

REPORT FOR PUBLIC CONSULTATION

PREPARED BY HEMSON FOR THE TOWNSHIP OF ESSA

DEVELOPMENT CHARGES BACKGROUND STUDY

April 21, 2023



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EXECUTIVE SUMMARY

The *Development Charges Act, 1997 (DCA)* and its associated *Ontario Regulation 82/98* (O. Reg. 82/98) allow municipalities to impose development charges on development and redevelopment to pay for development-related capital costs. This 2023 Township of Essa Development Charges (DC) Background Study is presented as part of a process to pass a development charges by-law that complies with this legislation.

PURPOSE OF DEVELOPMENT CHARGES BACKGROUND STUDY

i. Legislative Context

The Township of Essa 2023 Development Charges Background Study is presented as part of the process to lead to the approval of a new DC by-law in compliance with the *DCA*. The study is prepared in accordance with the *DCA* and associated regulations, including amendments that came into force through the *More Homes, More Choice Act*, the *COVID-19 Economic Recovery Act*, and the *More Homes Built Faster Act* (Bill 23).

ii. Key Steps in Determining Future Development-Related Projects

In accordance with the *DCA* and associated regulations, 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, attributing costs to development types (i.e. residential and non-residential), and adjusting the calculated rate using a cash flow analysis.

iii. DC Eligible and Ineligible Costs

Development charges are intended to pay for the initial round of capital costs needed to service 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 (e.g. computer equipment and vehicles with a replacement life of less than seven years); ineligible services, including parking services, studies, parkland acquisition, etc.; deductions for costs that exceed historical service level caps; and statutory exemptions for specific uses (e.g. industrial expansions).

iv. 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 2023 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 Township’s normal annual budget process.

DEVELOPMENT FORECAST

The table below summarize the anticipated residential and non-residential development over the 2023 to 2032 planning period. Details on the development forecast are provided in Appendix A.

Summary of Residential and Non-Residential Development Forecast

Growth Forecast	2022	2023 - 2032		2023 -2046	
		Growth	Total at 2032	Growth	Total at 2046
Township-Wide Forecast					
Residential					
Total Occupied Dwellings	8,123	1,717	9,840	3,940	12,063
Total Population					
Census	23,470	4,136	27,606	8,569	32,039
<i>Population In New Dwellings</i>		<i>5,267</i>		<i>10,106</i>	
Non-Residential					
Employment	8,210	1,380	9,590	2,860	11,070
Non-Residential Building Space (sq.m.)		37,760		115,520	
Angus Water and Sewer Service Area					
Total Occupied Dwellings		1,344		3,319	
Population In New Dwellings		4,069		10,106	

CALCULATED DEVELOPMENT CHARGES

The table below provides the Municipal-wide development charges for residential and non-residential development based on the aforementioned forecast.

Municipal-wide and Area-Specific Development Charges – Residential and Non-Residential Charges

Service	Residential Charge By Unit Type				Adjusted Charge Per Square Metre
	Singles & Semis	Rows & Other Multiples	Apartments 2+ Bedrooms	Apartments Bachelor or 1 Bedroom	
Total Township-wide Charge	\$29,019	\$25,656	\$17,103	\$12,603	\$146.48
Angus Service Area					
Angus Sewer	\$3,776	\$3,339	\$2,226	\$1,640	\$20.39
Angus Water	\$4,542	\$4,016	\$2,677	\$1,973	\$24.53
Total Serviced Charge in Angus	\$37,337	\$33,011	\$22,006	\$16,216	\$191.40

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 set out in Section 8. This examination is required by the *DCA*. Additional details on the long-term capital and operating impact analysis are found in Appendix E. By 2032, the Township’s annual net operating costs arising from the development-related infrastructure are estimated at about \$1.84 million.

For the general services and roads and related, about \$17.06 million of development-related project costs will need to be funded from non-development charges sources over the next 10 years. In addition, \$63.93 million in interim financing may be required for projects related to Library Services, Fire Protection and Services Related to a Highway that provide benefit post-2032.

ASSET MANAGEMENT PLAN

The main purpose of the Asset Management Plan is to demonstrate that all assets proposed to be funded under the DC by-law are financially sustainable over their full life cycle. The DC recoverable annual asset management contributions for the 2023 to 2033 planning period have been calculated for most services and 2023 to 2047 for sewer and water services. The year 2033 has been included to calculate the annual contribution for the 2023 to 2033 period as the expenditures in 2032 will not trigger asset management contributions until 2033. Similarly, expenditures in 2046 will not trigger asset management contributions until 2047.

The Township will need to fund an additional \$2.58 million per annum by 2033 to properly fund the full life cycle costs for assets related to general services and roads and related services supported under the by-law. For Water and Sewer Services, the Township will need to fund an addition \$261,800 per annum by 2047.

DC BY-LAW TO BE RELEASED UNDER SEPARATE COVER

The Township's proposed DC by-law will be made available under separate cover a minimum of two weeks in advance of the statutory public meeting to be held on May 17, 2023.

1. INTRODUCTION

The *Development Charges Act, 1997 (DCA)* and its associated *Ontario Regulation 82/98 (O. Reg. 82/98)* allow municipalities in Ontario to recover development-related capital costs from new development and redevelopment. The Township of Essa Development Charges Background Study is presented as part of a process to pass a new development charge by-law in compliance with this legislation.

Growth forecasts for the Township of Essa between 2023 and 2032 will increase the demand for all Township services. The Township wishes to continue implementing DCs to fund capital projects related to development so that growth can continue to be serviced in a fiscally responsible manner.

When passing a DC by-law, the *DCA* and *O. Reg. 82/98* require that a development charges background study be prepared in which DCs are determined with reference to:

- A forecast of the amount, type and location of development anticipated in the Municipality;
- The average level of service provided by the Township over the fifteen-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 Township or its local boards to provide for the expected development, including the determination of the development and non-development-related components of the capital projects;
- 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; and
- An Asset Management Plan to deal with all assets whose capital costs are proposed to be funded under the DC By-law, demonstrating that all assets included in the capital program are financially sustainable over their full life cycle.

The background study establishes the net capital costs attributable to development that is forecast to occur in the Township between 2023 and 2032. These development-related net

capital costs are apportioned to residential and non-residential development in a manner that reflects the increase in the need for each service.

The *DCA* provides for a period of public review and comment regarding the proposed development charges. This process includes considering and responding to comments received by members of the public about the calculated charges and methodology used. Following completion of the process, and in accordance with the *DCA* and Council's review of the study, it is intended that Council will pass new development charges for the Township.

The remainder of this study sets out the information and analysis upon which the proposed development charges are based.

Section 2 designates the services for which the DCs are calculated and the areas within the Township to which the DCs will apply. It also briefly reviews the methodologies that have been used in the background study.

Section 3 summarizes of the forecast residential and non-residential development that is expected to occur within the Township over a planning period from 2023 to 2032.

Section 4 summarizes the fifteen-year historical average capital service levels that have been attained in the Township, which form the basis for the development charges calculations.

Section 5 review the development-related capital program from various Township departments.

Section 6 summarizes the calculation of applicable development charges and the resulting calculated development charges by class and type of development.

Section 7 compares the calculated development charges with those currently in force in the Township.

Section 8 presents a cost of growth analysis, which considers an Asset Management Plan for the Township, demonstrating the financial sustainability of assets over the life cycle of the 2023 Development Charges By-law. This section also considers the long-term operating impacts of the projects.

Section 9 provides a review of development charges administrative matters and consideration of area rating.

2. THE METHODOLOGY INCLUDES A TOWNSHIP-WIDE AND AN AREA-SPECIFIC APPROACH

Several key steps are required when calculating any development charge. However, specific circumstances arise in each municipality which must be reflected in the calculation. In this study, therefore, we have tailored our approach to the Township's unique circumstances. The approach to the calculated development charges provides a reasonable alignment of development-related costs with the growth that necessitates them. This study combines a Township-wide approach for certain services and an area-specific approach for Water and Sewer Services. The approach used herein is consistent with Essa's 2018 Development Charges Background Study.

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

i. Services Based on a Township-Wide Approach

For the general and Roads and Related services, a range of capital infrastructure is available throughout the Township. All Township residents and employees have access to this infrastructure. As new development occurs, new infrastructure will need to be added so that overall service levels in the Township do not decline. A widely accepted method of sharing the development-related capital costs for such Township services is to apportion them over all new growth anticipated in the Township.

The following services are included in the Township-wide development charges calculations:

- Library Services
- Fire Services
- Police Services
- Parks and Recreation
- Services Related to a Highway: Public Works and Fleet
- Services Related to a Highway: Roads and Related

These services form a reasonable basis in which to plan and administer the Township-wide development charges. It is noted that the analysis of each of these services examines the individual capital facilities and equipment that constitute it. The resulting development charges for these services would be imposed against all development anywhere in the Township.

II. Area-Specific Charges Are Proposed

For some services the Township provides, the need for growth-related capital additions to support anticipated development is more localized. For such services, an alternative technique – the area-specific approach – is employed. The area-specific charges relate to the provision of water supply and distribution, and sewage treatment collection in Angus (see Map 1 in Appendix C). The water distribution and sewage collection systems require different additional, identifiable and independent projects in order to provide for anticipated growth. The area-specific approach is applied to Water and Sewer Services to more closely align the capital costs for these services with the particular areas that will be serviced by the required infrastructure. Special area-specific development charges are therefore calculated for Water and Sewer Services in Angus.

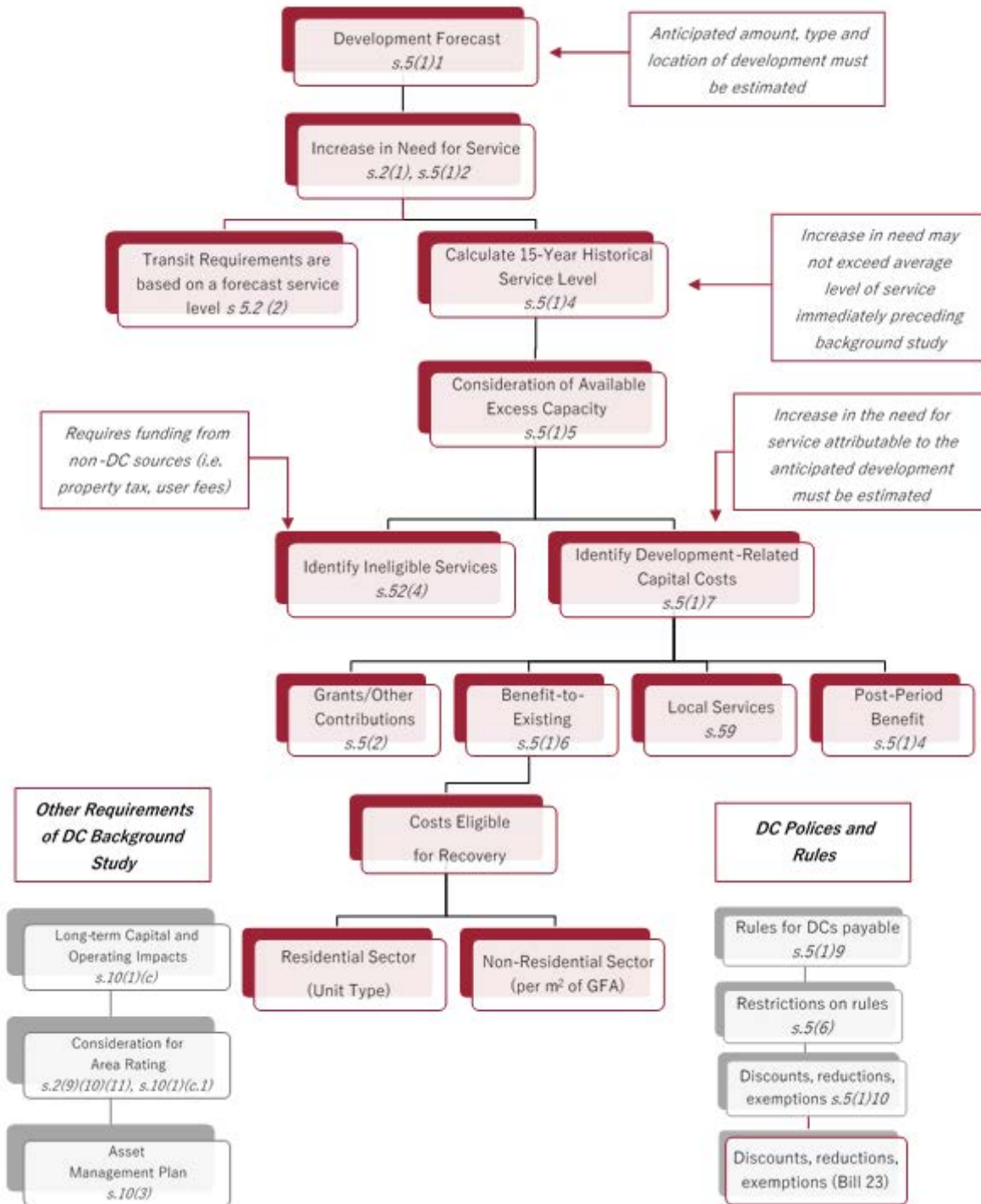
The area-specific approach for these services reflects the fact that the demand for, and benefit from, the projects is much more localized than that for other Township services. Area-specific charges result in a more accurate distribution of costs among developers than the Township-wide approach. The included geographic areas coincide with the specific services areas for each water and sewer project. The area-specific approach also facilitates front-end financing arrangements for the designated services if the Township chooses to use the front-ending provisions of the *DCA*. As an alternative, the area-specific charges also facilitate the use of developer group agreements.

Currently, the Township levies an area-specific charge for Water Services in Thornton and Sewer Services in Baxter. The appropriateness of these charges were reviewed as part of the 2023 DC Background Study update. As part of this review, it was determined the area-specific charge for Thornton should be removed until more information on the infrastructure needs and development potential is known. The Baxter area-specific charge has also been removed as part of the 2023 DC Background Study update as the developer is now responsible to provide the infrastructure required to service future development in the area. Any development within the Thornton or Baxter areas is subject to the Township-wide development charge.

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

Several key steps are required in calculating DCs for future development-related projects. These are summarized in Figure 1 on the next page and discussed further in the following sections.

Figure 1 Key Steps in Calculating Development Charges



i. Development Forecast

The first step in the methodology requires that a development forecast be prepared for the planning periods from 2023 to 2032 and the long-term planning horizon to 2046. The forecast is consistent with the County's *Municipal Comprehensive Review* from 2022. The Growth Management Strategy Update provides details on the forecast methodology and key assumptions.

For the residential portion of the forecast, the net population growth and population growth in new units is estimated. The net 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 occupy new housing units. This population in new units represents the population from which development charges will be collected.

The non-residential portion of the forecast estimates the gross floor area (GFA) of building space to be developed over the ten-year period, 2023 to 2032 and the long-term planning horizon to 2046. The forecast of GFA is based on an employment forecast for the Township. Due to a rise in work from home, not all employment growth is associated with an increase in space. Factors for floor space per worker are used to convert the employment forecast into GFA.

ii. Service Categories and Historical Service Levels

The *DCA* 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 fifteen-year period immediately preceding the preparation of the background study...(s. 5. (1) 4.)

Historical fifteen-year average service levels thus form the basis for development charges. A review of the Township'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 2008 to 2022.

iii. **Development-Related Capital Program and Analysis of Net Capital Costs to be Included in Development Charges**

A development-related capital program has been prepared by Township staff and the consulting team as part of the study. The program 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 program 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 fifteen-year average service levels or the service levels embodied in future plans of the Township. The development-related capital program 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 Township from non-development charge sources. The amount of Municipal funding for such shares is also identified as part of the preparation of the 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. Adjustments are made in the analysis to meet this requirement of the Act. This requirement has been

addressed through the use of “net” population and employment in the determination of maximum permissible funding envelopes. Furthermore, the Township’s capital programs, and the need for increased capacity, reflects available and useable capacity within existing infrastructure and facilities.

iv. 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 non-residential sectors. This is done using 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. shares of population in new units and employment).

Finally, the residential component of the 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 building GFA in square metres.

v. Final Adjustment

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

3. DEVELOPMENT FORECAST

This section provides the basis for the development forecasts used to calculate the development charges, as well as a summary of the forecast results. The forecasts of population, households, housing, and employment are consistent with Simcoe County’s recent *Municipal Comprehensive Review* and the development potential of the Angus benefitting area as described in the *Angus Infrastructure Master Plan (IMP) 2022*.

A more detailed summary of the forecasts, including tables illustrating historical trends and forecast results is provided in Appendix A.

A. RESIDENTIAL FORECAST

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 (or net population growth) as well as the population in new units 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 occupy new housing units. This population in new units represents the population from which development charges will be collected.

Table 1 provides a summary of the residential forecast for a ten-year planning period, from 2023 to 2032. As noted in Section 2, for development charge calculation purposes the ten-year planning period is applicable to both the General and Roads and Related Services.

As shown on Table 1, the Township’s total population is forecast to increase by 4,130 over the next ten years, reaching 27,600 by 2032. Over the ten-year planning period from 2023 to 2032, the number of households is forecast to increase by 1,720. This translates to population growth in new units of 5,270.

The residential forecast for the Angus Water and Sewer Service Area is also shown in Table 1 and represents a build-out scenario (until 2046). The growth in households includes the unit potential in Angus, but excludes those in Thornton, Baxter and the Rural areas of the Township. In summary, it is anticipated that there is a unit potential of 3,320 residential

units that will develop in Angus. It is also anticipated that a population of 10,110 persons will be accommodated within those new units.

B. NON-RESIDENTIAL FORECAST

Development charges are levied on non-residential development as a charge per square metre of GFA. As with the residential forecast, the non-residential forecast requires both a projection of employment growth as well as a projection of the employment growth associated with new floor space in the Township.

The non-residential forecast projects an increase of 1,380 jobs to 2032, the majority of which are anticipated to be population-related. Due to employment loss and a rise in work-from-home as a result of the COVID-19 pandemic, only 43% (587) of these net new jobs are associated with new non-residential gross floor area. The net employment growth will be accommodated in 37,760 square metres of new non-residential building space to 2032. All of this employment growth is projected to occur in the Angus Water and Sewer Service Area. By 2046 there will be 2,860 jobs created of which 63% (1,907) will be accommodated in 115,520 square metres of net new space.

Table 1 also summarizes the non-residential development forecasts.

TABLE 1
TOWNSHIP OF ESSA
SUMMARY OF RESIDENTIAL AND NON-RESIDENTIAL
DEVELOPMENT FORECAST

Growth Forecast	2022	2023 - 2032		2023 -2046	
		Growth	Total at 2032	Growth	Total at 2046
Township-Wide Forecast					
Residential					
Total Occupied Dwellings	8,123	1,717	9,840	3,940	12,063
Total Population					
Census	23,470	4,136	27,606	8,569	32,039
<i>Population In New Dwellings</i>		<i>5,267</i>		<i>12,100</i>	
Non-Residential					
Employment	8,210	1,380	9,590	2,860	11,070
Employment in New Space		587		1,907	
Non-Residential Building Space (sq.m.)		37,760		115,520	
Angus Water and Sewer Service Area					
Total Occupied Dwellings		1,344		3,319	
Population In New Dwellings		4,069		10,106	

4. SUMMARY OF HISTORICAL CAPITAL SERVICE LEVELS

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

For General Services and Services Related to a Highway: Roads and Related the legislative requirement is met by documenting historical service levels for the preceding fifteen years, in this case, for the period from 2008 to 2022. Typically, service levels are measured as a ratio of inputs per capita, or per capita 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 Township. Both the quantitative and qualitative aspects of service levels used in the present analysis are based on information provided by Township staff, based on historical records and experience with costs to acquire or construct similar facilities, equipment and infrastructure in 2022.

Table 2 summarizes service levels for all applicable services included in the development charge calculation. Appendix B provides the detailed historical inventory data upon which the calculation of service levels for the General Services and Services Related to a Highway: Roads and Related is based.

TABLE 2

TOWNSHIP OF ESSA
SUMMARY OF AVERAGE HISTORIC SERVICE LEVELS 2008 - 2022

Service	2008 - 2022 Service Level Indicator
1.0 LIBRARY SERVICES Buildings Land Materials Furniture And Equipment	\$460.50 per capita \$275.15 per capita \$51.54 per capita \$115.12 per capita \$18.69 per capita
2.0 FIRE SERVICES Buildings Land Furniture & Equipment Vehicles	\$599.54 per pop. & emp. \$245.67 per pop. & emp. \$37.64 per pop. & emp. \$31.37 per pop. & emp. \$284.86 per pop. & emp.
3.0 POLICE SERVICES Buildings Land Furniture & Equipment	\$155.61 per pop. & emp. \$113.22 per pop. & emp. \$22.92 per pop. & emp. \$19.47 per pop. & emp.
4.0 PARKS AND RECREATION Major Facilities & Land Parkland Park Facilities Vehicles and Special Facilities	\$3,266.55 per capita \$2,509.74 per capita \$202.01 per capita \$492.65 per capita \$62.15 per capita
5.0 SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS AND FLEET Buildings Land Furniture & Equipment Fleet & Equipment	\$761.86 per pop. & emp. \$380.73 per pop. & emp. \$62.38 per pop. & emp. \$0.12 per pop. & emp. \$318.63 per pop. & emp.
6.0 SERVICES RELATED TO A HIGHWAY: ROADS AND RELATED Roads Bridges & Culverts Sidewalks	\$35,674.23 per pop. & emp. \$35,005.02 per pop. & emp. \$528.86 per pop. & emp. \$140.35 per pop. & emp.

5. THE DEVELOPMENT-RELATED CAPITAL FORECAST

The *DCA* requires the Council of a municipality to express its intent to provide future capital facilities at the average historical service level incorporated in the development charges calculation. As noted 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.

A. DEVELOPMENT-RELATED CAPITAL FORECAST HAS BEEN APPROVED BY COUNCIL

Based on the development forecasts summarized in Section III and discussed in detail in Appendix A, Township staff, in collaboration with the consultants, have created a development-related capital forecast setting out those projects that are required to service anticipated development. For General Services and Roads and Related, the capital plan covers the ten-year period from 2023 to 2032. For Water and Sewer Services, the capital plan is based on a 2046 planning horizon.

The development-related capital forecast was presented to Council of the Township on March 22, 2023.

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 development occurring in the Township. It is acknowledged that changes to the forecast presented here may occur through the Township's normal capital budget process.

B. DEVELOPMENT-RELATED CAPITAL FORECAST FOR GENERAL AND ROADS AND RELATED SERVICES

A summary of the development-related capital forecast for General and Roads and Related Services is presented in Table 3. The table shows that the gross cost of the Township's capital forecast is estimated to be \$144.65 million. No upper-tier government grants are

anticipated in the ten-year planning period and, thus, the full amount of the capital program is brought forth for the development charges consideration.

Of this \$144.65 million net capital cost, approximately 80 per cent, or \$115.32 million is related to capital works for Services Related to a Highway: Roads and Related projects. Capital projects include urbanization to various roads, intersection improvement measures, a new bridge, on-road active transportation trail development, and the replacement and widening of Bridge Nine.

The next largest capital program belongs to Parks and Recreation. This capital program totals \$14.92 million and includes the expansion of space at the Thornton arena, a provision for new recreation space in Angus, additional parks, new trucks, off-road active transportation trail development, lighting, and outdoor recreation amenities.

The capital program for Fire Services includes for the expansion of space at Stations 2 and associated furnishings. Additional vehicles and equipment are also included for a total capital program of \$8.09 million.

The capital program associated with Public Works amounts to \$5.90 million to provide for the expansion of the Township's sand dome and additions to the department's fleet.

The Library Services capital program amounts to \$313,000, which includes additional parking, collection material acquisitions, and new outdoor meeting space.

The remainder of the Township's development-related capital program consists of \$102,000 for new Police Services equipment and vehicle.

The capital forecast incorporates projects identified to be related to development anticipated in the next ten years. Not all of these costs are to be recovered from new development by way of development charges (see the following Section 6 for the method and determination of net capital costs attributable to development). Portions of the capital forecast may relate to providing services for development which has occurred prior to 2023 (for which development charge reserve fund balances exist), for replacement of existing capital facilities or for development anticipated to occur beyond the 2023 to 2032 planning period.

TABLE 3

TOWNSHIP OF ESSA
 SUMMARY OF DEVELOPMENT-RELATED CAPITAL PROGRAM
 FOR TOWNSHIP-WIDE SERVICES 2023 - 2032
 (in \$000)

Service	Gross Cost	Grants/ Subsidies	Municipal Cost	Total Net Capital Program									
				2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
1.0 LIBRARY SERVICES	\$312.7	\$0.0	\$312.7	\$14.8	\$164.8	\$29.8	\$14.8	\$14.8	\$14.8	\$14.8	\$14.8	\$14.8	\$14.8
1.1 Buildings, Land & Furnishings	\$15.0	\$0.0	\$15.0	\$0.0	\$0.0	\$15.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
1.2 Material Acquisitions	\$147.7	\$0.0	\$147.7	\$14.8	\$14.8	\$14.8	\$14.8	\$14.8	\$14.8	\$14.8	\$14.8	\$14.8	\$14.8
1.3 Equipment	\$150.0	\$0.0	\$150.0	\$0.0	\$150.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
2.0 FIRE SERVICES	\$8,090.0	\$0.0	\$8,090.0	\$215.0	\$7,755.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0
2.1 Buildings, Land & Furnishings	\$5,740.0	\$0.0	\$5,740.0	\$0.0	\$5,740.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
2.2 Vehicles	\$2,200.0	\$0.0	\$2,200.0	\$200.0	\$2,000.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
2.3 Equipment & Other	\$150.0	\$0.0	\$150.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0
3.0 POLICE SERVICES	\$102.0	\$0.0	\$102.0	\$10.2	\$10.2	\$10.2	\$10.2	\$10.2	\$10.2	\$10.2	\$10.2	\$10.2	\$10.2
3.1 Equipment	\$102.0	\$0.0	\$102.0	\$10.2	\$10.2	\$10.2	\$10.2	\$10.2	\$10.2	\$10.2	\$10.2	\$10.2	\$10.2
4.0 PARKS AND RECREATION	\$14,924.2	\$0.0	\$14,924.2	\$909.7	\$1,933.5	\$2,133.5	\$3,321.5	\$2,468.5	\$583.5	\$2,018.5	\$518.5	\$518.5	\$518.5
4.1 Buildings, Land & Furnishings	\$5,463.0	\$0.0	\$5,463.0	\$0.0	\$1,350.0	\$1,425.0	\$2,688.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
4.2 Equipment	\$475.0	\$0.0	\$475.0	\$140.0	\$65.0	\$140.0	\$65.0	\$0.0	\$65.0	\$0.0	\$0.0	\$0.0	\$0.0
4.3 Parks, Outdoor Recreation Facilities	\$8,986.2	\$0.0	\$8,986.2	\$769.7	\$518.5	\$568.5	\$568.5	\$2,468.5	\$518.5	\$2,018.5	\$518.5	\$518.5	\$518.5
5.0 SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS AND FLEET	\$5,900.0	\$0.0	\$5,900.0	\$0.0	\$3,128.0	\$1,452.0	\$0.0	\$660.0	\$0.0	\$0.0	\$440.0	\$0.0	\$220.0
5.1 Buildings, Land & Furnishings	\$2,688.0	\$0.0	\$2,688.0	\$0.0	\$2,688.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
5.2 Fleet	\$3,212.0	\$0.0	\$3,212.0	\$0.0	\$440.0	\$1,452.0	\$0.0	\$660.0	\$0.0	\$0.0	\$440.0	\$0.0	\$220.0
6.0 SERVICES RELATED TO A HIGHWAY: ROADS AND RELATED	\$115,317.0	\$0.0	\$115,317.0	\$84,920.0	\$0.0	\$0.0	\$0.0	\$0.0	\$30,397.0	\$0.0	\$0.0	\$0.0	\$0.0
Road Projects	\$97,011.0	\$0.0	\$97,011.0	\$72,614.0	\$0.0	\$0.0	\$0.0	\$0.0	\$24,397.0	\$0.0	\$0.0	\$0.0	\$0.0
Other Works	\$18,306.0	\$0.0	\$18,306.0	\$12,306.0	\$0.0	\$0.0	\$0.0	\$0.0	\$6,000.0	\$0.0	\$0.0	\$0.0	\$0.0
TOTAL - 10 YEAR TOWNSHIP-WIDE SERVICES	\$144,645.9	\$0.0	\$144,645.9	\$86,069.7	\$12,991.5	\$3,640.5	\$3,361.5	\$3,168.5	\$31,020.5	\$2,058.5	\$998.5	\$558.5	\$778.5



C. DEVELOPMENT-RELATED CAPITAL FORECAST FOR ENGINEERED SERVICES

Table 4 provides the development-related capital recoveries for Water and Sewer Services. The development-related costs associated with water and sewer servicing are recovered on an area-specific basis in Angus.

The water and sewer area-specific costs for Angus are identified in the first section of Table 4. The Angus Servicing Area gross costs are made up of the water supply and distribution costs of \$19.20 million and sewage treatment costs of \$19.45 million for a total of \$38.65 million. The water service capital projects include increasing permit-to-take water and well capacity, new water storage tanks, distribution network (linear infrastructure) expansion, and debenture payments. The sewer works are comprised of the repayment of the debt related to the Angus wastewater treatment plant expansion, for future wastewater treatment plant expansion, and for Area 1 and 2 sanitary collection upgrades.

Details of the Water and Sewer capital programs are included in Appendix C.

TABLE 4

**TOWNSHIP OF ESSA
SUMMARY OF DEVELOPMENT-RELATED CAPITAL PROGRAM
FOR ENGINEERED SERVICES 2023 - BUILD-OUT
(in \$000)**

Service	Gross Cost	Grants/ Subsidies	Municipal Cost
1.0 ANGUS SERVICING AREA	\$38,651.0	\$0.0	\$38,651.0
1.1 Water Supply and Distribution	\$19,202.3	\$0.0	\$19,202.3
1.2 Sewage Treatment and Collection	\$19,448.7	\$0.0	\$19,448.7
TOTAL - ENGINEERED SERVICES CAPITAL PROGRAM	\$38,651.0	\$0.0	\$38,651.0

6. PROPOSED DEVELOPMENT CHARGES

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

For residential development, an adjusted total per capita amount is applied to different housing types on the basis of average occupancy factors. For non-residential development, the calculated development charges rates are based on gross floor area (GFA) of building space.

The calculation of the development charges does not include any provision for exemptions required under the *DCA*, for example, the exemption for enlargements of up to 50 per cent on existing industrial buildings or the five year phase-in of charges. Such legislated exemptions, or other exemptions which Council may choose to provide, will result in a loss of development charges revenue for the affected types of development. Any such revenue loss may not be offset by increasing other portions of the calculated charge.

i. Development Charges Calculation

A summary of the “unadjusted” residential and non-residential development charges for the Township-wide services is presented in Table 5. Further details of the calculation for each individual general service category are available in Appendix B.

ii. Township-Wide Services

The capital forecast for general services and Roads and Related incorporates those projects related to growth anticipated in the next ten years. However, not all of the capital costs are to be recovered from new development by way of development charges. A share of \$17.06 million represents a BTE, replacement, or service level enhancements. An additional share of \$12.43 million has been identified as prior growth and represents the revenues collected from previous development charges. This portion has been netted out of the chargeable capital costs. Another share of the forecast, \$63.96 million, is attributable to growth beyond the 2032 period (and can therefore only be recovered under future development charges studies).

The remaining \$51.19 million is carried forward to the development charges calculation as a development-related cost. Of the development-related cost, \$46.00 million is allocated to new residential development, and \$5.19 million is allocated to new non-residential development. This results in a charge of \$8,734.27 per capita and \$137.43 per square metre for the provision of Township-wide services.

iii. Area-Specific Services

Table 6 displays the development-related capital forecast for Water and Sewer Services in Angus from 2023 to 2046. The net cost of the water and sewer capital program amounts to \$38.65 million; however, the Township has \$8.58 million in available DC reserve funds to offset the cost of the program and is removed from the development charges calculation. No share of the works is deemed to benefit the existing population. The net capital cost after these deductions is \$30.07 million, of which the total cost is within the planning period.

The Water services development-related costs of \$16.79 million are allocated 84 per cent, or \$14.13 million against residential development, and 16 per cent, or \$2.67 million against non-residential development. This yields a charge per capita of \$1,397.81 per capita and \$23.07 per square metre.

For Sewer Services in Angus, the net development-related capital cost brought forward to the development charges calculation amounts to \$13.27 million. The capital cost is allocated 84 per cent, or \$11.17 million, against residential development, and 16 per cent, or \$2.11 million, against non-residential development. The resulting unadjusted development charge is \$1,105.04 per capita and \$18.24 per square metre.

iv. Adjusted Residential and Non-Residential Development Charge Rates

Final adjustments to the “unadjusted” development charges rates are made through a cash flow analysis. The analysis, details of which are included in Appendix B for General Services and Roads and Related, Appendix C for Water and Sewer Services, considers the borrowing cost and interest earnings associated with the timing of expenditures and development charges receipts for each service category. Table 7 summarizes the results of the cash flow adjustments for the residential development charges rates. As shown, the Township-wide charges increase from \$8,734.27 per capita to \$9,002.22 per capita. The adjusted per capita rate in the Angus Service Area increase from \$11,237.12 per capita to \$11,537.68 per capita after the cash flow analysis. Table 7 also provides the calculated rates by residential unit with the total charge per unit ranging from a high of \$37,337 per unit for a fully serviced

single- and semi-detached unit in Angus to a low of \$12,603 for a bachelor or 1 bedroom apartment unit.

As illustrated in Table 8, the non-residential charge also experiences a slight increase after cash flow considerations from \$137.42 to \$146.48 per square metre for everywhere except Angus and from \$178.73 to \$191.40 in the Angus Service Area .

v. Comparison of 2023 Newly Calculated Development Charges With Charges Currently in Force in Essa

Tables 9 and 10 present a comparison of the newly calculated residential and non-residential development charges with currently imposed development charge rates. It demonstrates that the residential development charge rate for a single- or semi-detached unit in Angus increases by \$12,323 per unit, or 49 per cent. Similarly, non-residential development charge rate increase by \$69.39 per square metre, 57 per cent.

The residential and non-residential charges in the Thornton area are decreasing (11 per cent and 47 per cent, respectively) as a result of removing the Thornton Water charge. Charges in the Baxter increase marginally as a result of removing the Baxter Sewer charge; however, the increase in the Township-wide rates results in an increase of 32 per cent for residential development and 40 per cent for non-residential development.

vi. Statutory Phase-in of Calculated Development Charges

The DCA now requires that the calculated development charge rates be phased-in over a five year period based on the following:

- Year 1 = 80% of calculated rates
- Year 2 = 85% of calculated rates
- Year 3 = 90% of calculated rates
- Year 4 = 95% of calculated rates
- Year 5 = 100% of calculated rates

Table 11 provides a summary of the 5-year phase in for the calculated residential and non-residential rates in the Township of Essa.

