11	0	0	0	0	16	49	0	0	0
RTOR Reduction (vph)	0	15	0	0	0	0	0	45	0	0	0	0
Lane Group Flow (vph)	0	2087	0	0	0	0	0	20	0	0	0	0
Turn Type	Split											
Protected Phases	2	2						8				
Permitted Phases												
Actuated Green, G (s)		65.0						6.0				
Effective Green, g (s)		67.0						8.0				
Actuated g/C Ratio		0.67						0.08				
Clearance Time (s)		6.0						6.0				
Vehicle Extension (s)		3.0						3.0				
Lane Grp Cap (vph)		3844						120				
v/s Ratio Prot		c0.36						c0.01				
v/s Ratio Perm												
v/c Ratio		0.54						0.17				
Uniform Delay, d1		8.6						42.9				
Progression Factor		1.08						1.00				
Incremental Delay, d2		0.1						0.7				
Delay (s)		9.3						43.5				
Level of Service		A						D				
Approach Delay (s)		9.3			0.0			43.5			0.0	
Approach LOS		A			A			D			A	

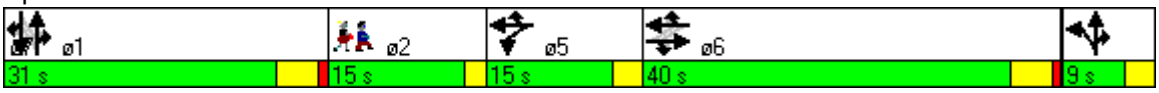
Intersection Summary			
HCM Average Control Delay	10.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	41.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	246	560	161	266	818	56	224	550	101	29	738	25
Lane Group Flow (vph)	265	602	173	283	870	60	0	922	120	0	843	27
Turn Type	Perm		Prot	D.P+P		Prot	D.P+P		Prot	Perm		Prot
Protected Phases		6	6	5	5 6	5 6	7	1 7	1 7		1	1
Permitted Phases	6			6			1			1		
Detector Phases	6	6	6	5	5 6	5 6	7	1 7	1 7	1	1	1
Minimum Initial (s)	10.0	10.0	10.0	2.0			2.0			10.0	10.0	10.0
Minimum Split (s)	15.0	15.0	15.0	10.0			10.0			15.0	15.0	15.0
Total Split (s)	40.0	40.0	40.0	15.0	55.0	55.0	9.0	40.0	40.0	31.0	31.0	31.0
Total Split (%)	36.4%	36.4%	36.4%	13.6%	50.0%	50.0%	8.2%	36.4%	36.4%	28.2%	28.2%	28.2%
Yellow Time (s)	4.0	4.0	4.0	3.0			3.0			4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	0.0			0.0			1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lag	Lead						Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes						Yes	Yes	Yes
Recall Mode	Min	Min	Min	None			None			C-Min	C-Min	C-Min
v/c Ratio	1.83	0.57	0.31	0.88	0.58	0.09		1.79dl	0.20		1.42	0.06
Control Delay	424.0	33.2	9.4	50.8	23.5	7.9		198.1	14.7		217.0	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Delay	424.0	33.2	9.4	50.8	23.5	7.9		198.1	14.7		217.0	4.5
Queue Length 50th (ft)	~284	184	19	126	230	7		~488	30		~461	6
Queue Length 95th (ft)	#447	243	71	#226	293	31		#560	66		m#503	m5
Internal Link Dist (ft)		968			408			638			275	
Turn Bay Length (ft)	50		100			100			100			100
Base Capacity (vph)	145	1053	560	322	1506	696		682	586		593	441
Starvation Cap Reductn	0	0	0	0	0	0		0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0		0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0		0	0		0	0
Reduced v/c Ratio	1.83	0.57	0.31	0.88	0.58	0.09		1.35	0.20		1.42	0.06

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 77 (70%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
~ 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.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 1: Beacon Street & Park Dr



