



**Andy Koropeski, P.Eng.**  
Acting General Manager  
Transportation Services Division

City Hall, 22<sup>nd</sup> Floor, East  
100 Queen Street West  
Toronto, Ontario M5H 2N2

**John Mende, P.Eng.**  
Director, Transportation  
Infrastructure Management

**Tel:** 416-392-5348  
**Fax:** 416-392-4808  
[jmende@toronto.ca](mailto:jmende@toronto.ca)  
[www.toronto.ca](http://www.toronto.ca)

## MEMORANDUM

**DATE:** June 30, 2011

**To:** file

**From:** Stephen Schijns, P.Eng., Manager, Infrastructure Planning

**Copy to:** Scott Thorburn, URS Canada  
Harold Madi, Planning Partnership  
Dave Dunn, Cycling Infrastructure and Programs  
Scott Mitchell, Technical Services  
Mike Logan, Public Consultation  
John Mende, Director, Transportation Infrastructure Management

**Subject:** **Cycling Figures on John Street**

---

As part of the John Street Environmental Assessment Study, cycling use of the street is to be documented as one element in the Background Information stage. This memo summarizes all the cycling information assembled and used in the study.

This memo recognizes the concern and controversy over the use of a "2 %" mode share for cyclists in the first round of public consultation (June 2010) and addresses how that figure was generated.

There were three cycling data sources used in the study:

- 1) City traffic counts (2007 – 2009)
- 2) URS off-peak counts (April – May, 2010)
- 3) City cycling tube counts (Sept. – Oct. 2010)

In addition, Toronto Cyclists Union founder Dave Meslin has published peak period counts undertaken informally in June 2011.

Note that the 100+ pages of raw traffic counts upon which this discussion is based are not attached, but remain on file.

## 1. City Traffic Counts (2007 – 2009)

At the start of the John Street study, the City provided the Consultant (URS) with the following weekday traffic counts, as being the most recent available in the corridor:

John Street / Queen Street West:	Thursday, April 23, 2009
John Street / Richmond Street West:	Monday, March 2, 2009
John Street / Adelaide Street West:	Wednesday, August 1, 2007
John Street / King Street West:	Monday, June 25, 2007
John Street / Wellington Street West:	Monday, November 3, 2008
John Street / Front Street West:	Thursday, April 23, 2009

The John / Adelaide count was the only one showing peak hour cycling volumes, and even then only in the southbound direction. Auto figures appeared to be valid for all the counts. The counts were summarized for the AM and PM Peak hours in Figures 2-3 and 2-4 in Technical Memo #1 (see following).

At the John / Adelaide intersection, the mode share breakdown for north-south travel on John Street can be calculated in the southbound direction:

Peak Hour	AM		PM	
	No.	Share	No.	Share
Autos	194	-	315	-
Auto Persons*	233	48 %	378	48%
Cyclists	123	25 %	57	7%
Pedestrians	133	27 %	349	45%
Total persons	489	100 %	784	100%

\*assume 1.2 persons per auto

These unidirectional figures for one intersection drawn from one weekday in August 2007 can not be considered representative of the John Street corridor as a whole, and indeed are not likely reliable for non-auto modes. It is the City's experience that intersection counts, unless specifically targeting pedestrian and cyclist activity, do not generally yield reliable data for those modes of travel<sup>1</sup>. The City will undertake separate counts for pedestrians and cyclists when necessary.

---

<sup>1</sup> The figures here may be compared with the all-mode counts undertaken in June 2011 for southbound John Street at Richmond Street (see Section 5): the auto count is comparable (223 vs. 194) but both the cyclist (267 vs. 123) and pedestrian (351 vs. 133) counts are substantially greater, yielding a 30 % / 30 % / 40 % distribution of auto users, cyclists, and pedestrians compared to the 48 % / 7 % / 45 % result shown here.

Figure 2-3 – Existing Traffic Volumes (Weekday A.M. Peak Hour)