TABLE 5

TOWNSHIP OF ESSA
 SUMMARY OF UNADJUSTED RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT CHARGES
 10-YEAR CAPITAL PROGRAM FOR TOWNSHIP-WIDE SERVICES

10 Year Growth in Population in New Units	5,267
10 Year Growth in Square Metres	37,760

Service	Development-Related Capital Program (2023 - 2032)					Residential Share		Non-Residential Share	
	Net Municipal Cost (\$000)	Replacement & Benefit to Existing (\$000)	Available DC Reserves (\$000)	Post-2032 Benefit (\$000)	Total DC Eligible Costs for Recovery (\$000)	%	(\$000)	%	(\$000)
	1.0 LIBRARY SERVICES	\$312.7	\$0.0	\$53.3	\$0.0	\$259.4	100%	\$259.4	0%
Unadjusted Development Charge Per Capita							\$49.25		
Unadjusted Development Charge Per Sq.M									\$0.00
2.0 FIRE SERVICES	\$8,090.0	\$1,508.8	\$1,245.1	\$2,504.6	\$2,831.5	88%	\$2,479.7	12%	\$351.79
Unadjusted Development Charge Per Capita							\$470.81		
Unadjusted Development Charge Per Sq.M									\$9.32
3.0 POLICE SERVICES	\$102.0	\$0.0	\$0.0	\$0.0	\$102.0	88%	\$89.3	12%	\$12.67
Unadjusted Development Charge Per Capita							\$16.96		
Unadjusted Development Charge Per Sq.M									\$0.34
4.0 PARKS AND RECREATION	\$14,924.2	\$1,049.3	\$4,707.5	\$0.0	\$9,167.4	100%	\$9,167.4	0%	\$0.00
Unadjusted Development Charge Per Capita							\$1,740.54		
Unadjusted Development Charge Per Sq.M									\$0.00
5.0 SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS AND FLEET	\$5,900.0	\$806.4	\$155.9	\$1,339.6	\$3,598.1	88%	\$3,151.1	12%	\$447.02
Unadjusted Development Charge Per Capita							\$598.26		
Unadjusted Development Charge Per Sq.M									\$11.84
6.0 SERVICES RELATED TO A HIGHWAY: ROADS AND RELATED	\$115,317.0	\$13,693.8	\$6,270.5	\$60,118.8	\$35,233.9	88%	\$30,856.5	12%	\$4,377.43
Unadjusted Development Charge Per Capita							\$5,858.45		
Unadjusted Development Charge Per Sq.M									\$115.93
TOTAL 10 YEAR TOWNSHIP-WIDE SERVICES	\$144,645.9	\$17,058.2	\$12,432.3	\$63,963.1	\$51,192.3		\$46,003.4		\$5,188.9
Unadjusted Development Charge Per Capita							\$8,734.27		
Unadjusted Development Charge Per Sq.M									\$137.43



TABLE 6

TOWNSHIP OF ESSA
 SUMMARY OF UNADJUSTED RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT CHARGES
 CAPITAL PROGRAM FOR ENGINEERED SERVICES

Angus Water and Sewer	
Build-Out Growth in Population in New Units	10,106
Build-Out Growth in Square Metres	115,520

Service	Development-Related Capital Program (2023 - Build-Out)					Residential Share		Non-Residential Share	
	Net Municipal Cost (\$000)	Replacement & Benefit to Existing (\$000)	Available DC Reserves (\$000)	Post-Period Benefit (\$000)	Total DC Eligible Costs for Recovery (\$000)	%	(\$000)	%	(\$000)
	1.0 ANGUS WATER	\$19,202.3	\$0.0	\$2,410.8	\$0.0	\$16,791.5	84%	\$14,126.2	16%
Unadjusted Development Charge Per Capita							\$1,397.81		
Unadjusted Development Charge Per Sq.M									\$23.07
2.0 ANGUS SEWER	\$19,448.7	\$0.0	\$6,174.1	\$0.0	\$13,274.6	84%	\$11,167.5	16%	\$2,107.03
Unadjusted Development Charge Per Capita							\$1,105.04		
Unadjusted Development Charge Per Sq.M									\$18.24
TOTAL ENGINEERED SERVICES	\$38,651.0	\$0.0	\$8,584.9	\$0.0	\$30,066.1		\$25,293.8		\$4,772.3

TABLE 7

TOWNSHIP OF ESSA
 2023 DEVELOPMENT CHARGES STUDY
 RESIDENTIAL DEVELOPMENT CHARGES BY UNIT TYPE

Service	Unadjusted Charge Per Capita	Adjusted Charge Per Capita	Residential Charge By Unit Type (1)			
			Singles & Semis	Rows & Other Multiples	Apartments 2+ Bedrooms	Apartments Bachelor or 1 Bedroom
Library Services	\$ 49.25	\$ 51.69	\$167	\$147	\$98	\$72
Fire Services	\$ 470.81	\$ 527.56	\$1,701	\$1,504	\$1,002	\$739
Police Services	\$ 16.96	\$ 16.93	\$55	\$48	\$32	\$24
Parks And Recreation	\$ 1,740.54	\$ 1,760.16	\$5,674	\$5,016	\$3,344	\$2,464
Services Related To A Highway: Public Works And Fleet	\$ 598.26	\$ 664.87	\$2,143	\$1,895	\$1,263	\$931
Services Related To A Highway: Roads And Related	\$ 5,858.45	\$ 5,981.02	\$19,279	\$17,046	\$11,364	\$8,373
Total Township-wide Charge	\$ 8,734.27	\$ 9,002.22	\$29,019	\$25,656	\$17,103	\$12,603

Angus Service Area						
Township-wide Charge	\$ 8,734.27	\$ 9,002.22	\$29,019	\$25,656	\$17,103	\$12,603
Angus Sewer	\$ 1,105.04	\$ 1,171.43	\$3,776	\$3,339	\$2,226	\$1,640
Angus Water	\$ 1,397.81	\$ 1,409.03	\$4,542	\$4,016	\$2,677	\$1,973
Total Serviced Charge in Angus	\$ 11,237.12	\$ 11,582.68	\$37,337	\$33,011	\$22,006	\$16,216

(1) Based on Persons Per Unit Of:	3.22	2.85	1.90	1.40
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TABLE 8

**TOWNSHIP OF ESSA
2023 DEVELOPMENT CHARGES STUDY
NON-RESIDENTIAL DEVELOPMENT CHARGES PER SQUARE METRE**

Service	Unadjusted Charge Per Square Metre	Adjusted Charge Per Square Metre
Library Services	\$0.00	\$0.00
Fire Services	\$9.32	\$10.73
Police Services	\$0.34	\$0.34
Parks And Recreation	\$0.00	\$0.00
Services Related To A Highway: Public Works And Fleet	\$11.84	\$13.53
Services Related To A Highway: Roads And Related	\$115.93	\$121.87
Total Township-wide Charge	\$137.42	\$146.48

Angus Service Area		
Township-wide Charge	\$137.42	\$146.48
Angus Sewer	\$18.24	\$20.39
Angus Water	\$23.07	\$24.53
Total Serviced Charge in Angus	\$178.73	\$191.40

TABLE 9

TOWNSHIP OF ESSA
COMPARISON OF CURRENT AND CALCULATED
RESIDENTIAL DEVELOPMENT CHARGES

Service	Residential (\$/Single or Semi-Detached Unit)			
	Current Residential Charge	Calculated Residential Charge	Difference in Charge	
			\$	%
General Government	\$23	\$0	(\$23)	-100%
Library Services	\$533	\$167	(\$366)	-69%
Fire Services	\$3,169	\$1,701	(\$1,468)	-46%
Police Services	\$31	\$55	\$24	76%
Parks And Recreation	\$3,157	\$5,674	\$2,517	80%
Services Related To A Highway: Public Works And Fleet	\$910	\$2,143	\$1,233	136%
Services Related To A Highway: Roads And Related	\$12,148	\$19,279	\$7,131	59%
Total Township-wide Charge	\$19,971	\$29,019	\$9,048	45%
Angus Service Area				
Township-wide Charge	\$19,971	\$29,019	\$9,048	45%
Angus Sewer	\$1,952	\$3,776	\$1,824	93%
Angus Water	\$3,090	\$4,542	\$1,452	47%
Total Serviced Charge in Angus	\$25,014	\$37,337	\$12,323	49%
Thornton Service Area				
Township-wide Charge	\$19,971	\$29,019	\$9,048	45%
Thornton Water	\$12,612	\$0	(\$12,612)	-100%
Total Serviced Charge in Thornton	\$32,583	\$29,019	(\$3,564)	-11%
Baxter Service Area				
Township-wide Charge	\$19,971	\$29,019	\$9,048	45%
Baxter Sewer	\$1,952	\$0	(\$1,952)	-100%
Total Serviced Charge in Baxter	\$21,924	\$29,019	\$7,095	32%

*Note: Development in Baxter and Thornton is now subject to the Township-wide charge

TABLE 10

TOWNSHIP OF ESSA
 COMPARISON OF CURRENT AND CALCULATED
 NON-RESIDENTIAL DEVELOPMENT CHARGES

Service	Non-Residential (\$/Square Metre)			
	Current Non-Residential Charge	Calculated Non-Residential Charge	Difference in Charge	
			\$	%
General Government	\$0.15	\$0.00	(\$0.15)	-100%
Library Services	\$0.00	\$0.00	\$0.00	0%
Fire Services	\$18.16	\$10.73	(\$7.43)	-41%
Police Services	\$0.18	\$0.34	\$0.16	86%
Parks And Recreation	\$0.00	\$0.00	\$0.00	0%
Services Related To A Highway: Public Works And Fleet	\$5.23	\$13.53	\$8.30	159%
Services Related To A Highway: Roads And Related	\$69.66	\$121.87	\$52.21	75%
Total Township-wide Charge	\$93.38	\$146.48	\$53.09	57%

Angus Service Area				
Township-wide Charge	\$93.38	\$146.48	\$53.09	57%
Angus Sewer	\$11.24	\$20.39	\$9.15	81%
Angus Water	\$17.39	\$24.53	\$7.14	41%
Total Serviced Charge in Angus	\$122.00	\$191.40	\$69.39	57%

Thornton Service Area				
Township-wide Charge	\$93.38	\$146.48	\$53.09	57%
Thornton Water	\$181.03	\$0.00	(\$181.03)	-100%
Total Serviced Charge in Thornton	\$274.41	\$146.48	(\$127.93)	-47%

Baxter Service Area				
Township-wide Charge	\$93.38	\$146.48	\$53.09	57%
Baxter Sewer	\$11.24	\$0.00	(\$11.24)	-100%
Total Serviced Charge in Baxter	\$104.62	\$146.48	\$41.86	40%

*Note: Development in Baxter and Thornton is now subject to the Township-wide charge

TABLE 11

TOWNSHIP OF ESSA
COMPARISON OF CURRENT AND CALCULATED
NON-RESIDENTIAL DEVELOPMENT CHARGES

Charge Type	Year 1 (80%)	Year 2 (85%)	Year 3 (90%)	Year 4 (95%)	Year 5 (100%)
Singles & Semis \$/unit	\$29,870	\$31,736	\$33,603	\$35,470	\$37,337
Rows & Other Multiples \$/unit	\$26,409	\$28,059	\$29,710	\$31,360	\$33,011
Apartments 2+ Bedrooms \$/unit	\$17,605	\$18,705	\$19,805	\$20,906	\$22,006
Apartments Bachelor or 1 Bedroom \$/unit	\$12,973	\$13,784	\$14,594	\$15,405	\$16,216
Non-Residential Charge per sq,m	\$153.12	\$162.69	\$172.26	\$181.83	\$191.40

7. COST OF GROWTH ANALYSIS

This section summarizes the examination of the long-term capital and operating costs as well as the asset management-related annual provisions for the capital facilities and infrastructure to be included in the DC By-law(s). The examination is required as one of the provisions of the *DCA*. Additional details on the cost of growth analysis, including asset management analysis, are included in Appendix E.

A. ASSET MANAGEMENT PLAN

Table 12 summarizes the annual capital provisions required to replace the capital infrastructure proposed to be funded under the development charges by-law. This estimate is based on information obtained through discussions with Township staff regarding useful life assumptions and the capital cost of acquiring and/or constructing each asset.

Table 12 illustrates that, by 2033, the Township will need to fund an additional \$2.58 million per annum for General Services and Roads and Related to properly fund the full life-cycle costs of the new assets supported under the DC by-law. Table 13 shows that by 2047 the Township will need to fund \$262,000 per annum for new water and sewer capital projects. The calculated annual funding provision should be considered within the context of the Township's projected growth; over the next ten years (to 2032) the Township is forecasting an increase in 1,720 occupied dwellings, which represents a 21 per cent increase over the existing base. By 2046, Angus is projected to add 3,320 new occupied dwellings.

Additionally, 590 net new employees occupying 37,760 square metres of non-residential building space are anticipated in the Township over the next ten years. By 2046, the Township is expected to add 1,910 net new employees occupying 115,520 square metres of new 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 DC by-law.

Table 12

TOWNSHIP OF ESSA
CALCULATED ANNUAL AMP PROVISION FOR GENERAL SERVICES AND ROADS

Services	2023-2032 Capital Program		Annual AMP Provision by 2033	
	DC-Eligible	Non DC-Eligible	DC-Related	Non DC-Related
LIBRARY SERVICES	\$312,675	\$0	\$12,406	\$0
FIRE SERVICES	\$4,076,608	\$4,013,392	\$117,949	\$201,150
POLICE SERVICES	\$102,000	\$0	\$6,353	\$0
PARKS AND RECREATION	\$13,874,890	\$1,049,300	\$532,202	\$44,838
SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS AND FLEET	\$3,753,961	\$2,146,039	\$188,268	\$129,163
SERVICES RELATED TO A HIGHWAY: ROADS AND RELATED	\$41,504,420	\$73,812,580	\$1,721,468	\$2,726,073
TOTAL	\$63,624,553	\$81,021,312	\$2,578,646	\$3,101,224

Table 13

TOWNSHIP OF ESSA
CALCULATED ANNUAL AMP PROVISION FOR WATER AND SEWER

Services	2023-2046 Capital Program		Annual AMP Provision by 2047	
	DC-Eligible	Non DC-Eligible	DC-Related	Non DC-Related
ANGUS SEWER	\$19,448,707	\$0	\$121,697	\$0
ANGUS WATER	\$19,202,295	\$0	\$140,136	\$0
TOTAL	\$38,651,001	\$0	\$261,833	\$0

Note: DC Eligible funding includes 10-year period funding from DCs and DC Reserve Funding

B. LONG-TERM CAPITAL AND OPERATING COSTS

Table 14 summarizes the estimated increase in net operating costs that the Township will experience for additions associated with the planned capital program for General and Roads and Related Services. The Township's annual net operating costs are estimated to increase by \$1.84 million by 2032.

Appendix E also summarizes the components of the development related capital program that will require funding from non-development charge sources. Of the \$144.65 million net capital cost of all services, about \$17.06 million will need to be funded from non-development charge sources over the next ten years. This is entirely related to shares of projects related to facility and infrastructure replacement and for non-development-related shares of projects that provide benefit to the existing community. A further \$69.96 million relates to post-2032 shares of projects which may need to be interim financed.

Council is made aware of these estimates so that they understand the financial implications of the quantum and timing of the projects included in the development related capital forecast in this study.

C. THE PROGRAM IS DEEMED TO BE FINANCIALLY SUSTAINABLE

In summary, the asset management plan and long-term capital and operating analysis contained in Appendix E demonstrates that the Township can afford to invest and operate the identified general and engineered services infrastructure over the ten-year and longer-term planning period.

Importantly, the Township's annual budget review allows staff to continue to monitor and implement mitigating measures should the program become less sustainable.

TABLE 14

**TOWNSHIP OF ESSA
SUMMARY OF LONG TERM CAPITAL AND
OPERATING COST IMPACTS FOR GENERAL SERVICES
(in thousands of constant dollars)**

	2032
Net Operating Impacts (1)	
Library Services	\$23.1
Fire Services	\$376.6
Police Services	\$10.2
Parks And Recreation	\$258.0
Services Related To A Highway: Public Works And Fleet	\$509.4
Services Related to a Highway: Roads and Related	\$661.7
NET OPERATING IMPACTS	\$1,838.8

	Total
Long-term Capital Impact (1)	
Total Net Cost	\$144,645.9
Net Cost From Development Charges	\$51,192.3
Prior Growth Share from DC Reserve Balances (2)	\$12,432.3
Portion for Post-2032 Development (3)	\$63,963.1
Funding From Non-DC Sources	
Replacement	\$17,058.2
TOTAL NET OPERATING & CAPITAL IMPACTS	\$18,897.0

Notes:

(1) See Appendix E

(2) Existing development charge reserve fund balances collected from growth prior to 2023 are applied to fund initial projects in development-related capital forecast.

(3) Post-2032 development-related net capital costs may be eligible for development charge funding in future DC by-laws

8. ADMINISTRATION AND COLLECTION

This section sets out the *DCA* requirements in respect of DC collection and administration.

A. DEVELOPMENT CHARGES ADMINISTRATION AND COLLECTION

The *DCA* requirements in respect of the collection of DCs, certification and remittance, as well as reserve fund management are outlined in this section.

i. Development Charges Amount Payable and Date of Payment

The total amount of a DC is the amount of the DC that would be determined under the by-law on the day of an application for site plan approval or the day of an application for rezoning or, if neither of these apply, the day of building permit issuance. Full details on determining the DCs payable in any particular case are provided in s.26 and s.26.2 of the *DCA*.

The default date of payment of a DC is the date of building permit issuance. However, under s.27 of the *DCA* the Township may enter into an agreement with a developer to alter the timing of payment.

For three specific types of development DCs must be paid according to the following plan:

- Six equal annual installments beginning at building occupancy (permit or actual occupancy) and for the following five anniversaries of that date for rental housing and institutional development.
- Twenty-one equal annual installments beginning at building occupancy (permit or actual occupancy) and for the following twenty anniversaries of that date for non-profit housing development.

For required instalments, the Township may charge interest from the date the DC would have been payable to the date the instalment is paid. Interest may accrue on each installment until the final payment has been made. Any skipped or late payments can be added to the tax roll (including interest). Full details on the prescribed payment plans are provided in s.26.1 of the *DCA*. In accordance with s.26.3 the maximum interest rate a municipal can charge is prime plus 1 per cent.

ii. Reserve Funds

Under the *DCA*, a municipality that has passed a development charge by-law must establish a separate reserve fund for each service to which the development charge relates and pay each development charge it collects into the respective reserve fund. While the *DCA* does permit municipalities to borrow from the reserve fund, the amount borrowed is to be repaid with interest at a rate not less than the prescribed minimum interest rate. Additionally, money in the reserve fund is to be spent only on development-related capital costs.

Annual financial statements are to be provided to Council and must include the following:

- Opening and closing balances and in-year transactions
- A description of service or category of service
- Details on credits paid by individual credit holders
- Amounts borrowed and purpose of borrowing
- Interest accrued on borrowing
- Amount and source of money used to repay borrowing
- Projects funded from DCs including amount and source of DC and non-DC funding

Statutory and non-statutory exemptions should be funded from non-DC sources.

iii. Changes Arising From the More Homes Built Faster Act (Bill 23)

As of November 28, 2022 there are several changes to the *DCA* due to the enactment and Royal Assent of Bill 23. A list of the changes that are now in force is provided below in Table 15.

Table 15: Bill 23 – *DCA* Changes In Force as of November 28, 2022

Section	Description
Section 2(1)	Exemptions for existing rental residential buildings and a range of residential units in existing and new houses.
Section 2(4)	Housing services are ineligible for DC funding (repeal of paragraph 17 of ss.2(4) of the <i>DCA</i>). Existing by-laws are deemed to be “amended” and no development charges can be collected for housing services from November 28, 2022 onward.
Section 4.2	Exemptions for non-profit housing development. This does not apply with respect to a DC payable before November 28, 2022.
Section 4.3	Exemption for inclusionary zoning residential units. This does not apply with respect to a DC payable before November 28, 2022.

Section	Description
Section 5(1)	Historical service level calculation period extended from 10 years to 15 years. Does not apply to by-laws in force prior to November 28, 2022.
Section 5(4)	Studies, including DC studies, are no longer a DC-eligible capital cost. Does not apply retroactively to by-laws that were in force prior to November 28, 2022.
Section 5(6) and Section 5(7)	DC by-laws passed on or after November 28, 2022 must be phased-in according to a prescribed schedule. The phase-in also applies retroactively to by-laws passed on or after January 1, 2022 as well as to the DCs “frozen” under s.26.2 of the <i>DCA</i> .
Section 9(1)	Maximum life of a DC by-law extended from 5 years to 10 years. This does not apply to by-laws in-force before November 28, 2022.
Section 26.1	Deferral payments now apply to rental housing and institutional development. Interest on deferral payments is now capped at prime plus 1% in accordance with s.26.3.
Section 26.2	DCs for rental housing development are now discounted based on the number of bedrooms proposed. Interest on DC freeze now capped at prime plus 1% in accordance with section 26.3.
Section 26.3	Maximum interest rates are capped at prime plus 1%. This does not apply with respect to a DC that was payable before November 28, 2022.
Section 35	Municipalities are now required to spend or allocate at least 60% of reserve balances each year for Water Supply, Wastewater, and services related to a highway beginning in 2023.
Section 60(1)(s.4)	Additional services for which municipalities are required to spend or allocate at least 60% of reserve fund balances may be prescribed through Regulations (none are proposed as of yet).

Table 16 summarizes the *DCA* changes that will take effect at a date to be determined. It is noted that section 60(1)(l) of the *DCA* allows for future regulations to identify services for which land will be an ineligible capital cost. No regulations have been released in this regard.

Table 16: Bill 23 – DCA Changes Not Currently In Force

Section	Description
<i>DCA</i> , Section 4.1	Exemptions for affordable and attainable residential units. Note: Implementation is contingent on the Minister developing a definition of “attainable residential unit” as well as bulletins to establish eligibility and (possibly) standard forms of agreement to assist with administration.
<i>DCA</i> , Section 44(4)	Rules for front ending agreements as they relate to affordable and attainable residential units.
<i>DCA</i> , Section 60(1)(d.2) and 9d.3)	Prescribes developments and criteria related to attainable residential units (section 4.1).

iv. Recommendations

- As required under the *DCA*, the Township should codify any rules regarding application of the by-law and exemptions within the DC by-law 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 Township’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.
- It is recommended that the Township continue to include indexing provisions in the by-law so as to ensure that the DC rates incorporate inflationary increases over the by-law term.

B. CONSIDERATION FOR AREA RATING

In accordance with the *DCA*, Council must consider the use of area rating, also known as area-specific development charges, as part of the DC Background Study. As part of the Township’s 2023 DC update, Water Supply and Sewer Services were considered appropriate to recover on an area-specific basis and as these services are only available within specific settlement areas. None of the other services were considered as appropriate to recover on an area-specific basis in keeping with the Township’s current practice.

APPENDIX A

DEVELOPMENT FORECAST

DEVELOPMENT FORECAST

This appendix summarizes the development forecast used to prepare the 2023 Development Charges Background Study for the Township of Essa. The forecast results are presented in the following tables:

Historical Development

- A-1 Population, Household & Employment Summary
- A-2 Historical Residential Building Permits
- A-3 Historical Households by Period of Construction Showing Household Size

Forecast Development

- A-4 Population, Household and Employment Forecast Summary
- A-5 Forecast of Housing Units by Type
- A-6 Forecast of Housing Growth by Unit Type
- A-7 Population Growth in New Households by Unit Type
- A-8 Forecast of Place of Work Employment
- A-9 Forecast Place of Work Employment and Non-Residential Gross Floor Area Growth in New Space
- A-10 Forecast Growth in Households by Unit Type in the Angus Water and Sewer Service Area
- A-11 Forecast Population in New Households by Unit Type in the Angus Water and Sewer Service Area

A. FORECAST APPROACH AND KEY ASSUMPTIONS

The *DCA* requires the Township 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 Township to prepare a reasonable development-related capital program.

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 development forecast, from mid-year 2023 to mid-year 2032, has been used for all the

development charge eligible general and roads and related services in the Township. The planning period from mid-year 2023 to 2046 (built-out) has been utilized for the water and sewer services in Angus.

B. HISTORICAL DEVELOPMENT IN THE TOWNSHIP

Historical growth and development figures presented here are based on Statistics Canada Census data and municipal building permit data. A “Census-based” definition of population is used for the purpose of the development charges study. This definition does not include the Census net undercoverage, which is typically included in the definition of “total” population commonly used in municipal planning documents. For development charges purposes, a 15-year period of 2008 to 2022 is used for calculating historical service levels.

The Township of Essa has experienced significant population growth over the last 15 years, and in particular during the most recent Census period of 2011 to 2016. Household growth has also been strong. As shown in Table A-1, the Township’s population increased from approximately 17,210 people in 2007 to an estimated 23,470 in 2022, which represents an increase of 36 per cent. The number of private occupied dwelling units in the Township also increased during the 15-year historical period from approximately 5,820 in 2007 to 8,120 in 2022 – a 40 per cent increase. The difference between the rates of population and occupied dwelling unit growth is the result of a decline in the average number of persons residing in housing units.

Historical employment figures are also shown in Table A-1 and are based on Statistics Canada place of work data. Place of work data records where people work rather than the place of residence. The employment figures used for development charge calculations include workers with no fixed place of work, but exclude work at home employment.

Overall, employment grew steadily in the Township from between 2006 to 2019. As with most communities in Ontario, the COVID-19 pandemic resulted in a severe shock to the local economy, the effects of which are still being felt. At the time of the 2021 Census, business closures and stay-at-home orders were still in effect. As such, a large portion of the labour force was unemployed and many others were working from home on a full-time basis, and often outside the Township. Total employment decline in Essa by 2,830 job between 2019 and 2020, with a significant increase in work at home employment of 6,740 jobs over the same period. Although employees continue to gradually return to their usual place of work, either full-time or under hybrid arrangements, it is evident that some shifts in work-at-home patterns will be long-lasting. Despite the impacts of the pandemic, the Township’s employment growth has increased over the last 15 years from approximately 6,840 in 2007 to 8,210 employees in 2022, this represents an increase of 20 per cent.

Details on historical residential building permits is outlined in Table A-2. This information is sourced from Statistics Canada building permit data. Overall, the most common type of new housing in Essa has been single- and semi-detached housing. However, within the past six years there has been an increase in row house construction.

Table A-3 provides details on historical occupancy patterns in the Township. The overall average occupancy level in Essa for all units is 2.84 persons per housing unit (PPU). Occupancy levels for recently constructed units, between 2011 and 2021 are higher than the overall average and are generally used in the development charges calculation since they better reflect the number of people that are likely to reside in new development. For singles and semis, the 2011-2021 average PPU of 3.22 is used in the development charges calculation as a large sample size of data is available for these recently constructed units. For rows, a PPU of 2.85 is used, which is consistent with the Township's previous DC Background Studies. This is due to the relatively small sample size of row dwellings constructed in the Township to date. Finally, the development charges calculation for apartments uses the total average PPU of 1.75, again consistent with the assumptions used in the Township's previous DC Background Studies.

C. FORECAST RESULTS

Development charges are levied on residential development as a charge per new unit and on non-residential development as a charge per unit of gross floor area (GFA).

i. Residential Development Forecast

The residential development forecast is based on lands designated for development as provided by Township planning staff. The number of units anticipated is determined by settlement area (Angus or other parts of the Township) which can be accommodated within the approved land areas. Tables A-4 and A-5 summarize the Census population and household growth forecast. The tables show that the Township's Census population is forecast to increase by roughly 4,140 over the ten-year planning period. The number of occupied dwellings will increase by 1,710 over the same period and place of work employment by 1,380.

Tables A-6 and A-7 summarize the ten-year Township-wide household growth forecast by unit type, and the anticipated population growth in new households by unit type. This ten-year Township-wide forecast is utilized for the "general" and roads and related services. The forecast of "population in new units" that will result from the addition of new housing

units has been made. Population growth in new units is estimated by applying the following PPU's to the housing unit forecast:

- 3.22 for single and semi-detached units;
- 2.85 for rows and other multiples; and
- 1.75 for apartments.

As shown in Table A-7, in total, 5,270 is the forecasted population in new dwelling units over the ten-year planning period. Over this period, it is anticipated that single and semi-detached dwelling units continue to be the dominant form of constructed units.

The residential forecast for the Angus Water and Sewer Service Area is shown on Tables A-10 and A-11. The planning horizon is considered to be to build-out (2046). In summary, it is anticipated that about 3,320 residential units that will develop in Angus over the 2046 planning horizon and a population of 10,110 persons will be accommodated within those new units.

ii. **Non-Residential Development Forecast**

Non-residential development charges are calculated on a per unit 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 ten-year development forecast, from mid-year 2023 to mid-year 2032, has been used for all the development charge eligible general and roads and related services in the Township. The planning period from mid-year 2023 to mid-year 2046 (or built-out) has been utilized for the Water and Sewer services in Angus.

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

- Population-Related: 50.0 square metres per employee
- Employment Land: 80.0 square metres per employee
- Rural Based: 0.0 square metres per employee

The total Township-wide employment growth is provided in Table A-8 while the growth of employment in new space and the associated GFA forecast is in Table A-9. The total GFA growth is forecast at 37,760 square metres over the ten-year period with an accompanying growth of 590 employees in new space. Over the longer planning period to 2046, it is forecasted that 1,910 new employees will be accommodated in 106,360 square metres of new non-residential GFA.

TABLE A-1

TOWNSHIP OF ESSA
HISTORICAL POPULATION, HOUSEHOLD & EMPLOYMENT SUMMARY

Mid-Year	Census Population	Growth	Total Occupied Dwellings	Growth	HH Size	Employment by Place of Work*	Growth	Activity Rate	
2008	17,525	315	5,965	144	2.94	6,927	85	39.5%	
2009	17,846	321	6,113	148	2.92	7,013	86	39.3%	
2010	18,173	327	6,265	152	2.90	7,100	87	39.1%	
2011	18,505	332	6,420	155	2.88	7,190	90	38.9%	
2012	18,994	489	6,565	145	2.89	7,412	222	39.0%	
2013	19,496	502	6,714	149	2.90	7,641	229	39.2%	
2014	20,011	515	6,866	152	2.91	7,877	236	39.4%	
2015	20,540	529	7,021	155	2.93	8,120	243	39.5%	
2016	21,083	543	7,180	159	2.94	8,370	250	39.7%	
2017	21,448	365	7,328	148	2.93	8,510	140	39.7%	
2018	21,819	371	7,479	151	2.92	8,660	150	39.7%	
2019	22,196	377	7,633	154	2.91	8,800	140	39.6%	
2020	22,580	384	7,790	157	2.90	5,970	-2,830	26.4%	
2021	22,970	390	7,949	159	2.89	6,720	750	29.3%	
2022	23,470	500	8,123	174	2.89	8,210	1,490	35.0%	
Growth 2008-2022		6,260				2,302		1,368	

Source: Statistics Canada, Census of Canada

*Employment excludes work at home

TABLE A-2

TOWNSHIP OF ESSA
HISTORICAL RESIDENTIAL BUILDING PERMITS

Year	HISTORICAL RESIDENTIAL BUILDING PERMITS				HISTORICAL BUILDING PERMITS - SHARES BY UNIT TYPE			
	Building Permits				Building Permits			
	Singles/Semis	Rows	Apts.	Total	Singles/Semis	Rows	Apts.	Total
2003	148	0	0	148	100%	0%	0%	100%
2004	124	6	0	130	95%	5%	0%	100%
2005	187	8	0	195	96%	4%	0%	100%
2006	120	42	0	162	74%	26%	0%	100%
2007	96	57	0	153	63%	37%	0%	100%
2008	177	20	0	197	90%	10%	0%	100%
2009	85	34	0	119	71%	29%	0%	100%
2010	109	79	30	218	50%	36%	14%	100%
2011	94	46	6	146	64%	32%	4%	100%
2012	115	0	0	115	100%	0%	0%	100%
2013	94	7	4	105	90%	7%	4%	100%
2014	141	21	0	162	87%	13%	0%	100%
2015	232	17	1	250	93%	7%	0%	100%
2016	271	16	9	296	92%	5%	3%	100%
2017	44	96	2	142	31%	68%	1%	100%
2018	16	0	0	16	100%	0%	0%	100%
2019	19	21	0	40	48%	53%	0%	100%
2020	119	20	0	139	86%	14%	0%	100%
2021	37	21	0	58	64%	36%	0%	100%
2022	68	3	0	71	96%	4%	0%	100%
Total	2,296	514	52	2,862	80%	18%	2%	100%
<i>Average 5-years</i>	<i>52</i>	<i>13</i>	<i>0</i>	<i>65</i>	<i>79%</i>	<i>21%</i>	<i>0%</i>	<i>100%</i>
<i>Average 10-years</i>	<i>105</i>	<i>20</i>	<i>1</i>	<i>127</i>	<i>80%</i>	<i>19%</i>	<i>1%</i>	<i>100%</i>

Source: Planning Department, Township of Essa

TABLE A-3

TOWNSHIP OF ESSA
HISTORICAL HOUSEHOLDS BY PERIOD OF CONSTRUCTION SHOWING HOUSEHOLD SIZE

Dwelling Unit Type	Period of Construction											Pre 2011	2011-2021	Total
	Pre 1945	1946-1960	1961-1970	1971-1980	1981-1990	1991-1995	1996-2000	2001-2005	2006-2010	2011-2016	2016-2021			
Singles & Semis														
Household Population	1,480	1,840	1,425	2,145	2,950	1,905	950	1,140	2,120	1,990	2,555	15,955	4,545	20,500
Households	590	685	525	870	1,010	650	320	375	605	650	760	5,630	1,410	7,040
Household Size	2.51	2.69	2.71	2.47	2.92	2.93	2.97	3.04	3.50	3.06	3.36	2.83	3.22	2.91
Rows														
Household Population	0	0	20	0	0	0	85	90	525	335	135	720	470	1,190
Households	0	15	20	0	15	0	40	35	185	110	45	310	155	465
Household Size	0.00	0.00	1.00	0.00	0.00	0.00	2.13	2.57	2.84	3.05	3.00	2.32	3.03	2.56
Apartments 0-1 Bedrooms														
Household Population	0	0	0	0	35	0	0	0	0	0	0	35	0	35
Households	0	0	0	15	20	10	0	0	0	10	0	45	10	55
Household Size	0.00	0.00	0.00	0.00	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.78	0.00	0.64
Apartments 2 plus Bedrooms														
Household Population	0	75	0	130	115	0	0	0	0	35	0	320	35	355
Households	0	30	10	45	65	0	10	0	0	10	10	160	20	180
Household Size	0.00	2.50	0.00	2.89	1.77	0.00	0.00	0.00	0.00	3.50	0.00	2.00	1.75	1.97
Apartments - Total														
Household Population	0	75	0	130	150	0	0	0	0	35	0	355	35	390
Households	0	30	10	60	85	10	10	0	0	20	10	205	30	235
Household Size	0.00	2.50	0.00	2.17	1.76	0.00	0.00	0.00	0.00	1.75	0.00	1.73	1.17	1.66
Duplex														
Household Population	0	70	45	40	135	0	0	0	0	0	35	290	35	325
Households	0	25	20	15	45	10	0	15	0	0	20	130	20	150
Household Size	0.00	2.80	2.25	2.67	3.00	0.00	0.00	0.00	0.00	0.00	1.75	2.23	1.75	2.17
All Units														
Household Population	1,480	1,985	1,490	2,315	3,235	1,905	1,035	1,230	2,645	2,360	2,725	17,320	5,085	22,405
Households	590	755	575	945	1,155	670	370	425	790	780	835	6,275	1,615	7,890
Household Size	2.51	2.63	2.59	2.45	2.80	2.84	2.80	2.89	3.35	3.03	3.26	2.76	3.15	2.84

