



2014 LRT PASSENGER COUNT

CAPITAL LINE – Northbound and Southbound

Project Team:

Edmonton Transit
Transit Data Management

Transportation Planning
Strategic Monitoring and Analysis

2014 LRT PASSENGER COUNT

The Strategic Monitoring and Analysis section of the Transportation Planning Branch conducted the 2014 Fall LRT Passenger Count during the SEP14 signup (August 31, 2014 – November 20, 2014). The purpose of the survey is to describe boarding and alighting on the LRT during a time when service hours are at their highest levels and post-secondary institutions and schools are in session, thus to represent a typical fall day.

ETS started Light Rail Transit (LRT) service in 1978. Today, ETS operates the service with 94 light-rail vehicles (LRV) on the Capital Line connecting 15 LRT stations with the Transit network and provides 314 daily trips between Clareview and Century Park stations.

The survey's methodology counts passengers at every LRV door for each train from the beginning of the service day and to the end. This train-level methodology provides better data accuracy while reducing counting errors and stages the data for simpler analysis and reporting.

In addition to the regular scheduled service, ETS operates extra service for special events such as hockey or football games or major events at venues near the Capital Line. While the project team tries to avoid doing passenger counts during major events, not all are avoided. Passenger counts from these special events may sometime blend in with the regular scheduled service passenger counts. The number of events from one year's counting to the next may produce a positive or negative variance on the count and may have an impact on the final passenger count reported.

The 2014 LRT Passenger Count report provides boarding and alighting information. The data is presented by station, by direction, by time period and by block. Three supplementary reports attached to this report providing a more detailed analysis of the data. Please view the following reports:

- Detailed Train List
- Passenger Volumes by Time Period
- Passenger Volume by Rolling One Hour and Two Hours Period

2014 KEY FINDINGS

In 2014, for the Capital Line Southbound, the maximum load point is the link between Stadium and Churchill stations. The LRT carried **15,420** southbound passengers and **16,170** northbound passengers in this link during the day.

For the Capital Line Northbound, the maximum load point is the link between McKernan/Belgravia and Health Sciences stations. The LRT carried **21,820** southbound passengers and **22,820** northbound passengers in this link during the day.

Key Findings

LRT boardings decreased slightly to an estimated **98,144** passengers in 2014

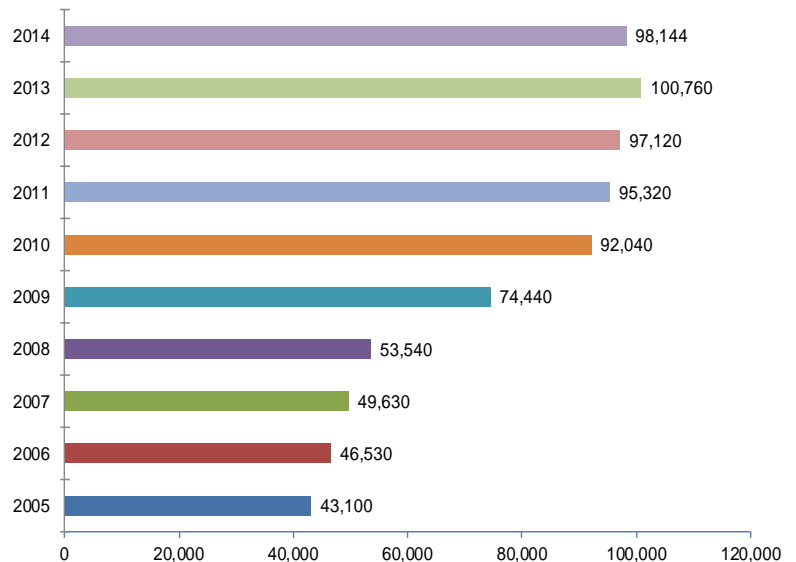
This is a decrease of **2,616** passengers from 2013 providing an annual growth rate of **-2.6%**.

Over the past ten years, LRT boardings have grown by **127.7%**

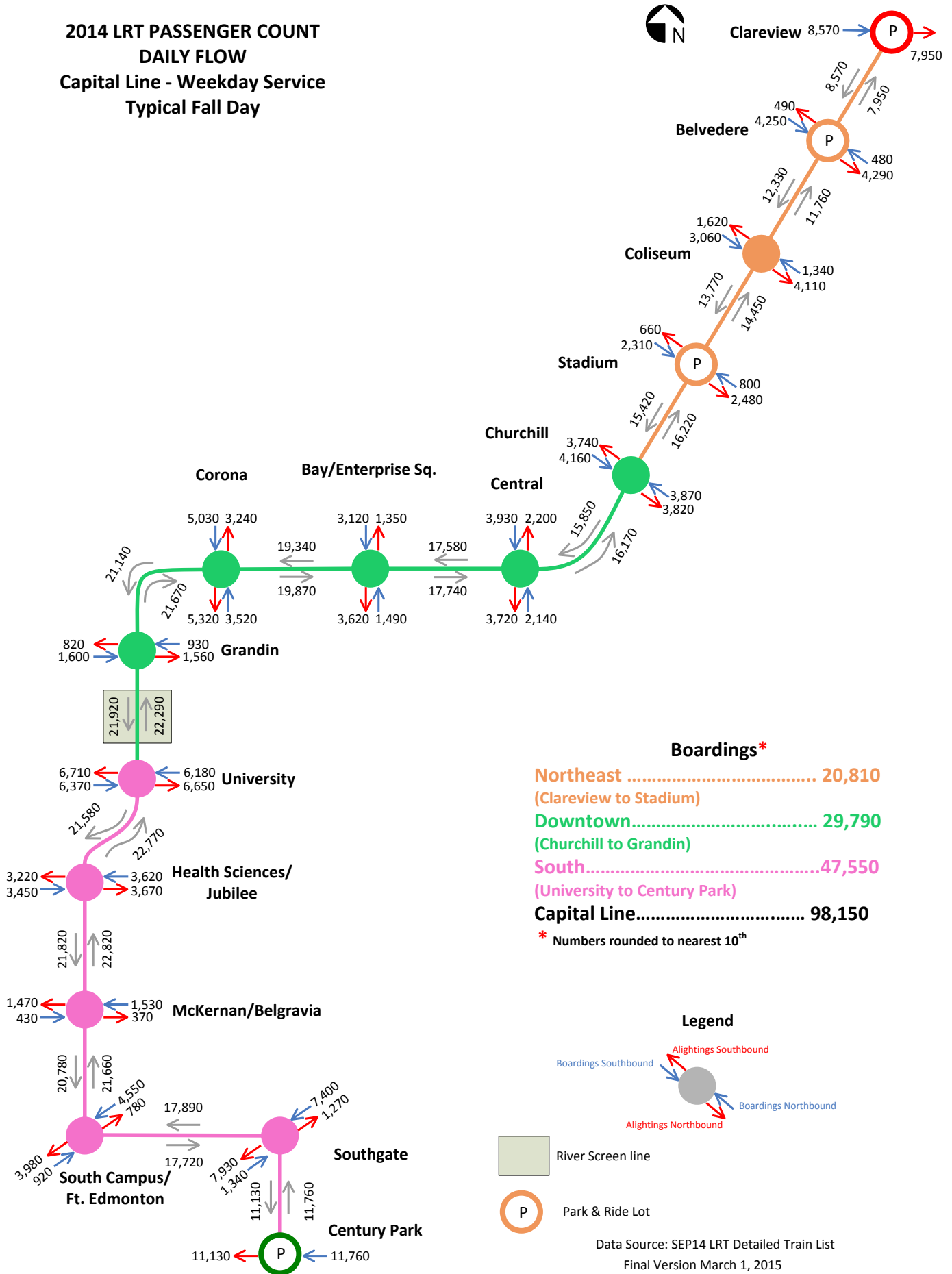
AM Peak Hour boardings have increased by **1.8%** to **13,540** in 2014

