



**City of Hamilton**  
**GENERAL ISSUES COMMITTEE**

**Meeting #:** 18-012  
**Date:** May 31, 2018  
**Time:** 9:30 a.m.  
**Location:** Council Chambers, Hamilton City Hall  
71 Main Street West

Stephanie Paparella, Legislative Coordinator (905) 546-2424 ext. 3993

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<b>1. APPROVAL OF AGENDA</b>	
(Added Items, if applicable, will be noted with *)	
<b>2. DECLARATIONS OF INTEREST</b>	
<b>3. APPROVAL OF MINUTES OF PREVIOUS MEETING</b>	
<b>4. DELEGATION REQUESTS</b>	
<b>5. CONSENT ITEMS</b>	
<b>6. PUBLIC HEARINGS / DELEGATIONS</b>	
6.1 Lisa Hodge respecting the Costs Forecast to Implement the LRT beyond the Provincial Funding (no copy)	
WITHDRAWN	
<b>7. STAFF PRESENTATIONS</b>	
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**10. NOTICES OF MOTION**

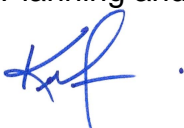
**11. GENERAL INFORMATION / OTHER BUSINESS**

**12. PRIVATE AND CONFIDENTIAL**

**13. ADJOURNMENT**



# INFORMATION REPORT

<b>TO:</b>	Mayor and Members General Issues Committee
<b>COMMITTEE DATE:</b>	May 31, 2018
<b>SUBJECT/REPORT NO:</b>	Hamilton Light Rail Transit (LRT) Project Update (PED18116) (City Wide)
<b>WARD(S) AFFECTED:</b>	City Wide
<b>PREPARED BY:</b>	Trevor Horzelenberg (905) 546-2424 Ext. 2343
<b>SUBMITTED BY:</b>	Kris Jacobson Acting Director, LRT Project Coordination Planning and Economic Development Department
<b>SIGNATURE:</b>	

## Council Direction:

Not applicable.

## Information:

The Request for Proposals (RFP) for the Hamilton Light Rail Transit (LRT) project was issued to three short-listed proponents on April 13, 2018. All three proponents are actively developing proposals according to the procurement delivery model for the project; Design, Build, Finance, Operate and Maintain (DBFOM). With the issuance of the RFP the project has officially entered the procurement phase.

This information report will provide an overall update on the project, identify new design features and alterations from the 2017 Environmental Project Report (EPR) Addendum, as well as provide some insight as to how impacts associated with construction staging, phasing and schedule will be mitigated.

## Background

In December 2011, the Ontario Ministry of Environment approved an EPR for the B-Line LRT project. The project was comprised of a route extending from McMaster University to Eastgate Square running along Main Street West, King Street West, King Street East, Main Street East and Queenston Road, with a combination of side/centre running LRT.

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**SUBJECT: Hamilton Light Rail Transit (LRT) Project Update (PED18116)  
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On May 26, 2015, the Ontario Government announced \$1 B in funding to cover 100% of the capital construction costs associated with the project with the understanding that future operations, maintenance and lifecycle rehabilitation costs will be shared between the City and the Province (i.e. Metrolinx).

Throughout 2016 and 2017, the 2011 EPR was updated to reflect changes in scope and alignment. These changes were primarily related to the Operations, Maintenance and Storage Facility (OMSF) as well as a shift in alignment to a centre running guideway for most of the corridor. Public Information Centres were held in September 2016 and January 2017 to inform and seek input from the public and affected stakeholders.

On April 26, 2017, Council approved the Hamilton B-Line LRT Environmental Project Report (EPR) Addendum. Approval from the Ministry of the Environment and Climate Change (MOECC) was subsequently received on August 2, 2017. The approved routing and stop locations are illustrated in Figure 1.1.

On April 13, 2018, Infrastructure Ontario (IO) and Metrolinx issued the RFP to three shortlisted proponents. The shortlisted teams were selected based on the evaluation criteria identified in a Request for Qualifications (RFQ) process that began in February 2017.

**Figure 1.1: Hamilton LRT Project Route Map**



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Project Schedule / Procurement Phase

With the issuance of the RFP on April 13, 2018, the project has officially entered the procurement phase. The three shortlisted proponents that will bid on the project were selected based on their experience, ability and financial capacity to deliver a project of this size and scope. The shortlisted proponents and their prime team members include:

- **CityLine Transit Group**

Equity Providers: ACS, Aecon, CRH, TIAA;  
Constructors: Dragados, Aecon, Dufferin;  
Design Team: Parsons, HDR, Amec, RDHA; and,  
Operation, Maintenance and Rehabilitation Team: ACS, Aecon, CRH, Serco.

- **Ei8ht Transit**

Equity Providers: EllisDon, Fluor, Bombardier;  
Constructors: Fluor Canada, EllisDon Civil, Bombardier;  
Design Team: WSP/MMM, Hatch, Gh3, Bombardier; and,  
Operation, Maintenance and Rehabilitation Team: EllisDon Facilities Services,  
Bombardier.

- **Mobilinx**

Equity Providers: Astaldi, John Laing, Hitachi-Ansaldo, Amico, Transdev;  
Constructors: Astaldi, Hitachi-Ansaldo, Amico, Bot;  
Design Team: IBI, Hitachi-Ansaldo, Daoust Lestage, Morrison Hershfield, Exp  
Services, Arcadis; and,  
Operation, Maintenance and Rehabilitation Team: Transdev, Hitachi-Ansaldo,  
Astaldi.

