



2015 LRT STATION ACTIVITY & PASSENGER FLOW SUMMARY REPORT

CAPITAL and METRO LINES

Project Team:

**ETS
Transit Data Management**

**Transportation Planning
Strategic Monitoring and Analysis**

April, 2016

2015 LRT STATION ACTIVITY AND PASSENGER FLOW SUMMARY

The 2015 LRT Station Activity and Passenger Flow Summary Report provides quick statistics on station activity (boarding and alighting) at LRT stations with a focus on the three new Metro Line stations at NAIT, Kingsway/RAH and MacEwan.

Edmonton Transit System (ETS) conducted the 2015 LRT Station Activity and Passenger Flow survey between September 6, 2015 and December 5, 2015. The survey was conducted with the assistance of the Strategic Monitoring and Analysis section of the Transportation Planning Branch. The purpose of the survey is to describe boardings and alightings on the Capital and Metro Lines during a time when service hours are at their highest level and post-secondary institutions and schools are in session. The 2015 LRT Station Activity and Passenger Flow Summary Report represent station activity at LRT stations and the average passenger flow of a typical fall weekday on the Capital and Metro Lines.

ETS started Light Rail Transit (LRT) service in 1978 starting with the Capital Line. The Capital Line now is a 16.1 km line from Clareview station in northeast Edmonton to Century Park station in south Edmonton. The Metro Line opened on Sunday, September 6, 2015 as a 3.3 km extension from Churchill LRT Station in downtown Edmonton northwest to the Northern Alberta Institute of Technology (NAIT). The Metro Line operates from Century Park to NAIT stations, overlapping the Capital Line from Century Park to Churchill station. ETS is operating the Metro Line on a line of sight basis. This means that in the short term, Metro Line trains run every 15 minutes between Century Park Station and NAIT Station, operating with reduced speeds (25 km/h) between MacEwan station and NAIT station. In the longer term - once the new signalling system is fully operational - Metro Line trains will run at roughly 50 km/h every 10 minutes between Health Sciences/Jubilee station and NAIT station, as originally designed.

The Metro Line trains operate between NAIT and Century Park stations on weekdays until 10:00 p.m. and Saturdays until 7:00 p.m. After 10:00 p.m. on weekdays, 7:00 p.m. on Saturdays, and all day Sundays, Metro Line trains operate between NAIT and Health Sciences/Jubilee stations. This routing allows ETS to maximize the number of trains ETS can be run during peak and non-peak hours.

Today, ETS operates the service with 94 light-rail vehicles (LRV) on the Capital and Metro Lines connecting 18 LRT stations, 10 of which are connected to a Transit Centre. The Capital Line provides 134 weekday trips between Clareview and Century Park stations while the Metro Line provides 77 weekday trips between NAIT 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 analysis and reporting.

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

The full 2015 LRT Station Activity and Passenger Flow Report and its supplementary reports provide a more detailed analysis of the LRT station activity and passenger flow. Please view the following reports for additional information:

- LRT Station Activity and Passenger Flow Report
- LRT Detailed Train List
- LRT Passenger Volumes by Time Period
- LRT Passenger Volume by Rolling One Hour and Two Hours Period
- LRT Average Daily Passenger Flow Map
- LRT A.M. Peak Hour Average Daily Passenger Flow Map
- LRT P.M. Peak Hour Average Daily Passenger Flow Map

2015 KEY FINDINGS

Station Activity (Boarding and Alighting)

The LRT Station Activity and Passenger Flow Report describe the station activity at each LRT station. This summary report groups the stations into the following segments:

The North LRT stations (NAIT to MacEwan), the North East LRT stations (Clareview to Stadium), the Downtown LRT stations (Churchill to Grandin/ Govt' Centre) and the South LRT stations (University to Century Park). The North LRT stations are served by the Metro Line. The North East LRT stations are served by the Capital Line. The Downtown LRT stations and the South LRT stations are served by both the Metro Line and the Capital Line.

The addition of three new North LRT stations in 2015 (Metro Line – NAIT, Kingsway/RAH and MacEwan) added **12,761** boardings and alightings to the LRT system.

