

DEVELOPMENT CHARGES BACKGROUND STUDY

City of Niagara Falls



HEMSON Consulting Ltd.

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EXECUTIVE SUMMARY

Hemson Consulting Ltd. was retained by the City of Niagara Falls to complete a Development Charges (DC) Background Study. This Background Study provides the basis and background required to update the City's development charges to accurately reflect the future servicing needs of new development.

STUDY CONSISTENT WITH DEVELOPMENT CHARGES LEGISLATION

- This study calculates development charges for the City of Niagara Falls in compliance with the provisions of the *Development Charges Act, 1997 (DCA)* and its associated regulation *O. Reg. 82/98*.
- The City's current Development Charges By-Law 2009-120, expires on July 19, 2014. Council must pass a new by-law in order to continue to levy development charges.
- The City must continue implementing development charges to help fund capital projects related to development throughout Niagara Falls so that development continues to be serviced in a fiscally responsible manner. The calculated changes to the development charges rates are required in order to reflect the revised costs associated with new infrastructure requirements.
- The *DCA* and *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 residential and non-residential development anticipated in the City;
 - The average capital service levels provided in the City over the ten year period immediately preceding the preparation of the background study;

- A review of future capital projects, including an analysis of gross expenditures, funding sources, and net expenditures incurred or to be incurred by the City to provide for the expected development, including the determination of the DC eligible and non-DC-eligible 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-law would relate.
- This report identifies the capital costs attributable to the development that is forecast to occur in the City. The costs are apportioned to types of development (residential, non-residential) in a manner that reflects the increase in the need for each service.

ALL SERVICES WITH DEVELOPMENT-RELATED COSTS INCLUDED IN THE ANALYSIS

- The following services have been included in the development charge analysis:
 - General Government
 - Library
 - Fire Protection
 - Parks and Recreation
 - Public Works and Fleet
 - Transit Services
 - Roads and Related
 - Sidewalks
 - Water
 - Sanitary Sewerage, and
 - Storm Water Management

- The development charges discussed in this report are calculated on a City-wide uniform basis. A non-residential area-specific charge is calculated for development occurring within the Core Tourist Area and Outside of the Core Tourist Area.

DEVELOPMENT FORECAST

- In collaboration with City staff, a development forecast has been created for the purposes of this DC Background Study. The growth projections are primarily based upon the Region of Niagara Sustainable Community Policies: Amendment 2-2009 to the Official Plan for the Niagara Planning Area, as amended November 2012.
- The City is forecast to add approximately 3,250 new households in the 10-year planning period from 2014-2023. This translates into a population of roughly 9,243 in the newly constructed units. In the same ten-year time frame, it is anticipated that the City will see an increase of 3,090 new employees that will be accommodated in 194,750 square metres of new non-residential building space.
- The following is a summary of the projected growth for the City:

Development Forecast

Residential Forecast	2013 Estimate	DC Study Planning Horizon 2014 - 2023	
		Growth	Total at 2023
Residential			
Total Occupied Dwellings	33,973	3,250	37,223
Total Population			
Census	84,127	6,355	90,482
<i>Population In New Dwellings</i>		9,243	
Non-Residential			
Employment	41,658	3,090	44,748
<i>Core Tourist Area</i>		1,853	
<i>Outside Core Tourist Area</i>		1,238	
Non-Residential Building Space (sq.m.)		194,750	
<i>Core Tourist Area</i>		101,888	
<i>Outside Core Tourist Area</i>		92,863	

THE CITY HAS AN EXTENSIVE DEVELOPMENT-RELATED CAPITAL PROGRAM FOR THE PROVISION OF ELIGIBLE SERVICES

General Services

- City staff, in collaboration with Hemson Consulting, has developed a development-related capital program identifying projects that are required to service anticipated development. The development-related capital programs for general services are based on a ten-year planning period from 2014 to 2023.
- The gross cost of the City's development-related capital program for general services amounts to \$22.97 million and provides for a wide range of infrastructure additions. Of the \$22.97 million, approximately \$10.14 million has been identified as eligible for recovery through development charges over the 2014–2023 planning period.
- The *DCA* requires that development-related net capital costs for general services be reduced by 10 per cent when 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, \$1.10 million is identified as the required 10 per cent reduction.
- Non-development charges funding for replacement portions of the capital program and for portions of development-related capital projects that benefit existing development have been identified. Replacement or benefit to existing shares amount to \$1.51 million.
- A share of the capital program is deducted for portions of projects that relate to development in the post-2023 period, which will be considered for recovery in future development charges studies subject to service level considerations. In total, \$5.19 million falls within this definition.
- Available DC reserve funds have been identified in each capital program to fund development-related infrastructure and amount to \$5.02 million.
- The following is a summary of the development-related capital program for general services:

Summary of Capital Forecast for General Services

Service	Gross Cost (\$000)	DC Eligible Cost For Recovery (\$000)
Library	\$932.0	\$341.5
Fire Protection	\$4,845.0	\$1,387.6
Parks and Recreation	\$8,859.8	\$7,002.9
Public Works and Fleet	\$446.0	\$166.6
Transit	\$7,114.5	\$1,111.8
General Government	\$770.0	\$133.5
Total	\$22,967.3	\$10,143.9

- Details regarding the capital programs for each individual service are provided in Appendix B of this report.

Engineered Services

- The development-related capital program for roads, sidewalks, water, sanitary sewer, and storm water management is also based on a ten-year planning period, 2014-2023.
- The City-wide capital program for engineered services amounts to \$62.22 million, of which \$28.29 million is recoverable through development charges. Full details regarding the engineered services can be found in Appendix C.

DEVELOPMENT CHARGES ARE CALCULATED WITH REFERENCE TO THE *DCA*

- Development charge rates have been established under the parameters and limitations of the *DCA*. This study provides the rationale and basis for the calculated rates.
- The calculated charges are the maximum charges the City may adopt. Lower charges can be approved; however, this will require a reduction in the capital plan and reduced service levels or financing from other sources, most likely property taxes.

- The fully calculated residential charges are recommended to vary by unit type, reflecting the difference in occupancy patterns expected in various unit types and the associated differences in demand that would be placed on City services.
- The following is a summary of the fully calculated development charges:

Calculated Residential Development Charges

Service	Adjusted Charge Per Capita	Residential Charge By Unit Type (1)		
		Singles & Semis	Rows & Other Multiples	Apartments
General Government	\$11.41	\$37	\$20	\$18
Library	\$37.14	\$122	\$65	\$60
Fire Protection	\$124.28	\$407	\$216	\$200
Parks And Recreation	\$764.37	\$2,506	\$1,331	\$1,230
Public Works & Fleet	\$14.08	\$46	\$25	\$23
Transit Services	\$105.86	\$347	\$184	\$170
Roads And Related	\$771.85	\$2,531	\$1,344	\$1,242
Subtotal Municipal Wide Services	\$1,828.99	\$5,996	\$3,185	\$2,943
Sidewalks	\$74.66	\$245	\$130	\$120
Water	\$107.73	\$353	\$188	\$173
Sanitary Sewer	\$913.84	\$2,996	\$1,591	\$1,470
Storm Water Management	\$521.50	\$1,710	\$908	\$839
Subtotal Urban Area Services	\$1,617.73	\$5,304	\$2,817	\$2,602
TOTAL CHARGE PER UNIT	\$3,446.72	\$11,300	\$6,002	\$5,545
(1) Based on Persons Per Unit Of:		3.28	1.74	1.61

**Calculated Non-Residential Development Charges
Outside Core Tourist Area**

Service	Non-Residential Charge Per Square Metre Outside Core Tourist Area	
	Unadjusted Charge	Adjusted Charge
General Government	\$0.17	\$0.19
Library	\$0.00	\$0.00
Fire Protection	\$1.79	\$1.98
Parks And Recreation	\$0.00	\$0.00
Public Works & Fleet	\$0.21	\$0.23
Transit Services	\$1.43	\$1.69
Roads And Related	\$13.36	\$12.27
Subtotal Municipal Wide Services	\$16.96	\$16.36
Sidewalks	\$0.98	\$1.00
Water	\$1.62	\$1.44
Sanitary Sewer	\$12.27	\$12.20
Storm Water Management	\$7.04	\$6.96
Subtotal Urban Area Services	\$21.91	\$21.60
TOTAL CHARGE PER SQUARE METRE	\$38.87	\$37.96

