Shaping Guelph Municipal Comprehensive Review: Fiscal Impact Analysis

City of Guelph

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List of Acronyms and Abbreviations

Acronym	Full Description of Acronym
B.T.E.	Benefit to Existing
C.B.C.	Community Benefits Charge
D.C.	Development Charge
D.C.A.	Development Charges Act
G.F.A.	Gross Floor Area
M.C.R.	Municipal Comprehensive Review
N.F.P.O.W.	No Fixed Place of Work
O.P.	Official Plan
Sq.ft.	Square Feet
S.W.M.	Stormwater Management
T.M.P.	Transportation Master Plan
W.A.H.	Work at Home

Executive Summary

The City of Guelph is currently undertaking a Municipal Comprehensive Review (M.C.R.) to allocate forecasted population and growth to the year 2051. The City is projected to grow to a population of 208,000 and an employment base of 116,000[1]. The purpose of this fiscal impact analysis is to identify potential financial pressures and to make recommendations to assist in managing growth over the next 30 years.

Growth Forecast

The City is projected to grow by an additional 58,000 people (excluding undercount) and 28,000 employees (excluding no fixed place of work and work at home employment). With respect to housing units, the City is forecasted to provide approximately 28,400 new residential units. Approximately 63% of these housing units are anticipated to be high density along with 26% medium density and 11% low density. It is noted that 9% of all housing units are anticipated to be developed as accessory/ancillary units (approximately 2,500 units over the forecast period). With respect to non-residential, a broad mix of employment types is expected over the next 30 years. Non-residential gross floor area is expected to increase by 18.8 million sq.ft.

Property Assessment Growth and Operating Impacts

Tax-Supported Services:

- Based on the growth forecast, an additional $12.6 billion in assessment is anticipated. It is noted that the residential/non-residential split in forecasted assessment growth is 72% residential/28% non-residential. This is in comparison to the City's current assessment base which provides for a split of 84% residential/16% non-residential. This provides for a relative shift in the City's assessment base towards non-residential development.
- It is also noted that high-density development has a higher assessment per capita than other types of residential housing. Given that the majority of housing is forecasted as high-density, this would provide additional tax revenues.
- Based on the forecasted assessment growth, an additional $150 million in tax revenues is anticipated (based on 2021 tax rates). In addition, non-tax revenues (e.g. user fees) are anticipated to generate an additional $25 million (2021 dollars). This provides incremental revenues of $175 million to the City.
- Additional operating expenditures resulting from growth in population and employment provide an increase in total operating expenditures of $109 million.
- The net difference of $66 million would be utilized to fund required capital expenditures over the forecast period (discussed further below).

[1] Including net Census undercount for population and no fixed place of work and work at home for employment.

Non-Tax Supported Services (Water, Wastewater, and Stormwater):

- Based on per capita/per employee assumptions on expenditures and revenues, an additional $15 million is required for the day-to-day expenditures needed for operating the water, wastewater, and stormwater systems.
- An additional $30 million in revenues (largely rate revenue related) would result from additional population and employment growth.
- The net difference of $15 million would be utilized to fund the required capital expenditures over the forecast period.

Capital Requirements

A high-level, preliminary assessment of the capital works required to service growth over the forecast period was undertaken. At the time of writing, many of the master plans are ongoing, and hence the cost estimates represent preliminary information and are subject to change. Based on the preliminary capital costing information, the following observations can be made from this analysis:

- **Tax-Supported Services:** capital requirements for tax-supported services are approximately $1.40 billion. Of this amount, approximately $733 million is to be recovered through development charges (D.C.s) or community benefits charges (C.B.C.s), whereas $96 million is anticipated to be funded through grants. The remaining $567 million will need to be funded through the City's tax base.
- **Non-tax Supported Services:** approximately $1.03 billion (2021 $) in capital needs over the next 30 years has been identified. Of this amount, approximately $623 million is anticipated to be recoverable through D.C.s, whereas $407 million is anticipated to be non-D.C. recoverable and will need to be funded through rates.

D.C. Rates

- Based on the net D.C.-recoverable costs presented above, a D.C. was calculated for the forecasted growth. Given that the cost estimates utilized in this analysis are very preliminary and are subject to revisions, these D.C. calculations will need to be further refined and validated during future D.C. updates as more accurate cost estimates become available through the master planning processes.
- The calculated charge for a single detached unit is $55,358. This represents an increase of $18,307 over the 2021 charge ($37,051).

Lifecycle Replacement Costs

When new growth-related infrastructure is put in place, the City needs to allocate funds, on an annual basis, towards replacement of the infrastructure at the end of its useful life. For tax-supported services, these annual lifecycle expenditures increase to

approximately $25.09 million (2021 $) by 2051. The annual lifecycle expenditures for non-tax supported services is estimated to be $5.3 million (2021 $). These costs need to be considered to understand the full impact of development.

Capital Impacts

Non-Tax Supported Services:

- With the recent changes to the D.C. legislation, additional dwelling units/accessory units in new and existing residential buildings are mandatorily exempt from D.C.s. This results in a total loss of D.C. funding of approximately $30 million that will need to be funded by the City's existing ratepayers.
- The funding requirement of $407 million for costs that are non-D.C.-recoverable combined with the accessory unit funding requirement of $30 million provides a total net capital cost to be funded through rates of $422 million. Amortizing this cost over 30 years at a rate of 4% provides annualized net costs related to capital of $24 million.
- These annualized net costs combined with the lifecycle replacement costs of $5 million provide an annual capital cost to be funded from the operating budget of $30 million.

Tax-Supported Services:

- Loss in D.C. funding through the mandatory additional dwelling/accessory units exemption is approximately $39 million. This loss in funding combined with the non-D.C./C.B.C. recoverable costs of $427 million provide for a net capital cost of $400 million that needs to be funded.
- Amortizing this cost over 30-years at 4% provides a net annualized cost related to capital of $31 million.
- These annualized costs of $31 million combined with the lifecycle replacement costs of $25 million leads to an annual capital cost of $56 million to be funded from the City's operating budget.