PM Peak Hour boardings have decreased by **-14.2%** to **11,980** in 2014

10 Years Estimated Daily LRT Boardings Weekday Service

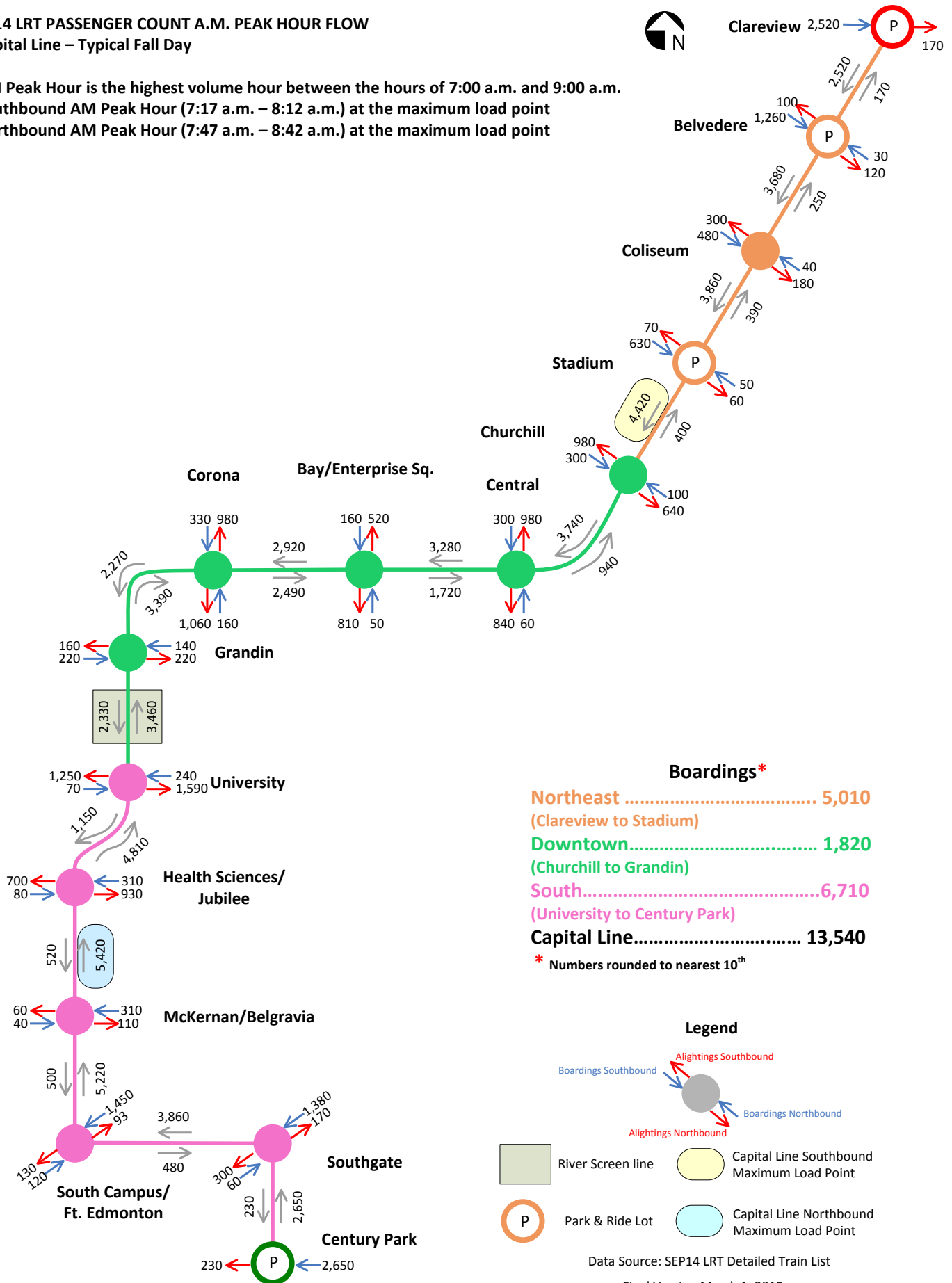


2014 LRT PASSENGER COUNT
DAILY FLOW
Capital Line - Weekday Service
Typical Fall Day



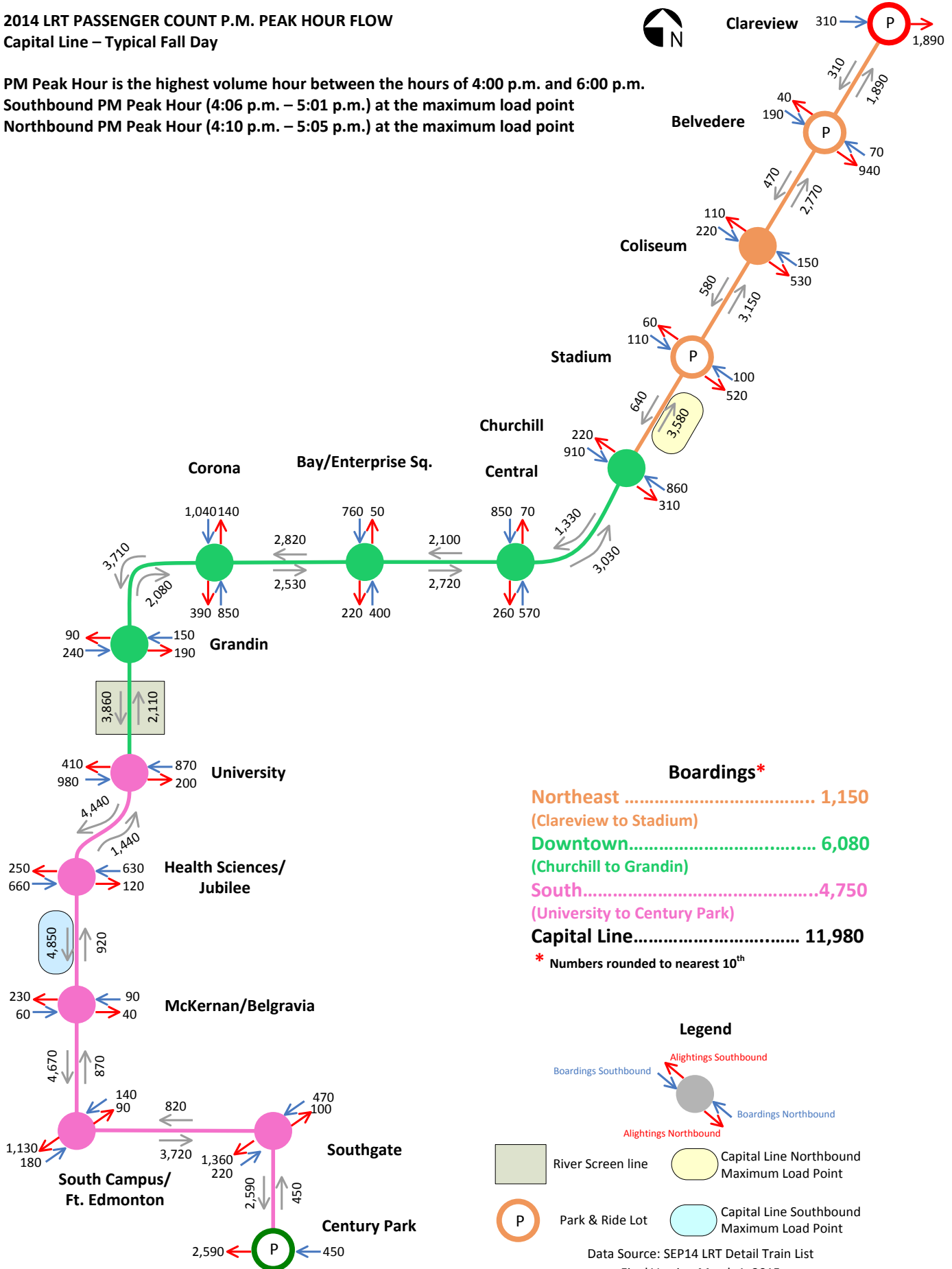
2014 LRT PASSENGER COUNT A.M. PEAK HOUR FLOW
Capital Line – Typical Fall Day

