



 **Watson  
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ECONOMISTS LTD.

# **Addendum #1 to the March 25, 2019 Development Charges Background Study**

City of Sarnia

April 30, 2019

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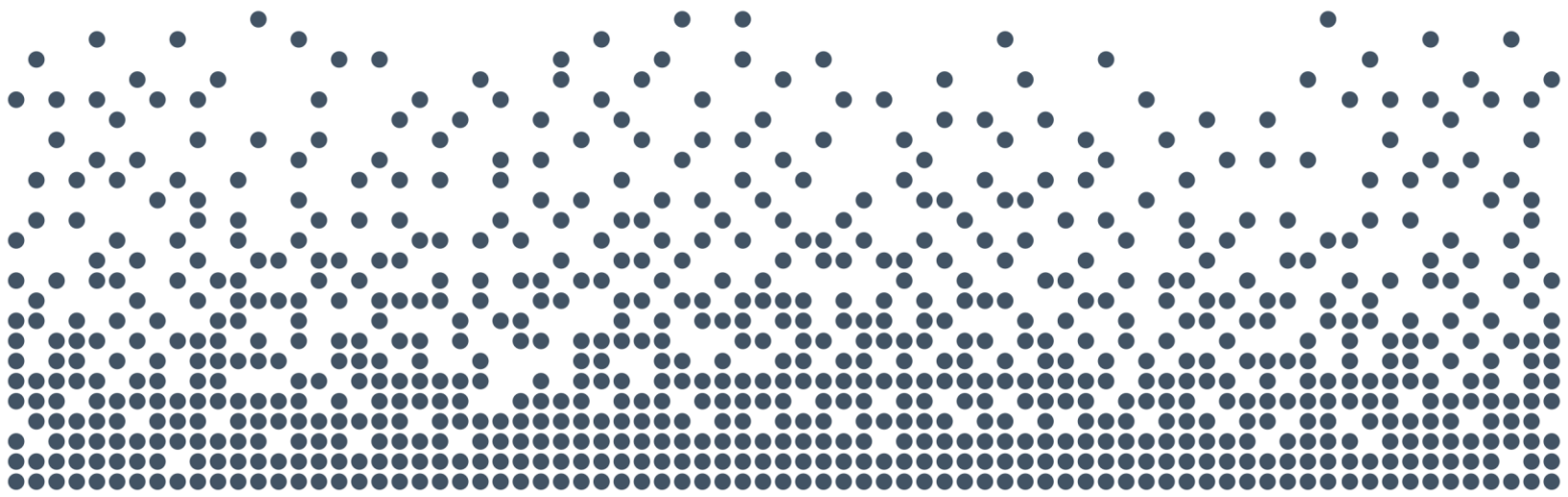
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## List of Acronyms and Abbreviations

<b>Acronym</b>	<b>Full Description of Acronym</b>
D.C.	Development Charges
D.C.A.	Development Charges Act



Addendum Report to  
the March 25, 2019  
Development  
Charges Background  
Study



# 1. Background

Commensurate with the provisions of the Development Charges Act, 1997, as amended (D.C.A.), the City has undertaken a Development Charges (D.C.) Background Study and released the study in accordance with the D.C.A. The following provides a summary of the key dates in the development charge by-law process:

February 11, 2019 – Council Workshop

February 15, 2019 – Stakeholder meeting

March 25, 2019 – Release of the D.C. Background Study and draft by-law

April 15, 2019 – Public Meeting of Council

April 30, 2019 – Addendum to March 25<sup>th</sup> report released

May 6, 2019 – Council Meeting

May 27, 2019 – Passage of Development Charges By-law

As per discussions at the Public Meeting of Council on April 15, 2019, staff were directed to review the capital projects identified in the D.C. study and to recommend an overall reduction in the capital program. The purpose of this addendum report is to provide for changes to the March 25, 2019 D.C. background study as per staff's review of the capital projects. These refinements are in relation to:

- Refinements to the Parkland Development listing of capital projects;
- Removal of projects for Services Related to a Highway – Roads, Development Area 2 Water, and Development Area 2 Stormwater;
- Refinement of project costs for Services Related to a Highway – Roads, and Wastewater (for both Development Area 2 and All Other Urban Areas);
- Refinement of timing and post-period benefit shares for County Roads, and All Other Urban Area Water services; and
- Refinements to benefit-to-existing shares for All Other Urban Areas and Development Area 2 Wastewater services.

These refinements will form part of the D.C. background study provided prior to by-law adoption.



## 2. Discussion

This section of the addendum report provides an explanation for the above-noted refinements. It is noted that the refinements have reduced the calculated development charges.

### 2.1 Refinements to Parkland Development Capital Project List

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The capital project listing for Parkland Development is provided on Page 5-5 of the March 25, 2019 D.C. background study. Refinements have been made to the project listing to combine projects 11 and 12 into one project and revise the name of the project to be “provision for parkland development”. No capital costs were changed for parkland development services.

### 2.2 Removal of Capital Projects

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As per Council’s direction, staff reviewed the capital projects identified in the D.C. study and have recommended the following projects be removed from the calculations:

- Services Related to a Highway – Roads: Project 21 (Glen Abbey Drive (Eagle to Veterans)) and project 29 (Afton Drive Realignment). These two projects were identified at \$1.95 million and \$1.30 million, respectively.
- Water Services for Development Area 2: Project 5 (Heritage Park Drive (Doris McCarthy to VMP)) and Project 7 (Glen Abbey (Eagle Way to VMP)). These two projects were identified at \$150,000 and \$200,000, respectively.
- Stormwater Services for Development Area 2: Project 8 (Heritage Park Drive HPD to Blackwell). This project was identified at a total gross cost of \$1,000,000.

### 2.3 Refinements to Capital Project Costs

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Continuing with Council’s direction to review the capital projects, staff identified the following projects for refinement of capital costs:



- Services Related to a Highway – Roads: Project 22 (Heritage Park Drive (VP to Blackwell)). The gross capital cost for this project has been reduced to \$750,000 from \$1,440,000.
- Wastewater Services for All Other Urban Areas: The gross capital costs for the following projects have been reduced:
  - Project 2 (Plank Road Pump Station (26) - Increase Capacity) – from \$1,000,000 to \$750,000.
  - Project 11 (Gladwish Gravity Sewer) – from \$1,000,000 to \$650,000.
  - Project 15 (London/Blackwell PS Upgrades (53, 29, 54, 45, 27)) – from \$1,000,000 to \$500,000.
- Wastewater Services for Development Area 2: The gross capital costs for the following projects have been reduced:
  - Project 3 (Area 2 Trunk Sewers) – from \$9,760,000 to \$5,760,000.
  - Projects 14 (Secondary Treatment Upgrades (Development Area 2 share)) and 15 (UV Treatment Upgrade (Development Area 2 share)) – both projects were reduced from \$4,100,000 each to \$410,000 each. This was due to a typo in the project cost.

## 2.4 Refinements to Timing and Post-period Benefit Shares

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The following provides for the listing of projects which have refined timing or post-period benefit amounts applied:

- County Roads: The timing for project 2 has been revised to 2033 from 2031. As a result, this project is now considered to benefit development outside of the forecast period only (i.e. a 100% post-period reduction has been applied).
- Water Services for Development Area 2: Project 1 (Veterans Parkway (London Line to Wellington)) has been assumed to benefit solely, development in the post-period. This results in a post-period benefit share of 100%.

## 2.5 Refinements to Benefit-to-Existing Shares

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The following provides the listing of projects that had revisions made to the growth/non-growth shares:



- Wastewater Services for All Other Urban Areas: The following provides the listing of projects and the respective changes to the non-growth (benefit to existing) shares
  - Project 3 (Bedford Pumping Station (Other urban areas share)) – from 67% to 75%.
  - Project 4 (Capacity Improvements (sewer separation, I/I reduction)) – from 50% to 75%.
  - Project 12 (PCP Biosolids Upgrade (Other urban areas share)) – from 0% to 50%.
- Wastewater Services for All Other Urban Areas: The following provides the listing of projects and the respective changes to the non-growth (benefit to existing) shares
  - Project 9 (Bedford Pumping Station (Development Area 2 share)) – from 67% to 75%.
  - Project 16 (PCP Biosolids Upgrade (Development Area 2 share)) – from 0% to 50%.

