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Green Line Board October 2023 Public Progress Report

1.0 Executive Summary

Work with Bow Transit Connectors (BTC), the Development Partner is progressing on schedule. Working groups continued their technical information exchange sessions to further develop details on design, and establish agreement on project costs, risk allocation, and overall schedule.

Green Line worked with Graham Construction, the 78 Avenue Project contractor, to ensure that the diversion track embankment work is completed as per the original schedule.

There were no lost time, medical aid or first aid incidents reported during the month of October. However, five property damage related safety incidents occurred. Two safety standdowns were held to emphasize the importance of safety and to brainstorm preventive measures to avoid incidents. More details on these incidents are included in the Health & Safety section of this report.

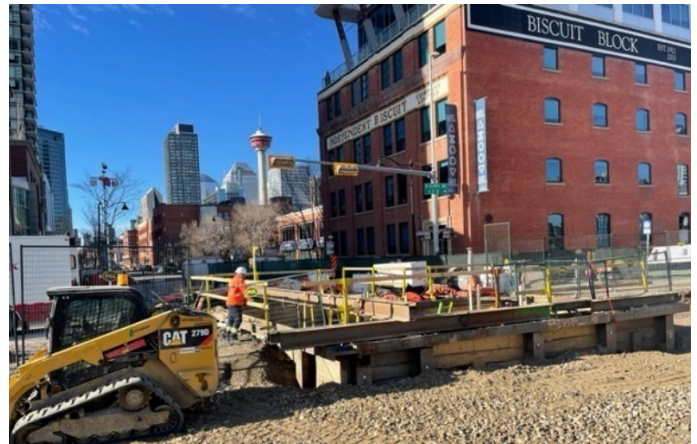
1.1 Construction Highlights

BDURP Construction Activity

Utility relocation work continued in the month of October within the Beltline and Downtown.



Looking south at transmission line work in Beltline west (10 Avenue).



Looking west at the ongoing shallow utility relocation work at the intersection of Olympic Way S.E., and 11 Avenue S.E.

The following tables summarize utility relocation works that continued throughout the month of October, with a look ahead at planned construction activities for the month of November:

Beltline		
Construction activity	October	November
ENMAX Transmission cable pull on 10 Avenue S.W. and 11 Avenue S.W.	Underway	Continues
ENMAX manhole installation at the intersection of Olympic Way S.E. and 11 Avenue S.E.	Underway	Continues

Whissell installation of sanitary, storm and feedermain at 12 Avenue S.E. and 6 Street S.E.	Underway	Expected Completion
Whissell installation of feedermain at Olympic Way and 11 Avenue S.E.	Started	Expected Completion

Downtown		
Construction activity	October	November
CDHI scope on 6 Avenue S.W. and 3 Street S.W.	Underway	Continues
ENMAX vault installation at the corner of 6 Avenue S.W. and 1 Street S.W.	Underway	Continues
Bell/Zayo cable pull along 3 Avenue S.W., 4 Avenue S.W., and 5 Avenue S.W.	Completed	-
ENMAX duct bank installation on 3 Avenue S.W.	Underway	Continues

78 Avenue Construction Activity

October was critical month for completing weather-dependent embankment construction work and Green Line worked with the contractor on an accelerated plan to expedite work by engaging another gravel pit and doubling the daily production and laying of gravel. As a result, the diversion embankments at 78 Avenue and the Pedestrian Tunnel area were completed at the end of October as planned.



Looking east at the completed 78 Avenue diversion track embankment.

5.3 Demolitions

Dakota Inc., the contractor brought in to undertake building demolitions, continued work on the Lilydale Chicken Factory and on three sheds located on 24 Street, north of 114 Avenue S.E. The Lilydale site internal demolition is well underway, and the structure demolition is expected to begin in November. It is expected that all four demolition projects will be complete by the end of 2023.



1.2 Program Status Dashboard

The table below provides the program status dashboard update for October 2023, including the overall program status and a comparison to the previous month.