All three proponents have been invited to respond to the RFP and have begun preparing proposals that will detail how they plan to deliver all aspects of the project. Contract award is expected in 2019 with construction starting later that year. Figure 1.2 illustrates the project schedule.

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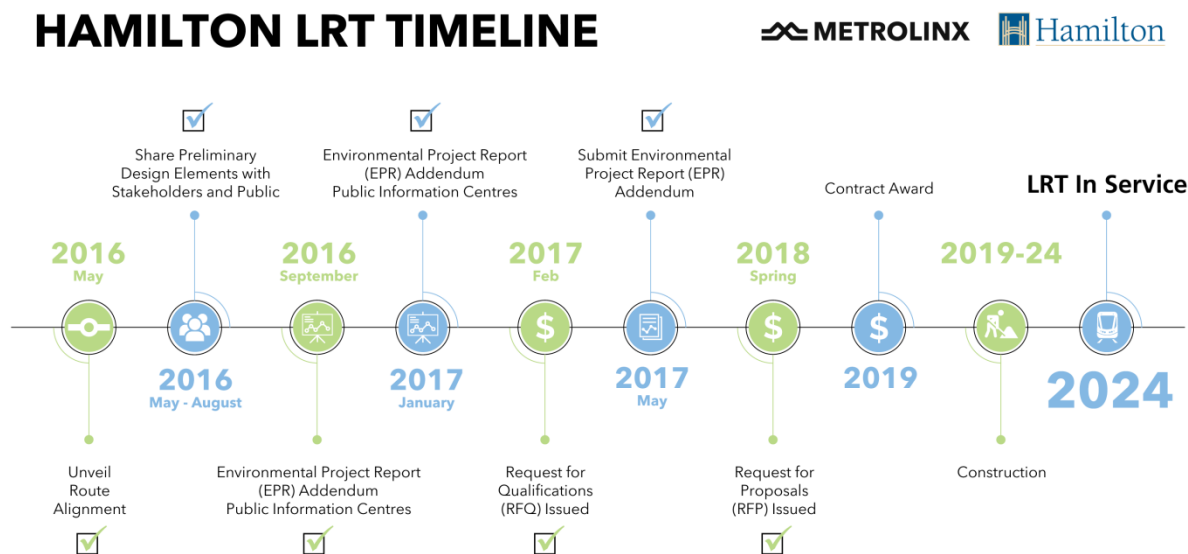
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**Figure 1.2: Project Schedule**



**Design Modifications/Alterations**

Subsequent to the approval of the EPR Addendum on April 26, 2017, the project team has been working to advance and refine the proposed design. Given the complexities and confines of the corridor, various issues and concerns were identified through this process that necessitated changes to the original design. While the general layout of the original design remains largely unchanged, there are a few areas along the corridor where the alignment was adjusted in order to accommodate constraints. These modifications include the following:

***Eastgate Square Stop***

The stop at the Eastgate Square terminus has been shifted from the centre of Queenston Road to the north side of Queenston Road adjacent to the mall. This shift in location will reduce the need for users to cross Queenston Road to access sidewalks and improve the pedestrian connection between the LRT, Eastgate Square and the current HSR Bus Terminal located on the Eastgate Square property. The alignment of Queenston Road between Centennial Parkway and Kenora Avenue is also improved by shifting the stop to the north side of the road.

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*Queenston Road between Parkdale Avenue and Strathearne Avenue*

Queenston Road between Parkdale Avenue and Strathearne Avenue has been reduced to one traffic lane in each direction. The original design called for two traffic lanes per direction. The intent of this change is to encourage westbound “through” traffic on Queenston Road to divert from the LRT corridor at Parkdale Avenue (an arterial road) rather than at Strathearne Avenue (a local residential road). This mitigation strategy will help reduce the potential for westbound “through traffic” on Queenston Road from using Strathearne Avenue and the local neighbourhood streets west of Parkdale Avenue.

*King Street from the Delta to Gage Avenue*

Through this section, the LRT guideway, including the underpass at the CP rail spur, has been shifted to the north side of King Street and will be “side running”. This shift in alignment will reduce the impacts to properties on the south side of King Street and allow for two westbound traffic lanes between the Delta and Gage Avenue. This increase in westbound traffic capacity will improve traffic operations at the Delta and provide a better traffic lane balance for westbound travel; especially during construction.

*International Village*

The look and feel of International Village will be similar to the current Gore Park design of a “naked street” space that removes the differentiation between the sidewalk and the roadway to create shared space for all forms of transportation (a special pedestrian only area will be demarcated with urban braille). Patterned and coloured concrete will be used for the shared space, including sidewalks, roadway and guideway in order to highlight the special character of the area. Landscape planting beds, raised planters and street trees will be incorporated into the design where possible. This shared space treatment will also be extended to include the closed sections of Mary Street, Walnut Street North and Ferguson Street North between King Street and the east/west alley on the north side of International Village.

As per the original design, King Street will operate with one eastbound traffic lane through this section (no westbound traffic flow). In order to improve pedestrian mobility and safety at the King Street/Wellington Street intersection as well as discourage “through” traffic from John Street to Wellington Street, King Street will terminate at Spring Street. Under this scenario, all eastbound traffic on King Street will be routed southbound on Spring Street to Main Street. To accommodate this movement, Spring Street will change from a one-way northbound road to a one-way southbound road. Access to Wellington Street will still be permitted for larger vehicles such as trucks and maintenance vehicles however such access will be limited and controlled.