AM Peak Hour is the highest volume hour between the hours of 7:00 a.m. and 9:00 a.m.
 Southbound AM Peak Hour (7:17 a.m. – 8:12 a.m.) at the maximum load point
 Northbound AM Peak Hour (7:47 a.m. – 8:42 a.m.) at the maximum load point

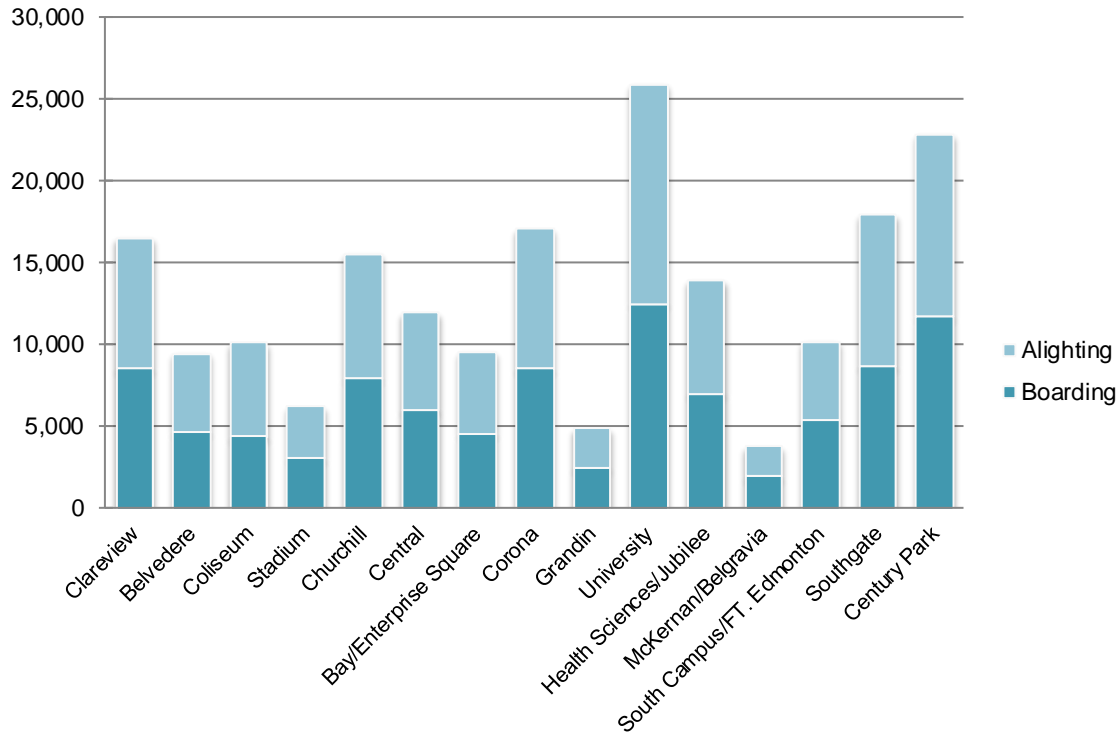


2014 LRT PASSENGER COUNT P.M. PEAK HOUR FLOW
Capital Line – Typical Fall Day

PM Peak Hour is the highest volume hour between the hours of 4:00 p.m. and 6:00 p.m.
 Southbound PM Peak Hour (4:06 p.m. – 5:01 p.m.) at the maximum load point
 Northbound PM Peak Hour (4:10 p.m. – 5:05 p.m.) at the maximum load point



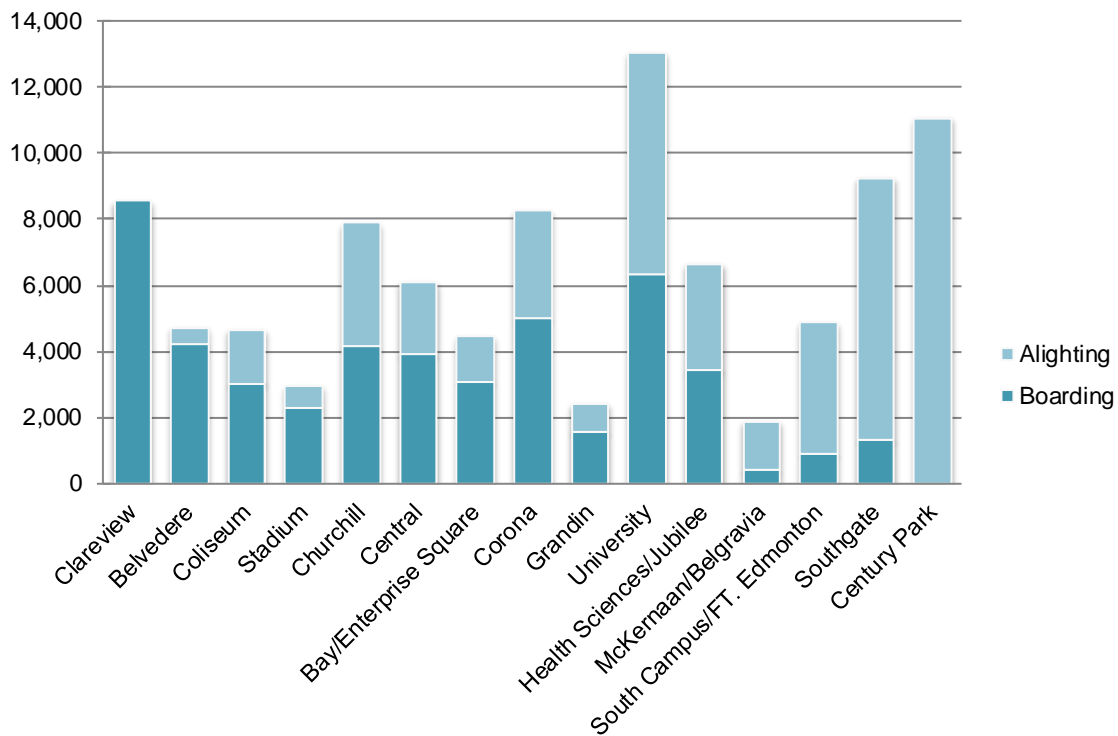
2014 Boardings and Alightings by Station Weekday Service



