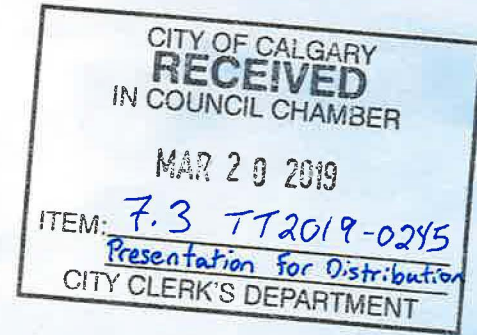


Calgary



Green Line Update TT2019-0245 March 20, 2019

Michael Thompson, General Manager, Transportation





Vision

A transit service that improves mobility in existing communities in north and southeast Calgary connecting people and places, and enhancing the quality of life in the city.



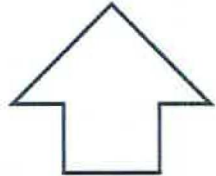
Presentation Overview

- I. Green Line Project Focus Areas
- II. Project Progress Report Card
- III. Project Risk Assessment
- IV. Project Expenditures
- V. Timeline
- VI. Single Bore
- VII. Future Stages



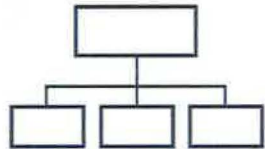


Five Focus Areas



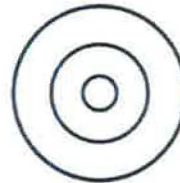
Leadership

- Vision, mission and values
- Organizational culture
- Capability, capacity and competence
- Change management
- Communications
- Soft Controls



Governance

- Oversight
- Decision/authority/escalation protocols
- Organizational design
- Reporting line of sight
- Performance management
- Stakeholders



Commercial

- Project structure
- Business case
- Contract strategy
- Procurement
- Risk management
- Finance and funding



Stakeholder

- Government and regulatory
- Indigenous relations
- Community/public engagement
- Internal stakeholders
- Relationship management
- Industrial relations



Technical

- Engineering management
- Budget and schedule
- Project controls
- Technology/systems/process
- Regulatory requirements/permitting
- Asset management





Focus Area: Leadership



Leadership

- Vision, mission and values
- Organizational culture
- Capability, capacity and competence
- Change management
- Communications
- Soft Controls

Q4 2018 (Oct–Dec)	Q1 2019 (Jan–March)	Q2 2019 (April–June)
Key Deliverables	Key Deliverables	Key Deliverables
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Posted position for GL Managing Director <input checked="" type="checkbox"/> Established the Vision and Mission <input checked="" type="checkbox"/> Established Project Team ground rules <input checked="" type="checkbox"/> Completed first series of Change Management sessions 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Interviewed candidates for GL Managing Director position <input checked="" type="checkbox"/> Ongoing Change Management program 	<ul style="list-style-type: none"> <input type="checkbox"/> Onboarding of new GL Managing Director <input type="checkbox"/> Ongoing Change Management program <input type="checkbox"/> Finalize Project Execution Plan

Colour Ratings:

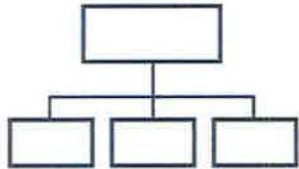
 Controlled

 Needs attention

 Requires immediate attention



Focus Area: Governance



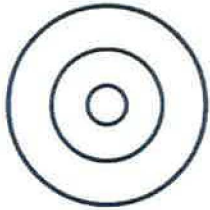
Governance

- Oversight
- Decision/authority/escalation protocols
- Organizational design
- Reporting line of sight
- Performance management
- Stakeholders

Q4 2018 (Oct–Dec)	Q1 2019 (Jan–March)	Q2 2019 (April–June)
Key Deliverables <input checked="" type="checkbox"/> Developed process to evaluate governance and reporting	Key Deliverables <input checked="" type="checkbox"/> Completed review of organizational structure and team skills assessment <input checked="" type="checkbox"/> Governance review <input checked="" type="checkbox"/> Developed an escalation and decision-making framework <input checked="" type="checkbox"/> Developed Project Report Card and overall Project Gap Analysis tool	Key Deliverables <input type="checkbox"/> Organize Project Team <input type="checkbox"/> Development of project dashboard and performance metrics



Focus Area: Commercial



Commercial

- Project structure
- Business case
- Contract strategy
- Procurement
- Risk management
- Finance and funding

Q4 2018 (Oct-Dec)	Q1 2019 (Jan-March)	Q2 2019 (April-June)
Key Deliverables	Key Deliverables	Key Deliverables
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Developed the contracting strategy <input checked="" type="checkbox"/> Developed a Risk Management Plan 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Finalized agreements between The City and Canadian Pacific <input checked="" type="checkbox"/> Ultimate Recipient Agreement signed <input checked="" type="checkbox"/> RFQ for LRV released <input checked="" type="checkbox"/> Finalized industry notification of Enmax Power Services Corporation 	<ul style="list-style-type: none"> <input type="checkbox"/> Finalize supplemental Contracts Strategy <input type="checkbox"/> Release Main Contract RFQ <input type="checkbox"/> Finalize comprehensive Risk Management Plan <input type="checkbox"/> Finalize Project Controls strategy <input type="checkbox"/> Finalize LRV RFP application



Focus Area: Stakeholder



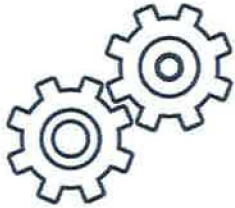
Stakeholder

- Government and regulatory
- Indigenous relations
- Community/public engagement
- Internal stakeholders
- Relationship management
- Industrial relations