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*Hughson Street from King Street to Main Street*

Similar to International Village, Hughson Street from King Street to Main Street will be similar to the current Gore Park design of a “naked street” space. Patterned and coloured concrete will be used for the shared space which will appear and flow as a natural extension of Gore Park. Enhanced wayfinding signs will also be placed along Hughson Street between King Street and Hunter Street to create a formalized pedestrian connection between the LRT and the Hamilton GO Centre.

*King Street from John Street to Bay Street*

Through this section, the LRT guideway has been shifted to the south side of King Street and will be “side running” in order to accommodate two westbound traffic lanes. Under the original design, only one westbound traffic lane was proposed. The addition of a second traffic lane through this section will improve mobility and accessibility through the corridor; especially for existing transit routes accessing the MacNab Transit Terminal. The addition of the second traffic lane will also improve connections between the major commercial, recreational, employment, residential and institutional land use anchors located in the Downtown.

*King Street West from Strathcona Avenue to Dundurn Street*

Through this section, the LRT guideway has been shifted to the south side of King Street and will be “side running”. This shift in alignment mitigates property impacts and allows for greater westbound traffic capacity at the intersection of King Street and Dundurn Street.

*Longwood Road Bridge*

The Longwood Road Bridge will be reconstructed as part of this project in order to support the LRT run-in tracks to the OMSF. The new bridge will be widened to accommodate sidewalks on both sides of the road and a bi-directional cycletrack on the east side of the road that will connect to the existing cycletrack/multi-use path south of Frid Street. The current bridge structure only has one sidewalk on the east side of the road.

*Other Elements*

In addition to specific design modifications mentioned above, several other design elements will be incorporated throughout the length of the corridor. These include:

- Urban Braille sidewalks;



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- Enhanced pedestrian crosswalks at all stops and throughout the downtown. These crosswalks will be similar to the standard currently used in Gore Park (concrete crosswalk with urban braille banding);
- Victorian themed pedestrian scale street lighting (poles and bollards) from West Avenue to Queen Street;
- All stops will be designed using a combination of steel, glass and wood canopy structures and will generally provide weather protection. All stops will be fully accessible (level boarding) and integrated into the adjacent pedestrian system (crosswalks and sidewalks); and,
- The Overhead Catenary System (OCS) poles will generally run down the centre of the guideway (middle of the road) to minimize the number of span wires crossing the road as well as interference/obstructions on adjacent sidewalks. The OCS poles will be black.

Construction Staging/Phasing Constraints

Unlike conventional construction projects where the general sequencing of work is set by the City prior to tender, the DBFOM procurement model requires the proponents to develop a staging and phasing plan based on the proposed scope of work and various operating and sequencing constraints. Rather than explicitly stating or directing how the project will be constructed, the specifications contained within the RFP provide the proponents with the flexibility to develop a plan that maximizes work efficiency but also respects the performance and operating boundaries set by the City. The ultimate goal for all parties is to find the right balance between maximizing efficiency (time to construct) while minimizing disruption (impact on residents and stakeholders).

The performance rules and operating constraints developed for this project focus on maximizing access to property (i.e. keeping roads and sidewalks accessible and functional during construction) and minimizing the length of potential road closures in both time and space. The following list outlines a number of the rules and constraints that all proponents must comply with when developing their construction staging and phasing plan (as per the RFP):

- Emergency, pedestrian and vehicular access to all road sections and properties must be maintained at all times;
- As specified by the City, the minimum number of traffic lanes through a work zone must be available and maintained at all times (the number of required lanes varies depending upon the road section);
- Where the minimum number of required traffic lanes can't be maintained due to construction constraints, the road will be considered "closed";
- Where a road is considered "closed", emergency, pedestrian and vehicular access must be maintained however "through" traffic may be limited or restricted;

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- Road closures have a maximum duration of 12 months and will only be permitted once during construction (per road section);
- Capacity restrictions or closures of north/south arterial roads crossing the work zone will be limited in both time (maximum of two weeks) and frequency (twice per 12 month period); and,
- Adjacent or interrelated north/south arterial roads shall not be closed at the same time.

It is important to note that the above referenced rules and constraints represent a generalized consolidation of those contained within the RFP document and is intended to provide an idea of how construction staging and phasing will be controlled. At a high level, the goals are to ensure that:

- Access to homes and businesses is provided at all times;
- Construction is focussed and continuous through an area; and,
- The surrounding road system remains functional to accommodate diversion.

Construction Delay Mitigation & Warranties

The Project Agreement (PA) between Metrolinx and the successful proponent will contain a number of protections to control and mitigate construction delay, correct performance and quality issues and ensure that all infrastructure is constructed in accordance with applicable standards and regulations. With respect to municipal infrastructure, the City will be granted full inspection rights and will review and approve all infrastructure prior to being put in service. All new City infrastructure will be protected by a two year warranty which is standard on all City road construction projects.

With respect to construction delays, the successful proponent is required to identify and commit to a “Substantial Completion” date as part of their proposal submission. The successful proponent will also be required to submit progress reports and construction schedules on a regular basis and must identify and remedy potential delays. Failure to correct schedule deficiencies in a timely manner will result in monetary deductions that will escalate over time. The City, through Metrolinx, can also claim for actual/verifiable damages incurred as a result of any delay or action by the successful proponent.

