



 **Watson
& Associates**
ECONOMISTS LTD.

Addendum to: 2019 Development Charges Background Study

Township of Woolwich

For Public Circulation and Comment

June 3, 2019

Watson & Associates Economists Ltd.
905-272-3600
info@watsonecon.ca



Table of Contents

	Page
1. Summary of Revisions to the April 25, 2019 Development Charges	
Background Study	1
1.1 Background.....	1
1.2 Discussion	1
1.2.1 Parks and Recreation Services.....	2
1.2.2 Library Services	2
1.2.3 Impacts on the Calculated Development Charge.....	5
2. Changes to the D.C.B.S	7
3. Process for Adoption of the D.C. By-law	7
Appendix A Amended Pages	A-1



1. Summary of Revisions to the April 25, 2019 Development Charges Background Study

1.1 Background

Commensurate with the provisions of the *Development Charges Act (D.C.A.)*, 1997, the Township of Woolwich (Township) has undertaken a Development Charges Background Study (D.C.B.S.) and has distributed the study and draft by-law to the public. The following provides a summary of the key dates in the Development Charges (D.C.) by-law process:

- April 25, 2019 – Release of the D.C.B.S.
- May 7, 2019 – Council Information Session
- June 4, 2019 – Public Meeting
- June 25, 2019 – Anticipated passage of D.C. By-law

The purpose of the addendum to the April 25, 2019 D.C.B.S. is to provide for revisions to the calculation of the charges arising from changes to capital program for Parks and Recreation Services, and Library Services. The refinements are detailed in the subsequent sections of this report, and will form part of the D.C.B.S. for Council's consideration and approval prior to adoption of the D.C. By-law.

1.2 Discussion

Subsequent to the issuance of the April 25, 2019 D.C.B.S. and Council Information Session on May 7, 2019, feedback from Township staff identified revisions to the D.C.B.S. and draft D.C. by-law. These refinements include:

- Refinements to the anticipated capital needs for Parks and Recreation services, specifically the removal of two splash pads projects;
- Updates to the Library Services capital program to include new facility space; and
- Other miscellaneous housekeeping matters.

The following subsections summarize the necessary changes identified above.



1.2.1 Parks and Recreation Services

The April 25th D.C.B.S. included the costs for two splash pad projects in Breslau and St. Jacobs. Further review by Town staff determined that these projects were no longer required to be included in the D.C.B.S., as these would be funded from other sources. These revisions reduce the Parks and Recreation Services D.C. recoverable costs by \$408,838, resulting in a reduction in the D.C. of \$51.33/capita, or \$330 per single detached dwelling unit. The revised project listing for Parks and Recreation Services is presented in Table 1.

1.2.2 Library Services

The April 25th D.C.B.S. did not identify an increase in need or capital cost estimates for Library Services. After the release of the study, staff and Council determined there would be an increase in need for a library space within Breslau during the 10-year forecast period. This revision incorporates the estimated capital cost for the additional library facility space in the calculation of the D.C.

The total gross capital cost estimate for Library Services in Breslau is approximately \$1.25 million, for 5,000 square feet of facility space. Approximately \$0.89 million was deducted in recognition of the benefit accruing to development to occur beyond the 2028 forecast period (i.e. post period benefit). The statutory 10% deduction applicable totals approximately \$36,000. This results in a net growth-related capital costs for inclusion in the calculation of the charge of \$322,835.

While Library Services usage is predominately residential-based, there is nominal use of the services by non-residential users. To acknowledge this use, the growth-related capital costs have been allocated 95% residential development and 5% non-residential development.

The calculated D.C. for Library Services is \$40.86/capita, or \$139 per single detached dwelling unit. The charge for non-residential development is \$0.01 per square foot of Gross Floor Area (G.F.A.). The revised project listing for Library Services to be included in the April 25th D.C.B.S., as amended, is presented in Table 2.



Table 1
Parks and Recreation Services

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2019\$)	Post Period Benefit	Net Capital Cost	Less:		Subtotal	Less:	Potential D.C. Recoverable Cost		
						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development		Other (e.g. 10% Statutory Deduction)	Total	Residential Share 95%	Non-Residential Share 5%
	2019-2028											
	<u>Parkland Development</u>											
1	Lunar Neighbourhood Park	2020-2022	275,000	-	275,000	-		275,000	27,500	247,500	235,125	12,375
2	St Jacobs Valleyview Subdivision Park (P2)	2023	400,000	-	400,000	-		400,000	40,000	360,000	342,000	18,000
3	Lions Park Extra Lighting	2023	175,000	-	175,000	-		175,000	17,500	157,500	149,625	7,875
4	Maryhill Park (Sunset Park)	2021	75,000	-	75,000	-		75,000	7,500	67,500	64,125	3,375
5	Lunar Subdivision - Soccer Field Development	2019	15,000	-	15,000	-		15,000	1,500	13,500	12,825	675
6	Playground Renewal/Trail Development	2019-2023	125,000	-	125,000	87,500		37,500	3,750	33,750	32,063	1,688
7	Maryhill Parking Lot Expansion	2021	225,000	-	225,000	-		225,000	22,500	202,500	192,375	10,125
	<u>Vehicles</u>											
8	Truck and Tractors	2021	110,000	-	110,000	-		110,000	11,000	99,000	94,050	4,950
9	Mower	2021	25,000	-	25,000	-		25,000	2,500	22,500	21,375	1,125
	<u>Pedestrian Bridges</u>											
10	Pedestrian Bridge - Thomasfield Subdivision (not incl. abutments)	2019	150,000	-	150,000	-		150,000	15,000	135,000	128,250	6,750
	<u>Facilities</u>											
11	Woolwich Memorial Centre Debenture (principal)	2019-2028	1,385,160	-	1,385,160	969,612		415,548	41,555	373,993	355,294	18,700
12	Woolwich Memorial Centre Debenture (interest)	2019-2028	683,191	-	683,191	478,234		204,957	20,496	184,462	175,238	9,223
	Outstanding Credits - Empire		20,433	-	20,433	-		20,433		20,433	19,411	1,022
	Outstanding Credits - Thomasfield		53,690	-	53,690	-		53,690		53,690	51,005	2,684
	Reserve Fund Adjustment							233,288		233,288	221,624	11,664
	Total		3,717,474	-	3,717,474	1,535,346	-	2,415,416	210,801	2,204,615	2,094,385	110,231



Table 2
Library Services

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2019\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Subtotal	Less:	Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development		Other (e.g. 10% Statutory Deduction)	Total	Residential Share	Non- Residential Share
	2019-2028										95%	5%	
1	Breslau Library (5,000 sq.ft.)	2023	1,250,000	891,295		358,705	-		358,705	35,871	322,835	306,693	16,142
	Total		1,250,000	891,295	-	358,705	-	-	358,705	35,871	322,835	306,693	16,142



1.2.3 Impacts on the Calculated Development Charge

The refinements presented in sections 1.2.1 and 1.2.2 have impacts on the calculated charges in the April 25th D.C.B.S. Table 3 compares the Township's current D.C., the charges presented within the April 25th D.C.B.S., and the amended D.C. as contained herein. The comparison is provided for a single detached residential dwelling unit, and per square foot of non-residential gross floor area (G.F.A.)

By comparison to the April 25, 2019 D.C.B.S., the amended charge for a single detached residential unit within the fully serviced urban area decreases by \$31 from \$11,694 to \$11,663. For non-residential development within the fully serviced urban serviced area, the charge would remain unchanged.

By comparison to the Township's current D.C. by-law, the amended charge for a single detached residential unit within the fully serviced urban area increases by \$1,827 from \$9,836 to \$11,663. For non-residential development within the fully serviced urban serviced area the charge would increase by \$1.28/sq.ft., from \$2.74/sq.ft. to \$4.02/sq.ft.



Table 3
Comparison of Calculated D.C.s

Residential (Single Detached) Comparison

Service	Current	Calculated (April 25, 2019)	Calculated (June 3, 2019)	Change (\$) June 3, 2019 vs. April 25, 2019	Change (%) June 3, 2019 vs. April 25, 2019
Municipal Wide Services:					
Roads and Related	4,478	7,230	7,230	-	0.0%
Fire Protection Services	463	710	710	-	0.0%
Parks and Recreation	2,528	1,121	952	(169)	-15.1%
Library Services	-	-	139	139	n/a
Administration	464	343	343	(0)	-0.1%
Total Municipal Wide Services	7,933	9,404	9,373	(31)	-0.3%
Area Specific Services:					
Wastewater Services	822	953	953	-	0.0%
Water Services	1,081	1,337	1,337	-	0.0%
Total Area Specific Services	1,903	2,290	2,290	-	0.0%
Grand Total - Urban Area	9,836	11,694	11,663	(31)	-0.3%

Non-Residential (per sq.ft.) Comparison

Service	Current	Calculated (April 25, 2019)	Calculated (June 3, 2019)	Change (\$) June 3, 2019 vs. April 25, 2019	Change (%) June 3, 2019 vs. April 25, 2019
Municipal Wide Services:					
Roads and Related	1.56	2.69	2.69	-	0.0%
Fire Protection Services	0.26	0.26	0.26	-	0.0%
Parks and Recreation	0.09	0.11	0.10	(0.01)	-9.1%
Library Services	-	-	0.01	0.01	n/a
Administration	0.16	0.13	0.13	-	0.0%
Total Municipal Wide Services	2.07	3.19	3.19	-	0.0%
Area Specific Services:					
Wastewater Services	0.28	0.35	0.35	-	0.0%
Water Services	0.39	0.48	0.48	-	0.0%
Total Area Specific Services	0.67	0.83	0.83	-	0.0%
Grand Total - Urban Area	2.74	4.02	4.02	-	0.0%



2. Changes to the D.C.B.S.

Based on the foregoing, the following revisions are made to the pages within the April 25, 2019 D.C.B.S. Accordingly, the revised pages are appended to this report:

- Table of Contents – Reissued to reflect page numbering changes;
- Page 1-3 – Revised to reflect this addendum;
- Pages 5-2 to 5-15 – Reissued to reflect changes described in Section 1.2.1 and 1.2.2, and page numbering;
- Chapter 6 – Updated to reflect changes in the calculated charges for Parks and Recreation Services, and Library Services;
- Page 7-6 – Reissued to reflect the issuance of this addendum;
- Pages 8-3 and 8-4 – Updated reflective of impacts of changes in Sections 1.2.1, 1.2.2, and 1.2.3;
- Page C-4 to C-8 – Reissued to reflect to the changes to D.C. cash flow calculations for Parks and Recreation and Library services, and page numbering;
- Page D-3 – Updated to reflect the changes to Parks and Recreation Services described in section 1.2.1 and Library Services described in section 1.2.2; and
- Appendix F – Revised draft D.C. By-Law.

3. Process for Adoption of the D.C. By-law

The revisions provided herein form the basis for the D.C. By-Law and will be incorporated into the D.C.B.S. to be provided to Council and the general public prior to Council's consideration and adoption of the proposed D.C. By-Law on June 25, 2019.

If Council is satisfied with the above noted changes to the D.C.B.S. and D.C. By-Law, then prior to By-Law passage Council must:

- Approve the Development Charges Background Study, as amended;
- Determine that no further public meetings are required on the matter; and
- Adopt the new Development Charges By-Law.