## 2.6 Overall Changes in the D.C. Calculation

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Based on the changes noted above, the calculated development charge (single/semi-detached unit) has decreased from \$37,518 to \$29,072 in the Development Area 2 and from \$18,097 to \$13,600 in all other urban areas. In regard to the non-residential charges, the calculated development charge (per sq.ft.) has decreased from \$17.93 to \$14.08 in the Development Area 2 and from \$8.06 to \$5.93 in all other urban areas.

The above changes have been incorporated into the calculations. The summary below outlines the current charges vs. the charges as calculated in the March 25, 2019 D.C. report and the charges calculated in this addendum report.





**Residential (Single Detached) Comparison**

Service	Current	Calculated for March 25, 2019 Report	Calculated for Addendum Report
<b>City-wide Services:</b>			
Services Related to a Highway (Roads and Related)	2,275	5,591	5,257
Public Works	-	233	233
County Roads	171	1,411	404
Parking Services	-	70	70
Fire Protection Services	119	590	590
Police Services	-	448	448
Outdoor Recreation Services	-	1,631	1,631
Indoor Recreation Services	-	-	-
Library Services	-	-	-
Administration	91	147	147
<b>Total City-wide Services</b>	<b>2,656</b>	<b>10,121</b>	<b>8,780</b>
<b>All Other Urban Areas:</b>			
Stormwater Drainage and Control Services	1,007	578	578
Wastewater Services	3,658	7,398	4,242
Water Services	652	-	-
<b>All Other Urban Areas</b>	<b>5,317</b>	<b>7,976</b>	<b>4,820</b>
<b>Grand Total - All Other Urban Areas</b>	<b>7,973</b>	<b>18,097</b>	<b>13,600</b>
<b>Development Area 2 Services</b>			
Stormwater Drainage and Control Services	1,007	10,019	9,441
Wastewater Services	3,658	16,783	10,752
Water Services	652	595	99
<b>Total Development Area 2 Services</b>	<b>5,317</b>	<b>27,397</b>	<b>20,292</b>
<b>Grand Total - Development Area 2</b>	<b>7,973</b>	<b>37,518</b>	<b>29,072</b>

Note: Development in Development Area 1 and development under current agreements in Development Area 2 would pay the "All Other Urban Areas" charge as well as the additional charges noted below. New development in Development Area 2 (not under these agreements) would pay the Development Area 2 charge. Development under current agreements in Development Area 2 have been removed from the Development Area 2 map in the DC Study (see next slide)

Current Additional Charges:

Development Area 1: \$6,240  
 Development Area 2: \$13,061

**Non-Residential (per sq.ft.) Comparison**

Service	Current	Calculated for March 25, 2019 Report	Calculated for Addendum Report
<b>City-wide Services:</b>			
Services Related to a Highway (Roads and Related)	1.40	2.52	2.38
Public Works	-	0.10	0.10
County Roads	0.10	0.63	0.18
Parking Services	-	0.03	0.03
Fire Protection Services	0.07	0.27	0.27
Police Services	-	0.20	0.20
Outdoor Recreation Services	-	0.33	0.33
Indoor Recreation Services	-	-	-
Library Services	-	-	-
Administration	0.05	0.07	0.07
<b>Total City-wide Services</b>	<b>1.62</b>	<b>4.15</b>	<b>3.56</b>
<b>All Other Urban Areas:</b>			
Stormwater Drainage and Control Services	0.82	0.31	0.31
Wastewater Services	2.26	3.60	2.06
Water Services	0.40	-	-
<b>All Other Urban Areas</b>	<b>3.48</b>	<b>3.91</b>	<b>2.37</b>
<b>Grand Total - All Other Urban Areas</b>	<b>5.10</b>	<b>8.06</b>	<b>5.93</b>
<b>Development Area 2 Services</b>			
Stormwater Drainage and Control Services	0.82	6.02	5.68
Wastewater Services	2.26	7.49	4.80
Water Services	0.40	0.27	0.04
<b>Total Development Area 2 Services</b>	<b>3.48</b>	<b>13.78</b>	<b>10.52</b>
<b>Grand Total - Development Area 2</b>	<b>5.10</b>	<b>17.93</b>	<b>14.08</b>

Note: Development in Development Area 1 and development under current agreements in Development Area 2 would pay the "All Other Urban Areas" charge as well as the additional charges noted below. New development in Development Area 2 (not under these agreements) would pay the Development Area 2 charge.

Current additional charges are provided on a per acre basis for Development areas 1 and 2



## 2.7 Changes to the Background Report

Based upon the above, the following revisions are made to the pages within the background study (new pages are appended to this report):

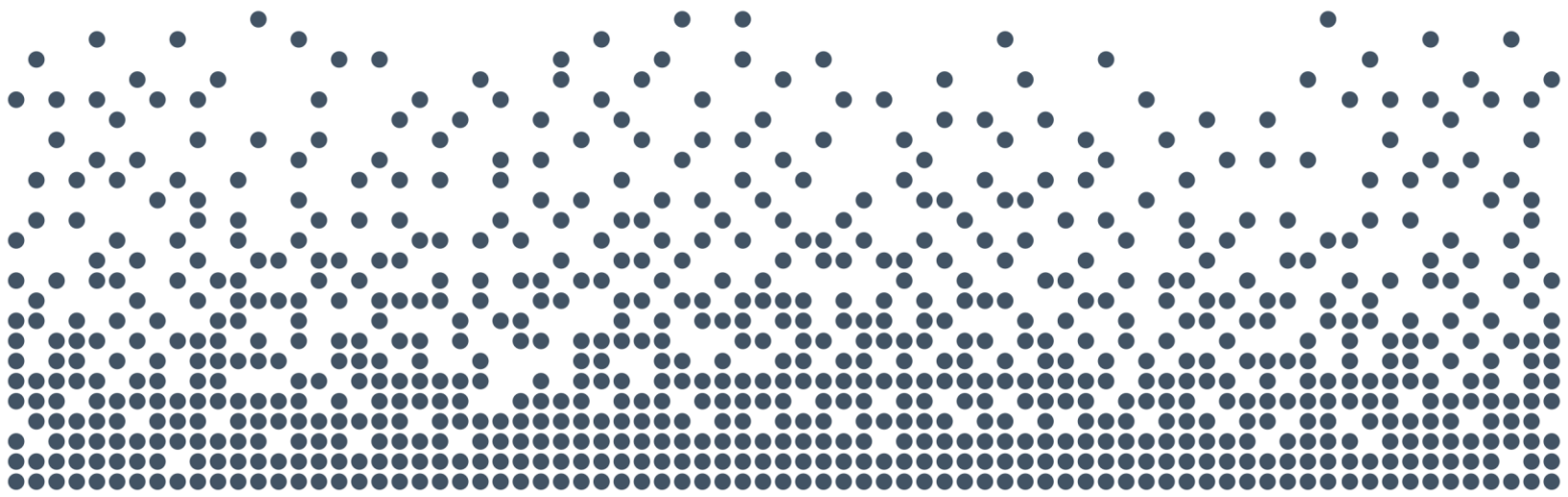
Page Reference	Description of Revisions
ES (iii)	Updates to the calculated charges and the table summarizing the costs to be incurred over the life of the by-law
ES (iv)	Updates to the summary of costs to be incurred over the life of the by-law
ES (vi)	Revised Table ES-1, Schedule of Development Charges
1-3	Revised Figure 1-1 to include the release of this addendum report and another Council meeting.
5-5	Updated capital project listing for Parkland Development.
5-10	Revised figures to align with updated capital costs and revisions to the capital project listing for services related to a highway.
5-12	Updated capital project listing for services related to a highway – roads.
5-15	Revised figures to align with revisions to the capital project listing for County roads.
5-16	Updated capital project listing for County roads.
5-27	Revised figures to align with revisions to the capital project listing for wastewater services for all other urban areas.
5-28	Updated capital project listing for wastewater services for all other urban areas.
5-31	Revised figures to align with revisions to the capital project listing for stormwater services.
5-32	Updated capital project listing for stormwater services.
5-33	Revised figures to align with revisions to the capital project listing for wastewater services for development area 2.
5-34	Updated capital project listing for wastewater services for development area 2.
5-35	Revised figures to align with revisions to the capital project listing for water services for development area 2.
5-36	Updated capital project listing for water services for development area 2.