While the PA will contain a number of controls and deductions to mitigate potential construction delays, the financing component of the DBFOM procurement model creates accountability within the proponent’s consortium to achieve the desired outcomes. Unlike conventional construction projects where payments are made on a monthly basis for actual work performed, under the DBFOM procurement model, most of the money (approximately 50% of total construction cost) is not released until the project achieves “Substantial Completion”. As the proponent must secure 100% of the capital value of the project prior to the start of construction, the cost of carrying this

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money (interest payments) over the duration of the project incentivizes the proponent to complete the project on-time. Delays of even a few months can have a significant impact on the proponent's finances.

Furthermore, as the proponent is also responsible for operations and maintenance (OM), any delays during construction will ultimately delay the start of the OM period and the monthly payments associated with this work. As OM will be programmed to start at a specific point in time (after Substantial Completion), any delays in timing will most likely result in the proponent having to carry additional costs (beyond financing) associated with idle OM programs (e.g. labour, material, equipment, energy, insurance etc.). Again, depending on the length and scope of the delay, the financial impact could be significant. As such, unlike traditional procurement models, the pressure to complete the project "on time" is generated by the proponent itself in addition to the controls and deductions included in the PA. Under the DBFOM procurement model, the proponent is incentivized to complete the project in a timely manner or risk the financial impacts associated with delays.

#### Property Acquisition

Over the past 12 months, the Property Acquisition Unit (PAU) has been actively purchasing properties within the corridor. Although the final number of property requirements continues to fluctuate based on design refinements, approximately 300 properties will require partial purchases (a few metres or less). While most property impacts will be small, approximately 90 full property purchases are required. These full property purchases are typically required around stops where the road must be widened to accommodate the stop platform and vehicle turning lanes.

To this point, the PAU has been focussed on full property purchases and has been negotiating with property owners on a "willing seller, willing buyer" basis. To date, 22 properties have been purchased while negotiations are active with several others. The acquisition of smaller parcels will begin this year with the goal of having all property secured by the start of construction. Although reasonable efforts will be made to negotiate voluntary purchases with all affected property owners, expropriation will most likely be required. If necessary, this process will begin at some point over the next 12 months.

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Community Engagement

The LRT team has engaged and consulted with various organizations, external agencies, stakeholders and the general public. Since May 2016, individual meetings have been held with over 100 stakeholder and community groups, such as Rotary Clubs, Business Improvement Areas (BIAs), Chambers of Commerce, and neighbourhood associations. The LRT team has participated in over 60 community events such as the Dundas Cactus Festival, Winona Peach Festival, Supercrawl, Ancaster Fair, and Hamilton Public Library March Break events, engaging with over 9,000 attendees, to date.

On April 30, 2018, the Hamilton LRT Community Connectors began their fifth canvass since the program launched in 2016, visiting over 1,400 properties along the LRT route. The Community Connectors, made up of a diverse group of individuals from across the City, are committed to informing, educating and engaging residents, property and business owners on our journey to implement LRT. This program is a “made in Hamilton” strategy that has become a model for community and property outreach and has been adopted as a best practice for other major Metrolinx infrastructure projects like the Hurontario LRT project. Appendix “A” to Report PED18116 illustrates the broad reach and effectiveness of the program.

Next Steps (12 Month Look Ahead)

Over the next 12 months, City staff will be facilitating the procurement process with Metrolinx by responding to inquiries (Requests for Information) and meeting with the proponents at regular intervals to assist in the development of their proposal submissions. Subsequent to a successful bid submission and evaluation process, contract award is expected in 2019. Construction will start later that year.

**Appendices and Schedules Attached**

Appendix “A” – Community Connector Canvass Data Overview

TH:KJ:clt

# HAMILTON LIGHT RAIL TRANSIT



## COMMUNITY CONNECTOR CANVASS DATA OVERVIEW

The City of Hamilton launched the LRT "Community Connector" Program, in partnership with Metrolinx, in May 2016. The Community Connector team, made up of a diverse group individuals from across our city, is committed to visiting every affected property (nearly 1,400) along the corridor twice per year for the duration of the project. Their role is to inform, educate and engage property owners and also gather feedback that will help inform the LRT plans.

# 4

COMPLETED  
CANVASSES

- ✓ SPRING 2016
- ✓ FALL 2016
- ✓ SPRING 2017
- ✓ FALL 2017

UP TO

# 20

COMMUNITY CONNECTORS  
PER CANVASS

## 1379 PROPERTIES ALONG THE LRT CORRIDOR



**963** #commercial  
**416** #residential

# 7976

KNOCKS

# 2957

CONVERSATIONS

# 2349

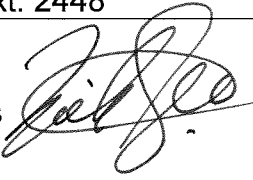
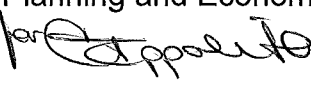
COMPLETED SURVEYS

**NEXT CANVASS**  
**> SPRING 2018**



Hamilton

# INFORMATION REPORT

<b>TO:</b>	Mayor and Members General Issues Committee
<b>COMMITTEE DATE:</b>	May 31, 2018
<b>SUBJECT/REPORT NO:</b>	Operation and Maintenance of the Hamilton Light Rail Transit (LRT) System (PED18117/FCS18058) (City Wide)
<b>WARD(S) AFFECTED:</b>	City Wide
<b>PREPARED BY:</b>	Bryan Boodhoo (905) 546-2424 Ext. 7164 Carla Ippolito (905) 546-2424 Ext. 2448
<b>SUBMITTED BY:</b>	Mike Zegarac General Manager Finance and Corporate Services 
<b>SIGNATURE:</b>	Kris Jacobson Acting Director, LRT Project Coordination Planning and Economic Development Department 

## Council Direction:

Council requested an update on the future estimated operation and maintenance (OM) costs associated with the Hamilton Light Rail Transit (LRT) project.