Q4 2018 (Oct–Dec)	Q1 2019 (Jan–March)	Q2 2019 (April–June)
Key Deliverables <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Held meetings with Indigenous groups/communities <input checked="" type="checkbox"/> Enabling Works engagement <input checked="" type="checkbox"/> Developed a Market Research Project 	Key Deliverables <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Community Stakeholder engagement and communication <input checked="" type="checkbox"/> Developed draft internal and external Communications Plan <input checked="" type="checkbox"/> Design Talks partnership for an International Ideas competition <input type="checkbox"/> Presentation to Calgary Construction Association 	Key Deliverables <ul style="list-style-type: none"> <input type="checkbox"/> Develop GL Indigenous Plan <input type="checkbox"/> Customer Relationships Management <input type="checkbox"/> Ongoing discussion with impacted property owners <input type="checkbox"/> Finalize Taking Care of Business and Communities Strategy



Focus Area: Technical



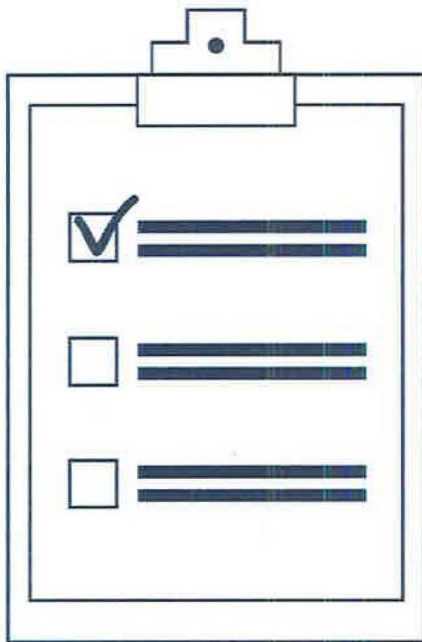
Technical

- Engineering management
- Budget and schedule
- Project controls
- Technology/ systems/process
- Regulatory requirements/permitting
- Asset management

Q4 2018 (Oct-Dec)	Q1 2019 (Jan-March)	Q2 2019 (April-June)
Key Deliverables	Key Deliverables	Key Deliverables
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Developed a Project Execution Plan <input checked="" type="checkbox"/> Enabling Works: 78 Avenue, CN/Highfield, utility relocations <input checked="" type="checkbox"/> Approved City Shaping Implementation Strategy <input checked="" type="checkbox"/> TOD Symposium 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Single-Bore Tunnel Analysis Underway <input checked="" type="checkbox"/> Adoption of the Envision Sustainability Management System <input checked="" type="checkbox"/> Development of an Integrated Schedule <input checked="" type="checkbox"/> Railway Gardens Notice of Motion Explorative Informal Steering Committee Meetings <input checked="" type="checkbox"/> TOD Implementation Strategy development 	<ul style="list-style-type: none"> <input type="checkbox"/> Finalize the Single-Bore Tunnel Analysis <input type="checkbox"/> MSF application <input type="checkbox"/> Railway Gardens Notice of Motion Scoping Report Back <input type="checkbox"/> Finalize TOD Limited-Term Developments recommendations



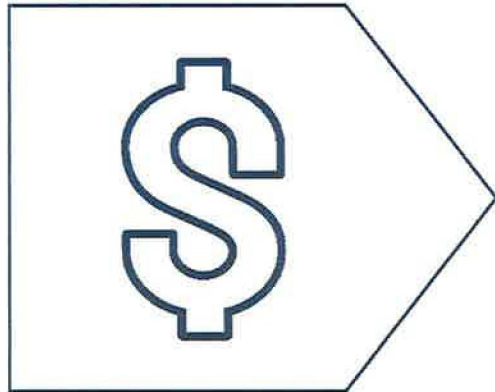
Project Risk Assessment – Key Risks



- Complexity of construction in downtown
- Team Readiness
- Mega Project Unknown Unknowns



Project Expenditures



Expenditures to Date:

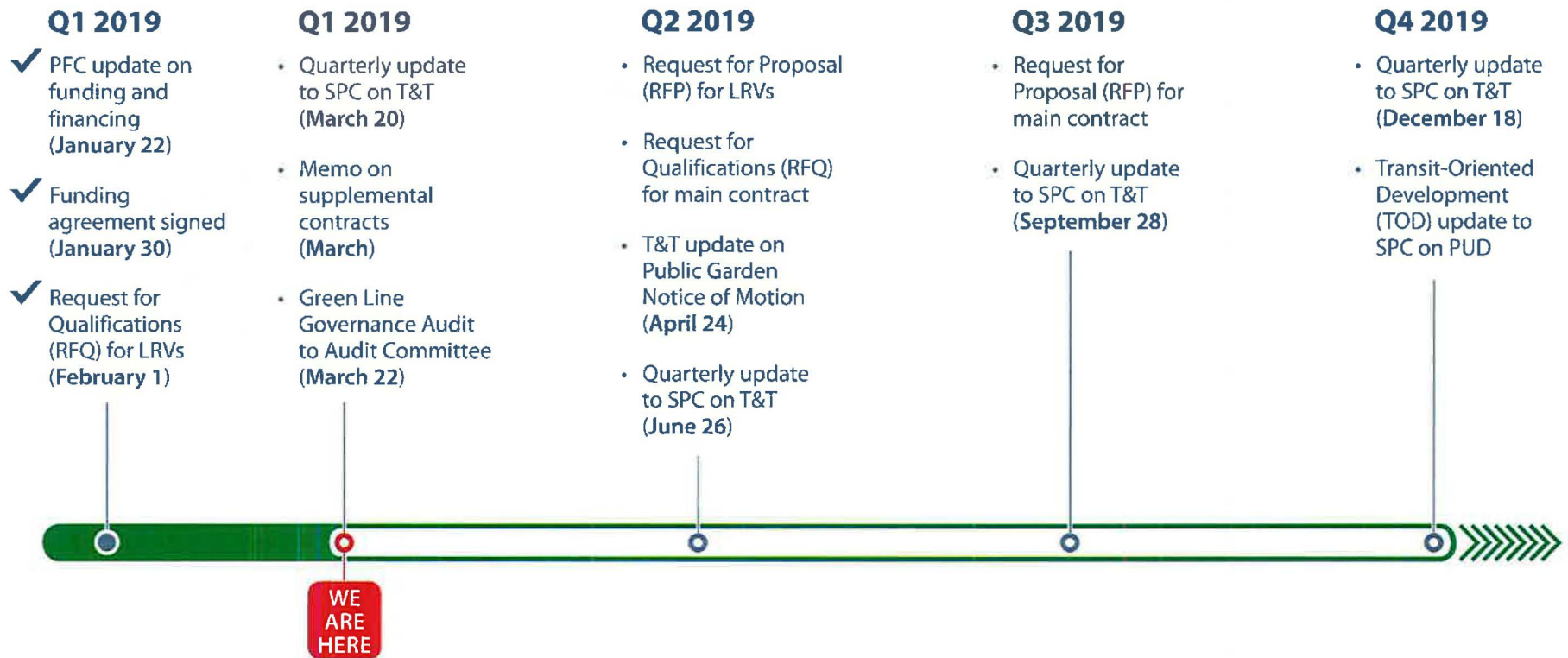
- \$370 Million since inception
 - Design & Engineering
 - Land Acquisition
 - Enabling Works