Lane Group	ø2
Lane Configurations	
Volume (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	2
Permitted Phases	
Detector Phases	
Minimum Initial (s)	2.0
Minimum Split (s)	15.0
Total Split (s)	15.0
Total Split (%)	14%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Recall Mode	None
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Flpb, ped/bikes	0.83	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99	1.00		1.00	1.00
Satd. Flow (prot)	1328	3217	1439	1624	3249	1454		3171	1439		3211	1439
Flt Permitted	0.32	1.00	1.00	0.29	1.00	1.00		0.53	1.00		0.71	1.00
Satd. Flow (perm)	442	3217	1439	488	3249	1454		1718	1439		2276	1439
Volume (vph)	246	560	161	266	818	56	224	550	101	29	738	25
Peak-hour factor, PHF	0.93	0.93	0.93	0.94	0.94	0.94	0.84	0.84	0.84	0.91	0.91	0.91
Adj. Flow (vph)	265	602	173	283	870	60	267	655	120	32	811	27
RTOR Reduction (vph)	0	0	89	0	0	21	0	0	38	0	0	9
Lane Group Flow (vph)	265	602	84	283	870	39	0	922	82	0	843	18
Confl. Peds. (#/hr)	149		184	184		149	84		107	107		84
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Turn Type	Perm		Prot	D.P+P		Prot	D.P+P		Prot	Perm		Prot
Protected Phases		6	6	5	5 6	5 6	7	1 7	1 7		1	1
Permitted Phases	6			6			1			1		
Actuated Green, G (s)	35.0	35.0	35.0	47.0	50.0	50.0		37.2	40.2		31.2	31.2
Effective Green, g (s)	36.0	36.0	36.0	47.0	51.0	51.0		37.2	41.2		32.2	32.2
Actuated g/C Ratio	0.33	0.33	0.33	0.43	0.46	0.46		0.34	0.37		0.29	0.29
Clearance Time (s)	5.0	5.0	5.0	3.0							5.0	5.0
Vehicle Extension (s)	2.0	2.0	2.0	2.0							2.0	2.0
Lane Grp Cap (vph)	145	1053	471	322	1506	674		647	539		666	421
v/s Ratio Prot		0.19	0.06	c0.09	0.27	0.03		c0.06	0.06			0.01
v/s Ratio Perm	c0.60			0.29				c0.42			0.37	
v/c Ratio	1.83	0.57	0.18	0.88	0.58	0.06		1.79dl	0.15		1.27	0.04
Uniform Delay, d1	37.0	30.6	26.4	25.0	21.6	16.3		36.4	22.8		38.9	27.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		0.46	0.21
Incremental Delay, d2	398.1	0.5	0.1	22.1	0.3	0.0		200.2	0.0		125.7	0.1
Delay (s)	435.1	31.1	26.5	47.1	21.9	16.3		236.6	22.9		143.6	5.9
Level of Service	F	C	C	D	C	B		F	C		F	A
Approach Delay (s)		133.3			27.5			212.0			139.3	
Approach LOS		F			C			F			F	

Intersection Summary			
HCM Average Control Delay	123.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.53		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	25.8
Intersection Capacity Utilization	101.3%	ICU Level of Service	G
Analysis Period (min)	15		

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

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	ø9
Lane Configurations									
Volume (vph)	10	555	50	1003	66	32	35	7	
Lane Group Flow (vph)	0	608	0	1157	0	226	0	49	
Turn Type	Perm		Perm		Perm		Perm		
Protected Phases		4		8		2		6	9
Permitted Phases	4		8		2		6		
Detector Phases	4	4	8	8	2	2	6	6	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	31.0
Total Split (s)	46.0	46.0	46.0	46.0	33.0	33.0	33.0	33.0	31.0
Total Split (%)	41.8%	41.8%	41.8%	41.8%	30.0%	30.0%	30.0%	30.0%	28%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	C-Max	C-Max	C-Max	C-Max	Min	Min	Min	Min	None
v/c Ratio		0.37		0.69		0.81		0.26	
Control Delay		8.0		11.4		53.4		35.3	
Queue Delay		0.0		0.0		0.0		0.0	
Total Delay		8.0		11.4		53.4		35.3	
Queue Length 50th (ft)		20		3		118		26	
Queue Length 95th (ft)		m255		m#505		194		57	
Internal Link Dist (ft)		361		842		154		472	
Turn Bay Length (ft)									
Base Capacity (vph)		1657		1670		362		262	
Starvation Cap Reductn		0		0		0		0	
Spillback Cap Reductn		0		0		0		0	
Storage Cap Reductn		0		0		0		0	
Reduced v/c Ratio		0.37		0.69		0.62		0.19	