2014 Boardings and Alightings - % of Total Station Activity Weekday Service

LRT Station	Boarding	Alighting	Station Total	% of Total
Clareview	8,572	7,978	16,550	8.4%
Belvedere	4,726	4,781	9,507	4.8%
Coliseum	4,398	5,732	10,130	5.2%
Stadium	3,110	3,137	6,245	3.2%
Churchill	8,030	7,554	15,584	7.9%
Central	6,070	5,911	11,981	6.1%
Bay/Enterprise Square	4,611	4,975	9,586	4.9%
Corona	8,551	8,555	17,106	8.7%
Grandin	2,532	2,381	4,913	2.5%
University	12,548	13,354	25,902	13.2%
Health Sciences/Jubilee	7,066	6,888	13,954	7.1%
McKernan/Belgravia	1,958	1,838	3,798	1.9%
South Campus/FT. Edmonton	5,473	4,756	10,229	5.2%
Southgate	8,739	9,205	17,944	9.1%
Century Park	11,760	11,099	22,859	11.6%
Total ---->	98,144	98,144	196,288	100%

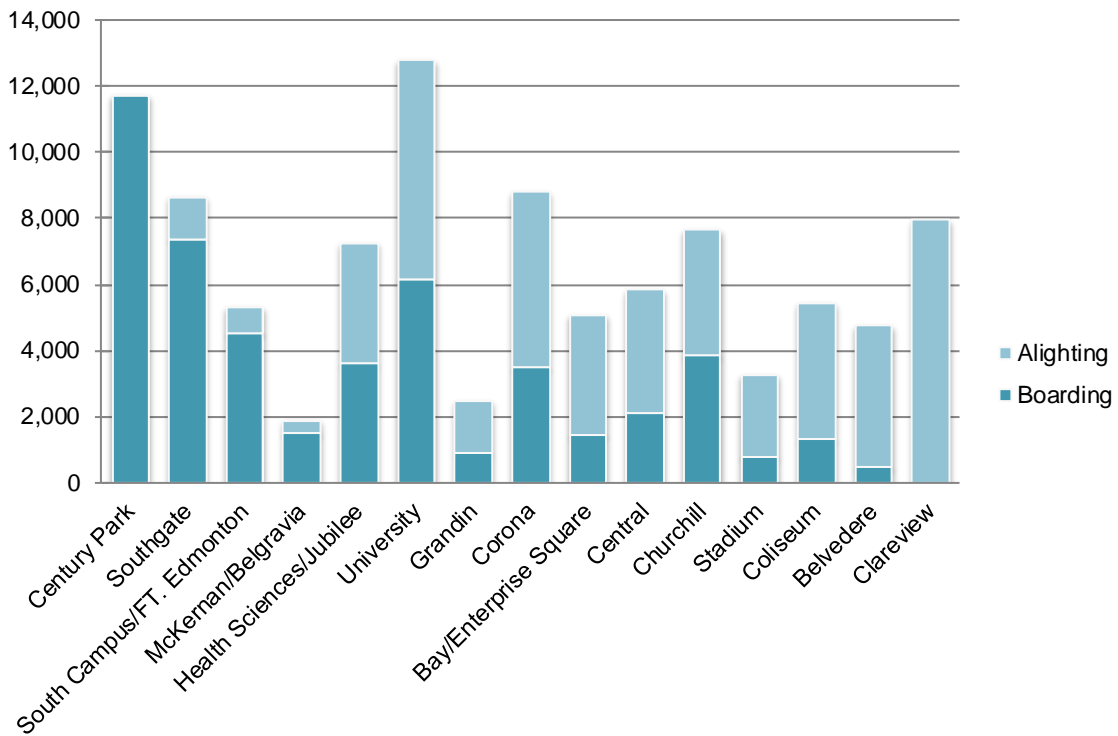
**2014 Boardings and Alightings - Southbound (Clareview to Century Park)
Weekday Service**



**2014 Boardings and Alightings- Southbound - % of Total Station Activity
(Clareview to Century Park)
Weekday Service**

LRT Station	Boarding	Alighting	StationTotal	% of Total
Clareview	8,572	0	8,572	8.8%
Belvedere	4,245	491	4,736	4.9%
Coliseum	3,061	1,620	4,681	4.8%
Stadium	2,309	657	2,966	3.1%
Churchill	4,163	3,735	7,898	8.1%
Central	3,926	2,196	6,122	6.3%
Bay/Enterprise Square	3,121	1,354	4,475	4.6%
Corona	5,032	3,240	8,272	8.5%
Grandin	1,600	820	2,420	2.5%
University	6,373	6,706	13,079	13.5%
Health Sciences/Jubilee	3,450	3,215	6,665	6.9%
McKernaan/Belgravia	426	1,469	1,895	2.0%
South Campus/FT. Edmonton	919	3,976	4,895	5.0%
Southgate	1,339	7,932	9,271	9.6%
Century Park	0	11,099	11,099	11.4%
Total ---->	48,536	48,510	97,046	100%

**2014 Boardings and Alightings - Northbound (Century Park to Clareview)
Weekday Service**



**2014 Boardings and Alightings- Northbound - % of Total Station Activity
(Century Park to Clareview)
Weekday Service**

LRT Station	Boarding	Alighting	StationTotal	% of Total
Century Park	11,760	0	11,760	11.9%
Southgate	7,400	1,273	8,673	8.7%
South Campus/FT. Edmonton	4,554	780	5,334	5.4%
McKernan/Belgravia	1,532	369	1,901	1.9%
Health Sciences/Jubilee	3,616	3,673	7,289	7.3%
University	6,175	6,648	12,823	12.9%
Grandin	932	1,561	2,493	2.5%
Corona	3,519	5,315	8,834	8.9%
Bay/Enterprise Square	1,490	3,621	5,111	5.2%
Central	2,144	3,715	5,859	5.9%
Churchill	3,867	3,819	7,686	7.7%
Stadium	801	2,478	3,279	3.3%
Coliseum	1,337	4,112	5,449	5.5%
Belvedere	481	4,290	4,771	4.8%
Clareview	0	7,978	7,978	8.0%
Total ---->	49,608	49,632	99,240	100%

**Comparison of 2014 to 2013 Boardings – Sorted by Top n % Change
Weekday Service**

LRT Station	2014 Boardings	2013 Boardings	Gain(loss)	% Change
South Campus/FT. Edmonton	5,473	5,033	440	8.74%
Clareview	8,572	8,121	451	5.55%
Central	6,070	5,850	220	3.76%
Stadium	3,110	3,037	73	2.40%
Century Park	11,760	11,712	48	0.41%
Coliseum	4,398	4,411	-13	-0.29%
Belvedere	4,726	4,782	-56	-1.17%
Corona	8,551	8,672	-121	-1.40%
Southgate	8,739	8,895	-156	-1.75%
Churchill	8,030	8,351	-321	-3.84%
Health Sciences/Jubilee	7,066	7,387	-321	-4.35%
Grandin	2,532	2,651	-119	-4.49%
McKernan/Belgravia	1,958	2,094	-136	-6.49%
University	12,548	14,358	-1,810	-12.61%
Bay/Enterprise Square	4,611	5,409	-798	-14.75%
Total ---->	98,144	100,763	-2,619	-2.60%