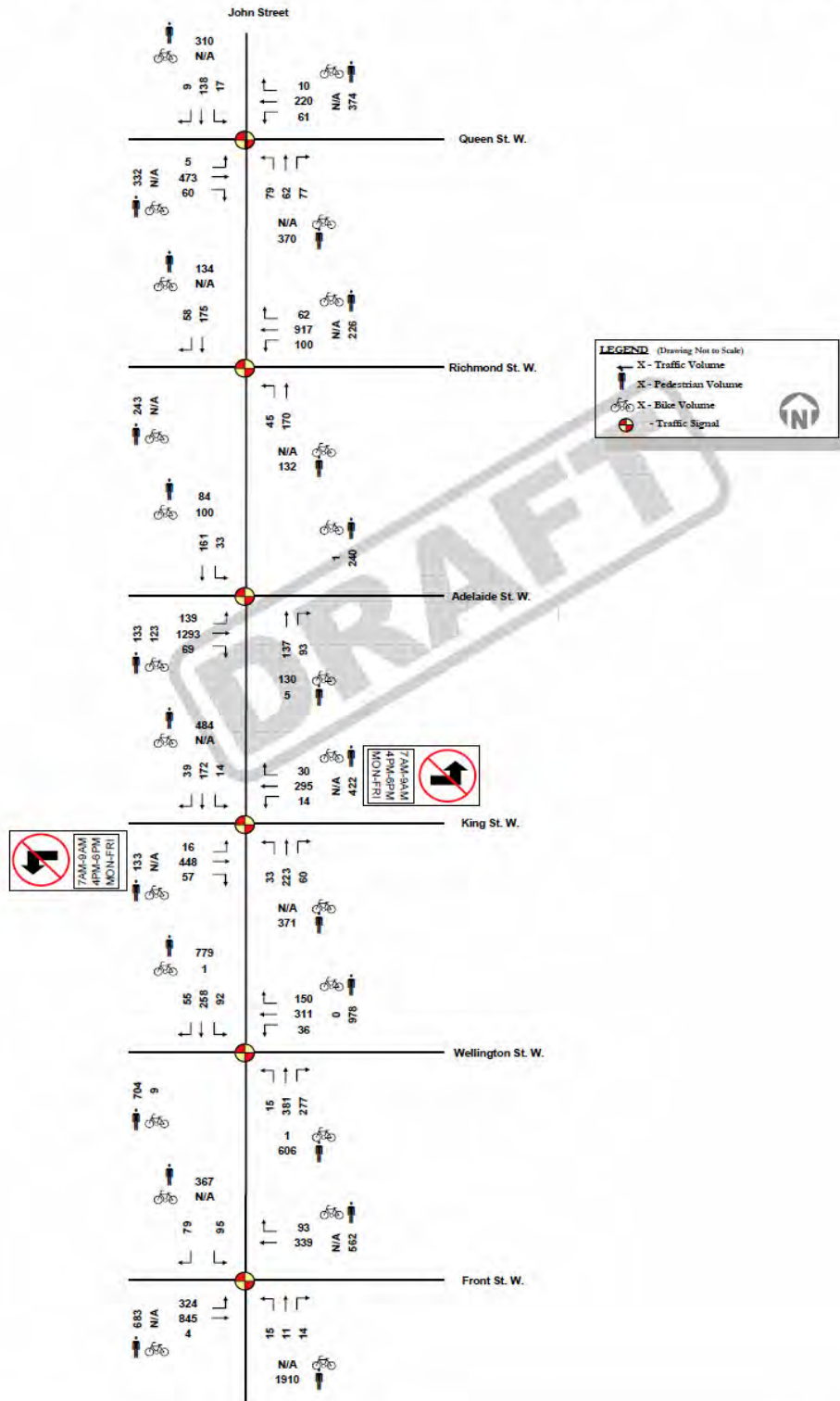
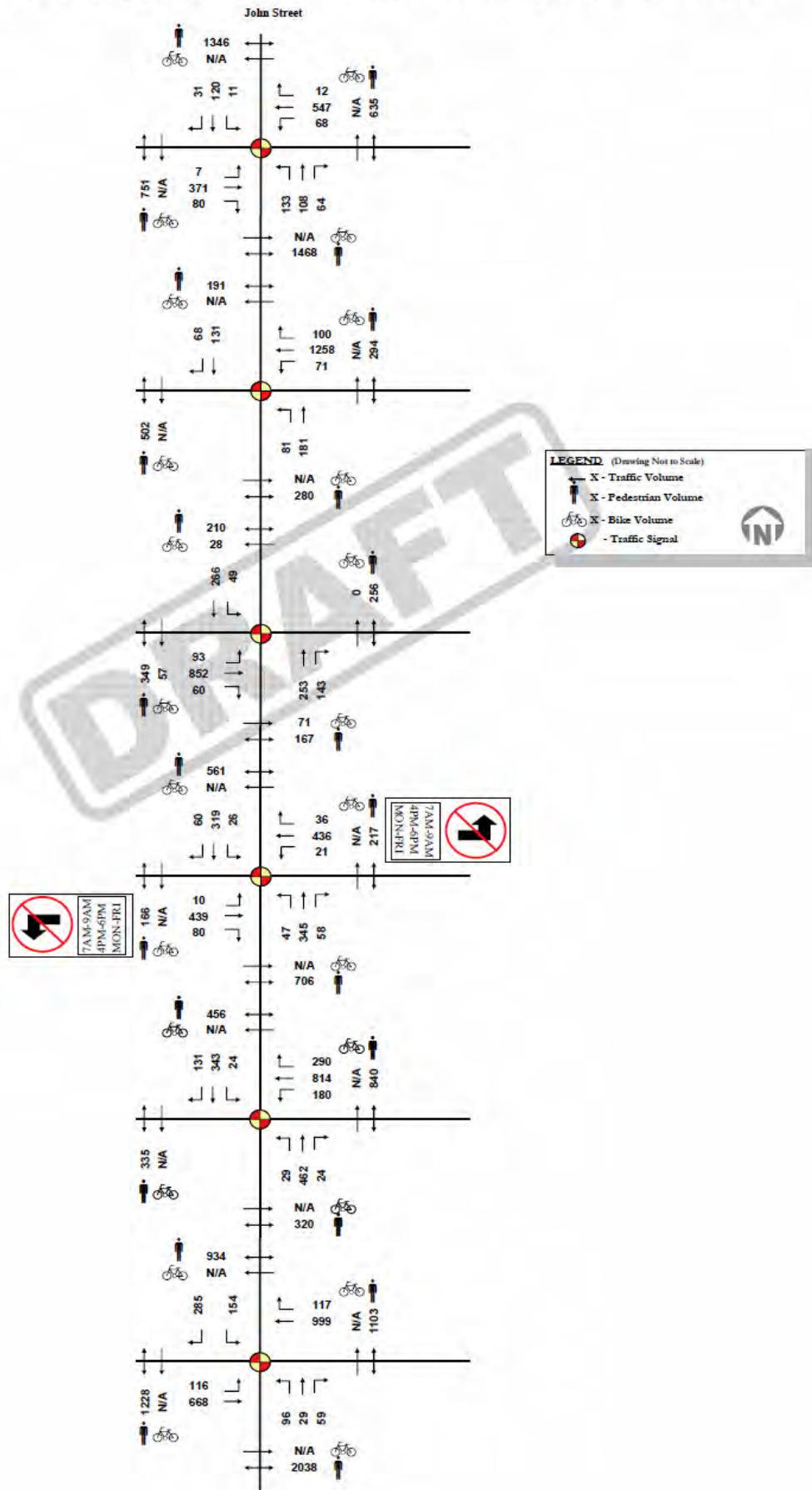


Figure 2-4 – Existing Adjusted Traffic Volumes (Weekday P.M. Peak Hour)



## 2. URS Off-Peak Counts (2010)

To supplement the City's weekday auto traffic counts and to gain useful pedestrian data for the EA study, URS commissioned a set of off-peak counts aimed primarily at understanding the pedestrian volumes on weekend evenings and during special events. These counts were undertaken as follows:

Friday, April 23, 2010:	8:00 PM to 12:00 PM
Friday, April 30, 2010	6:00 PM to 10:00 PM
Saturday, May 15, 2010	4:00 PM to 8:00 PM

The April 23 count did not document cyclists; this was corrected for the subsequent counts.

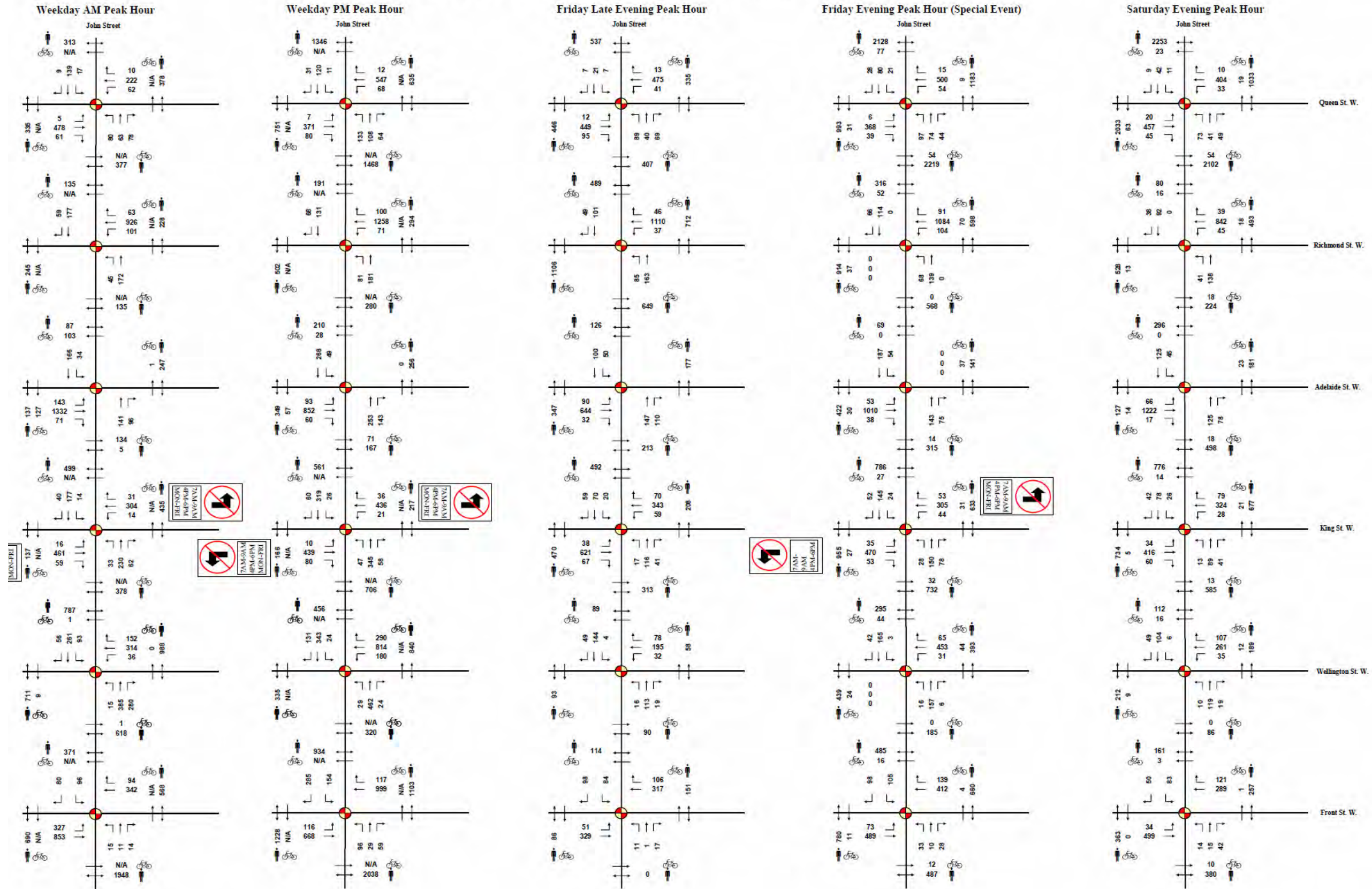
The April 30 count reflected a Blue Jays baseball game that started at 7:07 PM and ended at 9:48 PM<sup>2</sup>.

