

OTTAWA'S LIGHT RAIL TRANSIT PROJECT

Riding the O-Train to a Greener Future

Ottawa's O-Train network is undergoing a two-phase expansion

Confederation Line Stage 1 (2018): will improve transit efficiency and reliability through downtown core

Stage 2 LRT Project (2021-2023): will extend the network farther east, west and south

Within Ottawa, transportation is responsible for around 40% of all local greenhouse gas emissions. The completion of Ottawa's upcoming light rail transit (LRT) projects will result in the single greatest reduction of emissions in Ottawa's history.

"Ottawa's Light Rail Transit investment will change the way we move around the city creating shorter commutes, cleaner air, and a stronger economy".

- Steve Cripps, Director O-Train Construction, City of Ottawa

70%

Will bring 70% of residents within 5 km of rail by 2023

110,000

Will reduce annual greenhouse gas emissions by over 110,000 tonnes by 2048

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INTRODUCTION

Residents of Ottawa have seen “Ready4Rail” and “pret-pour-letrain” across the city as OC Transpo prepares to launch the new Confederation Line. To date, the Confederation Line is Ottawa’s largest infrastructure project and promises “shorter commutes, cleaner air, and a stronger economy”^[2].

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PROJECT DETAILS

The Ottawa City Council approved the Design, Build, Finance and Maintenance of Ottawa’s Light Rail Transit Project Report in December 2012. This project, referred to as the “Confederation Line”, is currently under construction and scheduled to open in 2018. This \$2.1 billion investment in public transit is being implemented through a 30-year Design-Build-Finance-Maintenance agreement with the Rideau Transit Group. Once built, the Stage 1 Confederation Line will include 12.5 kilometres of rail and 13 stations from Tunney’s Pasture in the west to Blair in the east, including a tunnel through the downtown core.

The second phase of work, called “Stage 2 LRT”, will see the O-Train Confederation Line expand eastward to Trim Road and westward to Moodie Drive and Algonquin College.

Stage 2 LRT will also expand the O-Train Trillium further south to Earl Armstrong and Bowesville, including new stations at Walkley and Gladstone, and a four-kilometre split to the Ottawa Macdonald-Cartier International Airport.

These extensions will launch in staggered openings, with the O-Train Trillium Line South slated to open in 2021, followed by the O-Train Confederation Line East in 2022, and O-Train Confederation Line West in 2023.

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RESULTS

There are many anticipated benefits to this LRT investment. One of the most recognizable results is the reduction in greenhouse gases (GHGs) and critical air contaminants (CACs). These have direct implications for the overall sustainability of urban growth and direct consequences on the health of the city’s residents. It is estimated that the Stage 2 LRT project will result in nearly 50 million litres of savings in fuel consumption, and a reduction of approximately 110,000 tonnes of GHGs and 3,000 tonnes of CACs (including carbon monoxide, nitrous oxides, sulphur oxides and particulate matter) per year by 2048. The economic value of these reductions will total in the order of \$438 million between 2023 and 2048.

Additional benefits include increased passenger capacity and improved reliability. When the Confederation Line enters revenue service in 2018, it will be capable of transporting 10,700 passengers per hour in each direction. Over time, should sufficient demand materialize, this capacity can be increased to 18,000 passengers per hour in each direction. Once Stage 2 LRT is complete, the O-Train network will be capable of transporting 24,000 passengers per peak hour in each direction.

The Confederation Line will be served by environmentally friendly Alstom Citadis Spirit trains able to accommodate up to 600 passengers on two, coupled vehicles, with zero emissions and a regenerative braking system that provides power back to other trains on the Confederation Line. Once Stage 2 LRT is complete in 2023, passengers travelling on the electric powered Confederation Line will be able to travel emission-free from Trim Road in the east to Moodie Drive and Algonquin College in the west.

The Stage 2 LRT project will encourage active transportation through the creation of more than 30 kilometres of multi-use pathways. Pedestrians and cyclists will benefit from these multi-use pathways being fully accessible to each Stage 2 LRT station. The communities adjacent to the stations were studied to identify opportunities to enhance connections, facilitate formal pedestrian and cycling connections to the station, and link to the Citywide Multi Use-Pathway system.

Finally, the Stage 1 Confederation Line is anticipated to create thousands of direct and indirect jobs, with the total economic output estimated at approximately \$3.2 billion. Building on this, the total economic output for Stage 2 LRT is anticipated at approximately \$4.5 billion (2018), creating over 21,000 person-years of employment.

