

CITY-WIDE DEVELOPMENT CHARGES BACKGROUND STUDY



HEMSON Consulting Ltd.

September 26, 2019

TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
I INTRODUCTION	5
A. INTRODUCTION AND BACKGROUND	5
B. LEGISLATIVE CONTEXT.....	6
C. LCONSULTATION AND APPROVAL PROCESS.....	6
II THE METHODOLOGY USES A CITY-WIDE APPROACH TO ALIGN DEVELOPMENT-RELATED COSTS AND BENEFITS.....	7
A. A CITY-WIDE DEVELOPMENT CHARGE IS PROPOSED	7
B. KEY STEPS WHEN DETERMINING DEVELOPMENT CHARGES FOR FUTURE DEVELOPMENT-RELATED PROJECTS	8
C. OPERATING & CAPITAL IMPACTS AND ASSET MANAGEMENT PLAN LEGISLATIVE REQUIREMENTS	12
D. TRANSIT SERVICES SPECIFIC REQUIREMENTS	13
III DEVELOPMENT FORECAST.....	15
IV HISTORICAL CAPITAL SERVICE LEVELS	17
V DEVELOPMENT-RELATED CAPITAL FORECAST	20
A. DEVELOPMENT-RELATED CAPITAL FORECAST IS PROVIDED FOR COUNCIL'S APPROVAL	20
B. THE DEVELOPMENT-RELATED CAPITAL FORECAST FOR GENERAL SERVICES.....	20
C. THE DEVELOPMENT-RELATED CAPITAL FORECAST FOR ENGINEERING SERVICES.....	22
VI DEVELOPMENT CHARGES ARE CALCULATED IN ACCORDANCE WITH THE DEVELOPMENT CHARGES ACT	26
A. DEVELOPMENT CHARGES CALCULATION	26
B. COMPARISON OF 2019 NEWLY CALCULATED DEVELOPMENT CHARGES WITH CHARGES CURRENTLY IN FORCE IN PETERBOROUGH.....	28
VII LONG-TERM CAPITAL AND OPERATING COSTS	37
A. NET OPERATING COSTS FOR THE CITY'S SERVICES TO INCREASE OVER THE FORECAST PERIOD	37
B. LONG-TERM CAPITAL FINANCING FROM NON- DEVELOPMENT CHARGES SOURCES TOTALS \$142.0 MILLION.....	37
VIII ASSET MANAGEMENTPLAN	39
A. ANNUAL CAPITAL PROVISIONS WILL REACH \$2.3 MILLION BY 2029 AND \$21.6 MILLION BY 2032	39

IX	OTHER ISSUES AND CONSIDERATIONS	43
A.	DEVELOPMENT CHARGES ADMINISTRATION	43
B.	CONSIDERATION OF AREA RATING.....	43
C	LOCAL SERVICE DEFINITIONS	44

LIST OF APPENDICES

A.	DEVELOPMENT FORECAST.....	45
B.	GENERAL SERVICES TECHNICAL APPENDIX.....	59
	B.1 LIBRARY SERVICES	65
	B.2 FIRE SERVICES	72
	B.3 POLICE SERVICES	81
	B.4 RECREATION.....	90
	B.5 PARKS.....	98
	B.6 PUBLIC WORKS	118
	B.7 PARKING.....	132
	B.8 TRANSIT SERVICES	140
	B.9 GENERAL GOVERNMENT	150
	B.10 AFFORDABLE HOUSING	156
	B.11 WASTE MANAGEMENT.....	163
C.	CITY-WIDE ENGINEERING INFRASTRUCTURE TECHNICAL APPENDIX.....	173
D.	RESERVE FUND BALANCES.....	192
E.	LONG-TERM CAPITAL AND OPERATING IMPACTS	195
F.	ASSET MANAGEMENT PLAN	200

EXECUTIVE SUMMARY

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

1. Legislative Context

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

2. Key Steps in Determining Future Development-Related Projects

In accordance with the *DCA* and associated regulation, several key steps are required to calculate development charges. This includes preparing a development forecast, establishing historical service levels, determining the increase in need for services arising from development and appropriate shares of costs, attribution to development types (i.e. residential and non-residential) and the final adjustment to the calculated rate of a cash flow analysis.

3. DC Eligible and Ineligible Costs

Development charges are intended to pay for the initial round of capital costs needed to service new development over an identified planning period. This is based on the overarching principle that “growth pays for growth”. However, the *DCA* and associated regulation includes several statutory adjustments and deductions that prevent these costs from fully being recovered by growth. Such adjustments include, but are not limited to: ineligible costs, including operating and maintenance costs; ineligible services, including, tourism facilities, parkland acquisition, etc.; statutory 10 per cent discount for “soft” or general services; deductions for costs that exceed historical service level caps; and statutory exemptions for specific uses (i.e. industrial expansions).

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

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

B. DEVELOPMENT FORECAST

1. Residential and Non-Residential

The table below provides a summary of the anticipated residential and non-residential growth over the 2019-2028 and 2019-2031 planning periods. The development forecast is further discussed in Appendix A.

Development Forecast	2018 Estimate	General Services Planning Period 2019 - 2028		Engineered Services Planning Period 2019 - 2031	
		Growth	Total at 2028	Growth	Total at 2031
Residential					
Occupied Dwellings	35,682	5,284	40,966	7,018	42,700
Population					
Census	83,265	12,120	95,385	16,089	99,354
<i>Population In New Dwellings</i>		13,373		17,729	
Non-Residential					
Employment	44,034	3,972	48,006	5,233	49,267
Non-Residential Building Space (Square Metres)		248,249		327,039	

C. CALCULATED DEVELOPMENT CHARGES

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

	Residential Charge per Unit			Non-Residential Charge per Square Metre
	Residential A Singles & Semis	Residential B Other Multiples	Residential C Apartments	
Discounted Services	\$ 7,112	\$ 4,493	\$ 4,028	\$ 5.08
Non-Discounted Services	\$ 23,447	\$ 14,816	\$ 13,280	\$ 123.60
Total Charge	\$ 30,559	\$ 19,309	\$ 17,308	\$ 128.68

D. LONG-TERM CAPITAL AND OPERATING COSTS

An overview of the long-term capital and operating costs for the capital facilities and infrastructure to be included in the DC by-law is provided in the study. This examination is required as one of the provisions of the *DCA*. Additional details on the long-term capital and operating impact analysis is found in Appendix E. By 2028 the City's net operating costs are estimated to increase by about \$55.1 million.

E. ASSET MANAGEMENT PLAN

A key purpose 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. The DC recoverable annual asset management contributions for the 2019-2028 and 2019-2031 planning periods have been calculated. The years 2029 and 2032 have been included to calculate the annual contribution for the 2019-2028 and 2019-2031 periods as the expenditures in 2028 and 2031 will not trigger asset management contributions until 2029 and 2032.

By 2029, the City will need to fund an additional \$2.3 million per annum in order to properly fund the full life cycle costs of the general services assets supported under the 2019 Development Charges By-law.

By 2032, the City will need to fund an additional \$21.6 million per annum to properly fund the full life cycle costs of the engineered services assets supported under the by-law.

Pursuant to O.Reg. 82/98 a comprehensive Asset Management Plan setting out information on current asset characteristics, proposed level of service, asset management strategy, and financial strategy is provided in Appendix F.

F. DEVELOPMENT CHARGES ADMINISTRATION & POLICY CONSIDERATIONS

1. Consideration for Area Rating

As part of the new regulations adopted by the Province, Council is required to consider the use of area rating (i.e. area-specific development charges) when preparing a development charges background study. As part of the City's 2019 DC update, the appropriateness of implementing area-specific development charges for the various City services was examined.

The *DCA* permits the City to designate, in its DC by-law, the areas where development charges shall be imposed. The charges may apply to all lands in the City or to other designated development areas as specified in the DC By-law.

The following was considered with respect to area-specific development charges:

- Is the use of area-specific charges appropriate for some or all services?
- Are there any data limitations with calculating an area-specific development charge?

Area-specific development charges are typically considered when there is clear benefit to a particular area (including the population or population and employment), and have been implemented in mostly stand alone greenfield developments.

The City undertook an area-specific development charges study in 2017 to establish area-specific rates for eight areas throughout the City. These rates were not updated as a part of this DC study process. The area-specific charges apply to the following areas:

- Jackson
- Carnegie East
- Carnegie West
- Lily Lake
- Chemong East
- Chemong West
- Liftlock
- Coldsprings

2. The 2019 DC Background Study is Based Upon the Best Available Information

The 2019 DC Background Study has been prepared based on the best available information at the time of preparing this report and is subject to change based on future and operating capital business plans presented to Council as part of the annual budgeting process. Any excess capacity that occurs over the five-year life of the DC By-law is expected to be recovered from future development as part of the capital plans approved by Council.

3. Modifications to the City's Development Charges By-laws are Proposed

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

I INTRODUCTION

A. INTRODUCTION AND BACKGROUND

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

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

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

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

The *DCA* provides for a period of public review and comment regarding the proposed development charges. Following completion of this process, in accordance with the *DCA* and Council's review of this study and the comments it receives regarding this

study or other information brought to its attention about the proposed charges, it is intended that Council will pass a new development charges by-law for the City.

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

B. LEGISLATIVE CONTEXT

The study is prepared in accordance with the *DCA* and associated regulations, including the amendments that came into force on January 1, 2016. Several of these amendments resulted in changes to the calculation methodology used for transit services including the removal of the 10 per cent statutory deduction and the use of a forward looking 10-year “planned level of service” rather than the 10-year “historical level of service”.

In particular, an asset management plan that deals with all assets whose capital costs are proposed to be funded under the DC by-law, which demonstrates that all such assets mentioned are financially sustainable over their full life cycle, must also be included as part of the background study. The DC Background Study must also include consideration for the use of area-rated or area-specific development charges.

C. CONSULTATION AND APPROVAL PROCESS

In keeping with past practice, the City established a highly consultative background study process that included regular meetings with a Steering Committee comprised of senior City staff, representatives of local homebuilder organizations and citizen representatives. The Steering Committee was involved at all stages of the process and the consulting team appreciates the feedback it received during those meetings. In addition to the statutory public meeting required under the *DCA*, the City also held a public information session for key organizations involved in the development process in the City and the general public. At this meeting, the draft rates, by-law policies and background study findings were discussed.

II THE METHODOLOGY USES A CITY-WIDE APPROACH TO ALIGN DEVELOPMENT-RELATED COSTS AND BENEFITS

Several key steps are required in calculating any development charge. However, specific circumstances arise in each municipality which must be reflected in the calculation. Therefore, this study has been tailored for the City of Peterborough's unique circumstances. The approach to the proposed development charges is focussed on providing a reasonable alignment of development-related costs with the development that necessitates them. This study utilizes a City-wide uniform approach for all DC eligible services which the City provides.

A. A CITY-WIDE DEVELOPMENT CHARGE IS PROPOSED

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

1. Services Based on a City-Wide Approach

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

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

- Library Services;
- Fire Services;
- Police Services;
- Recreation;
- Parks;
- Public Works;

- Parking;
- Transit Services;
- General Government;
- Affordable Housing;
- Waste Management;
- Roads & Other City-wide Engineering; and
- Sewage Treatment.

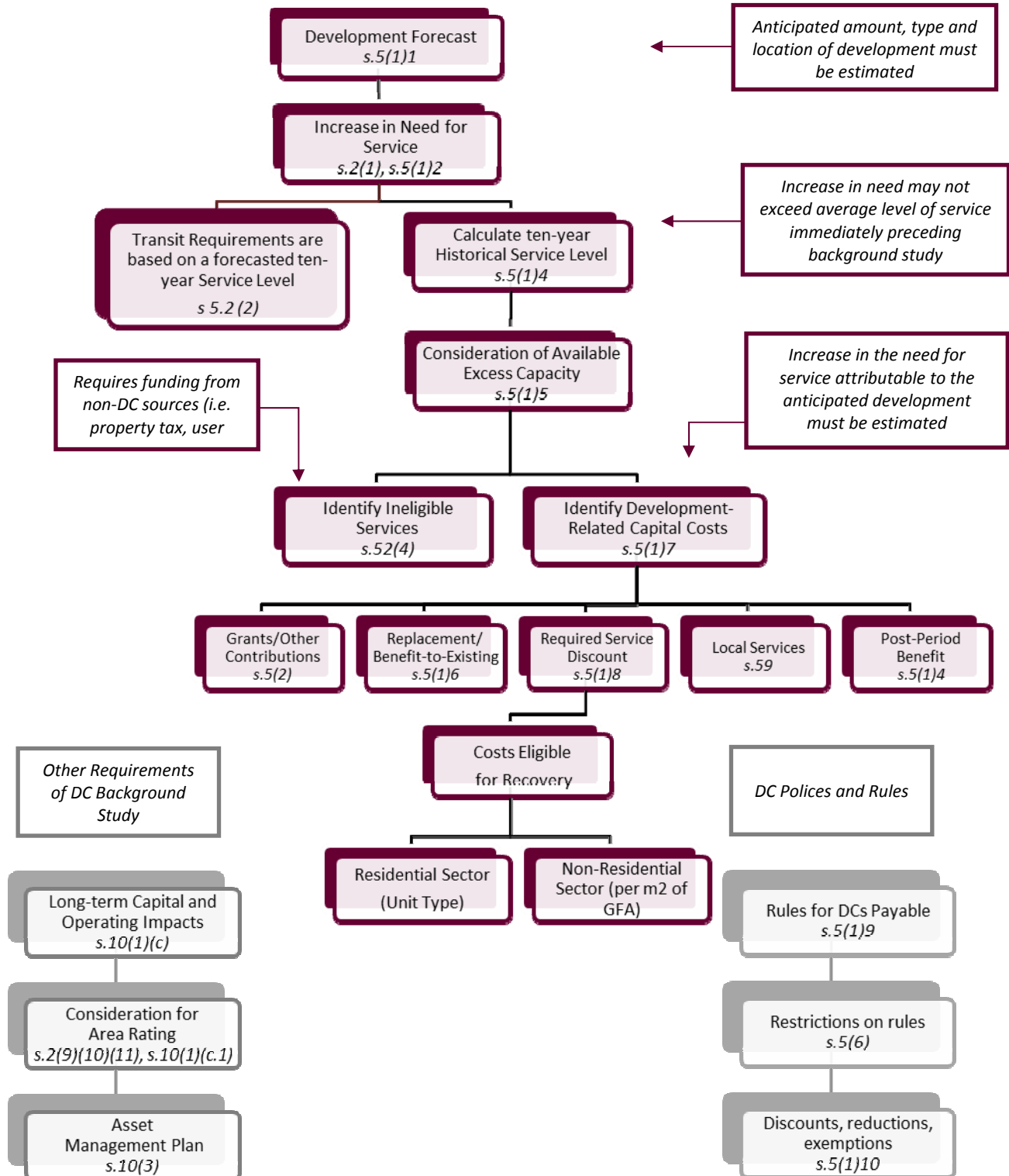
These services form a reasonable basis on which to plan and administer the development charges. It is noted that the analysis of each of these services examines the individual capital facilities and equipment that make them up. For example, Recreation includes various indoor facilities such as community centres, grandstands, arenas; associated land requirements as allowed under the *DCA*; and equipment.

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

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

Several key steps are required in calculating development charges for future development-related projects. These are summarized below and shown schematically in Figure 1.

Figure 1: Statutory Requirements of Development Charges Calculation and Study Process



1. Development Forecast

The first step in the methodology requires that a development forecast be prepared for the 10-year study period from 2019 to 2028, and to build-out or ultimate development in 2031. The forecasts of population, households, employment and non-residential building space were prepared by Hemson Consulting Ltd. and are structured to achieve 2031 population and employment targets established for the City through Schedule 3 to the Provincial *Growth Plan for the Greater Golden Horseshoe, 2017*.

For the residential portion of the forecast, the total change in Census population determines the need for additional facilities and provides the foundation for the development-related capital forecast.

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

2. Service Categories and Historical Service Levels

The *DCA* states 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 City over the 10-year period immediately preceding the preparation of the background study...(s. 5. (1) 4.)

Historical 10-year average service levels thus form the basis for the development charges calculation. A review of the City's capital service levels for buildings, land, vehicles, equipment and others 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 charges can be determined. The historical service levels used in this study have been calculated based on the period from 2009 to 2018.

For the engineered service of Sewage Treatment, historical service levels are less applicable and reference is made to the City's engineering standards as well as Provincial health or environmental requirements.

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

A development-related capital forecast has been prepared by City staff as part of the study. The forecast identifies development-related projects and their gross and net costs, after allowing for capital grants, subsidies or other contributions as required by the *DCA* s.5.(2). The capital forecast provides another cornerstone upon which

development charges are based. The DCA requires that the increase in the need for service attributable to the anticipated development may include an increase:

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

S. 5. (1) 4. and s. 5. (2). require that the development charges be calculated on the lesser of the historical 10-year average service levels or the service levels embodied in the future plans of the City. The development-related capital forecast prepared for this study ensures that development charges are only imposed to help pay for projects that have been or are intended to be purchased or built in order to accommodate future anticipated development. It is not sufficient in the calculation of development charges merely to have had the service in the past. There must also be a demonstrated commitment to continue to emplace facilities or infrastructure in the future. In this regard, Ontario Regulation 82/98, s. 3 states that:

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

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

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

Finally, when calculating development charges, the development-related net capital costs must be reduced by 10 per cent for all services except engineered services, such as Roads & Other City-wide Engineering (DCA, s. 5. (1) 8). The 10 per cent discount is applied to the other services, e.g. Library and Recreation, and the resulting financing responsibility from non-development charges sources is identified.

4. Attribution to Types of Development

The next step in the determination of development charges is the allocation of the development-related net capital costs between the residential and the non-residential sectors. This is done by using different apportionments for different

services in accordance with the demands which the two sectors would be expected to place on the various services and the different benefits derived from those services.

Some services (e.g. Library Services, Recreation, Parks and Affordable Housing) are deemed to provide benefit only to the residential sector, while other services are deemed to benefit both the residential and non-residential sectors. The apportionment of costs for these latter services is based on the expected demand for, and use of, the service by each sector (e.g. apportioned based on shares of net population and employment) and consideration of other factors affecting the demand for specific municipal services.

Finally, the residential component of the development charge is calculated based on the population to be generated in new housing units during the respective planning periods and the per capita amount determined is applied to different housing types on the basis of average occupancy factors. The non-residential component is calculated based on the growth that is forecast in non-residential building space in square metres.

5. Final Adjustment

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

C. OPERATING & CAPITAL COST IMPACTS AND ASSET MANAGEMENT PLAN LEGISLATIVE REQUIREMENTS

Section 10 of the *DCA* identifies what must be included in a Development Charges Background Study, namely:

- s.10 (2) The development charge background study shall include,
 - (c) an examination, for each service to which the development charge by-law would relate, of the long term capital and operating costs for capital infrastructure required for the service;
 - (c.2) an asset management plan prepared in accordance with subsection (3);

Asset management plan

- (3) The asset management plan shall,
 - (a) deal with all assets whose capital costs are proposed to be funded under the development charge by-law;
 - (b) demonstrate that all the assets mentioned in clause (a) are financially sustainable over their full life cycle;

- (c) contain any other information that is prescribed; and
- (d) be prepared in a prescribed manner.

The requirement to include an Asset Management Plan (AMP) was part of the *DCA* amendments that came into effect on January 1, 2016. A key function of the AMP is to demonstrate that all assets proposed to be funded under the development charges by-law are financially sustainable over their full life cycle. Appendices E and F address the operating and capital cost impacts and the asset management plan.

D. TRANSIT SERVICES SPECIFIC REQUIREMENTS

1. Planned Level of Service

As per the new requirements of the *DCA* and associated regulation that came into effect on January 1, 2016, Transit services must be treated as a “discrete” service. Generally, it is understood that this provision is intended to preclude combining the Roads & Other City-wide Engineering and Transit services into a broader “Transportation” DC service.

The *DCA* (s.5.2 (3)) requires that in estimating the increase in need for Transit services the increased need “shall not exceed the planned level of service over the 10-year period immediately following the preparation of the background study”.

The definition of planned level of service is not defined in the *DCA*. For the purposes of the development charge calculations, the “planned level of service” is considered the 10-year development-related capital forecast (2019-2028) in the 2019 DC Background Study, as informed by various sources including the City’s current and proposed capital budgets, long range plans, prior DC studies and staff reports.

In order to meet the requirements of the *DCA*, it is recommended that Council approve the 2019 DC Background Study and the underlying capital forecast, as an expression that Council intends to ensure that the increase in need in Transit service will be met.

In addition, any background study that incorporates Transit services into the calculation must now include the following:

- An assessment of ridership forecast for all modes of transit and whether ridership is generated from existing or planned development (O.Reg. 82/98 s.8(2)4).
- An assessment of ridership capacity for all modes of transit over the 10-year forecast period (O. Reg. 82/98 s.8(2)4).

2. Asset Management Plan Requirements

In addition to the AMP requirements set out in section 10 of the *DCA, Ontario Regulation 82/98* identifies additional direction on the contents of the asset management strategy for Transit services to be addressed in a DC Background Study. This includes an AMP as well as a financial strategy. However, it is noted that the Regulations are silent with respect to the AMP requirements for the Background Study for any services other than transit.

III DEVELOPMENT FORECAST

The *Development Charges Act (DCA)* requires the City 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 City to prepare a reasonable development-related capital program.

The forecast is primarily based upon the City achieving the population and employment targets contained in Schedule 3 of the Provincial *Growth Plan for the Greater Golden Horseshoe, 2017*.

A 10-year development forecast, from mid-year 2019 to mid-year 2028, has been used for all the development charges eligible general services in the City. The planning period from mid-year 2019 to mid-year 2031 has been utilized for the engineered services of Roads & Other City-wide Engineering and Sewage Treatment.

In the general service planning horizon of 2019-2028, it is anticipated that the City will add an average of 528 new residential units per year, which can accommodate a population of 13,373 in these new dwelling units. In the same planning horizon, it is anticipated that the City will see a total GFA growth of 248,249 square metres of new non-residential building space with an accompanying employment growth of 3,972.

In the longer planning horizon, utilized for engineered services, the City is anticipated to add 7,018 new residential units, which can accommodate a population in new dwellings of 17,729 persons. In terms of non-residential growth, the City is forecast to add 5,233 new employees that will generate an additional 327,039 square metres of new non-residential building space.

Table 1 provides a summary of the residential and non-residential growth forecast used in this analysis.

16
TABLE 1

CITY OF PETERBOROUGH
SUMMARY OF RESIDENTIAL AND NON-RESIDENTIAL
DEVELOPMENT FORECAST

Development Forecast	2018 Estimate	General Services Planning Period 2019 - 2028		Engineered Services Planning Period 2019 - 2031	
		Growth	Total at 2028	Growth	Total at 2031
Residential					
Occupied Dwellings	35,682	5,284	40,966	7,018	42,700
Population					
Census	83,265	12,120	95,385	16,089	99,354
<i>Population In New Dwellings</i>		13,373		17,729	
Non-Residential					
Employment	44,034	3,972	48,006	5,233	49,267
Non-Residential Building Space (Square Metres)		248,249		327,039	

IV HISTORICAL CAPITAL SERVICE LEVELS

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

For non-engineered services (Library Services, Parks, Recreation, etc.) the legislative requirement is met by documenting service levels for the preceding 10 years: in this case, for the period from 2009 to 2018. Typically, service levels are measured as a ratio of inputs per capita or inputs per population and employment. With engineered services such as sewage treatment, engineering standards are used in lieu of inputs per capita.

O. Reg. 82/98 requires that when defining and determining historical service levels, both the quantity and quality of service be taken into consideration. In most cases, the service levels are initially established in quantitative terms. For example, service levels for buildings are presented in terms of square feet per unit. The qualitative aspect is introduced by considering the monetary value of a 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 growth reflect not only the quantity (number and size) but also the quality (value or cost) of services provided by the City in the past. Both the quantitative and qualitative aspects of service levels used in the current analysis are based on information provided by City staff. This information is generally based on historical records and the City's and surrounding municipalities' experience with costs to acquire or construct similar facilities, equipment and infrastructure.

Table 2 summarizes service levels for all services included in the development charges calculations. Appendix B provides detailed historical inventory data upon which the calculation of service levels is based for all general services.

TABLE 2

**CITY OF PETERBOROUGH
SUMMARY OF AVERAGE HISTORICAL SERVICE LEVELS 2009 - 2018**

Service	2009 - 2018 Service Level Indicator
LIBRARY SERVICES Buildings Land Materials Furniture And Equipment	\$373.58 per capita \$245.61 per capita \$6.48 per capita \$113.60 per capita \$7.89 per capita
FIRE SERVICES Buildings Land Vehicles Furniture & Equipment	\$218.64 per pop + empl \$122.76 per pop + empl \$5.83 per pop + empl \$70.96 per pop + empl \$19.09 per pop + empl
POLICE SERVICES Buildings Land Vehicles Personal Police Equipment Furniture & Equipment	\$141.50 per pop + empl \$85.84 per pop + empl \$2.27 per pop + empl \$3.28 per pop + empl \$10.85 per pop + empl \$39.26 per pop + empl
RECREATION Buildings Land Furniture And Equipment	\$2,159.71 per capita \$1,920.93 per capita \$134.55 per capita \$104.23 per capita
PARKS Developed Parkland Park Facilities Special Facilities	\$900.87 per capita \$456.33 per capita \$332.96 per capita \$111.58 per capita
PUBLIC WORKS Buildings Land Furniture & Equipment Municipal Fleet	\$184.17 per pop + empl \$55.81 per pop + empl \$12.93 per pop + empl \$7.63 per pop + empl \$107.80 per pop + empl

TABLE 2

**CITY OF PETERBOROUGH
SUMMARY OF AVERAGE HISTORICAL SERVICE LEVELS 2009 - 2018**

Service	2009 - 2018 Service Level Indicator
PARKING Parking Spaces Parking Meters	\$370.36 per pop + empl \$365.97 per pop + empl \$4.39 per pop + empl
TRANSIT SERVICES Buildings Land Shelters, Signs Equipment Buses	\$446.57 per pop + empl \$142.84 per pop + empl \$8.60 per pop + empl \$48.41 per pop + empl \$14.12 per pop + empl \$232.60 per pop + empl
AFFORDABLE HOUSING Annual Municipal Investment	\$139.97 per capita \$139.97 per capita
WASTE MANAGEMENT Buildings Land Vehicles Furniture & Equipment	\$53.29 per pop + empl \$21.69 per pop + empl \$14.73 per pop + empl \$15.91 per pop + empl \$0.96 per pop + empl
ROADS & OTHER CITY-WIDE ENGINEERING Roads Traffic Signals Sidewalks Trails Bridges And Culverts Noise & Retaining Walls Decorative Plants And Luminaries Road Signs And Posts	\$16,204.69 per pop + empl \$11,105.37 per pop + empl \$2,208.46 per pop + empl \$1,876.42 per pop + empl \$68.90 per pop + empl \$879.31 per pop + empl \$15.85 per pop + empl \$19.67 per pop + empl \$30.71 per pop + empl

V DEVELOPMENT-RELATED CAPITAL FORECAST

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

For the purposes of paragraph 3 of subsection 5 (1) of the Act, the council of a City 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 IS PROVIDED FOR COUNCIL'S APPROVAL

Based on the growth forecasts summarized in Section III and detailed in Appendix A, City staff, in collaboration with the consultant has developed a development-related capital forecast, which sets out those projects that are required to service anticipated growth. For all general services, the capital plan covers the 10-year period from 2019 to 2028. As permitted by the *DCA* s. 5(1) 4., the development charge for the engineering services is based on a longer planning horizon.

One of the recommendations contained in this background study is for Council to adopt the development-related capital forecast developed for the purposes of the development charges calculation. It is assumed that future capital budgets and forecasts will continue to bring forward the capital projects presented here as they will be needed to service the anticipated growth in the City. It is, however, acknowledged that changes to the forecast presented here may occur through the City's normal capital budget process.

B. THE DEVELOPMENT-RELATED CAPITAL FORECAST FOR GENERAL SERVICES

A summary of the development-related capital forecast for general services is presented in Table 3. The table shows that the gross cost of the City's capital forecast is estimated to be \$361.9 million. Subsidies in the amount of \$76.1 million have been identified to offset the cost of various services, which has the effect of netting down the total capital program cost. The remaining \$285.7 million is identified as the total municipal cost brought forth for the development charges calculation.

Of this \$285.7 million net capital cost, 26 per cent, or 74.0 million, is related to the Police Services capital program. This includes a brand new Police facility, equipment and studies.

Transit Services represents 14 per cent, or \$41.0 million of the capital program. This is related to various buildings (Transit share of the Public Works building relocation, Bus Barn, Downtown Terminal, Satellite Terminal), additional shelters and signs and additional vehicles.

The next largest capital program belongs to Public Works. This capital program totals \$33.5 million and includes the Public Works share of the building relocation project, stormwater management ponds & drainage, fleet upgrades and equipment.

The capital program for Parks is recovering for ongoing parkland development, additional park facilities, the City's trail network and studies. It represents 11 per cent, or \$31.5 million, of the City's total capital program for general services.

The next largest capital program belongs to Parking. This capital program totals \$24.6 million and recovers solely for a structured lot in 2023.

The capital program for Affordable Housing is recovering for the City's ongoing investment in affordable housing and the Brock Street Mission. It represents 8 per cent, or \$22.3 million, of the City's total capital program for general services.

Fire Services represents 7 per cent, or \$19.3 million of the capital program. This recovers for additional buildings, vehicles and equipment over the 10-year planning period.

Recreation represents 6 per cent, or \$15.6 million of the capital program. This \$15.6 million recovers for a new arena and aquatics complex as well as studies.

Library Services accounts for \$13.6, or 5 per cent, of the City's capital program for general services. This includes a provision for additional library space, library kiosks, library materials and studies.

Waste Management is a new service in the City of Peterborough's 2019 DC Background Study. It represents \$9.7 million of the City's total capital program. This includes funds for an Organics Processing Facility and additional vehicles and equipment.

The capital program associated with General Government relates to the provision of development-related studies and amounts to \$709,700 over the next 10 years. These studies include additional development charges studies (City-wide and area-specific), OP reviews and various growth-related studies.

The capital forecast incorporates those projects identified to be related to development anticipated in the next 10 years. It is not implied that all of these costs are to be recovered from new development by way of development charges (see the following Section VI). Portions of the capital forecast may be related to the replacement of existing facilities, shares of projects that benefit the existing population, or growth anticipated to occur beyond the 2019-2028 planning period. In addition to these reductions, the amounts shown in Table 3 have not been reduced by 10 per cent for various general services as required by *s. 5 (1)* of the *DCA*.

After these reductions, the remaining development-related capital costs are brought forward to the development charges calculation. Further details on the capital plans for each individual service category are available in Appendix B.

C. THE DEVELOPMENT-RELATED CAPITAL FORECAST FOR ENGINEERING SERVICES

Table 4 provides the development-related capital recoveries for engineering services. This includes development-related costs associated with Roads & Other City-wide Engineering and Sewage Treatment.

In Peterborough, the total engineering capital program from 2019-2031 is \$570.2 million. Roads & Other City-wide Engineering projects account for 99 per cent, or \$562.4 million, of the total engineering capital program. Scheduled roads projects in the City are based on existing master plans and studies as well as discussions with City staff. These projects include roadworks, roadway studies and other works (such as sidewalks and multi-use trails). This also includes two projects at the City of Peterborough Airport: one to extend water and sewer services to an industrial park; the other to expand water and sewer services at the Airport proper.

The Sewage Treatment projects total approximately \$7.8 million. This program provides for the continued recovery of the Phase 3 expansion of the Waste Water Treatment Plant and an Environmental Assessment Study for future plant capacity.

Details of the engineering services capital program are included in Appendix C.

CITY OF PETERBOROUGH
SUMMARY OF DEVELOPMENT-RELATED CAPITAL PROGRAM
FOR GENERAL SERVICES 2019 - 2028
(in \$000)

Service	Gross Cost	Grants/ Subsidies	Municipal Cost	Total Net Capital Program									
				2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
1.0 LIBRARY SERVICES	\$13,645.0	\$0.0	\$13,645.0	\$12,373.0	\$93.0	\$193.0	\$138.0	\$93.0	\$93.0	\$338.0	\$93.0	\$93.0	\$138.0
1.1 Additional Library Space	\$12,035.0	\$0.0	\$12,035.0	\$12,035.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
1.2 Library Kiosks	\$180.0	\$0.0	\$180.0	\$45.0	\$0.0	\$0.0	\$45.0	\$0.0	\$0.0	\$45.0	\$0.0	\$0.0	\$45.0
1.3 Library Materials	\$1,130.0	\$0.0	\$1,130.0	\$293.0	\$93.0	\$93.0	\$93.0	\$93.0	\$93.0	\$93.0	\$93.0	\$93.0	\$93.0
1.4 Studies	\$300.0	\$0.0	\$300.0	\$0.0	\$0.0	\$100.0	\$0.0	\$0.0	\$0.0	\$200.0	\$0.0	\$0.0	\$0.0
2.0 FIRE SERVICES	\$19,318.1	\$0.0	\$19,318.1	\$35.0	\$9,003.1	\$780.0	\$0.0	\$0.0	\$9,500.0	\$0.0	\$0.0	\$0.0	\$0.0
2.1 Buildings, Land & Furnishings	\$17,500.0	\$0.0	\$17,500.0	\$0.0	\$8,000.0	\$0.0	\$0.0	\$0.0	\$9,500.0	\$0.0	\$0.0	\$0.0	\$0.0
2.2 Vehicles	\$1,680.1	\$0.0	\$1,680.1	\$35.0	\$865.1	\$780.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
2.3 Equipment	\$138.0	\$0.0	\$138.0	\$0.0	\$138.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
3.0 POLICE SERVICES	\$74,036.2	\$0.0	\$74,036.2	\$52.2	\$44.2	\$14.2	\$14.2	\$52.2	\$14.2	\$14.2	\$52.2	\$14.2	\$73,764.2
3.1 Buildings, Land & Furnishings	\$73,750.0	\$0.0	\$73,750.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$73,750.0
3.2 New Equipment	\$172.2	\$0.0	\$172.2	\$14.2	\$44.2	\$14.2	\$14.2	\$14.2	\$14.2	\$14.2	\$14.2	\$14.2	\$14.2
3.3 Studies	\$114.0	\$0.0	\$114.0	\$38.0	\$0.0	\$0.0	\$0.0	\$38.0	\$0.0	\$0.0	\$38.0	\$0.0	\$0.0
4.0 RECREATION	\$52,242.9	\$36,666.7	\$15,576.3	\$142.9	\$0.0	\$15,333.3	\$0.0	\$0.0	\$0.0	\$100.0	\$0.0	\$0.0	\$0.0
4.1 Arenas	\$52,000.0	\$36,666.7	\$15,333.3	\$0.0	\$0.0	\$15,333.3	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
4.2 Studies	\$242.9	\$0.0	\$242.9	\$142.9	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$100.0	\$0.0	\$0.0	\$0.0
5.0 PARKS	\$31,450.0	\$0.0	\$31,450.0	\$750.0	\$16,100.0	\$9,200.0	\$900.0	\$750.0	\$750.0	\$750.0	\$750.0	\$750.0	\$750.0
5.1 Parkland	\$450.0	\$0.0	\$450.0	\$0.0	\$150.0	\$150.0	\$150.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
5.2 Park Facilities	\$23,400.0	\$0.0	\$23,400.0	\$0.0	\$15,100.0	\$8,300.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
5.3 Trail Network	\$7,500.0	\$0.0	\$7,500.0	\$750.0	\$750.0	\$750.0	\$750.0	\$750.0	\$750.0	\$750.0	\$750.0	\$750.0	\$750.0
5.4 Studies	\$100.0	\$0.0	\$100.0	\$0.0	\$100.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
6.0 PUBLIC WORKS	\$33,501.1	\$0.0	\$33,501.1	\$18,274.1	\$2,493.0	\$2,004.0	\$1,661.0	\$1,862.0	\$1,441.4	\$1,441.4	\$1,441.4	\$1,441.4	\$1,441.4
6.1 Public Works Relocation Project	\$17,288.0	\$0.0	\$17,288.0	\$17,288.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
6.2 Buildings, Land & Furnishings	\$1,050.0	\$0.0	\$1,050.0	\$0.0	\$50.0	\$500.0	\$500.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
6.3 Fleet	\$14,813.1	\$0.0	\$14,813.1	\$986.1	\$2,093.0	\$1,504.0	\$1,161.0	\$1,862.0	\$1,441.4	\$1,441.4	\$1,441.4	\$1,441.4	\$1,441.4
6.4 Equipment	\$350.0	\$0.0	\$350.0	\$0.0	\$350.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
7.0 PARKING	\$24,570.0	\$0.0	\$24,570.0	\$0.0	\$0.0	\$0.0	\$0.0	\$24,570.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
7.1 Parking Infrastructure	\$24,570.0	\$0.0	\$24,570.0	\$0.0	\$0.0	\$0.0	\$0.0	\$24,570.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0

TABLE 3

CITY OF PETERBOROUGH
SUMMARY OF DEVELOPMENT-RELATED CAPITAL PROGRAM
FOR GENERAL SERVICES 2019 - 2028
(in \$000)

Service	Gross Cost	Grants/ Subsidies	Municipal Cost	Total Net Capital Program									
				2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
8.0 TRANSIT SERVICES	\$74,472.0	\$33,448.6	\$41,023.4	\$6,104.7	\$1,172.8	\$28,456.8	\$1,292.8	\$279.3	\$1,079.4	\$279.3	\$1,799.5	\$279.3	\$279.3
8.1 Buildings, Land & Furnishings	\$56,412.0	\$23,211.7	\$33,200.3	\$3,812.0	\$0.0	\$27,068.0	\$0.0	\$0.0	\$800.1	\$0.0	\$1,520.2	\$0.0	\$0.0
8.2 Shelters, Loops, Signs	\$4,150.0	\$1,356.6	\$2,793.4	\$279.3	\$279.3	\$279.3	\$279.3	\$279.3	\$279.3	\$279.3	\$279.3	\$279.3	\$279.3
8.3 Vehicles	\$13,910.0	\$8,880.3	\$5,029.7	\$2,013.4	\$893.4	\$1,109.5	\$1,013.5	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
9.0 GENERAL GOVERNMENT	\$709.7	\$0.0	\$709.7	\$339.7	\$20.0	\$20.0	\$60.0	\$20.0	\$80.0	\$20.0	\$20.0	\$60.0	\$70.0
9.1 Recovery of Negative Reserve Fund Balance	\$259.7	\$0.0	\$259.7	\$259.7	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
9.2 Development-Related Studies	\$450.0	\$0.0	\$450.0	\$80.0	\$20.0	\$20.0	\$60.0	\$20.0	\$80.0	\$20.0	\$20.0	\$60.0	\$70.0
10.0 AFFORDABLE HOUSING	\$22,255.0	\$0.0	\$22,255.0	\$1,103.0	\$11,138.0	\$1,173.0	\$1,208.0	\$1,243.0	\$1,278.0	\$1,278.0	\$1,278.0	\$1,278.0	\$1,278.0
10.1 Municipal Investment in Affordable Housing	\$12,255.0	\$0.0	\$12,255.0	\$1,103.0	\$1,138.0	\$1,173.0	\$1,208.0	\$1,243.0	\$1,278.0	\$1,278.0	\$1,278.0	\$1,278.0	\$1,278.0
10.2 Brock Street Mission Project	\$10,000.0	\$0.0	\$10,000.0	\$0.0	\$10,000.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
11.0 WASTE MANAGEMENT	\$15,650.0	\$6,000.0	\$9,650.0	\$0.0	\$0.0	\$0.0	\$0.0	\$9,325.0	\$0.0	\$0.0	\$325.0	\$0.0	\$0.0
11.1 Buildings, Land & Furnishings	\$15,000.0	\$6,000.0	\$9,000.0	\$0.0	\$0.0	\$0.0	\$0.0	\$9,000.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
11.2 Vehicles & Equipment	\$650.0	\$0.0	\$650.0	\$0.0	\$0.0	\$0.0	\$0.0	\$325.0	\$0.0	\$0.0	\$325.0	\$0.0	\$0.0
TOTAL - 10 YEAR GENERAL SERVICES	\$361,850.0	\$76,115.2	\$285,734.8	\$39,174.7	\$40,064.1	\$57,174.4	\$5,274.0	\$38,194.6	\$14,236.1	\$4,221.0	\$5,759.1	\$3,916.0	\$77,721.0

25
TABLE 4

**CITY OF PETERBOROUGH
SUMMARY OF DEVELOPMENT-RELATED CAPITAL PROGRAM
ENGINEERING SERVICES 2019 - 2031**

Service	Development-Related Capital Program					
	Total Project Cost (\$000)	Grants/ Subsidies Other Contributions (\$000)	Replacement & Benefit to Existing (\$000)	Available DC Reserves (\$000)	Post-Period Benefit (\$000)	Total DC Eligible Costs for Recovery (\$000)
1 ROADS & OTHER CITY-WIDE ENGINEERING	\$562,435.9	\$0.0	\$189,813.2	\$15,505.3	\$215,091.6	\$142,025.7
2 SEWAGE TREATMENT	\$7,757.1	\$0.0	\$0.0	\$0.0	\$0.0	\$7,757.1
TOTAL ENGINEERING SERVICES	\$570,193.0	\$0.0	\$189,813.2	\$15,505.3	\$215,091.6	\$149,782.8

VI DEVELOPMENT CHARGES ARE CALCULATED IN ACCORDANCE WITH THE *DEVELOPMENT CHARGES ACT*

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. Adjustments to these amounts resulting from a cash flow analysis that accounts for interest earnings and borrowing costs are also discussed.

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.

It is noted that 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. 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.

A. DEVELOPMENT CHARGES CALCULATION

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

1. General Services

The capital forecast for general services incorporates those projects identified to be related to development anticipated in the next 10 years. However, not all of the capital costs are to be recovered from new development by way of development charges. Table 5 shows that \$128.4 million of the capital forecast relates to replacement of existing capital facilities or to shares of projects that provide benefit to the existing community. These portions of capital costs would have to be funded from property taxes and other non-development charges revenue sources.

An additional share of \$4.6 million has been identified as available DC reserves and represents the revenues collected from previous DC by-laws. This portion has been netted out of the chargeable capital costs. Another share of the forecast, \$87.4 million, is attributable to growth beyond the 2028 period, which may be considered for recovery in future development charges studies, subject to service level restrictions.

The *DCA*, s. 5 (1) 8, requires that development-related net capital costs for “soft” services be reduced by 10 per cent in calculating the applicable development charges for these services. The 10 per cent share of development-related net capital costs not included in the development charges calculations must be funded from non-development charges sources. In total, about \$5.7 million is identified as the required 10 per cent reduction.

The remaining \$50.0 million is carried forward to the development charges calculation as a development-related cost. Of the development-related cost, \$44.8 million has been allocated to new residential development, and \$5.2 million has been allocated to new non-residential development. This results in an unadjusted charge of \$3,398.49 per capita and \$21.47 per square metre for the provision of soft services.

2. Engineered Services

Table 6 displays the development-related capital forecast for Roads & Other City-wide Engineering and Sewage Treatment from 2019 to 2031. The net cost of the capital program amounts to \$570.2 million; however, \$15.5 million has been identified as funds available in the DC reserves and is removed from the development charges calculation. In addition, \$189.8 million of the works is deemed to benefit the existing population and, as such, is also removed from the development charges calculation. Another portion of the program that is not included in the DC calculation is the share of the works that is considered to provide benefit to development beyond the DC Study’s planning horizon. \$215.1 million is identified as the post-period benefit share.

The net capital cost after the discounts is \$149.8 million, of which \$115.6 million is allocated to benefit the future residential population and \$34.1 million is allocated to non-residential development. The resulting development charge is \$6,523.18 per capita and \$104.38 per square metre.

3. 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 Appendix C for engineered 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 adjusted per capita rate increases by \$445.42, from \$9,921.66 per capita to \$10,367.08 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 \$30,559 for a single and semi-detached units to a low of \$17,308 for apartment units. The other multiples charge is calculated at \$19,309.

The non-residential charge also experiences an increase after cash flow considerations from \$125.86 to \$128.68 per square metre. This is displayed on Table 8.

B. COMPARISON OF 2019 NEWLY CALCULATED DEVELOPMENT CHARGES WITH CHARGES CURRENTLY IN FORCE IN PETERBOROUGH

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 increases by \$7,224 per unit, or 31 per cent.

The current development charges rate for non-residential development will increase by \$36.09 per square metre, from \$92.59 to \$128.68 per square metre, or 39 per cent.

Table 11 shows the total calculated City-wide uniform plus planning area charge compared with the current combined City-wide uniform and planning area charge. Increases range from 21 per cent in Chemong West to 31 per cent City-wide.

CITY OF PETERBOROUGH
SUMMARY OF UNADJUSTED RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT CHARGES
10-YEAR CAPITAL PROGRAM FOR GENERAL SERVICES

10 Year Growth in Population in New Units	13,373
10 Year Growth in Square Metres	248,249

Service	Development-Related Capital Program (2019 - 2028)									
	Net Municipal Cost (\$000)	Replacement & Benefit to Existing (\$000)	Required Service Discount (\$000)	Available DC Reserves (\$000)	Post-2028 Benefit (\$000)	Total DC Eligible Costs for Recovery (\$000)	Residential Share		Non-Residential Share	
							%	(\$000)	%	(\$000)
1.0 LIBRARY SERVICES	\$13,645.0	\$5,566.3	\$807.9	\$792.9	\$2,403.0	\$4,075.0	100%	\$4,075.0	0%	\$0.00
Unadjusted Development Charge Per Capita								\$304.72		
Unadjusted Development Charge Per Square Metre										\$0.00
2.0 FIRE SERVICES	\$19,318.1	\$4,000.0	\$0.0	\$114.0	\$11,685.9	\$3,518.2	80%	\$2,814.6	20%	\$703.64
Unadjusted Development Charge Per Capita								\$210.47		
Unadjusted Development Charge Per Square Metre										\$2.83
3.0 POLICE SERVICES	\$74,036.2	\$22,586.3	\$0.0	\$4.8	\$49,168.1	\$2,277.0	80%	\$1,821.6	20%	\$455.40
Unadjusted Development Charge Per Capita								\$136.22		
Unadjusted Development Charge Per Square Metre										\$1.83
4.0 RECREATION	\$15,576.3	\$4,743.7	\$1,083.3	\$1,059.3	\$0.0	\$8,690.0	100%	\$8,690.0	0%	\$0.00
Unadjusted Development Charge Per Capita								\$649.81		
Unadjusted Development Charge Per Square Metre										\$0.00
5.0 PARKS	\$31,450.0	\$12,000.0	\$1,945.0	\$935.9	\$6,742.4	\$9,826.7	100%	\$9,826.7	0%	\$0.00
Unadjusted Development Charge Per Capita								\$734.82		
Unadjusted Development Charge Per Square Metre										\$0.00
6.0 PUBLIC WORKS	\$33,501.1	\$21,259.9	\$0.0	\$0.0	\$9,277.3	\$2,963.8	80%	\$2,371.1	20%	\$592.76
Unadjusted Development Charge Per Capita								\$177.30		
Unadjusted Development Charge Per Square Metre										\$2.39
7.0 PARKING	\$24,570.0	\$9,090.9	\$1,547.9	\$1,242.4	\$7,324.9	\$5,363.8	80%	\$4,291.1	20%	\$1,072.77
Unadjusted Development Charge Per Capita								\$320.88		
Unadjusted Development Charge Per Square Metre										\$4.32

**CITY OF PETERBOROUGH
SUMMARY OF UNADJUSTED RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT CHARGES
10-YEAR CAPITAL PROGRAM FOR GENERAL SERVICES**

10 Year Growth in Population in New Units	13,373
10 Year Growth in Square Metres	248,249

Service	Development-Related Capital Program (2019 - 2028)									
	Net Municipal Cost	Replacement & Benefit to Existing	Required Service Discount	Available DC Reserves	Post-2028 Benefit	Total DC Eligible Costs for Recovery	Residential Share		Non-Residential Share	
	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	%	(\$000)	%	(\$000)
8.0 TRANSIT SERVICES	\$41,023.4	\$29,111.9	\$0.0	\$317.6	\$491.7	\$11,102.1	80%	\$8,881.7	20%	\$2,220.43
Unadjusted Development Charge Per Capita								\$664.15		
Unadjusted Development Charge Per Square Metre										\$8.94
9.0 GENERAL GOVERNMENT	\$709.7	\$0.0	\$45.0	\$0.0	\$0.0	\$664.7	80%	\$531.8	20%	\$132.95
Unadjusted Development Charge Per Capita								\$39.77		
Unadjusted Development Charge Per Square Metre										\$0.54
10.0 AFFORDABLE HOUSING	\$22,255.0	\$20,029.5	\$222.6	\$169.5	\$306.7	\$1,526.8	100%	\$1,526.8	0%	\$0.00
Unadjusted Development Charge Per Capita								\$114.17		
Unadjusted Development Charge Per Square Metre										\$0.00
11.0 WASTE MANAGEMENT	\$9,650.0	\$7,773.7	\$187.6	\$0.0	\$916.7	\$771.9	80%	\$617.5	20%	\$154.39
Unadjusted Development Charge Per Capita								\$46.18		
Unadjusted Development Charge Per Square Metre										\$0.62
TOTAL 10-YEAR GENERAL SERVICES	\$276,084.8	\$128,388.6	\$5,651.6	\$4,636.4	\$87,400.0	\$50,008.2		\$44,830.3		\$5,178.0
Unadjusted Development Charge Per Capita								\$3,398.49		
Unadjusted Development Charge Per Sq.M										\$21.47

CITY OF PETERBOROUGH
SUMMARY OF UNADJUSTED RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT CHARGES
CAPITAL PROGRAM FOR ENGINEERING SERVICES

Population Growth in New Units to 2031	17,729
Ultimate Non-Residential Floorspace Growth in Square Meters	327,039

Service	Development-Related Capital Program									
	Total Project Cost (\$000)	Grants/ Subsidies Other Contributions (\$000)	Replacement & Benefit to Existing (\$000)	Available DC Reserves (\$000)	Post-Period Benefit (\$000)	Total DC Eligible Costs for Recovery (\$000)	Residential Share		Non-Residential Share	
							%	(\$000)	%	(\$000)
1 ROADS & OTHER CITY-WIDE ENGINEERING	\$562,435.9	\$0.0	\$189,813.2	\$15,505.3	\$215,091.6	\$142,025.7	77.2%	\$109,660.0	22.8%	\$32,365.67
Unadjusted Development Charge Per Capita								\$6,185.35		
Unadjusted Development Charge Per Square Metre										\$98.97
2 SEWAGE TREATMENT	\$7,757.1	\$0.0	\$0.0	\$0.0	\$0.0	\$7,757.1	77.2%	\$5,989.4	22.8%	\$1,767.74
Development Charge Per Capita								\$337.83		
Development Charge Per Square Metre										\$5.41
TOTAL ENGINEERING SERVICES	\$570,193.0	\$0.0	\$189,813.2	\$15,505.3	\$215,091.6	\$149,782.8		\$115,649.4		\$34,133.4
Residential								\$6,523.18		
Unadjusted Development Charge Per Capita										
Unadjusted Development Charge Per Square Metre										\$104.38

32
TABLE 7

**CITY OF PETERBOROUGH
CITY-WIDE DEVELOPMENT CHARGES
RESIDENTIAL DEVELOPMENT CHARGES BY UNIT TYPE**

Service	Unadjusted Charge Per Capita	Adjusted Charge Per Capita	Residential Charge By Unit Type (1)			Percentage of Charge
			Residential A Singles & Semis	Residential B Other Multiples	Residential C Apartments	
General Government	\$39.77	\$42.46	\$125	\$79	\$71	0.41%
Library Services	\$304.72	\$375.81	\$1,108	\$700	\$627	3.62%
Fire Services	\$210.47	\$239.13	\$705	\$445	\$399	2.31%
Police Services	\$136.22	\$128.77	\$380	\$240	\$215	1.24%
Recreation	\$649.81	\$715.11	\$2,108	\$1,332	\$1,194	6.90%
Parks	\$734.82	\$825.32	\$2,433	\$1,537	\$1,378	7.96%
Public Works	\$177.30	\$252.36	\$744	\$470	\$421	2.43%
Parking	\$320.88	\$335.52	\$989	\$625	\$560	3.24%
Transit Services	\$664.15	\$717.12	\$2,114	\$1,336	\$1,197	6.92%
Affordable Housing	\$114.17	\$118.36	\$349	\$220	\$198	1.14%
Waste Management	\$46.18	\$48.29	\$142	\$90	\$81	0.47%
Subtotal General Services	\$3,398.48	\$3,798.24	\$11,197	\$7,074	\$6,341	36.64%
Roads & Other City-Wide Engineering	\$6,185.35	\$6,231.01	\$18,366	\$11,606	\$10,403	60.10%
Sewage Treatment	\$337.83	\$337.83	\$996	\$629	\$564	3.26%
Subtotal Engineered Services	\$6,523.18	\$6,568.84	\$19,362	\$12,235	\$10,967	63.36%
TOTAL CHARGE PER UNIT	\$9,921.66	\$10,367.08	\$30,559	\$19,309	\$17,308	100.00%
(1) Based on Persons Per Unit Of:			2.95	1.86	1.67	

TABLE 8

**CITY OF PETERBOROUGH
CITY-WIDE DEVELOPMENT CHARGES
NON-RESIDENTIAL DEVELOPMENT CHARGES PER SQUARE METRE**

Service	Non-Residential		Percentage of Charge
	Unadjusted Charge per Square Metre	Charge per Square Metre	
General Government	\$0.54	\$0.57	0.4%
Library Services	\$0.00	\$0.00	0.0%
Fire Services	\$2.83	\$3.22	2.5%
Police Services	\$1.83	\$1.73	1.3%
Recreation	\$0.00	\$0.00	0.0%
Parks	\$0.00	\$0.00	0.0%
Public Works	\$2.39	\$3.39	2.6%
Parking	\$4.32	\$4.51	3.5%
Transit Services	\$8.94	\$9.65	7.5%
Affordable Housing	\$0.00	\$0.00	0.0%
Waste Management	\$0.62	\$0.65	0.5%
Subtotal General Services	\$21.48	\$23.72	18.4%
Roads & Other City-Wide Engineering	\$98.97	\$99.55	77.4%
Sewage Treatment	\$5.41	\$5.41	4.2%
Subtotal Engineered Services	\$104.38	\$104.96	81.6%
TOTAL CHARGE PER SQUARE METRE	\$125.86	\$128.68	100.0%

TABLE 9

**CITY OF PETERBOROUGH
COMPARISON OF CURRENT AND CALCULATED
RESIDENTIAL DEVELOPMENT CHARGES**

Service	Current Singles & Semis Charge	Calculated Singles & Semis Charge	Difference in Charge	
General Government	\$108	\$125	\$17	15.7%
Library Services	\$882	\$1,108	\$226	25.6%
Fire Services	\$735	\$705	(\$30)	-4.1%
Police Services	\$1	\$380	\$379	N/A
Recreation	\$2,275	\$2,108	(\$167)	-7.3%
Parks	\$1,280	\$2,433	\$1,153	90.1%
Public Works	\$389	\$744	\$355	91.3%
Parking	\$508	\$989	\$481	94.7%
Transit Services	\$398	\$2,114	\$1,716	431.2%
Affordable Housing	\$237	\$349	\$112	47.3%
Waste Management	\$0	\$142	\$142	N/A
Subtotal General Services	\$6,813	\$11,197	\$4,384	64.3%
Roads & Other City-Wide Engineering	\$15,458	\$18,366	\$2,908	18.8%
Sewage Treatment	\$1,064	\$996	(\$68)	-6.4%
Subtotal Engineered Services	\$16,522	\$19,362	\$2,840	17.2%
TOTAL CHARGE PER UNIT	\$23,337	\$30,559	\$7,224	31.0%

TABLE 10

**CITY OF PETERBOROUGH
COMPARISON OF CURRENT AND CALCULATED
NON-RESIDENTIAL DEVELOPMENT CHARGES**

Service	Current Non-Residential Charge	Calculated Non-Residential Charge	Difference in Charge	
General Government	\$0.59	\$0.57	(\$0.02)	-3.4%
Library Services	\$0.00	\$0.00	\$0.00	0.0%
Fire Services	\$4.00	\$3.22	(\$0.78)	-19.5%
Police Services	\$0.01	\$1.73	\$1.72	N/A
Recreation	\$0.00	\$0.00	\$0.00	0.0%
Parks	\$0.00	\$0.00	\$0.00	0.0%
Public Works	\$2.12	\$3.39	\$1.27	59.9%
Parking	\$2.78	\$4.51	\$1.73	62.2%
Transit Services	\$2.17	\$9.65	\$7.48	344.7%
Affordable Housing	\$0.00	\$0.00	\$0.00	0.0%
Waste Management	\$0.00	\$0.65	\$0.65	N/A
Subtotal General Services	\$11.67	\$23.72	\$12.05	103.3%
Roads & Other City-Wide Engineering	\$75.66	\$99.55	\$23.89	31.6%
Sewage Treatment	\$5.26	\$5.41	\$0.15	2.9%
Subtotal Engineered Services	\$80.92	\$104.96	\$24.04	29.7%
TOTAL CHARGE PER SQUARE METRE	\$92.59	\$128.68	\$36.09	39.0%

36
TABLE 11

**CITY OF PETERBOROUGH
COMPARISON OF EXISTING AND PROPOSED
PLANNING AREA SPECIFIC DEVELOPMENT CHARGES**

Total Residential Development Charges

Development Charges By Growth Area	Charge Per Unit Residential A - Singles & Semi			
	Calculated 2019 City-wide Uniform plus Area Charge	Current City-wide Uniform plus Area Charge	Difference in Charge	
			\$	%
1 Jackson	\$33,760	\$26,538	\$7,224	27.2%
2 Carnegie East	\$36,341	\$29,119	\$7,224	24.8%
3 Carnegie West	\$34,762	\$27,540	\$7,224	26.2%
4 Lily Lake	\$37,637	\$30,415	\$7,224	23.8%
5 Chemong - East	\$38,107	\$30,885	\$7,224	23.4%
6 Chemong - West	\$41,133	\$33,911	\$7,224	21.3%
7 Liftlock	\$38,141	\$30,919	\$7,224	23.4%
8 Coldspring	\$34,382	\$27,160	\$7,224	26.6%
9 City-Wide Dev. Area	\$30,559	\$23,337	\$7,224	31.0%

Non-Residential Development Charges

City-Wide Uniform Charge	Charge Per Square Metre of Gross Floor Area			
	Calculated 2019 Charge	Current Charge	Difference in Charge	
			\$	%
Total Charge	\$128.68	\$92.59	\$36.09	39.0%

Note: Current development charges effective January 1st, 2019 to December 31st, 2019

VII LONG-TERM CAPITAL AND OPERATING COSTS

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

A. NET OPERATING COSTS FOR THE CITY'S SERVICES TO INCREASE OVER THE FORECAST PERIOD

Table 12 summarizes the estimated increase in net operating costs that the City will experience for additions associated with the planned capital program. The estimated changes in net operating costs are based on the financial information from the City (additional details are included in Appendix E).