Functional Area	October Status	September Status	Comments
Health & Safety	●	●	<ul style="list-style-type: none"> Five property damage related incidents occurred during the month of October. No injuries were reported. Two incidents were related to utility relocation works in Downtown and the other three were at the 78 Avenue Project site. Safety stand-downs were held, and the Green Line team is working with the contractors to implement additional preventive measures.
Environmental	●	●	<ul style="list-style-type: none"> Additional environmental and geotechnical due diligence investigations, fish spawning surveys, and supplemental baseline noise and vibration monitoring will be completed by BTC between October and December 2023. Field work for wetland assessments along the alignment was completed in October 2023.
Public Affairs	●	●	<ul style="list-style-type: none"> Connected with 147 businesses, residents, and key stakeholders in October.
Schedule	●	●	<ul style="list-style-type: none"> Work on key program activities is progressing as per schedule.
Cost	●	●	<ul style="list-style-type: none"> Green Line continues to proactively monitor program costs. Currently advancing design and negotiating risk allocation, price, and the project schedule with BTC as part of the Development Phase to align on project cost.
Quality	●	●	<ul style="list-style-type: none"> Program Quality Management Plan implementation continued with oversight of BDURP and 78 Avenue construction quality and LRV Supply project quality compliance.

*Definitions of the dashboard statuses can be found online in the [Monthly board report and financial summary legend](#).

1.3 Financial Summary as of October 31, 2023

Green Line continues to monitor the financial position of the program.

Category ^[1]	Committed Cost	Cost to Date	Cost Year to Date
Owner's Cost	95,959,376	93,202,998	12,997,667
Design & Engineering ^[2]	408,758,493	356,541,393	29,637,884
Construction, Land & Other Assets ^[2]	623,339,937	539,258,453	142,139,018
Bus Rapid Transit	5,846,980	5,846,980	1,203,684
Grand Total	1,133,904,786	994,849,825	185,978,253

[1] Details on specific inclusions can be found online in the [Monthly board report and financial summary legend](#).
[2] Adjusted as of October 2023 to shift the costs of Development Phase from Construction, Land & Other to Design & Engineering



1.4 Achievements and Milestones

Upcoming milestones and achievements for the Green Line program include:

Completed	Upcoming
October 31, 2023 – 78 Avenue S.E. Grade Separation and Pedestrian Tunnel diversion embankment work completed	January 2024 - Track work at 78 Avenue S.E. Grade Separation to be completed.

1.5 Risk Management

Risks and opportunities are continually monitored by Green Line, some key risks of note from October 2023 are:

- Green Line is working with BTC to ensure that they have sufficient resources to meet the Development Phase Agreement requirements within the agreed Development Phase schedule. BTC reports progress and a look ahead on a weekly basis to the Leadership Team (comprised of BTC and Green Line Executives). BTC has identified dedicated resources to source, screen, and recruit individuals for the project.
- Utility relocation works in Beltline and Downtown are ongoing in busy traffic corridors, which impacts the travelling public and pedestrians. Green Line continues to proactively engage and notify stakeholders of potential construction related impacts (e.g., road closures) and work actively with City business units on a regular basis to optimize traffic control, lane closures, and assist with traffic management in Beltline and Downtown overall.

1.6 Public Affairs

Construction activities were ongoing throughout October in Beltline and Downtown, including a full closure of 6 Avenue between 2 and 3 Street S.W. nearly every weekend for the month. Compounding impacts on travel (commuting, deliveries and building services) have required one-on-one coordination with building operators and the development of several plans to support access and business continuity during construction.

In Ogden, the push to get the embankment work done before winter resulted in a significant increase in truck traffic within the neighbourhood. Despite efforts by the contractor to correct the behaviour, there were several instances in October of heavy trucks using a residential road that Green Line had not previously identified as part of the truck routes. Members of the community raised their concerns and actions were taken to rectify the issue.

In October, BTC also began a series of due diligence investigations. Green Line worked collaboratively with the BTC team to secure access to properties, distribute construction notices, and identify opportunities to minimize impacts while maintaining the schedule. Specifically, Green Line coordinated with City peace officers to communicate with vulnerable people where encampments were identified along the alignment. This early intervention, allowed for BTC and Green Line take proactive and compassionate steps to advance the work as planned, while ensuring the safety of construction workers as well as the vulnerable populations encountered.



Green Line led its monthly construction outlook for Beltline and Downtown to inform residents and businesses about the anticipated impacts. The team also provided updates to the City's Truck Routes Committee and met with event organizers to begin planning for 2024 Calgary Marathon. The Q3 2023 Business Insights Panel met on site in Victoria Park, providing an opportunity to receive feedback from members on recent wayfinding signage and business access planning activities.

In addition to the thirteen construction notices sent to more than 195 interested parties (property owners, property managers, community organizations, businesses, and residents) in the Beltline, Downtown, and Ogden, the direct business and community outreach for October 2023 is summarized below.