Source: Statistics Canada, 2021 Census Special Run

TABLE A-4

TOWNSHIP OF ESSA
POPULATION, HOUSEHOLD & EMPLOYMENT FORECAST SUMMARY

Mid-Year	Census Population	Annual Growth	Total Occupied Dwellings	Annual Growth	Household Size	Employment by POW*	Annual Growth	Activity Rate
2022	23,470	500	8,123	174	2.89	8,210	1,490	35.0%
2023	23,981	511	8,301	178	2.89	8,540	330	35.6%
2024	24,503	522	8,482	181	2.89	8,670	130	35.4%
2025	25,037	534	8,667	185	2.89	8,810	140	35.2%
2026	25,584	547	8,856	189	2.89	8,930	120	34.9%
2027	25,916	332	9,016	160	2.87	9,040	110	34.9%
2028	26,252	336	9,178	162	2.86	9,140	100	34.8%
2029	26,593	341	9,343	165	2.85	9,250	110	34.8%
2030	26,938	345	9,511	168	2.83	9,370	120	34.8%
2031	27,287	349	9,681	170	2.82	9,480	110	34.7%
2032	27,606	319	9,840	159	2.81	9,590	110	34.7%
2033	27,928	322	10,001	161	2.79	9,690	100	34.7%
2034	28,254	326	10,165	164	2.78	9,790	100	34.6%
2035	28,583	329	10,332	167	2.77	9,900	110	34.6%
2036	28,916	333	10,501	169	2.75	10,000	100	34.6%
2037	29,217	301	10,664	163	2.74	10,100	100	34.6%
2038	29,521	304	10,829	165	2.73	10,190	90	34.5%
2039	29,829	308	10,996	167	2.71	10,290	100	34.5%
2040	30,140	311	11,166	170	2.70	10,380	90	34.4%
2041	30,454	314	11,338	172	2.69	10,490	110	34.4%
2042	30,764	310	11,479	141	2.68	10,600	110	34.5%
2043	31,078	314	11,622	143	2.67	10,710	110	34.5%
2044	31,395	317	11,767	145	2.67	10,830	120	34.5%
2045	31,715	320	11,914	147	2.66	10,950	120	34.5%
2046	32,039	324	12,063	149	2.66	11,070	120	34.6%
2047	32,344	305	12,201	138	2.65	11,180	110	34.6%
2048	32,652	308	12,340	139	2.65	11,280	100	34.5%
2049	32,963	311	12,480	140	2.64	11,380	100	34.5%
2050	33,277	314	12,622	142	2.64	11,490	110	34.5%
2051	33,596	319	12,765	143	2.63	11,600	110	34.5%
Growth 2023-2032		4,136		1,717			1,380	
Growth 2033-2046		4,433		2,223			1,480	
Growth 2023-2046		8,569		3,940			2,860	
Growth 2033-2051		5,990		2,925			2,010	
Growth 2023-2051		10,126		4,642			3,390	

Note*: Excludes Work at Home Employment

Source: Hemson Consulting Ltd., 2021

TABLE A-5
TOWNSHIP OF ESSA
FORECAST OF HOUSING UNITS BY UNIT TYPE

Mid-Year	Singles & Semis	Rows & Other Multiples	Apartments	Total	Singles & Semis	Rows & Other Multiples	Apartments	Total
2022	6,985	644	494	8,123	86%	8%	6.1%	100%
2023	7,121	683	497	8,301	86%	8%	6.0%	100%
2024	7,260	723	499	8,482	86%	9%	5.9%	100%
2025	7,401	765	501	8,667	85%	9%	5.8%	100%
2026	7,507	824	525	8,856	85%	9%	6%	100%
2027	7,616	866	534	9,016	84%	10%	6%	100%
2028	7,727	909	542	9,178	84%	10%	6%	100%
2029	7,840	953	550	9,343	84%	10%	6%	100%
2030	7,954	999	558	9,511	84%	11%	6%	100%
2031	8,095	1,027	559	9,681	84%	11%	6%	100%
2032	8,200	1,073	567	9,840	83%	11%	6%	100%
2033	8,305	1,121	575	10,001	83%	11%	6%	100%
2034	8,412	1,170	583	10,165	83%	12%	6%	100%
2035	8,520	1,220	592	10,332	82%	12%	6%	100%
2036	8,678	1,231	592	10,501	83%	12%	6%	100%
2037	8,793	1,271	600	10,664	82%	12%	6%	100%
2038	8,909	1,312	608	10,829	82%	12%	6%	100%
2039	9,026	1,354	616	10,996	82%	12%	6%	100%
2040	9,145	1,397	624	11,166	82%	13%	6%	100%
2041	9,279	1,433	626	11,338	82%	13%	6%	100%
2042	9,373	1,474	632	11,479	82%	13%	6%	100%
2043	9,467	1,516	639	11,622	81%	13%	5%	100%
2044	9,563	1,558	646	11,767	81%	13%	5%	100%
2045	9,660	1,601	653	11,914	81%	13%	5%	100%
2046	9,781	1,628	654	12,063	81%	13%	5%	100%
2047	9,869	1,671	661	12,201	81%	14%	5%	100%
2048	9,958	1,715	667	12,340	81%	14%	5%	100%
2049	10,048	1,759	673	12,480	81%	14%	5%	100%
2050	10,139	1,804	679	12,622	80%	14%	5%	100%
2051	10,265	1,818	683	12,765	80%	14%	5%	100%
Growth 2023-2032	1,215	429	73	1,717	-	-	-	-
Growth 2023-2046	2,796	984	160	3,940	-	-	-	-
Growth 2023-2051	3,280	1,174	189	4,642	-	-	-	-

TABLE A-6

TOWNSHIP OF ESSA
 TEN-YEAR TOWNSHIP-WIDE GROWTH
 FORECAST OF HOUSING GROWTH BY UNIT TYPE

Mid-Year	Singles & Semis	Rows & Other Multiples	Apartments	Total
2022	133	38	3	174
2023	136	39	3	178
2024	139	40	2	181
2025	141	42	2	185
2026	106	59	24	189
2027	109	42	9	160
2028	111	43	8	162
2029	113	44	8	165
2030	114	46	8	168
2031	141	28	1	170
2032	105	46	8	159
2033	105	48	8	161
2034	107	49	8	164
2035	108	50	9	167
2036	158	11	0	169
2037	115	40	8	163
2038	116	41	8	165
2039	117	42	8	167
2040	119	43	8	170
2041	134	36	2	172
2042	94	41	6	141
2043	94	42	7	143
2044	96	42	7	145
2045	97	43	7	147
2046	121	27	1	149
2047	88	43	7	138
2048	89	44	6	139
2049	90	44	6	140
2050	91	45	6	142
2051	126	14	4	143
Growth 2023-2032	1,215	429	73	1,717
Growth 2033-2046	1,581	555	87	2,223
Growth 2023-2046	2,796	984	160	3,940
Growth 2033-2051	2,065	745	116	2,925
Growth 2023-2051	3,280	1,174	189	4,642

Source: Hemson Consulting Ltd., 2021

TABLE A.7

TOWNSHIP OF ESSA
 TEN-YEAR TOWNSHIP-WIDE GROWTH
 POPULATION GROWTH IN NEW HOUSEHOLDS BY UNIT TYPE*

Mid-Year	Singles & Semis	Rows & Other Multiples	Apartments	Total Population in New HH
2022	430	108	5	543
2023	438	111	5	554
2024	448	114	4	566
2025	455	120	4	579
2026	343	167	43	553
2027	350	121	15	486
2028	358	123	14	495
2029	364	125	14	503
2030	367	131	14	512
2031	456	79	1	536
2032	337	132	14	483
2033	338	137	14	489
2034	345	140	14	499
2035	348	143	16	507
2036	511	31	0	542
2037	369	114	14	497
2038	374	117	14	505
2039	377	120	14	511
2040	384	123	14	521
2041	432	103	3	538
2042	303	116	11	430
2043	303	120	12	435
2044	309	120	12	441
2045	313	123	12	448
2046	389	78	3	470
2047	284	122	11	417
2048	287	125	11	423
2049	290	125	11	426
2050	293	128	11	432
2051	406	39	6	451
Growth 2023-2032	3,916	1,223	128	5,267
Growth 2033-2046	5,095	1,585	153	6,833
Growth 2023-2046	9,011	2,808	281	12,100
Growth 2033-2051	6,655	2,124	203	8,982
Growth 2023-2051	10,571	3,347	331	14,249

*Based on PPU's 3.22 2.85 1.75

Source: Hemson Consulting Ltd., 2021

TABLE A-8
TOWNSHIP OF ESSA
FORECAST OF PLACE OF WORK EMPLOYMENT

Mid-Year	Population-Related		Employment Land		Other Rural Based		Total for DC Study		Activity Rate	Work at Home Employment		Total with Work at Home Employment	
	Total Emp	Emp Growth	Total Emp	Empl Growth	Total Emp	Empl Growth	Total Emp	Empl Growth		Total Emp	Empl Growth	Total Emp	Empl Growth
2022	5,130	1,390	600	90	2,480	10	8,210	1,490	35.0%	1,440	-650	9,650	840
2023	5,370	240	670	70	2,500	20	8,540	330	35.6%	1,400	-40	9,940	290
2024	5,440	70	720	50	2,510	10	8,670	130	35.4%	1,380	-20	10,050	110
2025	5,500	60	780	60	2,530	20	8,810	140	35.2%	1,350	-30	10,160	110
2026	5,550	50	840	60	2,540	10	8,930	120	34.9%	1,350	0	10,280	120
2027	5,610	60	870	30	2,560	20	9,040	110	34.9%	1,360	10	10,400	120
2028	5,670	60	900	30	2,570	10	9,140	100	34.8%	1,380	20	10,520	120
2029	5,720	50	940	40	2,590	20	9,250	110	34.8%	1,400	20	10,650	130
2030	5,800	80	970	30	2,600	10	9,370	120	34.8%	1,410	10	10,780	130
2031	5,850	50	1,010	40	2,620	20	9,480	110	34.7%	1,430	20	10,910	130
2032	5,920	70	1,040	30	2,630	10	9,590	110	34.7%	1,440	10	11,030	120
2033	5,970	50	1,070	30	2,650	20	9,690	100	34.7%	1,460	20	11,150	120
2034	6,030	60	1,100	30	2,660	10	9,790	100	34.6%	1,480	20	11,270	120
2035	6,090	60	1,130	30	2,680	20	9,900	110	34.6%	1,490	10	11,390	120
2036	6,150	60	1,160	30	2,690	10	10,000	100	34.6%	1,510	20	11,510	120
2037	6,210	60	1,190	30	2,700	10	10,100	100	34.6%	1,520	10	11,620	110
2038	6,260	50	1,210	20	2,720	20	10,190	90	34.5%	1,540	20	11,730	110
2039	6,320	60	1,240	30	2,730	10	10,290	100	34.5%	1,550	10	11,840	110
2040	6,360	40	1,270	30	2,750	20	10,380	90	34.4%	1,570	20	11,950	110
2041	6,430	70	1,300	30	2,760	10	10,490	110	34.4%	1,580	10	12,070	120
2042	6,500	70	1,330	30	2,770	10	10,600	110	34.5%	1,600	20	12,200	130
2043	6,590	90	1,350	20	2,770	0	10,710	110	34.5%	1,620	20	12,330	130
2044	6,670	80	1,380	30	2,780	10	10,830	120	34.5%	1,630	10	12,460	130
2045	6,770	100	1,400	20	2,780	0	10,950	120	34.5%	1,650	20	12,600	140
2046	6,850	80	1,430	30	2,790	10	11,070	120	34.6%	1,670	20	12,740	140
2047	6,930	80	1,450	20	2,800	10	11,180	110	34.6%	1,680	10	12,860	120
2048	7,000	70	1,480	30	2,800	0	11,280	100	34.5%	1,700	20	12,980	120
2049	7,070	70	1,500	20	2,810	10	11,380	100	34.5%	1,720	20	13,100	120
2050	7,150	80	1,530	30	2,810	0	11,490	110	34.5%	1,730	10	13,220	120
2051	7,230	80	1,550	20	2,820	10	11,600	110	34.5%	1,750	20	13,350	130
Growth 2023-2032		790		440		150		1,380			0		1,380
Growth 2023-2046		1,720		830		310		2,860			230		3,090
Growth 2033-2046		930		390		160		1,480			230		1,710
Growth 2023-2051		2,100		950		340		3,390			310		3,700
Growth 2033-2051		1,310		510		190		2,010			310		2,320

Source: Hemson Consulting Ltd., 2021

TABLE A-9
TOWNSHIP OF ESSA
FORECAST PLACE OF WORK EMPLOYMENT AND NON-RESIDENTIAL GROSS FLOOR AREA GROWTH IN NEW SPACE

Employment Density		
Population-Related Employment	50.0	m ² per employee
Employment Land Employment	80.0	m ² per employee
Other Rural Based	-	m ² per employee

Mid-Year	Population-Related		Employment Land		Other Rural Based		Total for DC Study	
	Emp Growth	Space (m ²)	Empl Growth	Space (m ²)	Empl Growth	Space (m ²)	Empl Growth	Space (m ²)
2022	16	800	17	1,380	0	0	33	2,180
2023	18	900	20	1,560	0	0	38	2,460
2024	20	1,000	22	1,730	0	0	42	2,730
2025	22	1,100	24	1,900	0	0	46	3,000
2026	24	1,200	26	2,070	0	0	50	3,270
2027	26	1,300	28	2,250	0	0	54	3,550
2028	28	1,400	30	2,420	0	0	58	3,820
2029	30	1,500	32	2,590	0	0	62	4,090
2030	32	1,600	35	2,760	0	0	67	4,360
2031	34	1,700	37	2,940	0	0	71	4,640
2032	72	3,600	28	2,240	0	0	100	5,840
2033	50	2,500	30	2,400	0	0	80	4,900
2034	61	3,050	29	2,320	0	0	90	5,370
2035	59	2,950	31	2,480	0	0	90	5,430
2036	58	2,900	32	2,560	0	0	90	5,460
2037	63	3,150	27	2,160	0	0	90	5,310
2038	43	2,150	27	2,160	0	0	70	4,310
2039	62	3,100	28	2,240	0	0	90	5,340
2040	41	2,050	29	2,320	0	0	70	4,370
2041	71	3,550	29	2,320	0	0	100	5,870
2042	75	3,750	25	2,000	0	0	100	5,750
2043	84	4,200	26	2,080	0	0	110	6,280
2044	84	4,200	26	2,080	0	0	110	6,280
2045	94	4,700	26	2,080	0	0	120	6,780
2046	83	4,150	27	2,160	0	0	110	6,310
2047	77	3,850	23	1,840	0	0	100	5,690
2048	76	3,800	24	1,920	0	0	100	5,720
2049	66	3,300	24	1,920	0	0	90	5,220
2050	86	4,300	24	1,920	0	0	110	6,220
2051	75	3,750	25	2,000	0	0	100	5,750
Growth 2023-2032	306	15,300	281	22,460	0	0	587	37,760
Growth 2023-2046	1,234	61,700	673	53,820	0	0	1,907	115,520
Growth 2033-2046	928	46,400	392	31,360	0	0	1,320	77,760
Growth 2023-2051	1,614	80,700	793	63,420	0	0	2,407	144,120
Growth 2033-2051	1,308	65,400	512	40,960	0	0	1,820	106,360

Source: Hemson Consulting Ltd., 2023

TABLE A-10

TOWNSHIP OF ESSA
 GROWTH IN HOUSEHOLDS BY UNIT TYPE
 IN THE ANGUS WATER AND SEWER SERVICE AREA

Mid-Year	Singles & Semis	Rows & Other Multiples	Apartments	Total New HH
2023	95	38	3	136
2024	97	39	2	138
2025	99	41	2	142
2026	74	58	24	156
2027	76	41	9	126
2028	78	42	8	128
2029	79	43	8	130
2030	80	45	8	133
2031	101	27	1	129
2032	73	45	8	126
2033	89	47	8	144
2034	91	48	8	147
2035	92	49	9	150
2036	135	11	0	146
2037	97	39	8	144
2038	99	40	8	147
2039	99	41	8	148
2040	101	42	8	151
2041	114	36	2	152
2042	80	40	6	126
2043	80	41	7	128
2044	82	41	7	130
2045	82	42	7	131
2046	103	27	1	131
Growth 2023-2032	852	419	73	1,344
Growth 2033-2046	1,344	544	87	1,975
Growth 2023-2046	3,048	963	160	3,319

Source: Hemson Consulting Ltd., 2023

APPENDIX B

TOWNSHIP-WIDE SERVICES

TOWNSHIP-WIDE SERVICES

The following Appendix provides the detailed analysis undertaken to establish the development charge rates for each of the township-wide services in Essa. These services include:

- Appendix B.1 Library Services
- Appendix B.2 Fire Services
- Appendix B.3 Police Services
- Appendix B.4 Parks and Recreation
- Appendix B.5 Services Related to a Highway: Public Works and Fleet
- Appendix B.6 Services Related to a Highway: Roads and Related

Every service 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 is given below.

TABLE 1 HISTORICAL SERVICE LEVELS

Table 1 presents the data used to determine the 15-year historical service level. The *DCA* and *O. Reg. 82/98* require that development charges be set at a level no higher than the average service level provided in the Township over the 15-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 has been defined as 2008 to 2022.

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. 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 growth reflect not only the quantity (number and size) but also the quality (replacement value or cost) of service provided by the Township 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 maximum allowable is defined as the 15-year historical service level (expressed as either \$/capita, or \$/population and employment) multiplied by the forecast increase in net population, or net population and employment growth, over the planning period. The resulting figure is the value of capital infrastructure that must be constructed for that particular service so that the 15-year historical service level is maintained.

There is also a requirement in the *DCA* to consider “excess capacity” within the Township’s existing infrastructure that may be available to partially meet future servicing requirements. If Council had 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 notional “uncommitted excess capacity” exist, if it is determined to be available to service new development appropriate adjustments are made to the calculations.

TABLE 2 2023-2032 DEVELOPMENT-RELATED CAPITAL PROGRAM AND CALCULATION OF “UNADJUSTED” DEVELOPMENT CHARGES

The *DCA* requires that Council express its intent to provide future capital facilities to support future growth. Based on the development forecasts presented in Appendix A, Hemson Consulting in collaboration with Township staff has developed a development-related capital program which sets out the projects required to service anticipated growth for the ten-year period from 2023 to 2032.

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

A replacement share occurs when a new facility will, at least in part, replace a facility that is demolished, redeployed or will otherwise not be available to serve its former function. The replacement 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 replacement will require funding from non-development charge sources, typically property taxes or user fees.

The capital program less any replacement or 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 2023 to 2032. For some of the services, a portion of the capital program will service growth that will not occur until after 2032. This portion of the capital program is either deemed “pre-built” service capacity to be considered as committed excess capacity to be recovered under future development, or is a service level increase.

The remaining portion of the net capital program represents the development-related cost that may be included in the development charge. In all cases, as required, this amount is equal to or less than the maximum allowable capital amount as calculated on the final page of Table 1. The result is the discounted development-related net capital cost that is eligible for recovery against development over the period from 2023 to 2032.

i. Calculation of the Unadjusted Development Charge 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 when determining the unadjusted development charge rate is to allocate the development-related net capital cost between the residential and non-residential sectors. For all Township-wide services with the exception of Library Services and Parks and Recreation, the development-related costs have been apportioned as 88 per cent residential and 12 per cent non-residential. This apportionment is based on the anticipated shares of population and employment growth over the ten-year forecast period.

The development-related costs associated with Library Services and Parks and Recreation have been allocated 100 per cent to the residential sector because the need for these services is generally driven by residential development.

The residential share of the 2023-2032 DC eligible costs are then divided by the forecast population growth in new 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 are, therefore, accounted for in the calculation as allowed under the *DCA*. Based on the growth forecast, the analysis calculates the development charges rate that is 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 charges 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 2.0 per cent is used for the funding requirements, an interest rate of 3.5 per cent is used for positive opening balances, and a rate of 5.5 per cent is used for negative opening balances.

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

LIBRARY SERVICES

APPENDIX B.1: LIBRARY SERVICES

The Essa Public Library provides library services at two branch locations, one in Thornton and another in Angus. Each branch offers a variety of books, periodicals, multimedia and other electronic resource materials for the community's use.

TABLE B.1-1 HISTORICAL SERVICE LEVELS

Table 1 displays the Library's 15-year historical inventory for buildings, land, materials, and furniture and equipment (excluding computer equipment). The building space amounts to about 13,073 square feet which is valued at \$6.54 million. The library buildings occupy approximately 0.79 hectares of land worth \$1.19 million. The collection materials are valued at \$2.32 million and furniture and equipment associated with the branches are valued at \$489,000.

The 2022 full replacement value of the inventory of capital assets amounts to \$10.53 million and the fifteen-year historical average service level is \$460.51 per capita.

The historic service level multiplied by the ten-year forecast of net population growth results in a ten-year maximum allowable funding envelope of \$1.90 million (4,136 net population growth X historical service level of \$460.51/capita). No excess capacity has been identified in this service.

TABLE B.1-2 2023-2032 DEVELOPMENT-RELATED CAPITAL PROGRAM AND CALCULATION OF "UNADJUSTED" DEVELOPMENT CHARGES

The Library Services capital program includes three new parking spaces with a gross cost of \$15,000. The cost of acquiring new materials (including a new button maker and e-materials) over the ten-year planning amounts to \$147,700. The Library capital program also includes a provision for a new outdoor meetings space with a gross cost of \$150,000.

The total gross cost of Library Services capital program is \$312,700. No grants, subsidies, or other recoveries are anticipated to fund any shares of the above mentioned projects and as such, the net cost to the municipality remains at \$312,700. No shares of the projects are deemed to be a replacement, as they are net additions to the current Library's service level and as such, no shares are deducted for replacement or benefit to

existing. There is an amount of \$53,300 in the DC reserves to help offset the cost of the program. There are no post-period benefit shares identified for this service.

The remaining \$259,400 will be recovered through this DC by-law. This amount is allocated entirely against future residential development in the Township of Essa. This results in an unadjusted development charge of \$49.25 per capita.

TABLE B.1-3 CASH FLOW ANALYSIS

After cash flow, the residential calculated charge increases to \$51.69 per capita. This is a reflection of the timing of the capital program and development charges revenues.

The following table summarizes the calculation of the Library development charge:

LIBRARY SERVICES SUMMARY						
15-year Hist.	2023 - 2032		Unadjusted		Adjusted	
Service Level	Development-Related	Capital Program	Development Charge		Development Charge	
per capita	Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$460.51	\$312,675	\$259,375	\$49.25	\$0.00	\$51.69	\$0.00

APPENDIX B.1
TABLE 1 - PAGE 1

2023 DEVELOPMENT CHARGES BACKGROUND STUDY
TOWNSHIP OF ESSA
INVENTORY OF CAPITAL ASSETS
LIBRARY SERVICES

BUILDINGS Branch Name	# of Square Feet															UNIT COST (\$/sq. ft.)
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Thornton Branch, 34 Robert Street	2,738	2,738	2,738	2,738	2,738	2,738	2,738	2,738	2,738	2,738	2,738	2,738	2,738	2,738	2,738	\$500
Old Angus Branch, 18 King Street	3,938	3,938	3,938	3,938	-	-	-	-	-	-	-	-	-	-	-	\$500
New Angus Branch, 8505 County Road 10	-	-	-	-	10,335	10,335	10,335	10,335	10,335	10,335	10,335	10,335	10,335	10,335	10,335	\$500
Total (sq.ft.)	6,676	6,676	6,676	6,676	13,073	13,073	13,073	13,073	13,073	13,073	13,073	13,073	13,073	13,073	13,073	
Total (\$000)	\$3,338.0	\$3,338.0	\$3,338.0	\$3,338.0	\$6,536.5	\$6,536.5	\$6,536.5	\$6,536.5	\$6,536.5	\$6,536.5	\$6,536.5	\$6,536.5	\$6,536.5	\$6,536.5	\$6,536.5	

LAND Branch Name	# of Hectares															UNIT COST (\$/ha)
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Thornton Branch, 34 Robert Street	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	\$1,500,000
Old Angus Branch, 18 King Street	0.20	0.20	0.20	0.20	-	-	-	-	-	-	-	-	-	-	-	\$1,500,000
New Angus Branch, 8505 County Road 10	-	-	-	-	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	\$1,500,000
Total (ha)	0.48	0.48	0.48	0.48	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	
Total (\$000)	\$715.5	\$715.5	\$715.5	\$715.5	\$1,185.8	\$1,185.8	\$1,185.8	\$1,185.8	\$1,185.8	\$1,185.8	\$1,185.8	\$1,185.8	\$1,185.8	\$1,185.8	\$1,185.8	

APPENDIX B.1
TABLE 1 - PAGE 2

2023 DEVELOPMENT CHARGES BACKGROUND STUDY
TOWNSHIP OF ESSA
INVENTORY OF CAPITAL ASSETS
LIBRARY SERVICES

MATERIALS Type of Collection	# of Collection Materials															UNIT COST (\$/item)
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Books	32,954	33,658	34,429	38,317	42,678	46,962	49,016	44,334	43,084	39,329	38,568	37,421	36,586	36,573	35,658	\$50
Periodicals	57	57	66	81	96	107	1,864	1,211	1,131	1,434	1,555	1,327	1,044	1,119	1,820	\$65
Audiobooks	505	762	1,092	509	671	986	999	1,213	1,016	1,022	1,043	1,057	1,064	1,110	1,132	\$90
Films	946	1,814	2,770	1,892	2,359	2,909	3,262	4,741	2,696	2,481	2,667	2,423	2,770	3,072	3,501	\$60
CD-ROM Software	239	239	124	28	27	45	39	-	11	-	-	-	-	-	-	\$75
Vertical Files	27	27	27	27	27	27	27	27	27	-	-	-	-	-	-	\$16
Readalongs	106	117	180	102	168	200	192	176	174	165	170	189	195	198	190	\$35
Multimedia kits	102	111	138	76	113	173	332	134	148	132	160	220	258	342	333	\$78
Music	23	32	48	91	117	128	105	101	96	82	85	97	98	98	96	\$47
NetLibrary COOL	6	7	8	8	8	8	8	8	8	-	-	-	-	-	-	\$838
Object kits (board games, maker kits)	-	18	18	18	18	43	26	50	172	177	238	241	245	300	641	\$54
Video games	-	48	294	328	410	589	580	550	587	554	500	340	248	293	299	\$90
Seed Library	-	-	-	-	-	-	-	395	756	756	700	650	600	650	500	\$1
Kitchen Library	-	-	-	-	-	-	-	-	-	44	47	51	56	53	62	\$71
Internet Hubs	-	-	-	-	-	-	-	-	-	6	6	6	8	8	8	\$150
Total (#)	34,966	36,889	39,194	41,476	46,692	52,177	56,450	52,939	49,905	46,181	45,739	44,022	43,172	43,816	44,240	
Total (\$000)	\$1,789.8	\$1,907.7	\$2,053.4	\$2,133.9	\$2,409.3	\$2,710.7	\$2,958.8	\$2,770.1	\$2,573.8	\$2,384.5	\$2,368.6	\$2,274.9	\$2,232.0	\$2,272.0	\$2,317.9	

FURNITURE AND EQUIPMENT Branch Name	Total Value of Furniture and Equipment (\$)														
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Thornton Branch, 34 Robert Street	\$87,500	\$88,300	\$88,600	\$88,900	\$88,900	\$96,100	\$96,900	\$101,200	\$108,895	\$108,895	\$108,895	\$108,895	\$108,895	\$108,895	\$108,895
Old Angus Branch, 18 King Street	\$87,200	\$85,200	\$83,800	\$66,100	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
New Angus Branch, 8505 County Road 10	\$-	\$-	\$-	\$-	\$189,000	\$210,400	\$218,500	\$227,900	\$227,900	\$227,900	\$227,900	\$227,900	\$237,288	\$237,288	\$237,288
New Angus Branch Shelving	\$-	\$-	\$-	\$-	\$84,900	\$84,900	\$84,900	\$84,900	\$84,900	\$87,725	\$87,725	\$87,725	\$87,725	\$87,725	\$87,725
New Angus Branch Bibliogate System	\$-	\$-	\$-	\$-	\$55,100	\$55,100	\$55,100	\$55,100	\$55,100	\$55,100	\$55,100	\$55,100	\$55,100	\$55,100	\$55,100
Total (\$000)	\$174.7	\$173.5	\$172.4	\$155.0	\$417.9	\$446.5	\$455.4	\$469.1	\$476.8	\$479.6	\$479.6	\$479.6	\$489.0	\$489.0	\$489.0

APPENDIX B.1
TABLE 1 - PAGE 3

2023 DEVELOPMENT CHARGES BACKGROUND STUDY
TOWNSHIP OF ESSA
CALCULATION OF SERVICE LEVELS
LIBRARY SERVICES

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Historic Population	17,525	17,846	18,173	18,505	18,994	19,496	20,011	20,540	21,083	21,448	21,819	22,196	22,580	22,970	23,470

INVENTORY SUMMARY (\$000)

Buildings	\$3,338.0	\$3,338.0	\$3,338.0	\$3,338.0	\$6,536.5	\$6,536.5	\$6,536.5	\$6,536.5	\$6,536.5	\$6,536.5	\$6,536.5	\$6,536.5	\$6,536.5	\$6,536.5	\$6,536.5
Land	\$715.5	\$715.5	\$715.5	\$715.5	\$1,185.8	\$1,185.8	\$1,185.8	\$1,185.8	\$1,185.8	\$1,185.8	\$1,185.8	\$1,185.8	\$1,185.8	\$1,185.8	\$1,185.8
Materials	\$1,789.8	\$1,907.7	\$2,053.4	\$2,133.9	\$2,409.3	\$2,710.7	\$2,958.8	\$2,770.1	\$2,573.8	\$2,384.5	\$2,368.6	\$2,274.9	\$2,232.0	\$2,272.0	\$2,317.9
Furniture And Equipment	\$174.7	\$173.5	\$172.4	\$155.0	\$417.9	\$446.5	\$455.4	\$469.1	\$476.8	\$479.6	\$479.6	\$479.6	\$489.0	\$489.0	\$489.0
Total (\$000)	\$6,018.0	\$6,134.7	\$6,279.3	\$6,342.4	\$10,549.5	\$10,879.5	\$11,136.6	\$10,961.5	\$10,772.9	\$10,586.5	\$10,570.5	\$10,476.9	\$10,443.3	\$10,483.3	\$10,529.2

SERVICE LEVEL (\$/capita)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Average Service Level
Buildings	\$190.47	\$187.04	\$183.68	\$180.38	\$344.13	\$335.27	\$326.65	\$318.23	\$310.04	\$304.76	\$299.58	\$294.49	\$289.48	\$284.57	\$278.50	\$275.15
Land	\$40.83	\$40.09	\$39.37	\$38.67	\$62.43	\$60.82	\$59.26	\$57.73	\$56.24	\$55.29	\$54.35	\$53.42	\$52.52	\$51.62	\$50.52	\$51.54
Materials	\$102.13	\$106.90	\$112.99	\$115.32	\$126.84	\$139.04	\$147.86	\$134.86	\$122.08	\$111.18	\$108.56	\$102.49	\$98.85	\$98.91	\$98.76	\$115.12
Furniture And Equipment	\$9.97	\$9.72	\$9.49	\$8.38	\$22.00	\$22.90	\$22.76	\$22.84	\$22.62	\$22.36	\$21.98	\$21.61	\$21.66	\$21.29	\$20.84	\$18.69
Total (\$/capita)	\$343.39	\$343.76	\$345.53	\$342.74	\$555.41	\$558.04	\$556.52	\$533.66	\$510.98	\$493.59	\$484.46	\$472.02	\$462.50	\$456.39	\$448.62	\$460.51

TOWNSHIP OF ESSA
CALCULATION OF MAXIMUM ALLOWABLE
LIBRARY SERVICES

15-Year Funding Envelope Calculation

15 Year Average Service Level 2008 - 2022	\$460.51
Net Population Growth 2023 - 2032	4,136
Maximum Allowable Funding Envelope	\$1,904,669

APPENDIX B.1
TABLE 2

TOWNSHIP OF ESSA
DEVELOPMENT-RELATED CAPITAL PROGRAM
LIBRARY SERVICES

Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs		
					Replacement & BTE Shares	Replacement & BTE Shares		Available DC Reserves	2023-2032	Post 2032
1.0 LIBRARY SERVICES										
1.1 Buildings, Land & Furnishings										
1.1.6 Additional Parking (3 spaces)	2025	\$ 15,000	\$ -	\$ 15,000	0%	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
Subtotal Buildings, Land & Furnishings		\$ 15,000	\$ -	\$ 15,000		\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2 Material Acquisitions										
1.2.1 Additional Collection Materials (including E-material)	Various	\$ 147,675	\$ -	\$ 147,675	0%	\$ -	\$ 147,675	\$ -	\$ 147,675	\$ -
Subtotal Material Acquisitions		\$ 147,675	\$ -	\$ 147,675		\$ -	\$ 147,675	\$ -	\$ 147,675	\$ -
1.3 Equipment										
1.3.1 New Outdoor Meeting Space (Structure and Equipment)	2024	\$ 150,000	\$ -	\$ 150,000	0%	\$ -	\$ 150,000	\$ 53,300	\$ 96,700	\$ -
Subtotal Equipment		\$ 150,000	\$ -	\$ 150,000		\$ -	\$ 150,000	\$ 53,300	\$ 96,700	\$ -
TOTAL LIBRARY SERVICES		\$ 312,675	\$ -	\$ 312,675		\$ -	\$ 312,675	\$ 53,300	\$ 259,375	\$ -

Residential Development Charge Calculation		
Residential Share of 2023 - 2032 DC Eligible Costs	100%	\$259,375
10-Year Growth in Population in New Units		5,267
Unadjusted Development Charge Per Capita		\$49.25
Non-Residential Development Charge Calculation		
Non-Residential Share of 2023 - 2032 DC Eligible Costs	0%	\$0
10-Year Growth in Square Metres		37,760
Unadjusted Development Charge Per Square Metre		\$0.00

2023 - 2032 Net Funding Envelope	\$1,904,669
Reserve Fund Balance as at December 31, 2022	\$53,300

APPENDIX B.1

TABLE 3

TOWNSHIP OF ESSA
 CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
 LIBRARY SERVICES
 RESIDENTIAL DEVELOPMENT CHARGE
 (in \$000)

LIBRARY SERVICES	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	TOTAL
OPENING CASH BALANCE	\$0.0	\$14.1	(\$71.6)	(\$75.3)	(\$64.5)	(\$56.7)	(\$47.6)	(\$37.4)	(\$25.8)	(\$11.8)	
2023 - 2032 RESIDENTIAL FUNDING REQUIREMENTS											
- Library Services: Non Inflated	\$14.8	\$111.5	\$29.8	\$14.8	\$14.8	\$14.8	\$14.8	\$14.8	\$14.8	\$14.8	\$259.4
- Library Services: Inflated	\$14.8	\$113.7	\$31.0	\$15.7	\$16.0	\$16.3	\$16.6	\$17.0	\$17.3	\$17.6	\$275.9
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	554	566	579	553	486	495	503	512	536	483	5,267
REVENUE											
- DC Receipts: Inflated	\$28.6	\$29.8	\$31.1	\$30.3	\$27.2	\$28.3	\$29.3	\$30.4	\$32.5	\$29.8	\$297.4
INTEREST											
- Interest on Opening Balance	\$0.0	\$0.5	(\$3.9)	(\$4.1)	(\$3.5)	(\$3.1)	(\$2.6)	(\$2.1)	(\$1.4)	(\$0.6)	(\$21.0)
- Interest on In-year Transactions	\$0.2	(\$2.3)	\$0.0	\$0.3	\$0.2	\$0.2	\$0.2	\$0.2	\$0.3	\$0.2	(\$0.5)
TOTAL REVENUE	\$28.9	\$28.0	\$27.2	\$26.5	\$23.8	\$25.3	\$26.9	\$28.6	\$31.3	\$29.4	\$275.9
CLOSING CASH BALANCE	\$14.1	(\$71.6)	(\$75.3)	(\$64.5)	(\$56.7)	(\$47.6)	(\$37.4)	(\$25.8)	(\$11.8)	\$0.0	

2023 Adjusted Charge Per Capita	\$51.69
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Allocation of Capital Program	
Residential Sector	100.0%
Non-Residential Sector	0.0%
Rates for 2023	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX B.2

FIRE SERVICE

APPENDIX B.2: FIRE SERVICES

Essa's Fire Department is responsible for fire prevention, inspections, public education and training, as well as fire suppression. The Fire Department serves the Township from two stations located in Angus and Thornton.