Summary of Impact

Non-Tax Supported Services (see Figure ES-1):

- With regards to water, wastewater, and stormwater services, there is approximately $30 million in additional revenues as a result of growth, whereas expenditures required for growth are $45 million. This provides for a net annual deficit position of $15 million (2021 $) by 2051.
- As a result, the growth in the City will create an upward pressure on the City's water, wastewater, and stormwater rates throughout the forecast period and these costs will be borne by existing ratepayers.

- In addition to this upward pressure on the rates, the City will also need to monitor cashflow and debt capacity constraints as water, wastewater, and stormwater related infrastructure is needed in advance of development occurring.

Figure ES-1
Summary of Fiscal Impact – Non-Tax Supported Services

Summary of Fiscal Impact - Non-Tax Supported Services	2021$ At Buildout
1. Revenues	
Total Revenue	**29,806,983**
2. Expenditures	
Total Operating Expenditures	15,313,828
Capital	
Annualized Capital Expenditures to be Funded	*24,408,402*
Lifecycle Costs	*5,314,517*
Total Capital Expenditures	29,722,918
Total Expenditures	**45,036,747**
3. Surplus (Deficit)	**(15,229,764)**

Tax Supported Services (see Figure ES-2):

- Property tax revenues in addition to non-tax revenues provide for approximately $174 million in annual revenues. Total annual expenditures at buildout are approximately $164 million and hence the total net surplus position is estimated at approximately $9.7 million (2021 $) annually upon buildout.
- The new development will provide for additional operating revenues for the City by the end of the forecast period.
- Given that the majority of residential housing will be developed as high density, additional tax revenues are being generated as a result of the higher assessment per capita provided through this type of housing.
- Relative to the City's current assessment base, there is a shift in assessment towards non-residential. As non-residential tends to have a lower demand on City services compared to residential, this change in assessment provides for lower overall operating costs.
- Although development provides a positive net impact by the end of the forecast period, the City will need to monitor cash-flow over the next 30 years given that certain growth-related expenditures are often required prior to development.

Figure ES-2
Summary of Fiscal Impact – Tax-Supported Services

Summary of Fiscal Impact - Tax Supported Services	2021$ At Buildout
1. Revenues	
Total Property Tax Revenue	149,741,625
Total Non-Tax Revenue	24,888,119
Total Revenue	**174,629,743**
2. Expenditures	
Total Operating Expenditures	108,586,186
Capital	
Annualized Capital Expenditures to be Funded	*31,220,302*
Lifecycle Costs	*25,093,737*
Total Capital Expenditures	56,314,039
Total Expenditures	**164,900,225**
3. Surplus (Deficit)	**9,729,518**

General Conclusions

- Based on the information presented above, it is apparent there are pressures on the City's financial position over the next 30 years, especially for rate-supported services. The following policies may need to be considered to limit impacts to the City's existing taxpayers/ratepayers:
    - Require new development to prepay D.C.s or front-end projects for roads, water, and wastewater services to minimize debt issuances for the City.
    - Consider additional agreements with developers to contribute towards or fund capital projects required for growth. Through these agreements, there is less reliance on growth-related debt to fund the capital program, which would provide a positive impact on the City's debt capacity.
    - Delay capital expenditures and/or growth to minimize any cash flow issues.
- Further items for Council's consideration also include the following:
    - Monitor impacts of increased intensification on the City's financial position. Potential impacts include higher benefit to existing (B.T.E.) deductions on growth-related capital works required for intensification, increased complexity in arranging financing agreements with developers, and potential operating impacts that will need to be explored in further detail.

1. Introduction and Purpose

The City of Guelph is currently undertaking an M.C.R. to allocate forecasted population and employment growth to the year 2051 in accordance with the Provincial Growth Plan. The City is projected to grow to a population of 208,000 (including the net census undercount) and employment of 116,000 (including no fixed place of work (N.F.P.O.W.) and work at home (W.A.H.) employment)[1]. As a result, the City is projected to grow by an additional 60,800 people (including the net census undercount)[2] and 33,000 employees (including no fixed place of employment and work at home employment)[3].

The overall purpose of this fiscal impact analysis is to provide a high-level analysis, based on the information available at the time of writing. Given that many of the City's master plans are currently being developed, some of the data utilized for this analysis is very preliminary. Assumptions and estimates will be noted where these were used to estimate capital impacts for the purposes of this study.

As the City progresses with the master planning processes, the suggestions and recommendations provided herein will need to be monitored over time as new information becomes available.

[1] Excluding the undercount provides for total population of 201,000 and excluding N.F.P.O.W. and W.A.H. employment provides for total employment of 99,000 by 2051.
[2] Population growth excluding the undercount represents an increase of 58,000 persons.
[3] Employment growth excluding no fixed place of work employment and work at home employment is 28,000.

2. Growth Forecast

The following table provides for the anticipated housing growth, by unit type and net population growth over the 2021-2051 forecast period:

Figure 1
Housing and Population Growth (2021-2051)

Residential		
Housing	**2021-2051**	**Persons per Unit**
Low Density	3,102	3.33
Medium Density	7,449	2.45
High Density	17,830	1.68
Total Housing Units	**28,380**	
Population	**2021-2051**	
Population Growth (Net)*	58,088	

*Excludes net census undercount

- There is a shift in the type of housing to be developed in the City over the next thirty years with approximately 62% of new housing to be developed as high density. Through discussions with the City, this will largely be achieved through intensification growth in existing built-up areas.
- Within the high density category, a forecast of accessory units to be constructed was also developed. It is anticipated that 2,500 of the 18,000 high-density units will be developed as accessory/ancillary units to low and medium density housing (representing 9% of all housing development).

The following table provides the anticipated growth in employment space (in square feet), and the total employment growth (excluding N.F.P.O.W. and W.A.H. employment):

Figure 2
Gross Floor Area (G.F.A.) and Employment Growth (2021-2051)

Non-Residential		
Gross Floor Area	**2021-2051**	**Floor Space per Worker**
Commercial	6,186,600	450
Industrial	7,854,000	1,100
Institutional	4,779,600	700
Total GFA	**18,820,200**	
Employment	**2021-2051**	
Employment Growth*	27,516	

*Excludes work at home and no fixed place of work employment

Development across the City is forecasted to increase the employment base by approximately 28,000 employees, with a broad mix of employment types. Non-residential gross floor area (G.F.A.) was derived based on floor space per worker assumptions outlined in the above table. Note: a marginal allowance has been made to account for recent trends in W.A.H. employment, however whether this translates into a reduction in building activity is yet to be identified.

