

# DEVELOPMENT CHARGES BACKGROUND STUDY

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Version for Public Consultation

**HEMSON** Consulting Ltd.

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## EXECUTIVE SUMMARY

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### **A. PURPOSE OF 2019 DEVELOPMENT CHARGES (DC) BACKGROUND STUDY**

#### **1. Legislative Context**

The Municipality of Strathroy-Caradoc 2019 Development Charges (DC) Background Study is presented as part of the process to lead to the approval of a new DC by-law in compliance with the *Development Charges Act, 1997* (DCA). The study is prepared in accordance with the *DCA* and associated Regulation, including the amendments that came into force on January 1, 2016 and June 6, 2019.

#### **2. Key Steps in Determining Future Development-Related Projects**

In accordance with the *DCA* and associated regulation, several key steps are required to calculate development charges. This includes preparing a development forecast, establishing historical service levels, determining the increase in need for services arising from development and appropriate shares of costs, attribution to development types (i.e. residential and non-residential) and the final adjustment to the calculated rate of a cash flow analysis. Cashflow analysis was not completed for Area-Specific capital programs.

#### **3. DC Eligible and Ineligible Costs**

Development charges are intended to pay for the initial round of capital costs needed to service new development over an identified planning period. This is based on the overarching principle that “growth pays for growth”. However, the *DCA* and associated regulation includes several statutory adjustments and deductions that prevent these costs from fully being recovered by growth. Such adjustments include, but are not limited to: ineligible costs, including operating and maintenance costs; ineligible services; deductions for costs that exceed historical service level caps; and statutory exemptions for specific uses (i.e. industrial expansions).

#### **4. The Development-Related Capital Program is Subject to Change**

It is recommended that Council adopt the development-related capital program developed for the purposes of the 2019 DC Background Study. However, it is recognized that the DC Background Study is a point-in-time analysis and there may be changes to project timing, scope and costs through the Municipality’s normal annual budget process.

The following summarizes the findings of the Municipality of Strathroy-Caradoc’s 2019 Development Charges Background Study.

## B. DEVELOPMENT FORECAST

### 1. Residential and Non-Residential

The table below provides a summary of the anticipated residential and non-residential growth over the 2020-2029 and 2020-2036 planning periods. The development forecast is further discussed in Appendix A.

RESIDENTIAL FORECAST	Existing	2020-2029		2020-2036	
	As At Mid-Year 2019	Forecast Change	As at Mid Year-2029	Forecast Change	As at Mid Year-2036
<b>Total Occupied Dwellings</b>	8,978	2,163	11,141	3,494	12,472
<b>Population</b>					
Census	22,150	2,898	25,048	4,475	26,624
Population In New Dwellings		5,451		8,760	

NON-RESIDENTIAL FORECAST	Existing	2020-2029		2020-2036	
	As At Mid-Year 2019	Forecast Change	As at Mid Year-2029	Forecast Change	As at Mid Year-2036
<b>Employment</b>	8,776	1,148	9,925	1,773	10,549
<b>Non-Residential Building Space (sq.m.)</b>		70,804		111,051	

Growth in the Mount Brydges Service Area is forecast to 2029 and is summarized in the table below:

Area-Specific Forecasts for the Mount Brydges Service Area (2020-2029)				
Service Area	Occupied Households	Population in New Units	Employment	Gross Floor Area (m <sup>2</sup> )
<b>Mount Brydges (Water and Wastewater)</b>	774	2,052	95	3,800

Growth in the Strathroy Service Area is forecast to 2036 and is summarized in the table below:

Area-Specific Forecasts for the Strathroy Service Area (2020-2036)				
Service Area	Occupied Households	Population in New Units	Employment	Gross Floor Area (m <sup>2</sup> )
<b>Strathroy (Water, Wastewater and Roads and Related)</b>	2,200	5,311	1,626	101,865

It should be noted that limited growth is anticipated to occur in the Municipality's Rural or unserved areas and is considered to be the residual over the period.

### C. CALCULATED DEVELOPMENT CHARGES

The table below provides the development charges levied municipality-wide (for rural and unserved areas) as well as the Strathroy and Mount Brydges Service Areas for residential and non-residential development based on the aforementioned forecasts. Any development occurring in unserved areas would only be subject to the municipal-wide rates.

**MUNICIPAL-WIDE DEVELOPMENT CHARGE**

Rate	Single & Semi	Multiples	Apartments	Commercial/ Institutional Non-Residential Charge (\$/sq.m.)	Industrial Non-Residential Charge (\$/sq.m.)
Discounted Services (By-law 14-15)*	\$3,561	\$2,868	\$1,857	\$0.48	\$0.48
Calculated 2019 DC Charge	\$3,448	\$2,842	\$1,792	\$19.56	\$19.56
Total Development Charge	<b>\$7,009</b>	<b>\$5,710</b>	<b>\$3,649</b>	<b>\$20.04</b>	<b>\$20.04</b>

**STRATHROY SERVICE AREA DEVELOPMENT CHARGE**

Rate	Single & Semi	Multiples	Apartments	Commercial/ Institutional Non-Residential Charge (\$/sq.m.)	Industrial Non-Residential Charge (\$/sq.m.)
Discounted Services (By-law 14-15)*	\$3,561	\$2,868	\$1,857	\$0.37	\$0.21
Calculated 2019 DC Charge	\$19,276	\$15,890	\$10,017	\$107.92	\$107.92
Total Development Charge	<b>\$22,837</b>	<b>\$18,758</b>	<b>\$11,874</b>	<b>\$108.29</b>	<b>\$108.13</b>

**MOUNT BRYDGES SERVICE AREA DEVELOPMENT CHARGE**

Rate	Single & Semi	Multiples	Apartments	Commercial/ Institutional Non-Residential Charge (\$/sq.m.)	Industrial Non-Residential Charge (\$/sq.m.)
Discounted Services (By-law 14-15)*	\$3,561	\$2,868	\$1,857	\$0.48	\$0.27
2018 ASDC (By-law 76-18)*	\$9,116	\$6,535	\$4,838	\$90.17	\$50.87
Calculated 2019 DC Charge	\$13,828	\$11,398	\$7,186	\$103.28	\$103.28
Total Development Charge	<b>\$26,505</b>	<b>\$20,801</b>	<b>\$13,881</b>	<b>\$193.93</b>	<b>\$154.42</b>

\* Rates not being calculated under this Study and are shown for illustration purposes only.

The rates calculated as part of this Background Study are the maximum permissible rates under the current legislation. Council may implement rates lower than those calculated and the revenue shortfall will need to be made up from other sources namely property taxes, user fees and water and wastewater utility rates.

It should be noted that the services included for development charges recovery in this study relate solely to non-discounted services. Discounted services such as Indoor Recreation, Park Development & Facilities, Cemeteries, Library Services and General Government for which development charges are currently collected for, will continue to be in force at the existing rates until the earlier of the prescribed date (currently proposed to be January 1, 2021 under draft regulation, however, the date

may change subject to final approval) or until the Municipality implements a Community Benefits Charges By-law.

Lastly, the area-specific charges in Mount Brydges imposed under By-law No. 76-18 have not been reconsidered under this study and those rates will continue to be in-force. Therefore, discounted services development charges as prescribed under By 14-15 and the Mount Brydges Areas-Specific Development Charges imposed under By-law No. 76-18 are shown for illustration purposes only in this study and have not been recalculated.

#### **D. LONG-TERM CAPITAL AND OPERATING COSTS**

An overview of the long-term capital and operating costs for the capital facilities and infrastructure to be included in the DC by-law is provided in the study. This examination is required as one of the provisions of the DCA. Additional details on the long-term capital and operating impact analysis is found in Appendix G. By 2029 the Municipality's net operating costs are estimated to increase by about \$2.69 million per annum.

#### **E. ASSET MANAGEMENT PLAN**

A key function of the Asset Management Plan is to demonstrate that all assets proposed to be funded under the development charges by-law are financially sustainable over their full life cycle.

By 2030, the Municipality will need to fund an additional \$339,200 per annum and \$789,200 by 2037 in order to properly fund the full life cycle costs of the new assets supported under the 2019 Development Charges By-law.

#### **F. MODIFICATIONS TO THE MUNICIPALITY'S DEVELOPMENT CHARGES BY-LAW ARE PROPOSED**

The Municipality is proposing to modify the current development charges by-law as part of the study process. The proposed draft by-law will be made available, under separate cover, a minimum of two weeks in advance of the statutory public meeting.

## I INTRODUCTION

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This Municipality of Strathroy-Caradoc Development Charges Background Study is presented as part of a process to lead to the approval of a new development charge by-law in compliance with the *Development Charges Act, 1997 (DCA)*.

The *DCA* and *Ontario Regulation 82/98 (O. Reg. 82/98)* require that a development charges background study be prepared in which development charges are determined with reference to:

- A forecast of the amount, type and location of housing units, population and non-residential development anticipated in the Municipality;
- The average capital service levels provided in the Municipality over the 10-year period immediately preceding the preparation of the background study;
- A review of capital works in progress and anticipated future capital projects, including an analysis of gross expenditures, funding sources, and net expenditures incurred or to be incurred by the Municipality or its local boards to provide for the expected development, including the determination of the growth and non-development-related components of the capital projects; and
- An examination of the long-term capital and operating costs for the capital infrastructure required for each service to which the development charges by-laws would relate.

This study presents the results of the review that determines the development-related net capital costs which are attributable to new development that is forecast to occur in the Municipality of Strathroy-Caradoc. These development-related net capital costs are then apportioned among various types of development (residential; non-residential) in a manner that reflects the increase in the need for each service attributable to each type of development. Therefore, the study arrives at proposed development charges for various types of development.

The *DCA* provides for a period of public review and comment regarding the proposed development charges. Following completion of this process, in accordance with the *DCA* and Council's review of this study and the comments it receives regarding this study or other information brought to its attention about the proposed charges, it is intended that Council will pass new development charges for the Municipality.



## **II THE METHODOLOGY COMBINES A MUNICIPAL-WIDE AND AREA-SPECIFIC APPROACH TO ALIGN DEVELOPMENT-RELATED COSTS AND BENEFITS**

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Several key steps are required in calculating any development charge. However, specific circumstances arise in each municipality which must be reflected in the calculation. Therefore, this study has been tailored for the Municipality of Strathroy-Caradoc's unique circumstances. The approach to the proposed development charges is focussed on providing a reasonable alignment of development-related costs with the development that necessitates them.

### **A. BOTH MUNICIPAL-WIDE AND AREA-SPECIFIC DEVELOPMENT CHARGES ARE CALCULATED**

The Municipality provides a wide range of services to the community it serves and has an extensive inventory of facilities, land, infrastructure, vehicles and equipment. The *DCA* provides municipalities with flexibility to define services that will be included in the development charge by-laws, provided that the other provisions of the *Act* and its associated regulations are met. The *DCA* also requires that the by-law designates the areas within which the by-law shall be imposed. The development charges may apply to all lands in the municipality or to other designated development areas as specified in the by-law.

#### **1. Services Based on a Municipality-Wide Approach**

For the some of services that the Municipality provides, a range of capital facilities, land, equipment and infrastructure is available throughout the Municipality; fire stations, arterial roads, police and so on. As new development occurs, new facilities will need to be added so that service levels in newly developing areas are provided at levels enjoyed in existing communities. A widely accepted method for sharing the development-related capital costs for such municipal services is to apportion them over all new development anticipated in the Municipality.

The following services are included in the Municipal-wide development charge calculation:

- Fire Service;
- Police Service;
- Services Related to a Highway:
  - Public Works: Buildings and Fleet; and
  - Municipality-Wide Engineering (Roads and Studies).

These services form a reasonable basis on which to plan and administer the development charges. The analysis of each of these services examines the individual capital facilities and equipment that make them up. For example, the Fire service includes various buildings and associated land, fire fighting vehicles and equipment.

The resulting development charge for these services would be imposed against all development in the Municipality.

It should be noted that the services included for development charges recovery in this study relate solely to non-discounted services. Discounted services such as Indoor Recreation, Park Development & Facilities, Cemeteries, Library Services and General Government for which development charges are currently collected for, will continue to be in force at the existing rates until the earlier of the prescribed date (currently proposed to be January 1, 2021 under draft regulation) or until the Municipality implements a Community Benefits Charges By-law. Although a development charge is not being recalculated for discounted services at this time, the development charges at the existing rates are included in a summary of the total charges for illustration purposes in this study. A community benefits charge strategy, under separate cover, will need to be prepared in order to implement a Community Benefits Charge By-law under the provisions of the *Planning Act* by January 1, 2021 as identified by draft regulations. Please note this day may change when the final regulations are passed.

## **2. Area-Specific Charges are Proposed**

For some services the Municipality provides, the need for development-related capital additions to support anticipated development is more localized. For such services, where costs and benefits are more localized, an alternative technique - the area-specific approach - is proposed.

The area-specific charges relate to the provision of water and wastewater services in Strathroy and Mount Brydges as well as engineering (roads and stormwater) works in the Strathroy area. The servicing needs in these areas require differing, additional, identifiable and independent projects in order to provide for anticipated growth. The area-specific approach is applied to more closely align the capital costs for these services with the particular area that is serviced by the required infrastructure.

Area-Specific development charges are therefore calculated for:

- Strathroy Engineering (Roads and Stormwater)
- Strathroy Water
- Strathroy Wastewater
- Mount Brydges Water
- Mount Brydges Wastewater

The geographic areas that are included coincide with the specific service areas for the various projects.

## **B. KEY STEPS IN DETERMINING DEVELOPMENT CHARGES FOR FUTURE DEVELOPMENT-RELATED PROJECTS**

Several key steps are required in calculating development charges for future development-related projects. These are summarized below.

### **1. Development Forecast**

The first step in the methodology requires a development forecast to be prepared for the 10-year study period, 2020–2029, and over the long-term to 2036. The forecast of the future residential and non-residential development used in this study is based on those projections endorsed by Municipal Council on August 6, 2016 as presented in Staff Report *2019 Strathroy-Caradoc Population and Housing Projections, Report 1 of 3* as well as 2016 Census data and recent development activity.

For the residential portion of the forecast, the net (or Census) population growth and population growth in new units is estimated. Net population growth equals the population in new housing units reduced by the decline in the population in the existing base anticipated over the 10-year period and to 2036 (due to reducing household sizes as the community ages). Net population is used in the calculation of the development charges funding envelopes. In calculating the per capita development charge, however, population growth in new units is used.

The non-residential portion of the forecast estimates the Gross Floor Area (GFA) of building space to be developed over the 10-year period, 2020–2029, and to 2036. The forecast provides estimates for four categories: employment-land development, rural, retail and institutional development. The forecast of GFA is based on the employment forecast for the Municipality. Factors for floor space per worker by category are used to convert the employment forecast into gross floor areas for the purposes of the development charges study.

### **2. Service Categories and Historical Service Levels**

The *Development Charges Act* provides that the increase in the need for service attributable to anticipated development:

... must not include an increase that would result in the level of service exceeding the average level of that service provided in the municipality over the 10-year period immediately preceding the preparation of the background study...(s. 5. (1) 4.)

Historical 10-year average service levels thus form the basis for development charges. A review of Municipality's capital service levels for buildings, land, vehicles and so on, has therefore been prepared as a reference for the calculation, so that the portion of future capital projects that may be included in the development charge can be determined. The historical service levels used in this study have been calculated based on the period 2010–2019.

### **3. Development-Related Capital Forecast and Analysis of Net Capital Costs to be Included in the Development Charges**

A development-related capital forecast has been prepared by the Municipality departments and boards as part of the present study. The forecast identifies development-related projects and their gross and net costs, after allowing for capital grants, subsidies or other contributions as required by the Act (*DCA*, s. 5. (2)). The capital forecast provides another cornerstone upon which development charges are based. The *DCA* requires that the increase in the need for service attributable to the anticipated development may include an increase:

... only if the council of the municipality has indicated that it intends to ensure that such an increase in need will be met. (s. 5. (1) 3.)

In conjunction with *DCA*, s. 5. (1) 4. referenced above, these sections have the effect of requiring that the development charge be calculated on the lesser of the historical 10-year average service levels or the service levels embodied in future plans of the Municipality. The development-related capital forecast prepared for this study ensures that development charges are only imposed to help pay for projects that have been or are intended to be purchased or built in order to accommodate future anticipated development. It is not sufficient in the calculation of development charges merely to have had the service in the past. There must also be a demonstrated commitment to continue to emplace facilities or infrastructure in the future. In this regard, *Ontario Regulation 82/98*, s. 3 states that:

For the purposes of paragraph 3 of subsection 5 (1) of the *Act*, the council of a municipality has indicated that it intends to ensure that an increase in the need for service will be met if the increase in service forms part of an Official Plan, capital forecast or similar expression of the intention of the council and the plan, forecast or similar expression of the intention of the council has been approved by the council.

For some projects in the development-related capital forecast, a portion of the project may confer benefits to existing residents. As required by the *DCA*, s. 5. (1) 6., these portions of projects and their associated net costs are the funding responsibility of the Municipality from non-development charges sources. The amount of municipal funding for such non-development shares of projects is also identified as part of the preparation of the development-related capital forecast.

There is also a requirement in the *DCA* to reduce the applicable development charge by the amount of any “uncommitted excess capacity” that is available for a service. Such capacity is available to partially meet the future servicing requirements. Adjustments are made in the analysis to meet this requirement of the *Act*.

#### **4. Attribution to Types of Development**

The next step in the determination of development charges is the allocation of the development-related net capital costs between the residential and the non-residential sectors. This is done by using different apportionments for different services in accordance with the demands which the two sectors would be expected to place on the various services and the different benefits derived from those services.

Where reasonable data exist, the apportionment is based on the expected demand for, and use of, the service by each sector (e.g. based on shares of population in new units and employment growth).

Finally, the residential component of the Municipal-wide and Area-Specific development charge is applied to different housing types on the basis of average occupancy factors. The non-residential component is applied on the basis of gross building space in square metres.

#### **5. Final Adjustment**

The final determination of the development charge results from adjustments made to development-related net capital costs for each service and sector resulting from the application of any unallocated reserve fund balances available to finance the development-related capital costs in the capital forecast. A cash flow analysis is also undertaken to account for the timing of projects and receipt of development charges for municipality-wide services. Interest earnings or borrowing costs are therefore accounted for in the calculation as allowed under the *DCA*.

### III DEVELOPMENT FORECAST

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This section provides the basis for the development forecasts used in calculating the development charges and provides a summary of the forecast results. Appendix A contains additional material related to the development forecast and the Municipality's demographics.

Forecasts of population are based on those projections endorsed by Municipal Council on August 6, 2019 as presented in Staff Report *2019 Strathroy-Caradoc Population and Housing Projections, Report 1 of 3*. Furthermore, a range of statistical data including Statistics Canada Census and National Household Survey data, and Canada Mortgage Housing Corporation (CMHC) housing market information informs the forecasts. In general, population and household growth is expected to be higher in the first seven years of the ten-year forecast as more new units are constructed in Mount Brydges Area than in previous years.

#### A. RESIDENTIAL FORECAST

The residential forecast is based on a forecast of population and households in the Municipality. Table 1A provides a summary of the residential forecast for two planning periods: a ten-year planning period, 2020 to 2029, and a seventeen-year planning horizon of 2020 to 2036. The ten-year planning period is used throughout this study for Fire, Police, Public Works as well as water and wastewater services in Mount Brydges. A longer-term planning horizon (to 2036) is used for Municipality-wide Engineering and all Strathroy area-specific services.

Over the ten-year planning period from 2020-2029, the total number of occupied households is forecast to increase by approximately 2,160 units, which translates into a population in new units of 5,451. The population in new housing units was estimated based on a Statistics Canada special run of data on occupancy patterns of household unit types by period of construction, adjusted where insufficient data was present. The forecast has projected growth in the 2020 to 2036 period to accommodate 8,760 persons in 3,494 new households.

The table also shows that the Municipality's net population (or Census population) is forecast to increase over the ten-year forecast period by 2,898 persons, from 22,150 in 2019 to 25,048 in 2029. The total forecast net population growth from 2020-2036 is 4,475, reaching a total census population of 26,624 people in 2036.

## B. NON-RESIDENTIAL DEVELOPMENT FORECAST

The development charge employment forecast for the Municipality is based on generally maintaining the existing activity rate in the Municipality, therefore, the proportion of new employees in the Municipality to the census population growth is maintained for the forecast periods. The employment numbers referenced in the Study reflect how many employees work in Strathroy-Caradoc. This should not be confused with place of residence employment data which would be based on where residents of Strathroy-Caradoc work.

The non-residential portion of the forecast estimates the amount of building space to be developed in the Municipality over the ten and seventeen-year planning periods. The forecast is based on the projected increase in employment levels and the anticipated amount of new building space required to accommodate them.

The ten-year forecast projects an increase of 1,148 employees which can be accommodated in approximately 70,800 square metres of new non-residential floor space. For the seventeen-year planning period, the Municipality will see a growth of 1,773 new employees and roughly 111,050 square metres of new non-residential floor space.

Table 1A provides a summary of the non-residential development forecasts used in this analysis. Additional forecast details are found in Appendix A.

**TABLE 1A**  
**MUNICIPALITY OF STRATHROY-CARADOC**  
**SUMMARY OF RESIDENTIAL AND NON-RESIDENTIAL**  
**MUNICIPALITY-WIDE DEVELOPMENT FORECAST**

RESIDENTIAL FORECAST	Existing	2020-2029		2020-2036	
	As At Mid-Year 2019	Forecast Change	As at Mid Year-2029	Forecast Change	As at Mid Year-2036
<b>Total Occupied Dwellings</b>	8,978	2,163	11,141	3,494	12,472
<b>Population</b>					
Census	22,150	2,898	25,048	4,475	26,624
Population In New Dwellings		5,451		8,760	

  

NON-RESIDENTIAL FORECAST	Existing	2020-2029		2020-2036	
	As At Mid-Year 2019	Forecast Change	As at Mid Year-2029	Forecast Change	As at Mid Year-2036
<b>Employment</b>	8,776	1,148	9,925	1,773	10,549
<b>Non-Residential Building Space (sq.m.)</b>		70,804		111,051	

### C. AREA-SPECIFIC FORECASTS

The area-specific growth in Mount Brydges and Strathroy Service Areas are summarized in the tables below:

<b>Table 1B</b> <b>Area-Specific Forecasts for the Mount Brydges Service Area (2020-2029)</b>				
<b>Service Area</b>	<b>Occupied Households</b>	<b>Population in New Units</b>	<b>Employment</b>	<b>Gross Floor Area (m<sup>2</sup>)</b>
<b>Mount Brydges (Water and Wastewater)</b>	774	2,052	95	3,800

<b>Table 1C</b> <b>Area-Specific Forecasts for the Strathroy Service Area (2020-2036)</b>				
<b>Service Area</b>	<b>Occupied Households</b>	<b>Population in new Units</b>	<b>Employment</b>	<b>Gross floor Area (m<sup>2</sup>)</b>
<b>Strathroy (Water, Wastewater and Roads and Related)</b>	2,200	5,311	1,626	101,865



## IV SUMMARY OF HISTORICAL CAPITAL SERVICE LEVELS

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The *DCA* and *Ontario Regulation 82/98* require that the development charges be set at a level no higher than the average service level provided in the municipality over the 10-year period immediately preceding the preparation of the background study, on a service by service basis.

For non-engineered services of Fire and Police and Services Related to a Highway (Public Works and Municipality-Wide Engineering), the legislative requirement is met by documenting historical service levels for the preceding 10 years, in this case, for the period 2010–2019. Service levels are measured as a ratio of inputs per population plus employment.

*O. Reg. 82/98* requires that when determining historical service levels both quantity and quality of service be taken into consideration. In most cases, the service levels are initially established in quantitative terms. For example, service levels for buildings are presented in terms of square feet per capita. The qualitative aspect is introduced by the consideration of the monetary value of the facility or service. In the case of buildings, for example, the cost would be shown in terms of dollars per square foot to replace or construct a facility of the same quality. This approach helps to ensure that the development-related capital facilities that are to be charged to new development reflect not only the quantity (number and size) but also the quality (value or replacement cost) of service provided historically by the Municipality. Both the quantitative and qualitative aspects of service levels used in the present analysis are based on information provided by Municipal staff and boards, and is based on historical records and their experience with costs to acquire or construct similar facilities, equipment and infrastructure as of 2019.

Table 2 summarizes service levels for all applicable services included in the development charge calculation. Appendices B and C provide detailed historical inventory data upon which the calculation of service levels is based.

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TABLE 2

**MUNICIPALITY OF STRATHROY-CARADOC  
SUMMARY OF AVERAGE HISTORIC SERVICE LEVELS 2010 - 2019  
FOR MUNICIPAL-WIDE SERVICES**

Service	2010 - 2019 Service Level Indicator
<b>1.0 FIRE SERVICES</b> Buildings Land Vehicles Furniture & Equipment (Excluding Computers)	<b>\$435.67 per pop. &amp; employment</b> \$175.66 per pop. & employment \$3.87 per pop. & employment \$173.23 per pop. & employment \$82.91 per pop. & employment
<b>2.0 POLICE SERVICES</b> Buildings Land Vehicles Furniture And Equipment	<b>\$196.43 per pop. &amp; employment</b> \$128.61 per pop. & employment \$10.02 per pop. & employment \$6.39 per pop. & employment \$51.41 per pop. & employment
<b>3.0 SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS: BUILDINGS &amp; FLEET</b> Buildings Land Furniture & Equipment Fleet	<b>\$512.05 per pop. &amp; employment</b> \$253.93 per pop. & employment \$72.86 per pop. & employment \$17.24 per pop. & employment \$168.01 per pop. & employment
<b>4.0 MUNICIPALITY-WIDE ENGINEERING</b> Road Network Road-Related Infrastructure	<b>\$32,612.99 per pop. &amp; employment</b> \$32,462.27 per pop. & employment \$150.71 per pop. & employment

## **V THE DEVELOPMENT-RELATED CAPITAL PROGRAM**

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### **A. A DEVELOPMENT-RELATED CAPITAL PROGRAM IS PROVIDED FOR COUNCIL'S APPROVAL**

The *DCA* requires the Council of a municipality to express its intent to provide future capital facilities at the level incorporated in the development charges calculation. As noted above in Section II, *Ontario Regulation 82/98*, s. 3 states that:

*For the purposes of paragraph 3 of subsection 5 (1) of the Act, the council of a municipality has indicated that it intends to ensure that an increase in the need for service will be met if the increase in service forms part of an official plan, capital forecast or similar expression of the intention of the council and the plan, forecast or similar expression of the intention of the council has been approved by the council.*

Based on the development forecasts summarized in Section III and detailed in Appendix A, staff of the Municipal departments, in collaboration with the consultants developed a development-related capital forecast setting out those projects that are required to service anticipated development. For Fire, Police, Public Works and all Mount Brydges area-specific services, the capital plan covers the 10-year period from 2020–2029. For Municipality-wide Engineering and all Strathroy area-specific services the capital plan covers the period from 2020–2036.

One of the recommendations contained in this background study is for Council to adopt the development-related capital forecast developed for the purposes of the development charges calculation. It is assumed that future capital budgets and forecasts will continue to bring forward the development-related projects contained herein, that are consistent with the growth occurring in the Municipality. It is acknowledged that changes to the forecast presented here may occur through the Municipality's normal capital budget process.

### **B. THE DEVELOPMENT-RELATED CAPITAL PROGRAM FOR MUNICIPAL-WIDE SERVICES (2020-2029)**

A summary of the development-related capital program for Municipal-Wide services related to the years 2020-2029 is shown on Table 3A. Further details on the capital plans for each individual service category are available in Appendices B and C.1.

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TABLE 3A

**MUNICIPALITY OF STRATHROY-CARADOC  
SUMMARY OF DEVELOPMENT-RELATED CAPITAL FORECAST  
FOR MUNICIPAL-WIDE SERVICES 2020-2029  
(in \$000)**

Service	Gross Cost	Grants/ Subsidies	Municipal Cost	Total Net Capital Program									
				2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
<b>1.0 FIRE SERVICES</b>	<b>\$12,192.3</b>	<b>\$0.0</b>	<b>\$12,192.3</b>	<b>\$470.8</b>	<b>\$469.8</b>	<b>\$6,831.8</b>	<b>\$10.8</b>	<b>\$510.8</b>	<b>\$46.8</b>	<b>\$1,570.8</b>	<b>\$10.8</b>	<b>\$2,259.1</b>	<b>\$10.8</b>
1.1 Buildings, Land & Furnishings	\$9,408.3	\$0.0	\$9,408.3	\$0.0	\$344.0	\$5,220.0	\$0.0	\$0.0	\$36.0	\$1,560.0	\$0.0	\$2,248.3	\$0.0
1.2 Fleet & Equipment	\$2,744.0	\$0.0	\$2,744.0	\$430.8	\$125.8	\$1,611.8	\$10.8	\$510.8	\$10.8	\$10.8	\$10.8	\$10.8	\$10.8
1.3 Studies	\$40.0	\$0.0	\$40.0	\$40.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
<b>2.0 POLICE SERVICES</b>	<b>\$4,010.0</b>	<b>\$0.0</b>	<b>\$4,010.0</b>	<b>\$312.0</b>	<b>\$87.0</b>	<b>\$12.0</b>	<b>\$27.0</b>	<b>\$3,512.0</b>	<b>\$12.0</b>	<b>\$12.0</b>	<b>\$12.0</b>	<b>\$12.0</b>	<b>\$12.0</b>
2.1 New Projects	\$4,010.0	\$0.0	\$4,010.0	\$312.0	\$87.0	\$12.0	\$27.0	\$3,512.0	\$12.0	\$12.0	\$12.0	\$12.0	\$12.0
<b>3.0 SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS: BUILDINGS &amp; FLEET</b>	<b>\$4,275.0</b>	<b>\$0.0</b>	<b>\$4,275.0</b>	<b>\$700.0</b>	<b>\$375.0</b>	<b>\$500.0</b>	<b>\$1,600.0</b>	<b>\$0.0</b>	<b>\$650.0</b>	<b>\$0.0</b>	<b>\$300.0</b>	<b>\$0.0</b>	<b>\$150.0</b>
1.1 Land, Buildings & Equipment	\$2,250.0	\$0.0	\$2,250.0	\$450.0	\$0.0	\$0.0	\$1,300.0	\$0.0	\$500.0	\$0.0	\$0.0	\$0.0	\$0.0
1.2 Vehicles and Fleet	\$2,025.0	\$0.0	\$2,025.0	\$250.0	\$375.0	\$500.0	\$300.0	\$0.0	\$150.0	\$0.0	\$300.0	\$0.0	\$150.0
<b>TOTAL TEN-YEAR MUNICIPAL-WIDE SERVICES</b>	<b>\$20,477.3</b>	<b>\$0.0</b>	<b>\$20,477.3</b>	<b>\$1,482.8</b>	<b>\$931.8</b>	<b>\$7,343.8</b>	<b>\$1,637.8</b>	<b>\$4,022.8</b>	<b>\$708.8</b>	<b>\$1,582.8</b>	<b>\$322.8</b>	<b>\$2,271.1</b>	<b>\$172.8</b>

Municipality-wide engineering is on a longer planning horizon and is presented in Table 3B along with the capital programs for the area-specific programs.

The development-related capital program for municipality-wide 10-year services is estimated at a total gross cost of \$20.48 million. No grants or other subsidies have been identified for any of these services and the full gross cost is presented in the net capital program.