**Calculated Non-Residential Development Charges
Inside Core Tourist Area**

Service	Non-Residential Charge Per Square Metre Core Tourist Area	
	Unadjusted Charge	Adjusted Charge
General Government	\$0.17	\$0.19
Library	\$0.00	\$0.00
Fire Protection	\$1.79	\$1.98
Parks And Recreation	\$0.00	\$0.00
Public Works & Fleet	\$0.21	\$0.23
Transit Services	\$1.43	\$1.69
Roads And Related	\$13.36	\$12.27
Subtotal Municipal Wide Services	\$16.96	\$16.36
Sidewalks	\$1.40	\$1.36
Water	\$2.83	\$3.00
Sanitary Sewer	\$0.69	\$0.67
Storm Water Management	\$1.77	\$1.91
Subtotal Urban Area Services	\$6.69	\$6.94
TOTAL CHARGE PER SQUARE METRE	\$23.65	\$23.30

NEWLY CALCULATED RATES COMPARED WITH CURRENT RATES

- The fully calculated residential charge for a single or semi-detached unit in Niagara Falls is \$11,300, which represents an eight per cent increase from the City's current charge of \$10,509.
- The calculated non-residential charge outside the Core Tourist Area in Niagara Falls of \$37.96 per square metre of gross floor area represents a 24 per cent decrease from the City's current non-residential charge of \$50.11 per square metre.
- The calculated charge per square metre of new non-residential development inside the Core Tourist Area of Niagara Falls is \$23.30, which represents a 13 per cent increase for the City's current charge of \$20.59 per square metre.

DEVELOPMENT CHARGES BY-LAW PRACTICES AND COLLECTION POLICIES

- 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-law proposed for adoption.
- The proposed draft by-law sets out the rules to determine development charges applicable in any particular case. Rules for exemptions are also outlined in the proposed draft by-law.
- It is recommended that Council adopt the development-related capital program included in this background study, subject to annual review through the City's normal capital budget process.

I INTRODUCTION

The *Development Charges Act, 1997 (DCA)* and its associated *Ontario Regulation 82/98 (O. Reg. 82/98)* allow municipalities in Ontario to recover development-related capital costs from new development. The City of Niagara Falls Development Charges Background Study is presented as part of a process to establish a development charges by-law that complies with this legislation.

The City of Niagara Falls is experiencing residential growth pressure and is also an attractive location for a variety of non-residential development. The anticipated growth in Niagara Falls will increase the demand on all City services. The City wishes to implement development charges to fund capital projects related to growth in Niagara Falls so that development continues to be serviced in a fiscally responsible manner.

When a development charges by-law is proposed, the *DCA* and *O. Reg. 82/98* require that a development charges background study be prepared in support of the proposed changes with reference to:

- A forecast of the amount, type and location of development anticipated in the City;
- The average capital service levels provided in the City over the ten-year period immediately preceding the preparation of the background study;
- A review of 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 identifies the development-related net capital costs attributable to development that is forecast to occur in the City. The costs are apportioned to types of development (residential and non-residential) in a manner that reflects the

increase in the need for each service attributable to each type of development. The study therefore calculates development charges for each type of development.

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

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

Section II designates the services for which the development charges are calculated and the areas within the City to which the development charges will apply. It also briefly reviews the methodologies that have been used in this background study.

Section III presents a summary of the forecast residential and non-residential development which is expected to occur within the City over a ten-year period from 2014 to 2023.

Section IV summarizes the ten-year historic average capital service levels that have been attained in the City, which form the basis for the development charges calculations.

In Section V, the development-related capital forecast that has been developed by various City departments is reviewed.

Section VI summarizes the calculation of applicable development charges and the resulting calculated development charges by class and type of development. This section also provides a comparison of calculated total development charges rates for the City with rates currently being levied.

Section VII provides a discussion of other issues and considerations including by-law rules and policies.

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

Several key steps are required when calculating any development charge, however, specific circumstances arise in each municipality which must be reflected in the calculation. In this study, we have tailored our approach to accommodate the City of Niagara Falls. The approach to the calculated development charges is focused on providing a reasonable alignment of development-related costs with the development that necessitates them. This study uses both a City-wide and area-specific approach for various services provided by the City of Niagara Falls. The Background Study provides an update to the historic service levels and the cost of providing future development-related capital infrastructure.

A. CITY-WIDE DEVELOPMENT CHARGES ARE PROPOSED

The DCA provides municipalities with flexibility to define services that will be included in the development charges by-laws, provided that its other provisions, as well as those of *O. Reg. 82/98*, are met. The DCA also requires that the by-laws designate the areas within which DCs shall be imposed. The development charges may apply to all lands in a municipality or to other designated development areas as specified in the by-laws.

For both general and engineered services, a range of capital infrastructure is available throughout the City, and all Niagara Falls residents and employees have access to this infrastructure. As new development occurs, new infrastructure will be needed in order to maintain overall service levels in the City. A widely accepted method of sharing the development-related capital costs for such City services is to apportion them over all anticipated growth.

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

B. AREA-SPECIFIC DEVELOPMENT CHARGES ARE PROPOSED

Non-residential development charges in the City of Niagara Falls have been calculated on an area-specific basis, differentiating development anticipated both within and outside of the Core Tourist area. Full details of the non-residential area specific charges can be found in Appendix C, including a map of the applicable lands.

C. KEY STEPS WHEN DETERMINING DEVELOPMENT CHARGES FOR FUTURE DEVELOPMENT-RELATED PROJECTS

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

1. Development Forecast

The first step in the methodology requires that a development forecast be prepared for the ten-year study period from 2014 to 2023. The forecast of the future residential and non-residential development used in this study is based on the Region of Niagara Sustainable Community Policies: Amendment 2-2009 to the Official Plan for the Niagara Planning Area, as amended November 2012, as well as discussions with City staff.

For the residential portion of the forecast, the total Census change in 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 it.

2. Service Categories and Historic 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.)

Historic ten-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 historic service levels used in this study have been calculated based on the period from 2004 to 2013.

For the engineered services of water, sidewalks, sanitary sewer, and storm water management services, historic 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 historic ten-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 ten per cent for all services except engineered services, such as roads and related (*DCA, s. 5. (1) 8*). The ten 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. In the City of Niagara Falls, the allocation is based on the projected changes in population and employment over the planning periods.

The residential component of the development charges is applied to different housing types based on average occupancy factors. The non-residential component is applied on the basis of gross building space in square metres.

5. Final Adjustment

The final determination of the development charges results from adjustments made to development-related net capital costs for each service and sector resulting from a cash flow analysis that takes account of 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*.

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 Region of Niagara Sustainable Community Policies: Amendment 2-2009 to the Official Plan for the Niagara Planning Area, as amended November 2012. The City is required to conform to the growth targets as contained in the policies

A ten year development forecast, from mid-year 2014 to mid-year 2023, has been used for all the development charges eligible services in the City. In the 10 year planning horizon, it is anticipated that the City will add an average of 325 new residential units per year, for a total of 3,250, which can accommodate a population of 9,243 in these new dwelling units. In the same planning horizon, it is anticipated that the City will see a total GFA growth of 194,750 square metres of new non-residential building space with an accompanying employment growth of 3,090 from 2014-2023.

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

TABLE 1

**CITY OF NIAGARA FALLS
SUMMARY OF RESIDENTIAL AND NON-RESIDENTIAL
DEVELOPMENT FORECAST**

Residential Forecast	2013 Estimate	DC Study Planning Horizon 2014 - 2023	
		Growth	Total at 2023
Residential			
Total Occupied Dwellings	33,973	3,250	37,223
Total Population			
Census	84,127	6,355	90,482
<i>Population In New Dwellings</i>		9,243	
Non-Residential			
Employment	41,658	3,090	44,748
<i>Core Tourist Area</i>		1,853	
<i>Outside Core Tourist Area</i>		1,238	
Non-Residential Building Space (sq.m.)		194,750	
<i>Core Tourist Area</i>		101,888	
<i>Outside Core Tourist Area</i>		92,863	

IV HISTORIC 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 ten-year period immediately preceding the preparation of the background study, on a service-by-service basis.

