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TO:	CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON OCTOBER 7, 2013
FROM:	JOHN BRAAM, P. ENG. MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER AND MARTIN HAYWARD MANAGING DIRECTOR, CORPORATE SERVICES AND CITY TREASURER, CHIEF FINANCIAL OFFICER
SUBJECT:	BUS RAPID TRANSIT STRATEGY

RECOMMENDATION

That, on the recommendations of the Managing Director, Environmental & Engineering Services and City Engineer and Managing Director, Corporate Service and City Treasurer, Chief Financial Officer, the following actions **BE TAKEN** in respect to the Bus Rapid Transit Strategy:

- a) the Bus Rapid Transit Strategy Business Case presented by the London Transit Commission **BE RECEIVED**;
- b) the Civic Administration **BE DIRECTED** to initiate an Environmental Assessment in 2014 for the Rapid Transit Corridors identified in the Transportation Master Plan, to confirm the preferred form of rapid transit, detail the corridor improvements required to accommodate it and refine the implementation timing, with the cost of the Environmental Assessment study to be included in the draft 2014 Capital Budget for Council consideration;
- c) the Financial Plan for Constrained Implementation Plan of the Bus Rapid Transit Strategy **BE RECEIVED**, noting that the financial plan will be subject to revision as a result of the Environmental Assessment process, commitment of senior levels of government funding and the finalization of the 2014 Development Charge;
- d) the Civic Administration **BE AUTHORIZED**, working in conjunction with the London Transit Commission, to make representation to the Provincial and Federal governments respecting London's Bus Rapid Transit Strategy with the objective of gaining approval and commitment for investment in London's Bus Rapid Transit Strategy, recognizing that the Environmental Assessment will confirm the technical aspects of rapid transit and provide more detailed cost and implementation timing information for inclusion into a revised Financial Plan.

PREVIOUS REPORTS PERTINENT TO THIS MATTER
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- Civic Works Committee - June 19, 2012: London 2030 Transportation Master Plan
- Civic Works Committee – February 25, 2013: Timeline for Major Environmental & Engineering Report

BACKGROUND

Context

The City of London is responsible for a transportation system that promotes the movement of goods and services to strengthen our economic growth, provides for sustainable transportation mobility choices for residents that improve our quality of life and shape our community, and ensure that our roads and bridges remain safe and in good repair.

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The City's new Transportation Master Plan (TMP) is based on expanding options for London commuters through enhanced mobility choices and public transit service improvements providing a better balance between all modes of transportation and supporting the cost effectiveness of transportation infrastructure.



The implementation of the plan is a critical strategic priority. The TMP calls for the implementation of a nodes and corridors strategy for public transit employing a Bus Rapid Transit (BRT) platform. To meet the objectives in Council's Strategic Plan and the TMP in a manner that provides transportation mobility choices while ensuring that roads and bridges remain safe and in good repair, an investment of \$930 M in transportation and \$380 M in the BRT system have been identified.

The TMP will make a significant contribution to London and Southwest Ontario's growth prospects and economic competitiveness while providing broader public mobility, quality of life and environmental benefits.

Bus Rapid Transit Strategy

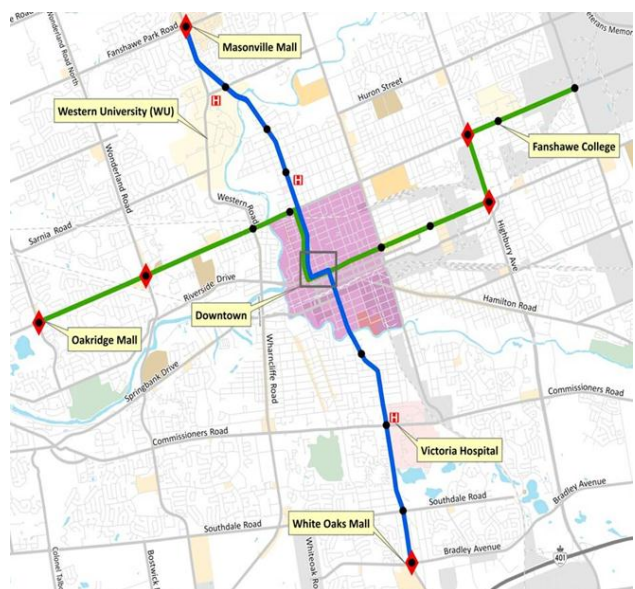
The BRT Strategy was developed as an integral part of the London 2030 Transportation Master Plan (TMP) entitled "Smart Moves" and approved by City Council in June 2012. Conceived as an integrated growth management and transportation planning program, the TMP is a transportation strategy that not only accommodates population and economic growth in London over the next 20 years, but also attempts to shape that growth through the spatial distribution of economic and other activities and through sustainable transportation outcomes. Five "Smart Moves" or strategic initiatives were recommended as part of the 20-year "new mobility" TMP. These Smart Moves are:

1. Rethinking Growth to Support the Transportation Master Plan
2. Taking Transit to the Next Level
3. Actively Managing Transportation Demand
4. Greater Investment in Cycling and Walking Infrastructure
5. More Strategic Program of Road Network Improvements

Transit ridership in London has grown on average at 4.1% per year between 1996 and 2012, when it carried 23.5 million riders. As a result, the current transit network is approaching the limits of its capacity, with peak period frequencies already at 5 minutes or less along major corridors where multiple bus routes are utilized.

The TMP provides the planning rationale for two BRT corridors: one north-south and one east-west. These corridors represent the best performing segments from five of the eight corridors identified in the Long Term Transit Growth Strategy.

The corridors are designed to better link downtown London to post-secondary institutions and other key activity centres in the community, such as the London Health Sciences Centre. This has also been described as the "centres" and "corridors" approach to transportation in ReThink London's discussion paper entitled Providing Transportation Choices.



A well designed BRT system attracts transit ridership, achieves better travel times than traditional transit routes, increases neighbourhood property values, attracts future residential

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and business development along its path, conserves energy and reduces greenhouse gases, and enhances the City's image and the quality of life.

The proposed rapid transit network for London consists of a north/south line in the Richmond Street/Wellington Road corridor and an east/west line in the Oxford Street/Dundas Street corridor, both serving the downtown and broader central area. The conventional bus routes would be reconfigured to link to and feed the BRT higher-order transit spine.

One of the major features of a bus based rapid transit system is its flexibility to allow for phased implementation. While road widening's are being planned, designed and constructed, service improvements and treatments such as signal priority measures and queue-jump lanes can be put in place to speed up service and build ridership. Operating the designated lanes as High Occupancy Vehicle (HOV) lanes, or allowing other "green vehicles" to use the lanes during peak periods is an excellent way to maximize the effectiveness of the investment in dedicated lanes while building ridership and BRT service frequency over time.

BRT provides a premium level of service, with fewer stops, faster service, enhanced reliability, higher quality amenities, and specially branded buses and stations compared to local bus service. BRT systems can combine Intelligent Transportation System (ITS) technology, as well as signal and roadway design priority treatments for transit, rapid and convenient fare collection, and enhanced integration between stations and adjacent land uses. BRT has the flexibility to be upgraded and expanded to meet increasing demand along a corridor, and can serve as a precursor for light rail transit (LRT).

Implementation of numerous urban BRT and LRT systems are underway in the Province of Ontario. Municipalities such as Ottawa, York Region, Brampton, Durham and Mississauga have BRT systems in the operational or developmental stages. The Waterloo Region, Ottawa, Mississauga and Hamilton are proceeding with LRT systems.

Purpose

The London Transit Commission in conjunction with the City has completed the Business Case for the BRT that will be submitted to the Provincial and Federal governments. The business case was approved by the London Transit Commission on July 31st, 2013.

The purpose of this report is to present to Committee and Council with the Business Case and a Financial Plan for the BRT Strategy.

The Business Case for the BRT is one of four key considerations necessary to secure support and investment from the senior levels of government. The remaining three include:

- 1) having a transportation master plan such as Smart Moves where public transit is a key component of the plan
- 2) demonstrating that land use and transportation planning are integrated to ensure that development supports transit and is oriented toward transit; that is, public transit is used to define the nature and shape of growth. The requirement is evidenced by both the adopted recommendations relating to land use set out in the approved TMP and further by the expected amendments to the Official Plan resulting from the Rethink London process; and
- 3) municipal commitment to developing a sustainable transportation system that has public transit as a focus with such commitment being evidenced/supported by a related Financial Plan.