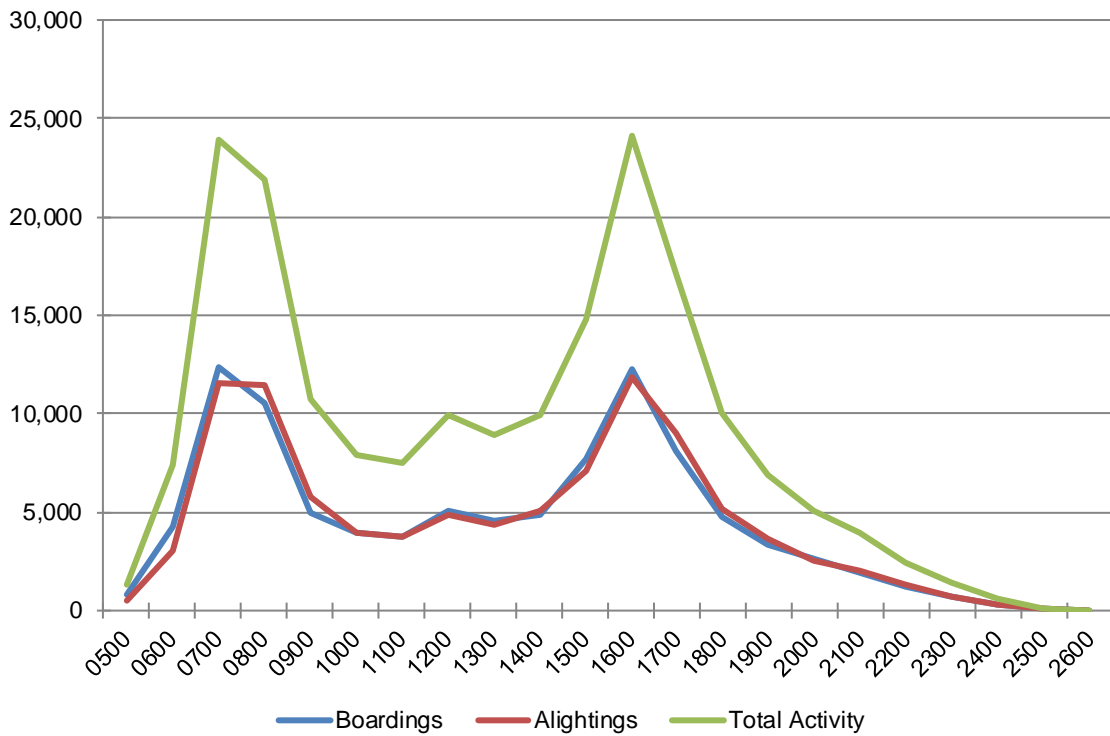
**Comparison of 2014 to 2013 Alightings – Sorted by Top n % Change
Weekday Service**

LRT Station	2014 Alightings	2013 Alightings	Gain(loss)	% Change
Coliseum	5,732	5,423	309	5.70%
Stadium	3,135	2,974	161	5.41%
Central	5,911	5,676	235	4.14%
Health Sciences/Jubilee	6,888	6,720	168	2.50%
Corona	8,555	8,387	168	2.00%
Belvedere	4,781	4,730	51	1.08%
Churchill	7,554	7,584	-30	-0.40%
Clareview	7,978	8,211	-233	-2.84%
McKernan/Belgravia	1,838	1,921	-83	-4.32%
Southgate	9,205	9,718	-513	-5.28%
Bay/Enterprise Square	4,975	5,292	-317	-5.99%
Century Park	11,099	11,807	-708	-6.00%
Grandin	2,381	2,573	-192	-7.46%
University	13,356	14,466	-1,110	-7.67%
South Campus/FT. Edmonton	4,756	5,281	-525	-9.94%
Total ---->	42,556	41,494	1,062	2.56%

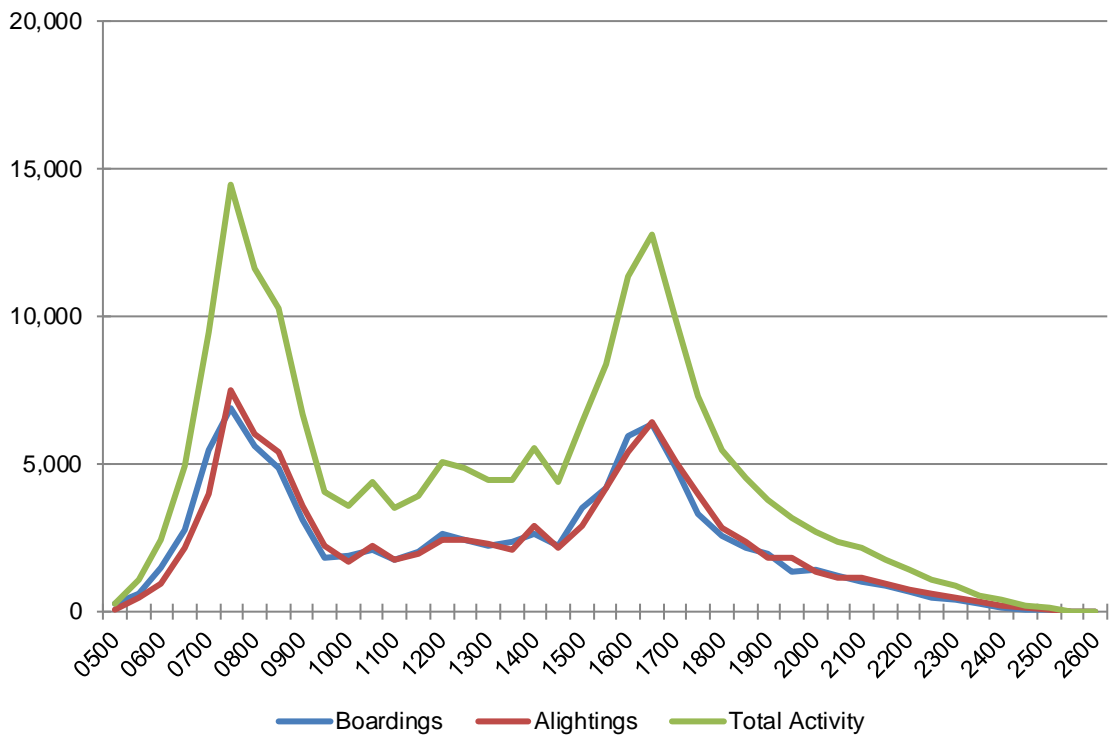
**2014 Boardings by Block – Ordered by Top n % of Total
Weekday Service**

Block	Boarding	%Of Total
50111	9,316	9.5%
50116	9,292	9.5%
50113	8,704	8.9%
50115	8,235	8.4%
50114	7,948	8.1%
50105	7,845	8.0%
50107	7,725	7.9%
50109	6,818	6.9%
50101	2,767	2.8%
50119	2,491	2.5%
50122	2,395	2.4%
50123	2,380	2.4%
50102	2,198	2.2%
50118	2,088	2.1%
50121	2,049	2.1%
50117	2,008	2.0%
50120	1,978	2.0%
50104	1,974	2.0%
50106	1,846	1.9%
50110	1,768	1.8%
50112	1,716	1.7%
50103	1,653	1.7%
50108	1,565	1.6%
50124	1,385	1.4%
Total --->	98,144	100.0%