Appendix A

Amended Pages

Table of Contents

	Page
1. Introduction.....	1-1
1.1 Purpose of this Document.....	1-1
1.2 Summary of the Process.....	1-2
2. Township of Woolwich Current D.C. Policy	2-1
2.1 By-law Enactment.....	2-1
2.2 Services Covered	2-1
2.3 Timing of D.C. Calculation and Payment	2-2
2.4 Indexing	2-2
2.5	
2.6 Exemptions	2-3
3. Anticipated Development in the Township of Woolwich	3-1
3.1 Requirement of the Act	3-1
3.2 Base of Population, All Household and Non-Residential Gross Floor Area Forecast	2-2 3-1
3.3 Summary of Growth Forecast	3-2
4. The Approach to the Calculation of the Charge	4-1
4.1 Introduction	4-1
4.2 Services Potentially Involved	4-1
4.3 Increase in the Need for Service.....	4-1
4.4 Local Service Policy.....	4-6
4.5 Capital Forecast.....	4-7
4.6 Treatment of Credits	4-8
4.7 Existing Reserve Funds	4-8
4.8 Deductions.....	4-9
4.8.1 Reduction Required by Level of Service Ceiling	4-10
4.8.2 Reduction for Uncommitted Excess Capacity	4-10
4.8.3 Reduction for Benefit to Existing Development.....	4-11



Table of Contents (Cont'd)

	Page	
4.8.4	Reduction for Anticipated Grants, Subsidies and Other Contributions.....	4-12
4.8.5	The 10% Reduction	4-12
4.9	Municipal-wide vs. Area Rating.....	4-12
4.10	Allocation of Development	4-13
5.	5. D.C.-Eligible Cost Analysis by Service	5-1
5.1	Introduction	5-1
5.2	Service Levels and 10-Year Capital Costs for D.C. Calculation.....	5-1
5.2.1	Administration Studies	5-1
5.2.2	Parks and Recreation Services	5-2
5.2.3	Library Services	5-2
5.3	Service Levels and 12-Year Capital Costs for D.C. Calculation.....	5-7
5.3.1	Roads and Related Services.....	5-7
5.3.2	Fire Protection Services	5-8
5.4	Service Levels and Build-out Capital Costs for Municipal Service Area DC Calculation	5-12
5.4.1	Water Services.....	5-12
5.4.2	Wastewater Services	5-12
6.	D.C. Calculation	6-1
7.	D.C. Policy Recommendations and D.C. By-law Rules	7-1
7.1	Introduction	7-1
7.2	D.C. By-law Structure	7-2
7.3	D.C. By-law Rules.....	7-2
7.3.1	Payment in any Particular Case.....	7-2
7.3.2	Determination of the Amount of the Charge.....	7-3
7.3.3	Application to Redevelopment of Land (Demolition and Conversion).....	7-3
7.3.4	Exemptions (full or partial)	7-4
7.3.5	Phasing in	7-5
7.3.6	Timing of Collection	7-5
7.3.7	Indexing	7-5
7.3.8	D.C. Spatial Applicability	7-5
7.4	Other D.C. By-law Provisions	7-6
7.4.1	Categories of Services for Reserve Fund and Credit Purposes.....	7-6
7.4.2	By-law In-force Date	7-6
7.4.3	Minimum Interest Rate Paid on Refunds and Charged for Inter-Reserve Fund Borrowing	7-6
7.5	Other Recommendations	7-6



Table of Contents (Cont'd)

	Page
8. Asset Management Plan	8-1
8.1 Introduction	8-1
9. By-law Implementation	9-1
9.1 Public Consultation Process	9-1
9.1.1 Introduction	9-1
9.1.2 Public Meeting of Council.....	9-1
9.1.3 Other Consultation Activity	9-1
9.2 Anticipated Impact of the Charge on Development.....	9-2
9.3 Implementation Requirements	9-3
9.3.1 Introduction	9-3
9.3.2 Notice of Passage.....	9-3
9.3.3 By-law Pamphlet	9-3
9.3.4 Appeals.....	9-4
9.3.5 Complaints	9-4
9.3.6 Credits	9-5
9.3.7 Front-Ending Agreements.....	9-5
9.3.8 Severance and Subdivision Agreement Conditions	9-5
Appendix A Background Information on Residential and Non-Residential Growth Forecast.....	A-1
Appendix B Historical Level of Service Calculations	B-1
Appendix C Cash Flow Calculations.....	C-1
Appendix D Long-Term Capital and Operating Cost Examination.....	D-1
Appendix E Local Service Policy	E-1
Appendix F Proposed D.C. By-law.....	F-1



Table 1-1
Schedule of Key D.C. Process Dates

Process Steps	Dates
1. Project initiation meetings with staff from Waterloo Region townships	January 17, 2019
2. Data collection, Township Staff interviews, preparation of D.C. calculations	January – April 2019
3. Preparation of draft D.C. background study and review of draft findings with staff	April, 2019
4. D.C. background study and proposed D.C. by-law available to public	April 25, 2019
5. Statutory notice of Public Meeting advertisement placed in newspaper(s)	20 days prior to public meeting
6. Council Information Session	May 7, 2019
7. Amendment to the D.C. Background Study	June 3, 2019
8. Public Meeting of Council	June 4, 2019
9. Council considers adoption of D.C. background study and passage of by-law	June 25, 2019
10. Newspaper notice given of by-law passage	By 20 days after passage
11. Last day for by-law appeal	40 days after passage
12. Township makes available D.C. pamphlet	by 60 days after in force date



been deducted for the 10% statutory deduction applicable to administration services under the Act. As a result, the net growth-related capital costs included in the charge totals approximately \$902,826.

The net growth-related costs have been allocated 84% residential and 16% non-residential based on the incremental growth in population to employment, for the 10-year forecast period.

5.2.2 Parks and Recreation Services

The Township currently has 218 acres of developed parkland, 49 amenities, and 62 linear kilometres of trails within its jurisdiction. In addition, the Township provides 187,088 square feet of indoor recreation facility space. A fleet consisting of 19 equipment and machinery items, including ice resurfacers, trucks and tractors, is used to maintain these assets. The Township's level of service over the historic 10-year period averaged \$2,514 per capita, or a maximum DC-eligible amount of \$17.48 million when applied to the anticipated development over the forecast period.

The total gross capital costs for parks and recreation services over the 10-year forecast period is approximately \$4.28 million. These capital needs include additional parkland development, soccer fields, vehicles and equipment, an adjustment for unfunded projects, outstanding D.C. credits, and debenture payments with respect to the Woolwich Memorial Centre. A benefit to existing development deduction of \$1.64 million has been provided, the majority reflecting the non-growth portion of the Woolwich Memorial Centre debenture. The statutory 10% deduction applicable for parks and recreation services totals \$254,801, resulting in net growth-related capital costs for inclusion in the calculation of approximately \$2.61 million, including existing reserve fund deficits of \$223,000.

While Parks and Recreation Services usage is predominately residential-based, there is some use of the services by non-residential users. To acknowledge this use, the growth-related capital costs have been allocated 95% residential and 5% non-residential.

5.2.3 Library Services

While the Region of Waterloo is responsible for the provision of library services, the Township provides the library facility space. The Township currently provides 5,720



sq.ft. of library facility space. Based on this level of investment, the average level of service provided has been \$52 per capita. In total, the maximum D.C. eligible amount for library services over the 10-year forecast period is \$358,705 based on the established level of service.

The total gross capital costs for Library Services over the 10-year forecast period is approximately \$1.25 million for a 5,000 square foot library in Breslau. \$891,295 was deducted in recognition of the benefit accruing to development forecast to occur after 2028. The statutory 10% deduction applicable totals \$35,871, resulting in net growth-related capital costs for inclusion in the calculation of approximately \$322,835.

While Library Services usage is predominately residential-based, there is some use of the services by non-residential users. To acknowledge this use, the growth-related capital costs have been allocated 95% residential and 5% non-residential.

The calculated D.C. for Library Services is \$40.86/capita or \$139 per single detached dwelling unit. The charge for non-residential development is \$0.01 per square foot of Gross Floor Area (G.F.A.).



Infrastructure Costs Covered in the D.C. Calculation – Administration Studies

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2019\$)	Post Period Benefit	Net Capital Cost	Less:		Subtotal	Less:	Potential D.C. Recoverable Cost		
						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development		Other (e.g. 10% Statutory Deduction)	Total	Residential Share 84%	Non-Residential Share 16%
	2019-2028											
1	DC Background Study	2019	28,200	-	28,200	-		28,200	2,820	25,380	21,319	4,061
2	DC Background Study	2024	28,200	-	28,200	-		28,200	2,820	25,380	21,319	4,061
3	Fire Master Plan Update	2023	65,000	-	65,000	32,500		32,500	3,250	29,250	24,570	4,680
4	Public Works Facility Study	2021	70,000	-	70,000	35,000		35,000	3,500	31,500	26,460	5,040
5	Roads Needs Study Update (every 5 years)	2019, 2024, 2029	150,000	-	150,000	127,500		22,500	2,250	20,250	17,010	3,240
6	Bridge OSIM Inspections (every 2 years)	2019, 2021, 2023, 2025, 2027, 2029	330,000	-	330,000	280,500		49,500	4,950	44,550	37,422	7,128
7	Built Heritage Inventory	2021	80,300	-	80,300	40,150		40,150	4,015	36,135	30,353	5,782
8	Cultural Heritage Landscape Inventory	2021	80,300	-	80,300	40,150		40,150	4,015	36,135	30,353	5,782
9	Growth Strategy Update	2021-2022	185,800	-	185,800	37,160		148,640	14,864	133,776	112,372	21,404
10	Environmental Zoning	2020-2021	74,500	-	74,500	33,525		40,975	4,098	36,878	30,977	5,900
11	Mineral Aggregate Resource Study	2024	254,000	-	254,000	177,800		76,200	7,620	68,580	57,607	10,973
12	Urban Design Guidelines for Non-Residential Development	2023	74,500	-	74,500	33,525		40,975	4,098	36,878	30,977	5,900
13	Zoning By-law Update	2020-2021	74,500	-	74,500	52,150		22,350	2,235	20,115	16,897	3,218
14	Official Plan Update	2019-2020	22,000	-	22,000	15,400		6,600	660	5,940	4,990	950
15	Parks & Recreation Strategy Study	2024	68,800	-	68,800	6,880		61,920	6,192	55,728	46,812	8,916
16	Parks, Recreation and Facilities Master Plan	2022	60,000	-	60,000	15,000		45,000	4,500	40,500	34,020	6,480
17	Parks, Recreation and Facilities Service Level Review	2020	40,000	-	40,000	20,000		20,000	2,000	18,000	15,120	2,880
18	Water Network Study	2021	172,000	-	172,000	129,000		43,000	4,300	38,700	32,508	6,192
19	Wastewater Network Study	2021	172,000	-	172,000	129,000		43,000	4,300	38,700	32,508	6,192
20	Elmira Water Model Study (Capacity Improvements)	2020	172,000	-	172,000	43,000		129,000	12,900	116,100	97,524	18,576
21	Development Engineering Standards	2020	114,700	-	114,700	86,025		28,675	2,868	25,808	21,678	4,129
22	East Connector Road Extension EA (26 or 30m ROW)	2020	390,000	-	390,000	-		390,000	39,000	351,000	294,840	56,160
	Outstanding Credits - Empire		8,309	-	8,309	-		8,309	831	7,478	6,281	1,196
	Outstanding Credits - Thomasfield		21,832	-	21,832	-		21,832	2,183	19,649	16,505	3,144
	Reserve Fund Adjustment							(359,583)		(359,583)	(302,049)	(57,533)
	Total		2,736,941	-	2,736,941	1,334,265	-	1,043,093	140,268	902,826	758,374	144,452



Infrastructure Costs Covered in the D.C. Calculation – Parks and Recreation Services