6-2	Updated Table 6-1 to reflect the changes to the capital project listings.
6-3	Updated Table 6-2 to reflect the changes to the capital project listings.
6-4	Updated Table 6-3 to reflect the changes to the capital project listings.
6-6	Updated Table 6-5 to reflect the changes to the capital project listings.
6-7	Updated Table 6-6 to reflect the changes to the capital project listings.
6-8	Updated Table 6-7 to reflect the changes to the capital project listings.
C-4	Updated operating and capital expenditure impacts for future capital expenditures table to reflect revised capital project listings.
F-4	Revised wording to reflect the changes to the capital expenditures.
F-5	Updated asset management summary table.
G-20	Updated Schedule B to by-law to reflect re-calculated development charges/.

### 3. Process for the Adoption of the Development Charges By-law

Sections 1 & 2 provide for a summary of the revisions to the City's D.C. Background Study. If Council is satisfied with the above changes to the Background Study and based on the public submissions made at the public meeting, this addendum report #1 will be considered for approval by Council.



# Amended Pages



will expire on June 9, 2019. The City is undertaking a D.C. public process and anticipates passing a new by-law in advance of the expiry date. The mandatory public meeting has been set for April 15, 2019 with adoption of the by-law on May 27, 2019.

6. The City's D.C.s currently in effect are \$7,973 for single detached dwelling units. Non-residential charges are \$5.10 per square foot. This report has undertaken a recalculation of the charge based on future identified needs (presented in Schedule ES-1 for residential and non-residential). Charges have been provided on a City-wide basis for all services except water, wastewater, and stormwater services, which have been provided on an urban-area basis (excluding Development Area 2). The single detached unit charge for these urban areas is \$13,600. The non-residential charge is \$5.93 per square foot of building area. These rates are submitted to Council for its consideration.
7. The City has identified area-specific D.C.s for additional costs related to Development Area 2. In the past, the City has requested additional payments from developers through development agreements to pay for water, wastewater, and stormwater infrastructure. Due to the recent "No Additional Levies" provision in the D.C.A. (as a result of Bill 73), the City has chosen to include growth-related capital costs related to Development Area 2 in the D.C. study. As a result, for Development Area 2, new development will pay the full City-wide charge as well as an additional \$20,292 per single-detached unit and \$10.52 per sq.ft. for non-residential development.
8. The D.C.A. requires a summary be provided of the gross capital costs and the net costs to be recovered over the life of the by-law. This calculation is provided by service and is presented in Table 6-6. A summary of these costs is provided below:

Total gross expenditures planned over the next five years	\$ 75,273,444
Less:	
Benefit to existing development	\$ 35,200,427
Post planning period benefit	\$ 13,301,943
Ineligible re: Level of Service	\$ -
Mandatory 10% deduction for certain services	\$ 339,735
Grants, subsidies and other contributions	\$ 1,296,905
<b>Net Costs to be recovered from development charges</b>	<b>\$ 25,134,434</b>



Hence, \$50.14 million (or an annual amount of \$10.03 million) will need to be contributed from taxes and rates, or other sources. Of this amount, \$13.30 million will be included in subsequent D.C. study updates to reflect the portion of capital that benefits growth in the post period D.C. forecasts.

Based on the above table, the City plans to spend \$75.27 million over the next five years, of which \$25.13 million (33%) is recoverable from D.C.s. Of this net amount, \$22.97 million is recoverable from residential development and \$2.16 million from non-residential development. It is noted also that any exemptions or reductions in the charges would reduce this recovery further.

9. Considerations by Council – The background study represents the service needs arising from residential and non-residential growth over the forecast periods.

The following services are calculated based on an urban 13-year forecast:

- Stormwater Drainage and Control Services;
- Wastewater Services; and
- Water Services.

The following services are calculated based on a 13-year forecast:

- Services Related to a Highway;
- County Roads;
- Public Works Facilities, Fleet & Equipment;
- Police Services; and
- Fire Protection Services.

All other services are calculated based on a 10-year forecast. These include:

- Parking;
- Parkland Development;
- Recreation Facilities;
- Library Services; and
- Administration.

Council will consider the findings and recommendations provided in the report and, in conjunction with public input, approve such policies and rates it deems



appropriate. These directions will refine the draft D.C. by-law which is appended in Appendix G. These decisions may include:

- adopting the charges and policies recommended herein;
- considering additional exemptions to the by-law; and
- considering reductions in the charge by class of development (obtained by removing certain services on which the charge is based and/or by a general reduction in the charge).



Table ES-1  
Schedule of Development Charges

Service	RESIDENTIAL					NON-RESIDENTIAL
	Single and Semi-Detached Dwelling	Other Multiples	Apartments - 2 Bedrooms +	Apartments - Bachelor and 1 Bedroom	Special Care/Special Dwelling Units	(per sq.ft. of Gross Floor Area)
<b>City-wide Services:</b>						
Services Related to a Highway	5,894	4,300	4,047	2,670	2,396	2.66
Parking Services	70	51	48	32	28	0.03
Fire Protection Services	590	430	405	267	240	0.27
Police Services	448	327	308	203	182	0.20
Outdoor Recreation Services	1,631	1,190	1,120	739	663	0.33
Administration	147	107	101	67	60	0.07
<b>Total City-wide Services</b>	<b>8,780</b>	<b>6,405</b>	<b>6,029</b>	<b>3,978</b>	<b>3,569</b>	<b>3.56</b>
<b>Urban Services - All Other Urban Areas</b>						
Stormwater Drainage and Control Services	578	422	397	262	235	0.31
Wastewater Services	4,242	3,094	2,913	1,922	1,724	2.06
<b>Total Urban Services - All Other Urban Areas</b>	<b>4,820</b>	<b>3,516</b>	<b>3,310</b>	<b>2,184</b>	<b>1,959</b>	<b>2.37</b>
<b>Urban Services - Development Area 2</b>						
Stormwater Drainage and Control Services	9,441	6,887	6,482	4,277	3,838	5.68
Wastewater Services	10,752	7,843	7,383	4,871	4,371	4.80
Water Services	99	72	68	45	40	0.04
<b>Total Urban Services - Development Area 2</b>	<b>20,292</b>	<b>14,802</b>	<b>13,933</b>	<b>9,193</b>	<b>8,249</b>	<b>10.52</b>
<b>GRAND TOTAL RURAL AREA</b>	<b>8,780</b>	<b>6,405</b>	<b>6,029</b>	<b>3,978</b>	<b>3,569</b>	<b>3.56</b>
<b>GRAND TOTAL ALL OTHER URBAN AREAS</b>	<b>13,600</b>	<b>9,921</b>	<b>9,339</b>	<b>6,162</b>	<b>5,528</b>	<b>5.93</b>
<b>GRAND TOTAL DEVELOPMENT AREA 2</b>	<b>29,072</b>	<b>21,207</b>	<b>19,962</b>	<b>13,171</b>	<b>11,818</b>	<b>14.08</b>