The Business Case is not a Financial Plan. It is a determination of the expected return on investment – an investment that represents the total cumulative net capital and operating investment requirements needed for a fully operational BRT service, including augmenting the supporting regular scheduled service.

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DISCUSSION

Business Case

The Business Case and covering letter from the London Transit Commission for the BRT Strategy is included as Attachment #1. Additional highlights of the business case are identified within the London Transit Commission submission. A presentation will also be provided at the CWC meeting by the London Transit Commission.

The business case is critical to securing capital investment from federal, provincial and municipal governments to implement the BRT Strategy.



The benefit-cost analysis has identified that the BRT Strategy is expected to generate \$1.80 of benefits for every \$1 investment in the net capital and net operating costs required to deliver the transformation of London's transit service. The net incremental capital investment required for the BRT Strategy in terms of net present value is \$300 million over a 30 year period. Net new operating and maintenance costs for the BRT Strategy are estimated at \$114 million. Both the capital and operating costs – which amount to \$414 million – exclude all capital and operating spending which would have otherwise occurred in the base case scenario in order to provide a continuation of the current transit service.

The benefits from the BRT Strategy for the full 2020-2049 period consist of the \$735 million under the transportation user account (social cost savings from reduced transit travel times, reduced auto-operating costs and safety benefits) and \$2 million of GHG emissions savings under the environmental account. Together, the combined benefits exceed the capital and operating costs associated with the BRT Strategy by \$323 million in terms of net present value or by a ratio of 1.8:1. The same figures can be expressed in terms of an economic rate of return of 11.3% over the 30-year period. All of these benefits would be lost to London if the BRT Strategy did not proceed.

Implementation Plan

Upon completion of the Business Plan, an implementation plan for the BRT was developed that takes into account constructability and financing constraints.

The implementation of BRT services along the proposed corridors will be phased in over a period of time allowing the growth in the service to relate to the growth in ridership in the corridors and the intensification of the land uses along the nodes and corridors.

The TMP recommended that the City reshape its current pattern of growth to focus on intensification, which would involve directing at least 40% of future population and employment growth into the downtown area and along the proposed rapid transit corridors. The intensification will provide the land use density and mix of uses to support the BRT. It is recognized that the intensification will take time and as such the implementation focuses on corridors with higher existing land use densities that will allow for a gradual transformation and shift from the existing 12.5 % transit mode share to the achievement of the 17% mode share identified in the Business Case.

The implementation also needs to consider several components of the service, including frequency of service, BRT transfer facilities at nodes, right of way priorities, corridor infrastructure requirements including enhanced pedestrian and cycling provisions within the context of creating green streets.

The initial stages of implementation will feature semi-express service along the planned BRT corridors, utilizing technologies such as transit signal priority to improve travel times. Providing a

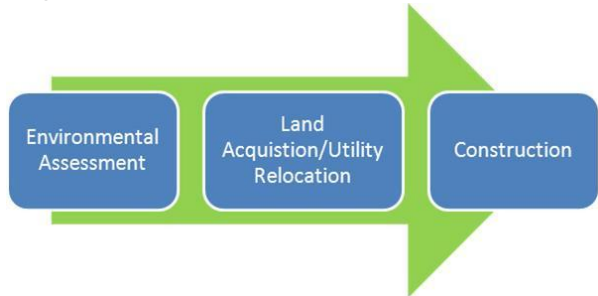
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higher overall quality service in the early stage of implementation is critical to start building ridership and immediately increasing transit modal share.

Outside the central area, it is proposed to widen the arterial BRT corridors to six lanes in width where reasonably possible to achieve exclusive lanes HOV/BRT lanes, although a more detailed review will need to be undertaken as part of the next phase of studies.

Within the central area, sufficient road right-of way is generally not available to widen pavements and, since the central area is served by a relatively fine grid of roadways, it was concluded that semi-exclusive lanes could be achieved without road widening. Within shared transit / HOV lanes, the opportunity exists to create a “green lane” (which permits usage of HOV lanes by energy efficient vehicles as well). Roadways will need to have parking restricted in order to allow for BRT services to function at an acceptable level.

The next phase is the completion of *Municipal Class Environmental Assessment* (Class EAs) for the corridors to determine opportunities and constraints, needs, impacts, costs, and required mitigation measures.