Committed Costs:

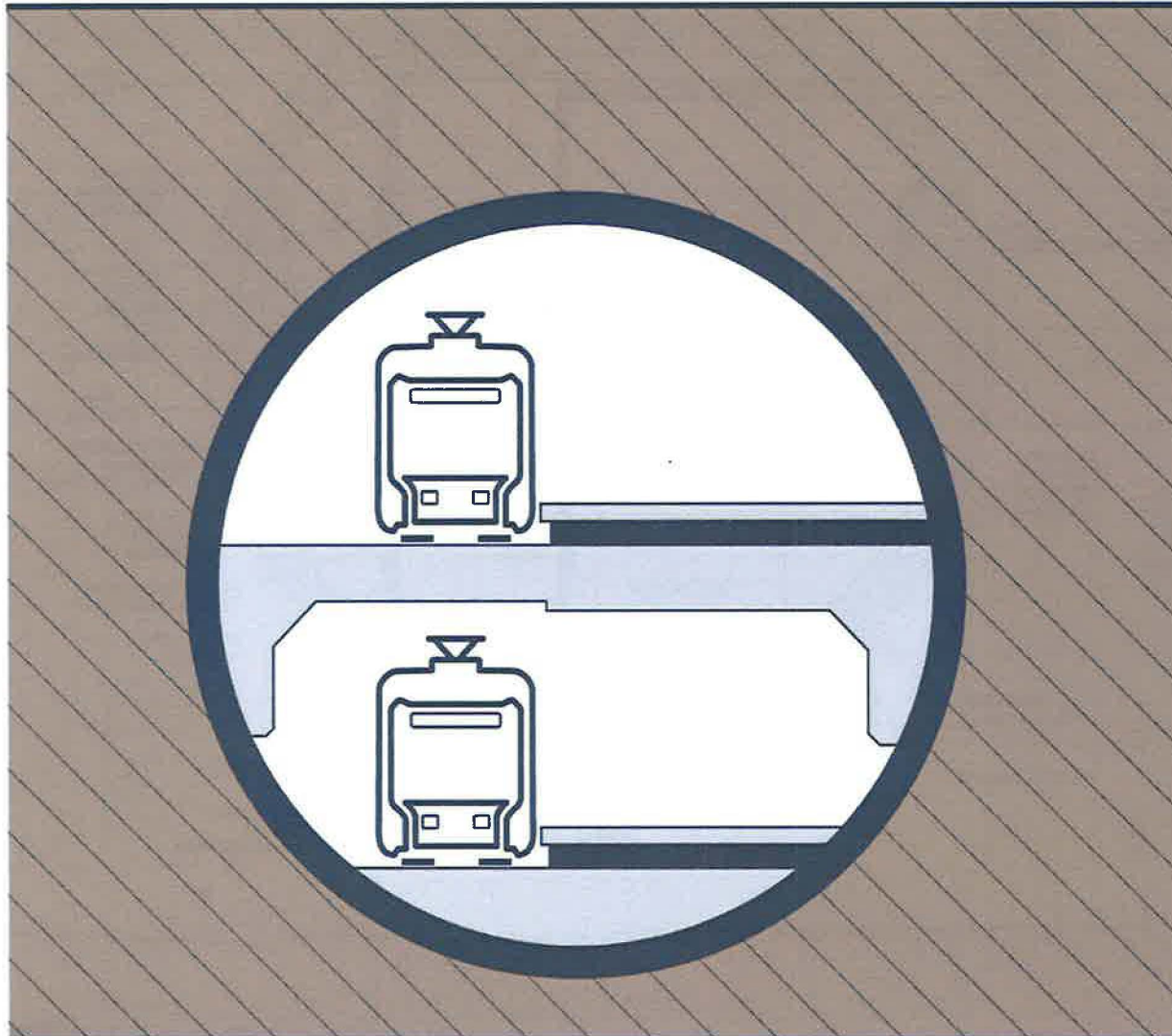
- \$515 million in total commitments for the Project