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2019\$)	Post Period Benefit	Net Capital Cost	Less:		Subtotal	Less:	Potential D.C. Recoverable Cost		
						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development		Other (e.g. 10% Statutory Deduction)	Total	Residential Share	Non-Residential Share
2019-2028										95%	5%	
	<u>Parkland Development</u>											
1	Lunar Neighbourhood Park	2020-2022	275,000	-	275,000	-		275,000	27,500	247,500	235,125	12,375
2	St Jacobs Valleyview Subdivision Park (P2)	2023	400,000	-	400,000	-		400,000	40,000	360,000	342,000	18,000
3	Lions Park Extra Lighting	2023	175,000	-	175,000	-		175,000	17,500	157,500	149,625	7,875
4	Maryhill Park (Sunset Park)	2021	75,000	-	75,000	-		75,000	7,500	67,500	64,125	3,375
5	Lunar Subdivision - Soccer Field Development	2019	15,000	-	15,000	-		15,000	1,500	13,500	12,825	675
6	Playground Renewal/Trail Development	2019-2023	125,000	-	125,000	87,500		37,500	3,750	33,750	32,063	1,688
7	Maryhill Parking Lot Expansion	2021	225,000	-	225,000	-		225,000	22,500	202,500	192,375	10,125
	<u>Vehicles</u>											
8	Truck and Tractors	2021	110,000	-	110,000	-		110,000	11,000	99,000	94,050	4,950
9	Mower	2021	25,000	-	25,000	-		25,000	2,500	22,500	21,375	1,125
	<u>Pedestrian Bridges</u>											
10	Pedestrian Bridge - Thomasfield Subdivision (not incl. abutments)	2019	150,000	-	150,000	-		150,000	15,000	135,000	128,250	6,750
	<u>Facilities</u>											
11	Woolwich Memorial Centre Debenture (principal)	2019-2028	1,385,160	-	1,385,160	969,612		415,548	41,555	373,993	355,294	18,700
12	Woolwich Memorial Centre Debenture (interest)	2019-2028	683,191	-	683,191	478,234		204,957	20,496	184,462	175,238	9,223
	Outstanding Credits - Empire		23,972	-	23,972	-		23,972		23,972	22,773	1,199
	Outstanding Credits - Thomasfield		62,988	-	62,988	-		62,988		62,988	59,839	3,149
	Reserve Fund Adjustment							233,288		233,288	221,624	11,664
	Total		3,730,312	-	3,730,312	1,535,346	-	2,428,254	210,801	2,217,453	2,106,581	110,873



Infrastructure Costs Covered in the D.C. Calculation – Library Services

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2019\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Subtotal	Less:	Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development		Other (e.g. 10% Statutory Deduction)	Total	Residential Share	Non-Residential Share
	2019-2028										95%	5%	
1	Breslau Library (5,000 sq.ft.)	2023	1,250,000	891,295		358,705	-		358,705	35,871	322,835	306,693	16,142
	Total		1,250,000	891,295	-	358,705	-	-	358,705	35,871	322,835	306,693	16,142



5.3 Service Levels and 12-Year Capital Costs for D.C. Calculation

This section evaluates the development-related capital requirements for Roads and Related Services over a 12-year planning period (i.e. 2019-2031). The service component is evaluated on two format sheets: the average historical 10-year level of service calculation (see Appendix B), which “caps” the D.C. amounts; and, the infrastructure cost calculation, which determines the potential D.C. recoverable cost.

5.3.1 Roads and Related Services

The Township has a current inventory of 60 lane kilometres of roads, excluding internal local roads. This historic level of infrastructure investment equates to a \$3,754 per capita level of service. When applied to the forecast growth to 2031, a maximum DC-eligible cost of \$34.1 million could be expected to meet the future increase in needs for service.

In addition to roadways, the Township’s public works department utilizes 29,800 square feet of facility space and operates 44 pieces of equipment and machinery, including vehicles. In this regard, a historical average level of service of \$359 per capita has been provided, resulting in D.C.-eligible cap room of approximately \$3.3 million.

Review of the Township’s roads and related needs for the 12-year forecast period identified \$53.7 million in gross capital costs. These capital needs include road reconstruction, road resurfacing, sidewalks, expansion of facility space and additional machinery and equipment (including vehicles), and outstanding D.C. credits. Recognizing the benefit to existing development, \$24.6 million has been deducted. A further deduction of \$3.5 million, has been taken for anticipated grants, subsidies and other contributions toward these capital costs. After applying the existing reserve fund balance of \$1.4 million, \$24.2 million in capital needs have been included in the D.C. calculation, including the outstanding D.C. credits.

The net growth-related costs for roads and related services have been allocated between residential and non-residential development on the basis of incremental population to employment growth over the 12-year forecast period, resulting in 85% allocated to residential and 15% to non-residential (rounded).



5.3.2 Fire Protection Services

The Township currently provides fire protection services from 6 fire halls and one sub-station totaling 34,077 sq.ft. of facility space. Services are provided by 22 fully equipped vehicles and 161 equipped firefighters including the fire chief and deputy fire chief.

This translates into an average service level of \$736 per capita. This historical level of investment in fire services provides for a D.C. eligible amount over the 12-year forecast period of \$6.7 million dollars.

The Township anticipates the need to provide additional fire facility space in Elmira and Maryhill. Furthermore, the Breslau and St. Jacob's stations will require additional vehicles and equipment. In total, the gross capital costs for fire services is \$3.6 million over the forecast period. Approximately, \$1.9 million has been deducted from these needs as a benefit to existing development. The net cost for inclusion in the D.C. calculation is \$2.4 million, which includes costs for unfunded projects reflected in the existing reserve deficit balance of \$677,958.

The allocation net growth-related costs for fire protection services between residential and non-residential development is 85% residential and 15% non-residential (rounded) based on land area growth over the forecast period to 2031.



Infrastructure Costs Covered in the D.C. Calculation – Roads and Related Services

Prj. No	Increased Service Needs Attributable to Anticipated Development 2019-2031	Timing (year)	Gross Capital Cost Estimate (2019\$)	Post Period Benefit	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 85%	Non-Residential Share 15%
	Road Reconstruction									
1	Old Scout Place - St. Jacobs	2019	150,000	-	150,000	69,600		80,400	68,340	12,060
2	Snyder Avenue North - Elmira (Church Street West to Riverside Drive)	2019	85,000	-	85,000	70,125		14,875	12,644	2,231
3	Bauman Street / College Street - Elmira (Duke Street to End)	2021	573,483	-	573,483	430,112		143,371	121,865	21,506
4	Union Street - Elmira (Erb Street to Oriole Parkway East)	2021	1,270,926	-	1,270,926	953,194		317,731	270,072	47,660
5	William Street - Elmira (Snyder Avenue North to Arthur Street North)	2019	621,071	-	621,071	456,487		164,584	139,896	24,688
6	Barnswallow Drive - Elmira (Church Street West to First Street West)	2020	3,500,303	-	3,500,303	1,225,106		2,275,197	1,933,917	341,280
7	Barnswallow Drive Extension/Lunor Drive (incl. land) - Elmira (Church Street West to ~300m North of Church Street West)	2019-2021	422,000	-	422,000	-		422,000	358,700	63,300
8	Henry Street - St. Jacobs (King Street North to Three Bridges Road)	2025-2031	1,067,200	-	1,067,200	747,040		320,160	272,136	48,024
9	Three Bridges Road - South - St. Jacobs (Henry Street to Lobsinger Line)	2025-2031	1,146,700	-	1,146,700	802,690		344,010	292,409	51,602
10	Martin's Lane - Elmira (Arthur Street North to End)	2024	246,818	-	246,818	123,409		123,409	104,898	18,511
11	Floradale Road - Elmira (Church Street West to Listowel Road)	2019	1,556,511	-	1,556,511	778,255		778,255	661,517	116,738
12	Whippoorwill Drive - Elmira (Barnswallow Drive to Arthur Street South)	2025-2031	3,466,613	-	3,466,613	1,213,315		2,253,299	1,915,304	337,995
13	Menno Street - Breslau (450m East of Lonsdale Road to Shantz Station Road)	2025-2031	1,150,000	-	1,150,000	230,000		920,000	782,000	138,000
14	Capital Bridge Expenditures	2019-2031	8,150,000	-	8,150,000	7,335,000		815,000	692,750	122,250
15	Snyder's Flats Rd. - Bloomingdale (Sawmill Rd. to 120m west of Sawmill)	2025-2031	482,346	-	482,346	24,117	48,235	409,994	348,495	61,499
16	Snyder's Flats Rd. - Bloomingdale (120m west of Sawmill to 395m west of Sawmill)	2025-2031	1,105,377	-	1,105,377	-	745,189	360,189	306,160	54,028
17	Dolman St. Extension (26-30m ROW, including land) - Breslau (Woolwich St. S. to 140m east of Woolwich St. S.)	2025-2031	1,199,759	-	1,199,759	-	599,880	599,880	509,898	89,982
18	Greenhouse Rd. (26m ROW) - Breslau (Victoria St. to Kramp Rd.)	2024	5,332,779	-	5,332,779	533,278		4,799,501	4,079,576	719,925
19	Greenhouse Rd. (26m ROW) - Breslau (Kramp Rd. to Railway Crossing)	2024	1,299,865	-	1,299,865	-		1,299,865	1,104,885	194,980
20	Kramp Rd. - Breslau (Greenhouse Rd. to Road M (Wombolt Avenue))	2026	1,103,674	-	1,103,674	110,367		993,306	844,310	148,996
21	Ottawa St. Extension (35m ROW) - Breslau (Shallow Creek to Andover Dr.)	2025-2027	1,030,096	-	1,030,096	-	515,048	515,048	437,791	77,257
22	Ottawa St. Extension (35m ROW) - Breslau (Woolwich St. S. to Fountain St.)	2020-2022	2,699,719	-	2,699,719	-	1,349,860	1,349,860	1,147,381	202,479
23	Woolwich St. N. - Breslau (Fountain St. to Terminus)	2022-2024	429,206	-	429,206	171,683	103,010	154,514	131,337	23,177
24	Snyder's Flats Storm (Snyder's Flats Road to 50m North of McAllister Drive)	2019	478,122	-	478,122	33,230	180,730	264,163	224,538	39,624



Infrastructure Costs Covered in the D.C. Calculation – Roads and Related Services (cont'd)

Prj.No	Increased Service Needs Attributable to Anticipated Development 2019-2031	Timing (year)	Gross Capital Cost Estimate (2019\$)	Post Period Benefit	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 85%	Non- Residential Share 15%
	Road Resurfacing									
25	Hunsburger Road - Conestogo	2019	520,600	-	520,600	416,480		104,120	88,502	15,618
26	South Field Drive - Elmira	2025-2031	666,800	-	666,800	533,440		133,360	113,356	20,004
27	Farmers Market Road - St. Jacobs	2025-2031	461,700	-	461,700	369,360		92,340	78,489	13,851
28	Benjamin Road - Urban - St. Jacobs	2025-2031	238,400	-	238,400	190,720		47,680	40,528	7,152
29	First Street West - Elmira	2025-2031	132,400	-	132,400	105,920		26,480	22,508	3,972
30	Greenhouse Road - Breslau	2021-2031	275,200	-	275,200	242,176		33,024	28,070	4,954
31	Kramp Road - Breslau	2022-2031	602,000	-	602,000	529,760		72,240	61,404	10,836
32	Ruggles Rd (Hot Mix Resurfacing)	2019	460,000	-	460,000	397,584		62,416	53,053	9,362
33	Road Upgrades (gravel to surface treated)	2019-2031	2,925,000	-	2,925,000	2,340,000		585,000	497,250	87,750
	Sidewalks									
34	Joseph Street - Breslau	2025-2031	45,900	-	45,900	13,770		32,130	27,311	4,820
35	Maryhill Road - Maryhill	2025-2031	68,800	-	68,800	27,520		41,280	35,088	6,192
36	Ruggles Road - Floradale	2019	20,600	-	20,600	15,450		5,150	4,378	773
37	Sidewalk - Repairs/Expansion	2019-2031	1,430,000	-	1,430,000	1,056,855		373,145	317,174	55,972
	Depots and Domes									
38	Municipal Yard Expansion	2022	6,000,000	-	6,000,000	3,000,000		3,000,000	2,550,000	450,000
	Roads and Related Vehicles									
45	Miscellaneous Equipment	2025-2031	114,700	-	114,700	-		114,700	97,495	17,205
46	Pickup Truck	2025-2031	40,100	-	40,100	-		40,100	34,085	6,015
47	Tandem Truck / Snowplow	2025-2031	275,200	-	275,200	-		275,200	233,920	41,280
48	1 Tonne Dump Truck	2025-2031	63,100	-	63,100	31,550		31,550	26,818	4,733
	Outstanding Credits - Empire		222,142		222,142	-		222,142	188,821	33,321
	Outstanding Credits - Thomasfield		583,700		583,700	-		583,700	496,145	87,555
	Reserve Fund Adjustment							(1,376,082)	(1,169,670)	(206,412)
	Total		53,713,911	-	53,713,911	24,577,593	3,541,950	24,218,286	20,585,543	3,632,743