The EA’s will confirm the preferred form of rapid transit, detail the corridor improvements required to accommodate rapid transit, refine the implementation timing, and determine in greater detail the overall costs associated with the corridors. The EA’s are anticipated to take two years with land acquisition and utility relocation anticipated to be the major impedances to the construction. It is recommended to initiate the two higher priority EA’s, the north and south legs, in 2014 at an estimated cost of \$2.0 M.

Based on anticipated right of way requirements, land acquisition will be a major component to the project. Road widening’s to implement the BRT will compose a significant portion of the overall capital budget (\$107.5 M of the \$300 M capital funding requirements for BRT roadways). The acquisition of the properties will require significant resources and lead time as there will be 100’s of property impacted either through purchases, partial widening, injurious affection or working easements for construction.

Coordination could affect project schedules and stress Water and Wastewater budgets. Other engineering service areas typically use the opportunity presented by an arterial road project to carry out cost-effective infrastructure installation or rehabilitation. This is of particular note because underground servicing capacity increases may be triggered by the proposed development intensification along the BRT corridors.

The BRT implementation will also have to take into account the timing of other life cycle and road widening projects in order to manage traffic congestion impacts from the construction. It is anticipated that a dedicated BRT Delivery Group would be considered for the project, and may be required as part of the funding agreement, upon confirmation of funding and a delivery schedule.

The project timelines for both the Implementation Plan as set out in the Transportation Master Plan which was incorporated as part of the Business Case and the revised Constrained Implementation Plan based on constructability and financing are as follows:

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Business Case Implementation Plan

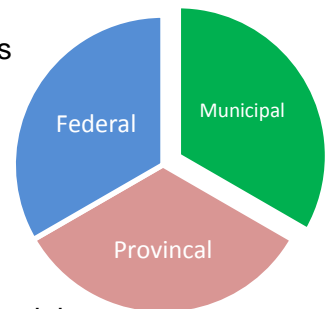
Facility	Year																
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
North Leg																	
Richmond Street																	
South Leg																	
Wellington Street																	
East Leg																	
Highbury Avenue																	
Dundas Street																	
Oxford Street																	
West Leg																	
Oxford Street West																	
Downtown																	
Optimization																	

Constrained Implementation Plan

Facility	Year																
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
North Leg																	
Environmental Assessment																	
Land/Engineering/Utilities																	
Construction																	
South Leg																	
Environmental Assessment																	
Land/Engineering/Utilities																	
Construction																	
East Leg																	
Environmental Assessment																	
Land/Engineering/Utilities																	
Construction																	
West Leg																	
Environmental Assessment																	
Land/Engineering/Utilities																	
Construction																	
Downtown Facility																	
Environmental Assessment																	
Land/Engineering/Utilities																	
Construction																	

Financial Plan

Upon completion of the Business Plan, a Financial Plan for the BRT was developed based on the Constrained Implementation Plan which took in account constructability, congestion management and financing constraints. The Financial Plan is preliminary and will be refined based on the results of the Environmental Assessment, confirmation of levels of funding from senior levels of government and the finalization of the 2014 Development Charges Study.



The financial plan also provides Council with an overview of the potential financial impacts of the BRT as there is significant municipal cost associated with a fully implemented BRT. The implementation of the BRT is only possible if senior levels of government match capital funding that have been extended to other municipalities. Template funding mechanisms from other jurisdictions with BRT systems in Ontario suggest that a one third share could be allocated to the province, the federal government, and the municipality.

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The breakdown of the overall cost of the BRT during the implementation (2014-2032) are summarized as follows:

Component		Cost (\$M)	
Capital			
City	Road Construction	301.7	
London Transit Commission	Downtown Terminal	5	81.8
	Maintenance Facility	25	
	New BRT Buses	25.9	
	Feeder Service Buses	25.9	
Capital Total		383.4	
Operating			
City	Roads Project Delivery	4.9	
	Transportation Operations	1.5	
London Transit Commission	Transit Operations	95.6	
Operating Total		100.5	

These capital costs are gross and are not reduced to show the inclusion from development charges and expected contributions from both the Federal and Provincial governments for BRT related costs. The transit operating costs are net of fares collected from riders, based on current rates of recovery.