The detailed counts were summarized in Figure 2-3 for the peak hours extracted from all five peak periods (AM and PM peak hour City counts, and Friday early evening, Friday late evening, and Saturday evening URS counts). Note that some minor adjustments were made in balancing the AM and PM counts.

---

<sup>2</sup> It may be noted that the Blue Jays attendance for that game (12,722) was relatively low; the team's average attendance in 2010 was 19,173 (the lowest in team history at the Rogers Centre), and the range was from 10,314 to 46,321 over 78 home dates. Higher-attendance games would be assumed to generate greater pedestrian volume and hence higher pedestrian mode shares on John Street before and after games. It may also be noted that over the preceding decade Blue Jays attendance averaged between 20,000 and 30,000; the 1993 championship season attained an average attendance of 50,098.

Figure 2-3 – Existing Adjusted Traffic Volumes (All peak periods)



**LEGEND** (Drawing Not to Scale)

- X - Traffic Volume
- Person icon - Pedestrian Volume
- Bicycle icon - Bike Volume
- Red circle with X - Traffic Signal




Table 2-3 summarizes the key data from Figure 2-3. Note that the only valid weekday peak period cycling volumes are southbound at Adelaide Street. The person-trip volumes assume 1.1 persons per vehicle in peak hours and 2.0 persons per vehicle on evenings and weekends.

**Table 2-3 – John Street (Usage by Mode – Number of Person/Vehicle Trips)**

Links	In Vehicles		Pedestrians*		On Bicycles	
	NB Vol.	SB Vol.	West S/W	East S/W	NB	SB
<b>Weekday A.M. Peak Hour</b>						
Queen St. West to Richmond St. West	235	262	335	378	N/A	127
Richmond St. West to Adelaide St. West	284	278	245	247		
Adelaide St. West to King St. West	277	237	137	435		
King St. West to Wellington St. West	537	410	711	988		
Wellington St. West to Front St. West	680	297	711	988		
<b>Weekday P.M. Peak Hour</b>						
Queen St. West to Richmond St. West	305	268	751	635	N/A	57
Richmond St. West to Adelaide St. West	346	315	502	294		
Adelaide St. West to King St. West	396	405	349	256		
King St. West to Wellington St. West	752	498	335	840		
Wellington St. West to Front St. West	515	523	1228	1103		
<b>Friday Late Evening Peak Hour</b>						
Queen St. West to Richmond St. West	209	157	1106	712	N/A	
Richmond St. West to Adelaide St. West	248	150	1106	712		
Adelaide St. West to King St. West	257	149	470	208		
King St. West to Wellington St. West	191	197	470	208		
Wellington St. West to Front St. West	158	176	93	151		
<b>Friday Evening (Special Event) Peak Hour</b>						
Queen St. West to Richmond St. West	230	180	993	1183	70	37
Richmond St. West to Adelaide St. West	207	241	914	598	70	37
Adelaide St. West to King St. West	238	225	955	633	37	30
King St. West to Wellington St. West	256	242	955	633	44	27
Wellington St. West to Front St. West	222	203	780	660	44	24
<b>Saturday Evening Peak Hour</b>						
Queen St. West to Richmond St. West	163	130	2033	1033	19	63
Richmond St. West to Adelaide St. West	191	170	528	493	23	14
Adelaide St. West to King St. West	203	146	734	677	23	14
King St. West to Wellington St. West	226	166	734	677	21	9
Wellington St. West to Front St. West	170	139	363	257	12	9

\*Intersection volumes assumed to be mid-block volumes.

### 3. URS Usage Calculations

The project team wanted to present some indication of all modes of usage along John Street at the June 2010 PIC. However, a detailed accounting of the activity was not possible due to the lack of cyclist counts for many time periods and locations throughout the corridor. The following steps were taken:

- Recognizing that the Friday April 30th and May 15th datasets were complete, a block-by-block calculation of the number of vehicles, cyclists and pedestrians was made, based on the

intersection counts. It was assumed that the proportion of various transportation modes within each link is similar to the southern intersection of the link. For example, the John Street / Adelaide Street data were used to represent the block of John street from Richmond Street West to Adelaide Street West

- In the example highlighted below, the total north-south vehicular activity (cars plus trucks) was generated by summing up the total southbound exiting (139 cars + 2 trucks= 141 vehicles) and northbound exiting (185 cars + 4 trucks= 189 vehicles per hour) at the John street intersection with Adelaide Street West.
- Similar calculations were made for the other locations

The figures from the Saturday evening peak hour (specific hour varies depending on the intersection) show, in the first four columns, the number of vehicles at each approach. Assuming an average 2.0 persons per vehicle, the "NS" column totals the number of people moving north-south through each intersection by car, bicycle, and foot. The modal share of person movement is calculated at each intersection for the segment to its north.

The small table to the right summarizes the situation along the whole of the corridor, by simply mathematically averaging the north-south activity in the six subsections. The "average" modal share is calculated from that data. The range by block is also noted for each mode.

Saturday May 15th							Average along Entire John St Corridor						
Section	Direction						Total NS	Total EW	NS Average	NS Range			
Front - Wellington	N	S	E	W	NS	NS	cars	3696	10886	34%	10%	65%	
	cars	166	131	622	353	594							49%
	cyclists	5	0	12	3	5							0.4%
	peds	257	363	380	160	620							51%
						1219	100%						
Wellington - King													
		221	139	23	320	720	63%						
		17	9	2	16	26	2%						
	189	212	86	212	401	35%							
						1147	100%						
King - Adelaide													
		201	164	482	379	730	34%						
		22	7	14	14	29	1%						
	677	734	585	776	1411	65%							
						2170	100%						
Adelaide - Richmond		189	141	1343	2	660	65%						
		25	15	20	0	40	4%						
		181	127	498	296	308	31%						
							1008	100%					
Richmond - Queen													
		177	136	1	920	626	37%						
		19	14	0	17	33	2%						
	493	528	224	80	1021	61%							
						1680	100%						
North of Queen													
		71	112	516	482	366	10%						
		19	71	55	27	90	3%						
						1033	2033	2101	2253	3066	87%		
						3522	100%						

Counts at Adelaide St. W. is Assumed to Represent the section between Adelaide and Richmond

Following are the data and averages for the Friday evening peak hour (Blue Jays game), using the same calculations.