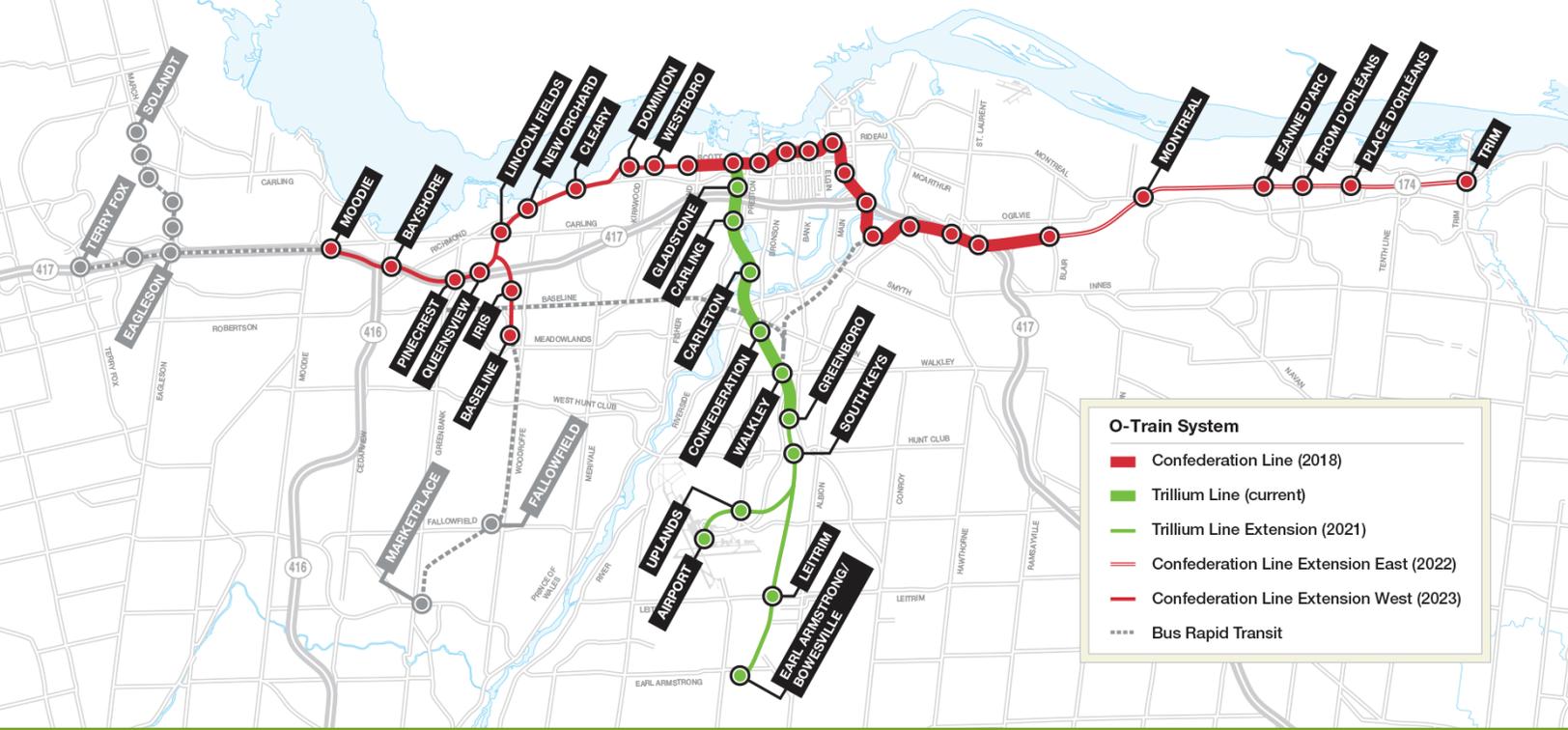


Figure 1: Map showing Phase 1 and 2 of the Confederation Line^[2]

4 CONCLUSIONS & REFLECTIONS

The expanding LRT will change the way we move around Ottawa. When the Stage 2 LRT Project is complete in 2023, Ottawa's O-Train network will span more than 60 kilometres with 40 stations, bringing 70% of Ottawa's residents within five kilometres of rail. This means shorter commutes, cleaner air, and a stronger economy. With Ottawa projected to grow to 1.14 million people by 2031, these investments in our public transit system will help ensure our nation's capital continues to be one of the best places in the world to live and work.

60km
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REFERENCES

- [1] <http://ottawacitizen.com/news/local-news/waiting-on-a-train-how-ottawas-confederation-lrt-line-is-taking-shape-around-us>
- [2] <http://www.stage2lrt.ca/>