This capital forecast incorporates those projects identified to be related to development anticipated in the next 10 years. It is not implied that all of these costs are to be recovered from new development by way of development charges (see the following Section VI for the method and determination of net capital costs attributable to growth). Portions of this capital forecast may relate to providing servicing for development which has occurred prior to 2019 (for which development charge reserve fund balances exist), for replacement of existing capital facilities or for growth anticipated to occur beyond the 2020-2029 planning period.

#### **C. THE DEVELOPMENT-RELATED CAPITAL FORECAST FOR MUNICIPALITY-WIDE ENGINEERING AND AREA-SPECIFIC SERVICES**

In addition to the development-related capital forecast for municipal-wide ten-year services, Table 3B summarizes the capital programs for Municipality-wide engineering and the area-specific services of Strathroy Engineering (roads and stormwater), Strathroy Water and Wastewater and Mount Brydges Water and Wastewater.

The development charges eligible components of the capital programs are described in Appendix C (Municipality-wide Engineering), Appendix D for Strathroy Service Area and Appendix E for Mount Brydges Service Area.

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TABLE 3B

**MUNICIPALITY OF STRATHROY-CARADOC  
SUMMARY OF DEVELOPMENT-RELATED CAPITAL FORECAST  
FOR ENGINEERING SERVICES MUNICIPALITY-WIDE AND AREA-SPECIFIC  
(in \$000)**

	<b>Planning Period</b>	<b>Gross Cost</b>	<b>Grants/ Subsidies</b>	<b>Municipal Cost</b>
<b>1.0 MUNICIPALITY-WIDE ENGINEERING</b>	<b>2020-2036</b>	\$11,845.0	\$217,500.0	\$11,627.5
<b>1.0 STRATHROY ENGINEERING</b>	<b>2020-2036</b>	\$42,015.5	\$0.0	\$42,015.5
<b>2.0 STRATHROY WATER SERVICE AREA</b>	<b>2020-2036</b>	\$26,714.9	\$0.0	\$26,714.9
<b>3.0 STRATHROY WASTEWATER SERVICE AREA</b>	<b>2020-2036</b>	\$21,448.3	\$1,100.0	\$20,348.3
<b>4.0 MOUNT BRYDGES WATER SERVICE AREA</b>	<b>2020-2029</b>	\$5,090.0	\$1,799.8	\$3,290.2
<b>5.0 MOUNT BRYDGES WASTEWATER SERVICE AREA</b>	<b>2020-2029</b>	\$9,914.2	\$0.0	\$9,914.2

## **VI PROPOSED DEVELOPMENT CHARGES ARE CALCULATED IN ACCORDANCE WITH THE *DCA***

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This section summarizes the calculation of development charges for each service category and the resulting total development charge by type of development. For Municipal-wide services, the calculation of the “unadjusted” per capita (residential) and per square metre (non-residential) charges is reviewed. Adjustments to these amounts resulting from a cash flow analysis that takes interest earnings and borrowing costs into account are also discussed.

For residential development, the adjusted total per capita amount is then converted to a variable charge by housing unit type using various unit occupancy factors. For non-residential development, the charges are based on gross floor area (GFA) of building space.

It is noted that the calculation of the Municipal-wide development charges does not include any provision for exemptions required under the *DCA*, such as the exemption for enlargements of up to 50 per cent on existing industrial buildings. Such legislated exemptions, or other exemptions that Council may choose to provide, will result in loss of development charge revenue for the affected types of development. However, any such revenue loss may not be made up by offsetting increases in other portions of the calculated charge.

Area-specific development charges are derived by identifying a project or group of projects in each service category that are required to service a particular service area in the municipality. The development-related net capital cost for the service area is then divided by the growth anticipated in that area of the Municipality.

### **A. UNADJUSTED DEVELOPMENT CHARGE CALCULATION FOR MUNICIPAL-WIDE SERVICES**

A summary of the “unadjusted” residential and non-residential development charges for Municipal-wide services is presented in Table 4.

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TABLE 4

**MUNICIPALITY OF STRATHROY-CARADOC  
SUMMARY OF UNADJUSTED RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT CHARGES  
CAPITAL PROGRAM FOR MUNICIPAL-WDE SERVICES**

10 Year Growth in Population in New Units	5,451
10 Year Growth in Square Meters	70,804
17 Year Growth in Population in New Units	8,760
17 Year Growth in Square Meters	111,051

Service	Development-Related Capital Forecast (2020 - 2029) & (2020-2036)								
	Net Municipal Cost (\$000)	Replacement & Benefit to Existing (\$000)	Available DC Reserves (\$000)	Post-Period Benefit (\$000)	Total DC Eligible Costs for Recovery (\$000)	Residential Share		Non-Residential Share	
						%	\$000	%	\$000
<b>1.00 FIRE SERVICES</b>	\$12,192.3	\$5,726.6	\$130.1	\$4,572.5	\$1,763.1	83%	\$1,463.4	17%	\$299.7
Unadjusted Development Charge Per Capita (\$)							\$268.44		
Unadjusted Development Charge Per Sq. M. (\$)									\$4.23
<b>2.00 POLICE SERVICES</b>	\$4,010.0	\$269.0	\$172.5	\$2,773.6	\$794.9	83%	\$659.8	17%	\$135.1
Unadjusted Development Charge Per Capita (\$)							\$121.03		
Unadjusted Development Charge Per Sq. M. (\$)									\$1.91
<b>3.00 SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS: BUILDINGS &amp; FLEET</b>	\$4,275.0	\$884.6	\$1,761.6	\$0.0	\$1,628.8	83%	\$1,351.9	17%	\$276.9
Unadjusted Development Charge Per Capita (\$)							\$248.00		
Unadjusted Development Charge Per Sq. M. (\$)									\$3.91
<b>4.00 MUNICIPALITY-WIDE ENGINEERING</b>	\$11,627.5	\$2,853.5	\$1,276.3	\$1,600.0	\$5,897.7	83%	\$4,895.1	17%	\$1,002.6
Unadjusted Development Charge Per Capita							\$558.82		
Unadjusted Development Charge Per Sq. M.									\$9.03
<b>Total - Municipal-Wide Services</b>	<b>\$32,104.8</b>	<b>\$9,733.6</b>	<b>\$3,340.5</b>	<b>\$8,946.1</b>	<b>\$10,084.5</b>		<b>\$8,370.1</b>		<b>\$1,714.4</b>
Unadjusted Development Charge Per Capita (\$)							<b>\$1,196.29</b>		
Unadjusted Development Charge Per Sq. M. (\$)									<b>\$19.08</b>

\*Note: 10-year growth is applicable to Fire, Police and Services Related to a Highway: Public Works: Building & Fleet; 17-year growth is applicable to Municipality-wide Engineering.



## **1. Municipal-wide Services**

The capital forecast for municipal-wide services incorporates those projects identified to be related to development anticipated in the next ten years. Table 4 shows that the net municipal cost of the capital program totals \$32.10 million. However, not all of the capital costs are to be recovered from new development by way of development charges. Table 4 shows that \$9.73 million of the capital forecast relates to replacement of existing capital facilities or for shares of projects that provide benefit to the existing community. This amount mainly results from the benefit to existing component related to the Fire and Municipal-wide Engineering Services. These portions of capital costs will have to be funded from non-development charge revenue sources.

An additional share of \$3.34 million has been identified as available development charges reserves and represents the revenue collected from previous development charges. This portion has been netted out of the chargeable capital costs. A portion of \$7.35 million is related to development beyond 2029 and \$1.60 million related to development post 2036 (related to Municipality-wide Engineering service). Cumulatively, \$8.9 million is considered to be a post-period share and will be considered for development charges recovery in subsequent study.

The total costs eligible for recovery through development charges for municipal-wide services is \$10.08 million. This amount is allocated between the residential and non-residential sectors to derive the unadjusted development charges. All services are allocated between both sectors based on shares of population in new units and employment growth both to 2029 (for fire, police and public works) and to 2036 (for Municipality-wide Engineering). Approximately \$8.37 million of the municipal-wide services development charges eligible capital program is deemed to benefit residential development. When this amount is divided by the ten-year growth in population in new units (5,451) and seventeen-year population in new units (8,760) for Municipality-wide Engineering an unadjusted charge of \$1,196.29 per capita is the result. The non-residential share of the municipal-wide services capital program totals \$1.71 million and when this amount is divided by the ten-year forecast of non-residential space growth (70,804 square metres) and seventeen-year forecast (111,051) an unadjusted charge of \$19.08 per square metre is the result.

## **2. Adjusted rates for Municipal-Wide Residential and Non-Residential Development Charges**

Final adjustments to the “unadjusted” development charge rates summarized above are made through a cash flow analysis. The analysis, details of which are included in the Appendices, considers the borrowing cost and interest earnings associated with the timing of expenditures and development charge receipts for all services. A cash flow analysis was not undertaken for engineering services under this study. Tables 5 and 6 summarize the results of the adjustments for the residential and non-residential components of the Municipal-wide rates respectively.

TABLE 5

**MUNICIPALITY OF STRATHROY-CARADOC  
RESIDENTIAL DEVELOPMENT CHARGE  
MUNICIPAL-WIDE DEVELOPMENT CHARGE**

SERVICE	Unadjusted Charge Per Capita	Adjusted Charge Per Capita After Cashflow	Charge Per Unit Type <sup>(1)</sup>		
			Single & Semi Detached	Multiples	Apartments
Discounted Services (By-law 14-15)*	-	-	\$3,561	\$2,868	\$1,857
Fire Services	\$268	\$294	\$820	\$676	\$426
Police Services	\$121	\$126	\$351	\$289	\$182
Services Related To A Highway: Public Works: Buildings & Fleet	\$248	\$254	\$707	\$583	\$368
<b>SUB-TOTAL GENERAL SERVICE CHARGE</b>	<b>\$637</b>	<b>\$673</b>	<b>\$5,439</b>	<b>\$4,416</b>	<b>\$2,833</b>
Municipality-Wide Engineering	\$559	\$563	\$1,570	\$1,294	\$816
<b>TOTAL MUNICIPAL-WIDE CHARGE</b>	<b>\$1,196</b>	<b>\$1,236</b>	<b>\$7,009</b>	<b>\$5,710</b>	<b>\$3,649</b>
1: Person per unit:			2.79	2.30	1.45

\* Rates not being calculated under this Study and are shown for illustration purposes only

TABLE 6

**MUNICIPALITY OF STRATHROY-CARADOC  
NON-RESIDENTIAL DEVELOPMENT CHARGE  
MUNICIPAL-WIDE DEVELOPMENT CHARGE**

<b>SERVICE</b>	<b>Unadjusted Charge (\$/sq.m.)</b>	<b>Adjusted Charge (\$/sq.m.)</b>	<b>Commercial Institutional (\$/sq.m.)</b>	<b>Industrial (\$/sq.m.)</b>
Discounted Services (By-law 14-15)*	-	-	\$0.48	\$0.48
Fire Services	\$4.23	\$4.59	\$4.59	\$4.59
Police Services	\$1.91	\$1.97	\$1.97	\$1.97
Services Related To A Highway: Public Works: Buildings & Fleet	\$3.91	\$3.97	\$3.97	\$3.97
<b>SUB-TOTAL PER SQ METRE</b>	<b>\$10.05</b>	<b>\$10.53</b>	<b>\$11.01</b>	<b>\$11.01</b>
Municipality-Wide Engineering	\$9.03	\$9.03	\$9.03	\$9.03
<b>TOTAL MUNICIPAL-WIDE CHARGE PER SQ.M</b>	<b>\$19.08</b>	<b>\$19.56</b>	<b>\$20.04</b>	<b>\$20.04</b>

*\* Rates not being calculated under this Study and are shown for illustration purposes only*

As shown on Table 5, the adjusted per capita rate increases from \$1,196 to \$1,236 after the cash flow analysis. Calculated rates in Tables 5 and 6 include the Discounted Services from by-law 14-15 in the unit totals for illustration purposes only but have not been recalculated under this study. As shown in Table 5, the calculated residential charge ranges from \$3,649 per unit for apartments, \$5,710 per unit for multiples (i.e. row houses/townhouses) to \$7,009 per unit for single and semi-detached units.

Table 6 shows that the adjusted rate for non-residential development increases slightly from \$19.08 to \$19.56 per square metre.

## **B. DEVELOPMENT CHARGES FOR AREA-SPECIFIC SERVICES**

The development charges capital program for area-specific services is summarized in Table 7. The table shows that the net municipal cost of the area-specific capital programs totals \$102.28 million (including both costs over the 10-year period and the 17-year period).

Not all of the net municipal costs are to be recovered from new development by way of development charges. Table 7 shows that over half of the capital program (47% or \$47.64 million) relate to replacement of existing capital works or for shares of projects that provide benefit to the existing community. This amount has been netted off the chargeable capital cost. Another deduction is made to account for development charges previously collected from prior growth (\$2.51 million) and have already been applied to offset the cost of completed projects. A further deduction (\$4.28 million) is made to account for monies available in DC reserves which can be used to fund the program. A post period share in the amount of \$769,700 is also netted off of the development-related costs, as it is deemed to benefit future development.

The remaining \$47.08 million is related to development and has been included in the development charge calculation.

The residential and non-residential shares of the development charges eligible capital program are split based on shares of population and employment growth over the respective period. The specific details regarding this allocation can be found in Appendix D for Strathroy Area Services and Appendix E for Mount Brydges Area Services. The calculated development charges for each of the services are presented in Tables 8-11.

MUNICIPALITY OF STRATHROY-CARADOC  
SUMMARY OF RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT CHARGES  
AREA SPECIFIC SERVICES

<b>Strathroy Service Area</b>	
17 Year Growth in Population in New Units (to 2036)	5,311
17 Year Growth in Square Meters (to 2036)	101,865
<b>Mt. Brydges Service Area</b>	
Growth in Population in New Units Horizon Year 2029	2,052
Growth in Square Meters to Horizon Year 2029	3,800

	Development-Related Capital Program																						
	Net Municipal Cost (\$000)	Replacement & Benefit to Existing (\$000)	Prior Growth* (\$000)	Available DC Reserves (\$000)	Post Period Benefit (\$000)	Total DC Eligible Costs for Recovery (\$000)	Residential Share					Non-Residential Share											
							%	\$000	%	\$000													
<b>STRATHROY SERVICE AREA</b>																							
<b>1.0 STRATHROY ENGINEERING</b>  Unadjusted Development Charge Per Capita Unadjusted Development Charge Per Sq. M	\$	42,015.5	\$	16,683.6	\$	-	\$	1,103.6	\$	-	\$	24,228.3	77%	\$	18,655.8	23%	\$	5,572.5					
														\$3,512.55									
																\$54.71							
<b>2.0 STRATHROY WATER SERVICE AREA</b>  Unadjusted Development Charge Per Capita Unadjusted Development Charge Per Sq. M	\$	26,714.9	\$	20,629.3	\$	241.5	\$	399.9	\$	-	\$	5,444.2	77%	\$	4,192.0	23%	\$	1,252.2					
														\$789.29									
																\$12.29							
<b>3.0 STRATHROY WASTEWATER SERVICE AREA</b>  Unadjusted Development Charge Per Capita Unadjusted Development Charge Per Sq. M	\$	20,348.3	\$	8,851.7	\$	780.9	\$	1,256.7	\$	-	\$	9,459.0	77%	\$	7,283.5	23%	\$	2,175.6					
														\$1,371.34									
																\$21.36							
<b>MOUNT BRYDGES SERVICE AREA</b>																							
<b>1.0 MOUNT BRYDGES WATER SERVICE AREA</b>  Unadjusted Development Charge Per Capita Unadjusted Development Charge Per Sq. M	\$	3,290.2	\$	836.3	\$	49.1	\$	328.8	\$	769.7	\$	1,306.2	96%	\$	1,254.0	4%	\$	52.2					
														\$610.97									
																\$13.75							
<b>2.0 MOUNT BRYDGES WASTEWATER SERVICE AREA</b>  Unadjusted Development Charge Per Capita Unadjusted Development Charge Per Sq. M	\$	9,914.2	\$	641.0	\$	1,437.3	\$	1,188.5	\$	-	\$	6,647.4	96%	\$	6,381.5	4%	\$	265.9					
														\$3,109.29									
																\$69.97							
<b>Total - Area-Specific Services</b>												<b>\$102,283.0</b>		<b>\$47,641.8</b>		<b>\$2,508.8</b>		<b>\$4,277.5</b>		<b>\$769.7</b>		<b>\$47,085.2</b>	

Note \*: Represents Development Charges which have been previously collected and have already been applied towards the funding of a specific project/program

**TABLE 8**  
**MUNICIPALITY OF STRATHROY-CARADOC**  
**RESIDENTIAL DEVELOPMENT CHARGE**  
**STRATHROY SERVICE AREA DEVELOPMENT CHARGE**

SERVICE	Unadjusted Charge Per Capita	Adjusted Charge Per Capita After Cashflow	Charge Per Unit Type <sup>(1)</sup>		
			Single & Semi Detached	Multiples	Apartments
Discounted Services (By-law 14-15)*			\$3,561	\$2,868	\$1,857
Fire Services	\$268.44	\$293.87	\$820	\$676	\$426
Police Services	\$121.03	\$125.71	\$351	\$289	\$182
Services Related To A Highway: Public Works: Buildings & Fleet	\$248.00	\$253.51	\$707	\$583	\$368
<b>SUB-TOTAL GENERAL SERVICE CHARGE</b>	<b>\$637.47</b>	<b>\$673.09</b>	<b>\$5,439</b>	<b>\$4,416</b>	<b>\$2,833</b>
Municipality-Wide Engineering	\$558.82	\$562.74	\$1,570	\$1,294	\$816
<b>TOTAL MUNICIPAL-WIDE CHARGE</b>	<b>\$1,196.29</b>	<b>\$1,235.83</b>	<b>\$7,009</b>	<b>\$5,710</b>	<b>\$3,649</b>
Strathroy Engineering (Roads and Storm)	\$3,512.55	\$3,512.55	\$9,800	\$8,079	\$5,093
Strathroy Water	\$789.29	\$789.29	\$2,202	\$1,815	\$1,144
Strathroy Wastewater	\$1,371.34	\$1,371.34	\$3,826	\$3,154	\$1,988
<b>TOTAL DEVELOPMENT CHARGE</b>	<b>\$6,869.47</b>	<b>\$6,909.01</b>	<b>\$22,837</b>	<b>\$18,758</b>	<b>\$11,874</b>
1: Person per unit:			2.79	2.30	1.45

\* Rates not being calculated under this Study and are shown for illustration purposes only

<b>TABLE 9</b>  <b>MUNICIPALITY OF STRATHROY-CARADOC</b> <b>NON-RESIDENTIAL DEVELOPMENT CHARGE</b> <b>STRATHROY SERVICE AREA DEVELOPMENT CHARGE</b>				
<b>SERVICE</b>	<b>Unadjusted Charge (\$/sq.m.)</b>	<b>Adjusted Charge (\$/sq.m.)</b>	<b>Commercial Institutional (\$/sq.m.)</b>	<b>Industrial (\$/sq.m.)</b>
Discounted Services (By-law 14-15)*	-	-	\$0.37	\$0.21
Fire Services	\$4.23	\$4.59	\$4.59	\$4.59
Police Services	\$1.91	\$1.97	\$1.97	\$1.97
Services Related To A Highway: Public Works: Buildings & Fleet	\$3.91	\$3.97	\$3.97	\$3.97
<b>SUB-TOTAL PER SQ METRE</b>	<b>\$10.05</b>	<b>\$10.53</b>	<b>\$10.90</b>	<b>\$10.74</b>
Municipality-Wide Engineering	\$9.03	\$9.03	\$9.03	\$9.03
<b>TOTAL MUNICIPAL-WIDE CHARGE PER SQ.M</b>	<b>\$19.08</b>	<b>\$19.56</b>	<b>\$19.93</b>	<b>\$19.77</b>
Strathroy Engineering (roads and storm)	\$54.71	\$54.71	\$54.71	\$54.71
Strathroy Water	\$12.29	\$12.29	\$12.29	\$12.29
Strathroy Wastewater	\$21.36	\$21.36	\$21.36	\$21.36
<b>TOTAL DEVELOPMENT CHARGE PER SQ.M</b>	<b>\$107.44</b>	<b>\$107.92</b>	<b>\$108.29</b>	<b>\$108.13</b>

\* Rates not being calculated under this Study and are shown for illustration purposes only

**TABLE 10**  
**MUNICIPALITY OF STRATHROY-CARADOC**  
**RESIDENTIAL DEVELOPMENT CHARGE**  
**MOUNT BRYDGES SERVICE AREA DEVELOPMENT CHARGE**

SERVICE	Unadjusted Charge Per Capita	Adjusted Charge Per Capita After Cashflow	Charge Per Unit Type <sup>(1)</sup>		
			Single & Semi Detached	Multiples	Apartments
Discounted Services (By-law 14-15)*			\$3,561	\$2,868	\$1,857
Fire Services	\$268.44	\$293.87	\$820	\$676	\$426
Police Services	\$121.03	\$125.71	\$351	\$289	\$182
Services Related To A Highway: Public Works: Buildings & Fleet	\$248.00	\$253.51	\$707	\$583	\$368
<b>SUB-TOTAL GENERAL SERVICE CHARGE</b>	<b>\$637.47</b>	<b>\$673.09</b>	<b>\$5,439</b>	<b>\$4,416</b>	<b>\$2,833</b>
Municipality-Wide Engineering	\$558.82	\$562.74	\$1,570	\$1,294	\$816
<b>TOTAL MUNICIPAL-WIDE CHARGE</b>	<b>\$1,196.29</b>	<b>\$1,235.83</b>	<b>\$7,009</b>	<b>\$5,710</b>	<b>\$3,649</b>
Mount Brydges Water	\$610.97	\$610.97	\$1,705	\$1,405	\$886
Mount Brydges Wastewater	\$3,109.29	\$3,109.29	\$8,675	\$7,151	\$4,508
<b>TOTAL DEVELOPMENT CHARGE</b>	<b>\$4,916.55</b>	<b>\$4,956.09</b>	<b>\$17,389</b>	<b>\$14,266</b>	<b>\$9,043</b>
1: Person per unit:			2.79	2.30	1.45

\* Rates not being calculated under this Study and are shown for illustration purposes only



<b>TABLE 11</b>  <b>MUNICIPALITY OF STRATHROY-CARADOC</b> <b>NON-RESIDENTIAL DEVELOPMENT CHARGE</b> <b>MOUNT BRYDGES SERVICE AREA DEVELOPMENT CHARGE</b>				
<b>SERVICE</b>	<b>Unadjusted Charge (\$/sq.m.)</b>	<b>Adjusted Charge (\$/sq.m.)</b>	<b>Commercial Institutional (\$/sq.m.)</b>	<b>Industrial (\$/sq.m.)</b>
Discounted Services (By-law 14-15)*	-	-	\$0.48	\$0.27
Fire Services	\$4.23	\$4.59	\$4.59	\$4.59
Police Services	\$1.91	\$1.97	\$1.97	\$1.97
Services Related To A Highway: Public Works: Buildings & Fleet	\$3.91	\$3.97	\$3.97	\$3.97
<b>SUB-TOTAL PER SQ METRE</b>	<b>\$10.05</b>	<b>\$10.53</b>	<b>\$11.01</b>	<b>\$10.80</b>
MUNICIPAL-WIDE ENGINEERING	\$9.03	\$9.03	\$9.03	\$9.03
<b>TOTAL MUNICIPAL-WIDE CHARGE PER SQ.M</b>	<b>\$19.08</b>	<b>\$19.56</b>	<b>\$20.04</b>	<b>\$19.83</b>
Mount Brydges Water	\$13.75	\$13.75	\$13.75	\$13.75
Mount Brydges Wastewater	\$69.97	\$69.97	\$69.97	\$69.97
<b>TOTAL DEVELOPMENT CHARGE</b>	<b>\$102.80</b>	<b>\$103.28</b>	<b>\$103.76</b>	<b>\$103.55</b>

\* Rates not being calculated under this Study and are shown for illustration purposes only

## **VII COMPARISON OF CALCULATED AND CURRENT DEVELOPMENT CHARGES**

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Tables 12—14 present a comparison of the newly calculated Strathroy residential and non-residential development charges with the Municipality's current charges.

Tables 15—17 present a comparison of the newly calculated Mount Brydges residential and non-residential development charges with the Municipality's current charges. It should be noted, the Mount Brydges Special Area charges (for area 1 and 2) have been amalgamated into the Mount Brydges Wastewater charge.

The calculated development charges, particularly the area-specific services in the Strathroy service area, represent an increase over the municipality's current charges.

- A better understanding of the road requirements to facilitate development in the Municipality's growth area.
- Current rates have not been adjusted to account for annual indexing to reflect the change in construction costs over time.

**TABLE 12**  
**MUNICIPALITY OF STRATHROY-CARADOC**  
**RESIDENTIAL DEVELOPMENT CHARGE PER SINGLE/SEMI DETACHED UNIT**  
**STRATHROY SERVICE AREA**

SERVICE	Current Charge per Single/Semi	Calculated Charge per Single/Semi	Difference in Calculated & Current Charge	
	\$/Unit		\$	%
<b>Discounted Services (By-law 14-15)*</b>	<b>\$3,561</b>	<b>\$3,561</b>	<b>\$0</b>	<b>0.0%</b>
Fire Services	\$126	\$820	\$694	550.8%
Police Services	\$119	\$351	\$232	195.0%
Services Related To A Highway: Public Works: Buildings & Fleet	\$586	\$707	\$121	20.6%
<b>SUB-TOTAL GENERAL SERVICE CHARGE</b>	<b>\$4,392</b>	<b>\$5,439</b>	<b>\$1,047</b>	<b>23.8%</b>
Municipality-Wide Engineering	\$1,517	\$1,570	\$53	3.5%
<b>TOTAL MUNICIPALITY-WIDE CHARGE</b>	<b>\$5,909</b>	<b>\$7,009</b>	<b>\$1,100</b>	<b>18.6%</b>
Strathroy Engineering (Roads and Storm)	\$2,948	\$9,800	\$6,852	232.4%
Strathroy Water	\$1,086	\$2,202	\$1,116	102.8%
Strathroy Wastewater	\$2,262	\$3,826	\$1,564	69.1%
<b>TOTAL DEVELOPMENT CHARGE PER UNIT</b>	<b>\$12,205</b>	<b>\$22,837</b>	<b>\$10,632</b>	<b>87.1%</b>

\* Rates not being calculated under this Study and are shown for illustration purposes only

**TABLE 13**  
**MUNICIPALITY OF STRATHROY-CARADOC**  
**NON-RESIDENTIAL DEVELOPMENT CHARGE PER SQUARE METRE**  
**STRATHROY SERVICE AREA**  
**COMMERCIAL & INSTITUTIONAL DEVELOPMENT**

<b>SERVICE</b>	<b>Current Commercial and Institutional Charge</b>	<b>Calculated Commercial and Institutional Charge</b>	<b>Difference in Calculated &amp; Current Charge</b>	
	<b>\$/sq. m</b>		<b>\$</b>	<b>%</b>
<b>Discounted Services (By-law 14-15)*</b>	<b>\$0.37</b>	<b>\$0.37</b>	<b>\$0.00</b>	<b>0.0%</b>
Fire Services	\$0.58	\$4.59	\$4.01	691.4%
Police Services	\$0.55	\$1.97	\$1.42	258.2%
Services Related To A Highway: Public Works: Buildings & Fleet	\$2.70	\$3.97	\$1.27	47.0%
<b>SUB-TOTAL GENERAL SERVICE CHARGE</b>	<b>\$4.20</b>	<b>\$10.90</b>	<b>\$6.70</b>	<b>159.5%</b>
Municipality-Wide Engineering	\$6.99	\$9.03	\$2.04	29.2%
<b>TOTAL MUNICIPAL-WIDE CHARGE</b>	<b>\$11.19</b>	<b>\$19.93</b>	<b>\$8.74</b>	<b>78.1%</b>
Strathroy Engineering (Roads and Storm)	\$13.26	\$54.71	\$41.45	312.6%
Strathroy Water	\$10.88	\$12.29	\$1.41	13.0%
Strathroy Wastewater	\$22.65	\$21.36	(\$1.29)	(5.7%)
<b>TOTAL DEVELOPMENT CHARGE PER SQ.M</b>	<b>\$57.98</b>	<b>\$108.29</b>	<b>\$50.31</b>	<b>86.8%</b>

\* Rates not being calculated under this Study and are shown for illustration purposes only

**TABLE 14**  
**MUNICIPALITY OF STRATHROY-CARADOC**  
**NON-RESIDENTIAL DEVELOPMENT CHARGE PER SQUARE METRE**  
**STRATHROY SERVICE AREA**  
**INDUSTRIAL DEVELOPMENT**

SERVICE	Current Industrial Charge	Calculated Industrial Charge	Difference in Calculated & Current Charge	
	\$/sq. m		\$	%
<b>Discounted Services (By-law 14-15)*</b>	<b>\$0.21</b>	<b>\$0.21</b>	<b>\$0.00</b>	<b>0.0%</b>
Fire Services	\$0.33	\$4.59	\$4.26	1290.9%
Police Services	\$0.31	\$1.97	\$1.66	535.5%
Services Related To A Highway: Public Works: Buildings & Fleet	\$1.52	\$3.97	\$2.45	161.2%
<b>SUB-TOTAL GENERAL SERVICE CHARGE</b>	<b>\$2.37</b>	<b>\$10.74</b>	<b>\$8.37</b>	<b>353.2%</b>
Municipality-Wide Engineering	\$3.94	\$9.03	\$5.09	129.2%
<b>TOTAL MUNICIPAL-WIDE CHARGE</b>	<b>\$6.31</b>	<b>\$19.77</b>	<b>\$13.46</b>	<b>213.3%</b>
Strathroy Engineering (roads and storm)	\$7.48	\$54.71	\$47.23	
Strathroy Water	\$6.14	\$12.29	\$6.15	100.2%
Strathroy Wastewater	\$12.78	\$21.36	\$8.58	67.1%
<b>TOTAL DEVELOPMENT CHARGE PER SQ.M</b>	<b>\$32.71</b>	<b>\$108.13</b>	<b>\$75.42</b>	<b>230.6%</b>

\* Rates not being calculated under this Study and are shown for illustration purposes only

**TABLE 15**  
**MUNICIPALITY OF STRATHROY-CARADOC**  
**RESIDENTIAL DEVELOPMENT CHARGE PER SINGLE/SEMI DETACHED UNIT**  
**MOUNT BRYDGES SERVICE AREA**

SERVICE	Current Charge per Single/Semi	Calculated Charge per Single/Semi	Difference in Calculated & Current Charge	
	\$/Unit		\$	%
<b>Discounted Services (By-law 14-15)*</b>	<b>\$3,561</b>	<b>\$3,561</b>	<b>\$0</b>	<b>0.0%</b>
Fire Services	\$126	\$820	\$694	550.8%
Police Services	\$119	\$351	\$232	195.0%
Services Related To A Highway: Public Works: Buildings & Fleet	\$586	\$707	\$121	20.6%
<b>SUB-TOTAL GENERAL SERVICE CHARGE</b>	<b>\$4,392</b>	<b>\$5,439</b>	<b>\$1,047</b>	<b>23.8%</b>
Municipality-Wide Engineering	\$1,517	\$1,570	\$53	3.5%
<b>TOTAL MUNICIPAL-WIDE CHARGE</b>	<b>\$5,909</b>	<b>\$7,009</b>	<b>\$1,100</b>	<b>18.6%</b>
Mount Brydges Water	\$1,556	\$1,705	\$149	9.6%
Mount Brydges Wastewater**	\$10,176	\$8,675	(\$1,501)	(14.8%)
<b>TOTAL CALCULATED DEVELOPMENT CHARGE PER UNIT</b>	<b>\$17,641</b>	<b>\$17,389</b>	<b>(\$252)</b>	<b>(1.4%)</b>

Mount Brydges Wastewater - Special Area 1	\$1,145	\$0	(\$1,145)	(100.0%)
Mount Brydges Wastewater - Special Area 2	\$2,240	\$0	(\$2,240)	(100.0%)
<b>2018 ASDC BY-LAW RATE</b>	<b>\$9,116</b>	<b>\$9,116</b>	<b>\$0</b>	<b>0.0%</b>
<b>TOTAL DEVELOPMENT CHARGE (excluding Special Area charges)</b>	<b>\$26,757</b>	<b>\$26,505</b>	<b>(\$252)</b>	<b>(0.9%)</b>
<b>TOTAL DEVELOPMENT CHARGE (including Special Area 1)</b>	<b>\$27,902</b>	<b>\$26,505</b>	<b>(\$1,397)</b>	<b>(5.0%)</b>
<b>TOTAL DEVELOPMENT CHARGE (including Special Area 2)</b>	<b>\$28,997</b>	<b>\$26,505</b>	<b>(\$2,492)</b>	<b>(8.6%)</b>

\* Rates not being calculated under this Study and are shown for illustration purposes only

\*\* Includes charges previously known as Special Areas 1 & 2.