Outreach Activity	Activity (October)
Business outreach*	71
Residential/property outreach*	69
Key stakeholder/partner meetings	7
Email/311 requests	11
Information sessions/events	4

* Outreach includes calls, meetings, and on-site visits.

There were 20 inquiries received in October through the Green Line email inbox and 311 service requests (18 received in September). Just over half of the inquiries were related to construction impacts including road closures, cycle track disruptions, noise complaints and site tidiness, while the remaining inquiries were related to future station design, pathway connections and impacts to buildings located along the underground alignment.

A social media campaign in October aimed to promote Small Business Week and encouraged business owners along the alignment to register their business with Green Line. Four businesses were featured on our social media channels: Action Hobby, Oasis Juice Bar, Ogden Whistle Pub and Umberto's Custom Tailors.

2.0 Health & Safety

The Green Line safety team conducted a "Getting Ready for Winter" safety push in October to highlight winter safety. A Green Line team "Lunch & Learn" was offered to discuss "Building a Learning Safety Culture". Additional lunch and learn topics will be offered in future months.

Fourteen (14) inspection/site visits were conducted by the Green Line Team in the month of October. A partnering session was held and attended by all 78 Avenue project partners (City of Calgary, Graham, Canadian Pacific Kansas City, Wilco, North Star) to collaborate proactively on safety and operational measures for the community and on the site.

Five site safety incidents occurred in October:

- Minor damage to a garbage bin due to the use of an improper equipment. The contractor changed practices (i.e.: use of forks on a loader instead of loader bucket) to avoid this happening again.



- Quality Inspector’s vehicle contacted a subcontractor vehicle in laydown parking lot while reversing without knowing that the vehicle tailgate is down and causing minor damage to the vehicle. To avoid future incidents, the contractor has made it mandatory for staff to perform safety vehicle walkaround.
- Contractor loader backed into a metal gate at site entrance while adjusting gravel pile causing damage to the gate. Investigation found that the Operator did not remain aware of surroundings, or request spotter. The contractor has reviewed the incident with the crew and debriefed their teams on the use of spotters in tight and congested areas, as well as mandatory 360 awareness checks if a spotter is not available. Although the root cause of the incidents was traced to individual behavior, a safety stand down was held where the Green Line senior leadership team met with the contractors to emphasize the importance of being aware of their environment, and acting only when they had established it was safe to do so. Additionally, the contractors have enhanced the requirements for flaggers to improve awareness and the management of vehicle movements.
- During an excavation a Contractor struck a shallow non-live power cable causing damage. The incident happened due to incorrect as-built information and the use of mechanical means to remove pavement structure. Utility owner’s safety watch was added to assist the contractor while the work is happening in proximity of other utility infrastructure and the process modified to avoid the use of mechanical excavator.
- A shallow utility duct bank and empty conduits were damaged during the removal of pavement structure. The concrete duct bank was found to be embedded within the roadway pavement, making it difficult to separate the two during nighttime work. The incident happened while utility owner’s safety watch was present and monitoring the work. Additional measures to avoid repeat of such incident were identified and include locating duct bank elevation from nearby manholes.

Green Line project team has followed up with the contractors to identify underlying causes and prevent utility strikes. Several follow-up meetings were held to discuss solutions and ensure that coordination and interfacing issues are addressed, and lessons learned are shared with all the BDURP contractors.

Safety Reporting

Green Line Safety Incident Frequency				
Performance Indicator		Green Line & City Staff	Contractors	Green Line, City Staff & Contractors
TRIFR: Total Recordable Injury Frequency Rate	per 200,000 hrs	●	●	●

**Statistics based on a rolling 12-month period from October 31, 2022, to October 31, 2023.*

3.0 Environmental

No environmental incidents or non-conformances were reported during the month of October. As part of the Development Phase, Green Line and BTC continue to discuss the due diligence requirements. Field work for additional wetland assessments along the alignment was completed in October 2023. Fish spawning surveys in the Bow and Elbow Rivers as well as supplemental baseline noise and vibration monitoring will be completed in November 2023.



Green Line received the Historical Resources Act approval to proceed for the southeast segment of the project from the Alberta Arts, Cultures and Status of Women on October 6, 2023. Approval for the downtown segment is pending and expected in November 2023.

Green Line and BTC have developed an approach to incorporate the Envision sustainability framework into the Development Phase. BTC's initial assessment of the available Envision credits and opportunities for the Green Line project is planned for November 2023.