TABLE B.2-1 HISTORICAL SERVICE LEVELS

The Fire Services inventory of capital assets includes two fire stations with a combined area of approximately 12,200 square feet, valued at \$6.85 million. The land area associated with the buildings is approximately 0.70 hectares and is valued at \$1.0 million. Station furniture and equipment such as SCBA, communications equipment, and equipment for firefighters and the dispatch centre add another \$903,600 to the value of inventory. Finally, vehicles associated with the stations have a replacement value of \$8.44 million.

The current value of the total Fire Services capital infrastructure including buildings, land, vehicles, furniture and equipment is valued at approximately \$17.25 million and has provided Essa with a 15-year average historical service level of \$599.55 per population and employment. The calculated maximum allowable recoverable through development charges over the 2023 to 2032 planning period is \$2.83 million (4,720 population and employment growth X historical service level of \$599.55/population and employment). No excess capacity has been identified in this service.

TABLE B.2-2 2023-2032 DEVELOPMENT-RELATED CAPITAL PROGRAM AND CALCULATION OF THE "UNADJUSTED" DEVELOPMENT CHARGES

The Fire capital program includes for the expansion of Station 2 (located in Angus) and the required furnishings to service anticipated growth in the Township. The station 2 expansion includes a 26 per cent ineligible share to account for the portion of the new station related to the replacement of the existing facility. The cost associated with the station expansion amounts to \$5.74 million. Additional fire vehicles are included in the capital program for a gross cost of \$2.20 million. Lastly, additional equipment for fire prevention, including bunker gear and equipment to service high- and mid-rise buildings add another \$150,000 to the capital program.

Altogether, the ten-year capital forecast for Fire Services amounts to \$8.09 million. Of this total, about \$1.51 million of the capital program is deemed to be a benefit to existing community or a replacement shares. These costs will not be recovered through DCs, and the Township will need to fund this amount through means other than DCs. Approximately \$1.25 million is to be funded from current Fire Services development charges reserve funds.

Finally, a portion of the capital program, \$2.50 million, is deemed a post-period benefit, and will be considered for recovery in subsequent development charge by-laws. The remaining \$2.83 million is related to development between 2023 and 2032, which is allocated against future residential and non-residential in the Township of Essa.

The ten-year development-related net capital cost is allocated 88 per cent, or \$2.48 million, against residential development, and 12 per cent, or \$351,800, against non-residential development. The allocation between residential and non-residential development is based on shares of ten-year growth in population and employment. The resulting unadjusted development charge is \$470.81 per capita and \$9.32 per square metre.

TABLE B.1-3 CASH FLOW ANALYSIS

After cash flow consideration, the residential charge increases to \$527.56 per capita and the non-residential charge increases to \$10.73 per square metre.

The following table summarizes the calculation of the Fire Services development charge.

FIRE SERVICES SUMMARY						
15-year Hist.	2023 - 2032		Unadjusted		Adjusted	
Service Level	Development-Related Capital Program		Development Charge		Development Charge	
per pop & emp	Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$599.55	\$8,090,000	\$2,831,525	\$470.81	\$9.32	\$527.56	\$10.73

APPENDIX B.2
TABLE 1 - PAGE 1

2023 DEVELOPMENT CHARGES BACKGROUND STUDY
TOWNSHIP OF ESSA
INVENTORY OF CAPITAL ASSETS
FIRE SERVICES

BUILDINGS Station Name	# of Square Feet															UNIT COST (\$/sq. ft.)
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Station #1 - Thornton	6,980	6,980	6,980	6,980	6,980	6,980	6,980	6,980	6,980	6,980	6,980	6,980	6,980	6,980	6,980	\$560
Station #2 - Angus	5,257	5,257	5,257	5,257	5,257	5,257	5,257	5,257	5,257	5,257	5,257	5,257	5,257	5,257	5,257	\$560
Total (sq.ft.)	12,237	12,237	12,237	12,237	12,237	12,237	12,237	12,237	12,237	12,237	12,237	12,237	12,237	12,237	12,237	
Total (\$000)	\$6,852.7	\$6,852.7	\$6,852.7	\$6,852.7	\$6,852.7	\$6,852.7	\$6,852.7	\$6,852.7	\$6,852.7	\$6,852.7	\$6,852.7	\$6,852.7	\$6,852.7	\$6,852.7	\$6,852.7	

LAND Station Name	# of Hectares															UNIT COST (\$/ha)
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Station #1 - Thornton	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	\$1,500,000
Station #2 - Angus	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	\$1,500,000
Total (ha)	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	
Total (\$000)	\$1,050.0	\$1,050.0	\$1,050.0	\$1,050.0	\$1,050.0	\$1,050.0	\$1,050.0	\$1,050.0	\$1,050.0	\$1,050.0	\$1,050.0	\$1,050.0	\$1,050.0	\$1,050.0	\$1,050.0	

FURNITURE & EQUIPMENT Station Name	Total Value of Furniture & Equipment (\$)															UNIT COST (\$/outfit)
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Dispatch Centre	\$115,000	\$115,000	\$115,000	\$115,000	\$115,000	\$115,000	\$115,000	\$115,000	\$115,000	\$115,000	\$115,000	\$115,000	\$115,000	\$115,000	\$115,000	
Other Station Equipment	\$201,200	\$201,200	\$201,200	\$201,200	\$201,200	\$201,200	\$201,200	\$201,200	\$201,200	\$201,200	\$201,200	\$201,200	\$201,200	\$201,200	\$201,200	
SCBA Equipment	\$209,800	\$235,700	\$261,500	\$287,400	\$287,400	\$287,400	\$287,400	\$287,400	\$287,400	\$287,400	\$287,400	\$287,400	\$287,400	\$287,400	\$287,400	
# of Equipped Firefighters	54	54	54	54	54	54	54	56	58	60	60	60	60	60	60	\$5,000
Total (\$000)	\$796.0	\$821.9	\$847.7	\$873.6	\$873.6	\$873.6	\$873.6	\$883.6	\$893.6	\$903.6	\$903.6	\$903.6	\$903.6	\$903.6	\$903.6	

APPENDIX B.2
TABLE 1 - PAGE 2

2023 DEVELOPMENT CHARGES BACKGROUND STUDY
TOWNSHIP OF ESSA
INVENTORY OF CAPITAL ASSETS
FIRE SERVICES

VEHICLES Vehicle Type	# of Vehicles																UNIT COST (\$/vehicle)
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022		
1985 GMC Utility Van	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$250,000
1988 Chev Pumper	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$900,000
1992 Int. Fire Truck Telesquirt (L4)	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	\$1,100,000
1993 International Fire Tanker (T2)	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	\$500,000
2001 Freightliner FL80 1050 Pumper (P2)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$900,000
2003 Freightliner 1050 Pumper	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$900,000
1994 Int. Fire Tanker (T3)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-	-	\$500,000
1993 Int. Fire Tanker (T1)	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	\$500,000
1996 Ford Rescue Unit (R2)	1	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	\$250,000
1997 Freightliner Rescue Unit (R1)	1	1	1	1	1	1	1	1	1	1	1	1	-	-	-	-	\$550,000
1999 Int. 4900 Fire Tanker (T4)	1	1	1	1	1	1	1	1	1	1	1	-	-	-	-	-	\$500,000
2005 Chev 2500 HD 4x4 (C1)	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	\$80,000
2007 Ford F150 4x4 (C2)	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$80,000
2004 GMC Sierra 2500 4x4 (U1)	-	-	1	1	1	1	1	1	1	1	1	1	1	-	-	-	\$90,000
2004 GMC Sierra 3500 SLT 4X4 (U2)	-	-	1	1	1	1	1	1	1	1	1	1	1	-	-	-	\$110,000
2008 Dependable Crimson (P1)	-	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$900,000
1995 Freightliner FL-80 P-3	-	1	1	1	1	1	1	1	1	1	1	1	1	1	-	-	\$900,000
2012 Int. Amthor Fire Tanker (T1)	-	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1	\$650,000
2015 Dependable Freightliner (T2)	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	\$750,000
2010 Pierce 75ft Aerial (L4)	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	1	\$1,500,000
2016 Spartan Pumper/Rescue (R1)	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	\$900,000
2010 Ford F150 4x4	-	-	-	-	-	-	-	-	1	1	1	1	-	-	-	-	\$80,000
2014 Ford Explorer (C2)	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	\$90,000
2022 Chev Silverado (C1)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	\$80,000
2019 Ford F350 (U1)	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	\$110,000
2019 Dodge Ram 1500 (U2)	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	\$80,000
2019 HME Heavy Rescue (R2)	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	\$800,000
2020 Kenworth HME Tanker (T3)	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	\$650,000
2021 Spartan Smeal Pumer (P2)	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	\$900,000
2022 kubota RTV (RTV1)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	\$50,000
Total (#)	12	13	14	14	14	15	14	15	15	14	15	17	14	13	15		
Total (\$000)	\$6,930.0	\$7,010.0	\$6,960.0	\$6,960.0	\$7,110.0	\$8,610.0	\$7,510.0	\$7,840.0	\$8,660.0	\$8,160.0	\$9,210.0	\$9,560.0	\$8,810.0	\$8,310.0	\$8,440.0		



APPENDIX B.2
TABLE 1 - PAGE 3

2023 DEVELOPMENT CHARGES BACKGROUND STUDY
TOWNSHIP OF ESSA
CALCULATION OF SERVICE LEVELS
FIRE SERVICES

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Historic Population	17,525	17,846	18,173	18,505	18,994	19,496	20,011	20,540	21,083	21,448	21,819	22,196	22,580	22,970	23,470
Historic Employment	6,927	7,013	7,100	7,190	7,412	7,641	7,877	8,120	8,370	8,510	8,660	8,800	5,970	6,720	8,210
Total Historic Population & Employment	24,452	24,859	25,273	25,695	26,406	27,137	27,888	28,660	29,453	29,958	30,479	30,996	28,550	29,690	31,680

INVENTORY SUMMARY (\$000)

Buildings	\$6,852.7	\$6,852.7	\$6,852.7	\$6,852.7	\$6,852.7	\$6,852.7	\$6,852.7	\$6,852.7	\$6,852.7	\$6,852.7	\$6,852.7	\$6,852.7	\$6,852.7	\$6,852.7	\$6,852.7
Land	\$1,050.0	\$1,050.0	\$1,050.0	\$1,050.0	\$1,050.0	\$1,050.0	\$1,050.0	\$1,050.0	\$1,050.0	\$1,050.0	\$1,050.0	\$1,050.0	\$1,050.0	\$1,050.0	\$1,050.0
Furniture & Equipment	\$796.0	\$821.9	\$847.7	\$873.6	\$873.6	\$873.6	\$873.6	\$883.6	\$893.6	\$903.6	\$903.6	\$903.6	\$903.6	\$903.6	\$903.6
Vehicles	\$6,930.0	\$7,010.0	\$6,960.0	\$6,960.0	\$7,110.0	\$8,610.0	\$7,510.0	\$7,840.0	\$8,660.0	\$8,160.0	\$9,210.0	\$9,560.0	\$8,810.0	\$8,310.0	\$8,440.0
Total (\$000)	\$15,628.7	\$15,734.6	\$15,710.4	\$15,736.3	\$15,886.3	\$17,386.3	\$16,286.3	\$16,626.3	\$17,456.3	\$16,966.3	\$18,016.3	\$18,366.3	\$17,616.3	\$17,116.3	\$17,246.3

SERVICE LEVEL (\$/pop & emp)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Average Service Level
Buildings	\$280.25	\$275.66	\$271.15	\$266.70	\$259.51	\$252.52	\$245.72	\$239.10	\$232.67	\$228.74	\$224.83	\$221.08	\$240.03	\$230.81	\$216.31	\$245.67
Land	\$42.94	\$42.24	\$41.55	\$40.86	\$39.76	\$38.69	\$37.65	\$36.64	\$35.65	\$35.05	\$34.45	\$33.88	\$36.78	\$35.37	\$33.14	\$37.64
Furniture & Equipment	\$32.55	\$33.06	\$33.54	\$34.00	\$33.08	\$32.19	\$31.33	\$30.83	\$30.34	\$30.16	\$29.65	\$29.15	\$31.65	\$30.43	\$28.52	\$31.37
Vehicles	\$283.41	\$281.99	\$275.39	\$270.87	\$269.26	\$317.28	\$269.29	\$273.55	\$294.03	\$272.38	\$302.18	\$308.43	\$308.59	\$279.89	\$266.41	\$284.86
Total (\$/pop & emp)	\$639.16	\$632.95	\$621.63	\$612.43	\$601.62	\$640.69	\$583.99	\$580.12	\$592.68	\$566.34	\$591.11	\$592.54	\$617.04	\$576.50	\$544.39	\$599.55

TOWNSHIP OF ESSA
CALCULATION OF MAXIMUM ALLOWABLE
FIRE SERVICES

15-Year Funding Envelope Calculation	
15 Year Average Service Level 2008 - 2022	\$599.55
Net Population & Employment Growth 2023 - 2032	4,723
Maximum Allowable Funding Envelope	\$2,831,525

APPENDIX B.2
TABLE 2
TOWNSHIP OF ESSA
DEVELOPMENT-RELATED CAPITAL PROGRAM
FIRE SERVICES

Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs		
					Replacement & BTE Shares	Replacement & BTE Shares		Available DC Reserves	2023-2032	Post 2032
2.0 FIRE SERVICES										
2.1 Buildings, Land & Furnishings										
2.1.1 Station 2 (Angus) Expansion	2024	\$ 5,600,000	\$ -	\$ 5,600,000	26%	\$ 1,471,960	\$ 4,128,040	\$ 1,045,083	\$ 2,681,525	\$ 401,432
2.1.2 Station 2 (Angus) Furniture	2024	\$ 140,000	\$ -	\$ 140,000	26%	\$ 36,799	\$ 103,201	\$ -	\$ -	\$ 103,201
Subtotal Buildings, Land & Furnishings		\$ 5,740,000	\$ -	\$ 5,740,000		\$ 1,508,759	\$ 4,231,241	\$ 1,045,083	\$ 2,681,525	\$ 504,633
2.2 Vehicles										
2.2.1 Fire Prevention Officer Vehicle	2023	\$ 100,000	\$ -	\$ 100,000	0%	\$ -	\$ 100,000	\$ 100,000	\$ -	\$ -
2.2.2 New Aerial	2024	\$ 2,000,000	\$ -	\$ 2,000,000	0%	\$ -	\$ 2,000,000	\$ -	\$ -	\$ 2,000,000
2.2.3 Fire Training Vehicle	2023	\$ 100,000	\$ -	\$ 100,000	0%	\$ -	\$ 100,000	\$ 100,000	\$ -	\$ -
Subtotal Vehicles		\$ 2,200,000	\$ -	\$ 2,200,000		\$ -	\$ 2,200,000	\$ 200,000	\$ -	\$ 2,000,000
2.3 Equipment & Other										
2.3.1 Bunker Gear for 10 Firefighters	Various	\$ 50,000	\$ -	\$ 50,000	0%	\$ -	\$ 50,000	\$ -	\$ 50,000	\$ -
2.3.2 New Equipment for Servicing High/Mid-Rise	Various	\$ 100,000	\$ -	\$ 100,000	0%	\$ -	\$ 100,000	\$ -	\$ 100,000	\$ -
Subtotal Equipment & Other		\$ 150,000	\$ -	\$ 150,000		\$ -	\$ 150,000	\$ -	\$ 150,000	\$ -
TOTAL FIRE SERVICES		\$ 8,090,000	\$ -	\$ 8,090,000		\$ 1,508,759	\$ 6,581,241	\$ 1,245,083	\$ 2,831,525	\$ 2,504,633

Residential Development Charge Calculation		
Residential Share of 2023 - 2032 DC Eligible Costs	88%	\$2,479,739
10-Year Growth in Population in New Units		5,267
Unadjusted Development Charge Per Capita		\$470.81
Non-Residential Development Charge Calculation		
Non-Residential Share of 2023 - 2032 DC Eligible Costs	12%	\$351,786
10-Year Growth in Square Metres		37,760
Unadjusted Development Charge Per Square Metre		\$9.32

2023 - 2032 Net Funding Envelope	\$2,831,525
Reserve Fund Balance as at December 31, 2022	\$1,245,083

APPENDIX B.2
TABLE 3 - PAGE 1

TOWNSHIP OF ESSA
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
FIRE SERVICES
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

FIRE SERVICES	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	TOTAL
OPENING CASH BALANCE	\$0.0	\$284.0	(\$1,868.1)	(\$1,661.4)	(\$1,451.9)	(\$1,263.9)	(\$1,054.8)	(\$823.8)	(\$568.7)	(\$278.6)	
2023 - 2032 RESIDENTIAL FUNDING REQUIREMENTS											
- Fire Services: Non Inflated	\$13.1	\$2,361.5	\$13.1	\$13.1	\$13.1	\$13.1	\$13.1	\$13.1	\$13.1	\$13.1	\$2,479.7
- Fire Services: Inflated	\$13.1	\$2,408.7	\$13.7	\$13.9	\$14.2	\$14.5	\$14.8	\$15.1	\$15.4	\$15.7	\$2,539.2
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	554	566	579	553	486	495	503	512	536	483	5,267
REVENUE											
- DC Receipts: Inflated	\$292.3	\$304.6	\$317.8	\$309.6	\$277.5	\$288.3	\$298.8	\$310.3	\$331.3	\$304.5	\$3,035.0
INTEREST											
- Interest on Opening Balance	\$0.0	\$9.9	(\$102.7)	(\$91.4)	(\$79.9)	(\$69.5)	(\$58.0)	(\$45.3)	(\$31.3)	(\$15.3)	(\$483.5)
- Interest on In-year Transactions	\$4.9	(\$57.9)	\$5.3	\$5.2	\$4.6	\$4.8	\$5.0	\$5.2	\$5.5	\$5.1	(\$12.4)
TOTAL REVENUE	\$297.2	\$256.6	\$220.4	\$223.4	\$202.3	\$223.6	\$245.8	\$270.1	\$305.6	\$294.3	\$2,539.2
CLOSING CASH BALANCE	\$284.0	(\$1,868.1)	(\$1,661.4)	(\$1,451.9)	(\$1,263.9)	(\$1,054.8)	(\$823.8)	(\$568.7)	(\$278.6)	(\$0.0)	

2023 Adjusted Charge Per Capita	\$527.56
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Allocation of Capital Program	
Residential Sector	87.6%
Non-Residential Sector	12.4%
Rates for 2023	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX B.2
TABLE 3 - PAGE 2

TOWNSHIP OF ESSA
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
FIRE SERVICES
NON-RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

FIRE SERVICES	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	TOTAL
OPENING CASH BALANCE	\$0.00	\$24.97	(\$294.56)	(\$278.65)	(\$258.09)	(\$232.38)	(\$201.20)	(\$164.10)	(\$120.61)	(\$70.10)	
2023 - 2032 NON-RESIDENTIAL FUNDING REQUIREMENTS											
- Fire Services: Non Inflated	\$1.9	\$335.0	\$1.9	\$1.9	\$1.9	\$1.9	\$1.9	\$1.9	\$1.9	\$1.9	\$351.8
- Fire Services: Inflated	\$1.9	\$341.7	\$1.9	\$2.0	\$2.0	\$2.1	\$2.1	\$2.1	\$2.2	\$2.2	\$360.2
NEW NON-RESIDENTIAL DEVELOPMENT											
- Growth in Square Metres	2,460	2,730	3,000	3,270	3,550	3,820	4,090	4,360	4,640	5,840	37,760
REVENUE											
- DC Receipts: Inflated	\$26.4	\$29.9	\$33.5	\$37.2	\$41.2	\$45.3	\$49.4	\$53.8	\$58.3	\$74.9	\$450.0
INTEREST											
- Interest on Opening Balance	\$0.0	\$0.9	(\$16.2)	(\$15.3)	(\$14.2)	(\$12.8)	(\$11.1)	(\$9.0)	(\$6.6)	(\$3.9)	(\$88.2)
- Interest on In-year Transactions	\$0.4	(\$8.6)	\$0.6	\$0.6	\$0.7	\$0.8	\$0.8	\$0.9	\$1.0	\$1.3	(\$1.5)
TOTAL REVENUE	\$26.8	\$22.2	\$17.8	\$22.5	\$27.7	\$33.2	\$39.2	\$45.6	\$52.7	\$72.3	\$360.2
CLOSING CASH BALANCE	\$25.0	(\$294.6)	(\$278.7)	(\$258.1)	(\$232.4)	(\$201.2)	(\$164.1)	(\$120.6)	(\$70.1)	(\$0.0)	

2023 Adjusted Charge Per Square Metre	\$10.73
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Allocation of Capital Program	
Residential Sector	87.6%
Non-Residential Sector	12.4%
Rates for 2023	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX B.3

POLICE SERVICES

APPENDIX B.3: POLICE SERVICES

Policing for the Township of Essa is provided by the Nottawasaga Ontario Provincial Police (OPP) through a joint contract between the Townships of Essa, and Adjala-Tosorontio and the Town of New Tecumseth. The service level calculations, development-related capital program and per capita development charge rates have been calculated based on the total growth requirements of the Township of Essa only.

TABLE B.3.1 HISTORICAL SERVICE LEVELS

The 15-year historical inventory of capital assets for Police includes 19,600 square feet of building space with a replacement value of \$11.77 million. The 1.72 hectares of land associated with the building space is valued at \$2.58 million and the equipment for police officers, vehicles and station furniture adds another \$1.92 million to the value of the inventory.

The current replacement value of the Police Service's capital infrastructure including buildings, land, furniture and equipment is approximately \$16.26 million. However, the Township's share of this infrastructure is only 27 per cent (as per the servicing agreement). As such, the value of the infrastructure related to the Township's level of service is reduced to \$4.47 million. This has provided a 15-year average historical service level of \$155.60 per capita and employee. This average historical service level multiplied by the ten-year forecast growth in net population and employment, results in a ten-year maximum allowable funding envelope of \$734,900.

TABLE B.3.2 2023-2032 DEVELOPMENT-RELATED CAPITAL PROGRAM AND CALCULATION OF THE "UNADJUSTED" DEVELOPMENT CHARGES

The Police Services capital program recovers for equipment for new police officers and for equipment contained in new police vehicles. Altogether, the ten-year capital forecast for Police amounts to \$102,000, all of which is considered to be development-related. The currently available DC reserves are committed to outstanding projects not identified for recovery in the capital program and therefore are not applied to the DC eligible costs. As such, the total eligible costs for the period of 2023-2032 amounts to \$102,000 and is brought forward to the development charge calculation.

The total development-related net capital cost is allocated 88 per cent, or \$89,300 against new residential development, and 12 per cent, or \$12,700 against non-residential development. This yields an unadjusted development charge of \$16.96 per capita and \$0.34 per square metre.

TABLE B.3-3 CASH FLOW

After cash flow consideration, the calculated residential charge remains to \$16.96 per capita and the non-residential charge remains at \$0.34 per square metre.

The following table summarizes the calculation of the Police Services development charge.

POLICE SERVICES SUMMARY						
15-year Hist.	2023 - 2032		Unadjusted		Adjusted	
Service Level	Development-Related Capital Program		Development Charge		Development Charge	
per pop & emp	Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$155.60	\$102,000	\$102,000	\$16.96	\$0.34	\$16.93	\$0.34

APPENDIX B.3
TABLE 1 - PAGE 1

2023 DEVELOPMENT CHARGES BACKGROUND STUDY
TOWNSHIP OF ESSA
INVENTORY OF CAPITAL ASSETS
POLICE SERVICES

BUILDINGS*	# of Square Feet															UNIT COST (\$/sq. ft.)
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Beeton	8,800	8,800	-	-	-	-	-	-	-	-	-	-	-	-	-	\$600
Alliston	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400	\$600
Nottawasaga Detachment - Alliston	-	-	17,319	17,319	17,319	17,319	17,319	17,319	17,319	17,319	17,319	17,319	17,319	17,319	17,319	\$600
Tottenham ESO	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	\$600
Beeton ESO	-	640	640	640	640	640	640	640	640	640	640	640	640	640	640	\$600
Total (sq.ft.)	10,450	11,090	19,609	19,609	19,609	19,609	19,609	19,609	19,609	19,609	19,609	19,609	19,609	19,609	19,609	
Total (\$000)	\$6,270.0	\$6,654.0	\$11,765.4	\$11,765.4	\$11,765.4	\$11,765.4	\$11,765.4	\$11,765.4	\$11,765.4	\$11,765.4	\$11,765.4	\$11,765.4	\$11,765.4	\$11,765.4	\$11,765.4	

* Reflects total number of assets. Essa's share is 27%. See calculations for funding envelope below.

LAND*	# of Hectares															UNIT COST (\$/ha)
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Beeton	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	\$ 1,500,000
Nottawasaga Detachment - Alliston	-	-	1.57	1.57	1.57	1.57	1.57	1.57	1.57	1.57	1.57	1.57	1.57	1.57	1.57	\$ 1,500,000
Total (ha)	0.15	0.15	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	
Total (\$000)	\$225.0	\$225.0	\$2,575.2	\$2,575.2	\$2,575.2	\$2,575.2	\$2,575.2	\$2,575.2	\$2,575.2	\$2,575.2	\$2,575.2	\$2,575.2	\$2,575.2	\$2,575.2	\$2,575.2	

* Reflects total number of assets. Essa's share is 27%. See calculations for funding envelope below.

FURNITURE & EQUIPMENT*	Total Value of Furniture & Equipment (\$)															UNIT COST (\$/unit)
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Furniture and Equipment	\$325,700	\$325,700	\$325,700	\$325,700	\$325,700	\$325,700	\$325,700	\$325,700	\$325,700	\$325,700	\$325,700	\$325,700	\$325,700	\$325,700	\$325,700	
Vehicle Equipment (# vehicles x unit cost)	24	24	28	29	29	29	29	29	29	29	29	29	29	29	29	\$ 29,800
Personal Equipment (# uniformed officers x unit cost)	54	56	60	61	61	61	61	61	61	61	61	61	61	61	61	\$ 12,000
Total (\$000)	\$1,688.9	\$1,706.9	\$1,880.1	\$1,921.9	\$1,921.9	\$1,921.9	\$1,921.9	\$1,921.9	\$1,921.9	\$1,921.9	\$1,921.9	\$1,921.9	\$1,921.9	\$1,921.9	\$1,921.9	

* Reflects total number of assets. Essa's share is 27%. See calculations for funding envelope below.

APPENDIX B.3
TABLE 1 - PAGE 2

2023 DEVELOPMENT CHARGES BACKGROUND STUDY
TOWNSHIP OF ESSA
CALCULATION OF SERVICE LEVELS
POLICE SERVICES

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Historic Population	17,525	17,846	18,173	18,505	18,994	19,496	20,011	20,540	21,083	21,448	21,819	22,196	22,580	22,970	23,470
Historic Employment	6,927	7,013	7,100	7,190	7,412	7,641	7,877	8,120	8,370	8,510	8,660	8,800	5,970	6,720	8,210
Total Historic Population & Employment	24,452	24,859	25,273	25,695	26,406	27,137	27,888	28,660	29,453	29,958	30,479	30,996	28,550	29,690	31,680

INVENTORY SUMMARY (\$000)

Buildings*	\$6,270.0	\$6,654.0	\$11,765.4	\$11,765.4	\$11,765.4	\$11,765.4	\$11,765.4	\$11,765.4	\$11,765.4	\$11,765.4	\$11,765.4	\$11,765.4	\$11,765.4	\$11,765.4	\$11,765.4
Land*	\$225.0	\$225.0	\$2,575.2	\$2,575.2	\$2,575.2	\$2,575.2	\$2,575.2	\$2,575.2	\$2,575.2	\$2,575.2	\$2,575.2	\$2,575.2	\$2,575.2	\$2,575.2	\$2,575.2
Furniture & Equipment*	\$1,688.9	\$1,706.9	\$1,880.1	\$1,921.9	\$1,921.9	\$1,921.9	\$1,921.9	\$1,921.9	\$1,921.9	\$1,921.9	\$1,921.9	\$1,921.9	\$1,921.9	\$1,921.9	\$1,921.9
Total (\$000)	\$8,183.9	\$8,585.9	\$16,220.7	\$16,262.5	\$16,262.5	\$16,262.5	\$16,262.5	\$16,262.5	\$16,262.5	\$16,262.5	\$16,262.5	\$16,262.5	\$16,262.5	\$16,262.5	\$16,262.5

INVENTORY SUMMARY (\$000) - Essa Share Only

Essa Share	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%	27%	27%
Buildings*	\$1,818.30	\$1,929.66	\$3,411.97	\$3,411.97	\$3,411.97	\$3,411.97	\$3,411.97	\$3,411.97	\$3,411.97	\$3,411.97	\$3,412.0	\$3,412.0	\$3,412.0	\$3,232.0	\$3,232.0
Land*	\$65.25	\$65.25	\$746.81	\$746.81	\$746.81	\$746.81	\$746.81	\$746.81	\$746.81	\$746.81	\$746.8	\$746.8	\$746.8	\$707.4	\$707.4
Furniture & Equipment*	\$489.78	\$495.00	\$545.23	\$557.35	\$557.35	\$557.35	\$557.35	\$557.35	\$557.35	\$557.35	\$557.4	\$557.4	\$557.4	\$527.9	\$527.9
Total (\$000)	\$2,373.3	\$2,489.9	\$4,704.0	\$4,716.1	\$4,716.1	\$4,716.1	\$4,716.1	\$4,716.1	\$4,716.1	\$4,716.1	\$4,716.1	\$4,716.1	\$4,716.1	\$4,467.3	\$4,467.3

Average
Service
Level

SERVICE LEVEL (\$/capita & employment)

Buildings*	\$74.36	\$77.62	\$135.00	\$132.79	\$129.21	\$125.73	\$122.35	\$119.05	\$115.84	\$113.89	\$111.94	\$110.08	\$119.51	\$108.86	\$102.02	\$113.22
Land*	\$2.67	\$2.62	\$29.55	\$29.06	\$28.28	\$27.52	\$26.78	\$26.06	\$25.36	\$24.93	\$24.50	\$24.09	\$26.16	\$23.83	\$22.33	\$22.92
Furniture & Equipment*	\$20.03	\$19.91	\$21.57	\$21.69	\$21.11	\$20.54	\$19.99	\$19.45	\$18.92	\$18.60	\$18.29	\$17.98	\$19.52	\$17.78	\$16.66	\$19.47
Total (\$/capita & employment)	\$97.06	\$100.16	\$186.13	\$183.54	\$178.60	\$173.79	\$169.11	\$164.55	\$160.12	\$157.42	\$154.73	\$152.15	\$165.19	\$150.47	\$141.01	\$155.60

CALCULATION OF MAXIMUM ALLOWABLE
POLICE SERVICES

15-Year Funding Envelope Calculation	
15 Year Average Service Level 2008 - 2022	\$155.60
Net Population & Employment Growth 2023 - 2032	4,723
Maximum Allowable Funding Envelope	\$734,860

APPENDIX B.3
TABLE 2

TOWNSHIP OF ESSA
DEVELOPMENT-RELATED CAPITAL PROGRAM
POLICE SERVICES

Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs		
					Replacement & BTE Shares	Replacement & BTE Shares		Available DC Reserves	2023-2032	Post 2032
3.0 POLICE SERVICES										
3.1 Equipment										
3.1.1 Personal Equipment	Various	\$ 47,000	\$ -	\$ 47,000	0%	\$ -	\$ 47,000	\$ -	\$ 47,000	\$ -
3.1.2 New Vehicles	Various	\$ 55,000	\$ -	\$ 55,000	0%	\$ -	\$ 55,000	\$ -	\$ 55,000	\$ -
Subtotal Equipment		\$ 102,000	\$ -	\$ 102,000		\$ -	\$ 102,000	\$ -	\$ 102,000	\$ -
TOTAL POLICE SERVICES		\$ 102,000	\$ -	\$ 102,000		\$ -	\$ 102,000	\$ -	\$ 102,000	\$ -

Residential Development Charge Calculation		
Residential Share of 2023 - 2032 DC Eligible Costs	88%	\$89,328
10-Year Growth in Population in New Units		5,267
Unadjusted Development Charge Per Capita		\$16.96
Non-Residential Development Charge Calculation		
Non-Residential Share of 2023 - 2032 DC Eligible Costs	12%	\$12,672
10-Year Growth in Square Metres		37,760
Unadjusted Development Charge Per Square Metre		\$0.34

2023 - 2032 Net Funding Envelope	\$734,860
Reserve Fund Balance as at December 31, 2022	\$0

APPENDIX B.3
TABLE 3 - PAGE 1

TOWNSHIP OF ESSA
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
POLICE SERVICES
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

POLICE SERVICES	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	TOTAL
OPENING CASH BALANCE	\$0.0	\$0.5	\$1.1	\$2.1	\$2.7	\$2.0	\$1.4	\$1.0	\$0.7	\$0.9	
2023 - 2032 RESIDENTIAL FUNDING REQUIREMENTS											
- Police Services: Non Inflated	\$8.9	\$8.9	\$8.9	\$8.9	\$8.9	\$8.9	\$8.9	\$8.9	\$8.9	\$8.9	\$89.3
- Police Services: Inflated	\$8.9	\$9.1	\$9.3	\$9.5	\$9.7	\$9.9	\$10.1	\$10.3	\$10.5	\$10.7	\$97.8
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	554	566	579	553	486	495	503	512	536	483	5,267
REVENUE											
- DC Receipts: Inflated	\$9.4	\$9.8	\$10.2	\$9.9	\$8.9	\$9.3	\$9.6	\$10.0	\$10.6	\$9.8	\$97.4
INTEREST											
- Interest on Opening Balance	\$0.0	\$0.0	\$0.0	\$0.1	\$0.1	\$0.1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.4
- Interest on In-year Transactions	\$0.0	\$0.0	\$0.0	\$0.0	(\$0.0)	(\$0.0)	(\$0.0)	(\$0.0)	\$0.0	(\$0.0)	(\$0.0)
TOTAL REVENUE	\$9.4	\$9.8	\$10.3	\$10.0	\$9.0	\$9.3	\$9.6	\$10.0	\$10.7	\$9.8	\$97.8
CLOSING CASH BALANCE	\$0.5	\$1.1	\$2.1	\$2.7	\$2.0	\$1.4	\$1.0	\$0.7	\$0.9	\$0.0	

2023 Adjusted Charge Per Capita	\$16.93
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Allocation of Capital Program	
Residential Sector	87.6%
Non-Residential Sector	12.4%
Rates for 2023	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX B.3
TABLE 3 - PAGE 2

TOWNSHIP OF ESSA
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
POLICE SERVICES
NON-RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

POLICE SERVICES	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	TOTAL
OPENING CASH BALANCE	\$0.00	(\$0.43)	(\$0.80)	(\$1.10)	(\$1.31)	(\$1.43)	(\$1.46)	(\$1.38)	(\$1.18)	(\$0.86)	
2023 - 2032 NON-RESIDENTIAL FUNDING REQUIREMENTS											
- Police Services: Non Inflated	\$1.3	\$1.3	\$1.3	\$1.3	\$1.3	\$1.3	\$1.3	\$1.3	\$1.3	\$1.3	\$12.7
- Police Services: Inflated	\$1.3	\$1.3	\$1.3	\$1.3	\$1.4	\$1.4	\$1.4	\$1.5	\$1.5	\$1.5	\$13.9
NEW NON-RESIDENTIAL DEVELOPMENT											
- Growth in Square Metres	2,460	2,730	3,000	3,270	3,550	3,820	4,090	4,360	4,640	5,840	37,760
REVENUE											
- DC Receipts: Inflated	\$0.8	\$1.0	\$1.1	\$1.2	\$1.3	\$1.5	\$1.6	\$1.7	\$1.9	\$2.4	\$14.4
INTEREST											
- Interest on Opening Balance	\$0.0	(\$0.0)	(\$0.0)	(\$0.1)	(\$0.1)	(\$0.1)	(\$0.1)	(\$0.1)	(\$0.1)	(\$0.0)	(\$0.5)
- Interest on In-year Transactions	(\$0.0)	(\$0.0)	(\$0.0)	(\$0.0)	(\$0.0)	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	(\$0.0)
TOTAL REVENUE	\$0.8	\$0.9	\$1.0	\$1.1	\$1.2	\$1.4	\$1.5	\$1.7	\$1.8	\$2.4	\$13.9
CLOSING CASH BALANCE	(\$0.4)	(\$0.8)	(\$1.1)	(\$1.3)	(\$1.4)	(\$1.5)	(\$1.4)	(\$1.2)	(\$0.9)	\$0.0	

2023 Adjusted Charge Per Square Metre	\$0.34
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Allocation of Capital Program	
Residential Sector	87.6%
Non-Residential Sector	12.4%
Rates for 2023	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX B.4

PARKS AND RECREATION

APPENDIX B.4: PARKS AND RECREATION

The Township of Essa Parks and Recreation Department is responsible for providing indoor and outdoor leisure space to its residents. The Township offers a wide array of recreational opportunities by way of community, neighborhood and township parks, and indoor recreation facilities within the Township. This department also offers a variety of outdoor recreation facilities including soccer fields, baseball diamonds, tennis courts, outdoor pads, splash pads and numerous playgrounds.

