



Green Line Board **Report**

ISC: UNRESTRICTED

Report #GLB2021-1646

Item #8.1

Green Line Board September 2021 Progress Report

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Executive Summary

1.1 Project Status Dashboard

	Overall Program	Enabling Works	LRVs	Phase 1	Comments
Health & Safety	●	●	N/A	N/A	There were no safety incidents in September. A spike in the Delta variant of COVID-19 has resulted in the volunteer return to work being postponed from October 20, 2021 to at least January 3, 2022.
Environmental	●	●	N/A	●	The contaminated sites remediation and cleanup work have begun on previously noted properties. Potential remediation work in the downtown core and areas affected by the enabling works are currently being identified.
Stakeholder Relations	●	●	N/A	●	Uncertainty on schedule continues to impact stakeholder confidence in the project. No change is expected until the updated Phase 1 project milestones are communicated.
Schedule	●	●	●	●	The Program schedule is undergoing a baseline exercise and will be presented to the Board in October. As part of this effort, the Beltline Downtown Utility Relocation project schedule is under review and required mitigations are being development.
Cost	●	●	●	●	Program budget has been updated to reflect the Phase 1 procurement approach. The current budget is under pressure due to changes in escalation cost factor, functional design development and schedule delays. Cost pressures in the Beltline Downtown Utility Relocation



					Project are increasing based on recent market input.					
Quality					The Program Quality Management Plan, which defines program quality requirements and activities, is currently being finalized.					
LEGEND*:	On Plan		At Risk		Off Plan		Not Started		Not Applicable	N/A

*Definition of legend for the dashboard in Appendix 1

1.2 Project Highlights

Project	Summary of Status this Month	Next Month
Overall Program	Overall Program Plan structure is being finalized to align with the procurement strategy for Phase 1 from Shepard to Eau Claire.	The Master Schedule will be submitted to the Board for approval in November 2021.
Enabling Works	<p>Highfield Blvd Multi-Use Pathway (PKG-008c) completed. Due to delay in ballast procurement from supplier, completion of CN Highfield Track & Tunnel project (PKG-002) will be extended to mid-November 2021.</p> <p>Review and revision of the Construction Manager's General Expense Estimate and 60% Design Schedule & Estimate for the Beltline was completed in preparation of the procurement package and the Guaranteed Maximum Price (GMP).</p> <p>Construction coordination and sequencing with Third Party Utilities relocations along with Work Package approvals are ongoing.</p> <p>Procurement documents for the water feeder main and initial</p>	<p>Business cases to support remaining supplementary enabling works in Calgary SE will be completed.</p> <p>Construction Manager will complete and issue East Beltline Civil (Deep Utilities & Roadwork) RFP procurement documents in November 2021.</p> <p>Draft GMP for Beltline Downtown Utility work will be prepared for circulation and review.</p> <p>The Downtown utility work 60%</p>



	tender procurement package for the Beltline Area utility relocations were completed for internal review.	Design, Estimate and Schedule will be reviewed and updated.
LRV	The LRV procurement is proceeding as scheduled with award of a contract planned in the fall of 2021.	Proceed per schedule.
Phase 1	<p>Negotiations with the Owner's Engineer to extend the contract through preparation of procurement documents continues.</p> <p>Pre-procurement planning is underway for the Phase 1 Design-Build-Finance (DBF) from Shepard to Eau Claire.</p> <p>The negotiation framework for Station Integration is being completed.</p>	<p>The project plan and corresponding dollar amount for the Owner's Engineer contract extension will be finalized.</p> <p>Strategy sessions will be conducted to provide direction on what will be prescribed in the Technical Performance Requirements (TPR).</p> <p>The negotiation framework for Station Integration will be established for all integrated station entrance locations. Negotiations will re-commence with property owners.</p>

1.3 Financial Summary for September 2021

Category	Committed Cost	Cost to Date	Cost Year to Date
Owner's Costs	64,378,225	64,320,762	11,091,595
Design & Engineering	276,769,562	227,022,923	20,011,220
Construction, Land & Other	468,751,312	385,396,448	28,113,291
Bus Rapid Transit	1,753,647	1,753,647	1,208,049
Grand Total	811,652,747	678,493,780	60,424,154

Owner's Costs: Include City of Calgary Staff Time, Communications, Software, and General Corporate Overheads and Inter- Business Unit costs.

Design & Engineering: Includes all Owner's Engineer costs as well as general Project Consultants costs.

Construction, Land & Other Assets: Includes Land, Enabling Works, and Quick Win build costs.

Bus Rapid Transit: Includes all costs related to the Bus Rapid Transit work for Green Line.

Committed Costs represent issued PO values only for Design & Engineering and Construction, Land & Other Assets. For Owner's Costs and Bus Rapid Transit these are primarily costs incurred to date.



1.4 Milestone Schedule

The milestone schedule is currently under review and will be presented to the Board for approval in October. Schedule development is focused on three critical paths to mitigate impact for future DBF construction: getting to the award of the DBF contract, relocating downtown utility conflicts, and land acquisition.