Infrastructure Costs Covered in the D.C. Calculation – Fire Services

Prj .No	Increased Service Needs Attributable to Anticipated Development 2019-2031	Timing (year)	Gross Capital Cost Estimate (2019\$)	Post Period Benefit	Net Capital Cost	Less:	Potential D.C. Recoverable Cost			
						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 85%	Non-Residential Share 15%
1	Fire Stations Elmira Fire Station - Replace and Expand (7,300 sq.ft.)	2023	1,800,000	-	1,800,000	1,280,959		519,041	441,185	77,856
2	Maryhill Fire Station Expansion - Replace and Expand (3,884 sq.ft.)	2021	850,000	-	850,000	587,384		262,616	223,223	39,392
3	Fire Vehicles Breslau Rescue	2024	420,000	-	420,000	-		420,000	357,000	63,000
4	Breslau Aerial	2019	300,000	-	300,000	-		300,000	255,000	45,000
5	Breslau Siren	2020	55,000	-	55,000	11,000		44,000	37,400	6,600
6	St Jacobs (Valleyview) Siren	2022	55,000	-	55,000	27,500		27,500	23,375	4,125
7	Fire Equipment Auto Extraction Equipment - Breslau Station	2019	31,000	-	31,000	6,000		25,000	21,250	3,750
	Outstanding Credits - Empire		28,029		28,029	-		28,029	23,825	4,204
	Outstanding Credits - Thomasfield		73,649		73,649	-		73,649	62,601	11,047
	Reserve Fund Adjustment							677,958	576,264	101,694
	Total		3,612,677	-	3,612,677	1,912,843	-	2,377,792	2,021,123	356,669



5.4 Service Levels and Build-out Capital Costs for Municipal Service Area DC Calculation

The Township's current development charges by-law imposes charges for water and wastewater services uniformly over the municipal service area, with the exception of the Breslau Area. For Breslau, an additional wastewater charge is based on the City of Kitchener applicable sanitary servicing D.C. As both water and wastewater growth-related Township capital needs have been identified for Breslau and other serviced areas, this D.C. Background Study calculates a uniform application of water and wastewater DC charges in the serviced areas, including the Breslau Sanitary Servicing Area. The anticipated development-related capital requirements for these services have been considered over the 2019-2031 forecast period.

5.4.1 Water Services

The gross capital cost estimates for the water program total \$7.8 million. In addition, \$3.1 million has been deducted as a benefit to existing, reflecting the non-growth share of the identified projects. A further deduction of \$169,836 has been applied to the capital needs reflecting anticipated grants and other contributions attributable to new development.

In total the capital costs identified for inclusion amount to \$4.4 million, after applying the available reserve fund balance of \$192,379. These costs have been allocated 85% to residential and 15% to non-residential (rounded) development on the basis of the incremental population to employment growth over the 2019-2031 forecast period.

5.4.2 Wastewater Services

The gross capital costs for wastewater services total \$ 5.4 million. Approximately, \$2.2 million was deducted from the gross cost estimate reflecting the benefit to existing development. A further deduction of \$71,715 was applied for anticipated grants and other contributions towards these capital needs, as well as \$12,992 for the existing reserve fund balance. In total the growth-related capital costs included in the D.C. calculation is \$3.1 million.



Similar to water services, the D.C. eligible capital costs have been allocated 85% to residential and 15% to non-residential development on the basis of the incremental population to employment growth over the 2019-2031 forecast period.



Infrastructure Costs Covered in the D.C. Calculation – Water Services

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2019\$)	Post Period Benefit	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 85%	Non-Residential Share 15%
	2019-2031									
1	William Street - Elmira (Snyder Avenue North to Arthur Street North)	2019	807,392	-	807,392	403,696		403,696	343,142	60,554
2	Bauman Street / College Street - Elmira (Duke Street to End)	2021	511,723	-	511,723	383,792		127,931	108,741	19,190
3	Union Street - Elmira (Erb Street to Oriole Parkway East)	2021	1,232,218	-	1,232,218	825,586		406,632	345,637	60,995
4	George Street / High Street Easement - Elmira (Church Street East to End of High Street)	2021	733,528	-	733,528	366,764		366,764	311,750	55,015
5	Barnswallow Drive Extension/Lunor Drive - Elmira	2021	321,075	-	321,075	-		321,075	272,914	48,161
6	Church Street East	2020	424,300	-	424,300	212,150		212,150	180,328	31,823
7	Arthur Street North	2024	607,200	-	607,200	303,600		303,600	258,060	45,540
8	Martin's Lane - Elmira (Arthur Street North to End)	2024	239,301	-	239,301	119,650		119,650	101,703	17,948
9	Area 1 (Listowel Road Construction) - Elmira (Arthur Street South to ~800m West of Arthur St S)	2019	308,000	-	308,000	-		308,000	261,800	46,200
10	Duke Street - Elmira (Erb Street to Church Street East)	2022	356,068	-	356,068	178,034		178,034	151,329	26,705
11	Area 10	2025-2031	206,400	-	206,400	-		206,400	175,440	30,960
12	System Capacity Improvements	2025-2031	573,300	-	573,300	286,650		286,650	243,653	42,998
13	Greenhouse Rd. (26m ROW) (Victoria St. to Kramp Rd.)	2023	683,002	-	683,002	-	68,300	614,702	522,497	92,205
14	Kramp Rd. (Greenhouse Rd. to Road M)	2026	576,283	-	576,283	-	57,628	518,655	440,856	77,798
15	Woolwich St. N. (Fountain St. to Terminus)	2024	109,768	-	109,768	-	43,907	65,861	55,982	9,879
	Outstanding Credits - Empire		40,300	-	40,300	-		40,300	34,255	6,045
	Outstanding Credits - Thomasfield		105,893	-	105,893	-		105,893	90,009	15,884
	Reserve Fund Adjustment							(192,379)	(163,522)	(28,857)
	Total		7,835,751	-	7,835,751	3,079,923	169,836	4,393,614	3,734,572	659,042



Infrastructure Costs Covered in the D.C. Calculation – Wastewater Services

Prj.No	Increased Service Needs Attributable to Anticipated Development 2019-2031	Timing (year)	Gross Capital Cost Estimate (2019\$)	Post Period Benefit	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 85%	Non-Residential Share 15%
1	System Capacity - I&I	2019-2031	917,400	-	917,400	458,700		458,700	389,895	68,805
2	Barnswallow Drive Extension/Lunor Drive - Elmira	2021	321,075	-	321,075	-		321,075	272,914	48,161
3	Arthur Street North - Elmira	2021	43,050	-	43,050	21,525		21,525	18,296	3,229
4	Martin's Lane - Elmira (Arthur Street to End)	2024	264,358	-	264,358	132,179		132,179	112,352	19,827
5	Area 1 (Listowel Road Construction) - Elmira (Arthur Street South to ~800m West of Arthur St S)	2025-2031	128,700	-	128,700	-		128,700	109,395	19,305
6	Flow Monitoring	2019-2031	222,500	-	222,500	-		222,500	189,125	33,375
7	Breslau Wet Well Upgrades	2019-2022	880,500	-	880,500	-		880,500	748,425	132,075
8	Greenhouse Rd. (26m ROW) - Breslau (Street 'C' to 80m south of Victoria St.)	2023	170,750	-	170,750	-	20,490	150,260	127,721	22,539
9	Woolwich St. N. - Breslau (Fountain St. to Terminus)	2024	128,063	-	128,063	-	51,225	76,838	65,312	11,526
10	Bauman Street / College Street - Elmira (Duke Street to End)	2021	705,825	-	705,825	529,369		176,456	149,988	26,468
11	Union Street - Elmira (Erb Street to Oriole Parkway East)	2021	1,361,246	-	1,361,246	1,020,934		340,311	289,265	51,047
12	One ton Cab and Chassis with Crane Mount and Utility Box	2025-2031	133,300	-	133,300	-		133,300	113,305	19,995
	Outstanding Credits - Empire		28,743	-	28,743	-		28,743	24,432	4,311
	Outstanding Credits - Thomasfield		75,525	-	75,525	-		75,525	64,197	11,329
	Reserve Fund Adjustment							(12,992)	(11,043)	(1,949)
	Total		5,381,035	-	5,381,035	2,162,707	71,715	3,133,621	2,663,578	470,043



Chapter 6

D.C. Calculation



6. D.C. Calculation

Table 6-1 calculates the proposed D.C.s to be imposed for water and wastewater services in the municipally serviced area over the 2014-2031 forecast period. Table 6-2 calculates the proposed D.C.s for Roads and Fire, to be imposed on anticipated development in the Township over the 12-year planning horizon. Table 6-3 calculates the proposed D.C.s for Parks and Recreation, Library, and Administration, to be imposed on anticipated development in the Township over the 10-year planning horizon.

The calculation for residential development is generated on a per capita basis and is based upon four forms of housing types (single and semi-detached, apartments 2+ bedrooms, apartment's bachelor and 1 bedroom, and all other multiples). The non-residential D.C. has been calculated uniformly on a per sq.ft. of G.F.A. basis for commercial, industrial, and institutional developments.

Table 6-4 summarizes the recommended schedule of charges, reflecting the maximum D.C.s by residential dwelling type and per sq.ft. of G.F.A. for non-residential development.

Table 6-5 compares the Township's existing charges to the charges proposed herein (Table 6-4), for a single detached residential dwelling unit and per sq.ft. of G.F.A. for non-residential development. The calculated charges are \$11,663 for a single detached residential dwelling unit, and \$4.02 per sq.ft. of non-residential G.F.A. The residential charges for a single detached dwelling unit represent a 19% increase (+\$1,827) over the current charges of \$9,836. The non-residential charges represent a 47% increase (+\$1.28) over the current charges of \$2.74 per sq.ft.

In addition to the calculations presented above, cash-flow calculations of the maximum D.C.s that could be imposed by Council were undertaken to account for the timing of revenues and expenditures and the resultant financing needs. The cash-flow calculations have been undertaken by service for each forecast development type, i.e. residential, and non-residential. D.C. cash flow calculation tables are provided in Appendix C and have been undertaken to account for 1% earnings on D.C. reserve fund balances and 3% interest charged for reserve fund borrowing.



The schedule of charges based on cash flow calculations is presented for comparison in Table 6-6 below. The D.C.s for a single detached dwelling unit within the urban serviced area calculated using the cash flow approach are \$17 higher (0.15%) than those presented in Table 6-4. Similarly, for non-residential development in the urban serviced area D.C.s are \$0.01 higher per sq.ft. of G.F.A (0.21%). Since the cash flow and quantum approaches result in similar D.C.s, it is recommended that the Township adopt the quantum D.C.s presented in Table 6-4.

