
Hamilton LRT Project Public Information Centre 1

Meeting Purpose

Building on previous work and consultation, the City of Hamilton and Metrolinx have embarked on an update to the previously approved 2011 Environmental Project Report.

This update follows the Transit Project Assessment Process (TPAP) and addresses the changes that have been proposed in terms of:

- Address minor design modifications to the 2011 EPR LRT (the B-Line) alignment.
- Complete the assessment of a spur line (the A-Line) along James Street North, connecting the new West Harbour GO Station and potentially down to the City's redeveloping Waterfront area.
- Complete the assessment of an Operations, Maintenance and Storage Facility (OMSF) where light rail vehicles would be maintained and stored.

The purpose of this Public Information Centre is to:

- Present the updated design for the A-Line and B-Line LRT and associated studies.
- Provide information on the Transit Project Assessment Process (TPAP).
- Obtain your input and views on key elements of the project to assist us in refining the design concept.
- Staff are available from the City of Hamilton, Metrolinx and the consultant team to explain the materials and answer your questions.



↑ Scott Park Visualization

Project Introduction: The Vision

Hamilton has established a vision to guide the development of Rapid Transit across the city:

Rapid Transit is more than just moving people from place to place. It is about providing a catalyst for the development of high quality, safe, sustainable and affordable transportation options for our citizens, connecting key destination points, stimulating economic development and revitalizing Hamilton. Rapid Transit planning strives to improve the quality of life for our community and the surrounding environment, as we move Hamilton forward.



↑ McMaster Visualization

What is the Hamilton LRT project?

The Hamilton LRT project is a Light Rail Transit (LRT) project that will provide frequent and limited stop service along Main West, King Street and Main East; connecting McMaster University to Queenston. It also includes a short connection from King Street, via James Street, to West Harbour GO Station and the Waterfront, as well as a high order pedestrian connection to the Hamilton GO Centre.

In 2015, the Province of Ontario announced \$1 billion in funding for the Hamilton LRT project.



Sustainable environment

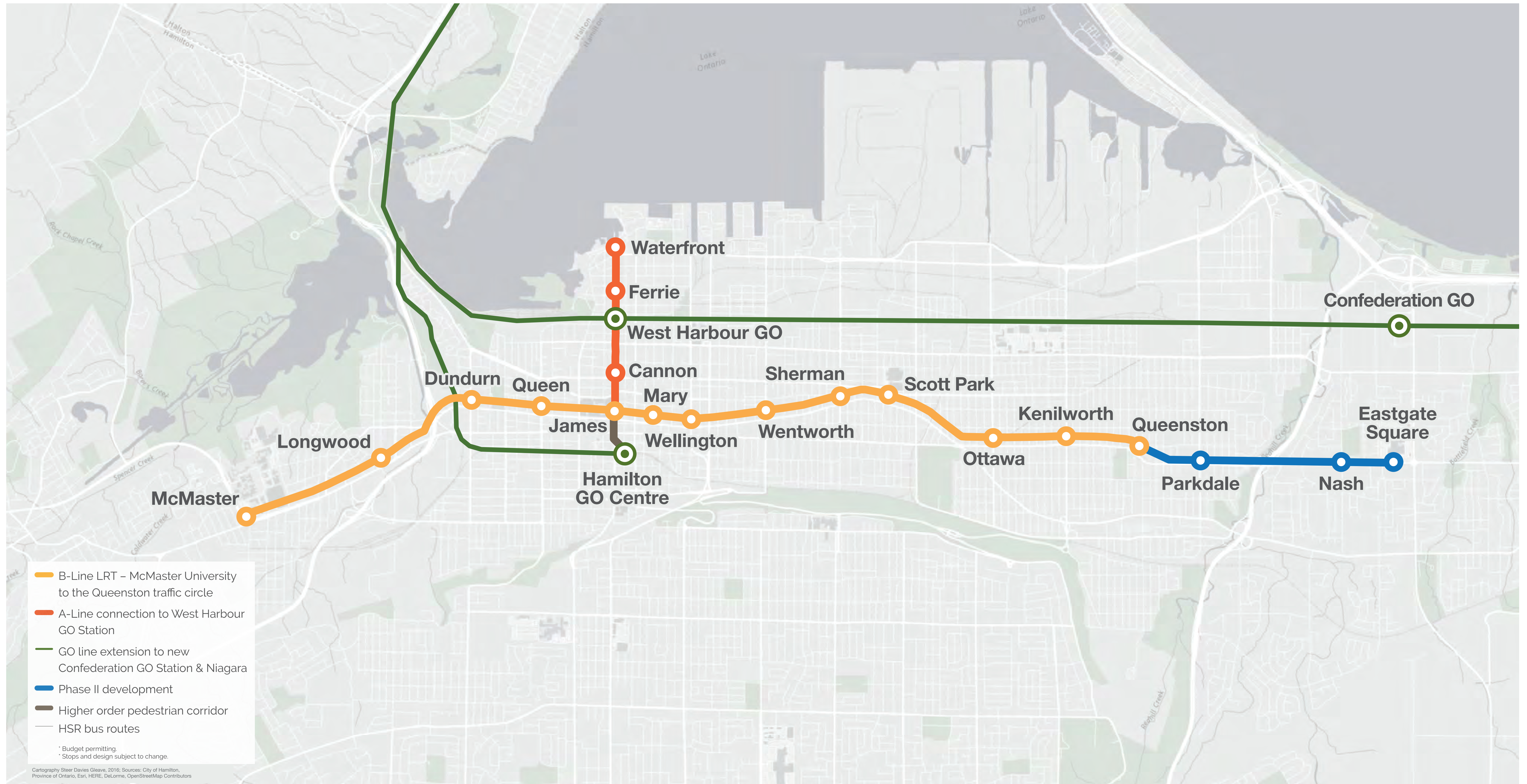


High quality of life



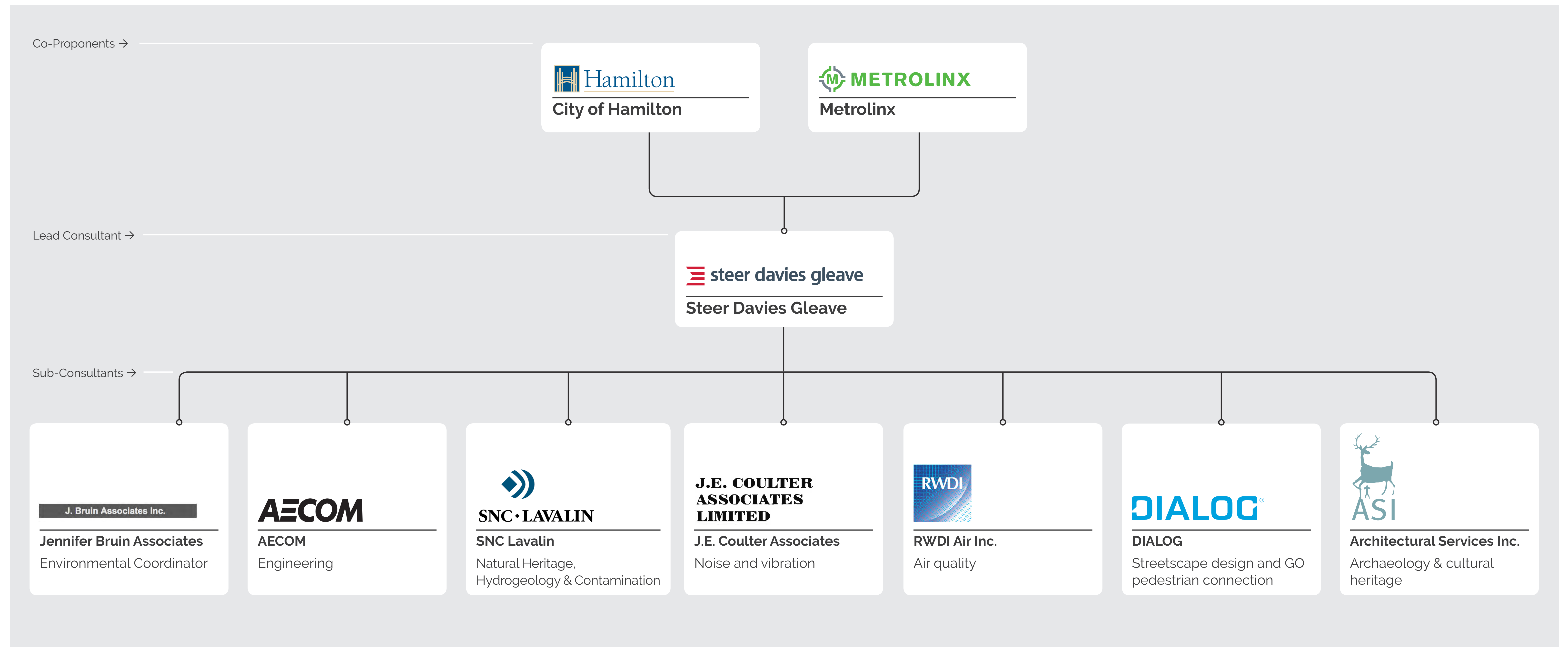
A competitive economy

Hamilton LRT Project

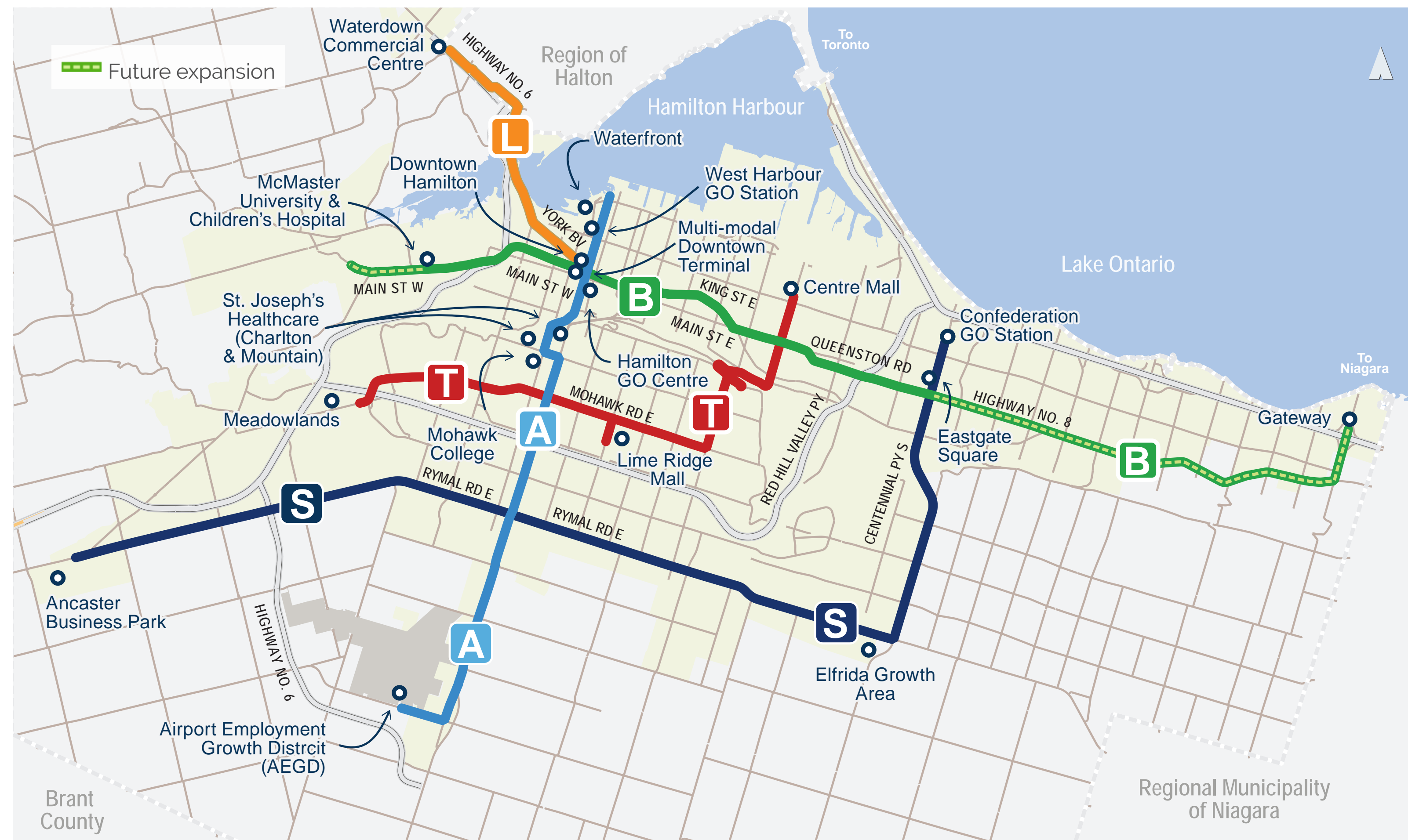


Hamilton LRT Project Team

The following agencies and companies are responsible for completing various components of the Environmental Project Report update:



Policy Context



↑ Hamilton long term rapid transit system "B.L.A.S.T"

Hamilton's 2007 Transportation Master Plan developed the concept of the BLAST network – a system of five interconnected rapid transit lines (comprising Light Rail Transit and Bus Rapid Transit), supported by the conventional bus network.

The proposed LRT fulfils a substantial portion of the B-Line proposal and establishes the beginning of the A-Line with the connection to West Harbour GO Station and the Waterfront.