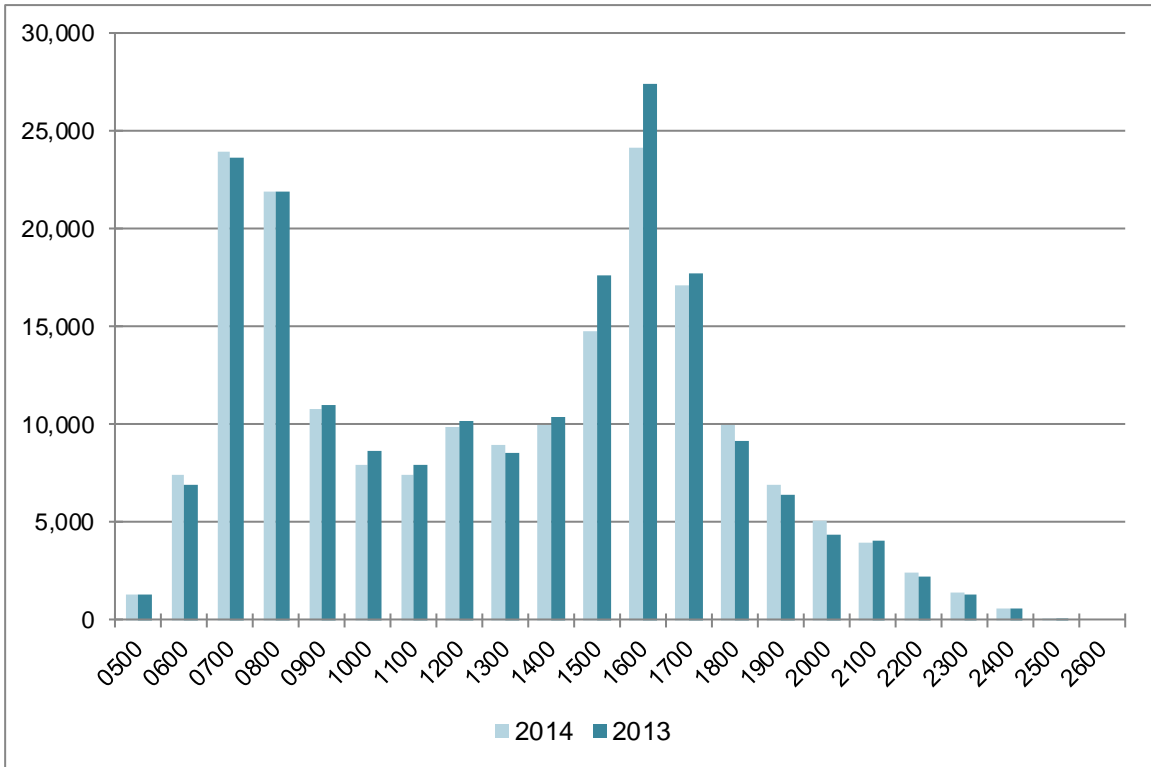
**2014 Hourly Time of Day Distribution of Total Station Activity (Boardings and Alightings)
Weekday Service**



**2014 Half-Hour Time of Day Distribution of Total Station Activity (Boardings and Alightings)
Weekday Service**



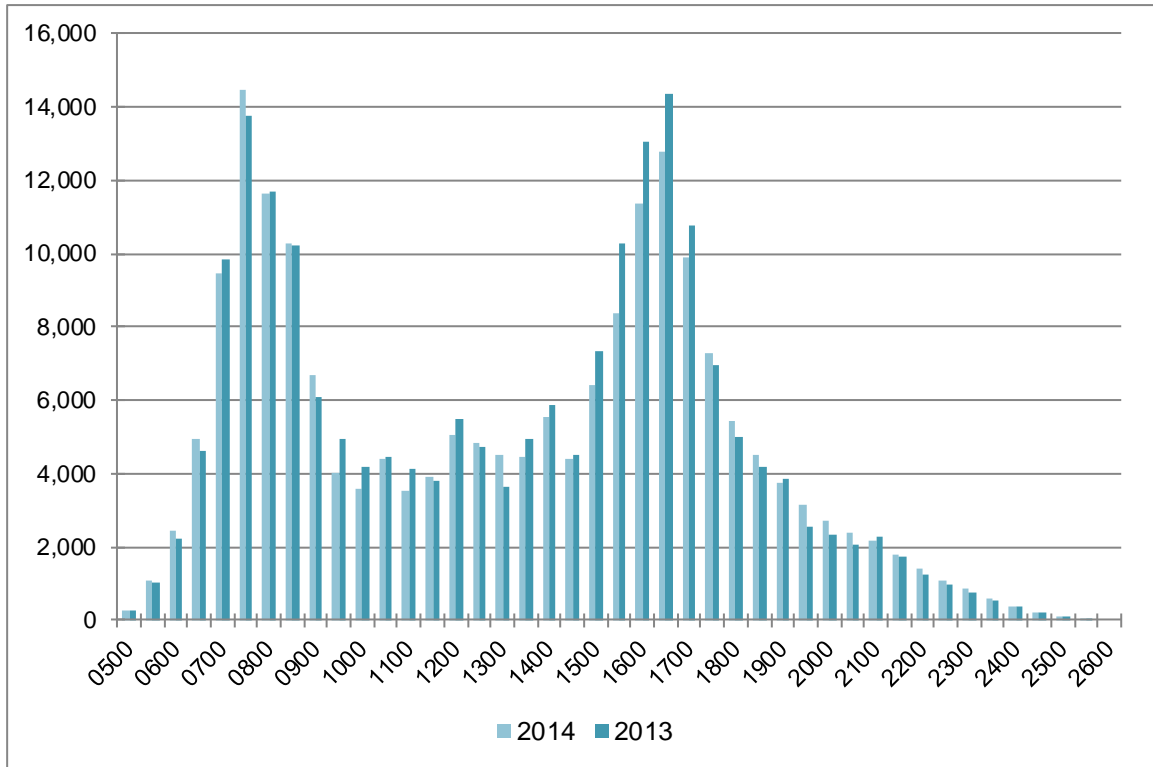
**Comparison of 2014 to 2013 Hourly Time of Day Distribution of Total Station Activity
(Boardings and Alightings)
Weekday Service**



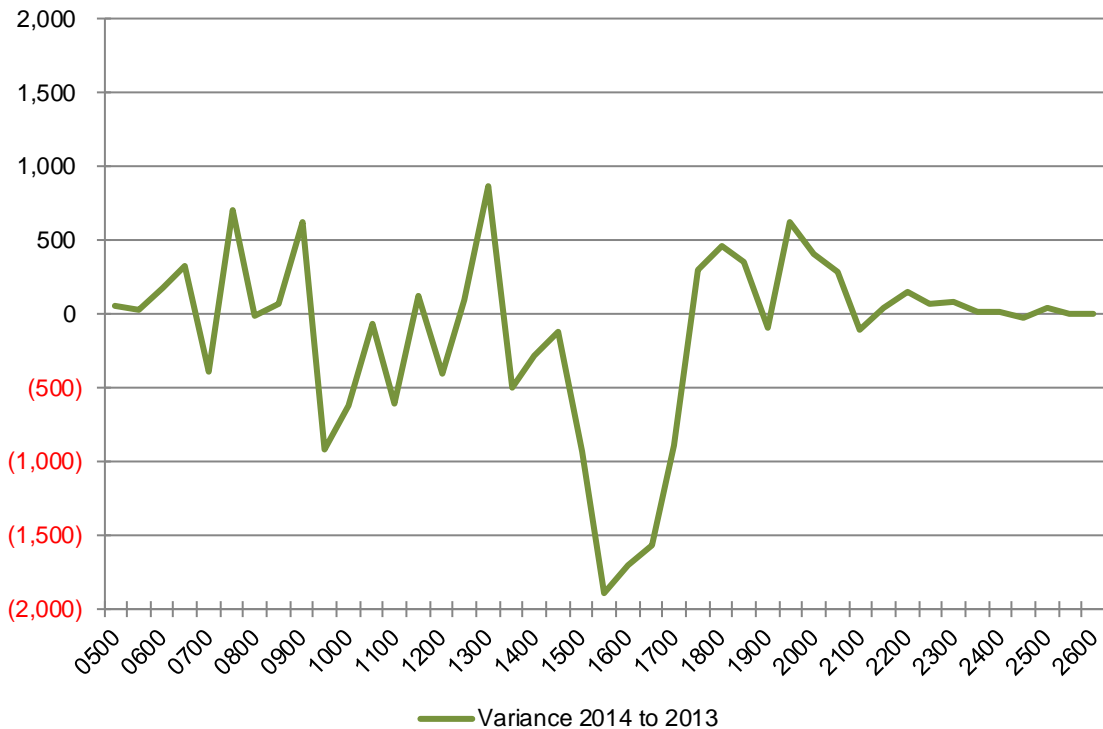
**Variance of 2014 to 2013 -Hourly Time of Day Distribution of Total Station Activity
(Boardings and Alightings)
Weekday Service**