As shown in Table 12, by 2028 the City's net operating costs are estimated to increase by about \$55.1 million. This includes substantial increased operating costs associated with expansion to facilities for Fire, Police, and Transit services.

B. LONG-TERM CAPITAL FINANCING FROM NON-DEVELOPMENT CHARGES SOURCES TOTALS \$142.0 MILLION

As discussed in Section VI, Table 12 also summarizes the components of the development-related capital forecast that will require funding from non-development charges sources. Of the \$285.7 million net capital forecast, about \$142.0 million will need to be financed from non-development charges sources over the next 10 years. This includes about \$5.8 in respect of the 10 per cent discount required by the DCA for "soft" services and about \$136.1 million for shares of projects related to capital replacement and for non-growth shares of projects that provide benefit to the existing community. In addition, \$88.3 million in interim financing may be required for projects, mostly road projects, related to general service level increases and to growth in the post-2028 period. It is likely that most of these monies could be recovered from future development charges as the by-laws are revisited at least every five years.

TABLE 12

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

Cumulative Net Operating Impacts	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Net Operating Impacts (1)										
Library Services	\$350.0	\$350.0	\$350.0	\$350.0	\$350.0	\$350.0	\$350.0	\$350.0	\$350.0	\$350.0
Fire Services	\$0.0	\$1,190.0	\$1,190.0	\$1,190.0	\$1,190.0	\$5,780.0	\$5,780.0	\$5,780.0	\$5,780.0	\$5,780.0
Police Services	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$33,750.0
Recreation	\$0.0	\$103.0	\$103.0	\$103.0	\$103.0	\$103.0	\$103.0	\$103.0	\$103.0	\$103.0
Parks	\$112.5	\$114.9	\$116.3	\$116.4	\$116.5	\$116.7	\$116.8	\$116.9	\$117.0	\$117.1
Public Works	\$98.6	\$209.3	\$150.4	\$116.1	\$186.2	\$144.1	\$144.1	\$144.1	\$144.1	\$144.1
Parking	\$0.0	\$0.0	\$0.0	\$0.0	\$1,228.5	\$1,228.5	\$1,228.5	\$1,228.5	\$1,228.5	\$1,228.5
Transit Services	\$1,831.4	\$2,183.2	\$10,720.3	\$11,108.1	\$11,191.9	\$11,515.8	\$11,599.6	\$12,139.4	\$12,223.2	\$12,307.0
General Government	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Affordable Housing	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Waste Management	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Roads & Other City-Wide Engineering	\$101.8	\$328.1	\$440.9	\$555.1	\$671.0	\$788.4	\$907.4	\$1,032.2	\$1,159.0	\$1,287.4
Sewage Treatment	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
NET OPERATING IMPACTS	\$2,494.3	\$4,478.6	\$13,070.9	\$13,538.8	\$15,037.2	\$20,026.5	\$20,229.4	\$20,894.2	\$21,104.8	\$55,067.1

Long-term Capital Impact	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Long-term Capital Impact (1)											
Total Net Cost	\$39,174.7	\$40,064.1	\$57,174.4	\$5,274.0	\$38,194.6	\$14,236.1	\$4,221.0	\$5,759.1	\$3,916.0	\$77,721.0	\$285,734.8
Net Cost From Development Charges	\$9,742.2	\$12,151.3	\$15,958.8	\$1,502.8	\$6,545.0	\$575.4	\$502.4	\$619.5	\$448.4	\$2,734.4	\$50,780.1
Prior Growth Share from DC Reserve Balances (2)	\$1,884.7	\$445.1	\$1,059.3	\$0.0	\$1,242.4	\$0.0	\$0.0	\$0.0	\$0.0	\$4.8	\$4,636.4
Portion for Post-2028 Development (3)	\$6,345.4	\$2,676.8	\$4,068.4	\$1,298.4	\$9,199.4	\$10,626.2	\$1,346.7	\$1,437.7	\$1,126.2	\$50,191.7	\$88,316.8
Funding From Non-DC Sources											
Discount Portion	\$780.4	\$917.7	\$1,635.6	\$121.9	\$1,801.8	\$105.1	\$133.6	\$131.6	\$103.1	\$108.6	\$5,839.2
Replacement	\$20,421.9	\$23,873.2	\$34,452.3	\$2,350.9	\$19,405.9	\$2,929.4	\$2,238.4	\$3,570.4	\$2,238.4	\$24,681.6	\$136,162.3
FUNDING FROM NON-DC SOURCES	\$21,202.3	\$24,790.9	\$36,087.8	\$2,472.8	\$21,207.7	\$3,034.5	\$2,371.9	\$3,702.0	\$2,341.4	\$24,790.1	\$142,001.5

Notes:

(1) See Appendix E

(2) Existing development charge reserve fund balances collected from growth prior to 2019 are applied to fund initial projects in development-related capital forecast

(3) Post 2028 development-related net capital costs may be eligible for development charge funding in future DC by-laws

VIII ASSET MANAGEMENT PLAN

The *DCA* now requires that municipalities complete an Asset Management Plan before passing a development charges by-law. A key purpose 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. Further details relating to the Asset Management Plan are discussed in Appendix F.

A. ANNUAL CAPITAL PROVISIONS WILL REACH \$2.3 MILLION BY 2029 AND \$21.6 MILLION BY 2032

Tables 13 and 14 summarize the annual capital provisions required to replace the development eligible and ineligible costs associated with the capital infrastructure identified in the DC Background Study. This estimate is based on information obtained through discussions with municipal staff regarding useful life assumptions and the capital cost of acquiring and/or replacing each asset.

Table 13 illustrates that by 2029 the City will need to fund an additional \$2.3 million per annum in order to properly fund the full life cycle costs of the new general services assets supported under the proposed Development Charges By-law. Table 14 illustrates that by 2032, the City will be required to fund approximately \$21.6 million per annum in order to fund the full life cycle costs of the engineered services assets. The years 2029 and 2032 have been included to calculate the annual contribution for the 2019-2028 and 2019-2031 periods as the expenditures in 2028 and 2031 will not trigger asset management contributions until 2029 and 2032.

The calculated annual funding provision should be considered in the context of the City's projected growth. Over the next 10 years, the City is projected to increase by 12,120 people. By 2031, the City's population will increase by approximately 16,089 people. In addition, the City will add 3,972 new employees by 2028 and 5,233 employees by 2031. This results in approximately 248,249 square metres and 327,039 square metres of additional non-residential building space by 2028 and 2031 respectively.

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 to be funded under the proposed Development Charges By-law.

The calculated annual provisions identified are considered to be financially sustainable as it is expected that the increased capital asset requirements can be absorbed by the tax and user base over the long-term.

TABLE 13

**CITY OF PETERBOROUGH
SUMMARY OF ASSET MANAGEMENT PROVISIONS FOR GENERAL SERVICES**

General Services	2019 - 2028 Capital Program		Calculated AMP Annual Provision by 2029	
	DC Recoverable	Non-DC Funded	DC Related	Non-DC Related
Library Services	\$5,392,036	\$8,252,964	\$107,043	\$265,121
Fire Services	\$3,632,167	\$15,685,933	\$73,548	\$427,312
Police Services	\$2,281,806	\$71,754,364	\$54,136	\$1,712,925
Recreation	\$10,832,550	\$41,410,395	\$220,489	\$853,519
Parks	\$11,958,433	\$19,491,567	\$585,654	\$1,050,759
Public Works	\$2,963,825	\$30,537,275	\$58,838	\$1,433,817
Parking	\$7,260,634	\$17,309,366	\$529,636	\$1,262,653
Transit Services	\$11,419,753	\$63,052,247	\$617,595	\$1,202,188
General Government	\$709,730	\$0	\$0	\$0
Affordable Housing	\$1,884,759	\$20,370,241	\$13,349	\$189,141
Waste Management	\$857,704	\$14,792,296	\$18,431	\$352,762
Total	\$59,193,396	\$302,656,649	\$2,278,718	\$8,750,197

TABLE 14

**CITY OF PETERBOROUGH
SUMMARY OF ASSET MANAGEMENT PROVISIONS FOR ENGINEERED SERVICES**

Engineered Services	2019 - 2031 Capital Program		Calculated AMP Annual Provision by 2032	
	DC Recoverable	Non-DC Funded	DC Related	Non-DC Related
Roads & Other City-Wide Engineering	\$393,606,001	\$152,516,897	\$21,562,177	\$8,555,452
Sewage Treatment	\$7,757,121	\$0	\$0	\$0
Total	\$401,363,122	\$152,516,897	\$21,562,177	\$8,555,452

IX OTHER ISSUES AND CONSIDERATIONS

A. DEVELOPMENT CHARGES ADMINISTRATION

Many of the administrative requirements of the *DCA* will be similar to those presently followed by the City in terms of collection practices. However, changes will likely be required in the use of and reporting on the new development charges. In this regard:

- It is recommended that the current practices regarding collection of development charges and by-law administration continue to the extent possible;
- As required under the *DCA*, the City should codify any rules regarding application of the by-laws and any exemptions within the development charges by-laws proposed for adoption;
- It is recommended that the City continue to report policies consistent with the requirements of the *DCA*;
- It is recommended that the by-laws permit the payment of a development charge in cash or through services-in-lieu agreements. The municipality is not obligated to enter services-in-lieu agreements; and
- It is recommended that Council adopt the development-related capital forecast included in this background study, subject to annual review through the City's normal capital budget process.

B. CONSIDERATION OF AREA RATING

As part of the new regulations adopted by the Province, Council is required to consider the use of area rating (i.e. area-specific development charges) when preparing a development charges background study. As part of the City's 2019 DC update, the appropriateness of implementing area-specific development charges for the various City services was examined.

The *DCA* permits the City to designate, in its DC by-law, the areas where development charges shall be imposed. The charges may apply to all lands in the City or to other designated development areas as specified in the DC By-law.

The following was considered with respect to area-specific development charges:

- Is the use of area-specific charges appropriate for some or all services?
- Are there any data limitations with calculating an area-specific development charge?

Area-specific development charges are typically considered when there is clear benefit to a particular area (including the population or population and employment), and have been implemented in mostly stand alone greenfield developments.

The City undertook an area-specific development charges study in 2017 to establish area-specific rates for eight areas throughout the City. These rates were not updated as a part of this DC study process. The area-specific charges apply to the following areas:

- | | |
|-----------------|----------------|
| • Jackson | • Chemong East |
| • Carnegie East | • Chemong West |
| • Carnegie West | • Liftlock |
| • Lily Lake | • Coldsprings |

C. LOCAL SERVICE DEFINITIONS

The 2019 DC Background Study also includes definitions to determine the eligible capital costs for inclusion in the development charges calculation for the City. The local service definitions have been reviewed by City staff and are set out in Appendix G.

APPENDIX A

DEVELOPMENT FORECAST

APPENDIX A

DEVELOPMENT FORECAST

This appendix summarizes the development forecast used to prepare the 2019 Development Charges Background Study for the City of Peterborough. The forecast methodology and key assumptions are discussed and the results are presented in a series of tables.

The forecasts of population, households, employment and non-residential building space were prepared by Hemson Consulting Ltd. and are structured to achieve 2031 population and employment targets established for the City through Schedule 3 to the Provincial Growth Plan for the Greater Golden Horseshoe, 2017.¹ Data sources include information from the Census, Statistics Canada building permits, CHMC housing completions, and City data on recent and anticipated development approvals.

The forecast results are set out as follows:

Table 1	Historical Population, Occupied Households & Employment Summary
Table 2	Historical Annual Housing Completions (CMHC)
Table 3	Historical Annual Residential Building Permits
Table 4	Historical Households by Period of Construction Showing Household Size
Table 5	Population, Household & Employment Forecast Summary
Table 6	Forecast of Household Growth by Unit Type
Table 7	Forecast Population Growth in New Households by Unit Type
Table 8	Non-Residential Space Forecast

A. FORECAST APPROACH AND KEY ASSUMPTIONS

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

¹ That is a population of 103,000 and employment of 52,000 by 2031. Note that the population target includes an estimate of Census net under-coverage.

be specific enough with regards to quantum, type, location and timing of development to allow the City to prepare a reasonable development-related capital program.

B. HISTORICAL DEVELOPMENT IN THE CITY

Population figures shown in the development forecast represent mid-year estimates. Population figures are equivalent to the population recorded in the Census (“Census population”). This definition does not include the Census net under-coverage (3.54 per cent of the Census population in Peterborough) which represents those who were missed or double-counted by the Census.

Historical population and employment set out in this appendix are used to determine the average service levels attained in the City over the last 10 years (2009-2018). Since 2016 was the last year of the Census, figures for 2017 and 2018 are estimated.

Historical data indicates the population of Peterborough increased from 76,706 in 2008 to 83,265 in 2018—an increase of 6,559 people. Total occupied households increased from 32,078 to 35,682 over the same period (see Table 1).

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

Historical employment figures are also shown in Table 1. There are currently about 44,034 jobs in the City. Overall employment has fallen over the last decade, in part the result of the 2008 financial crisis and subsequent recession. As a result, the City’s activity rate (the ratio of employment to population) has fallen from 58.3 per cent to 52.9 per cent over the last 10 years.

Details on new housing growth in the City are provided in Tables 2 and 3. The overall market share of single and semi-detached units over the last decade has been 60 per cent, though the number of units completed in any one year varies. The market share of row houses and apartments over the same period has been 21 per cent and 19 per cent respectively. As with the single and semi-detached unit types, the number of completions in any given year is variable.

Table 4 provides details on historical occupancy patterns for occupied households in Peterborough. The overall average occupancy level in the City for single and semi-detached units is 2.56 persons per housing unit (PPU). Occupancy levels for units constructed between 2006 and 2016 are higher than the overall average and are used in the development charges calculation since they better reflect the number of people that are likely to reside in new development. The average PPU of single and semi-detached units built in the City in the period 2006 to 2016 is 2.95. Average PPUs for recently constructed row and apartment housing, are 1.86 and 1.67 respectively.

C. FORECAST METHOD AND RESULTS

A 10-year development forecast, from 2019 to 2028, has been used for all the general services in the City. For the Roads and Other City-Wide Engineering and Sewage Treatment services, a long-term forecast from 2019 to 2031 has been used.

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 as well as the population in new housing units is required.

- The *population growth*² 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.

Development charges are levied on non-residential development as a charge per m² of Gross Floor Area (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 floorspace* in the City.

1. Residential Development Forecast

As shown in Table 5, the City's population is forecast to grow from 83,265 in 2018 to 95,385 in 2028. Occupied households are forecast to increase by 5,284 units over the

² Commonly referred to as "net population growth" in the context of development charges.

next 10 years. Over the long-term (to 2031) the City's population is forecast to grow to 99,354.

In keeping with past trends, the majority of new housing (64 per cent) is anticipated to be single detached dwelling units (see Table 6).

Population growth in the new units is estimated by applying the following PPU's to the housing unit forecast: 2.95 for single and semi-detached units; 1.86 for rows; and 1.67 for apartments. The assumptions are informed by the historical occupancy patterns for permanently occupied units set out in Table 4.

The forecast growth in population in new housing units over the 2019 to 2028 period is 13,373, of which 10,027 (75 per cent) will be in single and semi-detached housing types (see Table 7). The forecast growth in population in new housing between 2019 and 2031 is 17,729.

2. Non-Residential Development Forecast

Employment in the City, after a long period of decline, is forecast to increase steadily between 2019 and 2031, at about 400 jobs per year and below the rate of population growth (this figure excludes work at home employment) (see Table 5).

The employment forecast is divided into two land-use based categories:

- Population-related Employment is employment that primarily serves a resident population and includes retail, education, healthcare, and local government. This generally grows in line with population growth. Jobs under this category typically locate in land zoned for commercial and institutional uses, but may also be located in residential and mixed-use areas.
- Employment-land Employment refers to traditional industrial-type employment primarily accommodated in low-rise industrial buildings in business parks and employment areas. Given the spatial and operational needs of these types of jobs, they are almost exclusively located in lands zoned for industrial uses.

An assumed floor space per worker (FSW) is applied to the employment forecast in order to project growth in new non-residential space in the City. The FSWs used are:

Population-Related	40 m ² per employee
Employment Land-Related	90 m ² per employee

The overall growth in new non-residential building space across the City between 2019 and 2028 is 248,249 m², of which 87,384 m² will be population-related and 160,865 m² will be on employment lands (Table 8).

Between 2019 and 2031 overall growth in new non-residential building space across the City will be 327,039 m², of which 115,118 m² will be for population-related activities and 211,921 m² will be on employment lands (Table 8).

51
APPENDIX A - TABLE 1

CITY OF PETERBOROUGH
HISTORICAL POPULATION, OCCUPIED HOUSEHOLDS & EMPLOYMENT SUMMARY

Mid-Year	Census Population	Annual Growth	Occupied Households	Annual Growth	HH Size (PPU)	Employment by Place of Work	Annual Growth	Activity Rate
2006	75,406		31,204		2.42	44,114		58.5%
2007	76,053	647	31,638	434	2.40	44,425	311	58.4%
2008	76,706	653	32,078	440	2.39	44,738	313	58.3%
2009	77,364	658	32,524	446	2.38	45,054	316	58.2%
2010	78,028	664	32,976	452	2.37	45,372	318	58.1%
2011	78,698	670	33,435	459	2.35	45,692	320	58.1%
2012	79,159	461	33,686	251	2.35	45,199	-493	57.1%
2013	79,623	464	33,939	253	2.35	44,711	-488	56.2%
2014	80,090	467	34,194	255	2.34	44,229	-482	55.2%
2015	80,560	470	34,451	257	2.34	43,752	-477	54.3%
2016	81,032	472	34,710	259	2.33	43,280	-472	53.4%
2017	82,141	1,109	35,193	483	2.33	43,655	375	53.1%
2018	83,265	1,124	35,682	489	2.33	44,034	379	52.9%
Growth 2009-2018		6,559		3,604			-704	

Source: Statistics Canada, Census of Canada

APPENDIX A - TABLE 2

CITY OF PETERBOROUGH
HISTORICAL ANNUAL HOUSING COMPLETIONS (CMHC)

Year	CMHC Annual Housing Completions - Units				Completions - Shares By Unit Type			
	Singles & Semis	Rows	Apts.	Total	Singles & Semis	Rows	Apts.	Total
2009	178	86	75	339	53%	25%	22%	100%
2010	256	57	135	448	57%	13%	30%	100%
2011	154	70	0	224	69%	31%	0%	100%
2012	111	28	18	157	71%	18%	11%	100%
2013	146	52	44	242	60%	21%	18%	100%
2014	166	59	141	366	45%	16%	39%	100%
2015	180	12	0	192	94%	6%	0%	100%
2016	166	55	0	221	75%	25%	0%	100%
2017	151	103	79	333	45%	31%	24%	100%
2018	72	27	18	117	62%	23%	15%	100%
Growth 2009-2018	1,580	549	510	2,639	60%	21%	19%	100%
<i>5 Year Average</i>	<i>147</i>	<i>51</i>	<i>48</i>	<i>246</i>				

Source: Canada Mortgage and Housing Corporation (CMHC), Housing Market Information

APPENDIX A - TABLE 3

CITY OF PETERBOROUGH
HISTORICAL ANNUAL RESIDENTIAL BUILDING PERMITS

Year	Annual Building Permits				Building Permits - Shares By Unit Type			
	Singles/Semis	Rows	Apartments	Total	Singles/Semis	Rows	Apartments	Total
2009	239	70	37	346	69%	20%	11%	100%
2010	187	83	2	272	69%	31%	1%	100%
2011	150	54	48	252	60%	21%	19%	100%
2012	118	41	118	277	43%	15%	43%	100%
2013	211	39	143	393	54%	10%	36%	100%
2014	141	40	192	373	38%	11%	51%	100%
2015	153	44	90	287	53%	15%	31%	100%
2016	153	54	121	328	47%	16%	37%	100%
2017	131	37	41	209	63%	18%	20%	100%
2018	32	75	123	230	14%	33%	53%	100%
Growth 2009-2018	1,515	537	915	2,967	51%	18%	31%	100%
10 Year Average	152	54	92	297				
5 Year Average	122	50	113	285				

Source: Statistics Canada, Building Permits

APPENDIX A - TABLE 4

CITY OF PETERBOROUGH
HISTORICAL HOUSEHOLDS BY PERIOD OF CONSTRUCTION SHOWING HOUSEHOLD SIZE

Dwelling Unit Type	Period of Construction										Period of Construction Summaries		
	Pre 1945	1946-1960	1961-1970	1971-1980	1981-1990	1991-1995	1996-2000	2001-2005	2006-2010	2011-2016	Pre 2006	2006-2016	Total
<i>Singles and Semis</i>													
Household Population	9,585	10,570	5,900	6,155	6,350	2,315	2,070	2,925	3,415	2,200	45,870	5,615	51,485
Households	3,890	4,590	2,325	2,430	2,245	835	805	1,080	1,105	800	18,200	1,905	20,105
Household Size	2.46	2.30	2.54	2.53	2.83	2.77	2.57	2.71	3.09	2.75	2.52	2.95	2.56
<i>Rows</i>													
Household Population	420	380	750	1,110	1,140	595	485	525	710	510	5,405	1,220	6,625
Households	150	135	280	420	455	270	240	300	390	265	2,250	655	2,905
Household Size	2.80	2.81	2.68	2.64	2.51	2.20	2.02	1.75	1.82	1.92	2.40	1.86	2.28
<i>Apartments</i>													
Household Population	3,850	2,780	3,235	3,250	2,400	1,055	530	250	595	390	17,350	985	18,335
Households	2,380	1,655	1,835	1,945	1,420	655	280	165	325	265	10,335	590	10,925
Household Size	1.62	1.68	1.76	1.67	1.69	1.61	1.89	1.52	1.83	1.47	1.68	1.67	1.68
<i>All Units</i>													
Household Population	13,855	13,730	9,885	10,515	9,890	3,965	3,085	3,700	4,720	3,100	68,625	7,820	76,445
Households	6,420	6,380	4,440	4,795	4,120	1,760	1,325	1,545	1,820	1,330	30,785	3,150	33,935
Household Size	2.16	2.15	2.23	2.19	2.40	2.25	2.33	2.39	2.59	2.33	2.23	2.48	2.25

Source: Statistics Canada, 2016 Special Run

CITY OF PETERBOROUGH
POPULATION, HOUSEHOLD & EMPLOYMENT FORECAST SUMMARY

Mid-Year	Census Population	Census Pop'n Growth	Occupied Households	Occupied Household Growth	Household Size	Employment by POW	Employment by POW Growth	Activity Rate	Work at Home	Annual Growth	Total w/ Work At Home	Annual Growth
2016	81,032		34,710		2.33	43,280		53.4%	2,275		45,555	
2017	82,141	1,109	35,193	483	2.33	43,655	375	53.1%	2,295	20	45,950	395
2018	83,265	1,124	35,682	489	2.33	44,034	379	52.9%	2,315	20	46,349	399
2019	84,404	1,139	36,178	496	2.33	44,416	382	52.6%	2,335	20	46,751	402
2020	85,559	1,155	36,681	503	2.33	44,801	385	52.4%	2,355	20	47,156	405
2021	86,730	1,171	37,191	510	2.33	45,190	389	52.1%	2,375	20	47,565	409
2022	87,917	1,187	37,708	517	2.33	45,582	392	51.8%	2,396	21	47,978	413
2023	89,120	1,203	38,232	524	2.33	45,977	395	51.6%	2,417	21	48,394	416
2024	90,339	1,219	38,764	532	2.33	46,376	399	51.3%	2,438	21	48,814	420
2025	91,575	1,236	39,303	539	2.33	46,778	402	51.1%	2,459	21	49,237	423
2026	92,828	1,253	39,850	547	2.33	47,184	406	50.8%	2,480	21	49,664	427
2027	94,098	1,270	40,404	554	2.33	47,593	409	50.6%	2,502	21	50,095	430
2028	95,385	1,287	40,966	562	2.33	48,006	413	50.3%	2,523	22	50,529	435
2029	96,690	1,305	41,536	570	2.33	48,422	416	50.1%	2,545	22	50,967	438
2030	98,013	1,323	42,114	578	2.33	48,842	420	49.8%	2,567	22	51,409	442
2031	99,354	1,341	42,700	586	2.33	49,267	425	49.6%	2,590	22	51,856	447
2019-2028		12,120		5,284			3,972			209		4,181
2019-2031		16,089		7,018			5,233			275		5,508

Source: Hemson Consulting Ltd. 2019

56
APPENDIX A - TABLE 6

CITY OF PETERBOROUGH
FORECAST OF HOUSEHOLD GROWTH BY UNIT TYPE

Mid-Year	Annual Growth in Total Occupied Households				Shares By Unit Type			
	Singles & Semis	Rows & Other Multiples	Apartments	Total New Households	Singles & Semis	Rows & Other Multiples	Apartments	Total
2019	322	99	74	496	65%	20%	15%	100%
2020	327	101	75	503	65%	20%	15%	100%
2021	332	102	77	510	65%	20%	15%	100%
2022	336	103	78	517	65%	20%	15%	100%
2023	341	105	79	524	65%	20%	15%	100%
2024	346	106	80	532	65%	20%	15%	100%
2025	350	108	81	539	65%	20%	15%	100%
2026	345	109	93	547	63%	20%	17%	100%
2027	349	111	94	554	63%	20%	17%	100%
2028	354	112	96	562	63%	20%	17%	100%
2029	359	114	97	570	63%	20%	17%	100%
2030	364	116	98	578	63%	20%	17%	100%
2031	369	117	100	586	63%	20%	17%	100%
2019-2028	3,401	1,057	826	5,284	64%	20%	16%	100%
2019-2031	4,494	1,404	1,121	7,018	64%	20%	16%	100%

Source: Hemson Consulting Ltd. 2019

APPENDIX A - TABLE 7

CITY OF PETERBOROUGH
FORECAST POPULATION GROWTH IN NEW HOUSEHOLDS BY UNIT TYPE*

Mid-Year	Singles & Semis	Rows & Other Multiples	Apartments	Total Population in New Households
2019	950	185	124	1,259
2020	964	187	126	1,277
2021	977	190	128	1,295
2022	991	193	129	1,313
2023	1,004	195	131	1,330
2024	1,019	198	133	1,350
2025	1,033	201	135	1,369
2026	1,016	204	155	1,375
2027	1,029	206	157	1,392
2028	1,044	209	160	1,413
2029	1,058	212	162	1,432
2030	1,073	215	164	1,452
2031	1,088	218	166	1,472
2019-2028	10,027	1,968	1,378	13,373
2019-2031	13,246	2,613	1,870	17,729

*Based on PPUs

2.95

1.86

1.67

Source: Hemson Consulting Ltd., 2019

APPENDIX A - TABLE 8

CITY OF PETERBOROUGH
NON-RESIDENTIAL SPACE FORECAST**Employment Density**

Population-related

40 m² per employee

Employment Land

90 m² per employee

Year	Population-Related	Annual Growth	Growth in Space (m ²)	Employment Land	Annual Growth	Growth in Space (m ²)	Total	Annual Growth	Growth in Space (m ²)
2016	23,804			19,476			43,280		
2017	24,010	206	8,250	19,645	169	15,188	43,655	375	23,438
2018	24,219	208	8,338	19,815	171	15,350	44,034	379	23,688
2019	24,429	210	8,404	19,987	172	15,471	44,416	382	23,875
2020	24,641	212	8,470	20,160	173	15,593	44,801	385	24,063
2021	24,855	214	8,558	20,336	175	15,754	45,190	389	24,312
2022	25,070	216	8,624	20,512	176	15,876	45,582	392	24,500
2023	25,287	217	8,690	20,690	178	15,998	45,977	395	24,688
2024	25,507	219	8,778	20,869	180	16,159	46,376	399	24,937
2025	25,728	221	8,844	21,050	181	16,281	46,778	402	25,125
2026	25,951	223	8,932	21,233	183	16,443	47,184	406	25,375
2027	26,176	225	8,998	21,417	184	16,564	47,593	409	25,562
2028	26,403	227	9,086	21,603	186	16,726	48,006	413	25,812
2029	26,632	229	9,152	21,790	187	16,848	48,422	416	26,000
2030	26,863	231	9,240	21,979	189	17,010	48,842	420	26,250
2031	27,097	234	9,342	22,170	191	17,198	49,267	425	26,540
2019-2028		2,185	87,384		1,787	160,865		3,972	248,249
2019-2031		2,878	115,118		2,355	211,921		5,233	327,039

Source: Hemson Consulting Ltd. 2019

APPENDIX B

GENERAL SERVICES TECHNICAL APPENDIX

APPENDIX B

GENERAL SERVICES TECHNICAL APPENDIX INTRODUCTION AND OVERVIEW

The following appendix provides the detailed analysis undertaken to establish the development charge rates for each of the general services in the City of Peterborough. Eleven services have been analysed as part of the Development Charges Background Study:

Appendix B.1	Library Services
Appendix B.2	Fire Services
Appendix B.3	Police Services
Appendix B.4	Recreation
Appendix B.5	Parks
Appendix B.6	Public Works
Appendix B.7	Parking
Appendix B.8	Transit Services
Appendix B.9	General Government
Appendix B.10	Affordable Housing
Appendix B.11	Waste Management

Every service, with the exception of General Government and Transit, 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 10-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 City over the 10-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 2009 to 2018.

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 City 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.

Table 1 also shows the calculation of the “maximum allowable” funding envelope, net of uncommitted excess capacity and the legislated 10 per cent reduction (for all applicable services). The maximum allowable funding envelope is defined as the 10-year historical service level (expressed as either \$/capita or \$/population and employment) multiplied by the forecast increase in population or 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 10-year historical service level is maintained.

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

**TABLE 2 2019 – 2028 DEVELOPMENT-RELATED CAPITAL PROGRAM &
CALCULATION OF THE UNADJUSTED DEVELOPMENT CHARGE**

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 City staff has established a development-related capital program that sets out the projects required to service anticipated development for the 10-year period from 2019 to 2028.

To determine the share of the program that is eligible for recovery through development charges, the project costs are reduced by any anticipated grants, “replacement” shares and the legislated “10 per cent reduction” for any eligible services.

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 shares will require funding from non-development charge sources, typically property taxes or user fees.

When calculating development charges, the development-related net capital cost must be reduced by 10 per cent for all services except protection services, engineered services, as well as services related to a highway (*DCA* s.5.(1)8.). The 10 per cent discount is therefore applied to Library Services, Recreation, Parks, Parking, General Government, Affordable Housing and Waste Management. As with replacement shares, the 10 per cent mandatory reduction must be funded from non-development charge sources.

The capital program less any replacement or benefit to existing shares and 10 per cent discount 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 planning period. For some of the services, a portion of the capital program will service growth that will not occur until after 2028. This portion of the capital program is either deemed “pre-built” service capacity to be considered as committed excess capacity and 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 at the end of Table 1. The result is the discounted development-related net capital cost that is eligible for recovery against development over the period from 2019 to 2028.

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 general services with the exception of Library Services, Recreation, Parks and Affordable Housing, the development-related costs have been apportioned as 80 per cent residential and 20 per cent non-residential. This apportionment is based on the anticipated shares of population and employment growth over the 10-year forecast period.

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

The residential share of the 2019 to 2028 DC eligible costs are then divided by the forecast population in new housing 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 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 development 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 unit residential and per square metre (of GFA) non-residential development charges.

APPENDIX B.1

LIBRARY SERVICES

APPENDIX B.1

LIBRARY SERVICES

The Peterborough Public Library provides library services from its main branch in downtown Peterborough, and at the DelaFosse Branch in the south end of the City. The Peterborough Public Library provides a wide range of resources in a variety of formats and offers a range of programs to City residents.

TABLE 1 2009-2018 HISTORICAL SERVICE LEVELS

Table 1 displays the Library's 10-year historical inventory for buildings, land, materials, and furniture and equipment (excluding computer equipment). The building space amounts to 67,500 square feet and is valued at \$25.7 million. The library buildings occupy approximately 1.2 hectares of land worth \$517,900. The collection materials are valued at \$10.0 million and the furniture and equipment associated with both library branches is valued at \$829,300.

The full 2018 replacement value of the inventory of capital assets amounts to \$37.0 million and the 10-year historical average service level is \$373.58 per capita.

The historical service level multiplied by the 10-year forecast of net population growth results in a 10-year maximum allowable funding envelope of \$4.5 million (historical service level of \$373.58/capita X 12,120 net population growth).

Library services must be reduced by 10 per cent as required under the *DCA*. The discounted maximum allowable funding envelope brought forward to the development charge calculation is therefore \$4.1 million.

**TABLE 2 2019 – 2028 DEVELOPMENT-RELATED CAPITAL PROGRAM &
CALCULATION OF THE UNADJUSTED DEVELOPMENT CHARGE**

The Library's total 10-year forecast amounts to \$13.6 million. The capital program provides for 17,500 square feet of additional library space, library kiosks and materials, new collection materials, and three studies: a Library Needs Study and two Library Strategic Plans.

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 \$13.6 million. A share of \$5.6 million is deemed to be a replacement, which is

calculated based on the renovation portion of the expansion project. As required by the *DCA*, a 10 per cent reduction has been applied to all new projects, and these shares amount to \$807,869.

The net municipal cost of this program is then netted down to \$7.3 million and this amount is deemed to be DC eligible. A portion of the DC eligible costs, \$792,861, will be funded by available reserve funds. A share of \$2.4 million is deemed as a post-period benefit and will not be recovered under this development charges by-law, but can be considered in future DC studies, subject to service level restrictions.

The remaining \$4.1 million is related to growth between 2019 and 2028 and is allocated entirely against future residential development in the City of Peterborough. This results in an unadjusted development charge of \$304.72 per capita.

TABLE 3 CASH FLOW AND RESERVE FUND ANALYSIS

After cash flow, the residential calculated charge increases to \$375.81. The following table summarizes the calculation of the Library Services development charge:

LIBRARY SERVICES SUMMARY						
10-year Hist.	2019 - 2028		Unadjusted		Adjusted	
Service Level	Development-Related Capital Program		Development Charge		Development Charge	
per capita	Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$373.58	\$13,645,000	\$4,075,011	\$304.72	\$0.00	\$375.81	\$0.00

68
APPENDIX B.1
TABLE 1

CITY OF PETERBOROUGH
INVENTORY OF CAPITAL ASSETS
LIBRARY SERVICES

BUILDINGS Branch Name	# of Square Feet										UNIT COST (\$/sq.ft.)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Peterborough Public Library, 345 Aylmer St. N	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	57,500	\$380
DelaFosse Branch Library, 729 Park St. S	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	\$380
Total (sq.ft.)	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	67,500	
Total (\$000)	\$19,000.0	\$19,000.0	\$19,000.0	\$19,000.0	\$19,000.0	\$19,000.0	\$19,000.0	\$19,000.0	\$19,000.0	\$25,650.0	

LAND Branch Name	# of Hectares										UNIT COST (\$/ha)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Peterborough Public Library, 345 Aylmer St. N	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	\$431,600
DelaFosse Branch Library, 729 Park St. S	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	\$431,600
Total (ha)	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	
Total (\$000)	\$517.9	\$517.9	\$517.9	\$517.9	\$517.9	\$517.9	\$517.9	\$517.9	\$517.9	\$517.9	

MATERIALS Type of Collection	# of Collection Materials										UNIT COST (\$/item)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Books (Volumes)	123,855	141,204	126,955	131,204	134,751	131,398	108,140	128,744	136,968	141,439	\$50
Reference Titles	12,162	6,423	5,135	5,123	5,079	5,079	4,082	5,728	5,728	5,728	\$170
Microform	3,328	4,244	4,244	4,244	4,244	4,244	4,244	4,244	4,244	4,244	\$100
CD-ROM/A-V Materials	11,881	12,562	15,363	17,464	19,214	20,024	18,792	20,147	21,922	23,071	\$50
Full Text Databases	15	39	41	23	19	19	23	23	16	11	\$3,240
Downloadable Materials	-	-	-	16,608	56,191	65,901	112,100	142,944	139,157	152,765	\$2.16
Total (#)	151,241	164,472	151,738	174,666	219,498	226,665	247,381	301,830	308,035	327,258	
Total (\$000)	\$9,235.7	\$9,331.0	\$8,546.1	\$8,839.1	\$9,168.9	\$9,062.7	\$7,781.4	\$9,225.7	\$9,694.8	\$9,989.0	

FURNITURE AND EQUIPMENT Branch Name	Total Value of Furniture and Equipment (\$)									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Automated Collection System	\$337,926	\$345,022	\$352,267	\$360,017	\$366,497	\$371,261	\$374,973	\$378,723	\$382,510	\$386,335
Meeting Room Furnishings	\$16,360	\$16,704	\$17,055	\$17,430	\$17,744	\$17,975	\$18,155	\$18,337	\$18,520	\$35,753
Children's Department Carpet and Furniture	\$38,690	\$39,502	\$40,332	\$41,219	\$41,961	\$42,506	\$42,937	\$43,360	\$43,360	\$171,720
Audiovisual Equipment	\$17,270	\$17,633	\$18,003	\$18,399	\$18,730	\$18,973	\$19,162	\$19,355	\$19,549	\$30,831
Ergonomic Furniture	\$49,913	\$50,961	\$52,031	\$53,176	\$54,133	\$54,837	\$55,396	\$55,950	\$56,509	\$57,075
Security System	\$15,000	\$15,315	\$15,637	\$15,981	\$16,269	\$16,480	\$16,645	\$16,812	\$16,980	\$122,611
Main Floor and Basement Carpet	\$95,000	\$96,995	\$99,032	\$100,121	\$100,303	\$100,437	\$101,441	\$102,455	\$103,480	\$25,000
Total (\$000)	\$570.2	\$582.1	\$594.4	\$606.3	\$615.6	\$622.5	\$628.7	\$635.0	\$640.9	\$829.3

69
APPENDIX B.1
TABLE 1

**CITY OF PETERBOROUGH
CALCULATION OF SERVICE LEVELS
LIBRARY SERVICES**

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Historical Population	77,364	78,028	78,698	79,159	79,623	80,090	80,560	81,032	82,141	83,265

INVENTORY SUMMARY (\$000)

Buildings	\$19,000.0	\$19,000.0	\$19,000.0	\$19,000.0	\$19,000.0	\$19,000.0	\$19,000.0	\$19,000.0	\$19,000.0	\$25,650.0
Land	\$517.9	\$517.9	\$517.9	\$517.9	\$517.9	\$517.9	\$517.9	\$517.9	\$517.9	\$517.9
Materials	\$9,235.7	\$9,331.0	\$8,546.1	\$8,839.1	\$9,168.9	\$9,062.7	\$7,781.4	\$9,225.7	\$9,694.8	\$9,989.0
Furniture And Equipment	\$570.2	\$582.1	\$594.4	\$606.3	\$615.6	\$622.5	\$628.7	\$635.0	\$640.9	\$829.3
Total (\$000)	\$29,323.8	\$29,431.0	\$28,658.4	\$28,963.3	\$29,302.5	\$29,203.1	\$27,928.0	\$29,378.6	\$29,853.6	\$36,986.2

SERVICE LEVEL (\$/capita)											Average Service Level
Buildings	\$245.59	\$243.50	\$241.43	\$240.02	\$238.62	\$237.23	\$235.85	\$234.48	\$231.31	\$308.05	\$245.61
Land	\$6.69	\$6.64	\$6.58	\$6.54	\$6.50	\$6.47	\$6.43	\$6.39	\$6.31	\$6.22	\$6.48
Materials	\$119.38	\$119.58	\$108.59	\$111.66	\$115.15	\$113.16	\$96.59	\$113.85	\$118.03	\$119.97	\$113.60
Furniture And Equipment	\$7.37	\$7.46	\$7.55	\$7.66	\$7.73	\$7.77	\$7.80	\$7.84	\$7.80	\$9.96	\$7.89
Total (\$/capita)	\$379.04	\$377.19	\$364.16	\$365.89	\$368.02	\$364.63	\$346.67	\$362.56	\$363.44	\$444.20	\$373.58

**CITY OF PETERBOROUGH
CALCULATION OF MAXIMUM ALLOWABLE
LIBRARY SERVICES**

10-Year Funding Envelope Calculation	
10 Year Average Service Level 2009 - 2018	\$373.58
Net Population Growth 2019 - 2028	12,120
Maximum Allowable Funding Envelope	\$4,527,790
Less: 10% Legislated Reduction	\$452,779
Discounted Maximum Allowable Funding Envelope	\$4,075,011

CITY OF PETERBOROUGH
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	10% Reduction		Available DC Reserves	2019-2028	Post 2028
1.0 LIBRARY SERVICES										
1.1 Additional Library Space										
1.1.1 Additional Space - 17,500 Sq. Ft. Expansion	2019	\$ 12,035,000	\$ -	\$ 12,035,000	\$ 5,566,307	\$ 646,869	\$ 5,821,824	\$ 792,861	\$ 4,075,011	\$ 953,952
Subtotal Additional Library Space		\$ 12,035,000	\$ -	\$ 12,035,000	\$ 5,566,307	\$ 646,869	\$ 5,821,824	\$ 792,861	\$ 4,075,011	\$ 953,952
1.2 Library Kiosks										
1.2.1 Library Kiosk & Materials	2019	\$ 45,000	\$ -	\$ 45,000	\$ -	\$ 4,500	\$ 40,500	\$ -	\$ -	\$ 40,500
1.2.2 Library Kiosk & Materials	2022	\$ 45,000	\$ -	\$ 45,000	\$ -	\$ 4,500	\$ 40,500	\$ -	\$ -	\$ 40,500
1.2.3 Library Kiosk & Materials	2025	\$ 45,000	\$ -	\$ 45,000	\$ -	\$ 4,500	\$ 40,500	\$ -	\$ -	\$ 40,500
1.2.4 Library Kiosk & Materials	2028	\$ 45,000	\$ -	\$ 45,000	\$ -	\$ 4,500	\$ 40,500	\$ -	\$ -	\$ 40,500
Subtotal Library Kiosks		\$ 180,000	\$ -	\$ 180,000	\$ -	\$ 18,000	\$ 162,000	\$ -	\$ -	\$ 162,000
1.3 Library Materials										
1.3.1 Additional Collections Materials for New Space	2019	\$ 200,000	\$ -	\$ 200,000	\$ -	\$ 20,000	\$ 180,000	\$ -	\$ -	\$ 180,000
1.3.2 Additional Collections Materials	Various	\$ 930,000	\$ -	\$ 930,000	\$ -	\$ 93,000	\$ 837,000	\$ -	\$ -	\$ 837,000
Subtotal Library Materials		\$ 1,130,000	\$ -	\$ 1,130,000	\$ -	\$ 113,000	\$ 1,017,000	\$ -	\$ -	\$ 1,017,000
1.4 Studies										
1.4.1 Library Strategic Plan	2021	\$ 100,000	\$ -	\$ 100,000	\$ -	\$ 10,000	\$ 90,000	\$ -	\$ -	\$ 90,000
1.4.2 Library Needs Study	2025	\$ 100,000	\$ -	\$ 100,000	\$ -	\$ 10,000	\$ 90,000	\$ -	\$ -	\$ 90,000
1.4.3 Library Strategic Plan	2025	\$ 100,000	\$ -	\$ 100,000	\$ -	\$ 10,000	\$ 90,000	\$ -	\$ -	\$ 90,000
Subtotal Studies		\$ 300,000	\$ -	\$ 300,000	\$ -	\$ 30,000	\$ 270,000	\$ -	\$ -	\$ 270,000
TOTAL LIBRARY SERVICES		\$ 13,645,000	\$ -	\$ 13,645,000	\$ 5,566,307	\$ 807,869	\$ 7,270,824	\$ 792,861	\$ 4,075,011	\$ 2,402,952

Residential Development Charge Calculation

Residential Share of 2019 - 2028 DC Eligible Costs	100%	\$4,075,011
10-Year Growth in Population in New Units		13,373
Unadjusted Development Charge Per Capita		\$304.72

Non-Residential Development Charge Calculation

Non-Residential Share of 2019 - 2028 DC Eligible Costs	0%	\$0
10-Year Growth in Square Metres		248,249
Unadjusted Development Charge Per Square Metre		\$0.00

2019 - 2028 Net Funding Envelope	\$4,075,011
Current Reserve Fund Balance	\$792,861

71
APPENDIX B.1
TABLE 3

CITY OF PETERBOROUGH
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
LIBRARY SERVICES
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

LIBRARY SERVICES	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	TOTAL
OPENING CASH BALANCE	\$0.0	(\$3,732.0)	(\$3,469.1)	(\$3,173.2)	(\$2,841.8)	(\$2,472.7)	(\$2,062.1)	(\$1,607.3)	(\$1,110.9)	(\$565.4)	
2019 - 2028 RESIDENTIAL FUNDING REQUIREMENTS											
- Library Service: Non Inflated	\$4,075.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$4,075.0
- Library Service: Inflated	\$4,075.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$4,075.0
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	1,259	1,277	1,295	1,313	1,330	1,350	1,369	1,375	1,392	1,413	13,373
REVENUE											
- DC Receipts: Inflated	\$473.1	\$489.5	\$506.3	\$523.6	\$541.0	\$560.1	\$579.4	\$593.6	\$612.9	\$634.6	\$5,514.3
INTEREST											
- Interest on Opening Balance	\$0.0	(\$205.3)	(\$190.8)	(\$174.5)	(\$156.3)	(\$136.0)	(\$113.4)	(\$88.4)	(\$61.1)	(\$31.1)	(\$1,156.9)
- Interest on In-year Transactions	(\$99.1)	\$8.6	\$8.9	\$9.2	\$9.5	\$9.8	\$10.1	\$10.4	\$10.7	\$11.1	(\$10.8)
- Interest on Additional Library Space Debt	(\$31.1)	(\$29.9)	(\$28.5)	(\$26.9)	(\$25.1)	(\$23.3)	(\$21.3)	(\$19.2)	(\$17.0)	(\$49.3)	(\$271.5)
TOTAL REVENUE	\$343.0	\$262.9	\$295.9	\$331.4	\$369.1	\$410.7	\$454.8	\$496.4	\$545.6	\$565.4	\$4,075.0
CLOSING CASH BALANCE	(\$3,732.0)	(\$3,469.1)	(\$3,173.2)	(\$2,841.8)	(\$2,472.7)	(\$2,062.1)	(\$1,607.3)	(\$1,110.9)	(\$565.4)	\$0.0	

2019 Adjusted Charge Per Capita **\$375.81**

Allocation of Capital Program

Residential Sector	100.0%
Non-Residential Sector	0.0%

Rates for 2019

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

APPENDIX B.2

FIRE SERVICES

APPENDIX B.2

FIRE SERVICES

Peterborough Fire Services is responsible for the provision of fire suppression and rescue, prevention, public education, investigation and enforcement, and emergency management.

TABLE 1 2009-2018 HISTORICAL SERVICE LEVELS

The City of Peterborough Fire Services operates from three fire stations, including a headquarters location, as well as an airport vehicle bay. The combined area of the stations is 48,311 square feet and is valued at \$16.9 million. The land area associated with the buildings is approximately 1.6 hectares, which is worth \$673,300. The 22 vehicles associated with the stations have a replacement value of \$9.3 million, and the total value of all furniture and equipment is approximately \$3.2 million.

The current replacement value of the Fire Services capital infrastructure is \$30.0 million and has provided the City with a 10 year average service level of \$218.63 per population and employment.

The calculated maximum allowable share recoverable through development charges over the 2019 to 2028 planning period is \$3.5 million (16,092 net population and employment growth X historical service level of \$218.63). Fire Services are not subject to the 10 per cent discount and, as such, the full funding envelope is carried forward to the development charges calculation.

**TABLE 2 2019 – 2028 DEVELOPMENT-RELATED CAPITAL PROGRAM &
CALCULATION OF THE UNADJUSTED DEVELOPMENT CHARGE**

The first project in the Fire Services capital program is a replacement of Station 2 for \$8.0 million. Another \$9.5 million is allocated for a new Station 4. The rest of the capital program consists of new vehicles for Station 4 and equipment for new firefighters, as well as a new staff vehicle and breathing apparatuses.

In total, the 10-year capital program for Fire Services amounts to \$19.3 million. No grants or 10 per cent discount shares are identified for this service's capital program. A share of \$4.0 million is deemed as a replacement share, which is entirely related to the replacement portion of the Station 2 project. The available DC reserve fund balance

of \$113,973 is also removed from the calculation. A further \$11.7 million will benefit growth beyond 2028, and may recoverable under future by-laws.

The resulting 10-year development-related net capital cost of \$3.5 million is allocated 80 per cent, or \$2.8 million, against residential development, and 20 per cent, or \$703,369, against non-residential development. The resulting unadjusted development charge is \$210.47 per capita and \$2.83 per square metre.

TABLE 3 CASH FLOW ANALYSIS

After cash flow consideration, both the residential and non-residential charges increase to \$239.13 per capita and \$3.22 per square metre, respectively. The following table summarizes the calculation of the Fire Services development charge.