3. Growth in Assessment & Tax Revenues

As development progresses, the City will receive additional assessment arising from the completion of residential and non-residential buildings. The following assumptions were utilized to estimate the growth in assessment based on the growth forecast outlined in the previous section:

Figure 3
Average Assessment Value Assumptions

Residential	Average Assessment Value $	PPU	Assessment per Capita
Low Density	$ 510,000	3.330	$ 153,153
Medium Density	$ 360,000	2.450	$ 146,939
High Density - Condominium	$ 303,000	1.680	$ 180,357
High Density - Rental	$ 134,000	1.680	$ 79,762

Non-Residential	Average Assessment Value $ (per sq.ft.)
Commercial Use	$243
Industrial Use	$101
Institutional Use	$184

- These average assessment values are based on samples of recently constructed development across the City.
- It is noted that the high density – condominium category provides the highest assessment per capita. Given that majority of housing is to be developed as high-density, this would provide a higher level of assessment growth to the City.
- Utilizing the above assessment assumptions, the following tables provide the growth in assessment and tax-revenues (utilizing 2021 tax rates) for both residential and non-residential development:

Figure 4
Growth in Assessment and Tax Revenues (2021$)

Residential	Average Assessment Value $	Housing Growth	Residential Assessment Growth	Growth in Tax Revenues
Low Density	$510,000	3,102	$1,581,860,523	$15,654,234
Medium Density	$360,000	7,449	$2,681,493,800	$26,536,304
High Density - Condominium	$303,000	14,264	$4,321,923,840	$42,770,147
High Density - Rental*	$134,000	3,566	$477,836,464	$4,728,713
Total		**28,380**	**$9,063,114,627**	**$89,689,398**

*It is assumed that 20% of high density development will be in multi-residential/rental category

Non-Residential	Average Assessment Value $	Growth in Gross Floor Area	Non-Residential Assessment Growth	Growth in Tax Revenues
Commercial Use	$243	7,854,000	$1,911,645,924	$34,808,797
Industrial Use	$101	7,854,000	$790,973,027	$17,258,161
Institutional Use	$184	4,779,600	$877,077,416	$7,985,268
Total		**20,487,600**	**$3,579,696,366**	**$60,052,227**

Total Residential & Non-Residential:		**$12,642,810,993**	**$149,741,625**

Based on the growth forecast, an additional $12.6 billion in assessment is anticipated. It is noted that the residential/non-residential split in forecasted assessment growth is 72% residential/28% non-residential. This is in comparison to the City's current assessment base which provides for a split of 84% residential/16% non-residential. This provides for a relative shift in the City's assessment base towards non-residential development. Applying the 2021 tax rates to the additional assessment results in an additional $150 million in tax revenues. These tax revenues will be used to offset the operating and capital costs identified herein.

4. Operating Impacts

4.1 Tax-Supported

This section examines the potential impact of the development on the City's operating budget. The analysis was undertaken using the City's detailed 2020 operating budget and inflated to 2021 dollars. The following summary provides the per capita and per employee operating expenditures (day-to-day expenditures excluding reserve transfers and debt payments) and revenues. These per capita/per employee figures were then applied to the forecasted growth within the City to determine an estimate of incremental costs and revenues once development is in place.

Figure 5
Tax-Supported Operating Analysis (2021$)

Tax-Supported Operating Analysis	Per Capita Expenditures / Revenues	Population Growth (Net)	Population Related Operating Expenditures/ Revenues	Per Employee Expenditures / Revenues	Employment Growth*	Employment Related Operating Expenditures/ Revenues	Total Expenditures/ Revenues
Tax Revenues**			$89,689,398			$60,052,227	$149,741,625
Operating Non-Tax Revenues	$308	58,088	$17,863,680	$255	27,516	$7,024,439	$24,888,119
Operating Expenditures	($1,317)	58,088	($76,502,173)	($1,166)	27,516	($32,084,014)	($108,586,186)
Net Difference			**$31,050,905**			**$34,992,652**	**$66,043,557**

*Excluding WAH and NFPOW employment
**Tax Revenue calculation provided in Figure 4

The table above indicates that by 2051, the City would generate an additional $150 million in tax revenues and $25 million in non-tax revenues (2021 $). In addition, the City would incur an additional $109 million (2021 $) in operating expenditures. This provides for net operating revenues of $66 million. It is noted that these figures exclude any capital-related reserve transfers or debt payments, as these capital-related costs are addressed in subsequent sections. The net difference of $66 million would be utilized to fund required capital expenditures over the forecast period.

4.2 Non-Tax Supported Services (Water, Wastewater, and Stormwater Services)

Similar to the tax-supported operating analysis, a similar analysis was done for water, wastewater, and stormwater services to determine the operating impacts of growth. The table below provides the analysis for these services:

Figure 6
Non-Tax Supported Services Operating Analysis (2021$)

Non-Tax Supported Operating Analysis	Per Capita Expenditures / Revenues	Population Growth (Net)	Population Related Operating Expenditures/ Revenues	Per Employee Expenditures / Revenues	Employment Growth*	Employment Related Operating Expenditures /Revenues	Total Expenditures /Revenues
Revenues (Including Rate Revenue)	$348	58,088	$20,226,544	$348	27,516	$9,580,438	$29,806,983
Operating Expenditures	($179)	58,088	($10,388,189)	($179)	27,516	($4,925,639)	($15,313,828)
Net Difference			**$9,838,355**			**$4,654,799**	**$14,493,154**

*Excluding WAH and NFPOW employment

Based on the forecasted growth, an additional $15 million is required for the day-to-day operating expenditures required for operating the water, wastewater, and stormwater systems. This is in contrast to the additional $30 million in revenues (largely rate revenue related) that would result from the additional population and employment growth. The net difference of $15 million would be utilized to fund the required capital expenditures over the forecast period.