**HEMSON**

**TABLE 16**  
**MUNICIPALITY OF STRATHROY-CARADOC**  
**NON-RESIDENTIAL DEVELOPMENT CHARGE PER SQUARE METRE**  
**MOUNT BRYDGES SERVICE AREA**  
**COMMERCIAL & INSTITUTIONAL DEVELOPMENT**

<b>SERVICE</b>	<b>Current Commercial and Institutional Charge</b>	<b>Calculated Commercial and Institutional Charge</b>	<b>Difference in Calculated &amp; Current Charge</b>	
	<b>\$/sq. m</b>		<b>\$</b>	<b>%</b>
<b>Discounted Services (By-law 14-15)*</b>	<b>\$0.48</b>	<b>\$0.48</b>	<b>\$0.00</b>	<b>0.0%</b>
Fire Services	\$0.75	\$4.59	\$3.84	512.0%
Police Services	\$0.71	\$1.97	\$1.26	177.5%
Services Related To A Highway: Public Works: Buildings & Fleet	\$3.48	\$3.97	\$0.49	14.1%
<b>SUB-TOTAL GENERAL SERVICE CHARGE</b>	<b>\$5.42</b>	<b>\$11.01</b>	<b>\$5.59</b>	<b>103.1%</b>
Municipality-Wide Engineering	\$9.00	\$9.03	\$0.03	0.3%
<b>TOTAL MUNICIPAL-WIDE CHARGE</b>	<b>\$14.42</b>	<b>\$20.04</b>	<b>\$5.62</b>	<b>39.0%</b>
Mount Brydges Water	\$5.78	\$13.75	\$7.97	137.9%
Mount Brydges Wastewater	\$37.78	\$69.97	\$32.19	85.2%
<b>TOTAL DEVELOPMENT CHARGE PER SQ.M</b>	<b>\$57.98</b>	<b>\$103.76</b>	<b>\$45.78</b>	<b>79.0%</b>
<b>2018 ASDC BY-LAW RATE</b>	<b>\$90.17</b>	<b>\$90.17</b>	<b>\$0</b>	<b>0.0%</b>
<b>TOTAL DEVELOPMENT CHARGE</b>	<b>\$148.15</b>	<b>\$193.93</b>	<b>\$46</b>	<b>30.9%</b>

*\* Rates not being calculated under this Study and are shown for illustration purposes only*

TABLE 17

**MUNICIPALITY OF STRATHROY-CARADOC  
NON-RESIDENTIAL DEVELOPMENT CHARGE PER SQUARE METRE  
MOUNT BRYDGES SERVICE AREA  
INDUSTRIAL DEVELOPMENT**

SERVICE	Current Industrial Charge	Calculated Industrial Charge	Difference in Calculated & Current Charge	
	\$/sq. m		\$	%
<b>Discounted Services (By-law 14-15)*</b>	<b>\$0.27</b>	<b>\$0.27</b>	<b>\$0.00</b>	<b>0.0%</b>
Fire Services	\$0.42	\$4.59	\$4.17	992.9%
Police Services	\$0.40	\$1.97	\$1.57	392.5%
Services Related To A Highway: Public Works: Buildings & Fleet	\$1.96	\$3.97	\$2.01	102.6%
<b>SUB-TOTAL GENERAL SERVICE CHARGE</b>	<b>\$3.05</b>	<b>\$10.80</b>	<b>\$7.75</b>	<b>254.1%</b>
Municipality-Wide Engineering	\$5.08	\$9.03	\$3.95	77.8%
<b>TOTAL MUNICIPAL-WIDE CHARGE</b>	<b>\$8.13</b>	<b>\$19.83</b>	<b>\$11.70</b>	<b>143.9%</b>
Mount Brydges Water	\$3.26	\$13.75	\$10.49	321.8%
Mount Brydges Wastewater	\$21.32	\$69.97	\$48.65	228.2%
<b>TOTAL DEVELOPMENT CHARGE PER SQ.M</b>	<b>\$32.71</b>	<b>\$103.55</b>	<b>\$70.84</b>	<b>216.6%</b>

<b>2018 ASDC BY-LAW RATE</b>	<b>\$50.87</b>	<b>\$50.87</b>	<b>\$0</b>	<b>0.0%</b>
<b>TOTAL DEVELOPMENT CHARGE</b>	<b>\$83.58</b>	<b>\$154.42</b>	<b>\$71</b>	<b>84.8%</b>

*\* Rates not being calculated under this Study and are shown for illustration purposes only*



## VIII LONG-TERM CAPITAL AND OPERATING COSTS

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This section provides a brief examination of the long-term capital and operating costs for the capital facilities and infrastructure to be included in the development charges by-law. This examination is required as one of the features of the *Development Charges Act, 1997*.

### A. NET OPERATING COSTS FOR THE MUNICIPALITY'S SERVICES ESTIMATED TO INCREASE OVER THE FORECAST PERIOD

Table 18 summarizes the estimated increase in net operating costs that the Municipality will experience for additions associated with the planned capital program.

As shown in Table 18, by 2029, the Municipality's net operating costs are estimated to increase by \$2.69 million. Significant increases in net operating costs will be experienced as new facilities and equipment are added. Operating and maintenance costs will also increase as additions to the Municipality's road network are made.

### B. LONG-TERM CAPITAL FINANCING FROM NON-DEVELOPMENT CHARGE SOURCES

Table 18 also summarizes the components of the municipal-wide development-related capital program that will require funding from non-development charge sources as discussed in Section VI. In total \$8.36 million will need to be financed from non-development charge sources over the next ten years for Fire, Police, Services Related to a Highway: Public Works: Building & Fleet, and Mount Brydges Area Services and \$49.02 over the next seventeen years for Municipality-wide Engineering and Strathroy Area Services.

Appendix G provides a breakdown of the non-development charge financing requirements by service.

**TABLE 18**

**MUNICIPALITY OF STRATHROY-CARADOC**

**SUMMARY OF LONG TERM CAPITAL AND OPERATING COST IMPACTS**

**MUNICIPAL-WIDE SERVICES**

**(\$000)**

<b>NET OPERATING IMPACTS</b>		<b>2029</b>
Fire Services		\$1,416.1
Police Services		\$601.5
Public Works		\$427.5
Municipal-wide Engineering (1)		\$248.4
<b>TOTAL OPERATING IMPACTS</b>		<b>\$2,693.5</b>
<b>LONG-TERM CAPITAL IMPACTS</b>		<b>TOTAL</b>
<b>MUNICIPAL-WIDE SERVICES (2020-2029)</b>		
Total Net Cost		\$20,477.3
Net Cost From Development Charges		\$4,186.8
Prior Growth Share from DC Reserve Balances (2)		\$2,064.2
Portion for Post 2029 Development (3)		\$7,346.1
<b>Net Cost From Non-DC Sources (Benefit to Existing)</b>		<b>\$6,880.2</b>
<b>MUNICIPAL-WIDE ENGINEERING</b>		
Total Net Cost		\$11,627.5
Net Cost From Development Charges		\$5,897.7
Prior Growth Share from DC Reserve Balances (2)		\$1,276.3
Portion for Post 2036 Development (3)		\$1,600.0
<b>Net Cost From Non-DC Sources (Benefit to Existing)</b>		<b>\$2,853.5</b>
<b>STRATHROY SERVICE AREA</b>		
Total Net Cost		\$89,078.7
Net Cost From Development Charges		\$39,131.6
Prior Growth Share from DC Reserve Balances (2)		\$3,782.5
Portion for Post 2036 Development (3)		\$0.0
<b>Net Cost From Non-DC Sources (Benefit to Existing)</b>		<b>\$46,164.6</b>
<b>MOUNT BRYDGES SERVICE AREA</b>		
Total Net Cost		\$13,204.3
Net Cost From Development Charges		\$7,953.6
Prior Growth Share from DC Reserve Balances (2)		\$3,003.7
Portion for Post 2029 Development (3)		\$769.7
<b>Net Cost From Non-DC Sources (Benefit to Existing)</b>		<b>\$1,477.3</b>
<b>TOTAL LONG-TERM CAPITAL IMPACTS (2020-2029)</b>		<b>\$8,357.4</b>
<b>TOTAL LONG-TERM CAPITAL IMPACTS (2020-2036)</b>		<b>\$49,018.0</b>
<b>TOTAL NET OPERATING &amp; CAPITAL IMPACTS</b>	<b>\$2,693.5</b>	<b>n.a.</b>

Notes:

(1) Operating cost over the 10 year period of 2020-2029.

(2) To extent possible costs have been offset by existing DC Reserve Fund Balances. Includes prior DC funds allocated to projects.

(3) Costs for growth beyond the planning period may be recovered from future DC and therefore may only be an interim financing requirement.

## **IX DEVELOPMENT CHARGES ADMINISTRATION**

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### **A. BY-LAW ADMINISTRATION**

No significant changes are recommended to the Municipality's current policies and practices regarding development charge administration. In this regard:

- As required under the *DCA*, the Municipality should codify any rules regarding application of the by-laws and exemptions within the development charges by-laws proposed for adoption.
- It is recommended that Council adopt the development-related capital forecast included in this background study, subject to annual review through the Municipality's normal capital budget process.
- It is recommended that limited exemptions, other than those required in the *DCA*, be formally adopted in the by-laws.

A copy of the by-law will be made two weeks prior to the Public Meeting as required by the legislation.

### **B. CONSIDERATION FOR AREA RATING**

In accordance with the *DCA*, Council must give consideration to the use of area rating, also known as area-specific development charges, as part of the DC Background Study. As part of the Municipality's 2019 DC update, the area-specific development charges are calculated for Strathroy and Mount Brydges Services Area to properly reflect the infrastructure requirements to service development in those areas.

## APPENDIX A

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### *DEVELOPMENT FORECAST*

## APPENDIX A

### RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT FORECAST

#### A. BACKGROUND

This appendix provides details about the development forecasts that were used in the preparation of the Development Charges Background Study for the Municipality of Strathroy-Caradoc. The forecast described herein is consistent with governing legislation and represents the best estimate of the amount and type of development that is likely to occur in the Municipality from 2020 to 2036. The results of the forecasts are provided in a series of ten tables:

Table 1	Historical Population, Occupied Households and Employment Summary
Table 2	Historical Annual Building Permits by Type
Table 3	Historical Households by Period of Construction Showing Household Size
Table 4	Population, Household & Employment Forecast Summary
Table 5	Forecast of Household Growth by Unit Type
Table 6	Forecast of Population Growth in New Households by Unit Type
Table 7	Non-Residential Growth Forecast
Table 8	Forecast Non-Residential Space (Square Metres of Gross Floor Area)
Table 9A	Area-Specific Forecasts for the Mount Brydges Service Area (2020-2029)
Table 9B	Area-Specific Forecasts for the Strathroy Service Area (2020-2036)

The Forecasts of population and households in the Background Study are generally based on those projections endorsed by Municipal Council on August 6, 2019 as presented in Staff Report *2019 Strathroy-Caradoc Population and Housing Projections, Report 1 of 3*. Furthermore, a range of statistical data including Statistics Canada Census and National Household Survey data, and Canada Mortgage Housing Corporation (CMHC) housing market information informs the forecasts.

#### B. FORECAST APPROACH AND KEY ASSUMPTIONS

The *Development Charges Act* (DCA) requires the Municipality to estimate “the anticipated amount, type and location of development” for which development charges may be imposed. The development forecast must cover both residential and non-residential development and be specific enough with regards to quantum, type,

location and timing of development to allow the Municipality to prepare a reasonable development-related capital program.

“Place of Work Employment” figures in the forecasts record where people work rather than their place of residence. It includes all employment with a regular or no fixed place of work. However, work-at-home employment is excluded from the figures, for development charge purposes, as this type of employment does not require building floorspace for its activities.

The forecast is based on Census years and is translated into the time periods required for DC purposes, generally pro-rating the census periods to the DC time period. A ten-year planning period of 2020-2029 has been used for the fire, police, public works and water and wastewater services in Mount Brydges. A planning period of 2020 to 2036 has been used for Municipal-wide engineering, Stathroy Engineering (roads and storm) as well as water and wastewater services in Strathroy.

### **C. HISTORICAL GROWTH**

Strathroy-Caradoc has experienced modest growth over the last 10 years with a more dramatic increase the last three years (see Table 1). The Municipality has averaged 120 units per year of housing growth and the population has increased by approximately 1,600 people from 2010 to 2019. The Municipality’s estimated 2019 population was approximately 22,150. The population numbers referenced throughout the background study are based on Census population and do not include Census undercoverage (which is estimated at 3.4 per cent). The population growth rate has been slightly less than the growth in households as a result of the decline in the average number of persons residing in dwelling units, a trend that is expected to continue. As illustrated in Table 2, nearly 73% of all new building permits in the municipality over the last 10-years have been of a single/semi detached unit type.

Employment growth over the last 10 years has occurred at a slower rate than population growth largely due to the global economic slowdown which particularly affected the manufacturing sector. Following the slow down, the municipality has seen a general increase in employment. Approximately 880 employees were added over the historical 10-year period. In 2019, about 8,800 people were employed in the community. The employment numbers referenced in the background study reflect how many employees work in Strathroy-Caradoc. This should not be confused with place of residence employment data which would be based on where residents of Strathroy-Caradoc work.

Occupancy levels for single- and semi-detached, row and other multiple and apartment units in Strathroy-Caradoc are provided in Table 3. The overall average occupancy level in Strathroy-Caradoc was 2.46 persons per unit (PPU). For the purposes of calculating the population residing in new dwelling units over the 5-year by-law, the following PPU values were used:

Singles/Semis	2.79
Rows and Other Multiples	2.30
Apartments	1.45

The chosen PPU values generally resemble the 2006–2016 average presented in Table 3. The rows and other multiples PPU in new units used in the development charges study is higher than the value in Table 3 since a value of 1.33 is likely artificially low due to a small sample size. Therefore, the PPU for row housing has been adjusted to a similar proportion to the change in single/semi detached units occupancy patterns since the last by-law.

#### **D. FORECAST METHOD AND RESULTS**

This section describes the method used to establish the development forecast for the periods of 2020 to 2029 and 2020 to 2036.

Development charges are levied on residential development as a charge per new unit. Therefore, for the residential forecast, a projection of both the *population growth*<sup>1</sup> as well as the *population in new housing* is required.

- The population growth determines the need for additional facilities and provides the foundation for the development-related capital program.
- When calculating the development charge, however, the development-related net capital costs are spread over the total additional population that occupies new dwelling units. This population in new units represents the population from which development charges will be collected.

Development charges are levied on non-residential development as a charge per unit of gross floor area (GFA). The non-residential forecast includes both a projection of *employment growth* as well as a projection of the *employment growth associated with new floorspace* in the Municipality.

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<sup>1</sup> Commonly referred to as “net population growth” in the context of development charges.

Forecasts of population and households in the Background Study are generally based on the “high” growth forecasts endorsed by Municipal Council on August 6<sup>th</sup> 2019 as presented in the Staff Report. The employment forecast was estimated to generally maintain the current activity level at the Municipality.

Area-specific development charges have been calculated for the Strathroy and Mount Brydges Service Areas. Growth in Mount Brydges is generally higher than forecasted in the previous DC Study as the number of new building permits issued for the area have increased in recent years and this trend is expected to continue. Details of the service area growth forecasts are included in the section below.

## **1. Municipal-wide Residential Forecast**

The residential forecast is based on a projection of household and population growth in the Municipality. The allocation of development related capital costs between the residential and non-residential sector, for all services, is based on forecasts of population in new housing units and employment growth. The population in new housing units was estimated based on Statistics Canada special run of data on occupancy patterns of household unit types by period of construction as well as historic trends.

The population and household growth, in part, determines the need for additional facilities and provides the foundation for the development-related capital program. Tables 4—6 summarize the population and household forecast. The tables show that the Municipality’s net population (or Census population) is forecast to increase over the ten-year forecast period by about 2,900 persons, from 22,150 in 2019 to 25,048 in 2029. The total forecast net population growth from 2020-2036 is 4,475, reaching a total census population of 26,624 people in 2036. Further, the number of occupied households will increase by 2,163, from 8,978 in 2019 to 11,141 in 2029. Over the longer-term (to 2036), the Municipality will add 3,494 households. As outlined in Table 5, of the total occupied household growth, most new units constructed in the Municipality will continue to be single/semi detached dwelling unit form, although, a transition to more medium-high density type dwelling units will occur over the planning period. By 2036, about 65% of new households constructed will be singles/semi detached dwelling units.

In addition to the net population forecast, a forecast of “population in new units” that will result from the addition of new housing units has been made. As shown in Table 6, population growth in new units is estimated by applying persons per unit (PPUs) values to the housing unit forecast: 2.79 for single and semi-detached units; 2.30 for rows and other multiples; and 1.45 for apartments. The forecasted persons in newly constructed units are generally based upon the historical time series of population growth in housing in the last ten year Census period (2006-2016) as released in the 2016 National Household Survey and historical trends. In total, 5,451



is the forecasted population in new dwelling units over the ten-year planning period and 8,760 people is forecasted to 2036.

## **2. Municipal-wide Non-Residential Forecast**

Non-residential development charges are calculated on a per square metre of gross floor area (GFA) basis. Therefore, as per the *DCA*, a forecast of non-residential building space has been developed. As with the residential forecast, a growth forecast from 2020 to 2029 has been developed as well as a forecast to 2036.

Employment densities have been used to convert the employment forecast into building space estimates. The following densities, by employment type, have been utilized in this Study:

Commercial/ Retail:	40 square metres per employee
Institutional:	60 square metres per employee
Employment Land:	90 square metres per employee

The employment forecast by type (i.e. employment land, rural, retail, etc.) is provided in Table 7, while the GFA forecasts are provided in Table 8. The total GFA growth is forecast at 70,804 square metres over the ten-year period with an accompanying employment growth of 1,148. Over the longer planning period to 2036, it is forecasted that 1,773 new employees will be accommodated in 111,051 square metres of new non-residential GFA.

## **E. AREA-SPECIFIC FORECAST**

Area-specific development charges are in place for the recovery of engineering related infrastructure in the Strathroy and Mount Brydges service area. Mount Brydges is expected to see its population in new units increase by 2,052 people to 2029 with modest employment growth of about 95 (Table 9A). These new employees will be accommodated in 3,800 square metres of new non-residential GFA in Mount Brydges.

The Strathroy Service Area is expected to see its population in new units increase by 5,311 people to 2036 and the majority of all new employment expected in the municipality would occur in Strathroy, which equates to growth of about 1,626 employees (Table 9B). These new employees will be accommodated in 101,865 square metres of new non-residential GFA in Strathroy. It should be noted that modest growth is expected in the rural areas which is incorporated into the municipal-wide development forecasts.

## APPENDIX A - TABLE 1

## MUNICIPALITY OF STRATHROY-CARADOC

## HISTORICAL POPULATION, OCCUPIED HOUSEHOLDS &amp; EMPLOYMENT SUMMARY

Mid-Year	Census Population	Growth	Occupied Households	Household Growth	PPU	Employment by Place of Work	Growth	Activity Rate
2010	20,773	202	7,870	94	2.64	7,915	18	38.1%
<b>2011</b>	<b>20,978</b>	<b>205</b>	7,965	<b>95</b>	<b>2.63</b>	<b>7,935</b>	<b>20</b>	<b>37.8%</b>
2012	20,951	-27	8,030	65	2.61	7,999	64	38.2%
2013	20,924	-27	8,095	65	2.58	8,063	64	38.5%
2014	20,897	-27	8,161	66	2.56	8,128	65	38.9%
2015	20,870	-27	8,227	66	2.54	8,193	65	39.3%
<b>2016</b>	<b>20,844</b>	<b>-26</b>	<b>8,294</b>	<b>67</b>	<b>2.51</b>	<b>8,259</b>	<b>66</b>	<b>39.6%</b>
2017	21,271	427	8,500	206	2.50	8,428	169	39.6%
2018	21,706	435	8,795	295	2.47	8,600	172	39.6%
2019	22,150	444	8,978	183	2.47	8,776	176	39.6%
Growth 2010-2019		1,579		1,202			879	

Source: Statistics Canada, Census of Canada; Hemson Estimates

Note: Activity rate is based on ratio of number of employees to census population.

## APPENDIX A - TABLE 2

**MUNICIPALITY OF STRATHROY-CARADOC**  
**HISTORICAL ANNUAL BUILDING PERMITS BY TYPE**

Year	Annual Housing Building Permits - Units				Building Permits - Shares By Unit Type			
	Singles & Semis	Rows	Apts.	Total	Singles & Semis	Rows	Apts.	Total
2010	70	-	4	74	95%	0%	5%	100%
<b>2011</b>	<b>52</b>	<b>-</b>	<b>6</b>	<b>58</b>	<b>90%</b>	<b>0%</b>	<b>10%</b>	<b>100%</b>
2012	71	-	6	77	92%	0%	8%	100%
2013	74	-	5	79	94%	0%	6%	100%
2014	56	-	29	85	66%	0%	34%	100%
2015	146	28	42	216	68%	13%	19%	100%
<b>2016</b>	<b>128</b>	<b>32</b>	<b>46</b>	<b>206</b>	<b>62%</b>	<b>16%</b>	<b>22%</b>	<b>100%</b>
2017	216	26	53	295	73%	9%	18%	100%
2018	152	31	-	183	83%	17%	0%	100%
2019*	120	49	38	207	58%	24%	18%	100%
<b>Growth 2010 - 2019</b>	<b>1,085</b>	<b>166</b>	<b>229</b>	<b>1,480</b>	<b>73%</b>	<b>11%</b>	<b>15%</b>	<b>100%</b>
<i>5 Year Avg.</i>	<i>152</i>	<i>33</i>	<i>36</i>	<i>221</i>				

Source: Municipality of Strathroy-Caradoc building permit statistics

\* Represents YTD permits as of October 31, 2019 data.

## APPENDIX A - TABLE 3

## MUNICIPALITY OF STRATHROY-CARADOC

## HISTORICAL HOUSEHOLDS BY PERIOD OF CONSTRUCTION SHOWING HOUSEHOLD SIZE

Dwelling Unit Type	Period of Construction										Period of Construction Summaries		
	Pre 1945	1946-1960	1961-1970	1971-1980	1981-1990	1991-1995	1996-2000	2001-2005	2006-2010	2011-2016	Pre 2006	2006-2016	Total
<b><i>Singles and Semis</i></b>													
Household Population	2,690	1,580	2,070	2,795	2,160	1,405	1,695	1,445	1,300	1,125	15,840	2,425	18,265
Households	1,045	675	850	1,085	825	495	575	510	465	405	6,060	870	6,930
Household Size	2.57	2.34	2.44	2.58	2.62	2.84	2.95	2.83	2.80	2.78	2.61	2.79	2.64
<b><i>Rows</i></b>													
Household Population	80	0	65	95	30	0	80	50	60	0	400	60	460
Households	20	0	30	60	15	0	45	30	35	10	200	45	245
Household Size	0.00	0.00	2.17	1.58	2.00	0.00	1.78	1.67	1.71	0.00	2.00	1.33	1.88
<b><i>Apartments (excl. Duplexes)</i></b>													
Household Population	315	170	150	200	280	125	105	15	110	35	1,360	145	1,505
Households	200	105	110	135	230	80	70	20	90	10	950	100	1,050
Household Size	1.58	1.62	1.36	1.48	1.22	1.56	1.50	0.75	1.22	3.50	1.43	1.45	1.43
<b><i>Duplexes</i></b>													
Household Population	30	40	40	0	0	0	0	0	0	0	110	0	110
Households	20	20	15	10	10	0	0	0	0	0	75	0	75
Household Size	1.50	2.00	2.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.47	0.00	1.47
<b><i>All Units (excl. Duplexes)</i></b>													
Household Population	3,085	1,750	2,285	3,090	2,470	1,530	1,880	1,510	1,470	1,160	17,600	2,630	20,230
Households	1,265	780	990	1,280	1,070	575	690	560	590	425	7,210	1,015	8,225
Household Size	2.44	2.24	2.31	2.41	2.31	2.66	2.72	2.70	2.49	2.73	2.44	2.59	2.46

Source: Statistics Canada, 2016 National Household Survey Special Run.

## APPENDIX A - TABLE 4

**MUNICIPALITY OF STRATHROY-CARADOC**  
**POPULATION, HOUSEHOLD & EMPLOYMENT FORECAST SUMMARY**

Mid-Year	Census Population	Census Pop'n Growth	Occupied Households	Total Household Growth	Household Size	Employment by POW	Employment by POW Growth	Activity Rate
2019	22,150	444	8,978	183	2.47	8,776	176	39.6%
2020	22,602	453	9,185	207	2.46	8,956	179	39.6%
<b>2021</b>	<b>23,064</b>	<b>461</b>	<b>9,411</b>	<b>226</b>	<b>2.45</b>	<b>9,138</b>	<b>183</b>	<b>39.6%</b>
2022	23,313	250	9,642	231	2.42	9,237	99	39.6%
2023	23,565	252	9,879	237	2.39	9,337	100	39.6%
2024	23,820	255	10,122	243	2.35	9,438	101	39.6%
2025	24,077	257	10,371	249	2.32	9,540	102	39.6%
<b>2026</b>	<b>24,337</b>	<b>260</b>	<b>10,573</b>	<b>202</b>	<b>2.30</b>	<b>9,643</b>	<b>103</b>	<b>39.6%</b>
2027	24,572	235	10,759	186	2.28	9,736	93	39.6%
2028	24,809	237	10,948	189	2.27	9,830	94	39.6%
2029	25,048	239	11,141	193	2.25	9,925	95	39.6%
2030	25,290	242	11,337	196	2.23	10,021	96	39.6%
<b>2031</b>	<b>25,534</b>	<b>244</b>	<b>11,536</b>	<b>199</b>	<b>2.21</b>	<b>10,117</b>	<b>97</b>	<b>39.6%</b>
2032	25,748	214	11,717	181	2.20	10,202	85	39.6%
2033	25,964	216	11,901	184	2.18	10,288	86	39.6%
2034	26,182	218	12,088	187	2.17	10,374	86	39.6%
2035	26,402	220	12,278	190	2.15	10,461	87	39.6%
<b>2036</b>	<b>26,624</b>	<b>222</b>	<b>12,472</b>	<b>194</b>	<b>2.13</b>	<b>10,549</b>	<b>88</b>	<b>39.6%</b>
2020-2029		2,898		2,163			1,148	
2020-2036		4,475		3,494			1,773	

Source: Municipality of Strathroy-Caradoc and Hemson Consulting, 2019

Note: Census population does not include net undercount.

