



MEMO / NOTE DE SERVICE

To / Destinataire Mayor and Members of Council

File/N° de fichier:

From / Expéditeur Director,
O-Train Construction
Transportation Services Department

Subject / Objet O-Train Confederation Line Quarterly Update (Q1 – 2017) Date: May 11, 2017

As part of the ongoing commitment to keep Council apprised of the progress of the O-Train Confederation Line project, this memo outlines the milestones achieved in Q1 and provides an overview of the planned work for Q2 2017. In addition, it provides information that addresses the most common questions received by staff from Members of Council.

Completed:

- Tunnel excavation (last section west of Rideau station) completed;
- Ramp excavation at west portal completed;
- Parliament Station East Tunnel Vent Shaft (TVS) excavation completed and shaft waterproofed;
- Parliament East entrance exterior excavation completed;
- Tremblay Station building steel and roofing completed and permanent station power energized;
- Completion of all civil and structural work at Blair, Cyrville and St. Laurent Stations;
- Nine vehicles have been fully assembled and are in various stages of testing;
- Climatic chamber testing of Light Rail Vehicle 3 (LRV3) has been completed;
- 6,978 metres of Overhead Catenary System wire has been installed along the guideway;
- 142 Overhead Catenary System poles (of 323) have been installed along the guideway;
- Seven Traction Power Sub Stations (TPSS) have been installed;
- 6.5 km of track has been installed at Belfast Yard and 11 km of track has been installed along the guideway; and,
- Fire resistance testing of the vehicle under-frame and roof.

New/Ongoing:

- Tunney's Pasture Station foundation and servicing work nearing completion;
- Guideway/track work continues between Tunney's Pasture Station and the west portal;
- Bayview Station: The elevated guideway structure is nearing completion and concrete work for ancillary building is ongoing;
- Pimisi Station: Erection of steel work is ongoing;
- Excavation of east portal ramp continues and wall construction continues at both the east and west portals;

- Work continues at Lyon Station vent and HVAC shafts;
- Lyon Station concrete lining nearing completion;
- Lyon Station east entrance construction continues within Place de Ville;
- Lyon Station west entrance is ongoing;
- Work continues on the west entrance of Parliament Station at Sun Life and the east entrance at 155 Queen Street;
- Tunnel final lining continues between Parliament and Rideau Stations;
- Parliament and Rideau Stations concrete lining nearing completion;
- Rideau Station west entrance excavation ongoing;
- Concrete lining nearing completion at Rideau Station HVAC shaft;
- uOttawa Station mechanical and electrical work continues;
- Traction Power Sub Station 4 (TPSS4) delivery and installation near Mann Avenue;
- Reconstruction of the Mann Avenue Bridge is nearing completion;
- Canopy Steel work continues at Hurdman and commenced at Lees, uOttawa, Pimisi, and Bayview;
- Overhead Catenary System (OCS) installation and electrification work continues between Blair and Hurdman Stations;
- Architectural finishing, building systems and vertical circulation installations continue at Blair, Cyrville, St-Laurent and Tremblay Stations;
- High speed vehicle testing from Blair to Cyrville;
- Testing continues on the various components of the vehicle and systems; and,
- Assembly of LR vehicles continues at Belfast Yard with an additional four vehicles in an advanced state of assembly.

Budget

March 31, 2017				
Project Description	Authority	Actual Expenditures	Contractual Obligations/Contingency Draws	Unspent/Uncommitted Balance
Confederation Line	2,130,000,000	1,387,270,689	720,413,702	22,315,609
Confederation Line Contingency	100,000,000	32,041,003	57,233,401	10,725,596
LRT 417 Widening	226,000,000	222,598,738	267,184	3,134,078

To date, of the \$100M contingency fund, the Contingency Management Committee (CMC) has reserved \$89M for contract variations and possible future changes, primarily related to property requirements and transit priorities. This leaves a balance of \$11M to cover other unforeseen costs.

Revenue Service Availability/Revenue Service Start Date:

There have been a number of questions brought forward with respect to whether or not construction timelines for the O-Train Confederation Line will be delayed due to the infrastructure failure ("the sinkhole") event last June, and the term 'Revenue Service' is being

used to describe the completion of construction as well as the start of passenger service on the train. The two are not the same, but they are related.