## Information:

On February 25, 2013, the *Rapid Ready Expanding Mobility Choices in Hamilton* report (PW13014) (Rapid Ready) was submitted to Council. Rapid Ready estimated that LRT would have an incremental cost impact of between \$8.7 M and \$12.0 M per year for non-transit municipal services, such as snow clearing, road maintenance, waste collection, and a net levy impact of between \$2.9 M and \$3.5 M for transit.

## Executive Summary

This report updates high-level cost estimates from Rapid Ready for the potential OM impact of LRT, as summarized in the following table:

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System (PED18117/FCS18058) (City Wide) – Page 2 of 7**

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Cost Category	Estimated Net Levy Impact	
	Low Estimate 2017 (\$000's)	High Estimate 2017 (\$000's)
Municipal Services (excluding transit)	\$2,000	\$9,800*
Transit (with LRT operational)*	\$3,200	\$3,900
<b>TOTALS</b>	<b>\$5,200</b>	<b>\$13,700</b>
* Adjusted 2% per annum from Rapid Ready, 2013 to 2017, for inflation.		

The current estimated 2017 OM levy impact for municipal services, not including transit, ranges from approximately \$2 M to \$9.8 M with an estimated FTE count of 11.10. The current estimated levy impact for transit is in the range of \$3.2 M to \$3.9 M. The transit levy estimate updated the figures presented in Rapid Ready using a 2% per annum inflationary factor.

More precise cost estimates will be available after the award of the LRT contract. At that time, staff will have better details of the design of the LRT, construction phasing and finalized costs from the successful proponent relating to OM costs of the LRT. It is also anticipated that OM agreement between the City and Metrolinx will be finalized by that time.

## 1. Results

OM Costs are split into two categories: 1) the costs to municipal services excluding transit (Municipal Services) and 2) costs for transit, whether it is buses or LRT.

### (a) Municipal Services

For Municipal Services, the updated estimated levy impact is \$2.0 M, which is \$7.8M lower than the estimate provided in Rapid Ready (in 2017 \$s). It is also estimated that an additional 11.10 full time employees (FTEs) would be required for these municipal services, which is similar to what was estimated in Rapid Ready. Estimates were lower than those presented in Rapid Ready for the following reasons:

1. Design Optimization: The design proposal, in the approved 2017 Environmental Project Report (EPR) Addendum, has fewer side running sections and fewer dead-end streets and turning restrictions, which allow for better vehicle circulation and turning movements. Additionally many of the

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concerns previously expressed by City operating departments have been addressed through design modifications. These design modifications include, for example, ensuring that the guideway is accessible to emergency service vehicles through the use of mountable curbs and designated access and crossover points;

2. **Scope Changes:** The current design proposal is more advanced than previous versions. Accordingly, staff better understand potential operating concerns and challenges. Earlier estimates provided in 2011 and 2013 assumed enhanced service levels and an expanded area extending at least one block north and south of the corridor, based on previous design proposals; and,
3. **Level of Service:** Current estimates assume City crews are only responsible for the OM outside of the LRT guideway, and that the successful proponent will be responsible for OM within the LRT guideway. The earlier estimates provided in 2011 and 2013 assumed City crews would be responsible for all OM services both inside and outside the LRT guideway.

For the current costing exercise, the following municipal services (excluding transit) were reviewed:

- Roads: Winter and Summer Maintenance;
- Waste Management: garbage, blue box, organics collection;
- Forestry and Horticulture: Tree maintenance, traffic islands and hanging baskets;
- Traffic: Signal Maintenance, Sign install & maintenance, pavement markings;
- Street Lighting: maintenance and operation within City-owned street;
- Parks and Cemeteries;
- Parking Enforcement and School Safety ;
- Parking Operations: parking meters and revenue generation;
- Licensing and By-Law Enforcement; and,
- Water and Wastewater Operations.

For the current costing project, there were significant levy impacts associated with the maintenance of roads, both summer and winter, as well as the loss of parking revenues due to the removal of parking meters along the corridor. These cost drivers were consistent with those presented in 2011 and 2013. For winter maintenance, the cost impact is due to the projected need for increased snow removal throughout the corridor, as opposed to snow clearing with on-road storage. For summer maintenance, it is projected that weekly service would be performed daily as well as during off-peak hours and at night to minimize traffic disruption and ensure the corridor is free of debris.

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Details of each municipal service, assumptions and estimated levy impacts are set out in Appendix "A" to Report PED18117/FCS18058.

(b) Transit

Since the Request for Proposal for the LRT has been released, there is a limited amount of analysis on OM that can be done without prejudicing the Province of Ontario's procurement process.