## APPENDIX A - TABLE 5

MUNICIPALITY OF STRATHROY-CARADOC  
FORECAST OF HOUSEHOLD GROWTH BY UNIT TYPE

Mid-Year	Annual Growth in Total Occupied Households				Shares By Unit Type			
	Singles & Semis	Rows & Other Multiples	Apartments	Total New Households	Singles & Semis	Rows & Other Multiples	Apartments	Total
2020	152	23	32	207	73%	11%	15%	100%
<b>2021</b>	<b>166</b>	<b>25</b>	<b>35</b>	<b>226</b>	<b>73%</b>	<b>11%</b>	<b>15%</b>	<b>100%</b>
2022	169	25	36	231	73%	11%	15%	100%
2023	174	26	37	237	73%	11%	15%	100%
2024	178	27	38	243	73%	11%	15%	100%
2025	183	27	39	249	73%	11%	15%	100%
<b>2026</b>	<b>145</b>	<b>24</b>	<b>32</b>	<b>202</b>	<b>72%</b>	<b>12%</b>	<b>16%</b>	<b>100%</b>
2027	134	22	30	186	72%	12%	16%	100%
2028	134	25	30	189	71%	13%	16%	100%
2029	137	25	31	193	71%	13%	16%	100%
2030	137	27	31	196	70%	14%	16%	100%
<b>2031</b>	<b>137</b>	<b>30</b>	<b>32</b>	<b>199</b>	<b>69%</b>	<b>15%</b>	<b>16%</b>	<b>100%</b>
2032	123	29	29	181	68%	16%	16%	100%
2033	123	29	31	184	67%	16%	17%	100%
2034	123	32	32	187	66%	17%	17%	100%
2035	124	32	34	190	65%	17%	18%	100%
<b>2036</b>	<b>126</b>	<b>33</b>	<b>35</b>	<b>194</b>	<b>65%</b>	<b>17%</b>	<b>18%</b>	<b>100%</b>
2020-2029	1,572	250	339	2,163	73%	12%	16%	100%
2020-2036	2,466	463	563	3,494	71%	13%	16%	100%

Source: Hemson Consulting Ltd. 2019

## APPENDIX A - TABLE 6

## MUNICIPALITY OF STRATHROY-CARADOC

## FORECAST POPULATION GROWTH IN NEW HOUSEHOLDS BY UNIT TYPE\*

Mid-Year	Singles & Semis	Rows & Other Multiples	Apartments	Total Population in New Households
2020	423	53	46	523
<b>2021</b>	<b>462</b>	<b>57</b>	<b>51</b>	<b>570</b>
2022	472	58	52	583
2023	485	60	53	598
2024	497	61	55	613
2025	509	63	56	628
<b>2026</b>	<b>405</b>	<b>56</b>	<b>47</b>	<b>508</b>
2027	374	51	43	469
2028	374	57	44	475
2029	382	58	45	485
2030	383	63	45	491
<b>2031</b>	<b>383</b>	<b>69</b>	<b>46</b>	<b>498</b>
2032	343	67	42	452
2033	344	68	45	457
2034	344	73	46	464
2035	345	74	50	468
<b>2036</b>	<b>352</b>	<b>76</b>	<b>51</b>	<b>478</b>
2020-2029	4,385	575	491	5,451
2020-2036	6,879	1,064	816	8,760

\*Based on PPUs

2.79

2.30

1.45

Source: Hemson Consulting Ltd., 2019

APPENDIX A - TABLE 7  
MUNICIPALITY OF STRATHROY-CARADOC  
NON-RESIDENTIAL GROWTH FORECAST

Mid-Year	Commercial/Retail		Employment Land		Institutional		Rural		Total For DC Study		Work at Home		Total with Work at Home	
	Total Emp	Empl Growth	Total Emp	Empl Growth	Total Emp	Empl Growth	Total Emp	Empl Growth	Total Emp	Empl Growth	Total Emp	Empl Growth	Total Emp	Empl Growth
2019	2,690		3,939		1,099		1,049		8,776		765		9,541	
2020	2,763	73	4,010	72	1,121	22	1,061	12	8,956	179	781	16	9,736	195
<b>2021</b>	<b>2,838</b>	<b>75</b>	<b>4,083</b>	<b>73</b>	<b>1,144</b>	<b>23</b>	<b>1,074</b>	<b>13</b>	<b>9,138</b>	<b>183</b>	<b>797</b>	<b>16</b>	<b>9,935</b>	<b>199</b>
2022	2,887	49	4,118	35	1,156	12	1,076	2	9,237	99	805	9	10,043	107
2023	2,937	50	4,153	35	1,169	13	1,078	2	9,337	100	814	9	10,151	109
2024	2,987	51	4,189	36	1,182	13	1,081	2	9,438	101	823	9	10,261	110
2025	3,048	61	4,224	36	1,194	13	1,073	-7	9,540	102	832	9	10,372	111
<b>2026</b>	<b>3,110</b>	<b>62</b>	<b>4,260</b>	<b>36</b>	<b>1,207</b>	<b>13</b>	<b>1,065</b>	<b>-8</b>	<b>9,643</b>	<b>103</b>	<b>841</b>	<b>9</b>	<b>10,484</b>	<b>112</b>
2027	3,169	59	4,292	31	1,219	12	1,056	-9	9,736	93	849	8	10,585	101
2028	3,229	60	4,323	32	1,231	12	1,047	-9	9,830	94	857	8	10,687	102
2029	3,290	61	4,355	32	1,243	12	1,037	-10	9,925	95	865	8	10,790	103
2030	3,352	62	4,387	32	1,255	12	1,027	-10	10,021	96	874	8	10,894	104
<b>2031</b>	<b>3,415</b>	<b>63</b>	<b>4,419</b>	<b>32</b>	<b>1,267</b>	<b>12</b>	<b>1,017</b>	<b>-10</b>	<b>10,117</b>	<b>97</b>	<b>882</b>	<b>8</b>	<b>10,999</b>	<b>105</b>
2032	3,474	59	4,446	27	1,277	11	1,005	-12	10,202	85	889	7	11,092	92
2033	3,534	60	4,473	27	1,288	11	993	-12	10,288	86	897	7	11,185	93
2034	3,595	61	4,500	27	1,299	11	980	-12	10,374	86	904	8	11,278	94
2035	3,656	62	4,528	27	1,310	11	968	-13	10,461	87	912	8	11,373	95
<b>2036</b>	<b>3,719</b>	<b>62</b>	<b>4,555</b>	<b>28</b>	<b>1,321</b>	<b>11</b>	<b>955</b>	<b>-13</b>	<b>10,549</b>	<b>88</b>	<b>920</b>	<b>8</b>	<b>11,469</b>	<b>96</b>
Growth 2020-2029		600		416		144		-12		1,148		100		1,249
Growth 2020-2036		1,029		616		222		-94		1,773		155		1,928

Source: Hemson Consulting Ltd., 2019



## APPENDIX A - TABLE 8

## MUNICIPALITY OF STRATHROY-CARADOC

## FORECAST NON-RESIDENTIAL SPACE (SQUARE METRES OF GROSS FLOOR AREA)

Commercial/Retail	40.0 m <sup>2</sup> per employee
Employment Land Employment	90.0 m <sup>2</sup> per employee
Institutional	65.0 m <sup>2</sup> per employee

Mid-Year	Commercial/Retail		Employment Land		Institutional		Institutional		Total For DC Study	
	Emp Growth in New Space	New Space (m <sup>2</sup> )	Emp Growth in New Space	New Space (m <sup>2</sup> )	Emp Growth in New Space	New Space (m <sup>2</sup> )	Emp Growth in New Space	New Space (m <sup>2</sup> )	Emp Growth in New Space	New Space (m <sup>2</sup> )
2020	73	2,915	72	6,437	22	1,459	12	0	179	10,812
<b>2021</b>	<b>75</b>	<b>2,987</b>	<b>73</b>	<b>6,543</b>	<b>23</b>	<b>1,487</b>	<b>13</b>	<b>0</b>	<b>183</b>	<b>11,017</b>
2022	49	1,967	35	3,144	12	805	2	0	99	5,915
2023	50	1,995	35	3,166	13	813	2	0	100	5,973
2024	51	2,026	36	3,195	13	822	2	0	101	6,044
2025	61	2,434	36	3,209	13	829	-7	0	102	6,471
<b>2026</b>	<b>62</b>	<b>2,475</b>	<b>36</b>	<b>3,242</b>	<b>13</b>	<b>839</b>	<b>-8</b>	<b>0</b>	<b>103</b>	<b>6,557</b>
2027	59	2,368	31	2,821	12	757	-9	0	93	5,946
2028	60	2,402	32	2,841	12	764	-9	0	94	6,007
2029	61	2,435	32	2,855	12	771	-10	0	95	6,061
2030	62	2,474	32	2,885	12	780	-10	0	96	6,139
<b>2031</b>	<b>63</b>	<b>2,507</b>	<b>32</b>	<b>2,897</b>	<b>12</b>	<b>786</b>	<b>-10</b>	<b>0</b>	<b>97</b>	<b>6,191</b>
2032	59	2,370	27	2,417	11	690	-12	0	85	5,477
2033	60	2,400	27	2,431	11	696	-12	0	86	5,528
2034	61	2,432	27	2,446	11	703	-12	0	86	5,581
2035	62	2,464	27	2,462	11	709	-13	0	87	5,635
<b>2036</b>	<b>62</b>	<b>2,498</b>	<b>28</b>	<b>2,482</b>	<b>11</b>	<b>717</b>	<b>-13</b>	<b>0</b>	<b>88</b>	<b>5,697</b>
Growth 2019-2028	600	24,005	416	37,453	144	9,346	-12	0	1,148	70,804
Growth 2020-2036	1,029	41,149	616	55,473	222	14,429	-94	0	1,773	111,051

Source: Hemson Consulting Ltd., 2019

<b>Table 9A</b> <b>Area-Specific Forecasts for the Mount Brydges Service Area (2020-2029)</b>				
<b>Service Area</b>	<b>Occupied Households</b>	<b>Population in New Units</b>	<b>Employment</b>	<b>Gross floor Area (m<sup>2</sup>)</b>
<b>Mount Brydges (Water and Wastewater)</b>	774	2,052	95	3,800

<b>Table 9B</b> <b>Area-Specific Forecasts for the Strathroy Service Area (2020-2036)</b>				
<b>Service Area</b>	<b>Occupied Households</b>	<b>Population in New Units</b>	<b>Employment</b>	<b>Gross floor Area (m<sup>2</sup>)</b>
<b>Strathroy (Water, Wastewater and Roads and Related)</b>	2,200	5,311	1,626	101,865

## **APPENDIX B**

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### ***FIRE AND POLICE SERVICES TECHNICAL APPENDIX***

## APPENDIX B

### DEVELOPMENT CHARGES CALCULATIONS TECHNICAL APPENDIX INTRODUCTION AND OVERVIEW

The following appendix provides the detailed analysis undertaken to establish the development charge rates for the services of Fire and Police Services in the Municipality of Strathroy-Caradoc. The appendix is divided into two sub-sections, with one section for each of the services:

- B.1 Fire Services
- B.2 Police Services

Both sub-sections, contain a set of three tables. The tables provide the background data and analysis undertaken to arrive at the calculated development charge rates for that particular service. An overview of the content and purpose of each of the tables is given below.

#### TABLE 1 HISTORICAL SERVICE LEVELS

Table 1 presents the data used to determine the 10-year historical service level. The *Development Charges Act (DCA)* and *Ontario Regulation 82/98* require that development charges be set at a level no higher than the average service level provided in the municipality over the ten year period immediately preceding the preparation of the background study, on a service by service basis. For the purpose of this study, the historical inventory period is defined as 2010 to 2019.

*O. Reg. 82/98* requires that when defining and determining historical service levels, both the quantity and quality of service be taken into consideration. In most cases, the service levels are initially established in quantitative terms. For example, service levels for buildings are presented in terms of square feet per unit. The qualitative aspect is introduced by considering the monetary value of the facility or service. In the case of buildings, for example, the cost would be shown in terms of cost per square foot to replace or construct a facility of the same quality. This approach helps to ensure that the development-related capital facilities that are to be funded by new development reflect not only the quantity (number and size), but also the quality (value or cost) of service provided by the Municipality in the past. Both the quantitative and qualitative aspects of service levels used in the current analysis are based on information provided by Municipal staff. This information is generally

based on historical records and experience with costs to acquire or construct similar facilities, equipment and infrastructure.

The final page of Table 1 shows the calculation of the “maximum allowable funding envelope”, net of uncommitted excess capacity. The maximum allowable funding envelope is defined as the ten-year historical service level (expressed as \$/population and employment) multiplied by the forecast increase in net population and employment over the planning period. The resulting figure is the value of capital infrastructure that would have to be constructed for that particular service so that the 10-year historical service level is maintained.

There is also a requirement in the *DCA* to consider “excess capacity” within the Municipality’s existing infrastructure that may be available to partially meet the future servicing requirements. If Council has expressed its intent, before or at the time the capacity was created, to recoup the cost of providing the capacity from new development, it is considered “committed excess capacity” under the *DCA* and the associated capital cost is eligible for recovery. Should uncommitted excess capacity exist it will be determined whether or not this capacity will be available to service new development and, if so, appropriate adjustments will be made to the calculations.

**TABLE 2      2020 – 2029 DEVELOPMENT-RELATED CAPITAL PROGRAM AND  
CALCULATION OF THE “UNADJUSTED” DEVELOPMENT CHARGES**

The *DCA* requires that Council express its intent to provide future capital facilities to support future development. Based on the development forecasts presented in Appendix A, Municipal staff, in collaboration with consultants, has developed a development-related capital forecast which sets out the projects required to service anticipated growth for the ten-year period from 2020 to 2029. The development-related capital program for each service is shown as Table 2 of each sub-section.

To determine the share of the program that is eligible for recovery through development charges, the gross project costs are reduced by any anticipated grants, subsidies or other recoveries, and “benefit to existing” shares.

A benefit to existing share represents the portion of a capital project that will benefit the existing community. It could, for example, represent a portion of a new facility that will, at least in part, replace a facility that is demolished, redeployed or will otherwise not be available to serve its former function (a “replacement” share). The benefit to existing share of the capital program is not deemed to be development-

related and is therefore removed from the development charge calculation. The capital cost for benefit to existing shares will require funding from non-development charge sources, typically property taxes or user fees.

The capital program, less any benefit to existing shares yields the development-related costs. Although deemed development-related, not all of the net development-related capital program may be recoverable from development charges in the period from 2020 to 2029. For some services, existing development charge reserve funds may be available to fund a share of the program.

Additionally, for some services, a portion of the capital program will service development that will not occur until after 2029. This portion of the capital program is either deemed “pre-built” service capacity to be considered as committed excess capacity to be recovered from post-2029 development or represents a future service level increase that is ineligible for development charge recovery.

The remaining portion of the net capital program represents the development-related cost that may be included in the development charge calculation. In all cases this amount is equal to or less than the maximum allowable funding envelope that is calculated on the final page of Table 1. The result is the discounted development-related net capital costs eligible for recovery against growth over the forecast period from 2020 to 2029.

### **Calculation of the Unadjusted Development Charges Rates**

The section below the capital program displays the calculation of the “unadjusted” development charge rates. The term “unadjusted” development charge is used to distinguish the charge that is calculated prior to cash flow financing considerations. The cash flow analysis is shown in Table 3.

The first step in determining the unadjusted development charge rate is to allocate the development-related net capital cost between the residential and non-residential sectors. For both Fire and Police Services, the development-related costs have been apportioned as 83% residential and 17% non-residential. This ratio is based on forecast changes in population in new housing units and employment in new non-residential for space over the planning period.

The residential share of the 2020 to 2029 DC eligible costs are then divided by the forecast population growth in new dwelling units. This gives the unadjusted residential development charge per capita. The non-residential development-related

net capital costs are divided by the forecast increase in non-residential gross floor area (GFA). This yields a charge per square metre of new non-residential GFA.

### **TABLE 3      CASH FLOW ANALYSIS**

A cash flow analysis is also undertaken to account for the timing of projects and receipt of development charges. Interest earnings or borrowing costs, therefore, are accounted for in the calculation as allowed under the *DCA*. Based on the development forecast, the analysis calculates the development charge rate required to finance the net development-related capital spending plan, including provisions for any borrowing costs or interest earnings on the reserve funds. The cash flow analysis is designed so that the closing cash balance at the end of the planning period is as close to nil as possible.

In order to determine appropriate development charge rates reflecting borrowing and earnings necessary to support the net development-related funding requirement, assumptions are used for the inflation rate and interest rate. An inflation rate of 2% is used for the funding requirements and interest rates of 5.5% (negative balance) and 3.5% (positive balance) are used for borrowing/earnings on the funds.

Table 3 displays the results of the cash flow analysis and provides the adjusted or final per capita residential and per square metre (of GFA) non-residential development charges.

## APPENDIX B.1

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### *FIRE SERVICE*



## APPENDIX B.1

### FIRE SERVICE

The Strathroy-Caradoc Fire Department provides emergency and support services to the citizens of the community from three stations located in Strathroy, Mount Brydges and Melbourne. The *Fire Protection and Prevention Act* defines fire protection services as “...fire suppression, fire prevention, fire safety education, communication, training of persons involved in the provision of fire protection services, rescue and emergency services and the delivery of all those services”. The department currently draws on about 81 firefighters.

#### TABLE 1 HISTORICAL SERVICE LEVELS

Table 1 displays the 10-year historical inventory for buildings, land, vehicles and furniture and equipment. Fire services in Strathroy-Caradoc are provided from 17,190 square feet of building space on 0.67 hectares of land valued at approximately \$5.16 million and \$113,500 respectively.

The Fire Department currently has a fleet of 12 vehicles with a replacement cost of approximately \$4.92 million. Furniture and equipment, including communications equipment, firefighter personal equipment, fire hoses, rescue equipment and other miscellaneous station equipment add another \$2.59 million to the value of the inventory.

The Fire Department’s 2019 inventory of capital assets totals about \$12.78 million and the ten-year average historical service level is calculated at \$435.67 per population and employee. The ten-year maximum allowable funding envelope, based on the historical service level and the projected growth in net population and employment, is calculated at \$1.76 million.

#### TABLE 2 2020 – 2029 DEVELOPMENT-RELATED CAPITAL PROGRAM & CALCULATION OF THE “UNADJUSTED” DEVELOPMENT CHARGES

The 2020–2029 development-related capital program contains the cost for the land and expansion and relocation of Fire Station 1, a new Fire Station in the North End and the relocation of Station 2 that includes a training facility. The total gross cost of the buildings, land and furnishings projects is \$9.41 million. In addition to the costs above, fleet, equipment and studies have also been identified over 2020-2029 planning horizon at a cost of \$2.74 million and a Fire Master Plan is also included at a cost of \$40,000.

No grants, subsidies or other contributions have been identified for the Fire services capital program. A benefit to existing share has been assigned to many projects in the program and are based on the increase in size of the facility, capacity of equipment or proportion of new firefighters to be added over the 10-year period. In regards to the Station 1 expansion and relocation, the existing facility is intended to be decommissioned, therefore, the replacement share is equal to the value of the existing 8,700 square foot station which will be decommissioned when the new 17,400 square foot facility is constructed. In regards to the relocation of Station 2, the Municipality intends to relocate this station closer to the growth areas and include a training facility on site. The project at this time is considered to largely be a benefit to the existing community (the BTE share is calculated relative to population and employment growth in the period), however, the results of the forthcoming Fire Master Plan in 2020 may re-scope the project and this adjustment will be reflected in subsequent development charges studies. The total share of the replacement or benefit to existing shares for all projects amounts to \$5.73 million and has been netted of the total DC eligible cost.

Approximately \$130,120 is related to the reserves currently available in the Fire Services capital program, and these funds, have been applied to projects occurring within the first two years of the capital program. The funding envelope of \$1.76 million restricts the amount eligible for recovery in the 2020-2029 period and therefore \$4.57 million is deemed to benefit development post 2029. It should be noted that the new fire station in the north end as well as the relocation of Station 2 is considered to benefit development beyond the planning period and is not included for development charges recovery in this period.

The development-related net capital cost of \$1.76 million is allocated 83% against residential development, or \$1.46 million, and 17% against non-residential development, or \$299,723. This ratio is based on each sector's share of population in new units and employment growth to 2029. The residential share of the net development-related capital cost is divided by the ten-year forecast growth in population in new units (5,451) to derive an unadjusted charge of \$268.44 per capita. The non-residential share of the net growth-related capital cost is divided by the ten-year forecast growth in floor space (70,804) to derive an unadjusted charge of \$4.23 per m<sup>2</sup>.

**TABLE 3      CASH FLOW ANALYSIS**

After cash flow consideration, the residential calculated charge increases to \$293.87 per capita and the non-residential charge increases to \$4.59 per m<sup>2</sup>.

The following table summarizes the Fire Services development charge:

<b>FIRE SERVICES SUMMARY</b>						
10-year Hist. Service Level \$/pop & emp	2020-2029		Unadjusted		Adjusted	
	Development-Related Total	Capital Program Net DC Recoverable	Development Charge \$/capita	\$/sq.m	Development Charge \$/capita	\$/sq.m
\$435.67	\$12,192,300	\$1,763,074	\$268.44	\$4.23	<b>\$293.87</b>	<b>\$4.59</b>

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APPENDIX B.1  
TABLE 1

MUNICIPALITY OF STRATHROY-CARADOC  
INVENTORY OF CAPITAL ASSETS  
FIRE SERVICES

BUILDINGS Station Name	# of Square Feet										UNIT COST (\$/sq.ft)
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Strathroy-23 Zimmerman St	8,700	8,700	8,700	8,700	8,700	8,700	8,700	8,700	8,700	8,700	\$300
Mount Brydges-686/688 Bowen St	5,200	5,200	5,200	5,200	5,200	5,200	5,200	5,200	5,200	5,200	\$300
Melbourne-21912 Melbourne Rd	3,286	3,286	3,286	3,286	3,286	3,286	3,286	3,286	3,286	3,286	\$300
<b>Total (sq.ft.)</b>	<b>17,186</b>	<b>17,186</b>	<b>17,186</b>	<b>17,186</b>	<b>17,186</b>	<b>17,186</b>	<b>17,186</b>	<b>17,186</b>	<b>17,186</b>	<b>17,186</b>	
<b>Total (\$000)</b>	<b>\$5,155.8</b>	<b>\$5,155.8</b>	<b>\$5,155.8</b>	<b>\$5,155.8</b>	<b>\$5,155.8</b>	<b>\$5,155.8</b>	<b>\$5,155.8</b>	<b>\$5,155.8</b>	<b>\$5,155.8</b>	<b>\$5,155.8</b>	

LAND Station Name	# of Hectares										UNIT COST (\$/ha)
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Strathroy-23 Zimmerman St	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	\$170,000
Mount Brydges-686/688 Bowen St	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	\$170,000
Melbourne-21912 Melbourne Rd	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	\$170,000
<b>Total (ha)</b>	<b>0.67</b>	<b>0.67</b>	<b>0.67</b>	<b>0.67</b>	<b>0.67</b>	<b>0.67</b>	<b>0.67</b>	<b>0.67</b>	<b>0.67</b>	<b>0.67</b>	
<b>Total (\$000)</b>	<b>\$113.5</b>	<b>\$113.5</b>	<b>\$113.5</b>	<b>\$113.5</b>	<b>\$113.5</b>	<b>\$113.5</b>	<b>\$113.5</b>	<b>\$113.5</b>	<b>\$113.5</b>	<b>\$113.5</b>	

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APPENDIX B.1  
TABLE 1

MUNICIPALITY OF STRATHROY-CARADOC  
INVENTORY OF CAPITAL ASSETS  
FIRE SERVICES

VEHICLES Vehicle Type	# of Vehicles										UNIT COST (\$/vehicle)
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<b>Strathroy Station</b>											
1975 King Seagrave Pumper	1	-	-	-	-	-	-	-	-	-	\$408,000
1987 Ford LTC Pumper (E12)	1	1	1	1	1	-	-	-	-	-	\$524,000
1988 E-ONE Aerial Truck (A17)	1	1	1	1	1	1	-	-	-	-	\$1,164,000
1992 International Rescue Unit (R16)	1	1	1	1	1	1	1	1	1	1	\$233,000
2001 S&S Pumper (E11)	1	1	1	1	1	1	1	1	1	1	\$535,000
2010 Chevrolet Silverado Cheyenne (C1)	1	1	1	1	1	1	1	1	1	1	\$54,000
2013 Spartan Pumper/Rescue (E11)	-	-	-	1	1	1	1	1	1	1	\$453,000
2014 Rosenbauer Aerial T17	-	-	-	-	-	1	1	1	1	1	\$1,619,000
2019 Chevrolet Tahoe	-	-	-	-	-	-	-	-	-	1	\$70,000
<b>Mt. Brydges Station</b>											
2009 Pumper/Tanker (T24)	1	1	1	1	1	1	1	1	1	1	\$408,000
2003 Rosenbauer Pumper (E21)	1	1	1	1	1	1	1	1	1	1	\$524,000
2000 Ford MFT (S25)	1	1	1	1	1	1	1	1	1	1	\$105,000
<b>Melbourne Station</b>											
1987 Ford Tanker (E34)	1	1	1	1	-	-	-	-	-	-	\$408,000
1999 Ford CTV (S35)	1	1	1	1	1	1	1	1	1	-	\$105,000
2006 Rosenbauer Pumper (E31)	1	1	1	1	1	1	1	1	1	1	\$524,000
2013 Dependable Tanker (T34)	-	-	-	1	1	1	1	1	1	1	\$289,000
2001 Ford E350 (S15)	1	1	1	1	1	1	1	1	1	1	\$105,000
<b>Total (#)</b>	<b>13</b>	<b>12</b>	<b>12</b>	<b>14</b>	<b>13</b>	<b>13</b>	<b>12</b>	<b>12</b>	<b>12</b>	<b>12</b>	
<b>Total (\$000)</b>	<b>\$5,097.0</b>	<b>\$4,689.0</b>	<b>\$4,689.0</b>	<b>\$5,431.0</b>	<b>\$5,023.0</b>	<b>\$6,118.0</b>	<b>\$4,954.0</b>	<b>\$4,954.0</b>	<b>\$4,954.0</b>	<b>\$4,919.0</b>	

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APPENDIX B.1  
TABLE 1

1987 Ford LTC Pumper (E12)  
1988 E-ONE Aerial Truck (A17)  
1992 International Rescue Unit (R16)

FURNITURE & EQUIPMENT (excluding computers) Description	Total Value of Furniture & Equipment (\$)									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Communications Equipment	\$478,000	\$478,000	\$478,000	\$478,000	\$478,000	\$478,000	\$574,000	\$670,000	\$670,000	\$670,000
Firefighting Equipment (bunker gear - \$9,000 per FF)	\$675,000	\$675,000	\$675,000	\$675,000	\$675,000	\$729,000	\$729,000	\$729,000	\$729,000	\$729,000
Fire Hose	\$204,000	\$204,000	\$204,000	\$204,000	\$204,000	\$204,000	\$204,000	\$204,000	\$204,000	\$204,000
Rescue and Misc. Equipment	\$838,500	\$838,500	\$838,500	\$838,500	\$838,500	\$838,500	\$838,500	\$838,500	\$838,500	\$838,500
Alternator (Strathroy Station)	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000
Office Equipment	\$64,000	\$64,000	\$64,000	\$64,000	\$64,000	\$64,000	\$64,000	\$64,000	\$64,000	\$64,000
<b>Total (\$000)</b>	<b>\$2,341.5</b>	<b>\$2,341.5</b>	<b>\$2,341.5</b>	<b>\$2,341.5</b>	<b>\$2,341.5</b>	<b>\$2,395.5</b>	<b>\$2,491.5</b>	<b>\$2,587.5</b>	<b>\$2,587.5</b>	<b>\$2,587.5</b>

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APPENDIX B.1  
TABLE 1

**MUNICIPALITY OF STRATHROY-CARADOC  
CALCULATION OF SERVICE LEVELS  
FIRE SERVICES**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Historical Population	20,773	20,978	20,951	20,924	20,897	20,870	20,844	21,271	21,706	22,150
Historical Employment	<u>7,915</u>	<u>7,935</u>	<u>7,999</u>	<u>8,063</u>	<u>8,128</u>	<u>8,193</u>	<u>8,259</u>	<u>8,428</u>	<u>8,600</u>	<u>8,776</u>
<b>Total Historical Population &amp; Employment</b>	<b>28,688</b>	<b>28,913</b>	<b>28,950</b>	<b>28,987</b>	<b>29,025</b>	<b>29,063</b>	<b>29,103</b>	<b>29,699</b>	<b>30,306</b>	<b>30,926</b>

**INVENTORY SUMMARY (\$000)**

Buildings	\$5,155.8	\$5,155.8	\$5,155.8	\$5,155.8	\$5,155.8	\$5,155.8	\$5,155.8	\$5,155.8	\$5,155.8	\$5,155.8
Land	\$113.5	\$113.5	\$113.5	\$113.5	\$113.5	\$113.5	\$113.5	\$113.5	\$113.5	\$113.5
Vehicles	\$5,097.0	\$4,689.0	\$4,689.0	\$5,431.0	\$5,023.0	\$6,118.0	\$4,954.0	\$4,954.0	\$4,954.0	\$4,919.0
Furniture & Equipment (Excluding Computers)	\$2,341.5	\$2,341.5	\$2,341.5	\$2,341.5	\$2,341.5	\$2,395.5	\$2,491.5	\$2,587.5	\$2,587.5	\$2,587.5
<b>Total (\$000)</b>	<b>\$12,707.8</b>	<b>\$12,299.8</b>	<b>\$12,299.8</b>	<b>\$13,041.8</b>	<b>\$12,633.8</b>	<b>\$13,782.8</b>	<b>\$12,714.8</b>	<b>\$12,810.8</b>	<b>\$12,810.8</b>	<b>\$12,775.8</b>

<b>SERVICE LEVEL (\$/population &amp; employment)</b>											<b>Average Service Level</b>
Buildings	\$179.72	\$178.32	\$178.09	\$177.87	\$177.63	\$177.40	\$177.16	\$173.60	\$170.12	\$166.71	\$175.66
Land	\$3.96	\$3.93	\$3.92	\$3.92	\$3.91	\$3.91	\$3.90	\$3.82	\$3.75	\$3.67	\$3.87
Vehicles	\$177.67	\$162.18	\$161.97	\$187.36	\$173.06	\$210.51	\$170.22	\$166.81	\$163.46	\$159.06	\$173.23
Furniture & Equipment (Excluding Computers)	\$81.62	\$80.98	\$80.88	\$80.78	\$80.67	\$82.42	\$85.61	\$87.13	\$85.38	\$83.67	\$82.91
<b>Total (\$/pop &amp; empl)</b>	<b>\$442.97</b>	<b>\$425.41</b>	<b>\$424.86</b>	<b>\$449.92</b>	<b>\$435.27</b>	<b>\$474.24</b>	<b>\$436.89</b>	<b>\$431.36</b>	<b>\$422.71</b>	<b>\$413.11</b>	<b>\$435.67</b>

**CALCULATION OF MAXIMUM ALLOWABLE FUNDING ENVELOPE  
MUNICIPALITY OF STRATHROY-CARADOC**

<b>10-Year Funding Envelope Calculation</b>	
10-Year Average Service Level 2010 - 2019	\$435.67
Net Population & Employment Growth 2020 - 2029	4,047
<b>Maximum Allowable Funding Envelope</b>	<b>\$1,763,074</b>

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TABLE 2

MUNICIPALITY OF STRATHROY-CARADOC  
2020 DEVELOPMENT CHARGES BACKGROUND STUDY  
DEVELOPMENT-RELATED CAPITAL PROGRAM

Service	Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Cost		Total DC Eligible Costs	DC Eligible Costs		
						Replacement & BTE Shares	Replacement and BTE Share		DC Eligible Costs	Available DC Reserves	2020-2029
1.0 FIRE SERVICES											
1.1 Buildings, Land & Furnishings											
	1.1.1 Fire Station 1 Land Acquisition (2 ha or 5 acres)	2021	\$ 344,000	\$ -	\$ 344,000	17%	\$ 58,470	\$ 285,530	\$ 3,324	\$ 282,206	\$ -
	1.1.2 Fire Station 1 Expansion and Relocation (17,400 sq.ft)	2022	\$ 5,220,000	\$ -	\$ 5,220,000	50%	\$ 2,610,000	\$ 2,610,000	\$ -	\$ 1,480,867	\$ 1,129,133
	1.1.3 Fire Station North End Land Acquisition	2025	\$ 36,000	\$ -	\$ 36,000	0%	\$ -	\$ 36,000	\$ -	\$ -	\$ 36,000
	1.1.4 New Fire Station in North End (5,200 sq.ft)	2026	\$ 1,560,000	\$ -	\$ 1,560,000	0%	\$ -	\$ 1,560,000	\$ -	\$ -	\$ 1,560,000
	1.1.5 Relocation of Station 2 (plus training facility)	2028	\$ 1,560,000	\$ -	\$ 1,560,000	87%	\$ 1,355,869	\$ 204,131	\$ -	\$ -	\$ 204,131
	1.1.6 Land Acquisition (includes training facility)	2028	\$ 688,300	\$ -	\$ 688,300	5%	\$ 36,465	\$ 651,835	\$ -	\$ -	\$ 651,835
	Subtotal Buildings, Land & Furnishings		\$ 9,408,300	\$ -	\$ 9,408,300		\$ 4,060,804	\$ 5,347,496	\$ 3,324	\$ 1,763,074	\$ 3,581,099
1.2 Fleet & Equipment											
	1.2.1 SCBA Replacement	2020	\$ 350,000	\$ -	\$ 350,000	90%	\$ 315,000	\$ 35,000	\$ 35,000	\$ -	\$ -
	1.2.2 Air Compressor System (2009)	2020	\$ 40,000	\$ -	\$ 40,000	90%	\$ 36,000	\$ 4,000	\$ 4,000	\$ -	\$ -
	1.2.3 Bunker Gear Dryer	2020	\$ 30,000	\$ -	\$ 30,000	12%	\$ 3,704	\$ 26,296	\$ 26,296	\$ -	\$ -
	1.2.4 Thermal Imaging Cameras	2021	\$ 25,000	\$ -	\$ 25,000	50%	\$ 12,500	\$ 12,500	\$ 12,500	\$ -	\$ -
	1.2.5 Pagers	2021	\$ 90,000	\$ -	\$ 90,000	90%	\$ 81,000	\$ 9,000	\$ 9,000	\$ -	\$ -
	1.2.6 New Equipment for Stn 1 Replacement	2022	\$ 1,566,000	\$ -	\$ 1,566,000	50%	\$ 783,000	\$ 783,000	\$ -	\$ -	\$ 783,000
	1.2.7 Extrication Tool for Melbourne (Cutter)	2022	\$ 20,000	\$ -	\$ 20,000	0%	\$ -	\$ 20,000	\$ -	\$ -	\$ 20,000
	1.2.8 Extractor (PPE Gear Washer)	2022	\$ 15,000	\$ -	\$ 15,000	0%	\$ -	\$ 15,000	\$ -	\$ -	\$ 15,000
	1.2.9 Engine 21 (2002 Rosenbauer )	2024	\$ 500,000	\$ -	\$ 500,000	87%	\$ 434,573	\$ 65,427	\$ -	\$ -	\$ 65,427
	1.2.10 FF Equipment	Various	\$ 108,000	\$ -	\$ 108,000	0%	\$ -	\$ 108,000	\$ -	\$ -	\$ 108,000
	Subtotal Fleet & Equipment		\$ 2,744,000	\$ -	\$ 2,744,000		\$ 1,665,777	\$ 1,078,223	\$ 86,796	\$ -	\$ 991,427
1.3 Studies											
	1.3.1 Fire Master Plan	2020	\$ 40,000	\$ -	\$ 40,000	0%	\$ -	\$ 40,000	\$ 40,000	\$ -	\$ -
	Subtotal Studies		\$ 40,000	\$ -	\$ 40,000		\$ -	\$ 40,000	\$ 40,000	\$ -	\$ -
TOTAL FIRE SERVICES			\$ 12,192,300	\$ -	\$ 12,192,300		\$ 5,726,581	\$ 6,465,719	\$ 130,120	\$ 1,763,074	\$ 4,572,525