NORTH LRT STATIONS								
LRT Station	2015 Boarding	2014 Boarding	%Change Boarding	2015 Alighting	2014 Alighting	%Change Alighting	2015 Station Total	%of Total
N.A.I.T.	2,601	n/a	n/a	2,336	n/a	n/a	4,937	2.3%
Kingsway/RAH	1,452	n/a	n/a	1,635	n/a	n/a	3,087	1.4%
MacEwan	2,456	n/a	n/a	2,281	n/a	n/a	4,737	2.2%
Total ---->	6,509			6,252			12,761	5.9%

In 2015, an average of **108,690** weekday passengers boarded the LRT with **6,509** boardings at the North LRT stations, **20,485** boardings at the North East LRT stations, **31,849** boardings at the Downtown LRT stations and **49,847** boardings at the South LRT stations.

The total LRT station activity for the LRT is **217,380** boarding and alighting with the North LRT stations having **5.9%** of station activity, the North East LRT stations having **19.0%** of station activity, the Downtown LRT stations having **29.2%** of station activity, and the South LRT stations having **46.0%** of station activity.

The two most active LRT stations are Century Park LRT station with **26,424** or **12.2%** of the total LRT boardings and alightings, followed by University LRT station with **25,783** or **11.9%**. Churchill LRT station has had a significant increase in station activity. Boardings increased by **25.6%** from 2014 and alightings increased by **32.1%**. This increase in station activity is attributed to Churchill station role as a transfer point between the Metro Line and the Capital Line.

Key Findings

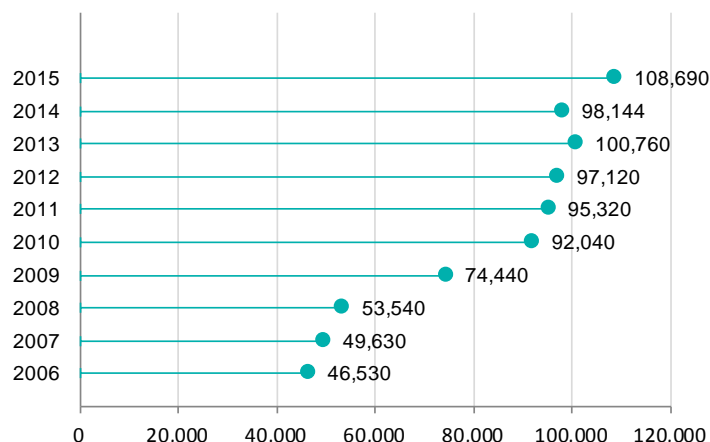
6,509 passengers boarded the LRT at NAIT, Kingsway/RAH and MacEwan LRT stations

The overall LRT boardings increased to an average **108,690** weekday boardings in 2015

This is an increase of **10,546** boardings from 2014 providing an annual growth rate of **10.7%**.

Over the past ten years, LRT boardings have grown by **62,160** passengers, an increase of **133.6%**