5. Capital Requirements

The following provides an overview of the capital needs and a commentary on the impact of forecasted growth on City services. At the time of writing, many of the master plans are ongoing, and hence the cost estimates below represent preliminary information and are subject to change. The ultimate costs that are identified through the master planning processes will need to be monitored with respect to the commentary provided herein. The development charge (D.C.) implications of these capital costs are discussed in the next section.

5.1 Non-Tax Supported Services

Figure 8 summarizes the capital costs for non-tax supported services (water, wastewater, and stormwater) and separates costs into D.C.-recoverable versus non-D.C.-recoverable. A brief discussion on the capital costs for each service are provided below.

Figure 8
Summary of Capital Requirements for Water, Wastewater, and Stormwater Services

Capital Works - Water, Wastewater, and Stormwater Services	Total Cost 2021 $	D.C. Recoverable	Non-D.C. Recoverable
Water			
Water Supply	$146,660,937	$146,660,937	
Water Distribution & Storage	$205,951,956	$129,288,566	$76,663,390
Wastewater			
Wastewater Treatment & Biosolids Management	$189,049,000	$189,049,000	
Wastewater Sewers, Storage & Pumping Stations	$177,642,421	$96,010,369	$81,632,052
Stormwater			
Stormwater Capital	$310,500,000	$62,100,000	$248,400,000
Total Non-Tax Supported Services	**$1,029,804,314**	**$623,108,872**	**$406,695,442**

5.1.1 Wastewater

5.1.1.1 Wastewater Treatment & Biosolids Management

- At the time of writing, the Wastewater Treatment & Biosolids Management master plan is still in development. Preliminary high-level estimates show potential incremental capital investments of $189 million. These investments are required to meet the needs for growth. It is noted that the master plan is assuming a population target of 203,000, however, through the M.C.R. process

and the ministerial zoning order, the population target has since increased to 208,000. Through discussions with City staff, it was identified that the capital investments already identified in the master plan may be sufficient to support the additional population of 5,000, however, this will need to be monitored over time.

- The costs identified include contingencies, engineering, project management, etc. In addition, a 13% cost increase was applied to the capital cost estimates to acknowledge the increased COVID-related capital construction premium that has been observed for hard service infrastructure in the City.

5.1.1.2 Wastewater Sewers, Storage and Pumping Stations

- The City's 2022 Water and Wastewater Servicing Master Plan is still in early stages, and as such, the following provides preliminary estimates on potential capital costs. These costs will need to be updated once the master plan is complete and the full extent of the capital requirements are understood. The wastewater distribution network was last analyzed in the 2013 D.C. Background Study, which included projects to support growth to 2031. The dollar values from unimplemented projects from that work have been modified to suit 2021 costs and additional cost premiums to provide an order of magnitude cost for high-level analysis. The capital costs will be finalized as part of the ongoing Water and Wastewater Servicing Master Plan, which will review the previous analysis and incorporate any new infrastructure projects required to support growth to 2051.
- Requirements to replace and upsize pipes in key intensification areas have been identified to support the M.C.R. growth strategy. (Note: the financial implications of intensification-related upgrades are discussed further in Appendix B).
- Based on the information available at the time of writing, there are approximately $178 million in capital costs identified for sewers, storage, and pumping stations (2021$). Approximately $96 million of these costs are growth-related, which are recoverable through D.C.s. The remaining $82 million is a benefit to existing development (B.T.E.) which will need to be funded through the City's rate-supported budget.

5.1.2 Water

5.1.2.1 Water Supply

- The City has prepared a draft Water Supply Master Plan which provides the capital requirements to accommodate growth across the City. Similar to the Wastewater Treatment & Biosolids Management Master Plan, a population target of 203,000 was utilized. It is acknowledged that the costs included in the master plan may be slightly low because of the lower population target, however, given the contingencies included in the analysis, the capital costs may be appropriate.
- Total capital costs identified in the master plan are $130 million. An additional capital cost premium of 13% was applied to acknowledge the COVID-related cost

premiums, resulting in a cost of $147 million. These costs will need to be incorporated into future D.C. updates.

5.1.2.2 Water Distribution and Storage

- As mentioned above, the 2022 Water and Wastewater Master Servicing Plan is currently ongoing, and the capital costs provided herein will need to be reviewed once the master plan is complete. The water distribution network was last analyzed in the 2013 D.C. Background Study, which included projects to support growth to 2031. The dollar values from unimplemented projects from that work have been modified to suit 2021 costs and additional cost premiums to provide an order of magnitude cost for high-level analysis. The capital costs will be finalized as part of the ongoing Water and Wastewater Servicing Master Plan, which will review the previous analysis and incorporate any new infrastructure projects required to support growth to 2051. Total preliminary capital costs identified for water distribution and storage based on this high-level analysis total $206 million. Approximately $130 million of these costs are growth-related and may be recovered through D.C.s, whereas the remaining $76 million will need to be recovered through the City's rate-based budget.

5.1.3 Stormwater

- At the time of writing, the City's Stormwater Management Master Plan is ongoing and as such, the preliminary cost estimates provided by the consultant are not final or approved at this time but have been provided to determine order of magnitude costs for the purposes of this study. The stormwater management system was last analyzed in the 2012 Stormwater Management Master Plan (S.W.M.), which included projects to support growth to 2031. The dollar values from the unimplemented projects from the 2012 S.W.M. Master Plan have been modified to suit 2021 costs and additional cost premiums to provide an order of magnitude cost for high-level analysis. It should be noted that the total cost includes additional elements identified through the ongoing S.W.M. Master Plan study that were not previously identified in the 2012 S.W.M. Master Plan. The capital costs will be finalized as part of the ongoing S.W.M. Master Plan, which will review the previous analysis and incorporate any new infrastructure projects required to support growth to 2051. Capital costs are estimated at $310 million (in 2021$). Approximately $62.1 million would be considered growth-related and recoverable through D.C.s whereas the remaining amounts would need to be funded by the City.

5.2 Tax-Supported Services

Figure 9 summarizes the capital costs for tax supported services and separates costs into D.C./Community Benefits Charge (C.B.C.)-recoverable versus non-D.C./C.B.C.-

recoverable. A brief discussion on the capital costs for each service are provided below.

