

Subject: Stage 2 Light Rail Transit Project

File Number: ACS2025-TSD-RCP-0001

Report to Transit Committee on 17 March 2025

**Submitted on March 6, 2025 by Renée Amilcar, General Manager, Transit Services
Department**

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Ward: Citywide

Objet : Phase 2 du projet de train léger sur rail

Numéro de dossier : ACS2025-TSD-RCP-0001

Rapport présenté au Comité du transport en commun

Rapport soumis le 17 mars 2025

**Soumis le 6 mars 2025 par Renée Amilcar, Directrice générale, Services de
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Quartier : À l'échelle de la ville

REPORT RECOMMENDATION(S)

That the Transit Committee receive this report for information.

RECOMMANDATION(S) DU RAPPORT

Que le Comité du transport en commun prenne connaissance du présent rapport à titre d'information.

BACKGROUND

On March 6, 2019, Council approved the Contract Award of Ottawa's Stage 2 Light Rail Transit Projects and Related Matters report ([ACS2019-TSD-OTP-0001](#)).

TransitNEXT (TNEXT) was awarded the contract to design, build, finance, and maintain the Trillium Line extension, including the Airport Link. The Trillium Line operates from Bayview Station to Limebank Station (Line 2) and includes the Airport Link (Line 4).

East/West Connectors (EWC) was awarded the contract to design, build, and finance the Confederation Line extensions. The project will extend Line 1 from Blair Station to Trim Station in the east and from Tunney's Pasture Station to Moodie Station (Line 1), and to Algonquin Station (Line 3) in the west.

As part of the 2022-2026 Council Governance Review report, Council approved the following Motion 2022 - 03/06, moved by Councillor Desroches and seconded by Mayor Sutcliffe:

THEREFORE BE IT RESOLVED that City Council establish a Light Rail Sub-Committee of Council to provide oversight over non-operational matters related to the Confederation Line 1 and the construction of Confederation Stage 2 and Trillium Lines.

Based on this motion, Transit Services provided a regular Stage 2 Light Rail Transit Project presentation to Light Rail Sub-Committee (LRSC).

On January 29, 2025, Council approved the 2022-2026 Mid-term Governance Review report ([ACS2025-OCC-GEN-0001](#)), which included the following recommendation:

- The following Council committee structure for the remainder of the 2022-2026 Term of Council, effective immediately and including that the Light Rail Sub-Committee be dissolved, and the Transit Commission be renamed as the Transit Committee.

As a result, updates to the Stage 2 Light Rail Transit Project, which had previously been provided to LRSC, will now be provided to the Transit Committee.

DISCUSSION

This report, and the presentation prepared for the Transit Committee meeting on March 17, 2025, provides a construction update on the O-Train Confederation East and West Extensions, as well as a status update on Line 2 and Line 4.

1. O-Train Line 2 and Line 4

O-Train Line 2 and Line 4 launched with five-day service on January 6, 2025, and expanded to six-day service on January 25, 2025. A memo to Council will be provided prior to the start of seven-day service.

As Line 2 and Line 4 are now operational, all updates related to that service will be rolled into OC Transpo's regular operational Key Performance Indicators (KPIs) provided to Transit Committee and Council. These KPIs will include ridership and vehicle availability.

Transit Services continues to work with TNEXT to close out all remaining work. It should be noted that the outstanding work does not affect any safety-critical systems or normal rail operations and includes work on the final landscaping and other minor outstanding deficiencies.

2. Confederation Line East Extension Construction

In the east, final construction activities and train testing are well underway and nearing completion. Remaining major fleet activities include software upgrades and operator training.

Communication rooms and device configurations continue at all stations in the east, and communication systems testing is expected to be completed in Q1 2025.

Technical Standards and Safety Authority (TSSA) certifications for elevators and escalators are also progressing well and eight of 22 certifications have been obtained.

All Traction Power Sub Stations (TPSS) and station permanent power in the east have been energized.

The communication-based train control system (CBTC) commissioning is well advanced with multiple trains continuing to run in loops. Boundary testing between Stage 1 and Stage 2 territories has been completed.

Correction of trackwork deficiencies is progressing well, and finishing work at Montréal, Jeanne d'Arc, Convent Glen, Place d'Orléans, and Trim stations is expected to be completed by the end of Q1 2025.