FIRE SERVICES SUMMARY						
10-year Hist.	2019 - 2028		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
\$218.63	\$19,318,100	\$3,518,194	\$210.47	\$2.83	\$239.13	\$3.22

75
APPENDIX B.2
TABLE 1

CITY OF PETERBOROUGH
INVENTORY OF CAPITAL ASSETS
FIRE SERVICES

BUILDINGS Station Name	# of Square Feet										UNIT COST (\$/sq.ft.)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Headquarters	27,208	27,208	27,208	27,208	27,208	27,208	27,208	27,208	27,208	27,208	\$350
Station #2	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	\$350
Station #3	5,053	5,053	5,053	5,053	-	-	-	-	-	-	\$350
New Station #3	-	-	-	-	16,603	16,603	16,603	16,603	16,603	16,603	\$350
Airport Vehicle Bay	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	\$350
Total (sq.ft.)	36,761	36,761	36,761	36,761	48,311	48,311	48,311	48,311	48,311	48,311	
Total (\$000)	\$12,866.4	\$12,866.4	\$12,866.4	\$12,866.4	\$16,908.9	\$16,908.9	\$16,908.9	\$16,908.9	\$16,908.9	\$16,908.9	

LAND Station Name	# of Hectares										UNIT COST (\$/ha)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Headquarters	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	\$431,600
Station #2	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	\$431,600
Station #3	0.30	0.30	0.30	0.30	-	-	-	-	-	-	\$431,600
New Station #3	-	-	-	-	-	-	-	-	-	-	\$431,600
Airport Vehicle Bay	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	\$431,600
Total (ha)	1.86	1.86	1.86	1.86	1.56	1.56	1.56	1.56	1.56	1.56	
Total (\$000)	\$802.8	\$802.8	\$802.8	\$802.8	\$673.3	\$673.3	\$673.3	\$673.3	\$673.3	\$673.3	

76
APPENDIX B.2
TABLE 1

CITY OF PETERBOROUGH
INVENTORY OF CAPITAL ASSETS
FIRE SERVICES

VEHICLES Vehicle Type	# of Vehicles										UNIT COST
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	(\$/vehicle)
Staff vehicles, sedans, wagons, vans, pick-ups	5	5	5	5	5	5	5	5	5	6	\$59,300
Service Truck/Rehab Support Vehicle	2	3	3	3	3	3	3	3	3	3	\$70,100
Command Unit	2	2	2	2	2	2	2	2	2	2	\$113,300
Pumpers (light duty commercial)/Haz Mat Unit	1	1	1	1	1	1	1	1	1	1	\$512,500
Pumpers (heavy duty custom)	5	5	5	5	5	5	6	6	6	6	\$620,400
Pumper Telesquirt/Aerial Ladder	1	1	1	1	1	1	1	1	1	1	\$1,186,900
Aerial/Quint	1	1	1	1	1	1	1	1	1	1	\$1,618,600
Airport Crash Rescue	1	1	1	1	1	1	1	1	1	1	\$733,700
Command Post	1	1	1	1	1	1	1	1	1	1	\$701,400
Total (#)	19	20	20	20	20	20	21	21	21	22	
Total (\$000)	\$8,518.4	\$8,588.5	\$8,588.5	\$8,588.5	\$8,588.5	\$8,588.5	\$9,208.9	\$9,208.9	\$9,208.9	\$9,268.2	

FURNITURE & EQUIPMENT Equipment	Total Value of Furniture & Equipment (\$)									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Personal Fire Fighter Equipment	\$594,894	\$620,790	\$620,790	\$629,423	\$701,718	\$773,668	\$852,996	\$940,457	\$1,036,886	\$1,143,202
Breathing Air Compressor System	\$75,144	\$75,144	\$75,144	\$75,144	\$107,515	107,515	107,515	107,515	107,515	107,515
Communications Equipment	\$535,104	\$535,104	\$535,104	\$535,104	\$535,104	535,104	535,104	535,104	535,104	715,104
Other Station Equipment	\$277,582	\$342,324	\$380,090	\$405,987	\$454,544	503,100	503,100	503,100	503,100	503,100
Fire Fighting Hose	\$125,244	\$125,244	\$125,244	\$125,244	\$151,140	151,140	301,140	301,140	301,140	301,140
SCBA	\$242,783	\$242,783	\$242,783	\$264,364	\$264,364	290,260	318,694	349,913	384,190	421,825
Total (\$000)	\$1,850.8	\$1,941.4	\$1,979.2	\$2,035.3	\$2,214.4	\$2,360.8	\$2,618.5	\$2,737.2	\$2,867.9	\$3,191.9

77
APPENDIX B.2
TABLE 1

CITY OF PETERBOROUGH
CALCULATION OF SERVICE LEVELS
FIRE SERVICES

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Historical Population	77,364	78,028	78,698	79,159	79,623	80,090	80,560	81,032	82,141	83,265
Historical Employment	<u>45,054</u>	<u>45,372</u>	<u>45,692</u>	<u>45,199</u>	<u>44,711</u>	<u>44,229</u>	<u>43,752</u>	<u>43,280</u>	<u>43,655</u>	<u>44,034</u>
Total Historical Population & Employment	122,418	123,400	124,390	124,358	124,334	124,319	124,312	124,312	125,796	127,299

INVENTORY SUMMARY (\$000)

Buildings	\$12,866.4	\$12,866.4	\$12,866.4	\$12,866.4	\$16,908.9	\$16,908.9	\$16,908.9	\$16,908.9	\$16,908.9	\$16,908.9
Land	\$802.8	\$802.8	\$802.8	\$802.8	\$673.3	\$673.3	\$673.3	\$673.3	\$673.3	\$673.3
Vehicles	\$8,518.4	\$8,588.5	\$8,588.5	\$8,588.5	\$8,588.5	\$8,588.5	\$9,208.9	\$9,208.9	\$9,208.9	\$9,268.2
Furniture & Equipment	\$1,850.8	\$1,941.4	\$1,979.2	\$2,035.3	\$2,214.4	\$2,360.8	\$2,618.5	\$2,737.2	\$2,867.9	\$3,191.9
Total (\$000)	\$24,038.3	\$24,199.0	\$24,236.8	\$24,292.9	\$28,385.0	\$28,531.4	\$29,409.6	\$29,528.3	\$29,659.0	\$30,042.2

SERVICE LEVEL (\$/pop & emp)											Average Service Level
Buildings	\$105.10	\$104.27	\$103.44	\$103.46	\$136.00	\$136.01	\$136.02	\$136.02	\$134.41	\$132.83	\$122.76
Land	\$6.56	\$6.51	\$6.45	\$6.46	\$5.42	\$5.42	\$5.42	\$5.42	\$5.35	\$5.29	\$5.83
Vehicles	\$69.58	\$69.60	\$69.04	\$69.06	\$69.08	\$69.08	\$74.08	\$74.08	\$73.21	\$72.81	\$70.96
Furniture & Equipment	\$15.12	\$15.73	\$15.91	\$16.37	\$17.81	\$18.99	\$21.06	\$22.02	\$22.80	\$25.07	\$19.09
Total (\$/pop & emp)	\$196.36	\$196.10	\$194.85	\$195.35	\$228.30	\$229.50	\$236.58	\$237.53	\$235.77	\$236.00	\$218.63

CITY OF PETERBOROUGH
CALCULATION OF MAXIMUM ALLOWABLE
FIRE SERVICES

10-Year Funding Envelope Calculation	
10 Year Average Service Level 2009 - 2018	\$218.63
Net Population & Employment Growth 2019 - 2028	16,092
Maximum Allowable Funding Envelope	\$3,518,194
Discounted Maximum Allowable Funding Envelope	\$3,518,194

CITY OF PETERBOROUGH
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	0% Reduction		Available DC Reserves	2019-2028	Post 2028
2.0 FIRE SERVICES										
2.1 Buildings, Land & Furnishings										
2.1.1 Replace Station #2 (7,000 sq.ft.)	2020	\$ 8,000,000	\$ -	\$ 8,000,000	\$ 4,000,000	\$ -	\$ 4,000,000	\$ 113,973	\$ 3,518,194	\$ 367,833
2.1.2 New Station #4	2024	\$ 9,500,000	\$ -	\$ 9,500,000	\$ -	\$ -	\$ 9,500,000	\$ -	\$ -	\$ 9,500,000
Subtotal Buildings, Land & Furnishings		\$ 17,500,000	\$ -	\$ 17,500,000	\$ 4,000,000	\$ -	\$ 13,500,000	\$ 113,973	\$ 3,518,194	\$ 9,867,833
2.2 Vehicles										
2.2.1 Staff Vehicle	2019	\$ 35,000	\$ -	\$ 35,000	\$ -	\$ -	\$ 35,000	\$ -	\$ -	\$ 35,000
2.2.2 Pumper Vehicles Associated With New Station #4 (1)	2020	\$ 780,000	\$ -	\$ 780,000	\$ -	\$ -	\$ 780,000	\$ -	\$ -	\$ 780,000
2.2.3 Service Truck for New Station #4	2020	\$ 70,100	\$ -	\$ 70,100	\$ -	\$ -	\$ 70,100	\$ -	\$ -	\$ 70,100
2.2.4 Boat for New Station #4	2020	\$ 15,000	\$ -	\$ 15,000	\$ -	\$ -	\$ 15,000	\$ -	\$ -	\$ 15,000
2.2.5 Pumper Vehicles Associated With New Station #4 (2)	2021	\$ 780,000	\$ -	\$ 780,000	\$ -	\$ -	\$ 780,000	\$ -	\$ -	\$ 780,000
Subtotal Vehicles		\$ 1,680,100	\$ -	\$ 1,680,100	\$ -	\$ -	\$ 1,680,100	\$ -	\$ -	\$ 1,680,100
2.3 Equipment										
2.3.1 Equipment for 16 Additional Firefighters (Station #4)	2020	\$ 96,000	\$ -	\$ 96,000	\$ -	\$ -	\$ 96,000	\$ -	\$ -	\$ 96,000
2.3.2 6 Additional Breathing Apparatus	2020	\$ 42,000	\$ -	\$ 42,000	\$ -	\$ -	\$ 42,000	\$ -	\$ -	\$ 42,000
Subtotal Equipment		\$ 138,000	\$ -	\$ 138,000	\$ -	\$ -	\$ 138,000	\$ -	\$ -	\$ 138,000
TOTAL FIRE SERVICES		\$ 19,318,100	\$ -	\$ 19,318,100	\$ 4,000,000	\$ -	\$ 15,318,100	\$ 113,973	\$ 3,518,194	\$ 11,685,933

Residential Development Charge Calculation

Residential Share of 2019 - 2028 DC Eligible Costs	80%	\$2,814,555
10-Year Growth in Population in New Units		13,373
Unadjusted Development Charge Per Capita		\$210.47

Non-Residential Development Charge Calculation

Non-Residential Share of 2019 - 2028 DC Eligible Costs	20%	\$703,639
10-Year Growth in Square Metres		248,249
Unadjusted Development Charge Per Square Metre		\$2.83

2019 - 2028 Net Funding Envelope	\$3,518,194
----------------------------------	-------------

Current Reserve Fund Balance	\$113,973
------------------------------	-----------

79
APPENDIX B.2
TABLE 3

CITY OF PETERBOROUGH
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
FIRE SERVICES
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

FIRE SERVICES	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	TOTAL
OPENING CASH BALANCE	\$0.0	\$306.3	(\$2,312.7)	(\$2,112.1)	(\$1,889.2)	(\$1,642.8)	(\$1,370.5)	(\$1,070.7)	(\$745.3)	(\$389.5)	
2019 - 2028 RESIDENTIAL FUNDING REQUIREMENTS											
- Fire Services: Non Inflated	\$0.0	\$2,814.6	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$2,814.6
- Fire Services: Inflated	\$0.0	\$2,870.8	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$2,870.8
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	1,259	1,277	1,295	1,313	1,330	1,350	1,369	1,375	1,392	1,413	13,373
REVENUE											
- DC Receipts: Inflated	\$301.1	\$311.5	\$322.2	\$333.2	\$344.3	\$356.4	\$368.7	\$377.7	\$390.0	\$403.8	\$3,508.9
INTEREST											
- Interest on Opening Balance	\$0.0	\$10.7	(\$127.2)	(\$116.2)	(\$103.9)	(\$90.4)	(\$75.4)	(\$58.9)	(\$41.0)	(\$21.4)	(\$623.6)
- Interest on In-year Transactions	\$5.3	(\$70.4)	\$5.6	\$5.8	\$6.0	\$6.2	\$6.5	\$6.6	\$6.8	\$7.1	(\$14.4)
TOTAL REVENUE	\$306.3	\$251.8	\$200.6	\$222.9	\$246.4	\$272.3	\$299.8	\$325.4	\$355.8	\$389.5	\$2,870.8
CLOSING CASH BALANCE	\$306.3	(\$2,312.7)	(\$2,112.1)	(\$1,889.2)	(\$1,642.8)	(\$1,370.5)	(\$1,070.7)	(\$745.3)	(\$389.5)	\$0.0	

2019 Adjusted Charge Per Capita **\$239.13**

Allocation of Capital Program

Residential Sector	80.0%
Non-Residential Sector	20.0%

Rates for 2019

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

80
APPENDIX B.2
TABLE 3

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

FIRE SERVICES	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	TOTAL
OPENING CASH BALANCE	\$0.00	\$78.15	(\$575.43)	(\$524.29)	(\$468.02)	(\$406.28)	(\$338.51)	(\$264.51)	(\$183.65)	(\$95.71)	
2019 - 2028 NON-RESIDENTIAL FUNDING REQUIREMENTS											
- Fire Services: Non Inflated	\$0.0	\$703.6	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$703.6
- Fire Services: Inflated	\$0.0	\$717.7	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$717.7
NEW NON-RESIDENTIAL DEVELOPMENT											
- Growth in Square Metres	23,875	24,063	24,312	24,500	24,688	24,937	25,125	25,375	25,562	25,812	248,249
REVENUE											
- DC Receipts: Inflated	\$76.8	\$79.0	\$81.4	\$83.6	\$86.0	\$88.6	\$91.0	\$93.8	\$96.3	\$99.2	\$875.7
INTEREST											
- Interest on Opening Balance	\$0.0	\$2.7	(\$31.6)	(\$28.8)	(\$25.7)	(\$22.3)	(\$18.6)	(\$14.5)	(\$10.1)	(\$5.3)	(\$154.4)
- Interest on In-year Transactions	\$1.3	(\$17.6)	\$1.4	\$1.5	\$1.5	\$1.6	\$1.6	\$1.6	\$1.7	\$1.7	(\$3.6)
TOTAL REVENUE	\$78.2	\$64.1	\$51.1	\$56.3	\$61.7	\$67.8	\$74.0	\$80.9	\$87.9	\$95.7	\$717.7
CLOSING CASH BALANCE	\$78.2	(\$575.4)	(\$524.3)	(\$468.0)	(\$406.3)	(\$338.5)	(\$264.5)	(\$183.6)	(\$95.7)	\$0.0	

2019 Adjusted Charge Per Square Metre

\$3.22

Allocation of Capital Program

Residential Sector	80.0%
Non-Residential Sector	20.0%

Rates for 2019

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

The Peterborough Lakefield Community Police Service provides various policing services, including crime prevention, law enforcement, victim assistance, public order and maintenance, emergency response, and administration and infrastructure.

TABLE 1 2009-2018 HISTORICAL SERVICE LEVELS

The 10-year historical inventory of capital assets for Police Services includes 56,930 square feet of building space with a replacement value of \$10.7 million. The 0.7 hectares of land associated with the building space are valued at \$293,500. The 12 vehicles associated with Police services total \$405,100. Personal police equipment is valued at \$1.4 million and the total value of furniture and equipment associated with the stations adds \$5.0 million to the value of the inventory.

The current replacement value of the Police Services capital infrastructure including buildings, land, vehicles and equipment is approximately \$17.9 million. This has provided a 10-year average historical service level of \$141.50 per population and employment. This average historical service level multiplied by the 10-year forecast growth in net population and employment results in a 10-year maximum allowable funding envelope of \$2.3 million. Police Services are not subject to the 10 per cent discount and, as such, the full funding envelope is carried forward to the development charges calculation.

**TABLE 2 2019 – 2028 DEVELOPMENT-RELATED CAPITAL PROGRAM &
CALCULATION OF THE UNADJUSTED DEVELOPMENT CHARGE**

The Police capital program is mainly related to the provision of new facility space, which will cost \$73.8 million. Other provisions will fund equipment for special constables and police officers for \$172,170. Lastly, three Police Services Business Plans will be conducted at a cost of \$38,000 each.

Altogether, the 10-year capital forecast for Police amounts to \$74.0 million. There are no grants or subsidies expected. The replacement shares for most of the capital program are equal to 50 per cent of the gross capital cost. The replacement share for the new police facility is based on the share of old police space that will be replaced,

and is equal to 30 per cent of the gross capital cost. Altogether \$22.6 million is removed from the calculation.

Available DC reserve funds of \$4,788 have been applied. Another \$49.2 million of the capital program will benefit development beyond 2028, and may be recoverable under future DC by-laws. The remaining in-period DC recoverable costs total \$2.3 million.

As shown in Table 2, the total development-related cost is allocated 80 per cent or \$1.8 million, against new residential development, and 20 per cent, or \$455,404, against non-residential development. This yields an unadjusted development charge of \$136.22 per capita and \$1.83 per square metre.

TABLE 3 CASH FLOW ANALYSIS

After cash flow consideration, both the residential and non-residential charges decrease to \$128.77 per capita and \$1.73 per square metre, respectively.

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

POLICE SERVICES SUMMARY						
10-year Hist.	2019 - 2028		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
\$141.50	\$74,036,170	\$2,277,018	\$136.22	\$1.83	\$128.77	\$1.73

84
APPENDIX B.3
TABLE 1

CITY OF PETERBOROUGH
INVENTORY OF CAPITAL ASSETS
POLICE SERVICES

BUILDINGS Station Name	# of Square Feet										UNIT COST (\$/sq.ft.)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Police Headquarters	33,497	34,519	34,519	34,519	34,519	34,519	34,519	34,519	34,519	34,519	\$250
Parking Garage	21,960	21,960	21,960	21,960	21,960	21,960	21,960	21,960	21,960	21,960	\$90
Forensic Identification Garage	-	448	448	448	448	448	448	448	448	448	\$250
Storage Units (# of units)	-	-	-	-	-	-	3	3	3	3	\$4,000
Total (sq.ft.)	55,457	56,927	56,927	56,927	56,927	56,927	56,930	56,930	56,930	56,930	
Total (\$000)	\$10,350.7	\$10,718.2	\$10,718.2	\$10,718.2	\$10,718.2	\$10,718.2	\$10,730.2	\$10,730.2	\$10,730.2	\$10,730.2	

LAND Station Name	# of Hectares										UNIT COST (\$/ha)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Police Headquarters	0.42	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	\$431,600
Forensic Identification Garage	-	-	-	-	-	-	-	-	-	-	\$431,600
Total (ha)	0.42	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	
Total (\$000)	\$181.3	\$293.5	\$293.5	\$293.5	\$293.5	\$293.5	\$293.5	\$293.5	\$293.5	\$293.5	

VEHICLES Vehicle Type	# of Vehicles										UNIT COST (\$/vehicle)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Utility Truck / Back-up K-9 vehicle	-	-	-	-	-	1	1	1	1	1	\$31,300
Barbeque trailer	1	1	1	1	1	1	1	1	-	-	\$8,100
Criminal Investigations cars	2	2	2	2	2	2	2	2	2	2	\$27,500
Community Services / ERT van	-	-	1	1	1	1	1	1	1	1	\$41,000
Criminal Investigations van	1	1	1	1	1	1	1	1	1	1	\$27,500
Trailer	1	1	1	1	1	1	1	1	1	1	\$6,500
Forensic Identification van	1	1	1	1	1	1	1	1	1	1	\$47,500
Prisoner van	1	1	1	1	1	1	1	1	1	1	\$59,300
Duty Officer car	1	1	1	1	1	1	1	1	1	1	\$34,500
Motorcycles	2	2	2	3	3	3	3	3	3	2	\$34,500
Pick-up truck	1	1	1	1	1	1	1	1	1	1	\$33,500
Total (#)	11	11	12	13	13	14	14	14	13	12	
Total (\$000)	\$340.9	\$340.9	\$381.9	\$416.4	\$416.4	\$447.7	\$447.7	\$447.7	\$439.6	\$405.1	

85
APPENDIX B.3
TABLE 1

**CITY OF PETERBOROUGH
INVENTORY OF CAPITAL ASSETS
POLICE SERVICES**

PERSONAL POLICE EQUIPMENT Description	# of Sets of Equipment										UNIT COST (\$/unit)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Personal Police Equipment	125	125	125	131	133	133	138	138	140	140	\$8,000
ERT Equipment	10	10	10	10	11	11	12	12	12	12	\$11,900
Special Constable Equipment	12	14	14	14	14	14	14	14	14	14	\$6,000
Volunteer Auxiliaries Equipment	24	23	22	21	20	31	29	27	24	22	\$3,100
Total (#)	171	172	171	176	178	189	193	191	190	188	
Total (\$000)	\$1,265.4	\$1,274.3	\$1,271.2	\$1,316.1	\$1,340.9	\$1,375.0	\$1,419.9	\$1,413.0	\$1,422.0	\$1,415.0	

FURNITURE & EQUIPMENT Equipment	Total Value of Furniture & Equipment (\$)									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Communications Equipment	\$3,452,912	\$3,452,912	\$3,452,912	\$3,452,912	\$3,452,912	\$3,452,912	\$3,452,912	\$3,452,912	\$3,452,912	\$3,452,912
Furniture & Other Station Equipment	\$1,182,678	\$1,182,678	\$1,182,678	\$1,182,678	\$1,182,678	\$1,182,678	\$1,182,678	\$1,182,678	\$1,182,678	\$1,182,678
Automated License Plate Recognition	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$80,000	\$80,000	\$116,000
Surveillance Equipment	\$0	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000
Total (\$000)	\$4,635.6	\$4,885.6	\$4,885.6	\$4,885.6	\$4,885.6	\$4,885.6	\$4,885.6	\$4,965.6	\$4,965.6	\$5,001.6

86
APPENDIX B.3
TABLE 1

CITY OF PETERBOROUGH
CALCULATION OF SERVICE LEVELS
POLICE SERVICES

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Historical Population	77,364	78,028	78,698	79,159	79,623	80,090	80,560	81,032	82,141	83,265
Historical Employment	<u>45,054</u>	<u>45,372</u>	<u>45,692</u>	<u>45,199</u>	<u>44,711</u>	<u>44,229</u>	<u>43,752</u>	<u>43,280</u>	<u>43,655</u>	<u>44,034</u>
Total Historical Population & Employment	122,418	123,400	124,390	124,358	124,334	124,319	124,312	124,312	125,796	127,299

INVENTORY SUMMARY (\$000)

Buildings	\$10,350.7	\$10,718.2	\$10,718.2	\$10,718.2	\$10,718.2	\$10,718.2	\$10,730.2	\$10,730.2	\$10,730.2	\$10,730.2
Land	\$181.3	\$293.5	\$293.5	\$293.5	\$293.5	\$293.5	\$293.5	\$293.5	\$293.5	\$293.5
Vehicles	\$340.9	\$340.9	\$381.9	\$416.4	\$416.4	\$447.7	\$447.7	\$447.7	\$439.6	\$405.1
Personal Police Equipment	\$1,265.4	\$1,274.3	\$1,271.2	\$1,316.1	\$1,340.9	\$1,375.0	\$1,419.9	\$1,413.0	\$1,422.0	\$1,415.0
Furniture & Equipment	\$4,635.6	\$4,885.6	\$4,885.6	\$4,885.6	\$4,885.6	\$4,885.6	\$4,885.6	\$4,965.6	\$4,965.6	\$5,001.6
Total (\$000)	\$16,773.8	\$17,512.4	\$17,550.3	\$17,629.7	\$17,654.5	\$17,719.9	\$17,776.9	\$17,849.9	\$17,850.8	\$17,845.3

SERVICE LEVEL (\$/pop & emp)											Average Service Level
Buildings	\$84.55	\$86.86	\$86.17	\$86.19	\$86.20	\$86.21	\$86.32	\$86.32	\$85.30	\$84.29	\$85.84
Land	\$1.48	\$2.38	\$2.36	\$2.36	\$2.36	\$2.36	\$2.36	\$2.36	\$2.33	\$2.31	\$2.27
Vehicles	\$2.78	\$2.76	\$3.07	\$3.35	\$3.35	\$3.60	\$3.60	\$3.60	\$3.49	\$3.18	\$3.28
Personal Police Equipment	\$10.34	\$10.33	\$10.22	\$10.58	\$10.78	\$11.06	\$11.42	\$11.37	\$11.30	\$11.12	\$10.85
Furniture & Equipment	\$37.87	\$39.59	\$39.28	\$39.29	\$39.29	\$39.30	\$39.30	\$39.94	\$39.47	\$39.29	\$39.26
Total (\$/pop & emp)	\$137.02	\$141.92	\$141.09	\$141.77	\$141.99	\$142.54	\$143.00	\$143.59	\$141.90	\$140.18	\$141.50

CITY OF PETERBOROUGH
CALCULATION OF MAXIMUM ALLOWABLE
POLICE SERVICES

10-Year Funding Envelope Calculation	
10 Year Average Service Level 2009 - 2018	\$141.50
Net Population & Employment Growth 2019 - 2028	16,092
Maximum Allowable Funding Envelope	\$2,277,018
Discounted Maximum Allowable Funding Envelope	\$2,277,018

CITY OF PETERBOROUGH
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	0% Reduction		Available DC Reserves	2019-2028	Post 2028
3.0 POLICE SERVICES										
3.1 Buildings, Land & Furnishings										
3.1.1 Additional Police Facility Space	2028	\$ 73,750,000	\$ -	\$ 73,750,000	\$ 22,443,193	\$ -	\$ 51,306,807	\$ 4,788	\$ 2,277,018	\$ 49,025,001
Subtotal Buildings, Land & Furnishings		\$ 73,750,000	\$ -	\$ 73,750,000	\$ 22,443,193	\$ -	\$ 51,306,807	\$ 4,788	\$ 2,277,018	\$ 49,025,001
3.2 New Equipment										
3.2.1 Special Constable Equipment	2020	\$ 30,000	\$ -	\$ 30,000	\$ 15,000	\$ -	\$ 15,000	\$ -	\$ -	\$ 15,000
3.2.2 Personal Police Equipment	Various	\$ 142,170	\$ -	\$ 142,170	\$ 71,085	\$ -	\$ 71,085	\$ -	\$ -	\$ 71,085
Subtotal New Equipment		\$ 172,170	\$ -	\$ 172,170	\$ 86,085	\$ -	\$ 86,085	\$ -	\$ -	\$ 86,085
3.3 Studies										
3.3.1 Police Services Business Plan	2019	\$ 38,000	\$ -	\$ 38,000	\$ 19,000	\$ -	\$ 19,000	\$ -	\$ -	\$ 19,000
3.3.2 Police Services Business Plan	2023	\$ 38,000	\$ -	\$ 38,000	\$ 19,000	\$ -	\$ 19,000	\$ -	\$ -	\$ 19,000
3.3.3 Police Services Business Plan	2026	\$ 38,000	\$ -	\$ 38,000	\$ 19,000	\$ -	\$ 19,000	\$ -	\$ -	\$ 19,000
Subtotal Studies		\$ 114,000	\$ -	\$ 114,000	\$ 57,000	\$ -	\$ 57,000	\$ -	\$ -	\$ 57,000
TOTAL POLICE SERVICES		\$ 74,036,170	\$ -	\$ 74,036,170	\$ 22,586,278	\$ -	\$ 51,449,892	\$ 4,788	\$ 2,277,018	\$ 49,168,086

Residential Development Charge Calculation

Residential Share of 2019 - 2028 DC Eligible Costs	80%	\$1,821,614
10-Year Growth in Population in New Units		13,373
Unadjusted Development Charge Per Capita		\$136.22

Non-Residential Development Charge Calculation

Non-Residential Share of 2019 - 2028 DC Eligible Costs	20%	\$455,404
10-Year Growth in Square Metres		248,249
Unadjusted Development Charge Per Square Metre		\$1.83

2019 - 2028 Net Funding Envelope \$2,277,018

Current Reserve Fund Balance \$4,788

88
APPENDIX B.3
TABLE 3

CITY OF PETERBOROUGH
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
POLICE SERVICES
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

POLICE SERVICES	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	TOTAL
OPENING CASH BALANCE	\$0.0	\$165.0	\$341.4	\$529.9	\$731.0	\$945.2	\$1,173.5	\$1,416.6	\$1,673.1	\$1,945.4	
2019 - 2028 RESIDENTIAL FUNDING REQUIREMENTS											
- Police Services: Non Inflated	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$1,821.6	\$1,821.6
- Police Services: Inflated	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$2,177.0	\$2,177.0
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	1,259	1,277	1,295	1,313	1,330	1,350	1,369	1,375	1,392	1,413	13,373
REVENUE											
- DC Receipts: Inflated	\$162.1	\$167.7	\$173.5	\$179.4	\$185.4	\$191.9	\$198.5	\$203.4	\$210.0	\$217.4	\$1,889.4
INTEREST											
- Interest on Opening Balance	\$0.0	\$5.8	\$11.9	\$18.5	\$25.6	\$33.1	\$41.1	\$49.6	\$58.6	\$68.1	\$312.2
- Interest on In-year Transactions	\$2.8	\$2.9	\$3.0	\$3.1	\$3.2	\$3.4	\$3.5	\$3.6	\$3.7	(\$53.9)	(\$24.6)
TOTAL REVENUE	\$165.0	\$176.4	\$188.5	\$201.1	\$214.2	\$228.4	\$243.1	\$256.5	\$272.2	\$231.6	\$2,177.0
CLOSING CASH BALANCE	\$165.0	\$341.4	\$529.9	\$731.0	\$945.2	\$1,173.5	\$1,416.6	\$1,673.1	\$1,945.4	\$0.0	

2019 Adjusted Charge Per Capita	\$128.77
--	-----------------

Allocation of Capital Program	
Residential Sector	80.0%
Non-Residential Sector	20.0%
Rates for 2019	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

89
APPENDIX B.3
TABLE 3

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

POLICE SERVICES	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	TOTAL
OPENING CASH BALANCE	\$0.00	\$42.11	\$86.87	\$134.52	\$185.08	\$238.69	\$295.60	\$355.85	\$419.71	\$487.22	
2019 - 2028 NON-RESIDENTIAL FUNDING REQUIREMENTS											
- Police Services: Non Inflated	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$455.4	\$455.4
- Police Services: Inflated	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$544.2	\$544.2
NEW NON-RESIDENTIAL DEVELOPMENT											
- Growth in Square Metres	23,875	24,063	24,312	24,500	24,688	24,937	25,125	25,375	25,562	25,812	248,249
REVENUE											
- DC Receipts: Inflated	\$41.4	\$42.5	\$43.8	\$45.1	\$46.3	\$47.7	\$49.0	\$50.5	\$51.9	\$53.5	\$471.8
INTEREST											
- Interest on Opening Balance	\$0.0	\$1.5	\$3.0	\$4.7	\$6.5	\$8.4	\$10.3	\$12.5	\$14.7	\$17.1	\$78.6
- Interest on In-year Transactions	\$0.7	\$0.7	\$0.8	\$0.8	\$0.8	\$0.8	\$0.9	\$0.9	\$0.9	(\$13.5)	(\$6.2)
TOTAL REVENUE	\$42.1	\$44.8	\$47.7	\$50.6	\$53.6	\$56.9	\$60.2	\$63.9	\$67.5	\$57.0	\$544.2
CLOSING CASH BALANCE	\$42.1	\$86.9	\$134.5	\$185.1	\$238.7	\$295.6	\$355.9	\$419.7	\$487.2	\$0.0	

2019 Adjusted Charge Per Square Metre **\$1.73**

Allocation of Capital Program

Residential Sector	80.0%
Non-Residential Sector	20.0%

Rates for 2019

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

APPENDIX B.4

RECREATION

APPENDIX B.4

RECREATION

The City of Peterborough Community Services Department oversees a variety of facilities, programs, services and special events for all ages. Indoor recreation services are provided to Peterborough's residents through 11 facilities, which include community centers, sports facilities, arenas, and aquatic facilities.

TABLE 1 2009-2018 HISTORICAL SERVICE LEVELS

The 10-year historical inventory of capital assets for Recreation includes 422,043 square feet of indoor recreation building space accommodated within 11 major facilities. The largest of these facilities is the Peterborough Memorial Centre at 119,286 square feet. The current replacement value for all buildings is \$152.3 million and the 24.4 hectares of land associated with the buildings is valued at \$10.5 million. The furniture and equipment found in the facilities has a total value of \$8.7 million.

The 2018 full replacement value of the inventory of capital assets for the Recreation department amounts to \$171.6 million and the 10-year historical average service level is \$2,159.71 per capita.

The historical service level multiplied by the 10-year forecast of net population growth results in a 10-year maximum allowable funding envelope of \$26.2 million (historical service level of \$2,159.71/capita X 12,120 net population growth).

Recreation is a service for which development-related capital costs must be reduced by 10 percent as required under the *DCA*. The resulting discounted maximum allowable funding envelope brought forward to the development charges calculation is reduced to \$23.6 million.

**TABLE 2 2019 – 2028 DEVELOPMENT-RELATED CAPITAL PROGRAM &
CALCULATION OF THE UNADJUSTED DEVELOPMENT CHARGE**

The 2019 to 2028 gross development-related capital program for Recreation amounts to \$52.2 million. The capital program provides for the construction of a new arena and aquatic complex for a total cost of \$52.0 million in 2021. This facility is intended to provide two ice pads, a pool and a walking track. Also included in the program are two studies, a Facility Feasibility Study and Vision 2035, for \$242,945.

Available grants and alternative funding sources have been identified for the major complex, with the City providing one-third of the capital costs and the federal and provincial governments each providing another third. This amounts to \$36.7 million in grants.

Replacement shares amount to \$4.7 million, with the majority related to the new facility, as one ice pad will replace an existing pad. The legislated 10 percent discount totals \$1.1 million and will be funded from non-development charges sources. A further amount of \$1.1 million will be funded from available reserve funds. The remaining share of \$8.7 million is eligible for development charges funding in the 10-year forecast period.

The full development-related share of the Recreation capital program is allocated entirely against future residential development in the City of Peterborough. This results in an unadjusted development charge of \$649.81 per capita.

TABLE 3 CASH FLOW AND RESERVE FUND ANALYSIS

After cash flow consideration, the calculated development charge increases to \$715.11 per capita. The following table summarizes the calculation of the Recreation development charge:

RECREATION SUMMARY						
10-year Hist.	2019 - 2028		Unadjusted		Adjusted	
Service Level	Development-Related Capital Program		Development Charge		Development Charge	
per capita	Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$2,159.71	\$52,242,945	\$8,689,956	\$649.81	\$0.00	\$715.11	\$0.00

93
APPENDIX B.4
TABLE 1

CITY OF PETERBOROUGH
INVENTORY OF CAPITAL ASSETS
RECREATION

BUILDINGS Facility Name	# of Square Feet										UNIT COST (\$/sq.ft.)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Peterborough Memorial Centre	119,286	119,286	119,286	119,286	119,286	119,286	119,286	119,286	119,286	119,286	\$370
Evinrude Centre	93,747	93,747	93,747	93,747	93,747	93,747	93,747	93,747	93,747	93,747	\$340
Kinsmen Civic Centre	56,234	56,234	56,234	56,234	56,234	56,234	56,234	56,234	56,234	56,234	\$420
Northcrest Arena	24,681	24,681	24,681	24,681	24,681	24,681	24,681	24,681	24,681	24,681	\$340
Queen Alexandra Community Centre	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	\$300
Morrow Building	25,049	25,049	25,049	25,049	25,049	25,049	25,049	25,049	25,049	25,049	\$210
Bicentennial Building	7,380	7,380	7,380	7,380	7,380	7,380	7,380	7,380	7,380	7,380	\$210
Morrow Lounge	3,073	3,073	3,073	3,073	3,073	3,073	-	-	-	-	\$190
Morrow Park Grandstand	11,577	11,577	11,577	11,577	11,577	-	-	-	-	-	\$160
Morrow Park Barns	14,511	14,511	14,511	14,511	14,511	14,511	14,511	14,511	14,511	14,511	\$190
Peterborough Marina Building	5,955	5,955	5,955	5,955	5,955	5,955	5,955	5,955	5,955	5,955	\$350
Peterborough Sport & Wellness Centre	59,600	59,600	59,600	59,600	59,600	59,600	59,600	59,600	59,600	59,600	\$470
Exhibition Office	600	600	600	600	600	600	600	600	600	600	\$190
Total (sq.ft.)	436,693	436,693	436,693	436,693	436,693	425,116	422,043	422,043	422,043	422,043	
Total (\$000)	\$154,733.2	\$154,733.2	\$154,733.2	\$154,733.2	\$154,733.2	\$152,880.9	\$152,297.1	\$152,297.1	\$152,297.1	\$152,297.1	

94
APPENDIX B.4
TABLE 1

**CITY OF PETERBOROUGH
INVENTORY OF CAPITAL ASSETS
RECREATION**

LAND Facility Name	# of Hectares										UNIT COST (\$/ha)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Peterborough Memorial Centre	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	\$431,600
Evinrude Centre	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	\$431,600
Kinsmen Civic Centre	7.26	7.26	7.26	7.26	7.26	7.26	7.26	7.26	7.26	7.26	\$431,600
Northcrest Arena	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	\$431,600
Queen Alexandra Community Centre	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	\$431,600
Morrow Building	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	\$431,600
Bicentennial Building	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	\$431,600
Morrow Lounge	0.28	0.28	0.28	0.28	0.28	0.28	-	-	-	-	\$431,600
Morrow Park Grandstand	0.76	0.76	0.76	0.76	0.76	-	-	-	-	-	\$431,600
Morrow Park Barns	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	\$431,600
Peterborough Marina Building	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	\$431,600
Peterborough Sport & Wellness Centre	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40	\$431,600
Total (ha)	25.41	25.41	25.41	25.41	25.41	24.65	24.37	24.37	24.37	24.37	
Total (\$000)	\$10,967.0	\$10,967.0	\$10,967.0	\$10,967.0	\$10,967.0	\$10,638.9	\$10,518.1	\$10,518.1	\$10,518.1	\$10,518.1	

FURNITURE AND EQUIPMENT Description	Total Value of Furniture & Equipment (\$)									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Peterborough Memorial Centre	\$2,846,000	\$3,117,000	\$3,117,000	\$3,117,000	\$3,180,000	\$3,210,000	\$3,210,000	\$3,210,000	\$3,210,000	\$3,210,000
Evinrude Centre	\$1,677,000	\$1,837,000	\$1,837,000	\$1,837,000	\$1,998,000	\$1,998,000	\$1,998,000	\$1,998,000	\$1,998,000	\$1,998,000
Kinsmen Civic Centre	\$956,000	\$1,047,000	\$1,047,000	\$1,047,000	\$1,473,000	\$1,473,000	\$1,473,000	\$1,473,000	\$1,473,000	\$1,473,000
Northcrest Arena	\$442,000	\$484,000	\$484,000	\$484,000	\$484,000	\$613,000	\$613,000	\$613,000	\$613,000	\$613,000
Morrow Building	\$299,000	\$327,000	\$327,000	\$327,000	\$327,000	\$327,000	\$327,000	\$327,000	\$327,000	\$327,000
Morrow Lounge	\$37,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000
Peterborough Marina Building	\$30,000	\$8,000	\$8,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000
Peterborough Sport & Wellness Centre	\$1,070,000	\$1,070,000	\$1,070,000	\$1,070,000	\$1,070,000	\$1,070,000	\$1,070,000	\$1,070,000	\$1,070,000	\$1,070,000
Total (\$000)	\$7,357.0	\$7,930.0	\$7,930.0	\$7,931.0	\$8,581.0	\$8,740.0	\$8,740.0	\$8,740.0	\$8,740.0	\$8,740.0

95
APPENDIX B.4
TABLE 1

**CITY OF PETERBOROUGH
CALCULATION OF SERVICE LEVELS
RECREATION**

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Historical Population	77,364	78,028	78,698	79,159	79,623	80,090	80,560	81,032	82,141	83,265

INVENTORY SUMMARY (\$000)

Buildings	\$154,733.2	\$154,733.2	\$154,733.2	\$154,733.2	\$154,733.2	\$152,880.9	\$152,297.1	\$152,297.1	\$152,297.1	\$152,297.1
Land	\$10,967.0	\$10,967.0	\$10,967.0	\$10,967.0	\$10,967.0	\$10,638.9	\$10,518.1	\$10,518.1	\$10,518.1	\$10,518.1
Furniture And Equipment	\$7,357.0	\$7,930.0	\$7,930.0	\$7,931.0	\$8,581.0	\$8,740.0	\$8,740.0	\$8,740.0	\$8,740.0	\$8,740.0
Total (\$000)	\$173,057.2	\$173,630.2	\$173,630.2	\$173,631.2	\$174,281.2	\$172,259.9	\$171,555.1	\$171,555.1	\$171,555.1	\$171,555.1

SERVICE LEVEL (\$/capita)

Average
Service
Level

Buildings	\$2,000.07	\$1,983.05	\$1,966.16	\$1,954.71	\$1,943.32	\$1,908.86	\$1,890.48	\$1,879.47	\$1,854.09	\$1,829.06	\$1,920.93
Land	\$141.76	\$140.55	\$139.35	\$138.54	\$137.74	\$132.84	\$130.56	\$129.80	\$128.05	\$126.32	\$134.55
Furniture And Equipment	\$95.10	\$101.63	\$100.76	\$100.19	\$107.77	\$109.13	\$108.49	\$107.86	\$106.40	\$104.97	\$104.23
Total (\$/capita)	\$2,236.92	\$2,225.23	\$2,206.28	\$2,193.45	\$2,188.83	\$2,150.83	\$2,129.53	\$2,117.13	\$2,088.54	\$2,060.35	\$2,159.71

**CITY OF PETERBOROUGH
CALCULATION OF MAXIMUM ALLOWABLE
RECREATION**

10-Year Funding Envelope Calculation	
10 Year Average Service Level 2009 - 2018	\$2,159.71
Net Population Growth 2019 - 2028	12,120
Maximum Allowable Funding Envelope	\$26,175,685
Less: 10% Legislated Reduction	\$2,617,569
Discounted Maximum Allowable Funding Envelope	\$23,558,117

CITY OF PETERBOROUGH
DEVELOPMENT-RELATED CAPITAL PROGRAM
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	10% Reduction		Available DC Reserves	2019-2028	Post 2028
4.0 RECREATION										
4.1 Arenas										
4.1.1 New Arena & Aquatic Complex	2021	\$ 52,000,000	\$ 36,666,667	\$ 15,333,333	\$ 4,657,961	\$ 1,067,537	\$ 9,607,835	\$ 1,059,339	\$ 8,548,496	\$ -
Subtotal Arenas		\$ 52,000,000	\$ 36,666,667	\$ 15,333,333	\$ 4,657,961	\$ 1,067,537	\$ 9,607,835	\$ 1,059,339	\$ 8,548,496	\$ -
4.2 Studies										
4.2.1 Facility Feasibility Study	2019	\$ 142,945	\$ -	\$ 142,945	\$ 85,767	\$ 5,718	\$ 51,460	\$ -	\$ 51,460	\$ -
4.2.2 Vision 2035	2025	\$ 100,000	\$ -	\$ 100,000	\$ -	\$ 10,000	\$ 90,000	\$ -	\$ 90,000	\$ -
Subtotal Studies		\$ 242,945	\$ -	\$ 242,945	\$ 85,767	\$ 15,718	\$ 141,460	\$ -	\$ 141,460	\$ -
TOTAL RECREATION		\$ 52,242,945	\$ 36,666,667	\$ 15,576,278	\$ 4,743,728	\$ 1,083,255	\$ 9,749,295	\$ 1,059,339	\$ 8,689,956	\$ -

Residential Development Charge Calculation

Residential Share of 2019 - 2028 DC Eligible Costs	100%	\$8,689,956
10-Year Growth in Population in New Units		13,373
Unadjusted Development Charge Per Capita		\$649.81

Non-Residential Development Charge Calculation

Non-Residential Share of 2019 - 2028 DC Eligible Costs	0%	\$0
10-Year Growth in Square Metres		248,249
Unadjusted Development Charge Per Square Metre		\$0.00

2019 - 2028 Net Funding Envelope \$23,558,117

Current Reserve Fund Balance \$1,059,339

97
APPENDIX B.4
TABLE 3

CITY OF PETERBOROUGH
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
RECREATION
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

RECREATION	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	TOTAL
OPENING CASH BALANCE	\$0.00	\$863.72	\$1,841.70	(\$6,232.80)	(\$5,561.77)	(\$4,820.15)	(\$4,000.73)	(\$3,201.92)	(\$2,228.79)	(\$1,164.65)	
2019 - 2028 RESIDENTIAL FUNDING REQUIREMENTS											
- Recreation: Non Inflated	\$51.5	\$0.0	\$8,548.5	\$0.0	\$0.0	\$0.0	\$90.0	\$0.0	\$0.0	\$0.0	\$8,690.0
- Recreation: Inflated	\$51.5	\$0.0	\$8,893.9	\$0.0	\$0.0	\$0.0	\$101.4	\$0.0	\$0.0	\$0.0	\$9,046.7
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	1,259	1,277	1,295	1,313	1,330	1,350	1,369	1,375	1,392	1,413	13,373
REVENUE											
- DC Receipts: Inflated	\$900.3	\$931.5	\$963.5	\$996.4	\$1,029.5	\$1,065.9	\$1,102.5	\$1,129.5	\$1,166.3	\$1,207.6	\$10,492.9
INTEREST											
- Interest on Opening Balance	\$0.0	\$30.2	\$64.5	(\$342.8)	(\$305.9)	(\$265.1)	(\$220.0)	(\$176.1)	(\$122.6)	(\$64.1)	(\$1,401.9)
- Interest on In-year Transactions	\$14.9	\$16.3	(\$208.6)	\$17.4	\$18.0	\$18.7	\$17.7	\$19.8	\$20.4	\$21.1	(\$44.3)
TOTAL REVENUE	\$915.2	\$978.0	\$819.3	\$671.0	\$741.6	\$819.4	\$900.2	\$973.1	\$1,064.1	\$1,164.7	\$9,046.7
CLOSING CASH BALANCE	\$863.7	\$1,841.7	(\$6,232.8)	(\$5,561.8)	(\$4,820.2)	(\$4,000.7)	(\$3,201.9)	(\$2,228.8)	(\$1,164.7)	\$0.0	

2019 Adjusted Charge Per Capita **\$715.11**

Allocation of Capital Program	
Residential Sector	100.0%
Non-Residential Sector	0.0%
Rates for 2019	
Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX B.5

PARKS

APPENDIX B.5

PARKS

Residents in the City of Peterborough enjoy over 100 parks throughout the City and a multitude of sports fields, playgrounds, and other special park facilities.

TABLE 1 2009-2018 HISTORICAL SERVICE LEVELS

Peterborough's inventory of developed parkland amounts to 328.1 hectares in parks of various sizes and types. This parkland is valued at \$36.6 million.

The Parks division is responsible for various park amenities such as baseball diamonds, sports fields, tennis courts, basketball courts, playgrounds, water parks and wading pools, beaches, and lacrosse bowls. Other facilities include park buildings, parking lots, interior roadways, picnic shelters, and boat ramps. The total value of park facilities is \$40.1 million.

The 2019 full replacement value of the inventory of capital assets for the Parks division amounts to \$76.6 million and the 10-year historical average service level is \$900.87 per capita.

The historical service level multiplied by the 10-year forecast of net population growth results in a 10-year maximum allowable funding envelope of \$10.9 million (historical service level of \$900.87/capita X 12,120 net population growth).

Parks is a service for which development-related capital costs must be reduced by 10 percent as required under the *DCA*. \$1.1 million is calculated as the 10 per cent reduction. The resulting discounted maximum allowable funding envelope brought forward to the development charges calculation is reduced to \$9.8 million.

TABLE 2 2019 – 2028 DEVELOPMENT-RELATED CAPITAL PROGRAM & CALCULATION OF THE UNADJUSTED DEVELOPMENT CHARGE

The 2019–2028 gross development-related capital program for Parks amounts to \$31.5 million.

The capital program provides for \$450,000 in various parkland development assistance projects to occur annually for the first three years. Also included in the program are

park facilities projects for a total of \$23.4 million. The most significant projects include the development of new ball diamonds and a fieldhouse for \$14.5 million, Del Crary Park upgrades (design and construction) for \$5.8 million and trail and shoreline improvements around Little Lake for \$2.0 million.

Benefit to existing shares have been identified for this service in the amount of \$12.0 million. The legislated 10 percent discount totals \$1.9 million and is netted off the DC eligible costs, which are then reduced to \$17.5 million. Of this \$17.5 million, \$935,900 is to be funded from available DC reserves and \$6.7 million will be considered under future development charges. The remaining \$9.8 million is eligible for development charges funding in the 10-year forecast period.

The full development-related share of the Parks capital program is allocated entirely against future residential development in the City of Peterborough. This results in an unadjusted development charge of \$734.82 per capita.

TABLE 3 CASH FLOW AND RESERVE FUND ANALYSIS

After cash flow consideration, the residential charge increases to \$825.32 per capita. The increase reflects the front-ended nature of the capital program.

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

PARKS SUMMARY						
10-year Hist.	2019 - 2028		Unadjusted		Adjusted	
Service Level	Development-Related Capital Program		Development Charge		Development Charge	
per capita	Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$900.87	\$31,450,000	\$9,826,690	\$734.82	\$0.00	\$825.32	\$0.00

101
APPENDIX B.5
TABLE 1

CITY OF PETERBOROUGH
INVENTORY OF CAPITAL ASSETS
PARKS
PARK DEVELOPMENT

DEVELOPED PARKLAND Park Name	# of Hectares of Developed Parkland										UNIT COST (\$/ha)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Applewood Tot Lot	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	\$193,300
Armour Park	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	\$193,300
Ashburnham Memorial Park	19.49	19.49	19.49	19.49	19.49	19.49	19.49	19.49	19.49	19.49	\$12,100
Auburn Reach	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	\$193,300
Barlesan & Leighton	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	\$193,300
Barnardo	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	\$193,300
Barnardo & Wolsley	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	\$193,300
Bears Creek Common	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	\$193,300
Bears Creek Gardens	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	\$193,300
Bears Creek Woods	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33	\$193,300
Beavermead	22.23	22.23	22.23	22.23	22.23	22.23	22.23	22.23	22.23	22.23	\$193,300
Bonnerworth	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.12	\$193,300
Bowers Park	8.40	8.40	8.40	8.40	8.40	8.40	8.40	8.40	8.40	8.40	\$193,300
Bridlewood	2.91	2.91	2.91	2.91	2.91	2.91	2.91	2.91	2.91	2.91	\$193,300
Briton Carpet	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	\$193,300
Burnham Point (Edgewater Blvd)	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42	\$193,300
Cameron Street Tot Lot	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	\$193,300
Cedargrove	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	\$193,300
Centennial	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	\$193,300
Charlotte & Park	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	\$193,300
Chelsea Gardens	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	\$193,300
Chemong Island	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	\$193,300
Clonsilla & Lansdowne	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	\$193,300
Collison Park	2.83	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	\$193,300
Confederation Park	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	\$193,300
Corrigan Crescent	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	\$193,300
Corrigan Hill	7.16	7.16	7.16	7.16	7.16	7.16	7.16	7.16	7.16	7.16	\$12,100
Crary Park	2.98	2.98	2.98	2.98	2.98	2.98	2.98	2.98	2.98	2.98	\$193,300
Crescent St	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	\$193,300
Cross & McDonnel	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	\$193,300
Cumberland Green Belt/Walkway	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	\$193,300
Dainard Drive	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	\$193,300
Denne Crescent	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	\$193,300

102
APPENDIX B.5
TABLE 1

CITY OF PETERBOROUGH
INVENTORY OF CAPITAL ASSETS
PARKS
PARK DEVELOPMENT

DEVELOPED PARKLAND Park Name	# of Hectares of Developed Parkland										UNIT COST (\$/ha)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Dominion Tot Lot	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	\$182,700
Earlwood	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	\$182,700
Eastgate	12.45	12.45	12.45	12.45	12.45	12.45	12.45	12.45	12.45	12.45	\$182,700
Edmison Heights Tot Lot	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	\$182,700
Fairbairn & Poplar	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	\$182,700
Farmcrest	12.84	12.84	12.84	12.84	12.84	12.84	12.84	12.84	12.84	12.84	\$11,400
Fleming Park	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	\$182,700
Franklin & Hilliard	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	\$182,700
Giles Park	1.46	1.46	1.46	1.46	1.46	1.46	1.46	1.46	1.46	1.46	\$182,700
Golfview	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56	\$182,700
Goose Pond	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	\$182,700
Grove Tot Lot	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	\$182,700
Hamilton Park	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	\$182,700
Harper Road - "open space"	29.63	29.63	29.63	29.63	29.63	29.63	29.63	29.63	29.63	29.63	\$11,400
Hastings Park	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	\$182,700
Hilliard Green Belt	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	\$34,200
Humber Tot Lot	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	\$182,700
Inverlea	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	\$182,700
Jackson Park	33.13	33.13	33.13	33.13	33.13	33.13	33.13	33.13	33.13	33.13	\$11,400
James Stevenson	5.45	5.45	5.45	5.45	5.45	5.45	5.45	5.45	5.45	5.45	\$22,900
John Taylor	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	\$182,700
Kawartha Heights Parks	10.73	10.73	10.73	10.73	10.73	10.73	10.73	10.73	10.73	10.73	\$22,900
Keith Wightman	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	\$182,700
King Edward	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37	\$182,700
Kinsmen	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	\$182,700
Kiwanis Park	3.21	3.21	3.21	3.21	3.21	3.21	3.21	3.21	3.21	3.21	\$182,700
Knights of Columbus	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	\$182,700
Manor Heights Tot Lot	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	\$182,700
Mapleridge	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	\$182,700
Millennium Park	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	\$182,700
Milroy Park	8.58	8.58	8.58	8.58	8.58	8.58	8.58	8.58	8.58	8.58	\$182,700
Morrow Park (ball diamonds)	8.12	8.12	8.12	8.12	8.12	8.12	8.12	8.12	8.12	8.12	\$182,700
Nevin	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	\$182,700
Newhall Park	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	\$182,700

103
APPENDIX B.5
TABLE 1

CITY OF PETERBOROUGH
INVENTORY OF CAPITAL ASSETS
PARKS
PARK DEVELOPMENT

DEVELOPED PARKLAND Park Name	# of Hectares of Developed Parkland										UNIT COST (\$/ha)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Nichols Place	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	\$182,700
Nichols Oval	17.69	17.69	17.69	17.69	17.69	17.69	17.69	17.69	17.69	17.69	\$182,700
Northland	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	\$182,700
Stillman Park	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82	\$182,700
Pioneer Park	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	\$182,700
Quaker Property (London foot bridge)	2.49	2.49	2.49	2.49	2.49	2.49	2.49	2.49	2.49	2.49	\$182,700
Redwood	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28	\$11,400
Reid & McDonnel	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	\$182,700
Rideau Crescent	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	\$182,700
Rogers Cove	3.07	3.07	3.07	3.07	3.07	3.27	3.27	3.27	3.27	3.27	\$182,700
Roland Glover	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	\$182,700
Roper	2.11	2.11	2.11	2.11	2.11	2.11	2.11	2.11	2.11	2.11	\$182,700
Rotary Park/Rotary Greenway Trail-Hunter to Parkhill	5.67	5.67	5.67	5.67	5.67	5.67	5.67	5.67	5.67	5.67	\$34,200
Rotary Trail - north of Parkhill	2.43	2.43	2.43	2.43	2.43	2.43	2.43	2.43	2.43	2.43	\$182,700
Royal Crescent	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	\$182,700
Rubidge & Reid	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	\$182,700
Sandalwood (Blodgett)	2.28	2.28	2.28	2.28	2.28	2.28	2.28	2.28	2.28	2.28	\$182,700
Sherbrooke Street Tot Lot	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	\$182,700
Sherbrooke Street Woods	4.77	4.77	4.77	4.77	4.77	4.77	4.77	4.77	4.77	4.77	\$11,400
Simcoe & Bethune	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	\$182,700
Stacey Green	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	\$182,700
Stenson Park	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	\$182,700

104
APPENDIX B.5
TABLE 1

CITY OF PETERBOROUGH
INVENTORY OF CAPITAL ASSETS
PARKS
PARK DEVELOPMENT

DEVELOPED PARKLAND Park Name	# of Hectares of Developed Parkland										UNIT COST (\$/ha)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Stewart Street Tot Lot	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	\$182,700
Stewart & Parkhill	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	\$182,700
Stocker Road Park (Glen Padgett)	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	\$182,700
Sunset & Chemong	3.96	3.96	3.96	3.96	3.96	3.96	3.96	3.96	3.96	3.96	\$182,700
Tinker Property	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	\$182,700
Turner Park	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	\$182,700
Union Street Tot Lot	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	\$182,700
University Heights	10.81	10.81	10.81	10.81	10.81	10.81	10.81	10.81	10.81	10.81	\$22,900
Valleymore	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	\$182,700
Walker Avenue	3.24	3.24	3.24	3.24	3.24	3.24	3.24	3.24	3.24	3.24	\$182,700
Wallis Heights	1.46	1.46	1.46	1.46	1.46	1.46	1.46	1.46	1.46	1.46	\$22,900
Waverley Heights	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06	\$182,700
Wedgewood	1.37	1.37	1.37	1.37	1.37	1.37	1.37	1.37	1.37	1.37	\$182,700
Weller Tot Lot	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	\$182,700
Wentworth	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	\$153,902
Westclox	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	\$182,700
Whitefield	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	\$182,700
Willowcreek	0.99	0.99	0.99	-	-	-	-	-	-	-	\$182,700
Jackson Creek	-	-	-	-	-	-	-	-	-	0.32	\$84,375
Mason (Roundabout Park)	-	-	-	-	-	-	-	-	0.75	0.75	\$195,893
Peace Crescent Island	-	-	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	\$85,000
McNamara Park	-	-	-	-	-	-	-	-	-	1.04	\$158,950
Total (ha)	330.08	327.45	327.52	326.53	326.53	326.73	326.73	326.73	327.48	328.06	
Total (\$000)	\$37,013.5	\$36,505.1	\$36,511.1	\$36,330.2	\$36,330.2	\$36,366.7	\$36,366.7	\$36,366.7	\$36,513.7	\$36,555.2	

105
APPENDIX B.5
TABLE 1

CITY OF PETERBOROUGH
INVENTORY OF CAPITAL ASSETS
PARKS
PARK FACILITIES

BASEBALL DIAMONDS Park Name	# of Baseball Diamonds										UNIT COST (\$/unit)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Premier Diamonds											
East City Bowl (Red Sullivan Bowl)	1	1	1	1	1	1	1	1	1	1	\$1,510,600
Kinsmen	1	1	1	1	1	1	1	1	1	1	\$1,510,600
Riverside	1	1	1	1	1	1	1	1	1	1	\$1,834,400
Trent University	-	-	-	-	-	-	-	1	1	1	\$1,834,400
Ball Diamonds "A"											
Bowers	4	4	4	4	4	4	4	4	4	4	\$685,200
Morrow	4	4	4	4	4	4	4	4	4	4	\$285,900
Fisher (Milroy)	1	1	1	1	1	1	1	1	1	1	\$342,100
Ball Diamonds "B"											
Armour Park	1	1	1	1	1	1	1	1	1	1	\$171,600
Barnardo	1	1	1	1	1	1	1	1	1	1	\$171,600
Bonnerworth - N	1	1	1	1	1	1	1	1	1	1	\$171,600
Bonnerworth - S	1	1	1	1	1	1	1	1	1	1	\$171,600
Briton Carpet	1	1	1	1	1	1	1	1	1	1	\$171,600
Knights of Columbus	1	1	1	1	1	1	1	1	1	1	\$171,600
Northland	1	1	1	1	1	1	1	1	1	1	\$171,600
Stacey Green	1	1	1	1	1	1	1	1	1	1	\$171,600
Westclox	1	1	1	1	1	1	1	1	1	1	\$171,600
Ball Diamonds "C"											
Fairbairn & Poplar	1	1	1	1	1	1	1	1	1	1	\$79,800
Inverlea	1	1	1	1	1	1	1	1	1	1	\$79,800
Kawartha Heights	2	2	2	2	2	2	2	2	2	2	\$79,800
Kiwanis	1	1	1	1	1	1	1	1	1	1	\$79,800
Northcrest	1	1	1	1	1	1	1	1	1	1	\$79,800
Olympus	1	1	1	1	1	1	1	1	1	1	\$79,800
Turner Park	1	1	1	1	1	1	1	1	1	1	\$79,800
Total (#)	29	29	29	29	29	29	29	30	30	30	
Total (\$000)	\$11,264.9	\$11,264.9	\$11,264.9	\$11,264.9	\$11,264.9	\$11,264.9	\$11,264.9	\$13,099.3	\$13,099.3	\$13,099.3	