Green Line LRT: Project Timeline

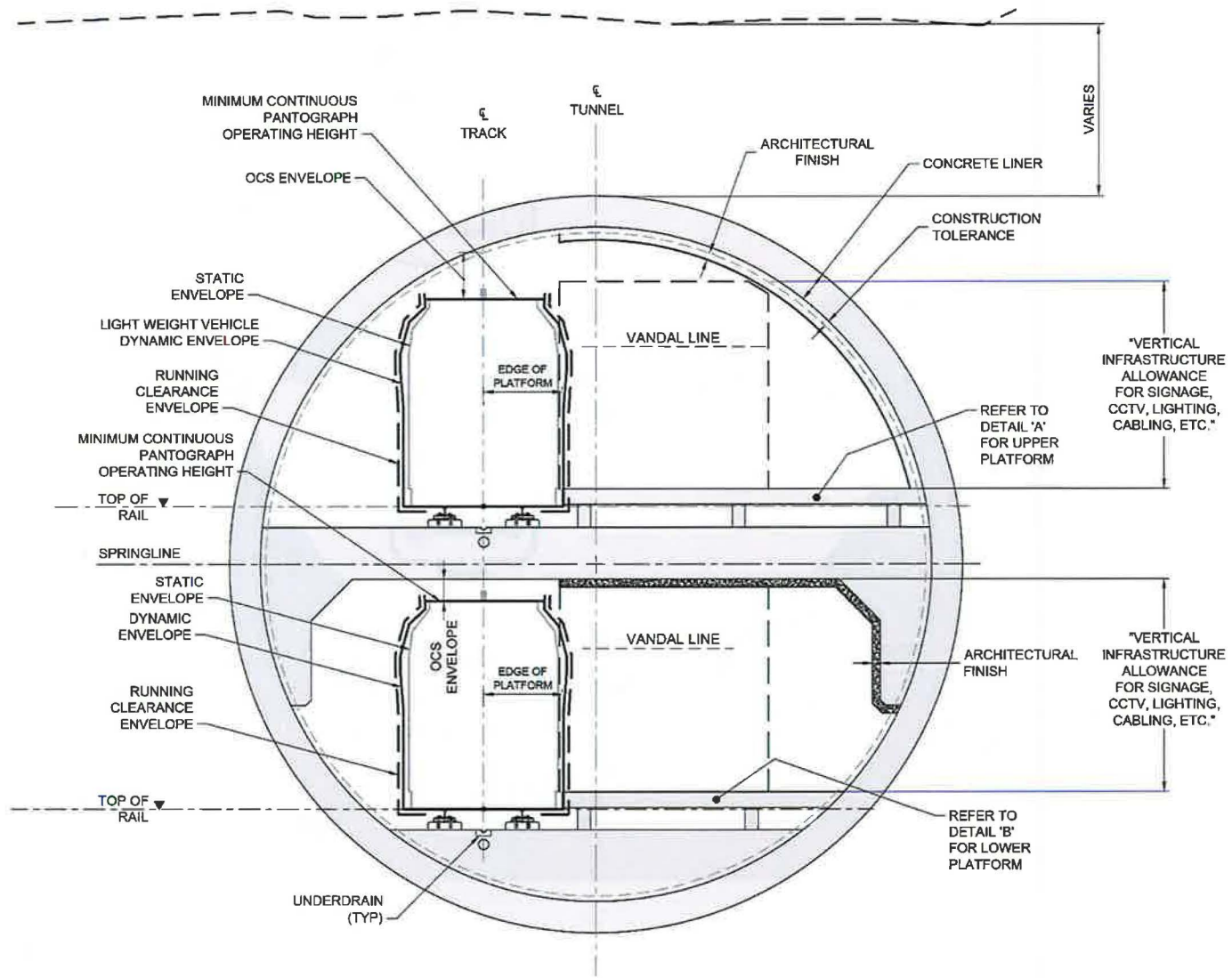


Single-Bore Cross Section at Stations

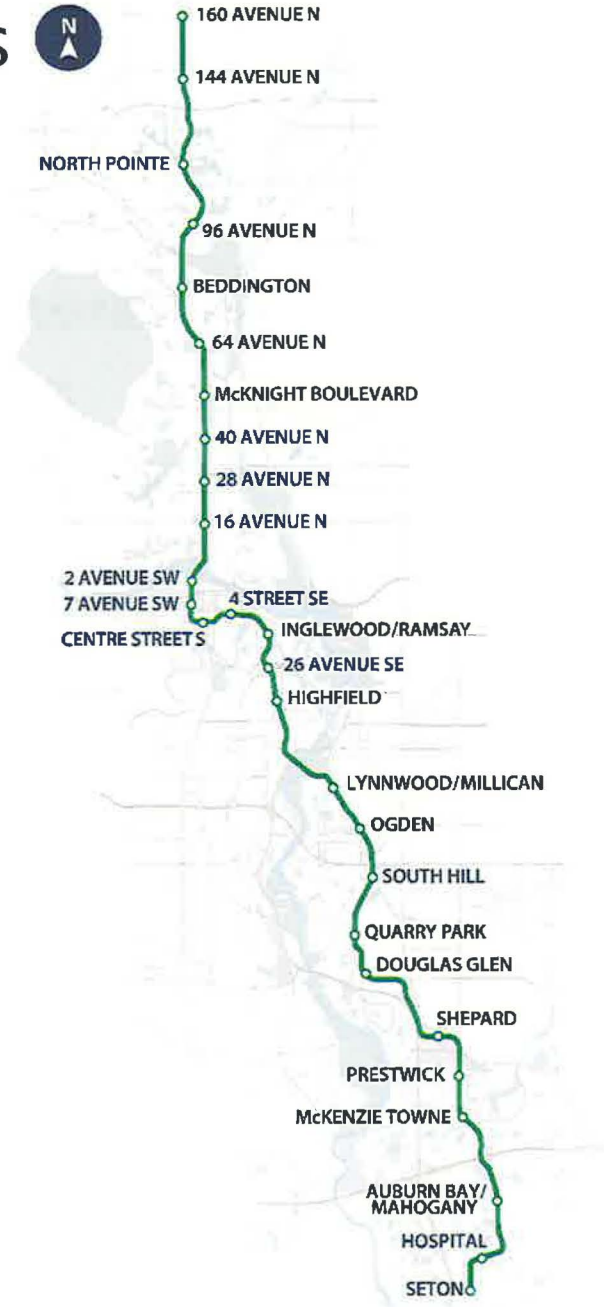




Single-Bore Cross Section at Stations



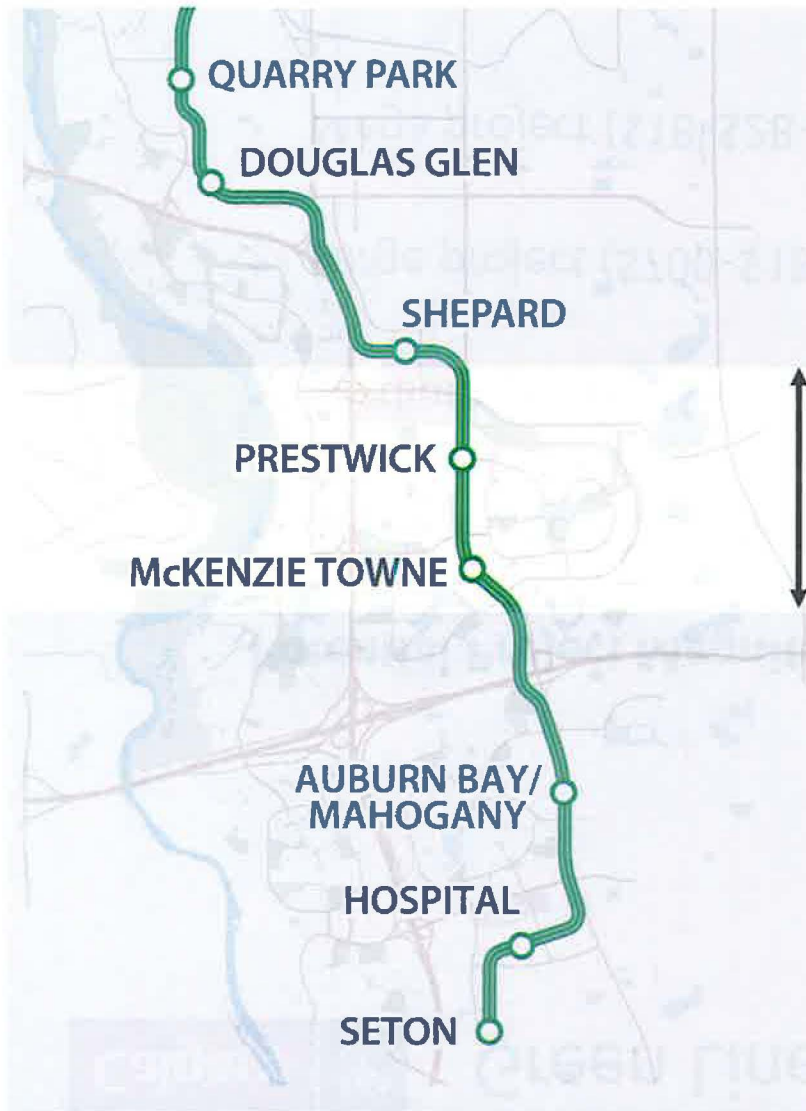
Green Line LRT Extensions



Potential Project Magnitude:

- Small project (\$250-\$400M)
- Medium project (\$400-\$700M)
- Large project (\$700-\$1B)
- Mega project (\$1B-\$2B+)

Green Line LRT Extensions



Small project (\$250-\$400M)

Shepard to McKenzie Towne
2.7 km, 2 stations

- 4,200 daily transit trips
- 12,700 population
- 5,200 jobs
- 1,800 tonnes GHG reduction
- Adds 0 TOD areas
- Connects to 2,500 affordable housing units
- Connects to 10 existing community services
- Net operating cost: -\$3M