Figure 9
Summary of Capital Requirements for Tax-Supported Services

Capital Works - Tax Supported Services	Total Cost 2021$	D.C./C.B.C. Recoverable	Anticipated Grant Funding	Non-D.C./C.B.C. Recoverable
Roads & Related Services	$639,686,218	$352,211,153		$287,475,065
Transit	$236,268,000	$95,815,000	$96,448,200	$44,004,800
Fire Services	$9,975,280	$9,975,280		
Police Services	$20,858,324	$20,858,324		
Public Works	$16,864,426	$16,864,426		
Parks	$72,975,625	$72,975,625		
Recreation	$99,540,297	$99,540,297		
Library	$16,393,326	$16,393,326		
Health	$6,217,896	$6,217,896		
Ambulance	$3,027,729	$3,027,729		
P.O.A.	$179,309	$179,309		
D.C.-Eligible Growth Studies	$21,297,778	$21,297,778		
Waste Diversion	$12,475,597	$12,475,597		
Non-D.C.-Eligible Growth Studies	$2,425,000	$101,263		$2,323,737
Culture & Public Realm	$23,285,000	$1,610,395		$21,674,605
Parking	$75,382,349	$3,658,028		$71,724,321
Parkland Acquisition Costs	$140,000,000			$140,000,000
Total Tax-Supported Services	**$1,396,852,153**	**$733,201,425**	**$96,448,200**	**$567,202,528**

5.2.1 Roads/Services Related to a Highway

- The City recently undertook a Transportation Master Plan (T.M.P.) which identified capital costs of $300 million to 2031. To determine capital requirements to 2051, it was assumed that a similar level of spending per capita would be required as what was identified in the T.M.P. for 2021-2031. Based on a gross cost per capita of $11,000, additional gross costs of $340 million were identified to support the growth between 2032-2051 and hence the total gross project costs identified for roads between 2021-2051 is $640 million. Approximately $352 million would be recoverable through D.C.s, whereas the remaining amount would need to be funded through the City's tax-supported budget.

5.2.2 Transit

- The City's 2021 T.M.P. emphasized a shift away from the City's current auto-centric approach to transportation to other modes such as transit, active transportation, etc. The City is intending to meet this goal in part by increasing the mode share target for transit to 13% by 2031 and 17% by 2051 (for reference the mode share in 2016 was 9%).
- To help move towards these increased transit targets, the City recently undertook a Future Ready Transit Plan which identified capital needs to 2031. In addition, a

high-level exercise was undertaken for the purposes of this study to determine potential capital costs to 2051. It must be noted that the City's transit service is currently exploring many different alternatives to achieve increased transit use and the actual capital needs may materialize differently in the future (e.g., routing changes requiring a lower number of buses, etc.). The capital needs provided herein are based on an extrapolation of the current plan which will be subject to ongoing review and will need to be monitored and adjusted over time as transit ridership shifts over the next 30-years.

- Initial estimates provide for an additional 92 vehicles (includes conventional buses, mobility buses, and supervisor vehicles). The capital costs related to these vehicles is approximately $102 million. Of this cost, approximately $41 million is anticipated to be funded through D.C.s, $45 million through grant funding, and the remaining $16 million to be funded through the City's existing tax base. Note: it is currently assumed that a similar level of grant funding would be provided in the future as what is being provided today. If grant funding is not secured, this would impact the D.C. rate as well as the funding requirement from the City's tax base.
- In addition to the buses, additional operations facilities, stations, and route reviews are required to fulfil the needs for growth. The capital costs for these projects are approximately $134 million, of which $55 million is to be funded from D.C.s, $51 from anticipated grants and the remaining $28 million from property taxes.

5.2.3 All Other D.C.-Eligible Services

- For all other D.C.-eligible services, the costs isolated are based on the level of spending (dollars per capita) identified in the 2018 D.C. study. This dollars per capita amount (inflated to 2021$) was then multiplied by the forecasted population to determine an approximate capital cost for these services. The costs for these services total $280 million. As this amount is based on the growth-related costs identified in the D.C., these costs are anticipated to be fully funded through D.C.s. As master plans and specific needs are identified for these services, these capital costs will need to be revisited and updated over the forecast period. Note: costs identified herein are based on D.C.-eligible costs and are within the D.C. legislated service standard ceiling.
- Although COVID-related cost premiums were applied to the hard services capital infrastructure, it is unclear what the impacts would be on the soft-service capital. As a result, a premium was not applied to these costs, however, this will need to be monitored over time.

5.2.4 Non D.C.-Eligible Services

- Growth-related capital costs related to Non D.C.-eligible services (e.g., culture, public realm, parking, non-D.C. eligible planning studies, etc.) have been

estimated by City staff. Based on very preliminary estimates, approximately $101 million in capital has been identified as required for growth to 2051.

- The City is currently undertaking a community benefits charge (C.B.C.) strategy to recover costs from eligible high-density residential development across the City (i.e., developments that are 5 storeys or more and have a minimum of 10 residential units). Based on preliminary calculations (that are subject to further review), approximately 8% of the identified costs may be recoverable through C.B.C.s. The remaining growth-related (and B.T.E.-related) costs will need to be funded through the City's existing tax base.

5.2.5 Parkland Acquisition

- Based on targets identified in the City's Official Plan (O.P.), parkland requirements for growth were identified. It is noted that the target for Regional parks (1.3 hectares per 1,000 people) was excluded from the analysis as this target is encouraged within the O.P., but not required. Based on the table below, the total parkland target for neighbourhood and community parks is 2 hectares per 1,000 people. Based on a population growth of 58,000 people, this results in a parkland requirement of 116 hectares (287 acres).

