

Transportation Report to
Green Line Committee
2020 February 21

ISC: UNRESTRICTED
GC2020-0244

Green Line Q4 2019 Update

EXECUTIVE SUMMARY

This report provides an update on the status of the Green Line LRT Project to the Green Line Committee as a Q4 2019 update and annual report. It includes key achievements in Q4 2019 such as retaining additional project management and third-party review expertise, closure of the Request for Qualifications (RFQ) for Segment 1 and establishment of the Green Line Committee. This report additionally includes 2020 key deliverables set by the project within three categories: staffing, planning and delivery. Updates to the project funding schedule following the Alberta's Budget 2019 are also reviewed within this report.

The project remains in a state of change with the final alignment not yet approved by committee and Council. The team is currently engaged in three phases of the project: planning, procurement, and delivery. For the project to move forward successfully, the planning phase must be concluded and effort focused on procurement and delivery. While a number of positive steps have been completed in Q1 2020, in Q4 2019, the project was at significant risk. For the project to be a success, in Q1 2020, the planning phase must be completed and attention moved to procurement and delivery.

ADMINISTRATION RECOMMENDATION:

That the Green Line Committee:

Recommend Council to direct Administration to return with a Q1 2020 Quarterly Report in April 2020.

PREVIOUS COUNCIL DIRECTION / POLICY

At the 2019 July 29 Combined Meeting of Council, Report TT2019-0811 (Green Line Q2 Update) was received for information, 11 recommendations were voted on separately. A summary and update on these recommendations are shown in Attachment 1.

At the 2019 September 18 SPC on Transportation and Transit meeting, Report TT2019-1073 (Green Line Q3 Update) was received for information.

BACKGROUND

Green Line Vision: *A city-shaping transit service that improves mobility in north and southeast Calgary, connecting people and places, and enhancing the quality of life in the city.* The updated vision was approved at the 2020 January 13 Combined Meeting of Council.

Stage 1 of Green Line extends from 16 Avenue N to 126 Avenue SE, selected because of its ease of expandability, transit network connections, benefits including ridership and overall project readiness. Stage 1 will build the core of the Green Line while preparing for future expansion – potentially both north and south. Like the Red and Blue Lines, the Green Line will be built in stages as funding becomes available. Once fully built, the Green Line will be a 46-km light rail transit (LRT) line that connects 27 communities and serves over 220,000 trips daily.

A progress report card, risk assessment, summary of project funding and a project focus area updates are included in this report and associated attachments.

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INVESTIGATION: ALTERNATIVES AND ANALYSIS

The Green Line has defined focus areas of leadership, governance, commercial, stakeholder and technical (See Table 1). Quarterly, within each focus area, the project tracks performance on key deliverables and provides a status rating for each focus area (See Attachment 2). The ratings for the focus areas are either “controlled”, “needs attention” and “requires immediate attention”. In Q4 2019, the project was undergoing a considerable amount of change, as a result, all focus areas were rated as “requiring immediate attention”. It should be noted that this report identifies the severity of issues as they existed at the end of Q4 2019 and that looking forward through Q1 2020, significant advancements have been made in all focus areas.

Table 1. Green Line Project Focus Areas and Key Elements

Leadership	Governance	Commercial	Stakeholder	Technical
<ul style="list-style-type: none"> • Vision, mission and values • Organizational culture • Capability, capacity and competence • Change management • Communications • Soft Controls 	<ul style="list-style-type: none"> • Oversight • Decision / authority / escalation protocols • Organizational design • Reporting line of sight • Performance management • Stakeholders 	<ul style="list-style-type: none"> • Project structure • Business case • Contract strategy • Procurement • Risk management • Finance and funding 	<ul style="list-style-type: none"> • Government and regulatory • Indigenous relations • Community/public engagement • Internal stakeholders • Relationship management • Industrial relations 	<ul style="list-style-type: none"> • Engineering management • Budget and schedule • Project controls • Technology / systems / process • Regulatory requirements/permitting • Asset Management

The remainder of this section lists notable deliverables achieved in 2019, upcoming deliverables in 2020, are identified below:

2019 Achievements

Notable Q4 2019 deliverables achieved:

- Developed readiness plan to be presented at the 2020 February 21 Green Line Committee Meeting;
- Closed the Segment 1 RFQ, released in August 2019 and closed in October 2019;
- Worked with the Government’s of Alberta and Canada following the change in the Government of Alberta’s Budget 2019 to minimize the impact of additional borrowing costs on the City of Calgary; and
- Established the Green Line Committee which held its inaugural meeting on 2019 November 2019

Notable 2019 deliverables achieved in addition to the above:

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- Adoption of the Envision Sustainability Management system: a framework that provides decision support in the planning, design and delivery of sustainable and resilient infrastructure projects, and measuring project contributions to sustainability across social, economic, and environmental indicators (Q1);
- Finalized and signed the funding agreement with the Provincial Government (Q1);
- Received executive agreements for the right-of-way required for the LRT between The City of Calgary Green Line and Canadian Pacific (CP) Railway (Q2);
- Recruited and on-boarded the Green Line Managing Director (Q3);
- Established the Technical Risk Committee (TRC) (Q3);
- Developed readiness plan to be presented at the 2020 February 21 Green Line Committee Meeting (Q4).