Revenue Service Availability is a contractual date identified in the Project Agreement between the City and Rideau Transit Group (RTG), identifying the date the City officially takes ownership of the newly constructed O-Train Confederation Line system. The Project Agreement has established the ownership transfer date to be May 24, 2018 (just over a year from now).

Construction for the O-Train Confederation Line is ongoing at multiple locations. On any given day, some parts of the project are ahead of schedule, some are on time and some are behind. Following the sinkhole on Rideau Street, RTG developed a modified schedule that adjusted the construction program, and provided additional resources and strategies to mitigate the impact of the sinkhole on the overall schedule. RTG, based on the redefined workplan, has told the City that they will meet the May 24, 2018 date for Revenue Service Availability (the transfer of ownership) as outlined in the contract. This schedule will be continuously monitored, and the City will be advised of any deviations or concerns about the contractual date. Should RTG provide any indication or notification to the City that the transfer of ownership date will not be met, staff will inform Council. If RTG does not meet this date, the structure of the Project Agreement serves to impose significant financial consequences on RTG, most notably the deferred payment of the Revenue Service Availability Payment of approximately \$202M and reduction of the fixed 30-year maintenance period and corresponding loss of the associated Monthly Service Payments, as outlined in the Project Agreement.

The Revenue Service Availability Date, which is the transfer of ownership, is separate and distinct from the actual beginning of revenue service for passengers. The City does not expect to receive the trains one day and fill them with passengers the next. The transition from the current public transit network (which is mainly bus, augmented by the O-Train Trillium Line) to the multi-modal transit system, which will be the busiest Light Rail Transit (LRT) in North America on day one of service, requires meticulous planning and extensive verification of preparedness. These complex plans are being developed and will be in place in advance of the launch of the O-Train Confederation Line, including the Ready for Rail campaign that was launched at the April 19 Transit Commission meeting. The objective of the Ready for Rail campaign is to implement a comprehensive communication, marketing, information and education campaign, by building on the key findings of the 2018 Multi-Modal Customer Journey project. The campaign will create awareness and equip customers with the information they need to seamlessly transition to their new journey and create excitement for the launch of the O-Train Confederation Line.

Staff is aware of the importance of establishing the date for passenger revenue service as soon as possible. At the same time, staff want the public to be able to count on the date and to know what to expect in the first few weeks of passenger service as they transition with us from primarily bus-only service to reliable and efficient bus and rail service. Staff anticipates being able to advise Council by the end of 2017 on the status of the anticipated first day of revenue service.

Comprehensive component and system testing is integrated into the contract for the Confederation Line. This testing, overseen by the City and verified by an independent certifier, has already begun and will be on-going until the transfer of ownership. Before revenue service

for passengers begins, there will need to be specific, comprehensive testing of all operational systems safety protocols and connection points to the feeder bus system. Rigorous testing and safety inspections of all operational elements and the customer experience will be part of the commissioning process. Passenger service will only begin when all systems testing and commissioning protocols have been completed to the City's satisfaction, industry requirements and safety regimes.

The comprehensive testing and commissioning process includes the following elements:

- Vehicle static and dynamic testing;
- Traction Power Supply and Distribution;
- Trackwork, including switch heaters;
- Communication systems including: SCADA (Control Systems; CCTV cameras; public address and passenger information; emergency, information and fire telephones; intrusion control; and guideway intrusion detection;
- Train Control systems including signals, track switches and computer based train control;
- Tunnel ventilations systems;
- Radio systems;
- Transit Operations Control Centre;
- Light Rail Stations including elevators, escalators and fire alarms; and,
- Fare collection systems.

Additionally, the City and RTG are tracking the progress towards Revenue Service Availability using a robust decision making plan called the Rail Activation Management Program (RAMP). This comprehensive program was developed using best industry practice with input from rail experts and details the key elements and deliverables that have to be achieved in order to commence operations. In addition, a comprehensive decision making matrix was developed in cooperation with RTG that outlines the key elements and conditions that must be met in addition to the Project Agreement requirements in order to move into revenue service. RAMP and the matrix was recently reviewed and endorsed by the Auditor General as part of the 2016 Audit of Light Rail Transit Planning and Change Management.