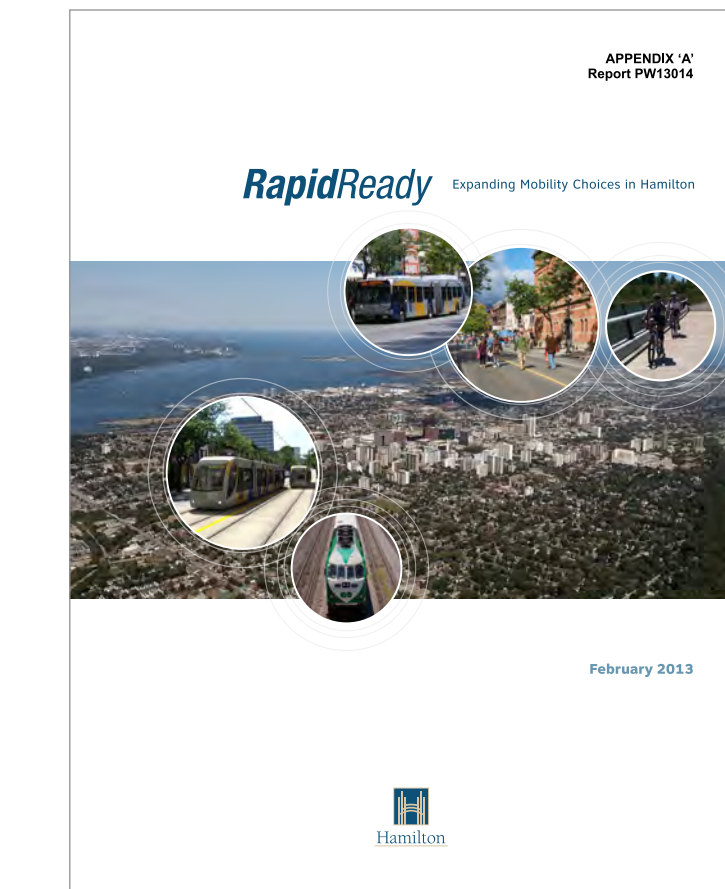


Provincially / regionally

Places to Grow was created by the Province of Ontario to guide the growth of the GGH (Greater Golden Horseshoe) region through to 2031.

To accompany Places to Grow, Metrolinx developed The Big Move Regional Transportation Plan in November 2008. This sets out many goals to improve the state of transportation across the Greater Toronto and Hamilton Area, including construction of a "comprehensive regional rapid transit network".

In 2010, the Metrolinx Benefits Case Analysis identified LRT as the preferred technology for the B-Line corridor.



Other relevant studies

The City has completed a wide variety of studies and established supporting policies that inform and support the development of the rapid transit network.

- City of Hamilton Official Plan
- Downtown Secondary Plan
- Rapid-Ready
- Growth-Related Integrated Development Strategy (GRIDS)
- Transportation Master Plan Update
- City-wide Planning Principles and Design Guidelines

Benefits of Light Rail Transit



Safe for passengers

- Surveillance cameras, emergency communications located at stops.
- Passenger assistance alarms and emergency voice communication provided on all LRVs.



Fast and reliable

- Segregated LRT operation avoids traffic congestion and improved service reliability.
- Frequent service: typically every 6 minutes during peak times and 10–15 minutes throughout most of the day.



Accessible

- Level boarding with no steps and meeting accessibility standards.
- Wayfinding systems guide people with visual impairments.



Superior passenger experience

- Smooth, quiet, comfortable ride quality.
- Large windows, natural daylight.
- No local emissions.

There are many benefits of Light Rail Transit that will help enhance the user's experience by making their trip smoother and more integrated.



Integrated fares

- Fare payment will be integrated with GTHA wide Presto Card system ensuring seamless access between all transit modes.
- Proof of payment system will facilitate quick boarding at all doors.
- Flexible payment methods.



Flexible travel times

- Service up to 20 hours per day.
- Estimated travel time from McMaster to Queenston is approximately 24 minutes.
- Additional service can be provided for special events.



Clear routes

- Transit network maps provided at stops and on board trains.
- Next-stop announcements on trains.
- Next train displays.



Incorporates cycling

- Bikes will be permitted on LRVs during most of the day.
- Bikes may be excluded during peak hours.
- Cycle lane connections and facilities in select corridor segments provides easy access for cyclists.

LRT System at a Glance



- 1 Overhead wires
- 2 Driver controlled
- 3 Transit shelter
- 4 Step-Free access and level boarding
- 5 Segregated LRT with curb
- 6 Landscaping
- 7 Pleasant walking areas

LRT Systems: The Key Components



Modern vehicles

- A single vehicle is 30m long and carries about 130 passengers comfortably. Equivalent to 2,5 buses.
- Low floor with easy access for mobility aids, strollers and bicycles.
- Join units for more capacity. In the long-term twinned vehicles, 60m long, will carry 260 passengers.



LRT stops

- Stops to be integrated into the streetscape.
- Low platforms for level step-free access.
- Passenger information at stops.
- Proof-Of-Payment fare system with no fare barriers.



Track

- Light Rail Vehicles (LRV) run on steel track.
- Steel track level with the road surface.
- Track separated from other traffic to provide quick and reliable journeys.
- Modern vehicle design reduces noise and vibration.



Electrically powered

- Powered from overhead wires.
- Poles support the wires and road lighting, traffic signals and signs.
- Poles can be located in the centre between the tracks or at the side of the roadway.
- LRVs emit no pollution at their point of use.

Light Rail Transit will be integrated with the streetscape, creating a seamless link between public transport and the urban realm.



An integrated network

- LRT services are integrated with bus transit services, and with GO regional bus and GO rail services.
- Integrated pedestrian and cycling network.



Operations, Maintenance and Storage Facility (OMSF)

- Includes overnight storage for vehicles, cleaning, maintenance and repair facilities, LRT control room, management offices and staff facilities.
- Proposed site is near Longwood Road and Aberdeen Avenue.



Electrical substations

- Convert electricity from the main grid to 750 VDC for the LRT line.
- Located approximately every 1.5 kms along the route and at terminals.
- Screening designed to fit into the local streetscape and may be integrated with public art.



Integrated in the streetscape

- Light Rail is integrated into a vibrant urban streetscape.
- Opportunities to create more livable streets through an enhanced urban realm.
- Opportunities for placemaking.
- Opportunities for public art.

Operations, Maintenance and Storage Facility

The project will require an Operations, Maintenance and Storage Facility (OMSF), which serves several key purposes.

Based on a review of multiple potential sites along the LRT corridor, a preferred OMSF site on lands south of Chatham Street, near Frid Street was identified.

The project team has developed a concept plan for the facility to confirm its size and functional layout, taking into account opening day service levels and long-term expansion requirements.

Functions:

- Control and maintenance base for operations
- System administration centre
- Operations control centre
- Vehicle servicing and report
- Daily vehicle cleaning
- Overnight storage yard



↑ Location area for the OMSF site



↑ Rendering of interior of Eglinton Crosstown OMSF facility



↑ Rendering of exterior of Eglinton Crosstown OMSF facility

Integrated Transit Network

The LRT will connect with local and regional transit services, GO bus and GO rail services. This will provide an integrated transit network, enabling passengers to move as easily as possible, in and around the city and the region.

Locally

The LRT will form the core of the east-west transit network in the lower city, and both support and be supported by the network of transit services throughout the city.

Regionally

The LRT will form a key part of the regional network, and connect with regional rail and bus services, providing a choice of transfer locations.

This connectivity, together with the planned improvements to the regional services, will make travel to Hamilton easier from all over the region.



↑ Integrated transit network

Planning for Pedestrian Oriented Corridor

“Complete streets create a balance between the movement of pedestrians, cyclists, transit, and vehicles.”

MetroInx Mobility Hub Guidelines

Planning for a pedestrian oriented street means providing space and amenities to encourage walking, cycling, and transit. The goal is to create a safe, attractive and comfortable environment for walking, which connects to transit facilities and other key destinations. The design aims to support the needs of busy urban areas, quiet residential neighbourhoods, and other unique places along the corridor.

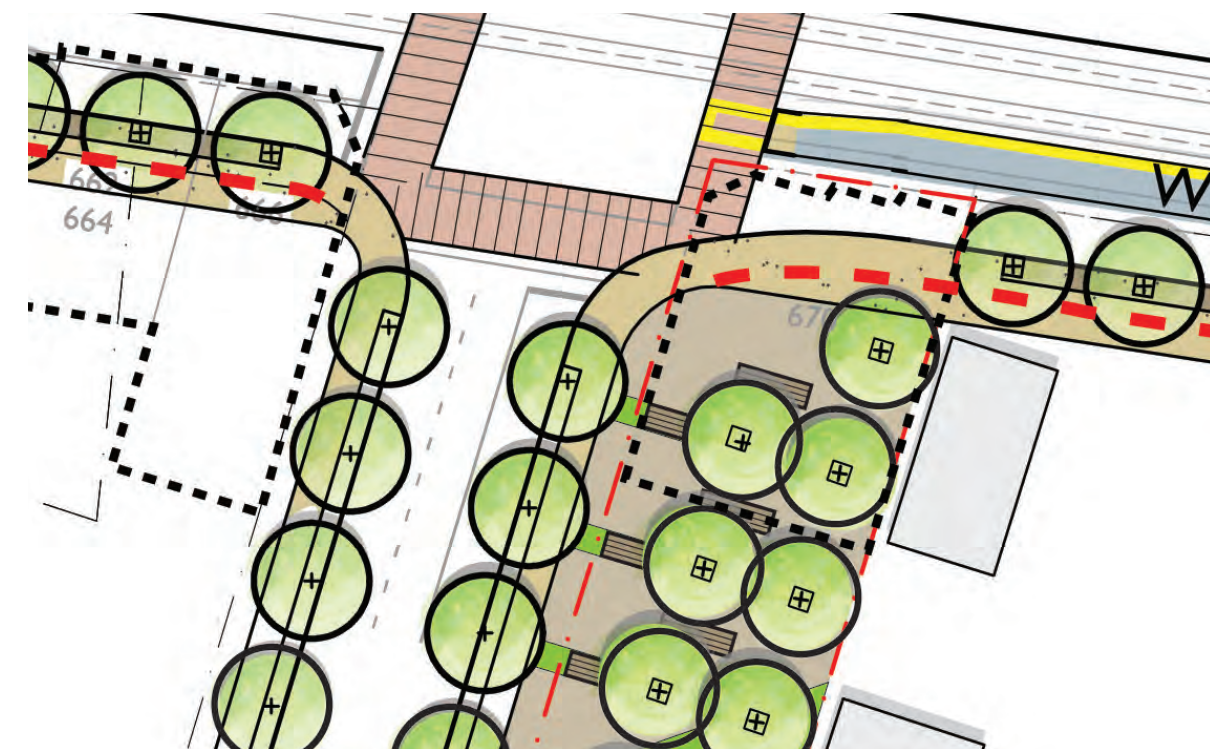
Some of the emerging work illustrated on this and subsequent panels may come forward as part of this project, while others may come forward through change and development on lands adjacent to the corridor, undertaken by individual property owners and stakeholders.

Here are some early design opportunities for consideration →



Pedestrian through zone

Where feasible, provide a 2 m wide pedestrian through zone, located on both sides of the street, and continuous along the entire length of the corridor.



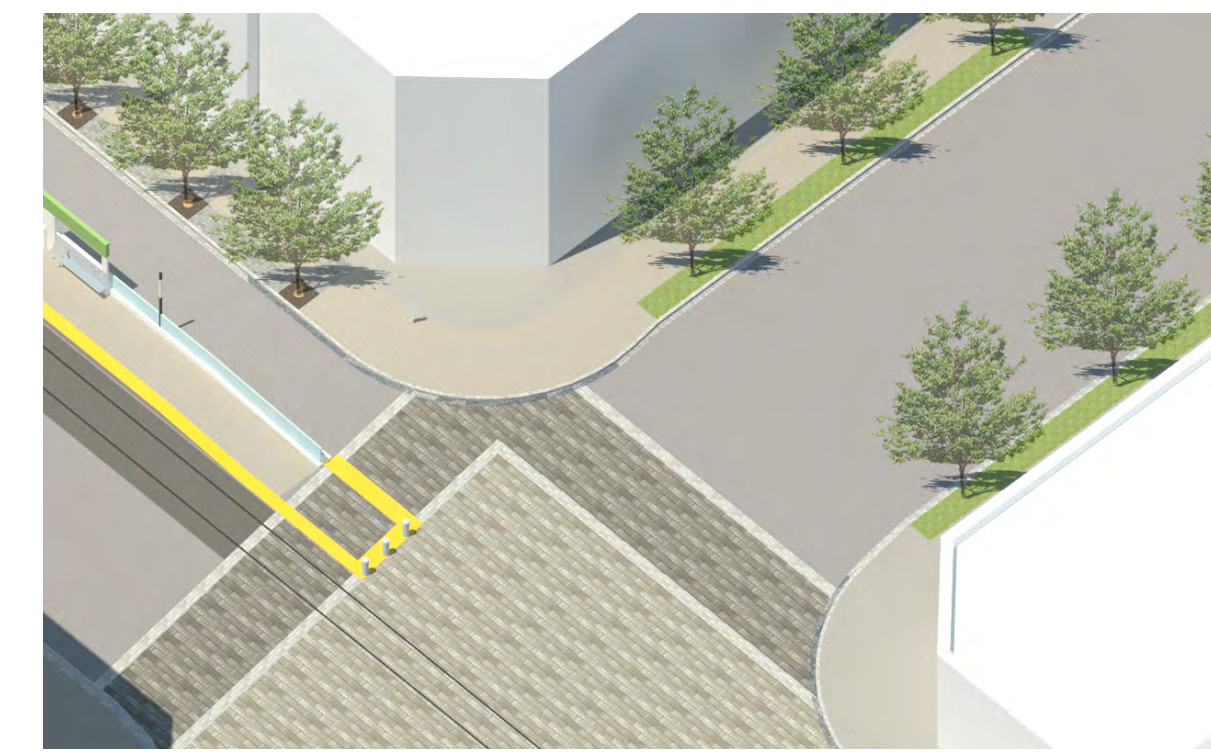
Interim design of vacant properties

Proposed plantings and pedestrian amenities on acquired sites; where demolition has created a vacant parcel on the streetscape, and where that parcel is deemed unlikely to be redeveloped in the first five years following opening day.



Healthy plantings & street trees

Cluster plantings and trees in groups, to leverage a shared soil trench, supporting long term health and growth potential. Provide between 8–10 m spacing between trees; this also supports an organized visual rhythm to plantings, furnishings, lighting, and other elements.



Green lobbies to the corridor

Side streets are often the first impression for pedestrians on route to an LRT stop. The design strategy proposes to implement street trees and related enhancements, 25 m back from the edge of crosswalk, or corridor building face.



Pedestrian-oriented intersections & crossings

Pedestrian safety and comfort is prioritized by separating crosswalks with paving treatments, colours, materials, and urban braille. Curb radii are tightened, to reduce the crossing distance for pedestrians.