Funding of the Municipal Share

The process to determine the nature and timing of the required municipal funding for the BRT Strategy is underway through the Development Charges Background Study development. The draft TMP and BRT project implementation schedule developed for the Development Charges Background Study was utilized as a basis for the Growth Component of the Transportation Infrastructure Gap analysis.

The analysis assumed existing development charge rational and capital funding contributions which are subject to input from the Development Charge Stakeholder Committee and approval through the Development Charge process.

To calculate the appropriate development charge, it is necessary to consider the various types of transportation projects and use a methodology for each type of project that conforms to the *Development Charges Act* and provincial regulations. The Act and supporting regulations do not identify specific methodologies for assessing different types of projects; they codify general principles that must be satisfied, but allow for flexibility in the specific methodology used.

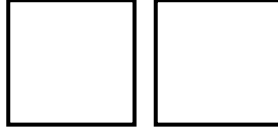
The various elements of a BRT system are treated differently for the purpose of determining DC eligibility and calculating the charge. The BRT elements were grouped into three categories: road right-of-way improvements, intersection improvements, and transit components.

Road right-of-way improvements include addition of high-occupancy vehicle (HOV) lanes to accommodate the BRT service. These lanes are justified based on the level of auto congestion and the level of transit service.

Intersection improvements include addition of queue jump lanes, signal upgrades, and transit signal priority to support BRT services in areas without dedicated lanes.

Transit components include vehicles, stations, garages, and other elements of the BRT system that are typically outside the road right-of-way. The amount eligible to be funded through DCs is calculated based on the historic ten-year average service level for the transit system as a whole.

It should be noted that moving forward with BRT allows for the deferral of a number of major road widening projects on parallel roadways. Approximately \$290 M of additional road widening would be required over the next 20-years if the proposed BRT routes do not go forward. In addition, road widening on portions of the BRT route would be required for automobile traffic, the prime example being the Wellington corridor which was in the 2009 DC identified for widening.



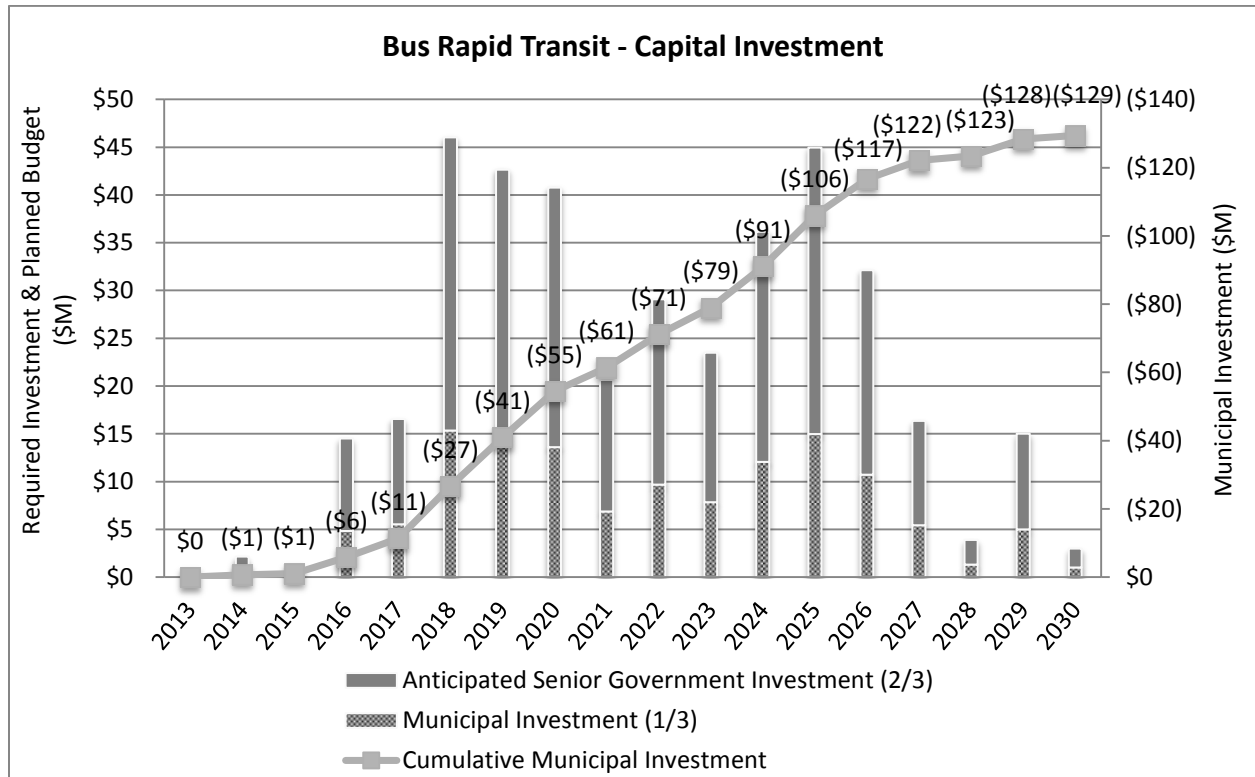
If the City was successful in securing two-thirds senior levels of government support the net savings of BRT on the Development Charges Rate would be in the magnitude of \$160 M.