Worker Safety at Rideau Transit Group Construction Sites and Other Safety-related Issues:

The Rideau Transit Group (RTG) is aware that protecting worker and public safety is a top priority for the City of Ottawa, as it is for them. For the O-Train Confederation Line construction and related works, RTG and OLRT-Constructors (OLRT-C) are required to meet provincial labour laws and to ensure the safety and security of all their employees. In accordance with the Occupational Health and Safety Act, conditions at all sites are monitored on an ongoing basis by OLRT-C or their subcontractor's site supervisors and safety teams. Employees are encouraged to bring any concerns they may have to the Joint Health and Safety Committee, comprised of representatives from OLRT-C's management and workers.

RTG has advised that, to date, over 5 million hours of labour have been invested in the project, which has had an accident rate slightly over 0.3, approximately two-thirds less than the industry average of 1.0 for heavy civil construction in Ontario. RTG and OLRT-C have confirmed that

they work collaboratively with the Ministry of Labour (MOL) to continually improve safety at their construction sites and further reduce or eliminate the risk of injury.

The City of Ottawa does not formerly receive and is not a direct party to any order issued by the MOL. The City does expect and receives high-level updates on all safety-related issues. RTG has advised that, with respect to MOL inspections and subsequent orders, all of the approximately 150 recent MOL orders, ranging from site housekeeping to washroom facilities to improved lighting, have been addressed by RTG. Final resolution of these orders will be completed upon verification by the MOL.

With respect to the recent crane incident and the gas leak, the City has been advised that these are being actively addressed. The MOL attended the site of the crane incident at the east portal on April 26, and RTG was ordered to stop work at this location until the structural integrity of the retaining walls could be confirmed. This was accomplished on April 28. RTG's constructor and their subcontractor are undertaking a thorough review of the incident and the equipment involved. The gas main break on Queen Street on May 2 is currently under investigation by the Technical Standards & Safety Authority (TSSA) and the MOL. The MOL has met with the constructor, released the site, and is now continuing their investigation with subcontractors.

The City is also ensuring that the Chief Executive Officer of RTG, the General Manager of the City's Transportation Services Department and the Director of O-Train Construction are meeting monthly with the Ottawa and District Labour Council to address any ongoing or emerging safety concerns.

In addition, beginning the week of April 18, RTG's constructor OLRT-C has been conducting a series of exercises with Paramedics and Fire Services in the area of the east and west portals, designed to ensure coordinated and effective emergency response in the tunnel. These exercises will help ensure emergency responders are familiar with and oriented to the various sites in the tunnel and its access points. These exercises are part of a transition from a tunnel excavation to a construction operation and ultimately a passenger service, whereby emergency rescues will become the responsibility of Ottawa's emergency services personnel.

Confederation Line Tours During the Final Year of Construction:

As we enter the final year of construction on the O-Train Confederation Line, critical work elements must be scheduled on specific timelines. Because tours of the O-train Confederation Line for interested parties requires halting construction in order to ensure a safe environment for visitors, tours will be restricted to only those required to fulfill obligations to the federal and provincial funding partners in order to maintain the current production schedule. The recently announced Ready for Rail campaign will provide other opportunities for Council to showcase the system. Staff will continue to support Councillors' requests for information and pictures to be shared with constituents. Staff will provide Council with notice with respect to when tours might be arranged again, closer to the date of ownership transfer.

2017 Readiness:

The Project Agreement for the Confederation Line project includes clauses regarding 2017 readiness. The intent of these requirements was to ensure city streets between the east and west portals were restored to pre-construction configuration before the 2017 Canada Day celebrations.

These Project Agreement requirements were re-examined following the June 2016 sinkhole. RTG, in cooperation with the City, has implemented more crews, more equipment and more work shifts in order to remain on schedule. However, some surface work will continue beyond July 2017.

Work on Queen Street streetscaping has resumed between Bank and O'Connor Streets, and will continue through the summer. This work, to improve pedestrian, cycling and vehicle infrastructure, requires some street closures and detours.

The section of Queen Street between Bank Street and O'Connor Street is closed to motorists and cyclists until mid-June to allow for sidewalk and roadway improvements that will help the Queen Street corridor better integrate with the O-Train Confederation Line Light Rail Transit Project.

Local traffic is still being maintained through this period to allow access to parking garages, and pedestrian access is maintained on the north side of Queen Street.

Signed detours are in place for motorists and cyclists during the closure.

RTG will cease construction activities on Rideau Street on Canada Day that could affect public mobility and enjoyment of the festivities. Enhanced hoarding and street cleaning on both Rideau Street and Queen Street will provide for a welcoming environment during Canada Day celebrations.