TABLE B.4.1 HISTORICAL SERVICE LEVELS

The 15-year historical inventory of capital assets for Parks and Recreation includes 72,500 square feet of indoor recreation building space with a current replacement value of \$32.47 million. The land associated with the buildings amount to 9.40 hectares, and is valued at \$14.10 million. The furniture and equipment associated with the facilities have a total value of \$3.13 million.

The Township of Essa offers approximately 32 hectares of developed parkland space in 22 Community and Neighbourhood parks. There are an additional 5 rural area township parks with 15 hectares and 24 km of trails. The combined value of the community, neighbourhood and township parks and trails amounts to \$4.08 million. The outdoor facilities include full and three-quarter sized soccer pitches, major and minor baseball diamonds, tennis courts, outdoor pads, an off leash dog park, splash pads, a skateboard park, picnic areas, and numerous playgrounds and parking spaces. These facilities have a combined value of \$10.65 million. The Parks and Recreation department is also responsible for the vehicles and small equipment that are required to maintain the park facilities – these items add \$609,000 to the inventory. Finally, the capital program includes a fish cleaning station and storage building for a combined cost of \$903,000.

The combined value of capital assets for Parks and Recreation Services totals \$65.94 million. The 15-year historical average service level is \$3,266.55 per capita, and this, multiplied by the ten-year forecast growth in net population, results in a ten-year maximum allowable funding envelope of \$13.51 million (4,136 net population growth X historic service level of \$3,266.55/capita). No calculated excess capacity has been identified for this service.

TABLE B.4-2 2023-2032 DEVELOPMENT-RELATED CAPITAL PROGRAM AND CALCULATION OF THE “UNADJUSTED” DEVELOPMENT CHARGES

The 2023-2032 development-related capital program for Parks and Recreation amounts to \$14.92 million. A provision of \$5.46 million for the construction of new space including new a meeting space and multi-purpose rooms, furniture and equipment for these spaces, and a new garage. The total provision includes for acquisition of land to facilitate the construction of the new facility. In addition, the capital program includes \$475,000 for new trucks. The capital program includes a provision for new playground equipment an amenities (of which 50 per cent will benefit existing users); new off-road trails (of which a range of 10-15 per cent has been identified as a benefit to existing residents); park upgrades in Baxter and Thornton, a dog park in Baxter a new pedestrian bridge of Nottasaga, and lights at the Bob Geddes Ball Diamond.

Of the \$14.92 million total capital program costs, \$1.05 million is deemed to be of the benefit of existing residents/replacement share and is removed from the DC eligible costs. Approximately \$4.71 million is to be funded from the current Parks and Recreation development charges reserve fund. The remaining \$9.17 million is related to growth between 2023 and 2032 and is brought forward to the development charges calculation.

The 2023-2032 DC costs eligible for recovery amount to \$9.17 million, which is allocated entirely against future residential development in the Township of Essa. This results in an unadjusted development charge of \$1,740.54 per capita.

TABLE B.4-3 CASH FLOW

After cash flow consideration, the residential calculated charge increases to \$1,760.16 per capita. The following table summarizes the calculation of the Parks and Recreation development charge:

PARKS AND RECREATION SUMMARY						
15-year Hist.	2023 - 2032		Unadjusted		Adjusted	
Service Level	Development-Related Capital Program		Development Charge		Development Charge	
per capita	Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$3,266.55	\$14,924,190	\$9,167,418	\$1,740.54	\$0.00	\$1,760.16	\$0.00

APPENDIX B.4
TABLE 1 - PAGE 1

2023 DEVELOPMENT CHARGES BACKGROUND STUDY
TOWNSHIP OF ESSA
INVENTORY OF CAPITAL ASSETS
PARKS AND RECREATION
INDOOR RECREATION FACILITIES

BUILDINGS Facility Name	# of Square Feet															UNIT COST (\$/sq. ft.)
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Angus Community Park Hall	2,010	2,010	2,010	2,010	2,010	2,010	2,010	2,010	2,010	2,010	2,010	2,010	2,010	2,010	2,010	\$400
Elmgrove Community Hall	1,400	1,400	-	-	-	-	-	-	-	-	-	-	-	-	-	\$400
Angus Recreation Centre	38,932	38,932	42,052	42,052	42,052	42,052	42,052	42,052	42,052	42,052	42,052	42,052	42,052	42,052	42,052	\$450
Former NVCA Building	2,000	2,000	2,000	2,000	-	-	-	-	-	-	-	-	-	-	-	\$400
Thornton Recreation Centre	27,240	27,240	27,240	27,240	27,240	27,240	27,240	27,240	27,240	27,240	27,240	27,240	27,240	27,240	27,240	\$450
Youth Centre	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	\$400
Total (sq.ft.)	72,782	72,782	74,502	74,502	72,502	72,502	72,502	72,502	72,502	72,502	72,502	72,502	72,502	72,502	72,502	
Total (\$000)	\$32,421.40	\$32,421.40	\$33,265.40	\$33,265.40	\$32,465.40	\$32,465.40	\$32,465.40	\$32,465.40	\$32,465.40	\$32,465.40	\$32,465.40	\$32,465.40	\$32,465.40	\$32,465.40	\$32,465.40	

LAND Facility Name	# of Hectares															UNIT COST (\$/ha)
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Angus Community Park Hall	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	\$1,500,000
Elmgrove Community Hall	0.50	0.50	-	-	-	-	-	-	-	-	-	-	-	-	-	\$1,500,000
Angus Recreation Centre	4.01	4.01	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39	\$1,500,000
Former NVCA Building	0.75	0.75	0.75	0.75	-	-	-	-	-	-	-	-	-	-	-	\$1,500,000
Thornton Recreation Centre	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	\$1,500,000
Youth Centre	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	\$1,500,000
Total (ha)	13.27	13.27	10.15	10.15	9.40	9.40	9.40	9.40	9.40	9.40	9.40	9.40	9.40	9.40	9.40	
Total (\$000)	\$19,906.7	\$19,906.7	\$15,226.7	\$15,226.7	\$14,101.7	\$14,101.7	\$14,101.7	\$14,101.7	\$14,101.7	\$14,101.7	\$14,101.7	\$14,101.7	\$14,101.7	\$14,101.7	\$14,101.7	

FURNITURE & EQUIPMENT Facility Name	Total Value of Furniture & Equipment (\$)														
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Angus Community Park Hall	\$33,000	\$33,000	\$33,000	\$33,000	\$33,000	\$33,000	\$33,000	\$33,000	\$33,000	\$33,000	\$33,000	\$33,000	\$33,000	\$33,000	\$33,000
Elmgrove Community Hall	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000
Angus Recreation Centre	\$1,519,000	\$1,519,000	\$1,519,000	\$1,519,000	\$1,519,000	\$1,519,000	\$1,519,000	\$1,519,000	\$1,519,000	\$1,519,000	\$1,519,000	\$1,519,000	\$1,519,000	\$1,519,000	\$1,519,000
Former NVCA Building	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000
Thornton Recreation Centre	\$1,519,000	\$1,519,000	\$1,519,000	\$1,519,000	\$1,519,000	\$1,519,000	\$1,519,000	\$1,519,000	\$1,519,000	\$1,519,000	\$1,519,000	\$1,519,000	\$1,519,000	\$1,519,000	\$1,519,000
Youth Centre	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000
Total (\$000)	\$3,133.0	\$3,133.0	\$3,133.0	\$3,133.0	\$3,133.0	\$3,133.0	\$3,133.0	\$3,133.0	\$3,133.0	\$3,133.0	\$3,133.0	\$3,133.0	\$3,133.0	\$3,133.0	\$3,133.0

APPENDIX B.4
TABLE 1 - PAGE 2

2023 DEVELOPMENT CHARGES BACKGROUND STUDY
TOWNSHIP OF ESSA
INVENTORY OF CAPITAL ASSETS
PARKS AND RECREATION
PARKLAND DEVELOPMENT

COMMUNITY PARKS Park Name	# of Hectares of Developed Area															UNIT COST (\$/ha)
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Angus - Community Park	2.64	2.64	2.64	2.64	2.64	2.64	2.64	2.64	2.64	2.64	2.64	2.64	2.64	2.64	2.64	\$64,900
Angus - Bush Parkland	4.09	4.09	4.09	-	-	-	-	-	-	-	-	-	-	-	-	\$64,900
Angus - LeClair Parkland	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	\$64,900
Angus - Peacekeepers Park	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	\$64,900
Angus - Lions Park	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	\$64,900
Bob Geddes	-	-	-	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	\$64,900
Baxter - Ball Park	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	\$64,900
Utopia - Soccer Park	1.81	1.81	1.81	1.81	1.81	1.81	1.81	1.81	1.81	1.81	1.81	1.81	1.81	1.81	1.81	\$64,900
Thonton Hills Soccer Park	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	\$64,900
Thornton Arena Ball Park	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	\$64,900
Total (ha)	21.45	21.45	21.45	19.43	19.43	19.43	19.43	19.43	19.43	19.43	19.43	19.43	19.43	19.43	19.43	
Total (\$000)	\$1,391.9	\$1,391.9	\$1,391.9	\$1,260.9	\$1,260.9	\$1,260.9	\$1,260.9	\$1,260.9	\$1,260.9	\$1,260.9	\$1,260.9	\$1,260.9	\$1,260.9	\$1,260.9	\$1,260.9	

NEIGHBOURHOOD PARKS Park Name	# of Hectares of Developed Area															UNIT COST (\$/ha)
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Angus - Dellbrook Subdivision	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	\$43,300
Angus - Glen Eton/Wildflowers Park	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	\$43,300
Angus - Maple Lane Subdivision	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	\$43,300
Angus - McGeorge Subdivision	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	\$43,300
Baxter - Marshall Parkland	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	\$43,300
Earl Cunningham	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	\$43,300
Cunningham	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	\$43,300
Egbert Pioneer Ridge	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	\$43,300
Robson Park	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	\$43,300
Thornton Creek Park	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	\$43,300
Stonemount Park	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	\$43,300
Brownley Park	-	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18	\$43,300
Meadowland (Olive Lee)	-	-	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	\$43,300
Total (ha)	9.83	11.01	12.85	12.85	12.85	12.85	12.85	12.85	12.85	12.85	12.85	12.85	12.85	12.85	12.85	
Total (\$000)	\$425.6	\$476.7	\$556.4	\$556.4	\$556.4	\$556.4	\$556.4	\$556.4	\$556.4	\$556.4	\$556.4	\$556.4	\$556.4	\$556.4	\$556.4	

APPENDIX B.4
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TOWNSHIP OF ESSA
INVENTORY OF CAPITAL ASSETS
PARKS AND RECREATION
PARKLAND DEVELOPMENT

TOWNSHIP PARKS (Rural Areas) Park Name	# of Hectares of Township Parks															UNIT COST (\$/ha)
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Don Ross Fishing Park	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	\$22,200
Elmgrove Ball Park	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	\$22,200
Essa Centennial Park	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	\$22,200
Elmgrove Community Centre	0.24	0.24	-	-	-	-	-	-	-	-	-	-	-	-	-	\$22,200
Ivy Ball Park	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	\$22,200
NVCA Fishing Park	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	\$22,200
Total (ha)	15.66	15.66	15.42	15.42	15.42	15.42	15.42	15.42	15.42	15.42	15.42	15.42	15.42	15.42	15.42	
Total (\$000)	\$347.7	\$347.7	\$342.3	\$342.3	\$342.3	\$342.3	\$342.3	\$342.3	\$342.3	\$342.3	\$342.3	\$342.3	\$342.3	\$342.3	\$342.3	

TRAIL SYSTEM Location	# of Kilometres of Limestone Trail															UNIT COST (\$/km)
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Abandoned CN Railway - Barrie - Collingwood	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	\$80,000
Thornton-Cookstown Trail	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	\$80,000
Rippon Trail	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	\$80,000
Total (km)	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	
Total (\$000)	\$1,920.0	\$1,920.0	\$1,920.0	\$1,920.0	\$1,920.0	\$1,920.0	\$1,920.0	\$1,920.0	\$1,920.0	\$1,920.0	\$1,920.0	\$1,920.0	\$1,920.0	\$1,920.0	\$1,920.0	

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TOWNSHIP OF ESSA
INVENTORY OF CAPITAL ASSETS
PARKS AND RECREATION
PARK FACILITIES

SOCCER FIELDS Park Name	# of Soccer Fields															UNIT COST (\$/unit)
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Full Sized Soccer Field																
LeClair Soccer Park	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Thornton Hills Soccer Park	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Three Quarter Sized Soccer Field																
Utopia Soccer Park	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Brownley Park	-	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1
LeClair Soccer Park	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total (#)	8	8	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Total (\$000)	\$1,100.0	\$1,100.0	\$1,175.0	\$1,175.0	\$1,175.0	\$1,175.0	\$1,175.0	\$1,175.0	\$1,175.0	\$1,175.0	\$1,175.0	\$1,175.0	\$1,175.0	\$1,175.0	\$1,175.0	\$1,175.0

BASEBALL DIAMONDS Park Name	# of Baseball Diamonds															UNIT COST (\$/unit)
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Major Diamond																
Angus Community Park - Lights, Irrigation	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Baxter Ball Park	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Bush Ball Park	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Elmgrove Ball Park	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ivy Ball Park	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Thornton Arena Ball Park	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Bob Geddes Park - Irrigation	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1	1
Minor Diamond																
Lion's Ball Park	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total (#)	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Total (\$000)	\$2,050.0	\$2,050.0	\$2,050.0	\$2,150.0	\$2,150.0	\$2,150.0	\$2,150.0	\$2,150.0	\$2,150.0	\$2,150.0	\$2,150.0	\$2,150.0	\$2,150.0	\$2,150.0	\$2,150.0	\$2,150.0

TENNIS COURTS Park Name	# of Tennis Courts															UNIT COST (\$/unit)
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Cunningham	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Glen Eton/Wildflower	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Marshall Park	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total (#)	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Total (\$000)	\$400.0	\$400.0	\$400.0	\$400.0	\$400.0	\$400.0	\$400.0	\$400.0	\$400.0	\$400.0	\$400.0	\$400.0	\$400.0	\$400.0	\$400.0	\$400.0

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TOWNSHIP OF ESSA
INVENTORY OF CAPITAL ASSETS
PARKS AND RECREATION
PARK FACILITIES

OUTDOOR PADS Park Name	# of Outdoor Pads															UNIT COST (\$/unit)
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Baxter Park	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$324,000
Glen Eton/Wildflower	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$364,000
Stonemount Park	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$405,000
Thornton Arena Park	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$364,000
Total (#)	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
Total (\$000)	\$1,457.0	\$1,457.0	\$1,457.0	\$1,457.0	\$1,457.0	\$1,457.0	\$1,457.0	\$1,457.0	\$1,457.0	\$1,457.0	\$1,457.0	\$1,457.0	\$1,457.0	\$1,457.0	\$1,457.0	\$1,457.0

OFF LEASH DOG PARK Park Name	# of Off Leash Dog Parks															UNIT COST (\$/unit)
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Glen Eton/Wildflower	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1	\$18,000
Total (#)	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1	
Total (\$000)	\$0.0	\$0.0	\$0.0	\$18.0	\$18.0	\$18.0	\$18.0	\$18.0	\$18.0	\$18.0	\$18.0	\$18.0	\$18.0	\$18.0	\$18.0	\$18.0

SPLASH PADS Park Name	# of Splash Pads															UNIT COST (\$/unit)
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Angus Community Park	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1	\$300,000
Stonemount Park	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	\$300,000
Thornton Arena Ball Park	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	\$400,000
Total (#)	-	-	-	1	1	1	1	1	1	1	3	3	3	3	3	
Total (\$000)	\$0.0	\$0.0	\$0.0	\$300.0	\$300.0	\$300.0	\$300.0	\$300.0	\$300.0	\$300.0	\$1,000.0	\$1,000.0	\$1,000.0	\$1,000.0	\$1,000.0	\$1,000.0

SKATEBOARD PARK Park Name	# of Skateboard Park															UNIT COST (\$/unit)
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Angus Arena	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$800,000
Total (#)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Total (\$000)	\$800.0	\$800.0	\$800.0	\$800.0	\$800.0	\$800.0	\$800.0	\$800.0	\$800.0	\$800.0	\$800.0	\$800.0	\$800.0	\$800.0	\$800.0	\$800.0

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TOWNSHIP OF ESSA
INVENTORY OF CAPITAL ASSETS
PARKS AND RECREATION
PARK FACILITIES

PLAYGROUNDS Park Name	# of Playgrounds															UNIT COST (\$/unit)
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Angus Community Park	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$280,000
Baxter Ball Park	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$25,000
Brownley Park	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$200,000
Earl Cunningham Park	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$280,000
Cunningham Park	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$150,000
Dellbrook Park	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$125,000
Egbert Park	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$100,000
Elmgrove Ball Park	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$40,000
Glen Eton/Wildflower	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$300,000
Ivy Ball Park	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$125,000
Maple Lane Park	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$150,000
Marshall Park	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$125,000
McGeorge Park	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$65,000
Robson Park	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$75,000
Stonemount Park	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$250,000
Thornton Arena Park	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$150,000
Thornton Creek Park	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$65,000
Utopia Park	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$100,000
Bob Geddes	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1	\$175,000
Total (#)	18	18	18	19	19	19	19	19	19	19	19	19	19	19	19	
Total (\$000)	\$2,605.0	\$2,605.0	\$2,605.0	\$2,780.0	\$2,780.0	\$2,780.0	\$2,780.0	\$2,780.0	\$2,780.0	\$2,780.0	\$2,780.0	\$2,780.0	\$2,780.0	\$2,780.0	\$2,780.0	

PICNIC TABLES Park Name	# of Picnic Tables															UNIT COST (\$/unit)
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Angus Community Park	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	\$4,000
Baxter Ball Park	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	\$1,000
Cunningham Acres Ph.2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$4,000
Don Ross Fishing Park	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	\$4,000
Maple Lane Park	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$4,000
NVCA Fishing Park	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$4,000
Peacekeepers Park	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	\$4,000
Stonemount Park	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1	\$1,000
Total (#)	17	18	18	19	19	19	19	19	19	19	19	19	19	19	19	
Total (\$000)	\$62.0	\$66.0	\$66.0	\$67.0	\$67.0	\$67.0	\$67.0	\$67.0	\$67.0	\$67.0	\$67.0	\$67.0	\$67.0	\$67.0	\$67.0	

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TOWNSHIP OF ESSA
INVENTORY OF CAPITAL ASSETS
PARKS AND RECREATION
PARK FACILITIES

SHELTERED PICNIC TABLES Park Name	# of Sheltered Picnic Tables															UNIT COST (\$/unit)
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Baxter Ball Park	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	\$1,000
Nottawasaga Fishing Park	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1	\$1,000
Don Ross	-	-	-	4	4	4	4	4	4	4	4	4	4	4	4	\$1,000
Total (#)	2	2	2	7	7	7	7	7	7	7	7	7	7	7	7	
Total (\$000)	\$2.0	\$2.0	\$2.0	\$7.0	\$7.0	\$7.0	\$7.0	\$7.0	\$7.0	\$7.0	\$7.0	\$7.0	\$7.0	\$7.0	\$7.0	\$7.0

PARKING SPACES Park Name	# of Parking Spots															UNIT COST (\$/unit)
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Angus Community Park	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	\$4,300
Brownley Meadows Park	-	-	34	34	34	34	34	34	34	34	34	34	34	34	34	\$4,300
Baxter Diamond Park	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	\$4,300
Ivy Diamond Park	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	\$4,300
Total (#)	150	150	184	184	184	184	184	184	184	184	184	184	184	184	184	
Total (\$000)	\$645.0	\$645.0	\$791.2	\$791.2	\$791.2	\$791.2	\$791.2	\$791.2	\$791.2	\$791.2	\$791.2	\$791.2	\$791.2	\$791.2	\$791.2	\$791.2

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TOWNSHIP OF ESSA
INVENTORY OF CAPITAL ASSETS
PARKS AND RECREATION
PARK VEHICLES AND EQUIPMENT

VEHICLES AND EQUIPMENT Type	# of Vehicles and Equipment																UNIT COST (\$/unit)
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022		
10" Table Saw Table Master	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	\$400	
Stihl Weed Wackers	3	3	3	3	3	3	3	3	3	3	3	3	3	3	12	\$1,000	
5 Ton Tag Along Trailer	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$15,600	
Billy Goat Honda Vacuum 5.5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-	\$3,100	
c/w 72" x 72" Bush Hog	1	1	1	1	1	1	1	1	1	1	-	-	-	-	-	\$5,900	
John Deere Tractor w/ Front Mount Mower F925	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-	\$29,100	
M.T.D. Lawn Mower	1	1	1	1	1	1	1	1	1	1	-	-	-	-	-	\$400	
Massey Ferguson 230 Tractor	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	\$29,100	
2006 Ford 350 1 Ton c/w Hoist 06-33	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	\$74,400	
Fertilizer Spreader	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$3,800	
2009 Chevrolet Silverado 1500 09-19	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$31,000	
5 x 8 utility trailer	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$5,000	
Stihl Back Pack Blowers (2)	-	2	2	2	2	2	2	2	3	4	4	4	4	6	6	\$700	
Solo Back Pack Blower	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$600	
Bannerman Groomer	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$11,600	
Craftsman Compressor	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1	\$700	
16x32 Portable Stage	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$7,800	
32 HP Diesel John Deer Tractor with Snowblower & bucket	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$54,300	
Dewalt Tool kit	1	1	1	1	1	2	2	2	2	2	1	1	-	-	-	\$1,900	
John Deere snow blower	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$6,000	
Murray snow blower	1	1	1	1	1	1	1	1	1	1	-	-	-	-	-	\$1,200	
2004 Ford Ranger	-	1	1	1	1	1	1	1	1	1	1	1	1	-	-	\$45,000	
2004 Ford Ranger	-	1	1	1	1	1	1	1	1	1	1	1	1	-	-	\$45,000	
2020 GMC 3500 - dump, with liftgate	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	\$61,709	
2021 Chevy Silverado 1500	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	\$43,886	
2022 Chevy Silverado 1500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	\$52,676	
2020 Kubota RTV	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	\$27,000	
Toro Lawn Mower - 3200 ser#407979271	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	\$26,069	
Toro Lawn Mower - 3200 ser#407979228	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	\$30,758	
Toro Lawn Mower - 4000 ser#407982390	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	\$85,000	
John Deere Z994R zero turn mower	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	\$25,000	
Push Mower - (2) Honda	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	\$600	
Push Mower - (1) Yardman	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	\$400	
2004 GMC 2500 Diesel (red)	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	\$10,000	
2007 Ford F250 (red)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	\$12,000	
Snowblower - Yardworks	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	\$800	
Snowblower - Ariens	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	\$2,000	
24ft. Aluminum Trailer	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	\$10,000	
Earthquake Rototiller	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	\$1,000	
Stihl Chainsaws (2)	-	-	-	-	-	-	-	-	-	-	-	1	1	2	2	\$600	
Stihl Polesaw	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	\$800	
Stihl Hedge-trimmer	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	\$600	
Stihl Pressure Washer	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	\$2,000	
Honday Generator 2000i	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	\$1,000	
Milwaukee Tool Kits (2)	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	\$600	
2017 GMC Sierra 4D with Lift	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	\$61,669	
Total (#)	15	24	24	25	24	25	25	27	28	31	29	30	32	42	53		
Total (\$000)	\$147.2	\$346.5	\$346.5	\$347.2	\$346.8	\$303.4	\$303.4	\$305.2	\$277.6	\$342.0	\$393.9	\$394.5	\$430.2	\$564.5	\$608.6		

PARK BUILDINGS Type of Structure	# of Buildings																UNIT COST (\$/unit)
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022		
Fish Cleaning Station	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	\$1,500	
AG storage building (approx. 3,200 sq ft)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$900,000	
Total (sq.ft.)	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3		
Total (\$000)	\$903.0	\$903.0	\$903.0	\$903.0	\$903.0	\$903.0	\$903.0	\$903.0	\$903.0	\$903.0	\$903.0	\$903.0	\$903.0	\$903.0	\$903.0		



APPENDIX B.4
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TOWNSHIP OF ESSA
CALCULATION OF SERVICE LEVELS
PARKS AND RECREATION

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Historic Population	17,525	17,846	18,173	18,505	18,994	19,496	20,011	20,540	21,083	21,448	21,819	22,196	22,580	22,970	23,470

INVENTORY SUMMARY (\$000)

Major Facilities & Land	\$55,461.1	\$55,461.1	\$51,625.1	\$51,625.1	\$49,700.1	\$49,700.1	\$49,700.1	\$49,700.1	\$49,700.1	\$49,700.1	\$49,700.1	\$49,700.1	\$49,700.1	\$49,700.1	\$49,700.1
Parkland	\$4,085.2	\$4,136.3	\$4,210.6	\$4,079.6	\$4,079.6	\$4,079.6	\$4,079.6	\$4,079.6	\$4,079.6	\$4,079.6	\$4,079.6	\$4,079.6	\$4,079.6	\$4,079.6	\$4,079.6
Park Facilities	\$9,121.0	\$9,125.0	\$9,346.2	\$9,945.2	\$9,945.2	\$9,945.2	\$9,945.2	\$9,945.2	\$9,945.2	\$9,945.2	\$10,645.2	\$10,645.2	\$10,645.2	\$10,645.2	\$10,645.2
Vehicles and Special Facilities	\$1,050.2	\$1,249.5	\$1,249.5	\$1,250.2	\$1,249.8	\$1,206.4	\$1,206.4	\$1,208.2	\$1,180.6	\$1,245.0	\$1,296.9	\$1,297.5	\$1,333.2	\$1,467.5	\$1,511.6
Total (\$000)	\$69,717.5	\$69,971.9	\$66,431.4	\$66,900.1	\$64,974.7	\$64,931.3	\$64,931.3	\$64,933.1	\$64,905.5	\$64,969.9	\$65,721.8	\$65,722.4	\$65,758.1	\$65,892.4	\$65,936.5

SERVICE LEVEL (\$/capita)

Average
Service
Level

Major Facilities & Land	\$3,164.69	\$3,107.76	\$2,840.76	\$2,789.79	\$2,616.62	\$2,549.25	\$2,483.64	\$2,419.67	\$2,357.36	\$2,317.24	\$2,277.84	\$2,239.15	\$2,201.07	\$2,163.70	\$2,117.60	\$2,509.74
Parkland	\$233.11	\$231.78	\$231.70	\$220.46	\$214.78	\$209.25	\$203.87	\$198.62	\$193.50	\$190.21	\$186.97	\$183.80	\$180.67	\$177.60	\$173.82	\$202.01
Park Facilities	\$520.46	\$511.32	\$514.29	\$537.43	\$523.60	\$510.11	\$496.99	\$484.19	\$471.72	\$463.69	\$487.89	\$479.60	\$471.44	\$463.44	\$453.57	\$492.65
Vehicles and Special Facilities	\$59.93	\$70.02	\$68.76	\$67.56	\$65.80	\$61.88	\$60.29	\$58.82	\$56.00	\$58.05	\$59.44	\$58.46	\$59.04	\$63.89	\$64.40	\$62.15
Total (\$/capita)	\$3,978.17	\$3,920.87	\$3,655.50	\$3,615.24	\$3,420.80	\$3,330.49	\$3,244.78	\$3,161.30	\$3,078.57	\$3,029.18	\$3,012.13	\$2,961.00	\$2,912.23	\$2,868.63	\$2,809.39	\$3,266.55

TOWNSHIP OF ESSA
CALCULATION OF MAXIMUM ALLOWABLE
PARKS AND RECREATION

15-Year Funding Envelope Calculation	
15 Year Average Service Level 2008 - 2022	\$3,266.55
Net Population Growth 2023 - 2032	4,136
Maximum Allowable Funding Envelope	\$13,510,451

APPENDIX B.4
TABLE 2 - PAGE 1

TOWNSHIP OF ESSA
DEVELOPMENT-RELATED CAPITAL PROGRAM
PARKS AND RECREATION

Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs		
					Replacement & BTE Shares	Replacement & BTE Shares		Available DC Reserves	2023-2032	Post 2032
4.0 PARKS AND RECREATION										
4.1 Buildings, Land & Furnishings										
4.1.1 Multipurpose Room (Olympia: Thornton - 3,000 sq.ft)	2024	\$ 1,350,000	\$ -	\$ 1,350,000	0%	\$ -	\$ 1,350,000	\$ 1,350,000	\$ -	\$ -
4.1.2 Multipurpose Room (Meeting Space: Angus - 3,000 sq.ft)	2025	\$ 1,350,000	\$ -	\$ 1,350,000	0%	\$ -	\$ 1,350,000	\$ 1,350,000	\$ -	\$ -
4.1.3 Furniture and Equipment	2025	\$ 75,000	\$ -	\$ 75,000	0%	\$ -	\$ 75,000	\$ 75,000	\$ -	\$ -
4.1.4 New Garage (8,000 sq.ft)	2026	\$ 2,688,000	\$ -	\$ 2,688,000	0%	\$ -	\$ 2,688,000	\$ 1,236,282	\$ 1,451,718	\$ -
Subtotal Buildings, Land & Furnishings		\$ 5,463,000	\$ -	\$ 5,463,000		\$ -	\$ 5,463,000	\$ 4,011,282	\$ 1,451,718	\$ -
4.2 Equipment										
4.2.1 Dump Truck	2023	\$ 140,000	\$ -	\$ 140,000	0%	\$ -	\$ 140,000	\$ 140,000	\$ -	\$ -
4.2.2 Dump Truck	2025	\$ 140,000	\$ -	\$ 140,000	0%	\$ -	\$ 140,000	\$ 140,000	\$ -	\$ -
4.2.3 New Truck	2024	\$ 65,000	\$ -	\$ 65,000	0%	\$ -	\$ 65,000	\$ 65,000	\$ -	\$ -
4.2.4 New Truck	2026	\$ 65,000	\$ -	\$ 65,000	0%	\$ -	\$ 65,000	\$ -	\$ 65,000	\$ -
4.2.5 New Truck	2028	\$ 65,000	\$ -	\$ 65,000	0%	\$ -	\$ 65,000	\$ -	\$ 65,000	\$ -
Subtotal Equipment		\$ 475,000	\$ -	\$ 475,000		\$ -	\$ 475,000	\$ 345,000	\$ 130,000	\$ -
4.3 Parks, Outdoor Recreation Facilities										
4.3.1 Playground Equipment and Amenities	Various	\$ 1,000,000	\$ -	\$ 1,000,000	50%	\$ 500,000	\$ 500,000	\$ 100,000	\$ 400,000	\$ -
4.3.2 Off-Road Trails - Rural Essa	Various	\$ 3,146,000	\$ -	\$ 3,146,000	10%	\$ 314,600	\$ 2,831,400	\$ -	\$ 2,831,400	\$ -
4.3.3 Off-Road Trails - Angus	Various	\$ 676,000	\$ -	\$ 676,000	10%	\$ 67,600	\$ 608,400	\$ -	\$ 608,400	\$ -
4.3.4 Off-Road Trails - Baxter	Various	\$ 36,000	\$ -	\$ 36,000	10%	\$ 3,600	\$ 32,400	\$ -	\$ 32,400	\$ -
4.3.5 Off-Road Trails - Thornton	Various	\$ 327,000	\$ -	\$ 327,000	50%	\$ 163,500	\$ 163,500	\$ -	\$ 163,500	\$ -
4.3.6 Baxter	2023	\$ 251,190	\$ -	\$ 251,190	0%	\$ -	\$ 251,190	\$ 251,190	\$ -	\$ -
4.3.7 Thornton	2025	\$ 50,000	\$ -	\$ 50,000	0%	\$ -	\$ 50,000	\$ -	\$ 50,000	\$ -
4.3.8 Baxter Dog Park	2026	\$ 50,000	\$ -	\$ 50,000	0%	\$ -	\$ 50,000	\$ -	\$ 50,000	\$ -
4.3.9 Baxter Park Expansion	2029	\$ 1,500,000	\$ -	\$ 1,500,000	0%	\$ -	\$ 1,500,000	\$ -	\$ 1,500,000	\$ -
4.3.10 Pedestrian Bridge over Nottasaga	2027	\$ 1,800,000	\$ -	\$ 1,800,000	0%	\$ -	\$ 1,800,000	\$ -	\$ 1,800,000	\$ -
4.3.11 Lights at Bob Geddes Ball Diamond	2027	\$ 150,000	\$ -	\$ 150,000	0%	\$ -	\$ 150,000	\$ -	\$ 150,000	\$ -
Subtotal Parks, Outdoor Recreation Facilities		\$ 8,986,190	\$ -	\$ 8,986,190		\$ 1,049,300	\$ 7,936,890	\$ 351,190	\$ 7,585,700	\$ -
TOTAL PARKS AND RECREATION		\$ 14,924,190	\$ -	\$ 14,924,190		\$ 1,049,300	\$ 13,874,890	\$ 4,707,472	\$ 9,167,418	\$ -

Residential Development Charge Calculation		
Residential Share of 2023 - 2032 DC Eligible Costs	100%	\$9,167,418
10-Year Growth in Population in New Units		5,267
Unadjusted Development Charge Per Capita		\$1,740.54
Non-Residential Development Charge Calculation		
Non-Residential Share of 2023 - 2032 DC Eligible Costs	0%	\$0
10-Year Growth in Square Metres		37,760
Unadjusted Development Charge Per Square Metre		\$0.00

2023 - 2032 Net Funding Envelope	\$23,890,735
Reserve Fund Balance as at December 31, 2022	\$4,707,472



APPENDIX B.4

TABLE 3

TOWNSHIP OF ESSA
 CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
 PARKS AND RECREATION
 RESIDENTIAL DEVELOPMENT CHARGE
 (in \$000)

PARKS AND RECREATION	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	TOTAL
OPENING CASH BALANCE	\$0.00	\$581.56	\$1,217.02	\$1,858.33	\$836.33	(\$800.62)	(\$392.25)	(\$1,592.03)	(\$1,097.97)	(\$514.74)	
2023 - 2032 RESIDENTIAL FUNDING REQUIREMENTS											
- Parks And Recreation: Non Inflated	\$403.6	\$403.6	\$453.6	\$1,970.3	\$2,353.6	\$468.6	\$1,903.6	\$403.6	\$403.6	\$403.6	\$9,167.4
- Parks And Recreation: Inflated	\$403.6	\$411.6	\$471.9	\$2,090.9	\$2,547.6	\$517.3	\$2,143.7	\$463.6	\$472.8	\$482.3	\$10,005.4
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	554	566	579	553	486	495	503	512	536	483	5,267
REVENUE											
- DC Receipts: Inflated	\$975.1	\$1,016.2	\$1,060.3	\$1,032.9	\$926.0	\$962.0	\$997.1	\$1,035.2	\$1,105.4	\$1,016.0	\$10,126.1
INTEREST											
- Interest on Opening Balance	\$0.0	\$20.4	\$42.6	\$65.0	\$29.3	(\$44.0)	(\$21.6)	(\$87.6)	(\$60.4)	(\$28.3)	(\$84.6)
- Interest on In-year Transactions	\$10.0	\$10.6	\$10.3	(\$29.1)	(\$44.6)	\$7.8	(\$31.5)	\$10.0	\$11.1	\$9.3	(\$36.1)
TOTAL REVENUE	\$985.1	\$1,047.1	\$1,113.2	\$1,068.9	\$910.6	\$925.7	\$943.9	\$957.6	\$1,056.1	\$997.0	\$10,005.4
CLOSING CASH BALANCE	\$581.6	\$1,217.0	\$1,858.3	\$836.3	(\$800.6)	(\$392.3)	(\$1,592.0)	(\$1,098.0)	(\$514.7)	\$0.0	

2023 Adjusted Charge Per Capita	\$1,760.16
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Allocation of Capital Program	
Residential Sector	100.0%
Non-Residential Sector	0.0%
Rates for 2023	
Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX B.5

SERVICES RELATED TO A HIGHWAY:

PUBLIC WORKS AND FLEET

APPENDIX B.5: SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS AND FLEET

The Public Works department is responsible for the maintenance of all roads, sidewalks and curbs within Township boundaries. Staff from the Township’s engineering department carry out the function relating to Services Related to a Highway: Public Works and Fleet. These functions include maintenance services such as sweeping, leaf pickup, pothole patching, repair of utility poles, sidewalk repair and replacement, curb repairs, snow plowing, sanding and salting and spring clean up. The capital costs associated with Public Works functions are accounted for in this section.