Green Line LRT Extensions

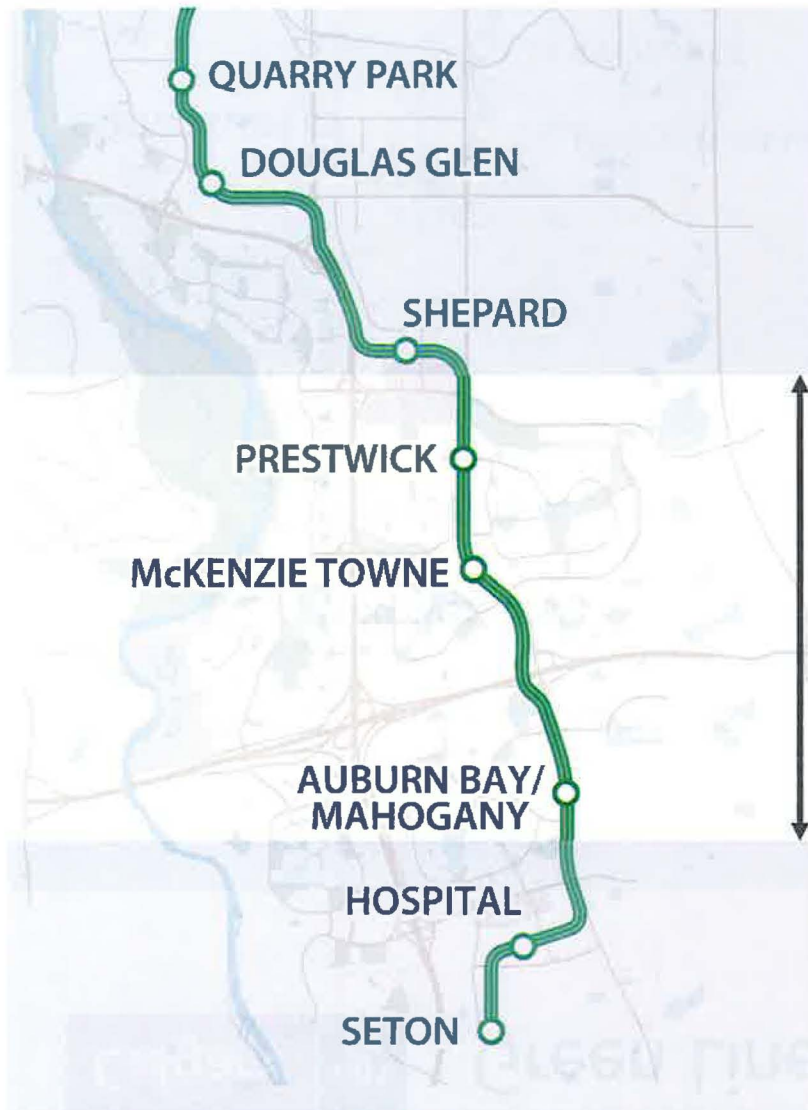


Medium project (\$400-\$700M)

16 Avenue N to 40 Avenue N
2.4 km, 2 stations

- 7,900 daily transit trips
- 13,900 population
- 5,900 jobs
- 3,300 tonnes GHG reduction
- Adds 2 TOD areas
- Connects to 5,000 affordable housing units
- Connects to 38 existing community services
- Net operating cost: \$7M

Green Line LRT Extensions



Medium project (\$400-\$700M)

Shepard to Auburn Bay/Mahogany
5.3 km, 3 stations

- 7,300 daily transit trips
- 19,550 population
- 5,600 jobs
- 3,100 tonnes GHG reduction
- Adds 0 TOD areas
- Connects to 4,600 affordable housing units
- Connects to 16 existing community services
- Net operating cost: -\$3M

Green Line LRT Extensions



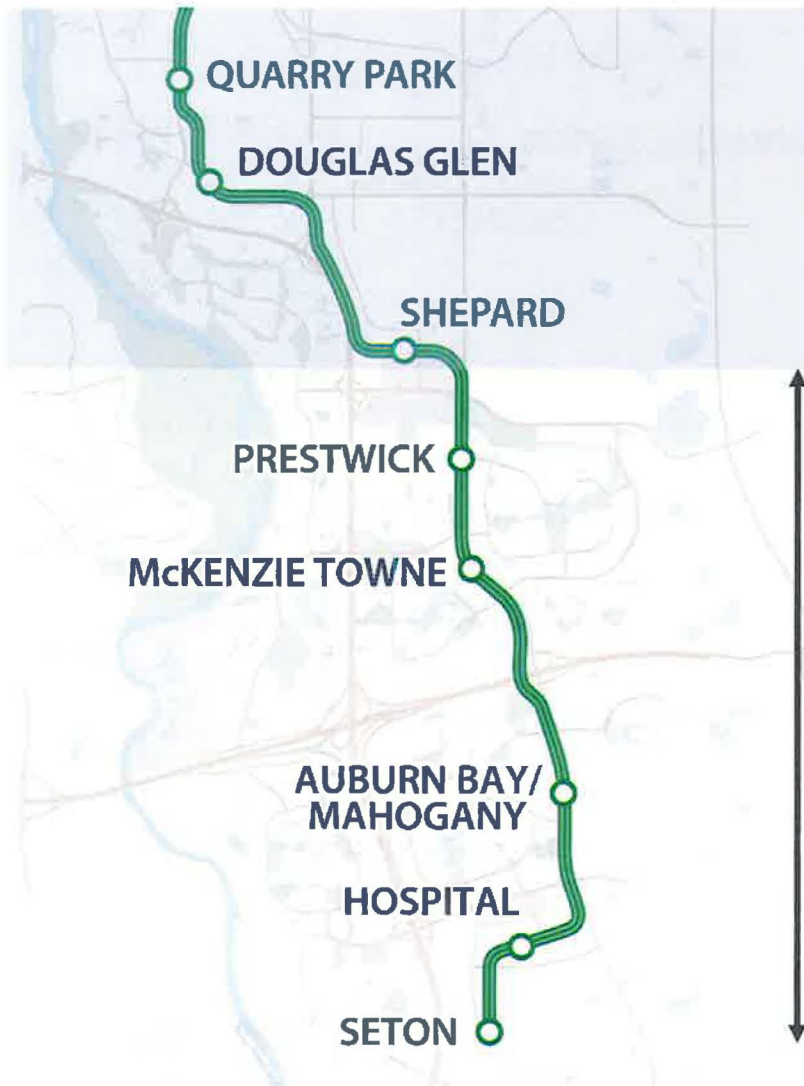
Large project (\$700-\$1B)

16 Avenue N to 64 Avenue N
5.2 km, 4 stations

- 26,900 daily transit trips
- 25,275 population
- 9,600 jobs
- 6,900 tonnes GHG reduction
- Adds 3 TOD areas
- Connects to 7,800 affordable housing units
- Connects to 65 existing community services
- Net operating cost: \$8M



Green Line LRT Extensions



Large project (\$700-\$1B)