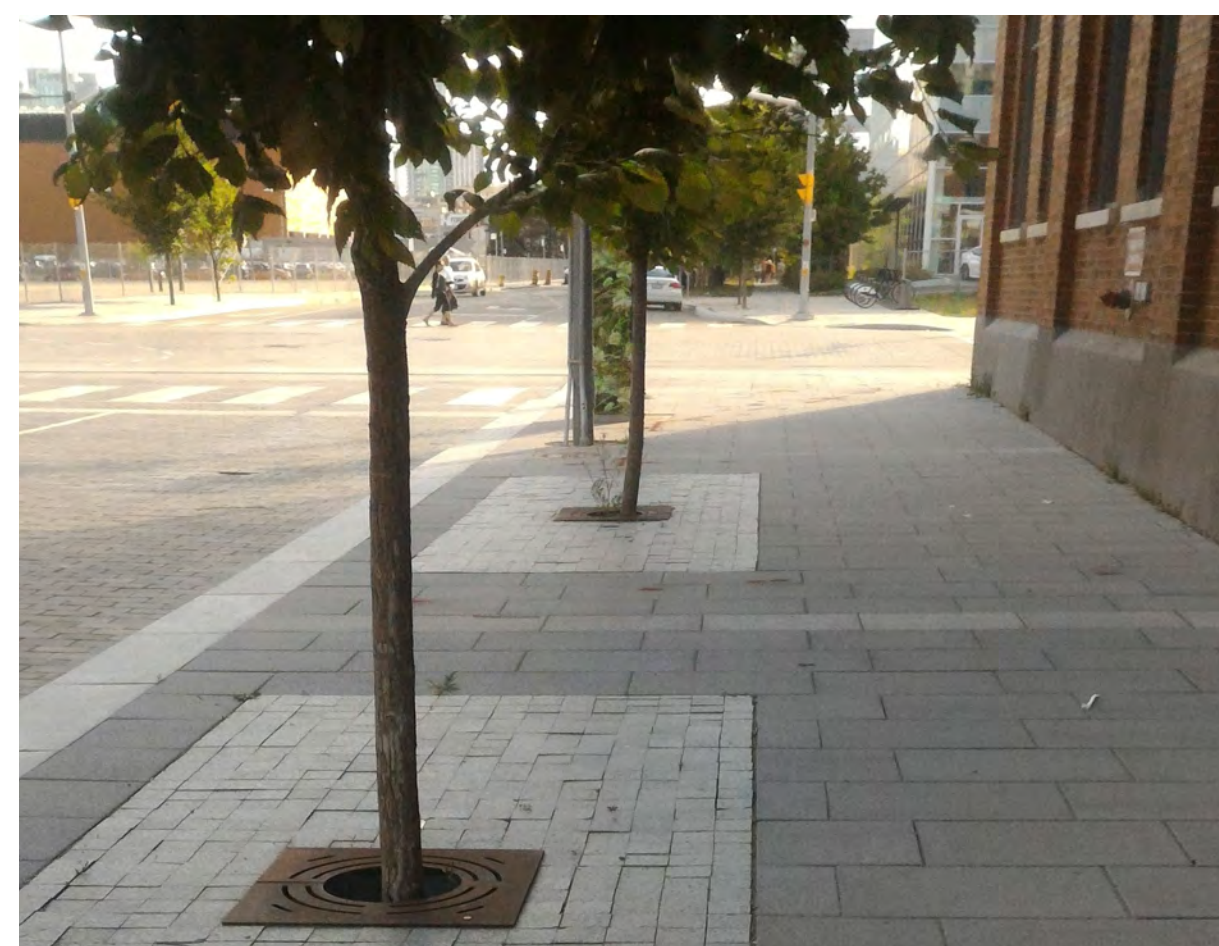


Context sensitive design

It will celebrate and support the future vision of character areas and key destinations. It applies a tailored approach to streetscape elements and infrastructure, particularly at areas of constraint such as International Village.

Streetscape Types and Elements

There are four types of streetscape that are designed to support the future vision for existing and emerging urban areas, as well as areas of less urban intensity along the corridor. The types respond to the intended character of the area, as well as to the level of targeted investment.



↑ Typical

Urban streetscape zones

The urban streetscape types will support pedestrian-oriented retail and mixed use urban areas. This will be provided through a spacious pedestrian through zone, buffered from the roadway by a hardscaped planting and furnishing zone, where accommodation is provided for tree plantings, lighting, furnishings, and utilities.



↑ Typical



↑ Tree in single pit, with grate



↑ Tree in continuous, uncovered pit

The greenscape zones

The greenscape types support the creation of idyllic, naturalized pedestrian oriented areas. This will be provided through a spacious pedestrian through zone, buffered from the roadway by street trees, vegetation, and related soft palette of materials that support the surrounding context.

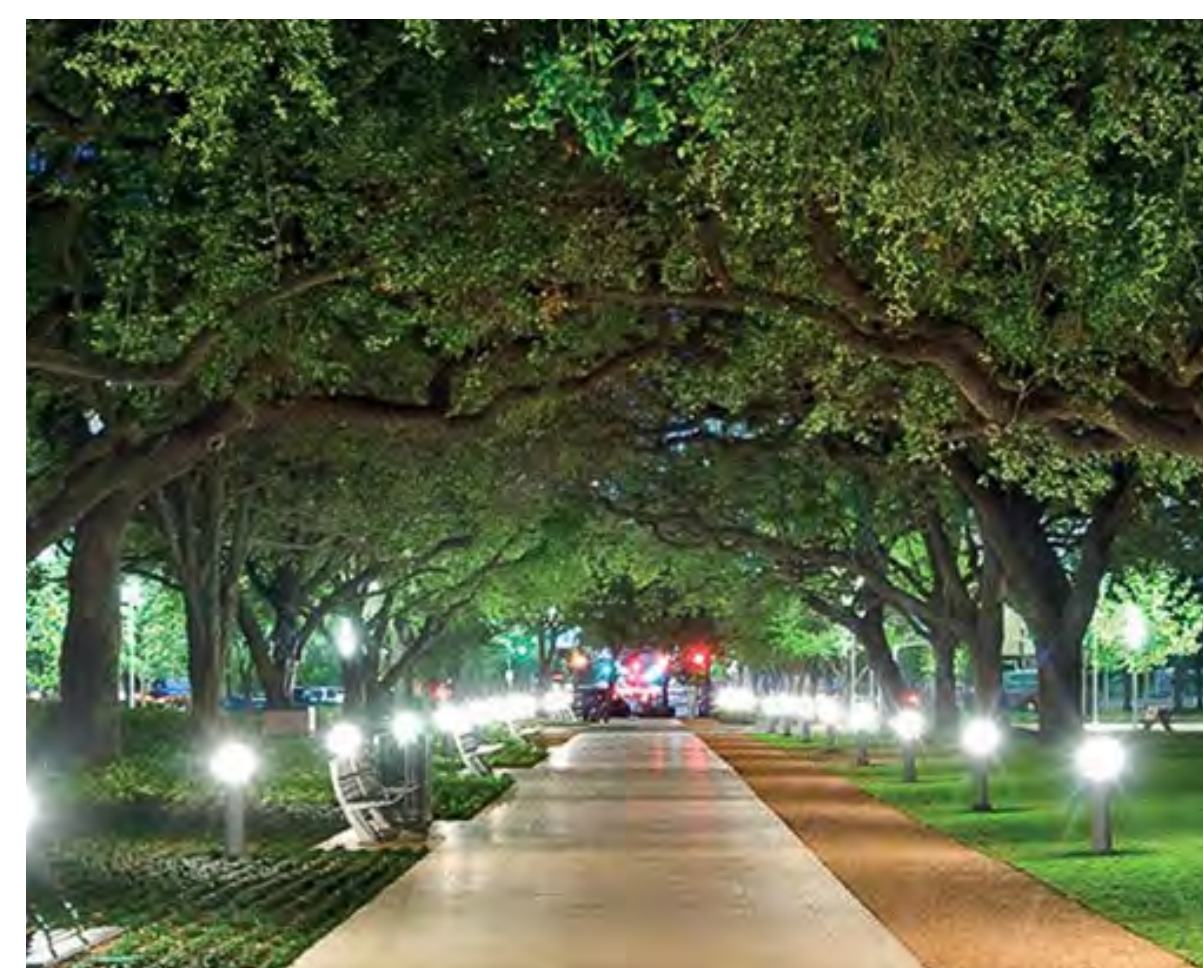
Streetscape plantings and paving

The LRT corridor should be designed to support robust and beautiful streetscape plantings, and a range of durable and beautiful paving materials; for instance:

- Locating low shrubs, perennials and grasses at select locations and adjacent to LRT stops.
- Locating trees along the streetscape, where feasible, to improve the quality of the experience for pedestrians and transit users, particularly in close proximity to LRT stops.
- Differentiating specific areas within the streetscape environment, such as sidewalks, crosswalks and retail uses.



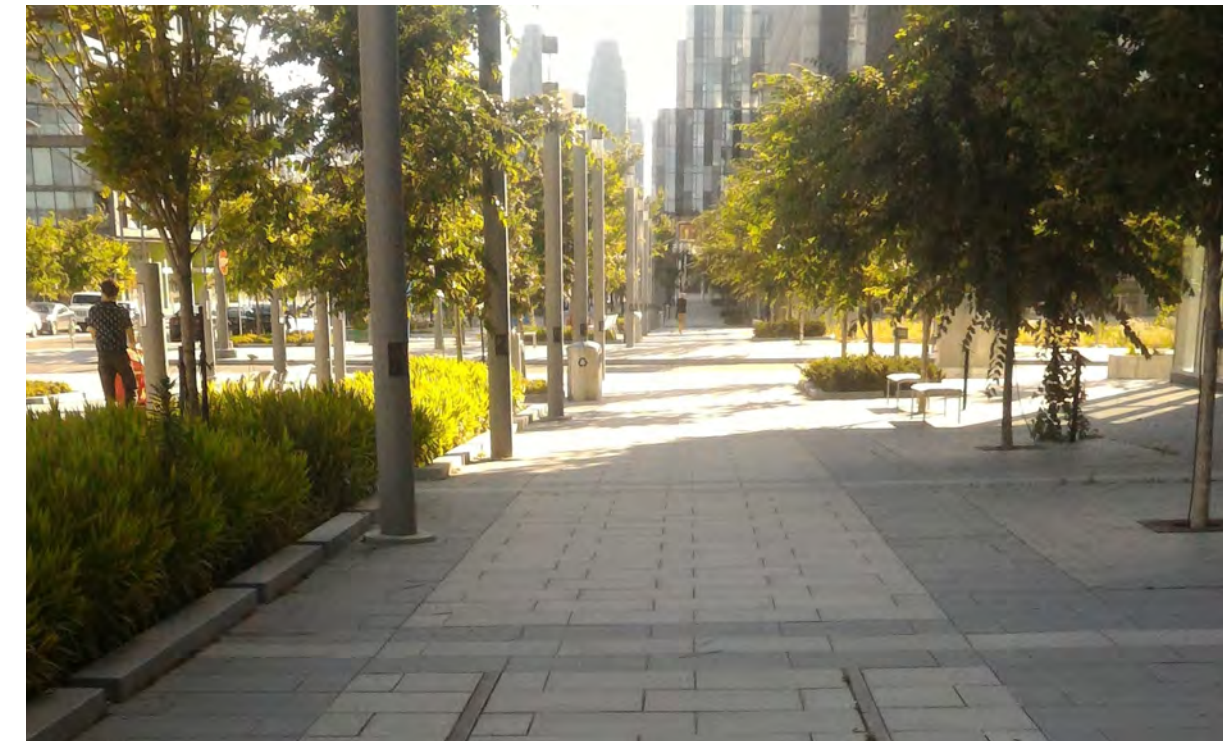
↑ Enhanced



↑ Enhanced

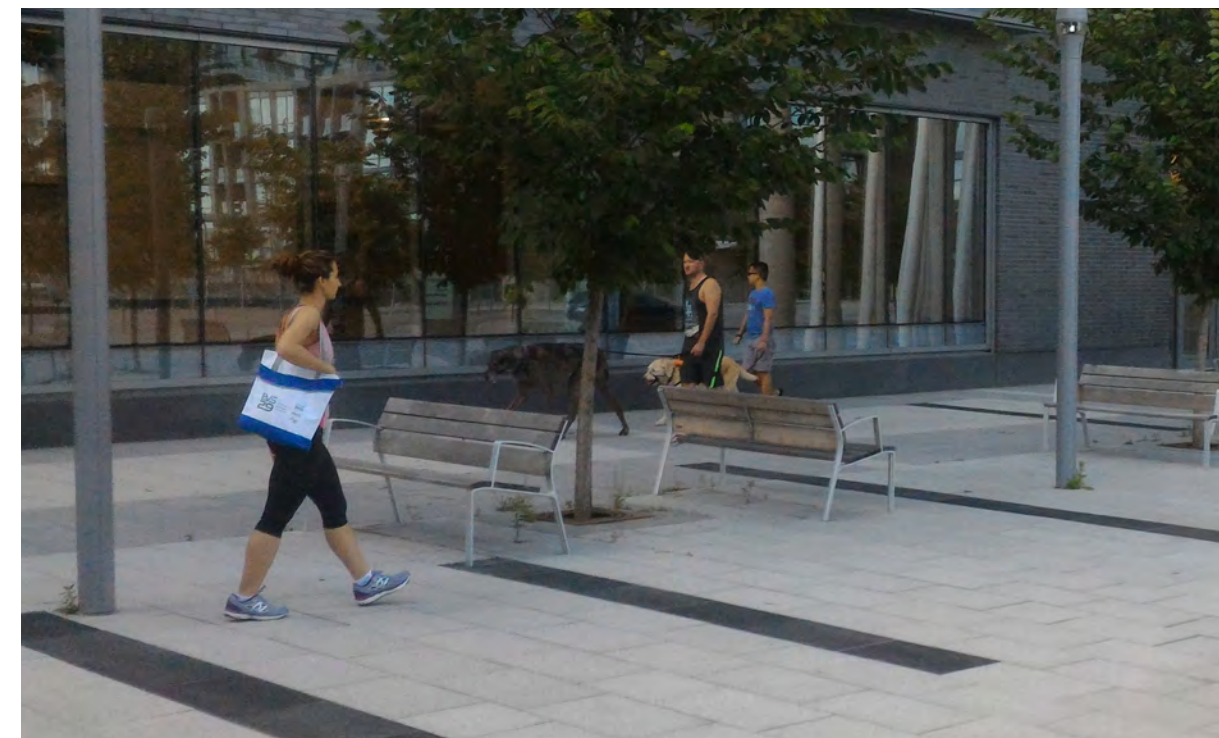
Introduction and Design Objectives

The following objectives are intended to inform and guide the design of the GO High Order Pedestrian Connection.