TABLE B.5.1 HISTORICAL SERVICE LEVELS

The 15-year historical inventory of capital assets for Public Works includes 36,200 square feet of building space with a replacement value of \$10.62 million. The 10 hectares of land associated with the Public Works buildings are valued at \$1.74 million, furniture and equipment amounts to \$3,400, and the public works fleet of 37 vehicles adds an additional \$10.22 million to the value of the capital assets.

The total value of the Public Works capital infrastructure is estimated to be \$22.58 million. The 15-year historical average service level is \$761.86 per capita and employee and this, multiplied by the ten-year forecast net population and employment growth (4,720), results in a ten-year maximum allowable funding envelope of \$3.60 million. No calculated excess capacity has been identified for this service.

TABLE B.5-2 2023-2032 DEVELOPMENT-RELATED CAPITAL PROGRAM AND CALCULATION OF THE “UNADJUSTED” DEVELOPMENT CHARGES

The total 2023-2032 development-related capital program for the Public Works department amounts to \$5.90 million, of which \$3.21 million provides for additional fleet vehicles and equipment. The Sand Dome expansion adds an additional \$2.69 million to the capital program, of which 30 per cent is the replacement of existing space.

The benefit to existing share for this capital program amounts to \$806,400 and an additional \$1.34 million is considered to benefit development beyond the planning

horizon. The available reserve amounts to \$155,900 and therefore, the total DC recoverable costs is \$3.60 million.

The 2023-2032 DC costs eligible for recovery are allocated 88 per cent, or \$3.15 million, against new residential development, and 12 per cent, or \$447,000, against non-residential development. This yields an unadjusted development charge of \$598.26 per capita and \$11.84 per square metre.

TABLE B.5-3 CASH FLOW

After cash flow and reserve fund analysis, the residential calculated charge increases to \$664.87 per capita and the non-residential charge increases to \$13.53 per square metre. This is a reflection of the timing of the capital program and development charges revenues.

The following table summarizes the calculation of the Services Related to a Highway: Public Works and Fleet development charge.

SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS AND FLEET SUMMARY						
15-year Hist.	2023 - 2032		Unadjusted		Adjusted	
Service Level	Development-Related Capital Program		Development Charge		Development Charge	
per pop & emp	Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$761.86	\$5,900,000	\$3,598,074	\$598.26	\$11.84	\$664.87	\$13.53

APPENDIX B.5
TABLE 1 - PAGE 1

TOWNSHIP OF ESSA
INVENTORY OF CAPITAL ASSETS
SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS AND FLEET

BUILDINGS Facility Name	# of Square Feet															UNIT COST (\$/sq.ft.)
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Roads Equipment Depot	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	\$330
Equipment Storage Building	3,200	3,200	3,200	3,200	3,200	3,200	3,200	3,200	3,200	3,200	3,200	3,200	3,200	3,200	3,200	\$200
Sand and Salt Storage Building 80 x 200	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	\$330
Equipment Storage Building 50 x 140	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	\$200
Total (#)	36,200	36,200	36,200	36,200	36,200	36,200	36,200	36,200	36,200	36,200	36,200	36,200	36,200	36,200	36,200	
Total (\$000)	\$10,620.0	\$10,620.0	\$10,620.0	\$10,620.0	\$10,620.0	\$10,620.0	\$10,620.0	\$10,620.0	\$10,620.0	\$10,620.0	\$10,620.0	\$10,620.0	\$10,620.0	\$10,620.0	\$10,620.0	

LAND Facility Name	# of Hectares															UNIT COST (\$/ha)
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Roads Equipment Depot	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	\$174,000
Total (ha)	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	
Total (\$000)	\$1,740.0	\$1,740.0	\$1,740.0	\$1,740.0	\$1,740.0	\$1,740.0	\$1,740.0	\$1,740.0	\$1,740.0	\$1,740.0	\$1,740.0	\$1,740.0	\$1,740.0	\$1,740.0	\$1,740.0	

FURNITURE & EQUIPMENT Facility Name	Total Value of Furniture & Equipment (\$)														
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Public Works Office Space - 15'x15'	\$3,400	\$3,400	\$3,400	\$3,400	\$3,400	\$3,400	\$3,400	\$3,400	\$3,400	\$3,400	\$3,400	\$3,400	\$3,400	\$3,400	\$3,400
Total (\$000)	\$3.4	\$3.4	\$3.4	\$3.4	\$3.4	\$3.4	\$3.4	\$3.4	\$3.4	\$3.4	\$3.4	\$3.4	\$3.4	\$3.4	\$3.4

APPENDIX B.5
TABLE 1 - PAGE 2

TOWNSHIP OF ESSA
INVENTORY OF CAPITAL ASSETS
SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS AND FLEET

FLEET & EQUIPMENT Description	# of Vehicles																UNIT COST (\$/unit)
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022		
1999 Champion 740 Grader #11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$732,000	
2002 Volvo 740A Grader #09	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$732,000	
2004 Sterling Tandem Dump/Plow #21	1	1	1	1	1	1	1	1	1	1	1	-	-	-	-	\$440,000	
1993 Ford Tandem Dump Truck/Plow	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$440,000	
1999 International Tandem Truck/Plow #27	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	\$440,000	
2001 International Tandem Dump/Plow #26	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	\$440,000	
2003 International Tandem Dump/Plow #23	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	\$440,000	
1997 Cat Loader 924F #06	1	1	1	1	1	1	1	1	1	1	-	-	-	-	-	\$379,000	
2001 Ford 350 1 Ton Truck (01-05)	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	\$76,000	
2004 Tag Along Float Trailer #30	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$87,000	
1999 Trackless 4 Wheel Drive Tractor #14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$220,000	
2001 Ford F150 1/2 Ton Pickup (01-18)	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	\$44,000	
2002 Pontiac Sunbird	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	\$25,000	
2002 JCB Tractor/Backhoe #04	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$480,000	
2003 Dodge 1 Ton Crew Cab Diesel #08	1	1	1	1	1	1	1	1	1	1	1	1	-	-	-	\$117,000	
2006 Sterling Tandem Dump/Plow #20	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$440,000	
2007 Sterling Tandem Dump/Plow #24	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$440,000	
2004 Sterling Tandem Dump/Plow #22	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$440,000	
2006 Cat Loader 930G #10	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$382,000	
2006 Cat D5 Dozer #12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$330,000	
2008 Volvo Tandem Dump/Plow #29	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$440,000	
2009 Sterling Tandem Dump/Plow #25	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$440,000	
2008 Ford F150 Crew Cab #07	1	1	1	1	1	1	1	1	1	1	1	-	-	-	-	\$73,000	
2005 Gradall Excavator #16	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$367,000	
2009 Trackless 4 Wheel Drive Tractor #15	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$220,000	
2010 Ford F150 Super Cab #03 (changed to #01 in 2015)	-	-	1	1	1	1	1	1	1	1	1	1	-	-	-	\$59,000	

APPENDIX B.5
TABLE 1 - PAGE 2

TOWNSHIP OF ESSA
INVENTORY OF CAPITAL ASSETS
SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS AND FLEET

2011 GMC 1 Ton Crew Cab Gas #18	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$88,000
2010 Kubota and Mower #05	-	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1	1	\$117,000
2016 Western Star Dump/Plow #26	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	\$440,000
2015 Western Star Dump/Plow #23	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	\$440,000
2016 Chev Half Ton Pickup #03	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	\$59,000
2012 Freightliner Dump/Plow	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1	\$440,000
2015 Elgin Megawind Sweeper/vac	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	\$476,000
2017 CASE 621G Wheel Loader	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	\$370,000
2015 MT6 Trackless Tractor #17	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	\$220,000
2014 Brandit 200XP Stock #80854	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	1	\$30,000
2017 Freightliner / Street sweeper/catchbasin cleaner	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	\$377,000
2018 Chev Silverado 1/2 ton Pick up #07	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	\$43,000
2018 Gradall Excavator XL4300 #16	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	\$353,000
2018 McLean MV4 #02	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	\$150,000
2019 Chev Silverado 4WD, Dbl, White #01	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	\$48,000
2019 White Western CNV Dump/Plow #21	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	\$284,000
2019 Ford DRW, 1-ton, gas #08	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	\$78,000
2021 White Western CNV Dump/Plow #31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	\$373,000
2021 Falcon Hot Box #38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	\$32,000
2022 White Western CNV Dump/Plow #20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	\$373,000
2022 Hydro Seeder #32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	\$31,000
2022 Chev Silverado, 4WD, Crew, White #33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	\$53,000
2022 Weber MT C7 Reversing Plate Tamper #35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	\$18,000
2022 Chev Silverado, 4WD, Crew, White #37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	\$53,000
Total (#)	22	24	25	25	25	25	26	28	29	31	31	32	30	32	37			
Total (\$000)	\$7,637.0	\$8,224.0	\$8,283.0	\$8,327.0	\$8,368.0	\$8,368.0	\$8,398.0	\$9,509.0	\$9,176.0	\$9,923.0	\$9,261.0	\$9,463.0	\$9,287.0	\$9,692.0	\$10,220.0			

APPENDIX B.5
TABLE 1 - PAGE 3

TOWNSHIP OF ESSA
CALCULATION OF SERVICE LEVELS
SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS AND FLEET

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Historic Population	17,525	17,846	18,173	18,505	18,994	19,496	20,011	20,540	21,083	21,448	21,819	22,196	22,580	22,970	23,470
Historic Employment	<u>6,927</u>	<u>7,013</u>	<u>7,100</u>	<u>7,190</u>	<u>7,412</u>	<u>7,641</u>	<u>7,877</u>	<u>8,120</u>	<u>8,370</u>	<u>8,510</u>	<u>8,660</u>	<u>8,800</u>	<u>8,970</u>	<u>9,120</u>	<u>9,210</u>
Total Historic Population & Employment	24,452	24,859	25,273	25,695	26,406	27,137	27,888	28,660	29,453	29,958	30,479	30,996	28,550	29,690	31,680

INVENTORY SUMMARY (\$000)

Buildings	\$10,620.0	\$10,620.0	\$10,620.0	\$10,620.0	\$10,620.0	\$10,620.0	\$10,620.0	\$10,620.0	\$10,620.0	\$10,620.0	\$10,620.0	\$10,620.0	\$10,620.0	\$10,620.0	\$10,620.0
Land	\$1,740.0	\$1,740.0	\$1,740.0	\$1,740.0	\$1,740.0	\$1,740.0	\$1,740.0	\$1,740.0	\$1,740.0	\$1,740.0	\$1,740.0	\$1,740.0	\$1,740.0	\$1,740.0	\$1,740.0
Furniture & Equipment	\$3.4	\$3.4	\$3.4	\$3.4	\$3.4	\$3.4	\$3.4	\$3.4	\$3.4	\$3.4	\$3.4	\$3.4	\$3.4	\$3.4	\$3.4
Fleet & Equipment	\$7,637.0	\$8,224.0	\$8,283.0	\$8,327.0	\$8,368.0	\$8,368.0	\$8,398.0	\$9,509.0	\$9,176.0	\$9,923.0	\$9,261.0	\$9,463.0	\$9,287.0	\$9,692.0	\$10,220.0
Total (\$000)	\$20,000.4	\$20,587.4	\$20,646.4	\$20,690.4	\$20,731.4	\$20,731.4	\$20,761.4	\$21,872.4	\$21,539.4	\$22,286.4	\$21,624.4	\$21,826.4	\$21,650.4	\$22,055.4	\$22,583.4

SERVICE LEVEL (\$/pop & emp)

Average
Service
Level

Buildings	\$434.32	\$427.21	\$420.21	\$413.32	\$402.18	\$391.35	\$380.81	\$370.55	\$360.57	\$354.50	\$348.44	\$342.62	\$371.98	\$357.70	\$335.23	\$380.73
Land	\$71.16	\$69.99	\$68.85	\$67.72	\$65.89	\$64.12	\$62.39	\$60.71	\$59.08	\$58.08	\$57.09	\$56.14	\$60.95	\$58.61	\$54.92	\$62.38
Furniture & Equipment	\$0.14	\$0.14	\$0.13	\$0.13	\$0.13	\$0.13	\$0.12	\$0.12	\$0.12	\$0.11	\$0.11	\$0.11	\$0.12	\$0.11	\$0.11	\$0.12
Fleet & Equipment	\$312.33	\$330.83	\$327.74	\$324.07	\$316.90	\$308.36	\$301.13	\$331.79	\$311.55	\$331.23	\$303.85	\$305.30	\$325.29	\$326.44	\$322.60	\$318.63
Total (\$/pop & emp)	\$817.95	\$828.17	\$816.94	\$805.24	\$785.10	\$763.95	\$744.46	\$763.17	\$731.31	\$743.92	\$709.49	\$704.17	\$758.34	\$742.86	\$712.86	\$761.86

TOWNSHIP OF ESSA
CALCULATION OF MAXIMUM ALLOWABLE
SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS AND FLEET

15-Year Funding Envelope Calculation	
15 Year Average Service Level 2008 - 2022	\$761.86
Net Population & Employment Growth 2023 - 2032	4,723
Maximum Allowable Funding Envelope	\$3,598,074

APPENDIX B.5
TABLE 2

TOWNSHIP OF ESSA
DEVELOPMENT-RELATED CAPITAL PROGRAM
SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS AND FLEET

Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs		
					Replacement & BTE Shares	Replacement & BTE Shares		Available DC Reserves	2023-2032	Post 2032
5.0 SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS AND FLEET										
5.1 Buildings, Land & Furnishings										
5.1.1 Expanding Sand Dome	2024	\$ 2,688,000	\$ -	\$ 2,688,000	30%	\$ 806,400	\$ 1,881,600	\$ -	\$ 1,881,600	\$ -
Subtotal Buildings, Land & Furnishings		\$ 2,688,000	\$ -	\$ 2,688,000		\$ 806,400	\$ 1,881,600	\$ -	\$ 1,881,600	\$ -
5.2 Fleet										
5.2.1 Single Axle Plow	2024	\$ 440,000	\$ -	\$ 440,000	0%	\$ -	\$ 440,000	\$ 155,887	\$ 284,113	\$ -
5.2.2 Trailer	2025	\$ 20,000	\$ -	\$ 20,000	0%	\$ -	\$ 20,000	\$ -	\$ 20,000	\$ -
5.2.3 Backhoe	2025	\$ 480,000	\$ -	\$ 480,000	0%	\$ -	\$ 480,000	\$ -	\$ 480,000	\$ -
5.2.4 Grader	2025	\$ 732,000	\$ -	\$ 732,000	0%	\$ -	\$ 732,000	\$ -	\$ 732,000	\$ -
5.2.5 Trackless Sidewalk Plow and Sander	2025	\$ 220,000	\$ -	\$ 220,000	0%	\$ -	\$ 220,000	\$ -	\$ 200,361	\$ 19,639
5.2.6 Single Axle Plow	2027	\$ 440,000	\$ -	\$ 440,000	0%	\$ -	\$ 440,000	\$ -	\$ -	\$ 440,000
5.2.8 Trackless Sidewalk Plow and Sander	2027	\$ 220,000	\$ -	\$ 220,000	0%	\$ -	\$ 220,000	\$ -	\$ -	\$ 220,000
5.2.7 Single Axle Plow	2030	\$ 440,000	\$ -	\$ 440,000	0%	\$ -	\$ 440,000	\$ -	\$ -	\$ 440,000
5.2.9 Trackless Sidewalk Plow and Sander	2032	\$ 220,000	\$ -	\$ 220,000	0%	\$ -	\$ 220,000	\$ -	\$ -	\$ 220,000
Subtotal Fleet		\$ 3,212,000	\$ -	\$ 3,212,000		\$ -	\$ 3,212,000	\$ 155,887	\$ 1,716,474	\$ 1,339,639
TOTAL SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS AND FLEET		\$ 5,900,000	\$ -	\$ 5,900,000		\$ 806,400	\$ 5,093,600	\$ 155,887	\$ 3,598,074	\$ 1,339,639

Residential Development Charge Calculation		
Residential Share of 2023 - 2032 DC Eligible Costs	88%	\$3,151,053
10-Year Growth in Population in New Units		5,267
Unadjusted Development Charge Per Capita		\$598.26
Non-Residential Development Charge Calculation		
Non-Residential Share of 2023 - 2032 DC Eligible Costs	12%	\$447,021
10-Year Growth in Square Metres		37,760
Unadjusted Development Charge Per Square Metre		\$11.84

2023 - 2032 Net Funding Envelope	\$3,598,074
Reserve Fund Balance as at December 31, 2022	\$155,887

APPENDIX B.5
TABLE 3 - PAGE 1

TOWNSHIP OF ESSA
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS AND FLEET
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS AND FLEET	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	TOTAL
OPENING CASH BALANCE	\$0.00	\$374.78	(\$1,205.48)	(\$2,201.23)	(\$1,925.30)	(\$1,675.31)	(\$1,397.73)	(\$1,091.39)	(\$753.55)	(\$370.14)	
2023 - 2032 RESIDENTIAL FUNDING REQUIREMENTS											
- Services Related To A Highway: Public Works And Fleet: Non Inflated	\$0.0	\$1,896.6	\$1,254.4	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$3,151.1
- Services Related To A Highway: Public Works And Fleet: Inflated	\$0.0	\$1,934.6	\$1,305.1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$3,239.7
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	554	566	579	553	486	495	503	512	536	483	5,267
REVENUE											
- DC Receipts: Inflated	\$368.3	\$383.8	\$400.5	\$390.2	\$349.8	\$363.4	\$376.6	\$391.0	\$417.5	\$383.8	\$3,825.0
INTEREST											
- Interest on Opening Balance	\$0.0	\$13.1	(\$66.3)	(\$121.1)	(\$105.9)	(\$92.1)	(\$76.9)	(\$60.0)	(\$41.4)	(\$20.4)	(\$571.0)
- Interest on In-year Transactions	\$6.4	(\$42.6)	(\$24.9)	\$6.8	\$6.1	\$6.4	\$6.6	\$6.8	\$7.3	\$6.7	(\$14.3)
TOTAL REVENUE	\$374.8	\$354.3	\$309.3	\$275.9	\$250.0	\$277.6	\$306.3	\$337.8	\$383.4	\$370.1	\$3,239.7
CLOSING CASH BALANCE	\$374.8	(\$1,205.5)	(\$2,201.2)	(\$1,925.3)	(\$1,675.3)	(\$1,397.7)	(\$1,091.4)	(\$753.5)	(\$370.1)	\$0.0	

2023 Adjusted Charge Per Capita	\$664.87
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Allocation of Capital Program	
Residential Sector	87.6%
Non-Residential Sector	12.4%
Rates for 2023	
Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX B.5
TABLE 3 - PAGE 2

TOWNSHIP OF ESSA
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS AND FLEET
NON-RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS AND FLEET	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	TOTAL
OPENING CASH BALANCE	\$0.00	\$33.87	(\$208.23)	(\$366.53)	(\$338.92)	(\$304.65)	(\$263.35)	(\$214.42)	(\$157.27)	(\$91.07)	
2023 - 2032 NON-RESIDENTIAL FUNDING REQUIREMENTS											
- Services Related To A Highway: Public Works And Fleet: Non Inflated	\$0.0	\$269.1	\$178.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$447.0
- Services Related To A Highway: Public Works And Fleet: Inflated	\$0.0	\$274.4	\$185.1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$459.6
NON-RESIDENTIAL SPACE GROWTH											
- Growth in Square Metres	2,460	2,730	3,000	3,270	3,550	3,820	4,090	4,360	4,640	5,840	37,760
REVENUE											
- DC Receipts: Inflated	\$33.3	\$37.7	\$42.2	\$47.0	\$52.0	\$57.1	\$62.3	\$67.8	\$73.6	\$94.4	\$567.3
INTEREST											
- Interest on Opening Balance	\$0.0	\$1.2	(\$11.5)	(\$20.2)	(\$18.6)	(\$16.8)	(\$14.5)	(\$11.8)	(\$8.6)	(\$5.0)	(\$105.8)
- Interest on In-year Transactions	\$0.6	(\$6.5)	(\$3.9)	\$0.8	\$0.9	\$1.0	\$1.1	\$1.2	\$1.3	\$1.7	(\$1.9)
TOTAL REVENUE	\$33.9	\$32.3	\$26.8	\$27.6	\$34.3	\$41.3	\$48.9	\$57.2	\$66.2	\$91.1	\$459.6
CLOSING CASH BALANCE	\$33.9	(\$208.2)	(\$366.5)	(\$338.9)	(\$304.7)	(\$263.3)	(\$214.4)	(\$157.3)	(\$91.1)	\$0.0	

2023 Adjusted Charge Per Square Metre	\$13.53
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Allocation of Capital Program	
Residential Sector	87.6%
Non-Residential Sector	12.4%
Rates for 2023	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX B.6

SERVICES RELATED TO A HIGHWAY:

ROADS AND RELATED

APPENDIX B.6: SERVICES RELATED TO A HIGHWAY: ROADS AND RELATED

The Public Works Department is responsible for the design and construction of the Township’s network of Services Related to a Highway: Roads and Related infrastructure. This Appendix provides an overview of the Township’s Services Related to a Highway: Roads and Related services included in the development charges calculation form 2023-2032. The cost, quantum and timing of the projects identified in the forecast are based on the current draft 2023 Transportation Master Plan as prepared by WSP for the Township.

TABLE B.6-1 HISTORICAL SERVICE LEVELS

Table 1 demonstrates that the Township’s current road infrastructure is comprised of 228 kilometres of paved roads, and 31 kilometres of gravel roads. The service level also includes 14 bridges, 7 culverts, and 29 kilometres of sidewalks. The total inventory of capital assets has a full replacement value of \$1.06 billion. This produces a 15-year historical service level of \$35,674.23 per capita and employment. The resulting maximum allowable funding envelope is \$168.48 million ($\$35,674.23 \times 4,720$ net population and employment growth over the ten-year planning horizon). No excess capacity exists for this service.

TABLE B.6-2 2023-2032 DEVELOPMENT-RELATED CAPITAL PROGRAM AND CALCULATION OF THE “UNADJUSTED” DEVELOPMENT CHARGES

Table 2 provides a summary of the development-related capital program for Services Related to a Highway: Roads and Related services.

As shown in Table 2, the gross capital program totals \$115.32 million. The largest projects in the Services Related to a Highway: Roads and Related capital program are the replacement and widening of Bridge 9, which amounts to \$6.00 million, the reconstruction of the bridge on Nottawasag, also costing \$6.00 million, and the reconstruction and strengthening’s for 5th Line and 25th sideroad, which amount to \$34.41 million and \$24.86 million in total for each project stage. Other works include the reconstruction of 6th Line and 20th Sideroad, totaling \$4.40 million and \$3.96 million. Other major projects include \$19.30 million for thirteen road urbanizations, \$813,000 for two intersection improvements, \$4.50

million for two traffic calming and road enhancement projects, \$1.05 million for three intersection signalizations, and \$5.96 million for on-road active transportation trails at four sites.

No subsidies have been identified to offset the cost of the Roads and Related program. A share of \$13.69 million has been identified as a non-growth or benefit to existing share to reflect general road resurfacing expenditures the Township would incur in the absence of new development and shares related to active transportation infrastructure; these costs will be recovered from other municipal funding sources. The development-related net capital cost for Roads and Related services is therefore reduced to \$101.62 million. About \$6.27 million is available in the Township’s existing Roads and Related development charges reserve fund to help offset the cost of this program. Additionally, \$60.12 million of the DC-eligible capital costs will benefit development post-2032.

Therefore, the remaining \$35.23 million is included in the development charges calculation and is allocated 88 per cent, or \$30.86 million to the residential sector and 12 per cent, or \$4.38 million to the non-residential sector based on shares of ten-year growth in population and employment. The resulting unadjusted per capita residential charge is \$5,858.45 per capita before cash flow adjustments. The non-residential unadjusted charge is \$115.93 per square metre.

TABLE B.6-3 CASH FLOW

After cash flow and reserve fund analysis, the residential calculated charge increases to \$5981.02 per capita and the non-residential charge increases slightly to \$121.87 per square metre. This is a reflection of the timing of the capital program and development charges revenues.

The following table summarizes the calculation of the Roads and Related development charge.

SERVICES RELATED TO A HIGHWAY: ROADS AND RELATED SUMMARY					
2023 - 2032		Unadjusted		Adjusted	
Development-Related Capital Program		Development Charge		Development Charge	
Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$115,317,000	\$35,233,909	\$5,858.45	\$115.93	\$5,981.02	\$121.87

APPENDIX B.7
TABLE 1 - PAGE 1

TOWNSHIP OF ESSA
INVENTORY OF CAPITAL ASSETS
SERVICES RELATED TO A HIGHWAY: ROADS AND RELATED

ROADS Type of Road	# of Kilometres															UNIT COST (\$/km)	
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022		
Paved	200.0	202.7	208.0	212.0	215.0	215.0	220.0	225.0	228.0	228.0	228.0	228.0	228.0	228.0	228.0	228.0	\$4,400,000
Gravel	45.0	41.0	38.0	34.0	33.0	33.0	33.0	33.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	\$400,000
Total (km)	245.0	243.7	246.0	246.0	248.0	248.0	253.0	258.0	259.0	259.0	259.0	259.0	259.0	259.0	259.0	259.0	
Total (\$000)	\$898,000.0	\$908,280.0	\$930,400.0	\$946,400.0	\$959,200.0	\$959,200.0	\$981,200.0	\$1,003,200.0	\$1,015,600.0	\$1,015,600.0	\$1,015,600.0	\$1,015,600.0	\$1,015,600.0	\$1,015,600.0	\$1,015,600.0	\$1,015,600.0	

BRIDGES & CULVERTS Description	# of Bridges & Culverts															UNIT COST (\$/unit)	
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022		
Bridges	13.0	13.0	13.0	13.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	\$931,000
Culverts	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	\$310,000
Total (#)	19	19	19	19	20	20	20	20	21	21	21	21	21	21	21	21	
Total (\$000)	\$13,963.0	\$13,963.0	\$13,963.0	\$13,963.0	\$14,894.0	\$14,894.0	\$14,894.0	\$14,894.0	\$15,204.0	\$15,204.0	\$15,204.0	\$15,204.0	\$15,204.0	\$15,204.0	\$15,204.0	\$15,204.0	

SIDEWALKS Description	# of Kilometres															UNIT COST (\$/km)	
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022		
Sidewalks	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	\$135,000
Total (#)	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	
Total (\$000)	\$3,915.0	\$3,915.0	\$3,915.0	\$3,915.0	\$3,915.0	\$3,915.0	\$3,915.0	\$3,915.0	\$3,915.0	\$3,915.0	\$3,915.0	\$3,915.0	\$3,915.0	\$3,915.0	\$3,915.0	\$3,915.0	

APPENDIX B.7
TABLE 1 - PAGE 2

TOWNSHIP OF ESSA
CALCULATION OF SERVICE LEVELS
SERVICES RELATED TO A HIGHWAY: ROADS AND RELATED

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Historic Population	17,525	17,846	18,173	18,505	18,994	19,496	20,011	20,540	21,083	21,448	21,819	22,196	22,580	22,970	23,470
Historic Employment	6,927	7,013	7,100	7,190	7,412	7,641	7,877	8,120	8,370	8,510	8,660	8,800	8,970	9,120	9,210
Total Historic Population & Employment	24,452	24,859	25,273	25,695	26,406	27,137	27,888	28,660	29,453	29,958	30,479	30,996	31,550	32,090	32,680

INVENTORY SUMMARY (\$000)

Roads	\$898,000.0	\$908,280.0	\$930,400.0	\$946,400.0	\$959,200.0	\$959,200.0	\$981,200.0	\$1,003,200.0	\$1,015,600.0	\$1,015,600.0	\$1,015,600.0	\$1,015,600.0	\$1,015,600.0	\$1,015,600.0	\$1,015,600.0
Bridges & Culverts	\$13,963.0	\$13,963.0	\$13,963.0	\$13,963.0	\$14,894.0	\$14,894.0	\$14,894.0	\$14,894.0	\$15,204.0	\$15,204.0	\$15,204.0	\$15,204.0	\$15,204.0	\$15,204.0	\$15,204.0
Sidewalks	\$3,915.0	\$3,915.0	\$3,915.0	\$3,915.0	\$3,915.0	\$3,915.0	\$3,915.0	\$3,915.0	\$3,915.0	\$3,915.0	\$3,915.0	\$3,915.0	\$3,915.0	\$3,915.0	\$3,915.0
Total (\$000)	\$915,878	\$926,158	\$948,278	\$964,278	\$978,009	\$978,009	\$1,000,009	\$1,022,009	\$1,034,719	\$1,034,719	\$1,034,719	\$1,034,719	\$1,034,719	\$1,034,719	\$1,034,719

Average
Service
Level

SERVICE LEVEL (\$/pop & emp)

Roads	\$36,725.0	\$36,537.3	\$36,814.0	\$36,832.5	\$36,325.1	\$35,346.6	\$35,183.6	\$35,003.5	\$34,482.1	\$33,900.8	\$33,321.3	\$32,765.5	\$32,573.2	\$34,206.8	\$32,058.1	\$35,005.0
Bridges & Culverts	\$571.0	\$561.7	\$552.5	\$543.4	\$564.0	\$548.8	\$534.1	\$519.7	\$516.2	\$507.5	\$498.8	\$490.5	\$532.5	\$512.1	\$479.9	\$528.9
Sidewalks	\$160.1	\$157.5	\$154.9	\$152.4	\$148.3	\$144.3	\$140.4	\$136.6	\$132.9	\$130.7	\$128.4	\$126.3	\$137.1	\$131.9	\$123.6	\$140.4
Total (\$/pop & emp)	\$37,456.16	\$37,256.45	\$37,521.39	\$37,528.31	\$37,037.38	\$36,039.69	\$35,858.04	\$35,659.77	\$35,131.19	\$34,538.99	\$33,948.59	\$33,382.34	\$36,242.84	\$34,850.76	\$32,661.58	\$35,674.23

CALCULATION OF MAXIMUM ALLOWABLE
SERVICES RELATED TO A HIGHWAY: ROADS AND RELATED

15-Year Funding Envelope Calculation	
15 Year Average Service Level 2008 - 2022	\$35,674.23
Net Population & Employment Growth 2023 - 2032	4,723
Maximum Allowable Funding Envelope	\$168,480,470