106
APPENDIX B.5
TABLE 1

CITY OF PETERBOROUGH
INVENTORY OF CAPITAL ASSETS
PARKS
PARK FACILITIES

RECTANGULAR FIELDS Park Name	# of Fields										UNIT COST (\$/unit)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Premier Rectangular Fields											
Eastgate	2	2	2	2	2	2	2	2	2	2	\$1,027,200
Rectangular "A"											
King Edward	1	1	1	1	1	1	1	1	1	1	\$458,600
Nichols Oval	1	1	1	1	1	1	1	1	1	1	\$431,600
Milroy	2	2	2	2	2	2	2	2	2	2	\$342,100
Rectangular "B"											
Beavermead	6	6	6	6	6	6	6	6	6	6	\$228,800
Eastgate	1	1	1	1	1	1	1	1	1	1	\$228,800
Kinsmen	1	1	1	1	1	1	1	1	1	1	\$228,800
Rectangular "C"											
Keith Wightman	1	1	1	1	1	1	1	1	1	1	\$79,800
Artificial Turfs											
Artificial TASS	-	-	-	-	0.49	0.49	0	0	0.49	0.49	\$2,913,400
Artificial SSFC	-	-	-	-	1	1	1	1	1	1	\$2,913,400
Total (#)	15	15	15	15	16	16	16	16	16	16	
Total (\$000)	\$5,539.0	\$5,539.0	\$5,539.0	\$5,539.0	\$9,880.0	\$9,880.0	\$9,880.0	\$9,880.0	\$9,880.0	\$9,880.0	

TENNIS COURTS Park Name	# of Tennis Courts										UNIT COST (\$/unit)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Barnardo	1	1	1	1	1	1	1	1	1	1	\$39,900
Bonnerworth	4	4	4	4	4	4	4	4	4	4	\$68,000
Chelsea Gardens	1	1	1	1	1	1	1	1	1	1	\$39,900
Knights of Columbus	1	1	1	1	1	1	1	1	1	1	\$39,900
Northland	1	1	1	1	1	1	1	1	1	1	\$39,900
Olympus	1	1	1	1	1	1	1	1	1	1	\$39,900
Roper	1	1	1	1	1	1	1	1	1	1	\$39,900
Stacey Green	1	1	1	1	1	1	1	1	1	1	\$39,900
Total (#)	11	11	11	11	11	11	11	11	11	11	
Total (\$000)	\$551.3	\$551.3	\$551.3	\$551.3	\$551.3	\$551.3	\$551.3	\$551.3	\$551.3	\$551.3	

107
APPENDIX B.5
TABLE 1

CITY OF PETERBOROUGH
INVENTORY OF CAPITAL ASSETS
PARKS
PARK FACILITIES

BASKETBALL COURTS Park Name	# of Basketball Courts										UNIT COST (\$/unit)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Armour	1	1	1	1	1	1	1	1	1	1	\$34,500
Barnardo	1	1	1	1	1	1	1	1	1	1	\$34,500
Bears Creek Common	1	1	1	1	1	1	1	1	1	1	\$34,500
Chelsea Gardens	1	1	1	1	1	1	1	1	1	1	\$17,300
Hamilton	1	1	1	1	1	1	1	1	1	1	\$34,500
Inverlea	1	1	1	1	1	1	1	1	1	1	\$34,500
James Stevenson	1	1	1	1	1	1	1	1	1	1	\$34,500
Kawartha Heights	1	1	1	1	1	1	1	1	1	1	\$34,500
King Edward	1	1	1	1	1	1	1	1	1	1	\$34,500
Kiwanis	1	1	1	1	1	1	1	1	1	1	\$34,500
Nichols Oval	1	1	1	1	1	1	1	1	1	1	\$34,500
Northland	1	1	1	1	1	1	1	1	1	1	\$34,500
Olympus	1	1	1	1	1	1	1	1	1	1	\$34,500
Roper	1	1	1	1	1	1	1	1	1	1	\$34,500
Sherbrooke Street	1	1	1	1	1	1	1	1	1	1	\$34,500
Simcoe & Bethune	1	1	2	2	2	2	2	2	2	2	\$80,900
Stacey Green	1	1	1	1	1	1	1	1	1	1	\$34,500
Stewart Street	1	1	1	1	1	1	1	1	1	1	\$34,500
Turner Park	1	1	1	1	1	1	1	1	1	1	\$34,500
Union Street	1	1	1	1	1	1	1	1	1	1	\$34,500
Valleymore	-	-	-	1	1	1	1	1	1	1	\$16,200
Walker Ave	1	1	1	-	-	-	-	-	-	-	\$17,300
Weller Cres	1	1	1	1	1	1	1	1	1	1	\$17,300
Wallis Heights	1	1	1	1	1	1	1	1	1	1	\$17,300
Waverly Heights	-	1	1	1	1	1	1	1	1	1	\$17,300
Total (#)	23	24	25	25	25	25	25	25	25	25	
Total (\$000)	\$771.1	\$788.4	\$869.3	\$868.2	\$868.2	\$868.2	\$868.2	\$868.2	\$868.2	\$868.2	

108
APPENDIX B.5
TABLE 1

CITY OF PETERBOROUGH
INVENTORY OF CAPITAL ASSETS
PARKS
PARK FACILITIES

PLAY EQUIPMENT Park Name	# of Play Equipment										UNIT COST (\$/unit)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Applewood	1	1	1	1	1	1	1	1	1	1	\$39,900
Ashburnham	1	1	1	1	1	1	1	1	1	1	\$28,100
Barlesan/Leighton	1	1	1	1	1	1	1	1	1	1	\$28,100
Barnardo	1	1	1	1	1	1	1	1	1	1	\$39,900
Bears Creek Gardens	1	1	1	1	1	1	1	1	1	1	\$28,100
Beavermead	1	1	1	1	1	1	1	1	1	1	\$79,800
Bowers	1	1	1	1	1	1	1	1	1	1	\$34,500
Bridlewood	1	1	1	1	1	1	1	1	1	1	\$39,900
Centennial	1	1	1	1	1	1	1	1	1	1	\$39,900
Chelsea Gardens	1	1	1	1	1	1	1	1	1	1	\$39,900
Collison	1	1	1	1	1	1	1	1	1	1	\$39,900
Dixon	-	-	1	1	1	1	1	1	1	1	\$39,900
Dominion	1	1	1	1	1	1	1	1	1	1	\$39,900
Edmison Tot Lot	1	1	1	1	1	1	1	1	1	1	\$39,900
Fairbairn/Poplar	1	1	1	1	1	1	1	1	1	1	\$39,900
Giles	1	1	1	1	1	1	1	1	1	1	\$39,900
Golfview	1	1	1	1	1	1	1	1	1	1	\$54,000
Grove	1	1	1	1	1	1	1	1	1	1	\$39,900
Hamilton	1	1	1	1	1	1	1	1	1	1	\$39,900
Hastings	1	1	1	1	1	1	1	1	1	1	\$34,500
Humber	1	-	-	-	-	-	-	-	-	-	\$34,500
Inverlea	1	1	1	1	1	1	1	1	1	1	\$39,900
Jackson	1	1	1	1	1	1	1	1	1	1	\$39,900
James Stevenson	1	1	1	1	1	1	1	1	1	1	\$39,900
Kawartha - Upper	1	1	1	1	1	1	1	1	1	1	\$39,900
King Edward	1	1	1	1	1	1	1	1	1	1	\$39,900
Kiwanis	1	1	1	1	1	1	1	1	1	1	\$91,700
Knights of Columbus	1	1	1	1	1	1	1	1	1	1	\$54,000
Manor Heights	1	1	1	1	1	1	1	1	1	1	\$39,900
Mapleridge	1	1	1	1	1	1	1	1	1	1	\$28,100
McKellar	1	1	1	1	1	1	1	1	1	1	\$39,900
Newhall	1	1	1	1	1	1	1	1	1	1	\$39,900

109
APPENDIX B.5
TABLE 1

CITY OF PETERBOROUGH
INVENTORY OF CAPITAL ASSETS
PARKS
PARK FACILITIES

PLAY EQUIPMENT Park Name	# of Play Equipment										UNIT COST (\$/unit)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Nichols Oval	1	1	1	1	1	1	1	1	1	1	\$39,900
Northland	1	1	1	1	1	1	1	1	1	1	\$39,900
Olympus	1	1	1	1	1	1	1	1	1	1	\$39,900
Rideau	1	1	1	1	1	1	1	1	1	1	\$28,100
Rogers Cove	2	2	2	2	2	2	2	2	2	2	\$114,400
Roland Glover	1	1	1	1	1	1	1	1	1	1	\$39,900
Roper	1	1	1	1	1	1	1	1	1	1	\$39,900
Sherbrooke	1	1	1	1	1	1	1	1	1	1	\$39,900
Simcoe & Bethune	1	1	1	1	1	1	1	1	1	1	\$39,900
Stacey Green	1	1	1	1	1	1	1	1	1	1	\$39,900
Stenson	1	1	1	1	1	1	1	1	1	1	\$28,100
Stewart	1	1	1	1	1	1	1	1	1	1	\$39,900
Stocker	1	1	1	1	1	1	1	1	1	1	\$28,100
Turner	1	1	1	1	1	1	1	1	1	1	\$28,100
Union	1	1	1	1	1	1	1	1	1	1	\$39,900
University Heights	1	1	1	1	1	1	1	1	1	1	\$39,900
Valleymore	1	1	1	1	1	1	1	1	1	1	\$39,900
Walker Ave	1	1	1	1	1	1	1	1	1	1	\$39,900
Wallis Heights	1	1	1	1	1	1	1	1	1	1	\$39,900
Weller Cres	1	1	1	1	1	1	1	1	1	1	\$39,900
Whitefield	1	1	1	1	1	1	1	1	1	1	\$39,900
Willowcreek	1	1	1	1	1	1	1	1	1	1	\$39,900
Waverley	1	1	1	1	1	1	1	1	1	1	\$54,000
Jackson Creek	-	-	-	-	-	-	-	-	-	1	\$54,000
Mason (Roundabout Park)	-	-	-	-	-	-	-	-	1	1	\$54,000
Total (#)	55	54	55	55	55	55	55	55	56	57	
Total (\$000)	\$2,366.9	\$2,332.4	\$2,372.3	\$2,372.3	\$2,372.3	\$2,372.3	\$2,372.3	\$2,372.3	\$2,426.3	\$2,480.3	

110
APPENDIX B.5
TABLE 1

CITY OF PETERBOROUGH
INVENTORY OF CAPITAL ASSETS
PARKS
PARK FACILITIES

WATERPLAY Park Name	# of Waterplay Features										UNIT COST (\$/unit)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Spray Posts											
Hamilton Park	1	1	1	1	1	1	1	1	1	1	\$34,500
Nichols Oval	1	1	1	1	1	-	-	-	-	-	\$34,500
Stillman Park	1	1	1	1	1	1	1	1	1	1	\$34,500
Splash Pads											
King Edward	-	-	1	1	1	1	1	1	1	1	\$256,800
Rogers Cove	-	-	-	-	1	1	1	1	1	1	\$701,400
Nichols Oval	-	-	-	-	1	1	1	1	1	1	\$256,800
Kinsmen	-	-	-	-	-	-	1	1	1	1	\$256,800
Barnardo	-	-	-	-	-	-	-	-	-	1	\$256,800
Total (#)	3	3	4	4	6	5	6	6	6	7	
Total (\$000)	\$103.5	\$103.5	\$360.3	\$360.3	\$1,318.5	\$1,284.0	\$1,540.8	\$1,540.8	\$1,540.8	\$1,797.6	

WADING POOLS Park Name	# of Pools										UNIT COST (\$/unit)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Barnardo	1	1	1	1	1	1	1	1	1	-	\$274,100
Chelsea Gardens	1	1	1	1	1	1	1	1	1	1	\$274,100
Knights of Columbus	1	1	1	1	1	1	1	1	1	1	\$274,100
McKellar	1	1	1	1	1	1	1	1	1	1	\$274,100
Turner	1	1	1	1	1	1	1	1	1	1	\$274,100
Total (#)	5	5	5	5	5	5	5	5	5	4	
Total (\$000)	\$1,370.5	\$1,370.5	\$1,370.5	\$1,370.5	\$1,370.5	\$1,370.5	\$1,370.5	\$1,370.5	\$1,370.5	\$1,096.4	

111
APPENDIX B.5
TABLE 1

CITY OF PETERBOROUGH
INVENTORY OF CAPITAL ASSETS
PARKS
PARK FACILITIES

BEACHES Park Name	# of Beaches										UNIT COST (\$/unit)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Rogers Cove	1	1	1	1	1	1	1	1	1	1	\$102,500
Beavermead	1	1	1	1	1	1	1	1	1	1	\$102,500
Total (#)	2	2	2	2	2	2	2	2	2	2	
Total (\$000)	\$205.0	\$205.0	\$205.0	\$205.0	\$205.0	\$205.0	\$205.0	\$205.0	\$205.0	\$205.0	

LACROSS BOWLS Park Name	# of Bowls										UNIT COST (\$/unit)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Knights of Columbus	1	1	1	1	1	1	1	1	1	1	\$399,200
Total (#)	1	1	1	1	1	1	1	1	1	1	
Total (\$000)	\$399.2	\$399.2	\$399.2	\$399.2	\$399.2	\$399.2	\$399.2	\$399.2	\$399.2	\$399.2	

112
APPENDIX B.5
TABLE 1

CITY OF PETERBOROUGH
INVENTORY OF CAPITAL ASSETS
PARKS
SPECIAL FACILITIES

PARK BUILDINGS Description	Total Value of Park Buildings (\$000)									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Beavermead Campground Kiosk	\$81.8	\$81.8	\$81.8	\$81.8	\$81.8	\$81.8	\$81.8	\$81.8	\$81.8	\$81.8
Beavermead Campground Washroom	\$280.4	\$280.4	\$280.4	\$280.4	\$280.4	\$280.4	\$280.4	\$280.4	\$280.4	\$280.4
Beavermead Public Washroom	\$303.8	\$303.8	\$303.8	\$303.8	\$303.8	\$303.8	\$303.8	\$303.8	\$303.8	\$303.8
Old Bonnerworth Washroom	\$251.2	\$251.2	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
New Bonnerworth Washroom	\$0.0	\$0.0	\$321.3	\$321.3	\$321.3	\$321.3	\$321.3	\$321.3	\$321.3	\$321.3
Collison Washroom	\$175.2	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Crary Washroom	\$251.2	\$251.2	\$251.2	\$251.2	\$251.2	\$251.2	\$251.2	\$251.2	\$251.2	\$251.2
Eastgate Washroom and Field House	\$350.5	\$350.5	\$350.5	\$350.5	\$350.5	\$350.5	\$350.5	\$350.5	\$350.5	\$350.5
Fleming Washroom & Changeroom	\$0.0	\$0.0	\$0.0	\$0.0	\$1,168.3	\$1,168.3	\$1,168.3	\$1,168.3	\$1,168.3	\$1,168.3
Jackson Washroom	\$251.2	\$251.2	\$251.2	\$251.2	\$251.2	\$251.2	\$251.2	\$251.2	\$251.2	\$251.2
King Edward Washroom	\$458.2	\$458.2	\$458.2	\$458.2	\$458.2	\$458.2	\$458.2	\$458.2	\$458.2	\$458.2
Nichols Oval Washroom	\$462.9	\$462.9	\$462.9	\$462.9	\$462.9	\$462.9	\$462.9	\$462.9	\$462.9	\$462.9
Otonabee River Trail Boathouse	\$554.9	\$554.9	\$554.9	\$554.9	\$554.9	\$554.9	\$554.9	\$554.9	\$554.9	\$554.9
Otonabee River Trail Washroom	\$227.8	\$227.8	\$227.8	\$227.8	\$227.8	\$227.8	\$227.8	\$227.8	\$227.8	\$227.8
Old Rogers Cove Changeroom	\$87.6	\$87.6	\$87.6	\$87.6	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
New Rogers Cove Changeroom	\$0.0	\$0.0	\$0.0	\$0.0	\$585.3	\$585.3	\$585.3	\$585.3	\$585.3	\$585.3
SSFC Maintenance Building	\$111.0	\$111.0	\$111.0	\$111.0	\$111.0	\$111.0	\$111.0	\$111.0	\$111.0	\$111.0
Bowers Field House	\$128.5	\$128.5	\$128.5	\$128.5	\$128.5	\$128.5	\$128.5	\$128.5	\$128.5	\$128.5
Brownsea Base Boathouse	\$0.0	\$0.0	\$0.0	\$0.0	\$186.9	\$186.9	\$186.9	\$186.9	\$186.9	\$186.9
Total (\$000)	\$3,976.3	\$3,801.0	\$3,871.1	\$3,871.1	\$5,724.0	\$5,724.0	\$5,724.0	\$5,724.0	\$5,724.0	\$5,724.0

113
APPENDIX B.5
TABLE 1

CITY OF PETERBOROUGH
INVENTORY OF CAPITAL ASSETS
PARKS
SPECIAL FACILITIES

PARKING LOTS Park Name	Total Value of Parking Lots (\$000)									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Ashburnham Hill - A	\$130.0	\$130.0	\$130.0	\$130.0	\$130.0	\$130.0	\$130.0	\$130.0	\$130.0	\$130.0
Barnardo - G	\$27.0	\$27.0	\$27.0	\$27.0	\$27.0	\$27.0	\$27.0	\$27.0	\$27.0	\$27.0
Beavermead - A	\$260.0	\$260.0	\$260.0	\$260.0	\$260.0	\$260.0	\$260.0	\$260.0	\$260.0	\$260.0
Bonnerworth - G	\$55.0	\$55.0	\$55.0	\$55.0	\$55.0	\$55.0	\$55.0	\$55.0	\$55.0	\$55.0
Bowers Park - G	\$95.0	\$95.0	\$95.0	\$95.0	\$95.0	\$95.0	\$95.0	\$95.0	\$95.0	\$95.0
Crary Park - A	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0
Jackson - A & G	\$65.0	\$65.0	\$65.0	\$65.0	\$65.0	\$65.0	\$65.0	\$65.0	\$65.0	\$65.0
James Stevenson Park - A	\$50.0	\$50.0	\$50.0	\$50.0	\$50.0	\$50.0	\$50.0	\$50.0	\$50.0	\$50.0
Knights of Columbus - A	\$65.0	\$65.0	\$65.0	\$65.0	\$65.0	\$65.0	\$65.0	\$65.0	\$65.0	\$65.0
Rogers Cove - A	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0
Milroy - G	\$95.0	\$95.0	\$95.0	\$95.0	\$95.0	\$95.0	\$95.0	\$95.0	\$95.0	\$95.0
Total (\$000)	\$1,142.0	\$1,142.0	\$1,142.0	\$1,142.0	\$1,142.0	\$1,142.0	\$1,142.0	\$1,142.0	\$1,142.0	\$1,142.0

114
APPENDIX B.5
TABLE 1

CITY OF PETERBOROUGH
INVENTORY OF CAPITAL ASSETS
PARKS
SPECIAL FACILITIES

ROADWAYS Park Name	Total Value of Park Roadways (\$000)									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Auburn Reach - G	\$38.0	\$38.0	\$38.0	\$38.0	\$38.0	\$38.0	\$38.0	\$38.0	\$38.0	\$38.0
Beavermead - A	\$145.0	\$145.0	\$145.0	\$145.0	\$145.0	\$145.0	\$145.0	\$145.0	\$145.0	\$145.0
Jackson - A & G	\$65.0	\$65.0	\$65.0	\$65.0	\$65.0	\$65.0	\$65.0	\$65.0	\$65.0	\$65.0
James Stevenson - A	\$110.0	\$110.0	\$110.0	\$110.0	\$110.0	\$110.0	\$110.0	\$110.0	\$110.0	\$110.0
Nicols Oval - A	\$215.0	\$215.0	\$215.0	\$215.0	\$215.0	\$215.0	\$215.0	\$215.0	\$215.0	\$215.0
SSFC - A	\$95.0	\$95.0	\$95.0	\$95.0	\$95.0	\$95.0	\$95.0	\$95.0	\$95.0	\$95.0
Total (\$000)	\$668.0	\$668.0	\$668.0	\$668.0	\$668.0	\$668.0	\$668.0	\$668.0	\$668.0	\$668.0

PICNIC SHELTERS Park Name	# of Shelters										UNIT COST (\$/unit)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Beavermead Pavillion	1	1	1	1	1	1	1	1	1	1	\$137,000
Nichols Oval Pavillion	1	1	1	1	1	1	1	1	1	1	\$137,000
Heritage Pavillion	1	1	1	1	1	1	1	1	1	1	\$137,000
Total (#)	3	3	3	3	3	3	3	3	3	3	
Total (\$000)	\$411.0	\$411.0	\$411.0	\$411.0	\$411.0	\$411.0	\$411.0	\$411.0	\$411.0	\$411.0	

BOAT RAMPS Park Name	# of Boat Ramps										UNIT COST (\$/unit)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Beavermead	1	1	1	1	1	1	1	1	1	1	\$57,200
Little Lake	1	1	1	1	1	1	1	1	1	1	\$91,700
Monaghan Road	1	1	1	1	1	1	1	1	1	1	\$45,300
Sherin Avenue	1	1	1	1	1	1	1	1	1	1	\$45,300
Mark Street	1	1	1	1	1	1	1	1	1	1	\$513,600
Marina (Docks)	1	1	1	1	1	1	1	1	1	1	\$976,500
Total (#)	6	6	6	6	6	6	6	6	6	6	
Total (\$000)	\$1,729.6	\$1,729.6	\$1,729.6	\$1,729.6	\$1,729.6	\$1,729.6	\$1,729.6	\$1,729.6	\$1,729.6	\$1,729.6	

115
APPENDIX B.5
TABLE 1

CITY OF PETERBOROUGH
CALCULATION OF SERVICE LEVELS
PARKS

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Historical Population	77,364	78,028	78,698	79,159	79,623	80,090	80,560	81,032	82,141	83,265

INVENTORY SUMMARY (\$000)

Developed Parkland	\$37,013.5	\$36,505.1	\$36,511.1	\$36,330.2	\$36,330.2	\$36,366.7	\$36,366.7	\$36,366.7	\$36,513.7	\$36,555.2
Park Facilities	\$22,571.4	\$22,554.2	\$22,931.8	\$22,930.7	\$28,229.9	\$28,195.4	\$28,452.2	\$30,286.6	\$30,340.6	\$30,377.3
Special Facilities	\$7,926.9	\$7,751.6	\$7,821.7	\$7,821.7	\$9,674.6	\$9,674.6	\$9,674.6	\$9,674.6	\$9,674.6	\$9,674.6
Total (\$000)	\$67,511.8	\$66,810.9	\$67,264.6	\$67,082.6	\$74,234.7	\$74,236.7	\$74,493.5	\$76,327.9	\$76,528.9	\$76,607.1

SERVICE LEVEL (\$/capita)

Average
Service
Level

Developed Parkland	\$478.43	\$467.85	\$463.94	\$458.95	\$456.28	\$454.07	\$451.42	\$448.79	\$444.52	\$439.02	\$456.33
Park Facilities	\$291.76	\$289.05	\$291.39	\$289.68	\$354.54	\$352.05	\$353.18	\$373.76	\$369.37	\$364.83	\$332.96
Special Facilities	\$102.46	\$99.34	\$99.39	\$98.81	\$121.51	\$120.80	\$120.09	\$119.39	\$117.78	\$116.19	\$111.58
Total (\$/capita)	\$872.65	\$856.24	\$854.72	\$847.44	\$932.33	\$926.92	\$924.70	\$941.95	\$931.68	\$920.04	\$900.87

CITY OF PETERBOROUGH
CALCULATION OF MAXIMUM ALLOWABLE
PARKS

10-Year Funding Envelope Calculation	
10 Year Average Service Level 2009 - 2018	\$900.87
Net Population Growth 2019 - 2028	12,120
Maximum Allowable Funding Envelope	\$10,918,544
Less: 10% Legislated Reduction	\$1,091,854
Discounted Maximum Allowable Funding Envelope	\$9,826,690

116
APPENDIX B.5
TABLE 2

CITY OF PETERBOROUGH
DEVELOPMENT-RELATED CAPITAL PROGRAM
PARKS

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	10% Reduction		Available DC Reserves	2019-2028	Post 2028
5.0 PARKS										
5.1 Parkland										
5.1.1 Ongoing Parkland Development	2020	\$ 150,000	\$ -	\$ 150,000	\$ -	\$ 15,000	\$ 135,000	\$ 135,000	\$ -	\$ -
5.1.2 Ongoing Parkland Development	2021	\$ 150,000	\$ -	\$ 150,000	\$ -	\$ 15,000	\$ 135,000	\$ -	\$ 135,000	\$ -
5.1.3 Ongoing Parkland Development	2022	\$ 150,000	\$ -	\$ 150,000	\$ -	\$ 15,000	\$ 135,000	\$ -	\$ 135,000	\$ -
Subtotal Parkland		\$ 450,000	\$ -	\$ 450,000	\$ -	\$ 45,000	\$ 405,000	\$ 135,000	\$ 270,000	\$ -
5.2 Park Facilities										
5.2.1 Beavermead Campground Park Entry Pavillion	2020	\$ 500,000	\$ -	\$ 500,000	\$ -	\$ 50,000	\$ 450,000	\$ 125,900	\$ 324,100	\$ -
5.2.2 Del Crary Park Upgrade (Design)	2020	\$ 100,000	\$ -	\$ 100,000	\$ 50,000	\$ 5,000	\$ 45,000	\$ -	\$ 45,000	\$ -
5.2.3 Development of New Ball Diamonds and Field House	2020	\$ 14,500,000	\$ -	\$ 14,500,000	\$ 8,100,000	\$ 640,000	\$ 5,760,000	\$ -	\$ 5,760,000	\$ -
5.2.4 Construction of a New Washroom Building at Trent Ball Diamond	2021	\$ 600,000	\$ -	\$ 600,000	\$ -	\$ 60,000	\$ 540,000	\$ -	\$ 540,000	\$ -
5.2.5 Del Crary Park Upgrade (Construction)	2021	\$ 5,700,000	\$ -	\$ 5,700,000	\$ 2,850,000	\$ 285,000	\$ 2,565,000	\$ -	\$ 2,122,590	\$ 442,410
5.2.6 Trail and Shoreline Improvements (Little Lake)	2021	\$ 2,000,000	\$ -	\$ 2,000,000	\$ 1,000,000	\$ 100,000	\$ 900,000	\$ -	\$ -	\$ 900,000
Subtotal Park Facilities		\$ 23,400,000	\$ -	\$ 23,400,000	\$ 12,000,000	\$ 1,140,000	\$ 10,260,000	\$ 125,900	\$ 8,791,690	\$ 1,342,410
5.3 Trail Network										
5.3.1 Annual Provision for Extending City's Trail Network	2019	\$ 750,000	\$ -	\$ 750,000	\$ -	\$ 75,000	\$ 675,000	\$ 675,000	\$ -	\$ -
5.3.2 Annual Provision for Extending City's Trail Network	2020	\$ 750,000	\$ -	\$ 750,000	\$ -	\$ 75,000	\$ 675,000	\$ -	\$ 675,000	\$ -
5.3.3 Annual Provision for Extending City's Trail Network	2021	\$ 750,000	\$ -	\$ 750,000	\$ -	\$ 75,000	\$ 675,000	\$ -	\$ -	\$ 675,000
5.3.4 Annual Provision for Extending City's Trail Network	2022	\$ 750,000	\$ -	\$ 750,000	\$ -	\$ 75,000	\$ 675,000	\$ -	\$ -	\$ 675,000
5.3.5 Annual Provision for Extending City's Trail Network	2023	\$ 750,000	\$ -	\$ 750,000	\$ -	\$ 75,000	\$ 675,000	\$ -	\$ -	\$ 675,000
5.3.6 Annual Provision for Extending City's Trail Network	2024	\$ 750,000	\$ -	\$ 750,000	\$ -	\$ 75,000	\$ 675,000	\$ -	\$ -	\$ 675,000
5.3.7 Annual Provision for Extending City's Trail Network	2025	\$ 750,000	\$ -	\$ 750,000	\$ -	\$ 75,000	\$ 675,000	\$ -	\$ -	\$ 675,000
5.3.8 Annual Provision for Extending City's Trail Network	2026	\$ 750,000	\$ -	\$ 750,000	\$ -	\$ 75,000	\$ 675,000	\$ -	\$ -	\$ 675,000
5.3.9 Annual Provision for Extending City's Trail Network	2027	\$ 750,000	\$ -	\$ 750,000	\$ -	\$ 75,000	\$ 675,000	\$ -	\$ -	\$ 675,000
5.3.10 Annual Provision for Extending City's Trail Network	2028	\$ 750,000	\$ -	\$ 750,000	\$ -	\$ 75,000	\$ 675,000	\$ -	\$ -	\$ 675,000
Subtotal Trail Network		\$ 7,500,000	\$ -	\$ 7,500,000	\$ -	\$ 750,000	\$ 6,750,000	\$ 675,000	\$ 675,000	\$ 5,400,000
5.4 Studies										
5.4.1 Parks and Open Space Strategy	2020	\$ 100,000	\$ -	\$ 100,000	\$ -	\$ 10,000	\$ 90,000	\$ -	\$ 90,000	\$ -
Subtotal Studies		\$ 100,000	\$ -	\$ 100,000	\$ -	\$ 10,000	\$ 90,000	\$ -	\$ 90,000	\$ -
TOTAL PARKS		\$ 31,450,000	\$ -	\$ 31,450,000	\$ 12,000,000	\$ 1,945,000	\$ 17,505,000	\$ 935,900	\$ 9,826,690	\$ 6,742,410

Residential Development Charge Calculation		
Residential Share of 2019 - 2028 DC Eligible Costs	100%	\$9,826,690
10-Year Growth in Population in New Units		13,373
Unadjusted Development Charge Per Capita		\$734.82
Non-Residential Development Charge Calculation		
Non-Residential Share of 2019 - 2028 DC Eligible Costs	0%	\$0
10-Year Growth in Square Metres		248,249
Unadjusted Development Charge Per Square Metre		\$0.00

2019 - 2028 Net Funding Envelope	\$9,826,690
Current Reserve Fund Balance	\$935,900

117
APPENDIX B.5
TABLE 3

CITY OF PETERBOROUGH
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
PARKS
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

PARKS	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	TOTAL
OPENING CASH BALANCE	\$0.00	\$1,057.26	(\$5,026.53)	(\$7,151.10)	(\$6,520.09)	(\$5,669.74)	(\$4,729.91)	(\$3,695.38)	(\$2,572.28)	(\$1,344.15)	
2019 - 2028 RESIDENTIAL FUNDING REQUIREMENTS											
- Parks: Non Inflated	\$0.0	\$6,894.1	\$2,797.6	\$135.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$9,826.7
- Parks: Inflated	\$0.0	\$7,032.0	\$2,910.6	\$143.3	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$10,085.9
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	1,259	1,277	1,295	1,313	1,330	1,350	1,369	1,375	1,392	1,413	13,373
REVENUE											
- DC Receipts: Inflated	\$1,039.1	\$1,075.0	\$1,112.0	\$1,150.0	\$1,188.2	\$1,230.1	\$1,272.4	\$1,303.5	\$1,346.1	\$1,393.7	\$12,110.0
INTEREST											
- Interest on Opening Balance	\$0.0	\$37.0	(\$276.5)	(\$393.3)	(\$358.6)	(\$311.8)	(\$260.1)	(\$203.2)	(\$141.5)	(\$73.9)	(\$1,982.0)
- Interest on In-year Transactions	\$18.2	(\$163.8)	(\$49.5)	\$17.6	\$20.8	\$21.5	\$22.3	\$22.8	\$23.6	\$24.4	(\$42.1)
TOTAL REVENUE	\$1,057.3	\$948.2	\$786.0	\$774.3	\$850.3	\$939.8	\$1,034.5	\$1,123.1	\$1,228.1	\$1,344.1	\$10,085.9
CLOSING CASH BALANCE	\$1,057.3	(\$5,026.5)	(\$7,151.1)	(\$6,520.1)	(\$5,669.7)	(\$4,729.9)	(\$3,695.4)	(\$2,572.3)	(\$1,344.1)	\$0.0	

2019 Adjusted Charge Per Capita

\$825.32

Allocation of Capital Program

Residential Sector	100.0%
Non-Residential Sector	0.0%

Rates for 2019

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

APPENDIX B.6

PUBLIC WORKS

APPENDIX B.6

PUBLIC WORKS

The Public Works Division has responsibility for solid waste collection and disposal, maintenance of the sanitary and storm sewer systems, sidewalks, streets, including winter control, bridges and culverts, municipal parklands and urban forestry. Note that the engineered components of Sewage Treatment and Roads & Other City-wide engineering construction are included in Appendix C.

TABLE 1 2009-2018 HISTORICAL SERVICE LEVELS

The 10-year historical inventory of capital assets for Public Works includes 67,170 square feet of building space with a replacement value of \$6.7 million. The 11.07 hectares of land associated with the Public Works buildings are valued at \$1.6 million. Furniture and equipment amounts to \$949,600, and the total value of the municipal fleet adds \$14.9 million to the value of the capital assets.

The total value of the Public Works capital infrastructure is estimated to be \$24.1 million. The 10-year historical average service level is \$184.18 per population and employment and this, multiplied by the 10-year forecast population and employment growth (16,092), results in a 10-year maximum allowable funding envelope of \$3.0 million. The services and capital assets of the Public Works department are considered to be related to a highway, and as such, the maximum allowable funding envelope of \$3.0 million is not required to be reduced by 10 per cent.

**TABLE 2 2019 – 2028 DEVELOPMENT-RELATED CAPITAL PROGRAM AND
CALCULATION OF THE UNADJUSTED DEVELOPMENT CHARGES**

The Public Works capital program includes a relocation of the public works facility, which has a gross capital cost of \$17.3 million. Other aspects of the capital program include stormwater management ponds and drainage for a snow dump (\$1.1 million), fleet upgrades (\$14.8 million), and brine equipment (\$350,000).

Altogether, the Public Works capital program totals \$33.5 million. No grants or subsidies have been identified. Replacement shares total \$21.3 million and account largely for the replacement portion of the facility replacement, snow dump and vehicle upgrades. An additional share of \$9.3 million is identified as providing benefit to development beyond 2028.

The remaining DC costs eligible for recovery between 2019 and 2028 amount to \$3.0 million and are allocated 80 percent, or \$2.4 million, against new residential development, and 20 per cent, or \$592,765 against non-residential development. This yields an unadjusted development charge of \$177.30 per capita and \$2.39 per square metre.

TABLE 3 CASH FLOW ANALYSIS

After cash flow and reserve fund analysis, the residential calculated charge increases to \$252.36 per capita and the non-residential charge increases to \$3.39 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 Public Works development charge.

PUBLIC WORKS SUMMARY						
10-year Hist.	2019 - 2028		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
\$184.18	\$33,501,100	\$2,963,825	\$177.30	\$2.39	\$252.36	\$3.39

121
APPENDIX B.6
TABLE 1

CITY OF PETERBOROUGH
INVENTORY OF CAPITAL ASSETS
PUBLIC WORKS

BUILDINGS Facility Name	# of Square Feet										UNIT COST (\$/sq.ft.)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Townsend St: Office	8,200	8,200	8,200	8,200	8,200	8,200	8,200	8,200	8,200	8,200	\$180
Townsend St: Vehicle Storage	12,360	12,360	12,360	12,360	12,360	12,360	12,360	12,360	12,360	12,360	\$110
Townsend St: Carpenter Shop	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	\$110
Townsend St: Salt Shed	1,260	1,260	1,260	1,260	1,260	1,260	1,260	1,260	1,260	1,260	\$40
Townsend St: Dome	7,850	7,850	7,850	7,850	7,850	7,850	7,850	7,850	7,850	7,850	\$40
Townsend St: Vehicle Storage	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	8,000	\$110
Townsend St: Vehicle Storage Leased	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	\$110
Harper Road: Storage Shed	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	\$40
SSFC Storage Facility/Garage	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	\$70
Wolfe St. Storage	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	\$70
Total (#)	70,170	70,170	70,170	70,170	70,170	70,170	70,170	70,170	70,170	67,170	
Total (\$000)	\$6,980.0	\$6,980.0	\$6,980.0	\$6,980.0	\$6,980.0	\$6,980.0	\$6,980.0	\$6,980.0	\$6,980.0	\$6,650.0	

LAND Facility Name	# of Hectares										UNIT COST (\$/ha)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Townsend Street: All land	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	\$431,600
Harper Road: Storage Shed	8.09	8.09	8.09	8.09	8.09	8.09	8.09	8.09	8.09	8.09	\$107,900
Hunter Street	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	\$107,900
SSFC Storage Facility/Garage	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	\$107,900
Wolfe St. Storage	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	\$431,600
Snow Dump	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	\$107,900
Total (ha)	11.07	11.07	11.07	11.07	11.07	11.07	11.07	11.07	11.07	11.07	
Total (\$000)	\$1,609.7	\$1,609.7	\$1,609.7	\$1,609.7	\$1,609.7	\$1,609.7	\$1,609.7	\$1,609.7	\$1,609.7	\$1,609.7	

FURNITURE & EQUIPMENT Facility Name	Total Value of Furniture & Equipment (\$)									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Townsend St: Office	\$156,460	\$156,460	\$156,460	\$156,460	\$156,460	\$156,460	\$156,460	\$156,460	\$156,460	\$156,460
Townsend St: Carpenter Shop	\$91,718	\$91,718	\$91,718	\$91,718	\$91,718	\$91,718	\$91,718	\$91,718	\$91,718	\$91,718
Townsend St: Vehicle Storage	\$701,373	\$701,373	\$701,373	\$701,373	\$701,373	\$701,373	\$701,373	\$701,373	\$701,373	\$701,373
Total (\$000)	\$949.6	\$949.6	\$949.6	\$949.6	\$949.6	\$949.6	\$949.6	\$949.6	\$949.6	\$949.6

122
APPENDIX B.6
TABLE 1

CITY OF PETERBOROUGH
INVENTORY OF CAPITAL ASSETS
PUBLIC WORKS

MUNICIPAL FLEET Description	Total Value of Fleet (\$)									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Light Duty Trucks										
200	\$30,000	\$30,000	\$30,000	\$0	\$0	\$0	\$0	\$0	\$32,306	\$32,306
237	\$0	\$0	\$0	\$23,011	\$23,011	\$23,011	\$23,011	\$23,011	\$23,011	\$23,011
201	\$27,000	\$27,000	\$27,000	\$27,000	\$0	\$0	\$0	\$0	\$32,306	\$32,306
244	\$0	\$0	\$0	\$0	\$51,651	\$51,651	\$51,651	\$51,651	\$51,651	\$51,651
202	\$35,000	\$35,000	\$35,000	\$35,000	\$0	\$0	\$0	\$0	\$0	\$0
245	\$0	\$0	\$0	\$0	\$30,389	\$30,389	\$30,389	\$30,389	\$30,389	\$30,389
203	\$78,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
350	\$0	\$145,241	\$145,241	\$145,241	\$145,241	\$145,241	\$145,241	\$145,241	\$145,241	\$145,241
205	\$62,000	\$62,000	\$62,000	\$62,000	\$0	\$0	\$0	\$0	\$0	\$0
242	\$0	\$0	\$0	\$0	\$70,665	\$70,665	\$70,665	\$70,665	\$70,665	\$70,665
206	\$62,000	\$62,000	\$62,000	\$62,000	\$0	\$0	\$0	\$0	\$0	\$0
243	\$0	\$0	\$0	\$0	\$68,866	\$68,866	\$68,866	\$68,866	\$68,866	\$68,866
210	\$34,000	\$34,000	\$34,000	\$34,000	\$0	\$0	\$0	\$0	\$0	\$0
246	\$0	\$0	\$0	\$0	\$30,389	\$30,389	\$30,389	\$30,389	\$30,389	\$30,389
213	\$30,000	\$30,000	\$30,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
238	\$0	\$0	\$0	\$23,032	\$23,032	\$23,032	\$23,032	\$23,032	\$23,032	\$23,032
215	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000	\$0	\$0	\$0	\$0
216	\$55,000	\$55,000	\$55,000	\$55,000	\$55,000	\$0	\$0	\$0	\$0	\$0
253	\$0	\$0	\$0	\$0	\$0	\$73,263	\$73,263	\$73,263	\$73,263	\$73,263
217	\$27,000	\$27,000	\$27,000	\$27,000	\$0	\$0	\$0	\$0	\$0	\$0
240	\$0	\$0	\$0	\$0	\$39,092	\$39,092	\$39,092	\$39,092	\$39,092	\$39,092
219	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$0	\$0	\$0	\$0	\$0
252	\$0	\$0	\$0	\$0	\$0	\$52,119	\$52,119	\$52,119	\$52,119	\$52,119
220	\$62,000	\$62,000	\$62,000	\$62,000	\$62,000	\$0	\$0	\$0	\$38,324	\$38,324
250	\$0	\$0	\$0	\$0	\$0	\$65,430	\$65,430	\$65,430	\$65,430	\$65,430
221	\$62,000	\$62,000	\$62,000	\$62,000	\$62,000	\$0	\$0	\$0	\$0	\$0
251	\$0	\$0	\$0	\$0	\$0	\$65,430	\$65,430	\$65,430	\$65,430	\$65,430
222	\$32,000	\$32,000	\$32,000	\$32,000	\$32,000	\$32,000	\$0	\$0	\$0	\$0
223	\$27,000	\$27,000	\$27,000	\$27,000	\$27,000	\$28,890	\$0	\$0	\$0	\$0
224	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$0	\$0	\$0	\$0
225	\$47,000	\$47,000	\$47,000	\$47,000	\$47,000	\$47,000	\$47,000	\$47,000	\$47,000	\$47,000
226	\$31,000	\$31,000	\$31,000	\$31,000	\$0	\$0	\$0	\$0	\$0	\$0
248	\$0	\$0	\$0	\$0	\$19,188	\$19,188	\$19,188	\$19,188	\$19,188	\$19,188
227	\$31,000	\$31,000	\$31,000	\$31,000	\$31,000	\$31,000	\$0	\$0	\$0	\$0
228	\$45,000	\$45,000	\$45,000	\$45,000	\$0	\$0	\$0	\$0	\$0	\$0
247	\$0	\$0	\$0	\$0	\$30,389	\$30,389	\$30,389	\$30,389	\$30,389	\$30,389
229	\$37,578	\$37,578	\$37,578	\$37,578	\$37,578	\$37,578	\$0	\$0	\$0	\$0

123
APPENDIX B.6
TABLE 1

CITY OF PETERBOROUGH
INVENTORY OF CAPITAL ASSETS
PUBLIC WORKS

MUNICIPAL FLEET Description	Total Value of Fleet (\$)									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
230	\$60,536	\$60,536	\$60,536	\$60,536	\$60,536	\$60,536	\$60,536	\$60,536	\$60,536	\$60,536
231	\$33,780	\$33,780	\$33,780	\$33,780	\$33,780	\$33,780	\$33,780	\$33,780	\$33,780	\$33,780
232	\$33,870	\$33,870	\$33,870	\$33,870	\$33,870	\$33,870	\$0	\$0	\$0	\$0
233	\$24,290	\$24,290	\$24,290	\$24,290	\$24,290	\$24,290	\$0	\$0	\$0	\$0
234	\$23,527	\$23,527	\$23,527	\$23,527	\$23,527	\$23,527	\$23,527	\$23,527	\$23,527	\$23,527
235	\$35,000	\$35,000	\$35,000	\$35,000	\$0	\$0	\$0	\$0	\$0	\$0
241	\$0	\$0	\$0	\$0	\$39,092	\$39,092	\$39,092	\$39,092	\$39,092	\$39,092
236	\$41,234	\$41,234	\$41,234	\$41,234	\$41,234	\$41,234	\$41,234	\$41,234	\$41,234	\$41,234
239	\$0	\$0	\$0	\$26,313	\$26,313	\$26,313	\$26,313	\$26,313	\$26,313	\$26,313
270	\$31,000	\$31,000	\$31,000	\$31,000	\$31,000	\$31,000	\$31,000	\$31,000	\$31,000	\$31,000
271	\$63,062	\$63,062	\$63,062	\$63,062	\$63,062	\$63,062	\$63,062	\$63,062	\$0	\$0
272	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$45,466	\$45,466
249	\$0	\$0	\$0	\$20,956	\$20,956	\$20,956	\$20,956	\$20,956	\$20,956	\$20,956
254	\$0	\$0	\$0	\$0	\$27,583	\$27,583	\$27,583	\$27,583	\$27,583	\$27,583
255	\$0	\$0	\$0	\$0	\$0	\$59,000	\$59,000	\$59,000	\$59,000	\$59,000
256	\$0	\$0	\$0	\$0	\$0	\$27,620	\$27,620	\$27,620	\$27,620	\$27,620
257	\$0	\$0	\$0	\$0	\$0	\$27,620	\$27,620	\$27,620	\$27,620	\$27,620
258	\$0	\$0	\$0	\$0	\$0	\$0	\$33,770	\$33,770	\$33,770	\$33,770
259	\$0	\$0	\$0	\$0	\$0	\$0	\$33,770	\$33,770	\$33,770	\$33,770
260	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$40,676	\$40,676	\$40,676
Heavy Duty Trucks										
441	\$140,000	\$140,000	\$140,000	\$140,000	\$140,000	\$140,000	\$0	\$0	\$0	\$0
442	\$140,000	\$140,000	\$140,000	\$140,000	\$140,000	\$140,000	\$0	\$0	\$0	\$0
443	\$197,000	\$197,000	\$197,000	\$197,000	\$197,000	\$197,000	\$0	\$0	\$0	\$0
444	\$197,000	\$197,000	\$197,000	\$197,000	\$197,000	\$197,000	\$197,000	\$197,000	\$197,000	\$197,000
445	\$179,000	\$179,000	\$179,000	\$179,000	\$179,000	\$179,000	\$0	\$0	\$0	\$0
446	\$215,000	\$215,000	\$215,000	\$215,000	\$215,000	\$215,000	\$0	\$0	\$0	\$0
447	\$215,000	\$215,000	\$215,000	\$215,000	\$215,000	\$215,000	\$0	\$0	\$0	\$0
448	\$215,000	\$215,000	\$215,000	\$215,000	\$215,000	\$215,000	\$0	\$0	\$0	\$0
449	\$215,000	\$215,000	\$215,000	\$215,000	\$215,000	\$215,000	\$0	\$0	\$0	\$0
450	\$237,768	\$237,768	\$237,768	\$237,768	\$237,768	\$237,768	\$0	\$0	\$0	\$0
451	\$237,768	\$237,768	\$237,768	\$237,768	\$237,768	\$237,768	\$0	\$0	\$0	\$0
452	\$237,768	\$237,768	\$237,768	\$237,768	\$237,768	\$237,768	\$0	\$0	\$0	\$0
453	\$237,768	\$237,768	\$237,768	\$237,768	\$237,768	\$237,768	\$237,768	\$237,768	\$237,768	\$237,768
454	\$243,337	\$243,337	\$243,337	\$243,337	\$243,337	\$243,337	\$0	\$0	\$0	\$0

124
APPENDIX B.6
TABLE 1

CITY OF PETERBOROUGH
INVENTORY OF CAPITAL ASSETS
PUBLIC WORKS

MUNICIPAL FLEET Description	Total Value of Fleet (\$)									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
455	\$243,337	\$243,337	\$243,337	\$243,337	\$243,337	\$243,337	\$0	\$0	\$0	\$0
456	\$243,337	\$243,337	\$243,337	\$243,337	\$243,337	\$243,337	\$0	\$0	\$0	\$0
457	\$243,337	\$243,337	\$243,337	\$243,337	\$243,337	\$243,337	\$0	\$0	\$0	\$0
458	\$0	\$0	\$0	\$0	\$213,216	\$213,216	\$213,216	\$213,216	\$213,216	\$213,216
459	\$0	\$0	\$0	\$0	\$213,216	\$213,216	\$213,216	\$213,216	\$213,216	\$213,216
460	\$0	\$0	\$0	\$0	\$213,216	\$213,216	\$213,216	\$213,216	\$213,216	\$213,216
461	\$0	\$0	\$0	\$0	\$0	\$0	\$191,116	\$191,116	\$191,116	\$191,116
462	\$0	\$0	\$0	\$0	\$0	\$0	\$191,116	\$191,116	\$191,116	\$191,116
463	\$0	\$0	\$0	\$0	\$0	\$0	\$191,116	\$191,116	\$191,116	\$191,116
464	\$0	\$0	\$0	\$0	\$0	\$0	\$191,116	\$191,116	\$191,116	\$191,116
465	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$234,913	\$234,913	\$234,913
466	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$234,913	\$234,913	\$234,913
467	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$234,913	\$234,913	\$234,913
468	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$234,913	\$234,913	\$234,913
469	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$234,913	\$234,913	\$234,913
470	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$234,913	\$234,913	\$234,913
471	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$246,501	\$246,501
472	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$246,501	\$246,501
473	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$246,501	\$246,501
474	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$246,501	\$246,501
475	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$246,501	\$246,501
Tractors/Loaders/Backhoes										
62	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$0	\$0	\$0	\$0	\$0
438 (rep 62)	\$0	\$0	\$0	\$0	\$0	\$136,806	\$136,806	\$136,806	\$136,806	\$136,806
66	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$0	\$0	\$0	\$0
439 (rep 66)	\$0	\$0	\$0	\$0	\$0	\$136,806	\$136,806	\$136,806	\$136,806	\$136,806
431	\$75,000	\$75,000	\$75,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0

125
APPENDIX B.6
TABLE 1

CITY OF PETERBOROUGH
INVENTORY OF CAPITAL ASSETS
PUBLIC WORKS

MUNICIPAL FLEET Description	Total Value of Fleet (\$)									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
436 (rep 431)	\$0	\$0	\$0	62,191	62,191	62,191	62,191	62,191	62,191	62,191
432	\$75,000	\$75,000	\$75,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
437 (rep 432)	\$0	\$0	\$0	\$65,260	\$65,260	\$65,260	\$65,260	\$65,260	\$65,260	\$65,260
434	\$75,000	\$75,000	\$75,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
435	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$0	\$0	\$0	\$0
73	\$140,000	\$140,000	\$140,000	\$140,000	\$0	\$0	\$0	\$0	\$0	\$0
516 (rep 73)	\$0	\$0	\$0	\$0	\$234,461	\$234,461	\$234,461	\$234,461	\$234,461	\$234,461
501	\$140,000	\$140,000	\$140,000	\$140,000	\$0	\$0	\$0	\$0	\$0	\$0
517 (rep 501)	\$0	\$0	\$0	\$0	\$234,461	\$234,461	\$234,461	\$234,461	\$234,461	\$234,461
502	\$60,000	\$60,000	\$60,000	\$60,000	\$0	\$0	\$0	\$0	\$0	\$0
504 (rep 502)	\$0	\$0	\$0	\$0	\$100,632	\$100,632	\$100,632	\$100,632	\$100,632	\$100,632
503	\$280,000	\$280,000	\$280,000	\$280,000	\$280,000	\$280,000	\$0	\$0	\$0	\$0
513	\$110,000	\$110,000	\$110,000	\$110,000	\$0	\$0	\$0	\$0	\$0	\$0
505 (rep 513)	\$0	\$0	\$0	\$0	\$164,619	\$164,619	\$164,619	\$164,619	\$164,619	\$164,619
514	\$144,000	\$144,000	\$144,000	\$144,000	\$144,000	\$144,000	\$0	\$0	\$0	\$0
515	\$144,000	\$144,000	\$144,000	\$144,000	\$144,000	\$144,000	\$144,000	\$144,000	\$144,000	\$144,000
440	\$0	\$0	\$0	\$0	\$0	\$0	\$47,803	\$47,803	\$47,803	\$47,803
430	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$96,293	\$96,293	\$96,293
506	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$139,944	\$139,944
507	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$139,944	\$139,944
518	\$0	\$0	\$0	\$0	\$180,856	\$180,856	\$180,856	\$180,856	\$180,856	\$180,856
Sidewalk Plows										
401	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$0	\$0	\$0	\$0
402	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$0	\$0	\$0	\$0
403	\$88,000	\$88,000	\$88,000	\$88,000	\$88,000	\$88,000	\$0	\$0	\$0	\$0
404	\$88,000	\$88,000	\$88,000	\$88,000	\$88,000	\$88,000	\$0	\$0	\$0	\$0
405	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$0	\$0	\$0	\$0
413	\$121,468	\$121,468	\$121,468	\$121,468	\$121,468	\$121,468	\$0	\$0	\$0	\$0
414	\$121,468	\$121,468	\$121,468	\$121,468	\$121,468	\$121,468	\$0	\$0	\$0	\$0
415	\$121,468	\$121,468	\$121,468	\$121,468	\$121,468	\$121,468	\$121,468	\$121,468	\$121,468	\$121,468
407	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$130,000
408	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$130,000
409	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$130,000
410	\$0	\$0	\$0	\$0	\$0	\$92,000	\$0	\$0	\$0	\$0
411	\$0	\$0	\$0	\$0	\$0	\$92,000	\$0	\$0	\$0	\$0
412	\$0	\$0	\$0	\$0	\$0	\$92,000	\$0	\$0	\$0	\$0
416	\$0	\$0	\$0	\$0	\$92,000	\$0	\$0	\$0	\$0	\$0
417	\$0	\$0	\$0	\$0	\$92,000	\$0	\$0	\$0	\$0	\$0
418	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$130,000	\$0
419	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$130,000	\$0