For non-engineered services (Library Services, Parks and Recreation, etc.) the legislative requirement is met by documenting service levels for the preceding ten years: in this case, for the period from 2004 to 2013. Typically, service levels are measured as a ratio of inputs per capita or inputs per population and employment. With engineered services such as water and sanitary sewer, engineering standards are used in lieu of inputs per capita.

O. Reg. 82/98 requires that, when defining and determining historic 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 NIAGARA FALLS
SUMMARY OF AVERAGE HISTORIC SERVICE LEVELS 2004 - 2013

Service	2004 - 2013 Service Level Indicator
1.0 LIBRARY	\$420.88 per capita
Buildings	\$215.24 per capita
Land	\$6.23 per capita
Materials	\$144.54 per capita
Furniture And Equipment	\$54.54 per capita
Library Van	\$0.33 per capita
2.0 FIRE PROTECTION	\$187.84 per population & employment
Fire Halls	\$70.20 per population & employment
Other Buildings/Structures	\$11.24 per population & employment
Land	\$20.02 per population & employment
Personal Firefighter Equipment	\$6.43 per population & employment
Equipment	\$6.58 per population & employment
Vehicles	\$73.37 per population & employment
3.0 PARKS AND RECREATION	\$1,653.00 per capita
Major Facilities & Land	\$1,043.78 per capita
Parkland	\$609.22 per capita
4.0 PUBLIC WORKS & FLEET	\$231.13 per population & employment
Buildings	\$88.51 per population & employment
Land	\$20.86 per population & employment
Fleet & Equipment	\$121.76 per population & employment
5.0 TRANSIT SERVICES	\$177.29 per population & employment
Buildings	\$61.22 per population & employment
Land	\$4.84 per population & employment
Shelters	\$3.38 per population & employment
Equipment	\$6.97 per population & employment
Vehicles	\$100.88 per population & employment
6.0 ROADS AND RELATED	\$6,706.57 per population & employment
Roads	\$4,933.85 per population & employment
Bridges & Culverts	\$884.09 per population & employment
Traffic Signals	\$77.04 per population & employment
Sidewalks	\$811.36 per population & employment
Traffic Hardware	\$0.23 per population & employment

V DEVELOPMENT-RELATED CAPITAL FORECAST

The *DCA* requires that the Council of a municipality 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 ten-year period from 2014 to 2023. 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 \$22.97 million. There have been no grants or subsidies identified to offset the cost of the capital program. Therefore, the full \$22.97 million is identified as the total municipal cost brought forth for the development charges calculation.

TABLE 3

CITY OF NIAGARA FALLS
 SUMMARY OF DEVELOPMENT-RELATED CAPITAL PROGRAM
 FOR GENERAL SERVICES 2014 - 2023
 (in \$'000)

Service	Gross Cost	Grants/ Subsidies	Municipal Cost	Total Net Capital Program														
				2014	2015	2016	2017	2018	2019	2020	2021	2022	2023					
1.0 LIBRARY	\$932.0	\$0.0	\$932.0	\$104.9	\$91.9	\$91.9	\$91.9	\$91.9	\$91.9	\$91.9	\$91.9	\$91.9	\$91.9	\$91.9	\$91.9	\$91.9	\$91.9	\$91.9
1.1 Material Acquisitions	\$919.0	\$0.0	\$919.0	\$91.9	\$91.9	\$91.9	\$91.9	\$91.9	\$91.9	\$91.9	\$91.9	\$91.9	\$91.9	\$91.9	\$91.9	\$91.9	\$91.9	\$91.9
1.2 Equipment	\$13.0	\$0.0	\$13.0	\$13.0	\$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
2.0 FIRE PROTECTION	\$4,845.0	\$0.0	\$4,845.0	\$1,000.0	\$0.0	\$3,845.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
2.1 Buildings, Land & Furnishings	\$4,210.0	\$0.0	\$4,210.0	\$1,000.0	\$0.0	\$3,210.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
2.2 Vehicles	\$500.0	\$0.0	\$500.0	\$0.0	\$0.0	\$500.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
2.3 Equipment & Other	\$135.0	\$0.0	\$135.0	\$0.0	\$0.0	\$135.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
3.0 PARKS AND RECREATION	\$8,859.8	\$0.0	\$8,859.8	\$787.0	\$842.0	\$1,087.0	\$2,092.0	\$717.0	\$767.0	\$517.0	\$517.0	\$517.0						
3.1 Indoor Recreation Facilities	\$6,669.8	\$0.0	\$6,669.8	\$517.0	\$517.0	\$517.0	\$2,017.0	\$517.0	\$517.0	\$517.0	\$517.0	\$517.0	\$517.0	\$517.0	\$517.0	\$517.0	\$517.0	\$517.0
3.2 Parkland & Park Facilities	\$2,190.0	\$0.0	\$2,190.0	\$270.0	\$325.0	\$570.0	\$75.0	\$200.0	\$250.0	\$250.0	\$250.0	\$250.0	\$250.0	\$250.0	\$250.0	\$0.0	\$0.0	\$0.0
4.0 PUBLIC WORKS & FLEET	\$446.0	\$0.0	\$446.0	\$0.0	\$0.0	\$220.0	\$150.0	\$20.0	\$49.0	\$49.0	\$7.0	\$7.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
4.1 Fleet and Equipment	\$446.0	\$0.0	\$446.0	\$0.0	\$0.0	\$220.0	\$150.0	\$20.0	\$49.0	\$49.0	\$7.0	\$7.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
5.0 TRANSIT SERVICES	\$7,114.5	\$0.0	\$7,114.5	\$3,414.5	\$700.0	\$0.0	\$500.0	\$0.0	\$0.0	\$500.0	\$1,000.0	\$1,000.0	\$500.0	\$500.0	\$500.0	\$500.0	\$500.0	\$500.0
5.1 Facilities	\$4,414.5	\$0.0	\$4,414.5	\$3,414.5	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$1,000.0	\$1,000.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
5.2 Buses	\$2,500.0	\$0.0	\$2,500.0	\$0.0	\$500.0	\$0.0	\$500.0	\$0.0	\$500.0	\$500.0	\$0.0	\$0.0	\$500.0	\$500.0	\$500.0	\$500.0	\$500.0	\$500.0
5.3 Other Transit Infrastructure	\$200.0	\$0.0	\$200.0	\$0.0	\$200.0	\$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
6.0 GENERAL GOVERNMENT	\$770.0	\$0.0	\$770.0	\$124.5	\$89.5	\$69.5	\$69.5	\$69.5	\$69.5	\$69.5	\$69.5	\$69.5	\$69.5	\$69.5	\$69.5	\$69.5	\$69.5	\$69.5
6.1 Development-Related Studies	\$770.0	\$0.0	\$770.0	\$124.5	\$89.5	\$69.5	\$69.5	\$69.5	\$69.5	\$69.5	\$69.5	\$69.5	\$69.5	\$69.5	\$69.5	\$69.5	\$69.5	\$69.5
TOTAL - 10 YEAR GENERAL SERVICES	\$22,967.3	\$0.0	\$22,967.3	\$5,430.9	\$1,723.4	\$5,313.4	\$2,903.4	\$698.4	\$1,477.4	\$1,935.4	\$1,428.4	\$678.4	\$1,178.4	\$1,178.4	\$1,178.4	\$1,178.4	\$1,178.4	\$1,178.4



Of this \$22.97 million net capital cost, 39 per cent, or \$8.86 million is related to Parks and Recreation Projects. The most significant project in the capital program recovers for the municipal debt incurred in relation to the Gale Centre. The remainder of the capital program fund various parkland and park facilities development.

The next largest capital program belongs to Transit Services. This capital program totals \$7.11 million and recovers for the new bus maintenance and storage facility, an expansion to the existing facility, as well as five additional buses to serve new development in the City.

The capital program for Fire Protection is recovering for the land, construction costs, and an additional vehicle for a new Station 7 in 2016. The program amounts to \$4.85 million.

The Library capital program includes a provision for additional collection material acquisitions to preserve the historic level of service in Niagara Falls from the previous ten years going forward, as well as an equipment acquisition. The program amounts to \$932,000.