Table 6-1
Urban Area Services D.C. Calculation
2019-2031

SERVICE	2019\$ D.C.-Eligible Cost		2019\$ D.C.-Eligible Cost	
	Residential	Non-Residential	S.D.U.	per sq.ft.
1. Wastewater Services	\$ 2,663,578	\$ 470,043	\$ 953	\$ 0.35
2. Water Services	3,734,572	659,042	1,337	0.48
TOTAL	6,398,150	\$1,129,085	\$2,290	0.83
D.C.-Eligible Capital Cost	\$6,398,150	\$1,129,085		
12-Year Gross Population/GFA Growth (sq.ft.)	9,478	1,353,200		
Cost Per Capita/Non-Residential GFA (sq.ft.)	\$675.05	\$0.83		
By Residential Unit Type	P.P.U.			
Single and Semi-Detached Dwelling	3.393	\$2,290		
Apartments - 2 Bedrooms +	2.126	\$1,435		
Apartments - Bachelor and 1 Bedroom	1.315	\$888		
Other Multiples	2.401	\$1,621		

Table 6-2
Municipal-Wide Services D.C. Calculation
2019-2031

SERVICE	2019\$ D.C.-Eligible Cost		2019\$ D.C.-Eligible Cost	
	Residential	Non-Residential	S.D.U.	per sq.ft.
3. Roads and Related	\$ 20,585,543	\$ 3,632,743	\$ 7,230	\$ 2.69
4. Fire Protection Services	2,021,123	356,669	710	0.26
TOTAL	22,606,666	\$3,989,412	\$7,940	\$2.95
D.C.-Eligible Capital Cost	\$22,606,666	\$3,989,412		
12-Year Gross Population/GFA Growth (sq.ft.)	9,661	1,353,200		
Cost Per Capita/Non-Residential GFA (sq.ft.)	\$2,339.99	\$2.95		
By Residential Unit Type	P.P.U.			
Single and Semi-Detached Dwelling	3.393	\$7,940		
Apartments - 2 Bedrooms +	2.126	\$4,975		
Apartments - Bachelor and 1 Bedroom	1.315	\$3,077		
Other Multiples	2.401	\$5,618		



Table 6-3
Municipal-Wide Services D.C. Calculation
2019-2028

SERVICE	2019\$ D.C.-Eligible Cost		2019\$ D.C.-Eligible Cost	
	Residential	Non-Residential	S.D.U.	per sq.ft.
5. Parks and Recreation	\$ 2,106,581	\$ 110,873	\$ 952	\$ 0.10
6. Library Services	306,693	16,142	139	0.01
7. Administration	758,374	144,452	343	0.13
TOTAL	3,171,647	271,467	1,433	\$0.24
D.C.-Eligible Capital Cost	\$3,171,647	\$271,467		
10-Year Gross Population/GFA Growth (sq.ft.)	7,510	1,147,200		
Cost Per Capita/Non-Residential GFA (sq.ft.)	\$422.32	\$0.24		
By Residential Unit Type	P.P.U.			
Single and Semi-Detached Dwelling	3.393	\$1,433		
Apartments - 2 Bedrooms +	2.126	\$898		
Apartments - Bachelor and 1 Bedroom	1.315	\$555		
Other Multiples	2.401	\$1,014		

Table 6-4
Schedule of Calculated D.C.s

Service	RESIDENTIAL				NON-RESIDENTIAL
	Single and Semi-Detached Dwelling	Apartments - 2 Bedrooms +	Apartments - Bachelor and 1 Bedroom	Other Multiples	(per sq.ft. of Gross Floor Area)
Municipal Wide Services:					
Roads and Related	7,230	4,530	2,802	5,116	2.69
Fire Protection Services	710	445	275	502	0.26
Parks and Recreation	952	596	369	673	0.10
Library Services	139	87	54	98	0.01
Administration	343	215	133	242	0.13
Total Municipal Wide Services	9,373	5,873	3,633	6,631	3.19
Urban Services					
Wastewater Services	953	597	369	674	0.35
Water Services	1,337	838	518	946	0.48
Total Urban Services	2,290	1,435	887	1,620	0.83
GRAND TOTAL RURAL AREA	9,373	5,873	3,633	6,631	3.19
GRAND TOTAL URBAN AREA	11,663	7,308	4,520	8,251	4.02



Table 6-5
Comparison of Current and Calculated D.C.s

Residential (Single Detached) Comparison			Non-Residential (per sq.ft.) Comparison		
Service	Current	Calculated	Service	Current	Calculated
Municipal Wide Services:			Municipal Wide Services:		
Roads and Related	4,478	7,230	Roads and Related	1.56	2.69
Fire Protection Services	463	710	Fire Protection Services	0.26	0.26
Parks and Recreation	2,528	952	Parks and Recreation	0.09	0.10
Library Services	-	139	Library Services	-	0.01
Administration	464	343	Administration	0.16	0.13
Total Municipal Wide Services	7,933	9,373	Total Municipal Wide Services	2.07	3.19
Area Specific Services:			Area Specific Services:		
Wastewater Services	822	953	Wastewater Services	0.28	0.35
Water Services	1,081	1,337	Water Services	0.39	0.48
Total Area Specific Services	1,903	2,290	Total Area Specific Services	0.67	0.83
Grand Total - Urban Area	9,836	11,663	Grand Total - Urban Area	2.74	4.02

Table 6-6
Schedule of Calculated D.C.s (Cash-Flow)

Service	RESIDENTIAL				NON-RESIDENTIAL
	Single and Semi-Detached Dwelling	Apartments - 2 Bedrooms +	Apartments - Bachelor and 1 Bedroom	Other Multiples	(per sq.ft. of Gross Floor Area)
Municipal Wide Services:					
Roads and Related	7,240	4,536	2,806	5,123	2.69
Fire Protection Services	713	447	276	504	0.26
Parks and Recreation	953	597	369	675	0.10
Library Services	141	88	55	100	0.01
Administration	344	216	133	244	0.13
Total Municipal Wide Services	9,391	5,884	3,639	6,646	3.19
Urban Services					
Wastewater Services	953	597	370	675	0.35
Water Services	1,336	837	518	945	0.49
Total Urban Services	2,290	1,434	888	1,620	0.83
GRAND TOTAL RURAL AREA	9,391	5,884	3,639	6,646	3.19
GRAND TOTAL URBAN AREA	11,680	7,318	4,527	8,266	4.03

Change vs. Quantum Calculation (\$)

GRAND TOTAL RURAL AREA	18	11	6	15	0.00
GRAND TOTAL URBAN AREA	17	10	7	15	0.01

Change vs. Quantum Calculation (%)

GRAND TOTAL RURAL AREA	0.19%	0.19%	0.17%	0.23%	0.14%
GRAND TOTAL URBAN AREA	0.15%	0.14%	0.15%	0.18%	0.21%



are used, it is generally to underpin master servicing and front-end financing arrangements for more localized capital costs.

Based on the foregoing and discussions with Township staff, area-specific D.C.s are suitable for urban (water and wastewater) services. The recommendations are:

- to continue to apply municipal-wide D.C.s for administration, roads and related, fire protection, and parks and recreation; and.
- to continue to apply area-specific D.C.s for water and wastewater services.

7.4 Other D.C. By-law Provisions

7.4.1 Categories of Services for Reserve Fund and Credit Purposes

It is recommended that the Township's D.C. collections be contributed into six (6) separate reserve funds, including: Roads and Related Services, Fire Protection Services, Parks and Recreation Services, Administration Services, Water Services and Wastewater Services.

7.4.2 By-law In-force Date

The proposed by-law under D.C.A., 1997 will come into force on the day of by-law passage.

7.4.3 Minimum Interest Rate Paid on Refunds and Charged for Inter-Reserve Fund Borrowing

The minimum interest rate is the Bank of Canada rate on the day on which the by-law comes into force (as per s.11 of O.Reg. 82/98).

7.5 Other Recommendations

It is recommended that Council:

“Approve the capital project listing set out in Chapter 5 of the D.C. Background Study dated April 25, 2019, subject to further annual review during the capital budget process;”

“Approve the D.C. Background Study dated April 25, 2019, as amended.”



with new growth. Note that the D.C.A. does not require an analysis of the non-D.C. capital needs or their associated operating costs so these are omitted from the table below. Furthermore, as only the present infrastructure gap been considered at this time within the A.M.P., the following does not represent a fiscal impact assessment (including future tax/rate increases) but provides insight into the potential affordability of the new assets:

1. The non-D.C. recoverable portion of the projects which will require financing from Township financial resources (i.e. taxation, rates, fees, etc.). This amount has been presented on an annual debt charge amount based on 20-year financing.
2. Lifecycle costs for the 2019 D.C. capital works have been presented based on a sinking fund basis. The assets have been considered over their estimated useful lives.
3. Incremental operating costs for the D.C. services (only) have been included.
4. The resultant total annualized expenditures are \$2.1 million.
5. Consideration was given to the potential new taxation and user fee revenues which will be generated as a result of new growth. These revenues will be available to finance the expenditures above. The new operating revenues are \$5.6 million. This amount, totalled with the existing operating revenues of \$27.3 million, provides annual revenues of \$32.9 million by the end of the period.
6. In consideration of the above, the capital plan is deemed to be financially sustainable.



Table 8-1
Township of Woolwich
Asset Management – Future Expenditures and Associated Revenues (2019\$)

Description	2031 (Total)
Expenditures (Annualized)	
Annual Debt Payment on Non-Growth Related Capital ¹	369,784
Annual Debt Payment on Post Period Capital ²	-
Lifecycle:	
Annual Lifecycle - Town Wide Services	820,612
Annual Lifecycle - Area Specific Services ³	138,334
Sub-Total - Annual Lifecycle	\$958,945
Incremental Operating Costs (for D.C. Services)	\$743,782
Total Expenditures	\$2,072,511
Revenue (Annualized)	
Total Existing Revenue ⁴	\$27,289,576
Incremental Tax and Non-Tax Revenue (User Fees, Fines, Licences, etc.)	\$5,628,229
Total Revenues	\$32,917,805

¹ Non-Growth Related component of Projects including 10% mandatory deduction on soft services

² Interim Debt Financing for Post Period Benefit

³ All infrastructure costs included in Area Specific by-laws have been included

⁴ As per Sch. 10 of FIR



**Township of Woolwich
2019 Development Charges Study
Cash Flow Calculation - Parks & Recreation - Residential**

Year	D.C. Reserve Fund Opening Balance	Development Related Expenditures	Development Related Expenditures	Development Related Long-Term Debt	Population Growth	\$280.94	Anticipated Revenues	Annual Surplus/ (Deficit)	1% / 3%	D.C. Reserve Fund Closing Balance after Interest
		Nominal Project Cost	Project Cost Inflated at 3%	Existing Debt Payments		Per Capita per Year Inflated at (3%) Starting in 2020			D.C. Reserve Fund Interest Earnings/ (Cost)	
2019	(221,624)	208,802	208,802		751	280.94	210,986	(219,440)	(6,616)	(226,056)
2020	(226,056)	146,102	150,485		751	289.37	217,315	(159,226)	(5,779)	(165,005)
2021	(165,005)	518,027	549,575		751	298.05	223,835	(490,745)	(9,836)	(500,581)
2022	(500,581)	146,102	159,650		751	306.99	230,550	(429,681)	(13,954)	(443,635)
2023	(443,635)	559,352	629,556		751	316.20	237,466	(835,725)	(19,190)	(854,915)
2024	(854,915)	61,314	71,080		751	325.69	244,590	(681,405)	(23,045)	(704,450)
2025	(704,450)	61,314	73,213		751	335.46	251,928	(525,735)	(18,453)	(544,188)
2026	(544,188)	61,314	75,409		751	345.52	259,486	(360,111)	(13,564)	(373,676)
2027	(373,676)	61,314	77,671		751	355.89	267,270	(184,077)	(8,366)	(192,443)
2028	(192,443)	61,314	80,001		751	366.56	275,288	2,844	(2,844)	0
Total		1,884,957	2,075,441	-	7,510		2,418,713		(121,648)	

**Township of Woolwich
2019 Development Charges Study
Cash Flow Calculation - Parks & Recreation - Non-Residential**

Year	D.C. Reserve Fund Opening Balance	Development Related Expenditures	Development Related Expenditures	Development Related Long-Term Debt	Sq. Ft. of Gross Floor Area	\$0.097	Anticipated Revenues	Annual Surplus/ (Deficit)	1% / 3%	D.C. Reserve Fund Closing Balance after Interest
		Nominal Project Cost	Project Cost Inflated at 3%	Existing Debt Payments		per sq.ft. per Year Inflated at (3%) Starting in 2020			D.C. Reserve Fund Interest Earnings/ (Cost)	
2019	(11,664)	10,990	10,990		114,720	0.097	11,105	(11,549)	(348)	(11,898)
2020	(11,898)	7,690	7,920		114,720	0.100	11,438	(8,380)	(304)	(8,684)
2021	(8,684)	27,265	28,925		114,720	0.103	11,781	(25,829)	(518)	(26,346)
2022	(26,346)	7,690	8,403		114,720	0.106	12,134	(22,615)	(734)	(23,349)
2023	(23,349)	29,440	33,135		114,720	0.109	12,498	(43,986)	(1,010)	(44,996)
2024	(44,996)	3,227	3,741		114,720	0.112	12,873	(35,863)	(1,213)	(37,076)
2025	(37,076)	3,227	3,853		114,720	0.116	13,259	(27,670)	(971)	(28,641)
2026	(28,641)	3,227	3,969		114,720	0.119	13,657	(18,953)	(714)	(19,667)
2027	(19,667)	3,227	4,088		114,720	0.123	14,067	(9,688)	(440)	(10,129)
2028	(10,129)	3,227	4,211		114,720	0.126	14,489	150	(150)	(0)
Total		99,208	109,234	-	1,147,200		127,301		(6,403)	