Figure 1-1  
Schedule of Key D.C. Process Dates for the City of Sarnia

1. Data collection, staff review, D.C. calculations and policy work	September 2018 to February 2019
2. Council Workshop	February 11, 2019
3. Stakeholder meeting	February 15, 2019
4. Public meeting advertisement placed in newspaper(s)	No later than March 25, 2019
5. Background study and proposed by-law available to public	March 25, 2019
6. Public meeting of Council	April 15, 2019
7. Addendum Report available to public	April 30, 2019
8. Council Meeting	May 6, 2019
9. Council considers adoption of background study and passage of by-law	May 27, 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. City makes pamphlet available (where by-law not appealed)	By 60 days after in force date



### Infrastructure Costs Included in the Development Charges Calculation

City of Sarnia  
Service: Parkland Development

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	Cricket Club Picnic Shelter	2019	35,000	-		35,000	17,500	10,000	7,500	750	6,750	6,413	338
2	Sports Field Development & Improvements (bleachers/lighting/field development/dugouts)	2019-2024	800,000	-		800,000	400,000		400,000	40,000	360,000	342,000	18,000
3	Camp Saredaca Main Building Expansion	2020-2024	1,250,000	-		1,250,000	125,000		1,125,000	112,500	1,012,500	961,875	50,625
4	Trail Development - Blackwell/Modeland	2019-2024	100,000	-		100,000	-	25,000	75,000	7,500	67,500	64,125	3,375
5	Tecumseh Spraypad Washroom/Changeroom/Concession Project	2019	75,000	-		75,000	-	50,000	25,000	2,500	22,500	21,375	1,125
6	Waterfront Improvements/Shoreline Protection	2019-2028	900,000	-		900,000	-		900,000	90,000	810,000	769,500	40,500
7	Canatara Park - LifeGuard/Washroom/Changeroom Project	2019-2021	200,000	-		200,000	-	75,000	125,000	12,500	112,500	106,875	5,625
8	Norm Perry Park - Field House/Washrooms	2021-2025	2,500,000	-		2,500,000	625,000		1,875,000	187,500	1,687,500	1,603,125	84,375
9	Accessible Sun Shade Shelters - Centennial Park	2019-2025	125,000	-		125,000	-	75,000	50,000	5,000	45,000	42,750	2,250
10	Trail Development - Modeland/Heritage Park	2019-2024	150,000	-		150,000	-	75,000	75,000	7,500	67,500	64,125	3,375
11	Provision for Parkland Development	2019-2024	300,000	-		300,000	-	150,000	150,000	15,000	135,000	128,250	6,750
	Reserve Fund Balance						1,816,442		(1,816,442)		(1,816,442)	(1,725,620)	(90,822)
	<b>Total</b>		<b>6,435,000</b>	<b>-</b>	<b>-</b>	<b>6,435,000</b>	<b>2,983,942</b>	<b>460,000</b>	<b>2,991,058</b>	<b>480,750</b>	<b>2,510,308</b>	<b>2,384,793</b>	<b>125,515</b>



## 5.3 Service Levels and 13-Year Capital Costs for Sarnia's D.C. Calculation

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This section evaluates the development-related capital requirements for those services provided on a City-wide basis with 13-year capital costs.

### 5.3.1 Services Related to a Highway

Sarnia owns and maintains 176.72 km of roads, of which 65% are urban roads and 35% are rural roads. The majority of roads are two lane urban roads. Over the past 10-year period, the City has sustained the average level of service of 5.9 km of roads per 1,000 single-detached equivalent units. This provides an average level of investment of \$9,276 per single-detached equivalent unit, resulting in a D.C.-eligible recovery amount of \$16,020,481 over the 13-year forecast period.

With respect to future needs, the City has identified a number of projects which include new roads and expansions of existing roads throughout the City. The total gross capital cost of the road program is \$43.49 million. Of this amount, deductions for post-period benefit of \$21.24 million and benefit to existing development of \$10.65 million have been made. Additionally, it is anticipated that the City will receive \$900,000 in other contributions for the work on Rapids Parkway. This amount was deducted from the calculations. A further deduction in the amount of \$2,183,498 was made to reflect the balance in the reserve fund. The resulting net growth-related capital costs included in the D.C. calculations is \$8,517,652.

Sarnia also provides 268 km of sidewalks throughout the municipality. Over the historical 10-year period the average level of service provided by the City was 9.2km of sidewalks per 1,000 single-detached units. When the average level of investment of \$1,720 is applied to the forecast growth in single-detached equivalents, the resultant D.C. eligible amount is \$2,970,889 over the forecast period.

This City has identified the need for 8 sidewalk projects over the forecast period. The total gross capital cost for these projects is \$4.65 million. Of this amount, \$2,575,000 and \$905,000 have been deducted from the calculations for the amount that benefit growth in the post-period and the amount that benefits existing development,



### Infrastructure Costs Included in the Development Charges Calculation

City of Sarnia  
Service: Roads

Prj .No	Increased Service Needs Attributable to Anticipated Development  2019-2031	Timing (year)	Gross Capital Cost Estimate (2019\$)	Post Period Benefit	Other Deductions	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 90%	Non-Residential Share 10%
1	Miscellaneous Capacity Improvements (turn lanes, widening, utility relocation, etc.)	2019-2037	750,000	281,300		468,700	187,500		281,200	253,080	28,120
2	Barclay (Exmouth to Quinn)	2020	150,000	56,300		93,700	37,500		56,200	50,580	5,620
3	Rapids Pkwy (Sandpiper to Exmouth)	2021	1,600,000	262,500		1,337,500	175,000	900,000	262,500	236,250	26,250
4	Exmouth Street Widening (Murphy to Amsterdam)	2021	350,000	131,300		218,700	87,500		131,200	118,080	13,120
5	Veterans Parkway (HPD to Confed)	2022	1,500,000	562,500		937,500	375,000		562,500	506,250	56,250
6	Roundabout @ VP and HPD	2022	875,000	328,100		546,900	218,750		328,150	295,335	32,815
7	Confederation & Indian Widen Intersection	2025	300,000	112,500		187,500	75,000		112,500	101,250	11,250
8	Veterans Parkway (HPD to Wellington)	2026	1,500,000	562,500		937,500	375,000		562,500	506,250	56,250
9	Wellington (Research Park to VP)	2026	2,655,000	995,600		1,659,400	663,750		995,650	896,085	99,565
10	Roundabout @ VP and Wellington	2026	875,000	328,100		546,900	218,750		328,150	295,335	32,815
11	Confederation (Modeland to VMP)	2028	2,300,000	862,500		1,437,500	575,000		862,500	776,250	86,250
12	Heritage Park Drive (HPD to Blackwell)	2028	1,550,000	581,300		968,700	387,500		581,200	523,080	58,120
13	Wellington (VP to Blackwell)	2030	3,000,000	1,125,000		1,875,000	750,000		1,125,000	1,012,500	112,500
14	Confederation (VMP to Blackwell)	2034	1,200,000	900,000		300,000	300,000		-	-	-
15	Blackwell (Confederation to BWC Phase1)	2037	3,100,000	2,325,000		775,000	775,000		-	-	-
16	Rapids Parkway Ditch Enclosure	2025	300,000	112,500		187,500	75,000		112,500	101,250	11,250
17	Roundabout @ Quinn and LMR	2023	875,000	328,100		546,900	218,750		328,150	295,335	32,815
18	Gladwish Drive	2022	750,000	281,300		468,700	187,500		281,200	253,080	28,120
19	Collector Road - Wellington to London Line	2030	3,575,000	1,340,600		2,234,400	893,750		1,340,650	1,206,585	134,065
20	Veterans Parkway (Wellington to London Line)	2033	8,830,000	6,622,500		2,207,500	2,207,500		-	-	-
21	Heritage Park Drive (VP to Blackwell)	2028	750,000	281,300		468,700	187,500		281,200	253,080	28,120
22	Procor Drive (loop to Confederation)	2024	2,990,000	1,121,300		1,868,700	747,500		1,121,200	1,009,080	112,120
23	Bike Lane Infill for Modal Split	2019-2037	500,000	187,500		312,500	125,000		187,500	168,750	18,750
24	Blackwell/Confederation SB Turn Lane	2030	201,500	75,600		125,900	50,375		75,525	67,973	7,553
25	Modeland/Wellington Turn Lanes	2032	923,000	692,200		230,800	230,800		-	-	-
26	Upper Canada Drive/Confederation Turn Lanes	2023	200,000	75,000		125,000	50,000		75,000	67,500	7,500
27	Modeland/Confederation Turn Lanes	2023	890,500	333,900		556,600	222,625		333,975	300,578	33,398
28	Upper Canada Drive Urbanization (Confederation to David Bolduc)	2025	1,000,000	375,000		625,000	250,000		375,000	337,500	37,500
	Reserve Fund Balance						2,183,498		(2,183,498)	(1,965,148)	(218,350)
	<b>Total</b>		<b>43,490,000</b>	<b>21,241,300</b>	<b>-</b>	<b>22,248,700</b>	<b>12,831,048</b>	<b>900,000</b>	<b>8,517,652</b>	<b>7,665,887</b>	<b>851,765</b>