APPENDIX B.7
TABLE 2

TOWNSHIP OF ESSA
2023 DEVELOPMENT CHARGES STUDY

SERVICES RELATED TO A HIGHWAY - ROADS AND RELATED CAPITAL PROGRAM

SERVICES RELATED TO A HIGHWAY: ROADS AND RELATED				Type of Improvement	Length of Improvement	Timing	Gross Cost	Grants and Subsidies	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs		
#	Road	From	To		(kilometres)					Benefit to Existing and Local Shares ²		Available DC Reserves	2023-2032	Post 2032	
Road Projects															
1	20th Sideroad	5th Line	County Rd 10	Reconstruction and Strengthening	0.90	2023 2028	\$ 3,960,000	\$ -	\$ 3,960,000	10%	\$ 396,000	\$ 3,564,000	\$ 3,564,000	\$ -	\$ -
2	5th Line	20th Sideroad	South of 19th Sideroad	Reconstruction and Strengthening	0.93	2023 2028	\$ 4,075,000	\$ -	\$ 4,075,000	10%	\$ 407,500	\$ 3,667,500	\$ 2,706,510	\$ 960,990	\$ -
3	5th Line	20th Sideroad	Willoughby Road	Reconstruction and Strengthening	1.16	2023 2028	\$ 5,104,000	\$ -	\$ 5,104,000	10%	\$ 510,400	\$ 4,593,600	\$ -	\$ 1,605,133	\$ 2,988,467
3	5th Line	20th Sideroad	Willoughby Road	Reconstruction and Strengthening	3.74	2028 2032	\$ 16,456,000	\$ -	\$ 16,456,000	10%	\$ 1,645,600	\$ 14,810,400	\$ -	\$ 5,175,170	\$ 9,635,230
4	5th Line	County Rd 90	Willoughby Road	Reconstruction and Strengthening	2.92	2023 2028	\$ 12,848,000	\$ -	\$ 12,848,000	10%	\$ 1,284,800	\$ 11,563,200	\$ -	\$ 4,040,507	\$ 7,522,693
5	6th Line	30th Sideroad	County Rd 90	Reconstruction and Strengthening	1.00	2023 2028	\$ 4,400,000	\$ -	\$ 4,400,000	10%	\$ 440,000	\$ 3,960,000	\$ -	\$ 1,383,735	\$ 2,576,265
6	25th Sideroad	5th Line	6th Line	Reconstruction and Strengthening	1.35	2023 2028	\$ 5,940,000	\$ -	\$ 5,940,000	10%	\$ 594,000	\$ 5,346,000	\$ -	\$ 1,868,043	\$ 3,477,957
7	25th Sideroad	6th Line	County Rd 56	Reconstruction and Strengthening	1.50	2023 2028	\$ 6,600,000	\$ -	\$ 6,600,000	10%	\$ 660,000	\$ 5,940,000	\$ -	\$ 2,075,603	\$ 3,864,397
9	25th Sideroad	8th Line	9th Line	Reconstruction and Strengthening	1.40	2023 2028	\$ 6,160,000	\$ -	\$ 6,160,000	10%	\$ 616,000	\$ 5,544,000	\$ -	\$ 1,937,229	\$ 3,606,771
10	25th Sideroad	9th Line	10th Line	Reconstruction and Strengthening	1.40	2023 2028	\$ 6,160,000	\$ -	\$ 6,160,000	10%	\$ 616,000	\$ 5,544,000	\$ -	\$ 1,937,229	\$ 3,606,771
11	Elizabeth St	Centre St	King St	Urbanization	0.30	2023 2028	\$ 1,320,000	\$ -	\$ 1,320,000	10%	\$ 132,000	\$ 1,188,000	\$ -	\$ 415,121	\$ 772,879
12	Sydenham St	Raglan St	East of Auburn St	Urbanization	0.39	2023 2028	\$ 1,716,000	\$ -	\$ 1,716,000	10%	\$ 171,600	\$ 1,544,400	\$ -	\$ 539,657	\$ 1,004,743
13	Simcoe St	Water St	East of Auburn St	Urbanization	0.70	2023 2028	\$ 3,080,000	\$ -	\$ 3,080,000	10%	\$ 308,000	\$ 2,772,000	\$ -	\$ 968,615	\$ 1,803,385
14	Alma St	King St	Margaret St	Urbanization	0.19	2023 2028	\$ 836,000	\$ -	\$ 836,000	10%	\$ 83,600	\$ 752,400	\$ -	\$ 262,910	\$ 489,490
15	Vernon St	Queen St	County Rd 10	Urbanization	1.08	2023 2028	\$ 4,752,000	\$ -	\$ 4,752,000	10%	\$ 475,200	\$ 4,276,800	\$ -	\$ 1,494,434	\$ 2,782,366
17	5th Line at Willoughby Rd	-	-	Intersection Improvement (Construct left turning lane and slip-by lane northbound on 5th Line)	1.00	2023 2028	\$ 500,000	\$ -	\$ 500,000	5%	\$ 25,000	\$ 475,000	\$ -	\$ 165,978	\$ 309,022
18	25th Sideroad at 10th Line	-	-	Intersection Improvement	1.00	2023 2028	\$ 313,000	\$ -	\$ 313,000	5%	\$ 15,650	\$ 297,350	\$ -	\$ 103,902	\$ 193,448
20	Road upgrades at Local Schools	-	-	Road Upgrades to improve street parking, sidewalk construction, RRFPS, etc.	3.00	2023 2028	\$ 1,500,000	\$ -	\$ 1,500,000	10%	\$ 150,000	\$ 1,350,000	\$ -	\$ 471,728	\$ 878,272
21	Traffic Calming at Various Locations	-	-	Measures such as raised intersections, roundabouts, traffic calming curbs etc	10.00	2023 2028	\$ 3,000,000	\$ -	\$ 3,000,000	20%	\$ 600,000	\$ 2,400,000	\$ -	\$ 838,627	\$ 1,561,373
28	5th Line at County Rd 90	-	-	Signalization of Intersection	1.00	2023 2028	\$ 350,000	\$ -	\$ 350,000	5%	\$ 17,500	\$ 332,500	\$ -	\$ 116,185	\$ 216,315
29	County Rd 10 at 25th Sideroad	-	-	Signalization of Intersection	1.00	2028 2032	\$ 350,000	\$ -	\$ 350,000	5%	\$ 17,500	\$ 332,500	\$ -	\$ 116,185	\$ 216,315
31	Raglan St	King St	Centre St	Urbanization	0.28	2028 2032	\$ 1,246,000	\$ -	\$ 1,246,000	10%	\$ 124,600	\$ 1,121,400	\$ -	\$ 391,849	\$ 729,551
32	Vernon St	King St	Simcoe St	Urbanization	0.09	2028 2032	\$ 374,000	\$ -	\$ 374,000	10%	\$ 37,400	\$ 336,600	\$ -	\$ 117,618	\$ 218,982
33	Vernon St	Sydenham St	Centre St	Urbanization	0.10	2028 2032	\$ 436,000	\$ -	\$ 436,000	10%	\$ 43,600	\$ 392,400	\$ -	\$ 137,116	\$ 255,284
34	Auburn St	King St	Centre St	Urbanization	0.33	2028 2032	\$ 1,466,000	\$ -	\$ 1,466,000	10%	\$ 146,600	\$ 1,319,400	\$ -	\$ 461,035	\$ 858,365
35	Water St	King St	north of Simcoe St	Urbanization	0.19	2028 2032	\$ 814,000	\$ -	\$ 814,000	10%	\$ 81,400	\$ 732,600	\$ -	\$ 255,991	\$ 476,609
36	William St	County Rd 27	County Rd 21	Urbanization	0.42	2028 2032	\$ 1,844,000	\$ -	\$ 1,844,000	10%	\$ 184,400	\$ 1,659,600	\$ -	\$ 579,911	\$ 1,079,689
37	Stoddart St	William St	County Rd 21	Urbanization	0.22	2028 2032	\$ 954,000	\$ -	\$ 954,000	10%	\$ 95,400	\$ 858,600	\$ -	\$ 300,019	\$ 558,581
	Victoria St	William St	Stoddart St	Urbanization	0.10	2028 2032	\$ 457,000	\$ -	\$ 457,000	10%	\$ 45,700	\$ 411,300	\$ -	\$ 143,720	\$ 267,580
Subtotal Road Works							\$ 97,011,000	\$ -	\$ 97,011,000		\$ 9,925,450	\$ 87,085,550	\$ 6,270,510	\$ 28,864,240	\$ 51,950,800



APPENDIX B.7
TABLE 2

TOWNSHIP OF ESSA
2023 DEVELOPMENT CHARGES STUDY

SERVICES RELATED TO A HIGHWAY - ROADS AND RELATED CAPITAL PROGRAM

SERVICES RELATED TO A HIGHWAY: ROADS AND RELATED				Type of Improvement	Length of Improvement	Timing	Gross Cost	Grants and Subsidies	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs		
#	Road	From	To		(kilometres)					Benefit to Existing and Local Shares ²			Available DC Reserves	2023-2032	Post 2032
Other Works															
16	Centre St at Greenwood Drive	-	-	Signalization of Intersection	1.00	2023 2028	\$ 350,000	\$ -	\$ 350,000	5%	\$ 17,500	\$ 332,500	\$ -	\$ 116,185	\$ 216,315
19	Bridge 9 on 5th Line (1.95 km north 2C	-	-	Bridge (replacement and widening)	1.00	2023 2028	\$ 6,000,000	\$ -	\$ 6,000,000	50%	\$ 3,000,000	\$ 3,000,000	\$ -	\$ 1,048,284	\$ 1,951,716
26	26th Sideroad	6th Line	County Rd 11	New Bridge (across Nottawasaga River)	1.00	2028 2033	\$ 6,000,000	\$ -	\$ 6,000,000	0%	\$ -	\$ 6,000,000	\$ -	\$ -	\$ 6,000,000
	Rural Essa			On-Road Active Transportation Trails	16.24	2023 2032	\$ 3,378,000	\$ -	\$ 3,378,000	10%	\$ 337,800	\$ 3,040,200	\$ -	\$ 3,040,200	\$ -
	Angus			On-Road Active Transportation Trails	9.55	2023 2032	\$ 1,986,000	\$ -	\$ 1,986,000	10%	\$ 198,600	\$ 1,787,400	\$ -	\$ 1,787,400	\$ -
	Baxter			On-Road Active Transportation Trails	0.98	2023 2032	\$ 204,000	\$ -	\$ 204,000	10%	\$ 20,400	\$ 183,600	\$ -	\$ 183,600	\$ -
	Thornton			On-Road Active Transportation Trails	1.87	2023 2032	\$ 388,000	\$ -	\$ 388,000	50%	\$ 194,000	\$ 194,000	\$ -	\$ 194,000	\$ -
	Subtotal Other Works						\$ 18,306,000	\$ -	\$ 18,306,000		\$ 3,768,300	\$ 14,537,700	\$ -	\$ 6,369,669	\$ 8,168,031
Total Roads and Related							\$115,317,000	\$0	\$115,317,000		13,693,750	101,623,250	\$6,270,510	\$35,233,909	\$60,118,830

Residential Development Charge Calculation		
Residential Share of 2023 - 2032 DC Eligible Costs	88%	\$30,856,482
10-Year Growth in Population in New Units		5,267
Unadjusted Development Charge Per Capita		\$5,858.45
Non-Residential Development Charge Calculation		
Non-Residential Share of 2023 - 2032 DC Eligible Costs	12%	\$4,377,428
10-Year Growth in Square Metres		37,760
Unadjusted Development Charge Per Square Metre		\$115.93

2023 - 2032 Net Funding Envelope	\$168,480,470
Reserve Fund Balance as at Dec 31, 2022	\$6,270,510

APPENDIX B.7
TABLE 3 - PAGE 1

TOWNSHIP OF ESSA
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
SERVICES RELATED TO A HIGHWAY: ROADS AND RELATED
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

SERVICES RELATED TO A HIGHWAY: ROADS AND RELATED	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	TOTAL
OPENING CASH BALANCE	\$0.00	(\$415.72)	(\$787.39)	(\$1,103.37)	(\$1,611.74)	(\$2,602.71)	(\$5,130.91)	(\$4,029.27)	(\$2,776.45)	(\$1,254.11)	
2023 - 2032 RESIDENTIAL FUNDING REQUIREMENTS											
- Services Related To A Highway: Roads And Related: Non Inflated	\$3,718.07	\$3,718.07	\$3,718.1	\$3,718.1	\$3,718.1	\$5,063.0	\$1,800.8	\$1,800.8	\$1,800.8	\$1,800.8	\$30,856.5
- Services Related To A Highway: Roads And Related: Inflated	\$3,718.1	\$3,792.4	\$3,868.3	\$3,945.7	\$4,024.6	\$5,590.0	\$2,028.0	\$2,068.5	\$2,109.9	\$2,152.1	\$33,297.5
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	554	566	579	553	486	495	503	512	536	483	5,267
REVENUE											
- DC Receipts: Inflated	\$3,313.5	\$3,453.0	\$3,602.9	\$3,509.9	\$3,146.4	\$3,268.7	\$3,388.0	\$3,517.6	\$3,756.1	\$3,452.4	\$34,408.6
INTEREST											
- Interest on Opening Balance	\$0.0	(\$22.9)	(\$43.3)	(\$60.7)	(\$88.6)	(\$143.1)	(\$282.2)	(\$221.6)	(\$152.7)	(\$69.0)	(\$1,084.1)
- Interest on In-year Transactions	(\$11.1)	(\$9.3)	(\$7.3)	(\$12.0)	(\$24.1)	(\$63.8)	\$23.8	\$25.4	\$28.8	\$22.8	(\$27.0)
TOTAL REVENUE	\$3,302.4	\$3,420.8	\$3,552.3	\$3,437.3	\$3,033.6	\$3,061.8	\$3,129.6	\$3,321.3	\$3,632.2	\$3,406.2	\$33,297.5
CLOSING CASH BALANCE	(\$415.7)	(\$787.4)	(\$1,103.4)	(\$1,611.7)	(\$2,602.7)	(\$5,130.9)	(\$4,029.3)	(\$2,776.4)	(\$1,254.1)	\$0.0	

2023 Adjusted Charge Per Capita	\$5,981.02
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Allocation of Capital Program	
Residential Sector	87.6%
Non-Residential Sector	12.4%
Rates for 2023	
Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%



APPENDIX B.7
TABLE 3 - PAGE 2

TOWNSHIP OF ESSA
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
SERVICES RELATED TO A HIGHWAY: ROADS AND RELATED
NON-RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

SERVICES RELATED TO A HIGHWAY: ROADS AND RELATED	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	TOTAL
OPENING CASH BALANCE	\$0.00	(\$233.92)	(\$450.90)	(\$648.72)	(\$825.01)	(\$975.85)	(\$1,316.21)	(\$1,110.18)	(\$848.78)	(\$525.88)	
2023 - 2032 NON-RESIDENTIAL FUNDING REQUIREMENTS											
- Services Related To A Highway: Roads And Related: Non Inflated	\$527.5	\$527.5	\$527.5	\$527.5	\$527.5	\$718.3	\$255.5	\$255.5	\$255.5	\$255.5	\$4,377.4
- Services Related To A Highway: Roads And Related: Inflated	\$527.5	\$538.0	\$548.8	\$559.7	\$570.9	\$793.0	\$287.7	\$293.4	\$299.3	\$305.3	\$4,723.7
NON-RESIDENTIAL SPACE GROWTH											
- Growth in Square Metres	2,460	2,730	3,000	3,270	3,550	3,820	4,090	4,360	4,640	5,840	37,760
REVENUE											
- DC Receipts: Inflated	\$299.8	\$339.4	\$380.4	\$422.9	\$468.3	\$514.0	\$561.3	\$610.4	\$662.5	\$850.6	\$5,109.5
INTEREST											
- Interest on Opening Balance	\$0.0	(\$12.9)	(\$24.8)	(\$35.7)	(\$45.4)	(\$53.7)	(\$72.4)	(\$61.1)	(\$46.7)	(\$28.9)	(\$381.5)
- Interest on In-year Transactions	(\$6.3)	(\$5.5)	(\$4.6)	(\$3.8)	(\$2.8)	(\$7.7)	\$4.8	\$5.5	\$6.4	\$9.5	(\$4.4)
TOTAL REVENUE	\$293.5	\$321.0	\$350.9	\$383.5	\$420.1	\$452.7	\$493.7	\$554.8	\$622.2	\$831.2	\$4,723.7
CLOSING CASH BALANCE	(\$233.9)	(\$450.9)	(\$648.7)	(\$825.0)	(\$975.8)	(\$1,316.2)	(\$1,110.2)	(\$848.8)	(\$525.9)	\$0.0	

2023 Adjusted Charge Per Square Metre	\$121.87
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Allocation of Capital Program	
Residential Sector	87.6%
Non-Residential Sector	12.4%
Rates for 2023	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX C

AREA-SPECIFIC SERVICES: WATER AND SEWER

AREA-SPECIFIC SERVICES: WATER AND SEWER

The Public Works Department ensures that the Township's municipal services such as roads, water and wastewater systems are designed for the appropriate protection, health and quality of life of the public, and good engineering practices. The department also provides review and inspection services to facilitate new development and to maintain service standards to sustain the existing infrastructure.

This appendix provides a brief outline of the municipal water and sewer services. Water Services includes water supply and distribution system and Sewer Service provides for sewer collection and treatment. This appendix describes the water and sewer infrastructure needs associated with the settlement of Angus in the Township of Essa based on the analysis in the *Community of Angus Infrastructure Master Plan, Schedule 'B' Class Environmental Assessment Summary Report*, dated September 2022 (referred to herein as the 2022 Angus IMP Report).

The sections set out the 2023 to 2046 development-related capital forecast and the calculation of development charges for water and sewer services in Angus (area shown on Map 1). The cost, quantum and description of the projects included in the forecast are generally based upon the 2022 Angus IMP Report.

The development-related water and sewer infrastructure projects are required to service the demands of population and employment growth from 2023 to 2046 as detailed in Appendix A.

A summary of the development charges technical tables are provided below for Angus Water and Sewer infrastructure:

Table C-1	Water Service Capital: Supply and Distribution System
Table C-2	Residential Cash Flow Analysis Water Service Capital: Supply and Distribution System
Table C-3	Non-Residential Cash Flow Analysis Water Service Capital: Supply and Distribution System
Table C-4	Sewer Service Capital: Treatment and Collection System
Table C-5	Residential Cash Flow Analysis Sewer Service Capital: Treatment and Collection System
Table C-6	Non-Residential Cash Flow Analysis Sewer Service Capital: Treatment and Collection System

A. ANGUS WATER SERVICES

As shown in Table C-1, the development-related capital program for the water supply and distribution system in Angus is \$19.20 million. The program provides for an increase in permit to take water (PTTW) and existing well capacity, new storage tanks, and linear infrastructure expansion costing \$19.00 million. Recoveries of past commitments include the Mill Street Reservoir and Brownley Reservoir principal payments on the remaining portions of the debentures which totals \$202,300. Remaining interest payments in the amount of \$18,100 are included for recovery as part of the cash flow analysis.

The total capital program amounts to \$19.20 million, with no deductions for benefit to existing nor post-period benefit. However, about \$2.41 million in existing development charges reserves are available to fund a share of the program which reduces the capital program to \$16.79 million. This amount is brought forward to the DC calculation. The total development-related capital cost of \$16.79 million is allocated 84 per cent to the residential sector, and 16 per cent to the non-residential sector (based on shares of future population and employment growth). The residential allocation amounts to \$14.13 million of the development-related capital program and this cost, divided by the anticipated population growth in new units yields an unadjusted charge of \$1,397.81 per capita. The non-residential portion of the capital program is \$2.67 million and the unadjusted non-residential charge amounts to \$23.07 per square metre (\$2.67 million divided by 115,520 square metres of gross floor area). After cash-flow adjustments (shown in Tables C-2 and C-3) the residential charge increases to \$1,409.03 per capita and the non-residential charges increases to \$24.53.

The following is a summary of the Angus Water development charges:

ANGUS WATER SUMMARY						
2023 - Build-out		Unadjusted		Adjusted		
Development-Related Capital Program		Development Charge		Development Charge		
Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m	
\$ 19,202,295	\$ 16,791,510	\$1,397.81	\$23.07	\$1,409.03	\$24.53	

B. ANGUS SEWER SERVICES

The development-related capital program for sewer treatment and collection amounts to \$19.45 million (see Table C-4). The Township continues to recover for the previous expansion to the Angus Sewage Treatment Plant and the remaining principal payments

amount to \$2.95 million. Also included in the capital program is the expansion of the existing wastewater treatment plant, and Areas 1 and 2 sanitary collection upgrades which adds a further \$16.50 million.

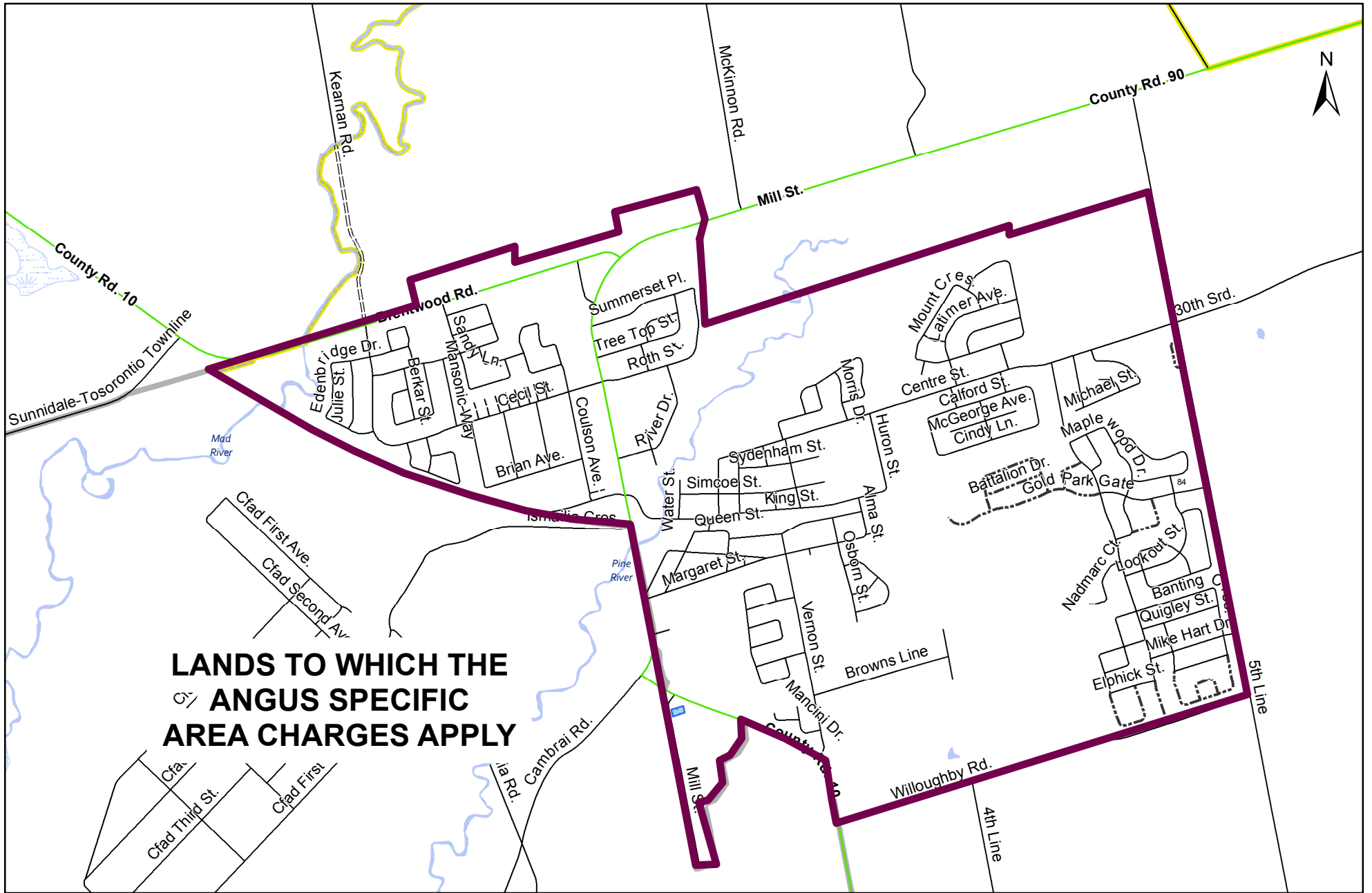
In total, capital program amounts to \$19.45 million with no deductions for benefit to existing nor post-period benefit. About \$6.17 million is available in the development charges reserve fund and is used to offset the capital program. After this adjustment, \$13.27 million is brought forward to the DC calculation.

Approximately, 84 percent of these costs are apportioned to the residential sector, while the remaining 16 per cent are apportioned to the non-residential sector (based on shares of future population and employment growth). This yields unadjusted charges of \$1,105.04 per capita and \$18.24 per square metre. After cash-flow adjustments (see Tables C-5 and C-6) the residential charge increases to \$1,171.43 per capital and the non-residential charges increases to \$20.39.

The following is a summary of the calculated Angus Sewer development charges:

ANGUS SEWER SUMMARY						
2023 - Build-out		Unadjusted		Adjusted		
Development-Related Capital Program		Development Charge		Development Charge		
Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m	
\$ 19,448,707	\$ 13,274,566	\$1,105.04	\$18.24	\$1,171.43	\$20.39	

Map 1: Angus Servicing Area



APPENDIX C
TABLE C-1

TOWNSHIP OF ESSA
DEVELOPMENT-RELATED CAPITAL PROGRAM
ANGUS WATER (WATER SUPPLY AND DISTRIBUTION)

ANGUS WATER SUPPLY AND DISTRIBUTION	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs		
					Replacement & BTE Shares	Replacement & BTE Shares		Available DC Reserves	2023-2046	Post 2046
1.0 Angus Water Supply and Distribution Projects										
1.1 Increase PTTW and Existing Well Capacity	2023 - 2046	\$ 4,000,000	\$ -	\$ 4,000,000	0%	\$ -	\$ 4,000,000	\$ 2,410,785	\$ 1,589,215	\$ -
1.2 New Water Storage Tanks (3) (Southwest, Northwest & Northeast)	2023 - 2046	\$ 10,000,000	\$ -	\$ 10,000,000	0%	\$ -	\$ 10,000,000	\$ -	\$ 10,000,000	\$ -
1.3 Water Distribution Network Expansion (Linear Infrastructure)	2023 - 2046	\$ 5,000,000	\$ -	\$ 5,000,000	0%	\$ -	\$ 5,000,000	\$ -	\$ 5,000,000	\$ -
Subtotal Angus Water Supply and Distribution Projects		\$ 19,000,000	\$ -	\$ 19,000,000		\$ -	\$ 19,000,000	\$ 2,410,785	\$ 16,589,215	\$ -
2.0 Debenture Payments: Principal										
2.1 Mill Street Reservoir Principal	2023 - 2023	\$ 67,574	\$ -	\$ 67,574	0%	\$ -	\$ 67,574	\$ -	\$ 67,574	\$ -
2.2 Mill Street Reservoir Principal	2024 - 2024	\$ 67,574	\$ -	\$ 67,574	0%	\$ -	\$ 67,574	\$ -	\$ 67,574	\$ -
2.3 Brownley Reservoir Principal	2023 - 2023	\$ 33,574	\$ -	\$ 33,574	0%	\$ -	\$ 33,574	\$ -	\$ 33,574	\$ -
2.4 Brownley Reservoir Principal	2024 - 2024	\$ 33,574	\$ -	\$ 33,574	0%	\$ -	\$ 33,574	\$ -	\$ 33,574	\$ -
Subtotal Debenture Payments: Principal		\$ 202,295	\$ -	\$ 202,295		\$ -	\$ 202,295	\$ -	\$ 202,295	\$ -
TOTAL ANGUS WATER SUPPLY AND DISTRIBUTION		\$ 19,202,295	\$ -	\$ 19,202,295		\$ -	\$ 19,202,295	\$ 2,410,785	\$ 16,791,510	\$ -

Residential Development Charge Calculation		
Residential Share of 2023 - 2046 DC Eligible Costs	84.1%	\$14,126,241
Long-Term Growth in Population in New Units		10,106
Unadjusted Development Charge Per Capita		\$1,397.81
Non-Residential Development Charge Calculation		
Non-Residential Share of 2023 - 2032 DC Eligible Costs	15.9%	\$2,665,269
Long-Term Growth in Square Metres		115,520
Unadjusted Development Charge Per Square Metre		\$23.07

Current Reserve Fund Balance	\$ 2,410,785
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12.7%

APPENDIX C
TABLE C-2

TOWNSHIP OF ESSA
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
ANGUS WATER SUPPLY AND DISTRIBUTION
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

ANGUS WATER SUPPLY AND DISTRIBUTION	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
OPENING CASH BALANCE	\$0.0	(\$85.9)	(\$163.1)	(\$131.4)	(\$86.4)	(\$147.1)	(\$199.4)	(\$244.2)	(\$278.7)	(\$308.8)	(\$387.5)	(\$369.9)	(\$334.4)
2023 - 2032 RESIDENTIAL FUNDING REQUIREMENTS													
- Angus Water Supply And Distribution: Non Inflated	\$581.5	\$581.5	\$581.5	\$581.5	\$581.5	\$581.5	\$581.5	\$581.5	\$581.5	\$581.5	\$581.5	\$581.5	\$581.5
- Angus Debenture Principal Payments	\$85.1	\$85.1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
- Angus Water Supply And Distribution: Inflated	\$666.59	\$678.2	\$605.0	\$617.1	\$629.4	\$642.0	\$654.9	\$668.0	\$681.3	\$694.9	\$708.8	\$723.0	\$737.5
NEW RESIDENTIAL DEVELOPMENT													
- Population Growth in New Units	419	428	440	447	377	385	392	400	404	377	435	444	453
REVENUE													
- DC Receipts: Inflated	\$590.4	\$615.1	\$645.0	\$668.4	\$575.0	\$598.9	\$622.0	\$647.4	\$667.0	\$634.8	\$747.2	\$777.9	\$809.5
INTEREST													
- Interest on Opening Balance	\$0.0	(\$4.7)	(\$9.0)	(\$7.2)	(\$4.8)	(\$8.1)	(\$11.0)	(\$13.4)	(\$15.3)	(\$17.0)	(\$21.3)	(\$20.3)	(\$18.4)
- Interest on In-year Transactions	(\$2.1)	(\$1.7)	\$0.7	\$0.9	(\$1.5)	(\$1.2)	(\$0.9)	(\$0.6)	(\$0.4)	(\$1.7)	\$0.7	\$1.0	\$1.3
- Interest on Angus Debenture Payments	(\$7.62)	(\$7.6)	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
TOTAL REVENUE	\$580.7	\$601.0	\$636.7	\$662.1	\$568.7	\$589.7	\$610.2	\$633.4	\$651.2	\$616.2	\$726.5	\$758.5	\$792.4
CLOSING CASH BALANCE	(\$85.9)	(\$163.1)	(\$131.4)	(\$86.4)	(\$147.1)	(\$199.4)	(\$244.2)	(\$278.7)	(\$308.8)	(\$387.5)	(\$369.9)	(\$334.4)	(\$279.5)

ANGUS WATER SUPPLY AND DISTRIBUTION	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	TOTAL
OPENING CASH BALANCE	(\$279.5)	(\$196.0)	(\$158.9)	(\$101.5)	(\$33.7)	\$59.5	\$185.0	\$128.9	\$78.1	\$37.6	\$1.5	\$0.0
2023 - 2032 RESIDENTIAL FUNDING REQUIREMENTS												
- Angus Water Supply And Distribution: Non Inflated	\$581.5	\$581.5	\$581.5	\$581.5	\$581.5	\$581.5	\$581.5	\$581.5	\$581.5	\$581.5	\$581.5	\$13,956.1
- Angus Debenture Principal Payments	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$170.2
- Angus Water Supply And Distribution: Inflated	\$752.2	\$767.3	\$782.6	\$798.3	\$814.2	\$830.5	\$847.1	\$864.1	\$881.4	\$899.0	\$917.0	\$17,860.6
NEW RESIDENTIAL DEVELOPMENT												
- Population Growth in New Units	466	438	447	450	460	473	383	387	393	396	412	10,106
REVENUE												
- DC Receipts: Inflated	\$849.4	\$814.3	\$847.7	\$870.4	\$907.6	\$951.9	\$786.2	\$810.3	\$839.3	\$862.6	\$915.4	\$18,053.7
INTEREST												
- Interest on Opening Balance	(\$15.4)	(\$10.8)	(\$8.7)	(\$5.6)	(\$1.9)	\$2.1	\$6.5	\$4.5	\$2.7	\$1.3	\$0.1	(\$175.7)
- Interest on In-year Transactions	\$1.7	\$0.8	\$1.1	\$1.3	\$1.6	\$2.1	(\$1.7)	(\$1.5)	(\$1.2)	(\$1.0)	(\$0.0)	(\$2.2)
- Interest on Angus Debenture Payments	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	(\$15.2)
TOTAL REVENUE	\$835.7	\$804.4	\$840.1	\$866.1	\$907.4	\$956.1	\$791.0	\$813.3	\$840.9	\$862.9	\$915.4	\$17,860.6
CLOSING CASH BALANCE	(\$196.0)	(\$158.9)	(\$101.5)	(\$33.7)	\$59.5	\$185.0	\$128.9	\$78.1	\$37.6	\$1.5	\$0.0	

1 Principal payments not inflated

2023 Adjusted Charge Per Capita	\$1,409.03
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Allocation of Capital Program	
Residential Sector	84.1%
Non-Residential Sector	15.9%
Rates for 2023	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX C
TABLE C-3

TOWNSHIP OF ESSA
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
ANGUS WATER SUPPLY AND DISTRIBUTION
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

ANGUS WATER SUPPLY AND DISTRIBUTION	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
OPENING CASH BALANCE	\$0.0	(\$68.7)	(\$135.2)	(\$181.2)	(\$223.4)	(\$260.8)	(\$293.3)	(\$320.3)	(\$341.2)	(\$355.0)	(\$333.8)	(\$339.1)	(\$329.9)
2023 - 2032 RESIDENTIAL FUNDING REQUIREMENTS													
- Angus Water Supply And Distribution: Non Inflated	\$109.7	\$109.7	\$109.7	\$109.7	\$109.7	\$109.7	\$109.7	\$109.7	\$109.7	\$109.7	\$109.7	\$109.7	\$109.7
- Angus Debenture Principal Payments	\$16.1	\$16.1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
- Angus Water Supply And Distribution: Inflated	\$125.77	\$128.0	\$114.1	\$116.4	\$118.8	\$121.1	\$123.6	\$126.0	\$128.5	\$131.1	\$133.7	\$136.4	\$139.1
NEW NON-RESIDENTIAL DEVELOPMENT													
- Growth in Square Metres	2,460	2,730	3,000	3,270	3,550	3,820	4,090	4,360	4,640	5,840	4,900	5,370	5,430
REVENUE													
- DC Receipts: Inflated	\$60.3	\$68.3	\$76.6	\$85.1	\$94.3	\$103.5	\$113.0	\$122.9	\$133.4	\$171.2	\$146.5	\$163.8	\$168.9
INTEREST													
- Interest on Opening Balance	\$0.0	(\$3.8)	(\$7.4)	(\$10.0)	(\$12.3)	(\$14.3)	(\$16.1)	(\$17.6)	(\$18.8)	(\$19.5)	(\$18.4)	(\$18.7)	(\$18.1)
- Interest on In-year Transactions	(\$1.8)	(\$1.6)	(\$1.0)	(\$0.9)	(\$0.7)	(\$0.5)	(\$0.3)	(\$0.1)	\$0.1	\$0.7	\$0.2	\$0.5	\$0.5
- Interest on Angus Debenture Payments	(\$1.4)	(\$1.4)	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
TOTAL REVENUE	\$57.1	\$61.5	\$68.1	\$74.3	\$81.3	\$88.6	\$96.6	\$105.2	\$114.7	\$152.4	\$128.4	\$145.6	\$151.3
CLOSING CASH BALANCE	(\$68.7)	(\$135.2)	(\$181.2)	(\$223.4)	(\$260.8)	(\$293.3)	(\$320.3)	(\$341.2)	(\$355.0)	(\$333.8)	(\$339.1)	(\$329.9)	(\$317.8)