Accordingly, the cost estimates provided in this report simply update the findings previously presented in Rapid Ready through the use of a 2% per annum inflationary factor. Using this method, the estimated 2017 OM net levy impact for transit ranges from \$3.2 M to \$3.9 M.

2. Process

(a) Municipal Services

An OM Steering Committee (OMSC) and an OM Working Group (OMWG) were convened in Fall 2017 to re-examine the potential OM impacts of LRT on Municipal Services. The OMSC consisted of directors representing each of the Municipal Services, as well as Labour Relations and Finance while the OMWG consisted of managers, business affairs associates and other representatives from those areas. This costing project was divided into three phases:

- Phase 1: Estimated current 2017 budget along the corridor: Operating Divisions generally do not track costs on a street-by-street basis and, as such, do not have separate budgets dedicated to the LRT corridor. As an initial step, staff reviewed their current operating practices and budgets and estimated a baseline cost using the 2017 Council Approved Budget for the services they provide within the LRT corridor. This budget breakdown exercise was different for all working groups due to the unique nature of each service delivery. Methodologies, however, were reviewed by Finance & Administration staff and the LRT Project Office to ensure reasonableness and consistency;
- Phase 2: Estimates 2017 budget with LRT in operation: The OMWG members were asked to determine what their 2017 Budget estimate would have been (higher, lower or the same) assuming the LRT was fully constructed and operational. To assist with this exercise, the LRT Project Team met one-on-one with each Working Group to describe the current design concept and help develop future operating scenarios and strategies; and,

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*OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.*

*OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.*

**SUBJECT: Operation and Maintenance of the Hamilton Light Rail Transit (LRT) System (PED18117/FCS18058) (City Wide) – Page 5 of 7**

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- Phase 3: Estimated costs during construction period: The OMSC and OMWG will estimate the impact of LRT construction on Municipal Services when the details of construction phasing become available through the Request for Proposal (RFP) process.

(b) Transit

Since the RFP for the LRT has been released, there is a limited amount of analysis on OM that can be done without prejudicing the Province of Ontario's procurement process. The proponents are working on OM costing as part of their bids, which will inform an OM cost-sharing agreement between Metrolinx and the City of Hamilton. A more accurate estimate can be provided once these two processes have been completed.

Additionally, HSR staff is currently undertaking a systematic review of the City's transit network, which will result in a new Transit Master Plan (TMP). The TMP will guide how transit services will be provided in the future. The TMP will address routing, scheduling, level of service and integration throughout the City and with LRT and other modes of transportation. More accurate OM estimates for transit outside the LRT corridor will be available once the TMP is established.

3. Background Reports

On October 13, 2011, the *Conventional, Rapid and Inter-Regional Transit* report (CM11016/PW11064/PED11154/FCS11072) (Conventional, Rapid and Inter-Regional Transit Report) was presented to General Issues Committee (GIC). The OM estimated costs presented at that time indicated:

Cost Category	Estimated Levy Impact	
	Low Estimate 2011 (\$000's)	High Estimate 2011 (\$000's)
Municipal Services (excluding transit)	\$8,700	\$12,020
B-Line LRT Operating Cost Estimate	\$7,800	\$13,500
<b>TOTALS</b>	<b>\$16,500</b>	<b>\$25,520</b>

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**SUBJECT: Operation and Maintenance of the Hamilton Light Rail Transit (LRT) System (PED18117/FCS18058) (City Wide) – Page 6 of 7**

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The assumptions used to develop these cost estimates included the following:

- Responsibility for both operations and maintenance of the LRT system, including all services within the LRT guideway would be borne by the City;
- A significant portion of the system would be side running between Dundurn Street and the Queenston Traffic Circle, complicating access to and from side streets;
- Enhanced winter control activities, including snow removal along the corridor, neighborhood streets and alleyways and a reduction of on-street snow storage capacity in a larger geographical area;
- Enhanced parking enforcement services along the corridor; and,
- 22 LRT vehicles would be used (currently projected at 18 at commencement of service, but subject to the procurement process and later increases based on ridership demand).

On February 25, 2013, the *Rapid Ready- Expanding Mobility Choices in Hamilton* Report (PW13014) was submitted to GIC. The OM cost estimates presented at that time indicated the following:

Cost Category	Estimated Net Levy Impact	
	Low Estimate (\$000's)	High Estimate (\$000's)
Municipal Services (excluding transit)	\$8,700	\$12,020
Transit (with LRT operational + Revenue)*	\$2,900	\$3,500
<b>TOTALS</b>	<b>\$11,600</b>	<b>\$15,520</b>
* OM Costs for Transit are net, after deducting for projected revenue.		

Notably, unlike the previous Conventional, Rapid and Inter-Regional Transit Report which included gross OM costs for B-Line LRT specifically, Rapid Ready included net OM costs for transit. The gross costs for B-Line LRT in Rapid Ready range from approximately \$11.2 M to \$14.5M, and were included in the Transit net OM cost calculation.

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**SUBJECT: Operation and Maintenance of the Hamilton Light Rail Transit (LRT)  
System (PED18117/FCS18058) (City Wide) – Page 7 of 7**

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The assumptions used to develop the estimates in Rapid Ready included the following:

- The Municipal Services cost estimates were carried forward from the 2011 report;
- The LRT design and routing was consistent with the 2011 report;
- The low estimate assumed 16 LRT vehicles operating at 6 minute headways, no change in ridership and a 33% service hour reduction on the King and Delaware routes due to redundancy with LRT; and,
- The high estimate assumed 22 LRT vehicles operating at 4 minute headways, an 8% system wide increase in ridership and a 33% service hour reduction on the King and Delaware routes due to redundancy with LRT.