<b>Residential Development Charge Calculation</b>		
Residential Share of 2020-2029 DC Eligible Costs	83%	\$1,463,351
10 Year Growth in Population in New Units		5,451
Unadjusted Development Charge Per Capita (\$)		<b>\$268.44</b>
<b>Non-Residential Development Charge Calculation</b>		
Non-Residential Share of 2020-2029 DC Eligible Costs	17%	\$299,723
10 Year Growth in Square Meters		70,804
Unadjusted Development Charge Per Sq.M (\$)		<b>\$4.23</b>

2020 - 2029 Net Funding Envelope	\$1,763,074
Reserve Fund Balance	\$130,120



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**MUNICIPALITY OF STRATHROY-CARADOC  
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE  
FIRE SERVICES  
RESIDENTIAL DEVELOPMENT CHARGE**

**1.0 FIRE SERVICES**

OPENING CASH BALANCE FROM APPLICABLE RESERVES	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	TOTAL
OPENING CASH BALANCE (\$000)	0.0	156.5	92.0	(1,035.6)	(902.8)	(754.1)	(588.2)	(449.5)	(313.3)	(164.2)	
2020-2029 RESIDENTIAL FUNDING REQUIREMENTS											
1.00 Fire Services : Non Inflated	\$0.00	\$234.23	\$1,229.12	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	<b>\$1,463.35</b>
1.00 Fire Services: Inflated	\$0.00	\$238.92	\$1,278.78	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	<b>\$1,517.69</b>
POPULATION GROWTH											
- Population in New Units	523	570	583	598	613	628	508	469	475	485	<b>5,451</b>
REVENUE - current (\$000)											
- Dev. Charge Receipts	153.8	170.9	178.2	186.5	195.0	203.8	168.1	158.2	163.5	170.3	<b>\$1,748.10</b>
- Interest on Opening Balance	0.0	5.5	3.2	(57.0)	(49.7)	(41.5)	(32.4)	(24.7)	(17.2)	(9.0)	<b>(\$222.73)</b>
- Interest on In-year Transactions (excl.int.)	2.7	(1.9)	(30.3)	3.3	3.4	3.6	2.9	2.8	2.9	3.0	<b>(\$7.65)</b>
TOTAL REVENUE	156.5	174.5	151.1	132.8	148.8	165.9	138.6	136.3	149.1	164.2	<b>\$1,517.71</b>
CLOSING CASH BALANCE	156.5	92.0	(1,035.6)	(902.8)	(754.1)	(588.2)	(449.5)	(313.3)	(164.2)	0.0	

**2020 Adjusted Charge Per Capita** \$293.87

**Allocation of Capital Program**

Residential Sector	83.0%
Non-Residential Sector	17.0%

**Rates for 2020**

Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

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TABLE 3

**MUNICIPALITY OF STRATHROY-CARADOC  
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE  
FIRE SERVICES  
NON-RESIDENTIAL DEVELOPMENT CHARGE**

**1.0 FIRE SERVICES**

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	TOTAL
OPENING CASH BALANCE FROM APPLICABLE RESERVES											
OPENING CASH BALANCE (\$000)	\$0.00	\$50.49	\$54.95	(\$183.22)	(\$163.69)	(\$142.14)	(\$116.59)	(\$88.51)	(\$61.48)	(\$31.99)	
2020-2029 NON-RESIDENTIAL FUNDING REQUIREMENTS											
3.00 Fire Services : Non Inflated	\$0.00	\$47.98	\$251.75	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	<b>\$299.72</b>
3.00 Fire Services: Inflated	\$0.00	\$48.93	\$261.92	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	<b>\$310.85</b>
NON-RESIDENTIAL GROWTH											
- Sq. Metres in New Buildings	10,812	11,017	5,915	5,973	6,044	6,471	6,557	5,946	6,007	6,061	<b>70,804</b>
REVENUE - current (\$000)											
- Dev. Charge Receipts	\$49.6	\$51.6	\$28.2	\$29.1	\$30.0	\$32.8	\$33.9	\$31.4	\$32.3	\$33.2	<b>\$352.17</b>
- Interest on Opening Balance	0.0	1.8	1.9	(10.1)	(9.0)	(7.8)	(6.4)	(4.9)	(3.4)	(1.8)	<b>(\$39.63)</b>
- Interest on In-year Transactions (excl.int.)	0.9	0.0	(6.4)	0.5	0.5	0.6	0.6	0.5	0.6	0.6	<b>(\$1.61)</b>
TOTAL REVENUE	50.5	53.4	23.7	19.5	21.5	25.6	28.1	27.0	29.5	32.1	<b>\$310.93</b>
CLOSING CASH BALANCE	50.5	55.0	(183.2)	(163.7)	(142.1)	(116.6)	(88.5)	(61.5)	(32.0)	0.1	

**2020 Adjusted Charge Per Square Metre**      \$4.59

<b>Allocation of Capital Program</b>	
Residential Sector	83.0%
Non-Residential Sector	17.0%
<b>Rates for 2020</b>	
Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

## **APPENDIX B.2**

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### ***POLICE SERVICES***

## APPENDIX B.2

### POLICE SERVICE

The Strathroy-Caradoc Police Service provides the community with the education, crime prevention advice, enforcement and other appropriate activities required to promote the safety of its citizens.

#### TABLE 1 HISTORICAL SERVICE LEVELS

The police service inventory of capital assets is organized into four components: buildings, land, furniture and equipment, and vehicles. The police headquarters building is located at 299 Frances Street, and comprises 10,472 square feet of space. Also at the department's disposal is one outbuilding; which provides another 384 square feet of space. Together, the structures are valued at approximately \$3.74 million. The associated 1.73 hectares of land is currently valued at about \$294,100. Police vehicles are valued at \$267,400 and is also included in the inventory. Police cruisers are not in the inventory as the *DCA* only permits the inclusion of vehicles with useful lives over seven years. Furniture and equipment, including communications equipment, personal police equipment and miscellaneous station equipment are valued at about \$1.65 million.

The current value of the Police Service's capital infrastructure including buildings, land, vehicles, furniture and equipment is \$5.96 million and has provided Strathroy-Caradoc with a ten-year average historical service level of \$196.43 per population and employment. The calculated maximum allowable amount recoverable through development charges is approximately \$794,922.

#### TABLE 2 2020 – 2029 DEVELOPMENT-RELATED CAPITAL PROGRAM & CALCULATION OF THE “UNADJUSTED” DEVELOPMENT CHARGES

The 2020-2029 capital program is predominately related to the expansion of space at the police headquarters (10,000 sq.ft. addition) as well as the acquisition of additional equipment for a total gross cost of \$4.01 million. No grants, subsidies or other recoveries are anticipated to fund any component of the development-related capital program. Replacement and Benefit to Existing (BTE) shares in the amount of \$269,000 have been netted off the program. The BTE shares were calculated based on the shares of new equipment to be acquired relative to replacing existing assets for the dispatch upgrades in 2020 as well as the proportion of new policemen relative to the existing compliment for the digital technology additions. About \$172,460 of

existing DC reserve funds have been applied towards the projects occurring first and have been netted off of the development charges calculation. The funding envelope of \$794,900 restricts the amount eligible for recovery in the 2020-2029 period and therefore \$2.77 million is deemed to benefit development post 2029. It should be noted that over 75% of the expansion of space (at the police headquarters) is considered to benefit development beyond the planning period and is not included for development charges recovery in this period.

The remaining \$794,922 is related to development in the 2020-2029 planning period and is eligible for DC recovery. The development-related net capital cost is allocated 83 per cent (\$659,785) to residential development and 17 per cent (\$135,137) to non-residential development. The residential share of the net development-related capital cost is divided by the 10-year growth in population in new dwelling units to derive an unadjusted charge of \$121.03 per capita. The non-residential share of the net development related capital cost is divided by the 10-year forecast growth in floor space, resulting in an unadjusted charge of \$1.91 per m<sup>2</sup>.

### **TABLE 3      CASH FLOW ANALYSIS**

After cash flow consideration, the calculated residential charge increases to \$125.71 per capita and the non-residential charge also increases to \$1.97 per m<sup>2</sup>.

The following table summarizes the calculation of the Police Service development charge:

POLICE SERVICES SUMMARY						
10-year Hist. Service Level \$/pop & emp	2020-2029		Unadjusted		Adjusted	
	Development-Related Capital Program		Development Charge		Development Charge	
	Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$196.43	\$4,010,000	\$794,922	\$121.03	\$1.91	\$125.71	\$1.97

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TABLE 1

MUNICIPALITY OF STRATHROY-CARADOC  
INVENTORY OF CAPITAL ASSETS  
POLICE SERVICES

BUILDINGS Location	# of Square Feet										UNIT COST
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	(\$/sq.ft)
Police Headquarters, 299 Frances St.	10,472	10,472	10,472	10,472	10,472	10,472	10,472	10,472	10,472	10,472	\$350
Garage Outbuilding, 299 Frances St.	384	384	384	384	384	384	384	384	384	384	\$210
22501 Adelaide Rd. Mt. Brydges	450	450	450	-	-	-	-	-	-	-	\$210
<b>Total (sq.ft.)</b>	<b>11,306</b>	<b>11,306</b>	<b>11,306</b>	<b>10,856</b>	<b>10,856</b>	<b>10,856</b>	<b>10,856</b>	<b>10,856</b>	<b>10,856</b>	<b>10,856</b>	
<b>Total (\$000)</b>	<b>\$3,840.3</b>	<b>\$3,840.3</b>	<b>\$3,840.3</b>	<b>\$3,745.8</b>	<b>\$3,745.8</b>	<b>\$3,745.8</b>	<b>\$3,745.8</b>	<b>\$3,745.8</b>	<b>\$3,745.8</b>	<b>\$3,745.8</b>	

LAND Location	# of Hectares										UNIT COST
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	(\$/ha)
Police Headquarters, 299 Frances St.	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	\$170,000
<b>Total (ha)</b>	<b>1.73</b>	<b>1.73</b>	<b>1.73</b>	<b>1.73</b>	<b>1.73</b>	<b>1.73</b>	<b>1.73</b>	<b>1.73</b>	<b>1.73</b>	<b>1.73</b>	
<b>Total (\$000)</b>	<b>\$294.1</b>	<b>\$294.1</b>	<b>\$294.1</b>	<b>\$294.1</b>	<b>\$294.1</b>	<b>\$294.1</b>	<b>\$294.1</b>	<b>\$294.1</b>	<b>\$294.1</b>	<b>\$294.1</b>	

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TABLE 1

MUNICIPALITY OF STRATHROY-CARADOC  
INVENTORY OF CAPITAL ASSETS  
POLICE SERVICES

VEHICLES Vehicle Type	Total # of Vehicles										UNIT COST (\$/vehicle)
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Emergency Response Vehicle	1	1	1	1	1	1	1	-	1	1	\$79,400
CID Vehicles	2	2	2	2	2	2	2	2	3	4	\$42,000
Trailer	1	1	1	1	1	1	1	1	1	1	\$20,000
<b>Total (#)</b>	<b>4.00</b>	<b>4.00</b>	<b>4.00</b>	<b>4.00</b>	<b>4.00</b>	<b>4.00</b>	<b>4.00</b>	<b>3.00</b>	<b>5.00</b>	<b>6.00</b>	
<b>Total (\$000)</b>	<b>\$183.4</b>	<b>\$183.4</b>	<b>\$183.4</b>	<b>\$183.4</b>	<b>\$183.4</b>	<b>\$183.4</b>	<b>\$183.4</b>	<b>\$104.0</b>	<b>\$225.4</b>	<b>\$267.4</b>	

FURNITURE AND EQUIPMENT Description	Total Value of Equipment (\$)									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Communications Equipment	\$ 554,000	\$ 554,000	\$ 554,000	\$ 606,000	\$ 747,000	\$ 747,000	\$ 747,000	\$ 747,000	\$ 747,000	\$ 747,000
Personal Police Equipment	\$ 341,000	\$ 341,000	\$ 341,000	\$ 341,000	\$ 341,000	\$ 341,000	\$ 341,000	\$ 341,000	\$ 341,000	\$ 341,000
Furniture & Other Station Equipment	\$ 185,000	\$ 185,000	\$ 185,000	\$ 266,000	\$ 266,000	\$ 266,000	\$ 266,000	\$ 266,000	\$ 266,000	\$ 266,000
Emergency Response Unit Equipment	\$ 68,000	\$ 68,000	\$ 68,000	\$ 68,000	\$ 68,000	\$ 68,000	\$ 68,000	\$ 68,000	\$ 68,000	\$ 68,000
Other Technology Equipment	\$ 103,000	\$ 103,000	\$ 112,000	\$ 112,000	\$ 174,000	\$ 174,000	\$ 174,000	\$ 174,000	\$ 174,000	\$ 174,000
Mobile Data Devices	\$ -	\$ -	\$ -	\$ 41,000	\$ 57,000	\$ 57,000	\$ 57,000	\$ 57,000	\$ 57,000	\$ 57,000
<b>Total (\$000)</b>	<b>\$1,251.0</b>	<b>\$1,251.0</b>	<b>\$1,260.0</b>	<b>\$1,434.0</b>	<b>\$1,653.0</b>	<b>\$1,653.0</b>	<b>\$1,653.0</b>	<b>\$1,653.0</b>	<b>\$1,653.0</b>	<b>\$1,653.0</b>

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TABLE 1

**MUNICIPALITY OF STRATHROY-CARADOC  
CALCULATION OF SERVICE LEVELS  
POLICE SERVICES**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Historical Population	20,773	20,978	20,951	20,924	20,897	20,870	20,844	21,271	21,706	22,150
Historical Employment	7,915	7,935	7,999	8,063	8,128	8,193	8,259	8,428	8,600	8,776
<b>Total Historical Population &amp; Employment</b>	<b>28,688</b>	<b>28,913</b>	<b>28,950</b>	<b>28,987</b>	<b>29,025</b>	<b>29,063</b>	<b>29,103</b>	<b>29,699</b>	<b>30,306</b>	<b>30,926</b>

**INVENTORY SUMMARY (\$000)**

Buildings	\$3,840.3	\$3,840.3	\$3,840.3	\$3,745.8	\$3,745.8	\$3,745.8	\$3,745.8	\$3,745.8	\$3,745.8	\$3,745.8
Land	\$294.1	\$294.1	\$294.1	\$294.1	\$294.1	\$294.1	\$294.1	\$294.1	\$294.1	\$294.1
Vehicles	\$183.4	\$183.4	\$183.4	\$183.4	\$183.4	\$183.4	\$183.4	\$104.0	\$225.4	\$267.4
Furniture And Equipment	\$1,251.0	\$1,251.0	\$1,260.0	\$1,434.0	\$1,653.0	\$1,653.0	\$1,653.0	\$1,653.0	\$1,653.0	\$1,653.0
<b>Total (\$000)</b>	<b>\$5,568.8</b>	<b>\$5,568.8</b>	<b>\$5,577.8</b>	<b>\$5,657.3</b>	<b>\$5,876.3</b>	<b>\$5,876.3</b>	<b>\$5,876.3</b>	<b>\$5,796.9</b>	<b>\$5,918.3</b>	<b>\$5,960.3</b>

**SERVICE LEVEL (\$/population & employment)**

Average  
Service  
Level

Buildings	\$133.87	\$132.82	\$132.65	\$129.22	\$129.06	\$128.89	\$128.71	\$126.13	\$123.60	\$121.12	\$128.61
Land	\$10.25	\$10.17	\$10.16	\$10.15	\$10.13	\$10.12	\$10.11	\$9.90	\$9.70	\$9.51	\$10.02
Vehicles	\$6.39	\$6.34	\$6.34	\$6.33	\$6.32	\$6.31	\$6.30	\$3.50	\$7.44	\$8.65	\$6.39
Furniture And Equipment	\$43.61	\$43.27	\$43.52	\$49.47	\$56.95	\$56.88	\$56.80	\$55.66	\$54.54	\$53.45	\$51.41
<b>Total (\$/pop &amp; empl)</b>	<b>\$194.12</b>	<b>\$192.61</b>	<b>\$192.67</b>	<b>\$195.17</b>	<b>\$202.46</b>	<b>\$202.19</b>	<b>\$201.92</b>	<b>\$195.19</b>	<b>\$195.28</b>	<b>\$192.73</b>	<b>\$196.43</b>

**CALCULATION OF MAXIMUM ALLOWABLE FUNDING ENVELOPE  
MUNICIPALITY OF STRATHROY-CARADOC**

<b>10-Year Funding Envelope Calculation</b>	
10-Year Average Service Level 2010 - 2019	\$196.43
Net Population & Employment Growth 2020 - 2029	4,047
<b>Maximum Allowable Funding Envelope</b>	<b>\$794,922</b>



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TABLE 2

MUNICIPALITY OF STRATHROY-CARADOC  
2020 DEVELOPMENT CHARGES BACKGROUND STUDY  
DEVELOPMENT-RELATED CAPITAL PROGRAM

Service	Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Cost		Total	DC Eligible Costs		
						Replacement & BTE Shares	Replacement and BTE Share	DC Eligible Costs	Available DC Reserves	2020-2029	Post 2029
2.0 POLICE SERVICES											
2.1 New Projects											
2.1.1	County Fire Dispatch Upgrades	2020	\$ 300,000	\$ -	\$ 300,000	60%	\$ 180,000	\$ 120,000	\$ 120,000	\$ -	\$ -
2.1.2	Dispatch System	2021	\$ 75,000	\$ -	\$ 75,000	0%	\$ -	\$ 75,000	\$ 52,461	\$ 22,539	\$ -
2.1.3	Development Study Expansion Report	2023	\$ 15,000	\$ -	\$ 15,000	0%	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
2.1.4	Police Headquarters Expansion (10,000 sq.ft addition)	2024	\$ 3,500,000	\$ -	\$ 3,500,000	0%	\$ -	\$ 3,500,000	\$ -	\$ 757,382	\$ 2,742,618
2.1.5	Digital Technology Additions	Various	\$ 100,000	\$ -	\$ 100,000	89%	\$ 89,000	\$ 11,000	\$ -	\$ -	\$ 11,000
2.1.6	Outfitting of Additional Officers	Various	\$ 20,000	\$ -	\$ 20,000	0%	\$ -	\$ 20,000	\$ -	\$ -	\$ 20,000
Subtotal New Projects			\$ 4,010,000	\$ -	\$ 4,010,000		\$ 269,000	\$ 3,741,000	\$ 172,461	\$ 794,922	\$ 2,773,618
TOTAL POLICE SERVICES			\$ 4,010,000	\$ -	\$ 4,010,000		\$ 269,000	\$ 3,741,000	\$ 172,461	\$ 794,922	\$ 2,773,618

<b>Residential Development Charge Calculation</b>			
Residential Share of 2020-2029 DC Eligible Costs	83%	\$659,785	
10 Year Growth in Population in New Units		5,451	
Unadjusted Development Charge Per Capita (\$)		<b>\$121.03</b>	
<b>Non-Residential Development Charge Calculation</b>			
Non-Residential Share of 2020-2029 DC Eligible Costs	17%	\$ 135,137	
10 Year Growth in Square Meters		70,804	
Unadjusted Development Charge Per Sq.M (\$)		<b>\$1.91</b>	

2020 - 2029 Net Funding Envelope	\$794,922
Reserve Fund Balance	\$172,461

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TABLE 3

**MUNICIPALITY OF STRATHROY-CARADOC  
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE  
POLICE SERVICES  
RESIDENTIAL DEVELOPMENT CHARGE**

**2.0 POLICE SERVICES**

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	TOTAL
OPENING CASH BALANCE FROM APPLICABLE RESERVES											
OPENING CASH BALANCE (\$000)	0.0	66.9	124.2	206.1	281.1	(322.5)	(251.6)	(192.3)	(134.0)	(70.2)	
2020-2029 RESIDENTIAL FUNDING REQUIREMENTS											
2.00 Police Services : Non Inflated	\$0.00	\$18.71	\$0.00	\$12.45	\$628.63	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	<b>\$659.8</b>
2.00 Police Services: Inflated	\$0.00	\$19.08	\$0.00	\$13.21	\$680.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	<b>\$712.7</b>
POPULATION GROWTH											
- Population in New Units	523	570	583	598	613	628	508	469	475	485	<b>5,451</b>
REVENUE - current (\$000)											
- Dev. Charge Receipts	65.8	73.1	76.2	79.8	83.4	87.2	71.9	67.7	69.9	72.8	<b>\$747.8</b>
- Interest on Opening Balance	0.0	2.3	4.3	7.2	9.8	(17.7)	(13.8)	(10.6)	(7.4)	(3.9)	<b>(\$29.6)</b>
- Interest on In-year Transactions (excl.int.)	1.2	0.9	1.3	1.2	(16.4)	1.5	1.3	1.2	1.2	1.3	<b>(\$5.4)</b>
TOTAL REVENUE	66.9	76.4	81.9	88.1	76.8	71.0	59.3	58.3	63.8	70.2	<b>\$712.8</b>
CLOSING CASH BALANCE	66.9	124.2	206.1	281.1	(322.5)	(251.6)	(192.3)	(134.0)	(70.2)	0.1	

**2020 Adjusted Charge Per Capita**                      \$125.71

**Allocation of Capital Program**

Residential Sector	83.0%
Non-Residential Sector	17.0%

**Rates for 2020**

Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

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TABLE 3

**MUNICIPALITY OF STRATHROY-CARADOC  
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE  
POLICE SERVICES  
NON-RESIDENTIAL DEVELOPMENT CHARGE**

**2.0 POLICE SERVICES**

OPENING CASH BALANCE FROM APPLICABLE RESERVES	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	TOTAL
OPENING CASH BALANCE (\$000)	\$0.00	\$21.67	\$40.98	\$54.75	\$66.62	(\$61.01)	(\$50.04)	(\$37.99)	(\$26.39)	(\$13.74)	
2020-2029 NON-RESIDENTIAL FUNDING REQUIREMENTS											
3.00 Police Services : Non Inflated	\$0.00	\$3.83	\$0.00	\$2.55	\$128.76	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	<b>\$135.14</b>
3.00 Police Services: Inflated	\$0.00	\$3.91	\$0.00	\$2.71	\$139.37	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	<b>\$145.98</b>
NON-RESIDENTIAL GROWTH											
- Sq. Metres in New Buildings	10,812	11,017	5,915	5,973	6,044	6,471	6,557	5,946	6,007	6,061	<b>70,804</b>
REVENUE - current (\$000)											
- Dev. Charge Receipts	\$21.3	\$22.1	\$12.1	\$12.5	\$12.9	\$14.1	\$14.5	\$13.5	\$13.9	\$14.3	<b>\$151.15</b>
- Interest on Opening Balance	0.0	0.8	1.4	1.9	2.3	(3.4)	(2.8)	(2.1)	(1.5)	(0.8)	<b>(\$3.96)</b>
- Interest on In-year Transactions (excl.int.)	0.4	0.3	0.2	0.2	(3.5)	0.2	0.3	0.2	0.2	0.2	<b>(\$1.17)</b>
TOTAL REVENUE	21.7	23.2	13.8	14.6	11.7	11.0	12.0	11.6	12.7	13.8	<b>\$146.01</b>
CLOSING CASH BALANCE	21.7	41.0	54.7	66.6	(61.0)	(50.0)	(38.0)	(26.4)	(13.7)	0.0	

**2020 Adjusted Charge Per Square Metre**                      \$1.97

<b>Allocation of Capital Program</b>	
Residential Sector	83.0%
Non-Residential Sector	17.0%
<b>Rates for 2020</b>	
Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

## **APPENDIX C**

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### ***SERVICES RELATED TO A HIGHWAY TECHNICAL APPENDIX***

## **APPENDIX C**

### **SERVICES RELATED TO A HIGHWAY TECHNICAL APPENDIX**

The following appendix provides the detailed analysis undertaken to establish the development charge rates for the Services Related to a Highway: Public Works: Building & Fleet and Municipality-wide Engineering (roads and studies) in the Municipality of Strathroy-Caradoc. The appendix is divided into two sub-sections, with one section for each of the services:

- C.1 Public Works: Building & Fleet Services
- C.2 Municipality-wide Engineering (Roads and Studies)

Both sub-sections, contains a set of three tables. The tables provide the background data and analysis undertaken to arrive at the calculated development charge rates for that particular service. An overview of the content and purpose of each of the tables can be found in Appendix B for Public Works: Building & Fleet and for Municipality-wide Engineering.

## APPENDIX C.1

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### *PUBLIC WORKS: BUILDINGS & FLEET*

## APPENDIX C.1

### PUBLIC WORKS: BUILDINGS & FLEET

The Public Works Department is responsible for the maintenance and operation of the Municipality's 630 km of roads and its related infrastructure. The following section addresses the need for Public Works buildings, land, equipment and fleet across the Municipality.

#### TABLE 1 HISTORICAL SERVICE LEVELS

The Public Works Department operates out of a number of buildings in the Municipality of Strathroy-Caradoc, including an office/equipment depot, storage buildings and sand/salt sheds. In 2019, 46,540 square feet of space was available for these purposes, valued at approximately \$8.48 million. The 25.91 hectares of land associated with these buildings is valued at \$2.45 million. In all locations, the total replacement cost of furniture and equipment is \$605,000. The 2019 inventory of fleet and large equipment has a replacement value of about \$5.29 million.

The total value of the Public Works capital inventory is \$16.82 million. Over the 2010–2019 period, the average service level is \$512.05 per population and employment, and this, multiplied by the ten-year growth in net population plus employment, results in a maximum allowable funding envelope of about \$2.07 million. No excess capacity has been identified for this service, and therefore, the maximum allowable funding envelope of \$2.07 million is brought forward to the development charges calculation. The service makes up part of the “Services Related to a Highway” service category and as such, the full cost of the service has been included in the calculation.

#### TABLE 2 2020 – 2029 DEVELOPMENT-RELATED CAPITAL PROGRAM & CALCULATION OF THE “UNADJUSTED” DEVELOPMENT CHARGES

The 2020–2029 development-related capital program for Public Works amounts to approximately \$4.28 million. It includes the for the provisions for a new sand dome (\$250,000), Falconbridge yard interim (\$200,000) and final expansions (\$1.30 million), Metcalf yard and building upgrade (\$500,000), and various vehicles and fleet (\$2.03 million).

No grants, subsidies or replacement shares are anticipated to offset the cost of the program. Benefit to existing or replacement shares total \$884,573 and are largely related to the Falconbridge Yard expansion and the Metcalf Yard and Building

Upgrade in 2025 – the Metcalfe Yard BTE share is based on growth in population and employment over the 2020-2029 period. Lastly, a 50% BTE share has been applied to the two sidewalk tractor acquisitions in 2025 and 2029 to represent a change in service delivery as these new tractors would reduce the municipality's dependence on contracted services.

The Municipality has \$1.76 million in available reserve funds to help offset the cost of the program. The remaining \$1.63 million is related to development in the 2020 to 2029 planning period and is eligible for DC recovery in this period. This amount is well under the funding envelope of \$2.07 million for the service. This development related cost is allocated 83 per cent, or \$1.35 million, against new residential development, and 17 per cent, or \$276,899 against new non-residential development. This yields an unadjusted residential development charge of \$248.00 per capita and \$3.91 per m<sup>2</sup> respectively.

**TABLE 3 CASH FLOW ANALYSIS**

After cash flow consideration, the calculated residential development charge increases slightly to \$253.51 per capita and the non-residential charge increases to \$3.97 per m<sup>2</sup>.