126
APPENDIX B.6
TABLE 1

CITY OF PETERBOROUGH
INVENTORY OF CAPITAL ASSETS
PUBLIC WORKS

MUNICIPAL FLEET Description	Total Value of Fleet (\$)									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Sewage Treatment										
17032	\$185,000	\$185,000	\$185,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
17038	\$185,000	\$185,000	\$185,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
17053	\$46,000	\$46,000	\$46,000	\$46,000	\$46,000	\$46,000	\$0	\$0	\$0	\$0
17072	\$56,000	\$56,000	\$56,000	\$56,000	\$56,000	\$0	\$0	\$0	\$0	\$0
17500 (rep 17072)	\$0	\$0	\$0	\$0	\$0	\$132,856	\$132,856	\$132,856	\$132,856	\$132,856
17074	\$22,000	\$22,000	\$22,000	\$22,000	\$22,000	\$0	\$0	\$0	\$0	\$0
17075 (rep 17074)	\$0	\$0	\$0	\$0	\$0	\$27,731	\$27,731	\$27,731	\$27,731	\$27,731
17102	\$42,300	\$42,300	\$42,300	\$42,300	\$42,300	\$42,300	\$42,300	\$42,300	\$42,300	\$42,300
17207	\$56,000	\$56,000	\$56,000	\$56,000	\$56,000	\$56,000	\$56,000	\$56,000	\$56,000	\$56,000
17218	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000	\$0	\$0	\$0	\$0	\$0
17221 (rep 17218)	\$0	\$0	\$0	\$0	\$0	\$44,256	\$44,256	\$44,256	\$44,256	\$44,256
17219	\$33,000	\$33,000	\$33,000	\$33,000	\$33,000	\$33,000	\$0	\$0	\$0	\$0
17103	\$56,000	\$56,000	\$56,000	\$56,000	\$56,000	\$56,000	\$56,000	\$56,000	\$56,000	\$56,000
17146	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000
17147	\$41,000	\$41,000	\$41,000	\$41,000	\$41,000	\$41,000	\$41,000	\$41,000	\$41,000	\$41,000
17220 (additional)	\$0	\$0	\$60,836	\$60,836	\$60,836	\$60,836	\$60,836	\$60,836	\$60,836	\$60,836
17222	\$0	\$0	\$0	\$0	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
17223	\$0	\$0	\$0	\$0	\$0	\$0	\$28,000	\$28,000	\$28,000	\$28,000
17224	\$0	\$0	\$0	\$0	\$0	\$0	\$38,500	\$38,500	\$38,500	\$38,500
17225	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$38,300	\$38,300
Engineering										
16001	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000
Specialized Equipment										
43	\$315,000	\$315,000	\$315,000	\$128,589	\$128,589	\$128,589	\$128,589	\$128,589	\$128,589	\$128,589
420	\$42,760	\$42,760	\$42,760	\$42,760	\$42,760	\$42,760	\$42,760	\$42,760	\$42,760	\$42,760
600	\$0	\$0	\$261,518	\$261,518	\$261,518	\$261,518	\$261,518	\$261,518	\$261,518	\$261,518
601	\$0	\$0	\$261,518	\$261,518	\$261,518	\$261,518	\$261,518	\$261,518	\$261,518	\$261,518
602	\$174,000	\$174,000	\$174,000	\$174,000	\$174,000	\$174,000	\$174,000	\$174,000	\$174,000	\$174,000
603	\$174,000	\$174,000	\$174,000	\$174,000	\$174,000	\$174,000	\$174,000	\$174,000	\$174,000	\$174,000
604	\$315,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
606 (rep 604)	\$0	\$531,963	\$531,963	\$531,963	\$531,963	\$531,963	\$531,963	\$531,963	\$531,963	\$531,963
607	\$0	\$0	\$0	\$431,349	\$431,349	\$431,349	\$431,349	\$431,349	\$431,349	\$431,349
605	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000
650	\$229,000	\$229,000	\$229,000	\$229,000	\$229,000	\$229,000	\$229,000	\$229,000	\$229,000	\$229,000
77	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$0	\$0	\$0	\$0	\$0
78	\$0	\$0	\$0	\$0	\$0	\$56,715	\$56,715	\$56,715	\$56,715	\$56,715
701	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$0	\$0	\$0	\$0
702	\$259,000	\$259,000	\$259,000	\$259,000	\$259,000	\$259,000	\$259,000	\$259,000	\$259,000	\$259,000
83	\$23,530	\$23,530	\$23,530	\$23,530	\$23,530	\$23,530	\$23,530	\$23,530	\$23,530	\$23,530

MUNICIPAL FLEET Description	Total Value of Fleet (\$)									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
84	\$40,068	\$40,068	\$40,068	\$40,068	\$40,068	\$40,068	\$40,068	\$40,068	\$40,068	\$40,068
90	\$23,530	\$23,530	\$23,530	\$23,530	\$23,530	\$23,530	\$0	\$0	\$0	\$0
91	\$25,000	\$23,530	\$23,530	\$23,530	\$23,530	\$23,530	\$0	\$0	\$0	\$0
94	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000
122	\$52,000	\$52,000	\$52,000	\$52,000	\$52,000	\$0	\$0	\$0	\$0	\$0
140	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
800	\$7,948	\$7,948	\$7,948	\$7,948	\$7,948	\$7,948	\$0	\$0	\$0	\$0
801	\$0	\$0	\$0	\$0	\$0	\$0	\$8,250	\$8,250	\$8,250	\$8,250
802	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000
803	\$38,000	\$38,000	\$38,000	\$0	\$0	\$0	\$0	\$8,635	\$8,635	\$8,635
804	\$0	\$0	\$0	\$47,010	\$47,010	\$47,010	\$47,010	\$47,010	\$47,010	\$47,010
805	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000
806	\$6,661	\$6,661	\$6,661	\$6,661	\$6,661	\$6,661	\$0	\$0	\$0	\$0
807	\$9,369	\$9,369	\$9,369	\$9,369	\$9,369	\$9,369	\$9,369	\$9,369	\$9,369	\$9,369
808	\$22,815	\$22,815	\$22,815	\$22,815	\$22,815	\$22,815	\$22,815	\$22,815	\$22,815	\$22,815
852	\$19,939	\$19,939	\$19,939	\$19,939	\$19,939	\$19,939	\$19,939	\$19,939	\$19,939	\$19,939
860	\$50,323	\$50,323	\$50,323	\$50,323	\$50,323	\$50,323	\$50,323	\$50,323	\$50,323	\$66,800
861	\$50,323	\$50,323	\$50,323	\$50,323	\$50,323	\$50,323	\$50,323	\$50,323	\$50,323	\$66,800
862	\$18,316	\$18,316	\$18,316	\$18,316	\$18,316	\$18,316	\$18,316	\$18,316	\$18,316	\$21,700
863	\$18,316	\$18,316	\$18,316	\$18,316	\$18,316	\$18,316	\$18,316	\$18,316	\$18,316	\$21,700
864	\$18,316	\$18,316	\$18,316	\$18,316	\$18,316	\$18,316	\$18,316	\$18,316	\$18,316	\$21,700
865	\$18,316	\$18,316	\$18,316	\$18,316	\$18,316	\$18,316	\$18,316	\$18,316	\$18,316	\$21,700
866	\$18,316	\$18,316	\$18,316	\$18,316	\$18,316	\$18,316	\$18,316	\$18,316	\$18,316	\$21,700
Sanitation Fleet										
304	\$209,670	\$209,670	\$209,670	\$209,670	\$209,670	\$209,670	\$209,670	\$209,670	\$209,670	\$209,670
305	\$209,670	\$209,670	\$209,670	\$209,670	\$209,670	\$209,670	\$209,670	\$209,670	\$209,670	\$209,670
306	\$209,670	\$209,670	\$209,670	\$209,670	\$209,670	\$209,670	\$209,670	\$209,670	\$209,670	\$209,670
307	\$209,670	\$209,670	\$209,670	\$209,670	\$209,670	\$209,670	\$209,670	\$209,670	\$209,670	\$209,670
308	\$209,670	\$209,670	\$209,670	\$209,670	\$209,670	\$209,670	\$209,670	\$209,670	\$209,670	\$209,670
309	\$0	\$237,445	\$237,445	\$237,445	\$237,445	\$237,445	\$237,445	\$237,445	\$237,445	\$237,445
310	\$0	\$0	\$237,506	\$237,506	\$237,506	\$237,506	\$237,506	\$237,506	\$237,506	\$237,506
311	\$0	\$0	\$0	\$0	\$228,386	\$228,386	\$228,386	\$228,386	\$228,386	\$228,386
312	\$0	\$0	\$0	\$0	\$0	\$223,436	\$223,436	\$223,436	\$223,436	\$223,436
313	\$0	\$0	\$0	\$0	\$0	\$223,436	\$223,436	\$223,436	\$223,436	\$223,436
340	\$0	\$0	\$0	\$0	\$154,628	\$154,628	\$154,628	\$154,628	\$154,628	\$154,628
Total (\$000)	\$11,814.2	\$12,334.4	\$13,155.8	\$12,975.5	\$14,716.5	\$15,633.9	\$11,252.5	\$12,807.6	\$14,703.7	\$14,883.3

CITY OF PETERBOROUGH
CALCULATION OF SERVICE LEVELS
PUBLIC WORKS

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Historical Population	77,364	78,028	78,698	79,159	79,623	80,090	80,560	81,032	82,141	83,265
Historical Employment	45,054	45,372	45,692	45,199	44,711	44,229	43,752	43,280	43,655	44,034
Total Historical Population & Employment	122,418	123,400	124,390	124,358	124,334	124,319	124,312	124,312	125,796	127,299

INVENTORY SUMMARY (\$000)

Buildings	\$6,980.0	\$6,980.0	\$6,980.0	\$6,980.0	\$6,980.0	\$6,980.0	\$6,980.0	\$6,980.0	\$6,980.0	\$6,650.0
Land	\$1,609.7	\$1,609.7	\$1,609.7	\$1,609.7	\$1,609.7	\$1,609.7	\$1,609.7	\$1,609.7	\$1,609.7	\$1,609.7
Furniture & Equipment	\$949.6	\$949.6	\$949.6	\$949.6	\$949.6	\$949.6	\$949.6	\$949.6	\$949.6	\$949.6
Municipal Fleet	\$11,814.2	\$12,334.4	\$13,155.8	\$12,975.5	\$14,716.5	\$15,633.9	\$11,252.5	\$12,807.6	\$14,703.7	\$14,883.5
Total (\$000)	\$21,353.4	\$21,873.6	\$22,695.0	\$22,514.7	\$24,255.7	\$25,173.1	\$20,791.8	\$22,346.9	\$24,242.9	\$24,092.8

SERVICE LEVEL (\$/pop & emp)

Average
Service
Level

Buildings	\$57.02	\$56.56	\$56.11	\$56.13	\$56.14	\$56.15	\$56.15	\$56.15	\$55.49	\$52.24	\$55.81
Land	\$13.15	\$13.04	\$12.94	\$12.94	\$12.95	\$12.95	\$12.95	\$12.95	\$12.80	\$12.65	\$12.93
Furniture & Equipment	\$7.76	\$7.69	\$7.63	\$7.64	\$7.64	\$7.64	\$7.64	\$7.64	\$7.55	\$7.46	\$7.63
Municipal Fleet	\$96.51	\$99.95	\$105.76	\$104.34	\$118.36	\$125.76	\$90.52	\$103.03	\$116.88	\$116.92	\$107.80
Total (\$/pop & emp)	\$174.43	\$177.26	\$182.45	\$181.05	\$195.09	\$202.49	\$167.25	\$179.76	\$192.72	\$189.26	\$184.18

CITY OF PETERBOROUGH
CALCULATION OF MAXIMUM ALLOWABLE
PUBLIC WORKS

10-Year Funding Envelope Calculation

10 Year Average Service Level 2009 - 2018	\$184.18
Net Population & Employment Growth 2019 - 2028	16,092
Maximum Allowable Funding Envelope	\$2,963,825
Discounted Maximum Allowable Funding Envelope	\$2,963,825

CITY OF PETERBOROUGH
DEVELOPMENT-RELATED CAPITAL PROGRAM
PUBLIC WORKS

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	0% Reduction		Available DC Reserves	2019-2028	Post 2028
6.0 PUBLIC WORKS										
6.1 Public Works Relocation Project										
6.1.1 Public Works Facility Relocation - Public Works Share	2019	\$ 17,288,000	\$ -	\$ 17,288,000	\$ 9,544,513	\$ -	\$ 7,743,487	\$ -	\$ -	\$ -
Committed Excess Capacity - Negative Reserve Fund Balance	2019							\$ -	\$ 325,444	\$ 712,320
Debt Principal Payments ⁴	2019							\$ -	\$ 964,952	\$ 1,556,146
Remaining DC Eligible Capital Costs	2019							\$ -	\$ 1,673,428	\$ 2,511,197
Subtotal Public Works Relocation Project		\$ 17,288,000	\$ -	\$ 17,288,000	\$ 9,544,513	\$ -	\$ 7,743,487	\$ -	\$ 2,963,825	\$ 4,779,663
6.2 Buildings, Land & Furnishings										
6.2.1 Stormwater Management Ponds & Drainage for Snow Dump (Design)	2020	\$ 50,000	\$ -	\$ 50,000	\$ 29,817	\$ -	\$ 20,183	\$ -	\$ -	\$ 20,183
6.2.2 Stormwater Management Ponds & Drainage for Snow Dump	2021	\$ 500,000	\$ -	\$ 500,000	\$ 277,611	\$ -	\$ 222,389	\$ -	\$ -	\$ 222,389
6.2.3 Stormwater Management Ponds & Drainage for Snow Dump	2022	\$ 500,000	\$ -	\$ 500,000	\$ 298,167	\$ -	\$ 201,833	\$ -	\$ -	\$ 201,833
Subtotal Buildings, Land & Furnishings		\$ 1,050,000	\$ -	\$ 1,050,000	\$ 605,594	\$ -	\$ 444,406	\$ -	\$ -	\$ 444,406
6.3 Fleet										
6.3.1 Fleet Upgrades	2019	\$ 986,100	\$ -	\$ 986,100	\$ 739,575	\$ -	\$ 246,525	\$ -	\$ -	\$ 246,525
6.3.2 Fleet Upgrades	2020	\$ 2,093,000	\$ -	\$ 2,093,000	\$ 1,569,750	\$ -	\$ 523,250	\$ -	\$ -	\$ 523,250
6.3.3 Fleet Upgrades	2021	\$ 1,504,000	\$ -	\$ 1,504,000	\$ 1,128,000	\$ -	\$ 376,000	\$ -	\$ -	\$ 376,000
6.3.4 Fleet Upgrades	2022	\$ 1,161,000	\$ -	\$ 1,161,000	\$ 870,750	\$ -	\$ 290,250	\$ -	\$ -	\$ 290,250
6.3.5 Fleet Upgrades	2023	\$ 1,862,000	\$ -	\$ 1,862,000	\$ 1,396,500	\$ -	\$ 465,500	\$ -	\$ -	\$ 465,500
6.3.6 Fleet Upgrades	2024	\$ 1,441,400	\$ -	\$ 1,441,400	\$ 1,081,050	\$ -	\$ 360,350	\$ -	\$ -	\$ 360,350
6.3.7 Fleet Upgrades	2025	\$ 1,441,400	\$ -	\$ 1,441,400	\$ 1,081,050	\$ -	\$ 360,350	\$ -	\$ -	\$ 360,350
6.3.8 Fleet Upgrades	2026	\$ 1,441,400	\$ -	\$ 1,441,400	\$ 1,081,050	\$ -	\$ 360,350	\$ -	\$ -	\$ 360,350
6.3.9 Fleet Upgrades	2027	\$ 1,441,400	\$ -	\$ 1,441,400	\$ 1,081,050	\$ -	\$ 360,350	\$ -	\$ -	\$ 360,350
6.3.10 Fleet Upgrades	2028	\$ 1,441,400	\$ -	\$ 1,441,400	\$ 1,081,050	\$ -	\$ 360,350	\$ -	\$ -	\$ 360,350
Subtotal Fleet		\$ 14,813,100	\$ -	\$ 14,813,100	\$ 11,109,825	\$ -	\$ 3,703,275	\$ -	\$ -	\$ 3,703,275
6.4 Equipment										
6.4.1 Brine Equipment	2020	\$ 350,000	\$ -	\$ 350,000	\$ -	\$ -	\$ 350,000	\$ -	\$ -	\$ 350,000
Subtotal Equipment		\$ 350,000	\$ -	\$ 350,000	\$ -	\$ -	\$ 350,000	\$ -	\$ -	\$ 350,000
TOTAL PUBLIC WORKS		\$ 33,501,100	\$ -	\$ 33,501,100	\$ 21,259,932	\$ -	\$ 12,241,168	\$ -	\$ 2,963,825	\$ 9,277,343

¹ Financing included in cash flow calculation

Residential Development Charge Calculation			
Residential Share of 2019 - 2028 DC Eligible Costs	80%	\$2,371,060	
10-Year Growth in Population in New Units		13,373	
Unadjusted Development Charge Per Capita		\$177.30	
Non-Residential Development Charge Calculation			
Non-Residential Share of 2019 - 2028 DC Eligible Costs	20%	\$592,765	
10-Year Growth in Square Metres		248,249	
Unadjusted Development Charge Per Square Metre		\$2.39	

2019 - 2028 Net Funding Envelope	\$2,963,825
Current Reserve Fund Balance	(\$1,037,764)

130
APPENDIX B.6
TABLE 3

CITY OF PETERBOROUGH
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
PUBLIC WORKS
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

PUBLIC WORKS	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	TOTAL
OPENING CASH BALANCE	\$0.00	(\$2,184.76)	(\$2,042.44)	(\$1,877.35)	(\$1,687.53)	(\$1,471.22)	(\$1,225.49)	(\$948.31)	(\$641.14)	(\$298.52)	
2019 - 2028 RESIDENTIAL FUNDING REQUIREMENTS											
- Public Works: Non Inflated	\$2,371.1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$2,371.1
- Public Works: Inflated	\$2,371.1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$2,371.1
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	1,259	1,277	1,295	1,313	1,330	1,350	1,369	1,375	1,392	1,413	13,373
REVENUE											
- DC Receipts: Inflated	\$317.7	\$328.7	\$340.0	\$351.6	\$363.3	\$376.2	\$389.1	\$398.6	\$411.6	\$426.2	\$3,703.0
INTEREST											
- Interest on Opening Balance	\$0.0	(\$120.2)	(\$112.3)	(\$103.3)	(\$92.8)	(\$80.9)	(\$67.4)	(\$52.2)	(\$35.3)	(\$16.4)	(\$680.7)
- Interest on In-year Transactions	(\$56.5)	\$5.8	\$6.0	\$6.2	\$6.4	\$6.6	\$6.8	\$7.0	\$7.2	\$7.5	\$2.8
- Interest on Public Works Relocation Project	(\$75.0)	(\$72.0)	(\$68.5)	(\$64.7)	(\$60.5)	(\$56.1)	(\$51.3)	(\$46.2)	(\$40.9)	(\$118.7)	(\$654.0)
TOTAL REVENUE	\$186.3	\$142.3	\$165.1	\$189.8	\$216.3	\$245.7	\$277.2	\$307.2	\$342.6	\$298.5	\$2,371.1
CLOSING CASH BALANCE	(\$2,184.8)	(\$2,042.4)	(\$1,877.4)	(\$1,687.5)	(\$1,471.2)	(\$1,225.5)	(\$948.3)	(\$641.1)	(\$298.5)	\$0.0	

2019 Adjusted Charge Per Capita **\$252.36**

Allocation of Capital Program

Residential Sector	80.0%
Non-Residential Sector	20.0%

Rates for 2019

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

131
APPENDIX B.6
TABLE 3

CITY OF PETERBOROUGH
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
PUBLIC WORKS
NON-RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

PUBLIC WORKS	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	TOTAL
OPENING CASH BALANCE	\$0.00	(\$544.53)	(\$507.69)	(\$465.38)	(\$417.34)	(\$363.12)	(\$302.01)	(\$233.71)	(\$157.44)	(\$72.88)	
2019 - 2028 NON-RESIDENTIAL FUNDING REQUIREMENTS											
- Public Works: Non Inflated	\$592.8	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$592.8
- Public Works: Inflated	\$592.8	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$592.8
NON-RESIDENTIAL SPACE GROWTH											
- Growth in Square Metres	23,875	24,063	24,312	24,500	24,688	24,937	25,125	25,375	25,562	25,812	248,249
REVENUE											
- DC Receipts: Inflated	\$81.1	\$83.3	\$85.9	\$88.3	\$90.7	\$93.5	\$96.1	\$99.0	\$101.7	\$104.7	\$924.1
INTEREST											
- Interest on Opening Balance	\$0.0	(\$29.9)	(\$27.9)	(\$25.6)	(\$23.0)	(\$20.0)	(\$16.6)	(\$12.9)	(\$8.7)	(\$4.0)	(\$168.5)
- Interest on In-year Transactions	(\$14.1)	\$1.5	\$1.5	\$1.5	\$1.6	\$1.6	\$1.7	\$1.7	\$1.8	\$1.8	\$0.7
- Interest on Public Works Relocation Project	(\$18.7)	(\$18.0)	(\$17.1)	(\$16.2)	(\$15.1)	(\$14.0)	(\$12.8)	(\$11.6)	(\$10.2)	(\$29.7)	(\$163.5)
TOTAL REVENUE	\$48.2	\$36.8	\$42.3	\$48.0	\$54.2	\$61.1	\$68.3	\$76.3	\$84.6	\$72.9	\$592.8
CLOSING CASH BALANCE	(\$544.5)	(\$507.7)	(\$465.4)	(\$417.3)	(\$363.1)	(\$302.0)	(\$233.7)	(\$157.4)	(\$72.9)	(\$0.0)	

2019 Adjusted Charge Per Square Metre **\$3.39**

Allocation of Capital Program

Residential Sector	80.0%
Non-Residential Sector	20.0%

Rates for 2019

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

APPENDIX B.7

PARKING

APPENDIX B.7

PARKING

The Transportation Division is responsible for the operation of the municipal parking, including off-street lots, on-street metre parking, parking by-law enforcement and adult crossing guards. The parking section also enforces all municipal parking by-law regulations for the City of Peterborough.

TABLE 1 2009-2018 HISTORICAL SERVICE LEVELS

The Parking Divisions manages 1,558 parking spaces, 1,160 of which are in structured lots and the remaining 398 are on surface lots. The replacement cost of the spots total \$44.6 million. The City also operates a total of 54 on-street parking metres and 72 pay and display machines. These add \$594,000 to the value of the capital assets.

The total value of the Parking capital infrastructure is estimated to be \$45.2 million. The 10-year historical average service level is \$370.36 per population and employment and this, multiplied by the 10-year forecast population and employment growth (16,092), results in a 10-year maximum allowable funding envelope of \$6.0 million. The legislated 10 per cent discount amounts to \$595,983 and is netted off the funding envelope. Therefore, the discounted maximum allowable funding envelope brought forward to the development charge calculation is reduced to \$5.4 million.

**TABLE 2 2019 – 2028 DEVELOPMENT-RELATED CAPITAL PROGRAM AND
CALCULATION OF THE UNADJUSTED DEVELOPMENT CHARGES**

The Parking services capital program consists solely of 700 parking spaces in a structured lot, which will cost \$24.6 million. No grants or subsidies are identified.

Significant replacement shares in the amount of \$9.1 million account largely for the replacement portion of the new parking structure, as identified in the Strategic Parking Management Study. The legislated 10 per cent deduction totals \$1.5 million and netted off the municipal cost. Available DC reserve funds of \$1.2 million have been applied, and another \$7.3 million will benefit development beyond 2028 and may be recoverable under future DC by-laws.

The remaining 2019-2028 DC costs eligible for recovery amount to \$5.4 million and are allocated 80 percent, or \$4.3 million, against new residential development and 20

per cent, or \$1.1 million, against non-residential development. This yields an unadjusted development charge of \$320.88 per capita and \$4.32 per square metre.

TABLE 3 CASH FLOW ANALYSIS

After cash flow and reserve fund analysis, the residential calculated charge increases to \$335.52 per capita and the non-residential charge increases to \$4.51 per square metre.

The following table summarizes the calculation of the Parking development charge.

PARKING SUMMARY						
10-year Hist.	2019 - 2028		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
\$370.36	\$24,570,000	\$5,363,850	\$320.88	\$4.32	\$335.52	\$4.51

135
APPENDIX B.7
TABLE 1

CITY OF PETERBOROUGH
INVENTORY OF CAPITAL ASSETS
PARKING

PARKING SPACES Lot Name	# of Parking Spaces										UNIT COST (\$/space)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
King St Parkade	625	625	625	625	625	625	625	625	625	625	\$35,100
Simcoe Street Parking Garage	535	535	535	535	535	535	535	535	535	535	\$35,100
Louis St lot	100	100	100	100	100	100	100	100	100	-	\$9,700
Hunter / Chambers Lot	76	76	76	76	76	76	76	76	76	76	\$9,700
Brock Lot	95	95	95	95	95	95	95	95	95	95	\$9,700
Courthouse Lot (Simcoe St)	39	39	39	39	39	39	39	39	39	39	\$9,700
Library Lot (Alymer St)	12	12	12	12	-	-	-	-	-	-	\$9,700
Reid St. Lot	60	60	60	60	60	60	60	60	60	60	\$9,700
Downie St. Lot	28	28	28	28	28	28	28	28	28	28	\$9,700
Rehill / Dalhousie St. Lot	100	100	100	100	100	100	100	100	100	100	\$9,700
Bethune Street Lot	-	-	-	30	30	-	-	-	-	-	\$9,700
Total (#)	1,670	1,670	1,670	1,700	1,688	1,658	1,658	1,658	1,658	1,558	
Total (\$000)	\$45,663.0	\$45,663.0	\$45,663.0	\$45,954.0	\$45,837.6	\$45,546.6	\$45,546.6	\$45,546.6	\$45,546.6	\$44,576.6	

PARKING METERS Location	# of Meters										UNIT COST (\$/unit)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
On-street	520	420	310	85	70	70	66	62	58	54	\$1,000
Pay and Display Machines	-	12	22	62	64	64	66	68	70	72	\$7,500
Total (#)	520	432	332	147	134	134	132	130	128	126	
Total (\$000)	\$520.0	\$510.0	\$475.0	\$550.0	\$550.0	\$550.0	\$561.0	\$572.0	\$583.0	\$594.0	

136
APPENDIX B.7
TABLE 1

CITY OF PETERBOROUGH
CALCULATION OF SERVICE LEVELS
PARKING

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Historical Population	77,364	78,028	78,698	79,159	79,623	80,090	80,560	81,032	82,141	83,265
Historical Employment	<u>45,054</u>	<u>45,372</u>	<u>45,692</u>	<u>45,199</u>	<u>44,711</u>	<u>44,229</u>	<u>43,752</u>	<u>43,280</u>	<u>43,655</u>	<u>44,034</u>
Total Historical Population & Employment	122,418	123,400	124,390	124,358	124,334	124,319	124,312	124,312	125,796	127,299

INVENTORY SUMMARY (\$000)

Parking Spaces	\$45,663.0	\$45,663.0	\$45,663.0	\$45,954.0	\$45,837.6	\$45,546.6	\$45,546.6	\$45,546.6	\$45,546.6	\$44,576.6
Parking Meters	\$520.0	\$510.0	\$475.0	\$550.0	\$550.0	\$550.0	\$561.0	\$572.0	\$583.0	\$594.0
Total (\$000)	\$46,183.0	\$46,173.0	\$46,138.0	\$46,504.0	\$46,387.6	\$46,096.6	\$46,107.6	\$46,118.6	\$46,129.6	\$45,170.6

SERVICE LEVEL (\$/pop & emp)

											Average Service Level
Parking Spaces	\$373.01	\$370.04	\$367.10	\$369.53	\$368.67	\$366.37	\$366.39	\$366.39	\$362.07	\$350.17	\$365.97
Parking Meters	\$4.25	\$4.13	\$3.82	\$4.42	\$4.42	\$4.42	\$4.51	\$4.60	\$4.63	\$4.67	\$4.39
Total (\$/pop & emp)	\$377.26	\$374.17	\$370.91	\$373.95	\$373.09	\$370.79	\$370.90	\$370.99	\$366.70	\$354.84	\$370.36

CITY OF PETERBOROUGH
CALCULATION OF MAXIMUM ALLOWABLE
PARKING

10-Year Funding Envelope Calculation	
10 Year Average Service Level 2009 - 2018	\$370.36
Net Population & Employment Growth 2019 - 2028	16,092
Maximum Allowable Funding Envelope	\$5,959,833
Less: 10% Legislated Reduction	\$595,983
Discounted Maximum Allowable Funding Envelope	\$5,363,850

CITY OF PETERBOROUGH
DEVELOPMENT-RELATED CAPITAL PROGRAM
PARKING

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	10% Reduction		Available DC Reserves	2019-2028	Post 2028
7.0 PARKING										
7.1 Parking Infrastructure										
7.1.1 700 Spaces in Structured Lot	2023	\$ 24,570,000	\$ -	\$ 24,570,000	\$ 9,090,900	\$ 1,547,910	\$ 13,931,190	\$ 1,242,444	\$ 5,363,850	\$ 7,324,896
Subtotal Parking Infrastructure		\$ 24,570,000	\$ -	\$ 24,570,000	\$ 9,090,900	\$ 1,547,910	\$ 13,931,190	\$ 1,242,444	\$ 5,363,850	\$ 7,324,896
TOTAL PARKING		\$ 24,570,000	\$ -	\$ 24,570,000	\$ 9,090,900	\$ 1,547,910	\$ 13,931,190	\$ 1,242,444	\$ 5,363,850	\$ 7,324,896

Residential Development Charge Calculation

Residential Share of 2019 - 2028 DC Eligible Costs	80%	\$4,291,080
10-Year Growth in Population in New Units		13,373
Unadjusted Development Charge Per Capita		\$320.88

Non-Residential Development Charge Calculation

Non-Residential Share of 2019 - 2028 DC Eligible Costs	20%	\$1,072,770
10-Year Growth in Square Metres		248,249
Unadjusted Development Charge Per Square Metre		\$4.32

2019 - 2028 Net Funding Envelope	\$5,363,850
Current Reserve Fund Balance	\$1,242,444

138
APPENDIX B.7
TABLE 3

CITY OF PETERBOROUGH
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
PARKING
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

PARKING	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	TOTAL
OPENING CASH BALANCE	\$0.00	\$429.81	\$889.53	\$1,380.62	\$1,904.63	(\$2,304.94)	(\$1,922.87)	(\$1,502.30)	(\$1,045.72)	(\$546.44)	
2019 - 2028 RESIDENTIAL FUNDING REQUIREMENTS											
- Parking: Non Inflated	\$0.0	\$0.0	\$0.0	\$0.0	\$4,291.1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$4,291.1
- Parking: Inflated	\$0.0	\$0.0	\$0.0	\$0.0	\$4,644.8	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$4,644.8
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	1,259	1,277	1,295	1,313	1,330	1,350	1,369	1,375	1,392	1,413	13,373
REVENUE											
- DC Receipts: Inflated	\$422.4	\$437.0	\$452.1	\$467.5	\$483.0	\$500.1	\$517.3	\$529.9	\$547.2	\$566.6	\$4,923.1
INTEREST											
- Interest on Opening Balance	\$0.0	\$15.0	\$31.1	\$48.3	\$66.7	(\$126.8)	(\$105.8)	(\$82.6)	(\$57.5)	(\$30.1)	(\$241.6)
- Interest on In-year Transactions	\$7.4	\$7.6	\$7.9	\$8.2	(\$114.4)	\$8.8	\$9.1	\$9.3	\$9.6	\$9.9	(\$36.7)
TOTAL REVENUE	\$429.8	\$459.7	\$491.1	\$524.0	\$435.2	\$382.1	\$420.6	\$456.6	\$499.3	\$546.4	\$4,644.8
CLOSING CASH BALANCE	\$429.8	\$889.5	\$1,380.6	\$1,904.6	(\$2,304.9)	(\$1,922.9)	(\$1,502.3)	(\$1,045.7)	(\$546.4)	\$0.0	

2019 Adjusted Charge Per Capita \$335.52

Allocation of Capital Program
Residential Sector 80.0%
Non-Residential Sector 20.0%

Rates for 2019
Inflation Rate: 2.0%
Interest Rate on Positive Balances 3.5%
Interest Rate on Negative Balances 5.5%

139
APPENDIX B.7
TABLE 3

CITY OF PETERBOROUGH
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
PARKING
NON-RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

PARKING	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	TOTAL
OPENING CASH BALANCE	\$0.00	\$109.68	\$226.27	\$350.39	\$482.09	(\$570.20)	(\$475.08)	(\$371.22)	(\$257.74)	(\$134.32)	
2019 - 2028 NON-RESIDENTIAL FUNDING REQUIREMENTS											
- Parking: Non Inflated	\$0.0	\$0.0	\$0.0	\$0.0	\$1,072.8	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$1,072.8
- Parking: Inflated	\$0.0	\$0.0	\$0.0	\$0.0	\$1,161.2	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$1,161.2
NON-RESIDENTIAL SPACE GROWTH											
- Growth in Square Metres	23,875	24,063	24,312	24,500	24,688	24,937	25,125	25,375	25,562	25,812	248,249
REVENUE											
- DC Receipts: Inflated	\$107.8	\$110.8	\$114.2	\$117.4	\$120.7	\$124.3	\$127.7	\$131.6	\$135.2	\$139.3	\$1,229.0
INTEREST											
- Interest on Opening Balance	\$0.0	\$3.8	\$7.9	\$12.3	\$16.9	(\$31.4)	(\$26.1)	(\$20.4)	(\$14.2)	(\$7.4)	(\$58.6)
- Interest on In-year Transactions	\$1.9	\$1.9	\$2.0	\$2.1	(\$28.6)	\$2.2	\$2.2	\$2.3	\$2.4	\$2.4	(\$9.2)
TOTAL REVENUE	\$109.7	\$116.6	\$124.1	\$131.7	\$108.9	\$95.1	\$103.9	\$113.5	\$123.4	\$134.3	\$1,161.2
CLOSING CASH BALANCE	\$109.7	\$226.3	\$350.4	\$482.1	(\$570.2)	(\$475.1)	(\$371.2)	(\$257.7)	(\$134.3)	(\$0.0)	

2019 Adjusted Charge Per Square Metre \$4.51

Allocation of Capital Program
Residential Sector 80.0%
Non-Residential Sector 20.0%

Rates for 2019
Inflation Rate 2.0%
Interest Rate on Positive Balances 3.5%
Interest Rate on Negative Balances 5.5%

APPENDIX B.8

TRANSIT SERVICES

APPENDIX B.8

TRANSIT SERVICES

The Transportation Division provides public transportation services in the City of Peterborough through a surface route network operating out of the Simcoe Street terminal.

This appendix provides details of the ridership forecast and capital program used to calculate the DC for Transit Services. The benefits of Transit are considered to be City-wide for the purposes of these calculations.

1. Overview of Transit Service Delivery

Peterborough Transit's 12 regular routes run every day and all buses on regular routes are fully accessible. For people with limited mobility, Peterborough Transit also operates a Community Bus and Handi-Van Service. Transit ridership has grown in recent years and is anticipated to continue throughout the 10-year forecast period. The anticipated ridership in the system and the related capital program requirements are discussed further in the sections below.

2. Transit Ridership

Under the *Development Charges Act*, Transit Services must be based on a “planned level of service” rather than the “10-year historical average level of service.” For the purposes of determining the “planned level of service”, the City’s transit service development-related capital program has been informed based on existing and proposed capital budget and forecast documents and discussions with staff.

Ontario Regulation 82/98 also requires that, for Transit, the DC background study must include:

- An assessment of ridership forecast for all modes of transit and whether ridership is generated from existing or planned development (*O.Reg. 82/98* s.8(2)4).
- An assessment of ridership capacity for all modes of transit over the 10-year forecast period (*O. Reg. 82/98* s.8(2)4).

The ridership forecast used for the purposes of the 2019 DC Background Study was prepared based on historical ridership data and discussions with City staff.

As shown in Table 1, from 2011 to 2018 the City had an average annual increase in ridership of 5.2 per cent; much of the recent increase is attributable to increased enrollment at Trent University and Fleming College. The increase in ridership

compares to population growth of about 1 per cent per annum over the same period (see Appendix A). As of 2016, the transit mode share of daily trips in Peterborough was 4.3 per cent, still short of the 6 per cent mode share target set by the Transportation Master Plan completed by the City in 2012.

Table 1 - Annual Boardings				
Year	Conventional	Specialized	All Modes	Increase
2011	3,498,367	31,633	3,530,000	
2012	3,732,549	31,702	3,764,251	6.60%
2013	3,760,128	30,354	3,790,482	0.70%
2014	3,685,108	33,819	3,718,927	-1.90%
2015	3,766,546	37,137	3,803,683	2.30%
2016	3,862,720	35,170	3,897,890	2.50%
2017	4,193,013	32,135	4,225,148	8.40%
2018	4,942,029	31,542	4,973,571	17.70%
Average Increase				5.19%

Source: City of Peterborough

The City currently is undertaking a study of Transit Services that will include a Transit Route Review, a Long Term Growth Strategy for the Transit System, and a plan for a Downtown Transit Terminal. Only the first part of the study, the Transit Route Review, has been initiated.

Given the early stage of the study, no formal ridership forecast exists. As such, for the purposes of this background study it is assumed that the ridership will be required to increase 1.5 per cent per annum in order to achieve a ridership total of 6,030,000 by 2031. This figure has been provided by City staff and represented a best estimate of the ridership required to achieve the 6 per cent transit mode share target for the population of 103,000 established by the *Growth Plan for the Greater Golden Horseshoe* (see Appendix A). It is noted that the rate of population growth over the same period is forecast at about 1.4 per cent per annum.

At an assumed increase of 1.5 per cent per annum, annual boardings (ridership) are forecast to increase from 4,973,571 in 2018 to 5,767,846 in 2028 (see Table 2).

Table 2 - Annual Boardings				
Year	Conventional	Specialized	All Modes	Increase
2019	5,005,856	41,952	5,047,808	1.49%
2020	5,080,574	42,579	5,123,153	1.49%
2021	5,156,409	43,214	5,199,623	1.49%
2022	5,233,376	43,859	5,277,235	1.49%
2023	5,311,491	44,514	5,356,005	1.49%
2024	5,390,773	45,178	5,435,951	1.49%
2025	5,471,237	45,853	5,517,090	1.49%
2026	5,552,903	46,537	5,599,440	1.49%
2027	5,635,787	47,232	5,683,019	1.49%
2028	5,719,909	47,937	5,767,846	1.49%
2029	5,805,287	48,652	5,853,939	1.49%
2030	5,891,939	49,378	5,941,317	1.49%
2031	5,979,885	50,115	6,030,000	1.49%

NB. 2031 estimated ridership required to achieve 6% mode share target for Growth Plan population target of 103,000.

3. Transit Development-Related Capital Program and Calculation of Unadjusted Development Charges

The *DC Act* s.5.2 (3) requires that in estimating the increase in need for Transit services the increased need “shall not exceed the planned level of service over the 10-year period immediately following the preparation of the background study”. For the purposes of the DC calculations, the “planned level of service” is considered to be equivalent to the ten year capital program (2019-2028) set out in Table 1. The program is based on the City’s capital budget and forecast documents and discussions with City staff.

The Transit Services capital program addresses additional service frequency, additional routes, and additional vehicles required to meet existing and future demands. It includes substantial reorganization and expansion of transit facilities and bus fleet planned for in the City’s long-term capital forecast, including:

- The Transit component of the relocation of the main public works facility, at a total cost of \$5.7 million, for which PTIF grant funding in the amount of \$1.9 million has been secured.
- The relocation and expansion of the existing transit bus barn, at a total cost of \$42 million (including \$2 million for land acquisition), for which ICIP funding in the amount of \$14.9 million has been secured. The need and cost of this project was established in part by a Transit Garage Relocation Study

completed in 2027 which analysed design work for the selected location and necessary approvals allowing for construction to proceed once funding becomes available.

- Provision for the construction of a new downtown bus terminal at a cost of \$5.7 million, for which \$4.2 million in Federal and Provincial grant funding has been assumed. The approved 2012 Public Transit Operations Review (Reports USDIR12-016 and USDIR12-019) recommended construction of a new downtown terminal with a modern flow-through design in the longer term. Council, in approving Report USDIR18-002, provided funding to increase the scope of this study to include a Route Review and Long Term Transit Growth Strategy. These studies are not yet underway.
- Provision for the construction of a new satellite bus terminal at a cost of \$3.0 million, for which \$2.2 million in Federal and Provincial grant funding has been assumed. The introduction of a satellite terminals will offset savings and likely result in increased maintenance and utility costs. A better flow of bus traffic would reduce operational costs.

Additional shelters and signs will cost \$4.2 million over the 10-year period and additions to the bus fleet, both for conventional and community buses, total \$13.9 million. Grants in the amount of \$10.2 million have been identified for these works.

Altogether, the gross cost Transit capital program is \$74.5 million, of which \$33.4 million is to be funded by grants and \$41.0 million is to be funded by the City.

Allocation of Costs Benefitting Existing Development

A substantial portion of the net cost of the program—72 per cent—has been excluded from the development charge calculation as it either represents:

- replacement of existing facilities, such as the current Transit barn located at Townsend Street. It is noted that the Townsend barn currently accommodates 66 buses, of which 24 are stored out of doors. The new bus barn is planned to accommodate 90 buses, all in indoor shelters. The current Transit Terminal has no excess capacity.
- that portion of expanded facilities and buses required to accommodate increased ridership from existing residents in order to meet the 6 per cent mode share target in 2031.

The benefit to existing share for facilities has been determined based on the ratio of population and employment growth over the period 2019-2028 to the existing population and employment of the City (86 per cent).

The benefit to existing share for new vehicles (9 per cent) recognizes that all vehicles are net additions to the existing fleet. Moreover, there is capacity in the existing fleet

to accommodate increased ridership from existing residents; at the end of 2019 the spare ratios of conventional buses and specialized buses is 24 per cent and 27 per cent respectively.

It is noted that the ridership forecasts support the approach to determining the benefit to existing shares. Using the ridership forecast shown in the previous table, the benefit to existing share could be calculated based on the 2018 annual ridership (4,973,571) plus the growth in 2019-2028 ridership (794,275). This results in total ridership of 5,767,846 over the 2018-2028 period. On this basis, 86 per cent of total ridership could be attributed to existing residents and the remaining 14 per cent could be attributed to new development occurring over the planning period.

Based on the results of the forthcoming Transit Studies and Transportation Master Plan, it is anticipated that subsequent background studies will recalculate the benefit to existing share of the Transit works.

Post-Period Benefit

An additional \$491,750 in “post-period benefits” have also been excluded from the DC calculation. These benefits represent excess capacity that would exist in the facilities in 2028; principally at the new bus barn which will be oversized to accommodate 12 additional buses. These costs may be recoverable under future DC by-laws.

Final Calculations

Altogether, \$11.9 million of the capital program is considered to be related to development over the next 10 years. Available DC reserve funds in the amount of \$317,604 are available to fund these development-related costs.

The remaining 2019-2028 DC costs eligible for recovery total \$11.1 million, of which 80 per cent, or \$8.9 million, is allocated against new residential development and 20 per cent, or \$2.2 million, against non-residential development. This yields an unadjusted development charge of \$664.15 per capita and \$8.94 per square metre.

4. Cash Flow Analysis

After cash flow and reserve fund analysis, both the residential and non-residential calculated charges increase to \$717.12 per capita and \$9.65 per square metre, respectively.

The following table summarizes the calculation of the Transit development charge.

TRANSIT SERVICES SUMMARY					
2019 - 2028		Unadjusted		Adjusted	
Development-Related Capital Program		Development Charge		Development Charge	
Total	† DC Recoveral	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$74,472,000	\$11,102,149	\$664.15	\$8.94	\$717.12	\$9.65

CITY OF PETERBOROUGH
DEVELOPMENT-RELATED CAPITAL PROGRAM
TRANSIT 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	0% Reduction		Available DC Reserves	2019-2028	Post 2028
8.0 TRANSIT SERVICES										
8.1 Buildings, Land & Furnishings										
8.1.1 Public Works Relocation Project - Transit Share	2019	\$ 5,712,000	\$ 1,900,000	\$ 3,812,000	\$ 3,292,600	\$ -	\$ 519,400	\$ -	\$ 519,400	\$ -
8.1.2 Relocation and Expansion of Bus Barn - Land	2021	\$ 2,000,000	\$ -	\$ 2,000,000	\$ 1,727,492	\$ -	\$ 272,508	\$ -	\$ 236,174	\$ 36,334
8.1.3 Relocation and Expansion of Bus Barn	2021	\$ 40,000,000	\$ 14,932,000	\$ 25,068,000	\$ 21,652,384	\$ -	\$ 3,415,616	\$ -	\$ 2,960,200	\$ 455,415
8.1.4 New Downtown Terminal	2026	\$ 5,700,000	\$ 4,179,810	\$ 1,520,190	\$ 1,313,058	\$ -	\$ 207,132	\$ -	\$ 207,132	\$ -
8.1.5 New Satellite Terminal	2024	\$ 3,000,000	\$ 2,199,900	\$ 800,100	\$ 691,083	\$ -	\$ 109,017	\$ -	\$ 109,017	\$ -
Subtotal Buildings, Land & Furnishings		\$ 56,412,000	\$ 23,211,710	\$ 33,200,290	\$ 28,676,617	\$ -	\$ 4,523,673	\$ -	\$ 4,031,923	\$ 491,750
8.2 Shelters, Loops, Signs										
8.2.1 Additional Shelters and Signs	Various	\$ 4,150,000	\$ 1,356,607	\$ 2,793,393	\$ -	\$ -	\$ 2,793,393	\$ -	\$ 2,793,393	\$ -
Subtotal Shelters, Loops, Signs		\$ 4,150,000	\$ 1,356,607	\$ 2,793,393	\$ -	\$ -	\$ 2,793,393	\$ -	\$ 2,793,393	\$ -
8.3 Vehicles										
8.3.1 3 Conventional Buses	2019	\$ 1,800,000	\$ -	\$ 1,800,000	\$ 155,800	\$ -	\$ 1,644,200	\$ 317,604	\$ 1,326,596	\$ -
8.3.2 4 Community buses	2019	\$ 800,000	\$ 586,640	\$ 213,360	\$ 18,500	\$ -	\$ 194,860	\$ -	\$ 194,860	\$ -
8.3.3 4 Community Buses	2020	\$ 1,400,000	\$ 1,026,620	\$ 373,380	\$ 32,300	\$ -	\$ 341,080	\$ -	\$ 341,080	\$ -
8.3.4 3 Conventional Buses	2020	\$ 1,950,000	\$ 1,429,935	\$ 520,065	\$ 45,000	\$ -	\$ 475,065	\$ -	\$ 475,065	\$ -
8.3.5 4 Conventional Buses	2021	\$ 3,800,000	\$ 2,786,540	\$ 1,013,460	\$ 87,700	\$ -	\$ 925,760	\$ -	\$ 925,760	\$ -
8.3.6 Specialized Van Expansion	2021	\$ 360,000	\$ 263,988	\$ 96,012	\$ 8,300	\$ -	\$ 87,712	\$ -	\$ 87,712	\$ -
8.3.7 4 Conventional Buses	2022	\$ 3,800,000	\$ 2,786,540	\$ 1,013,460	\$ 87,700	\$ -	\$ 925,760	\$ -	\$ 925,760	\$ -
Subtotal Vehicles		\$ 13,910,000	\$ 8,880,263	\$ 5,029,737	\$ 435,300	\$ -	\$ 4,594,437	\$ 317,604	\$ 4,276,833	\$ -
TOTAL TRANSIT SERVICES		\$ 74,472,000	\$ 33,448,580	\$ 41,023,420	\$ 29,111,917	\$ -	\$ 11,911,503	\$ 317,604	\$ 11,102,149	\$ 491,750

Residential Development Charge Calculation		
Residential Share of 2019 - 2028 DC Eligible Costs	80%	\$8,881,720
10-Year Growth in Population in New Units		13,373
Unadjusted Development Charge Per Capita		\$664.15
Non-Residential Development Charge Calculation		
Non-Residential Share of 2019 - 2028 DC Eligible Costs	20%	\$2,220,430
10-Year Growth in Square Metres		248,249
Unadjusted Development Charge Per Square Metre		\$8.94

Current Reserve Fund Balance \$317,604

148
APPENDIX B.8
TABLE 2

CITY OF PETERBOROUGH
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
TRANSIT SERVICES
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

TRANSIT SERVICES	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	TOTAL
OPENING CASH BALANCE	\$0.00	(\$979.52)	(\$992.54)	(\$3,893.56)	(\$4,132.25)	(\$3,555.19)	(\$3,012.18)	(\$2,308.98)	(\$1,738.37)	(\$910.35)	
2019 - 2028 RESIDENTIAL FUNDING REQUIREMENTS											
- Transit Services: Non Inflated	\$1,856.2	\$876.4	\$3,591.3	\$964.1	\$223.5	\$310.7	\$223.5	\$389.2	\$223.5	\$223.5	\$8,881.7
- Transit Services: Inflated	\$1,856.2	\$893.9	\$3,736.4	\$1,023.1	\$241.9	\$343.0	\$251.7	\$447.0	\$261.8	\$267.1	\$9,322.1
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	1,259	1,277	1,295	1,313	1,330	1,350	1,369	1,375	1,392	1,413	13,373
REVENUE											
- DC Receipts: Inflated	\$902.8	\$934.1	\$966.2	\$999.2	\$1,032.4	\$1,068.9	\$1,105.6	\$1,132.6	\$1,169.6	\$1,211.0	\$10,522.4
INTEREST											
- Interest on Opening Balance	\$0.0	(\$53.9)	(\$54.6)	(\$214.1)	(\$227.3)	(\$195.5)	(\$165.7)	(\$127.0)	(\$95.6)	(\$50.1)	(\$1,183.8)
- Interest on In-year Transactions	(\$26.2)	\$0.7	(\$76.2)	(\$0.7)	\$13.8	\$12.7	\$14.9	\$12.0	\$15.9	\$16.5	(\$16.5)
TOTAL REVENUE	\$876.6	\$880.9	\$835.4	\$784.4	\$818.9	\$886.0	\$954.9	\$1,017.6	\$1,089.9	\$1,177.4	\$9,322.1
CLOSING CASH BALANCE	(\$979.5)	(\$992.5)	(\$3,893.6)	(\$4,132.2)	(\$3,555.2)	(\$3,012.2)	(\$2,309.0)	(\$1,738.4)	(\$910.4)	\$0.0	

2019 Adjusted Charge Per Capita **\$717.12**

Allocation of Capital Program

Residential Sector	80.0%
Non-Residential Sector	20.0%

Rates for 2019

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

149
APPENDIX B.8
TABLE 2

CITY OF PETERBOROUGH
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
TRANSIT SERVICES
NON-RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

TRANSIT SERVICES	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	TOTAL
OPENING CASH BALANCE	\$0.00	(\$240.15)	(\$239.84)	(\$962.12)	(\$1,020.14)	(\$875.48)	(\$740.64)	(\$567.67)	(\$426.51)	(\$222.60)	
2019 - 2028 NON-RESIDENTIAL FUNDING REQUIREMENTS											
- Transit Services: Non Inflated	\$464.0	\$219.1	\$897.8	\$241.0	\$55.9	\$77.7	\$55.9	\$97.3	\$55.9	\$55.9	\$2,220.4
- Transit Services: Inflated	\$464.0	\$223.5	\$934.1	\$255.8	\$60.5	\$85.8	\$62.9	\$111.8	\$65.5	\$66.8	\$2,330.5
NON-RESIDENTIAL SPACE GROWTH											
- Growth in Square Metres	23,875	24,063	24,312	24,500	24,688	24,937	25,125	25,375	25,562	25,812	248,249
REVENUE											
- DC Receipts: Inflated	\$230.3	\$236.8	\$244.0	\$250.8	\$257.8	\$265.6	\$272.9	\$281.2	\$288.9	\$297.6	\$2,625.9
INTEREST											
- Interest on Opening Balance	\$0.0	(\$13.2)	(\$13.2)	(\$52.9)	(\$56.1)	(\$48.2)	(\$40.7)	(\$31.2)	(\$23.5)	(\$12.2)	(\$291.2)
- Interest on In-year Transactions	(\$6.4)	\$0.2	(\$19.0)	(\$0.1)	\$3.5	\$3.1	\$3.7	\$3.0	\$3.9	\$4.0	(\$4.1)
TOTAL REVENUE	\$223.9	\$223.8	\$211.8	\$197.8	\$205.1	\$220.6	\$235.9	\$252.9	\$269.4	\$289.4	\$2,330.5
CLOSING CASH BALANCE	(\$240.2)	(\$239.8)	(\$962.1)	(\$1,020.1)	(\$875.5)	(\$740.6)	(\$567.7)	(\$426.5)	(\$222.6)	\$0.0	

2019 Adjusted Charge Per Square Metre

\$9.65

Allocation of Capital Program

Residential Sector	80.0%
Non-Residential Sector	20.0%

Rates for 2019

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

APPENDIX B.9

GENERAL GOVERNMENT

APPENDIX B.9

GENERAL GOVERNMENT

The *DCA* allows the cost of development-related studies to be included in the calculation of the development charges as long as they are permitted under the legislation. Consistent with s.5(1)7 of the *DCA*, the eligible development-related capital costs for the provision of studies and permitted General Government expenditures and are reduced by 10 per cent when calculating the development charges.

**TABLE 1 2019 – 2028 DEVELOPMENT-RELATED CAPITAL PROGRAM AND
CALCULATION OF THE UNADJUSTED DEVELOPMENT CHARGES**

As shown on Table 1, the 2019–2028 development-related gross cost for General Government is \$709,730. This includes the recovery of a \$259,730 reserve fund balance, as well as studies that include two area-specific development charges studies, two City-wide development charges studies, and an Official Plan Review. No grants or subsidies are expected. The legislated 10 per cent reduction, \$45,000 has been discounted from the capital costs.

The remaining amount of \$664,730 is eligible for development charges funding in the 10-year planning period. This amount is included in the development charge calculation and is allocated 80 per cent, or \$531,784 to the residential sector and 20 per cent, or \$132,946 to the non-residential sector based on shares of 10-year growth in population and employment. The resulting unadjusted per capita residential charge is \$39.77 before cash flow adjustments. The non-residential unadjusted charge is \$0.54 per square metre.

TABLE 3 CASH FLOW ANALYSIS

After cash flow analysis, the residential charge increases to \$42.46 per capita and the non-residential charge increases to \$0.57 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 General Government development charge.