Friday April 30th		Direction							Average along entire John St					
Section		N	S	E	W	NS	EW	NS	Total NS	Total EW	Average	Range		
Front - Wellington														
	cars	222	203	622	543	850	2330	37%	cars	4920	12176	37%	20%	57%
	cyclists	4	11	12	16	15	28	1%	cyclists	355	404	2.7%	1%	4%
	peds	660	780	487	485	1440	972	62%	peds	8046	7948	60%	41%	79%
						2305		100%		13321				
Wellington - King														
		222	196	9	511	836	1040	48%						
		44	24	7	44	68	51	4%						
		393	439	185	295	832	480	48%						
						1736		100%						
King - Adelaide														
		238	242	572	385	960	1914	37%		355	0.02665			
		31	27	32	27	58	59	2%		13321				
		633	955	732	786	1588	1518	61%						
						2606		100%						
Adelaide - Richmond														
		196	225	1139	0	842	2278	57%						
		37	30	14	69	67	83	2%						
		141	422	315	0	563	315	41%						
						1472		100%						
Richmond - Queen														
		230	218	0	1218	896	2436	36%						
		70	37	0	52	107	52	4%						
		598	914	0	316	1512	316	60%						
						2515		100%						
North of Queen														
		95	173	433	656	536	2178	20%						
		9	31	54	77	40	131	1%						
		1118	993	2219	2128	2111	4347	79%						

To summarize, the Saturday evening cycling mode share on John Street was, on average, 2.1 % and varied by block between 0.4 % and 4 %. The Friday evening (event) cycling mode share averaged 2.7 % and varied between 1 % and 4 % by block.

For the non-Blue Jays Friday evening of April 23, 2010, cyclists had not been counted separately. On the assumption that a 2 % average mode share as calculated from the April 30 and May 15 counts could reasonably be applied to April 23, the same calculations as above were made, with the exception that 2 % of the total person volume was reassigned to the cycling mode, and added to the total. The pedestrian mode share was affected only marginally.

In the Front / Wellington line below, for example, the total NS car volume  $158 + 186 = 344$ ; at 2.0 persons per auto that equals 688 auto persons. Total NS persons = 688 in cars + 237 pedestrians = 925. Assigning 2 % to cyclists is  $0.02 \times 925 = 19$ .

Friday Typical													
Front - Wellington								NS	EW	Average	Range		
	N	S	E	W	NS	EW	NS						
cars	158	186	420	426	688	1692	73%	cars	4146	10168	49%	27%	81%
cyclists					19	36	2%	cyclists	167	274	2%	2%	2%
peds	151	86	0	114	237	114	25%	peds	4189	3509	49%	17%	71%
Wellington - King								8501.7					
	192	177	23	260	738	566	81%						
					18	15	2%						
	58	93	90	89	151	179	17%						
King - Adelaide													
	224	196	382	419	840	1602	54%						
					30	48	2%						
	208	470	313	492	678	805	44%						
Adelaide - Richmond													
	237	132	804	5	738	1618	57%						
					25	39	2%						
	177	347	203	126	524	329	41%						
Richmond - Queen													
	211	138	5	1244	698	2498	27%						
					50	73	2%						
	712	1106	649	489	1818	1138	71%						
North of Queen													
	65	157	525	571	444	2192	36%						
					25	63	2%						
	335	446	407	537	781	944	63%						

The same approach was taken for AM and PM weekday peak periods – adding 2 % cycling share to the total counted volumes. A 1.1 persons/vehicle occupancy rate was used for autos during weekday peak periods. Note that the intent was to highlight the significant pedestrian volume and mode share, particularly in relationship to the amount of sidewalk available on John Street. The relative distribution of roadway users between cars and bikes was not germane to the pedestrian analysis. It is important, however, to note that the weekend-based 2% assignment for peak period cycling use is inappropriate and should have been corrected. Understating the cycling mode share also had the effect of proportionally overstating the auto and pedestrian shares.

Unfortunately, there was very little peak period cycling data available at that point in the study upon which to base a correct mode distribution; the only count was SB at Adelaide from August 2007. It (unreliably, per footnote 1) showed 127 bikes in the AM peak and 57 in the PM peak, as opposed to the much lower (two-way) cycling figures below (22 AM, 25 PM), as inferred by the 2% assignment (below). Proportionally, this would infer a 5 % - 10 % peak hour cycling mode share at that location.

AM								Total NS	Total EW	Average	Range		
Front - Wellington													
	N	S	E	W	NS	EW	NS						
cars	428	174	954	433	662	1526	34%	cars	3617	6283	34%	13%	59%
cyclists	0	0	0	0	38	76	2%	cyclists	207	239	2%	2%	2%
peds	562	683	367	1910	1245	2277	64%	peds	6731	5677	64%	39%	85%
					1945		100%		10555		100%		
Wellington - King													
cars	531	294	0	381	908	419	34%						
cyclists	0	9	1	1	52	36	2%						
peds	978	704	779	606	1682	1385	64%						
					2641		100%						
King - Adelaide													
cars	269	243	522	367	563	978	49%						
cyclists	0	0	0	0	22	37	2%						
peds	422	133	484	371	555	855	49%						
					1141		100%						
Adelaide - Richmond													
cars	276	230	1419	0	557	1561	59%						
cyclists	1	123	5	100	19	35	2%						
peds	240	133	130	84	373	214	39%						
					948		100%						
Richmond - Queen													
cars	232	275	0	1020	558	1122	53%						
cyclists	0	0	0	0	21	28	2%						
peds	226	243	134	132	469	266	45%						
					1047		100%						
North of Queen													
cars	77	259	308	308	370	678	13%						
cyclists	0	0	0	0	56	27	2%						
peds	374	2033	310	370	2407	680	85%						

PM														
Front - Wellington														
									Total NS	Total EW	Average	Range		
cars	260	434	871	1366	763	2461	24%		cars	4692	8858	37%	14%	69%
cyclists	0	0	0	0	61	108	2%		cyclists	251	348	2%	2%	2%
peds	1092	1216	925	2018	2308	2943	74%		peds	7882	8559	61%	29%	84%
Wellington - King									12825					
cars	744	518	0	965	1388	1062	53%							
cyclists	0	0	0	0	51	37	2%							
peds	832	332	451	317	1164	768	45%							
King - Adelaide														
cars	380	408	507	527	867	1137	69%							
cyclists	0	0	0	0	25	47	2%							
peds	211	161	545	685	372	1230	29%							
Adelaide - Richmond														
cars	336	316	1014	0	717	1115	54%							
cyclists	0	55	27	69	26	30	2%							
peds	249	339	204	162	588	366	44%							
Richmond - Queen														
cars	278	200	0	1393	526	1532	39%							
cyclists	0	0	0	0	26	40	2%							
peds	291	497	189	277	788	466	59%							
North of Queen														
cars	126	265	705	705	430	1551	14%							
cyclists	0	0	0	0	62	87	2%							
peds	629	2033	1333	1453	2662	2786	84%							

Weekday average midday traffic counts were also drawn from the City's intersection data and adjusted to show 2 % cycling volumes:

Off Peak														
Front - Wellington														
									Total NS	Total EW	Average	Range		
cars	194	0	559	559	185	1205	13%		cars	2699	5416	37%	13%	58%
cyclists					29	68	2%		cyclists	141	210	2%	2%	2%
peds	562	683	1,910	367	1245	2277	85%		peds	4486	5452	61%	40%	85%
Wellington - King									7326					
cars	366	292	71	327	695	429	47%							
cyclists					28	17	2%							
peds	421	342	176	286	763	462	51%							
King - Adelaide														
cars	230	284	330	379	536	764	35%							
cyclists					30	45	2%							
peds	760	211	703	847	971	1550	63%							
Adelaide - Richmond														
cars	282	239	968	0	555	1044	58%							
cyclists					18	22	2%							
peds	236	152	85	71	388	156	40%							
Richmond - Queen														
cars	236	188	0	842	446	908	41%							
cyclists					21	21	2%							
peds	275	333	49	160	608	209	57%							
North of Queen														
cars	101	170	495	494	282	1066	35%							
cyclists					16	36	2%							
peds	236	275	494	304	511	798	63%							

The "Average" mode shares were then tabulated for each timeframe and put in a more graphic form by the Consultant in preparation for Public Information Centre #1, on June 17, 2010 (following). The intent of the graphic was to focus on the disproportionate share of the right-of-way available for pedestrians as opposed to street users (autos and bikes) but the highlighting of the bike share as a separate uniform "2%" assumption was not only incorrect in terms of AM and PM peak period characteristics but distracted from the main thrust of the display.