Figure 7
Parkland Dedication & O.P. Target Analysis

Parkland Targets	Hectares/1,000 people
Neighbourhood Parks	0.7
Community Parks	1.3
Total Neighbourhood & Community Parkland Target	**2.00**

Population Growth	58,088
Parkland Requirements (ha)	116
Parkland Requirements (acres)	**287**
Estimated Acres to be Dedicated Based on Growth Forecast	**175**
Deficiency in Parkland based on OP Target (acres)	**112**
Estimated Cost to Purchase Additional Land*	**$140,000,000**

*Based on an assumption of $1,250,000/acre

- Utilizing a parkland dedication policy of 1 hectare for 300 units for low and medium density units and cash-in-lieu of parkland for high-density units, a total of 175 acres would be dedicated based on the growth forecast.

- Based on current parkland dedication policies, it is observed that there will be a potential deficit of 112 acres. It is unclear whether the City will continue with these policies given the changing nature of housing (i.e., intensification versus greenfield) and hence this may be subject to further review in the future. For the purposes of this analysis, parkland acquisition costs have been estimated based on an assumption of $1.25 million per acre. Based on this land cost, the City would be required to purchase parkland at a cost of approximately $140 million.

6. D.C. Rates

Based on the net recoverable costs presented above, a D.C. was calculated for the forecasted growth. Given that the cost estimates utilized in this analysis are very preliminary and are subject to revisions, these D.C. calculations will need to be further refined and validated during future D.C. updates as more accurate cost estimates become available through the master planning processes. The total amount of the charge is $55,358 for a single detached unit and $20.09 per square foot for non-residential development. With respect to residential development, this represents an increase over the 2021 charge ($37,051) of $18,307 or 49% for a single detached dwelling. The breakdown of the D.C. rate by service is provided in Appendix A. The following is noted with regards to the calculated D.C.:

- The largest increases over the current rates are observed for Services Related to a Highway (126%), Wastewater (60%), Water (46%), and Transit (27%). These increases are largely related to updated cost estimates provided through the master planning processes.
- With regards to fire, police and public works the increase is in the range of 15% predominantly due to changes in the residential/non-residential splits which allocates a higher proportion of the service to the residential sector.
- The calculation for the remaining services is based on what is currently being provided for in the D.C. calculation and hence, there is very little change in the calculated rates.

The following table provides current D.C. rates in select comparator municipalities:

Figure 10
Survey of D.C. Rates in Comparator Municipalities

Municipality	D.C. Rate for Single Detached Dwelling (2021$)*
Town of Milton	$63,168
City of Guelph (Calculated)	$55,358
City of Hamilton	$54,520
City of Cambridge	$51,774
City of Kitchener	$46,838
City of Waterloo	$44,242
City of Guelph (Current - 2021$)	$37,051

*Note: rates are in 2021 dollars and do not reflect current indexing to 2022 dollars

Based on the above table, the recalculated D.C.s are generally comparable to similar municipalities in the vicinity of Guelph.

It is noted that this very preliminary D.C. estimate does not include additional financing costs that may be considered for inclusion in future D.C. updates, which would further increase the charge.

7. Lifecycle Replacement Costs of New Infrastructure

A significant amount of new infrastructure will be required for the forecasted growth in the City. As mentioned, new infrastructure required for growth is generally paid for through D.C.s (or constructed by the developer as a local service). As such, new infrastructure is constructed/installed with minimal impacts to the taxpayer/ratepayer. However, once the infrastructure is assumed, the City begins to allocate funds, on an annual basis, to replace the infrastructure at the end of its useful life. These annual contributions are referred to as lifecycle expenditures and must be borne by taxpayers/ratepayers. Based on the infrastructure costs identified in Section 5, the following table provides for the estimated annualized lifecycle costs for new infrastructure by 2051.

Figure 11
Summary of Lifecycle Costs (2021$)

Service	Annual Cumulative Lifecycle Cost
Tax-Supported Services	$25,093,737
Water, Wastewater, and Stormwater Services	$5,314,517
Total	**$30,408,254**

The above costs are calculated based on the average useful lives of similar existing assets. The City will need to ensure that lifecycle costs for new assets are addressed and budgeted for appropriately. This analysis identified a need to increase transfers to capital replacement reserves for new assets required for growth once they are constructed. In order to assess the full impact these lifecycle costs would have on the taxpayer/ratepayer, the financial impacts discussed in the next sections will incorporate these costs as a funding requirement.

8. Capital Impacts

8.1 Non-Tax Supported Services

The following summary table provides a high-level estimate on the capital impacts and funding requirements for water, wastewater, and stormwater services.

Figure 12
Summary of Capital Analysis for Water, Wastewater, and Stormwater Services

Capital Analysis - Non-Tax Supported Services	
Capital Costs to be Funded	$406,695,442
Add: Funding for Exempt Accessory Units	$29,868,606
Total Net Capital Costs to be Funded:	**$422,070,894**
Annualized Net Costs Related to Capital (Based on 30-year amortization period at 4%)	$24,408,402
Add: Lifecycle Replacement Costs for New Infrastructure	$5,314,517
Annual Capital Costs to be Funded from the Operating Budget:	**$29,722,918**

Based on Figure 8, the funding requirement for costs that are non D.C.-recoverable is $407 million.

With the recent changes to the D.C. legislation, additional dwelling units/accessory units in new and existing residential buildings are mandatorily exempt from D.C.s. Based on the growth forecast summarized in Section 2, it is estimated that approximately 9% of all housing development in the City will be in the form of these high-density accessory units. The mandatory exemption results in a total loss of D.C. funding of 4.8% ($30 million) and will need to be funded by the City's existing ratepayers.

Net total capital-related costs of $422 million are required to be funded. Based on an amortization period of 30-years and a rate of 4%, the annualized capital costs to be funded are $24 million. In addition to the initial capital cost requirements, the lifecycle replacement costs for this new infrastructure is approximately $5 million (as identified in Section 7). This provides for annual capital costs to be funded from the City's operating budget of $30 million.