Near term milestones for the project include:

- Fall 2021 – LRV Procurement – Contract Award
- Fall 2021 – Baseline Schedule – Complete
- Winter 2022 – Beltline Downtown Utility Relocation Project – Construction Started

1.5 Risk Management

Below are some of the primary risk items being addressed by the team:

- Vacancies within the leadership team.
 - Recruitment is underway to fill key vacant positions. The focus is on hiring a Chief Operating Officer by the end of October and other outstanding director positions thereafter.
- Competing pressure in the North American marketplace is potentially limiting the available capacity for the required proponent expertise.
 - Market soundings will be ongoing through the pre-procurement phase to continually evaluate and mitigate this risk. Steps are also being taken to improve the Phase 1 DBF procurement process and documents to make the procurement more attractive to the market.
- Property acquisition and interface timing.
 - Negotiations for land acquisition and station integration are underway at Downtown and Beltline locations. Exploration of alternative options to reduce property impacts also continues.

The risk register and risk management strategies continue to be reviewed and updated as required.

2 Health and Safety

	Overall Program	Enabling Works	LRVs	Phase 1	Comments
Current Period	●	●	N/A	N/A	There were no safety incidents in September. A spike in the Delta variant of COVID-19 has resulted in the

					volunteer return to work being postponed from October 20, 2021 to at least January 3, 2022.					
Last Period	●	●	N/A	N/A	There were no safety incidents in August.					
LEGEND*:	On Plan	●	At Risk	●	Off Plan	●	Not Started	●	Not Applicable	N/A

*Definition of legend for the dashboard in Appendix 1

2.1 Overall Program

The team continued auditing City, Consultant and Contractor compliance against their respective Safety Management Systems and performance.

Development of the Construction Tunnel Safety and Interface Plan continues.

Preparation continued for the Green Line 2021 Internal Maintenance Safety Audit which will be completed in Q4 of 2021.

Safety Culture: The Green Line's strong safety culture continues to improve and support the development of The City's mandatory vaccination policy for the ongoing COVID-19 pandemic. Green Line staff have been complying with the COVID-19 protocols and minimizing coming into the office.

The September 2021 Safety Focus was on the Safety Pyramid and Slips, Trips and Falls. In addition, the Alberta OH&S September eNewsletter covered musculoskeletal disorders, OHS laws and substance use in the workplace.

Overall Program Metrics

There were no safety incidents on the Green Line project for the month of September.

The following chart contains the recorded incidents for the 12-month rolling period:

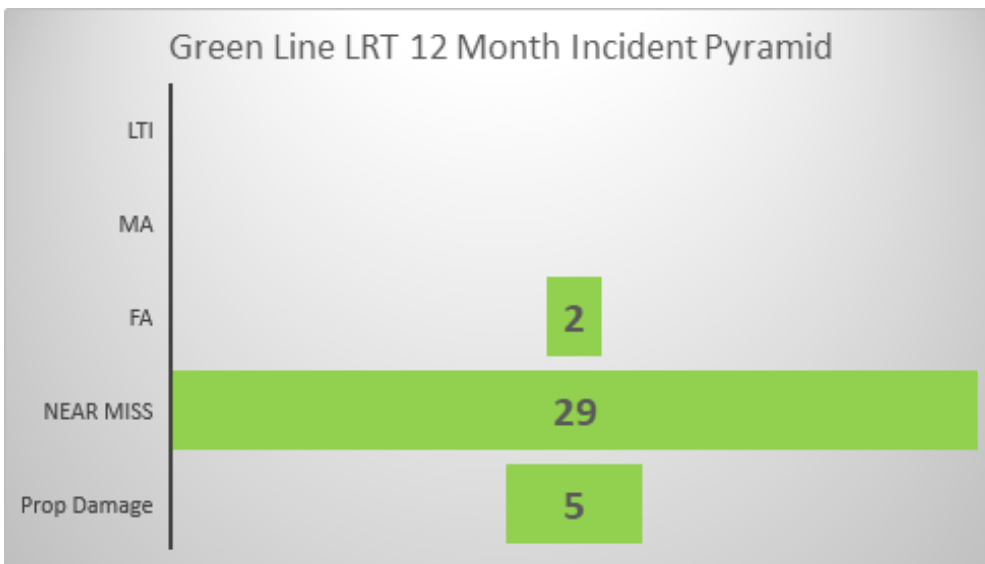




Table 1: Green Line Safety Incident Frequency Statistics

Performance Indicator		GL City Staff	Contractors	GL City Staff & Contractors
TRIFR: Total Recordable Injury Frequency Rate (MA +LTI)	per 200,000 hrs	●	●	●
	per 1,000,000 hrs	●	●	●
LTIFR: Lost Time Injury Frequency Rate	per 200,000 hrs	●	●	●
	per 1,000,000 hrs	●	●	●

*** Statistics are based on 12 month rolling period from September 30, 2020 to September 30, 2021**

Table 2: Overview of September Safety Metrics for the 2021 Calendar Year

Metric	Current Month	2021 YTD Incidents	Days since Last incident
Lost Time Incident	0	0	882
Medical Aids	0	0	555
First Aids	0	1	111
Near Misses	2	29	17
Property Damage/Theft Incidents	0	4	140

The two near misses reported were minor non-conformances including a missed monthly extinguisher check and a worker not wearing a mask within 2 metres of another worker. These non-conformances were addressed at the site by the contractor.