Design excellence

Shape an attractive and functional design for the streetscape connection, grounded in best practices. A design that inspires greater pedestrian use and enjoyment.



Comfortable

Provide amenities such as lighting, weather protection, plantings and seating, to improve the pedestrian experience.



Safety and security

Support clearly defined, well-lit, and safe pedestrian routes, crossings, and related components of the public realm.



Convenient

Plan for seamless and efficient pedestrian connections between the Hunter Street GO Station and LRT, as well as other destinations in the Downtown Core.



Intuitive

Support intuitive wayfinding between transit destinations.

Corridor selection criteria

Hughson Street was selected as the preferred corridor to make the pedestrian connection between the B-Line LRT and the Hamilton GO Centre. The other candidate routes included James Street, and MacNab Street. The evaluation was guided by the following criteria:

- **Short Walking Distance from the LRT to the GO Centre:** Distance from the westbound LRT platform to the Station building entrance, located at Hughson and Hunter Streets.
- **Wide Pedestrian Walking Zone:** Average width of clear sidewalk, measured along the journey between the LRT platform and the GO Centre entrance.
- **Weather Protection Opportunity:** Hughson Street provides opportunities to plan for awnings or canopies affixed to existing buildings, along the pedestrian journey.
- **Safe Pedestrian Crossings:** Hughson Street provides a safe walking environment, with relatively few crossings of busy roads, compared to other parallel streets in the area.
- **Development / Frontage Potential:** Linear length of vacant blocks along the route, where future development may occur.
- **Plantings and Furnishings Zone:** Areas where there are existing trees and / or furnishings, and where it is reasonable to accommodate these in the future without unduly impacting the available walking space.
- **Intuitive Wayfinding:** Without the aid of signage, this route provides clear view corridors that allow pedestrians to see the transit destination at either end of the route.
- **Minimizing Traffic Impacts:** Relative to other route options, Hughson Street minimizes potential impacts to vehicle oriented traffic operations.

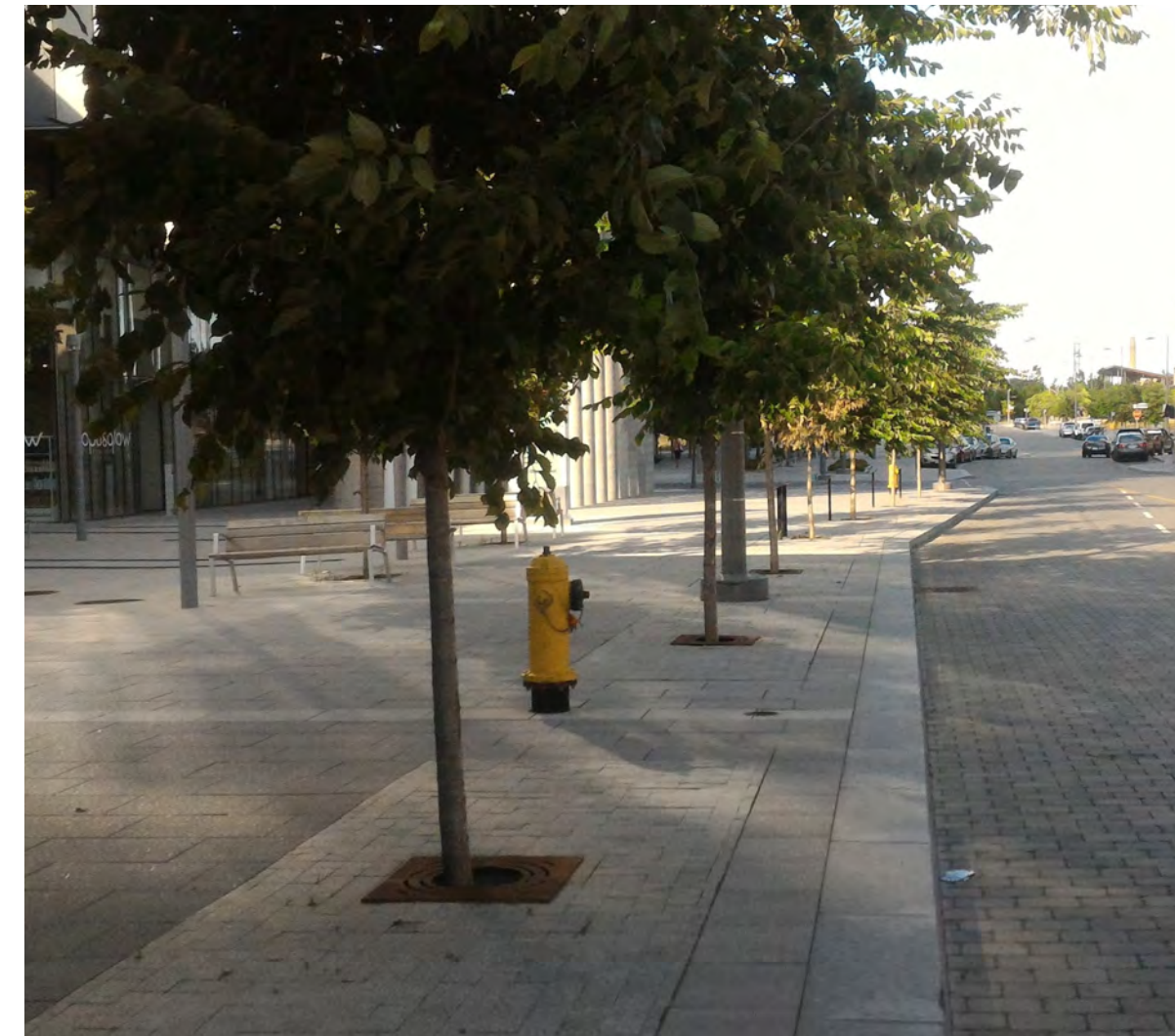
Streetscape Design Approach

GO High Order Pedestrian Connection

The design includes a range of components, deployed to support a safe, convenient, comfortable, and attractive pedestrian connection between the Hamilton GO Centre and the LRT Corridor.

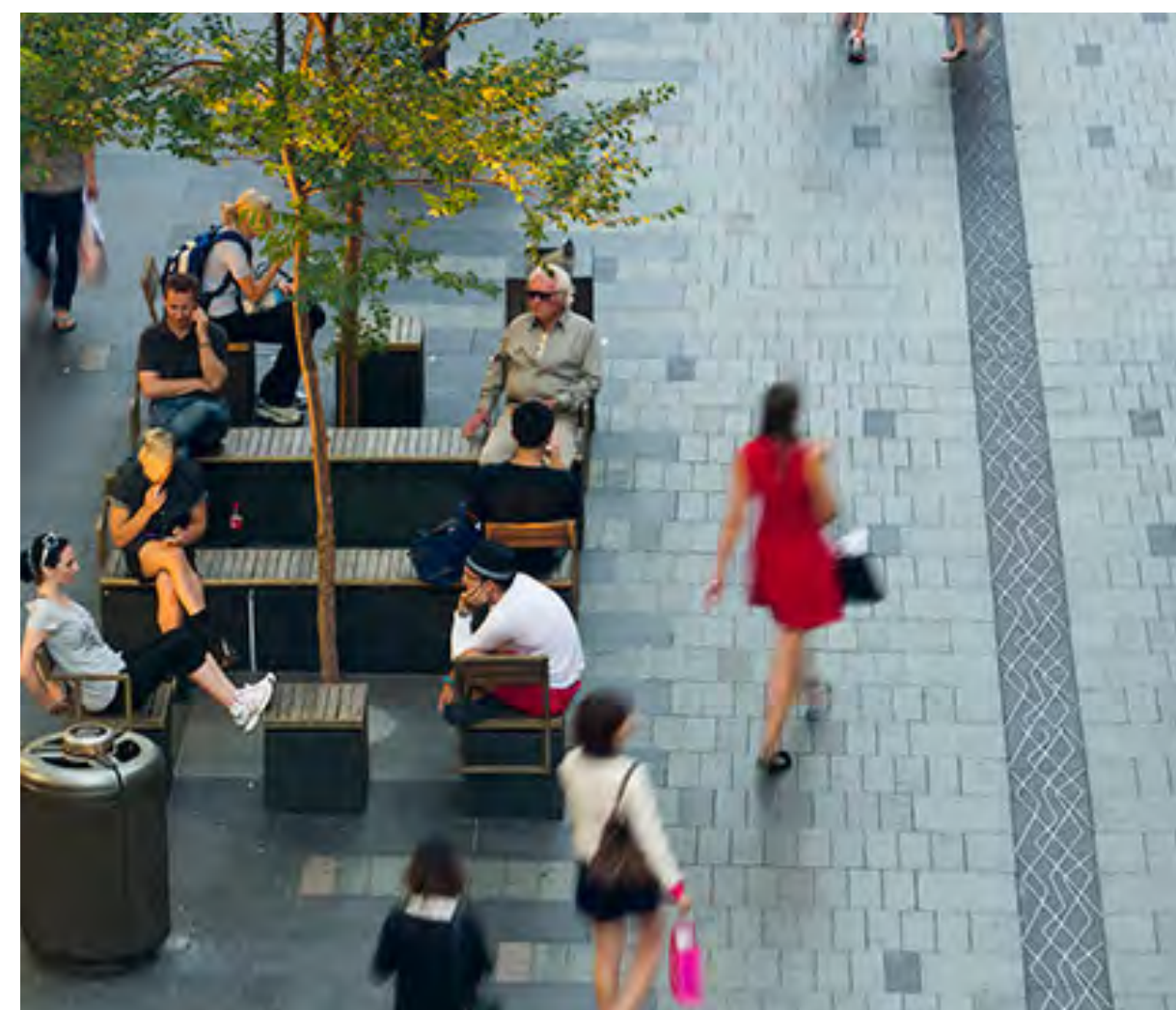
Plantings and street trees

Plantings and street trees help 'soften' and enhance the urban landscape, while creating an attractive streetscape that supports walking, provides shade, and frames key view corridors.



Intersections and crossings

Distinctive hardscape colours and patterns are used as visual cues to support the safety and comfort of pedestrians.



Hardscapes

The design approach deploys a palette of hardscapes that is durable, high quality, and composed of complementary colours, patterns and textures. A key objective is to integrate the look and feel of sidewalks and crosswalks with the street, to feel like one integrated pedestrian oriented space.



Pedestrian amenities

Amenities include seating, bike parking, public art, waste and recycling receptacles, and other components that support the experience of pedestrians along the corridor.

On street parking

On street parking is accommodated at select locations along the corridor, particularly where there is an established need for short term pick-up and drop-off, or loading activities.

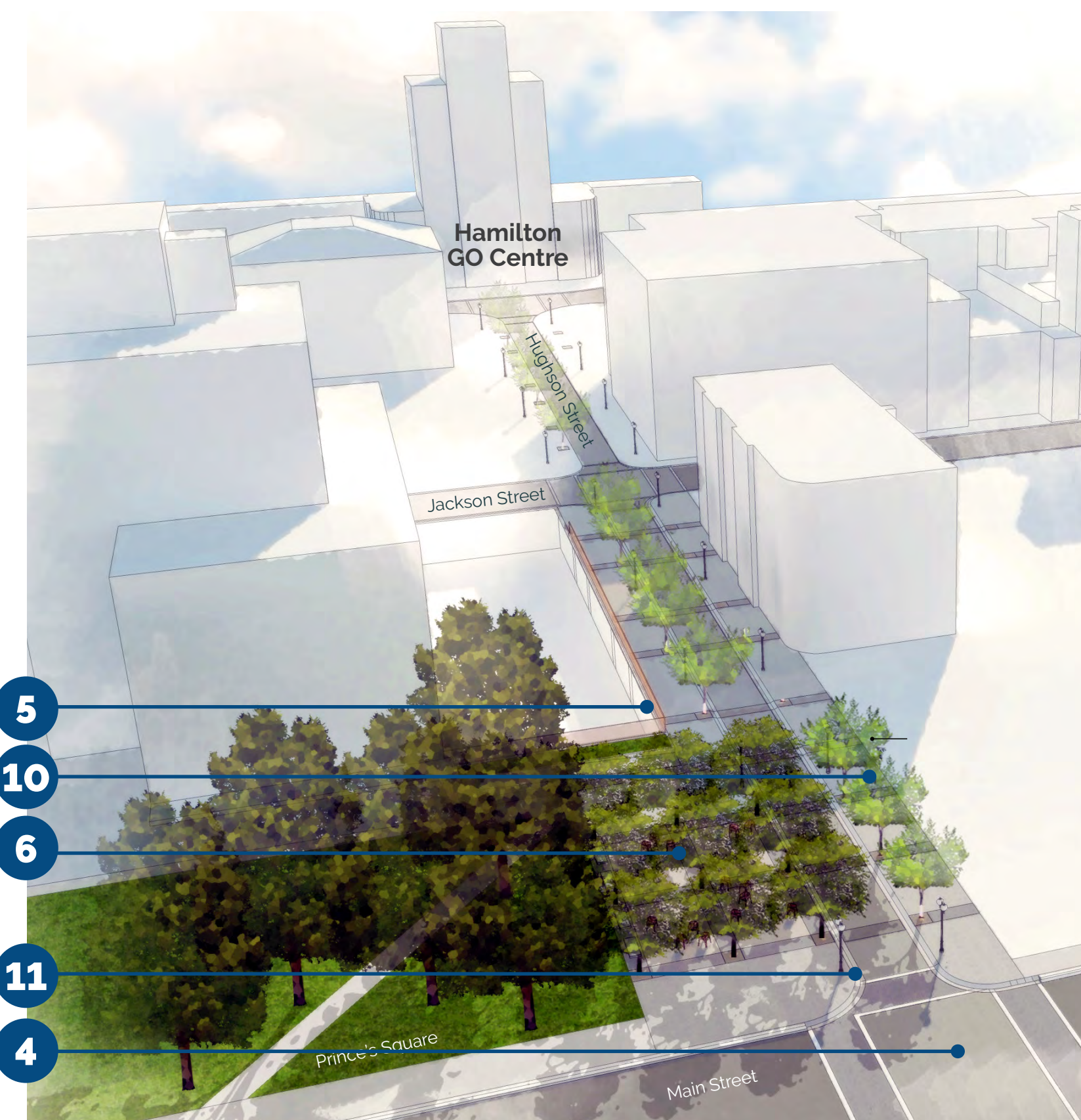
Lighting

Lighting provides several benefits; for example: foster visual continuity along the corridor, highlight the character of the streetscape, contribute to a safe environment, and offer a distinctive design feature to enhance the pedestrian experience.