Operating Costs

LTC annual operating costs associated with additional service hours are estimated to grow to approximately \$15 M annually upon full implementation. Assuming current farebox revenues, the net increase would be \$10.7 M annually upon implementation in 2032, which translates to a 42% increase over the \$25.5 million that LTC currently receives from the City for operating costs.

The new HOV lanes that the BRT would operate in would increase City operation and maintenance costs. Once completed, operation and maintenance cost of the BRT complete network is estimated at \$150,000 annually. LTC annual operating costs are estimated to grow to \$10.7 M upon full implementation.

Given the transitory nature of the BRT project, the defined-term project delivery costs would be outsourced and capitalized as much as possible. Internal project delivery costs are estimated at an average \$450,000 per year for the duration of the capital construction phase.



FINANCIAL IMPACT

The BRT Strategy financial impact examines that gap that exists to implement the plan presented by the London Transit Commission. It does not examine nor portray the existing transit related gap in funding for the London Transit Commission.

The BRT Strategy is contingent on senior levels of government support. With two-thirds senior government support for BRT and based on existing development charge assumptions, the tax supported funding gap for 10 years is approximately \$18 million. At this level, the BRT capital funding can be supported by debt financing within the City's current debt cap. Operating costs to support this new infrastructure increase to \$5.6 million annually in ten years. The operating costs grow to \$10.7 million annually by the time the system is fully implemented. The capital and operating program can be supported with a **0.25%** tax levy increase for eight years starting in 2015.

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The terms of senior government funding for other municipalities have been variable. A scenario was developed to review the impact of slightly reduced senior government funding. Lower projected levels of senior government support for aspects of the BRT program do not significantly alter the tax levy increase required to support the program.

It must be noted that the development charges assumptions, in terms of the applicability and growth splits for the BRT Strategy, are subject to the Development Charges process.

In order to provide Council with an order of magnitude related to the transportation development charge, the current Roads DC for a single family home is \$9,651. Preliminary estimates based on the work completed to date as part of the Development Charge Update indicates that the Roads DC would have to increase approximately 50% to accommodate the assumptions included as part of the overall transportation system analysis. The BRT accounts for one quarter of that increase.

Revised assumptions on the level of support from development charges would significantly increase the tax supported capital funding required. At this level, BRT capital funding could not be supported by debt financing and the program would require a tax levy of as much as **0.75%** for four years. The detailed Financial Plan analysis is provided as Appendix B.

The funding of the BRT Strategy implementation must take into account the overall funding needs of the transportation system as it is only one component of the Transportation Master Plan. The funding gap must be analyzed holistically, not in segments, as the overall transportation network requires that all three components (lifecycle, growth, BRT) be funded in a sustainable manner.

SUMMARY

The Transportation Master Plan has identified a Rapid Transit Strategy which represents a unique opportunity to transform the scale and quality of London's transit network in order meet the population growth and ridership demands for the City and the wider region.

The London Transit Commission has developed a Business Case that identifies a benefit-cost which is expected to generate \$1.80 of benefits for every \$1 investment in the net capital and net operating costs required to deliver the transformation of London's transit service. This is based on comparing the transportation user benefits and the environmental benefits to the additional capital and operating costs required for the Strategy. In addition, the BRT Strategy generates broader economic development impacts and social and community impacts.