10-year Hist. Service Level \$/pop & emp	PUBLIC WORKS: BUILDINGS AND FLEET SUMMARY					
	2020-2029		Unadjusted		Adjusted	
	Development-Related Capital Program		Development Charge		Development Charge	
	Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$512.05	\$4,275,000	\$1,628,818	\$248.00	\$3.91	\$253.51	\$3.97



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TABLE 1

**MUNICIPALITY OF STRATHROY-CARADOC**  
**INVENTORY OF CAPITAL ASSETS**  
**SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS: BUILDINGS & FLEET**

BUILDINGS Facility Name	# of Square Feet										UNIT COST (\$/sq.ft)
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Equipment Shed	5,180	5,180	5,180	5,180	5,180	5,180	5,180	5,180	5,180	5,180	\$150
Salt Shed & Storage	7,460	7,460	7,460	7,460	7,460	7,460	7,460	7,460	7,460	7,460	\$60
Equipment Depot, 475 Metcalfe St W, Stry	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	\$230
Storage Building #1, Metcalfe St, Stry	800	800	800	800	800	800	800	800	800	800	\$150
Storage Building #2, Metcalfe St, Stry	600	600	600	600	600	600	600	600	600	600	\$150
Equipment Depot/Office-Caradoc	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	\$230
12 Bay Garage, 8605 Falconbridge	14,700	14,700	14,700	14,700	14,700	14,700	14,700	14,700	14,700	14,700	\$230
House - Fire Training & Storage - 8625 Falconbridge	-	-	-	-	-	-	-	-	-	1,400	\$230
Garage - 8625 Falconbridge	-	-	-	-	-	-	-	-	-	1,400	\$150
Equipment Storage - 8625 Falconbridge	-	-	-	-	-	-	-	-	-	4,000	\$150
<b>Total (sq.ft)</b>	<b>39,740</b>	<b>39,740</b>	<b>39,740</b>	<b>39,740</b>	<b>39,740</b>	<b>39,740</b>	<b>39,740</b>	<b>39,740</b>	<b>39,740</b>	<b>46,540</b>	
<b>Total (\$000)</b>	<b>\$7,345.6</b>	<b>\$7,345.6</b>	<b>\$7,345.6</b>	<b>\$7,345.6</b>	<b>\$7,345.6</b>	<b>\$7,345.6</b>	<b>\$7,345.6</b>	<b>\$7,345.6</b>	<b>\$7,345.6</b>	<b>\$8,477.6</b>	

LAND Facility Name	# of Hectares										UNIT COST (\$/ha)
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
475 Metcalfe St. W., Strathroy	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	\$170,000
8605 Falconbridge Drive, Mt. Brydges	2.91	2.91	2.91	2.91	2.91	2.91	2.91	2.91	2.91	2.91	\$170,000
Gravel Pit Land	14.30	14.30	14.30	14.30	14.30	14.30	14.30	14.30	14.30	14.30	\$75,000
North Yard - Glen Oak Drive	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	\$50,000
8625 Falconbridge Dr - PW Yard Expansion Land	-	-	-	-	-	-	-	-	-	2.00	\$170,000
<b>Total (ha)</b>	<b>23.91</b>	<b>23.91</b>	<b>23.91</b>	<b>23.91</b>	<b>23.91</b>	<b>23.91</b>	<b>23.91</b>	<b>23.91</b>	<b>23.91</b>	<b>25.91</b>	
<b>Total (\$000)</b>	<b>\$2,106.2</b>	<b>\$2,106.2</b>	<b>\$2,106.2</b>	<b>\$2,106.2</b>	<b>\$2,106.2</b>	<b>\$2,106.2</b>	<b>\$2,106.2</b>	<b>\$2,106.2</b>	<b>\$2,106.2</b>	<b>\$2,446.2</b>	

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TABLE 1

**MUNICIPALITY OF STRATHROY-CARADOC  
INVENTORY OF CAPITAL ASSETS  
SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS: BUILDINGS & FLEET**

FURNITURE AND EQUIPMENT Facility Name	Total Value of Furniture and Equipment (\$)									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Miscellaneous Unlicensed Equipment	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
Communications Equipment	\$30,000	\$31,100	\$32,200	\$33,300	\$34,400	\$35,500	\$36,600	\$37,700	\$38,800	\$40,000
Material Stacker	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$25,000	\$25,000
Grader Disc Attachment	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$60,000
Brush Hog Attachment for Tractor	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$25,000
Dump Trailer	\$0	\$0	\$0	\$0	\$0	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000
Utility Trailers - 5 units	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	
Paint Machine, Trackless & Tractor Attachments - 7 units	\$60,000	\$60,000	\$70,000	\$70,000	\$80,000	\$80,000	\$90,000	\$90,000	\$100,000	\$100,000
Wood Chipper	\$0	\$0	\$0	\$0	\$0	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000
Fuel, Brine and Water Tanks	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
<b>Total (\$000)</b>	<b>\$425.0</b>	<b>\$426.1</b>	<b>\$437.2</b>	<b>\$438.3</b>	<b>\$449.4</b>	<b>\$555.5</b>	<b>\$566.6</b>	<b>\$567.7</b>	<b>\$603.8</b>	<b>\$605.0</b>

MUNICIPAL FLEET Facility Name	# of Vehicles										UNIT COST (\$/vehicle)
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
graders	2	2	2	2	2	2	2	2	2	2	\$400,000
single axle dump sander & plow	2	2	2	2	2	2	2	2	2	2	\$240,000
tandem axle dump sander & plow	7	7	7	7	7	7	7	7	7	7	\$300,000
pick up	4	4	4	4	4	4	4	4	4	4	\$40,000
1-ton	1	1	1	1	1	1	1	1	1	1	\$125,000
sweeper	1	1	1	1	1	1	1	1	1	1	\$400,000
tractor, mower & snow blower	1	1	1	1	1	1	1	1	1	1	\$225,000
backhoe	1	1	1	1	1	1	1	1	2	2	\$125,000
loader	1	1	1	1	1	1	1	1	1	1	\$200,000
570 loader	1	1	1	1	1	1	1	1	1	1	\$100,000
trackless	-	-	-	-	2	2	2	2	2	3	\$150,000
<b>Total (#)</b>	<b>21</b>	<b>21</b>	<b>21</b>	<b>21</b>	<b>23</b>	<b>23</b>	<b>23</b>	<b>23</b>	<b>24</b>	<b>25</b>	
<b>Total (\$000)</b>	<b>\$4,715.0</b>	<b>\$4,715.0</b>	<b>\$4,715.0</b>	<b>\$4,715.0</b>	<b>\$5,015.0</b>	<b>\$5,015.0</b>	<b>\$5,015.0</b>	<b>\$5,015.0</b>	<b>\$5,140.0</b>	<b>\$5,290.0</b>	

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TABLE 1

**MUNICIPALITY OF STRATHROY-CARADOC**  
**CALCULATION OF SERVICE LEVELS**  
**SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS: BUILDINGS & FLEET**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Historical Population	20,773	20,978	20,951	20,924	20,897	20,870	20,844	21,271	21,706	22,150
Historical Employment	<u>7,915</u>	<u>7,935</u>	<u>7,999</u>	<u>8,063</u>	<u>8,128</u>	<u>8,193</u>	<u>8,259</u>	<u>8,428</u>	<u>8,600</u>	<u>8,776</u>
<b>Total Historical Population &amp; Employment</b>	<b>28,688</b>	<b>28,913</b>	<b>28,950</b>	<b>28,987</b>	<b>29,025</b>	<b>29,063</b>	<b>29,103</b>	<b>29,699</b>	<b>30,306</b>	<b>30,926</b>

**INVENTORY SUMMARY (\$000)**

Buildings	\$7,345.6	\$7,345.6	\$7,345.6	\$7,345.6	\$7,345.6	\$7,345.6	\$7,345.6	\$7,345.6	\$7,345.6	\$8,477.6
Land	\$2,106.2	\$2,106.2	\$2,106.2	\$2,106.2	\$2,106.2	\$2,106.2	\$2,106.2	\$2,106.2	\$2,106.2	\$2,446.2
Furniture & Equipment	\$425.0	\$426.1	\$437.2	\$438.3	\$449.4	\$555.5	\$566.6	\$567.7	\$603.8	\$605.0
Fleet	\$4,715.0	\$4,715.0	\$4,715.0	\$4,715.0	\$5,015.0	\$5,015.0	\$5,015.0	\$5,015.0	\$5,140.0	\$5,290.0
<b>Total (\$000)</b>	<b>\$14,591.8</b>	<b>\$14,592.9</b>	<b>\$14,604.0</b>	<b>\$14,605.1</b>	<b>\$14,916.2</b>	<b>\$15,022.3</b>	<b>\$15,033.4</b>	<b>\$15,034.5</b>	<b>\$15,195.6</b>	<b>\$16,818.8</b>

**SERVICE LEVEL (\$/population & employment)**

Average  
Service  
Level

Buildings	\$256.05	\$254.06	\$253.73	\$253.41	\$253.08	\$252.75	\$252.40	\$247.34	\$242.38	\$274.13	\$253.93
Land	\$73.42	\$72.85	\$72.75	\$72.66	\$72.57	\$72.47	\$72.37	\$70.92	\$69.50	\$79.10	\$72.86
Furniture & Equipment	\$14.81	\$14.74	\$15.10	\$15.12	\$15.48	\$19.11	\$19.47	\$19.12	\$19.92	\$19.56	\$17.24
Fleet	\$164.35	\$163.08	\$162.87	\$162.66	\$172.78	\$172.56	\$172.32	\$168.86	\$169.60	\$171.05	\$168.01
<b>Total (\$/pop &amp; empl)</b>	<b>\$508.64</b>	<b>\$504.72</b>	<b>\$504.46</b>	<b>\$503.85</b>	<b>\$513.91</b>	<b>\$516.89</b>	<b>\$516.56</b>	<b>\$506.24</b>	<b>\$501.40</b>	<b>\$543.84</b>	<b>\$512.05</b>

**CALCULATION OF MAXIMUM ALLOWABLE FUNDING ENVELOPE**  
**MUNICIPALITY OF STRATHROY-CARADOC**

<b>10-Year Funding Envelope Calculation</b>	
10-Year Average Service Level 2010 - 2019	\$512.05
Net Population & Employment Growth 2020 - 2029	4,047
<b>Maximum Allowable Funding Envelope</b>	<b>\$2,072,146</b>

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TABLE 2

MUNICIPALITY OF STRATHROY-CARADOC  
2020 DEVELOPMENT CHARGES BACKGROUND STUDY  
DEVELOPMENT-RELATED CAPITAL PROGRAM

Service	Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Cost		Total DC Eligible Costs	DC Eligible Costs		
						Replacement & BTE Shares	Replacement and BTE Share		Available DC Reserves	2020-2029	Post 2029
1.0 SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS: BUILDINGS & FLEET											
1.1 Land, Buildings & Equipment											
1.1.1	Sand Dome	2020	\$ 250,000	\$ -	\$ 250,000	0%	\$ -	\$ 250,000	\$ 250,000	\$ -	\$ -
1.1.2	Falconbridge Yard - interim expansion	2020	\$ 200,000	\$ -	\$ 200,000	20%	\$ 40,000	\$ 160,000	\$ 160,000	\$ -	\$ -
1.1.3	Falconbridge Yard Expansion	2023	\$ 1,300,000	\$ -	\$ 1,300,000	20%	\$ 260,000	\$ 1,040,000	\$ 226,609	\$ 813,391	\$ -
1.1.4	Metcalfe Yard and Building Upgrades	2025	\$ 500,000	\$ -	\$ 500,000	87%	\$ 434,573	\$ 65,427	\$ -	\$ 65,427	\$ -
Subtotal Land, Buildings & Equipment			\$ 2,250,000	\$ -	\$ 2,250,000		\$ 734,573	\$ 1,515,427	\$ 636,609	\$ 878,818	\$ -
1.2 Vehicles and Fleet											
1.2.1	Sidewalk Tractor	2020	\$ 150,000	\$ -	\$ 150,000	0%	\$ -	\$ 150,000	\$ 150,000	\$ -	\$ -
1.2.2	Rough Terrain Articulating Boom Lift Tractor	2020	\$ 100,000	\$ -	\$ 100,000	0%	\$ -	\$ 100,000	\$ 100,000	\$ -	\$ -
1.2.3	Street Sweeper	2021	\$ 225,000	\$ -	\$ 225,000	0%	\$ -	\$ 225,000	\$ 225,000	\$ -	\$ -
1.2.4	Tractor Attachements	2021	\$ 150,000	\$ -	\$ 150,000	0%	\$ -	\$ 150,000	\$ 150,000	\$ -	\$ -
1.2.5	Vactor Truck	2022	\$ 500,000	\$ -	\$ 500,000	0%	\$ -	\$ 500,000	\$ 500,000	\$ -	\$ -
1.2.6	Plow Truck	2023	\$ 300,000	\$ -	\$ 300,000	0%	\$ -	\$ 300,000	\$ -	\$ 300,000	\$ -
1.2.7	Sidewalk Tractor	2025	\$ 150,000	\$ -	\$ 150,000	50%	\$ 75,000	\$ 75,000	\$ -	\$ 75,000	\$ -
1.2.8	Plow Truck	2027	\$ 300,000	\$ -	\$ 300,000	0%	\$ -	\$ 300,000	\$ -	\$ 300,000	\$ -
1.2.9	Sidewalk Tractor	2029	\$ 150,000	\$ -	\$ 150,000	50%	\$ 75,000	\$ 75,000	\$ -	\$ 75,000	\$ -
Subtotal Vehicles and Fleet			\$ 2,025,000	\$ -	\$ 2,025,000		\$ 150,000	\$ 1,875,000	\$ 1,125,000	\$ 750,000	\$ -
TOTAL SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS: BUILDINGS & F			\$ 4,275,000	\$ -	\$ 4,275,000		\$ 884,573	\$ 3,390,427	\$ 1,761,609	\$ 1,628,818	\$ -

<b>Residential Development Charge Calculation</b>			
Residential Share of 2020-2029 DC Eligible Costs	83%	\$1,351,919	
10 Year Growth in Population in New Units		5,451	
Unadjusted Development Charge Per Capita (\$)		<b>\$248.00</b>	
<b>Non-Residential Development Charge Calculation</b>			
Non-Residential Share of 2020-2029 DC Eligible Costs	17%	\$ 276,899	
10 Year Growth in Square Meters		70,804	
Unadjusted Development Charge Per Sq.M (\$)		<b>\$3.91</b>	

2020 - 2029 Net Funding Envelope	\$2,072,146
Reserve Fund Balance	\$1,761,609

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TABLE 3

MUNICIPALITY OF STRATHROY-CARADOC  
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE  
PUBLIC WORKS: BUILDINGS AND FLEET  
RESIDENTIAL DEVELOPMENT CHARGE

1.0 SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS: BUILDINGS & FLEET

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	TOTAL
OPENING CASH BALANCE FROM APPLICABLE RESERVES											
OPENING CASH BALANCE (\$000)	0.0	135.0	289.7	456.2	(370.2)	(219.4)	(183.5)	(46.1)	(202.2)	(69.9)	
2020-2029 RESIDENTIAL FUNDING REQUIREMENTS											
1.00 Services Related To A Highway: Public Works: Buildings & F	\$0.00	\$0.00	\$0.00	\$924.11	\$0.00	\$116.55	\$0.00	\$249.00	\$0.00	\$62.25	<b>\$1,351.92</b>
1.00 Services Related To A Highway: Public Works: Buildings & F	\$0.00	\$0.00	\$0.00	\$980.68	\$0.00	\$128.69	\$0.00	\$286.02	\$0.00	\$74.39	<b>\$1,469.78</b>
POPULATION GROWTH											
- Population in New Units	523	570	583	598	613	628	508	469	475	485	<b>5,451</b>
REVENUE - current (\$000)											
- Dev. Charge Receipts	132.6	147.4	153.7	160.8	168.2	175.8	145.0	136.5	141.0	146.9	<b>\$1,508.01</b>
- Interest on Opening Balance	0.0	4.7	10.1	16.0	(20.4)	(12.1)	(10.1)	(2.5)	(11.1)	(3.8)	<b>(\$29.19)</b>
- Interest on In-year Transactions (excl.int.)	2.3	2.6	2.7	(22.5)	2.9	0.8	2.5	(4.1)	2.5	1.3	<b>(\$9.02)</b>
TOTAL REVENUE	135.0	154.7	166.5	154.3	150.8	164.6	137.4	129.8	132.4	144.3	<b>\$1,469.80</b>
CLOSING CASH BALANCE	135.0	289.7	456.2	(370.2)	(219.4)	(183.5)	(46.1)	(202.2)	(69.9)	0.0	

2020 Adjusted Charge Per Capita \$253.51

**Allocation of Capital Program**  
Residential Sector 83.0%  
Non-Residential Sector 17.0%

**Rates for 2020**  
Inflation Rate 2.0%  
Interest Rate on Positive Balances 3.5%  
Interest Rate on Negative Balances 5.5%

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APPENDIX C.1  
TABLE 3

MUNICIPALITY OF STRATHROY-CARADOC  
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE  
SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS: BUILDINGS & FLEET  
NON-RESIDENTIAL DEVELOPMENT CHARGE

1.0 SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS: BUILDINGS & FLEET

OPENING CASH BALANCE FROM APPLICABLE RESERVES	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	TOTAL
OPENING CASH BALANCE (\$000)	\$0.00	\$43.67	\$90.60	\$118.63	(\$57.75)	(\$34.50)	(\$34.35)	(\$6.41)	(\$39.10)	(\$12.82)	
2020-2029 NON-RESIDENTIAL FUNDING REQUIREMENTS											
1.00 Services Related To A Highway: Public Works: Buildings & F	\$0.00	\$0.00	\$0.00	\$189.28	\$0.00	\$23.87	\$0.00	\$51.00	\$0.00	\$12.75	\$276.90
1.00 Services Related To A Highway: Public Works: Buildings & F	\$0.00	\$0.00	\$0.00	\$200.86	\$0.00	\$26.36	\$0.00	\$58.58	\$0.00	\$15.24	\$301.04
NON-RESIDENTIAL GROWTH											
- Sq. Metres in New Buildings	10,812	11,017	5,915	5,973	6,044	6,471	6,557	5,946	6,007	6,061	70,804
REVENUE - current (\$000)											
- Dev. Charge Receipts	\$42.9	\$44.6	\$24.4	\$25.2	\$26.0	\$28.4	\$29.3	\$27.1	\$27.9	\$28.8	\$304.60
- Interest on Opening Balance	0.0	1.5	3.2	4.2	(3.2)	(1.9)	(1.9)	(0.4)	(2.2)	(0.7)	(\$1.32)
- Interest on In-year Transactions (excl.int.)	0.8	0.8	0.4	(4.8)	0.5	0.0	0.5	(0.9)	0.5	0.2	(\$2.01)
TOTAL REVENUE	43.7	46.9	28.0	24.5	23.2	26.5	27.9	25.9	26.3	28.3	\$301.27
CLOSING CASH BALANCE	43.7	90.6	118.6	(57.7)	(34.5)	(34.4)	(6.4)	(39.1)	(12.8)	0.2	

2020 Adjusted Charge Per Square Metre \$3.97

<b>Allocation of Capital Program</b>	
Residential Sector	83.0%
Non-Residential Sector	17.0%
<b>Rates for 2020</b>	
Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

## **APPENDIX C.2**

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### ***MUNICIPALITY-WIDE ENGINEERING***

## APPENDIX C.2

### MUNICIPALITY-WIDE ENGINEERING

This appendix provides a review of the analysis undertaken to establish the development charge rates for the Municipality-Wide Engineering service. The service includes various gravel road improvements, sidewalk development, and engineering-related portions of municipal studies. The development-related infrastructure projects identified are required to service the demands of new development over the 2020–2036 period, subject to annual budget reviews. This development forecast is discussed in more detail in Appendix A.

The following table sets out the 2020 to 2036 development-related capital program and the calculation of the development charge for Municipality-Wide Engineering. The cost, quantum and description of the projects included in the forecast have been provided by municipal staff. This appendix identifies the necessary engineering infrastructure to allow the municipality to meet the servicing needs of the forecast 2036 population in new units and non-residential floor space that benefit the entire municipality. The demands of new development in the Strathroy Service Area over the 2020–2036 period are included in the area-specific capital program more fully described in Appendix D.1 of this Study.

The content of the tables included in Appendix C.2 is as follows:

Table 1	Municipality-Wide Engineering Historical Service Level, 2010-2019
Table 2	Municipality-Wide Engineering Development-Related Capital Program: 2020-2036
Table 3	Residential and Non-Residential Cashflow

#### **TABLE 1      2010 – 2019 HISTORICAL SERVICE LEVELS**

The roads and related inventory of capital assets includes various facilities and infrastructure, including the roads themselves, traffic signals, sidewalks, and streetlights.

The Municipality's current infrastructure inventory totals 222 rural lane kilometers of roads and 408 lane kilometers of urban roadway. Together, these roads have a replacement value of about \$945.00 million. Other roads and related infrastructure adds an additional of \$4.74 million to the replacement value of assets.



Altogether, the total inventory of capital assets for Municipality-wide engineering totals \$949.74 million. The resulting ten-year average service level of the provision of engineering service is calculated at \$32,612.99 per population and employment. Based on this average service level, the maximum allowable funding envelope is \$203.76 million (\$32,612.99 per population and employment x 6,248 net population and employment growth from 2020 to 2036).

No uncommitted excess capacity has been identified for this service. As such, the fully calculated maximum allowable funding envelope brought forward to the development charges calculation remains at \$203.76 million.

**TABLE 2      2020 – 2036 DEVELOPMENT-RELATED CAPITAL PROGRAM &  
CALCULATION OF THE DEVELOPMENT CHARGES**

The gross cost of the Municipality-wide engineering capital program is \$11.63 million and provides for the undertaking of land acquisition for an overpass, various gravel road projects, and development-related studies. Development-related studies make up \$687,500 of the gross cost of the program and include future DC Studies, municipality-wide engineering studies, official plan and zoning review, and the Downtown Master Plan/CIP. Importantly, only the engineering-related portions of study costs have been included in the capital program and the remaining costs are intended to be recovered through a future CBC By-law, therefore, \$217,500 is netted off the total cost and recovered from non-dc sources.

Benefit to existing (BTE) shares have been identified for several road improvements and upgrades which are being undertaken throughout the planning period as a result of increased growth and traffic volumes. In this instance, a benefit to existing share of twenty per cent has been attributed to represent regular road resurfacing work which would need to occur even in the event of limited development. Gravel road conversion to tar and chip which are to occur over the seventeen year period, and these projects are assigned an 80 per cent BTE share based on the shares of growth in population and employment relative to the existing base. In addition, recognizing that not all studies under this service are entirely as a result of new growth in the Municipality, BTE shares have been netted off the total net municipal cost. The benefit to existing shares of studies amount to \$87,500 and this amount will not be recovered through development charges.

In total, the BTE shares amount to \$2.85 million (related to road works and studies), and this amount will not be recovered from development charges. Furthermore, a

share of the program, \$1.28 million, is funded through the existing DC reserve fund balance.

Upgrades on Christina Road are estimated to occur in 2039 which is outside of the planning period for this Study and will be considered for recovery from DCs in subsequent DC studies. The total remaining development-related capital program for the 2020–2036 period is \$5.90 million. The development-related cost has been allocated 83 per cent (\$4.90 million) to residential development and 17 per cent (\$1.00 million) to non-residential development. The allocation of costs is based on shares of population in new units and employment growth over the seventeen-year planning period.

The residential costs are recovered against the population growth in new units of 8,760 people yielding an unadjusted charge of \$558.82 per capita. The non-residential costs are recovered against the growth in non-residential floor area over the period of 111,051m<sup>2</sup> yielding an unadjusted charge of \$9.03 per m<sup>2</sup>.

### **TABLE 3      CASH FLOW ANALYSIS**

After cash flow consideration, the calculated residential development charge increases slightly to \$562.74 per capita and the non-residential charge maintains at \$9.03 per m<sup>2</sup>.

The following table summarizes the development charges calculation:

10-year Hist. Service Level \$/pop & emp	MUNICIPALITY-WIDE ENGINEERING SUMMARY						
	2020-2036			Unadjusted		Adjusted	
	Development-Related Capital Program		Development Charge		Development Charge		
	Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m	
\$32,612.99	\$11,627,500	\$5,897,685	\$558.82	\$9.03	\$562.74	\$9.03	

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APPENDIX C.2  
TABLE 1

MUNICIPALITY OF STRATHROY-CARADOC  
INVENTORY OF CAPITAL ASSETS  
MUNICIPALITY-WIDE ENGINEERING

ROAD NETWORK	# of Lane Km of Roads										UNIT COST
Asset Type	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	(\$/lane km)
Collectors - Rural kilometers											
- 2 Lane	222	222	222	222	222	222	222	222	222	222	\$1,500,000
Collectors - Urban kilometers											
- 2 Lane	425	425	425	408	408	408	408	408	408	408	\$1,500,000
Total # (km)	647	647	647	630	630	630	630	630	630	630	
Total (\$000)	\$970,500.0	\$970,500.0	\$970,500.0	\$945,000.0	\$945,000.0	\$945,000.0	\$945,000.0	\$945,000.0	\$945,000.0	\$945,000.0	

ROAD-RELATED INFRASTRUCTURE	# of Units										UNIT COST
Asset Type	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	(\$/unit)
Traffic Signals (#)	3	3	3	2	2	2	2	2	2	2	\$100,000
Sidewalks (metres)	22,200	22,200	22,200	22,950	22,980	23,530	23,530	24,210	24,610	24,780	\$100
Other Items:											
Street Lights (#)	438	473	550	650	681	686	686	686	686	686	\$3,000
Total (#)	22,641	22,676	22,753	23,602	23,663	24,218	24,218	24,898	25,298	25,468	
Total (\$000)	\$3,832.5	\$3,937.5	\$4,170.0	\$4,445.0	\$4,541.0	\$4,611.0	\$4,611.0	\$4,679.0	\$4,719.0	\$4,736.0	

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APPENDIX C.2  
TABLE 1

MUNICIPALITY OF STRATHROY-CARADOC  
INVENTORY OF CAPITAL ASSETS  
MUNICIPALITY-WIDE ENGINEERING

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Historical Population	20,773	20,978	20,951	20,924	20,897	20,870	20,844	21,271	21,706	22,150
Historical Employment	<u>7,915</u>	<u>7,935</u>	<u>7,999</u>	<u>8,063</u>	<u>8,128</u>	<u>8,193</u>	<u>8,259</u>	<u>8,428</u>	<u>8,600</u>	<u>8,776</u>
<b>Total Historical Population &amp; Employment</b>	<b>28,688</b>	<b>28,913</b>	<b>28,950</b>	<b>28,987</b>	<b>29,025</b>	<b>29,063</b>	<b>29,103</b>	<b>29,699</b>	<b>30,306</b>	<b>30,926</b>

INVENTORY SUMMARY (\$000)

Road Network	\$970,500.0	\$970,500.0	\$970,500.0	\$945,000.0	\$945,000.0	\$945,000.0	\$945,000.0	\$945,000.0	\$945,000.0	\$945,000.0
Road-Related Infrastructure	\$3,832.5	\$3,937.5	\$4,170.0	\$4,445.0	\$4,541.0	\$4,611.0	\$4,611.0	\$4,679.0	\$4,719.0	\$4,736.0
<b>Total (\$000)</b>	<b>\$974,332.5</b>	<b>\$974,437.5</b>	<b>\$974,670.0</b>	<b>\$949,445.0</b>	<b>\$949,541.0</b>	<b>\$949,611.0</b>	<b>\$949,611.0</b>	<b>\$949,679.0</b>	<b>\$949,719.0</b>	<b>\$949,736.0</b>

SERVICE LEVEL (\$/population & employment)

Road Network	\$33,829.48	\$33,566.22	\$33,523.32	\$32,600.82	\$32,558.14	\$32,515.57	\$32,470.88	\$31,819.75	\$31,181.75	\$30,556.83	\$32,462.27
Road-Related Infrastructure	\$133.59	\$136.18	\$144.04	\$153.34	\$156.45	\$158.66	\$158.44	\$157.55	\$155.71	\$153.14	\$150.71
<b>Total (\$/pop &amp; empl)</b>	<b>\$33,963.07</b>	<b>\$33,702.40</b>	<b>\$33,667.36</b>	<b>\$32,754.17</b>	<b>\$32,714.59</b>	<b>\$32,674.22</b>	<b>\$32,629.32</b>	<b>\$31,977.30</b>	<b>\$31,337.46</b>	<b>\$30,709.97</b>	<b>\$32,612.99</b>

Average  
Service  
Level

CALCULATION OF MAXIMUM ALLOWABLE FUNDING ENVELOPE  
MUNICIPALITY-WIDE ENGINEERING

<b>10-Year Funding Envelope Calculation</b>	
10-Year Average Service Level 2010 - 2019	\$32,612.99
Net Population & Employment Growth 2020 - 2036	6,248
<b>Maximum Allowable Funding Envelope</b>	<b>\$203,756,589</b>

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TABLE 2

MUNICIPALITY OF STRATHROY-CARADOC  
2020 DEVELOPMENT CHARGES BACKGROUND STUDY  
DEVELOPMENT-RELATED CAPITAL PROGRAM

Service	Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Cost		Total	DC Eligible Costs		
						Replacement & BTE Shares	Replacement and BTE Share	DC Eligible Costs	Available DC Reserves	2020- 2036	Post 2036
2.0	MUNICIPALITY-WIDE ENGINEERING										
	2.1 Roads										
	2.1.1 Land acquisition – Future McEvoy overpass of CN Rail	2025	\$ 100,000	\$ -	\$ 100,000	0%	\$ -	\$ 100,000	\$ 100,000	\$ -	\$ -
	2.1.2 Glengyle / Amiens Upgrading	2027	\$ 2,400,000	\$ -	\$ 2,400,000	20%	\$ 480,000	\$ 1,920,000	\$ 1,176,337	\$ 743,663	\$ -
	2.1.3 Saxton Road / Walkers Upgrading	2027	\$ 3,200,000	\$ -	\$ 3,200,000	20%	\$ 640,000	\$ 2,560,000	\$ -	\$ 2,560,000	\$ -
	2.1.4 Falconbridge / Springwell Upgrade	2031	\$ 1,520,000	\$ -	\$ 1,520,000	20%	\$ 304,000	\$ 1,216,000	\$ -	\$ 1,216,000	\$ -
	2.1.5 Oriole Drive Upgrade	2035	\$ 720,000	\$ -	\$ 720,000	20%	\$ 144,000	\$ 576,000	\$ -	\$ 576,000	\$ -
	2.1.6 Christina Upgrades	2039	\$ 2,000,000	\$ -	\$ 2,000,000	20%	\$ 400,000	\$ 1,600,000	\$ -	\$ -	\$ 1,600,000
	2.1.7 Gravel Road Conversions to Tar & Chip	Various	\$ 1,000,000	\$ -	\$ 1,000,000	80%	\$ 797,978	\$ 202,022	\$ -	\$ 202,022	\$ -
	Subtotal Roads		\$ 10,940,000	\$ -	\$ 10,940,000		\$ 2,765,978	\$ 8,174,022	\$ 1,276,337	\$ 5,297,685	\$ 1,600,000
	2.2 Studies										
	2.2.1 Municipal-Wide SWM Study	2021	\$ 250,000	\$ -	\$ 250,000	20%	\$ 50,000	\$ 200,000	\$ -	\$ 200,000	\$ -
	2.2.2 Future DC Needs Studies	2022	\$ 50,000	\$ -	\$ 50,000	0%	\$ -	\$ 50,000	\$ -	\$ 50,000	\$ -
	2.2.3 Future DC Needs Studies	2032	\$ 50,000	\$ -	\$ 50,000	0%	\$ -	\$ 50,000	\$ -	\$ 50,000	\$ -
	2.2.4 Development Charges Study	2020	\$ 30,000	\$ -	\$ 30,000	0%	\$ -	\$ 30,000	\$ -	\$ 30,000	\$ -
	2.2.5 Official Plan and Zoning Review	2020	\$ 150,000	\$ 75,000	\$ 75,000	50%	\$ 37,500	\$ 37,500	\$ -	\$ 37,500	\$ -
	2.2.6 Development Charges Study	2025	\$ 30,000	\$ -	\$ 30,000	0%	\$ -	\$ 30,000	\$ -	\$ 30,000	\$ -
	2.2.7 Development Charges Study	2030	\$ 30,000	\$ -	\$ 30,000	0%	\$ -	\$ 30,000	\$ -	\$ 30,000	\$ -
	2.2.8 Development Charges Study	2035	\$ 30,000	\$ -	\$ 30,000	0%	\$ -	\$ 30,000	\$ -	\$ 30,000	\$ -
	2.2.9 Downtown Master Plan/CIP	2020	\$ 35,000	\$ 17,500	\$ 17,500	0%	\$ -	\$ 17,500	\$ -	\$ 17,500	\$ -
	2.2.10 Provisoin for Future Development Related Studies	2020	\$ 250,000	\$ 125,000	\$ 125,000	0%	\$ -	\$ 125,000	\$ -	\$ 125,000	\$ -
	Subtotal Studies		\$ 905,000	\$ 217,500	\$ 687,500		\$ 87,500	\$ 600,000	\$ -	\$ 600,000	\$ -
	TOTAL MUNICIPALITY-WIDE ENGINEERING		\$ 11,845,000	\$ 217,500	\$ 11,627,500		\$ 2,853,478	\$ 8,774,022	\$ 1,276,337	\$ 5,897,685	\$ 1,600,000

<b>Residential Development Charge Calculation</b>			
Residential Share of 2020-2036 DC Eligible Costs	83%	\$4,895,078	
Growth in Population in New Units		8,760	
Unadjusted Development Charge Per Capita (\$)		<b>\$558.82</b>	
<b>Non-Residential Development Charge Calculation</b>			
Non-Residential Share of 2020-2036 DC Eligible Costs	17%	\$ 1,002,606	
Growth in Square Meters		111,051	
Unadjusted Development Charge Per Sq.M (\$)		<b>\$9.03</b>	

2020 - 2029 Net Funding Envelope	\$203,756,589
Reserve Fund Balance	\$1,276,337

APPENDIX C.2  
TABLE 3MUNICIPALITY OF STRATHROY-CARADOC  
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE  
MUNICIPALITY-WIDE ENGINEERING  
RESIDENTIAL DEVELOPMENT CHARGE