### **5.3.2 County Roads**

The City collects D.C.s on behalf of the County for County road work. The County is responsible for carrying out the work.

The County, in City of Sarnia, provides for 77.9 km of County roads within the municipality. These roads include both urban and rural roads. Over the historical 10-year period the level of service provided was 2.7 km of roads per 1,000 single-detached equivalent units. This results in an average level of investment of \$3,719 per single-detached equivalent and a D.C. eligible amount of \$6,422,920 over the 13-year forecast period.

With respect to the capital needs, the City has identified the need for urbanization and widening of roads, as well as providing for bike lanes. The total gross capital cost identified is \$9,122,800. A post-period deduction of \$3,936,400 and a benefit to existing development deduction of \$3,404,600 were applied to the D.C. calculations. Additionally, \$878,820 was deducted from the calculations to reflect the balance in the reserve fund. After all deductions, the amount included in the D.C. calculations is \$902,980.

As noted for services related to a highway, the residential/non-residential capital cost allocation is 90%/10% based on the incremental growth in population to employment for the 13-year forecast period.



### Infrastructure Costs Included in the Development Charges Calculation

City of Sarnia  
Service: County Roads

Prj .No	Increased Service Needs Attributable to Anticipated Development  2019-2031	Timing (year)	Gross Capital Cost Estimate (2019\$)	Post Period Benefit	Other Deductions	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 90%	Non-Residential Share 10%
1	London Road - Urbanize cross section from Lambton Mall to London Line	2026	2,250,000	-		2,250,000	843,200		1,406,800	1,266,120	140,680
2	Confederation - Urbanize Murphy to Modeland	2033	3,000,000	2,250,000		750,000	750,000		-	-	-
3	Indian Road Widening - Plank to Highway 40	2037	3,372,800	1,686,400		1,686,400	1,686,400		-	-	-
4	Bike Lane Infill for Modal Split	2019-2037	500,000	-		500,000	125,000		375,000	337,500	37,500
	Reserve Fund Balance						878,820		(878,820)	(790,938)	(87,882)
	<b>Total</b>		<b>9,122,800</b>	<b>3,936,400</b>	<b>-</b>	<b>5,186,400</b>	<b>4,283,420</b>	<b>-</b>	<b>902,980</b>	<b>812,682</b>	<b>90,298</b>



### **5.4.2 Wastewater Services**

Sarnia has identified the need for a number of wastewater projects throughout the City. These projects include gravity sewers, pumping stations, capacity improvements, and various upgrades. The total gross capital costs for these works is \$37,599,000. Of this amount, \$4,785,000 has been deducted for the share of the costs that benefit growth outside of the 13-year urban forecast period. Further, \$24,662,250 has been deducted from the calculations for the share of the costs that benefit existing development. An additional deduction in the amount of \$2,849,360 has been made to reflect the balance in the reserve fund. The net D.C. recoverable amount after the deductions mentioned above is \$5,302,390. This amount has been included in the D.C. calculations.

The growth-related costs have been allocated between residential and non-residential development based the incremental population and employment growth over the forecast period. This results in a 86% allocation to residential development and a 14% allocation to non-residential development.



### Infrastructure Costs Included in the Development Charges Calculation

City of Sarnia

Service: Wastewater Services - All Other Urban Areas

Prj.No	Increased Service Needs Attributable to Anticipated Development  2019-Other Urban Serviced Area 13-year	Timing (year)	Gross Capital Cost Estimate (2019\$)	Post Period Benefit	Other Deductions	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 86%	Non-Residential Share 14%
1	Plank Road Gravity Sewer	2022	550,000	183,000		367,000	55,000		312,000	268,320	43,680
2	Plank Road Pump Station (26) - Increase Capacity	2020	750,000	208,000		542,000	187,500		354,500	304,870	49,630
3	Bedford Pumping Station (Other urban areas share)	2020-2021	19,470,000	1,801,000		17,669,000	14,602,500		3,066,500	2,637,190	429,310
4	Capacity Improvements (sewer separation, I/I reduction)	2019-2037	10,000,000	925,000		9,075,000	7,500,000		1,575,000	1,354,500	220,500
5	Analysis/Stress Test to Confirm Plant Peak Flows (Other urban areas share)	2020	24,000	7,000		17,000	6,000		11,000	9,460	1,540
6	Review Hydraulic Constriction (Other urban areas share)	2021	27,000	7,000		20,000	6,750		13,250	11,395	1,855
7	Wet Weather Flow Management Strategy (Other urban areas share)	2021	56,000	10,000		46,000	28,000		18,000	15,480	2,520
8	UV System Upgrades (Other urban areas share)	2021	12,000	1,000		11,000	9,000		2,000	1,720	280
9	Secondary Treatment Upgrades (Other urban areas share)	2023	590,000	109,000		481,000	295,000		186,000	159,960	26,040
10	UV Treatment Upgrades (Other urban areas share)	2025	590,000	109,000		481,000	295,000		186,000	159,960	26,040
11	Gladwish Gravity Sewer	2023	650,000	216,000		434,000	65,000		369,000	317,340	51,660
12	PCP Biosolids Upgrade (Other urban areas share)	2020	2,655,000	491,000		2,164,000	1,327,500		836,500	719,390	117,110
13	Industrial Land Servicing Study	2019	125,000	46,000		79,000	-		79,000	67,940	11,060
14	Rapids Forcemain (Pumpstation to Willa)	2020	1,600,000	533,000		1,067,000	160,000		907,000	780,020	126,980
15	London/Blackwell PS Upgrades (53, 29, 54, 45, 27)	2024	500,000	139,000		361,000	125,000		236,000	202,960	33,040
	Reserve Fund Balance						2,849,360		(2,849,360)	(2,450,450)	(398,910)
	<b>Total</b>		<b>37,599,000</b>	<b>4,785,000</b>	<b>-</b>	<b>32,814,000</b>	<b>27,511,610</b>	<b>-</b>	<b>5,302,390</b>	<b>4,560,055</b>	<b>742,335</b>





## 5.5 Development Area 2 Capital Costs for Sarnia's Area-specific D.C. Calculation

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This section provides for the water, wastewater, and stormwater capital projects required to service growth in Development Area 2. Historically the City has collected growth-related capital costs related to specific development areas through development agreements. As of January 1, 2016, the D.C.A. was amended to include a provision with respect to “no additional levies”. As a result, the City has chosen to include these costs through an area-specific D.C. instead of collecting the charges as part of development agreements.

### 5.5.1 Stormwater Services

The City has identified 14 stormwater projects to service Development Area 2. The total gross capital cost of these projects is \$20,567,000. Of this amount, \$9,796,200 has been deducted to reflect the amount that benefits growth outside of the forecast period. An additional amount of \$2,244,200 has been deducted for the amount that benefits existing development. After these deductions the net D.C. recoverable amount included in the D.C. calculations is \$8,526,600.