The capital program associated with General Government relates to the provision of development-related studies and amounts to \$770,000 over the next ten years. These studies include additional development charges studies, a Fire Master Plan, land use intensification Fiscal Impact Analysis study and various secondary plans.

The remainder of the City's development-related capital program relates to Public Works and Fleet. The total municipal cost of \$446,000 provides for various fleet and equipment acquisitions.

The capital forecast incorporates those projects identified to be related to development anticipated in the next ten 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 2014 – 2023 planning period. In addition to these reductions, the amounts shown in Table 3 have not been reduced by ten 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 ENGINEERED SERVICES

Table 4 provides the development-related capital recoveries for the engineered services of roads, sidewalks, water, sanitary sewer, and storm water management. In Niagara Falls, the total engineered capital program from 2014-2023 is \$62.22 million. Roads projects account for 34 per cent, or \$21.33 million, of the total engineered capital program. Scheduled roads projects in the City include road works, widening, road rehabilitations, as well as fifteen environmental assessment studies.

Storm water management projects account for 26 per cent of the total engineered services capital program. The total \$16.05 million provides for various road improvements, storm water management pond projects, oversizing, construction, sewer separations in the Core Tourist Area, as well as a Draining and Watershed Master Plan.

The sanitary sewer projects total over \$15.17 million. This program provides for the continued debt recovery from the cost to upgrade and expand the Grassy Brook/Garner Southwest Pumping Station, the replacement and enlargement of the Cattell Drive Sewer Diversion, as well as various sanitary sewers, pumping stations, and growth-related studies.

The water works total \$7.16 million, or 12 per cent of the total program. Water-related projects include storage, supply, distribution, and two water related studies.

Finally, the sidewalks projects add another \$2.52 million to the forecast. These projects seek to make improvements to existing roads within the City of Niagara Falls.

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

TABLE 4

**CITY OF NIAGARA FALLS
SUMMARY OF DEVELOPMENT-RELATED CAPITAL PROGRAM
FOR ENGINEERED SERVICES 2014 - 2031
(in \$000)**

Service	Gross Cost	Grants / Subsidies	Net Municipal Cost
1.0 ROADS AND RELATED	\$21,329.1	\$0.0	\$21,329.1
1.1 Roads - City-Wide	\$21,329.1	\$0.0	\$21,329.1
2.0 SIDEWALKS	\$2,518.0	\$0.0	\$2,518.0
2.1 Sidewalks - Outside Core Tourist Area	\$1,864.0	\$0.0	\$1,864.0
2.2 Sidewalks - Core Tourist Area	\$654.0	\$0.0	\$654.0
3.0 WATER	\$7,162.9	\$0.0	\$7,162.9
3.1 Watermains - Outside Core Tourist Area	\$3,994.4	\$0.0	\$3,994.4
3.2 Watermains - Core Tourist Area	\$2,813.5	\$0.0	\$2,813.5
3.3 Water Studies	\$355.0	\$0.0	\$355.0
4.0 SANITARY SEWER SERVICES	\$15,167.0	\$0.0	\$15,167.0
4.1 Sanitary Sewers - Outside Core Tourist Area	\$14,377.9	\$0.0	\$14,377.9
4.2 Sanitary Sewers - Core Tourist Area	\$339.1	\$0.0	\$339.1
4.3 Sanitary Sewer Studies	\$450.0	\$0.0	\$450.0
5.0 STORM WATER MANAGEMENT SERVICES	\$16,048.0	\$0.0	\$16,048.0
5.1 Storm Water Management - Outside Core Tourist Area	\$13,236.5	\$0.0	\$13,236.5
5.2 Storm Water Management - Core Tourist Area	\$2,361.5	\$0.0	\$2,361.5
5.3 Storm Water Management Studies	\$450.0	\$0.0	\$450.0
TOTAL - ENGINEERED SERVICES CAPITAL PROGRAM	\$62,224.9	\$0.0	\$62,224.9

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 ten years. However, not all of the capital costs are to be recovered from new development by way of development charges. Table 5 shows that \$1.51 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.

TABLE 5

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

10 Year Growth in Population in New Units	9,243
10 Year Growth in Square Feet	194,750

Service	Development-Related Capital Program (2014 - 2023)							Non-Residential Share %	Non-Residential Share (\$000)	
	Net Municipal Cost (\$000)	Replacement & Benefit to Existing (\$000)	Required Service Discount (\$000)	Available DC Reserves (\$000)	Post-2023 Benefit (\$000)	Total DC Eligible Costs for Recovery (\$000)	Residential Share %			Residential Share (\$000)
1.0 LIBRARY	\$932.0	\$0.0	\$93.2	\$497.3	\$0.0	\$341.5	100%	\$341.5	0%	\$0.00
Unadjusted Development Charge Per Capita										
Unadjusted Development Charge Per Sq.M										\$0.00
2.0 FIRE PROTECTION	\$4,845.0	\$0.0	\$0.0	\$2,141.9	\$1,315.5	\$1,387.6	75%	\$1,039.9	25%	\$347.66
Unadjusted Development Charge Per Capita										\$1.79
Unadjusted Development Charge Per Sq.M										\$0.00
3.0 PARKS AND RECREATION	\$8,859.8	\$500.0	\$319.0	\$1,037.8	\$0.0	\$7,002.9	100%	\$7,002.9	0%	\$0.00
Unadjusted Development Charge Per Capita										\$0.00
Unadjusted Development Charge Per Sq.M										\$0.00
4.0 PUBLIC WORKS & FLEET	\$446.0	\$0.0	\$0.0	\$279.4	\$0.0	\$166.6	75%	\$124.9	25%	\$41.74
Unadjusted Development Charge Per Capita										\$0.21
Unadjusted Development Charge Per Sq.M										\$0.00
5.0 TRANSIT SERVICES	\$7,114.5	\$824.1	\$629.0	\$672.6	\$3,877.0	\$1,111.8	75%	\$833.3	25%	\$278.56
Unadjusted Development Charge Per Capita										\$1.43
Unadjusted Development Charge Per Sq.M										\$0.00
6.0 GENERAL GOVERNMENT	\$770.0	\$185.0	\$58.5	\$393.0	\$0.0	\$133.5	75%	\$100.1	25%	\$33.45
Unadjusted Development Charge Per Capita										\$0.17
Unadjusted Development Charge Per Sq.M										\$0.00
TOTAL 10 YEAR GENERAL SERVICES	\$22,967.3	\$1,509.1	\$1,099.7	\$5,022.0	\$5,192.5	\$10,143.9		\$9,442.5		\$701.4
Unadjusted Development Charge Per Capita										
Unadjusted Development Charge Per Sq.M										\$3.60

An additional share of \$5.02 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, \$5.19 million, is either attributable to growth beyond the 2023 period (and can therefore only be recovered under future development charges studies) or represents a service level increase in the City.

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 \$1.10 million is identified as the required 10 per cent reduction.

The remaining \$10.14 million is carried forward to the development charges calculation as a development-related cost. Of the development-related cost, \$9.44 million has been allocated to new residential development, and \$701,400 has been allocated to new non-residential development. This results in an unadjusted charge of \$1,021.58 per capita and \$3.60 per square metre for the provision of soft services.

2. Engineered Services

Table 6 displays the development-related capital forecast for Roads, Sidewalks, Water, and Sanitary Sewer and Storm Water Services from 2014 to 2023. It also shows the differing unadjusted rates on development occurring both inside and outside the core tourist area. The net cost of the capital program amounts to \$62.22 million; however, \$9.17 million has been identified as funds available in the DC reserves and is removed from the development charges calculation. In addition, \$18.08 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 10-year planning horizon. \$6.69 million is identified as the post-period benefit share.