# JOHN STREET CORRIDOR IMPROVEMENTS

## Environmental Assessment Study

### Existing Conditions

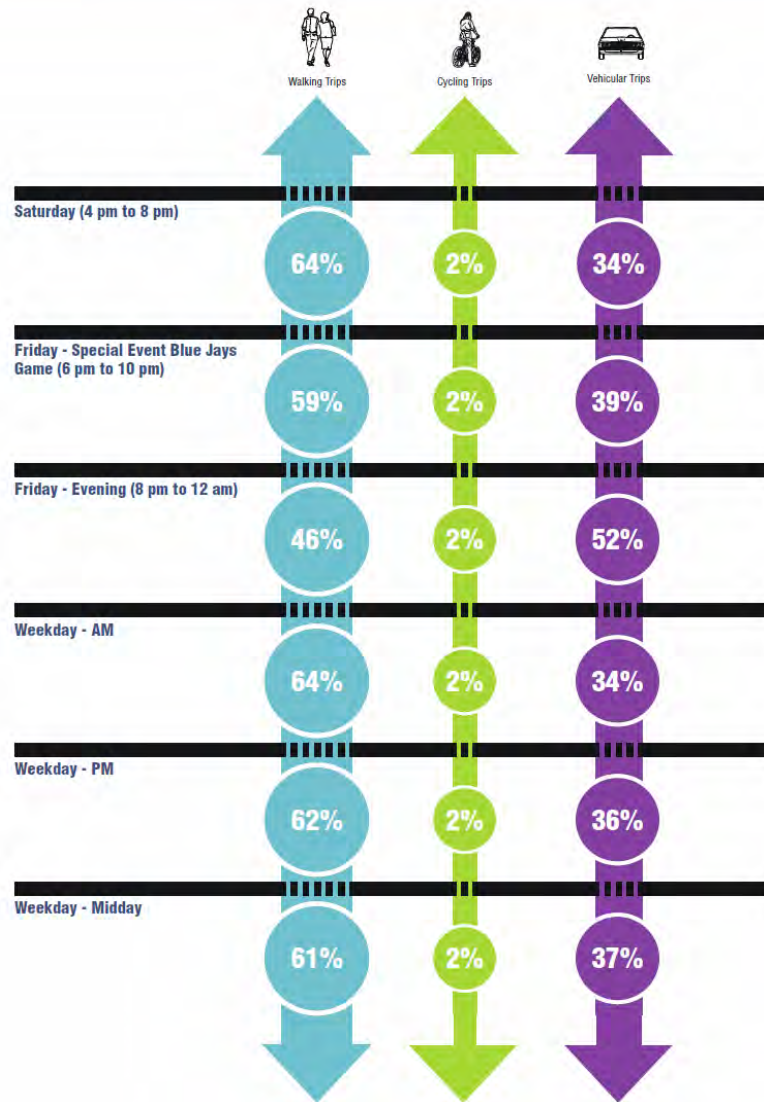
#### How is John Street Used?

**Summary of Significant Patterns based on Available Data:**

- Highest auto volumes along John Street observed during weekday PM peak hour.
- Highest percentage of walking trips along John Street are observed north of Richmond Street St. W. during the Friday and Saturday evenings.
- Significant pedestrian volumes along John Street, from Wellington St. W. to Front St. W. are exhibited during the traditional commuting peak hours.

**The result of the transportation assessment that:**

- Walking trips currently make up about 60% of the total trips along John St. corridor on average and cycling and vehicular trips make up 2% and 40% respectively. While cycling trips make up 2% of the average, it is noted that this does not preclude the provision of a shared vehicular/ cycling lane along John Street.



The Project Team and the public observed that the consistent "2 % cycling trips" figure appeared odd and not in line with expectations that it would be higher and would vary by time scenario. While the 2% share as used in the Saturday and Friday (Special Events) scenarios is correct and supported by the data, and its application to the Friday evening scenario is defensible, it should not have been used for the Weekday AM and PM peaks. At the very least, those figures should have been asterisked or annotated as to their basis in an assumption drawn from off-peak periods. Alternatively, they could have been marked as "N/A".

The Project Team determined that continued use of percentage mode shares was not useful; the actual volumes were used from this point forward. Recognizing that better weekday peak period cycling data was needed, the City undertook to do some counts.

#### 4. City Cycling Counts (2010)

In order to provide both weekday peak period cycling volumes and a better understanding of the 24 hour distribution of cycling, City Cycling staff set out automatic (tube) counters on John Street in late September / early October 2010. Equipment availability and tube damage limited the amount of data collected, but one full day was monitored at Queen Street (Wednesday, September 29) and two full days were monitored at King Street (Friday, October 1 and Wednesday, October 13). The results are tabulated below, and were posted on the City's web site at

<http://www.toronto.ca/cycling/reports/pdf/john.pdf>.

##### Bicycle Counts on John Street at Queen Street

**Day:** Wednesday  
**Date:** 9/29/10  
**Weather:** 19° C, No Rain

**Direction:** Northbound  
**Position:** Curb lane just south of Queen St.

**Direction:** Southbound  
**Position:** Curb lane just south of Queen St.

Hour	Bikes	Hour	Bikes
12:00:00 AM	6	12:00:00 AM	2
1:00:00 AM	4	1:00:00 AM	2
2:00:00 AM	0	2:00:00 AM	0
3:00:00 AM	0	3:00:00 AM	1
4:00:00 AM	0	4:00:00 AM	2
5:00:00 AM	4	5:00:00 AM	4
6:00:00 AM	2	6:00:00 AM	18
7:00:00 AM	14	7:00:00 AM	46
8:00:00 AM	33	8:00:00 AM	148
9:00:00 AM	31	9:00:00 AM	97
10:00:00 AM	23	10:00:00 AM	24
11:00:00 AM	29	11:00:00 AM	28
12:00:00 PM	30	12:00:00 PM	31
1:00:00 PM	36	1:00:00 PM	45
2:00:00 PM	30	2:00:00 PM	40
3:00:00 PM	31	3:00:00 PM	44
4:00:00 PM	87	4:00:00 PM	40
5:00:00 PM	142	5:00:00 PM	46
6:00:00 PM	85	6:00:00 PM	49
7:00:00 PM	37	7:00:00 PM	25
8:00:00 PM	37	8:00:00 PM	27
9:00:00 PM	22	9:00:00 PM	10
10:00:00 PM	27	10:00:00 PM	11
11:00:00 PM	26	11:00:00 PM	10