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 35 (32%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Beacon Street & Maitland St/Garage Access

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frpb, ped/bikes		1.00			0.99			0.93			0.98	
Flpb, ped/bikes		1.00			1.00			0.96			0.91	
Frt		1.00			0.99			0.93			0.99	
Flt Protected		1.00			1.00			0.98			0.96	
Satd. Flow (prot)		3134			3135			1314			1278	
Flt Permitted		0.93			0.89			0.89			0.62	
Satd. Flow (perm)		2913			2794			1189			826	
Volume (vph)	10	555	12	50	1003	46	66	32	117	35	7	5
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	584	13	53	1056	48	69	34	123	37	7	5
RTOR Reduction (vph)	0	1	0	0	2	0	0	43	0	0	4	0
Lane Group Flow (vph)	0	607	0	0	1155	0	0	183	0	0	45	0
Confl. Peds. (#/hr)	150		82	82		150	82		82	150		150
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	6%	6%	6%	13%	13%	13%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		64.4			64.4			20.2			20.2	
Effective Green, g (s)		65.4			65.4			21.2			21.2	
Actuated g/C Ratio		0.59			0.59			0.19			0.19	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1732			1661			229			159	
v/s Ratio Prot												
v/s Ratio Perm		0.21			c0.41			c0.15			0.05	
v/c Ratio		0.35			0.70			0.80			0.28	
Uniform Delay, d1		11.4			15.4			42.4			37.9	
Progression Factor		0.49			0.35			1.00			1.00	
Incremental Delay, d2		0.5			0.7			17.8			1.0	
Delay (s)		6.0			6.1			60.2			38.9	
Level of Service		A			A			E			D	
Approach Delay (s)		6.0			6.1			60.2			38.9	
Approach LOS		A			A			E			D	

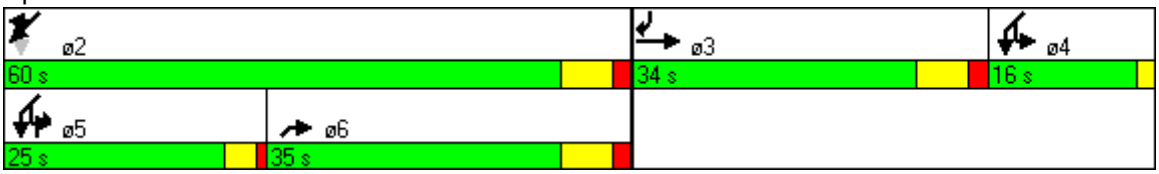
Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	23.4
Intersection Capacity Utilization	78.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	NBR2	SBR2	NER	SWL	SWT	SWR	ø4
Lane Configurations								
Volume (vph)	688	529	81	776	361	1187	697	
Lane Group Flow (vph)	980	608	88	876	430	1477	632	
Turn Type		custom	custom	custom	pm+pt		Prot	
Protected Phases	3	5!	3	6	4 5	2	2	4
Permitted Phases					2			
Detector Phases	3	5	3	6	4 5	2	2	
Minimum Initial (s)	4.0	4.0	4.0	8.0		8.0	8.0	4.0
Minimum Split (s)	24.0	14.0	24.0	21.0		21.0	21.0	16.0
Total Split (s)	34.0	25.0	34.0	35.0	41.0	60.0	60.0	16.0
Total Split (%)	30.9%	22.7%	30.9%	31.8%	37.3%	54.5%	54.5%	15%
Yellow Time (s)	5.0	3.0	5.0	5.0		5.0	5.0	2.0
All-Red Time (s)	2.0	1.0	2.0	2.0		2.0	2.0	0.0
Lead/Lag	Lead	Lead	Lead	Lag				Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				Yes
Recall Mode	None	None	None	C-Max		C-Min	C-Min	Min
v/c Ratio	1.25	1.29	0.14	1.22	0.47	1.02	0.99	
Control Delay	160.3	175.5	0.5	153.5	7.1	50.8	53.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	21.1	5.4	
Total Delay	160.3	175.5	0.5	153.5	7.1	71.9	59.3	
Queue Length 50th (ft)	~470	~278	0	~427	120	~624	500	
Queue Length 95th (ft)	#453	#383	0	#586	131	#776	#370	
Internal Link Dist (ft)	211					393		
Turn Bay Length (ft)								
Base Capacity (vph)	782	473	612	716	907	1453	639	
Starvation Cap Reductn	0	0	0	0	0	78	14	
Spillback Cap Reductn	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	
Reduced v/c Ratio	1.25	1.29	0.14	1.22	0.47	1.07	1.01	