10 Years - Average Daily LRT Boardings Weekday Service



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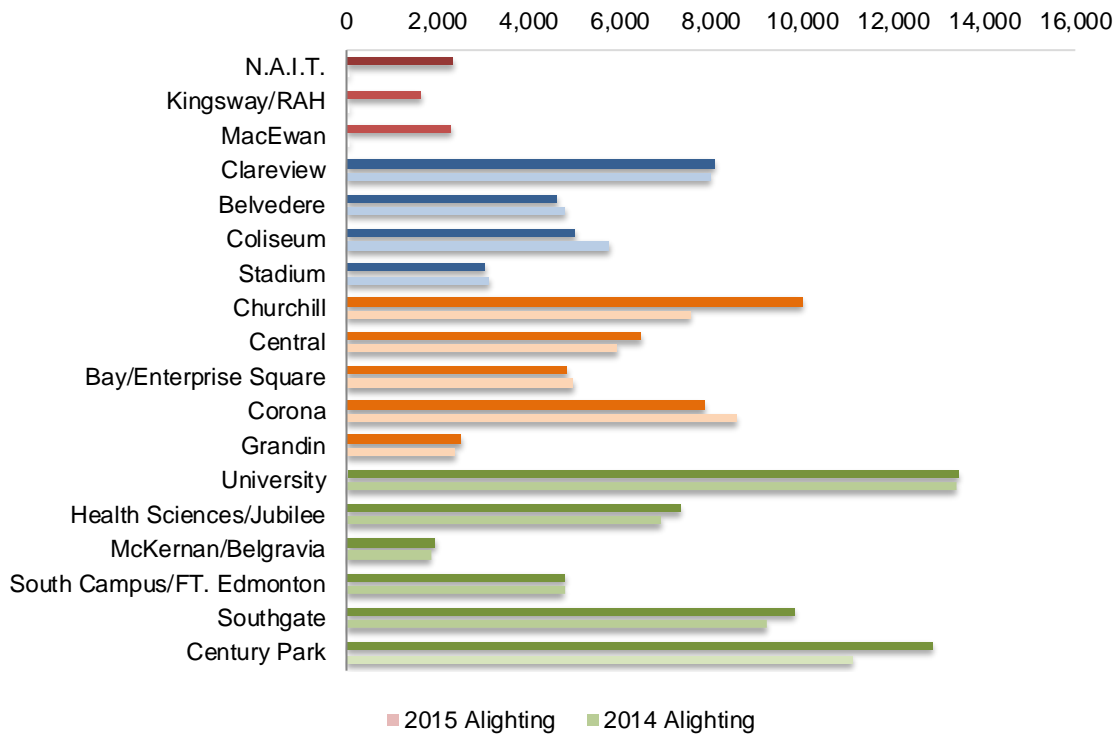
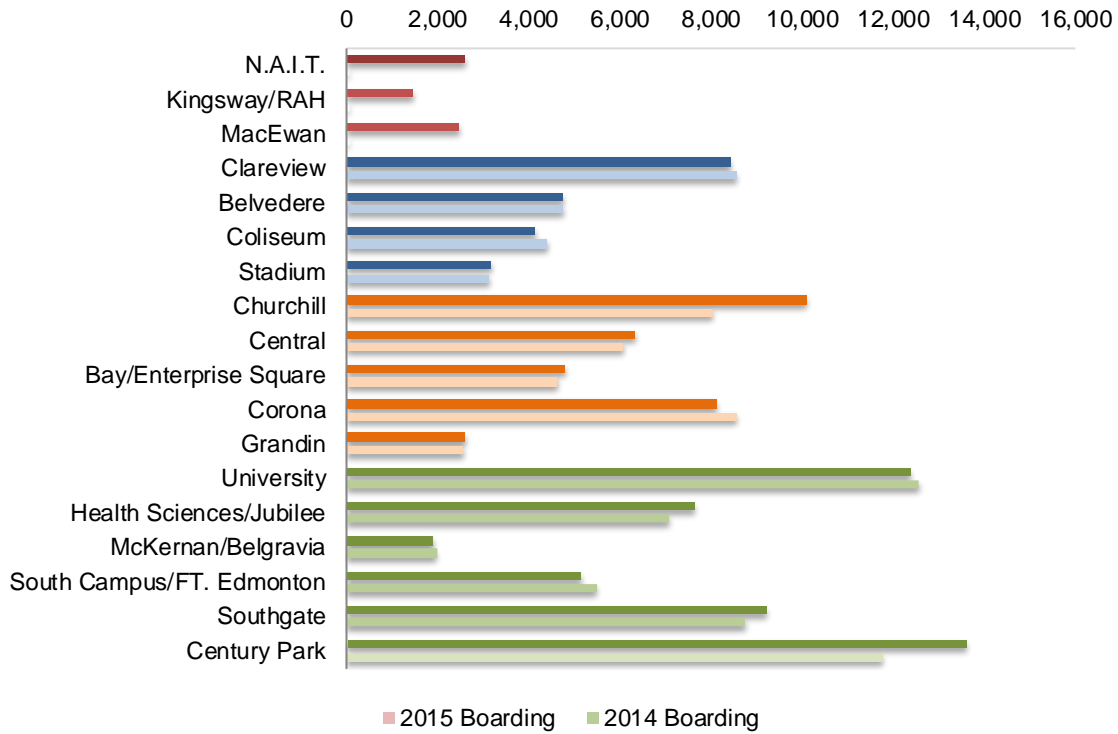
NORTH EAST LRT STATIONS								
LRT Station	2015 Boarding	2014 Boarding	%Change Boarding	2015 Alighting	2014 Alighting	%Change Alighting	2015 Station Total	%of Total
Clareview	8,417	8,572	-1.8%	8,060	7,978	1.0%	16,477	7.6%
Belvedere	4,752	4,726	0.6%	4,618	4,781	-3.4%	9,370	4.3%
Coliseum	4,145	4,398	-5.8%	5,007	5,732	-12.6%	9,152	4.2%
Stadium	3,171	3,110	2.0%	3,042	3,135	-3.0%	6,213	2.9%
Total ---->	20,485	20,806	-1.5%	20,727	21,626	-4.2%	41,212	19.0%