The costs for stormwater services are shared 96%/4% between residential and non-residential based on the area of benefiting lands associated with the stormwater works in Development Area 2 over the 13-year forecast period.





### **5.5.2 Wastewater Services**

A number of wastewater projects have been identified for Development Area 2. These projects include works related to forcemains, pumping stations, and trunk sewers. The total gross capital cost for these works totals \$29,616,000. Deductions for post-period benefit and benefit to existing development have been made in the amounts of \$7,158,000 and \$12,848,000, respectively. The net growth-related cost included in the D.C. calculations, after the deductions noted above, is \$9,610,000.

The growth-related costs have been allocated between residential and non-residential development based the incremental population and employment growth over the forecast period in Development Area 2. This results in a 97% allocation to residential development and a 3% allocation to non-residential development.



### Infrastructure Costs Included in the Development Charges Calculation

City of Samia

Service: Wastewater Services - Development Area 2

Prj.No	Increased Service Needs Attributable to Anticipated Development  2019-Development Area 2 Serviced Area 13-year	Timing (year)	Gross Capital Cost Estimate (2019\$)	Post Period Benefit	Other Deductions	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 97%	Non-Residential Share 3%
1	Research Park PS Upgrades	2028	1,000,000	378,000		622,000	100,000		522,000	506,340	15,660
2	Area 2 Collection System Upgrades	2021	650,000	246,000		404,000	65,000		339,000	328,830	10,170
3	Area 2 Trunk Sewers	2021-2037	5,760,000	2,177,000		3,583,000	576,000		3,007,000	2,916,790	90,210
4	Area 2 Forcemain	2022-2035	2,680,000	1,013,000		1,667,000	268,000		1,399,000	1,357,030	41,970
5	Area 2 - Pumping Station B	2027	490,000	185,000		305,000	49,000		256,000	248,320	7,680
6	Area 2 - Pumping Station C	2023	1,790,000	677,000		1,113,000	179,000		934,000	905,980	28,020
7	Area 2 - Pumping Station A	2035	220,000	198,000		22,000	22,000		-	-	-
8	Upsize Huron Trunk from 1200 to 1500 (Wellington to Old Bedford)	2028	750,000	284,000		466,000	75,000		391,000	379,270	11,730
9	Bedford Pumping Station (Development Area 2 share)	2020-2021	13,530,000	1,421,000		12,109,000	10,147,500		1,961,500	1,902,655	58,845
10	Analysis/Stress Test to Confirm Plant Peak Flows (Development Area 2 share)	2020	16,000	5,000		11,000	4,000		7,000	6,790	210
11	Review Hydraulic Constriction (Development Area 2 share)	2021	18,000	6,000		12,000	4,500		7,500	7,275	225
12	Wet Weather Flow Management Strategy (Development Area 2 share)	2021	39,000	8,000		31,000	19,500		11,500	11,155	345
13	UV System Upgrades (Development Area 2 share)	2021	8,000	1,000		7,000	6,000		1,000	970	30
14	Secondary Treatment Upgrades (Development Area 2 share)	2023	410,000	86,000		324,000	205,000		119,000	115,430	3,570
15	UV Treatment Upgrade (Development Area 2 share)	2025	410,000	86,000		324,000	205,000		119,000	115,430	3,570
16	PCP Biosolids Upgrade (Development Area 2 share)	2020	1,845,000	387,000		1,458,000	922,500		535,500	519,435	16,065
	<b>Total</b>		<b>29,616,000</b>	<b>7,158,000</b>	<b>-</b>	<b>22,458,000</b>	<b>12,848,000</b>	<b>-</b>	<b>9,610,000</b>	<b>9,321,700</b>	<b>288,300</b>



### **5.5.3 Water Services**

The City has identified 7 water projects to service Development Area 2. The total gross capital cost of these projects is \$1.35 million. Of this amount, \$772,000 has been deducted to reflect the amount that benefits growth outside of the forecast period. An additional amount of \$134,000 has been deducted for the amount that benefits existing development. A further reduction of \$355,581 has been provided to reflect the balance in the water reserve fund (note this balance reflects the remaining balance after applying reserve funds for the Urban-wide water capital projects). After these deductions the net D.C. recoverable amount included in the D.C. calculations is \$88,419.

The growth-related costs have been allocated between residential and non-residential development based the incremental population and employment growth over the forecast period in Development Area 2. This results in a 97% allocation to residential development and a 3% allocation to non-residential development.



### Infrastructure Costs Included in the Development Charges Calculation

City of Samia

Service: Water Services - Area 2

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:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share	Non-Residential Share
	2019-Other Urban Serviced Area 13-year									97%	3%
1	Veterans Parkway (London Line to Wellington)	2033	500,000	450,000		50,000	50,000		-	-	-
2	Veterans Parkway (HPD to Confed)	2022	200,000	76,000		124,000	19,000		105,000	101,850	3,150
3	Veterans Parkway (HPD to Wellington)	2026	200,000	76,000		124,000	20,000		104,000	100,880	3,120
4	Wellington (Research Park to VP)	2020	300,000	113,000		187,000	30,000		157,000	152,290	4,710
5	Procor Drive (Procor Drive to Confederation)	2024	150,000	57,000		93,000	15,000		78,000	75,660	2,340
	Reserve Fund Balance						355,581		(355,581)	(344,914)	(10,667)
	<b>Total</b>		<b>1,350,000</b>	<b>772,000</b>	<b>-</b>	<b>578,000</b>	<b>489,581</b>	<b>-</b>	<b>88,419</b>	<b>85,766</b>	<b>2,653</b>



Table 6-1  
City of Sarnia  
Development Charges Calculation  
All Other Urban Area Services  
2019-2031

SERVICE	2019\$ D.C.-Eligible Cost		2019\$ D.C.-Eligible Cost	
	Residential	Non-Residential	S.D.U.	per sq.ft.
	\$	\$	\$	\$
1. <u>Stormwater Drainage and Control Services</u>				
1.1 Channels, drainage and ponds	621,848	109,738	578	0.31
	621,848	109,738	578	0.31
2. <u>Wastewater Services</u>				
2.1 Treatment plants & Sewers	4,560,055	742,335	4,242	2.06
	4,560,055	742,335	4,242	2.06
3. <u>Water Services</u>				
3.1 Treatment, storage and distribution systems	-	-	-	-
	-	-	-	-
<b>TOTAL</b>	<b>\$5,181,904</b>	<b>\$852,073</b>	<b>\$4,820</b>	<b>\$2.37</b>
D.C.-Eligible Capital Cost	\$5,181,904	\$852,073		
Urban 13-year S.D.E.s/G.F.A. Growth (sq.ft.)	1,075	359,400		
<b>Cost Per S.D.E./Non-Residential GFA (sq.ft.)</b>	<b>\$4,820</b>	<b>\$2.37</b>		
<b>By Residential Unit Type</b>				
Single and Semi-Detached Dwelling	100%	\$4,820		
Apartments - 2 Bedrooms +	69%	\$3,310		
Apartments - Bachelor and 1 Bedroom	45%	\$2,184		
Other Multiples	73%	\$3,516		
Special Care/Special Dwelling Units	41%	\$1,960		



Table 6-2  
City of Sarnia  
Development Charges Calculation  
Development Area 2 Services  
2019-2031