The net capital cost after the discounts is \$28.29 million, of which \$22.98 million is allocated to benefit the future residential population and \$5.32 million is allocated to non-residential development. The resulting residential development charge is \$2,485.84 per capita. The non-residential charges are calculated on an area-specific basis. The resulting unadjusted charge per square metre of new development inside

**CITY OF NIAGARA FALLS
SUMMARY OF RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT CHARGES
CAPITAL PROGRAM FOR ENGINEERED SERVICES**

City-Wide	
10 Year Growth in Population in New Units	9,243
10 Year Growth in SquareMetres	194,750
Inside Core Tourist Area	
10 Year Growth in Square Meters	101,888
Outside Core Tourist Area	
10 Year Growth in Square Meters	92,863

Service	Development-Related Capital Program (2014 - 2023)					Residential Share		Non-Residential Share	
	Net Municipal Cost (\$000)	Replacement & Benefit to Existing (\$000)	Available DC Reserves (\$000)	Post-Period Benefit (\$000)	Total DC Eligible Costs for Recovery (\$000)	%	(\$000)	%	(\$000)
	1.0 ROADS	\$21,329.1	\$4,513.4	\$4,381.3	\$2,053.5	\$10,380.9	75%	\$7,780.0	25%
Development Charge Per Capita							\$841.72		
Development Charge Per Sq.M									\$13.36
2.0 SIDEWALKS									
2.1 Inside Core Tourist Area	\$654.0	\$327.0	\$132.9	\$51.3	\$142.8	0%	\$0.0	100%	\$142.83
Development Charge Per Capita							\$0.00		
Development Charge Per Sq.M									\$1.40
2.2 Outside Core Tourist Area	\$1,864.0	\$642.4	\$326.8	\$127.6	\$767.2	88%	\$676.6	12%	\$90.59
Development Charge Per Capita							\$73.20		
Development Charge Per Sq.M									\$0.98
3.0 WATER									
3.1 Inside Core Tourist Area	\$2,813.5	\$1,969.5	\$506.4	\$49.3	\$288.3	0%	\$0.0	100%	\$288.29
Development Charge Per Capita							\$0.00		
Development Charge Per Sq.M									\$2.83
3.2 Outside Core Tourist Area	\$4,349.4	\$2,039.5	\$654.2	\$379.0	\$1,276.7	88%	\$1,125.9	12%	\$150.74
Development Charge Per Capita							\$121.81		
Development Charge Per Sq.M									\$1.62
4.0 SEWER									
4.1 Inside Core Tourist Area	\$339.1	\$189.9	\$61.0	\$18.3	\$69.8	0%	\$0.0	100%	\$69.82
Development Charge Per Capita							\$0.00		
Development Charge Per Sq.M									\$0.69
4.2 Outside Core Tourist Area	\$14,827.9	\$2,372.2	\$814.3	\$1,993.4	\$9,648.0	88%	\$8,508.8	12%	\$1,139.20
Development Charge Per Capita							\$920.56		
Development Charge Per Sq.M									\$12.27
5.0 STORM WATER									
5.1 Inside Core Tourist Area	\$2,361.5	\$2,125.4	\$11.8	\$44.5	\$179.8	0%	\$0.0	100%	\$179.83
Development Charge Per Capita							\$0.00		
Development Charge Per Sq.M									\$1.77
5.2 Outside Core Tourist Area	\$13,686.5	\$3,899.4	\$2,277.4	\$1,970.2	\$5,539.5	88%	\$4,885.4	12%	\$654.08
Development Charge Per Capita							\$528.55		
Development Charge Per Sq.M									\$7.04
TOTAL ENGINEERED SERVICES	\$62,224.9	\$18,078.7	\$9,166.2	\$6,687.1	\$28,293.0		\$22,976.7		\$5,316.3
Development Charge Per Capita							\$2,485.84		
Development Charge Per Sq.M									\$20.05
Inside Core Tourist Area									\$35.27
Outside Core Tourist Area									

the Core Tourist Area is \$20.05. On all lands outside the core Tourist Area, the unadjusted rate is \$35.27 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 for general services. 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 decreases by \$60.70, from \$3,507.43 per capita to \$3,446.72 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 \$11,300 for a fully serviced single or semi-detached unit to a low of \$5,545 for an apartment unit. The charge for rows and other multiples is calculated at \$6,002.

The non-residential charges both inside and outside the Core Tourist Area also experience a decrease after cash flow considerations. The charge outside the core Tourist Area decreases from 38.87 to \$37.96 per square metre, which is a two per cent decrease. The adjusted non-residential charge applied to development inside the Core Tourist Area (\$23.30) is \$0.4 cents less than the unadjusted rate of \$23.65. This is displayed on Tables 8 and 9.

B. COMPARISON OF 2014 NEWLY CALCULATED DEVELOPMENT CHARGES WITH CHARGES CURRENTLY IN FORCE IN NIAGARA FALLS

Tables 10, 11 and 12 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 \$791 per unit, or eight per cent.

The current development charges rate for non-residential development outside the Core Tourist Area will decrease by \$12.15 per square metre, from \$50.11 to \$37.96 per square metre, or 24 per cent. The calculated charge for non-residential development occurring within the Core Tourist Area will increase by \$2.71, from \$20.59 to the calculated \$23.30, an increase of 13 per cent.

TABLE 7
CITY OF NIAGARA FALLS
2014 DEVELOPMENT CHARGES STUDY
RESIDENTIAL DEVELOPMENT CHARGES BY UNIT TYPE

Service	Unadjusted Charge Per Capita	Adjusted Charge Per Capita	Residential Charge By Unit Type (1)			Percentage of Charge
			Singles & Semis	Rows & Other Multiples	Apartments	
General Government	\$10.82	\$11.41	\$37	\$20	\$18	0.3%
Library	\$36.94	\$37.14	\$122	\$65	\$60	1.1%
Fire Protection	\$112.51	\$124.28	\$407	\$216	\$200	3.6%
Parks And Recreation	\$757.65	\$764.37	\$2,506	\$1,331	\$1,230	22.2%
Public Works & Fleet	\$13.51	\$14.08	\$46	\$25	\$23	0.4%
Transit Services	\$90.15	\$105.86	\$347	\$184	\$170	3.1%
Roads And Related	\$841.72	\$771.85	\$2,531	\$1,344	\$1,242	22.4%
Subtotal Municipal Wide Services	\$1,863.31	\$1,828.99	\$5,996	\$3,185	\$2,943	53.1%
Sidewalks	\$73.20	\$74.66	\$245	\$130	\$120	2.2%
Water	\$121.81	\$107.73	\$353	\$188	\$173	3.1%
Sanitary Sewer	\$920.56	\$913.84	\$2,996	\$1,591	\$1,470	26.5%
Storm Water Management	\$528.55	\$521.50	\$1,710	\$908	\$839	15.1%
Subtotal Urban Area Services	\$1,644.12	\$1,617.73	\$5,304	\$2,817	\$2,602	46.9%
TOTAL CHARGE PER UNIT	\$3,507.43	\$3,446.72	\$11,300	\$6,002	\$5,545	100.0%

(1) Based on Persons Per Unit Of:

3.28	1.74	1.61
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TABLE 8
CITY OF NIAGARA FALLS
2014 DEVELOPMENT CHARGES STUDY
NON-RESIDENTIAL DEVELOPMENT CHARGES PER SQUARE METRE
OUTSIDE CORE TOURIST AREA

Service	Non-Residential Charge Per Square Metre Outside Core Tourist Area		Percentage of Charge
	Unadjusted Charge	Adjusted Charge	
General Government	\$0.17	\$0.19	0.5%
Library	\$0.00	\$0.00	0.0%
Fire Protection	\$1.79	\$1.98	5.2%
Parks And Recreation	\$0.00	\$0.00	0.0%
Public Works & Fleet	\$0.21	\$0.23	0.6%
Transit Services	\$1.43	\$1.69	4.5%
Roads And Related	\$13.36	\$12.27	32.3%
Subtotal Municipal Wide Services	\$16.96	\$16.36	43.1%
Sidewalks	\$0.98	\$1.00	2.6%
Water	\$1.62	\$1.44	3.8%
Sanitary Sewer	\$12.27	\$12.20	32.1%
Storm Water Management	\$7.04	\$6.96	18.3%
Subtotal Urban Area Services	\$21.91	\$21.60	56.9%
TOTAL CHARGE PER SQUARE METRE	\$38.87	\$37.96	100.0%

TABLE 9
CITY OF NIAGARA FALLS
2014 DEVELOPMENT CHARGES STUDY
NON-RESIDENTIAL DEVELOPMENT CHARGES PER SQUARE METRE
CORE TOURIST AREA

