16 MULTI-YEAR BUDGET FOR THE 19 CITY OF LONDON 2016 • 2019

INVESTING IN OUR FUTURE

London CANADA

2016 – 2019 CITY OF LONDON STRATEGIC MULTI-YEAR BUDGET

ADDITIONAL INVESTMENTS BUSINESS CASE # 6

STRATEGIC AREA OF FOCUS:	BUILDING A SUSTAINABLE CITY
SUB-PRIORITY:	CONVENIENT AND CONNECTED MOBILITY CHOICES
STRATEGY:	IMPLEMENT AND ENHANCE SAFE MOBILITY CHOICES FOR CYCLISTS, PEDESTRIANS, TRANSIT USERS AND DRIVERS THROUGH THE PROVISION OF COMPLETE STREETS, CONNECTED PATHWAYS, AND ENHANCED TRANSIT SERVICES
INITIATIVE:	RAPID TRANSIT IMPLEMENTATION STRATEGY
INITIATIVE LEAD(S):	JOHN BRAAM AND EDWARD SOLDO
SERVICE(S):	ROADWAYS AND PUBLIC TRANSIT

TOTAL 2016 – 2019 INVESTMENT REQUESTED ($000'S): TBD*

TOTAL 2016 – 2019 NET BUDGET REQUESTED ($000'S): $0

*Additional funding is based on the assumption that both the Provincial and Federal levels of government will fund the additional amount required over and above what is in the existing plan.

WHAT IS INCLUDED IN THE BASE BUDGET?

BASE BUDGET ($000'S):	2015	2016-2019 TOTAL
Civic Service Areas:		
Operating	**0**	**0**
Full-Time Equivalents	**0**	**0**
Capital		
Route 1 Wellington – Bradley	1,000	87,994
Route 2 Richmond – Fanshawe	0	35,109
Route 3 Highbury - Dundas	200	18,406
Route 4 Dundas – Adelaide	300	24,205
Route 5 Oxford – Highbury	300	26,377
Route 6 Oxford – Hyde Park	800	35,785
Route 7 Richmond - Raymond	60	14,482
Route 8 York - Richmond	0	3,394
Route 9 Colborne – York	0	1,131
Route 10 Dundas - Colborne	0	2,639
Route 11 Wellington - Horton	40	200
Route 12 Downtown Terminal	0	5,000
Total Civic Departments Capital	**2,700**	**254,722**
Boards & Commissions:		
LTC Expansion Buses	0	13,064
Total Capital	**2,700**	**267,786**

Base Budget Summary:

Rapid Transit is the primary recommendation of the Smart Moves Transportation Master Plan (TMP), is identified in the current Official Plan, and represents a cornerstone of The London Plan and Council's 2015-2019 Strategic Plan. The 2015-2019 Strategic Plan identifies the Rapid Transit Implementation Strategy as a means to deliver convenient and connected mobility choices as part of a strategic area of focus called "Building a Sustainable City".

The Rapid Transit Environmental Assessment (EA) is being undertaken to create a Rapid Transit Master Plan (Master Plan) that adheres to the legislative requirements of the Environmental Assessment Act. The Master Plan will provide a strategy for building a Rapid Transit system that will help meet the City's economic development, mobility, environmental and community buildings objectives while still being operationally feasible and economically viable.

The preliminary cost estimate for a full Bus Rapid Transit (BRT) system was approximately $380 million which does not include significant capital works nor were the estimates based on a detailed Environmental Assessment. This anticipates approximately 1/3 funding from each of the Provincial and Federal governments (yet to be confirmed) and 1/3 funding from the City (Development Charges and property taxes).

WHAT INVESTMENT IS REQUIRED FROM PROPERTY TAX?

TAX LEVY IMPACT ($000'S):	2016	2017	2018	2019	2016-2019 TOTAL	2020-2025
Net Requested Tax Levy (Cumulative)	0	0	0	0	**0**	0
Net Incremental Tax Levy	**0**	**0**	**0**	**0**		
Annual Tax Levy Impact	**0.0%**	**0.0%**	**0.0%**	**0.0%**		

INITIATIVE DELIVERABLES

The downtown continues to be an important part of London. The city is structured along key corridors radiating out from the downtown – Wellington Street to the South, Richmond Street to the North, Oxford Street to the west and Dundas Street/Oxford Street to the east.

Over the next 20 years, London is projected to grow by 77,000 people and 43,000 jobs. By focusing this growth on Rapid Transit corridors, London can capitalize on its established transit-supportive urban form, becoming a more attractive city in Ontario for regeneration and sustainable cost-effective growth.

Factors that support a transformation and investment in Rapid Transit include:

- The draft London Plan implements a policy and planning framework to direct a large portion of London's future growth to the Downtown and along Rapid Transit Corridors.
- Almost 40% of London's future population and jobs would be within walking distance of the proposed Rapid Transit system.
- London is well connected to other parts of Ontario by rail, road, air and intercity bus. Rapid Transit would provide the local connections to these broader provincial networks supporting travel to London's major employers and institutions, as well as allowing greater access to other parts of Ontario for London residents. With the implementation of High Speed Rail in the Quebec-Windsor Corridor, these benefits would be significantly amplified.
- Rapid Transit would serve to connect major economic activities in London – universities, colleges, hospitals, financial institutions, manufacturing and a rapidly growing high-tech industry. There is significant marketing potential associated with these connections – one being a "knowledge-based city". Connecting Rapid Transit to economic growth is also critical to encouraging students who are educated in London to stay in London.

Options being considered for Rapid Transit are:

1. Base BRT Network Alternative

   The BRT network previously developed through the TMP and LTC business case was refined to reflect updated conditions.