SERVICE	2019\$ D.C.-Eligible Cost		2019\$ D.C.-Eligible Cost	
	Residential	Non-Residential	S.D.U.	per sq.ft.
	\$	\$	\$	\$
4. <u>Stormwater Drainage and Control Services</u>				
4.1 Channels, drainage and ponds	8,185,536	341,064	9,441	5.68
	8,185,536	341,064	9,441	5.68
5. <u>Wastewater Services</u>				
5.1 Treatment plants & Sewers	9,321,700	288,300	10,752	4.80
	9,321,700	288,300	10,752	4.80
6. <u>Water Services</u>				
6.1 Treatment, storage and distribution systems	85,766	2,653	99	0.04
	85,766	2,653	99	0.04
<b>TOTAL</b>	<b>\$17,593,002</b>	<b>\$632,017</b>	<b>\$20,292</b>	<b>\$10.52</b>
D.C.-Eligible Capital Cost	\$17,593,002	\$632,017		
Area 2 Urban 13-year S.D.E.s/G.F.A. Growth (sq.ft.)	867	60,100		
<b>Cost Per S.D.E./Non-Residential GFA (sq.ft.)</b>	<b>\$20,292</b>	<b>\$10.52</b>		
<b>By Residential Unit Type</b>				
Single and Semi-Detached Dwelling	100%	\$20,292		
Apartments - 2 Bedrooms +	69%	\$13,933		
Apartments - Bachelor and 1 Bedroom	45%	\$9,194		
Other Multiples	73%	\$14,803		
Special Care/Special Dwelling Units	41%	\$8,249		





Table 6-3  
City of Sarnia  
Development Charges Calculation  
City-wide Services  
2019-2031

SERVICE	2019\$ D.C.-Eligible Cost		2019\$ D.C.-Eligible Cost	
	Residential	Non-Residential	S.D.U.	per sq.ft.
	\$	\$	\$	\$
<b>7. Services Related to a Highway</b>				
7.1 Roads	7,665,887	851,765	3,811	1.73
7.2 Traffic Signals and Streetlights	1,629,000	181,000	810	0.36
7.3 Sidewalks	1,278,000	142,000	636	0.29
7.4 Public Works	467,911	51,990	233	0.10
7.5 County Roads	812,682	90,298	404	0.18
	11,853,480	1,317,053	5,894	2.66
<b>8. Fire Protection Services</b>				
8.1 Fire facilities	620,100	68,900	308	0.14
8.2 Fire vehicles	450,000	50,000	224	0.10
8.3 Small equipment and gear	116,640	12,960	58	0.03
	1,186,740	131,860	590	0.27
<b>9. Police Services</b>				
9.1 Police facilities, vehicles and equipment	900,000	100,000	448	0.20
	900,000	100,000	448	0.20
<b>TOTAL</b>	<b>\$13,940,220</b>	<b>\$1,548,913</b>	<b>\$6,932</b>	<b>\$3.13</b>
D.C.-Eligible Capital Cost	\$13,940,220	\$1,548,913		
13-Year Gross S.D.E.s/G.F.A. Growth (sq.ft.)	2,011	496,500		
<b>Cost Per S.D.E./Non-Residential GFA (sq.ft.)</b>	<b>\$6,932</b>	<b>\$3.12</b>		
<b>By Residential Unit Type</b>				
	<b>Ratio</b>			
Single and Semi-Detached Dwelling	100%	\$6,932		
Apartments - 2 Bedrooms +	69%	\$4,760		
Apartments - Bachelor and 1 Bedroom	45%	\$3,141		
Other Multiples	73%	\$5,057		
Special Care/Special Dwelling Units	41%	\$2,818		



Table 6-5  
City of Sarnia  
Development Charges Calculation  
Total All Services

	2019\$ D.C.-Eligible Cost		2019\$ D.C.-Eligible Cost	
	Residential	Non-Residential	S.D.U.	per sq.ft.
	\$	\$	\$	\$
All Other Urban Areas - 13-year	5,181,904	852,073	4,820	2.37
Development Area 2 Services - 13-year	17,593,002	632,017	20,292	10.52
City-wide Services 13-year	13,940,220	1,548,913	6,932	3.13
City-wide Services 10-year	2,980,998	181,730	1,848	0.43
<b>Total City-wide</b>	<b>16,921,218</b>	<b>1,730,643</b>	<b>8,780</b>	<b>3.56</b>
<b>Total All Other Urban Areas (i.e. excluding Development Area 2)</b>	<b>22,103,122</b>	<b>2,582,715</b>	<b>13,600</b>	<b>5.93</b>
<b>Total Development Area 2</b>	<b>39,696,124</b>	<b>3,214,732</b>	<b>33,892</b>	<b>14.08</b>



Table 6-6  
City of Sarnia  
Gross Expenditure and Sources of Revenue Summary for Costs to be Incurred over the Life of the By-law

Service	Total Gross Cost	Sources of Financing						
		Tax Base or Other Non-D.C. Source				Post D.C. Period Benefit	D.C. Reserve Fund	
		Other Deductions	Benefit to Existing	Other Funding	Legislated Reduction		Residential	Non-Residential
<b>All Other Urban Areas Services</b>								
1. Stormwater Drainage and Control Services								
1.1 Channels, drainage and ponds	826,316	0	293,158	0	0	129,368	343,221	60,568
2. Wastewater Services								
2.1 Treatment plants & Sewers	29,140,579	0	18,715,934	0	0	3,855,421	5,649,532	919,691
3. Water Services								
3.1 Treatment, storage and distribution systems	1,000,000	0	260,000	0	0	139,000	516,860	84,140
<b>Area 2 Urban Services</b>								
4. Stormwater Drainage and Control Services								
4.1 Channels, drainage and ponds	5,378,000	0	537,800	0	0	2,033,000	2,694,912	112,288
5. Wastewater Services								
5.1 Treatment plants & Sewers	19,705,328	0	11,692,933	0	0	3,365,891	4,507,109	139,395
6. Water Services								
6.1 Treatment, storage and distribution systems	500,000	0	49,000	0	0	189,000	254,140	7,860
<b>City-wide Services</b>								
7. Services Related to a Highway								
7.1 Roads	7,519,447	0	1,654,862	900,000	0	2,482,368	2,233,995	248,222
7.2 Traffic Signals and Streetlights	1,200,000	0	290,000	0	0	0	819,000	91,000
7.3 Sidewalks	2,347,368	0	411,579	0	0	1,107,895	745,105	82,789
7.4 Public Works	640,000	0	0	0	0	0	576,000	64,000
7.5 County Roads	131,579	0	32,895	0	0	0	88,816	9,868
8. Fire Protection Services								
8.1 Fire facilities	265,000	0	0	0	0	0	238,500	26,500
8.2 Fire vehicles	838,462	0	400,000	0	0	0	394,615	43,846
8.3 Small equipment and gear	49,846	0	0	0	0	0	44,862	4,985
9. Police Services								
9.1 Police facilities, vehicles and equipment	1,000,000	0	0	0	0	0	900,000	100,000
10. Parking Services								
10.1 Municipal parking spaces	0	0	0	0	0	0	0	0
11. Outdoor Recreation Services								
11.1 Parkland development, amenities & trails	4,307,619	0	809,167	396,905	310,155	0	2,651,823	139,570
11.2 Parks vehicles and equipment	144,000	0	0	0	14,400	0	123,120	6,480
12. Administration								
12.1 Studies	279,900	0	53,100	0	15,180	0	188,342	23,278
<b>Total Expenditures &amp; Revenues</b>	<b>\$75,273,444</b>	<b>\$0</b>	<b>\$35,200,427</b>	<b>\$1,296,905</b>	<b>\$339,735</b>	<b>\$13,301,943</b>	<b>\$22,969,953</b>	<b>\$2,164,481</b>



Table 6-7  
City of Sarnia  
Residential and Non-residential D.C. Comparison  
Current vs. Calculated D.C.