2.2 Enabling Works

There was limited site activity on both the CN Track ‘n’ Tunnel and the Chemtron sites in September. Safety oversight continued to observe site status or any public activity issues.

No Enabling Works were stopped due to suspected or actual positive COVID-19 cases in September.



Appendix 1 –Dashboards Legends

	On Plan	At Risk	Off Plan
Health and Safety	Zero LTIs or Scheduled monthly site inspections completed with < 2 missed or Joint OH&S committee meetings and inspections on track or Green Line COR Internal Maintenance Audit completed with minor findings or all mandatory training complete	One LTI or ≤5 scheduled site inspection not completed or missed a Joint OH&S committee meeting or inspection or Green Line COR Internal Maintenance Audit completed with major findings or <90% mandatory training not completed	More than one LTI or >5 scheduled site inspections not completed or multiple Joint OH&S committee meetings or inspection not completed or Green Line COR Internal Maintenance Audit failed or less than 75% mandatory training complete
TRIFR: Total Recordable Injury Frequency Rate (MA +LTI)	Per 200,000 hrs <0.12 Per 1,000,000 hrs <0.60	Per 200,000 hrs ≥0.12 Per 1,000,000 hrs ≥0.60	Per 200,000 hrs >0.30 Per 1,000,000 hrs <1.50
LTIFR: Lost Time Injury Frequency Rate	Per 200,000 hrs <0.00 Per 1,000,000 hrs <0.00	Per 200,000 hrs ≥0.00 Per 1,000,000 hrs ≥0.00	Per 200,000 hrs >0.13 Per 1,000,000 hrs <0.65
Environmental	Overall environmental requirements are progressing as defined and work plans and budgets are being accurately managed	Specific environmental management subjects are being addressed and progressing; reliance on other project disciplines, information and inputs to complete the work may cause temporary delays	Failing to meet contractually required environmental obligations causing delays and complications for the Contractor and/or Owner
Stakeholder Relations	Minimal risk of reputational damage or	Moderate risk of reputational damage or	Severe risk of reputational damage or Major risk with funding partners



	Localized stakeholder issues	Multiple stakeholder issues that require urgent action	
Schedule	SPI \geq 1.0 or No change to critical activities/milestones	SPI 0.9-0.99 or Delay of critical milestones by less than 4 weeks	SPI $<$ 0.9 or Critical activities delayed by more than 4 weeks
Cost	CPI \geq 1.0 or Costs forecast within the Budget excluding retained contingency	CPI 0.95-0.99 or Costs forecast to be over Budget and $<$ 30% retained contingency	CPI $<$ 0.95 or Cost forecast to be $>$ Budget + 30 % retained contingency
Quality	Quality requirements adequate/defined or in progress or Audits performed per plan with no/minor findings or NCR identification and resolution are with expectations	Quality requirements not adequate/defined in at least one area or Audits performed per plan with one or more major findings or NCR identification and resolution are not trending downward	Quality requirements not adequate/defined in multiple areas or Audits not performed or performed with many major findings or Significant non-conformance with contract terms



Appendix 2 –Stakeholder Engagement Activities

Summary

During the month of September, stakeholder outreach and communications occurred through general communications, enquiry responses, direct stakeholder outreach and a variety of stakeholder meetings and activities to support the Enabling Works projects.

All 311 service requests have been addressed and closed.

Stakeholder Events / Communications

Event	Purpose	Date/Time	Method	Attendance
Stakeholder Meeting	Rivers District project interface coordination	2021/09/01 - 21/09/30	3 virtual meetings	Calgary Municipal Land Corporation (CMLC)
Stakeholder Meeting	Project update and stakeholder feedback shared	2021/09/20	Virtual meeting	Calgary Sports and Entertainment Corporation CMLC
Stakeholder Meeting	Project update and stakeholder feedback shared	2021/09/23	Virtual meeting	Calgary Stampede, CMLC
BDURP Pre-investigation emails/meetings	To obtain architectural, mechanical, and electrical drawings prior to GL building investigations	2021/09/02 – 2021/09/30	Email/ Phone	Property managers/ building owners for 12 different affected properties
Combined Rivers District Stakeholder	Project update from Green Line, CMLC, CSEC, and Stampede	2021/09/28	Virtual meeting	Multiple stakeholders from within the Rivers District/East Beltline/Ramsay/Inglewood area
Follow-up with Rivers District stakeholders	Sent materials to condo boards regarding presentation from September 28	2021/09/29	Email	Three condo boards