The next step is the completion of an Environmental Assessment to determine opportunities and constraints, needs, impacts, costs, and required mitigation measures. The EA will confirm the preferred form of rapid transit, detail the corridor improvements required to accommodate rapid transit, refine the implementation timing, and determine in greater detail the overall costs associated with the corridors. The EA will also determine the actual "line" on the map and identify the long term infrastructure needs to insure that the corridors do not preclude the rapid transit requirements for a potential transition from BRT to LRT.

Rapid Transit can provide access to senior government funding for transportation network capacity increases by creating it in an environmentally responsible manner. The Business Case will be presented to the Provincial and Federal governments to in order to request an initial funding commitment for rapid transit in London, recognizing that the environmental assessment will confirm provide more detailed cost and implementation timing information for inclusion into a revised Financial Plan.

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Acknowledgements

This report has been developed with the assistance of Alan Dunbar, Manager Financial Planning and Policy, Doug MacRae, Divisional Manager, Transportation Planning and Design, and the London Transit Commission.

SUBMITTED BY:	RECOMMENDED BY:
EDWARD SOLDO, P. ENG. DIRECTOR, ROADS AND TRANSPORTATION	MARTIN HAYWARD MANAGING DIRECTOR, CORPORATE SERVICES AND CITY TREASURER, CHIEF FINANCIAL OFFICER
RECOMMENDED BY:	
JOHN BRAAM, P.ENG. MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES & CITY ENGINEER	

Attach: Appendix "A" – London Transit Commission Submission & BRT Strategy
 Business Case
 Appendix "B" – Constrained Financial Plan

cc. Larry E. Ducharme, General Manager, London Transit Commission

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Appendix A

London Transit Submission & BRT Business Case

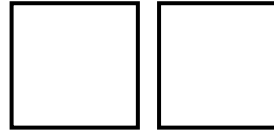
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Appendix B

Constrained Financial Plan



BRT STRATEGY COSTS

Description	Year																			Total
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	
City Capital (Roads)																				
EA	2,000	700	700	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,400
Land	-	-	10,034	10,034	10,034	5,913	12,577	6,665	13,115	13,115	13,115	6,450	6,450	-	-	-	-	-	-	107,500
Engineering	-	-	3,000	2,250	1,500	2,750	3,000	1,550	1,500	1,750	1,000	1,250	1,000	500	-	750	-	-	-	21,800
Utilities	-	-	345	1,902	1,902	1,557	859	-	1,042	1,042	1,942	900	-	-	900	-	-	-	-	12,391
Construction	-	-	-	2,000	29,573	29,573	12,120	12,120	-	7,170	7,170	23,506	14,167	5,000	-	14,167	-	-	-	156,563
Total roads	2,000	700	14,079	16,186	43,009	39,793	28,556	20,334	15,657	23,076	23,226	32,106	21,617	5,500	900	14,917	-	-	-	301,654
LTC Capital (Buses/Facilities)																				
Downtown and facility	-	-	-	-	2,500	2,500	-	-	-	-	12,500	12,500	-	-	-	-	-	-	-	30,000
North leg - BRT	-	-	-	-	-	11,750	-	-	-	-	-	-	-	-	-	-	-	-	-	11,750
South leg - BRT	-	-	-	-	-	-	-	13,000	-	-	-	-	-	-	-	-	-	-	-	13,000
East leg - BRT	-	-	-	-	-	-	-	-	-	-	-	10,250	-	3,000	-	-	-	-	-	13,250
West leg - BRT	-	-	-	-	-	-	-	-	-	-	-	-	10,750	-	3,000	-	-	-	-	13,750
Total Buses	-	-	-	-	2,500	14,250	-	13,000	-	-	12,500	22,750	10,750	3,000	-	3,000	-	-	-	81,750
Total Capital	2,000	700	14,079	16,186	45,509	54,043	28,556	33,334	15,657	23,076	35,726	54,856	32,367	8,500	900	17,917	-	-	-	383,404
City Operating - Roads One-time Project Delivery																				
Engineering	150	210	300	240	320	230	230	180	180	180	180	230	140	90	-	90	-	-	-	2,950
Realty	-	-	200	200	200	120	240	120	240	240	240	120	120	-	-	-	-	-	-	2,040
	150	210	440	380	520	350	470	300	420	420	420	350	260	90	-	90	-	-	-	4,990
Total One-Time Costs	2,150	910	14,519	16,566	46,029	54,393	29,026	33,634	16,077	23,496	36,146	55,206	32,627	8,590	900	18,007	-	-	-	388,394