ANGUS WATER SUPPLY AND DISTRIBUTION	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	TOTAL
OPENING CASH BALANCE	(\$329.9)	(\$317.8)	(\$303.4)	(\$292.5)	(\$314.1)	(\$301.6)	(\$321.8)	(\$289.7)	(\$259.2)	(\$206.4)	(\$149.4)	(\$68.6)	\$0.0
2023 - 2032 RESIDENTIAL FUNDING REQUIREMENTS													
- Angus Water Supply And Distribution: Non Inflated	\$109.7	\$109.7	\$109.7	\$109.7	\$109.7	\$109.7	\$109.7	\$109.7	\$109.7	\$109.7	\$109.7	\$109.7	\$2,633.2
- Angus Debenture Principal Payments	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$32.1
- Angus Water Supply And Distribution: Inflated	\$139.1	\$141.9	\$144.8	\$147.7	\$150.6	\$153.6	\$156.7	\$159.8	\$163.0	\$166.3	\$169.6	\$173.0	\$3,369.8
NEW NON-RESIDENTIAL DEVELOPMENT													
- Growth in Square Metres	5,430	5,460	5,310	4,310	5,340	4,370	5,870	5,750	6,280	6,280	6,780	6,310	115,520
REVENUE													
- DC Receipts: Inflated	\$168.9	\$173.3	\$171.9	\$142.3	\$179.8	\$150.1	\$205.7	\$205.5	\$228.9	\$233.5	\$257.1	\$244.1	\$3,699.9
INTEREST													
- Interest on Opening Balance	(\$18.1)	(\$17.5)	(\$16.7)	(\$16.1)	(\$17.3)	(\$16.6)	(\$17.7)	(\$15.9)	(\$14.3)	(\$11.4)	(\$8.2)	(\$3.8)	(\$330.3)
- Interest on In-year Transactions	\$0.5	\$0.5	\$0.5	(\$0.1)	\$0.5	(\$0.1)	\$0.9	\$0.8	\$1.2	\$1.2	\$1.5	\$1.2	\$3.2
- Interest on Angus Debenture Payments	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	(\$2.9)
TOTAL REVENUE	\$151.3	\$156.3	\$155.7	\$126.1	\$163.1	\$133.4	\$188.8	\$190.4	\$215.8	\$223.3	\$250.4	\$241.6	\$3,369.8
CLOSING CASH BALANCE	(\$317.8)	(\$303.4)	(\$292.5)	(\$314.1)	(\$301.6)	(\$321.8)	(\$289.7)	(\$259.2)	(\$206.4)	(\$149.4)	(\$68.6)	\$0.0	

1 Principal payments not inflated

2023 Adjusted Charge Per Square Metre	\$24.53
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Allocation of Capital Program	
Residential Sector	84.1%
Non-Residential Sector	15.9%
Rates for 2023	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX C
TABLE C-4

TOWNSHIP OF ESSA
DEVELOPMENT-RELATED CAPITAL PROGRAM
ANGUS SEWER (SEWAGE TREATMENT AND COLLECTION)

ANGUS SEWER (SEWAGE TREATMENT AND COLLECTION)	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs		
					Replacement & BTE Shares	Replacement & BTE Shares		Available DC Reserves	2023-2046	Post 2046
1.0 Debture Payments: Angus WWTP and Pump Station No. 2										
1.1 Principal Payment	2023 - 2023	\$ 346,907	\$ -	\$ 346,907	0%	\$ -	\$ 346,907	\$ 346,907	\$ -	\$ -
1.2 Principal Payment	2024 - 2024	\$ 346,907	\$ -	\$ 346,907	0%	\$ -	\$ 346,907	\$ 346,907	\$ -	\$ -
1.2 Principal Payment	2025 - 2025	\$ 346,907	\$ -	\$ 346,907	0%	\$ -	\$ 346,907	\$ 346,907	\$ -	\$ -
1.2 Principal Payment	2026 - 2026	\$ 346,907	\$ -	\$ 346,907	0%	\$ -	\$ 346,907	\$ 346,907	\$ -	\$ -
1.2 Principal Payment	2027 - 2027	\$ 346,907	\$ -	\$ 346,907	0%	\$ -	\$ 346,907	\$ -	\$ 346,907	\$ -
1.2 Principal Payment	2028 - 2028	\$ 346,907	\$ -	\$ 346,907	0%	\$ -	\$ 346,907	\$ -	\$ 346,907	\$ -
1.2 Principal Payment	2029 - 2029	\$ 346,907	\$ -	\$ 346,907	0%	\$ -	\$ 346,907	\$ -	\$ 346,907	\$ -
1.2 Principal Payment	2030 - 2030	\$ 346,907	\$ -	\$ 346,907	0%	\$ -	\$ 346,907	\$ -	\$ 346,907	\$ -
1.2 Principal Payment	2031 - 2031	\$ 173,454	\$ -	\$ 173,454	0%	\$ -	\$ 173,454	\$ -	\$ 173,454	\$ -
Subtotal Debture Payments: Angus WWTP and Pump Station No. 2		\$ 2,948,707	\$ -	\$ 2,948,707		\$ -	\$ 2,948,707	\$ 1,387,626	\$ 1,561,080	\$ -
2.0 Sewage Treatment and Collection Projects										
2.1 Expand Existing Wastewater Treatment Plant	2023 - 2046	\$ 10,500,000	\$ -	\$ 10,500,000	0%	\$ -	\$ 10,500,000	\$ 4,786,515	\$ 5,713,485	\$ -
2.2 Area 1 Sanitary Collection Upgrades	2023 - 2046	\$ 2,000,000	\$ -	\$ 2,000,000	0%	\$ -	\$ 2,000,000	\$ -	\$ 2,000,000	\$ -
2.3 Area 2 Sanitary Collection Upgrades	2023 - 2046	\$ 4,000,000	\$ -	\$ 4,000,000	0%	\$ -	\$ 4,000,000	\$ -	\$ 4,000,000	\$ -
Subtotal Sewage Treatment and Collection Projects		\$ 16,500,000	\$ -	\$ 16,500,000		\$ -	\$ 16,500,000	\$ 4,786,515	\$ 11,713,485	\$ -
TOTAL		\$ 19,448,707	\$ -	\$ 19,448,707		\$ -	\$ 19,448,707	\$ 6,174,141	\$ 13,274,566	\$ -

Residential Development Charge Calculation		
Residential Share of 2023 - 2032 DC Eligible Costs	84.1%	\$11,167,531
Long-Term Growth in Population in New Units		10,106
Unadjusted Development Charge Per Capita		\$1,105.04
Non-Residential Development Charge Calculation		
Non-Residential Share of 2023 - 2032 DC Eligible Costs	15.9%	\$2,107,034
Long-Term Growth in Square Metres		115,520
Unadjusted Development Charge Per Square Metre		\$18.24

Current Reserve Fund Balance	\$ 6,174,141
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APPENDIX C
TABLE C-5

TOWNSHIP OF ESSA
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
ANGUS SEWER (SEWAGE TREATMENT AND COLLECTION)
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

ANGUS SEWER (SEWAGE TREATMENT AND COLLECTION)	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
OPENING CASH BALANCE	\$0.0	(\$12.5)	(\$3.6)	\$32.6	\$91.7	(\$223.5)	(\$531.4)	(\$833.7)	(\$1,127.7)	(\$1,267.6)	(\$1,299.6)	(\$1,248.3)	(\$1,178.4)
2023 - 2032 RESIDENTIAL FUNDING REQUIREMENTS													
- Angus Sewer (Sewage Treatment And Collection): Non Inflated	\$410.6	\$410.6	\$410.6	\$410.6	\$410.6	\$410.6	\$410.6	\$410.6	\$410.6	\$410.6	\$410.6	\$410.6	\$410.6
- Angus Wastewater Principle Payments 1	\$0.0	\$0.0	\$0.0	\$0.0	\$291.8	\$291.8	\$291.8	\$291.8	\$145.9	\$0.0	\$0.0	\$0.0	\$0.0
- Angus Sewer (Sewage Treatment And Collection): Inflated	\$410.59	\$418.8	\$427.2	\$435.7	\$736.3	\$745.2	\$754.2	\$763.5	\$627.0	\$490.7	\$500.5	\$510.5	\$520.7
NEW RESIDENTIAL DEVELOPMENT													
- Population Growth in New Units	419	428	440	447	377	385	392	400	404	377	435	444	453
REVENUE													
- DC Receipts: Inflated	\$490.8	\$511.4	\$536.3	\$555.7	\$478.0	\$497.9	\$517.1	\$538.2	\$554.5	\$527.8	\$621.2	\$646.7	\$673.0
INTEREST													
- Interest on Opening Balance	\$0.0	(\$0.7)	(\$0.2)	\$1.1	\$3.2	(\$12.3)	(\$29.2)	(\$45.9)	(\$62.0)	(\$69.7)	(\$71.5)	(\$68.7)	(\$64.8)
- Interest on In-year Transactions	\$1.4	\$1.6	\$1.9	\$2.1	(\$7.1)	(\$6.8)	(\$6.5)	(\$6.2)	(\$2.0)	\$0.6	\$2.1	\$2.4	\$2.7
- Angus Debenture Payments: Interest	(\$94.2)	(\$84.6)	(\$74.6)	(\$64.1)	(\$53.1)	(\$41.5)	(\$29.4)	(\$16.7)	(\$3.4)	\$0.0	\$0.0	\$0.0	\$0.0
TOTAL REVENUE	\$398.1	\$427.7	\$463.4	\$494.8	\$421.1	\$437.3	\$452.0	\$469.5	\$487.1	\$458.7	\$551.8	\$580.4	\$610.9
CLOSING CASH BALANCE	(\$12.5)	(\$3.6)	\$32.6	\$91.7	(\$223.5)	(\$531.4)	(\$833.7)	(\$1,127.7)	(\$1,267.6)	(\$1,299.6)	(\$1,248.3)	(\$1,178.4)	(\$1,088.2)

ANGUS SEWER (SEWAGE TREATMENT AND COLLECTION)	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	TOTAL
OPENING CASH BALANCE	(\$1,088.2)	(\$970.0)	(\$885.8)	(\$779.7)	(\$659.8)	(\$513.3)	(\$333.0)	(\$294.9)	(\$246.5)	(\$183.3)	(\$109.6)	\$0.0
2023 - 2032 RESIDENTIAL FUNDING REQUIREMENTS												
- Angus Sewer (Sewage Treatment And Collection): Non Inflated	\$410.6	\$410.6	\$410.6	\$410.6	\$410.6	\$410.6	\$410.6	\$410.6	\$410.6	\$410.6	\$410.6	\$9,854.2
- Angus Wastewater Principle Payments 1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$1,313.3
- Angus Sewer (Sewage Treatment And Collection): Inflated	\$531.1	\$541.8	\$552.6	\$563.7	\$574.9	\$586.4	\$598.2	\$610.1	\$622.3	\$634.8	\$647.5	\$13,804.3
NEW RESIDENTIAL DEVELOPMENT												
- Population Growth in New Units	466	438	447	450	460	473	383	387	393	396	412	10,106
REVENUE												
- DC Receipts: Inflated	\$706.2	\$677.0	\$704.7	\$723.7	\$754.5	\$791.4	\$653.6	\$673.6	\$697.8	\$717.2	\$761.1	\$15,009.3
INTEREST												
- Interest on Opening Balance	(\$59.9)	(\$53.4)	(\$48.7)	(\$42.9)	(\$36.3)	(\$28.2)	(\$18.3)	(\$16.2)	(\$13.6)	(\$10.1)	(\$6.0)	(\$754.1)
- Interest on In-year Transactions	\$3.1	\$2.4	\$2.7	\$2.8	\$3.1	\$3.6	\$1.0	\$1.1	\$1.3	\$1.4	\$2.0	\$10.7
- Angus Debenture Payments: Interest	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	(\$461.6)
TOTAL REVENUE	\$649.4	\$626.0	\$658.7	\$683.6	\$721.4	\$766.7	\$636.3	\$658.5	\$685.5	\$708.5	\$757.0	\$13,804.3
CLOSING CASH BALANCE	(\$970.0)	(\$885.8)	(\$779.7)	(\$659.8)	(\$513.3)	(\$333.0)	(\$294.9)	(\$246.5)	(\$183.3)	(\$109.6)	\$0.0	

1 Principal payments not inflated

2023 Adjusted Charge Per Capita **\$1,171.43**

Allocation of Capital Program	
Residential Sector	84.1%
Non-Residential Sector	15.9%
Rates for 2023	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX C
TABLE C-6

TOWNSHIP OF ESSA
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
ANGUS SEWER (SEWAGE TREATMENT AND COLLECTION)
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

ANGUS SEWER (SEWAGE TREATMENT AND COLLECTION)	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
OPENING CASH BALANCE	\$0.0	(\$45.8)	(\$87.2)	(\$123.5)	(\$154.1)	(\$234.8)	(\$311.7)	(\$384.1)	(\$451.4)	(\$484.6)	(\$460.6)	(\$458.1)	(\$442.8)
2023 - 2032 RESIDENTIAL FUNDING REQUIREMENTS													
- Angus Sewer (Sewage Treatment And Collection): Non Inflated	\$77.5	\$77.5	\$77.5	\$77.5	\$77.5	\$77.5	\$77.5	\$77.5	\$77.5	\$77.5	\$77.5	\$77.5	\$77.5
- Angus Wastewater Principle Payments 1	\$0.0	\$0.0	\$0.0	\$0.0	\$55.1	\$55.1	\$55.1	\$55.1	\$27.5	\$0.0	\$0.0	\$0.0	\$0.0
- Angus Sewer (Sewage Treatment And Collection): Inflated	\$77.47	\$79.0	\$80.6	\$82.2	\$138.9	\$140.6	\$142.3	\$144.1	\$118.3	\$92.6	\$94.4	\$96.3	\$98.2
NEW NON-RESIDENTIAL DEVELOPMENT													
- Growth in Square Metres	2,460	2,730	3,000	3,270	3,550	3,820	4,090	4,360	4,640	5,840	4,900	5,370	5,430
REVENUE													
- DC Receipts: Inflated	\$50.2	\$56.8	\$63.6	\$70.8	\$78.4	\$86.0	\$93.9	\$102.1	\$110.9	\$142.3	\$121.8	\$136.1	\$140.4
INTEREST													
- Interest on Opening Balance	\$0.0	(\$2.5)	(\$4.8)	(\$6.8)	(\$8.5)	(\$12.9)	(\$17.1)	(\$21.1)	(\$24.8)	(\$26.7)	(\$25.3)	(\$25.2)	(\$24.4)
- Interest on In-year Transactions	(\$0.8)	(\$0.6)	(\$0.5)	(\$0.3)	(\$1.7)	(\$1.5)	(\$1.3)	(\$1.2)	(\$0.2)	\$0.9	\$0.5	\$0.7	\$0.7
- Angus Debenture Payments: Interest	(\$17.8)	(\$16.0)	(\$14.1)	(\$12.1)	(\$10.0)	(\$7.8)	(\$5.5)	(\$3.2)	(\$0.6)	\$0.0	\$0.0	\$0.0	\$0.0
TOTAL REVENUE	\$31.6	\$37.7	\$44.3	\$51.6	\$58.2	\$63.7	\$69.9	\$76.7	\$85.2	\$116.5	\$96.9	\$111.6	\$116.8
CLOSING CASH BALANCE	(\$45.8)	(\$87.2)	(\$123.5)	(\$154.1)	(\$234.8)	(\$311.7)	(\$384.1)	(\$451.4)	(\$484.6)	(\$460.6)	(\$458.1)	(\$442.8)	(\$424.2)

ANGUS SEWER (SEWAGE TREATMENT AND COLLECTION)	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	TOTAL
OPENING CASH BALANCE	(\$442.8)	(\$424.2)	(\$403.0)	(\$383.8)	(\$390.7)	(\$368.3)	(\$372.0)	(\$331.0)	(\$290.3)	(\$229.8)	(\$164.4)	(\$77.9)	\$0.0
2023 - 2032 RESIDENTIAL FUNDING REQUIREMENTS													
- Angus Sewer (Sewage Treatment And Collection): Non Inflated	\$77.5	\$77.5	\$77.5	\$77.5	\$77.5	\$77.5	\$77.5	\$77.5	\$77.5	\$77.5	\$77.5	\$77.5	\$1,859.2
- Angus Wastewater Principle Payments 1													
- Angus Sewer (Sewage Treatment And Collection): Inflated	\$98.2	\$100.2	\$102.2	\$104.3	\$106.3	\$108.5	\$110.6	\$112.9	\$115.1	\$117.4	\$119.8	\$122.2	\$2,604.5
NEW NON-RESIDENTIAL DEVELOPMENT													
- Growth in Square Metres	5,430	5,460	5,310	4,310	5,340	4,370	5,870	5,750	6,280	6,280	6,780	6,310	115,520
REVENUE													
- DC Receipts: Inflated	\$140.4	\$144.0	\$142.9	\$118.3	\$149.5	\$124.8	\$170.9	\$170.8	\$190.3	\$194.1	\$213.7	\$202.9	\$3,075.4
INTEREST													
- Interest on Opening Balance	(\$24.4)	(\$23.3)	(\$22.2)	(\$21.1)	(\$21.5)	(\$20.3)	(\$20.5)	(\$18.2)	(\$16.0)	(\$12.6)	(\$9.0)	(\$4.3)	(\$389.1)
- Interest on In-year Transactions	\$0.7	\$0.8	\$0.7	\$0.2	\$0.8	\$0.3	\$1.1	\$1.0	\$1.3	\$1.3	\$1.6	\$1.4	\$5.3
- Angus Debenture Payments: Interest	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	(\$87.1)
TOTAL REVENUE	\$116.8	\$121.5	\$121.4	\$97.4	\$128.7	\$104.8	\$151.5	\$153.6	\$175.6	\$182.8	\$206.3	\$200.0	\$2,604.5
CLOSING CASH BALANCE	(\$424.2)	(\$403.0)	(\$383.8)	(\$390.7)	(\$368.3)	(\$372.0)	(\$331.0)	(\$290.3)	(\$229.8)	(\$164.4)	(\$77.9)	\$0.0	

2023 Adjusted Charge Per Square Metre **\$20.39**

Allocation of Capital Program	
Residential Sector	84.1%
Non-Residential Sector	15.9%
Rates for 2023	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX D

RESERVE FUNDS

APPENDIX D – RESERVE FUNDS

The *DCA* requires that a reserve fund be established for each service for which development charges are collected. Table D-1 presents the uncommitted reserve fund balances, as at December 31, 2022, that are available to help fund the development-related net capital costs identified in this study. All of the available reserve funds are accounted for in this study.

As shown in Table D-1, the December 31, 2022 total reserve fund balance was in a positive position of \$21.49 million. Positive reserve fund balances are 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. Negative balances are recovered as a project in the capital program, where applicable.

**APPENDIX D
TABLE D-1**

**TOWNSHIP OF ESSA
DEVELOPMENT CHARGE RESERVE FUND BALANCE BY ACCOUNT
YEAR ENDING DECEMBER 31, 2022**

Service	Uncommitted Reserve Fund Balance as at Dec. 31, 2022
Library Services	\$ 53,300.00
Fire Services	\$ 1,245,083.00
Police Services (1)	\$ -
Parks And Recreation	\$ 4,707,472.00
Services Related To A Highway: Public Works And Fleet	\$ 155,886.68
General Government	\$ 128,578.63
Services Related To A Highway: Roads And Related	\$ 6,270,510.29
Angus Sewer	\$ 6,174,141.00
Angus Water	\$ 2,410,785.00
Thornton Water	\$ 346,840.00
Total Development Charge Reserves	\$ 21,492,597

(1) Existing reserves are committed

APPENDIX E

COST OF GROWTH ANALYSIS

APPENDIX E – COST OF GROWTH ANALYSIS

A. ASSET MANAGEMENT PLAN

The *DCA* now 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.

i. 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 E-1 and Table E-2. Although all capital assets considered in the study have been identified, not all assets necessitate future replacement or ongoing maintenance activities. The exception and the justification is as follows:

Some projects do not relate to the emplacement of a tangible capital asset – some 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 are identified as omitted in Table E-1 and E-2.

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 (e.g. new buildings include: HVAC, structural elements, roof, etc.). Accordingly, the average useful life assumptions noted below are applicable to all project components and come from the Township's 2020 Asset Management Plan or benchmarking

Table E-1 – Summary of Municipal Assets Useful Lives

Service and Amenities	Estimated Useful Life
Library Services	
▪ Parking	23 Years
▪ Collection Materials	23 Years
▪ Outdoor Meeting Space	30 Years

Service and Amenities	Estimated Useful Life
Fire Services <ul style="list-style-type: none"> ▪ Buildings ▪ Furniture ▪ Fire Equipment ▪ Fire Vehicles 	40 Years 25 Years 20 Years 14 Years
Police <ul style="list-style-type: none"> ▪ Equipment ▪ Vehicles 	20 Years 14 Years
Parks and Recreation <ul style="list-style-type: none"> ▪ Buildings ▪ Furniture ▪ Vehicles ▪ Trail Construction ▪ Playground Equipment and Amenities ▪ Lighting at Fields ▪ Park Development ▪ Pedestrian Bridge 	40 Years 25 Years 13 Years 20 Years 30 Years 25 Years 20 Years 30 Years
Public Works: Buildings and Fleet <ul style="list-style-type: none"> ▪ Fleet ▪ Buildings 	14 Years 40 Years
Roads and Related <ul style="list-style-type: none"> ▪ Road Projects ▪ Bridge work ▪ Signalization and Intersection Improvements ▪ Trails 	25 Years 75 Years 35 Years 20 Years

Table E-2 - Summary of Township-wide Municipal Assets for Engineered Services

Capital Project Description	Estimated Useful Life
Angus Sewer <ul style="list-style-type: none"> ▪ Wastewater Treatment Plant ▪ Sanitary Collection 	50 Years 50 Years
Angus Water <ul style="list-style-type: none"> ▪ Facilities 	50 Years

Development Charges collected towards the ongoing recovery of debt associated with the construction of an asset (e.g. Mill Street Reservoir) is considered to be incorporated into the Township's corporate asset management plan and that there are no additional fiscal requirements associated with this project.

ii. 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 Township staff regarding useful life assumptions and the capital cost of acquiring and/or replacing each asset, a provision for infrastructure replacement has been calculated for both general and engineered 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 *DCA*, 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. For reference, the annual replacement provisions associated with the non-development charge funded portion include costs related to benefit-to-existing development and post-period benefit that will be considered for recovery in subsequent by-laws has also been calculated.

Table E-3 and 4 provides the calculated annual asset management contribution for 2023-2033 for the gross capital expenditures and the share related to the 2023-2032 DC recoverable portion. The year 2033 has been included to calculate the annual contribution for the 2023-2032 period as the expenditures in 2032 will not trigger asset management contributions until 2033. As shown in Table E-3, by 2033, the Township's DC-related asset management contributions would reach \$2.58 million for general services and roads and \$261,800 for water and sewer infrastructure in Angus per annum. This amount would be needed in order to properly fund the full life-cycle costs of the new assets related to the general services supported under the development charges by-law.

iii. **Future Revenue Growth**

The calculated annual funding provision should be considered within the context of the Township's projected growth. Over the next ten years (to 2032), the Township is projected to increase by approximately 1,700 households, which represents a 21 per cent increase over the existing base. In addition, the Township will also add nearly 1,400 new employees that will result in approximately 37,700 square metres 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 Township's reserves for the future replacement of these assets.

B. LONG-TERM CAPITAL AND OPERATING IMPACTS

As shown in Table E-5, by 2032 the Township's net operating costs are estimated to increase by \$1.84 million for property tax supported services. Increases in net operating costs will be experienced as there are operational costs associated with additional capital.

Table E-6 summarizes the components of the tax supported development-related capital forecast that will require funding from non-DC sources (e.g. property tax) for the planning period 2023 to 2032. In total, \$17.06 million will need to be funded from non-DC sources over the planning period and is related to facilities and infrastructure that will benefit the existing community. Funding needs associated with water and sewer infrastructure has not been identified as it is expected to be funded through the Township's utility rates.

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.

C. THE PROGRAM IS DEEMED FINANCIAL SUSTAINABLE

In summary, the Asset Management Plan and long-term capital and operating analysis included in this appendix demonstrates that the Municipality can afford to invest and operate the identified general and engineered services infrastructure over the ten-year planning period.

Importantly, the Township's annual budget review allows staff to continue to monitor and implement mitigating measures should the program become less sustainable.

APPENDIX E

Table E-3

TOWNSHIP OF ESSA

CALCULATED ANNUAL AMP PROVISION FOR GENERAL SERVICES AND ROADS

Services	2023-2032 Capital Program		Annual AMP Provision by 2033	
	DC-Eligible	Non DC-Eligible	DC-Related	Non DC-Related
LIBRARY SERVICES	\$312,675	\$0	\$12,406	\$0
FIRE SERVICES	\$4,076,608	\$4,013,392	\$117,949	\$201,150
POLICE SERVICES	\$102,000	\$0	\$6,353	\$0
PARKS AND RECREATION	\$13,874,890	\$1,049,300	\$532,202	\$44,838
SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS AND FLEET	\$3,753,961	\$2,146,039	\$188,268	\$129,163
SERVICES RELATED TO A HIGHWAY: ROADS AND RELATED	\$41,504,420	\$73,812,580	\$1,721,468	\$2,726,073
TOTAL	\$63,624,553	\$81,021,312	\$2,578,646	\$3,101,224

APPENDIX E

Table E-4

TOWNSHIP OF ESSA

CALCULATED ANNUAL AMP PROVISION FOR WATER AND SEWER

Services	2023-2046 Capital Program		Annual AMP Provision by 2047	
	DC-Eligible	Non DC-Eligible	DC-Related	Non DC-Related
ANGUS SEWER	\$19,448,707	\$0	\$121,697	\$0
ANGUS WATER	\$19,202,295	\$0	\$140,136	\$0
TOTAL	\$38,651,001	\$0	\$261,833	\$0

APPENDIX E

TABLE E-5

TOWNSHIP OF ESSA
 ESTIMATED NET OPERATING COST OF THE PROPOSED
 DEVELOPMENT-RELATED CAPITAL PROGRAM
 (in constant 2023 dollars)

			Net Cost (in 2023\$)	Total DC Eligible Costs	Estimated Operating Costs (\$000) 2032
Library Services					\$23.1
	\$0.07	per \$1.00 of addt'l capital		\$312,675	\$23.1
Fire Services					\$376.6
	\$0.06	per \$1.00 of addt'l capital		\$6,581,241	\$376.6
Police (1)					\$10.2
- Buildings, Land and Fleet	\$0.10	per \$1.00 of addt'l capital		\$102,000	\$10.2
Parks and Recreation					\$258.0
	\$0.02	per \$1.00 of addt'l capital		\$13,874,890	\$258.0
Services Related to a Highway: Public Works and Fleet					\$509.4
	\$0.10	per \$1.00 of addt'l capital		\$5,093,600	\$509.4
Services Related to a Highway: Roads and Related					\$661.7
- Development-Related Roads Infrastructure	\$385	per household			\$661.7
TOTAL ESTIMATED OPERATING COSTS					\$1,838.8

Note 1: Additional Operating costs associated with the OPP contract are not identified



**APPENDIX E
TABLE E-6 - PAGE 1**

**TOWNSHIP OF ESSA
SUMMARY OF TAX SUPPORTED FUNDING REQUIREMENTS**

Net Capital Cost of Development-Related Projects	2023 (\$000)	2024 (\$000)	2025 (\$000)	2026 (\$000)	2027 (\$000)	2028 (\$000)	2029 (\$000)	2030 (\$000)	2031 (\$000)	2032 (\$000)	TOTAL (\$000)
LIBRARY SERVICES											
Total Net Cost (1)	14.8	164.8	29.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	312.7
Net Cost From Development Charges (2)	14.8	111.5	29.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	259.4
Net Cost From Non-DC Sources	0.0	53.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	53.3
- Available DC Reserves (3)	0.0	53.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	53.3
- Replacement & Benefit to Existing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
- For Post 2032 Development (4)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FIRE SERVICES											
Total Net Cost (1)	215.0	7,755.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	8,090.0
Net Cost From Development Charges (2)	15.0	2,696.5	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	2,831.5
Net Cost From Non-DC Sources	200.0	5,058.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5,258.5
- Available DC Reserves (3)	200.0	1,045.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,245.1
- Replacement & Benefit to Existing	0.0	1,508.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,508.8
- For Post 2032 Development (4)	0.0	2,504.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2,504.6
POLICE SERVICES											
Total Net Cost (1)	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	102.0
Net Cost From Development Charges (2)	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	102.0
Net Cost From Non-DC Sources	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
- Available DC Reserves (3)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
- Replacement & Benefit to Existing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
- For Post 2032 Development (4)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PARKS AND RECREATION											
Total Net Cost (1)	909.7	1,933.5	2,133.5	3,321.5	2,468.5	583.5	2,018.5	518.5	518.5	518.5	14,924.2
Net Cost From Development Charges (2)	403.6	403.6	453.6	1,970.3	2,353.6	468.6	1,903.6	403.6	403.6	403.6	9,167.4
Net Cost From Non-DC Sources	506.1	1,529.9	1,679.9	1,351.2	114.9	114.9	114.9	114.9	114.9	114.9	5,756.8
- Available DC Reserves (3)	401.2	1,425.0	1,575.0	1,246.3	10.0	10.0	10.0	10.0	10.0	10.0	4,707.5
- Replacement & Benefit to Existing	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9	1,049.3
- For Post 2032 Development (4)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Notes: (1) For total development-related capital program see Appendix B.

(2) Share of capital program to be funded from development charges if calculated rates are fully implemented

(3) Portion of development-related capital program identified as available DC reserves (to be funded from present Development Charge reserve fund balances).

(4) Post 2032 development-related net capital costs may be eligible for development charges in future DC by-laws, but interim financing of this share may be required

APPENDIX E
TABLE E-6 - PAGE 2

TOWNSHIP OF ESSA
SUMMARY OF TAX SUPPORTED FUNDING REQUIREMENTS

Net Capital Cost of Development-Related Projects	2023 (\$000)	2024 (\$000)	2025 (\$000)	2026 (\$000)	2027 (\$000)	2028 (\$000)	2029 (\$000)	2030 (\$000)	2031 (\$000)	2032 (\$000)	TOTAL (\$000)
SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS AND FLEET											
Total Net Cost (1)	0.0	3,128.0	1,452.0	0.0	660.0	0.0	0.0	440.0	0.0	220.0	5,900.0
Net Cost From Development Charges (2)	0.0	2,165.7	1,432.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3,598.1
Net Cost From Non-DC Sources	0.0	962.3	19.6	0.0	660.0	0.0	0.0	440.0	0.0	220.0	2,301.9
- Available DC Reserves (3)	0.0	155.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	155.9
- Replacement & Benefit to Existing	0.0	806.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	806.4
- For Post 2032 Development (4)	0.0	0.0	19.6	0.0	660.0	0.0	0.0	440.0	0.0	220.0	1,339.6
SERVICE RELATED TO A HIGHWAY: ROADS AND RELATED											
Total Net Cost (1)	84,920.0	0.0	0.0	0.0	0.0	30,397.0	0.0	0.0	0.0	0.0	115,317.0
Net Cost From Development Charges (2)	4,245.5	4,245.5	4,245.5	4,245.5	4,245.5	5,781.3	2,056.2	2,056.2	2,056.2	2,056.2	35,233.9
Net Cost From Non-DC Sources	80,674.5	(4,245.5)	(4,245.5)	(4,245.5)	(4,245.5)	24,615.7	(2,056.2)	(2,056.2)	(2,056.2)	(2,056.2)	80,083.1
- Available DC Reserves (3)	6,270.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6,270.5
- Replacement & Benefit to Existing	11,271.6	0.0	0.0	0.0	0.0	2,422.2	0.0	0.0	0.0	0.0	13,693.8
- For Post 2032 Development (4)	39,822.6	0.0	0.0	0.0	0.0	20,296.2	0.0	0.0	0.0	0.0	60,118.8
TOTAL MUNICIPAL SERVICES											
Total Net Cost (1)	86,069.7	12,991.5	3,640.5	3,361.5	3,168.5	31,020.5	2,058.5	998.5	558.5	778.5	144,645.9
Net Cost From Development Charges (2)	4,689.1	9,633.0	6,186.4	6,255.8	6,639.1	6,289.8	3,999.8	2,499.8	2,499.8	2,499.8	51,192.3
Net Cost From Non-DC Sources	81,380.6	3,358.5	(2,546.0)	(2,894.3)	(3,470.6)	24,730.7	(1,941.3)	(1,501.3)	(1,941.3)	(1,721.3)	93,453.6
- Available DC Reserves (3)	6,871.7	2,679.3	1,575.0	1,246.3	10.0	10.0	10.0	10.0	10.0	10.0	12,432.3
- Replacement & Benefit to Existing	11,376.5	2,420.1	104.9	104.9	104.9	2,527.1	104.9	104.9	104.9	104.9	17,058.2
- For Post 2032 Development (4)	39,822.6	2,504.6	19.6	0.0	660.0	20,296.2	0.0	440.0	0.0	220.0	63,963.1

Notes: (1) For total development-related capital program see Appendix B.

(2) Share of capital program to be funded from development charges if calculated rates are fully implemented

(3) Portion of development-related capital program identified as available DC reserves (to be funded from present Development Charge reserve fund balances).

(4) Post 2032 development-related net capital costs may be eligible for development charges in future DC by-laws, but interim financing of this share may be required

APPENDIX F

LOCAL SERVICE DEFINITIONS

APPENDIX F – LOCAL SERVICE DEFINITIONS

The following provides the definition of “local service” under the *DCA* for a number of services provided by the Township of Essa. The purpose in establishing these definitions is to determine the eligible capital costs for inclusion in the development charges calculation for the Township. The functions or services deemed to be local in nature are not to be included in the determination of the development charges rates. The provision of local services is considered to be a direct developer responsibility under s.59 of the *DCA* and will (or may) be recovered under other agreement(s) with the landowner or developer. The issue of “local service” is being specifically considered for the services of:

- Roads
- Stormwater Management (SWM) Facilities
- Water and Sewer
- Parkland Development

A. ROADS

i. Local Roads

All roads and share of roads identified as local are to be treated as a local service under the *DCA* and the associated costs are not to be included in the development charges calculation. Generally, a local residential road is deemed to have a right-of-way of 20 metres and a non-residential road a right-of-way of 23 metres.

ii. Road Oversizing

If a local road is oversized to accommodate additional traffic needs external to the subject lands, the oversized share of the roads is to be included in the development charges calculation.

B. STORMWATER MANAGEMENT (SWM) FACILITIES

The costs of stormwater management facilities internal to a subdivision and related to a plan of a subdivision are considered to be a local service under the *DCA* and the associated costs are not included in the development charges calculation. Local SWM facilities would typically include:

- Stormwater management facilities servicing local drainage areas;
- Storm sewer oversizing associated with local drainage areas; and
- Storm sewer works on existing roads.

A municipality may recover these costs as a direct developer contribution (or by way of service provision) or alternatively may fund these works directly and recoup the costs through the assessment of a local charge against each unit or land area (holding) within the defined befitting area, based on proportionate shares. This may be facilitated by the Municipal Draining Act or applicable legislation.

C. WATER AND SEWER

- Major external trunk watermains and sanitary sewers (i.e. those with sizes over 300mm and major pumping stations) may be included within the development charges. Oversizing within subdivisions may also be included in the DC above 300mm for watermains and 300mm for sanitary sewers.
- Connections to trunk mains and minor pumping stations to service specific areas are to be a direct developer responsibility as a local service provision (*s.59 of DCA*). Minor pumping stations are those that service a single subdivision, or adjacent or adjoining subdivisions.

D. PARKLAND DEVELOPMENT

For the purpose of parkland development, local services include the requirement for the owner to undertake preparation of the park plan, retaining necessary consultants to prepare design and grading plans for the park, prior to development. In addition, the owner is required to provide stripping and stockpiling, levelling, top soiling, seeding and stormwater servicing including all appurtenances (consistent with the plan), fencing the property perimeter, and provide municipal water and waste water services to the lot line. These requirements are part of the conditions of s.51 and 53 of the Planning Act agreements. The municipality also requires the owner to dedicate parkland or provide cash-in-lieu, consistent with the Planning Act provisions. All of these costs are deemed a direct responsibility of the developer and have not been included in the development charges calculation.

With respect to other parkland development costs, the municipality has included all other components of parkland development in the development charges calculation, including parking, park furniture, signage, landscaping and walkways/trails, in addition to the necessary fields, diamonds, playground equipment, lighting, irrigation and field houses.

APPENDIX G

PROPOSED BY-LAW

(AVAILABLE UNDER SEPARATE COVER)