**Residential (Single Detached) Comparison**

Service	Current	Calculated for March 25, 2019 Report	Calculated for Addendum Report
<b>City-wide Services:</b>			
Services Related to a Highway (Roads and Related)	2,275	5,591	5,257
Public Works	-	233	233
County Roads	171	1,411	404
Parking Services	-	70	70
Fire Protection Services	119	590	590
Police Services	-	448	448
Outdoor Recreation Services	-	1,631	1,631
Indoor Recreation Services	-	-	-
Library Services	-	-	-
Administration	91	147	147
<b>Total City-wide Services</b>	<b>2,656</b>	<b>10,121</b>	<b>8,780</b>
<b>All Other Urban Areas:</b>			
Stormwater Drainage and Control Services	1,007	578	578
Wastewater Services	3,658	7,398	4,242
Water Services	652	-	-
All Other Urban Areas	5,317	7,976	4,820
<b>Grand Total - All Other Urban Areas</b>	<b>7,973</b>	<b>18,097</b>	<b>13,600</b>
<b>Development Area 2 Services</b>			
Stormwater Drainage and Control Services	1,007	10,019	9,441
Wastewater Services	3,658	16,783	10,752
Water Services	652	595	99
<b>Total Development Area 2 Services</b>	<b>5,317</b>	<b>27,397</b>	<b>20,292</b>
<b>Grand Total - Development Area 2</b>	<b>7,973</b>	<b>37,518</b>	<b>29,072</b>

Note: Development in Development Area 1 and development under current agreements in Development Area 2 would pay the "All Other Urban Areas" charge as well as the additional charges noted below. New development in Development Area 2 (not under these agreements) would pay the Development Area 2 charge. Development under current agreements in Development Area 2 have been removed from the Development Area 2 map in the DC Study (see next slide)

Current Additional Charges:

Development Area 1: \$6,240

Development Area 2: \$13,061

**Non-Residential (per sq.ft.) Comparison**

Service	Current	Calculated for March 25, 2019 Report	Calculated for Addendum Report
<b>City-wide Services:</b>			
Services Related to a Highway (Roads and Related)	1.40	2.52	2.38
Public Works	-	0.10	0.10
County Roads	0.10	0.63	0.18
Parking Services	-	0.03	0.03
Fire Protection Services	0.07	0.27	0.27
Police Services	-	0.20	0.20
Outdoor Recreation Services	-	0.33	0.33
Indoor Recreation Services	-	-	-
Library Services	-	-	-
Administration	0.05	0.07	0.07
<b>Total City-wide Services</b>	<b>1.62</b>	<b>4.15</b>	<b>3.56</b>
<b>All Other Urban Areas:</b>			
Stormwater Drainage and Control Services	0.82	0.31	0.31
Wastewater Services	2.26	3.60	2.06
Water Services	0.40	-	-
All Other Urban Areas	3.48	3.91	2.37
<b>Grand Total - All Other Urban Areas</b>	<b>5.10</b>	<b>8.06</b>	<b>5.93</b>
<b>Development Area 2 Services</b>			
Stormwater Drainage and Control Services	0.82	6.02	5.68
Wastewater Services	2.26	7.49	4.80
Water Services	0.40	0.27	0.04
<b>Total Development Area 2 Services</b>	<b>3.48</b>	<b>13.78</b>	<b>10.52</b>
<b>Grand Total - Development Area 2</b>	<b>5.10</b>	<b>17.93</b>	<b>14.08</b>

Note: Development in Development Area 1 and development under current agreements in Development Area 2 would pay the "All Other Urban Areas" charge as well as the additional charges noted below. New development in Development Area 2 (not under these agreements) would pay the Development Area 2 charge.

Current additional charges are provided on a per acre basis for Development areas 1 and 2



Table C-1  
City of Sarnia  
Operating and Capital Expenditure Impacts for Future Capital Expenditures

SERVICE	GROSS COST LESS BENEFIT TO EXISTING	ANNUAL LIFECYCLE EXPENDITURES	ANNUAL OPERATING EXPENDITURES	TOTAL ANNUAL EXPENDITURES
<b>All Other Urban Areas Services</b>				
1. Stormwater Drainage and Control Services				
1.1 Channels, drainage and ponds	1,165,586	84,564	4,398	88,962
2. Wastewater Services				
2.1 Treatment plants & Sewers	10,087,390	710,423	175,759	886,182
3. Water Services				
3.1 Treatment, storage and distribution systems	139,000	40,637	55,713	96,350
<b>Area 2 Urban Services</b>				
4. Stormwater Drainage and Control Services				
4.1 Channels, drainage and ponds	18,322,800	1,004,847	55,807	1,060,654
5. Wastewater Services				
5.1 Treatment plants & Sewers	16,768,000	920,810	235,817	1,156,627
6. Water Services				
6.1 Treatment, storage and distribution systems	860,419	66,777	278,361	345,138
<b>City-wide Services</b>				
7. Services Related to a Highway				
7.1 Roads	30,658,952	1,773,675	99,997	1,873,672
7.2 Traffic Signals and Streetlights	2,350,000	132,267	7,665	139,932
7.3 Sidewalks	3,745,000	194,111	12,215	206,326
7.4 Public Works	519,901	87,001	1,696	88,697
7.5 County Roads	4,839,380	308,816	15,784	324,600
8. Fire Protection Services				
8.1 Fire facilities	689,000	62,764	130,031	192,795
8.2 Fire vehicles	500,000	45,045	94,362	139,407
8.3 Small equipment and gear	129,600	19,123	24,459	43,582
9. Police Services				
9.1 Police facilities, vehicles and equipment	1,000,000	122,736	308,608	431,344
10. Parking Services				
10.1 Municipal parking spaces	140,000	7,256	132	7,388
11. Outdoor Recreation Services				
11.1 Parkland development, amenities & trails	3,451,058	287,296	56,800	344,096
11.2 Parks vehicles and equipment	288,000	42,510	4,740	47,250
12. Administration				
12.1 Studies	289,150	-	49,109	49,109
<b>Total</b>	<b>95,943,236</b>	<b>5,910,658</b>	<b>1,611,453</b>	<b>7,522,111</b>



**Asset management strategy:** the asset management strategy is the set of planned actions that will seek to generate the desired levels of service in a sustainable way, while managing risk, at the lowest lifecycle cost.

**Financing strategy:** having a financial plan is critical for putting an A.M.P. into action. By having a strong financial plan, municipalities can also demonstrate that they have made a concerted effort to integrate the A.M.P. with financial planning and municipal budgeting and are making full use of all available infrastructure financing tools.

Commensurate with the above, the City prepared an Asset Management Plan in 2018 for its existing core assets, however, did not take into account all future growth-related assets identified in this study. As a result, the asset management requirement for the D.C. must be undertaken in the absence of this information.

In recognition to the schematic above, the following table (presented in 2019 \$) has been developed to provide the annualized expenditures and revenues associated 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. As well, as all capital costs included in the D.C. eligible capital costs are not included in the City's Asset Management Plan, the present infrastructure gap and associated funding plan have not been considered at this time. Hence 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 municipal 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 \$11.84 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 \$2.41 million. This amount, totalled with the existing operating revenues of \$145.70 million, provide annual revenues of \$148.10 million by the end of the period.

6. In consideration of the above, the capital plan is deemed to be financially sustainable.

City of Sarnia  
Asset Management – Future Expenditures and Associated Revenues  
2019\$

Asset Management Summary	2031 (Total)
<b>Expenditures (Annualized)</b>	
Annual Debt Payment on Non-Growth Related Capital <sup>1</sup>	4,319,738
Annual Debt Payment on Post Period Capital <sup>2</sup>	3,762,007
<b>Lifecycle:</b>	
Annual Lifecycle - All Services	\$5,910,658
<b>Incremental Operating Costs (for D.C. Services)</b>	
	\$1,611,453
<b>Total Expenditures</b>	<b>\$11,841,849</b>
<b>Revenue (Annualized)</b>	
Total Existing Revenue <sup>3</sup>	\$145,695,736
Incremental Tax and Non-Tax Revenue (User Fees, Fines, Licences, etc.)	\$2,406,779
<b>Total Revenues</b>	<b>\$148,102,515</b>

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

<sup>2</sup> Interim Debt Financing for Post Period

<sup>3</sup> As per Sch. 10 of FIR