Next Steps

Staff will report back after the next key LRT project milestones are met, the award of the LRT contract, when proposed design, contract phasing and OM costs on the LRT guideway are known.

Staff will also report back with updates on the principles of an OM agreement with Metrolinx.

**Appendices and Schedules Attached**

Appendix "A" – LRT OM Levy Impact Estimate – Municipal Services (excluding Transit)

BB:CI:KJ:clt

**LRT O&M COSTING EXERCISE - MUNICIPAL SERVICES (Excluding Transit)**

PHASE 2				
Municipal Service	ASSUMPTIONS/JUSTIFICATION	2017 B-LINE CORRIDOR LEVY IMPACTS	2017 CORPORATE LEVY IMPACTS	FTE IMPACTS
<b>Forestry:</b> Storm Damage Response, Tree Maintenance, Tree Planting	Assumption: Currently we maintain 9,110 annual Diameter at Breast Height cms along the LRT corridor. The assumption is that there will be a 90% decrease in trees along the corridor once LRT is implemented. Although there is a proposed reduction along the corridor, the Corporate levy impact to the City will not change. Through existing funding and the "loss of tree canopy" component of the permit that will be issued under By-law 15-125, the tree maintenance costs are effectively just moved out of the LRT corridor but still a cost to the City.	-\$89,630.00	\$0.00	0.00
<b>Horticulture:</b> Traffic Island Beautification & Hanging Baskets	Assumption: Currently we maintain 1,417m2 of Traffic Islands & 132 Hanging Baskets along the corridor. The assumption is that there will be a 95% decrease in traffic island beautification along the corridor and a 100% decrease in hanging baskets along the corridor with LRT implementation. Even though there is a reduction in costs along the LRT corridor, this will be offset by an increase in traffic island inventory & hanging baskets in other areas of the ward/city.	-\$352,720.00	\$0.00	0.00
<b>Parks &amp; Cemeteries:</b> Christmas Displays	Assumption: Christmas displays will be done elsewhere OR labour hours will be reallocated as necessary to Winter Park Activities eg. trash collection (budget is primarily labour).	-\$102,210.00	\$0.00	0.00
<b>Streetlighting:</b> Maintenance & operations of ROW streetlighting	Assumption: The majority of street lighting infrastructure is planned to be attached to the LRT Overhead Catenary System (OCS) poles and the Project Specific Output Specification (PSOS) documentation places the ownership and operation of this infrastructure on ProjectCo/Metrolinx and not the City. Based on this the maintenance responsibilities for street lighting in the LRT corridor will be considerably reduced. Assumed 100 poles remain as City assets along the LRT corridor. This also assumes electricity expenses will be paid for by ProjectCo. Reductions are as follows: <b>Labour (\$12,400) + Contractual (\$67,800) + Electricity (\$197,300)</b>	-\$277,500.00	-\$265,000.00	0.00
<b>Traffic:</b> Traffic Signal Maintenance, Sign Installation & Maintenance, Pavement Markings, Admin	Assumption: Traffic Signal Maintenance: Currently have 52 Full Signals and 8 Ped Signals along the Corridor. With LRT, Signal Mix has been changed. Reduced Full Signals by 10 and Increased Ped Signals by 12. City Levy impact = 0 due to labour hours being reallocated.	-\$34,000.00	\$0.00	0.00
	Assumption: Traffic Sign Installation & Maintenance : No change	\$0.00	\$0.00	0.00
	Assumption : Pavement Markings : The use of "plastics vs paint" will change, thereby shifting labour hours from City to contractual work. The number of ladder crosswalks is expected to increase as is other plastic work. Lane line "paint" work is expected to decrease.	\$25,330.00	\$43,920.00	0.00