Shepard to Seton
8.4 km, 5 stations

- 12,600 daily transit trips
- 25,550 population
- 6,200 jobs
- 5,300 tonnes GHG reduction
- Adds 0 TOD areas
- Connects to 9,400 affordable housing units
- Connects to 23 existing community services
- Net operating cost: -\$1M

Green Line LRT Extensions

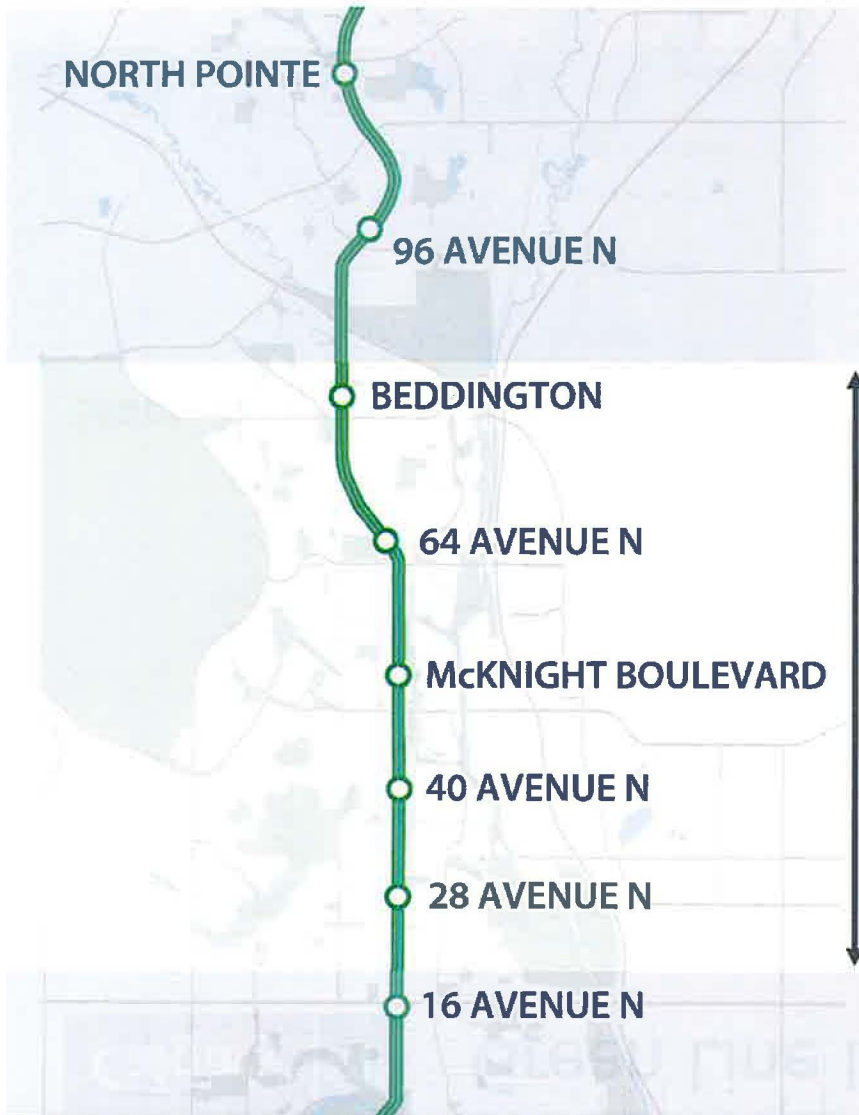


Large project (\$700-\$1B)

16 Avenue N to 40 Avenue N and Shepard to Auburn Bay/Mahogany
7.7 km, 5 stations

- 15,200 daily transit trips
- 33,450 population
- 11,500 jobs
- 6,400 tonnes GHG reduction
- Adds 2 TOD areas
- Connects to 9,600 affordable housing units
- Connects to 54 existing community services
- Net operating cost: \$5M