Q4 2019 Updates by Focus Area and 2020 Deliverables

For this report an update on all focus areas are included.

Leadership Update

In Q4 2019, a key success included the on-boarding of a number of firms and personnel to provide additional expertise to the project. Among the firms:

- SMA Consulting (SMA), who provide Risk Management and Project Control expertise;
- Hanscomb Limited, who provide independent cost estimate review;
- Steer Group, who provide due diligence review of the transportation and transit planning for Stage 1; and
- Individual and team coaching, through the People and Culture division of HR.

In 2020, the project will focus on the following three key goals, with associated deliverables:

1. Governance and Staffing

- Governance model is finalized, approved by council and fully operational;
- Senior Leadership positions and required staffing requirements are filled by people with the right level of expertise and who excel in the project environment;
- Clear roles, responsibilities and authorities are defined, documented and embedded into the culture of the team; and
- Program set-up and systems are in place and all actions identified through TRC reviews have been completed;

2. Planning

- Segment 2 planning is complete and the class 3 cost and schedule for the complete Stage 1 is within the approved \$4.9 billion funding; and
- An updated Business case is approved by Council;

3. Delivery

- RFP for Segment 1 and the LRV's has commenced;
- Segment 1 enabling works are substantially complete; and
- Segment 2 construction management utilities contract is issued and underway.

Governance Update

Key governance achievements in the last quarter include the TRC's commencement of work on the deliverability review, including a presentation to the Green Line Committee in December 2019. The scope of the TRC deliverability included an assessment of the current status of

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governance and potential improvements. Looking forward to 2020, work on a recommended governance model will continue. This includes the review of potential options, including an improved internal structure, a hybrid model with delegation of authority to a Committee or Board of Council or a wholly owned subsidiary. Following the assessment, the approval of Council will be sought to implement the recommended governance model. Delegation of authority, decision making and escalation will be updated to ensure that it is consistent with the finalized organizational structure.

Commercial Update

Major Q4 2019 achievements within the commercial focus areas were:

- The closure of the Segment 1 RFQ;
- Issuing of the Green Line Risk Management Plan;
- Continued work with project funding partners, the Government of Alberta and Government of Canada following the change in the Government of Alberta's Budget 2019 to minimize the impact of additional borrowing costs on the City of Calgary.

In 2020 commercial goals include:

- Release of Light Rail Vehicle (LRV) Request for Proposal (RFP);
- Release of Segment 2 Utility Construction Management Request for Proposal (RFP);
- Release of Segment 1 Request for Proposal (RFP); and
- Release of Owner's Engineering Request for Proposal (RFP) for Contract Administration.

Stakeholder Engagement, Research and Communication

During Q4 2019, through the Enabling Works Program, the team has continued to inform citizens and respond to their concerns in Segment 1. Segment 1 enabling works stakeholder relations will continue into 2020. In Segment 2, Q4 2019 activities focused on meetings with key stakeholders, Business Improvement Areas (BIAs) and communities, to better understand stakeholder interests associated with changes to the Segment 2 alignment. Moving into 2020, meetings will continue with the goal of better understanding Segment 2 stakeholder interests in the process of finalizing the updated Stage 1 alignment. The input received will be summarized and shared as a "What We Heard" report with Committee at the 2020 March 31 meeting.

Technical Update

In July 2019, Council directed Administration to review the Stage 1 alignment. At the 2019 December Committee meeting Administration reported on the status of the review to date and the next steps in finalizing the updated Stage 1 alignment. In Q4 2019 the team focused on value engineering across Stage 1, reviewing and updating the alignment to ensure that the project will maximize the return on investment. The Stage 1 value engineering will be finalized in Q1 2020 and incorporated into the procurement documents.

Strategic Alignment

Calgarians consistently tell Administration that frequent, convenient, reliable, and affordable transit is important to them and the provision of this type of transit service is integral to The City's Municipal Development Plan and Calgary Transportation Plan. Construction of the Green

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Line is our next step towards completing Calgary's transit network, as described in the Council-approved Route Ahead: A Strategic Plan for Transit in Calgary.