8.2 Tax-Supported Services

Similar to the analysis above for non-tax supported services, the following summary table provides a high-level estimate of the capital impacts on tax-supported services:

Figure 13
Summary of Capital Analysis for Tax-Supported Services

Capital Analysis - Tax Supported Services	
Capital Costs to be Funded	$567,202,528
Add: Funding for Exempt Accessory Units	$38,703,526
Total Net Capital Costs to be Funded:	**$539,862,496**
Annualized Net Costs Related to Capital (Based on 30-year amortization period at 4%)	$31,220,302
Add: Lifecycle Replacement Costs for New Infrastructure	$25,093,737
Annual Capital Costs to be Funded from the Operating Budget:	**$56,314,039**

Figure 9 provides for a capital funding requirement of $567 million from the City's tax base. Based on the mandatory exemption for accessory units, the City is required to fund approximately $39 million in D.C. exemptions. This provides for a total capital-related cost of $540 million. Based on an amortization period of 30-years and a rate of 4%, the annualized capital costs to be funded are $31 million. In addition to the initial capital cost requirements, the annual lifecycle replacement cost for this new infrastructure is approximately $25 million (as identified in Section 7). This provides for annual capital costs to be funded from the operating budget of $56 million.

9. Summary of Net Impact

Based on the foregoing analysis, Figures 14 and 15 provide the net fiscal impact at buildout for non-tax supported and tax-supported services, respectively. These tables provide the operating expenditures, including the overall capital spending and non-tax revenues and taxation to provide for the net annual financial position.

Figure 14
Summary of Fiscal Impact – Non-Tax Supported Services

Summary of Fiscal Impact - Non-Tax Supported Services	2021$ At Buildout
1. Revenues	
1.1 Operating Revenue (Figure 6)	
Residential Growth	20,226,544
Non-Residential Growth	9,580,438
Total Revenue	**29,806,983**
2. Expenditures	
2.1 Operating (Figure 6)	
Residential Growth	10,388,189
Non-Residential Growth	4,925,639
Total Operating Expenditures	15,313,828
2.2 Capital (Figure 12)	
Annualized Capital Expenditures to be Funded	24,408,402
Lifecycle Costs	5,314,517
Total Capital Expenditures	29,722,918
Total Expenditures	**45,036,747**
3. Surplus (Deficit)	**(15,229,764)**

With regards to water, wastewater, and stormwater services there is approximately $30 million in additional revenues as a result of growth, whereas expenditures required for growth are $45 million. This provides for a net annual deficit position of $15 million (2021$) by 2051. This is largely a result of the increased capital costs identified through the master planning processes. As a result, the growth in the City will create an upward pressure on the City's water, wastewater, and stormwater rates throughout the forecast period and these costs will be borne by existing ratepayers. In addition to this upward pressure on the rates, the City will also need to monitor cashflow and debt capacity constraints as water, wastewater and stormwater related infrastructure is needed in advance of development occurring.

Figure 15
Summary of Fiscal Impact – Tax Supported Services

Summary of Fiscal Impact - Tax Supported Services	2021$ At Buildout
1. Revenues	
1.1 Property Tax (Figure 4)	
Residential Growth	89,689,398
Non-residential Growth	60,052,227
Total Property Tax Revenue	**149,741,625**
1.2 Non-Tax Revenues (Figure 5)	
Residential Growth	17,863,680
Non-residential Growth	7,024,439
Total Non-Tax Revenue	**24,888,119**
1.3 Total Revenue	
Residential Growth	107,553,078
Non-residential Growth	67,076,665
Total Revenue	**174,629,743**
2. Expenditures	
2.1 Operating (Figure 5)	
Residential Growth	76,502,173
Non-residential Growth	32,084,014
Total Operating Expenditures	108,586,186
2.2 Capital (Figure 13)	
Annualized Capital Expenditures to be Funded	31,220,302
Lifecycle Costs	25,093,737
Total Capital Expenditures	56,314,039
Total Expenditures	**164,900,225**
3. Surplus (Deficit)	**9,729,518**

Based on Figure 15, property tax revenues in addition to non-tax revenues provide for approximately $174 million in annual revenues. Total annual expenditures at buildout are approximately $164 million and hence the total net surplus position is estimated at approximately $9.7 million (2021$) annually upon buildout. The new development will

provide for additional operating revenues for the City by the end of the forecast period. The following observations are provided:

- As noted in Section 2, the majority of residential housing will be developed as high-density. The higher assessment per capita for high-density development is providing additional tax revenues and assisting in generating a surplus by buildout.
- Based on the commentary provided in Section 3, there is a relative shift in assessment towards non-residential, relative to the City's current assessment base. As non-residential tends to have a lower demand on City services compared to residential, this relative change provides for lower overall operating costs.

Although development provides a positive net impact by the end of the forecast period, the City will need to monitor cash-flow over the next 30 years given that certain growth-related expenditures are often required prior to development. Policy areas for the City's consideration are provided below.

Based on the information presented above, it is apparent there are pressures on the City's financial position over the next 30 years, especially for rate-supported services. Policies will need to be implemented in terms of growth financing (i.e., developer early payment/front-ending agreements) to limit impacts to the City's existing taxpayers/ratepayers. A discussion on potential financing alternatives is provided in Appendix B. Further, it may be necessary to adjust the capital program and/or slow down the pace of growth to allow the City to grow in a fiscally sustainable manner. Slowing the rate of development may assist in further reducing financial risk.

Concluding Remarks

The review of the various services and the associated financial commentary provided herein is high-level and many estimates and assumptions were utilized. This analysis was completed to assist Council in understanding high-level financial impacts and risks associated with growth. As more detailed cost estimates become available, the areas for consideration provided herein will need to be monitored with respect to the updated information. In addition, there are some other observations that are made with respect to intensification and these matters are discussed further in Appendix B.

Appendix A
Calculated D.C. Rates by Service

Appendix A: Calculated D.C. Rates by Service

Figure A-1
Calculated Development Charges (2021$)

Service	RESIDENTIAL			NON-RESIDENTIAL
	Low Density	Medium Density	High Density	per sq.ft. of GFA
Services Related to a Highway	13,630	10,028	6,876	5.99
Fire Protection Services	386	284	195	0.17
Police Services	807	594	407	0.35
Transit Services	3,708	2,728	1,871	1.63
Parks and Recreation	9,327	6,862	4,705	0.46
Public Works	653	480	329	0.29
Library Services	886	652	447	0.04
Growth Studies	824	606	416	0.36
Public Health Services	318	234	161	0.03
Provincial Offences Act	7	5	4	0.00
Ambulance Services	117	86	59	0.05
Waste Diversion	582	428	294	0.12
Wastewater Services - Treatment	7,316	5,382	3,691	3.21
Wastewater Sewers - Sewers, Storage, Pumping Stations	3,715	2,734	1,874	1.63
Water Supply	5,675	4,176	2,863	2.49
Water Distribution and Storage	5,003	3,681	2,524	2.20
Stormwater Services	2,403	1,768	1,212	1.06
GRAND TOTAL ALL SERVICES	**55,358**	**40,729**	**27,929**	**20.09**

Note: these D.C. rates are based on very preliminary cost estimates. These will need to be further refined and validated during the City's 2023 D.C. Background Study process.