Service	Non-Residential Charge Per Square Metre Core Tourist Area		Percentage of Charge
	Unadjusted Charge	Adjusted Charge	
General Government	\$0.17	\$0.19	0.8%
Library	\$0.00	\$0.00	0.0%
Fire Protection	\$1.79	\$1.98	8.5%
Parks And Recreation	\$0.00	\$0.00	0.0%
Public Works & Fleet	\$0.21	\$0.23	1.0%
Transit Services	\$1.43	\$1.69	7.3%
Roads And Related	\$13.36	\$12.27	52.7%
Subtotal Municipal Wide Services	\$16.96	\$16.36	70.2%
Sidewalks	\$1.40	\$1.36	5.8%
Water	\$2.83	\$3.00	12.9%
Sanitary Sewer	\$0.69	\$0.67	2.9%
Storm Water Management	\$1.77	\$1.91	8.2%
Subtotal Urban Area Services	\$6.69	\$6.94	29.8%
TOTAL CHARGE PER SQUARE METRE	\$23.65	\$23.30	100.0%

TABLE 10
CITY OF NIAGARA FALLS
COMPARISON OF CURRENT AND CALCULATED
RESIDENTIAL DEVELOPMENT CHARGES

Service	Current Residential Charge / SDU	Calculated Residential Charge / SDU	Difference in Charge	
General Government	\$288	\$37	(\$251)	-87%
Library	\$247	\$122	(\$125)	-51%
Fire Protection	\$0	\$407	\$407	-
Parks And Recreation	\$1,942	\$2,506	\$564	29%
Public Works & Fleet	\$183	\$46	(\$137)	-75%
Transit Services	\$310	\$347	\$37	12%
Roads And Related	\$1,342	\$2,531	\$1,189	89%
Subtotal Municipal Wide Services	\$4,312	\$5,996	\$1,684	39%
Sidewalks	\$138	\$245	\$107	78%
Water	\$476	\$353	(\$123)	-26%
Sanitary Sewer	\$3,149	\$2,996	(\$153)	-5%
Storm Water Management	\$2,434	\$1,710	(\$724)	-30%
Subtotal Urban Area Services	\$6,197	\$5,304	(\$893)	-14%
TOTAL CHARGE PER UNIT	\$10,509	\$11,300	\$791	8%

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TABLE 11

CITY OF NIAGARA FALLS
 COMPARISON OF CURRENT AND CALCULATED
 NON-RESIDENTIAL DEVELOPMENT CHARGES - OUTSIDE CORE TOURIST AREA

Service	Outside Core Tourist Area (\$/Square Metre)			Difference in Charge
	Current Non-Residential Charge	Calculated Non-Residential Charge		
General Government	\$1.58	\$0.19	(\$1.39)	-88%
Library	\$0.11	\$0.00	(\$0.11)	-100%
Fire Protection	\$0.00	\$1.98	\$1.98	-
Parks And Recreation	\$0.90	\$0.00	(\$0.90)	-100%
Public Works & Fleet	\$1.02	\$0.23	(\$0.79)	-77%
Transit Services	\$1.70	\$1.69	(\$0.01)	-1%
Roads And Related	\$7.46	\$12.27	\$4.81	64%
Subtotal Municipal Wide Services	\$12.77	\$16.36	\$3.59	28%
Sidewalks	\$1.70	\$1.00	(\$0.70)	-41%
Water	\$2.49	\$1.44	(\$1.05)	-42%
Sanitary Sewer	\$16.40	\$12.20	(\$4.20)	-26%
Storm Water Management	\$16.75	\$6.96	(\$9.79)	-58%
Subtotal Urban Area Services	\$37.34	\$21.60	(\$15.74)	-42%
TOTAL CHARGE PER SQUARE METRE	\$50.11	\$37.96	(\$12.15)	-24%

TABLE 12

CITY OF NIAGARA FALLS
 COMPARISON OF CURRENT AND CALCULATED
 NON-RESIDENTIAL DEVELOPMENT CHARGES - CORE TOURIST AREA

Service	Core Tourist Area (\$/Square Metre)			Difference in Charge
	Current Non-Residential Charge	Calculated Non-Residential Charge		
General Government	\$2.15	\$0.19	(\$1.96)	-91%
Library	\$0.11	\$0.00	(\$0.11)	-100%
Fire Protection	\$0.00	\$1.98	\$1.98	-
Parks And Recreation	\$1.24	\$0.00	(\$1.24)	-100%
Public Works & Fleet	\$1.40	\$0.23	(\$1.17)	-84%
Transit Services	\$2.38	\$1.69	(\$0.69)	-29%
Roads And Related	\$10.25	\$12.27	\$2.02	20%
Subtotal Municipal Wide Services	\$17.53	\$16.36	(\$1.17)	-7%
Sidewalks	\$1.47	\$1.36	(\$0.11)	-7%
Water	\$1.36	\$3.00	\$1.64	121%
Sanitary Sewer	\$0.23	\$0.67	\$0.44	191%
Storm Water Management	\$0.00	\$1.91	\$1.91	-
Subtotal Urban Area Services	\$3.06	\$6.94	\$3.88	127%
TOTAL CHARGE PER SQUARE METRE	\$20.59	\$23.30	\$2.71	13%

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 13 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 F).

As shown in Table 13, by 2023 the City's net operating costs are estimated to increase by about \$5.56 million. The most significant portion of this increase relates to the construction of a new fire station and the hiring of additional fire fighters. The construction of the new roads and additional bus routes are also projected to impact on the annual operating budget.

B. LONG-TERM CAPITAL FINANCING FROM NON-DEVELOPMENT CHARGES SOURCES TOTALS \$6.77 MILLION

As discussed in Section VI, Table 13 also summarizes the components of the development-related capital forecast that will require funding from non-development charges sources. Of the \$42.61 million net capital forecast, about \$6.77 million will need to be financed from non-development charges sources over the next 10 years. This includes about \$1.10 in respect of the 10 per cent discount required by the *DCA* for "soft" services and about \$5.67 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, \$9.07 million in interim financing may be required for projects related to general service level increases and to growth in the post-2023 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.

VIII 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 present 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 Council adopt the development-related capital forecast included in this background study, subject to annual review through the City's normal capital budget process.

APPENDIX A

DEVELOPMENT FORECAST

APPENDIX A

DEVELOPMENT FORECAST

This appendix provides the details of the development forecast used to prepare the 2014 Development Charges Background Study for the City of Niagara Falls. The forecast method and key assumptions are discussed. The results of the forecasts are presented in the following nine tables:

- A.1 Historical Population, Dwellings and Employment
- A.2 Historical Housing Activity
- A.3 Historical Residential Building Permits
- A.4 Historical Household Size
- A.5 Forecast Population, Households and Employment
- A.6 Forecast Population, Household and Employment Growth Summary
- A.7 Growth in Household by Unit Type
- A.8 Forecast Population in New Units by Unit Type
- A.9 Forecast of Non-Residential Development

The forecasts were prepared by Hemson Consulting Ltd. in consultation with City planning staff and are based on a range of statistical data including Statistics Canada Census and National Household Survey data, and Canada Mortgage Housing Corporation (CMHC) housing market information.

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 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 based on Census years and is translated into the time periods required for DC purposes, generally pro-rating the census periods to the DC time period. A ten year development forecast, from mid-year 2014 to mid-year 2023, has been used for all the development charges eligible services in the City.

The forecast is primarily based upon the Region of Niagara Sustainable Community Policies: Amendment 2-2009 to the Official Plan for the Niagara Planning Area, as amended November 2012. This document has been approved by Regional Council and the City is required to conform to the growth targets as contained in the policies.

B. FORECAST RESULTS

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

1. Residential Development Forecast

The residential development forecast is based upon the targets contained in the Region's Policy Plan Amendment, 2-2009. The 2031 target for the City of Niagara Falls is 96,500, which excludes Census undercount (with undercount, this equates to a total population count of roughly 100,500). It should be noted that in development charges studies, Census population, exclusive of undercount is always used to determine historic service levels and maximum allowable funding envelopes.

Development charges are levied and collected by the City based on the number of building permits issued for new residential dwelling units. The housing forecast assumes that housing growth in the City will average roughly 325 units per year, for the ten-year planning period. Housing growth will continue to accelerate until 2031 where the annual unit growth ramps up to 375-400 units per year.