KONTINUUM at Lyon Station:

The City and RTG are on track to hand over Lyon Station to the Ottawa 2017 Bureau for Kontinuum. The Ottawa 2017 Bureau is responsible for the installation of the show once the station is handed over to them. In the coming weeks, the Bureau will be providing the details on their event and the opening date.

Communications

As has been noted, the O-Train Confederation Line construction project is a multi-year project, with numerous construction sites across the city, resulting in both localized and citywide impacts. As part of the Project Agreement, the City is the lead for the management and sharing of public information.

The City has divided communications efforts into two streams:

- Stakeholder Relations: focuses on local residents, businesses and other stakeholders directly affected by the construction; and,
- Citywide Communications: ensures that communications on the overall project, as well as traffic and mobility impacts, are shared with the public in a timely and consistent

manner. This information is integrated with traffic and mobility impacts resulting from other construction projects as well as planned and unplanned events.

The Stakeholder Relations group continues to meet with Councillors, stakeholders and community representatives affected by the O-Train Confederation Line project to provide information about upcoming work, mitigate risk and coordinate activities, as required. Examples of these outreach efforts include:

- Weekly construction project updates sent to subscriber list and posted on Ottawa.ca/confederationline;
- Regular, monthly meetings and presentations to key stakeholders, including the Canadian Broadcasting Corporation (CBC), uOttawa, VIA Rail and Public Services Procurement Canada (PSPC);
- Sharing information through meetings and communication documents with property owners regarding tunnel excavation under Queen Street, Rideau Street and Waller Street alignments;
- Regular design and construction meetings with all integrated station partners;
- Sharing information through meetings and communication documents with local residents and businesses regarding Belfast Yard and connector work;
- Sharing information through presentations, meetings and communication documents with local residents and businesses regarding the construction at Blair, Cyrville, St-Laurent, Tremblay, Hurdman, Lees, uOttawa, Rideau, Parliament, Lyon, Pimisi, Bayview and Tunney's Pasture Stations;
- Sharing information through regular monthly Councillor led community meetings, weekly updates and communications documents with Scott Street residents;
- Information booths at various City events including Councillor Open Houses and senior tea luncheons hosted by various members of Council; and,
- Project presentations to multiple internal and external organizations and departments (including industry associations, community associations, business groups, international delegations and business improvement areas).

With respect to citywide communications, the City has increased communications efforts around all construction-related projects to provide timely, accurate and reliable information to help the public plan how to move around the city. The public is also kept informed and engaged on construction milestones. Examples of citywide communications efforts include:

- Regular Public Service Announcements related to the O-Train Confederation Line projects;
- Weekly updates to the O-Train Confederation Line project website;
- Daily Traffic Updates are shared with local traffic reporters;
- Real-time commuter delays are shared with the public via Twitter at [@Ottawacity](https://twitter.com/Ottawacity), [@Ottawa_Traffic](https://twitter.com/Ottawa_Traffic) and [@OCTranspo](https://twitter.com/OCTranspo);
- Quarterly traffic and construction briefings providing four-month outlooks;
- The Ottawa Nav mobile app is available for motorists, cyclists and pedestrians to plan routes in real-time;
- Construction and variable message signs are installed near construction sites alerting commuters to current or planned works;
- Information about construction and traffic impacts are posted on Ottawa.ca and

weekly updates on the Confederation Line are included on Ottawa.ca/confederationline;

- Notifications are issued prior to the start of any construction project;
- Unplanned traffic impacts are shared with the public via Twitter and on the landing page of Ottawa.ca; and,
- Milestones and interesting facts about the project are highlighted via the City's social media channels.

Look Ahead

The following activities are planned for Q2 2017:

- Trackwork begins in west running tunnel moving eastward;
- Lyon Station west entrance architectural finishes begin;
- Tunnel vent shafts at Lyon Station substantially completed;
- Parliament Station architectural work begins;
- West Portal construction substantial completion;
- Brake and propulsion tests on the vehicles being completed;
- Thales train control equipment mimic screen live at the Maintenance and Storage Facility (MSF); and,
- System Integration Testing begins.

Should you have any questions, please do not hesitate to contact me at extension 16623.

*Original signed by
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cc: Senior Leadership Team
Transportation Services Departmental Leadership Team
Director, Public Information and Media Relations