Social, Environmental, Economic (External)

Calgarians who do not live close to the Green Line will also benefit from the new service. The Green Line will help return capacity to the Red Line by providing additional service in the southern quadrants of Calgary. Additional capacity on the Red Line will help improve the ridership experience, further alleviate vehicular demand on the area road network and create capacity for growth. Data shows that many Calgarians in communities along the Blue Line and Red Line already use transit. The Green Line will help connect Calgarians from across the city to employment hubs and destinations.

The Green Line will deliver long-term outcomes for Calgarians by improving mobility with fast, frequent, and reliable transit service; reducing congestion and travel times; enhancing connectivity between people and place; creating a safe, accessible, comfortable and convenient transportation experience; contributing positively to the urban realm, community development and revitalization; contributing to the vitality of businesses in the community; and protecting the environment.

Green Line has been putting Calgarians to work with over 100 Enabling Works projects completed to prepare for Stage 1 construction. Construction of Stage 1 is expected to create 20,000 direct and indirect jobs. On opening day, Stage 1 of Green Line will provide Calgarians direct access to 190,000 jobs, and 225,000 jobs anticipated by 2048. Once built from 160 Avenue N to Seton, the Green Line is expected to serve over 220,000 trips daily. This is expected to save 30,000 tonnes of greenhouse gas (GHG) emissions, equivalent to 6,100 vehicles.

Financial Capacity

Total funding for Project's Stage 1 is \$5.5 billion, with contributions from the Government of Canada (\$1.64 billion), Government of Alberta (\$1.70 billion) and the City of Calgary (\$2.20 billion). Municipal funding is comprised of two funding streams, \$52 million annually for 30-years (2015 to 2044) and \$23.7 million annually for 27-years (2018-2044). The municipal funding of \$1.64 billion is allocated to categories of capital funding (\$1.56 billion) and financing funding (\$0.64 billion) and these funding streams can be optimized over the term of the project. Incremental operating costs of approximately \$40 million per year (in 2016 dollars) have been estimated for the project. Operating budget requirements will be reviewed during the current One Calgary cycle with refinements and updates to be approved in a future budget cycle¹ to align with the anticipated revenue service date for the Project.

In October 2019, the Provincial government released its 2019 budget. In Alberta's Budget 2019 and subsequent public commentary, the Government of Alberta reiterated its funding commitment of \$1.53 billion for Stage 1 of the Green Line. The City is currently in conversation

¹ Provided to Council on 2017 May 15 and 2017 November 27 (C2017-1123).

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with the Government of Canada to confirm its schedule of payments. Attachment 4 includes supporting tables regarding funding sources, funding schedules and City of Calgary approvals.

Current and Future Operating Budget:

This report has no impact on the current and future operating budget for the Project.

Current and Future Capital Budget:

This report has no impact on the current and future capital budget for the Project.

Risk Assessment

All mega projects experience risk. To assist in managing and mitigating risk, Administration has brought on additional resources to support the risk management.

Green Line operationalized the TRC in Q3 2019 and retained SMA, a firm specializing in Risk Management in Q4 2019. The TRC, comprised of external industry project specialists in the areas of procurement, commercial strategies, stakeholder management, design, and construction, have delivered reports to the Green Line Committee and the Executive Steering Committee, and have actively been engaged with the project team. The TRC will continue to work with the project team and report quarterly to the Green Line Committee. SMA's involvement will bolster The City's risk management expertise and capabilities.

In December 2019, the Green Line Risk Management Plan was issued, outlining the basis of risk management standards and procedures, and providing a starting point for the project to establish a "risk-culture". In Q1 2020, the project risk register will undergo an in-depth reorganization to align its structure and functionality with best practices on mega projects. This includes an update to the reported categories to enhance communication on project risks. In the interim, administration has identified the top risk categories on the project, and is allocating resources and expertise to monitor, manage, and mitigate these as appropriate.

Attachment 3 includes a summary of the Project Risk Assessment.

Upcoming Key Deliverables

Information to be provided at the 2020 March 31 Green Line Committee meeting will include:

- A "what we heard" report outlining updated Stage 1 alignment feedback from Calgarians;
- A final recommendation on the updated Stage 1 alignment; and
- An updated business case.

REASON(S) FOR RECOMMENDATION(S):

ATTACHMENT(S)

1. Attachment 1 – 2019 July 29 Council Direction
2. Attachment 2 – 2019 Q4 Green Line LRT Progress Report Card
3. Attachment 3 – Risk Registry Q4 2019
4. Attachment 4 – Additional Information on Project Funding