**Comparison of 2013 to 2014 Half-Hour Time of Day Distribution of Total Station Activity
(Boardings and Alightings)
Weekday Service**



**Variance of 2014 to 2013 -Half-Hour Time of Day Distribution of Total Station Activity
(Boardings and Alightings)
Weekday Service**



**2014 vs. 2013 Maximum Load Point Activity
Capital Line Weekday Service**

At Maximum Load Point

Capital Line Southbound - A.M. Peak Hour

Capital Line Northbound - A.M. Peak Hour

Year	Departing Stadium Southbound	Number of Trips	Number of LRV	Average Passenger Loads per LRV
2014	4,420	12	48	92
2013	4,012	12	48	84
% Change	10.2%	0.0%	0.0%	10.2%

Year	Departing Stadium Southbound	Number of Trips	Number of LRV	Average Passenger Loads per LRV
2014	5,423	12	48	113
2013	5,852	12	47	125
% Change	-7.3%	0.0%	2.1%	-9.3%

The Maximum Load Point for the Capital line during the A.M. peak hour are the links between Stadium and Churchill stations for the Capital line Southbound, and the link between McKernan/Belgravia and Health Sciences/Jubilee stations for the Capital line northbound.

The LRV design capacity is 165 passengers.

**2014 vs. 2013 Maximum Load Point Activity
Capital Line Weekday Service**

At Maximum Load Point

Capital Line Southbound - P.M. Peak Hour

Capital Line Northbound - P.M. Peak Hour

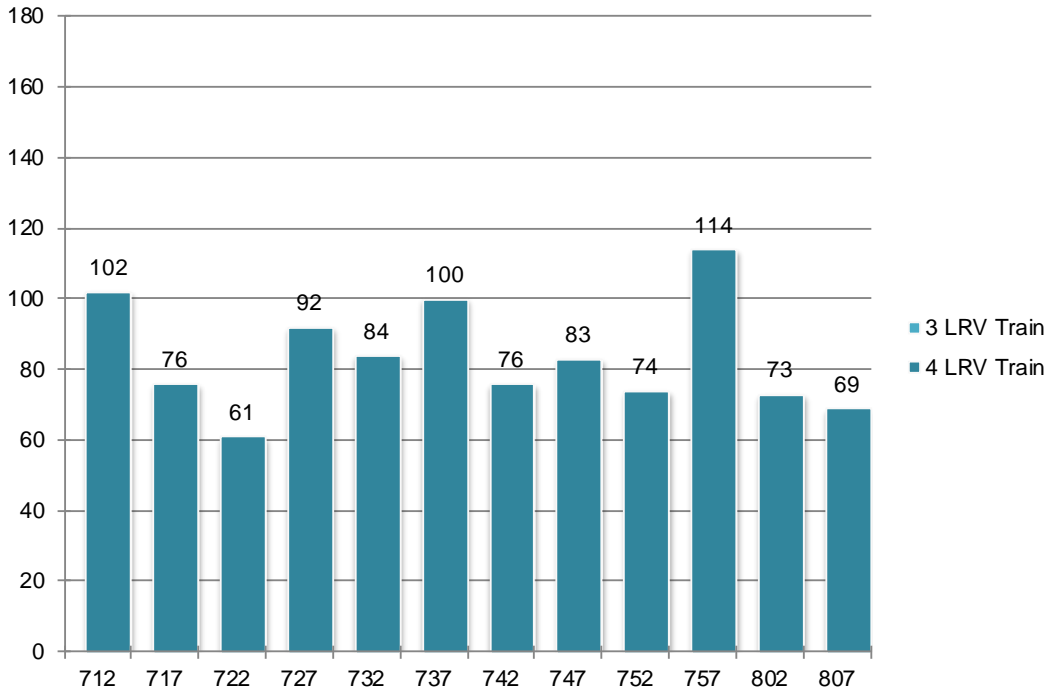
Year	Departing Stadium Southbound	Number of Trips	Number of LRV	Average Passenger Loads per LRV
2014	4,845	12	48	101
2013	5,872	12	48	122
% Change	-17.5%	0.0%	0.0%	-17.5%

Year	Departing Stadium Southbound	Number of Trips	Number of LRV	Average Passenger Loads per LRV
2014	3,575	12	48	74
2013	3,552	12	48	74
% Change	0.6%	0.0%	0.0%	0.6%

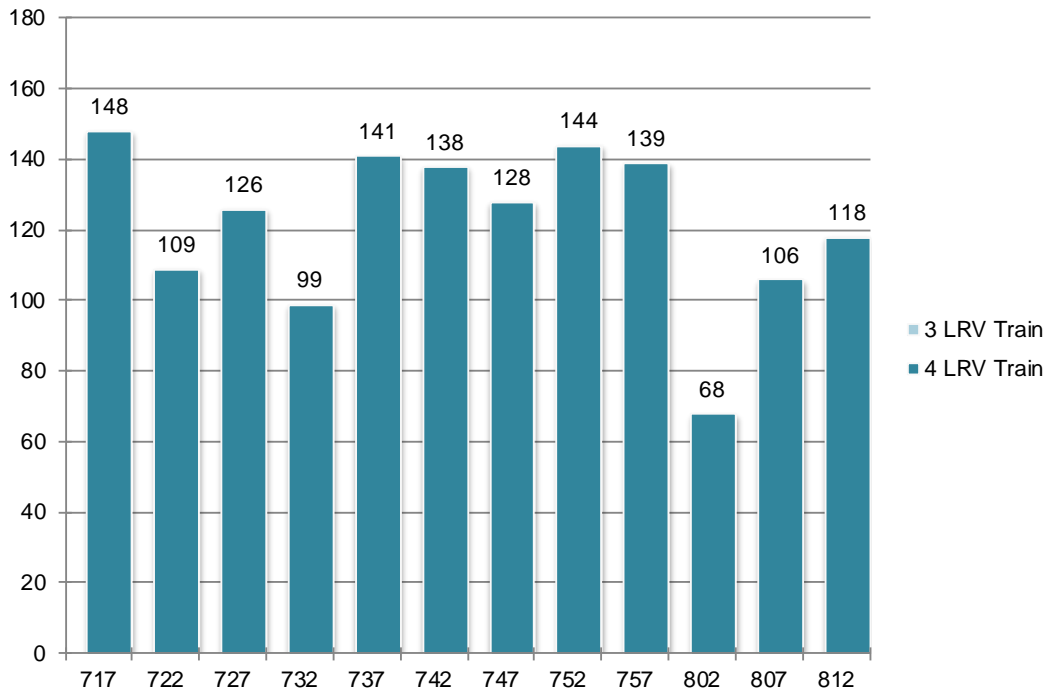
The Maximum Load Point for the Capital line during the A.M. peak hour are the links between Stadium and Churchill stations for the Capital line Southbound, and the link between McKernan/Belgravia and Health Sciences/Jubilee stations for the Capital line northbound.