GENERAL GOVERNMENT SUMMARY					
2019 - 2028		Unadjusted		Adjusted	
Development-Related Capital Program		Development Charge		Development Charge	
Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$709,730	\$664,730	\$39.77	\$0.54	\$42.46	\$0.57

CITY OF PETERBOROUGH
DEVELOPMENT-RELATED CAPITAL PROGRAM
GENERAL GOVERNMENT

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	10% Reduction		Available DC Reserves	2019-2028	Post 2028
9.0 GENERAL GOVERNMENT										
9.1 Recovery of Negative Reserve Fund Balance										
9.1.1 Reserve Fund Balance as of December 31, 2018	2019	\$ 259,730	\$ -	\$ 259,730	\$ -	\$ -	\$ 259,730	\$ -	\$ 259,730	\$ -
Subtotal Recovery of Negative Reserve Fund Balance		\$ 259,730	\$ -	\$ 259,730	\$ -	\$ -	\$ 259,730	\$ -	\$ 259,730	\$ -
9.2 Development-Related Studies										
9.2.1 Provision for Growth-Related Studies	Various	\$ 200,000	\$ -	\$ 200,000	\$ -	\$ 20,000	\$ 180,000	\$ -	\$ 180,000	\$ -
9.2.2 City-Wide Development Charges Study	2019	\$ 60,000	\$ -	\$ 60,000	\$ -	\$ 6,000	\$ 54,000	\$ -	\$ 54,000	\$ -
9.2.3 Area-Specific Development Charges Study	2022	\$ 40,000	\$ -	\$ 40,000	\$ -	\$ 4,000	\$ 36,000	\$ -	\$ 36,000	\$ -
9.2.4 City-Wide Development Charges Study	2024	\$ 60,000	\$ -	\$ 60,000	\$ -	\$ 6,000	\$ 54,000	\$ -	\$ 54,000	\$ -
9.2.5 Area-Specific Development Charges Study	2027	\$ 40,000	\$ -	\$ 40,000	\$ -	\$ 4,000	\$ 36,000	\$ -	\$ 36,000	\$ -
9.2.6 Official Plan Review (Growth Management components)	2028	\$ 50,000	\$ -	\$ 50,000	\$ -	\$ 5,000	\$ 45,000	\$ -	\$ 45,000	\$ -
Subtotal Development-Related Studies		\$ 450,000	\$ -	\$ 450,000	\$ -	\$ 45,000	\$ 405,000	\$ -	\$ 405,000	\$ -
TOTAL GENERAL GOVERNMENT		\$ 709,730	\$ -	\$ 709,730	\$ -	\$ 45,000	\$ 664,730	\$ -	\$ 664,730	\$ -

Residential Development Charge Calculation

Residential Share of 2019 - 2028 DC Eligible Costs	80%	\$531,784
10-Year Growth in Population in New Units		13,373
Unadjusted Development Charge Per Capita		\$39.77

Non-Residential Development Charge Calculation

Non-Residential Share of 2019 - 2028 DC Eligible Costs	20%	\$132,946
10-Year Growth in Square Metres		248,249
Unadjusted Development Charge Per Square Metre		\$0.54

Current Reserve Fund Balance	(\$259,730)
------------------------------	-------------

154
APPENDIX B.9
TABLE 2

CITY OF PETERBOROUGH
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
GENERAL GOVERNMENT
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

GENERAL GOVERNMENT	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	TOTAL
OPENING CASH BALANCE	\$0.0	(\$217.8)	(\$188.4)	(\$155.8)	(\$150.8)	(\$112.8)	(\$119.3)	(\$75.7)	(\$28.5)	(\$11.1)	
2019 - 2028 RESIDENTIAL FUNDING REQUIREMENTS											
- General Government: Non Inflated	\$265.4	\$14.4	\$14.4	\$43.2	\$14.4	\$57.6	\$14.4	\$14.4	\$43.2	\$50.4	\$531.8
- General Government: Inflated	\$265.4	\$14.7	\$15.0	\$45.8	\$15.6	\$63.6	\$16.2	\$16.5	\$50.6	\$60.2	\$563.7
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	1,259	1,277	1,295	1,313	1,330	1,350	1,369	1,375	1,392	1,413	13,373
REVENUE											
- DC Receipts: Inflated	\$53.5	\$55.3	\$57.2	\$59.2	\$61.1	\$63.3	\$65.5	\$67.1	\$69.3	\$71.7	\$623.1
INTEREST											
- Interest on Opening Balance	\$0.0	(\$12.0)	(\$10.4)	(\$8.6)	(\$8.3)	(\$6.2)	(\$6.6)	(\$4.2)	(\$1.6)	(\$0.6)	(\$58.3)
- Interest on In-year Transactions	(\$5.8)	\$0.7	\$0.7	\$0.2	\$0.8	(\$0.0)	\$0.9	\$0.9	\$0.3	\$0.2	(\$1.1)
TOTAL REVENUE	\$47.6	\$44.0	\$47.6	\$50.8	\$53.6	\$57.1	\$59.8	\$63.8	\$68.0	\$71.3	\$563.7
CLOSING CASH BALANCE	(\$217.8)	(\$188.4)	(\$155.8)	(\$150.8)	(\$112.8)	(\$119.3)	(\$75.7)	(\$28.5)	(\$11.1)	\$0.0	

2019 Adjusted Charge Per Capita

\$42.46

Allocation of Capital Program

Residential Sector	80.0%
Non-Residential Sector	20.0%

Rates for 2019

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

155
APPENDIX B.9
TABLE 2

CITY OF PETERBOROUGH
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
GENERAL GOVERNMENT
NON-RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

GENERAL GOVERNMENT	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	TOTAL
OPENING CASH BALANCE	\$0.00	(\$54.16)	(\$46.61)	(\$38.28)	(\$36.94)	(\$27.40)	(\$29.08)	(\$18.36)	(\$6.64)	(\$2.47)	
2019 - 2028 NON-RESIDENTIAL FUNDING REQUIREMENTS											
- General Government: Non Inflated	\$66.3	\$3.6	\$3.6	\$10.8	\$3.6	\$14.4	\$3.6	\$3.6	\$10.8	\$12.6	\$132.9
- General Government: Inflated	\$66.3	\$3.7	\$3.7	\$11.5	\$3.9	\$15.9	\$4.1	\$4.1	\$12.7	\$15.1	\$140.9
NEW NON-RESIDENTIAL DEVELOPMENT											
- Growth in Square Metres	23,875	24,063	24,312	24,500	24,688	24,937	25,125	25,375	25,562	25,812	248,249
REVENUE											
- DC Receipts: Inflated	\$13.6	\$14.0	\$14.4	\$14.9	\$15.3	\$15.7	\$16.2	\$16.6	\$17.1	\$17.6	\$155.5
INTEREST											
- Interest on Opening Balance	\$0.0	(\$3.0)	(\$2.6)	(\$2.1)	(\$2.0)	(\$1.5)	(\$1.6)	(\$1.0)	(\$0.4)	(\$0.1)	(\$14.3)
- Interest on In-year Transactions	(\$1.4)	\$0.2	\$0.2	\$0.1	\$0.2	(\$0.0)	\$0.2	\$0.2	\$0.1	\$0.0	(\$0.3)
TOTAL REVENUE	\$12.2	\$11.2	\$12.1	\$12.8	\$13.4	\$14.2	\$14.8	\$15.9	\$16.8	\$17.5	\$140.9
CLOSING CASH BALANCE	(\$54.2)	(\$46.6)	(\$38.3)	(\$36.9)	(\$27.4)	(\$29.1)	(\$18.4)	(\$6.6)	(\$2.5)	(\$0.0)	

2019 Adjusted Charge Per Square Metre **\$0.57**

Allocation of Capital Program

Residential Sector	80.0%
Non-Residential Sector	20.0%

Rates for 2019

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

APPENDIX B.10

AFFORDABLE HOUSING

APPENDIX B.10

AFFORDABLE HOUSING

The City of Peterborough is responsible for the provision of affordable housing options to residents in need of assistance. The City provides support in various forms, such as development charges rebates, municipal tax savings, land contributions and building fee discounts for developers. The City has been making annual investments since 2005 in affordable housing initiatives and plans to continue into the future.

TABLE 1 2009-2018 HISTORICAL SERVICE LEVELS

The 10-year historical inventory of capital assets for Affordable Housing is calculated based upon annual municipal investments. Table 1 shows the annual investment from 2009 to 2018. The total investment in 2018 was \$24.8 million. The 10-year historical average service level is \$139.97 per capita and this, multiplied by the 10-year forecast net population growth (12,120), results in a 10-year maximum allowable funding envelope of \$1.7 million. The legislated 10 per cent discount amounts is netted off the funding envelope. Therefore, the discounted maximum allowable funding envelope brought forward to the development charge calculation is reduced to \$1.5 million.

**TABLE 2 2019 – 2028 DEVELOPMENT-RELATED CAPITAL PROGRAM AND
CALCULATION OF THE UNADJUSTED DEVELOPMENT CHARGES**

The Affordable Housing capital program includes an annual provision for municipal investment in affordable housing options. Over 10 years this totals \$12.3 million. In addition, \$10.0 million will go towards the Brock Street Mission Project. The gross 2019-2028 capital program totals \$22.3 million.

Recognizing the existing built-up demand for affordable housing in the City of Peterborough today, 90 per cent of these costs are identified as replacement shares that benefit the existing community. These shares total \$20.0 million. An additional share of \$222,550 is netted off as the legislated 10 per cent discount. Available DC reserve funds of \$169,490 have been applied. An additional \$306,667 related to the Brock Street Mission project has been determined to benefit development beyond 2028, and may be recoverable under future DC by-laws.

The remaining 2019-2028 DC costs eligible for recovery amount to \$1.5 million and are allocated entirely to residential development. This yields an unadjusted development charge of \$114.17 per capita.

TABLE 3 CASH FLOW ANALYSIS

After cash flow and reserve fund analysis, the residential calculated charge increases to \$118.36 per capita.

The following table summarizes the calculation of the Affordable Housing development charge.

AFFORDABLE HOUSING SUMMARY						
10-year Hist. Service Level per capita	2019 - 2028		Unadjusted		Adjusted	
	Development-Related Capital Program		Development Charge		Development Charge	
	Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$139.97	\$22,255,000	\$1,526,793	\$114.17	\$0.00	\$118.36	\$0.00

CITY OF PETERBOROUGH
INVENTORY OF CAPITAL ASSETS
AFFORDABLE HOUSING

BUILDINGS Project Name	Address	Units	Total Value of Municipal Investment									
			2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Anson House Phase 1	136 Anson Street	20	\$442,059	\$442,059	\$442,059	\$442,059	\$442,059	\$442,059	\$442,059	\$442,059	\$442,059	\$442,059
Maryland Place	716 Maryland Place	23	\$382,897	\$382,897	\$382,897	\$382,897	\$382,897	\$382,897	\$382,897	\$382,897	\$382,897	\$382,897
Myrtle Terrace	200 St Lukes Avenue	60	\$1,442,445	\$1,442,445	\$1,442,445	\$1,442,445	\$1,442,445	\$1,442,445	\$1,442,445	\$1,442,445	\$1,442,445	\$1,442,445
River Ridge Emergency Flood Relief	900 Dutton Road	40	\$1,682,086	\$1,682,086	\$1,682,086	\$1,682,086	\$1,682,086	\$1,682,086	\$1,682,086	\$1,682,086	\$1,682,086	\$1,682,086
Woollen Mill	526 McDonnell Street	50	\$1,815,368	\$1,815,368	\$1,815,368	\$1,815,368	\$1,815,368	\$1,815,368	\$1,815,368	\$1,815,368	\$1,815,368	\$1,815,368
Anson House Phase 2	136 Anson Street	30	\$560,734	\$560,734	\$560,734	\$560,734	\$560,734	\$560,734	\$560,734	\$560,734	\$560,734	\$560,734
The Canadian Wollens	544 McDonell Street	4	\$79,439	\$79,439	\$79,439	\$79,439	\$79,439	\$79,439	\$79,439	\$79,439	\$79,439	\$79,439
Central School	90 Murray Street	50	\$723,663	\$723,663	\$723,663	\$723,663	\$723,663	\$723,663	\$723,663	\$723,663	\$723,663	\$723,663
TVM Schoolhouse	443 Reid Street	48	\$890,711	\$890,711	\$890,711	\$890,711	\$890,711	\$890,711	\$890,711	\$890,711	\$890,711	\$890,711
TVM Brock Towers	212 Brock Street	11	\$158,500	\$158,500	\$158,500	\$158,500	\$158,500	\$158,500	\$158,500	\$158,500	\$158,500	\$158,500
Arygle Street	49 Argyle Street	16	\$273,547	\$273,547	\$273,547	\$273,547	\$273,547	\$273,547	\$273,547	\$273,547	\$273,547	\$273,547
Anson House Phase 3	136 Anson Street	6	\$117,520	\$117,520	\$117,520	\$117,520	\$117,520	\$117,520	\$117,520	\$117,520	\$117,520	\$117,520
TVM George Street	406-408 George Street	4	\$63,522	\$63,522	\$63,522	\$63,522	\$63,522	\$63,522	\$63,522	\$63,522	\$63,522	\$63,522
Edinburgh	220 Edinburgh Street	4	\$137,932	\$137,932	\$137,932	\$137,932	\$137,932	\$137,932	\$137,932	\$137,932	\$137,932	\$137,932
Cameron House	738 Chemong Road	8	\$169,375	\$169,375	\$169,375	\$169,375	\$169,375	\$169,375	\$169,375	\$169,375	\$169,375	\$169,375
ECE Living	260 Aylmer Street	6	\$119,529	\$119,529	\$119,529	\$119,529	\$119,529	\$119,529	\$119,529	\$119,529	\$119,529	\$119,529
TVM George Street North	406-410 George Street North	4	\$79,686	\$79,686	\$79,686	\$79,686	\$79,686	\$79,686	\$79,686	\$79,686	\$79,686	\$79,686
Habitat for Humanity	284 Towerhill Road	1	\$0	\$81,514	\$81,514	\$81,514	\$81,514	\$81,514	\$81,514	\$81,514	\$81,514	\$81,514
Habitat for Humanity	288 Towerhill Road	1	\$0	\$81,514	\$81,514	\$81,514	\$81,514	\$81,514	\$81,514	\$81,514	\$81,514	\$81,514
Habitat for Humanity	292 Towerhill Road	1	\$0	\$85,289	\$85,289	\$85,289	\$85,289	\$85,289	\$85,289	\$85,289	\$85,289	\$85,289
Bradburn House	293 London Street	18	\$0	\$0	\$343,148	\$343,148	\$343,148	\$343,148	\$343,148	\$343,148	\$343,148	\$343,148
TVM Terraces	207-209 Murray Street	16	\$0	\$0	\$400,886	\$400,886	\$400,886	\$400,886	\$400,886	\$400,886	\$400,886	\$400,886
Community Living	740 Jane Street	1	\$0	\$0	\$12,735	\$12,735	\$12,735	\$12,735	\$12,735	\$12,735	\$12,735	\$12,735
Community Living	742 Jane Street	1	\$0	\$0	\$12,735	\$12,735	\$12,735	\$12,735	\$12,735	\$12,735	\$12,735	\$12,735
Habitat for Humanity	270 Towerhill Road	1	\$0	\$0	\$12,735	\$12,735	\$12,735	\$12,735	\$12,735	\$12,735	\$12,735	\$12,735
Habitat for Humanity	268 Towerhill Road	1	\$0	\$0	\$91,984	\$91,984	\$91,984	\$91,984	\$91,984	\$91,984	\$91,984	\$91,984
Community Living	730-736 Jane Street	8	\$0	\$0	\$0	\$217,669	\$217,669	\$217,669	\$217,669	\$217,669	\$217,669	\$217,669
Community Living	753 Young Street	1	\$0	\$0	\$0	\$12,563	\$12,563	\$12,563	\$12,563	\$12,563	\$12,563	\$12,563
Community Living	743 Young Street	1	\$0	\$0	\$0	\$0	\$17,839	\$17,839	\$17,839	\$17,839	\$17,839	\$17,839
Community Living	745 Young Street	1	\$0	\$0	\$0	\$0	\$17,839	\$17,839	\$17,839	\$17,839	\$17,839	\$17,839
Habitat for Humanity	574 George Street	2	\$0	\$0	\$0	\$0	\$16,030	\$16,030	\$16,030	\$16,030	\$16,030	\$16,030
Hazelbrae Place	21 Barnardo Avenue	42	\$0	\$0	\$0	\$0	\$2,005,346	\$2,005,346	\$2,005,346	\$2,005,346	\$2,005,346	\$2,005,346
Knox United Church	165 Rubidge Street	41	\$0	\$0	\$0	\$0	\$0	\$1,933,585	\$1,933,585	\$1,933,585	\$1,933,585	\$1,933,585
Canada Builds	143 Rubidge Street	4	\$0	\$0	\$0	\$0	\$0	\$0	\$539,945	\$539,945	\$539,945	\$539,945
Loyola	188-189 Edinburgh Street	28	\$0	\$0	\$0	\$0	\$0	\$0	\$1,443,003	\$1,443,003	\$1,443,003	\$1,443,003
Former Fire Hall	721 Monaghan Road	11	\$0	\$0	\$0	\$0	\$0	\$0	\$278,319	\$278,319	\$278,319	\$278,319
The Mount	Monaghan Road	65	\$0	\$0	\$0	\$0	\$0	\$0	\$2,787,420	\$2,787,420	\$2,787,420	\$2,787,420
Glen Payne	342 Downie Street	4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$295,003	\$295,003	\$295,003
Habitat for Humanity	678 St Marys Street	1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$24,106	\$24,106	\$24,106
Brock Mission	217 Murray Street	15	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,274,036	\$1,274,036	\$1,274,036
Knox United Church	165 Rubidge Street	1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$37,903	\$37,903	\$37,903
PHC - McRae Building	555 Bonnaccord Street	34	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,579,800	\$3,579,800	\$3,579,800
Habitat for Humanity	505 Wellington Street	1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$23,325	\$23,325
Habitat for Humanity	450 Wolfe Street	2	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$46,649	\$46,649
DeafBlind Ontario	86 Earlwood Drive	2	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$25,234
Cumulative Municipal Investment (\$000)			\$9,139.0	\$9,387.3	\$10,261.6	\$10,491.8	\$12,548.8	\$14,482.4	\$19,531.1	\$24,742.0	\$24,811.9	\$24,837.2

160
APPENDIX B.10
TABLE 1

CITY OF PETERBOROUGH
CALCULATION OF SERVICE LEVELS
AFFORDABLE HOUSING

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Historical Population	77,364	78,028	78,698	79,159	79,623	80,090	80,560	81,032	82,141	83,265

INVENTORY SUMMARY (\$000)

Annual Municipal Investment			\$9,139.0	\$9,387.3	\$10,261.6	\$10,491.8	\$12,548.8	\$14,482.4	\$19,531.1	\$24,742.0	\$24,811.9	\$24,837.2
Total (\$000)			\$9,139.0	\$9,387.3	\$10,261.6	\$10,491.8	\$12,548.8	\$14,482.4	\$19,531.1	\$24,742.0	\$24,811.9	\$24,837.2

SERVICE LEVEL (\$/capita)

												Average Service Level
Annual Municipal Investment	\$118.13	\$120.31	\$130.39	\$132.54	\$157.60	\$180.83	\$242.44	\$305.34	\$302.07	\$298.29	\$139.97	
Total (\$/capita)	\$118.13	\$120.31	\$130.39	\$132.54	\$157.60	\$180.83	\$242.44	\$305.34	\$302.07	\$298.29	\$139.97	

CITY OF PETERBOROUGH
CALCULATION OF MAXIMUM ALLOWABLE
AFFORDABLE HOUSING

10-Year Funding Envelope Calculation	
10 Year Average Service Level 2009 - 2018	\$139.97
Net Population Growth 2019 - 2028	12,120
Maximum Allowable Funding Envelope	\$1,696,436
Less: 10% Legislated Reduction	\$169,644
Discounted Maximum Allowable Funding Envelope	\$1,526,793

161
APPENDIX B.10
TABLE 2

CITY OF PETERBOROUGH
DEVELOPMENT-RELATED CAPITAL PROGRAM
AFFORDABLE HOUSING

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	10% Reduction		Available DC Reserves	2019-2028	Post 2028
10.0 AFFORDABLE HOUSING										
10.1 Municipal Investment in Affordable Housing										
10.1.1 Annual Municipal Investment In Affordable Housing	2019	\$ 1,103,000	\$ -	\$ 1,103,000	\$ 992,700	\$ 11,030	\$ 99,270	\$ 99,270	\$ -	\$ -
10.1.2 Annual Municipal Investment In Affordable Housing	2020	\$ 1,138,000	\$ -	\$ 1,138,000	\$ 1,024,200	\$ 11,380	\$ 102,420	\$ 70,220	\$ 32,200	\$ -
10.1.3 Annual Municipal Investment In Affordable Housing	2021	\$ 1,173,000	\$ -	\$ 1,173,000	\$ 1,055,700	\$ 11,730	\$ 105,570	\$ -	\$ 105,570	\$ -
10.1.4 Annual Municipal Investment In Affordable Housing	2022	\$ 1,208,000	\$ -	\$ 1,208,000	\$ 1,087,200	\$ 12,080	\$ 108,720	\$ -	\$ 108,720	\$ -
10.1.5 Annual Municipal Investment In Affordable Housing	2023	\$ 1,243,000	\$ -	\$ 1,243,000	\$ 1,118,700	\$ 12,430	\$ 111,870	\$ -	\$ 111,870	\$ -
10.1.6 Annual Municipal Investment In Affordable Housing	2024	\$ 1,278,000	\$ -	\$ 1,278,000	\$ 1,150,200	\$ 12,780	\$ 115,020	\$ -	\$ 115,020	\$ -
10.1.7 Annual Municipal Investment In Affordable Housing	2025	\$ 1,278,000	\$ -	\$ 1,278,000	\$ 1,150,200	\$ 12,780	\$ 115,020	\$ -	\$ 115,020	\$ -
10.1.8 Annual Municipal Investment In Affordable Housing	2026	\$ 1,278,000	\$ -	\$ 1,278,000	\$ 1,150,200	\$ 12,780	\$ 115,020	\$ -	\$ 115,020	\$ -
10.1.9 Annual Municipal Investment In Affordable Housing	2027	\$ 1,278,000	\$ -	\$ 1,278,000	\$ 1,150,200	\$ 12,780	\$ 115,020	\$ -	\$ 115,020	\$ -
10.1.10 Annual Municipal Investment In Affordable Housing	2028	\$ 1,278,000	\$ -	\$ 1,278,000	\$ 1,150,200	\$ 12,780	\$ 115,020	\$ -	\$ 115,020	\$ -
Subtotal Municipal Investment in Affordable Housing		\$ 12,255,000	\$ -	\$ 12,255,000	\$ 11,029,500	\$ 122,550	\$ 1,102,950	\$ 169,490	\$ 933,460	\$ -
10.2 Brock Street Mission										
10.2.1 Brock Street Mission Project	2020	\$ 10,000,000	\$ -	\$ 10,000,000	\$ 9,000,000	\$ 100,000	\$ 900,000	\$ -	\$ 593,333	\$ 306,667
Subtotal Brock Street Mission		\$ 10,000,000	\$ -	\$ 10,000,000	\$ 9,000,000	\$ 100,000	\$ 900,000	\$ -	\$ 593,333	\$ 306,667
TOTAL AFFORDABLE HOUSING		\$ 22,255,000	\$ -	\$ 22,255,000	\$ 20,029,500	\$ 222,550	\$ 2,002,950	\$ 169,490	\$ 1,526,793	\$ 306,667

Residential Development Charge Calculation		
Residential Share of 2019 - 2028 DC Eligible Costs	100%	\$1,526,793
10-Year Growth in Population in New Units		13,373
Unadjusted Development Charge Per Capita		\$114.17
Non-Residential Development Charge Calculation		
Non-Residential Share of 2019 - 2028 DC Eligible Costs	0%	\$0
10-Year Growth in Square Metres		248,249
Unadjusted Development Charge Per Square Metre		\$0.00

2019 - 2028 Net Funding Envelope	\$1,526,793
Current Reserve Fund Balance	\$169,490

162
APPENDIX B.10
TABLE 3

CITY OF PETERBOROUGH
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
AFFORDABLE HOUSING
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

AFFORDABLE HOUSING	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	TOTAL
OPENING CASH BALANCE	\$0.00	\$151.62	(\$340.26)	(\$308.48)	(\$275.04)	(\$240.00)	(\$202.92)	(\$160.21)	(\$113.25)	(\$60.19)	
2019 - 2028 RESIDENTIAL FUNDING REQUIREMENTS											
- Affordable Housing: Non Inflated	\$0.0	\$625.5	\$105.6	\$108.7	\$111.9	\$115.0	\$115.0	\$115.0	\$115.0	\$115.0	\$1,526.8
- Affordable Housing: Inflated	\$0.0	\$638.0	\$109.8	\$115.4	\$121.1	\$127.0	\$129.5	\$132.1	\$134.8	\$137.5	\$1,645.2
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	1,259	1,277	1,295	1,313	1,330	1,350	1,369	1,375	1,392	1,413	13,373
REVENUE											
- DC Receipts: Inflated	\$149.0	\$154.2	\$159.5	\$164.9	\$170.4	\$176.4	\$182.5	\$186.9	\$193.0	\$199.9	\$1,736.7
INTEREST											
- Interest on Opening Balance	\$0.0	\$5.3	(\$18.7)	(\$17.0)	(\$15.1)	(\$13.2)	(\$11.2)	(\$8.8)	(\$6.2)	(\$3.3)	(\$88.2)
- Interest on In-year Transactions	\$2.6	(\$13.3)	\$0.9	\$0.9	\$0.9	\$0.9	\$0.9	\$1.0	\$1.0	\$1.1	(\$3.2)
TOTAL REVENUE	\$151.6	\$146.2	\$141.6	\$148.8	\$156.1	\$164.1	\$172.2	\$179.1	\$187.8	\$197.6	\$1,645.2
CLOSING CASH BALANCE	\$151.6	(\$340.3)	(\$308.5)	(\$275.0)	(\$240.0)	(\$202.9)	(\$160.2)	(\$113.2)	(\$60.2)	(\$0.0)	

2019 Adjusted Charge Per Capita **\$118.36**

Allocation of Capital Program

Residential Sector	100.0%
Non-Residential Sector	0.0%

Rates for 2019

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

APPENDIX B.11

WASTE MANAGEMENT

APPENDIX B.11

WASTE MANAGEMENT

The City of Peterborough operates a recycling program, including a facility and trucks. The costs of waste collection and diversion are eligible for DC recovery under the *DCA*.

This is a new service and has been determined to provide City-wide benefits for the purpose of the DC calculation.

TABLE 1 2009-2018 HISTORICAL SERVICE LEVELS

The 10-year historical inventory of capital assets for Waste Management includes a 15,000 square foot recycling facility situated on 4.3 hectares of land, valued at a total of \$4.5 million. The City's seven trucks are valued at \$2.3 million, and equipment at the depot are worth \$120,000.

The total value of capital infrastructure in 2018 was \$6.9 million. The 10-year historical average service level is \$53.30 per population and employment and this, multiplied by the 10-year forecast net population and employment growth (16,092), results in a 10-year maximum allowable funding envelope of \$857,704. The legislated 10 per cent discount amounts is netted off the funding envelope. Therefore, the discounted maximum allowable funding envelope brought forward to the development charge calculation is reduced to \$771,933.

TABLE 2 2019 – 2028 DEVELOPMENT-RELATED CAPITAL PROGRAM AND CALCULATION OF THE UNADJUSTED DEVELOPMENT CHARGES

The Waste Management capital program includes an organics processing facility for \$15.0 million, as well as two additional recycling trucks that cost \$325,000 apiece. The total capital program runs \$15.7 million.

A \$6.0 million grant has been identified to offset the cost of the new organics processing facility. In addition, a replacement share of \$7.8 million related to the facility has been deducted from the calculation. An additional share of \$187,629 is netted off as the legislated 10 per cent discount. Post-period benefit shares totaling \$916,724 related to all the projects have been identified; these may be recoverable under future DC by-laws.

The remaining 2019-2028 DC costs eligible for recovery amount to \$771,933 and are allocated 80 per cent to residential development and 20 per cent to non-residential development. This results in charges of \$46.18 per capita and \$0.62 per square metre.

TABLE 3 CASH FLOW ANALYSIS

After cash flow and reserve fund analysis, the residential calculated charge increases to \$48.29 per capita and the non-residential charge increases to \$0.65 per square metre.

The following table summarizes the calculation of the Waste Management development charge.

WASTE MANAGEMENT SUMMARY						
10-year Hist.	2019 - 2028		Unadjusted		Adjusted	
Service Level	Development-Related Capital Program		Development Charge		Development Charge	
per capita	Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$53.30	\$15,650,000	\$771,933	\$46.18	\$0.62	\$48.29	\$0.65

166
APPENDIX B.11
TABLE 1

CITY OF PETERBOROUGH
INVENTORY OF CAPITAL ASSETS
WASTE MANAGEMENT

BUILDINGS Description	# of Square Feet										UNIT COST (\$/sq.ft.)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Peterborough Material Recycling Facility (MRF)	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	\$180
Total (sq.ft.)	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	
Total (\$000)	\$2,700.0	\$2,700.0	\$2,700.0	\$2,700.0	\$2,700.0	\$2,700.0	\$2,700.0	\$2,700.0	\$2,700.0	\$2,700.0	

LAND Description	# of Hectares										UNIT COST (\$/ha)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Peterborough Material Recycling Facility (MRF)	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	\$431,600
Total (ha)	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	
Total (\$000)	\$1,834.0	\$1,834.0	\$1,834.0	\$1,834.0	\$1,834.0	\$1,834.0	\$1,834.0	\$1,834.0	\$1,834.0	\$1,834.0	

VEHICLES Description	# of Vehicles										UNIT COST (\$/unit)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Recycling Trucks	5	5	5	6	6	6	7	7	7	7	\$325,000
Total (#)	5	5	5	6	6	6	7	7	7	7	
Total (\$000)	\$1,625.0	\$1,625.0	\$1,625.0	\$1,950.0	\$1,950.0	\$1,950.0	\$2,275.0	\$2,275.0	\$2,275.0	\$2,275.0	

FURNITURE & EQUIPMENT Description	Value of Equipment										
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Depot Equipment	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000	
Total (\$000)	\$120.0	\$120.0	\$120.0	\$120.0	\$120.0	\$120.0	\$120.0	\$120.0	\$120.0	\$120.0	

167
APPENDIX B.11
TABLE 1

CITY OF PETERBOROUGH
CALCULATION OF SERVICE LEVELS
WASTE MANAGEMENT

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Historical Population	77,364	78,028	78,698	79,159	79,623	80,090	80,560	81,032	82,141	83,265
Historical Employment	<u>45,054</u>	<u>45,372</u>	<u>45,692</u>	<u>45,199</u>	<u>44,711</u>	<u>44,229</u>	<u>43,752</u>	<u>43,280</u>	<u>43,655</u>	<u>44,034</u>
Total Historical Population & Employment	122,418	123,400	124,390	124,358	124,334	124,319	124,312	124,312	125,796	127,299

INVENTORY SUMMARY (\$000)

Buildings	\$2,700.0	\$2,700.0	\$2,700.0	\$2,700.0	\$2,700.0	\$2,700.0	\$2,700.0	\$2,700.0	\$2,700.0	\$2,700.0
Land	\$1,834.0	\$1,834.0	\$1,834.0	\$1,834.0	\$1,834.0	\$1,834.0	\$1,834.0	\$1,834.0	\$1,834.0	\$1,834.0
Vehicles	\$1,625.0	\$1,625.0	\$1,625.0	\$1,950.0	\$1,950.0	\$1,950.0	\$2,275.0	\$2,275.0	\$2,275.0	\$2,275.0
Furniture & Equipment	\$120.0	\$120.0	\$120.0	\$120.0	\$120.0	\$120.0	\$120.0	\$120.0	\$120.0	\$120.0
Total (\$000)	\$6,279.0	\$6,279.0	\$6,279.0	\$6,604.0	\$6,604.0	\$6,604.0	\$6,929.0	\$6,929.0	\$6,929.0	\$6,929.0

SERVICE LEVEL (\$/pop & emp)

											Average Service Level
Buildings	\$22.06	\$21.88	\$21.71	\$21.71	\$21.72	\$21.72	\$21.72	\$21.72	\$21.46	\$21.21	\$21.69
Land	\$14.98	\$14.86	\$14.74	\$14.75	\$14.75	\$14.75	\$14.75	\$14.75	\$14.58	\$14.41	\$14.73
Vehicles	\$13.27	\$13.17	\$13.06	\$15.68	\$15.68	\$15.69	\$18.30	\$18.30	\$18.08	\$17.87	\$15.91
Furniture & Equipment	\$0.98	\$0.97	\$0.96	\$0.96	\$0.97	\$0.97	\$0.97	\$0.97	\$0.95	\$0.94	\$0.96
Total (\$/pop & emp)	\$51.29	\$50.88	\$50.48	\$53.10	\$53.11	\$53.12	\$55.74	\$55.74	\$55.08	\$54.43	\$53.30

CITY OF PETERBOROUGH
CALCULATION OF MAXIMUM ALLOWABLE
WASTE MANAGEMENT

10-Year Funding Envelope Calculation	
10 Year Average Service Level 2009 - 2018	\$53.30
Net Population & Employment Growth 2019 - 2028	16,092
Maximum Allowable Funding Envelope	\$857,704
Less: 10% Legislated Reduction	\$85,770
Discounted Maximum Allowable Funding Envelope	\$771,933

CITY OF PETERBOROUGH
DEVELOPMENT-RELATED CAPITAL PROGRAM
WASTE MANAGEMENT

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	10% Reduction		Available DC Reserves	2019-2028	Post 2028
11.0 WASTE MANAGEMENT										
11.1 Buildings, Land & Furnishings										
11.1.1 Organics Processing Facility	2023	\$ 15,000,000	\$ 6,000,000	\$ 9,000,000	\$ 7,773,714	\$ 122,629	\$ 1,103,658	\$ -	\$ 771,933	\$ 331,724
Subtotal Buildings, Land & Furnishings		\$ 15,000,000	\$ 6,000,000	\$ 9,000,000	\$ 7,773,714	\$ 122,629	\$ 1,103,658	\$ -	\$ 771,933	\$ 331,724
11.2 Vehicles & Equipment										
11.2.1 Additional Recycling Truck	2023	\$ 325,000	\$ -	\$ 325,000	\$ -	\$ 32,500	\$ 292,500	\$ -	\$ -	\$ 292,500
11.2.2 Additional Recycling Truck	2026	\$ 325,000	\$ -	\$ 325,000	\$ -	\$ 32,500	\$ 292,500	\$ -	\$ -	\$ 292,500
Subtotal Vehicles & Equipment		\$ 650,000	\$ -	\$ 650,000	\$ -	\$ 65,000	\$ 585,000	\$ -	\$ -	\$ 585,000
TOTAL WASTE MANAGEMENT		\$ 15,650,000	\$ 6,000,000	\$ 9,650,000	\$ 7,773,714	\$ 187,629	\$ 1,688,658	\$ -	\$ 771,933	\$ 916,724

Residential Development Charge Calculation

Residential Share of 2019 - 2028 DC Eligible Costs	80%	\$617,547
10-Year Growth in Population in New Units		13,373
Unadjusted Development Charge Per Capita		\$46.18

Non-Residential Development Charge Calculation

Non-Residential Share of 2019 - 2028 DC Eligible Costs	20%	\$154,387
10-Year Growth in Square Metres		248,249
Unadjusted Development Charge Per Square Metre		\$0.62

2019 - 2028 Net Funding Envelope	\$771,933
----------------------------------	-----------

Current Reserve Fund Balance	\$0
------------------------------	-----

169
APPENDIX B.11
TABLE 3

CITY OF PETERBOROUGH
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
WASTE MANAGEMENT
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

WASTE MANAGEMENT	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	TOTAL
OPENING CASH BALANCE	\$0.00	\$61.86	\$128.02	\$198.69	\$274.10	(\$331.71)	(\$276.73)	(\$216.20)	(\$150.49)	(\$78.64)	
2019 - 2028 RESIDENTIAL FUNDING REQUIREMENTS											
- Waste Management: Non Inflated	\$0.0	\$0.0	\$0.0	\$0.0	\$617.5	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$617.5
- Waste Management: Inflated	\$0.0	\$0.0	\$0.0	\$0.0	\$668.5	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$668.5
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	1,259	1,277	1,295	1,313	1,330	1,350	1,369	1,375	1,392	1,413	13,373
REVENUE											
- DC Receipts: Inflated	\$60.8	\$62.9	\$65.1	\$67.3	\$69.5	\$72.0	\$74.4	\$76.3	\$78.8	\$81.5	\$708.5
INTEREST											
- Interest on Opening Balance	\$0.0	\$2.2	\$4.5	\$7.0	\$9.6	(\$18.2)	(\$15.2)	(\$11.9)	(\$8.3)	(\$4.3)	(\$34.8)
- Interest on In-year Transactions	\$1.1	\$1.1	\$1.1	\$1.2	(\$16.5)	\$1.3	\$1.3	\$1.3	\$1.4	\$1.4	(\$5.3)
TOTAL REVENUE	\$61.9	\$66.2	\$70.7	\$75.4	\$62.6	\$55.0	\$60.5	\$65.7	\$71.9	\$78.6	\$668.5
CLOSING CASH BALANCE	\$61.9	\$128.0	\$198.7	\$274.1	(\$331.7)	(\$276.7)	(\$216.2)	(\$150.5)	(\$78.6)	(\$0.0)	

2019 Adjusted Charge Per Capita

\$48.29

Allocation of Capital Program

Residential Sector	80.0%
Non-Residential Sector	20.0%

Rates for 2019

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

170
APPENDIX B.11
TABLE 3

CITY OF PETERBOROUGH
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
WASTE MANAGEMENT
NON-RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

WASTE MANAGEMENT	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	TOTAL
OPENING CASH BALANCE	\$0.00	\$15.78	\$32.56	\$50.43	\$69.38	(\$82.06)	(\$68.37)	(\$53.42)	(\$37.09)	(\$19.33)	
2019 - 2028 RESIDENTIAL FUNDING REQUIREMENTS											
- Waste Management: Non Inflated	\$0.0	\$0.0	\$0.0	\$0.0	\$154.4	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$154.4
- Waste Management: Inflated	\$0.0	\$0.0	\$0.0	\$0.0	\$167.1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$167.1
NEW NON-RESIDENTIAL DEVELOPMENT											
- Growth in Square Metres	23,875	24,063	24,312	24,500	24,688	24,937	25,125	25,375	25,562	25,812	248,249
REVENUE											
- DC Receipts: Inflated	\$15.5	\$15.9	\$16.4	\$16.9	\$17.4	\$17.9	\$18.4	\$18.9	\$19.5	\$20.0	\$176.9
INTEREST											
- Interest on Opening Balance	\$0.0	\$0.6	\$1.1	\$1.8	\$2.4	(\$4.5)	(\$3.8)	(\$2.9)	(\$2.0)	(\$1.1)	(\$8.4)
- Interest on In-year Transactions	\$0.3	\$0.3	\$0.3	\$0.3	(\$4.1)	\$0.3	\$0.3	\$0.3	\$0.3	\$0.4	(\$1.3)
TOTAL REVENUE	\$15.8	\$16.8	\$17.9	\$19.0	\$15.7	\$13.7	\$14.9	\$16.3	\$17.8	\$19.3	\$167.1
CLOSING CASH BALANCE	\$15.8	\$32.6	\$50.4	\$69.4	(\$82.1)	(\$68.4)	(\$53.4)	(\$37.1)	(\$19.3)	(\$0.0)	

2019 Adjusted Charge Per Capita

\$0.65

Allocation of Capital Program

Residential Sector	80.0%
Non-Residential Sector	20.0%

Rates for 2019

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

APPENDIX C

CITY-WIDE ENGINEERING INFRASTRUCTURE TECHNICAL APPENDIX

APPENDIX C

CITY-WIDE ENGINEERING INFRASTRUCTURE TECHNICAL APPENDIX

The Utility Services Department of the City includes the Engineering and Construction Division, which is responsible for the design and construction of all new storm and sanitary sewers, sidewalks, streets, bridges and culverts. The Division is also responsible for the operation and maintenance of the streetlight system. The Environmental Protection Division operates the Wastewater Treatment Plant (WWTP) and the pumping stations and force mains used to convey sanitary sewage to the WWTP.

This appendix provides an outline of the Roads & Other City-wide Engineering and Sewage Treatment infrastructure. The former includes the roads themselves as well as traffic signals, sidewalks, trails, bridges, culverts, noise and retaining walls, street lights and road signs. This service also includes two projects at the City of Peterborough Airport: one to extend water and sewer services to an industrial park; the other to expand water and sewer services at the Airport proper. Sewage treatment services are provided by the main Wastewater Treatment Plant on Kennedy Road.

The development-related City-wide engineering infrastructure projects are required to service the demands of new development over the period from 2019 to 2031. The development forecast over this time horizon is discussed in more detail in Appendix A.

APPENDIX C.1

ROADS & OTHER CITY-WIDE ENGINEERING

The Roads & Other City-wide Engineering capital program includes capacity improvements, urbanizations, and realignments of the roads themselves, as well as intersection improvements, sidewalk installations, multi-use trails, and land purchases associated with the projects. It also includes two projects at the City of Peterborough Airport: one to extend water and sewer services to an industrial park; the other to expand water and sewer services at the Airport proper.

The capital program is largely based on the 2012 Council approved Transportation Master Plan and subsequent 2014 Development Charges Background Study. In approving the Transportation Master Plan, Council also adopted the recommended road network improvements and implementation horizons as detailed in the Plan. The cycling and trail network improvements and implementations horizons were also adopted.

The following tables set out the 2019 to 2031 development-related capital program and the calculation of the development charges. The cost of the development-related capital program for Roads & Other City-wide Engineering services was prepared by City staff. The projects identified in the capital program are required to service the demands of new anticipated development, subject to annual capital budget reviews. Consistent with s.5.(1)7. of the *DCA*, there is no legislated percentage reduction in the eligible development-related capital cost for the provision of roads and related infrastructure.

Tables 1 – 6 provide details of the projects included in the development charges calculation. The content of the tables is as follows:

Table 1	2009 – 2018 Historical Service Level Analysis
Table 2	2019 – 2031 Roads & Other City-wide Engineering Capital Program: Breakdown of Gross Costs
Table 3	Roads & Other City-wide Engineering Growth and Non-Growth Shares
Table 4	Roads & Other City-wide Engineering Capital Program Summary
Table 5	Calculation of Unadjusted Development Charge

Table 6 Residential and Non-Residential Cash Flow Analysis

The data on Table 1 demonstrates that the City could raise \$345.5 million in DC revenue between 2019 and 2031 without exceeding its 10-year historical average service level. This maximum allowable funding envelope entitles the City to fund development-related capital projects up to this amount.

The Roads & Other City-wide Engineering capital program amounts to \$562.4 million and includes road construction, structure and intersection improvements, utility relocation, and land acquisition costs. The details of the timing of each project, and the project cost breakdown, are set out in Table 2.

The gross cost of the program is not to be entirely recovered through future development charges. Approximately \$189.8 million of the program cost has been identified as the benefit to existing, or non-growth, share. Table 3 displays the percentages of each cost component that is considered to be development-related.

Table 4 summarizes the program costs and the various deductions made. An amount of \$15.5 million has been identified in the Roads DC reserve fund and is available to fund a portion of the costs. Also, \$215.1 million is deemed to benefit development beyond the planning period of 2019 to 2031 and has been removed from the DC calculation as “post-period” benefit. Of the total program cost of \$562.4 million, the net DC recoverable share is \$142.0 million. This amount has been brought forward to the DC calculation.

As shown on Table 5, the DC recoverable costs have been allocated 77 per cent (\$109.7 million) to new residential development and 23 per cent (\$32.4 million) to new non-residential development. The allocation is based on the ratio of population growth in new units and employment growth to 2031. The result is an unadjusted charge of \$6,185.35 per capita, which is calculated by taking the residential share of the program (\$109.7 million) and dividing it by the population growth in new units (17,729). The unadjusted non-residential charge is \$98.97 per square metre, which is the result of dividing the non-residential share of the program (\$32.4 million) by the anticipated growth in non-residential gross floor area (327,039 square metres).

A cash-flow analysis takes into consideration expenditure timing and revenue projections. Table 6 displays the residential and non-residential cash flow analysis.

The following is a summary of the adjusted DC rates:

ROADS & OTHER CITY-WIDE ENGINEERING SUMMARY						
10-year Hist.	2019 - 2031		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
\$16,204.69	\$562,435,866	\$142,025,683	\$6,185.35	\$98.97	\$6,231.01	\$99.55

176
APPENDIX C.1
TABLE 1

CITY OF PETERBOROUGH
INVENTORY OF CAPITAL ASSETS
ROADS & OTHER CITY-WIDE ENGINEERING

ROADS Type of Road	# of Kilometres										UNIT COST (\$/km)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Urban Arterials											
2 Lane	16.8	16.8	16.8	18.4	18.4	18.4	20.4	19.5	19.5	19.5	\$4,830,000
3 Lane	19.2	19.5	19.5	19.2	19.2	19.2	25.7	26.5	26.5	26.5	\$5,175,000
4 Lane	22.8	22.8	23.1	23.0	22.8	22.8	29.6	31.0	31.0	31.0	\$5,865,000
5 Lane	4.6	4.6	5.8	6.1	6.4	6.4	13.3	13.3	13.3	13.3	\$6,555,000
6 Lane	0.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	\$6,900,000
Rural Arterials											
2 Lane	31.2	30.4	29.1	29.1	30.0	30.0	22.4	22.4	22.4	22.4	\$3,335,000
3 Lane	2.3	2.3	2.1	2.1	2.1	2.1	5.7	5.7	5.7	5.7	\$4,255,000
4 Lane	2.1	1.6	1.6	1.6	1.3	1.3	0.6	0.6	0.6	0.6	\$5,520,000
5 Lane	0.2	0.2	0.2	0.2	0.5	0.5	0.7	0.7	0.7	0.7	\$6,670,000
6 Lane	0.5	0.5	0.5	0.5	0.5	0.5	1.5	1.5	1.5	1.5	\$7,130,000
Urban Collector											
2 Lane	46.2	46.2	46.2	48.0	47.9	47.9	41.3	44.9	44.9	44.9	\$3,565,000
3 Lane	11.7	11.8	11.8	11.8	11.9	11.9	14.4	14.7	14.7	14.7	\$4,370,000
4 Lane	-	-	-	-	-	-	0.3	0.3	0.3	0.3	\$5,175,000
Rural Collector											
2 Lane	18.5	18.5	18.5	18.5	18.5	18.5	14.0	13.9	13.9	13.9	\$3,335,000
3 Lane	0.1	0.1	0.1	0.1	0.1	0.1	-	-	-	-	\$4,255,000
Urban Local											
2 Lane	82.4	82.4	82.4	82.4	82.4	82.4	179.2	179.2	179.3	180.0	\$3,450,000
3+ Lane	-	-	-	-	-	-	3.5	3.5	3.5	3.2	\$3,910,000
Urban Rural											
2 Lane	45.9	45.9	45.9	45.9	45.9	45.9	38.9	38.3	38.3	37.9	\$3,335,000
Back Laneway	-	-	-	0.6	0.6	0.6	0.2	0.2	0.2	0.2	\$2,070,000
Total (km)	304.6	304.5	304.5	308.5	309.4	309.4	412.7	417.2	417.3	417.3	
Total (\$000)	\$1,191,030.6	\$1,193,015.9	\$1,197,424.4	\$1,213,278.0	\$1,216,949.0	\$1,216,949.0	\$1,637,324.0	\$1,657,138.5	\$1,657,483.5	\$1,657,391.5	

TRAFFIC SIGNALS Description	# of Traffic Signals										UNIT COST (\$/unit)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Signalized Intersections	110	111	119	119	120	120	128	129	130	131	\$2,260,000
Total (#)	110	111	119	119	120	120	128	129	130	131	
Total (\$000)	\$248,600.0	\$250,860.0	\$268,940.0	\$268,940.0	\$271,200.0	\$271,200.0	\$289,280.0	\$291,540.0	\$293,800.0	\$296,060.0	

SIDEWALKS Description	# of Kilometres of Sidewalks										UNIT COST (\$/km)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Sidewalks	359	365	370	376	382	382	389	399	400	400	\$611,250
Total (km)	359	365	370	376	382	382	389	399	400	400	
Total (\$000)	\$219,495.1	\$223,058.2	\$226,285.6	\$229,830.0	\$233,497.5	\$233,497.5	\$237,751.8	\$244,114.9	\$244,469.4	\$244,469.4	

TRAILS Description	# Kilometres of Trails										UNIT COST (\$/km)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Paved Trails	20.5	21.7	22.0	22.8	22.8	23.0	27.3	30.4	31.9	32.2	\$303,800
Unpaved Trail	5.4	5.4	5.5	4.6	4.6	5.0	5.9	6.0	6.6	7.2	\$151,900
Total (km)	25.9	27.1	27.4	27.4	27.4	28.0	33.2	36.4	38.5	39.4	
Total (\$000)	\$7,047.0	\$7,425.2	\$7,502.6	\$7,632.5	\$7,632.5	\$7,746.9	\$9,180.8	\$10,146.9	\$10,683.1	\$10,885.2	

BRIDGES AND CULVERTS Description	# of Bridges and Culverts										UNIT COST (\$/unit)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Vehicle Bridge	28	28	28	28	28	28	27	27	27	27	\$2,968,700
Pedestrian Bridge	16	16	16	17	17	17	21	21	21	21	\$965,500
Culvert Bridge	15	15	15	15	15	15	17	17	19	19	\$609,000
Total (#)	59	59	59	60	60	60	65	65	67	67	
Total (\$000)	\$107,706.6	\$107,706.6	\$107,706.6	\$108,672.1	\$108,672.1	\$108,672.1	\$110,783.4	\$110,783.4	\$112,001.4	\$112,001.4	

NOISE & RETAINING WALLS Description	Total Value of Noise and Retaining Walls (\$)									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Noise Wall along Sherbrooke St	\$170,900	\$170,900	\$170,900	\$170,900	\$170,900	\$170,900	\$170,900	\$170,900	\$170,900	\$170,900
Retaining Wall - Brealey Dr	\$233,700	\$233,700	\$233,700	\$233,700	\$233,700	\$233,700	\$233,700	\$233,700	\$233,700	\$233,700
Retaining Wall - Geraldine Ave	\$66,000	\$66,000	\$66,000	\$66,000	\$66,000	\$66,000	\$66,000	\$66,000	\$66,000	\$66,000
Retaining Wall - b/w London St & Edinbur	\$282,700	\$282,700	\$282,700	\$282,700	\$282,700	\$282,700	\$282,700	\$282,700	\$282,700	\$282,700
Noise Wall along Medical Dr	\$0	\$0	\$0	\$912,700	\$912,700	\$912,700	\$912,700	\$912,700	\$912,700	\$912,700
Retaining Wall - Lansedown Street West	\$0	\$0	\$0	\$554,900	\$554,900	\$554,900	\$554,900	\$554,900	\$554,900	\$554,900
Retaining Wall Maria St Trail	\$0	\$0	\$0	\$0	\$0	\$0	\$82,700	\$82,700	\$82,700	\$82,700
Retaining Wall - Steve Terry Way	\$0	\$0	\$0	\$0	\$0	\$0	\$125,300	\$125,300	\$125,300	\$125,300
Retaining Wall - Hunter St E @ Armour Rd	\$113,300	\$113,300	\$113,300	\$113,300	\$113,300	\$113,300	\$113,300	\$113,300	\$113,300	\$113,300
Total (\$000)	\$866.6	\$866.6	\$866.6	\$2,334.2	\$2,334.2	\$2,334.2	\$2,542.2	\$2,542.2	\$2,542.2	\$2,542.2

DECORATIVE PLANTS AND LUMINARIES Description	Total Value of Decorative Plants and Luminaries (\$)									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Decorative Plants	\$1,442,900	\$1,442,900	\$1,442,900	\$1,939,400	\$1,939,400	\$1,939,400	\$1,939,400	\$1,939,400	\$1,939,400	\$1,939,400
Decorative Luminaries	\$649,700	\$649,700	\$649,700	\$664,500	\$664,500	\$664,500	\$664,500	\$664,500	\$664,500	\$664,500
Total (\$000)	\$2,092.6	\$2,092.6	\$2,092.6	\$2,603.9	\$2,603.9	\$2,603.9	\$2,603.9	\$2,603.9	\$2,603.9	\$2,603.9

ROAD SIGNS AND POSTS Description	Total Value of Road Signs and Posts (\$)									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Road Signs and Posts	\$3,572,550	\$3,572,550	\$3,572,550	\$3,572,550	\$3,572,550	\$3,572,550	\$3,813,348	\$4,086,474	\$4,333,660	\$4,594,473
Total (\$000)	\$3,572.6	\$3,572.6	\$3,572.6	\$3,572.6	\$3,572.6	\$3,572.6	\$3,813.3	\$4,086.5	\$4,333.7	\$4,594.5

178
APPENDIX C.1
TABLE 1

CITY OF PETERBOROUGH
CALCULATION OF SERVICE LEVELS
ROADS & OTHER CITY-WIDE ENGINEERING

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Historical Population	77,364	78,028	78,698	79,159	79,623	80,090	80,560	81,032	82,141	83,265
Historical Employment	<u>45,054</u>	<u>45,372</u>	<u>45,692</u>	<u>45,199</u>	<u>44,711</u>	<u>44,229</u>	<u>43,752</u>	<u>43,280</u>	<u>43,655</u>	<u>44,034</u>
Total Historical Population & Employment	122,418	123,400	124,390	124,358	124,334	124,319	124,312	124,312	125,796	127,299

INVENTORY SUMMARY (\$000)

Roads	\$1,191,030.6	\$1,193,015.9	\$1,197,424.4	\$1,213,278.0	\$1,216,949.0	\$1,216,949.0	\$1,637,324.0	\$1,657,138.5	\$1,657,483.5	\$1,657,391.5
Traffic Signals	\$248,600.0	\$250,860.0	\$268,940.0	\$268,940.0	\$271,200.0	\$271,200.0	\$289,280.0	\$291,540.0	\$293,800.0	\$296,060.0
Sidewalks	\$219,495.1	\$223,058.2	\$226,285.6	\$229,830.0	\$233,497.5	\$233,497.5	\$237,751.8	\$244,114.9	\$244,469.4	\$244,469.4
Trails	\$7,047.0	\$7,425.2	\$7,502.6	\$7,632.5	\$7,632.5	\$7,746.9	\$9,180.8	\$10,146.9	\$10,683.1	\$10,885.2
Bridges And Culverts	\$107,706.6	\$107,706.6	\$107,706.6	\$108,672.1	\$108,672.1	\$108,672.1	\$110,783.4	\$110,783.4	\$112,001.4	\$112,001.4
Noise & Retaining Walls	\$866.6	\$866.6	\$866.6	\$2,334.2	\$2,334.2	\$2,334.2	\$2,542.2	\$2,542.2	\$2,542.2	\$2,542.2
Decorative Plants And Luminaries	\$2,092.6	\$2,092.6	\$2,092.6	\$2,603.9	\$2,603.9	\$2,603.9	\$2,603.9	\$2,603.9	\$2,603.9	\$2,603.9
Road Signs And Posts	\$3,572.6	\$3,572.6	\$3,572.6	\$3,572.6	\$3,572.6	\$3,572.6	\$3,813.3	\$4,086.5	\$4,333.7	\$4,594.5
Total (\$000)	\$1,780,411.1	\$1,788,597.5	\$1,814,390.9	\$1,836,863.3	\$1,846,461.8	\$1,846,576.2	\$2,293,279.5	\$2,322,956.3	\$2,327,917.2	\$2,330,548.1

SERVICE LEVEL (\$/pop & emp)

Average
Service
Level

Roads	\$9,729.21	\$9,667.88	\$9,626.37	\$9,756.33	\$9,787.74	\$9,788.92	\$13,171.09	\$13,330.48	\$13,175.96	\$13,019.67	\$11,105.37
Traffic Signals	\$2,030.75	\$2,032.90	\$2,162.07	\$2,162.63	\$2,181.22	\$2,181.48	\$2,327.05	\$2,345.23	\$2,335.53	\$2,325.71	\$2,208.46
Sidewalks	\$1,793.00	\$1,807.60	\$1,819.16	\$1,848.13	\$1,877.99	\$1,878.21	\$1,912.54	\$1,963.73	\$1,943.38	\$1,920.43	\$1,876.42
Trails	\$57.56	\$60.17	\$60.32	\$61.38	\$61.39	\$62.31	\$73.85	\$81.62	\$84.92	\$85.51	\$68.90
Bridges And Culverts	\$879.83	\$872.82	\$865.88	\$873.86	\$874.03	\$874.14	\$891.17	\$891.17	\$890.34	\$879.83	\$879.31
Noise & Retaining Walls	\$7.08	\$7.02	\$6.97	\$18.77	\$18.77	\$18.78	\$20.45	\$20.45	\$20.21	\$19.97	\$15.85
Decorative Plants And Luminaries	\$17.09	\$16.96	\$16.82	\$20.94	\$20.94	\$20.95	\$20.95	\$20.95	\$20.70	\$20.45	\$19.67
Road Signs And Posts	\$29.18	\$28.95	\$28.72	\$28.73	\$28.73	\$28.74	\$30.68	\$32.87	\$34.45	\$36.09	\$30.71
Total (\$/pop & emp)	\$14,543.70	\$14,494.31	\$14,586.31	\$14,770.77	\$14,850.82	\$14,853.53	\$18,447.77	\$18,686.50	\$18,505.49	\$18,307.67	\$16,204.69

CITY OF PETERBOROUGH
CALCULATION OF MAXIMUM ALLOWABLE
ROADS & OTHER CITY-WIDE ENGINEERING

20-Year Funding Envelope Calculation	
10 Year Average Service Level 2009 - 2018	\$16,204.69
Net Population & Employment Growth 2019 - 2031	21,321
Maximum Allowable Funding Envelope	\$345,507,258
Discounted Maximum Allowable Funding Envelope	\$345,507,258

CITY OF PETERBOROUGH
DEVELOPMENT-RELATED CAPITAL PROGRAM
ROADS & OTHER CITY-WIDE ENGINEERING
BREAKDOWN OF TOTAL GROSS COSTS