**Total** 736

**Total** 750

**Bicycle Counts on John Street at King Street**

**Day:** Friday  
**Date:** 10/1/10  
**Weather:** 17° C, No Rain

**Day:** Wednesday  
**Date:** 10/13/10  
**Weather:** 16° C, 10mm Rain (at night)

**Direction:** Northbound  
**Position:** Curb lane just north of King St.

**Direction:** Southbound  
**Position:** Curb lane just north of King St.

**Direction:** Northbound  
**Position:** Curb lane just south of King St.

**Direction:** Southbound  
**Position:** Curb lane just south of King St.

Hour	Bikes	Hour	Bikes	Hour	Bikes	Hour	Bikes
12:00:00 AM	5	12:00:00 AM	3	12:00:00 AM	1	12:00:00 AM	1
1:00:00 AM	3	1:00:00 AM	0	1:00:00 AM	1	1:00:00 AM	1
2:00:00 AM	6	2:00:00 AM	2	2:00:00 AM	0	2:00:00 AM	1
3:00:00 AM	1	3:00:00 AM	1	3:00:00 AM	0	3:00:00 AM	1
4:00:00 AM	1	4:00:00 AM	0	4:00:00 AM	1	4:00:00 AM	2
5:00:00 AM	0	5:00:00 AM	0	5:00:00 AM	1	5:00:00 AM	6
6:00:00 AM	3	6:00:00 AM	6	6:00:00 AM	4	6:00:00 AM	8
7:00:00 AM	13	7:00:00 AM	28	7:00:00 AM	11	7:00:00 AM	20
8:00:00 AM	11	8:00:00 AM	77	8:00:00 AM	17	8:00:00 AM	58
9:00:00 AM	21	9:00:00 AM	50	9:00:00 AM	16	9:00:00 AM	53
10:00:00 AM	11	10:00:00 AM	4	10:00:00 AM	5	10:00:00 AM	19
11:00:00 AM	17	11:00:00 AM	5	11:00:00 AM	4	11:00:00 AM	13
12:00:00 PM	26	12:00:00 PM	3	12:00:00 PM	10	12:00:00 PM	22
1:00:00 PM	25	1:00:00 PM	13	1:00:00 PM	7	1:00:00 PM	18
2:00:00 PM	27	2:00:00 PM	26	2:00:00 PM	17	2:00:00 PM	14
3:00:00 PM	26	3:00:00 PM	28	3:00:00 PM	13	3:00:00 PM	22
4:00:00 PM	67	4:00:00 PM	24	4:00:00 PM	39	4:00:00 PM	17
5:00:00 PM	102	5:00:00 PM	19	5:00:00 PM	58	5:00:00 PM	31
6:00:00 PM	49	6:00:00 PM	20	6:00:00 PM	30	6:00:00 PM	16
7:00:00 PM	15	7:00:00 PM	10	7:00:00 PM	13	7:00:00 PM	13
8:00:00 PM	19	8:00:00 PM	10	8:00:00 PM	6	8:00:00 PM	4
9:00:00 PM	16	9:00:00 PM	8	9:00:00 PM	11	9:00:00 PM	4
10:00:00 PM	20	10:00:00 PM	8	10:00:00 PM	6	10:00:00 PM	2
11:00:00 PM	13	11:00:00 PM	9	11:00:00 PM	13	11:00:00 PM	1
<b>Total</b>	<b>497</b>	<b>Total</b>	<b>354</b>	<b>Total</b>	<b>284</b>	<b>Total</b>	<b>347</b>

The peak hours for cycling are highlighted: 8 – 9 AM (southbound) and 5 – 6 PM (northbound). The 24 hour and peak hour figures were summarized as follows:

Weekday Counts	North	South	Total	AM Peak	PM Peak
John St. & Queen Street - Wed. Sep 29	736	750	1,486	8:00 (181)	5:00 (186)
John St. & King Street - Fri. Oct. 1	497	354	851	8:00 (88)	5:00 (121)

Cycling staff notes included:

1) Note that the previous Friday Apr 30th counts which were only from 6:00 -10:00 PM miss the peak hour for cyclists which is from 5:00 - 6:00 PM. The 24 hour counts at all the locations show that the same number of cyclists travel in the peak direction in the peak hour as in those 4 hours after the peak combined.

2) The Sept 29th count seems to be representative for the link between Queen and Richmond when compared to the April 30th count (slightly higher as expected since mid-week typically higher than Monday or Friday counts). However, both this count (Fall) and the Apr 30th count (Spring) likely underestimate the peak cycling volumes on John St (Summer).

3) The Oct 1st count is consistent with the Friday April 30th count but does not represent the peak condition for this location (both are Friday counts vs mid-week)

4) The numbers in Oct 13th count appear to be low. We would have expected these mid-week volumes to be higher than in the Apr 30th (Friday) count. This is possibly due to the rain/weather or perhaps the count being even later in October. The count does still provide useful information for the hourly distribution at this location.

It is noteworthy that volumes vary considerably between counts. It should also be noted that the cycling counts did not collect auto and pedestrian data, so site- and date-specific mode shares cannot be calculated. It may also be noted that the automatic tube method of gathering cycling data is reliable and cost-effective, but some cyclists could avoid the tube while others may be double-counted. The data may be assumed to be reasonably accurate for the purposes of this study.

## 5. Dave Meslin Counts (2011)

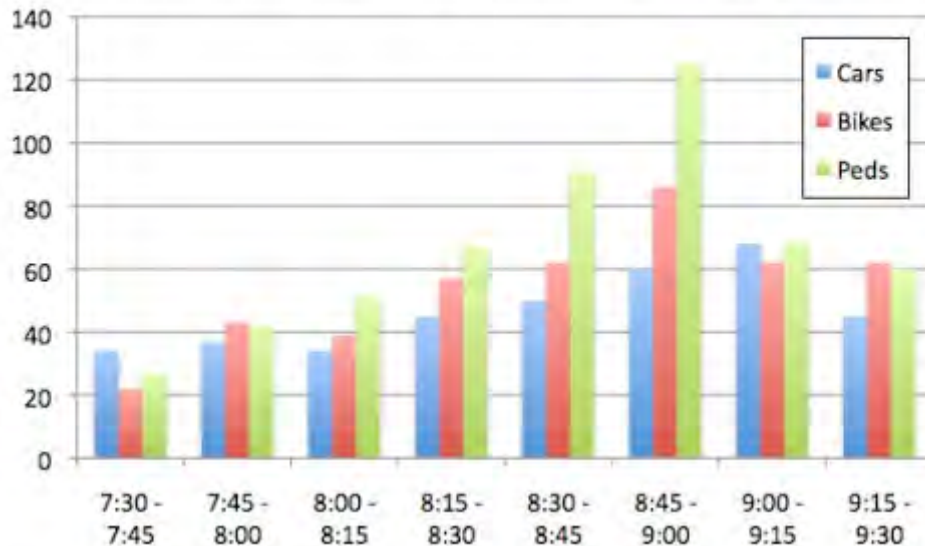
Dave Meslin is active in the cycling community and, on his blog (<http://meslin.wordpress.com/>) he commented in June 2010 about the apparent inaccuracy in using a uniform "2% Cyclists" mode share in one display panel shown at Public Information Centre #1 (June 17, 2010) (see <http://meslin.wordpress.com/2010/06/28/john-street/>). As outlined above, this concern was shared by other members of the public and the Project Team, and the City consequently undertook cycling counts later in 2010 (as documented above) to ensure that correct and updated counts were used in the study. The display panel was, however, not removed from the project web page, as it remains a record of what was presented at PIC #1, even if some of the figures were inappropriate and were never used in the project technical work.

Noting that the PIC #1 "2%" proportion appeared to remain the figures of record as the study approached PIC #2 in June 2011, even though the Project Team was in fact using the updated volumes, Mr. Meslin undertook to do a field count of cycling use of John Street on Wednesday, June 15, 2011. This was documented in [http://meslin.wordpress.com/2011/06/15/tally\\_ho/](http://meslin.wordpress.com/2011/06/15/tally_ho/). It should be noted that Mr. Meslin promoted the count in advance on his twitter account and blog, so it is possible that some additional cyclists were drawn to the corridor to participate.