The works outside the guideway will be completed in two phases. First, and currently underway, work on grading, drainage, headwall installation, slope finishing, top-lift paving, guardrail installation and landscaping along OR-174 required for Substantial Completion is expected to be completed by Q2 2025. Additional work on the slope finishing, top-lift paving, guardrail installation and landscaping will be required to finish the OR-174 following Substantial Completion, which is considered part of "Remaining Works".

Line 1 East Stations

Station occupancy for the east stations is nearly complete with deficiency closeout, building code service reviews, and occupancy permits expected in Q2 2025.

Path to Revenue Service

The path to revenue service for the east extension includes Substantial Completion, Trial Running and Final Safety Approval.

Substantial Completion will validate that the system infrastructure designed and built by EWC meets the requirements of the Project Agreement.

Trial Running follows Substantial Completion and will demonstrate that Transit Services and the maintainer, Rideau Transit Maintenance (RTM), can achieve the performance requirements for passenger service.

Final Safety Approval is the final step before Revenue Service and will include a statement from the Independent Safety Auditor that the system is safe for passenger service.

Throughout this process, City staff will continue to apply the knowledge gained from previous work, lessons learned, and current operations on Line 1, in addition to recommendations from the OLRT Public Inquiry.

The City, EWC and RTM continue to work together to ensure a robust framework is in place to achieve a successful launch. Details on this process, including the Trial Running plan, will be provided at a technical briefing as the east extension advances further towards Substantial Completion.

3. Confederation Line West Extension Construction

In the west, construction of stations, guideway, track, off-guideway utilities, and roadway works continue in all areas. A series of traffic detours continue to be necessary to enable

various construction activities. Cut and cover tunnel construction was completed in 2024 with works now ongoing for guideway infrastructure inside the tunnel. This includes installation of track, dry fire lines, and other tunnel fit-outs that will be required to run the system.

Line 3 Stations

Structural work is nearing completion at all stations. Westboro Station is expected to be structurally complete by mid-2025, and work has been progressing well with concourse pre-cast panel and structural steel installation ongoing.

Interior finishes, including testing and commissioning of mechanical and electrical components at stations, continue as they near closer to completion. These stations include Moodie, Pinecrest and Queensview.

Construction of the platforms and work on the elevators continues at Bayshore Station, and work on the permanent bus loop is expected this year.

Line 1 West Stations

Work on Line 1 west stations is progressing well. Interior finishes, including testing and commissioning of mechanical and electrical components at stations, continue as work nears completion. These stations include Lincoln Fields, Iris and Algonquin.

Construction of the pedestrian bridge at Algonquin Station is ongoing.

Light Maintenance Storage Facility (LMSF)

At the LMSF, curb and fence installation was completed and the first lift of asphalt placed. Remaining flatworks will be completed in spring 2025.

Crews have completed work on the overhead catenary system (OCS) at the Light Rail Maintenance Facility (LMSF) which is at the western limit of the project. Work for the OCS is starting to progress east from Moodie Station towards Bayshore Station. Electrification of the yard and start of testing is expected at the end of Q1 2025.

In addition to the delivery of the first train to the LMSF in fall 2024, two additional trains were delivered by truck before the end of 2024 and have been reassembled. This allows for testing to begin, including clearance tests, pantograph and OCS tests. It will be followed by CBTC testing starting at the LMSF and gradually progressing eastward over the next several months. Testing and commissioning of maintenance equipment at the LMSF has been completed.

Currently, 17 of the 38 vehicles for the Stage 2 fleet have been delivered and accepted by the City. Fifteen additional vehicles are at various stages of testing and acceptance, and the remaining six are awaiting production.

FINANCIAL IMPLICATIONS

1. Stage 1 and Stage 2 Contingency Funds

The Stage 1 Confederation Line contingency fund is \$115 million. To date, \$102 million from the total fund has been spent. Remaining funds are primarily related to property requirements and remaining commercial matters.

The original Stage 2 contingency fund of approximately \$152 million was increased by \$25 million (approved by Council on July 06, 2022) and an additional \$110 million (approved by Council on November 22, 2023) due to unforeseen costs and improvements to the project. Approximately \$238 million of the \$287.6 million Stage 2 contingency fund has been committed to date. As per the last funding report, a residual budget pressure is forecasted for City and other costs; however, that pressure will be addressed at a future date.