Project and Location	Proposed Improvement	Anticipated Timing		Length (m)	Road Construction Costs					Structures and Intersections Construction Costs					Utility Relocation	Land Acquisition	Total Project Cost	
					Roads	SWM Quality	Ancillary Costs	Eng & Cont	Subtotal	Structure	Intersections	Ancillary Costs	Eng & Cont	Subtotal				
10%25%10%25%																		
City-wide Improvements																		
1 Parkhill Widening - Wallis to Brealey	Capacity Improvement	2030	-	2030	2,200	\$10,274,000	\$250,000	\$1,052,400	\$2,894,100	\$14,470,500	\$0	\$400,000	\$40,000	\$110,000	\$550,000	\$344,085	\$0	\$15,364,585
2 Sherbrooke St - Glenforest to W. City Limit	Urbanization	2021	-	2021	1,600	\$6,500,000	\$600,000	\$710,000	\$1,952,500	\$9,762,500	\$0	\$2,250,000	\$225,000	\$618,750	\$3,093,750	\$294,507	\$800,000	\$13,950,757
3 Armour Rd- Nassau Mills S. to Rotary Trail	Realignment	2024	-	2024	1,150	\$3,543,750	\$650,000	\$419,375	\$1,153,281	\$5,766,406	\$0	\$2,250,000	\$225,000	\$618,750	\$3,093,750	\$886,016	\$0	\$9,746,172
4 Sherbrooke/Wallis Intersection	Capacity Improvement	2022	-	2022	1,525	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000,000	\$100,000	\$275,000	\$1,375,000	\$119,166	\$30,000	\$1,524,166
5 Maria St. - Walker Ave to Television Road	Capacity Improvement	2028	-	2028	1,500	\$4,312,500	\$500,000	\$481,250	\$1,323,438	\$6,617,188	\$0	\$1,687,500	\$168,750	\$464,063	\$2,320,313	\$893,750	\$0	\$9,831,250
6 Brealey - Lansdowne to Sherbrooke	Urbanization	2024	-	2024	1,600	\$6,603,250	\$650,000	\$725,325	\$1,994,644	\$9,973,219	\$0	\$500,000	\$50,000	\$137,500	\$687,500	\$244,212	\$0	\$10,904,931
7 Brealey - Sherbrooke to Parkhill Rd	Urbanization	2026	-	2026		\$6,495,000	\$650,000	\$714,500	\$1,964,875	\$9,824,375	\$0	\$500,000	\$50,000	\$137,500	\$687,500	\$240,802	\$0	\$10,752,677
8 River Road - Hwy 7/115 to Lansdowne St	Urbanization	2025	-	2025		\$6,000,000	\$600,000	\$660,000	\$1,815,000	\$9,075,000	\$0	\$0	\$0	\$0	\$0	\$207,887	\$0	\$9,282,887
9 Kawartha Heights Pond	Capacity Improvement	2021	-	2021		\$0	\$0	\$0	\$0	\$800,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$800,000
10 Chemong Rd-Parkhill to Parkway ROW	Capacity Improvement	2022	-	2022	1,200	\$6,864,000	\$1,000,000	\$786,400	\$2,162,600	\$10,813,000	\$0	\$6,000,000	\$600,000	\$1,650,000	\$8,250,000	\$2,627,766	\$5,000,000	\$26,690,766
11 Charlotte - Clonsilla Ave to Rubidge St	Cycling Improvement	2026	-	2026	1,150	\$1,138,500	\$300,000	\$143,850	\$395,588	\$1,977,938	\$0	\$1,125,000	\$112,500	\$309,375	\$1,546,875	\$80,745	\$895,000	\$4,500,558
12 Carnegie Planning Area - N/S Arterial	New Medium Capacity Arterial	2022	-	2022	280	\$1,198,400	\$150,000	\$134,840	\$370,810	\$1,854,050	\$0	\$0	\$0	\$0	\$0	\$185,405	\$0	\$2,039,455
13 Carnegie Planning Area - E/W Arterial	New Medium Capacity Arterial	2027	-	2027	1,500	\$6,420,000	\$600,000	\$702,000	\$1,930,500	\$9,652,500	\$0	\$0	\$0	\$0	\$0	\$965,250	\$0	\$10,617,750
14 Ashburnham Manieco to McFarlane	New High Capacity Collector	2025	-	2025	1,100	\$4,708,000	\$500,000	\$520,800	\$1,432,200	\$7,161,000	\$1,000,000	\$1,125,000	\$212,500	\$584,375	\$2,921,875	\$1,008,288	\$0	\$11,091,163
15 University Rd Upgrade	Capacity Improvement	2028	-	2028	3,000	\$4,725,000	\$0	\$472,500	\$1,299,375	\$6,496,875	\$0	\$0	\$0	\$0	\$0	\$148,828	\$0	\$6,645,703
16 Television Rd Widening	Capacity Improvement	2029	-	2029	3,500	\$18,620,000	\$2,000,000	\$2,062,000	\$5,670,500	\$28,352,500	\$5,000,000	\$4,500,000	\$950,000	\$2,612,500	\$13,062,500	\$5,708,908	\$2,000,000	\$49,123,908
17 North/South Transportation Improvements (previously Parkway)	Capacity Improvement	2028	-	2028	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$33,803,310
18 Pioneer Rd Upgrade	Capacity Improvement	2026	-	2026	550	\$2,062,500	\$200,000	\$226,250	\$622,188	\$3,110,938	\$750,000	\$562,500	\$131,250	\$360,938	\$1,804,688	\$112,605	\$0	\$5,028,230
19 Citywide Transportation Operational Improvements	Capacity Improvement	2019	-	2031		\$0	\$0	\$0	\$0	\$0	\$0	\$2,250,000	\$0	\$0	\$2,250,000	\$0	\$0	\$2,250,000
20 Nassau Mills Rd over Otonabee River	Capacity Improvement	2024	-	2024	400	\$1,768,000	\$400,000	\$216,800	\$596,200	\$2,981,000	\$15,000,000	\$0	\$1,500,000	\$4,125,000	\$20,625,000	\$540,758	\$0	\$24,146,758
21 Nassau Mills Rd over Trent Severn	Capacity Improvement	2026	-	2026	525	\$2,320,500	\$500,000	\$282,050	\$775,638	\$3,878,188	\$10,000,000	\$0	\$1,000,000	\$2,750,000	\$13,750,000	\$403,821	\$0	\$18,032,008
22 Various New Sidewalk Installations	Capacity Improvement	2019	-	2031		\$0	\$0	\$0	\$0	\$900,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$900,000
23 Various New Multi-Use Trails	Capacity Improvement	2019	-	2031		\$0	\$0	\$0	\$0	\$1,500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,500,000
24 Armour Rd - Thompson Creek south of Francis Stewart	Urbanization	2023	-	2023	400	\$1,428,000	\$150,000	\$157,800	\$433,950	\$2,169,750	\$0	\$0	\$0	\$0	\$0	\$49,704	\$0	\$2,219,454
25 Erosion Control Measures	Creek Erosion	2019	-	2031		\$0	\$1,100,000	\$110,000	\$302,500	\$1,512,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,512,500
26 Flood Reduction Master Plan Projects	Citywide	2019	-	2031		\$0	\$1,800,000	\$180,000	\$495,000	\$2,475,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,475,000
27 Intensification Allowance - Sanitary	Citywide	2019	-	2031	5,000	\$17,434,688	\$0	\$1,743,469	\$4,794,539	\$23,972,696	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$23,972,696
28 Bethune Street Diversion - Shared Funding	Citywide	2020	-	2020		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$30,971,700
29 Bethune Street Diversion - City Funded	Citywide	2020	-	2020		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,235,800
30 Jackson Park Management Plan	Route Planning	2020	-	2020		\$0	\$0	\$0	\$0	\$350,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$350,000
31 Transit Hub and Route Review and Long Term Growth Strategy	Capacity Improvement	2021	-	2021		\$0	\$0	\$0	\$0	\$500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$500,000
32 City Wide Traffic Operations Review	Capacity Improvement	2022	-	2022		\$0	\$0	\$0	\$0	\$700,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$700,000
33 Cycling Network Update	Capacity Improvement	2020	-	2020		\$0	\$0	\$0	\$0	\$350,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$350,000
34 Signal Control Upgrade Program	Capacity Improvement	2024	-	2024		\$0	\$0	\$0	\$0	\$600,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$600,000
35 Transportation Master Plan	Capacity Improvement	2020	-	2021		\$0	\$0	\$0	\$0	\$900,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$900,000
Subtotal City-wide Improvements						\$112,416,088	\$12,600,000	\$12,501,609	\$34,379,424	\$178,497,121	\$31,750,000	\$24,150,000	\$5,365,000	\$14,753,750	\$76,018,750	\$15,062,501	\$8,725,000	\$355,314,183

CITY OF PETERBOROUGH
DEVELOPMENT-RELATED CAPITAL PROGRAM
ROADS & OTHER CITY-WIDE ENGINEERING
BREAKDOWN OF TOTAL GROSS COSTS

Project and Location	Proposed Improvement	Anticipated Timing		Length (m)	Road Construction Costs					Structures and Intersections Construction Costs					Utility Relocation	Land Acquisition	Total Project Cost	
					Roads	SWM Quality	Ancillary Costs	Eng & Cont	Subtotal	Structure	Intersections	Ancillary Costs	Eng & Cont	Subtotal				
					10%		25%		10%		25%							
Secondary Plan Traffic Study Improvements																		
Lily Lake																		
36 Lily Lake Rd Urbanization - Fairbairn to Ackison	Urbanization	2025	-	2025	3,150	\$13,639,500	\$1,400,000	\$1,503,950	\$4,135,863	\$20,679,313	\$250,000	\$0	\$25,000	\$68,750	\$343,750	\$2,102,306	\$0	\$23,125,369
37 Ackison Road Urbanization - Lily Lake to Parkhill (Outside City)	Urbanization	Beyond 2031			1,400	\$5,250,000	\$500,000	\$575,000	\$1,581,250	\$7,906,250	\$1,500,000	\$0	\$150,000	\$412,500	\$2,062,500	\$996,875	\$0	\$10,965,625
38 Lily Lake Rd/ Fairbairn Signalization	Capacity Improvement	2022	-	2022		\$0	\$0	\$0	\$0	\$0	\$0	\$2,250,000	\$225,000	\$618,750	\$3,093,750	\$309,375	\$0	\$3,403,125
39 Fairbairn Urbanization - Towerhill to Parkway	Urbanization	2023	-	2023	1,100	\$5,852,000	\$500,000	\$635,200	\$1,746,800	\$8,734,000	\$0	\$4,500,000	\$450,000	\$1,237,500	\$6,187,500	\$2,056,875	\$500,000	\$17,478,375
40 Intersection Improvements Chemong/Towerhill	Capacity Improvement	2022	-	2022		\$0	\$0	\$0	\$0	\$0	\$0	\$1,125,000	\$112,500	\$309,375	\$1,546,875	\$154,688	\$0	\$1,701,563
41 Ackison/Lily Lake Signalization	Capacity Improvement	Beyond 2031				\$0	\$0	\$0	\$0	\$0	\$0	\$2,250,000	\$225,000	\$618,750	\$3,093,750	\$309,375	\$0	\$3,403,125
Chemong Growth																		
42 Towerhill Widening - Chemong to Fairbairn	Urbanization	2025	-	2025	900	\$3,852,000	\$500,000	\$435,200	\$1,196,800	\$5,984,000	\$250,000	\$562,500	\$81,250	\$223,438	\$1,117,188	\$710,119	\$0	\$7,811,306
43 Chemong Urbanization - Milroy to County Rd 19	Urbanization	2030	-	2030	880	\$3,775,200	\$400,000	\$417,520	\$1,148,180	\$5,740,900	\$500,000	\$562,500	\$106,250	\$292,188	\$1,460,938	\$720,184	\$0	\$7,922,021
44 New Collector Internal to Plan out to County Rd 19	Capacity Improvement	Beyond 2031			120	\$450,000	\$200,000	\$65,000	\$178,750	\$893,750	\$500,000	\$1,125,000	\$162,500	\$446,875	\$2,234,375	\$0	\$0	\$3,128,125
45 Third Line & County Rd19 Urbanization	Urbanization	Beyond 2031			2,250	\$8,437,500	\$100,000	\$853,750	\$2,347,813	\$11,739,063	\$0	\$0	\$0	\$0	\$0	\$1,173,906	\$0	\$12,912,969
Coldsprings Growth																		
46 Intersection Improvements Kennedy Rd/Otonabee Dr	Capacity Improvement	2025	-	2025		\$0	\$0	\$0	\$0	\$0	\$0	\$2,250,000	\$225,000	\$618,750	\$3,093,750	\$309,375	\$0	\$3,403,125
47 Bensford Rd Signalization and Turn Lanes	Capacity Improvement	2025	-	2025		\$0	\$0	\$0	\$0	\$0	\$0	\$2,250,000	\$225,000	\$618,750	\$3,093,750	\$309,375	\$0	\$3,403,125
48 Wallace Pt Rd Urbanization - Kennedy to Coldsprings Sub	Urbanization	2025	-	2025	1,405	\$5,268,750	\$550,000	\$581,875	\$1,600,156	\$8,000,781	\$0	\$2,250,000	\$225,000	\$618,750	\$3,093,750	\$1,109,453	\$0	\$12,203,984
49 McNamara Rd/Guthrie Dr Urbanization	Urbanization	2030	-	2030	560	\$2,100,000	\$250,000	\$235,000	\$646,250	\$3,231,250	\$0	\$0	\$0	\$0	\$0	\$323,125	\$0	\$3,554,375
Lifftock Growth																		
50 Intersection Improvements - Hunter/Ashburnham	Capacity Improvement	2025	-	2025		\$0	\$0	\$0	\$0	\$0	\$0	\$2,250,000	\$225,000	\$618,750	\$3,093,750	\$309,375	\$0	\$3,403,125
51 McFarlane/Canal Crossing Signalization	Capacity Improvement	2025	-	2025		\$0	\$0	\$0	\$0	\$0	\$0	\$2,250,000	\$225,000	\$618,750	\$3,093,750	\$309,375	\$0	\$3,403,125
52 Intersection Improvements - Armour/Parkhill	Capacity Improvement	2025	-	2025		\$0	\$0	\$0	\$0	\$0	\$0	\$2,250,000	\$225,000	\$618,750	\$3,093,750	\$309,375	\$0	\$3,403,125
53 Parkhill Urbanization - Park St to Television	Urbanization	2028	-	2028	3,480	\$13,050,000	\$1,300,000	\$1,435,000	\$3,946,250	\$19,731,250	\$500,000	\$2,812,500	\$331,250	\$910,938	\$4,554,688	\$2,428,594	\$0	\$26,714,531
54 Television Road/Parkhill Intersection	Signalization	2026	-	2026		\$0	\$0	\$0	\$0	\$0	\$0	\$2,250,000	\$225,000	\$618,750	\$3,093,750	\$309,375	\$0	\$3,403,125
55 Television Road/Old Norwood Road	Signalization	2026	-	2026		\$0	\$0	\$0	\$0	\$0	\$0	\$2,250,000	\$225,000	\$618,750	\$3,093,750	\$309,375	\$0	\$3,403,125
56 Ashburham Rd/Lansdowne	Signalization	2026	-	2026		\$0	\$0	\$0	\$0	\$0	\$0	\$2,250,000	\$225,000	\$618,750	\$3,093,750	\$309,375	\$0	\$3,403,125
57 Internal Collectors	Capacity Improvement	2026	-	2026	1,500	\$5,310,000	\$0	\$531,000	\$1,460,250	\$7,301,250	\$0	\$0	\$0	\$0	\$0	\$730,125	\$0	\$8,031,375
Carnegie Growth																		
58 New Arterial/County Rd 19 Signalization	Capacity Improvement	2028	-	2028		\$0	\$0	\$0	\$0	\$0	\$0	\$2,250,000	\$225,000	\$618,750	\$3,093,750	\$309,375	\$0	\$3,403,125
59 Carnegie Urbanization - Cumberland to Heritage Trail	Urbanization	2022	-	2022	375	\$1,406,250	\$150,000	\$155,625	\$427,969	\$2,139,844	\$0	\$1,125,000	\$0	\$0	\$0	\$213,984	\$0	\$2,353,828
60 Hilliard St Urbanization - Cumberland to County Rd 19	Urbanization	2028	-	2028	360	\$1,350,000	\$150,000	\$150,000	\$412,500	\$2,062,500	\$500,000	\$1,125,000	\$162,500	\$446,875	\$2,234,375	\$429,688	\$0	\$4,726,563
Sub-Total Secondary Plan Traffic Study Improvements						\$69,741,200	\$6,000,000	\$7,574,120	\$20,828,830	\$104,144,150	\$4,000,000	\$39,937,500	\$4,281,250	\$11,773,438	\$58,867,188	\$16,553,046	\$500,000	\$180,064,383
Peterborough Airport																		
61 Airport Industrial Park East of Airport Road - North Development		2020	-	2022		\$12,400,000	\$0	\$0	\$0	\$12,400,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,400,000
62 Airport Water and Sewer Servicing Upgrade		2020	-	2024		\$14,657,300	\$0	\$0	\$0	\$14,657,300			\$0	\$0	\$0	\$0	\$0	\$14,657,300
Sub-Total Peterborough Airport						\$27,057,300	\$0	\$0	\$0	\$27,057,300	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$27,057,300
TOTAL ROADS & OTHER CITY-WIDE ENGINEERING PROGRAM																		
						\$209,214,588	\$18,600,000	\$20,075,729	\$55,208,254	\$309,698,571	\$35,750,000	\$64,087,500	\$9,646,250	\$26,527,188	\$134,885,938	\$31,615,547	\$9,225,000	\$562,435,866

CITY OF PETERBOROUGH
ROADS & OTHER CITY-WIDE ENGINEERING CAPITAL PROGRAM
TOTAL PROJECT COSTS AND GROWTH SHARES

Project and Location	Project Costs and Growth Shares														
	Road Construction			Structures & Intersections			Utility Relocation			Land Acquisition			Total Project Cost		
	Subtotal Project Cost	%	Growth Share \$	Subtotal Project Cost	%	Growth Share \$	Subtotal Project Cost	%	Growth Share \$	Subtotal Project Cost	%	Growth Share \$	Non-Growth Share	Growth Share	Total Project Cost
1 Parkhill Widening - Wallis to Brealey	\$14,470,500	100%	\$14,470,500	\$550,000	100%	\$550,000	\$344,085	100%	\$344,085	\$0	100%	\$0	\$0	\$15,364,585	\$15,364,585
2 Sherbrooke St - Glenforest to W. City Limit	\$9,762,500	66%	\$6,443,250	\$3,093,750	66%	\$2,041,875	\$294,507	66%	\$194,374	\$800,000	100%	\$800,000	\$4,471,257	\$9,479,499	\$13,950,757
3 Armour Rd- Nassau Mills S. to Rotary Trail	\$5,766,406	66%	\$3,805,828	\$3,093,750	66%	\$2,041,875	\$886,016	66%	\$584,770	\$0	0%	\$0	\$3,313,698	\$6,432,473	\$9,746,172
4 Sherbrooke/Wallis Intersection	\$0	100%	\$0	\$1,375,000	100%	\$1,375,000	\$119,166	100%	\$119,166	\$30,000	100%	\$30,000	\$0	\$1,524,166	\$1,524,166
5 Maria St. - Walker Ave to Television Road	\$6,617,188	100%	\$6,617,188	\$2,320,313	100%	\$2,320,313	\$893,750	100%	\$893,750	\$0	0%	\$0	\$0	\$9,831,250	\$9,831,250
6 Brealey - Lansdowne to Sherbrooke	\$9,973,219	66%	\$6,582,324	\$687,500	66%	\$453,750	\$244,212	66%	\$161,180	\$0	0%	\$0	\$3,707,676	\$7,197,254	\$10,904,931
7 Brealey - Sherbrooke to Parkhill Rd	\$9,824,375	66%	\$6,484,088	\$687,500	66%	\$453,750	\$240,802	66%	\$158,930	\$0	0%	\$0	\$3,655,910	\$7,096,767	\$10,752,677
8 River Road - Hwy 7/115 to Lansdowne St	\$9,075,000	33%	\$2,994,750	\$0	33%	\$0	\$207,887	33%	\$68,603	\$0	0%	\$0	\$6,219,534	\$3,063,353	\$9,282,887
9 Kawartha Heights Pond	\$800,000	100%	\$800,000	\$0	100%	\$0	\$0	100%	\$0	\$0	0%	\$0	\$0	\$800,000	\$800,000
10 Chemong Rd-Parkhill to Parkway ROW	\$10,813,000	33%	\$3,568,290	\$8,250,000	33%	\$2,722,500	\$2,627,766	33%	\$867,163	\$5,000,000	100%	\$5,000,000	\$14,532,813	\$12,157,953	\$26,690,766
11 Charlotte - Clonsilla Ave to Rubidge St	\$1,977,938	66%	\$1,305,439	\$1,546,875	66%	\$1,020,938	\$80,745	66%	\$53,292	\$895,000	100%	\$895,000	\$1,225,890	\$3,274,668	\$4,500,558
12 Carnegie Planning Area - N/S Arterial	\$1,854,050	33%	\$611,837	\$0	33%	\$0	\$185,405	33%	\$61,184	\$0	0%	\$0	\$1,366,435	\$673,020	\$2,039,455
13 Carnegie Planning Area - E/W Arterial	\$9,652,500	33%	\$3,185,325	\$0	33%	\$0	\$965,250	33%	\$318,533	\$0	0%	\$0	\$7,113,893	\$3,503,858	\$10,617,750
14 Ashburnham Maniece to Mcfarlane	\$7,161,000	66%	\$4,726,260	\$2,921,875	66%	\$1,928,438	\$1,008,288	66%	\$665,470	\$0	0%	\$0	\$3,770,995	\$7,320,167	\$11,091,163
15 University Rd Upgrade	\$6,496,875	50%	\$3,248,438	\$0	50%	\$0	\$148,828	50%	\$74,414	\$0	0%	\$0	\$3,322,852	\$3,322,852	\$6,645,703
16 Television Rd Widening	\$28,352,500	100%	\$28,352,500	\$13,062,500	100%	\$13,062,500	\$5,708,908	100%	\$5,708,908	\$2,000,000	100%	\$2,000,000	\$0	\$49,123,908	\$49,123,908
17 North/South Transportation Improvements (previously Parkway)	\$0	50%	\$0	\$0	50%	\$0	\$0	50%	\$0	\$0	100%	\$0	\$16,186,109	\$17,617,201	\$33,803,310
18 Pioneer Rd Upgrade	\$3,110,938	50%	\$1,555,469	\$1,804,688	50%	\$902,344	\$112,605	50%	\$56,303	\$0	0%	\$0	\$2,514,115	\$2,514,115	\$5,028,230
19 Citywide Transportation Operational Improvements	\$0	100%	\$0	\$2,250,000	100%	\$2,250,000	\$0	100%	\$0	\$0	0%	\$0	\$0	\$2,250,000	\$2,250,000
20 Nassau Mills Rd over Otonabee River	\$2,981,000	75%	\$2,235,750	\$20,625,000	75%	\$15,468,750	\$540,758	75%	\$405,569	\$0	0%	\$0	\$6,036,690	\$18,110,069	\$24,146,758
21 Nassau Mills Rd over Trent Severn	\$3,878,188	100%	\$3,878,188	\$13,750,000	100%	\$13,750,000	\$403,821	100%	\$403,821	\$0	0%	\$0	\$0	\$18,032,008	\$18,032,008
22 Various New Sidewalk Installations	\$900,000	100%	\$900,000	\$0	100%	\$0	\$0	100%	\$0	\$0	0%	\$0	\$0	\$900,000	\$900,000
23 Various New Multi-Use Trails	\$1,500,000	100%	\$1,500,000	\$0	100%	\$0	\$0	100%	\$0	\$0	0%	\$0	\$0	\$1,500,000	\$1,500,000
24 Armour Rd - Thompson Creek south of Francis Stewart	\$2,169,750	33%	\$716,018	\$0	33%	\$0	\$49,704	33%	\$16,402	\$0	0%	\$0	\$1,487,034	\$732,420	\$2,219,454
25 Erosion Control Measures	\$1,512,500	50%	\$756,250	\$0	50%	\$0	\$0	50%	\$0	\$0	0%	\$0	\$756,250	\$756,250	\$1,512,500
26 Flood Reduction Master Plan Projects	\$2,475,000	20%	\$495,000	\$0	20%	\$0	\$0	20%	\$0	\$0	0%	\$0	\$1,980,000	\$495,000	\$2,475,000
27 Intesification Allowance - Sanitary	\$23,972,696	50%	\$11,986,348	\$0	50%	\$0	\$0	50%	\$0	\$0	0%	\$0	\$11,986,348	\$11,986,348	\$23,972,696
28 Bethune Street Diversion - Shared Funding	\$0	0%	\$0	\$0	0%	\$0	\$0	0%	\$0	\$0	0%	\$0	\$28,489,000	\$2,482,700	\$30,971,700
29 Bethune Street Diversion - City Funded	\$0	0%	\$0	\$0	0%	\$0	\$0	0%	\$0	\$0	0%	\$0	\$9,788,640	\$2,447,160	\$12,235,800
30 Jackson Park Management Plan	\$350,000	100%	\$350,000	\$0	100%	\$0	\$0	0%	\$0	\$0	0%	\$0	\$0	\$350,000	\$350,000
31 Transit Hub and Route Review and Long Term Growth Strategy	\$500,000	100%	\$500,000	\$0	100%	\$0	\$0	0%	\$0	\$0	0%	\$0	\$0	\$500,000	\$500,000
32 City Wide Traffic Operations Review	\$700,000	100%	\$700,000	\$0	100%	\$0	\$0	0%	\$0	\$0	0%	\$0	\$0	\$700,000	\$700,000
33 Cycling Network Update	\$350,000	100%	\$350,000	\$0	100%	\$0	\$0	0%	\$0	\$0	0%	\$0	\$0	\$350,000	\$350,000
34 Signal Control Upgrade Program	\$600,000	100%	\$600,000	\$0	100%	\$0	\$0	0%	\$0	\$0	0%	\$0	\$0	\$600,000	\$600,000
35 Transportation Master Plan	\$900,000	100%	\$900,000	\$0	100%	\$0	\$0	0%	\$0	\$0	0%	\$0	\$0	\$900,000	\$900,000
Sub-Total Transportation Plan	\$178,497,121		\$120,619,037	\$76,018,750		\$60,342,031	\$15,062,501		\$11,155,914	\$8,725,000		\$8,725,000	\$131,925,140	\$223,389,043	\$355,314,183

CITY OF PETERBOROUGH
ROADS & OTHER CITY-WIDE ENGINEERING CAPITAL PROGRAM
TOTAL PROJECT COSTS AND GROWTH SHARES

Project and Location	Project Costs and Growth Shares														
	Road Construction			Structures & Intersections			Utility Relocation			Land Acquisition			Total Project Cost		
	Subtotal Project Cost	Growth Share %	\$	Subtotal Project Cost	Growth Share %	\$	Subtotal Project Cost	Growth Share %	\$	Subtotal Project Cost	Growth Share %	\$	Non-Growth Share	Growth Share	Total Project Cost
Secondary Plan Traffic Study Improvements															
Lily Lake															
36 Lily Lake Rd Urbanization - Fairbairn to Ackison	\$20,679,313	66%	\$13,648,346	\$343,750	66%	\$226,875	\$2,102,306	66%	\$1,387,522	\$0	0%	\$0	\$7,862,625	\$15,262,743	\$23,125,369
37 Ackison Road Urbanization - Lily Lake to Parkhill (Outside City)	\$7,906,250	66%	\$5,218,125	\$2,062,500	66%	\$1,361,250	\$996,875	66%	\$657,938	\$0	0%	\$0	\$3,728,313	\$7,237,313	\$10,965,625
38 Lily Lake Rd/ Fairbairn Signalization	\$0	100%	\$0	\$3,093,750	100%	\$3,093,750	\$309,375	100%	\$309,375	\$0	0%	\$0	\$0	\$3,403,125	\$3,403,125
39 Fairbairn Urbanization - Towerhill to Parkway	\$8,734,000	66%	\$5,764,440	\$6,187,500	66%	\$4,083,750	\$2,056,875	66%	\$1,357,537	\$500,000	100%	\$500,000	\$5,772,647	\$11,705,727	\$17,478,375
40 Intersection Improvements Chemong/Towerhill	\$0	100%	\$0	\$1,546,875	100%	\$1,546,875	\$154,688	100%	\$154,688	\$0	0%	\$0	\$0	\$1,701,563	\$1,701,563
41 Ackison/Lily Lake Signalization	\$0	100%	\$0	\$3,093,750	100%	\$3,093,750	\$309,375	100%	\$309,375	\$0	0%	\$0	\$0	\$3,403,125	\$3,403,125
Chemong Growth															
42 Towerhill Widening - Chemong to Fairbairn	\$5,984,000	66%	\$3,949,440	\$1,117,188	66%	\$737,344	\$710,119	66%	\$468,678	\$0	0%	\$0	\$2,655,844	\$5,155,462	\$7,811,306
43 Chemong Urbanization - Milroy to County Rd 19	\$5,740,900	66%	\$3,788,994	\$1,460,938	66%	\$964,219	\$720,184	66%	\$475,321	\$0	0%	\$0	\$2,693,487	\$5,228,534	\$7,922,021
44 New Collector Internal to Plan out to County Rd 19	\$893,750	100%	\$893,750	\$2,234,375	100%	\$2,234,375	\$0	100%	\$0	\$0	0%	\$0	\$0	\$3,128,125	\$3,128,125
45 Third Line & County Rd19 Urbanization	\$11,739,063	25%	\$2,934,766	\$0	25%	\$0	\$1,173,906	25%	\$293,477	\$0	0%	\$0	\$9,684,727	\$3,228,242	\$12,912,969
Coldsprings Growth															
46 Intersection Improvements Kennedy Rd/Otonabee Dr	\$0	100%	\$0	\$3,093,750	100%	\$3,093,750	\$309,375	100%	\$309,375	\$0	0%	\$0	\$0	\$3,403,125	\$3,403,125
47 Bensford Rd Signalization and Turn Lanes	\$0	100%	\$0	\$3,093,750	100%	\$3,093,750	\$309,375	100%	\$309,375	\$0	0%	\$0	\$0	\$3,403,125	\$3,403,125
48 Wallace Pt Rd Urbanization - Kennedy to Coldsprings Sub	\$8,000,781	66%	\$5,280,516	\$3,093,750	66%	\$2,041,875	\$1,109,453	66%	\$732,239	\$0	0%	\$0	\$4,149,355	\$8,054,630	\$12,203,984
49 McNamara Rd/Guthrie Dr Urbanization	\$3,231,250	66%	\$2,132,625	\$0	66%	\$0	\$323,125	66%	\$213,263	\$0	0%	\$0	\$1,208,488	\$2,345,888	\$3,554,375
Liftlock Growth															
50 Intersection Improvements - Hunter/Ashburnham	\$0	100%	\$0	\$3,093,750	100%	\$3,093,750	\$309,375	100%	\$309,375	\$0	0%	\$0	\$0	\$3,403,125	\$3,403,125
51 McFarlane/Canal Crossing Signalization	\$0	100%	\$0	\$3,093,750	100%	\$3,093,750	\$309,375	100%	\$309,375	\$0	0%	\$0	\$0	\$3,403,125	\$3,403,125
52 Intersection Improvements - Armour/Parkhill	\$0	100%	\$0	\$3,093,750	100%	\$3,093,750	\$309,375	100%	\$309,375	\$0	0%	\$0	\$0	\$3,403,125	\$3,403,125
53 Parkhill Urbanization - Park St to Television	\$19,731,250	66%	\$13,022,625	\$4,554,688	66%	\$3,006,094	\$2,428,594	66%	\$1,602,872	\$0	0%	\$0	\$9,082,941	\$17,631,591	\$26,714,531
54 Television Road/Parkhill Intersection	\$0	100%	\$0	\$3,093,750	100%	\$3,093,750	\$309,375	100%	\$309,375	\$0	0%	\$0	\$0	\$3,403,125	\$3,403,125
55 Television Road/Old Norwood Road	\$0	100%	\$0	\$3,093,750	100%	\$3,093,750	\$309,375	100%	\$309,375	\$0	0%	\$0	\$0	\$3,403,125	\$3,403,125
56 Ashburnham Rd/Lansdowne	\$0	50%	\$0	\$3,093,750	50%	\$1,546,875	\$309,375	50%	\$154,688	\$0	0%	\$0	\$1,701,563	\$1,701,563	\$3,403,125
57 Internal Collectors	\$7,301,250	33%	\$2,409,413	\$0	33%	\$0	\$730,125	33%	\$240,941	\$0	0%	\$0	\$5,381,021	\$2,650,354	\$8,031,375
Carnegie Growth															
58 New Arterial/County Rd 19 Signalization	\$0	100%	\$0	\$3,093,750	100%	\$3,093,750	\$309,375	100%	\$309,375	\$0	0%	\$0	\$0	\$3,403,125	\$3,403,125
59 Carnegie Urbanization - Cumberland to Heritage Trail	\$2,139,844	66%	\$1,412,297	\$0	66%	\$0	\$213,984	66%	\$141,230	\$0	0%	\$0	\$800,302	\$1,553,527	\$2,353,828
60 Hilliard St Urbanization - Cumberland to County Rd 19	\$2,062,500	33%	\$680,625	\$2,234,375	33%	\$737,344	\$429,688	33%	\$141,797	\$0	0%	\$0	\$3,166,797	\$1,559,766	\$4,726,563
Sub-Total Secondary Plan Traffic Study	\$104,144,150		\$61,135,961	\$58,867,188		\$49,424,375	\$16,553,046		\$11,115,939	\$500,000		\$500,000	\$57,888,108	\$122,176,275	\$180,064,383
Peterborough Airport															
61 Airport Industrial Park East of Airport Road - North Development	\$12,400,000	100%	\$12,400,000	\$0	100%	\$0	\$0	0%	\$0	\$0	0%	\$0	\$0	\$12,400,000	\$12,400,000
62 Airport Water and Sewer Servicing Upgrade	\$14,657,300	100%	\$14,657,300	\$0	100%	\$0	\$0	0%	\$0	\$0	0%	\$0	\$0	\$14,657,300	\$14,657,300
Sub-Total Peterborough Airport	\$27,057,300		\$27,057,300	\$0		\$0	\$0		\$0	\$0		\$0	\$0	\$27,057,300	\$27,057,300
TOTAL	\$309,698,571		\$208,812,298	\$134,885,938		\$109,766,406	\$31,615,547		\$22,271,853	\$9,225,000		\$9,225,000	\$189,813,248	\$372,622,618	\$562,435,866

183
APPENDIX C.1
TABLE 4

CITY OF PETERBOROUGH
2019 DEVELOPMENT CHARGES STUDY
ROADS & OTHER CITY-WIDE ENGINEERING CAPITAL PROGRAM

						LESS:						
Project and Location	Anticipated Timing			Useful Life	Total Project Cost	Grants and Subsidies	Non-Growth Shares		Available DC Reserves	Post-Period Benefit	Net DC Recoverable 2019 - 2031	
City-wide Improvements												
1 Parkhill Widening - Wallis to Brealey	2030	-	2030	20	\$15,364,585	\$0	0%	\$0	\$0	\$15,364,585	\$0	
2 Sherbrooke St - Glenforest to W. City Limit	2021	-	2021	20	\$13,950,757	\$0	32%	\$4,471,257	\$0	\$0	\$9,479,499	
3 Armour Rd- Nassau Mills S. to Rotary Trail	2024	-	2024	20	\$9,746,172	\$0	34%	\$3,313,698	\$0	\$0	\$6,432,473	
4 Sherbrooke/Wallis Intersection	2022	-	2022	20	\$1,524,166	\$0	0%	\$0	\$0	\$0	\$1,524,166	
5 Maria St. - Walker Ave to Television Road	2028	-	2028	20	\$9,831,250	\$0	0%	\$0	\$0	\$9,831,250	\$0	
6 Brealey - Lansdowne to Sherbrooke	2024	-	2024	20	\$10,904,931	\$0	34%	\$3,707,676	\$0	\$0	\$7,197,254	
7 Brealey - Sherbrooke to Parkhill Rd	2026	-	2026	20	\$10,752,677	\$0	34%	\$3,655,910	\$0	\$6,387,090	\$709,677	
8 River Road - Hwy 7/115 to Lansdowne St	2025	-	2025	20	\$9,282,887	\$0	67%	\$6,219,534	\$0	\$3,063,353	\$0	
9 Kawartha Heights Pond	2021	-	2021	20	\$800,000	\$0	0%	\$0	\$0	\$0	\$800,000	
10 Chemong Rd-Parkhill to Parkway ROW	2022	-	2022	20	\$26,690,766	\$0	54%	\$14,532,813	\$0	\$0	\$12,157,953	
11 Charlotte - Clonsilla Ave to Rubidge St	2026	-	2026	20	\$4,500,558	\$0	27%	\$1,225,890	\$0	\$3,274,668	\$0	
12 Carnegie Planning Area - N/S Arterial	2022	-	2022	20	\$2,039,455	\$0	67%	\$1,366,435	\$0	\$0	\$673,020	
13 Carnegie Planning Area - E/W Arterial	2027	-	2027	20	\$10,617,750	\$0	67%	\$7,113,893	\$0	\$0	\$3,503,858	
14 Ashburnham Maniece to Mcfarlane	2025	-	2025	20	\$11,091,163	\$0	34%	\$3,770,995	\$0	\$7,320,167	\$0	
15 University Rd Upgrade	2028	-	2028	20	\$6,645,703	\$0	50%	\$3,322,852	\$0	\$3,322,852	\$0	
16 Television Rd Widening	2029	-	2029	20	\$49,123,908	\$0	0%	\$0	\$0	\$24,561,954	\$24,561,954	
17 North/South Transportation Improvements (previously Parkway)	2028	-	2028	20	\$33,803,310	\$0	48%	\$16,186,109	\$0	\$7,046,880	\$10,570,321	
18 Pioneer Rd Upgrade	2026	-	2026	20	\$5,028,230	\$0	50%	\$2,514,115	\$0	\$2,514,115	\$0	
19 Citywide Transportation Operational Improvements	2019	-	2031	20	\$2,250,000	\$0	0%	\$0	\$0	\$1,125,000	\$1,125,000	
20 Nassau Mills Rd over Otonabee River	2024	-	2024	20	\$24,146,758	\$0	25%	\$6,036,690	\$0	\$6,700,725	\$11,409,343	

184
APPENDIX C.1
TABLE 4

CITY OF PETERBOROUGH
2019 DEVELOPMENT CHARGES STUDY
ROADS & OTHER CITY-WIDE ENGINEERING CAPITAL PROGRAM

Project and Location	Anticipated Timing			Useful Life	Total Project Cost	LESS:					Net DC Recoverable 2019 - 2031
						Grants and Subsidies	Non-Growth Shares		Available DC Reserves	Post-Period Benefit	
21 Nassau Mills Rd over Trent Severn	2026	-	2026	20	\$18,032,008	\$0	0%	\$0	\$0	\$6,671,843	\$11,360,165
22 Various New Sidewalk Installations	2019	-	2031	30	\$900,000	\$0	0%	\$0	\$0	\$315,000	\$585,000
23 Various New Multi-Use Trails	2019	-	2031	30	\$1,500,000	\$0	0%	\$0	\$1,500,000	\$0	\$0
24 Armour Rd - Thompson Creek south of Fancis Stewart	2023	-	2023	20	\$2,219,454	\$0	67%	\$1,487,034	\$0	\$0	\$732,420
25 Erosion Control Measures	2019	-	2031	20	\$1,512,500	\$0	50%	\$756,250	\$756,250	\$0	\$0
26 Flood Reduction Master Plan Projects	2019	-	2031	20	\$2,475,000	\$0	80%	\$1,980,000	\$495,000	\$0	\$0
27 Intesification Allowance - Sanitary	2019	-	2031	20	\$23,972,696	\$0	50%	\$11,986,348	\$11,986,348	\$0	\$0
28 Bethune Street Diversion - Shared Funding	2020	-	2020	20	\$30,971,700	\$0	92%	\$28,489,000	\$0	\$0	\$2,482,700
29 Bethune Street Diversion - City Funded	2020	-	2020	20	\$12,235,800	\$0	80%	\$9,788,640	\$0	\$0	\$2,447,160
30 Jackson Park Management Plan	2020	-	2020	0	\$350,000	\$0	0%	\$0	\$0	\$0	\$350,000
31 Transit Hub and Route Review and Long Term Growth Strategy	2021	-	2021	0	\$500,000	\$0	0%	\$0	\$0	\$0	\$500,000
32 City Wide Traffic Operations Review	2022	-	2022	0	\$700,000	\$0	0%	\$0	\$0	\$0	\$700,000
32 City Wide Traffic Operations Review	2020	-	2020	0	\$350,000	\$0	0%	\$0	\$0	\$0	\$350,000
33 Cycling Network Update	2024	-	2024	0	\$600,000	\$0	0%	\$0	\$0	\$0	\$600,000
35 Transportation Master Plan	2020	-	2021	0	\$900,000	\$0	0%	\$0	\$0	\$0	\$900,000
Subtotal					\$355,314,183	\$0		\$131,925,140	\$14,737,598	\$97,499,482	\$111,151,963
Secondary Plan Traffic Study Improvements											
Lily Lake											
36 Lily Lake Rd Urbanization - Fairbairn to Ackison	2025	-	2025	20	\$23,125,369	\$0	34%	\$7,862,625	\$0	\$15,262,743	\$0
37 Ackison Road Urbanization - Lily Lake to Parkhill (Outside City)	Beyond 2031			20	\$10,965,625	\$0	34%	\$3,728,313	\$0	\$7,237,313	\$0
38 Lily Lake Rd/ Fairbairn Signalization	2022	-	2022	20	\$3,403,125	\$0	0%	\$0	\$0	\$3,403,125	\$0
39 Fairbairn Urbanization - Towerhill to Parkway	2023	-	2023	20	\$17,478,375	\$0	33%	\$5,772,647	\$0	\$11,705,727	\$0
40 Intersection Improvements Chemong/Towerhill	2022	-	2022	20	\$1,701,563	\$0	0%	\$0	\$0	\$1,701,563	\$0
41 Ackison/Lily Lake Signalization	Beyond 2031			20	\$3,403,125	\$0	0%	\$0	\$0	\$3,403,125	\$0

185
APPENDIX C.1
TABLE 4

CITY OF PETERBOROUGH
2019 DEVELOPMENT CHARGES STUDY
ROADS & OTHER CITY-WIDE ENGINEERING CAPITAL PROGRAM

						LESS:						
Project and Location	Anticipated Timing			Useful Life	Total Project Cost	Grants and Subsidies	Non-Growth Shares		Available DC Reserves	Post-Period Benefit	Net DC Recoverable 2019 - 2031	
Chemong Growth												
42 Towerhill Widening - Chemong to Fairbairn	2025	-	2025	20	\$7,811,306	\$0	34%	\$2,655,844	\$0	\$5,155,462	\$0	
43 Chemong Urbanization - Milroy to County Rd 19	2030	-	2030	20	\$7,922,021	\$0	34%	\$2,693,487	\$0	\$5,228,534	\$0	
44 New Collector Internal to Plan out to County Rd 19	Beyond 2031			20	\$3,128,125	\$0	0%	\$0	\$0	\$3,128,125	\$0	
45 Third Line & County Rd19 Urbanization	Beyond 2031			20	\$12,912,969	\$0	75%	\$9,684,727	\$0	\$1,614,121	\$1,614,121	
Coldsprings Growth												
46 Intersection Improvements Kennedy Rd/Otonabee Dr	2025	-	2025	20	\$3,403,125	\$0	0%	\$0	\$0	\$3,403,125	\$0	
47 Bensford Rd Signalization and Turn Lanes	2025	-	2025	20	\$3,403,125	\$0	0%	\$0	\$0	\$3,403,125	\$0	
48 Wallace Pt Rd Urbanization - Kennedy to Coldsprings Sub	2025	-	2025	20	\$12,203,984	\$0	34%	\$4,149,355	\$0	\$8,054,630	\$0	
49 McNamara Rd/Guthrie Dr Urbanization	2030	-	2030	20	\$3,554,375	\$0	34%	\$1,208,488	\$0	\$2,345,888	\$0	
Liftlock Growth												
50 Intersection Improvements - Hunter/Ashburnham	2025	-	2025	20	\$3,403,125	\$0	0%	\$0	\$0	\$3,403,125	\$0	
51 McFarlane/Canal Crossing Signalization	2025	-	2025	20	\$3,403,125	\$0	0%	\$0	\$0	\$3,403,125	\$0	
52 Intersection Improvements - Armour/Parkhill	2025	-	2025	20	\$3,403,125	\$0	0%	\$0	\$0	\$3,403,125	\$0	
53 Parkhill Urbanization - Park St to Television	2028	-	2028	20	\$26,714,531	\$0	34%	\$9,082,941	\$0	\$17,631,591	\$0	
54 Television Road/Parkhill Intersection	2026	-	2026	20	\$3,403,125	\$0	0%	\$0	\$0	\$0	\$3,403,125	
55 Television Road/Old Norwood Road	2026	-	2026	20	\$3,403,125	\$0	0%	\$0	\$0	\$0	\$3,403,125	
56 Ashburham Rd/Lansdowne	2026	-	2026	20	\$3,403,125	\$0	50%	\$1,701,563	\$0	\$0	\$1,701,563	
57 Internal Collectors	2026	-	2026	20	\$8,031,375	\$0	67%	\$5,381,021	\$0	\$0	\$2,650,354	

186
APPENDIX C.1
TABLE 4

CITY OF PETERBOROUGH
2019 DEVELOPMENT CHARGES STUDY
ROADS & OTHER CITY-WIDE ENGINEERING CAPITAL PROGRAM

						LESS:					
Project and Location	Anticipated Timing			Useful Life	Total Project Cost	Grants and Subsidies	Non-Growth Shares		Available DC Reserves	Post-Period Benefit	Net DC Recoverable 2019 - 2031
Carnegie Growth											
58 New Arterial/County Rd 19 Signalization	2028	-	2028	20	\$3,403,125	\$0	0%	\$0	\$0	\$0	\$3,403,125
59 Carnegie Urbanization - Cumberland to Heritage Trail	2022	-	2022	20	\$2,353,828	\$0	34%	\$800,302	\$0	\$0	\$1,553,527
60 Hilliard St Urbanization - Cumberland to County Rd 19	2028	-	2028	20	\$4,726,563	\$0	67%	\$3,166,797	\$0	\$1,559,766	\$0
Subtotal				\$180,064,383		\$0		\$57,888,108	\$0	\$104,447,336	\$17,728,939
Peterborough Airport											
61 Airport Industrial Park East of Airport Road - North Development	2020	-	2022	30	\$12,400,000	\$0	0%	\$0	\$ 767,737	\$5,816,131	\$5,816,131
62 Airport Water and Sewer Servicing Upgrade	2020	-	2024	30	\$14,657,300	\$0	0%	\$0	\$0	\$7,328,650	\$7,328,650
Subtotal				\$27,057,300		\$0		\$0	\$767,737	\$13,144,781	\$13,144,781
TOTAL ROADS & OTHER CITY-WIDE ENGINEERING CAPITAL PROGRAM 2019 - 2031				\$562,435,866		\$0		\$189,813,248	\$15,505,335	\$215,091,600	\$142,025,683

187
APPENDIX C.1
TABLE 5

CITY OF PETERBOROUGH
SUMMARY OF RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT CHARGES
ROADS & OTHER CITY-WIDE ENGINEERING 2019 - 2031

Ultimate Year Growth in Population in New Units	17,729
Ultimate Growth in Square Metres	327,039

	Development-Related Capital Forecast (\$000)										
	Total Project Cost	Grants/ Subsidies Other Contributions	Non-Growth Share	Available DC Reserves	Post Period Benefit	Total Costs Eligible For DC Recovery	Residential Share		Non-Residential Share		
							%	\$	%	\$	
ROADS & OTHER CITY-WIDE ENGINEERING											
City-wide Improvements	\$355,314.2	\$0.0	\$131,925.1	\$14,737.6	\$97,499.5	\$111,152.0	77%	\$85,822.0	23%	\$25,330.0	
Secondary Plan Traffic Study Improvements	\$180,064.4	\$0.0	\$57,888.1	\$0.0	\$104,447.3	\$17,728.9	77%	\$13,688.8	23%	\$4,040.2	
Peterborough Airport	\$27,057.3	\$0.0	\$0.0	\$767.7	\$13,144.8	\$13,144.8	77%	\$10,149.27	23%	\$2,995.5	
TOTAL ROADS & OTHER CITY-WIDE ENGINEERING	\$562,435.9	\$0.0	\$189,813.2	\$15,505.3	\$215,091.6	\$142,025.7		\$109,660.0		\$32,365.7	
Unadjusted Development Charge Per Capita								\$6,185.35			
Unadjusted Development Charge Per Square Metre										\$98.97	

Roads: Residential	Unadjusted Charge Per Capita	Charge By Unit Type (1)		
		Residential A	Residential B	Residential C
		Singles/Semis	Multiples	Apartments
ROADS & OTHER CITY-WIDE ENGINEERING	\$6,185.35	\$18,231	\$11,521	\$10,326

Roads: Non-Residential	
Unadjusted	Calculated Charge
Per Square Metre of GFA	\$98.97
Per Square Foot of GFA	\$9.19

**CITY OF PETERBOROUGH
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
ROADS & OTHER CITY-WIDE ENGINEERING
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)**

ROADS & OTHER CITY-WIDE ENGINEERING	2019	2020	2021	2022	2023	2024	2025	2026	2027
OPENING CASH BALANCE	\$0.0	\$7,878.8	\$8,707.2	\$5,450.5	(\$2,397.7)	\$4,616.6	(\$9,535.9)	(\$402.2)	(\$11,599.8)
2019 - 2031 RESIDENTIAL FUNDING REQUIREMENTS									
- Roads & Other City-Wide Engineering: Non Inflated	\$101.6	\$7,424.5	\$11,400.6	\$15,554.0	\$1,798.8	\$21,029.6	\$101.6	\$18,036.2	\$2,806.9
- Roads & Other City-Wide Engineering: Inflated	\$101.6	\$7,573.0	\$11,861.2	\$16,506.0	\$1,947.1	\$23,218.3	\$114.4	\$20,718.0	\$3,288.8
NEW RESIDENTIAL DEVELOPMENT									
- Population Growth in New Units	1,259	1,277	1,295	1,313	1,330	1,350	1,369	1,375	1,392
REVENUE									
- DC Receipts: Inflated	\$7,844.8	\$8,116.1	\$8,395.2	\$8,682.1	\$8,970.4	\$9,287.4	\$9,606.5	\$9,841.5	\$10,162.5
INTEREST									
- Interest on Opening Balance	\$0.0	\$275.8	\$304.8	\$190.8	(\$131.9)	\$161.6	(\$524.5)	(\$22.1)	(\$638.0)
- Interest on In-year Transactions	\$135.5	\$9.5	(\$95.3)	(\$215.2)	\$122.9	(\$383.1)	\$166.1	(\$299.1)	\$120.3
TOTAL REVENUE	\$7,980.4	\$8,401.4	\$8,604.6	\$8,657.7	\$8,961.4	\$9,065.9	\$9,248.1	\$9,520.3	\$9,644.8
CLOSING CASH BALANCE	\$7,878.8	\$8,707.2	\$5,450.5	(\$2,397.7)	\$4,616.6	(\$9,535.9)	(\$402.2)	(\$11,599.8)	(\$5,243.8)

ROADS & OTHER CITY-WIDE ENGINEERING	2028	2029	2030	2031	TOTAL
OPENING CASH BALANCE	(\$5,243.8)	(\$8,094.0)	(\$21,244.0)	(\$11,094.7)	\$0.0
2019 - 2031 RESIDENTIAL FUNDING REQUIREMENTS					
- Roads & Other City-Wide Engineering: Non Inflated	\$10,890.7	\$19,066.2	\$101.6	\$101.6	\$108,413.7
- Roads & Other City-Wide Engineering: Inflated	\$13,015.3	\$23,241.6	\$126.3	\$128.8	\$121,840.3
NEW RESIDENTIAL DEVELOPMENT					
- Population Growth in New Units	1,413	1,432	1,452	1,472	17,729
REVENUE					
- DC Receipts: Inflated	\$10,522.1	\$10,876.9	\$11,249.3	\$11,632.4	\$125,187.1
INTEREST					
- Interest on Opening Balance	(\$288.4)	(\$445.2)	(\$1,168.4)	(\$610.2)	(\$2,895.8)
- Interest on In-year Transactions	(\$68.6)	(\$340.0)	\$194.7	\$201.3	(\$451.0)
TOTAL REVENUE	\$10,165.1	\$10,091.7	\$10,275.6	\$11,223.5	\$121,840.3
CLOSING CASH BALANCE	(\$8,094.0)	(\$21,244.0)	(\$11,094.7)	\$0.0	

2019 Adjusted Charge Per Capita	\$6,231.01
--	-------------------

Allocation of Capital Program	
Residential Sector	77.2%
Non-Residential Sector	22.8%
Rates for 2019	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

**CITY OF PETERBOROUGH
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
ROADS & OTHER CITY-WIDE ENGINEERING
NON-RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)**

ROADS & OTHER CITY-WIDE ENGINEERING	2019	2020	2021	2022	2023	2024	2025	2026	2027
OPENING CASH BALANCE	\$0.0	\$2,387.8	\$2,683.1	\$1,767.1	(\$517.3)	\$1,576.2	(\$2,593.7)	\$95.2	(\$3,203.1)
2019 - 2031 NON-RESIDENTIAL FUNDING REQUIREMENTS									
- Roads & Other City-Wide Engineering: Non Inflated	\$30.0	\$2,191.3	\$3,364.8	\$4,590.7	\$530.9	\$6,206.8	\$30.0	\$5,323.3	\$828.5
- Roads & Other City-Wide Engineering: Inflated	\$30.0	\$2,235.1	\$3,500.8	\$4,871.7	\$574.7	\$6,852.8	\$33.8	\$6,114.8	\$970.7
NON-RESIDENTIAL SPACE GROWTH									
- Growth in Square Metres	23,875	24,063	24,312	24,500	24,688	24,937	25,125	25,375	25,562
REVENUE									
- DC Receipts: Inflated	\$2,376.7	\$2,443.3	\$2,517.9	\$2,588.2	\$2,660.2	\$2,740.7	\$2,816.6	\$2,901.6	\$2,981.4
INTEREST									
- Interest on Opening Balance	\$0.0	\$83.6	\$93.9	\$61.9	(\$28.5)	\$55.2	(\$142.7)	\$3.3	(\$176.2)
- Interest on In-year Transactions	\$41.1	\$3.6	(\$27.0)	(\$62.8)	\$36.5	(\$113.1)	\$48.7	(\$88.4)	\$35.2
TOTAL REVENUE	\$2,417.7	\$2,530.5	\$2,584.8	\$2,587.2	\$2,668.2	\$2,682.8	\$2,722.7	\$2,816.5	\$2,840.4
CLOSING CASH BALANCE	\$2,387.8	\$2,683.1	\$1,767.1	(\$517.3)	\$1,576.2	(\$2,593.7)	\$95.2	(\$3,203.1)	(\$1,333.3)

ROADS & OTHER CITY-WIDE ENGINEERING	2028	2029	2030	2031	TOTAL
OPENING CASH BALANCE	(\$1,333.3)	(\$2,198.5)	(\$6,125.9)	(\$3,194.9)	
2019 - 2031 NON-RESIDENTIAL FUNDING REQUIREMENTS					
- Roads & Other City-Wide Engineering: Non Inflated	\$3,214.3	\$5,627.3	\$30.0	\$30.0	\$31,997.8
- Roads & Other City-Wide Engineering: Inflated	\$3,841.4	\$6,859.6	\$37.3	\$38.0	\$35,960.6
NON-RESIDENTIAL SPACE GROWTH					
- Growth in Square Metres	25,812	26,000	26,250	26,540	327,039
REVENUE					
- DC Receipts: Inflated	\$3,070.8	\$3,155.0	\$3,249.0	\$3,350.6	\$36,852.0
INTEREST					
- Interest on Opening Balance	(\$73.3)	(\$120.9)	(\$336.9)	(\$175.7)	(\$756.3)
- Interest on In-year Transactions	(\$21.2)	(\$101.9)	\$56.2	\$58.0	(\$135.1)
TOTAL REVENUE	\$2,976.2	\$2,932.2	\$2,968.3	\$3,232.9	\$35,960.6
CLOSING CASH BALANCE	(\$2,198.5)	(\$6,125.9)	(\$3,194.9)	\$0.0	

2019 Adjusted Charge Per Square Metre

\$99.55**Allocation of Capital Program**

Residential Sector	77.2%
Non-Residential Sector	22.8%

Rates for 2019

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

APPENDIX C.2

SEWAGE TREATMENT

As shown in Table 1, the Sewage Treatment DC capital program comprises of the recovery of debt associated with the Phase 3 expansion of the Wastewater Treatment Plant (WWTP) as well as an for environmental assessment study for future plant capacity to serve population and employment growth to 2031.