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 0 (0%), Referenced to phase 2:SWTL and 6:NER, Start of Green, Master Intersection
Natural Cycle: 150
Control Type: Actuated-Coordinated
~ 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.
! Phase conflict between lane groups.

Splits and Phases: 11: Commonwealth Ave & Beacon Street



Movement	EBT	EBR	NBR2	SBR2	NER	NER2	SWL2	SWL	SWT	SWR	SWR2
Lane Configurations											
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0			4.0	4.0	4.0	
Lane Util. Factor	0.95		0.88	1.00	0.88			1.00	0.91	0.91	
Frpb, ped/bikes	0.96		1.00	1.00	1.00			1.00	0.99	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00			0.81	1.00	1.00	
Frt	0.99		0.85	0.86	0.85			1.00	0.98	0.85	
Flt Protected	1.00		1.00	1.00	1.00			0.95	1.00	1.00	
Satd. Flow (prot)	2868		2064	1479	2533			1235	2855	1248	
Flt Permitted	1.00		1.00	1.00	1.00			0.95	1.00	1.00	
Satd. Flow (perm)	2868		2064	1479	2533			1235	2855	1248	
Volume (vph)	688	47	529	81	776	30	35	361	1187	697	56
Peak-hour factor, PHF	0.75	0.75	0.87	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	917	63	608	88	843	33	38	392	1290	758	61
RTOR Reduction (vph)	0	0	79	64	2	0	0	3	0	3	0
Lane Group Flow (vph)	980	0	529	24	874	0	0	427	1477	629	0
Confl. Peds. (#/hr)		470	98	96	98	170	98	170		98	170
Heavy Vehicles (%)	8%	8%	10%	0%	1%	1%	6%	6%	6%	6%	6%
Parking (#/hr)			25			25					
Turn Type			custom	custom	custom		Prot	pm+pt		Prot	
Protected Phases	3		5!	3	6		4 5!	4 5	2	2	
Permitted Phases								2			
Actuated Green, G (s)	27.0		21.0	27.0	28.0			69.0	53.0	53.0	
Effective Green, g (s)	30.0		21.0	30.0	31.0			72.0	56.0	56.0	
Actuated g/C Ratio	0.27		0.19	0.27	0.28			0.65	0.51	0.51	
Clearance Time (s)	7.0		4.0	7.0	7.0				7.0	7.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0				3.0	3.0	
Lane Grp Cap (vph)	782		394	403	714			808	1453	635	
v/s Ratio Prot	c0.34		c0.26	0.02	c0.35			c0.18	0.52	0.50	
v/s Ratio Perm								0.17			
v/c Ratio	1.25		1.34	0.06	1.22			0.53	1.02	0.99	
Uniform Delay, d1	40.0		44.5	29.6	39.5			10.0	27.0	26.7	
Progression Factor	1.18		1.00	1.00	1.23			0.64	0.96	0.94	
Incremental Delay, d2	120.5		170.1	0.1	112.4			0.4	24.1	27.7	
Delay (s)	167.8		214.6	29.6	161.1			6.9	50.0	52.9	
Level of Service	F		F	C	F			A	D	D	
Approach Delay (s)	167.8								43.5		
Approach LOS	F								D		

Intersection Summary			
HCM Average Control Delay	107.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	Err%	ICU Level of Service	H
Analysis Period (min)	15		

! Phase conflict between lane groups.