## 2.0 MUNICIPALITY-WIDE ENGINEERING

OPENING CASH BALANCE FROM APPLICABLE RESERVES	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE (\$000)	0.0	112.2	266.6	568.7	941.3	1,343.3	1,748.4	2,125.7	(736.6)	(470.4)
2020-2036 RESIDENTIAL FUNDING REQUIREMENTS										
2.00 Municipality-Wide Engineering : Non Inflated	\$184.16	\$175.86	\$51.36	\$9.86	\$9.86	\$34.76	\$9.86	\$2,751.90	\$9.86	\$9.86
2.00 Municipality-Wide Engineering : Inflated	\$184.16	\$179.38	\$53.44	\$10.47	\$10.68	\$38.38	\$11.11	\$3,161.07	\$11.56	\$11.79
POPULATION GROWTH										
- Population in New Units	523	570	583	598	613	628	508	469	475	485
REVENUE - current (\$000)										
- Dev. Charge Receipts	\$294.44	\$327.26	\$341.19	\$357.05	\$373.41	\$390.28	\$321.81	\$302.98	\$313.02	\$326.04
- Interest on Opening Balance	0.0	3.9	9.3	19.9	32.9	47.0	61.2	74.4	(40.5)	(25.9)
- Interest on In-year Transactions (excl.int.)	1.9	2.6	5.0	6.1	6.3	6.2	5.4	(78.6)	5.3	5.5
TOTAL REVENUE	296.4	333.8	355.6	383.0	412.7	443.5	388.4	298.8	277.8	305.7
CLOSING CASH BALANCE	112.2	266.6	568.7	941.3	1,343.3	1,748.4	2,125.7	(736.6)	(470.4)	(176.5)

OPENING CASH BALANCE FROM APPLICABLE RESERVES	2030	2031	2032	2033	2034	2035	2036	TOTAL
OPENING CASH BALANCE (\$000)	(176.5)	113.7	(826.3)	(609.9)	(317.9)	1.6	(343.0)	
2020-2036 RESIDENTIAL FUNDING REQUIREMENTS								
2.00 Municipality-Wide Engineering : Non Inflated	\$34.76	\$1,019.14	\$51.36	\$9.86	\$9.86	\$512.84	\$9.86	\$4,895.08
2.00 Municipality-Wide Engineering : Inflated	\$42.38	\$1,267.18	\$65.14	\$12.76	\$13.01	\$690.22	\$13.54	\$5,776.26
POPULATION GROWTH								
- Population in New Units	491	498	452	457	464	468	478	8,760
REVENUE - current (\$000)								
- Dev. Charge Receipts	\$337.07	\$348.51	\$322.47	\$332.69	\$344.20	\$354.79	\$369.31	\$5,756.52
- Interest on Opening Balance	(9.7)	4.0	(45.4)	(33.5)	(17.5)	0.1	(18.9)	\$61.32
- Interest on In-year Transactions (excl.int.)	5.2	(25.3)	4.5	5.6	5.8	(9.2)	6.2	(\$41.47)
TOTAL REVENUE	332.5	327.2	281.5	304.7	332.5	345.6	356.7	\$5,776.37
CLOSING CASH BALANCE	113.7	(826.3)	(609.9)	(317.9)	1.6	(343.0)	0.1	

2020 Adjusted Charge Per Capita

\$562.74

## Allocation of Capital Program

Residential Sector	83.0%
Non-Residential Sector	17.0%

## Rates for 2020

Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

**APPENDIX C.2  
TABLE 3**

**MUNICIPALITY OF STRATHROY-CARADOC  
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE  
MUNICIPALITY-WIDE ENGINEERING  
NON-RESIDENTIAL DEVELOPMENT CHARGE**

**2.0 MUNICIPALITY-WIDE ENGINEERING**

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE FROM APPLICABLE RESERVES										
OPENING CASH BALANCE (\$000)	\$0.00	\$60.96	\$128.96	\$178.88	\$241.20	\$307.53	\$375.94	\$454.63	(\$131.34)	(\$76.30)
2020-2036 NON-RESIDENTIAL FUNDING REQUIREMENTS										
2.00 Municipality-Wide Engineering : Non Inflated	\$37.72	\$36.02	\$10.52	\$2.02	\$2.02	\$7.12	\$2.02	\$563.64	\$2.02	\$2.02
2.00 Municipality-Wide Engineering : Inflated	\$37.72	\$36.74	\$10.95	\$2.14	\$2.19	\$7.86	\$2.28	\$647.45	\$2.37	\$2.41
NON-RESIDENTIAL GROWTH										
- Sq. Metres in New Buildings	10,812	11,017	5,915	5,973	6,044	6,471	6,557	5,946	6,007	6,061
REVENUE - current (\$000)										
- Dev. Charge Receipts	97.6	\$101.48	\$55.57	\$57.24	\$59.07	\$64.52	\$66.68	\$61.68	\$63.56	\$65.41
- Interest on Opening Balance	0.0	2.1	4.5	6.3	8.4	10.8	13.2	15.9	(7.2)	(4.2)
- Interest on In-year Transactions (excl.int.)	1.0	1.1	0.8	1.0	1.0	1.0	1.1	(16.1)	1.1	1.1
TOTAL REVENUE	98.7	104.7	60.9	64.5	68.5	76.3	81.0	61.5	57.4	62.3
CLOSING CASH BALANCE	61.0	129.0	178.9	241.2	307.5	375.9	454.6	(131.3)	(76.3)	(16.4)

	2030	2031	2032	2033	2034	2035	2036	TOTAL
OPENING CASH BALANCE FROM APPLICABLE RESERVES								
OPENING CASH BALANCE (\$000)	(\$16.40)	\$42.63	(\$151.14)	(\$109.21)	(\$52.18)	\$9.90	(\$64.65)	
2020-2036 NON-RESIDENTIAL FUNDING REQUIREMENTS								
2.00 Municipality-Wide Engineering : Non Inflated	\$7.12	\$208.74	\$10.52	\$2.02	\$2.02	\$105.04	\$2.02	\$1,002.61
2.00 Municipality-Wide Engineering : Inflated	\$8.68	\$259.54	\$13.34	\$2.61	\$2.67	\$141.37	\$2.77	\$1,183.09
NON-RESIDENTIAL GROWTH								
- Sq. Metres in New Buildings	6,139	6,191	5,477	5,528	5,581	5,635	5,697	111,051
REVENUE - current (\$000)								
- Dev. Charge Receipts	\$67.58	\$69.51	\$62.72	\$64.57	\$66.50	\$68.48	\$70.62	\$1,162.81
- Interest on Opening Balance	(0.9)	1.5	(8.3)	(6.0)	(2.9)	0.3	(3.6)	\$29.96
- Interest on In-year Transactions (excl.int.)	1.0	(5.2)	0.9	1.1	1.1	(2.0)	1.2	(\$8.84)
TOTAL REVENUE	67.7	65.8	55.3	59.6	64.7	66.8	68.3	\$1,183.92
CLOSING CASH BALANCE	42.6	(151.1)	(109.2)	(52.2)	9.9	(64.6)	0.8	

**2020 Adjusted Charge Per Square Metre**                      \$9.03

**HEMSON**

<b>Allocation of Capital Program</b>	
Residential Sector	83.0%
Non-Residential Sector	17.0%
<b>Rates for 2020</b>	
Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

## **APPENDIX D**

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### ***AREA-SPECIFIC SERVICES: STRATHROY AREA***



## **APPENDIX D.1**

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### ***AREA-SPECIFIC STRATHROY ENGINEERING***

## APPENDIX D.1

### STRATHROY ENGINEERING

This appendix provides a review of the analysis undertaken to establish the area-specific engineering development charge rates for the Strathroy service area. The service includes the road network as well as intersection improvements, sidewalks, curbs, stormwater facilities and other related expenditures. The area-specific service for Strathroy has been created to maintain consistency with the approach used to fund Mount Brydges development-related road and storm projects. In the Mount Brydges Service Area, the road and storm improvements are included within the area-specific water and wastewater capital programs under Appendix E and Area-Specific By-law No.76-18.

The development-related infrastructure projects are required to service the demands of development in the Strathroy area over the 2020–2036 period.

The *DCA* requires a specific forecast of growth be prepared for the area to which the charge would apply. It is estimated that approximately 61% of the residential growth and 92% of the non-residential growth will occur in the Strathroy Service Area over the 2020–2036 period.

<b>2020-2036 Growth</b>	<b>Municipal-Wide</b>	<b>Strathroy Service Area</b>	<b>Percentage of Growth in Strathroy</b>
Population in New Housing Units	8,760	5,311	61%
Non-Residential Space	111,051	101,865	92%

This growth forecast is discussed in more detail in Appendix A.

The inventory and funding envelope calculations for engineered services have been prepared at the municipal-wide level and are shown in Appendix C.2. The development charges eligible capital programs for road and related infrastructure across all areas of the community is below the maximum permissible funding envelope.

**TABLE 1      2020 – 2036 DEVELOPMENT-RELATED CAPITAL PROGRAM & CALCULATION OF THE DEVELOPMENT CHARGES**

The following table sets out the 2020–2036 development-related capital programs and the calculation of the development charge for Strathroy Engineering. The cost, quantum and description of the projects included in the forecast have been provided by municipal staff. This report identifies the necessary engineering infrastructure to allow the Municipality to meet the servicing needs of the forecast 2036 population in new units and non-residential floor space.

The gross cost of the capital program is \$42.02 million and provides for the undertaking of various road upgrades, expansions, widening's, and stormwater projects. No grants, subsidies or other recoveries have been identified in this program.

In total, \$16.68 million in benefit to existing share are identified and netted off the total project cost. Benefit to existing shares have been identified for several projects and identified below. Three projects, the McEvoy / Indale Upgrading, Carroll at Queen - roundabout/signals and York Street Servicing have been identified to be largely related to and driven by new development and thus have been assigned a twenty per cent benefit to existing share. Other projects such as the Downtown streetscaping, Head Street (curb and gutter and paving) and High Street projects, a benefit to existing share of approximately eighty per cent has been applied – this share is set relative to the current versus projected population and employment growth. The stormwater components of the projects above include corresponding benefit to existing shares.

Furthermore, a share of the program, approximately \$1.10 million, can be funded through existing development charge funds previously collected for roads and related services.

The total development-related capital program for the 2020–2036 period is \$24.23 million. The development-related cost has been allocated 77 per cent (\$18.66 million) to residential development and 23 per cent (\$5.57 million) to non-residential development. The allocation of costs is based on shares of population in new units and employment growth over the 17-year planning period.

The residential costs are recovered against the population growth in new units of 5,311 people yielding an unadjusted charge of \$3,512.55 per capita. The non-residential costs are recovered against the growth in non-residential floor area of 101,865m<sup>2</sup> yielding an unadjusted charge of \$54.71 per m<sup>2</sup>.

The following table summarizes the development charges calculation. No cashflow analysis has undertaken for the Strathroy Engineering Service.

<b>STRATHROY ENGINEERING (ROADS AND STORMWATER)</b>			
2020-2036			
Development-Related Capital Program	Development Charge		
Total	Net DC Recoverable	\$/capita	\$/sq.m
\$42,015,500	\$24,228,345	\$3,512.55	\$54.71

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TABLE 1

MUNICIPALITY OF STRATHROY-CARADOC  
2020 DEVELOPMENT CHARGES BACKGROUND STUDY  
DEVELOPMENT-RELATED CAPITAL PROGRAM

Service	Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Cost		Total DC Eligible Costs	DC Eligible Costs		
						BTE (%)	Replacement and BTE Share		Available DC Reserves	2020-2036	Post 2036
1.0 STRATHROY ENGINEERING											
1.1 Roads											
1.1.1	Wright & Adair – Curb & Gutter and Paving	2020	\$ 750,000	\$ -	\$ 750,000	0%	\$ -	\$ 750,000	\$ 750,000	\$ -	\$ -
1.1.2	McEvoy / Inadale Upgrading (Municipal share only)	2021	\$ 680,000	\$ -	\$ 680,000	20%	\$ 136,000	\$ 544,000	\$ 353,580	\$ 190,420	\$ -
1.1.3	Downtown streetscaping improvements (St and MT B – not Melbourne)	2021	\$ 2,750,000	\$ -	\$ 2,750,000	80%	\$ 2,194,441	\$ 555,559	\$ -	\$ 555,559	\$ -
1.1.4	Queen Street reconstructions	2022	\$ 2,240,000	\$ -	\$ 2,240,000	50%	\$ 1,120,000	\$ 1,120,000	\$ -	\$ 1,120,000	\$ -
1.1.5	Carroll at Queen – roundabout/signals	2022	\$ 300,000	\$ -	\$ 300,000	20%	\$ 60,000	\$ 240,000	\$ -	\$ 240,000	\$ -
1.1.6	Head Street – c&g and paving	2023	\$ 2,240,000	\$ -	\$ 2,240,000	80%	\$ 1,787,472	\$ 452,528	\$ -	\$ 452,528	\$ -
1.1.7	Second St signals at Head	2023	\$ 100,000	\$ -	\$ 100,000	20%	\$ 20,000	\$ 80,000	\$ -	\$ 80,000	\$ -
1.1.8	Drury Lane Construction (Saulsbry to Albert)	2024	\$ 1,200,000	\$ -	\$ 1,200,000	50%	\$ 600,000	\$ 600,000	\$ -	\$ 600,000	\$ -
1.1.9	Storm Trunk – Creek to Saxton	2024	\$ 1,920,000	\$ -	\$ 1,920,000	10%	\$ 192,000	\$ 1,728,000	\$ -	\$ 1,728,000	\$ -
1.1.10	High Street Storm Sewers	2025	\$ 1,440,000	\$ -	\$ 1,440,000	80%	\$ 1,149,089	\$ 290,911	\$ -	\$ 290,911	\$ -
1.1.11	York Street Servicing (incl 1 block of High St)	2026	\$ 1,664,000	\$ -	\$ 1,664,000	20%	\$ 332,800	\$ 1,331,200	\$ -	\$ 1,331,200	\$ -
1.1.12	Pannell Lane reconstruction (full length)	2027	\$ 1,760,000	\$ -	\$ 1,760,000	50%	\$ 880,000	\$ 880,000	\$ -	\$ 880,000	\$ -
1.1.13	Trunk sanitary sewer Carroll to Walkers (west side of Adelaide)	2027	\$ 2,240,000	\$ -	\$ 2,240,000	0%	\$ -	\$ 2,240,000	\$ -	\$ 2,240,000	\$ -
1.1.14	Albert St San Sewer & County Road - Carrie to Town Limit	2028	\$ 1,600,000	\$ -	\$ 1,600,000	50%	\$ 800,000	\$ 800,000	\$ -	\$ 800,000	\$ -
1.1.15	Saulsbury reconstruction	2032	\$ 1,760,000	\$ -	\$ 1,760,000	50%	\$ 880,000	\$ 880,000	\$ -	\$ 880,000	\$ -
1.1.16	Adair Extension to Metcalfe including Watermain	2035	\$ 2,240,000	\$ -	\$ 2,240,000	0%	\$ -	\$ 2,240,000	\$ -	\$ 2,240,000	\$ -
Subtotal Roads			\$ 24,884,000	\$ -	\$ 24,884,000		\$ 10,151,802	\$ 14,732,198	\$ 1,103,580	\$ 13,628,618	\$ -
1.2 Stormwater											
1.2.1	Queen Street reconstructions	2022	\$ 1,890,000	\$ -	\$ 1,890,000	50%	\$ 945,000	\$ 945,000	\$ -	\$ 945,000	\$ -
1.2.2	Head Street – c&g and paving	2023	\$ 1,890,000	\$ -	\$ 1,890,000	80%	\$ 1,508,179	\$ 381,821	\$ -	\$ 381,821	\$ -
1.2.3	Drury Lane Construction (Saulsbry to Albert)	2024	\$ 1,012,500	\$ -	\$ 1,012,500	50%	\$ 506,250	\$ 506,250	\$ -	\$ 506,250	\$ -
1.2.4	Storm Trunk – Creek to Saxton	2024	\$ 1,620,000	\$ -	\$ 1,620,000	10%	\$ 162,000	\$ 1,458,000	\$ -	\$ 1,458,000	\$ -
1.2.5	High Street Storm Sewers	2025	\$ 1,215,000	\$ -	\$ 1,215,000	80%	\$ 969,544	\$ 245,456	\$ -	\$ 245,456	\$ -
1.2.6	York Street Servicing (incl 1 block of High St)	2026	\$ 1,404,000	\$ -	\$ 1,404,000	20%	\$ 280,800	\$ 1,123,200	\$ -	\$ 1,123,200	\$ -
1.2.7	Pannell Lane reconstruction (full length)	2027	\$ 1,485,000	\$ -	\$ 1,485,000	50%	\$ 742,500	\$ 742,500	\$ -	\$ 742,500	\$ -
1.2.8	Trunk sanitary sewer Carroll to Walkers (west side of Adelaide)	2027	\$ 1,890,000	\$ -	\$ 1,890,000	0%	\$ -	\$ 1,890,000	\$ -	\$ 1,890,000	\$ -
1.2.9	Albert St San Sewer & County Road - Carrie to Town Limit	2028	\$ 1,350,000	\$ -	\$ 1,350,000	50%	\$ 675,000	\$ 675,000	\$ -	\$ 675,000	\$ -
1.2.10	Saulsbury reconstruction	2032	\$ 1,485,000	\$ -	\$ 1,485,000	50%	\$ 742,500	\$ 742,500	\$ -	\$ 742,500	\$ -
1.2.11	Adair Extension to Metcalfe including Watermain	2035	\$ 1,890,000	\$ -	\$ 1,890,000	0%	\$ -	\$ 1,890,000	\$ -	\$ 1,890,000	\$ -
Subtotal Stormwater			\$ 17,131,500	\$ -	\$ 17,131,500		\$ 6,531,773	\$ 10,599,727	\$ -	\$ 10,599,727	\$ -
TOTAL STRATHROY ENGINEERING			\$ 42,015,500	\$ -	\$ 42,015,500		\$ 16,683,575	\$ 25,331,925	\$ 1,103,580	\$ 24,228,345	\$ -

<b>Residential Development Charge Calculation</b>		
Residential Share of 2020-2036 DC Eligible Costs	77%	\$18,655,826
17 Year Growth in Population in New Units (to 2036)		5,311
Unadjusted Development Charge Per Capita (\$)		<b>\$3,512.55</b>
<b>Non-Residential Development Charge Calculation</b>		
Non-Residential Share of 2020-2036 DC Eligible Costs	23%	\$ 5,572,519
17 Year Growth in Square Meters (to 2036)		101,865
Unadjusted Development Charge Per Sq.M (\$)		<b>\$54.71</b>

2020 - 2036 Net Funding Envelope	\$203,756,589
Reserve Fund Balance	\$1,103,580

## APPENDIX D.2

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### *STRATHROY WATER*

## APPENDIX D.2

### STRATHROY WATER

This appendix provides the analysis undertaken to establish the area-specific development charge rates for Strathroy Water. The development-related infrastructure projects are required to service the demands of new development in the Strathroy area over the 2020–2036 period.

This growth forecast is discussed in Appendix D.1 and in more detail in Appendix A.

**TABLE 1      2020 – 2036 DEVELOPMENT-RELATED CAPITAL PROGRAM AND  
CALCULATION OF THE DEVELOPMENT CHARGES**

Table 1 provides a summary of the development-related capital program for water infrastructure for the Strathroy Water Service Area. The capital program is separated between two components; firstly, completed projects for which the Municipality has already undertaken the work, secondly, for new capital infrastructure which the Municipality intends to construct over the planning horizon.

The gross cost of the entire development-related capital program is approximately \$26.71 million, of which, \$20.63 million has been identified as a benefit to existing share, and is therefore netted off the development charge calculation.

For “Lake Huron Connection/Ground Level Reservoir”, “Victoria Watermain Replacement”, “Metcalf St W Watermain (Saxonville to P.S)” and “Carroll St-Park St Watermain Loop” projects, the BTE shares have been maintained from previous studies. The Benefit to Existing shares for new capital projects range from 0%-80% and are consistent with the projects identified in the Strathroy Engineering appendix. The Strathroy Water Tower replacement and upsizing BTE share applied is related to the expanded capacity of the infrastructure.

In addition, the municipality has previously allocated \$241,510 of DC funds related to the “Carroll St-Park St Watermain Loop” have been netted off from the DC-eligible capital cost. Furthermore, the Municipality has approximately \$399,940 in available DC reserves to offset the cost of this program; these funds have been applied to the program to reduce the development related share. No post-2036 shares have been identified, therefore, approximately \$5.44 million is eligible for funding through development charges in this period.

Table 1 provides the calculation of the residential and non-residential development charges for the Strathroy Water Service Area. The development-related capital cost of \$5.44 million is allocated 77% (\$4.19 million) to residential development and 23% (\$1.25 million) to non-residential development. This apportionment is based on shares of population in new units and employment growth. When the \$4.19 million residential share of the development-related capital program is divided by the population in new units anticipated in Strathroy to 2036 (5,311) a charge of \$789.29 per capita is derived. When the \$1.25 million-residential share of the development-related capital program is divided by the non-residential space anticipated in Strathroy to 2036 (101,865) a charge of \$12.29 per m<sup>2</sup> is derived.

The following table summarizes the calculation of the Strathroy Water service area development charge.

<b>STRATHROY WATER SERVICE AREA SUMMARY</b>			
2020-2036			
Development-Related Capital Program		Development Charge	
Total	Net DC Recoverable	\$/capita	\$/sq.m
\$26,714,925	\$5,444,220	\$789.29	\$12.29



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TABLE 1

MUNICIPALITY OF STRATHROY-CARADOC  
2020 DEVELOPMENT CHARGES BACKGROUND STUDY  
DEVELOPMENT-RELATED CAPITAL PROGRAM

Service	Project Description	Length (m)	Size (mm)	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Cost		Total DC Eligible Costs	Prior Growth <sup>1</sup>	DC Eligible Costs		
								BTE (%)	Replacement and BTE Share			Available DC Reserves	2020- 2036	Post 2036
2.0 STRATHROY WATER SERVICE AREA														
2.1 Completed Projects														
2.1.1	Lake Huron Connection/Ground Level Reservoir			2006	\$ 18,933,155	\$ -	\$ 18,933,155	91%	\$ 17,160,733	\$ 1,772,422	\$ -	\$ 75,000	\$ 1,697,422	\$ -
2.1.2	Victoria Watermain Replacement	600	400	2009	\$ 500,000	\$ -	\$ 500,000	63%	\$ 316,490	\$ 183,510	\$ -	\$ 75,000	\$ 108,510	\$ -
2.1.3	Metcalfe St W watermain (Saxonville to P.S)	700	300	2009	\$ 219,770	\$ -	\$ 219,770	25%	\$ 54,943	\$ 164,828	\$ -	\$ 164,828	\$ -	\$ -
2.1.4	Metcalfe St W watermain (McNab to Bear Creek Golf)	867	300	2011	\$ 387,000	\$ -	\$ 387,000	0%	\$ -	\$ 387,000	\$ -	\$ 26,615	\$ 360,385	\$ -
2.1.5	Carroll St-Park St Watermain Loop	995	250	2013	\$ 400,000	\$ -	\$ 400,000	25%	\$ 100,000	\$ 300,000	\$ 241,508	\$ 58,492	\$ -	\$ -
Subtotal Completed Projects					\$ 20,439,925	\$ -	\$ 20,439,925		\$ 17,632,166	\$ 2,807,759	\$ 241,508	\$ 399,935	\$ 2,166,316	\$ -
2.2 New Projects														
2.1.1	Queen Street reconstructions	1.40		2022	\$ 700,000	\$ -	\$ 700,000	50%	\$ 350,000	\$ 350,000	\$ -	\$ -	\$ 350,000	\$ -
2.1.2	Strathroy Water Tower replacement and upsizing			2022	\$ 2,000,000	\$ -	\$ 2,000,000	75%	\$ 1,500,000	\$ 500,000	\$ -	\$ -	\$ 500,000	\$ -
2.1.3	Drury Lane Construction (Saulsbry to Albert)	0.75		2024	\$ 375,000	\$ -	\$ 375,000	50%	\$ 187,500	\$ 187,500	\$ -	\$ -	\$ 187,500	\$ -
2.1.4	Pannell Lane reconstruction (full length)	1.10		2027	\$ 550,000	\$ -	\$ 550,000	50%	\$ 275,000	\$ 275,000	\$ -	\$ -	\$ 275,000	\$ -
2.1.5	Trunk sanitary sewer Carroll to Walkers (west side of Adelaide)	1.40		2027	\$ 700,000	\$ -	\$ 700,000	0%	\$ -	\$ 700,000	\$ -	\$ -	\$ 700,000	\$ -
2.1.6	Albert St San Sewer & County Road - Carrie to Town Limit	1.00		2028	\$ 500,000	\$ -	\$ 500,000	50%	\$ 250,000	\$ 250,000	\$ -	\$ -	\$ 250,000	\$ -
2.1.7	Alternate trunk watermain – McDonald to Pannell	0.40		2030	\$ 200,000	\$ -	\$ 200,000	80%	\$ 159,596	\$ 40,404	\$ -	\$ -	\$ 40,404	\$ -
2.1.8	Saulsbury reconstruction	1.10		2032	\$ 550,000	\$ -	\$ 550,000	50%	\$ 275,000	\$ 275,000	\$ -	\$ -	\$ 275,000	\$ -
2.1.9	Adair Extension to Metcalfe including Watermain	1.40		2035	\$ 700,000	\$ -	\$ 700,000	0%	\$ -	\$ 700,000	\$ -	\$ -	\$ 700,000	\$ -
Subtotal New Projects					\$ 6,275,000	\$ -	\$ 6,275,000		\$ 2,997,096	\$ 3,277,904	\$ -	\$ -	\$ 3,277,904	\$ -
TOTAL STRATHROY WATER SERVICE AREA					\$ 26,714,925	\$ -	\$ 26,714,925		\$ 20,629,262	\$ 6,085,663	\$ 241,508	\$ 399,935	\$ 5,444,220	\$ -

Note 1: DC which have been previously collected and have been applied towards that project

<b>Residential Development Charge Calculation</b>		
Residential Share of 2020-2036 DC Eligible Costs	77.0%	\$4,192,050
Growth in Population in New Units Horizon Year 2036		5,311
Unadjusted Development Charge Per Capita (\$)		<b>\$789.29</b>
<b>Non-Residential Development Charge Calculation</b>		
Non-Residential Share of 2020-2036 DC Eligible Costs	23.0%	\$ 1,252,171
Growth in Square Meters Horizon Year 2036		101,865
Unadjusted Development Charge Per Sq.M (\$)		<b>\$12.29</b>

Reserve Fund Balance	\$399,935
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## **APPENDIX D.3**

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### ***STRATHROY WASTEWATER***

## APPENDIX D.3

### STRATHROY WASTEWATER

This appendix provides the analysis undertaken to establish the area-specific development charge rates for Strathroy Wastewater. The development-related infrastructure projects are required to service the demands of new development in the Strathroy area over the 2020–2036 period.

This growth forecast is discussed in Appendix D.1 and in more detail in Appendix A.

**TABLE 1      2020 – 2036 DEVELOPMENT-RELATED CAPITAL PROGRAM AND  
CALCULATION OF THE DEVELOPMENT CHARGES**

Table 1 provides a summary of the development-related capital program for wastewater infrastructure for the Strathroy Service Area. Similarly to the water capital program, the wastewater capital program is separated between; completed projects for which the Municipality has already undertaken the work and for new capital infrastructure which the Municipality intends to construct over the planning horizon.

The total capital forecast for the Strathroy Wastewater services amounts to \$21.45 million, of which, the Municipality of Strathroy-Caradoc has recovered \$1.10 million from Adelaide-Metcalf to help fund the expansion of the sewage treatment plant which the work has already occurred.

In addition, approximately \$8.85 million represents the replacement and benefit to existing component – this share is netted off the development charge calculation. Benefit to existing (BTE) shares for completed projects have been maintained as they were in the previous 2015 DC Background Study. For new wastewater capital projects, the BTE shares are equal to the related shares of the project as included in the Strathroy Engineering appendix where applicable.

The Municipality has previously allocated \$780,860 of DC funds to support the Metcalfe Street Pump Station, this share has also been netted off the development charges calculation. In addition, the Municipality has approximately \$1.26 million in available DC reserve to offset the cost of this program; these funds have been applied towards the completed projects in the program. No post-2036 shares have been identified, therefore, approximately \$9.46 million is eligible for funding through development charges in this period.

Table 1 provides the calculation of the residential and non-residential development charges for the Strathroy Wastewater Service Area. The development-related capital cost of \$9.46 million is allocated 77% (\$7.28 million) to residential development and 23% (\$2.18 million) to non-residential development. This apportionment is based on shares of population in new units and employment growth. When the \$7.28 million residential share of the net development-related capital program is divided by the population in new units anticipated in Strathroy to 2036 (5,311) a charge of \$1,371.34 per capita is derived. When the \$2.18 million non-residential share of the net development-related capital program is divided by the non-residential space anticipated in Strathroy to 2036 (101,865) a charge of \$21.36 per m<sup>2</sup> is derived.

The following table summarizes the calculation of the Strathroy wastewater service area development charge.