**Township of Woolwich
2019 Development Charges Study
Cash Flow Calculation - Administration - Residential**

Year	D.C. Reserve Fund Opening Balance	Development Related Expenditures	Development Related Expenditures	Development Related Long-Term Debt	Population Growth	\$101.44	Anticipated Revenues	Annual Surplus/ (Deficit)	1% / 3%	D.C. Reserve Fund Closing Balance after Interest
		Nominal Project Cost	Project Cost Inflated at 3%	Existing Debt Payments		Per Capita per Year Inflated at (3%) Starting in 2020			D.C. Reserve Fund Interest Earnings/ (Cost)	
2019	302,049	80,525	80,525		751	101.44	76,181	297,706	2,999	300,705
2020	300,705	457,873	471,609		751	104.48	78,467	(92,438)	1,041	(91,396)
2021	(91,396)	234,584	248,870		751	107.62	80,821	(259,446)	(5,263)	(264,709)
2022	(264,709)	92,485	101,060		751	110.85	83,245	(282,524)	(8,208)	(290,733)
2023	(290,733)	57,826	65,083		751	114.17	85,742	(270,073)	(8,412)	(278,486)
2024	(278,486)	128,017	148,406		751	117.60	88,315	(338,577)	(9,256)	(347,833)
2025	(347,833)	2,279	2,721		751	121.12	90,964	(259,590)	(9,111)	(268,701)
2026	(268,701)	2,279	2,802		751	124.76	93,693	(177,810)	(6,698)	(184,508)
2027	(184,508)	2,279	2,887		751	128.50	96,504	(90,891)	(4,131)	(95,022)
2028	(95,022)	2,279	2,973		751	132.36	99,399	1,404	(1,404)	0
Total		1,060,423	1,126,937	-	7,510		873,331		(48,443)	

**Township of Woolwich
2019 Development Charges Study
Cash Flow Calculation - Administration - Non-Residential**

Year	D.C. Reserve Fund Opening Balance	Development Related Expenditures	Development Related Expenditures	Development Related Long-Term Debt	Sq. Ft. of Gross Floor Area	\$0.126	Anticipated Revenues	Annual Surplus/ (Deficit)	1% / 3%	D.C. Reserve Fund Closing Balance after Interest
		Nominal Project Cost	Project Cost Inflated at 3%	Existing Debt Payments		per sq.ft. per Year Inflated at (3%) Starting in 2020			D.C. Reserve Fund Interest Earnings/ (Cost)	
2019	57,533	15,338	15,338		114,720	0.126	14,511	56,706	571	57,277
2020	57,277	87,214	89,830		114,720	0.130	14,946	(17,607)	198	(17,409)
2021	(17,409)	44,683	47,404		114,720	0.134	15,394	(49,418)	(1,002)	(50,421)
2022	(50,421)	17,616	19,250		114,720	0.138	15,856	(53,814)	(1,564)	(55,378)
2023	(55,378)	11,014	12,397		114,720	0.142	16,332	(51,443)	(1,602)	(53,045)
2024	(53,045)	24,384	28,268		114,720	0.147	16,822	(64,491)	(1,763)	(66,254)
2025	(66,254)	434	518		114,720	0.151	17,327	(49,446)	(1,735)	(51,181)
2026	(51,181)	434	534		114,720	0.156	17,846	(33,869)	(1,276)	(35,144)
2027	(35,144)	434	550		114,720	0.160	18,382	(17,313)	(787)	(18,099)
2028	(18,099)	434	566		114,720	0.165	18,933	267	(267)	0
Total		201,985	214,655	-	1,147,200		166,349		(9,227)	



**Township of Woolwich
2019 Development Charges Study
Cash Flow Calculation - Library - Residential**

Year	D.C. Reserve Fund Opening Balance	Development Related Expenditures	Development Related Expenditures	Development Related Long-Term Debt	Population Growth	\$41.47	Anticipated Revenues	Annual Surplus/ (Deficit)	1% / 3%	D.C. Reserve Fund Closing Balance after Interest
		Nominal Project Cost	Project Cost Inflated at 3%	Existing Debt Payments		Per Capita per Year Inflated at (3%) Starting in 2020			D.C. Reserve Fund Interest Earnings/ (Cost)	
2019	-	-	-	-	751	41.47	31,147	31,147	156	31,302
2020	31,302	-	-	-	751	42.72	32,081	63,384	473	63,857
2021	63,857	-	-	-	751	44.00	33,044	96,901	804	97,704
2022	97,704	-	-	-	751	45.32	34,035	131,739	1,147	132,886
2023	132,886	306,693	345,186	-	751	46.68	35,056	(177,243)	(665)	(177,909)
2024	(177,909)	-	-	-	751	48.08	36,108	(141,801)	(4,796)	(146,597)
2025	(146,597)	-	-	-	751	49.52	37,191	(109,406)	(3,840)	(113,246)
2026	(113,246)	-	-	-	751	51.01	38,307	(74,939)	(2,823)	(77,762)
2027	(77,762)	-	-	-	751	52.54	39,456	(38,307)	(1,741)	(40,048)
2028	(40,048)	-	-	-	751	54.11	40,639	592	(592)	(0)
Total		306,693	345,186	-	7,510		357,062		(11,877)	

**Township of Woolwich
2019 Development Charges Study
Cash Flow Calculation - Library - Non-Residential**

Year	D.C. Reserve Fund Opening Balance	Development Related Expenditures	Development Related Expenditures	Development Related Long-Term Debt	Sq. Ft. of Gross Floor Area	\$0.014	Anticipated Revenues	Annual Surplus/ (Deficit)	1% / 3%	D.C. Reserve Fund Closing Balance after Interest
		Nominal Project Cost	Project Cost Inflated at 3%	Existing Debt Payments		per sq.ft. per Year Inflated at (3%) Starting in 2020			D.C. Reserve Fund Interest Earnings/ (Cost)	
2019	-	-	-	-	114,720	0.014	1,639	1,639	8	1,647
2020	1,647	-	-	-	114,720	0.015	1,688	3,336	25	3,361
2021	3,361	-	-	-	114,720	0.015	1,739	5,100	42	5,142
2022	5,142	-	-	-	114,720	0.016	1,791	6,934	60	6,994
2023	6,994	16,142	18,168	-	114,720	0.016	1,845	(9,329)	(35)	(9,364)
2024	(9,364)	-	-	-	114,720	0.017	1,900	(7,463)	(252)	(7,716)
2025	(7,716)	-	-	-	114,720	0.017	1,957	(5,758)	(202)	(5,960)
2026	(5,960)	-	-	-	114,720	0.018	2,016	(3,944)	(149)	(4,093)
2027	(4,093)	-	-	-	114,720	0.018	2,077	(2,016)	(92)	(2,108)
2028	(2,108)	-	-	-	114,720	0.019	2,139	31	(31)	(0)
Total		16,142	18,168	-	1,147,200		18,793		(625)	



**Township of Woolwich
2019 Development Charges Study
Cash Flow Calculation - Water - Residential**

Year	D.C. Reserve Fund Opening Balance	Development Related Expenditures	Development Related Expenditures	Development Related Long-Term Debt	Population Growth	\$393.77	Anticipated Revenues	Annual Surplus/ (Deficit)	1% / 3%	D.C. Reserve Fund Closing Balance after Interest
		Nominal Project Cost	Project Cost Inflated at 3%	Existing Debt Payments		Per Capita per Year Inflated at (3%) Starting in 2020			D.C. Reserve Fund Interest Earnings/ (Cost)	
2019	163,522	617,368	617,368		736	393.77	289,933	(163,913)	(6)	(163,918)
2020	(163,918)	192,754	198,537		736	405.58	298,631	(63,824)	(3,416)	(67,240)
2021	(67,240)	1,051,468	1,115,502		736	417.75	307,590	(875,152)	(14,136)	(889,288)
2022	(889,288)	163,756	178,940		736	430.28	316,818	(751,410)	(24,610)	(776,021)
2023	(776,021)	534,923	602,061		736	443.19	326,322	(1,051,759)	(27,417)	(1,079,176)
2024	(1,079,176)	428,171	496,367		736	456.49	336,112	(1,239,431)	(34,779)	(1,274,211)
2025	(1,274,211)	72,297	86,326		736	470.18	346,195	(1,014,341)	(34,328)	(1,048,670)
2026	(1,048,670)	513,153	631,114		736	484.29	356,581	(1,323,202)	(35,578)	(1,358,781)
2027	(1,358,781)	72,297	91,583		736	498.82	367,279	(1,083,085)	(36,628)	(1,119,713)
2028	(1,119,713)	72,297	94,331		736	513.78	378,297	(835,748)	(29,332)	(865,079)
2029	(865,079)	59,870	80,461		705	529.19	373,082	(572,458)	(21,563)	(594,021)
2030	(594,021)	59,870	82,875		705	545.07	384,274	(292,621)	(13,300)	(305,921)
2031	(305,921)	59,870	85,361		705	561.42	395,803	4,521	(4,521)	(0)
Total		3,898,094	4,360,825	-	9,478		4,476,917		(279,614)	

**Township of Woolwich
2019 Development Charges Study
Cash Flow Calculation - Water - Non-Residential**

Year	D.C. Reserve Fund Opening Balance	Development Related Expenditures	Development Related Expenditures	Development Related Long-Term Debt	Sq. Ft. of Gross Floor Area	\$0.487	Anticipated Revenues	Annual Surplus/ (Deficit)	1% / 3%	D.C. Reserve Fund Closing Balance after Interest
		Nominal Project Cost	Project Cost Inflated at 3%	Existing Debt Payments		per sq.ft. per Year Inflated at (3%) Starting in 2020			D.C. Reserve Fund Interest Earnings/ (Cost)	
2019	28,857	108,947	108,947		114,720	0.487	55,839	(24,251)	23	(24,228)
2020	(24,228)	34,015	35,036		114,720	0.501	57,514	(1,750)	(390)	(2,139)
2021	(2,139)	185,553	196,853		114,720	0.516	59,240	(139,753)	(2,128)	(141,881)
2022	(141,881)	28,898	31,578		114,720	0.532	61,017	(112,442)	(3,815)	(116,257)
2023	(116,257)	94,398	106,246		114,720	0.548	62,847	(159,655)	(4,139)	(163,794)
2024	(163,794)	75,560	87,594		114,720	0.564	64,733	(186,655)	(5,257)	(191,912)
2025	(191,912)	12,758	15,234		114,720	0.581	66,675	(140,471)	(4,986)	(145,457)
2026	(145,457)	90,556	111,373		114,720	0.599	68,675	(188,155)	(5,004)	(193,159)
2027	(193,159)	12,758	16,162		114,720	0.617	70,735	(138,585)	(4,976)	(143,561)
2028	(143,561)	12,758	16,647		114,720	0.635	72,857	(87,351)	(3,464)	(90,814)
2029	(90,814)	10,565	14,199		68,667	0.654	44,918	(60,096)	(2,264)	(62,359)
2030	(62,359)	10,565	14,625		68,667	0.674	46,265	(30,719)	(1,396)	(32,115)
2031	(32,115)	10,565	15,064		68,667	0.694	47,653	475	(475)	0
Total		687,899	769,557	-	1,353,200		778,970		(38,269)	