DOWNTOWN LRT STATIONS								
LRT Station	2015 Boarding	2014 Boarding	%Change Boarding	2015 Alighting	2014 Alighting	%Change Alighting	2015 Station Total	%of Total
Churchill	10,087	8,030	25.6%	9,981	7,554	32.1%	20,068	9.2%
Central	6,299	6,070	3.8%	6,430	5,911	8.8%	12,729	5.9%
Bay/Enterprise Square	4,777	4,611	3.6%	4,825	4,975	-3.0%	9,602	4.4%
Corona	8,102	8,551	-5.3%	7,833	8,555	-8.4%	15,935	7.3%
Grandin	2,584	2,532	2.1%	2,527	2,381	6.1%	5,111	2.4%
Total ---->	31,849	29,794	6.9%	31,596	29,376	7.6%	63,445	29.2%

SOUTH LRT STATIONS								
LRT Station	2015 Boarding	2014 Boarding	%Change Boarding	2015 Alighting	2014 Alighting	%Change Alighting	2015 Station Total	%of Total
University	12,358	12,548	-1.5%	13,425	13,354	0.5%	25,783	11.9%
Health Sciences/Jubilee	7,640	7,066	8.1%	7,326	6,888	6.4%	14,966	6.9%
McKernan/Belgravia	1,911	1,958	-2.4%	1,918	1,838	4.4%	3,829	1.8%
South Campus/FT. Edmonton	5,140	5,473	-6.1%	4,792	4,756	0.8%	9,932	4.6%
Southgate	9,225	8,739	5.6%	9,803	9,205	6.5%	19,028	8.8%
Century Park	13,573	11,760	15.4%	12,851	11,101	15.8%	26,424	12.2%
Total ---->	49,847	47,544	4.8%	50,115	47,142	6.3%	99,962	46.0%