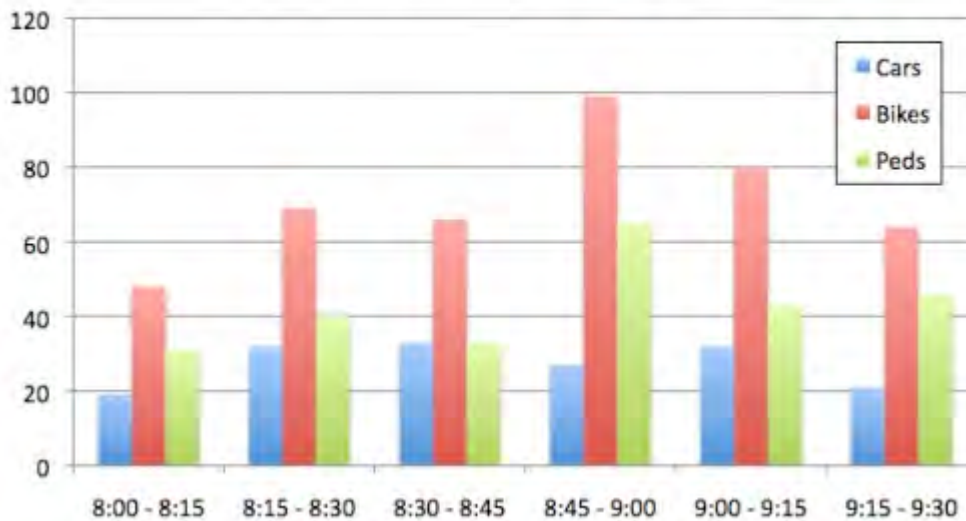
The data was presented as (all material reprinted with the permission of Dave Meslin):

- 32% : Average for cyclists over two hours, southbound at Richmond.*
- 37% : Highest level of cyclists during a 15 minute period at Richmond.*
- 50% : Average for bikes over 90 minutes, southbound, north of Queen.*
- 774 : Southbound rush-hour cyclists in the Entertainment District*

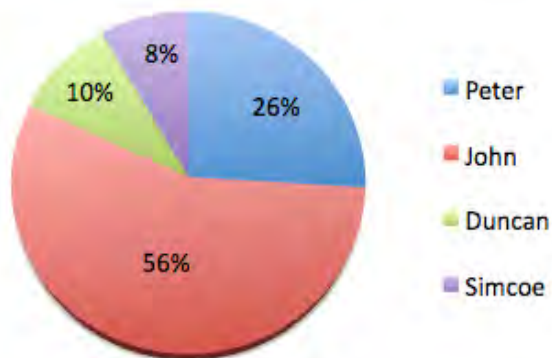
### Southbound totals • John Street, just north of Richmond



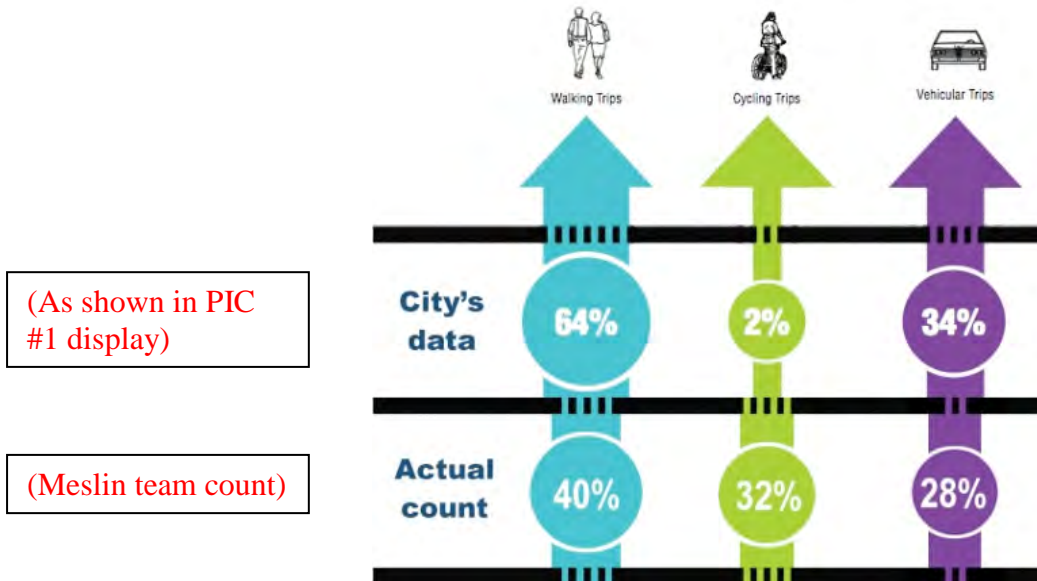
### Southbound totals • John Street, just north of Queen



### Percentage of all bike traffic (by street)



I could hardly believe the numbers as they came in. The discrepancy between the data is astounding:



(As shown in PIC #1 display)

(Meslin team count)

The raw data was tabulated as follows:

<b>John Street (at Richmond)</b>								
Counted by Andie Garcia, Stephen Cooper								
	Southbound				Northbound			
	Cars	Bikes	Peds	% bikes	Cars	Bikes	Peds	% bikes
7:30 - 7:45	34	22	27	26.5%				
7:45 - 8:00	37	43	42	35.2%				
8:00 - 8:15	34	39	51	31.5%				
8:15 - 8:30	45	57	67	33.7%				
8:30 - 8:45	50	62	91	30.5%				
8:45 - 9:00	60	86	125	31.7%				
9:00 - 9:15	68	62	68	31.3%				
9:15 - 9:30	45	62	60	37.1%				
<b>Totals:</b>	<b>373</b>	<b>433</b>	<b>531</b>	<b>32.2%</b>	<b>0</b>	<b>0</b>	<b>0</b>	

<b>John (North of Queen)</b>								
Counted by Herb van den Dool								
	Southbound				Northbound			
	Cars	Bikes	Peds	% bikes	Cars	Bikes	Peds	% bikes
8:00 - 8:15	19	48	31	49.0%	21	7	34	11.3%
8:15 - 8:30	32	69	40	48.9%	18	10	41	14.5%
8:30 - 8:45	33	66	33	50.0%	13	7	43	11.1%
8:45 - 9:00	27	99	65	51.8%	22	11	55	12.5%
9:00 - 9:15	32	80	43	51.6%	20	13	43	17.1%
9:15 - 9:30	21	64	46	48.9%	40	18	42	18.0%
<b>Totals / Avg</b>	<b>164</b>	<b>426</b>	<b>258</b>	<b>50.0%</b>	<b>134</b>	<b>66</b>	<b>258</b>	

Additional counts undertaken by the Meslin team on Peter Street and Simcoe Street are not shown here, but are available on the web site.

- For overall person movement southbound on John Street at Richmond (assuming 1.2 persons per auto), the AM peak hour is recorded from 8:15 to 9:15. The total car volume in that hour was 223; the total persons in cars may be assumed as  $1.2 \times 223 = 268$ . The total bike count was 267, and the total pedestrian volume was 351, for a total person volume (all modes) of 886. The cycling share was 30.1%
- A similar calculation for John Street north of Queen Street in the 8:15 – 9:15 AM peak hour yields 124 autos, 149 auto occupants, 314 cyclists, and 181 pedestrians, for a 48.8% cyclist share of a 644 total person volume southbound. Northbound for the same hour (noting that the northbound peak itself appears to be from 8:30 to 9:30 or later), the figures are 73 autos, 88 auto occupants, 41 bikes, 182 pedestrians, and 311 total persons. This yields a 13.2 % cycle mode share.