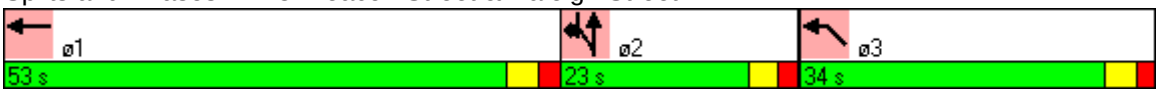
c Critical Lane Group

Lane Group	WBT	NBL	NBT	SBR	NWL
Lane Configurations					
Volume (vph)	1431	126	25	10	769
Lane Group Flow (vph)	1556	137	27	11	847
Turn Type		Split		custom	
Protected Phases	1	2!	2	2!	3
Permitted Phases					
Detector Phases	1	2	2	2	3
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	19.0	21.0	21.0	21.0	21.0
Total Split (s)	53.0	23.0	23.0	23.0	34.0
Total Split (%)	48.2%	20.9%	20.9%	20.9%	30.9%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	
Recall Mode	C-Max	None	None	None	None
v/c Ratio	0.68	0.60	0.12	0.06	0.75
Control Delay	21.7	49.6	39.8	39.7	35.8
Queue Delay	0.9	3.8	0.0	0.0	0.0
Total Delay	22.6	53.4	39.8	39.7	35.8
Queue Length 50th (ft)	373	77	14	7	205
Queue Length 95th (ft)	m435	124	m24	23	247
Internal Link Dist (ft)	511		111		478
Turn Bay Length (ft)					
Base Capacity (vph)	2304	285	289	250	1230
Starvation Cap Reductn	0	84	0	0	0
Spillback Cap Reductn	434	1	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.83	0.68	0.09	0.04	0.69

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 74 (67%), Referenced to phase 1:WBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.
! Phase conflict between lane groups.

Splits and Phases: 13: Beacon Street & Raleigh Street



Movement	WBT	WBR	NBL	NBT	SBR	NWL	NWR
Lane Configurations							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor	0.91		1.00	1.00	1.00	0.94	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00	
Frt	1.00		1.00	1.00	0.86	1.00	
Flt Protected	1.00		0.95	1.00	1.00	0.95	
Satd. Flow (prot)	4576		1593	1676	1450	4475	
Flt Permitted	1.00		0.95	1.00	1.00	0.95	
Satd. Flow (perm)	4576		1593	1676	1450	4475	
Volume (vph)	1431	1	126	25	10	769	10
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1555	1	137	27	11	836	11
RTOR Reduction (vph)	0	0	10	0	0	0	0
Lane Group Flow (vph)	1556	0	127	27	11	847	0
Confl. Peds. (#/hr)		175	57		57		175
Turn Type			Split		custom		
Protected Phases	1		2!	2	2!	3	
Permitted Phases							
Actuated Green, G (s)	54.4		14.0	14.0	14.0	26.6	
Effective Green, g (s)	55.4		15.0	15.0	15.0	27.6	
Actuated g/C Ratio	0.50		0.14	0.14	0.14	0.25	
Clearance Time (s)	5.0		5.0	5.0	5.0	5.0	
Vehicle Extension (s)	4.0		4.0	4.0	4.0	4.0	
Lane Grp Cap (vph)	2305		217	229	198	1123	
v/s Ratio Prot	c0.34		c0.08	0.02	0.01	c0.19	
v/s Ratio Perm							
v/c Ratio	0.68		0.58	0.12	0.06	0.75	
Uniform Delay, d1	20.5		44.6	41.7	41.3	38.1	
Progression Factor	0.94		0.99	0.97	1.00	0.82	
Incremental Delay, d2	1.1		4.1	0.3	0.2	3.1	
Delay (s)	20.4		48.2	40.9	41.5	34.4	
Level of Service	C		D	D	D	C	
Approach Delay (s)	20.4			47.0		34.4	
Approach LOS	C			D		C	