Street Design Concept

GO High Order Pedestrian Connection

The streetscape concept illustrated on this panel has been designed to establish a high quality civic corridor, prioritizing pedestrians, and supporting safe, convenient and comfortable connections between the Hamilton GO Centre and the LRT Corridor.



↑ Conceptual View: Looking North to the Hamilton GO Centre



↑ GO High Order Pedestrian Connection: Conceptual Plan

- 1 Enhanced hardscape paving
- 2 Enhanced planting at existing plant beds
- 3 One-way vehicular traffic
- 4 Distinctive hardscape paving at intersection
- 5 Decorative screening opportunity
- 6 Pedestrian plaza / bosque
- 7 Existing drive to parkade & surface parking to remain
- 8 Restricted vehicular access
- 9 On-street parking / loading
- 10 Tree in grate comes with soil cells
- 11 Continuous mountable curb



↑ Conceptual View: Looking South to the Hamilton GO Centre



↑ 'A - A' Conceptual Hughson Street Cross Section: Looking North

Design Excellence

The Metrolinx commitment to design excellence is grounded in a belief that all aspects of its systems can deliver design quality and functionality at the highest level.

For the Hamilton LRT, such an expansive civic contribution to the public realm carries with it a responsibility to current and future generations, to maximize the transformative power of public transit in order to both catalyse a shift toward high quality, safe, sustainable and affordable transportation options for our citizens, connecting key destination points, stimulating economic development and revitalizing Hamilton.

Step 1: Listen and learn

- Leverage the Finch West and Eglinton LRT process to understand opportunities for the Hamilton LRT.
- Gather and learn from precedent designs from other LRT systems.
- Consult with Stakeholders.
- Establish a clear design vision and principles for the Hamilton LRT.

Step 2: Build on the vision

- Produce the Design Excellence Principles and Requirements document including the principles, evaluation criteria and demonstration designs.
- The demonstration designs allow ideas to be tested for stops and other infrastructure such as the termini, interchange stop, the OMSF, the Traction Power Substations (TPSS), and other elements of the line – providing pragmatic direction.

Step 3: Engage with bid teams

- The Design Excellence team is involved in proponent pre-qualification and selection to ensure design capability on bid teams.
- During the bidding period, the design excellence team engages with the bid teams – providing feedback – to ensure every team achieves a design that would meet the criteria outlined in the Design Excellence Principles and Requirements document.

Step 4: Select a winning bid team

- Once the Bidding Period concludes and the Bid Teams have submitted their schemes for evaluation, the Design Excellence team forms a key part of the evaluation scoring team involved in the selection of the winning Bid Team.

Step 5: Ensure compliance

- The Design Excellence team reviews design submissions from the winning bid team (Project Co) through implementation to ensure compliance with the DX Principles and Requirements document.



↑ Design excellence workshop



↑ Precedent example of architectural form as a stop enhancement, University of British Columbia



↑ Precedent of lighting as a stop enhancement, Paris, France

Principles of Design Excellence

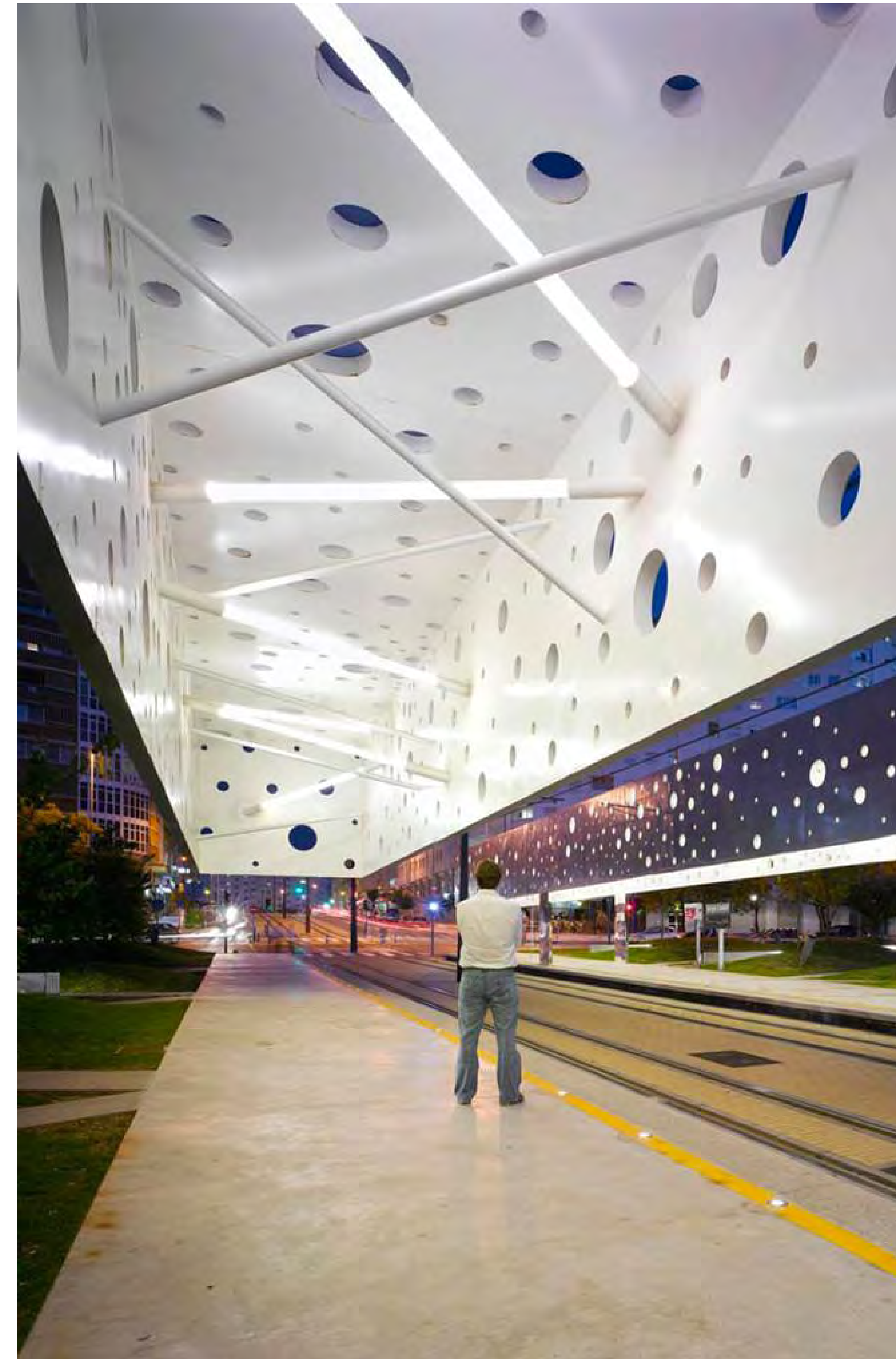
The Principles and Requirements of the Design Excellence document contains three distinct elements of guidance: principles and requirements, precedents, and demonstration designs.

The purpose of this document is to clearly articulate the Design Excellence principles, requirements and key evaluative criteria that proponent bid teams competing on the Hamilton LRT project must incorporate into their design.



Listed below are Metrolinx's standard *Principles of Design Excellence*, which will act as the basis of the Hamilton LRT Principles:

- 1 A strong conceptual design narrative across the system.
- 2 Design that elevates the quality of the passenger experience.
- 3 Civic character, exhibited through scale, materiality and quality.
- 4 Clarity and simplicity of architectural expression through integrated design of all systems and elements.
- 5 Responsiveness to contextual, local and future conditions.



↑ Precedent example of architectural form as a Stop enhancement, Alicante, Spain



↑ Precedent example of well designed Stops, Raleigh, North Carolina



↑ Precedent example of well designed Stops, Zürich, Switzerland



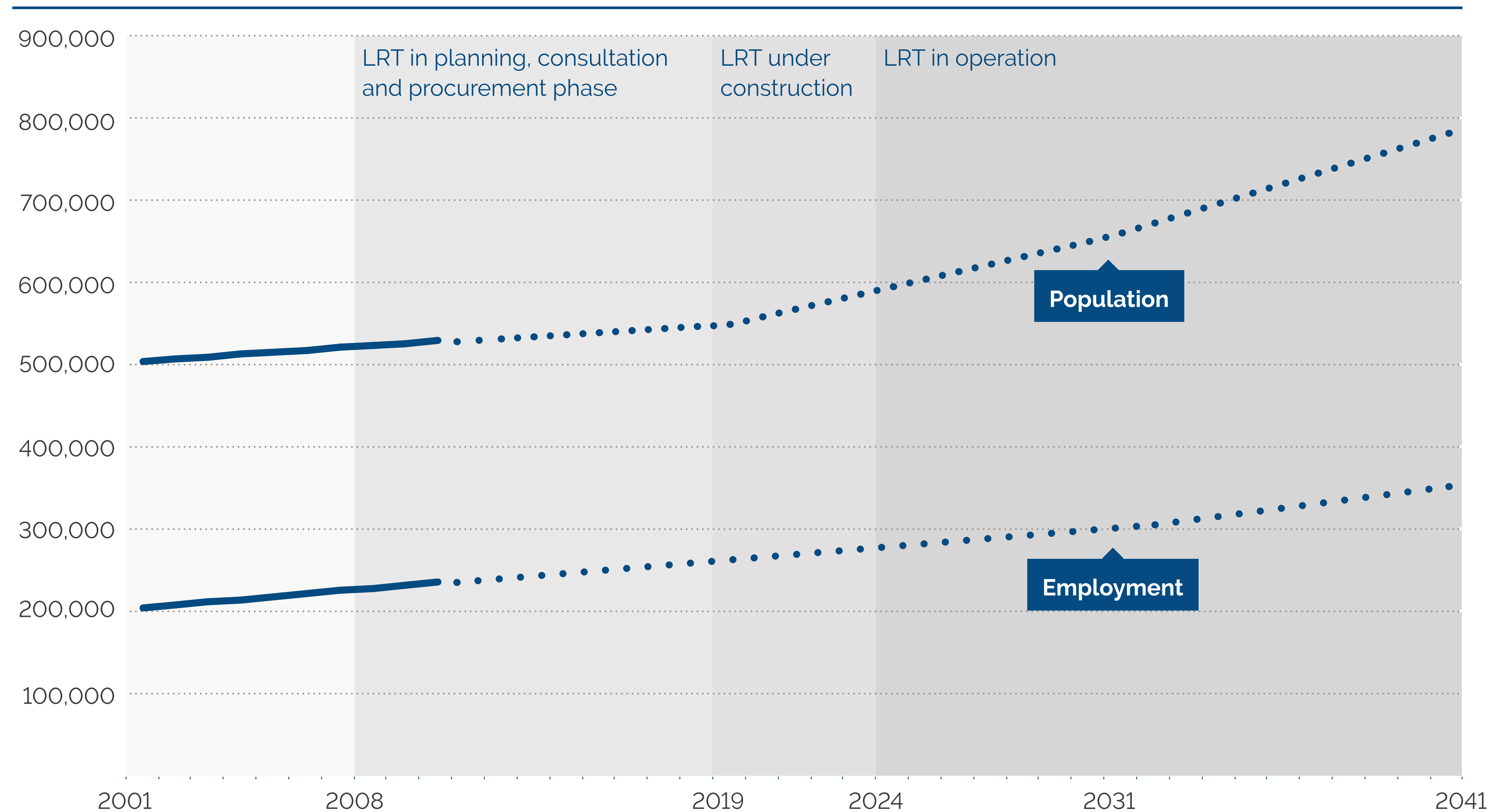
↑ Precedent example of well designed Stops, Hamilton

Hamilton is Growing

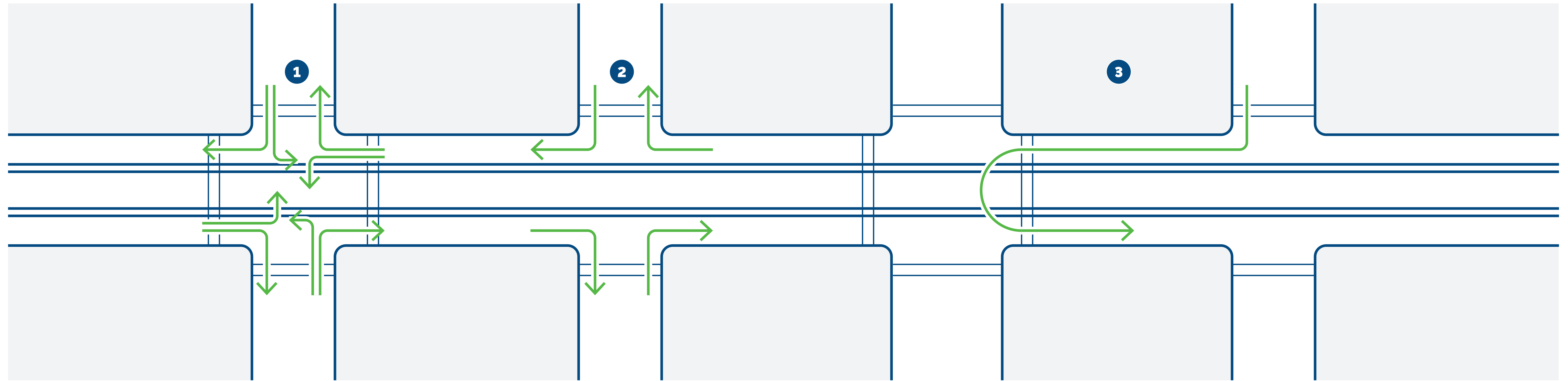
The Growth Plan for the Greater Golden Horseshoe (2013) forecasts that the City of Hamilton will have a population of 660,000 by 2031 and 780,000 by 2041, while the number of jobs will increase up to 300,000 by 2031 and 350,000 by 2041.

This is equivalent to a growth of about 25 percent by 2031 and almost 50 percent by 2041. This increase in people and jobs also means increased activity throughout the city, and thus, more people making more trips.

The LRT project, as part of the City's on-going transportation planning and development, will help the City of Hamilton accommodate the added traffic expected from this growth.



How will traffic work?



With segregated centre-running LRT on the B-line, traffic will only be permitted to cross the tracks at select locations, typically major streets with signalized intersections.