The LRV design capacity is 165 passengers.

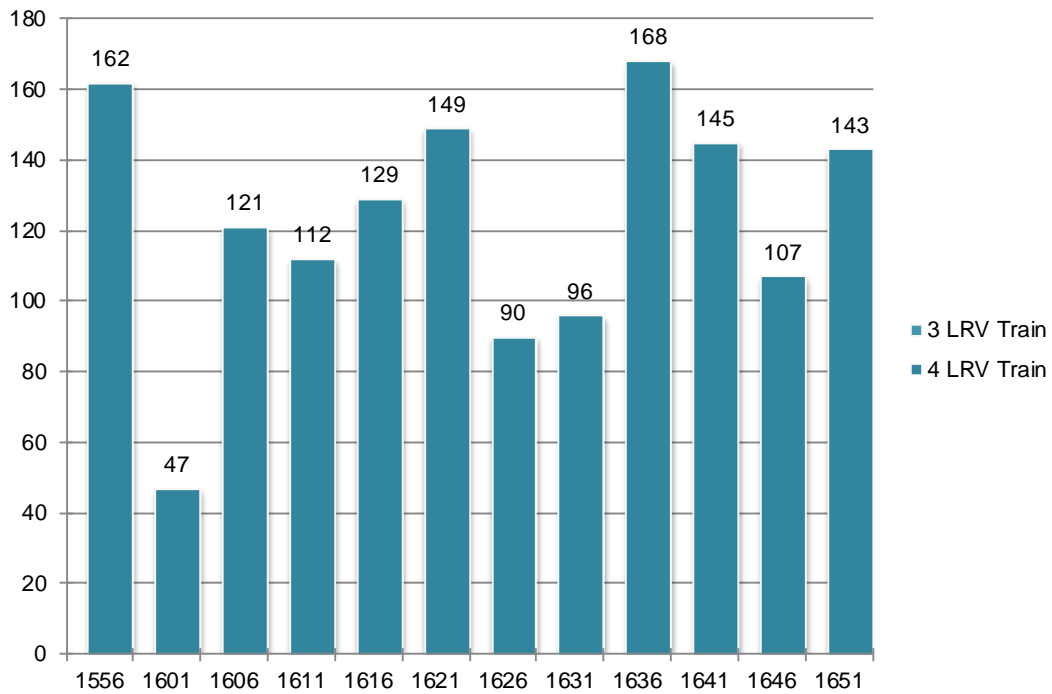
**2014 Average Passengers per LRV at Stadium Station, Departing Southbound
A.M. Peak Hour
Maximum LRV Load = 165**



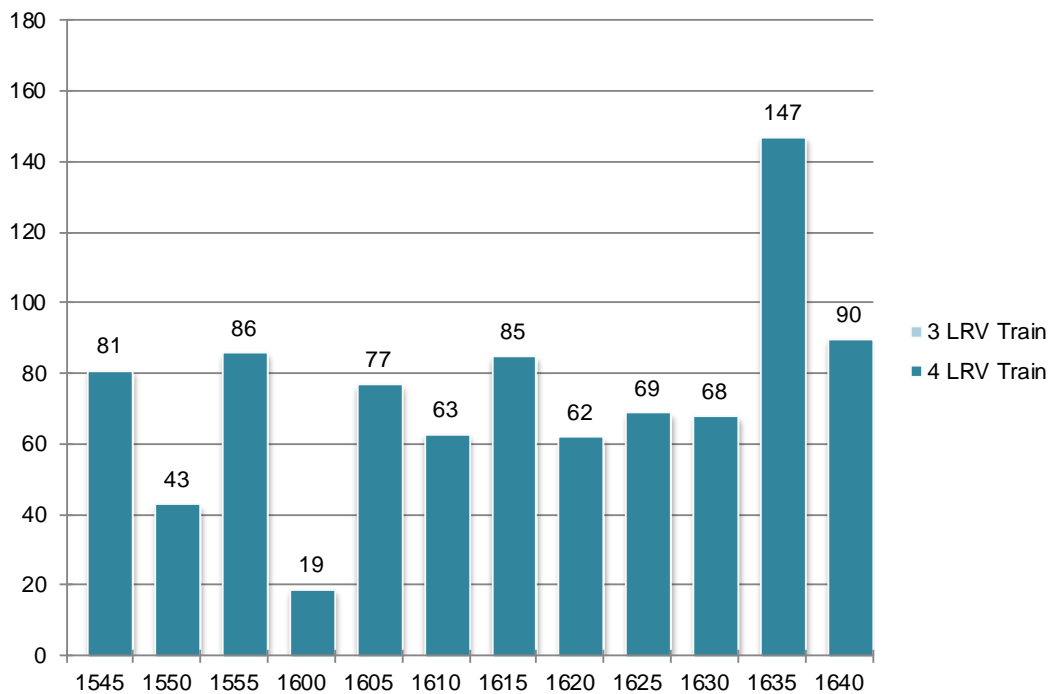
**2014 Average Passengers per LRV at McKernan/Belgravia Station, Departing Northbound
A.M. Peak Hour
Maximum LRV Load = 165**



**2014 Average Passengers per LRV at Health Science/Jubilee Station, Departing Southbound
P.M. Peak Hour
Maximum LRV Load = 165**



**2014 Average Passengers per LRV at Churchill Station, Departing Northbound
P.M. Peak Hour
Maximum LRV Load = 165**



A Note on Ridership and Boardings

Daily ridership figures refer to the total number of boardings on a transit vehicle (bus or LRT). Annual or monthly ridership figures refer to the total number of linked trips.

Boardings:

A boarding is counted each time a passenger boards a bus or LRT vehicle even though the boarding may be the result of a transfer from another route to complete the same one-way journey. For example, if a passenger boards three different buses to get to their destination then their trip will add three boardings to the daily total. (A boarding is also known as an unlinked trip.)

The number of boardings is obtained by counting passengers (manually or with a machine) as they board each transit vehicle.

Linked Trips:

A linked trip is the complete ride from an origin to a destination, no matter how many transfers between buses (or between LRT and buses) it takes to complete the trip. Traveling from home to work would be one linked trip, even if it meant taking a bus to an LRT station and then transferring to the LRT to get Downtown. Returning from work to home would count as a second linked trip. The number of linked trips is obtained through an analysis of the monthly sales of the various fare media (e.g. monthly passes, ticket books, and cash).

Disclaimer

The project team makes an extensive effort to assure the quality of information contained in this report is correct. Transit usage can vary by 10 percent or more from one day to the next or by season to season. Our team tries to minimize the variations by conducting surveys around the same time of the year. Year to Year variation may be due to random events such as weather, accidents or unforeseen events affecting service delivery. It is impossible to achieve complete accuracy and consistency in the reported data.

We recommend looking at trends, since variation that is consistent over a longer period is more likely to be real and not just the result of random events. Consideration and appropriate weighting of other sources is to be encouraged before making decisions.