Appendix B
Other Considerations of Council

Appendix B: Other Considerations of Council

Benefit to Existing Deductions on Growth-Related Works

Although new infrastructure is often required for both greenfield and intensification growth, there are major differences in the nature of the capital works required and the resulting financial impacts.

With regards to water, wastewater, stormwater, and roads infrastructure, it is recognized that there would be some benefit to existing (B.T.E.) allocation for projects that are required to service intensification growth within existing urban areas. There are often deficiencies in the existing infrastructure that would need to be addressed in conjunction with the growth-related works required for intensification. For these projects, a non-growth component would relate to one or more of the following:

- Upgrades to the existing system;
- Upgrades to alleviate existing capacity deficiencies;
- Facilities that are required to maintain an adequate level of service to existing users; and
- Infrastructure required to fulfill critical security/redundancy requirements.

In the City's 2018 D.C. background study, B.T.E. deductions anywhere between 10% to 80% were applied to projects for hard services that were driven by growth but were also likely to address issues in the existing system. This is in contrast to infrastructure that is primarily located in new growth areas where there would be limited non-growth components as part of the capital works.

As the City would be required to fund the B.T.E. components of these growth-related works, it is important to understand the implications of intensification growth and how the nature of the required works would affect B.T.E. deductions. Given that there could be capacity constraints and issues in the existing system, the works that would be required to allow for the increased intensification could entail significant B.T.E. deductions. This is an important financial consideration in planning for future growth as these deductions are likely to impact existing residents through user rates and property taxes.

Where the timing of replacement of existing infrastructure is accelerated as a result of growth, there must be a recognition that there is a benefit to the existing community. When the infrastructure is replaced well in advance of its useful life, this will cause budgetary impacts earlier than initially planned and impact the City's existing residents.

It is noted that further analysis through the City's master plans will be required to identify whether there is sufficient capacity within existing infrastructure to accommodate growth in intensification areas. For example, preliminary work through the Water and

Wastewater Servicing Master Plan has identified that most strategic growth areas are well serviced with respect to water distribution infrastructure, however there are several capacity constraints for wastewater collection infrastructure that would need to be addressed to service growth. The City will need to consider the B.T.E. components of the required works in these strategic growth areas as the funding will have a direct impact on existing taxpayers/ratepayers.

Financing Options for Growth

In planning for growth, municipalities often face cash flow issues based on the need to build infrastructure in advance of growth. For example: prior to the issuance of building permits: water, wastewater, stormwater, and to a certain extent, roads infrastructure must be in place for development to proceed. As payment of D.C.s normally occurs at the time of building permit issuance (i.e. well after the installation of the infrastructure), cash flow problems can be experienced by the municipality. A municipality may issue growth-related debt as a form of bridge financing prior to the receipt of D.C. revenue however, municipalities are limited in the amount of debt they can issue (i.e. 25% of own source revenues). When the debt financing burden for growth-related works becomes extensive, municipalities may seek agreements with developing landowners to assist in paying for works.

These financing agreements with developers function well in greenfield areas, where there is usually a group of developing landowners that own large blocks of developable land. It is more straightforward to engage the group of landowners that are planning to develop large areas to upfront the required costs for infrastructure. In contrast, lands to be used for intensification are often owned in small lots by homeowners and businesses. It becomes much more difficult to engage with these landowners to provide upfront financing for infrastructure as usually only large developers would have the financing ability.

Potential Operating Impacts

At this time, operating budget impacts of increased intensification growth within the City are unknown, however, the following general observations can be made:

- With regards to transit, it is observed that there is a positive correlation between transit use and population density where denser communities support higher levels of transit utilization. The City is likely to incur higher operating costs to operate additional buses required for population growth, however, there is also potential that these costs would be recovered through increased ticket revenues as buses would likely have higher utilization with increased population density.
    - Growth into greenfield areas may take time to reach densities that support basic transit service. Cost recovery is likely to be low as new areas develop and population and employment has not yet reached its target density. These operating costs for expanding transit into greenfield areas

are likely to be a burden on existing taxpayers, at least while development is in its early stages.

- In terms of linear infrastructure (roads, watermains, sanitary and storm sewers), growth into greenfield areas requires additional kilometres of pipes/roads to service the new area. As a result, operating costs may be higher to service greenfield growth relative to intensification growth. This would need to be explored in further detail once infrastructure requirements are more fully understood.

Further Discussion on Financing Alternatives for Growth-Related Works

As mentioned above, given that many of the growth-related expenditures must occur before the growth is realized, the City's cash flow position and overall debt capacity may be negatively impacted. To mitigate some of these financial pressures over the next thirty years, the City may need to further explore the following additional alternatives:

- Require new development to prepay D.C.s or front-end projects for roads, water, and wastewater services to minimize debt issuances for the City.
- Consider additional agreements with developers to contribute towards or fund capital projects required for growth. Through these agreements, there is less reliance on growth-related debt to fund the capital program, which would provide a positive impact on the City's debt capacity.
- Delay capital expenditures and/or growth to minimize any cash flow issues.

The City will need to monitor cash flow and debt requirements for growth in conjunction with the City's ongoing asset management needs and other non-growth related works which may add additional pressure to debt capacity limits.

Update to D.C. Background Study

Based on the very preliminary capital requirements identified to service growth, the D.C. is anticipated to increase significantly. Once the master plans processes are complete, the City should consider updating the D.C. to embrace the additional capital needs to fully recover costs related to growth, while minimizing impacts to the existing taxpayers.