<b>STRATHROY WASTEWATER SERVICE AREA SUMMARY</b>			
2020-2036		Unadjusted	
Development-Related Capital Program		Development Charge	
Total	Net DC Recoverable	\$/capita	\$/sq.m
\$21,448,272	\$9,459,028	\$1,371.34	\$21.36

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TABLE 1

MUNICIPALITY OF STRATHROY-CARADOC  
2020 DEVELOPMENT CHARGES BACKGROUND STUDY  
DEVELOPMENT-RELATED CAPITAL PROGRAM

Service	Project Description	Length	Size (mm)	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Cost		Total DC Eligible Costs	DC Eligible Costs				
								BTE (%)	Replacement and BTE Share		Prior Growth <sup>1</sup>	Available DC Reserves	2020-2036	Post 2036	
3.0 STRATHROY WASTEWATER SERVICE AREA															
3.1 Completed Projects															
3.1.1	Sewage Treatment Plant Expansion (3400 m <sup>3</sup> of growth capacity)			2000	\$ 3,400,000	\$ 1,100,000	\$ 2,300,000	0.0%	\$ -	\$ 2,300,000	\$ -	\$ 240,274	\$ 2,059,726	\$ -	
3.1.2	Hwy 81 Sewer (Twin Ekims to Trout Sewer Trunk to Trout Creek Crossing)	780	250	2008	\$ 345,464	\$ -	\$ 345,464	62.5%	\$ 215,915	\$ 129,549	\$ -	\$ 129,549	\$ -	\$ -	
3.1.3	Metcalf Street Pump Station			2010	\$ 2,500,000	\$ -	\$ 2,500,000	50.0%	\$ 1,250,000	\$ 1,250,000	\$ 780,863	\$ 469,137	\$ -	\$ -	
3.1.4	Forecmain Metcalfe St. To PS Lagoon	1,594	350	2010	\$ 510,000	\$ -	\$ 510,000	0.0%	\$ -	\$ 510,000	\$ -	\$ 100,000	\$ 410,000	\$ -	
3.1.5	Tourt Creek Trunk Sewer (SPS to Park St)	1,495	600	2011	\$ 1,453,584	\$ -	\$ 1,453,584	50.0%	\$ 726,792	\$ 726,792	\$ -	\$ 100,000	\$ 626,792	\$ -	
3.1.6	McNab Pump Replacement			2012	\$ 17,703	\$ -	\$ 17,703	0.0%	\$ -	\$ 17,703	\$ -	\$ 17,703	\$ -	\$ -	
3.1.7	Metcalfe St Sewer (Richmond to PS)	1,700	525	2013	\$ 1,358,021	\$ -	\$ 1,358,021	50.0%	\$ 679,011	\$ 679,011	\$ -	\$ 100,000	\$ 579,011	\$ -	
3.1.8	Carroll St Sanitary Sewer (Park St to Adelaide St)	1,097	600/250	2013	\$ 771,000	\$ -	\$ 771,000	25.0%	\$ 192,750	\$ 578,250	\$ -	\$ 100,000	\$ 478,250	\$ -	
Subtotal					\$ 10,355,772	\$ 1,100,000	\$ 9,255,772		\$ 3,064,468	\$ 6,191,305	\$ 780,863	\$ 1,256,663	\$ 4,153,778	\$ -	
3.2 New Wastewater Capital Projects															
3.2.1	Queen Street reconstructions	1		2022	\$ 1,050,000	\$ -	\$ 1,050,000	50%	\$ 525,000	\$ 525,000	\$ -	\$ -	\$ 525,000	\$ -	
3.2.2	ST WWTP – two new aeration tanks (abandon existing)			2022	\$ 4,000,000	\$ -	\$ 4,000,000	75%	\$ 3,000,000	\$ 1,000,000	\$ -	\$ -	\$ 1,000,000	\$ -	
3.2.3	Drury Lane Construction (Saulsbry to Albert)	1		2024	\$ 562,500	\$ -	\$ 562,500	50%	\$ 281,250	\$ 281,250	\$ -	\$ -	\$ 281,250	\$ -	
3.2.4	York Street Servicing (incl 1 block of High St)	1		2026	\$ 780,000	\$ -	\$ 780,000	20%	\$ 156,000	\$ 624,000	\$ -	\$ -	\$ 624,000	\$ -	
3.2.5	Pannell Lane reconstruction (full length)	1		2027	\$ 825,000	\$ -	\$ 825,000	50%	\$ 412,500	\$ 412,500	\$ -	\$ -	\$ 412,500	\$ -	
3.2.6	Trunk sanitary sewer Carroll to Walkers (west side of Adelaide)	1		2027	\$ 1,050,000	\$ -	\$ 1,050,000	0%	\$ -	\$ 1,050,000	\$ -	\$ -	\$ 1,050,000	\$ -	
3.2.7	Albert St Sewage PS upgrades and FM Carrie St Connection			2028	\$ 750,000	\$ -	\$ 750,000	50%	\$ 375,000	\$ 375,000	\$ -	\$ -	\$ 375,000	\$ -	
3.2.8	Albert St PS FM to Treatment Plant			2028	\$ 500,000	\$ -	\$ 500,000	50%	\$ 250,000	\$ 250,000	\$ -	\$ -	\$ 250,000	\$ -	
3.2.9	Albert St San Sewer & County Road - Carrie to Town Limit	1		2028	\$ 750,000	\$ -	\$ 750,000	50%	\$ 375,000	\$ 375,000	\$ -	\$ -	\$ 375,000	\$ -	
3.2.10	Saulsbury reconstruction	1		2032	\$ 825,000	\$ -	\$ 825,000	50%	\$ 412,500	\$ 412,500	\$ -	\$ -	\$ 412,500	\$ -	
Subtotal New Wastewater Capital Projects					\$ 11,092,500	\$ -	\$ 11,092,500		\$ 5,787,250	\$ 5,305,250	\$ -	\$ -	\$ 5,305,250	\$ -	
TOTAL STRATHROY WASTEWATER SERVICE AREA					\$ 21,448,272	\$ 1,100,000	\$ 20,348,272		\$ 8,851,718	\$ 11,496,555	\$ 780,863	\$ 1,256,663	\$ 9,459,028	\$ -	

Note 1: DC which have been previously collected and have been applied towards that project.

<b>Residential Development Charge Calculation</b>		
Residential Share of 2020-2036 DC Eligible Costs	77.0%	\$7,283,452
Growth in Population in New Units Horizon Year 2036		5,311
Unadjusted Development Charge Per Capita (\$)		<b>\$1,371.34</b>
<b>Non-Residential Development Charge Calculation</b>		
Non-Residential Share of 2020-2036 DC Eligible Costs	23.0%	\$ 2,175,576
Growth in Square Meters Horizon Year 2036		101,865
Unadjusted Development Charge Per Sq.M (\$)		<b>\$21.36</b>

Reserve Fund Balance	\$1,256,663
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## **APPENDIX E**

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### ***MOUNT BRYDGES SERVICE AREA***

## **APPENDIX E.1**

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### ***MOUNT BRYDGES WATER***

## APPENDIX E.1

### MOUNT BRYDGES WATER SERVICES

This appendix provides the analysis undertaken to establish the development charge rates for Mount Brydges Water Services. The development-related infrastructure projects are required to service the demands of new development in the Mount Brydges area over the 2020–2029 period.

The *DCA* requires a specific forecast of growth be prepared for the area to which the charge would apply. It is estimated that about 38% of the residential development and 5% of the non-residential development will occur in the Mount Brydges Service Area over the 2020–2029 period.

2020-2029 Development	Municipal-Wide	Mount Brydges Service Area	Percentage of Development in Mount Brydges
Population in New Housing Units	5,451	2,052	38%
Non-Residential Space	70,804	3,800	5%

**TABLE 1            2020 – 2029 DEVELOPMENT-RELATED CAPITAL PROGRAM AND CALCULATION OF THE DEVELOPMENT CHARGES**

Table 1 provides a summary of the development-related capital program for water infrastructure for the Mount Brydges Service Area. The gross cost of the Mount Brydges capital program amount to \$5.09 million and is primarily related to the infrastructure associated with the connection to Lake Huron water supply at a cost of \$3.70 million. Of this cost, approximately \$1.80 million in grants and subsidies has been received to offset the cost of the project. In addition, the program also incorporates a provision for new linear infrastructure and a reservoir to facilitate future growth in this area. A needs and design study is incorporated into the capital program and it is anticipated that once this study is complete, it will help further quantify water capital needs in Mount Brydges. It is anticipated that these works will benefit development beyond the planning period, therefore, 50% of the total cost can be recovered in subsequent development charge studies.

Benefit to existing shares of about \$836,280 has been identified, and is netted off the development charge calculation. The majority of this amount is related to the Lake Huron Water Supply project and a small share of 5 per cent is attributed to the water



portion of the Mount Brydges Sanitary extension to Falconbridge (on Adelaide). Prior allocation of DC Funds have been attributed to the Wood's Edge Pipe Oversizing at a cost of \$49,113. There is an amount in the Mount Brydges Water DC reserve fund of \$328,850 that has been collected and has been allocated between the connection to Lake Huron Water Supply and Woods Edge Pipe Oversizing. Lastly, in consultation with municipal staff, it was determined that the benefiting period of the Lake Huron Connection would extend beyond 2029, therefore, \$269,725 is considered to benefit development beyond 2029 – this amount can be recovered in subsequent development charge studies.

As shown in Table 1, the 2020 – 2029 DC costs eligible for recovery amounts to \$1.31 million. The net development-related capital cost of \$1.31 million is allocated 96% (\$1.25 million) to residential development and 4% (\$52,248) to non-residential development. This apportionment is based on shares of population in new household and employment growth over the ten-year period in Mount Brydges. When the \$1.25 residential share of the net development-related capital program is divided by the population in new units anticipated in Mount Brydges to 2029 (2,052) a charge of \$610.97 per capita is derived. When the \$52,248 non-residential share of the net development-related capital program is divided by the non-residential space anticipated in Mount Brydges to 2029 (3,800) a charge of \$13.75 per m<sup>2</sup> is derived.

The following table summarizes the Mount Brydges Water Service area development charges calculation.

<b>MOUNT BRYDGES WATER SERVICE AREA SUMMARY</b>			
2020-2029		Unadjusted	
Development-Related Capital Program		Development Charge	
Total	Net DC Recoverable	\$/capita	\$/sq.m
\$5,090,000	\$1,306,212	\$610.97	\$13.75

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TABLE 1

MUNICIPALITY OF STRATHROY-CARADOC  
2020 DEVELOPMENT CHARGES BACKGROUND STUDY  
DEVELOPMENT-RELATED CAPITAL PROGRAM

Service	Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Cost		Total DC Eligible Costs	DC Eligible Costs			
						BTE (%)	Replacement and BTE Share		Prior Growth <sup>1</sup>	Available DC Reserves	2020-2029	Post 2029
1.0 MOUNT BRYDGES WATER SERVICE AREA												
1.1 Completed Projects												
1.1.1	Connection to Lake Huron Water Supply (max day demand 3,540 m3/day - 40 year)	2020	\$ 3,700,000	\$ 1,799,820	\$ 1,900,180	43%	\$821,280	\$ 1,078,900	\$ -	\$ 327,963	\$ 481,212	\$ 269,725
1.1.2	Wood's Edge Pipe Oversizing	2020	\$ 50,000	\$ -	\$ 50,000	0%	\$ -	\$ 50,000	\$ 49,113	\$ 887	\$ -	\$ -
Subtotal Completed Projects			\$ 3,750,000	\$ 1,799,820	\$ 1,950,180		\$ 821,280	\$ 1,128,900	\$ 49,113	\$ 328,850	\$ 481,212	\$ 269,725
1.2 New Water Capital Projects												
1.2.1	MT B – Sanitary extension to Falconbridge (on Adelaide)	2025	\$ 300,000	\$ -	\$ 300,000	5%	\$ 15,000	\$ 285,000	\$ -	\$ -	\$ 285,000	\$ -
1.2.2	Provision for Development-Related Study Costs	2025	\$ 40,000	\$ -	\$ 40,000	0%	\$ -	\$ 40,000	\$ -	\$ -	\$ 40,000	\$ -
1.2.3	Provision for Development-Related Works (linear infrastructure and reservoir)	2026	\$ 1,000,000	\$ -	\$ 1,000,000	0%	\$ -	\$ 1,000,000	\$ -	\$ -	\$ 500,000	\$ 500,000
Subtotal New Water Capital Projects			\$ 1,340,000	\$ -	\$ 1,340,000		\$ 15,000	\$ 1,325,000	\$ -	\$ -	\$ 825,000	\$ 500,000
TOTAL MOUNT BRYDGES WATER SERVICE AREA			\$ 5,090,000	\$ 1,799,820	\$ 3,290,180		\$ 836,280	\$ 2,453,900	\$ 49,113	\$ 328,850	\$ 1,306,212	\$ 769,725

Note 1: DC which have been previously collected and have been applied towards that project

<b>Residential Development Charge Calculation</b>		
Residential Share of 2020-2029 DC Eligible Costs	96%	\$1,253,963
Growth in Population in New Units to Horizon Year 2029		2,052
Unadjusted Development Charge Per Capita (\$)		<b>\$610.97</b>
<b>Non-Residential Development Charge Calculation</b>		
Non-Residential Share of 2020-2029 DC Eligible Costs	4%	\$ 52,248
Growth in Square Meters to Horizon Year 2029		3,800
Unadjusted Development Charge Per Sq.M (\$)		<b>\$13.75</b>

Reserve Fund Balance	\$328,850
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## **APPENDIX E.2**

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### ***MOUNT BRYDGES WASTEWATER***

## APPENDIX E.2

### MOUNT BRYDGES WASTEWATER SERVICES

This appendix provides the analysis undertaken to establish the development charge rates for Mount Brydges wastewater services. The development-related infrastructure projects are required to service the demands of new development in the Mount Brydges area over the 2020–2029 period. It should be noted that the wastewater capital program identified in this Background Study includes the consolidation of Special Area 1 and 2 into the single Mount Brydges wide wastewater calculation. Details on the development forecast for Mount Brydges can be found in Appendix E.1.

**TABLE 1            2020 – 2029 DEVELOPMENT-RELATED CAPITAL PROGRAM AND CALCULATION OF THE DEVELOPMENT CHARGES**

Table 1 provides a summary of the development-related capital program for the Mount Brydges Wastewater Service Area. The development-related capital program totals \$9.91 million, and is partially related to the recovery of outstanding debenture payments related to sewage treatment and related works constructed in Mount Brydges.

The Municipality has previously allocated \$1.44 million of DC monies collected to support the debenture payments as well as portion related to Woods Edge Pipe Oversizing, in addition to the \$1.19 million in DC reserve collected. These funds have been applied to offset the cost of these projects. No post-2029 shares have been identified, therefore, the remaining \$1.69 million is eligible for funding through development charges in this period.

The capital program also includes a Capacity Needs analysis and Servicing in 2020; Sewer Extension on Parkhouse Drive in 2021 (previously part of Service Area 2); Mount Brydges Sanitary Extension to Falconbridge in (on Adelaide) in 2025 (previously part of Service Area 1); Mount Brydges Sanitary Equalization Tank in 2025; and a provision to provide additional capacity to the plant in 2026. It is important to note that following the completion of the capacity and needs analysis, the costs and timing of the infrastructure requirements will be quantified and reflected in subsequent DC studies. BTE shares related to the Sewer Extension on Parkhouse Drive, Sanitary Extension to Falconbridge on Adelaide and the Sanitary Equalization Tank amount to \$641,000 and have been netted off the DC Eligible shares.

As shown in Table 1, the total 2020 – 2029 DC costs eligible for recovery amount to \$6.65 million. The net development-related capital cost of \$6.65 million is allocated 96% (\$6.38 million) to residential development and 4% (\$265,896) to non-residential development. When the \$6.38 million residential share of net development-related capital program is divided by the population in new units anticipated to 2029 (2,052) a charge of \$3,109.29 is derived. When the \$265,896 non-residential share of the net development-related capital program is divided by the non-residential space anticipated to 2029 (3,800) a charge of \$69.97 per m<sup>2</sup> is derived.

The following table summarizes the Mount Brydges Wastewater Service Area development charges calculation.

<b>MT.BRYDGES WASTEWATER SUMMARY</b>			
2020-2029		Unadjusted	
Development-Related Capital Program		Development Charge	
Total	Net DC Recoverable	\$/capita	\$/sq.m
\$9,914,160	\$6,647,407	\$3,109.29	\$69.97

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TABLE 1

MUNICIPALITY OF STRATHROY-CARADOC  
2020 DEVELOPMENT CHARGES BACKGROUND STUDY  
DEVELOPMENT-RELATED CAPITAL PROGRAM

Service	Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Cost		Total DC Eligible Costs	DC Eligible Costs			
						BTE (%)	Replacement and BTE Share		Prior Growth <sup>1</sup>	Available DC Reserves	2020-2029	Post 2029
2.0 MOUNT BRYDGES WASTEWATER SERVICE AREA												
2.1 Completed Projects												
2.1.1	Sewage Project CMHC Loan (2012-2021)	2012	\$ 646,893	\$ -	\$ 646,893	0%	\$ -	\$ 646,893	\$ 296,137	\$ 350,756	\$ -	\$ -
2.1.2	Sewage Project CMHC Loan (2012-2026)	2012	\$ 3,622,268	\$ -	\$ 3,622,268	0%	\$ -	\$ 3,622,268	\$ 1,092,023	\$ 836,837	\$ 1,693,407	\$ -
2.1.3	Wood's Edge Pipe Oversizing	2019	\$ 50,000	\$ -	\$ 50,000	0%	\$ -	\$ 50,000	\$ 49,113	\$ 887	\$ -	\$ -
Subtotal Completed Projects			\$ 4,319,160	\$ -	\$ 4,319,160		\$ -	\$ 4,319,160	\$ 1,437,274	\$ 1,188,479	\$ 1,693,407	\$ -
2.2 New Wastewater Capital Projects												
2.2.1	Capacity Needs Analysis and Servicing	2020	\$ 75,000	\$ -	\$ 75,000	0%	\$ -	\$ 75,000	\$ -	\$ -	\$ 75,000	\$ -
2.2.2	Sewer Extension (Parkhouse Drive)	2021	\$ 1,000,000	\$ -	\$ 1,000,000	38%	\$ 380,000	\$ 620,000	\$ -	\$ -	\$ 620,000	\$ -
2.2.3	MT B – Sanitary extension to Falconbridge (on Adelaide)	2025	\$ 2,220,000	\$ -	\$ 2,220,000	5%	\$ 111,000	\$ 2,109,000	\$ -	\$ -	\$ 2,109,000	\$ -
2.2.4	MT B – san equalization tank	2025	\$ 300,000	\$ -	\$ 300,000	50%	\$ 150,000	\$ 150,000	\$ -	\$ -	\$ 150,000	\$ -
2.2.5	Provision for Additional Capacity	2026	\$ 2,000,000	\$ -	\$ 2,000,000	0%	\$ -	\$ 2,000,000	\$ -	\$ -	\$ 2,000,000	\$ -
Subtotal New Wastewater Capital Projects			\$ 5,595,000	\$ -	\$ 5,595,000		\$ 641,000	\$ 4,954,000	\$ -	\$ -	\$ 4,954,000	\$ -
TOTAL MOUNT BRYDGES WASTEWATER SERVICE AREA			\$ 9,914,160	\$ -	\$ 9,914,160		\$ 641,000	\$ 9,273,160	\$ 1,437,274	\$ 1,188,479	\$ 6,647,407	\$ -

Note 1: DC which have been previously collected and have been applied towards that project

<b>Residential Development Charge Calculation</b>		
Residential Share of 2020-2029 DC Eligible Costs	96%	\$6,381,511
Growth in Population in New Units Horizon Year 2029		2,052
Unadjusted Development Charge Per Capita (\$)		<b>\$3,109.29</b>
<b>Non-Residential Development Charge Calculation</b>		
Non-Residential Share of 2020-2029 DC Eligible Costs	4%	\$ 265,896
Growth in Square Meters Horizon Year 2029		3,800
Unadjusted Development Charge Per Sq.M (\$)		<b>\$69.97</b>

Reserve Fund Balance	\$1,188,479
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## APPENDIX F

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### *RESERVE FUNDS*

## APPENDIX F

### DEVELOPMENT CHARGES RESERVE FUNDS

The *DCA* requires that a reserve fund be established for each category or service for which development charges are collected. The table below presents the uncommitted reserve fund balances, as at December 31, 2019, that are available to help fund the development-related net capital costs identified in this study.

As shown in Table 1, the December 31, 2019, total reserve fund balance was \$7.62 million (unaudited at the time of this study). The application of the available uncommitted balance in each of the reserve funds is discussed in the appendix section related to each service. Positive reserve fund balances are generally assigned to projects in the initial years of the capital program for each service. This has the effect of reducing and deferring capital costs brought forward to the development charge calculation and the cash flow analysis.

It is important to note that only reserve funds related to non-discounted services are considered in this study. DC reserve fund balances for discounted services (total of \$3.03 million) such as Library, Indoor Recreation, Parks Development & Facilities, Cemeteries, Library and General Government will continue to be used for the purposes for which they were set up for and collected as regulated by the *DCA* and other related legislation. Also, the DC Reserve funds associated with the Mount Brydges Area Specific development charges imposed under by-law 76-18 are not included in this study and will continue to be used for the works to which it is being collected for.



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**TABLE 1**

**MUNICIPALITY OF STRATHROY-CARADOC**  
**DEVELOPMENT CHARGE RESERVE FUND BALANCE BY ACCOUNT**  
**YEAR ENDING DECEMBER 31, 2019**

<b>CATEGORY</b>	<b>Available Reserve Fund Balance</b>
<b>General Services</b>	
Fire Services	\$130,120
Police Services	\$172,461
<b>Subtotal General Services</b>	<b>\$302,581</b>
<b>Municipal Wide Engineering</b>	
Public Works: Buildings and Fleet	\$1,761,609
Roads	\$1,093,304
Storm Drainage	\$183,033
<b>Subtotal Municipal Wide Engineering</b>	<b>\$3,037,946</b>
<b>Environmental Services</b>	
Strathroy Roads	\$1,103,580
Strathroy Water	\$399,935
Strathroy Wastewater	\$1,256,663
Mt. Brydges Water	\$328,850
Mt. Brydges Wastewater	\$1,188,479
<b>Subtotal Environmental Services</b>	<b>\$4,277,507</b>
<b>Total Development Charge Reserves</b>	<b>\$7,618,033</b>

## APPENDIX G

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## APPENDIX G

### COST OF GROWTH

The *Development Charges Act* requires that municipalities complete an Asset Management Plan before passing a development charges by-law. A key function of the Asset Management Plan is to demonstrate that all assets proposed to be funded under the development charges by-law are financially sustainable over their full life cycle.

#### ASSET TYPES

A summary of the future municipal-owned assets and estimated useful life assumptions for eligible DC services considered as part of the study are outlined in Table 1. These assumptions are sourced from the Municipality's Asset Management Plan (2013), the Municipality's tangible capital asset base as well as discussions with staff. Although all capital assets considered in the study have been identified, not all assets necessitate future replacement or ongoing maintenance activities. For instance, some projects do not relate to the replacement of a tangible capital asset; examples include the acquisition of land or the undertaking of development-related studies. These projects/costs do not necessarily require future replacement or ongoing maintenance. Such projects have been excluded from the asset management provision calculations.

It should be noted that the capital cost estimates prepared for each of the projects identified in this section include grouped costs of various individual elements, which, as a stand-alone item, may have its own useful life (ex. New buildings include: HVAC, structural elements, roof, etc.). Accordingly, the average useful life assumptions noted below are applicable to all project components.

<b>Table 1</b> <b>Summary of Municipal Assets Considered</b> <b>Municipality-wide Services</b>	
<b>Service and Amenities</b>	<b>Estimated Useful Life</b>
<b>Fire Services</b> <ul style="list-style-type: none"> <li>• Land Acquisition</li> <li>• Buildings</li> <li>• Equipment</li> </ul>	<ul style="list-style-type: none"> <li>• Not Infrastructure</li> <li>• 50 years</li> <li>• 10 years</li> </ul>
<b>Police Services</b> <ul style="list-style-type: none"> <li>• Buildings</li> <li>• Equipment</li> <li>• Studies</li> </ul>	<ul style="list-style-type: none"> <li>• 50 years</li> <li>• 10 years</li> <li>• Not Infrastructure</li> </ul>

<b>Table 1</b> <b>Summary of Municipal Assets Considered</b> <b>Municipality-wide Services</b>	
<b>Services Related to a Highway: Public Works: Buildings &amp; Fleet</b> <ul style="list-style-type: none"> <li>• Facilities/Structures</li> <li>• Fleet and Equipment</li> </ul>	<ul style="list-style-type: none"> <li>• 50 years</li> <li>• 10 years</li> </ul>
<b>Roads and Related</b> <ul style="list-style-type: none"> <li>• Land Acquisition</li> <li>• Road Surface</li> <li>• Studies</li> <li>• Signals</li> <li>• Stormwater Linear Infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>• Not Infrastructure</li> <li>• 10-75 years</li> <li>• Not Infrastructure</li> <li>• 20 years</li> <li>• 50 years</li> </ul>
<b>Water</b> <ul style="list-style-type: none"> <li>• Linear Water Infrastructure</li> <li>• Water Treatment Plant Building</li> </ul>	<ul style="list-style-type: none"> <li>• 10-75 years</li> <li>• 50 years</li> </ul>
<b>Wastewater</b> <ul style="list-style-type: none"> <li>• Linear infrastructure</li> <li>• Wastewater Treatment Plant Building</li> </ul>	<ul style="list-style-type: none"> <li>• 10-75 years</li> <li>• 50 years</li> </ul>

## ANNUAL PROVISION

When assets require rehabilitation or are due for replacement, the source of funds is limited to reserves or contributions from operating. Capital expenditures to carry out the rehabilitation and replacement of aging infrastructure are not development-related and are therefore not eligible for funding through development charge revenues or other developer contributions.

Based on the information obtained from municipal staff, the existing Asset Management Plan regarding useful life assumptions and the capital cost of acquiring and/or replacing each asset, a provision for infrastructure replacement has been calculated for all services. Provisions for infrastructure replacement are initially calculated for each asset based on their useful life and the anticipated cost of replacement. The aggregate of all individual provisions form the required annual capital provision. In calculating the annual provisions, a number of assumptions are made to account for inflation (2.0 per cent) and interest (3.5 per cent).

Consistent with the requirements of the Development Charges Act, assets that are proposed to be funded under the development charges by-law have been included in the analysis. As a result, the total calculated annual provision for development charge related infrastructure has been netted down to consider the replacement of existing

infrastructure or benefit-to-existing development. However, for reference, the annual replacement provisions associated with the non-development charge funded costs; including costs related to the ten per cent statutory discount, benefit-to-existing and post-period benefit have also been calculated.

Table 2 provides the calculated annual asset management contribution by 2030 and 2037 as it relates to the non-DC funded and the DC recoverable portions for all services. The year 2030 has been included to calculate the annual contribution for the 2020-2029 period as the expenditures in 2029 will not trigger asset management contributions until 2030. Similarly, the year 2037 has been included to calculate the annual contribution for the 2020-2036 period as the expenditures in 2036 will not trigger asset management contributions until 2037. As shown in Table 2, by 2030, the Municipality will need to fund an additional \$339,200 per year and by 2037, \$789,200 in order to properly fund the full life cycle costs of the new assets related to the services under the development charges by-law.

Table 2				
Service	2020-2029 Capital Program		Calculated AMP Annual Provision by 2030	
	DC Recoverable	Non-DC Funded	DC Related	Non-DC Related
FIRE SERVICES	\$ 1,893,200	\$ 10,299,100	\$ 18,500	\$ 282,700
POLICE SERVICES	\$ 967,400	\$ 3,042,600	\$ 22,200	\$ 46,400
PUBLIC WORKS: BUILDINGS & FLEET	\$ 3,390,400	\$ 884,600	\$ 174,300	\$ 19,800
MOUNT BRYDGES WATER SERVICE AREA	\$ 795,000	\$ 525,000	\$ 17,400	\$ 11,500
MOUNT BRYDGES WASTEWATER SERVICE AREA	\$ 4,954,000	\$ 641,000	\$ 106,800	\$ 13,400
<b>TOTAL</b>			\$ 339,200	\$ 373,800
Service	2020-2036 Capital Program		Calculated AMP Annual Provision by 2037	
	DC Recoverable	Non-DC Funded	DC Related	Non-DC Related
MUNICIPALITY-WIDE ENGINEERING	\$ 7,174,000	\$ 4,453,500	\$ 77,900	\$ 26,900
STRATHROY ENGINEERING	\$ 25,331,900	\$ 16,683,600	\$ 643,900	\$ 406,900
STRATHROY WATER SERVICE AREA	\$ 3,277,900	\$ 2,997,100	\$ 28,300	\$ 24,200
STRATHROY WASTEWATER SERVICE AREA	\$ 5,305,300	\$ 5,787,300	\$ 39,100	\$ 42,700
<b>TOTAL</b>			\$ 789,200	\$ 500,700

## FINANCIAL SUSTAINABILITY OF THE PROGRAM

### *Future Revenue Growth*

The calculated annual funding provision should be considered within the context of the Municipality's projected growth. Over the next ten years (to 2029), the Municipality is projected to increase by approximately 2,160 households, which represents a 24 per cent increase over the existing base. In addition, the Municipality will also add nearly 1,150 employees that will result in approximately 70,800 square meters of additional non-residential building space.

By 2036, there will be an increase of 3,500 occupied households and about 111,050 square meters of additional non-residential building space. This growth will have the effect of increasing the overall assessment base and additional user fee and charges revenues to offset the capital asset provisions required to replace the infrastructure proposed to be funded under the development charges by-law. The collection of these funds is intended to be allocated to the Municipality's reserves for future replacement of these assets.

### ***Asset Management Plan***

In order to maintain, protect and manage the Municipality's infrastructure and assets, staff monitor current levels of service and life cycle trends. These assessments are used to schedule appropriate activities, such as road reconstruction, bridge replacement, and equipment and vehicle replacement. Ongoing maintenance and repairs to community facilities will ensure that they continue to meet the needs of a growing population into the future.

Overall, the Municipality will continue to invest, renew, and manage infrastructure and assets through its Asset Management Plan. These plans are crucial for forecasting capital budgetary needs both in the short and long terms. The AMP process helps to improve financial sustainability to maximize benefits, reduce risk and provide satisfactory levels of service to the community in an environmentally and financially responsible manner.

## **LONG-TERM CAPITAL AND OPERATING IMPACT ANALYSIS**

As shown in Table 3, by 2029, the Municipality's net operating costs are estimated to increase by \$2.69 million for property tax supported services. Increases in net operating costs will be experienced as new facilities such as fire station expansions are opened and as additions to the Municipality's road network are made.

Watermains and Sanitary Sewer capital expenditures are expected to be offset by user fees and water/wastewater rates rather than property taxes and therefore no impact is reflected in the analysis. Capital costs related to studies are not expected to have an impact on property tax supported costs.

Table 4 summarizes the components of the development-related capital forecast that will require funding from non-DC sources. In total, municipality-wide, \$9.73 million will need to be financed from non-DC sources over the 2020-2029 and 2020-2036 planning periods. The entire amount is related to replacement and benefit to existing

## APPENDIX G

TABLE 3

**MUNICIPALITY OF STRATHROY-CARADOC  
ESTIMATED NET OPERATING COST OF THE PROPOSED  
DEVELOPMENT-RELATED CAPITAL PROGRAM**

	Net Cost (in 2020\$)	Estimated Operating Costs (\$000) 2029
<b>Fire Services</b>		
Various Equipment	\$0.15 per \$1 of new infrastructure	\$411.6
New Buildings	\$70 per sq.ft.	\$973.0
3 New Firefighters	\$10,500 per new FF <sup>1</sup>	\$31.5
<b>Police Services</b>		
Various Equipment and New Buildings	\$0.15 per \$ of new infrastructure	\$601.5
<b>Services Related To A Highway: Public Works: Buildings &amp; Fleet</b>		
Buildings, Land and Fleet	\$0.1 per \$1 of new infrastructure	\$427.5
<b>Municipal-wide Engineering*</b>		
Various Projects	\$235 per household	\$248.4
<b>TOTAL ESTIMATED OPERATING COSTS (\$000)</b>		<b>\$2,693.5</b>

*Note 1: Cost per FF based on total Fire Services Salaries (as identified in 2018 FIR statements) over approximately 81 firefighters*

*\* Operating cost over the 10 year period of 2020-2029.*

shares of the gross capital program. In the area-specific programs of Strathroy and Mount Brydges, \$50.54 million will need to be financed from non-DC sources over the same planning periods as municipality-wide. In addition, \$8.95 million in interim DC financing related to post-period shares of projects may be required municipality-wide and \$769,700 in the area-specific areas. However, because DC by-laws must be revisited at least every five years, it is difficult to determine the quantum of interim financing that may be necessary.

The share of the development-related capital forecast requiring funding from non-DC sources consists of two components in the area-specific capital programs. The most significant portion, at \$47.64 million is related to replacement and benefit to existing shares of existing Municipal infrastructure. Another \$2.90 million relates to contributions from other parties. Council is made aware of these factors so that they understand the operating and capital costs that will not be covered by DCs as it adopts the development-related capital forecast set out in the study.

#### ***The Program is Deemed Financially Sustainable***

The calculated annual asset management provisions identified in Table 2 are considered to be financially sustainable as it is expected that the increased capital asset management requirements can be absorbed by the tax and user base over the long-term. The Municipality's annual operating budget review will allow staff to continue to monitor and implement mitigating measures should the program become less sustainable.