At minor side streets, traffic will not be permitted to cross the tracks, either turning left or going straight through.

To maintain access to all locations, U-turns will be permitted at strategic locations.

On the A-line, the LRVs will operate in mixed traffic, so all current turning movements are maintained.

- 1** Typical signalized intersection entrance and exit: Crossing of tracks permitted.
- 2** Typical side-street entrance and exit: No crossing of tracks permitted.
- 3** Drivers wishing to turn in the opposite directions where crossing the tracks is not permitted, will need to make the allowed right turn and travel to the next U-turn location, and make a permitted U-turn. U-turns at these locations will be combined with left turns, and controlled by their own separate signal phase to ensure safety.

Where will traffic go?

Projections of future traffic movements, with and without LRT, were forecasted using a three-tiered modelling approach that looked at regional, area and corridor projections and impacts.

The modelling process projects various changes in traffic patterns with the LRT in place including:

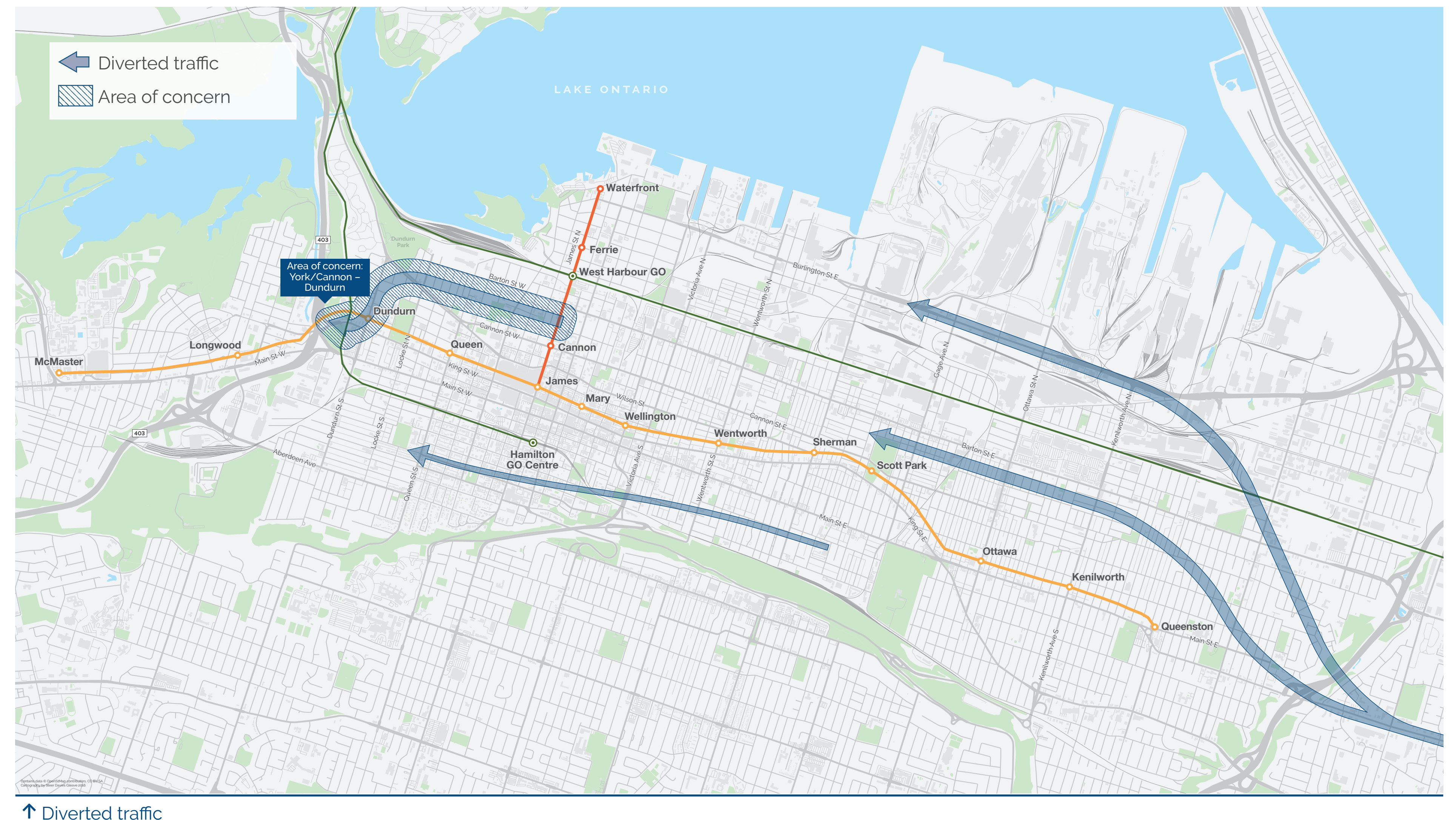
- Significant reduction on King Street westbound.
- New traffic on King Street eastbound where the new lane is introduced.
- Decreases on some perpendicular routes because of restrictions on crossing the LRT alignment.
- Increases on some perpendicular routes as traffic consolidates at crossing points.
- Increases on parallel routes as traffic is diverted.

This process shows:

- Traffic will increase in relationship to the project population and employment growth, with or without LRT.
- LRT will change traffic patterns, the flow of traffic, and the level of service at intersections. The results of those impacts will require mitigation strategies.
- With proper management strategies, traffic will continue to flow when LRT is in service.

Areas of concern:

- The York / Cannon / Dundurn corridor from Queen to King / Dundurn will require further study.
- Mountain accesses will continue to operate adequately after the introduction of LRT.



How will we manage traffic?

Even without the LRT, traffic growth will lead to increased traffic in the network and interventions will be required to keep the network moving.



With the network changes resulting from the LRT additional modifications are required at some intersections. These include:

- Changes to signal timing operation – timings, order and cycle length.
- Changes to intersection operation.
- Change to lane allocation.
- Banning of specific turns.
- Addition of turning lanes.
- Addition of dedicated slip lanes.



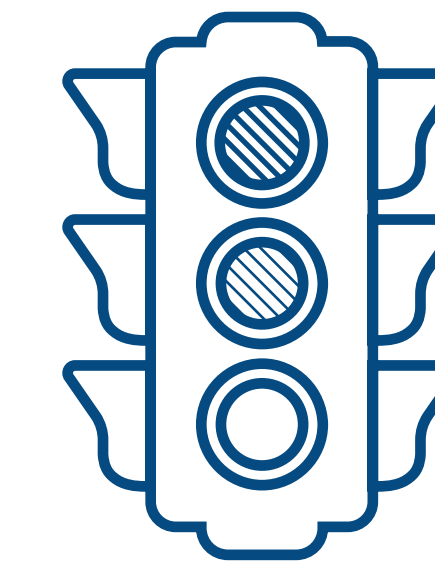
Most intersections are dealt with through minor signal changes, and emerging signal technology will make this even easier.

Some intersections may require turn bans (usually left turns) and some may require additional turning lanes or right turn slip lanes.

These potential modifications are being assessed by the City of Hamilton and Metrolinx to determine where they may be required to keep traffic flowing.

This work will continue over the coming months as the LRT design is further refined.

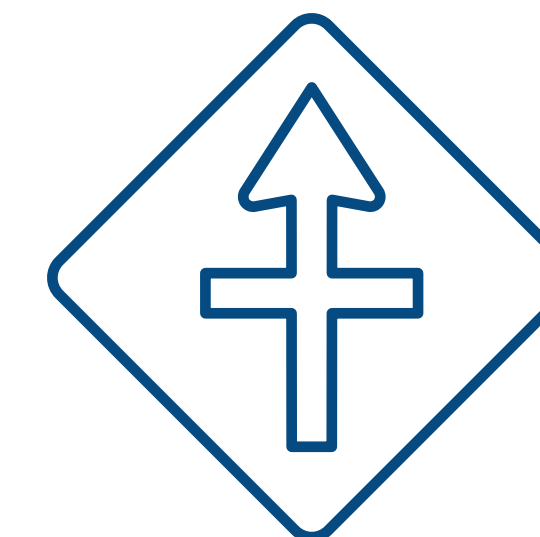
More details will be available at Public Information Centre #2.



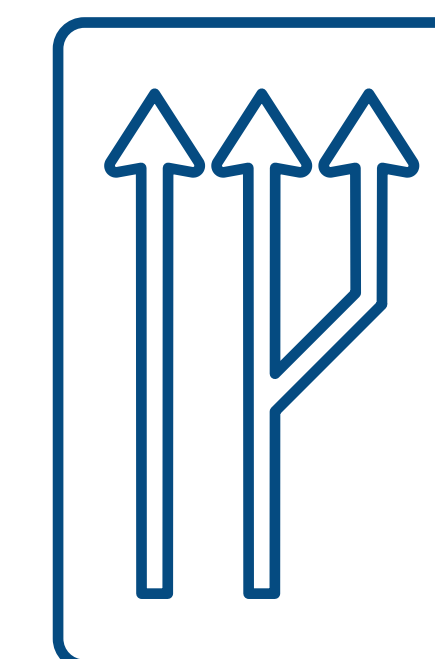
Signal changes



Turn bans



Intersection changes



Added lanes at intersections

Moving More People

King Street and Main Street form one of the most important east-west corridors in Hamilton, serving: the downtown, significant employment and residential areas, and major institutions.



Currently, traffic performance along the corridor is generally good during much of the day. Nevertheless, during peak periods, some queuing and congestion is experienced by both motorists and transit riders.

To support future growth in demand, the corridor will need to expand its people moving potential and protect for reliable transit service.

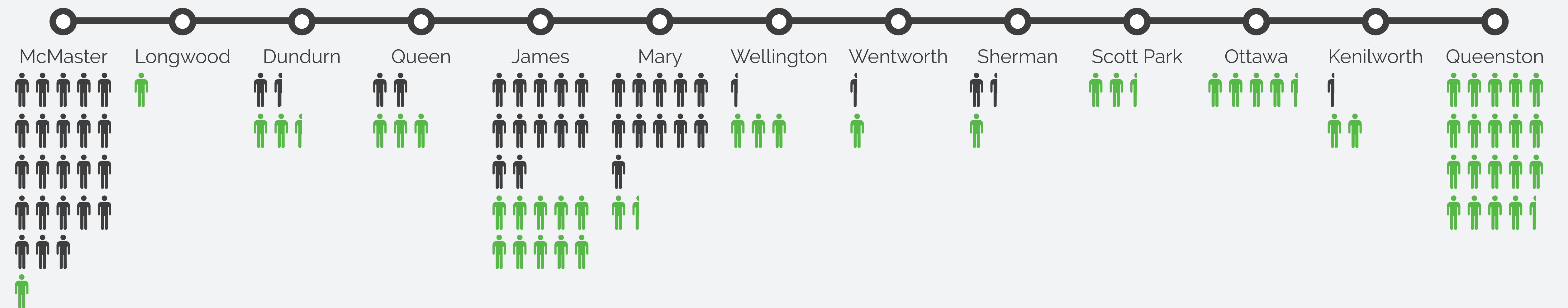
The introduction of the LRT to the corridor will help achieve both the transportation and growth objectives for the City of Hamilton.

B-Line stop activity 2041 – westbound AM peak hour

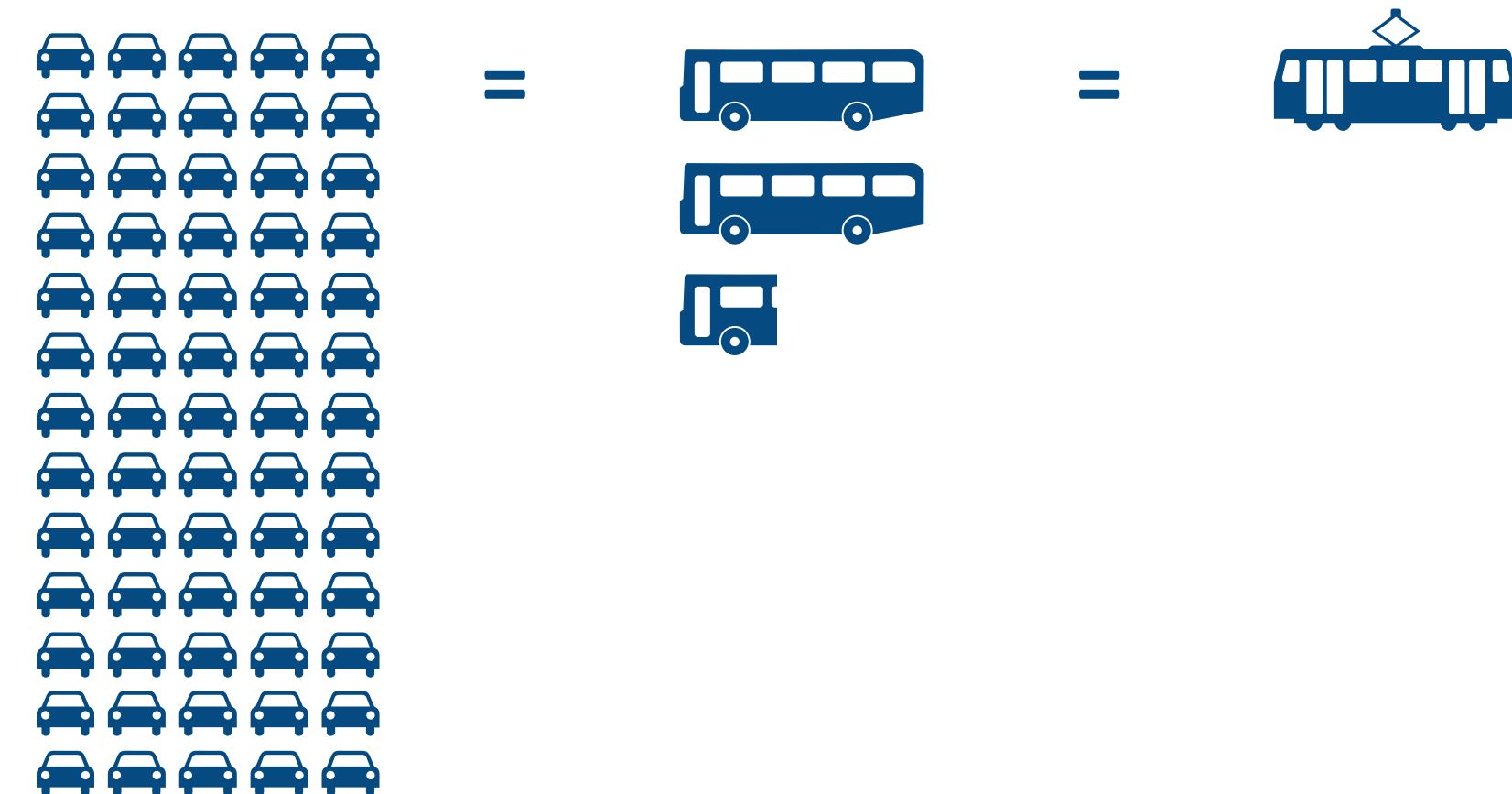
Each person represents about 75 riders:

 Alightings  Boardings

*Ridership patterns shown here typically reverse in the afternoon peak



130 people in cars (1 car = 2 people) 130 people in buses (1 bus = 55 people) 130 people in LRV (1 LRV = 130 people)



A-Line ridership

The A-Line ridership pattern is different from the B-Line. As a short spur, the A-Line is designed to connect to the West Harbour GO Station and the Waterfront, and provide local service along James Street. Ridership patterns will depend on the level of service at West Harbour GO, compared to the Hamilton GO Centre, and the amount of local service that remains on James Street. Since James Street is very walkable and the distance from end-to-end is short (about a 25 minute walk), people will choose

to use the A-Line more as a shuttle rather than a commuter connection, and thus peak usage will vary. Off-peak use on this line could also be important – on evenings and weekends – as riders take advantage of the James Street and Waterfront experience.