   The alternative does not include dedicated transit lanes in a number of constrained corridors (Wellington Street) and retains the at-grade crossing of the Canadian Pacific Railway (CP) tracks on Richmond Street in the Richmond Row area.

   The projected capital cost of this alternative is $260 - $280 million, which is lower than the TMP alternative which was estimated to cost $380 million.

2. Full BRT Network Alternative

   This BRT network alternative incorporates additional road widening along the corridors and a number of major structural projects, including a Richmond Street Rapid Transit Tunnel under the CP railway and fully separated transit lanes on Wellington Street between Commissioners Road and Horton Street. This alternative also includes allowances for a replacement bridge over the North Thames River on University Drive, pending finalization of alignments through Western University.

   The estimated capital cost for this alternative is $475 - $525 million. The cost differences between this alternative and the base alternative are primarily related to the Richmond Street tunnel and allowances for property costs on Wellington South. However, these major enhancements would improve transit travel times and transit reliability over the Base BRT option.

3. Hybrid Network Alternative

   Hybrid Network Alternative incorporates Light Rail Transit (LRT) along the north and east corridors via downtown with Bus Rapid Transit (BRT) along the south and west corridors. It also incorporates additional widening along the corridors and a number of major structural projects, including a Richmond Street Rapid Transit Tunnel and widening of Wellington Street south of Horton Street to provide for fully separated lanes.

   The selection of the north and east corridors for LRT was to a large extent based on ridership. These corridors have high ridership today and projected ridership growth in these corridors reaches the minimum levels for LRT to be considered. There is good potential for walk in traffic given the major institutions and area businesses that are directly along the corridors. The estimated capital cost for this alternative is $850-$900 million. The major difference between this alternative and the Full BRT alternative is the added cost for rail tracks, electrical overhead power, LRT vehicles and a new LRT maintenance facility.

4. LRT Network Alternative

This alternative network incorporates LRT along all the corridors. It also incorporates additional widening along the corridors and the same structural projects as the previous two alternatives. The estimated capital cost for this alternative is $1.1 - $1.2 billion. This works out to approximately $45 million per kilometer, which is within the range of typical costs from other jurisdictions. This option also requires a new LRT maintenance facility.

One of the advantages of this alternative is that the entire rapid transit network would utilize the same technology. The disadvantage, however, is that the LRT capacity is more than what is needed for the projected ridership on the west and south corridors. As a result, either the frequency of trips would need to be reduced (likely to 15 minutes) or a higher subsidy per passenger would be required. Based on preliminary estimates, this subsidy could be over $1 million per year.

The following table represents a summary of the network alternatives:

NETWORK ALTERNATIVES SUMMARY

Network Alternatives			Base BRT	Full BRT	Hybrid	Full LRT
Operational	2035 Ridership Projection (millions) (Annual riders - 24 million today)		31.4	31.6	32.0	32.1
	Projected Travel Time Savings (# minutes faster than transit today)	From King/Richmond to:	Time Savings (min)	Time Savings (min)	Time Savings (min)	Time Savings (min)
		Western University	5.5	7	7	7
		White Oaks	3	4.5	4.5	4.5
		Fanshawe College	7.5	7.5	7.5	7.5
		Wonderland Road	1	1	1	1.5
	Operational Flexibility		High	High	Medium	Low
Transportation Benefits	Transit User Benefits (NPV $millions)		465	523	597	623
	Qualitative User Benefits		✓	✓	✓✓	✓✓✓
Environmental Benefits	GHG emissions savings (NPV $millions)		2.03	2.18	2.47	2.55

Network Alternatives		Base BRT	Full BRT	Hybrid	Full LRT
Financial	Total Capital Cost ($millions)	260 - 290	475-525	850-900	1,100-1,200
	City of London Maximum Contribution to Capital Cost ($millions)	125	125	125	125
	Cost per km ($millions/km)	11	21	36	45
	Operating and Maintenance Costs (Annual $millions) *	13.8	12.1	11.1	11.5
	NPV Capital Costs including Quick Start ($millions)	280	497	880	1142
	Net Incremental Operating Costs (NPV $millions)	370	319	287	252
	Benefit-Cost Ratio Including Environmental and Economic Development	1.19	1.16	1.05	0.99
Economic Development	Land Value Uplift ($millions)	80	90	110	115
	Short Term GDP Gains (NPV $millions)	123	227	399	520
	Long Term GDP Gains ($millions)	16	14	13	12
City Building and Social Community	Catalyst for Compact Urban Form of Growth	✓	✓✓	✓✓½	✓✓✓
	Potential Impact on City Image	✓	✓✓	✓✓½	✓✓✓
	Urban Regeneration Benefits	✓	✓✓	✓✓½	✓✓✓
	Catalyst for Development	Moderate potential to attract outside investment and to promote intensified development along the RT corridors		High potential to attract outside investment and to promote intensified development along the RT corridors	

Note: ✓= slightly positive impacts - ✓✓= positive impacts - ✓✓✓= very positive impacts.

(*) Annual maintenance costs in 2035 expressed in current dollars. LRT will be more expensive in the short-medium term given projected ridership;

NPV = Net Present Value (Life Cycle Costing)

OTHER INFORMATION TO REFER TO

Shift Rapid Transit Update – SPPC – November 9, 2015
http://sire.london.ca/cache/2/fvd0o4ykhxequwn2edmna145/203963113020151045526 4.PDF

Shift Rapid Transit Initiative Appointment of Survey Consultants - CWC – August 24, 2015
http://sire.london.ca/cache/2/fvd0o4ykhxequwn2edmna145/19586011302015104754496.PDF

Rapid Transit Funding Opportunities – CWC – June 2, 2015
http://sire.london.ca/cache/2/qujgmq55tmefva452003h1i2/19056911302015105558576.PDF