**Township of Woolwich
2019 Development Charges Study
Cash Flow Calculation - Wastewater - Residential**

Year	D.C. Reserve Fund Opening Balance	Development Related Expenditures	Development Related Expenditures	Development Related Long-Term Debt	Population Growth	\$281.01	Anticipated Revenues	Annual Surplus/ (Deficit)	1% / 3%	D.C. Reserve Fund Closing Balance after Interest
		Nominal Project Cost	Project Cost Inflated at 3%	Existing Debt Payments		Per Capita per Year Inflated at (3%) Starting in 2020			D.C. Reserve Fund Interest Earnings/ (Cost)	
2019	11,043	240,509	240,509		736	281.01	206,908	(22,558)	(173)	(22,731)
2020	(22,731)	240,509	247,724		736	289.44	213,115	(57,340)	(1,201)	(58,541)
2021	(58,541)	970,971	1,030,104		736	298.12	219,508	(869,136)	(13,915)	(883,052)
2022	(883,052)	240,509	262,811		736	307.07	226,094	(919,769)	(27,042)	(946,811)
2023	(946,811)	181,124	203,856		736	316.28	232,877	(917,791)	(27,969)	(945,760)
2024	(945,760)	231,067	267,870		736	325.77	239,863	(973,767)	(28,793)	(1,002,560)
2025	(1,002,560)	85,217	101,754		736	335.54	247,059	(857,255)	(27,897)	(885,152)
2026	(885,152)	85,217	104,806		736	345.61	254,471	(735,488)	(24,310)	(759,798)
2027	(759,798)	85,217	107,950		736	355.98	262,105	(605,643)	(20,482)	(626,125)
2028	(626,125)	85,217	111,189		736	366.65	269,968	(467,346)	(16,402)	(483,748)
2029	(483,748)	76,354	102,614		705	377.65	266,246	(320,116)	(12,058)	(332,174)
2030	(332,174)	76,354	105,692		705	388.98	274,234	(163,632)	(7,437)	(171,070)
2031	(171,070)	76,354	108,863		705	400.65	282,461	2,528	(2,528)	(0)
Total		2,674,621	2,995,743	-	9,478		3,194,907		(210,207)	

**Township of Woolwich
2019 Development Charges Study
Cash Flow Calculation - Wastewater - Non-Residential**

Year	D.C. Reserve Fund Opening Balance	Development Related Expenditures	Development Related Expenditures	Development Related Long-Term Debt	Sq. Ft. of Gross Floor Area	\$0.347	Anticipated Revenues	Annual Surplus/ (Deficit)	1% / 3%	D.C. Reserve Fund Closing Balance after Interest
		Nominal Project Cost	Project Cost Inflated at 3%	Existing Debt Payments		per sq.ft. per Year Inflated at (3%) Starting in 2020			D.C. Reserve Fund Interest Earnings/ (Cost)	
2019	1,949	42,443	42,443		114,720	0.347	39,847	(647)	7	(640)
2020	(640)	42,443	43,716		114,720	0.358	41,043	(3,313)	(59)	(3,373)
2021	(3,373)	171,348	181,783		114,720	0.368	42,274	(142,881)	(2,194)	(145,075)
2022	(145,075)	42,443	46,378		114,720	0.380	43,542	(147,911)	(4,395)	(152,306)
2023	(152,306)	31,963	35,975		114,720	0.391	44,849	(143,432)	(4,436)	(147,868)
2024	(147,868)	40,777	47,271		114,720	0.403	46,194	(148,945)	(4,452)	(153,398)
2025	(153,398)	15,038	17,957		114,720	0.415	47,580	(123,774)	(4,158)	(127,932)
2026	(127,932)	15,038	18,495		114,720	0.427	49,007	(97,420)	(3,380)	(100,800)
2027	(100,800)	15,038	19,050		114,720	0.440	50,478	(69,373)	(2,553)	(71,925)
2028	(71,925)	15,038	19,622		114,720	0.453	51,992	(39,555)	(1,672)	(41,227)
2029	(41,227)	13,474	18,108		68,667	0.467	32,054	(27,282)	(1,028)	(28,309)
2030	(28,309)	13,474	18,652		68,667	0.481	33,015	(13,945)	(634)	(14,579)
2031	(14,579)	13,474	19,211		68,667	0.495	34,006	215	(215)	0
Total		471,992	528,660	-	1,353,200		555,881		(29,169)	



Table D-1
Operating and Capital Expenditure Impacts for Future Capital Expenditures

SERVICE	ANNUAL LIFECYCLE EXPENDITURES	ANNUAL OPERATING EXPENDITURES	TOTAL ANNUAL EXPENDITURES
Water Services	87,958	42,325	130,283
Wastewater Services	50,376	30,077	80,452
Roads and Related	661,019	579,303	1,240,322
Fire Protection Services	65,484	52,173	117,657
Parks and Recreation	70,056	35,299	105,355
Library Services	24,053	4,605	28,658
Administration	-	-	-
	958,945	743,782	1,702,727



Appendix F

Proposed D.C. By-law

THE CORPORATION OF THE TOWNSHIP OF WOOLWICH

BY-LAW NUMBER ____ - 2019

A BY-LAW FOR THE IMPOSITION OF DEVELOPMENT CHARGES

WHEREAS the Township of Woolwich will experience growth through development and re-development;

AND WHEREAS development and re-development requires the provision of physical and social services by the Township of Woolwich;

AND WHEREAS Council desires to ensure that the capital cost of meeting growth-related demands for or burden on municipal services does not place an excessive financial burden on the Township of Woolwich or its existing taxpayers while at the same time ensuring new taxpayers contribute no more than the net capital cost attributable to providing the current level of municipal services;

AND WHEREAS the *Development Charges Act, 1997* (the "Act") provides that the council of a municipality may by by-law impose development charges against land to pay for increased capital costs required because of increased needs for services;

AND WHEREAS a development charge background study has been completed in accordance with the Act;

AND WHEREAS the Council of The Corporation of the Township of Woolwich has given notice of and held a public meeting on the 17th day of June, 2019 in accordance with the Act and the regulations thereto;

NOW THEREFORE THE COUNCIL OF THE CORPORATION OF THE TOWNSHIP OF WOOLWICH ENACTS AS FOLLOWS:

1. INTERPRETATION

1.1 In this By-law the following items shall have the corresponding meanings:

“Act” means the *Development Charges Act*, as amended, or any successor thereof;

“accessory use” means where used to describe a use, building, or structure that the use, building or structure is naturally and normally incidental, subordinate in purpose of floor area or both, and exclusively devoted to a principal use, building or structure;

“apartment unit” means any residential unit within a building containing three or more dwelling units where access to each residential unit is obtained through a common entrance or entrances from the street level and the residential units are connected by an interior corridor;

“bedroom” means a habitable room larger than seven square metres, including a den, study or other similar area, but does not include a bathroom, living room, dining room or kitchen;

“benefiting area” means an area defined by map, plan or legal description in a front-ending agreement as an area that will receive a benefit from the construction of a service;

“board of education” has the same meaning as set out in the *Education Act*, R.S.O. 1990, Chap. E.2, as amended, or any successor thereof;

“bona fide farm uses” means the proposed development will qualify as a farm business operating with a valid Farm Business Registration Number issued by the Ontario Ministry of Agriculture, Food and Rural Affairs and be assessed in the Farmland Realty Tax Class by the Ontario Property Assessment Corporation;

“Building Code Act” means the *Building Code Act*, S.O. 1992, as amended, or any successor thereof;

“capital cost” means costs incurred or proposed to be incurred by the municipality or a local board thereof directly or by others on behalf of and as authorized by the municipality or local board,

- (a) to acquire land or an interest in land, including a leasehold interest,
- (b) to improve land,
- (c) to acquire, lease, construct or improve buildings and structures,
- (d) to acquire, construct or improve facilities including,
 - (i) furniture and equipment other than computer equipment, and
 - (ii) material acquired for circulation, reference or information purposes by a library board as defined in the *Public Libraries Act*, R.S.O. 1990, Chap. P.44, as amended, or any successor thereof; and
 - (iii) rolling stock with an estimated useful life of seven years or more, and

- (e) to undertake studies in connection with any matter under the Act and any of the matters in clauses (a) to (d) above, including the development charge background study

required for the provision of services designated in this By-law within or outside the municipality, including interest on borrowing for those expenditures under clauses (a) to (e) above that are growth-related;

“commercial” means any use of land, structures or buildings for the purposes of buying or selling commodities and services, but does not include industrial or agricultural uses, but does include hotels, motels, motor inns and boarding, lodging and rooming houses;

“Council” means the Council of the municipality;

“development” means the construction, erection or placing of one or more buildings or structures on land or the making of an addition or alteration to a building or structure that the effect of increasing the size of usability thereof, and includes redevelopment;

“development charge” means a charge imposed with respect to this By-law;

“dwelling unit” means any part of a building or structure used, designed or intended to be used as a domestic establishment in which one or more persons may sleep and are provided with culinary and sanitary facilities for their exclusive use;

“existing” means the number, use and size that existed as of the date the date of the first building;

“farm building” means all or part of a building; that does not contain any area used for residential occupancy, that is associated with and located on land devoted to

the practice of farming and that is used essentially for the housing of equipment or livestock or the production, storage or processing of agricultural and horticultural produce or feeds. Examples include encompassing barns, silos and other ancillary development to an agricultural use.;

“gross floor area” means:

- (a) in the case of a residential building or structure, the total area of all floors above grade of a dwelling unit measured between the outside surfaces of exterior walls or between the outside surfaces of exterior walls and the centre line of party walls dividing the dwelling unit from any other dwelling unit or other portion of a building; and
- (b) in the case of a non-residential building or structure, or in the case of a mixed-use building or structure in respect of the non-residential portion thereof, the total area of all building floors above or below grade measured between the outside surfaces of the exterior walls, or between the outside surfaces of exterior walls and the centre line of party walls dividing a non-residential use and a residential use, except for:
 - (i) a room or enclosed area within the building or structure above or below that is used exclusively for the accommodation of heating, cooling, ventilating, electrical, mechanical or telecommunications equipment that service the building;
 - (ii) loading facilities above or below grade; and
 - (iii) a part of the building or structure below grade that is used for the parking of motor vehicles or for storage or other accessory use;

“industrial” means lands, buildings or structures used or designed or intended for use for manufacturing, processing, fabricating or assembly of raw goods, warehousing or bulk storage of goods, and includes office uses and the sale of commodities to the general public where such uses are accessory to an industrial use, but does not include the sale of commodities to the general public through a warehouse club;

“institutional” means land, buildings, structures or any part thereof used by any organization, group or association for promotion of charitable, educational or benevolent objectives and not for profit or gain;

“Local Board” means a school board, public utility, commission, transportation commission, public library board, board of park management, local board of health, board of commissioners of police, planning board, or any other board, commission, committee, body or local authority established or exercising any power or authority under any general or special Act with respect to any of the affairs or purposes, including school purposes, of the Township of Woolwich or any part or parts thereof;

“local services” means those services, facilities or things which are under the jurisdiction of the municipality and are related to a plan of subdivision or within the area to which the plan relates in respect of the lands under Sections 41, 51 or 53 of the *Planning Act*, R.S.O. 1990, Chap. P.13, as amended, or any successor thereof;

“multiple dwellings” means all dwellings other than single-detached, semi-detached and apartment unit dwellings;

“municipality” means the Corporation of the Township of Woolwich;

“non-residential use” means a building or structure of any kind whatsoever used, designed or intended to be used for other than a residential use;

“Official Plan” means the Official Plan adopted for the Township, as amended and approved;

“owner” means the owner of land or a person who has made application for an approval for the development of land upon which a development charge is imposed’

“place of worship” means that part of a building or structure that is exempt from taxation as a place of worship under the *Assessment Act*, R.S.O. 1990, Chap. A.31, as amended, or any successor thereof;

“rate” means the interest rate established weekly by the Bank of Canada based on Treasury Bills having a term of 91 days;

“regulation” means any regulation made pursuant to the Act;

“residential dwelling” means a building, occupied or capable of being occupied as a home, residence or sleeping place by one or more persons, containing one or more dwelling units but not including motels, hotels, tents, truck campers, tourist trailers, mobile camper trailers or boarding, lodging or rooming houses;

“residential use” means the use of a building or structure or portion thereof for one or more dwelling units. This also includes a dwelling unit on land that is used for an agricultural use;

“row dwelling” means a building containing three or more attached dwelling units in a single row, each of which dwelling units has an independent entrance from the outside and is vertically separated from any abutting dwelling unit;

“school, private” means a private school defined under the *Education Act* or any successor thereto, being “an institution at which instruction is provided at any time between the hours of 9 a.m. and 4 p.m. on any school day for five or more pupils who are of, or over compulsory school age in any of the subjects of the elementary or secondary school courses of study”.