Transit Project Assessment Process (TPAP)

On December 22, 2011, the Ontario Minister of the Environment and Climate Change issued a Notice to Proceed with the Hamilton LRT project in accordance with the Environmental Project Report (2011) completed under the Transit Project Assessment Process (TPAP).

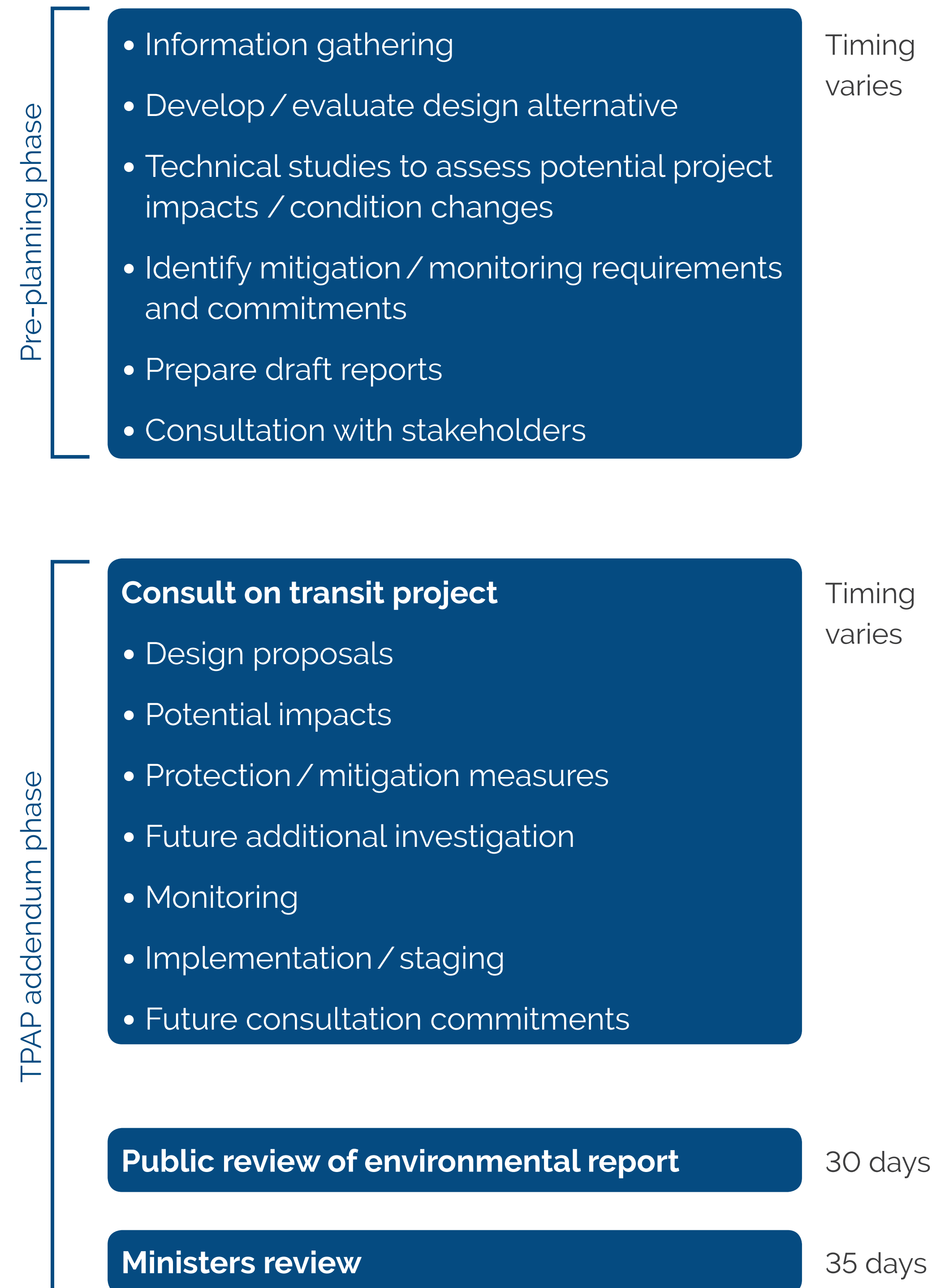
The TPAP process is a focused Environmental Assessment process specific to public transit projects that includes consultation, an assessment of potential positive and negative impacts, and assessment of measures to reduce negative impacts and documentation in an Environmental Project Report (EPR).

The TPAP documents the process that was followed and the conclusions that were reached including:

- An overview of the process used to select the transit project.
- Description of the transit project.
- Assessment of environmental impacts and how negative impacts will be mitigated.

- Record of consultation with the public, agencies, aboriginal communities and stakeholders.
- Commitments to monitoring environmental effects / mitigation, conducting further technical analysis, and consultation in other project phases.

The TPAP process includes an addendum process to make changes in a project after the ER is completed. This allows for the possibility for changes or additions to the project that change the scope of the Environmental Project Report.



Why is a TPAP addendum required?

The approved LRT project in the 2011 Environmental Project Report (EPR) included a side-running, street-level LRT alignment on Main Street West, King Street, and Main Street East, from McMaster University to Eastgate Square.

An addendum to the EPR is required to assess the impact of these changes.

With the Provincial announcement and further project development, changes to the project include:

- A new eastern terminus at Queenston Traffic Circle, with a new bus facility.
- A new spur line connecting from King Street via James Street North to West Harbour GO Station and potentially extended to the Waterfront.
- A High Order Pedestrian connection, connecting King Street at James to the Hamilton GO Centre.
- A shift to centre-running alignment to improve transit speed and reliability.
- The required Operations and Maintenance facility.

Scope of Environmental Assessment

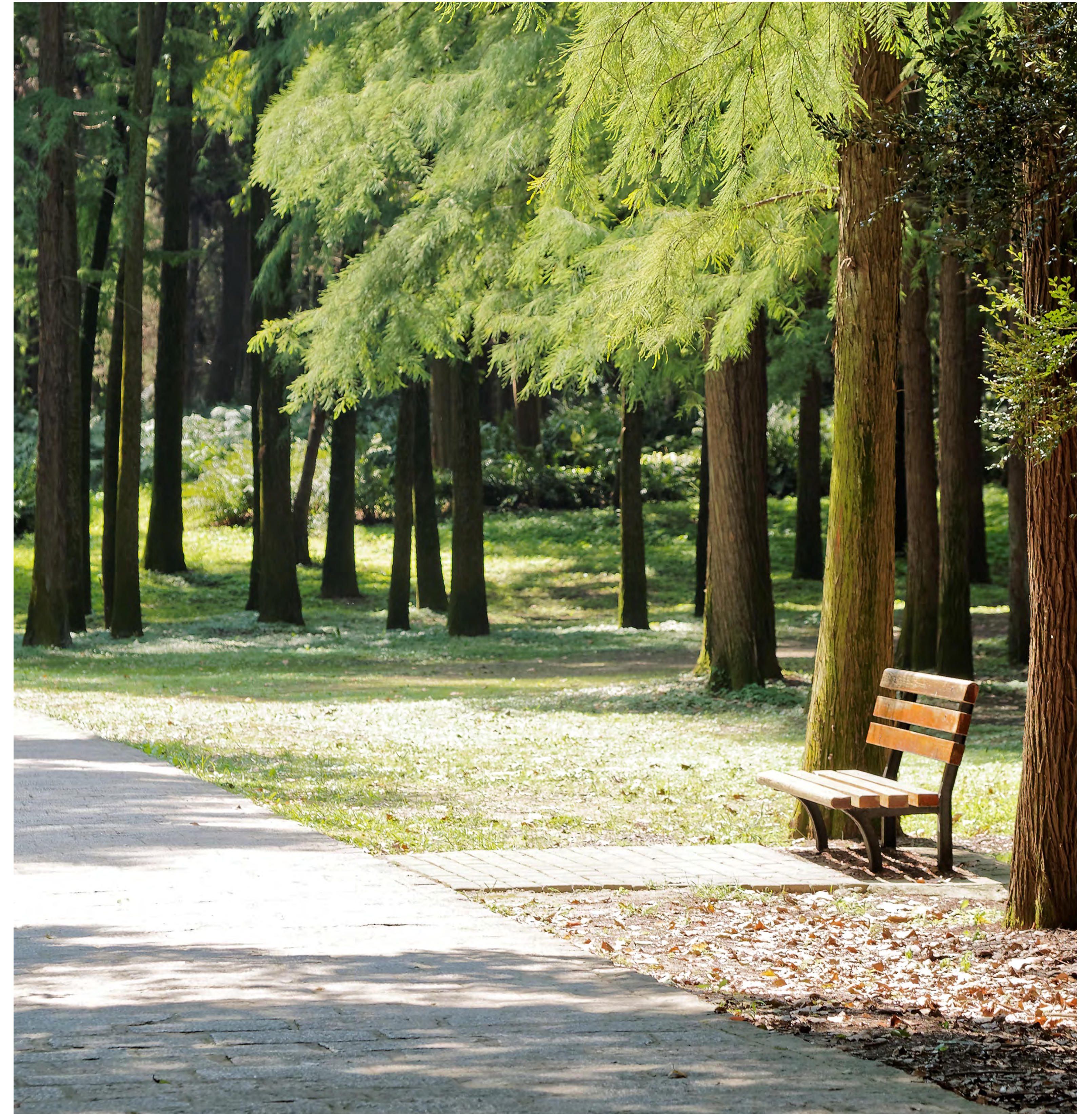
These environmental components include cultural heritage and archaeology, natural heritage (aquatic and terrestrial), contamination, hydrogeology, air quality, noise and vibration.

The new scope includes:

- Updating the 2011 existing conditions, impact assessment and mitigation.
- Inclusion of the A-Line spur line, running to the north from the B-Line along James Street North, that will connect to the new West Harbour GO Station and Waterfront. This spur link was previously part of the A-Line feasibility study.
- Development of an Operations, Maintenance and Servicing Facility (OMSF) on a site located near Frid Street and Chatham Street, which will run from the intersection of Longwood and Main Street, across the Longwood bridge over the 403 bridge and using the Frid Street extension to the site.

Next steps

Potential environmental effects will be summarized, and mitigation measures will be identified to eliminate, reduce, or control any negative environmental impacts associated with the LRT project.

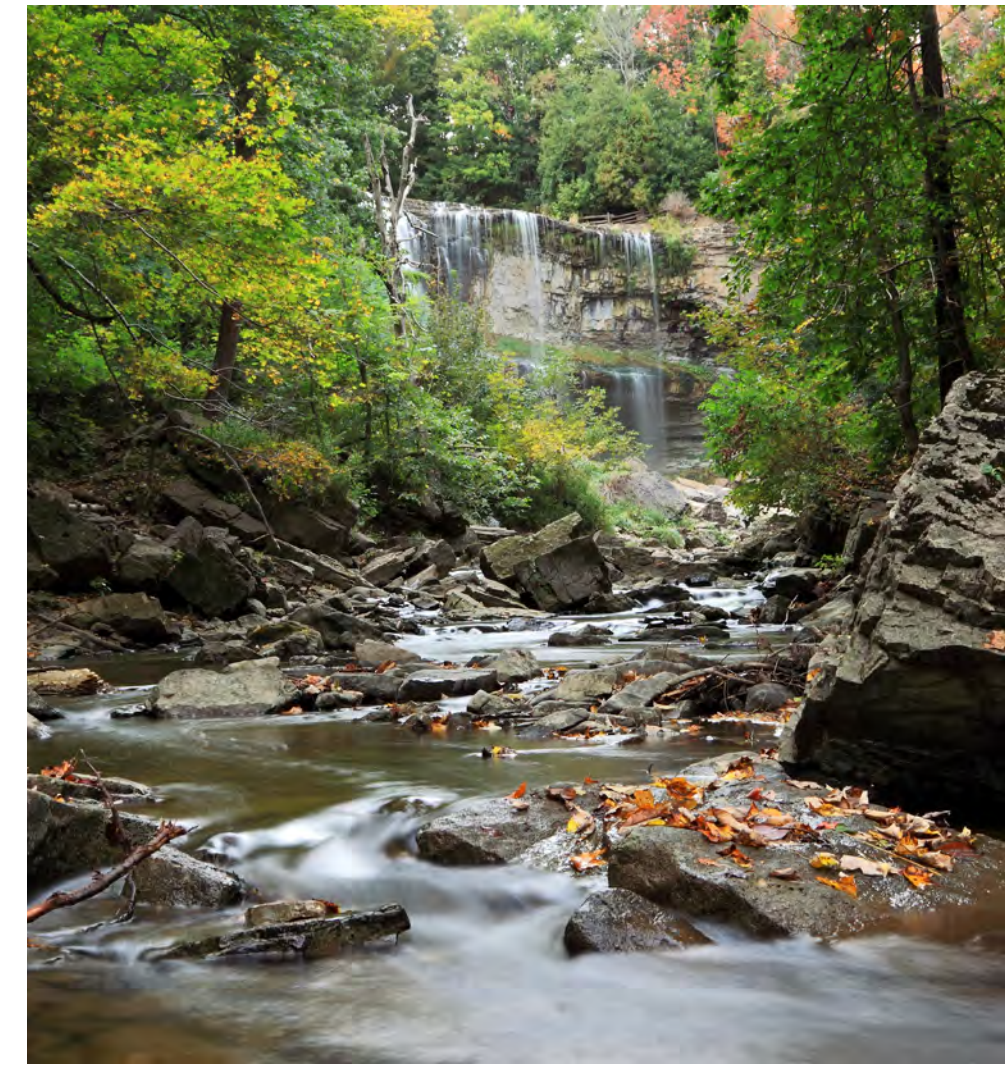


Environmental Studies



Cultural heritage

A Cultural Heritage Resources Assessment and Archaeology Assessment is being prepared by Archaeological Services Inc. Background research and a field survey will be analyzed for the purposes of identifying impacts of the proposed, undertaking on cultural heritage resources.