ONGOING OPERATING COSTS (Net Incremental Operating Cost in Year of Service)

Description	Year																			Total
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	
Roads Operating/Maintenance																				
North leg - BRT	-	-	-	-	-	-	15	-	-	-	-	-	-	-	-	-	-	-	-	15
South leg - BRT	-	-	-	-	-	-	-	-	34	-	-	-	-	-	-	-	-	-	-	34
Downtown	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	10
East leg - BRT	-	-	-	-	-	-	-	-	-	-	-	-	28	-	7	-	-	-	-	35
West leg - BRT	-	-	-	-	-	-	-	-	-	-	-	-	-	24	-	-	17	-	-	41
	-	-	-	-	-	10	15	-	34	-	-	-	28	24	7	-	17	-	-	135
LTC Operating - Buses																				
Downtown and facility	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
North leg - BRT	-	-	-	-	-	-	2,496	-	-	-	-	-	-	-	-	-	-	-	-	2,496
South leg - BRT	-	-	-	-	-	-	-	-	2,671	-	-	-	-	-	-	-	-	-	-	2,671
East leg - BRT	-	-	-	-	-	-	-	-	-	-	-	-	2,098	-	575	-	-	-	-	2,673
West leg - BRT	-	-	-	-	-	-	-	-	-	-	-	-	-	2,224	-	-	575	-	-	2,798
	-	-	-	-	-	-	2,496	-	2,671	-	-	-	2,098	2,224	575	-	575	-	-	10,637
Total Ongoing Operating Costs	-	-	-	-	-	10	2,511	-	2,704	-	-	-	2,126	2,247	582	-	591	-	-	10,772

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BRT FINANCIAL MODEL - CONSTRAINED

(000)'s	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Scenario 1 66% Senior Government Support																			
Assumption: All costs are debt financed.																			
Tax Supported Capital (Debt)	\$147	\$52	\$1,037	\$1,192	\$3,691	\$4,352	\$2,102	\$2,491	\$1,153	\$1,699	\$4,333	\$5,770	\$2,413	\$634	\$66	\$1,327	\$0	\$0	\$0
Debt Servicing Costs (Operating)	\$0	\$17	\$23	\$145	\$285	\$717	\$1,227	\$1,474	\$1,766	\$1,766	\$1,766	\$1,749	\$1,743	\$1,621	\$1,481	\$1,049	\$538	\$292	\$0
Direct Tax Supported Operating	\$150	\$210	\$440	\$380	\$520	\$360	\$2,991	\$2,821	\$5,646	\$5,646	\$5,646	\$5,576	\$7,612	\$9,689	\$10,180	\$10,270	\$10,772	\$10,772	\$10,772
Total Operating Funding Required	\$150	\$227	\$463	\$525	\$805	\$1,077	\$4,219	\$4,295	\$7,411	\$7,411	\$7,411	\$7,324	\$9,354	\$11,310	\$11,662	\$11,319	\$11,310	\$11,064	\$10,772
Tax Levy Increase Required	0.00%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Requires: 0.25% tax levy increase for 8 years starting in 2015																			
Scenario 2 66% Senior Government Support - NO Development Charges																			
Assumption: All costs are financed by capital levy																			
Tax Supported Capital (Debt)	\$667	\$233	\$4,694	\$5,396	\$15,173	\$18,018	\$9,520	\$11,114	\$5,220	\$7,694	\$11,911	\$18,289	\$10,791	\$2,834	\$300	\$5,973	\$0	\$0	\$0
Direct Tax Supported Operating	\$150	\$210	\$440	\$380	\$520	\$360	\$2,991	\$2,821	\$5,646	\$5,646	\$5,646	\$5,576	\$7,612	\$9,689	\$10,180	\$10,270	\$10,772	\$10,772	\$10,772
Total Operating Funding Required	\$817	\$443	\$5,134	\$5,776	\$15,693	\$18,378	\$12,512	\$13,935	\$10,865	\$13,339	\$17,557	\$23,864	\$18,403	\$12,523	\$10,480	\$16,244	\$10,772	\$10,772	\$10,772
Tax Levy Increase Required	0.00%	0.75%	0.75%	0.75%	0.75%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Requires: 0.75% tax levy increase for 4 years starting in 2015																			