In addition to the Censes population forecast, a forecast of "population in new units" that will result from the addition of new housing units has been made. Population growth in new units is estimated by applying the following PPU's to the housing unit forecast: 3.28 for single and semi-detached units; 1.74 for rows and other multiples; and 1.61 for apartments. The forecasted persons in newly constructed units are based upon the historical time series of population growth in housing in the last ten year census period (2001-2011) as released in the 2011 National Household Survey. In total, 9,243 is the forecasted population in new dwelling units over the ten-year planning period and 17,617 is forecasted to 2031.

2. Non-Residential Development Forecast

The non-residential forecast is based upon the 2031 target contained in the Region's Policy Plan Amendment, 2-2009 of 47,670 employees.

Non-residential development charges are calculated on a per square metre of gross floor area (GFA) basis. Therefore, as per the DCA, a forecast of non-residential building space has been developed. As with the residential forecast, a ten year development forecast, from mid-year 2014 to mid-year 2023, has been used for all the development charge eligible services in the City.

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

Population-Related:	55 square metres per employee
Employment Land:	95 square metres per employee

The GFA forecasts are provided in Table A.9. The total GFA growth is forecast at 194,750 square metres over the ten year period with an accompanying employment growth of 3,090. Over the longer planning period to 2031, it is forecasted that 6,012 new employees will be accommodated in 378,900 square metres of new non-residential GFA.

CITY OF NIAGARA FALLS 2014 DEVELOPMENT CHARGES STUDY

TABLE A.1
Historic Population, Dwellings & Employment

Mid-Year	Census Population	Growth	Total Dwellings	Growth	HH Size	Employment by Place of Work	Growth	Activity Rate
1996	76,917		30,045		2.56	29,555		38.4%
1997	77,293	376	30,331	286	2.55	30,981	1,426	40.1%
1998	77,671	378	30,620	289	2.54	32,476	1,495	41.8%
1999	78,051	380	30,912	292	2.52	34,043	1,567	43.6%
2000	78,432	381	31,207	295	2.51	35,686	1,643	45.5%
2001	78,815	383	31,505	298	2.50	37,408	1,722	47.5%
2002	79,478	663	31,701	196	2.51	38,327	919	48.2%
2003	80,146	668	31,898	197	2.51	39,268	941	49.0%
2004	80,820	674	32,096	198	2.52	40,232	964	49.8%
2005	81,499	679	32,295	199	2.52	41,220	988	50.6%
2006	82,184	685	32,495	200	2.53	42,232	1,012	51.4%
2007	82,346	162	32,670	175	2.52	41,986	-246	51.0%
2008	82,508	162	32,846	176	2.51	41,741	-245	50.6%
2009	82,671	163	33,023	177	2.50	41,498	-243	50.2%
2010	82,834	163	33,201	178	2.49	41,256	-242	49.8%
2011	82,997	163	33,382	181	2.49	41,015	-241	49.4%
2012	83,484	487	33,578	196	2.49	41,339	324	49.5%
2013	84,127	643	33,973	395	2.48	41,658	319	49.5%

Source: Statistics Canada, Census of Canada

CITY OF NIAGARA FALLS 2014 DEVELOPMENT CHARGES STUDY

TABLE A.2
Historic Housing Activity - Units

Year	Housing Completions - Units			Total
	Singles/Semis	Rows	Apts.	
2004	288	23	0	311
2005	259	50	3	312
2006	217	53	0	270
2007	176	7	16	199
2008	188	24	9	221
2009	161	9	0	170
2010	257	22	75	354
2011	189	55	2	246
2012	155	41	0	196
2013	217	55	123	395
Total	2,107	339	228	2,674
5-Year Average	196	36	40	272
10-Year Average	211	34	23	267

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

Historic Housing Activity - Shares By Unit Type

Year	Housing Completions - Units			Total
	Singles/Semis	Rows	Apts.	
2004	93%	7%	0%	100%
2005	83%	16%	1%	100%
2006	80%	20%	0%	100%
2007	88%	4%	8%	100%
2008	85%	11%	4%	100%
2009	95%	5%	0%	100%
2010	73%	6%	21%	100%
2011	77%	22%	1%	100%
2012	79%	21%	0%	100%
2013	55%	14%	31%	100%
Total	79%	13%	9%	100%

CITY OF NIAGARA FALLS 2014 DEVELOPMENT CHARGES STUDY

TABLE A.3
Historic Residential Building Permits

Year	Building Permits			Total
	Singles/Semis	Rows	Apts.	
2004	287	42	25	354
2005	253	41	1	295
2006	198	31	3	232
2007	208	16	60	284
2008	171	49	50	270
2009	213	3	40	256
2010	205	22	0	227
2011	187	60	110	357
2012	222	95	0	317
2013	290	92	0	382
Total	2,234	451	289	2,974
5-Year Average	223	54	30	308
10-Year Average	223	45	29	297

Source: City of Niagara Falls, Planning Department

Historic Building Permits - Shares By Unit Type

Year	Building Permits			Total
	Singles/Semis	Rows	Apts.	
2004	81%	12%	7%	100%
2005	86%	14%	0%	100%
2006	85%	13%	1%	100%
2007	73%	6%	21%	100%
2008	63%	18%	19%	100%
2009	83%	1%	16%	100%
2010	90%	10%	0%	100%
2011	52%	17%	31%	100%
2012	70%	30%	0%	100%
2013	76%	24%	0%	100%
Total	75%	15%	10%	100%

CITY OF NIAGARA FALLS 2014 DEVELOPMENT CHARGES STUDY

TABLE A.4
Historic Households by Period of Construction Showing Household Size

	Period of Construction										Total
	Pre 1970	1971-1980	1981-1985	1986-1990	1991-1995	1996-2000	2001-2005	2006-2011	Pre 2001	2001-2011	
Singles & Semis											
Household Population	32,205	12,070	3,095	4,520	2,720	3,435	4,335	3,550	58,045	7,885	65,930
Households	13,205	4,485	1,105	1,560	965	1,115	1,295	1,110	22,435	2,405	24,840
Household Size	2.44	2.69	2.80	2.90	2.82	3.08	3.35	3.20	2.59	3.28	2.65
Rows											
Household Population	800	1,055	340	430	715	295	395	110	3,635	505	4,140
Households	340	380	120	195	260	165	235	55	1,460	290	1,750
Household Size	2.35	2.78	2.83	2.21	2.75	1.79	1.68	2.00	2.49	1.74	2.37
Apartments											
Household Population	6,485	1,595	890	545	830	330	35	335	10,675	370	11,045
Households	3,890	1,035	565	305	475	220	20	210	6,490	230	6,720
Household Size	1.67	1.54	1.58	1.79	1.75	1.50	1.75	1.60	1.64	1.61	1.64
All Units											
Household Population	39,490	14,720	4,325	5,495	4,265	4,060	4,765	3,995	77,120	3,995	81,115
Households	17,435	5,900	1,790	2,060	1,700	1,500	1,550	1,375	31,935	1,375	33,310
Household Size	2.26	2.49	2.42	2.67	2.51	2.71	3.07	2.91	2.41	2.91	2.44

Source: Statistics Canada, 2011 National Household Survey Special Run.

