



The Green Line LRT

Setting the Vision



HATCH

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Setting the Vision

Green Line LRT Project Summary



The Green Line LRT project is Calgary’s largest-ever infrastructure project. It is being planned holistically, with consideration of the needs and aspirations of communities and transit users, developers, and long-term city planning. The Hatch team, along with The City of Calgary, developed and implemented a unique, four-layered planning and engagement process that served as the foundation for the holistic planning approach. It culminated in the achievement of funding and City Council approval for the first stage of the project.

Green Line Stage 1 fast facts

-  20 km of track
-  8 bridges
-  1 km of elevated track
-  4 river crossings
-  14 LRT stations
-  11 park-and-ride facilities
-  13 transit hubs
-  3 tunnels
-  70 low-floor vehicles
-  4 km Centre City tunnel
-  1 maintenance and storage facility
-  \$4.65B capital construction cost

“A strong public transit system that is well integrated into the very fabric of our communities contributes to a vibrant city...”

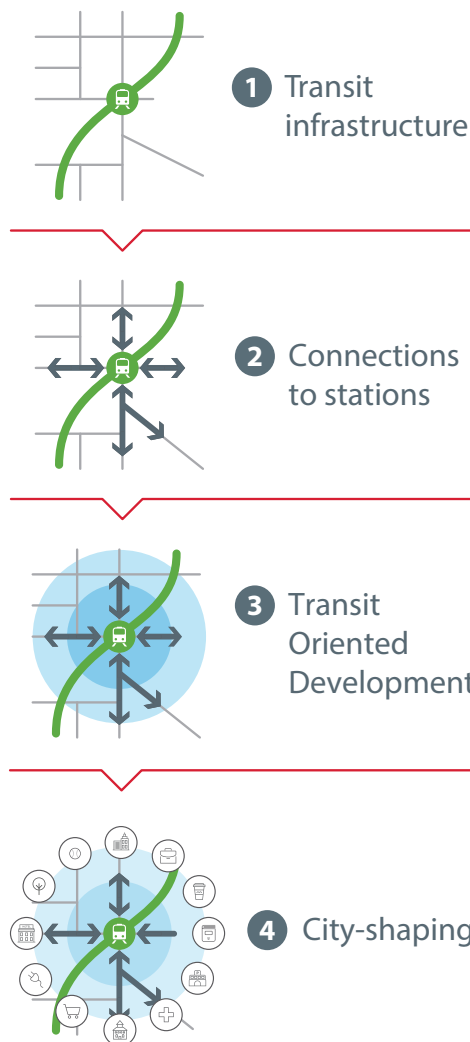
– Naheed Nenshi, Mayor of Calgary

Nature of the Project

The Green Line Light Rail Transit (LRT) is being planned holistically with consideration given to the needs and aspirations of communities and transit users, developers, and long-term city planning. The Green Line objective is to be both a transit system and a platform for development and City Shaping. Over the course of two years, this transparent approach to planning helped identify opportunities to integrate and leverage the Green Line to serve cultural and commercial hubs in the city. The LRT alignment and station locations have been refined throughout the process to maximize ridership potential, community integration and accessibility. Hatch, as prime consultant for planning, design engineering, and program advisory services, has served as part of an integrated project team with The City of Calgary. Time has been invested in cultivating strong relationships with community stakeholders to build trust, understanding and goodwill among Green Line project neighbours. These relationships have resulted in building strong support for the project.

Along with Transit Oriented Development (land use planning that coincides with transit) and City Shaping (investing in people, places and programs and connecting them with reliable transportation), the four-layered approach serves as the framework for the engagement process for Stage 1 of the Green Line project:

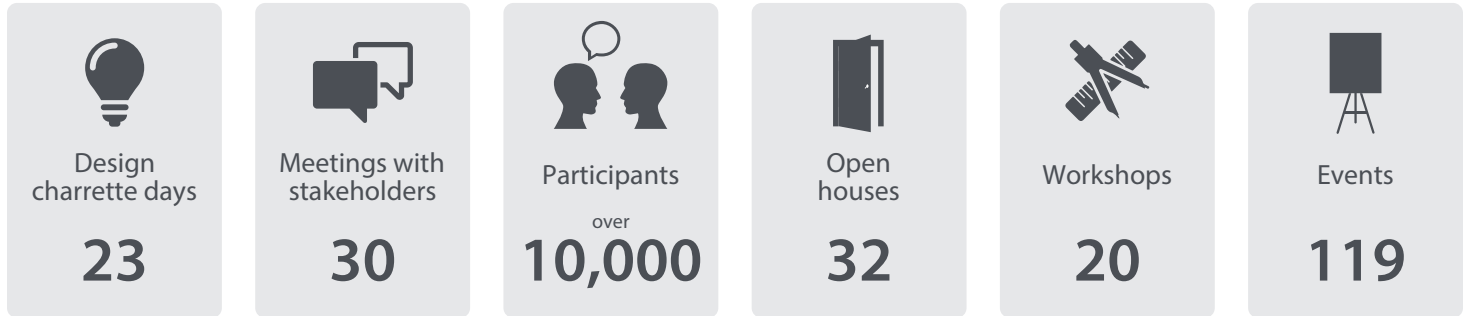
Four-Layered Approach



- **Layer 1 – Transit Infrastructure:** key core transit infrastructure elements for the project. This layer is the catalyst for Layers 2, 3, and 4, and includes the following key elements:
 - LRT track
 - Scalable station platforms that integrate into each community
 - Station plazas, and Park and Ride facilities
 - Pedestrian crossing/amenities
 - Cycling amenities
 - Storage and maintenance facilities
- **Layer 2 – Connections to Stations:** infrastructure that connects riders to stations, including integration of pedestrian, cycling, bus, and automobile connections to the Green Line so that stations are safely and conveniently accessible to all users – this is key for Green Line ridership.
- **Layer 3 – Transit Oriented Development (TOD):** focuses on future growth and development close to transit stations. The result is the provision of affordable and active lifestyle opportunities that support the use of transit in the community.
- **Layer 4 – City Shaping:** linkage elements between the transit corridor and other municipal facilities and services. The Green Line offers the opportunity for the city to re-prioritize, and potentially accelerate, other initiatives to leverage the investment in transit infrastructure as a catalyst for community integration and connectivity.

Using this four-layered process, the engagement program for the Green Line project was extensive and included a variety of tactics to reach stakeholders, as described below.

Effort and Complexity



The engagement program has involved community and business leaders, property owners, stakeholder groups, and the public so that the diverse people of Calgary can all have a say in this influential project. The following key engagement processes and tactics outline staff efforts, commitments and challenges:

Design Charrettes

Six design charrettes brought together the project working team, including City planners and policy makers, a unique developer advisory group, and the public to develop community design concepts around specific Green Line stations. This process compressed six months of typical land use/infrastructure planning into three to five days for each key project area. Through hands-on, “roll-up-your-sleeves” workshops, Calgarians took part in understanding and influencing the design. Their input was invaluable in understanding the existing community environment, as well as longer-term aspirations for the community areas resulting from the new Green Line.



Community Connection to Development activity

Station Area Workshops and Open Houses

To understand opportunities and threats that could impact the communities surrounding stations, 20 Station Area Workshops were conducted. The outcomes influenced decisions on station locations and LRT alignment. Gaps in connectivity were also addressed.

A series of open houses were also held so that stakeholders could stay up to date and provide their input on the evolving project plans for the Green Line.



Pains & Gains activity with community representatives

Community Outreach and Communications

Community outreach and communications initiatives focused on raising awareness of the project and encouraging Calgarians to provide input for the planning process. Charrettes, workshops and open houses were concentrated on station areas, while the community outreach focused on a broader audience.



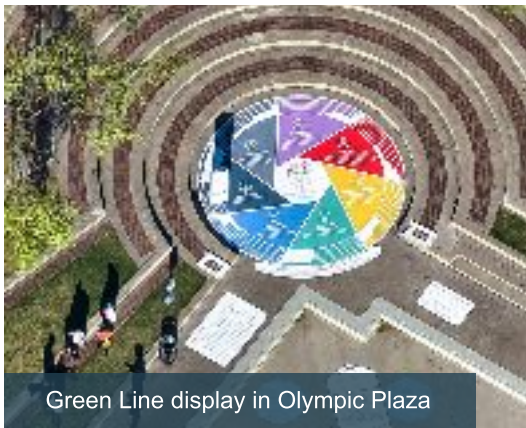
Green Line Open House

Green Line Speaker Series

The Green Line speaker series was implemented to raise awareness and educate Calgarians and City Council on the opportunities the project will bring to Calgary. Four sessions were held; these included panel discussions and presentations by subject matter experts from The City, Hatch, and industry professionals. The series attracted diverse crowds from all areas of Calgary.

Green Line Ambassador Program

The Green Line Ambassador Program was initiated to raise city-wide awareness of the project. The ambassadors were summer students hired to assist with planning and engineering elements of the project, and to serve as project ambassadors representing the project at over 20 festivals and events throughout Calgary.



Green Line display in Olympic Plaza



Pop-up events

Pop-up events focused on making project information more broadly available to Calgarians by bringing the information to heavily-trafficked areas. Typically, events involved kiosk-style setups with display boards and brochures. Project staff were available to discuss and answer questions.