**LRT O&M COSTING EXERCISE - MUNICIPAL SERVICES (Excluding Transit)**

PHASE 2				
Municipal Service	ASSUMPTIONS/JUSTIFICATION	2017 B-LINE CORRIDOR LEVY IMPACTS	2017 CORPORATE LEVY IMPACTS	FTE IMPACTS
<b>Roads:</b> Winter - salting, plowing, anti-icing, snow removal, hired equipment Summer - pothole repairs, drainage, sidewalk repair	Assumption Winter: Due to lane restrictions, snow removal instead of ploughing becomes essential along the corridor. Therefore, 2 dedicated crews required for afterhours (ie. 8 Operators and 2 Lead Hands with 2 - 4X4 crew cabs with plow&hopper). Summer: Nightly sweeping along the corridor instead of weekly to ensure LRT corridor is kept free from debris. Maintenance work would be conducted during LRT shutdown hours, to avoid traffic congestion during the days. Alternative is to continue to provide road maintenance during the day regardless of traffic implications. (4 operators + 1 Lead Hand, Sweeper) <b>Labour increase: \$ 547,030 + Equipment \$93,210</b>	\$640,250.00	\$640,250.00	7.10
<b>Waste Mgmt:</b> Curbside garbage collection, organics L&Y, blue box, automated blue carts , public space litter containers, power sweeping/washing in the downtown core	Assumption: Addition of 2 - 1 tonne Stake Trucks with tipper required for International Village and small space accessibility for all streams of pickup (ie. garbage, organics, leaf & yard, Recycling Blue Box cart, Call-in Bulk, Commercial Garbage, Public Space containers and Illegal Dumping )	\$30,000.00	\$60,000.00	0.00
<b>Licensing &amp; By-law:</b> Annual renewal fees for Licensing	Assumption: In regards to demolition of properties and its impact on Licensing Fees, the information was based on the SDG Environmental Impact Report. There is no report of any demolition from Queenston Traffic Circle to Eastgate Square. Based on this information, 13 business licenses would be lost due to demolition resulting in approx. \$ 20,250 in loss revenue. This does not include the loss of license fees due to construction at this time.	\$20,250.00	\$20,250.00	0.00
<b>Parking Enforcement &amp; School Safety:</b>	Assumption: Parking Enforcement - no change: with the implementation of LRT, there will still be parking regulations along the corridor that will need to be enforced via both internal and contract staff. There is a risk of more enforcement needed if the priority of corridor parking regulations take precedence or additional regulations are implemented (This is a change in service delivery and will therefore require Council approval).  School Crossing Guard - no change: With the implementation of LRT, the crossing points are still required due to existing school walking patters and existing Schools. There are yearly reviews of existing crossing points with potential changes in walking patterns. These points may be altered or traffic design may also alter crossing locations.	\$0.00	\$0.00	0.00
<b>Parking Operations:</b>	Assumption: Based on 522 Parking Meters being removed. This includes the removal of meters along the sidestreets as well.	\$615,000.00	\$615,000.00	0.00
<b>Rapid Transit Office &amp; Staff:</b>	Assumption: City Staff required to manage the LRT operating contract.	\$0.00	\$500,000.00	4.00
		<b>\$474,770.00</b>	<b>\$1,614,420.00</b>	<b>11.10</b>
<b>25% CONTINGENCY</b>			<u>\$403,600</u>	
			<u><b>\$2,018,020.00</b></u>	

# CITY OF HAMILTON M O T I O N

**General Issues Committee: May 31, 2018**

**MOVED BY COUNCILLOR M. GREEN.....**

**SECONDED BY COUNCILLOR .....**

## **Hamilton Transit Passenger Bill of Rights for Hamilton Street Railway (HSR) and Light Rail Transit (LRT)**

WHEREAS, the residents of Hamilton, through elected City Councillors and the Mayor, should have direct oversight over any transit projects within in their jurisdiction, including the Hamilton LRT.

THEREFORE BE IT RESOLVED:

- (a) That Metrolinx build a mechanism into the contract with ProjectCo to allow Hamilton City Council, through Metrolinx, to initiate sanctions against ProjectCo, up to and including, termination of the Operating Agreement for LRT; and,
- (b) That the residents and transit users of the city of Hamilton are entitled to expect the following articles of their transit system, whether it be public or private, municipal or provincial including, but not limited, to Hamilton Street Railway and Hamilton Light Rail Transit operations (currently known as ProjectCo):

### **PASSENGER BILL OF RIGHTS**

- 1. Safety and Accountability, Public Oversight
  - (i) That ProjectCo must comply with any and all public audit requests at expense of each contractor;
  - (ii) That ProjectCo submit, unredacted, any and all audits performed related to efficiency, labor, performance, and safety to [relevant agency, executive, and Council offices] within 30 days of any audit's completion;
  - (iii) That ProjectCo must commit to the highest level of maintenance and safety standards as defined by federal, provincial, and municipal regulations. In addition, each contractor must submit a summary report to Metrolinx, City Council and the Minister of Transportation of all infractions related to noncompliance with any relevant federal, provincial, or municipal regulatory statute; and,

- (iv) If the designated bidder is headquartered outside of the Province of Ontario, said contract cost shall be increased by the amount of income tax revenue, if any, which will be lost to the province.

## 2. Reliability, Predictability and Service

- (i) ProjectCo must demonstrate and adhere to providing high-quality transit service at levels that reflect and meet demand;
- (ii) ProjectCo must commit to provide reliable transit service and submit quarterly reports on on-time performance and hours of missed service to Metrolinx, City Council and the Minister of Transportation;
- (iii) ProjectCo must commit to working with the City of Hamilton and Hamilton Street Railway to optimize service integration; and,
- (iv) To prepare for any event that the Hamilton LRT will experience service interruptions, delays, or stoppages, ProjectCo and HSR must have an established arrangement for HSR to provide bus service at ProjectCo's expense.

## 3. Affordability and Fares

- (i) Each private contractor must provide any and all operating and capital budget drafts and revisions for public review to Metrolinx, City Council and the Minister of Transportation;
- (ii) The total contract cost, inclusive of all cost considerations, outlined in this Passenger Bill of Rights, will be at least fifteen percent less than the estimated current year cost of the service provided by the public sector, or that could be were public sector partners afforded equal opportunity and resources; and,
- (iii) Hamilton LRT fares must be equal to current and future HSR fares, and ProjectCo must honour all HSR transfers and Presto discounts.

## 4. Equity and Accessibility

- (i) ProjectCo must honour all federal, provincial, and municipal transit discounts and special fares for persons with disabilities, senior citizens, low-income riders, children, and students. This must include all current and future rate-reductions provided by HSR; and,
- (ii) Hamilton LRT may not adopt a fare-by-distance model that would disproportionately affect riders from neighbourhoods with equity-seeking groups, who have been pushed out of the inner core due to gentrification and rising housing costs in Ontario.