“semi-detached dwelling” means a dwelling unit in a residential building consisting of two dwelling units having one vertical wall or one horizontal wall, but not other parts, attached or another dwelling unit where the residential unit are not connected by an interior corridor;

“service” means a service designed in Schedule “A” to this By-law, and “services” shall have a corresponding meaning;

“servicing agreement” means an agreement between a landowner and the municipality relative to the provision of municipal services to specified land within the municipality;

“single detached dwelling unit” means a residential building consisting of one dwelling unit and not attached to another structure;

“Township” means the area within the geographic limits of the Township of Woolwich; and

“Zoning By-Law” means the Zoning By-Law of the Township of Woolwich or any successor thereof passed pursuant to Section 34 of the Planning Act, S.O. 1998.

2. DESIGNATION OF SERVICES

2.1 The categories of services for which development charges are imposed under this By-law are as follows:

- (a) Roads and Related;
- (b) Fire Protection Services;
- (c) Parks and Recreation Services;
- (d) Administration;
- (e) Wastewater Services;
- (f) Sanitary Sewer Services (Breslau Sanitary Servicing Area Only); and
- (g) Water Services.

2.2 The components of the services designated in section 2.1 are described in Schedule A.

3. APPLICATION OF BY-LAW RULES

3.1 Development charges shall be payable in the amounts set out in this By-law where:

- (a) the lands are located in the area described in section 3.2; and
- (b) the development of the lands requires any of the approvals set out in subsection 3.4(a).

Area to Which By-law Applies

- 3.2 Subject to section 3.3, this By-law applies to all lands in the Township of Woolwich whether or not the land or use thereof is exempt from taxation under s. 13 or the Assessment Act.
- 3.3. Notwithstanding clause 3.2 above, this by-law shall not apply to lands that are owned by and used for the purposes of:
- (a) the municipality or a local board thereof;
 - (b) a board of education; or
 - (c) the Corporation of the Region of Waterloo or a local board thereof;
 - (d) a private school, being an institution offering elementary and secondary curriculum in accordance with the *Education Act*, and defined elsewhere in this by-law.

Approvals for Development

- 3.4 (a) Development charges shall be imposed on all lands, buildings or structures that are developed for residential or non-residential uses if the development requires:
- (i) the passing of a zoning by-law or of an amendment to a zoning by-law under section 34 of the *Planning Act*;
 - (ii) the approval of a minor variance under section 45 of the *Planning Act*;

- (iii) a conveyance of land to which a by-law passed under subsection 50(7) of the *Planning Act* applies;
 - (iv) the approval of a plan of subdivision under section 51 of the *Planning Act*;
 - (v) a consent under section 53 of the *Planning Act*;
 - (vi) the approval of a description under section 50 of the *Condominium Act*, R.S.O. 1990, Chap. C.26, as amended, or any successor thereof; or
 - (vii) the issuing of a permit under the *Building Code Act* in relation to a building or structure.
- (b) No more than one development charge for each service designated in subsection 2.1 shall be imposed upon any lands, buildings or structures to which this By-law applies even though two or more of the actions described in subsection 3.4(a) are required before the lands, buildings or structures can be developed.
- (c) Despite subsection 3.4(b), if two or more of the actions described in subsection 3.4(a) occur at different times, additional development charges shall be imposed if the subsequent action has the effect of increasing the need for services.

Exemptions

- 3.5 Notwithstanding the provisions of this By-law, development charges shall not be imposed with respect to:
- (a) an enlargement to an existing dwelling unit;
 - (b) one or two additional dwelling units in an existing single detached dwelling; or
 - (c) one additional dwelling unit in any other existing residential building;

3.6 Notwithstanding section 3.5(b), development charges shall be imposed if the total gross floor area of the additional one or two units exceeds the gross floor area of the existing dwelling unit.

3.7 Notwithstanding section 3.5, development charges shall be imposed if the additional unit has a gross floor area greater than

- i. in the case of a semi-detached or row dwelling, the gross floor area of the existing dwelling unit; and
- ii. in the case of any other residential building, the gross floor area of the smallest dwelling unit contained in the residential building.

3.8 Exemption for Industrial Development:

3.8.1 Notwithstanding any other provision of this by-law, no development charge is payable with respect to an enlargement of the gross floor area of an existing industrial building where the gross floor area is enlarged by 50 percent or less, of the original gross floor area.

3.8.2 If the gross floor area of an existing industrial building is enlarged by greater than 50 percent, the amount of the development charge payable in respect of the enlargement is the amount of the development charge that would otherwise be payable multiplied by the fraction determined as follows:

- 1) determine the amount by which the enlargement exceeds 50 percent of the gross floor area before the enlargement;
- 2) divide the amount determined under subsection 1) by the amount of the enlargement

3.9 For the purpose of section 3.8 herein, “existing industrial building” is used as defined in the Regulation made pursuant to the Act.

3.10 Other Exemptions:

Notwithstanding the provision of this by-law, development charges shall not be imposed with respect to:

- a) a Temporary Use in accordance with section 39 of the *Planning Act*,
- b) If a development includes the enlargement of the gross floor area of an existing commercial or institutional building, and if the gross floor area is enlarged by 50% or less, the amount of the development charge in respect of the enlargement is zero. If the gross floor area is enlarged by more than 50%, the development charge is payable only on that portion of the enlargement exceeding the 50% of floor area enlargement calculation.
- c) Lands, buildings or structures used or to be used for a place of worship or for the purposes of a churchyard or cemetery exempt from taxation under the *Assessment Act*.
- d) The development of non-residential farm buildings constructed for bona-fide farm uses except for any building constructed to accommodate an On-Farm Business which shall be considered to be an industrial building.

Amount of Charges

Residential

3.11 The development charges set out in Schedule B shall be imposed on residential uses of lands, buildings or structures, including a dwelling unit accessory to a non-residential use and, in the case of a mixed use building or structure, on the residential uses in the mixed use building or structure, according to the type of residential unit, and calculated with respect to each of the services according to the type of residential use.

Non-Residential

3.12 The development charges described in Schedule B to this by-law shall be imposed on non-residential uses of lands, buildings or structures, and, in the case of a mixed use building or structure, on the non-residential uses in the mixed use building or structure, and calculated with respect to each of the services according to the total floor area of the non-residential use.

Area-Specific (Breslau Sanitary Servicing)

3.13 There shall be an additional Development Charge component imposed within the Breslau Sanitary Servicing area for sanitary servicing which shall be equal to the sanitary service component of the current City of Kitchener Development Charge. Such component shall be adjusted annually, without amendment to this by-law, commencing on the first anniversary date of this by-law to equal the sanitary service component of the Current City of Kitchener Development Charge. This Breslau Sanitary Servicing area is set out in Schedule “C” of this By-law.

Reduction of Development Charges for Redevelopment

3.14 Despite any other provisions of this By-law, where, as a result of the redevelopment of land, a building or structure existing on the same land within 60 months prior to the date of payment of development charges in regard to such redevelopment was, or is to be demolished, in whole or in part, or converted from one principal use to another principal use on the same land, in order to facilitate the redevelopment, the development charges otherwise payable with respect to such redevelopment shall be reduced by the following amounts:

- (a) in the case of a residential building or structure, or in the case of a mixed-use building or structure, the residential uses in the mixed-use building or structure, an amount calculated by multiplying the applicable development charge under subsection 3.11 by the number, according to type, of dwelling units that have been or will be demolished or converted to another principal use; and
- (b) in the case of a non-residential building or structure or, in the case of mixed-use building or structure, the non-residential uses in the mixed-use building or structure, an amount calculated by multiplying the applicable development charges under subsection 3.12, by the gross floor area that has been or will be demolished or converted to another principal use;

provided that such amounts shall not exceed, in total, the amount of the development charges otherwise payable with respect to the redevelopment.

3.14.1 The conversion from an exempt principal use to a non-exempt principal use, on the same land, would result in the payment of the applicable charge based on the new non-exempt use (with no D.C. credit applicable).

Time of Payment of Development Charges

- 3.15 Development charges imposed under this By-law are calculated, payable, and collected upon issuance of a building permit for the development.
- 3.16 Despite section 3.15, Council from time to time, and at any time, may enter into agreements providing for all or any part of a development charge to be paid before or after it would otherwise be payable, in accordance with section 27 of the Act.

4. PAYMENT BY SERVICES

- 4.1 Despite the payment required under subsections 3.11 and 3.12, Council may, by agreement, give a credit towards a development charge in exchange for work that relates to a service to which a development charge relates under this By-law.

5. INDEXING

- 5.1 Development charges imposed pursuant to this By-law shall be adjusted annually, without amendment to this By-law, on February 1st of each year, in accordance with the prescribed index in the Act.

6. SCHEDULES

- 6.1 The following schedules shall form part of this By-law:

Schedule A	-	Components of Services Designated in section 2.1
Schedule B	-	Residential and Non-Residential Development Charges
Schedule C	-	Breslau Sanitary Servicing Area

7. CONFLICTS

7.1 Where the Township and an owner or former owner have entered into an agreement with respect to land within the area to which this By-law applies, and a conflict exists between the provisions of this By-law and such agreement, the provisions of the agreement shall prevail to the extent that there is a conflict.

7.2 Notwithstanding section 7.1, where a development which is the subject of an agreement to which section 7.1 applies, is subsequently the subject of one or more of the actions described in subsection 3.4(a), an additional development charge in respect of the development permitted by the action shall be calculated, payable and collected in accordance with the provisions of this By-law if the development has the effect of increasing the need for services, unless such agreement provides otherwise.

8. SEVERABILITY

8.1 If, for any reason, any provision of this By-law is held to be invalid, it is hereby declared to be the intention of Council that all the remainder of this By-law shall continue in full force and effect until repealed, re-enacted, amended or modified.

9. DATE BY-LAW IN FORCE

9.1 This By-law shall come into effect at 12:01 AM on _____, 2019.

10. DATE BY-LAW EXPIRES

10.1 This By-law will expire at 12:01 AM on _____, 2024 unless it is repealed by Council at an earlier date.

11. EXISTING BY-LAW REPEALED

11.1 By-law Number 33-2014 (as amended) is hereby repealed as of the date and time of this By-law coming into effect.

PASSED THIS 25 day of June, 2019.

Mayor

Township Clerk

SCHEDULE “A” TO BY-LAW ___ - 2019

COMPONENTS OF SERVICES DESIGNATED IN SUBSECTION 2.1

100% Eligible Services

- Roads and Related
 - Roads
 - Public Works Facilities
 - Public Works Rolling Stock
- Fire Protection Services
 - Fire Vehicles
 - Small Equipment and Gear

90% Eligible Services

- Parks and Recreation Services
 - Parkland Development
 - Indoor Recreation Facilities
 - Parks and Recreation Vehicles and Equipment
- Library Services
 - Library Facilities
- Administration Services
 - Growth Related Studies

Municipally Serviced Area

- Wastewater Services
 - Sewers
- Water Services
 - Distribution Systems
- Sanitary Sewer Services (Breslau Sanitary Servicing Area Only)

SCHEDULE "B" TO BY-LAW ___ - 2019

SCHEDULE OF DEVELOPMENT CHARGES

Service	RESIDENTIAL				NON-RESIDENTIAL
	Single and Semi-Detached Dwelling	Apartments - 2 Bedrooms +	Apartments - Bachelor and 1 Bedroom	Other Multiples	(per sq.ft. of Gross Floor Area)
Municipal Wide Services:					
Roads and Related	7,230	4,530	2,802	5,116	2.69
Fire Protection Services	710	445	275	502	0.26
Parks and Recreation	952	596	369	673	0.10
Library Services	139	87	54	98	0.01
Administration	343	215	133	242	0.13
Total Municipal Wide Services	9,373	5,873	3,633	6,631	3.19
Urban Services					
Wastewater Services	953	597	369	674	0.35
Water Services	1,337	838	518	946	0.48
Total Urban Services	2,290	1,435	887	1,620	0.83
Breslau Sanitary Servicing Area					
Sanitary Services	1,610	1,141	887	887	1.08
GRAND TOTAL RURAL AREA	9,373	5,873	3,633	6,631	3.19
GRAND TOTAL URBAN AREA	11,663	7,308	4,520	8,251	4.02
GRAND TOTAL BRESLAU	13,273	8,449	5,407	9,138	5.10

SCHEDULE "C"
BRESLAU SANITARY SERVICING AREA