Pop-up event in a local community hub

Social, Economic and Other Benefits

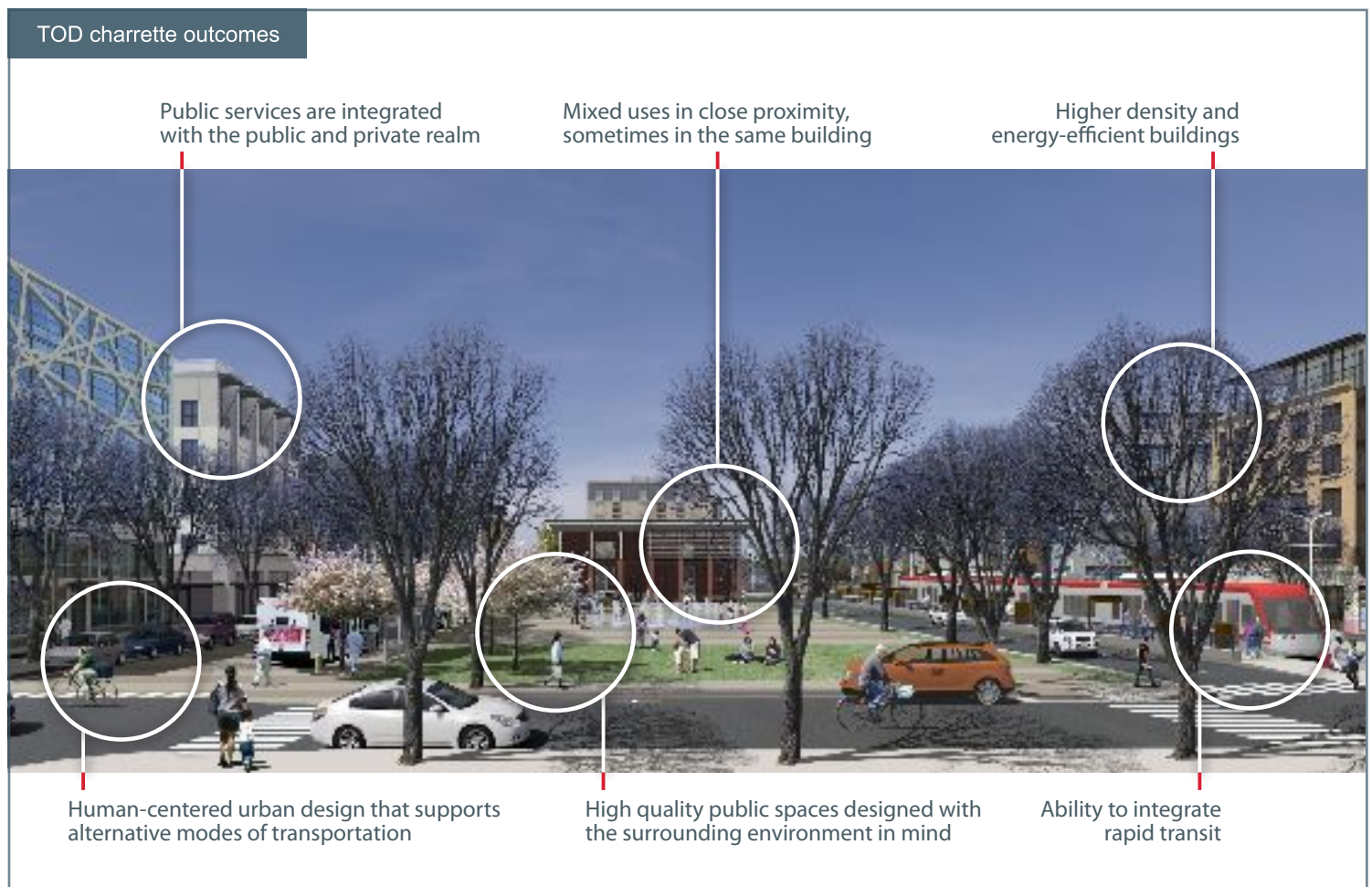
As related to the CCE Awards judging criteria appropriate to this award theme category, benefits of the Calgary Green Line LRT Engagement Program include the following:

Social:

- 27+ communities directly served.
- An estimated 90,000 – 140,000 person-trips per day on opening day.
- Driving a vehicle will become a choice —not a necessity— for many Calgarians.
- Opportunities available for connections to other regional municipalities including Airdrie, Crossfield, Okotoks, Black Diamond, Turner Valley and High River.
- More than 20,000 direct and indirect jobs created through the construction of the Green Line.
- Improved access to community amenities and services.

Economic:

- \$15.6 billion net increase in GDP from construction and operation of the Green Line.
- \$1.9 billion increase in property values, resulting in \$16 million in additional non-durable goods spending.
- Station locations were strategically selected based on proximity to existing facilities such as health centres, schools, and grocery stores, or the potential for future development of these services.
- Opportunities for affordable housing were also highlighted.



Added Value:

- Added value outcomes of the four-layered approach are the result of leveraging the infrastructure investment to integrate the economic, social, environmental and cultural needs of the city.

Environmental Value:

- The addition of the Green Line will result in fewer vehicles on the road and a reduction in approximately 30,000 tonnes of CO₂ on an annual basis; the four-layered approach and engagement process provides further assurances that potential environmental issues are identified and addressed.

Innovation:

- The primary innovation of the Engagement Program is that it is the most comprehensive engagement program implemented on a City of Calgary project to date. The effective application of the four-layered approach as the framework for engagement and decision-making, and the strategic implementation of a variety of engagement tactics and processes, has provided valued outcomes for the project. Lessons learned throughout this process will be retained and implemented on future City of Calgary projects, as appropriate.

Technical Excellence:

- The project team was provided with direct hands-on support of subject matter experts for all technical project elements at engagement events to interact with attendees.



Board game engagement activity