Intersection Summary			
HCM Average Control Delay	26.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.1%	ICU Level of Service	C
Analysis Period (min)	15		

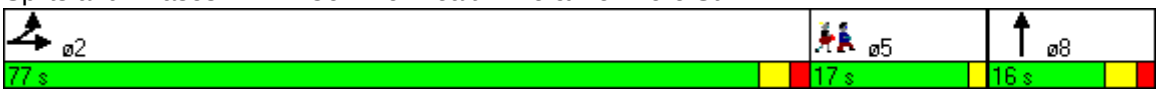
! Phase conflict between lane groups.

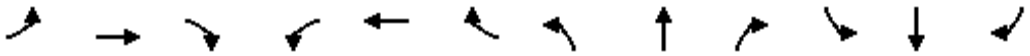
c Critical Lane Group

Lane Group	EBT	NBT	ø5
Lane Configurations			
Volume (vph)	1877	15	
Lane Group Flow (vph)	2204	77	
Turn Type			
Protected Phases	2	8	5
Permitted Phases			
Detector Phases	2	8	
Minimum Initial (s)	4.0	8.0	4.0
Minimum Split (s)	21.0	13.0	17.0
Total Split (s)	77.0	16.0	17.0
Total Split (%)	70.0%	14.5%	15%
Yellow Time (s)	3.0	3.0	2.0
All-Red Time (s)	2.0	2.0	0.0
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	C-Max	None	Ped
v/c Ratio	0.54	0.41	
Control Delay	2.7	23.2	
Queue Delay	0.2	0.0	
Total Delay	2.9	23.3	
Queue Length 50th (ft)	103	11	
Queue Length 95th (ft)	m87	56	
Internal Link Dist (ft)	453	193	
Turn Bay Length (ft)			
Base Capacity (vph)	4077	218	
Starvation Cap Reductn	936	0	
Spillback Cap Reductn	50	1	
Storage Cap Reductn	0	0	
Reduced v/c Ratio	0.70	0.35	

Intersection Summary
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 9 (8%), Referenced to phase 2:EBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 14: Commonwealth Ave & Kenmore St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0				
Lane Util. Factor		0.86						1.00				
Frt		1.00						0.89				
Flt Protected		1.00						1.00				
Satd. Flow (prot)		5740						1497				
Flt Permitted		1.00						1.00				
Satd. Flow (perm)		5740						1497				
Volume (vph)	131	1877	20	0	0	0	0	15	56	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.95	0.95	0.95	0.92	0.92	0.92	0.95	0.95	0.95
Adj. Flow (vph)	142	2040	22	0	0	0	0	16	61	0	0	0
RTOR Reduction (vph)	0	9	0	0	0	0	0	57	0	0	0	0
Lane Group Flow (vph)	0	2195	0	0	0	0	0	20	0	0	0	0
Heavy Vehicles (%)	2%	2%	2%	0%	0%	0%	0%	2%	2%	0%	0%	0%
Turn Type	Split											
Protected Phases	2	2						8				
Permitted Phases												
Actuated Green, G (s)		75.9						7.1				
Effective Green, g (s)		76.9						8.1				
Actuated g/C Ratio		0.70						0.07				
Clearance Time (s)		5.0						5.0				
Vehicle Extension (s)		3.0						3.0				
Lane Grp Cap (vph)		4013						110				
v/s Ratio Prot		c0.38						c0.01				
v/s Ratio Perm												
v/c Ratio		0.55						0.19				
Uniform Delay, d1		8.1						47.9				
Progression Factor		0.33						1.00				
Incremental Delay, d2		0.0						0.8				
Delay (s)		2.7						48.7				
Level of Service		A						D				
Approach Delay (s)		2.7			0.0			48.7			0.0	
Approach LOS		A			A			D			A	

Intersection Summary				
HCM Average Control Delay	4.2	HCM Level of Service	A	
HCM Volume to Capacity ratio	0.51			
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	25.0	
Intersection Capacity Utilization	46.1%	ICU Level of Service	A	
Analysis Period (min)	15			

c Critical Lane Group