2. Stage 1 and Stage 2 Capital Budgets

In keeping with Council’s approved 2017 Stage 2 Report ([ACS2017-TSD-OTP-0001](#)), 2019 Stage 2 Report ([ACS2019-TSD-OTP-0001](#)), 2022 Stage 2 Report ([ACS2022-FSD-FIN-0009](#)) and 2023 Stage 2 Report ([ACS2023-TSD-RCP-0017](#)), approximately \$4.264 billion has been spent as of January 31, 2025, and relates to the RTG MOU for Belfast Yard and vehicle assembly mobilization (\$454 million), Confederation Line extension mobilization and construction period payments (\$2.315 billion), Trillium Line extension capital costs including financial close for the Revenue Vehicle Supply Contract (\$834 million), and contingency (\$171 million). The remaining \$490 million was spent on planning, procurement, project delivery and City retained scope.

January 31, 2025				
Project Description	Authority	Actual Expenditures	Funds Reserved/Committed	Unspent/Uncommitted
Stage 1				
Confederation Line Program	2,130,000,000	2,130,000,000	-	-
Contingency	115,000,000	102,030,319	12,969,681	-
Total Stage 1	2,245,000,000	2,232,030,319	12,969,681	-
Stage 2				

Confederation Line Extensions				
DBF Contract	2,680,832,113	2,315,059,861	365,772,252	-
Trillium Line Extension DBFM				
Contract	850,966,493	695,127,498	17,317,004	-
Deferred Equity (Maintenance Term)	-	138,521,990	-	-
RTG Stage 2 MOU (includes 38				
Alstom vehicles)	516,184,423	453,580,267	62,604,157	-
City Costs (includes planning, procurement, property acquisitions, City retained scope, and delivery oversight)	574,629,108	490,207,612	28,834,509	55,586,987
Contingency	287,640,000	171,253,629	78,634,555	37,751,816
Total Stage 2	4,910,252,137	4,263,750,857	553,162,477	93,338,803

Delays could have implications on the project's budget. Staff will report to Committee and Council on any adjustments to the contingency budget, as required.

LEGAL IMPLICATIONS

There are no legal impediments to receiving this report for information.

ACCESSIBILITY IMPACTS

All components of the Stage 2 LRT project adhere to the *Accessibility for Ontarians with Disabilities Act* (AODA). Any policy or procedural development, as well as customer communications and public engagement identified in the report's recommendations will include the application of the City's Equity and Inclusion Lens. Staff will continue to engage persons with disabilities and accessibility stakeholders to ensure that their perspectives are considered and incorporated, and to promote inclusion. Staff will also ensure that any applicable accessibility legislation, standards and guidelines are adhered to during the execution of the projects and initiatives identified in this report.

ASSET MANAGEMENT IMPLICATIONS

The City of Ottawa's Comprehensive Asset Management program uses widely accepted asset management practices and long-range financial planning, in compliance with provincial asset management regulations, to manage the City's infrastructure portfolio worth over \$70 billion to provide for the safe delivery of reliable and affordable services to the community. Asset management is an internationally recognized and implemented practice that supports informed, transparent decision making, giving Council a framework to provide direction on the appropriate balance of service delivery, cost, and risk, through a process of optimizing the lifecycle management of the City's assets which support the services it delivers.

The implementation of the Comprehensive Asset Management program enables the City

to effectively manage existing and new infrastructure to maximize benefits, reduce risk, and provide safe and reliable levels of service to community users. The report identifies potential improvements to the Business Case and Project Management Policy and Project Management Framework. These are guiding documents to the Comprehensive Asset Management program, and as such, any changes to these core documents will be reviewed and reflected in the program.

RURAL IMPLICATIONS

The City's transportation network, including light rail transit, is designed to provide options for all residents. Once completed, Stage 2 LRT will span from Trim Road to Moodie Drive and south all the way to Riverside South. Rural residents will have access to Park and Ride lots at various stations which will allow them to easily use public transit.

TERM OF COUNCIL PRIORITIES

The 2023-2026 Term of Council Priorities include:

- A city that is more connected with reliable, safe and accessible mobility options.
- A city that it is green and resilient.

DISPOSITION

Transit Services will provide ongoing information to Transit Committee and Council as Substantial Completion of O-Train Line 1 East is finalized.

Construction updates for O-Train Line 1 and Line 3 will continue to be provided to Transit Committee.