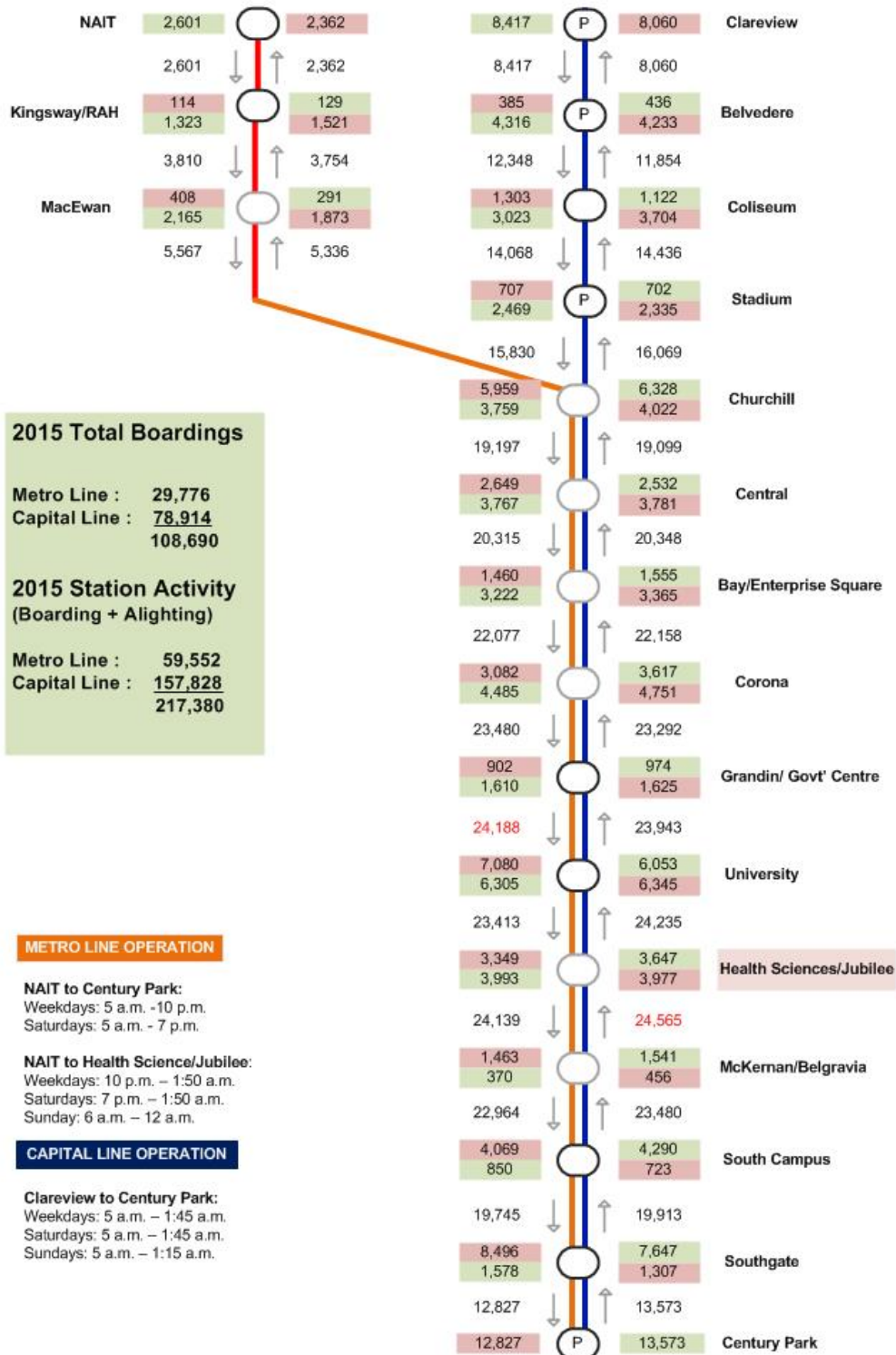
	2015 Boarding	2014 Boarding	%Change Boarding	2015 Alighting	2014 Alighting	%Change Alighting	2015 Station Total	%of Total
NORTH STATIONS ---->	6,509	n/a	0.0%	6,252	n/a	0.0%	12,761	5.9%
NORTH EAST STATIONS ---->	20,485	20,806	-1.5%	20,727	21,626	-4.2%	41,212	19.0%
DOWNTOWN STATIONS ---->	31,849	29,794	6.9%	31,596	29,376	7.6%	63,445	29.2%
SOUTH STATIONS ---->	49,847	47,544	4.8%	50,115	47,142	6.3%	99,962	46.0%
Totals	108,690	98,144	10.2%	108,690	98,144	9.7%	217,380	100%

2015 Station Activity - Boarding and Alighting Weekday Service



METRO AND CAPITAL LINES MAP AVERAGE DAILY PASSENGER FLOW

2015 - Typical Fall Weekday



A Note on Ridership and Boardings

Daily ridership figures refer to the total number of Boarding on a transit vehicle (bus or LRT). Annual or monthly ridership figures refer to the total number of linked trips. This report describes the Boarding and alighting on the LRT.

What is ridership?

Ridership is the total number of linked passenger trips.

- Trips: one-way trips from origin to destination
- Linked Trips: a trip connected by more than one public transit vehicle entry

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, electronic fare boxes and cash).

What are Boardings?

Boardings are the number of passenger entries onto a public transit vehicle.

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.

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

Example of Ridership and Boarding

Jaime is trying to get to class. She leaves home and boards an ETS bus that takes her to an LRT Station/Transit Centre. Jamie transfers onto the LRT to reach her destination.

Ridership:

Jaime's trip counts as 1 for ridership. Her trip is a single linked trip, using one transit system.

Boarding:

Jaime's trip counts as 2 Boarding. One entry onto a vehicle was made on a bus and another on the LRT.

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.