Green Line LRT Extensions

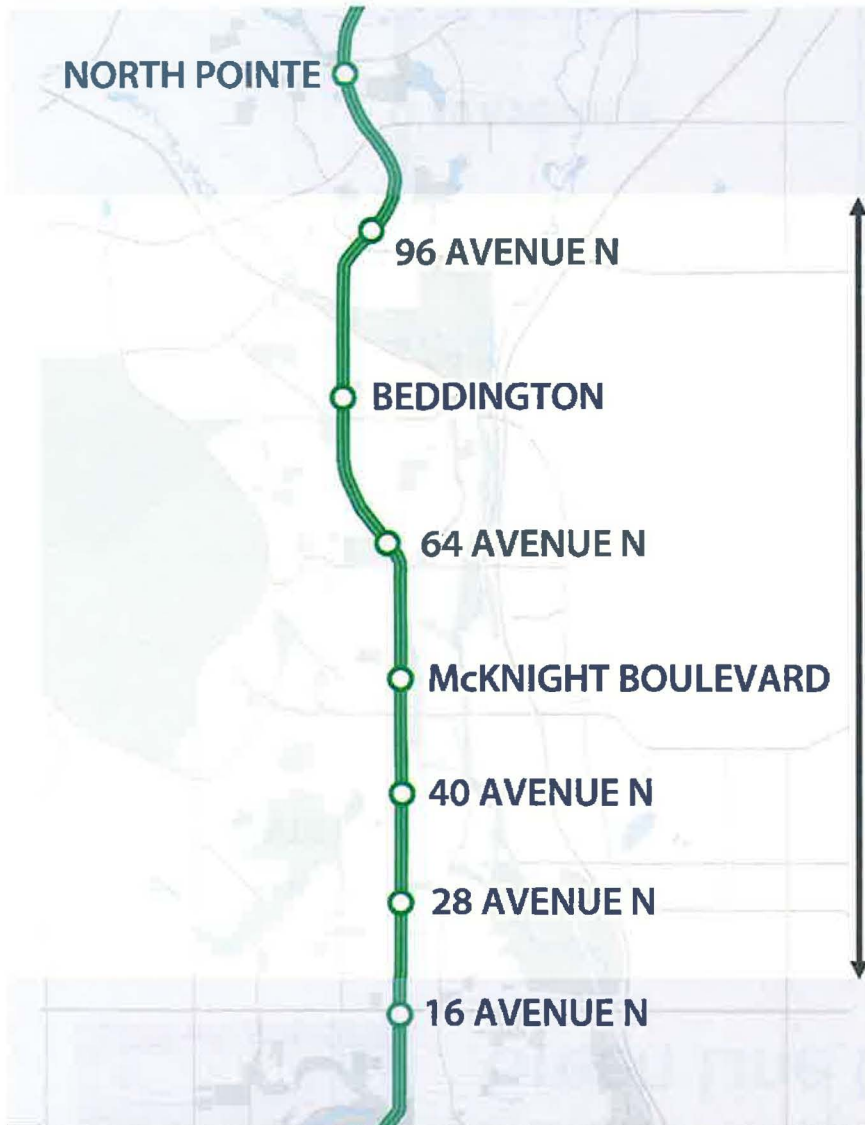


Mega project (\$1B-\$2B+)

16 Avenue N to Beddington
7.0 km, 5 stations

- 30,800 daily transit trips
- 32,950 population
- 11,300 jobs
- 12,900 tonnes GHG reduction
- Adds 3 TOD areas
- Connects to 9,500 affordable housing units
- Connects to 92 existing community services
- Net operating cost: \$6M

Green Line LRT Extensions

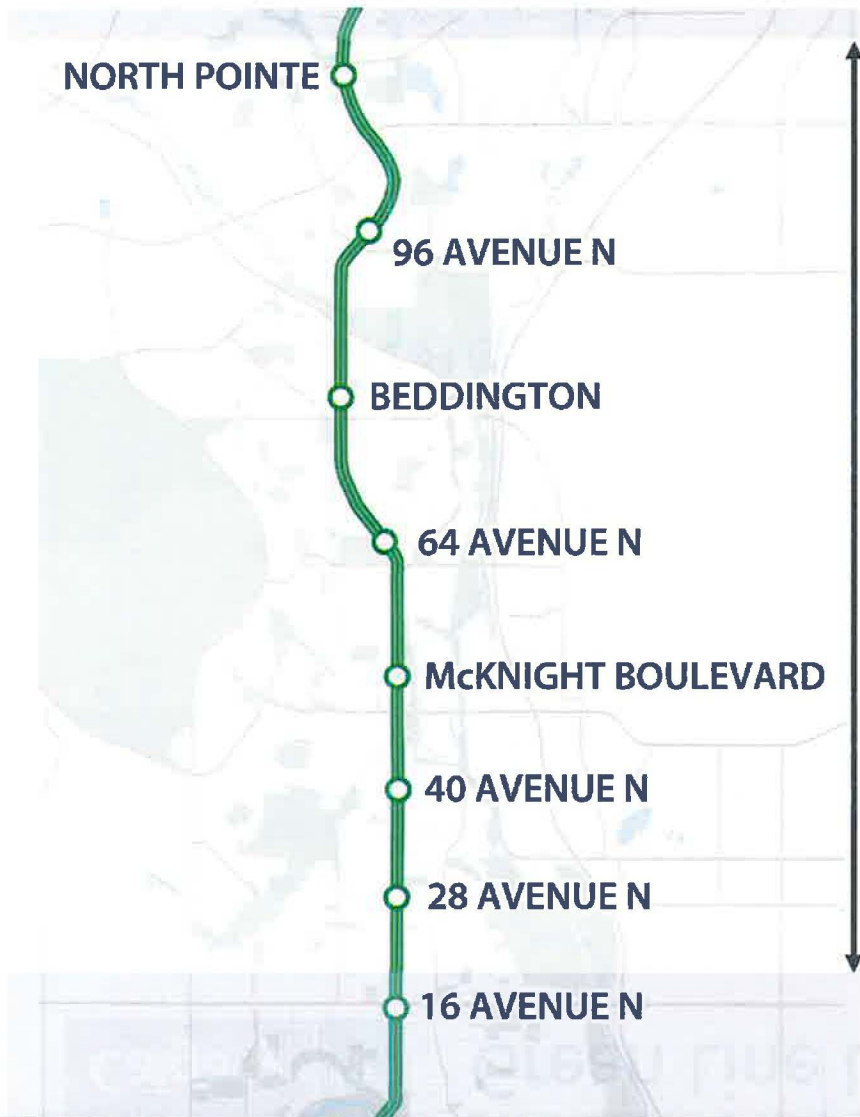


Mega project (\$1B-\$2B+)

16 Avenue N to 96 Avenue N
8.8 km, 6 stations

- 36,300 daily transit trips
- 43,000 population
- 12,900 jobs
- 15,200 tonnes GHG reduction
- Adds 4 TOD areas
- Connects to 11,100 affordable housing units
- Connects to 109 existing community services
- Net operating cost: \$5M

Green Line LRT Extensions



Mega project (\$1B-\$2B+)

16 Avenue N to North Pointe
10.9 km, 7 stations

- 42,300 daily transit trips
- 48,575 population
- 14,800 jobs
- 17,700 tonnes GHG reduction
- Adds 4 TOD areas
- Connects to 11,750 affordable housing units
- Connects to 125 existing community services
- Net operating cost: \$6M



Questions?