Natural heritage

A Natural Environment Existing Conditions and Impact Assessment report will be prepared by SNC Lavalin. Background research and field surveys will be analyzed for the purposes of identifying impacts of the proposed, undertaking on aquatic and terrestrial resources.

Contamination

A Contamination Overview Study is being prepared by SNC Lavalin. Background research and a field survey will be analyzed for the purposes of identifying environmental issues within the project area. This includes identification of activities that have potential to result in environmental impact, as well as occurrences such as spills, waste disposal sites, polychlorinated biphenyls (PCBs) storage, and water well inventories within the project area. The field survey includes observing areas by driving over the length of the proposed roadway, and recording all the actual or potential indications of the sources or presence of contamination.



Summary of work in progress

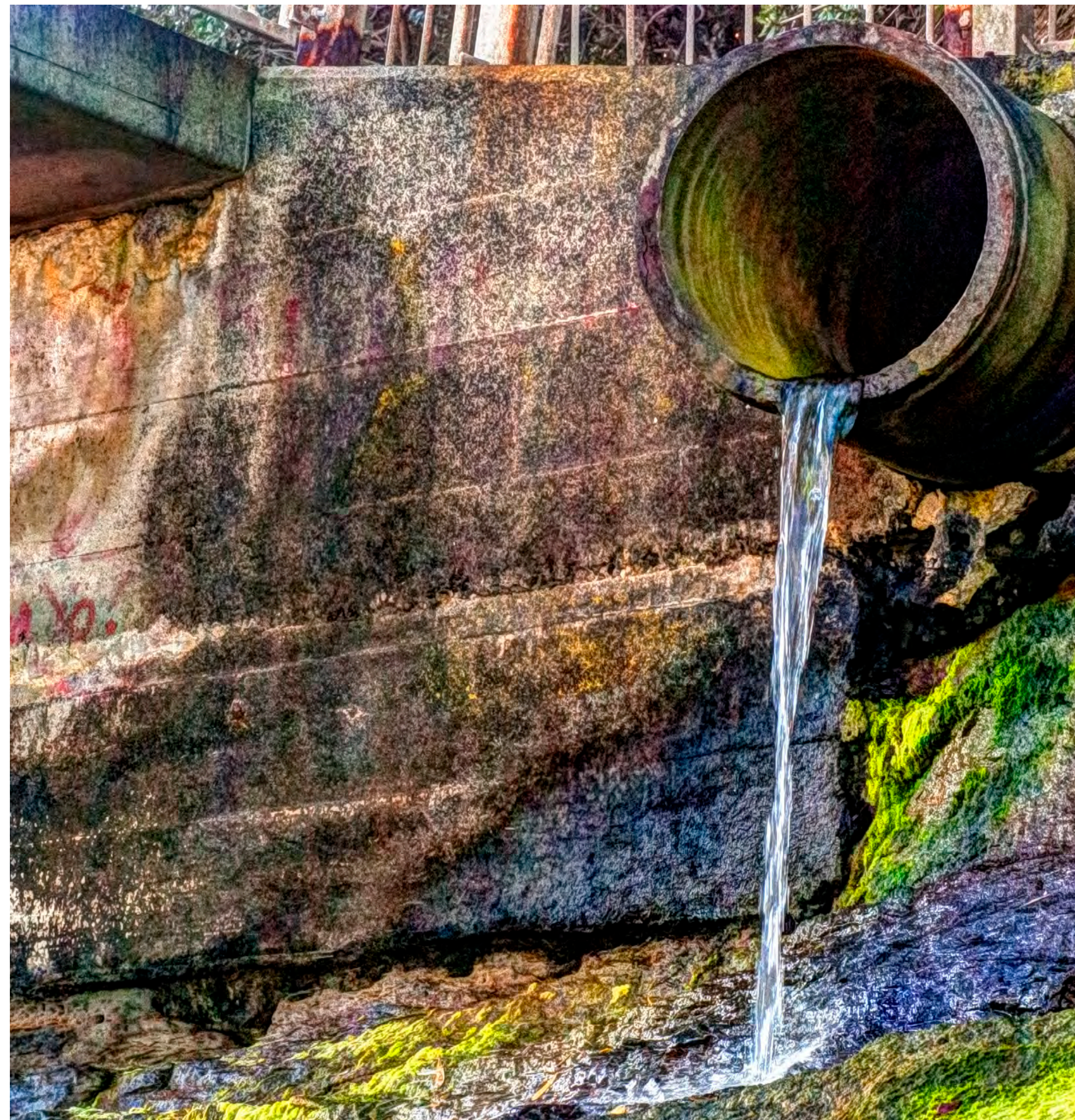
In each study, a background review, and in some cases field work, has been completed in July and August 2016. This work has been done to cross-check the results of previous work, ensure that the data represents remains valid or to update relevant data, and assess the new information resulting from the changes to the project. Findings and reports will be available for Public Information Centre #2.

Environmental Studies



Air quality

The Air Quality Study will be prepared by RWDI Air Inc. The Study will involve an examination of air quality monitoring data and how traffic patterns will be altered, to confirm that potential air quality impacts are adequately addressed.



Hydrogeology

A hydrogeological report is being prepared by SNC Lavalin. Background research (of the physiography, geology, hydrogeology and geotechnical background) and a field survey will be analyzed to provide a description of the conceptual model of groundwater conditions. The report will identify any surface features that may relate to potential groundwater impacts from the development.



Noise and vibration

A Noise and Vibration Study will be prepared by J.E. Coulter Associates Limited. Background research and field surveys will be analyzed for the purposes of identifying noise and vibration impacts of the proposed undertaking. Long term noise monitoring activities will take place along the entire project corridor, with focused monitoring locations at the MacNab, McMaster and Queenston terminals, and the OMSF.



Summary of work in progress

In each study, a background review, and in some cases field work, has been completed in July and August 2016. This work has been done to cross-check the results of previous work, ensure that the data represents remains valid or to update relevant data, and assess the new information resulting from the changes to the project. Findings and reports will be available for Public Information Centre #2.

Community Benefits

A Community Benefits Framework is expected to be included as part of the Hamilton LRT project. The Eglinton Crosstown LRT project in Toronto was the first major infrastructure project in Ontario to include a Community Benefits Framework.

What does a Community Benefits Framework look like?

- Commit to Social Procurement and Local Investment to maximize business opportunities along the project corridor.
- Partner with Local Workforce Agencies to recruit candidates from the project corridor and from historically disadvantaged communities.
- Work with Subcontractors to maximize opportunities for apprentices.



In establishing a Community Benefits Framework for Hamilton LRT, Metrolinx commits to being ↓



Inclusive

Offering a range of employment, training and apprenticeship opportunities as well as encouraging provision of goods and services.



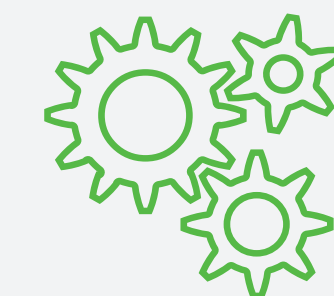
Accessible

Ensuring that employment information is readily available.



Transparent

Making the plan with ProjectCo public and publishing quarterly reports.



Collaborative

By working together with community, labour business, government and other stakeholders.

Business Support: Our Commitment

Our commitment

- Metrolinx understands that its construction activities have an impact on local businesses.
- We are committed to mitigate the impacts of construction, where practical.
- Metrolinx makes every effort to ensure that businesses receive up-to-date information on construction activities and timing, and where they are directly impacted, they are supported. This involves significant outreach and public communication.
- Metrolinx works closely with City transportation, local councillors, police services, traffic and parking enforcement, among others; to monitor and understand the impacts of construction, and to consider mitigation measures.

EXPERIENCE EGLINTON MENU BIA

TO SUPPORT BIA-LEAD MARKETING INITIATIVES METROLINX HAS ALLOCATED FUNDING THAT CAN BE USED TOWARDS THE FOLLOWING:

<div style="background-color: #4CAF50; color: white; padding: 5px; text-align: center; font-weight: bold;">ADVERTISING</div> <ul style="list-style-type: none"> • Radio • Newspaper Ad • Bus Shelter Ad 	<div style="background-color: #4CAF50; color: white; padding: 5px; text-align: center; font-weight: bold;">PRINTING</div> <ul style="list-style-type: none"> • Postcards • Brochures • Coupon books 
<div style="background-color: #4CAF50; color: white; padding: 5px; text-align: center; font-weight: bold;">SIGNAGE</div> <ul style="list-style-type: none"> • Window hoarding • Banners • Billboards • Lawn signs 	<div style="background-color: #4CAF50; color: white; padding: 5px; text-align: center; font-weight: bold;">PROMOTIONAL ITEMS</div> <ul style="list-style-type: none"> • Shopping bags • Pens • T-Shirts 
<div style="background-color: #4CAF50; color: white; padding: 5px; text-align: center; font-weight: bold;">SERVICES</div> <ul style="list-style-type: none"> • Organize workshops • Canada Post mail-outs 	<div style="background-color: #4CAF50; color: white; padding: 5px; text-align: center; font-weight: bold;">CONTACT US</div> <div style="padding: 5px;"> <p>West Community Office 1848 Eglinton Ave West 416-782-8118</p> <p>East Community Office Unit 110, 660 Eglinton Ave East 416-482-7411</p> <p>crosstown@metrolinx.com www.thecrosstown.ca</p> <p>  facebook.com/thecrosstown  twitter.com/crosstownTO </p> </div>  <div style="text-align: right; margin-top: 10px;">  <p>METROLINX <small>An agency of the Government of Ontario</small></p> </div>

HOW CAN WE HELP YOU?

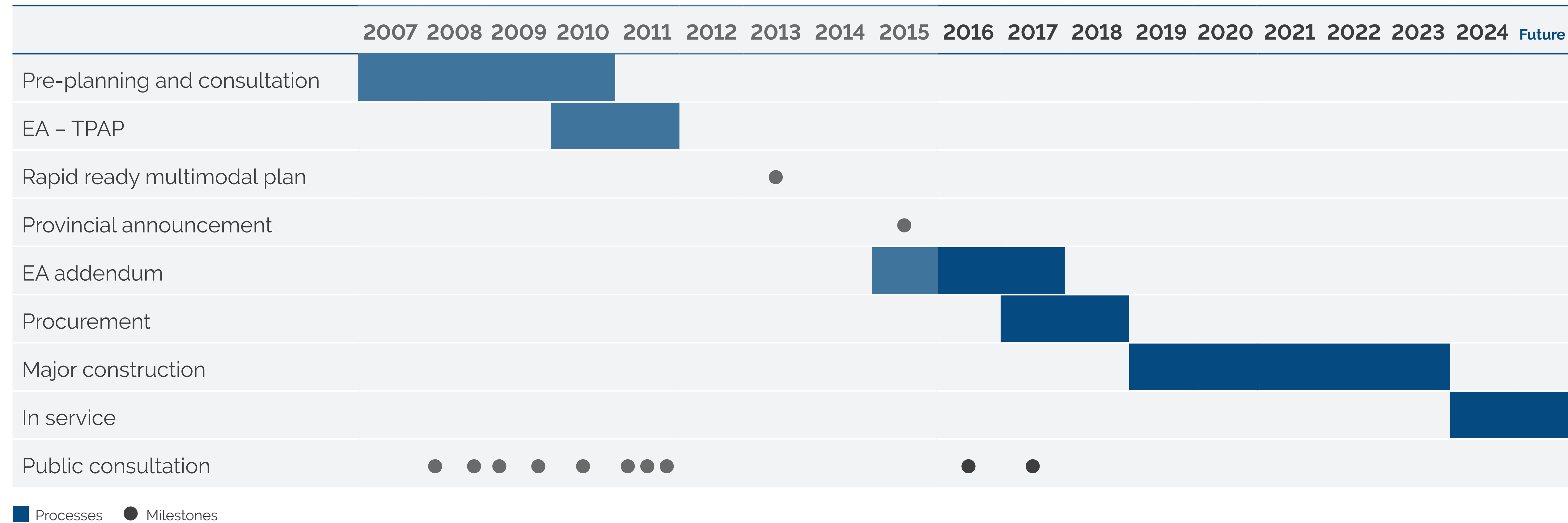
↑ Example of Marketing Support from Eglinton Crosstown

Metrolinx also works with local BIAs, the Hamilton Chamber of Commerce, and local businesses themselves

- Fully-staffed community office(s), working directly with businesses and the local community.
- Development and implementation of a business support program, based on best practices.
- Strengthen local businesses through professional training opportunities, market research and advertising.

Project Timeline

Hamilton and Metrolinx have been working together on planning the LRT since 2007, with numerous consultation events like this one. This timeline shows the general outline of activities we have completed, and what is coming up.



Next steps

Following Public Information Centre #2 in early 2017, the Environmental Project Report Addendum will be prepared and submitted.

Once the Addendum has been submitted and reviewed by members of the public, government agencies, aboriginal communities, and other interested parties, the proponents will respond to and address any matters arising from the review of the project.

To stay on track with us, visit the project website for the latest project developments, or call the project team representatives to discuss any questions you may have.

For more information go to:
hamilton.ca/LRT
metrolinx.com/HamiltonLRT

Thank you for coming!

If you have any project related questions or would like to be added to our project mailing list, please contact:

LRT@hamilton.ca

Andrew Hope

Director, Hamilton LRT, Metrolinx

Paul Johnson

Director, LRT Coordination, CoH

36 Hunter Street East,
Hamilton, ON

(905) 546-2424, ext. 6385

For more information go to:

hamilton.ca/LRT

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