Some observations:

- Despite the risk of the count results being influenced by the advance publicity, it is likely that the results were not skewed beyond the norms of day-to-day variation in travel patterns. It may be assumed that the counted numbers themselves are valid for the particular day
- There were no weather concerns, and no documented special events or closures that would significantly affect the counts.
- It is important to note that Meslin's percentage calculations reflect a 1.0 persons per auto occupancy rate and therefore slightly overrepresent the cycling proportions in terms of total person movement in the corridor (which is the normal technical measure used in planning). Without doing specific occupancy counts, a factor of 1.2 persons per hour is normally applied in urban peak periods. The difference is not significant; the cycling mode share in the Richmond Street peak hour, for example, is shown as 31.8% by Meslin; adjusting for 1.2 persons per auto occupancy rate to create a "true" person mode share, the result is 30.1%.
- It may be noted that the peak hour in the Meslin count (8:15 – 9:15 AM) differs slightly from the peak hour (8 – 9 AM) in the City's 2010 hourly counts.
- The Meslin counts cannot be directly compared with the City's 2010 counts, as they differ in terms of season, location, and peak hour. It is unknown how many cyclists at Meslin's north of Queen station carried across Queen to the City's nearest counting station south of Queen. Nevertheless, the Meslin figures for John Street north of Queen Street (314 cyclists southbound in a June AM peak hour) are, not unexpectedly, somewhat higher than the City's 2010 count of 148 cyclists in a September peak hour south of Queen Street. The Meslin counts at Richmond Street cannot be compared with the City's counts at King Street.

On Monday, June 21, 2011, the Meslin team undertook a similar field count in the PM peak period (4:00 – 6:00 PM) (see [http://meslin.wordpress.com/2011/06/21/john\\_count\\_2/](http://meslin.wordpress.com/2011/06/21/john_count_2/)). Meslin's observations of the key results were:

- 21% : Average for cyclists over two hours, northbound at Richmond.*
- 30% : Highest level of cyclists during a 15 minute period at Richmond.*
- 18% : Average for bikes over two hours, northbound, at Adelaide.*
- 24% : Highest level of cyclists during a 15 minute period at Adelaide.*
- 695 : Northbound rush-hour cyclists in the Entertainment District.*

The raw Meslin data tables for John Street are as follows:

<b>John (North of Richmond)</b>					Counted by Steve Barnes / Dave M, Jane Farrow			
	Southbound				Northbound			
	Cars	Bikes	Peds	% bikes	Cars	Bikes	Peds	% bikes
4:00 - 4:15					47	24	83	15.6%
4:15 - 4:30					57	32	82	18.7%
4:30 - 4:45					73	25	115	11.7%
4:45 - 5:00					67	37	83	19.8%
5:00 - 5:15					61	72	174	23.5%
5:15 - 5:30					57	69	148	25.2%
5:30 - 5:45					45	57	154	22.3%
5:45 - 6:00					45	58	90	30.1%
Totals:	0	0	0	0.0%	452	374	929	21.3%

<b>John (North of Adelaide)</b>					Counted by Ross (cars) & Lynda Young (B + P)			
	Southbound				Northbound			
	Cars	Bikes	Peds	% bikes	Cars	Bikes	Peds	% bikes
4:00 - 4:15					73	23	59	14.8%
4:15 - 4:30					71	25	86	13.7%
4:30 - 4:45					78	21	97	10.7%
4:45 - 5:00					92	28	116	11.9%
5:00 - 5:15					64	58	126	23.4%
5:15 - 5:30					76	66	132	24.1%
5:30 - 5:45					71	53	118	21.9%
5:45 - 6:00					59	50	107	23.1%
Totals / Avg	0	0	0	0.0%	584	324	841	18.0%

The PM peak counts yield the following results:

- For overall person movement northbound on John Street north of Richmond (assuming 1.2 persons per auto), the PM peak hour is recorded from 5:00 to 6:00. The total cars in that hour was 208; the total persons in cars 250. The total bike count was 256, and the total pedestrian volume was 566, for a total person volume (all modes) of 1,072. The cycling share was 23.9%
- A similar calculation for John Street north of Adelaide Street in the 4:45 – 5:45 PM peak hour yields 303 autos, 364 auto occupants, 205 cyclists, and 492 pedestrians, for a 19.3% cyclist share of 1,061 total person volume northbound.

Again, the count locations, seasons, and specific peak hours are not directly comparable with the City's 2010 data, but the 2011 results supplement and confirm the strong weekday peak period presence of cyclists on John Street. The PM peak hour northbound count of cyclists by the City "south of Queen" in September 2010 was 142; Meslin's team's count "north of Richmond" in June was 256. Again, it is not surprising for summer conditions to yield higher cycling volumes than those of the end of September.

## 6. Summary and Conclusions

The use of John Street by cyclists has been documented in several ways through the Environmental Assessment study:

- City intersection counts for weekday peak periods
- Consultant intersection counts for selected weekend and evening periods
- City 24 hour tube counts at two locations
- Private (Dave Meslin) weekday peak period volume counts at three locations

Although each count process has its limitations, collectively, there is adequate information about cycling to be able to feed in to the EA process of identifying, analyzing, and evaluating corridor improvement alternatives.

All the available John Street cycling counts are summarized below:

Location	Date	Source	Peak Hour	Peak Hour Cyclist Volume	Peak Hour Cyclist Person Mode Share
John / Adelaide	Wed Aug 1 07	City Traffic	Weekday AM SB	123	25 %
			Weekday PM SB	57	7 %
Six John Street intersections	Fri Apr 30 10	URS	Fri Evening	15 - 107	1 % - 4 %; avg. 2.7 %
	Sat May 15 10		Sat Afternoon	5 - 90	0.4 % - 4 %; avg. 2.1 %
John / Queen	Wed Sep 29 10	City Cycling	Weekday AM SB	148	n/a
			Weekday AM NB	33	
			Weekday PM SB	46	
			Weekday PM NB	142	
John / King	Fri Oct 1 10 / Wed Oct 13 10	City Cycling	Weekday AM SB	77 / 58	n/a
			Weekday AM NB	11 / 17	
			Weekday PM SB	19 / 31	
			Weekday PM NB	102 / 58	
John N of Richmond	Wed Jun 15 11	Dave Meslin team	Weekday AM SB	267	30%
	Mon Jun 21 11		Weekday PM NB	256	24 %
John N of Queen	Wed Jun 15 11		Weekday AM SB	314	49 %
			Weekday AM NB	41	13 %
John N of Adelaide	Mon Jun 21 11		Weekday PM NB	205	19 %

There was one error in analyzing and communicating cycling mode shares to the public; a display panel in the first Public Information Centre (June 2010) indicated that the cycling share of all person-trips along John Street was a uniform 2 % in all time periods. That figure is representative for evening and weekend situations but is incorrect for the weekday AM and PM peak periods.

Although that peak period mode share assignment was not used by the Study Team and the figures were subsequently replaced by the City's counts, the updated counts as used in the analysis were not communicated to the public. Meanwhile the PIC #1 displays remained on the project web site (since the City does not edit or retroactively remove public display material) and led to the erroneous impression by cycling activists that the cycling count was being misused or fabricated as a means of downplaying the importance of cycling in the corridor. In fact, as the analysis of alternatives demonstrates, cycling issues play a key, if not dominant, role in the deliberations and differences between alternatives.

This memo will be posted on the project web site, and a note will be added to the PIC #1 display showing the mode shares to refer to this memo for correct and updated cycling information.