The outstanding balance of the WWTP debenture, including principal and interest payments, as well as the unfunded DC reserve fund amounts to \$5.8 million. The environmental assessment costs to be recovered are \$2.0 million. The total capital program totals \$7.8 million, which is fully related to development in the 2019 to 2031 planning period.

The development-related cost has been allocated 77 per cent (\$6.0 million) to residential development and 23 per cent (\$1.8 million) to non-residential development. The allocation of costs is based on shares of population and employment growth over the planning period.

The residential costs are recovered against the population growth in new units over the period 2019-2031 of 17,729 persons yielding an unadjusted charge of \$337.83 per capita (\$6.0 million/17,729 persons). The non-residential costs are recovered against the growth in non-residential floor area over the period 2019-2031 of 327,039 square metres yielding an unadjusted charge of \$5.41 per square metre (\$1.8 million/327,039 square metres).

The following is a summary of the calculated Sewage Treatment charges:

SEWAGE TREATMENT SUMMARY			
2019 - 2031		Unadjusted	
Development-Related Capital Program		Development Charge	
Total	Net DC Recoverable	\$/capita	\$/sq.m
\$7,757,121	\$7,757,121	\$337.83	\$5.41

191
APPENDIX C.2
TABLE 1

CITY OF PETERBOROUGH
SUMMARY OF RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT CHARGES
SEWAGE TREATMENT 2019 - 2031

Ultimate Year Growth in Population in New Units	17,729
Ultimate Growth in Square Meters	327,039

	Development-Related Capital Forecast (\$000)						Residential Share		Non-Residential Share	
	Total Project Cost	Grants/ Subsidies Other Contributions	Non-Growth Share	Available DC Reserves	Post Period Benefit	Total Costs Eligible For DC Recovery				
							%	\$	%	\$
SEWAGE TREATMENT										
Phase 3 Expansion WWTP Debenture - Unfunded DC Reserve	\$2,476.1	\$0.0	\$0.0	\$0.0	\$0.0	\$2,476.1	77%	\$1,911.8	23%	\$564.3
Phase 3 Expansion of the WWTP Debenture - Future Payments	\$3,281.0	\$0.0	\$0.0	\$0.0	\$0.0	\$3,281.0	77%	\$2,533.3	23%	\$747.7
Environmental Assessment Study for Future Plant Capacity	\$2,000.0	\$0.0	\$0.0	\$0.0	\$0.0	\$2,000.0	77%	\$1,544.2	23%	\$455.8
TOTAL SEWAGE TREATMENT	\$7,757.1	\$0.0	\$0.0	\$0.0	\$0.0	\$7,757.1		\$5,989.4		\$1,767.7
Unadjusted Development Charge Per Capita								\$337.83		
Unadjusted Development Charge Per Square Metre								\$5.41		

Residential	Calculated Charge Per Capita	Charge By Unit Type (1)		
		Residential A Singles/Semi	Residential B Other Multiples	Residential C Apartments
Sewage Treatment	\$337.83	\$996	\$629	\$564

Non-Residential	
Calculated Charge	
Per Square Metre of GFA	\$5.41
Per Square Foot of GFA	\$0.50

(1) Based on Persons Per Unit Of: 2.95 1.86 1.67

APPENDIX D

RESERVE FUND BALANCES

APPENDIX D

DEVELOPMENT CHARGES RESERVE FUNDS UNCOMMITTED BALANCES

The *Development Charges Act* requires that a reserve fund be established for each service for which development charges are collected. Table 1 presents the uncommitted reserve fund balances that are available to help fund the development-related net capital costs identified in this study. The balances of the development charges reserve funds as of December 31, 2018 have been adjusted to account for current commitments to reserve fund projects. All of the available reserve fund balances are therefore accounted in this study.

As shown on Table 1, the December 31, 2018 total reserve fund balance is \$16.4 million. The application of each of the balances in each of the reserve funds is discussed in the appendix section related to each service. The reserve funds are assigned to projects in the initial years of the capital program for the services in which the reserves are a position balance. This has the effect of reducing and deferring capital costs brought forward to the development charge calculation and the cash flow analysis. Where there is a negative balance, the amount is brought forward to the DC capital forecast for recovery through future development charges.

APPENDIX D

TABLE 1

**CITY OF PETERBOROUGH
DEVELOPMENT CHARGE RESERVE FUND BALANCE BY ACCOUNT
AS AT DECEMBER 31, 2018**

Service	Balance As At End of 2018
Library Services	\$792,861
Fire Services	\$113,973
Police Services	\$4,788
Recreation	\$1,059,339
Parks	\$935,900
Public Works	(\$1,037,764)
Parking	\$1,242,444
Transit Services	\$317,604
General Government	(\$259,730)
Affordable Housing	\$169,490
Roads & Other City-Wide Engineering	\$15,505,335
Sewage Treatment	(\$2,476,076)
Total Development Charge Reserves	\$16,368,164

APPENDIX E

LONG-TERM CAPITAL AND OPERATING IMPACTS

**CITY OF PETERBOROUGH
ESTIMATED NET OPERATING COST OF THE PROPOSED
DEVELOPMENT-RELATED CAPITAL PROGRAM
(in constant 2019 dollars)**

Net Cost (in 2019\$)			Estimated Operating Costs (\$000)									
			2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Library Services			\$350.0	\$350.0	\$350.0	\$350.0	\$350.0	\$350.0	\$350.0	\$350.0	\$350.0	\$350.0
Additional Library Space	\$20	per sq.ft.	\$350.0	\$350.0	\$350.0	\$350.0	\$350.0	\$350.0	\$350.0	\$350.0	\$350.0	\$350.0
Fire Services			\$0.0	\$1,190.0	\$1,190.0	\$1,190.0	\$1,190.0	\$5,780.0	\$5,780.0	\$5,780.0	\$5,780.0	\$5,780.0
Replace Station #2 (7,000 sq.ft.)	\$170	per sq.ft.	\$0.0	\$1,190.0	\$1,190.0	\$1,190.0	\$1,190.0	\$1,190.0	\$1,190.0	\$1,190.0	\$1,190.0	\$1,190.0
New Station #4	\$170	per sq.ft.	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$4,590.0	\$4,590.0	\$4,590.0	\$4,590.0	\$4,590.0
Police Services			\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$33,750.0
Additional Police Facility Space	\$225	per sq.ft.	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$33,750.0
Recreation			\$0.0	\$103.0	\$103.0	\$103.0	\$103.0	\$103.0	\$103.0	\$103.0	\$103.0	\$103.0
- New Arena Facility Build	\$10	per sq. ft.	\$0.0	\$103.0	\$103.0	\$103.0	\$103.0	\$103.0	\$103.0	\$103.0	\$103.0	\$103.0
Parks			\$112.5	\$114.9	\$116.3	\$116.4	\$116.5	\$116.7	\$116.8	\$116.9	\$117.0	\$117.1
- Parkland Development and Facilities Projects	\$0.15	per \$1 of total infrastructure value	\$112.5	\$114.9	\$116.3	\$116.4	\$116.5	\$116.7	\$116.8	\$116.9	\$117.0	\$117.1
Public Works			\$98.6	\$209.3	\$150.4	\$116.1	\$186.2	\$144.1	\$144.1	\$144.1	\$144.1	\$144.1
- Fleet Expansion	10%	of total \$ value	\$98.6	\$209.3	\$150.4	\$116.1	\$186.2	\$144.1	\$144.1	\$144.1	\$144.1	\$144.1
Parking			\$0.0	\$0.0	\$0.0	\$0.0	\$1,228.5	\$1,228.5	\$1,228.5	\$1,228.5	\$1,228.5	\$1,228.5
- New Parking Structure	\$0.05	per \$1 of total infrastructure value	\$0.0	\$0.0	\$0.0	\$0.0	\$1,228.5	\$1,228.5	\$1,228.5	\$1,228.5	\$1,228.5	\$1,228.5
Transit Services			\$1,831.4	\$2,183.2	\$10,720.3	\$11,108.1	\$11,191.9	\$11,515.8	\$11,599.6	\$12,139.4	\$12,223.2	\$12,307.0
- Downtown Transportation Hub	\$0.30	per \$1 of total infrastructure value	\$1,831.4	\$2,183.2	\$10,720.3	\$11,108.1	\$11,191.9	\$11,515.8	\$11,599.6	\$12,139.4	\$12,223.2	\$12,307.0
General Government			\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
- No additional operating costs			\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Affordable Housing			\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
- No additional operating costs			\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Waste Management	Net additional operating costs to be funded from waste fees		\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
			\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Roads & Other City-Wide Engineering			\$101.8	\$328.1	\$440.9	\$555.1	\$671.0	\$788.4	\$907.4	\$1,032.2	\$1,159.0	\$1,287.4
- Development-Related Roads Infrastructure	\$ 240.0	per new household	\$101.8	\$328.1	\$440.9	\$555.1	\$671.0	\$788.4	\$907.4	\$1,032.2	\$1,159.0	\$1,287.4
Sewage Treatment	Net additional operating costs to be funded from user rates		\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
			\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
TOTAL ESTIMATED OPERATING COSTS			\$2,494.3	\$4,478.6	\$13,070.9	\$13,538.8	\$15,037.2	\$20,026.5	\$20,229.4	\$20,894.2	\$21,104.8	\$55,067.1

197
APPENDIX E
TABLE 2

CITY OF PETERBOROUGH
SUMMARY OF TAX SUPPORTED FUNDING REQUIREMENTS

Net Capital Cost of Development-Related Projects	2019 (\$000)	2020 (\$000)	2021 (\$000)	2022 (\$000)	2023 (\$000)	2024 (\$000)	2025 (\$000)	2026 (\$000)	2027 (\$000)	2028 (\$000)	TOTAL (\$000)
LIBRARY SERVICES											
Total Net Cost (1)	12,373.0	93.0	193.0	138.0	93.0	93.0	338.0	93.0	93.0	138.0	13,645.0
Net Cost From Development Charges (2)	4,075.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4,075.0
Net Cost From Non-DC Sources	8,298.0	93.0	193.0	138.0	93.0	93.0	338.0	93.0	93.0	138.0	9,570.0
- Discount Portion (3)	680.7	9.3	19.3	13.8	9.3	9.3	33.8	9.3	9.3	13.8	807.9
- Available DC Reserves (4)	792.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	792.9
- Replacement & Benefit to Existing	5,566.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5,566.3
- For Post 2028 Development (5)	1,258.2	83.7	173.7	124.2	83.7	83.7	304.2	83.7	83.7	124.2	2,403.0
FIRE SERVICES											
Total Net Cost (1)	35.0	9,003.1	780.0	0.0	0.0	9,500.0	0.0	0.0	0.0	0.0	19,318.1
Net Cost From Development Charges (2)	0.0	3,518.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3,518.2
Net Cost From Non-DC Sources	35.0	5,484.9	780.0	0.0	0.0	9,500.0	0.0	0.0	0.0	0.0	15,799.9
- Discount Portion (3)	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 (4)	0.0	114.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	114.0
- Replacement & Benefit to Existing	0.0	4,000.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4,000.0
- For Post 2028 Development (5)	35.0	1,370.9	780.0	0.0	0.0	9,500.0	0.0	0.0	0.0	0.0	11,685.9
POLICE SERVICES											
Total Net Cost (1)	52.2	44.2	14.2	14.2	52.2	14.2	14.2	52.2	14.2	73,764.2	74,036.2
Net Cost From Development Charges (2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2,277.0	2,277.0
Net Cost From Non-DC Sources	52.2	44.2	14.2	14.2	52.2	14.2	14.2	52.2	14.2	71,487.2	71,759.2
- Discount Portion (3)	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 (4)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	4.8
- Replacement & Benefit to Existing	26.1	22.1	7.1	7.1	26.1	7.1	7.1	26.1	7.1	22,450.3	22,586.3
- For Post 2028 Development (5)	26.1	22.1	7.1	7.1	26.1	7.1	7.1	26.1	7.1	49,032.1	49,168.1
RECREATION											
Total Net Cost (1)	142.9	0.0	15,333.3	0.0	0.0	0.0	100.0	0.0	0.0	0.0	15,576.3
Net Cost From Development Charges (2)	51.5	0.0	8,548.5	0.0	0.0	0.0	90.0	0.0	0.0	0.0	8,690.0
Net Cost From Non-DC Sources	91.5	0.0	6,784.8	0.0	0.0	0.0	10.0	0.0	0.0	0.0	6,886.3
- Discount Portion (3)	5.7	0.0	1,067.5	0.0	0.0	0.0	10.0	0.0	0.0	0.0	1,083.3
- Available DC Reserves (4)	0.0	0.0	1,059.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,059.3
- Replacement & Benefit to Existing	85.8	0.0	4,658.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4,743.7
- For Post 2028 Development (5)	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) Mandatory 10% reduction for applicable services

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

(5) Post 2024 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

198
APPENDIX E
TABLE 2

CITY OF PETERBOROUGH
SUMMARY OF TAX SUPPORTED FUNDING REQUIREMENTS

Net Capital Cost of Development-Related Projects	2019 (\$000)	2020 (\$000)	2021 (\$000)	2022 (\$000)	2023 (\$000)	2024 (\$000)	2025 (\$000)	2026 (\$000)	2027 (\$000)	2028 (\$000)	TOTAL (\$000)
PARKS											
Total Net Cost (1)	750.0	16,100.0	9,200.0	900.0	750.0	750.0	750.0	750.0	750.0	750.0	31,450.0
Net Cost From Development Charges (2)	0.0	6,894.1	2,797.6	135.0	0.0	0.0	0.0	0.0	0.0	0.0	9,826.7
Net Cost From Non-DC Sources	750.0	9,205.9	6,402.4	765.0	750.0	750.0	750.0	750.0	750.0	750.0	21,623.3
- Discount Portion (3)	75.0	795.0	535.0	90.0	75.0	75.0	75.0	75.0	75.0	75.0	1,945.0
- Available DC Reserves (4)	675.0	260.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	935.9
- Replacement & Benefit to Existing	0.0	8,150.0	3,850.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12,000.0
- For Post 2028 Development (5)	0.0	0.0	2,017.4	675.0	675.0	675.0	675.0	675.0	675.0	675.0	6,742.4
PUBLIC WORKS											
Total Net Cost (1)	18,274.1	2,493.0	2,004.0	1,661.0	1,862.0	1,441.4	1,441.4	1,441.4	1,441.4	1,441.4	33,501.1
Net Cost From Development Charges (2)	2,963.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2,963.8
Net Cost From Non-DC Sources	15,310.3	2,493.0	2,004.0	1,661.0	1,862.0	1,441.4	1,441.4	1,441.4	1,441.4	1,441.4	30,537.3
- Discount Portion (3)	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 (4)	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	10,284.1	1,599.6	1,405.6	1,168.9	1,396.5	1,081.1	1,081.1	1,081.1	1,081.1	1,081.1	21,259.9
- For Post 2028 Development (5)	5,026.2	893.4	598.4	492.1	465.5	360.4	360.4	360.4	360.4	360.4	9,277.3
PARKING											
Total Net Cost (1)	0.0	0.0	0.0	0.0	24,570.0	0.0	0.0	0.0	0.0	0.0	24,570.0
Net Cost From Development Charges (2)	0.0	0.0	0.0	0.0	5,363.8	0.0	0.0	0.0	0.0	0.0	5,363.8
Net Cost From Non-DC Sources	0.0	0.0	0.0	0.0	19,206.2	0.0	0.0	0.0	0.0	0.0	19,206.2
- Discount Portion (3)	0.0	0.0	0.0	0.0	1,547.9	0.0	0.0	0.0	0.0	0.0	1,547.9
- Available DC Reserves (4)	0.0	0.0	0.0	0.0	1,242.4	0.0	0.0	0.0	0.0	0.0	1,242.4
- Replacement & Benefit to Existing	0.0	0.0	0.0	0.0	9,090.9	0.0	0.0	0.0	0.0	0.0	9,090.9
- For Post 2028 Development (5)	0.0	0.0	0.0	0.0	7,324.9	0.0	0.0	0.0	0.0	0.0	7,324.9
TRANSIT SERVICES											
Total Net Cost (1)	6,104.7	1,172.8	28,456.8	1,292.8	279.3	1,079.4	279.3	1,799.5	279.3	279.3	41,023.4
Net Cost From Development Charges (2)	2,320.2	1,095.5	4,489.2	1,205.1	279.3	388.4	279.3	486.5	279.3	279.3	11,102.1
Net Cost From Non-DC Sources	3,784.5	77.3	23,967.6	87.7	0.0	691.1	0.0	1,313.1	0.0	0.0	29,921.3
- Discount Portion (3)	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 (4)	317.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	317.6
- Replacement & Benefit to Existing	3,466.9	77.3	23,475.9	87.7	0.0	691.1	0.0	1,313.1	0.0	0.0	29,111.9
- For Post 2028 Development (5)	0.0	0.0	491.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	491.7
GENERAL GOVERNMENT											
Total Net Cost (1)	339.7	20.0	20.0	60.0	20.0	80.0	20.0	20.0	60.0	70.0	709.7
Net Cost From Development Charges (2)	331.7	18.0	18.0	54.0	18.0	72.0	18.0	18.0	54.0	63.0	664.7
Net Cost From Non-DC Sources	8.0	2.0	2.0	6.0	2.0	8.0	2.0	2.0	6.0	7.0	45.0
- Discount Portion (3)	8.0	2.0	2.0	6.0	2.0	8.0	2.0	2.0	6.0	7.0	45.0
- Available DC Reserves (4)	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 2028 Development (5)	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) Mandatory 10% reduction for applicable services

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

(5) Post 2024 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

199
APPENDIX E
TABLE 2

CITY OF PETERBOROUGH
SUMMARY OF TAX SUPPORTED FUNDING REQUIREMENTS

Net Capital Cost of Development-Related Projects	2019 (\$000)	2020 (\$000)	2021 (\$000)	2022 (\$000)	2023 (\$000)	2024 (\$000)	2025 (\$000)	2026 (\$000)	2027 (\$000)	2028 (\$000)	TOTAL (\$000)
AFFORDABLE HOUSING											
Total Net Cost (1)	1,103.0	11,138.0	1,173.0	1,208.0	1,243.0	1,278.0	1,278.0	1,278.0	1,278.0	1,278.0	22,255.0
Net Cost From Development Charges (2)	0.0	625.5	105.6	108.7	111.9	115.0	115.0	115.0	115.0	115.0	1,526.8
Net Cost From Non-DC Sources	1,103.0	10,512.5	1,067.4	1,099.3	1,131.1	1,163.0	1,163.0	1,163.0	1,163.0	1,163.0	20,728.2
- Discount Portion (3)	11.0	111.4	11.7	12.1	12.4	12.8	12.8	12.8	12.8	12.8	222.6
- Available DC Reserves (4)	99.3	70.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	169.5
- Replacement & Benefit to Existing	992.7	10,024.2	1,055.7	1,087.2	1,118.7	1,150.2	1,150.2	1,150.2	1,150.2	1,150.2	20,029.5
- For Post 2028 Development (5)	0.0	306.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	306.7
WASTE MANAGEMENT											
Total Net Cost (1)	0.0	0.0	0.0	0.0	9,325.0	0.0	0.0	325.0	0.0	0.0	9,650.0
Net Cost From Development Charges (2)	0.0	0.0	0.0	0.0	771.9	0.0	0.0	0.0	0.0	0.0	771.9
Net Cost From Non-DC Sources	0.0	0.0	0.0	0.0	8,553.1	0.0	0.0	325.0	0.0	0.0	8,878.1
- Discount Portion (3)	0.0	0.0	0.0	0.0	155.1	0.0	0.0	32.5	0.0	0.0	187.6
- Available DC Reserves (4)	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	7,773.7	0.0	0.0	0.0	0.0	0.0	7,773.7
- For Post 2028 Development (5)	0.0	0.0	0.0	0.0	624.2	0.0	0.0	292.5	0.0	0.0	916.7
TOTAL MUNICIPAL SERVICES											
Total Net Cost (1)	39,174.7	40,064.1	57,174.4	5,274.0	38,194.6	14,236.1	4,221.0	5,759.1	3,916.0	77,721.0	285,734.8
Net Cost From Development Charges (2)	9,742.2	12,151.3	15,958.8	1,502.8	6,545.0	575.4	502.4	619.5	448.4	2,734.4	50,780.1
Net Cost From Non-DC Sources	29,432.5	27,912.8	41,215.5	3,771.2	31,649.6	13,660.7	3,718.6	5,139.7	3,467.6	74,986.6	234,954.6
- Discount Portion (3)	780.4	917.7	1,635.6	121.9	1,801.8	105.1	133.6	131.6	103.1	108.6	5,839.2
- Available DC Reserves (4)	1,884.7	445.1	1,059.3	0.0	1,242.4	0.0	0.0	0.0	0.0	4.8	4,636.4
- Replacement & Benefit to Existing	20,421.9	23,873.2	34,452.3	2,350.9	19,405.9	2,929.4	2,238.4	3,570.4	2,238.4	24,681.6	136,162.3
- For Post 2024 Development (5)	6,345.4	2,676.8	4,068.4	1,298.4	9,199.4	10,626.2	1,346.7	1,437.7	1,126.2	50,191.7	88,316.8

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) Mandatory 10% reduction for applicable services

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

(5) Post 2024 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

ASSET MANAGEMENT PLAN

APPENDIX F

ASSET MANAGEMENT PLAN

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

ASSET TYPES

A summary of the future municipal-owned assets and estimated useful life assumptions for eligible DC services considered as part of the study are set out in Tables 1 and 2. Although all capital assets considered in the study have been identified, not all assets necessitate future replacement or ongoing maintenance activities. Some projects do not relate to the replacement of a tangible capital asset—examples include the acquisition of land or the undertaking of development-related studies. These projects/costs do not necessarily require future replacement or ongoing maintenance. They have been excluded from the asset management provision calculations.

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

Table 1 Summary of Municipal Assets Considered City-wide General Services	
Service and Amenities	Estimated Useful Life
Library Services <ul style="list-style-type: none"> • Additional Library Space • Library Kiosks • Library Materials • Studies 	<ul style="list-style-type: none"> • 50 years • 10 years • 10 years • Not infrastructure
Fire Services <ul style="list-style-type: none"> • Buildings, Land & Furnishings • Vehicles • Equipment 	<ul style="list-style-type: none"> • 50 years • 15 years • 10 years
Police Services <ul style="list-style-type: none"> • Buildings, Land & Furnishings • New Equipment • Studies 	<ul style="list-style-type: none"> • 50 years • 10 years • Not infrastructure
Recreation <ul style="list-style-type: none"> • Arenas • Studies 	<ul style="list-style-type: none"> • 50 years • Not infrastructure
Parks <ul style="list-style-type: none"> • Parkland • Park Design • Park Structures • Park & Trail Upgrades • Trail Network • Studies 	<ul style="list-style-type: none"> • 15 years • Not infrastructure • 25 years • 15 years • 20 years • Not infrastructure
Public Works <ul style="list-style-type: none"> • Public Works Relocation Project • Buildings, Land & Furnishings • Fleet • Equipment 	<ul style="list-style-type: none"> • 50 years • 50 years • 15 years • 10 years
Parking <ul style="list-style-type: none"> • Parking Infrastructure 	<ul style="list-style-type: none"> • 15 years
Transit Services <ul style="list-style-type: none"> • Land • Buildings • Shelters, Loops and Signs • Buses • Vans 	<ul style="list-style-type: none"> • Not infrastructure • 100 years • 10 years • 16 years • 7 years
General Government <ul style="list-style-type: none"> • Recovery of Negative Reserve Fund Balance • Development Related Studies 	<ul style="list-style-type: none"> • Not infrastructure • Not infrastructure
Affordable Housing <ul style="list-style-type: none"> • Municipal Investment in Affordable Housing • Brock Street Mission 	<ul style="list-style-type: none"> • Not infrastructure • 50 years
Affordable Housing <ul style="list-style-type: none"> • Buildings, Land & Furnishings • Vehicles & Equipment 	<ul style="list-style-type: none"> • 50 years • 15 years

Table 2 Summary of Municipal Assets Considered Engineered Services	
Capital Project Description	Estimated Useful Life
Roads & Other City-wide Engineering <ul style="list-style-type: none"> • Roadway Improvements • Studies • Intersection Improvements • New Multi-Use Paths • New Sidewalks • Peterborough Airport Projects 	<ul style="list-style-type: none"> • 20 years • Not infrastructure • 20 years • 20 years • 20 years • 30 years
Sewage Treatment <ul style="list-style-type: none"> • Recovery of Negative Reserve Fund Balance • Debenture Payments • Studies 	<ul style="list-style-type: none"> • Not infrastructure • Not infrastructure • Not infrastructure

No annual provisions have been identified for General Government as plan updates and studies included in the General Government development charge category are not infrastructure and therefore have no long-term financial requirements. Additionally, there are no provisions identified for Sewage Treatment as the funding of debt and studies are not infrastructure and have no long-term financial requirements.

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

replacement provisions associated with the non-development charge funded costs, including costs related to the 10 per cent statutory discount, benefit-to-existing and post-period benefit have also been calculated.

Tables 3 and 4 provide the calculated annual asset management contribution for both the non-DC recoverable share and the share related to the 2019-2028 and 2019-2031 DC recoverable portion. The years 2029 and 2032 have been included to calculate the annual contribution for the 2019-2028 and 2019-2031 periods as the expenditures in 2028 and 2031 will not trigger asset management contributions until 2029 and 2032, respectively.

As shown in Table 3, by 2029, the City will need to fund an additional \$2.3 million per year in order to properly fund the full life cycle costs of the new assets related to all general and protection services under the development charges by-law. Table 4 shows that by 2032 the City will need to fund an additional \$21.6 million per year to properly fund all life-cycle costs of the new engineered assets under the DC by-law.

FINANCIAL SUSTAINABILITY OF THE PROGRAM

A key purpose 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.

Future Revenue Growth

The calculated annual funding provision should be considered within the context of the City's projected growth. Over the next 10 years, the City is projected to increase by 12,120 people. In addition, the City will also add 3,972 new employees that will result in 248,249 square metres of additional non-residential building space. Between 2019 and 2031, the City's population will increase by approximately 16,089 people. The City will also add 5,233 new employees during this planning period which translates into 327,039 square metres of additional non-residential building space.

This growth will have the effect of increasing the overall assessment base. This leads to additional user fee and charge 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 City's reserves for future replacement of these assets.

Asset Management Plan

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

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

Program is Deemed Financially Sustainable

The calculated annual provisions identified in Tables 3 and 4 are considered to be financially sustainable as it is expected that the increased capital asset management requirements can be absorbed by the tax and user base over the long-term. The City's annual operating budget review will allow staff to continue to monitor and implement mitigating measures should the program become less sustainable.

**APPENDIX F
TABLE 3**

**CITY OF PETERBOROUGH
SUMMARY OF ASSET MANAGEMENT PROVISIONS FOR GENERAL SERVICES**

General Services	2019 - 2028 Capital Program		Calculated AMP Annual Provision by 2029	
	DC Recoverable	Non-DC Funded	DC Related	Non-DC Related
Library Services	\$5,392,036	\$8,252,964	\$107,043	\$265,121
Fire Services	\$3,632,167	\$15,685,933	\$73,548	\$427,312
Police Services	\$2,281,806	\$71,754,364	\$54,136	\$1,712,925
Recreation	\$10,832,550	\$41,410,395	\$220,489	\$853,519
Parks	\$11,958,433	\$19,491,567	\$585,654	\$1,050,759
Public Works	\$2,963,825	\$30,537,275	\$58,838	\$1,433,817
Parking	\$7,260,634	\$17,309,366	\$529,636	\$1,262,653
Transit Services	\$11,419,753	\$63,052,247	\$617,595	\$1,202,188
General Government	\$709,730	\$0	\$0	\$0
Affordable Housing	\$1,884,759	\$20,370,241	\$13,349	\$189,141
Waste Management	\$857,704	\$14,792,296	\$18,431	\$352,762
Total	\$59,193,396	\$302,656,649	\$2,278,718	\$8,750,197

**APPENDIX F
TABLE 4**

**CITY OF PETERBOROUGH
SUMMARY OF ASSET MANAGEMENT PROVISIONS FOR ENGINEERED SERVICES**

Engineered Services	2019 - 2031 Capital Program		Calculated AMP Annual Provision by 2032	
	DC Recoverable	Non-DC Funded	DC Related	Non-DC Related
Roads & Other City-Wide Engineering	\$393,606,001	\$152,516,897	\$21,562,177	\$8,555,452
Sewage Treatment	\$7,757,121	\$0	\$0	\$0
Total	\$401,363,122	\$152,516,897	\$21,562,177	\$8,555,452

TRANSIT ASSET MANAGEMENT PLAN

The *DCA* requires that a more comprehensive Asset Management Plan be undertaken for Transit than for other services. The general purpose of the Plan remains the same: to demonstrate that all Transit assets proposed to be funded under the development charges by-law are financially sustainable over their full life cycle.

ASSET CHARACTERISTICS

O.Reg. 82/98 requires that the Transit Asset Management Plan set out the state of local infrastructure with reference to asset type, quantity (or extent), value, age, useful life, and condition based on standard engineering practices. A full inventory of assets by type, including the quantity of assets over the last 10 years and current replacement cost valuation is set out in Table 5. Information on asset age, useful life, and condition is provided in Table 6 below.

Table 6 - Transit Asset Type, Age, Useful Life, and Condition Based on Standard Engineering Practices

Transit Asset Type	Expected Useful Life (years)	Average Age (years)	Remaining Useful Life (years)	Percent of Useful Life Remaining	Condition Score	Condition Rating
Fleet						
Buses	16	7.6	8.4	52.4%	2.7	Fair
Accessible Vans	7	2.5	4.5	64.3%	3.8	Good
Support Fleet	10	6	4	40.0%	2.7	Fair
Facilities						
Transit Garage - 200 Townsend St.	100	30	70	50.0%	1.6	Poor
Simcoe St. Parking Garage/Bus Terminal - 190 Simcoe St.	100	44	56	26.7%	2.7	Fair

Source: City of Peterborough

More detailed information on the City's Transit inventory, valuation, age profile, condition, and network risk can be found in Section 4.2 of the City's *Capital Asset Management Plan, 2016*.¹

¹ <https://www.peterborough.ca/en/city-hall/resources/Documents/Capital-Asset-Management-Plan.pdf>

209
APPENDIX F
TABLE 5

CITY OF PETERBOROUGH
INVENTORY OF CAPITAL ASSETS
TRANSIT SERVICES

BUILDINGS Description	# of Square Feet										UNIT COST (\$/sq.ft.)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Simcoe Street Terminal	5,280	5,280	5,280	5,280	5,280	5,280	5,280	5,280	5,280	5,280	\$400
Transit Garage (Townsend - capacity 42 buses)	32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000	\$350
Bus Bays	44,690	44,690	44,690	44,690	44,690	44,690	44,690	44,690	44,690	44,690	\$100
Total (sq.ft.)	81,970	81,970	81,970	81,970	81,970	81,970	81,970	81,970	81,970	81,970	
Total (\$000)	\$17,781.0	\$17,781.0	\$17,781.0	\$17,781.0	\$17,781.0	\$17,781.0	\$17,781.0	\$17,781.0	\$17,781.0	\$17,781.0	

LAND Description	# of Hectares										UNIT COST (\$/ha)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Simcoe Street Terminal	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	\$431,600
Transit Garage (Townsend - capacity 42 buses)	1.68	1.68	1.68	1.68	1.68	1.68	1.68	1.68	1.68	1.68	\$431,600
Total (ha)	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	
Total (\$000)	\$1,070.4	\$1,070.4	\$1,070.4	\$1,070.4	\$1,070.4	\$1,070.4	\$1,070.4	\$1,070.4	\$1,070.4	\$1,070.4	

SHELTERS, SIGNS Description	# of Shelters and Signs										UNIT COST (\$/unit)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Bus Shelters	50	50	52	52	53	53	53	53	49	98	\$18,000
Bus Signs	650	639	631	617	620	622	622	622	622	622	\$8,000
Total (#)	700	689	683	669	673	675	675	675	671	720	
Total (\$000)	\$6,100.0	\$6,012.0	\$5,984.0	\$5,872.0	\$5,914.0	\$5,930.0	\$5,930.0	\$5,930.0	\$5,858.0	\$6,740.0	

EQUIPMENT Description	# of Pieces of Equipment										UNIT COST (\$/unit)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Radios	58	58	58	58	58	62	62	62	62	65	\$3,000
Base Station	3	3	3	3	3	3	3	3	3	3	\$3,000
Fare Boxes	58	58	58	58	58	62	62	62	62	65	\$26,000
Total (#)	119	119	119	119	119	127	127	127	127	133	
Total (\$000)	\$1,691.0	\$1,691.0	\$1,691.0	\$1,691.0	\$1,691.0	\$1,807.0	\$1,807.0	\$1,807.0	\$1,807.0	\$1,894.0	

210
APPENDIX F
TABLE 5

CITY OF PETERBOROUGH
INVENTORY OF CAPITAL ASSETS
TRANSIT SERVICES

BUSES Type of Bus	# of Buses										UNIT COST (\$/bus)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
40 Foot Buses											
T02 - GMC Classic 1024474	1	-	-	-	-	-	-	-	-	-	\$560,000
T03 - GMC Classic 1000389	1	1	1	1	1	1	-	-	-	-	\$560,000
T04 - Orion V 1030812	1	1	1	1	1	-	-	-	-	-	\$560,000
T05 - Orion V1 (del. 12/98)	1	1	1	1	1	1	1	1	-	-	\$560,000
T06 - Orion V1 (del. 12/98)	1	1	1	1	1	1	1	1	-	-	\$560,000
T07 - Orion V1 (del. 12/98)	1	1	1	1	1	1	1	1	-	-	\$560,000
T08 - Orion V1 (del. 12/98)	1	1	1	1	1	1	1	1	-	-	\$560,000
T12 - GMC Classic 2GHYT82W3F3500174	1	1	1	1	1	-	-	-	-	-	\$560,000
T13 - GMC Classic 2GHYT82W3E3500108	1	1	1	1	1	-	-	-	-	-	\$560,000
T14 - GMC Classic 2GHYT82W8E3500086	1	1	1	1	1	1	-	-	-	-	\$560,000
T15 - GMC Classic 2GHYT82J1D3500448	-	-	-	-	-	-	-	-	-	-	\$560,000
T16 - GMC Classic 2GHYT82JXD3500450	-	-	-	-	-	-	-	-	-	-	\$560,000
T17-Nova LFS 2NVYL82S143000001	1	1	1	1	1	1	1	1	1	1	\$560,000
T18-Nova LFS 2NVYL82S343000002	1	1	1	1	1	1	1	1	1	1	\$560,000
T19- Nova LFS 2NVYL82S543000003	1	1	1	1	1	1	1	1	1	1	\$560,000
T20- Nova LFS 2NVYL82S743000004	1	1	1	1	1	1	1	1	1	1	\$560,000
T21- Nova LFS 2NVYL82S943000005	1	1	1	1	1	1	1	1	1	1	\$560,000
T22- Nova LFS 2NVYL82S443000168	1	1	1	1	1	1	1	1	1	1	\$560,000
T23- Nova LFS 2NVYL82S643000169	1	1	1	1	1	1	1	1	1	1	\$560,000
T24- Nova LFS 2NVYL82S243000170	1	1	1	1	1	1	1	1	1	1	\$560,000
T25- Nova LFS 2NVYL82U253000110	1	1	1	1	1	1	1	1	1	1	\$560,000
T26- Nova LFS 2NVYL82U453000111	1	1	1	1	1	1	1	1	1	1	\$560,000
T27- Nova LFS 2NVYL82U653000112	1	1	1	1	1	1	1	1	1	1	\$560,000
T28- MCI Classic 2AVYT82JBL3000138	1	1	1	1	1	1	-	-	-	-	\$560,000
T29- MCI Classic 2AVYT82J6L3000140	1	1	1	1	1	1	-	-	-	-	\$560,000
T30- MCI Classic 2AVYT82JXL3000142	1	1	1	1	1	1	1	-	-	-	\$560,000
T31- MCI Classic 2AVYT82J6L3000171	1	1	1	1	1	1	1	-	-	-	\$560,000
T32- MCI Classic 2AVYT82J9L3000181	1	1	1	1	1	1	1	-	-	-	\$560,000
T33- MCI Classic 2AVYT82J0L3000182	1	1	1	1	1	1	1	-	-	-	\$560,000
T34- MCI Classic 2AVYT82J5L3000226	1	1	1	1	1	1	1	-	-	-	\$560,000
T35- MCI Classic 2AVYT82J0L3000232	1	1	1	1	1	1	1	-	-	-	\$560,000
T36- Nova LFS 2NVYL82U283000354	1	1	1	1	1	1	1	1	1	1	\$560,000
T37- Nova LFS 2NVYL82U483000355	1	1	1	1	1	1	1	1	1	1	\$560,000
T38- Nova LFS 2NVYL82U683000356	1	1	1	1	1	1	1	1	1	1	\$560,000
T39- Nova LFS 2NVYL82U883000357	1	1	1	1	1	1	1	1	1	1	\$560,000

211
APPENDIX F
TABLE 5

CITY OF PETERBOROUGH
INVENTORY OF CAPITAL ASSETS
TRANSIT SERVICES

BUSES Type of Bus	# of Buses										UNIT COST (\$/bus)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
T40- Nova LFS 2NVYL82UX83000358	1	1	1	1	1	1	1	1	1	1	\$560,000
T41- Nova LFS 2NVYL82U683000423	1	1	1	1	1	1	1	1	1	1	\$560,000
T42- Nova LFS 2NVYL82U883000424	1	1	1	1	1	1	1	1	1	1	\$560,000
T43- Nova LFS 2NVYL82UX83000425	1	1	1	1	1	1	1	1	1	1	\$560,000
T44- Nova LFS 2NVYL82U183000426	1	1	1	1	1	1	1	1	1	1	\$560,000
T45- Nova LFS 2NVYL82U383000427	1	1	1	1	1	1	1	1	1	1	\$560,000
T46- Nova LFS 2NVYL82U	1	1	1	1	1	1	1	1	1	1	\$560,000
T47- Nova LFS 2NVYL82U	1	1	1	1	1	1	1	1	1	1	\$560,000
T48- Nova LFS 2NVYL82U	1	1	1	1	1	1	1	1	1	1	\$560,000
T49- Nova LFS 2NVYL82U	1	1	1	1	1	1	1	1	1	1	\$560,000
T50- Nova LFS 2NVYL82U	1	1	1	1	1	1	1	1	1	1	\$560,000
T51-Nova LFS 2NYL82UX93000345	1	1	1	1	1	1	1	1	1	1	\$560,000
T52-Nova LFS 2NYL82U193000346	-	1	1	1	1	1	1	1	1	1	\$560,000
T53-Nova LFS 2NVYL82U393000347	-	1	1	1	1	1	1	1	1	1	\$560,000
T54-Nova LFS 2NVYL82U593000348	-	1	1	1	1	1	1	1	1	1	\$560,000
T55-Nova LFS 2NVYL82U0D3000993	-	-	-	-	-	1	1	1	1	1	\$560,000
T56-Nova LFS 2NVYL82U2D3000994	-	-	-	-	-	1	1	1	1	1	\$560,000
T57-Nova LFS 2NVYL82U4D3000995	-	-	-	-	-	1	1	1	1	1	\$560,000
T58-Nova LFS 2NVYL82U6D3000996	-	-	-	-	-	1	1	1	1	1	\$560,000
T59-Nova LFS 2NVYL82U8D3000997	-	-	-	-	-	1	1	1	1	1	\$560,000
T60-Nova LFS 2NVYL82UXD3000998	-	-	-	-	-	1	1	1	1	1	\$560,000
T61-Nova LFS	-	-	-	-	-	-	1	1	1	1	\$560,000
T62-Nova LFS	-	-	-	-	-	-	1	1	1	1	\$560,000
T63-Nova LFS	-	-	-	-	-	-	1	1	1	1	\$560,000
T64-Nova LFS	-	-	-	-	-	-	1	1	1	1	\$560,000
T65-Nova LFS	-	-	-	-	-	-	1	1	1	1	\$560,000
T66-Nova LFS	-	-	-	-	-	-	1	1	1	1	\$560,000
T67-Nova LFS	-	-	-	-	-	-	-	1	1	1	\$560,000
T68-Nova LFS	-	-	-	-	-	-	-	1	1	1	\$560,000
T69-Nova LFS	-	-	-	-	-	-	-	1	1	1	\$560,000
T70-Nova LFS	-	-	-	-	-	-	-	1	1	1	\$560,000
T71-Nova LFS	-	-	-	-	-	-	-	1	1	1	\$560,000
T7217-Nova LFS	-	-	-	-	-	-	-	-	1	1	\$560,000
T7317-Nova LFS	-	-	-	-	-	-	-	-	1	1	\$560,000
T7417-Nova LFS	-	-	-	-	-	-	-	-	1	1	\$560,000
T7517-Nova LFS	-	-	-	-	-	-	-	-	1	1	\$560,000
T7617-Nova LFS	-	-	-	-	-	-	-	-	1	1	\$560,000

212
APPENDIX F
TABLE 5

CITY OF PETERBOROUGH
INVENTORY OF CAPITAL ASSETS
TRANSIT SERVICES

BUSES Type of Bus	# of Buses										UNIT COST (\$/bus)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
27 Foot Buses											
T7717 - Arboc Spirt of Freedom	-	-	-	-	-	-	-	-	-	1	\$190,000
25 Foot Buses											
T150 - Ford Van 1FDKE37F5SHA26373	1	-	-	-	-	-	-	-	-	-	\$75,500
T151 - Ford Van 1FDKE37F7SHA26374	1	-	-	-	-	-	-	-	-	-	\$75,500
T152 - Elf 125 HD 1FDLE40F4VHB96961	1	-	-	-	-	-	-	-	-	-	\$226,600
22 Foot Buses											
T153 - Elf 122HD 1FDXE45F91HA37373	1	1	1	1	1	-	-	-	-	-	\$226,600
T154 - Elf 122HD 1FDXE45FX2HB41176	1	1	1	1	1	-	-	-	-	-	\$226,600
T155 - Elf 122HD 1FDXE45F52HB51646	1	1	1	1	1	-	-	-	-	-	\$226,600
T156 - Elf 122HD 1FDKE45F72HB51647	1	1	1	1	1	-	-	-	-	-	\$226,600
T157 - Elf 122HD 1FDXE45F92HB51648	1	1	1	1	1	-	-	-	-	-	\$226,600
T158 - Ford Goshen 1FDXE47F2XHB34730	1	1	1	1	1	1	-	-	-	-	\$125,000
T159 - Ford Goshen 1FDXE45P49DA48868	-	1	1	1	1	1	1	1	-	-	\$125,000
T160-Ford Goshen 1FDXE45P69DA48869	-	1	1	1	1	1	1	1	1	-	\$125,000
T161- Ford Goshen 1FDXE45P29DA48870	-	1	1	1	1	1	1	1	1	-	\$125,000
T162- Ford Goshen 1FDXE45P49DA48871	-	1	1	1	1	1	1	1	1	-	\$125,000
T163-Ford Goshen 1FDXE4FS7DDA42431	-	-	-	-	-	1	1	1	1	1	\$125,000
T164-Ford Goshen 1FDXE4FS9DDA4232	-	-	-	-	-	1	1	1	1	1	\$125,000
T165-Ford Goshen 1FDXE4FS0DDA42433	-	-	-	-	-	1	1	1	1	1	\$125,000
T166-Ford Goshen 1FDXE4FS2DDA42434	-	-	-	-	-	1	1	1	1	1	\$125,000
T167-Ford Goshen 1FDXE4FS4DDA42435	-	-	-	-	-	1	1	1	1	1	\$125,000
T168-Ford Goshen 1FDXE4FS6DDA42436	-	-	-	-	-	1	1	1	1	1	\$125,000
T169-Ford E350/E450	-	-	-	-	-	-	-	-	-	1	\$125,000
T170-Ford E350/E450	-	-	-	-	-	-	-	-	-	1	\$125,000
T171-Ford E350/E450	-	-	-	-	-	-	-	-	-	1	\$125,000
T172-Ford E350/E450	-	-	-	-	-	-	-	-	-	1	\$125,000
T173-Ford E350/E450	-	-	-	-	-	-	-	-	-	1	\$125,000
Total (#)	54	57	57	57	57	61	62	61	61	64	
Total (\$000)	\$26,835.6	\$28,078.0	\$28,078.0	\$28,078.0	\$28,078.0	\$29,375.0	\$30,370.0	\$29,810.0	\$30,245.0	\$30,685.0	

PROPOSED LEVEL OF SERVICE

The *DCA* s.5.2 (3) requires that in estimating the increase in need for Transit services the increased need “shall not exceed the planned level of service over the 10-year period immediately following the preparation of the background study”. For the purposes of the DC calculations, the “planned level of service” is considered to be equivalent to the ten year capital program (2019-2028) set out in the Transit section of Appendix B.

The City currently is undertaking a comprehensive study of Transit Services that will include a Transit Route Review, a Long Term Growth Strategy for the Transit System, and a plan for a Downtown Transit Terminal. Only the first part of the study, the Transit Route Review, has been initiated.

- The Transit Route Review will review the current transit route system, develop recommendations to improve service levels and reduce travel times, and encourage increased ridership as means to improve the share of City-wide travel by transit means.
- The Long-Term Growth Strategy will develop a future long-term transit vision for the City. It will define the level of investment and types of transit service that will be needed to achieve this vision. As part of the strategy, a detailed plan on how to achieve the Transit mode share target of 6 per cent of all trips made using transit, which was established in the 2012 Transportation Master Plan; including service levels, routes, operating costs and capital costs for an expanded transit fleet and support facilities. The study will also test higher and more aggressive targets for future transit ridership, in terms of feasibility (given the City’s size and density), the type of service level needed to attract even higher ridership levels, and the associated operating cost and new capital investment required over the next 30 years.
- Part Three of the study will complete the functional planning and design for the new Downtown Transit Terminal (see below), based on the findings of the previous two phases, to support longer range land use planning and provide cost estimates for a new facility to facilitate future capital budgeting and external funding requests.

Given the preliminary stages of these studies, the ten year growth-related capital program set out in the Transit section of Appendix B is based on the City’s capital budget and forecast documents and discussions with City staff.

The growth-related capital program addresses additional service frequency, additional routes, and additional vehicles required to meet existing and future demands. The

program includes substantial reorganization and expansion of transit facilities and bus fleet planned for in the City's long-term capital forecast, including:

- The Transit component of the relocation of the main public works facility, at a total cost of \$5.7 million, for which PTIF grant funding in the amount of \$1.9 million has been secured.
- The relocation and expansion of the existing transit bus barn, at a total cost of \$42 million (including \$2 million for land acquisition), for which ICIP funding in the amount of \$14.9 million has been secured. The need and cost of this project was established in part by a Transit Garage Relocation Study completed in 2027 which analysed design work for the selected location and necessary approvals allowing for construction to proceed once funding becomes available.
- Provision for the construction of a new downtown bus terminal at a cost of \$5.7 million, for which \$4.2 million in Federal and Provincial grant funding has been assumed. The approved 2012 Public Transit Operations Review (Reports USDIR12-016 and USDIR12-019) recommended construction of a new downtown terminal with a modern flow-through design in the longer term. Council, in approving Report USDIR18-002, provided funding to increase the scope of this study to include a Route Review and Long Term Transit Growth Strategy. These studies are not yet underway.
- Provision for the construction of a new satellite bus terminal at a cost of \$3.0 million, for which \$2.2 million in Federal and Provincial grant funding has been assumed. The introduction of a satellite terminals will offset savings and likely result in increased maintenance and utility costs. A better flow of bus traffic would reduce operational costs.

Additional shelters and signs will cost \$4.2 million over the 10-year period and additions to the bus fleet, both for conventional and community buses, total \$13.9 million. Grants in the amount of \$10.2 million have been identified for these works.

Altogether, the gross cost Transit capital program is \$74.5 million, of which \$33.4 million is to be funded by grants and \$41.0 million is to be funded by the City.

More detailed information on the City's Transit level of service performance measures can be found in Section 5.2 of the City's *Capital Asset Management Plan, 2016*.

ASSET MANAGEMENT STRATEGY

In addition to the 10-year Transit growth-related capital program set out in Appendix B, the City has identified the following actions, through its 2020 capital budget, to

enable existing and future assets to provide the planned level of service in a sustainable way, while managing risk, at the lowest life cycle cost:

- The replacement of the Specialized Bus Fleet, which will be used to purchase up to four new specialized transit buses in 2020. Replacement of the remaining vehicles in the fleet will follow in subsequent years contingent on ICIP grant funding (see below).
- The replacement of the Conventional Bus Fleet, which will be used to purchase up to six new conventional transit buses over the 2020-2022 period. Replacement of the remaining vehicles in the fleet will follow in subsequent years contingent on ICIP grant funding (see below) at which time opportunities to consider buses using alternative fuels will be considered.
- For the conventional bus fleet, the average age at the end of December 2019 was 8.2 years, compared to the City's target average age of 10 years. In 2008 the City purchased 13 conventional buses, which are reaching their mid-life age and major maintenance work (new engines, transmissions, and mechanical systems are beginning to fail). A bus refurbishment program targeting these mid-life vehicles can extend their life from 16 years to 18 or 20 years, and can provide a capital fund to reduce the impact of increasing maintenance costs as these components start to fail. The refurbishment of a number of buses in the Conventional Bus Fleet was included as one of 5 projects submitted as part of the City's ICIP funding intake in 2019 (see below), and will be used to upgrade up to 8 existing buses over the 2020-2022 period. Refurbishment will also include upgraded passenger and operator seating, enhanced passenger safety systems, replacement of heating and cooling systems as required.
- As part of the ITS program for Peterborough Transit, passengers will be able to receive automatic next bus arrival information delivered to their smart phones or to various wayside signs at major transit stops and terminals. In order to receive customized information for a particular transit stop, users need to enter the stop number into the application, which in turn will provide the next 2-3 bus arrival times for that particular stop. To facilitate this, stop ID numbers will need to be added to all of the transit stops across the City. In addition to the ITS program, many other jurisdictions are providing enhanced signage at transit stops to better inform customers about the bus routes that service particular stops, whether the stop is accessible or not, and how to find information about the transit system. New types of service strategies are expected to be implemented in the future including more Community Bus routes, higher frequency express routes with fewer stops, and local feeder routes that service all stops along a route. Upgrading the signage at transit stops, will allow users to better utilize the new ITS system being deployed and will help them navigate the new transit route system that will be implemented as part of the Transit Route Review.

- Peterborough Transit has two light duty vehicles for use by transit supervisory staff to support day-to-day operations including monitoring transit service delivery and responding to on-site incidents requiring investigations. The use of City owned vehicles reduces the cost of personal vehicle use. The replacement of the 2010 Chevrolet Equinox was deferred in 2017 and again in 2018. Provision for \$155,000 to replace the vehicle in 2021 and for an accessible van that can be used for on-road supervisors to monitor service, but also to shuttle drivers to relief points, and assist with pick ups of disabled passengers who cannot be accommodated on full conventional buses, has been made in the 2020 capital budget and forecast.
- Phase 2 of the Transit ITS program will build upon the technology platform developed in Phase 1, adding additional Intelligent Transportation infrastructure to the transit fleet. In 2018, funding was used to add cameras to the existing transit fleet. Phase 2 will see exterior collision warning sensors added in 2021 to warn drivers of hazards that may not be visible or hidden in blind spots. New technologies for collision warning systems also provide advance warning to drivers of potential conflicts with other vehicles or pedestrians. Noticeable benefits have been seen in buses equipped with this technology in collision reductions with pedestrians and other vehicles at intersections where blind spots, crosswalks, and busy turning movements contribute to higher collision risks. Provision for \$700,000 to fund this project has been made in the 2020 capital budget and forecast.
- The Accessible Transit Stope project continues the annual program to reconstruct public transit stops to be fully accessible and compliant with AODA Transportation and Built Environment standards. The conventional transit system is currently supported by over 620 public transit stops, many of which are not accessible to people with disabilities. Although progress has been made to achieve a fully accessible transit fleet in 2017, many transit stops continue to offer barriers such as full height curbs, steps, and grass boulevards that make the stop not accessible to passengers using mobility devices. In 2017 and 2018, approximately 140 transit stops were upgraded to be fully accessible as part of the Public Transit Infrastructure Funding received. In 2020 the upgrade program will resume. It is estimated that 65% of the 620 transit stops in the city are fully accessible, with approximately 220 requiring additional work. A program of further transit stop accessibility upgrades will be included as part of future ICIP applications (see below), once the Transit Route Review and Long Term Growth study is complete and upgrades can be prioritized based on the reconfigured route system.

Procurement measures intended to achieve the proposed level of service will continue to be governed through the City's Procurement Policy By-Law (By-Law Number 18-084 (As Amended by 19-035)).

More detailed information on the City's Transit asset management strategy can be found in Section 6.3 of the City's *Capital Asset Management Plan, 2016*.

FINANCIAL STRATEGY

Non-infrastructure solutions for funding and financing future yearly expenditures for Transit include the forthcoming comprehensive study of Transit Services.

Transit capital expenditures, including maintenance, renewal and rehabilitation, disposal, and expansion are mainly funded from a combination of development charges, grants and subsidies, and the capital levy. Transit operating costs are mainly funded from a combination of farebox revenue and the tax levy. The City will continue to rely extensively on Federal and Provincial grants to fund its Transit program, including:

- Provincial Gas Tax, which is dedicated Transit funding and is utilized primarily to fund operations. Capital funding is permitted under the terms of the funds but is rarely used for such purposes in Peterborough.
- Federal Gas Tax, which is intermittently used to fund Transit capital;
- Public Transit Infrastructure Fund (PTIF) grants, which are dedicated grants for Transit capital and includes \$5.4 million in funds through the 2017 PTIF; and
- Investing in Canada Infrastructure Plan (ICIP) - Transit Stream, which are dedicated grants for Transit capital. In March 2019, the City was advised of its receipt of ICIP - Transit Stream allocation of \$57.1 million over the 2020 to 2027 period. Federal contributions of 40 per cent of eligible project costs and Provincial contributions of 33 per cent must be matched by City contributions of 27 per cent to be eligible for funding.

Yearly expenditure forecasts that are proposed to provide for the eventual replacement of new assets (both DC eligible and non-DC eligible components) are set out in Table 7.

Operating cost impacts associated with new Transit infrastructure are set out in Appendix E.

The total annual funding requirement for Transit should be considered within the context of the City's projected growth. Over the next ten years (to 2028) the City is projected to increase by approximately 5,300 households, which represents a 15 per cent increase over the existing base. In addition, the City will also add roughly 4,000

218
APPENDIX F
TABLE 7

Table 7 - Cost Provision for New Asset Replacement														
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	TOTAL		
Non-DC Eligible	\$ -	\$ 226,459	\$ 389,924	\$ 932,174	\$ 1,125,089	\$ 1,125,089	\$ 1,150,989	\$ 1,150,989	\$ 1,202,188	\$ 1,202,188	\$ 1,202,188	\$ 9,707,277		
DC Eligible	\$ -	\$ 400,973	\$ 453,624	\$ 552,552	\$ 614,687	\$ 614,687	\$ 615,664	\$ 615,664	\$ 617,595	\$ 617,595	\$ 617,595	\$ 5,720,636		

new employees that will result in approximately 248,000 square metres of additional non-residential building space. This growth will have the effect of increasing the overall assessment base and additional fare 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 City's reserves for the future replacement of these assets.

As such, the calculated annual provisions identified above are considered to be financially sustainable as it is expected that the increased capital asset management requirements can be absorbed by the tax and Transit fare box payer base over the long-term.

More detailed information on the City's Transit financial strategy, including external trends, risk management, and the impact of funding shortfalls can be found in Section 7 and other sections of the City's *Capital Asset Management Plan, 2016*.

For reference and comparison purposes, extracts from the City's General Levy Reports showing expenditures and revenues for 2017 and 2018 are available.