CITY OF NIAGARA FALLS 2014 DEVELOPMENT CHARGES STUDY

TABLE A.5
Population, Household & Employment Forecast Summary

Mid-Year	Census Population	Total Dwellings	Employment by POW	HH Size	Activity Rate
2014	84,714	34,273	41,943	2.47	49.5%
2015	85,301	34,573	42,228	2.47	49.5%
2016	85,888	34,873	42,513	2.46	49.5%
2017	86,475	35,173	42,798	2.46	49.5%
2018	87,062	35,473	43,083	2.45	49.5%
2019	87,746	35,823	43,416	2.45	49.5%
2020	88,430	36,173	43,749	2.44	49.5%
2021	89,114	36,523	44,082	2.44	49.5%
2022	89,798	36,873	44,415	2.44	49.5%
2023	90,482	37,223	44,748	2.43	49.5%
2024	91,215	37,598	45,104	2.43	49.4%
2025	91,948	37,973	45,460	2.42	49.4%
2026	92,681	38,348	45,816	2.42	49.4%
2027	93,414	38,723	46,172	2.41	49.4%
2028	94,196	39,123	46,552	2.41	49.4%
2029	94,978	39,523	46,932	2.40	49.4%
2030	95,760	39,923	47,312	2.40	49.4%
2031	96,500	40,300	47,670	2.39	49.4%
2014-2023	6,355	3,250	3,090		
2014-2031	12,373	6,327	6,012		

TABLE A.6
Forecast Population & Household Growth Summary

Mid-Year	Census Pop'n Growth	Total Dwellings Growth	Employment by POW Growth
2014	587	300	285
2015	587	300	285
2016	587	300	285
2017	587	300	285
2018	587	300	285
2019	684	350	333
2020	684	350	333
2021	684	350	333
2022	684	350	333
2023	684	350	333
2024	733	375	356
2025	733	375	356
2026	733	375	356
2027	733	375	356
2028	782	400	380
2029	782	400	380
2030	782	400	380
2031	740	377	358
2014-2023	6,355	3,250	3,090
2014-2031	12,373	6,327	6,012

Source: Region of Niagara, Sustainable Community Policies: Amendment 2-2009 to the Official Plan for the Niagara Planning Area



CITY OF NIAGARA FALLS 2014 DEVELOPMENT CHARGES STUDY

TABLE A.7
Growth in Households by Unit Type

Mid-Year	Singles & Semis	Rows & Other Multiples	Apartments	Total New Households
2014	225	45	30	300
2015	225	45	30	300
2016	225	45	30	300
2017	225	45	30	300
2018	225	45	30	300
2019	262	53	35	350
2020	262	53	35	350
2021	262	53	35	350
2022	227	70	53	350
2023	227	70	53	350
2024	244	75	56	375
2025	244	75	56	375
2026	244	75	56	375
2027	244	75	56	375
2028	260	80	60	400
2029	260	80	60	400
2030	260	80	60	400
2031	245	75	57	377
2014-2023	2,365	524	361	3,250
2014-2031	4,366	1,139	822	6,327

TABLE A.8
Forecast Population in New Households by Unit Type*

Mid-Year	Singles & Semis	Rows & Other Multiples	Apartments	Total Population in New HH
2014	738	78	48	864
2015	738	78	48	864
2016	738	78	48	864
2017	738	78	48	864
2018	738	78	48	864
2019	859	92	56	1,007
2020	859	92	56	1,007
2021	859	92	56	1,007
2022	744	122	85	951
2023	744	122	85	951
2024	800	131	90	1,021
2025	800	131	90	1,021
2026	800	131	90	1,021
2027	800	131	90	1,021
2028	852	139	97	1,088
2029	852	139	97	1,088
2030	852	139	97	1,088
2031	803	131	92	1,026
2014-2023	7,755	910	578	9,243
2014-2031	14,314	1,982	1,321	17,617

Source: Hemson Consulting Ltd., 2014

*Based on PPU's

3.28 1.74 1.61

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 Niagara Falls. Six general services have been analysed as part of the development charges study:

Appendix B.1	Library
Appendix B.2	Fire Protection
Appendix B.3	Parks and Recreation
Appendix B.4	Public Works and Fleet
Appendix B.5	Transit Services
Appendix B.6	General Government

Every service, with the exception of General Government, 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 HISTORIC SERVICE LEVELS

Table 1 presents the data used to determine the ten-year historic 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 ten-year period immediately preceding the preparation of the background study, on a service-by-service basis. For the purpose of this study, the historic inventory period has been defined as 2004-2013.

O. Reg. 82/98 requires that when defining and determining historic 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 growth-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.

The final page of Table 1 shows the calculation of the “maximum allowable”, net of uncommitted excess capacity and the legislated ten per cent reduction (for all applicable services). The maximum allowable is defined as the ten-year historic service level (expressed as either \$/capita, or \$/population & employment) multiplied by the forecast increase in net population growth, or net population and employment growth, over the planning period. The resulting figure is the value of capital infrastructure that must be constructed for that particular service so that the ten-year historic 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 maximum allowable funding envelope are required.

**TABLE 2 2014 – 2023 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 growth forecasts presented in Appendix A, Hemson Consulting in collaboration with City staff has developed a development-related capital program which sets out the projects required to service anticipated growth for the ten-year period from 2014-2023.

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 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 ten per cent for all services except protection services and services related to a highway (*DCA s.5.(1)8.*). The ten per cent discount is therefore applied to all general services considered in this appendix with the exception of Fire and Public Works and Fleet. As with replacement shares, the ten per cent mandatory reduction must be funded from non-development charge sources.

The capital program less any replacement or benefit to existing shares, ten 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 period from 2014-2023. For some of the services, a portion of the capital program will service growth that will not occur until after 2023. This portion of the capital program is either deemed “pre-built” service capacity to be considered as committed excess capacity to be recovered under future development.

The remaining portion of the net capital program represents the development-related cost that may be included in the development charge. In all cases, as required, this amount is equal to or less than the maximum allowable capital amount as calculated on the final page of Table 1. The result is the discounted development-related net capital cost that is eligible for recovery against growth over the period from 2014-2023.

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 growth-related net capital cost between the residential and non-residential sectors. For all general services with the exception of Library and Parks and Recreation, the development-related costs have been apportioned as 75 per cent residential and 25 per cent non-residential. This apportionment is based on the anticipated shares of population in new units and employment growth over the ten-year forecast period.

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

The residential share of the 2014-2023 DC eligible costs are then divided by the forecast population growth in new units. This gives the unadjusted residential development charge per capita. The non-residential growth-related net capital costs are divided by the forecast increase in non-residential gross floor area (GFA). This yields a charge per square metre of new non-residential GFA.

TABLE 3 CASH FLOW ANALYSIS

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

In order to determine appropriate development charges rates reflecting borrowing and earnings necessary to support the net development-related funding requirement, assumptions are used for the inflation rate and interest rate. An inflation rate of 2.0 per cent is used for the funding requirements, an interest rate of 3.5 per cent is used for positive opening balances, and a rate of 5.5 per cent is used for negative opening balances.

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

APPENDIX B.1

LIBRARY

APPENDIX B.1

LIBRARY

The Niagara Falls Library provides free and equitable access to information to the residents of the City. The Library also provides a wide range of resources in a variety of formats as well as a number of programs to City residents.

TABLE 1 2004-2013 HISTORIC SERVICE LEVELS

The Table 1 displays the Library ten-year historic inventory for buildings and the associated land, furniture, equipment in addition to the Library materials. The total space provided by the Library totals 66,684 square feet in 2013 and has a replacement value of \$17.77 million. The land associated with the space totals 2.57 acres of land worth \$514,200. The materials found at the four branches, which include all collections, are valued at \$14.29 million and the furniture and equipment is valued at \$4.99 million. Finally, the library owns one vehicle which has a replacement value of \$27,000.

The 2013 full replacement value of the inventory of capital assets for library services amounts to \$37.60 million and the ten-year historic average service level is \$420.89 per capita. The historic service level multiplied by the ten-year forecast of net population growth results in a ten-year maximum allowable funding envelope of \$2,674,756 (6,355 net population growth X historic service level of \$420.89/capita).

Finally, library services must be reduced by ten per cent as required under the *DCA*. The resulting net maximum allowable funding envelope brought forward to the development charges calculation is reduced to \$2,407,280.

Through discussion with City staff, a review of current facilities, and past funding commitments, it has been established the Library has a committed excess capacity equivalent to \$2.19 million. This amount is related to forecast development over the 2014-2023 period and is eligible for DC funding as part of the calculated maximum funding envelope. As such, the calculated excess capacity is deemed to be committed, and no reduction has been made to the funding envelope. The discounted maximum allowable funding envelope brought forward to the DC calculation is therefore \$2.41 million.

**TABLE 2 2014 – 2023 DEVELOPMENT-RELATED CAPITAL PROGRAM &
CALCULATION OF THE UNADJUSTED DEVELOPMENT CHARGE**

The capital program includes a provision for additional collection materials over the 10-year period which amounts to \$919,000. The other item in the capital program is for a microfilm reader which costs \$13,000.

No replacement or benefit to existing shares have been deducted from the net municipal cost since the costs of this project are solely for additional materials required to service the growth and for the acquisition of new equipment and not for any rehabilitation or replacement existing library branch and materials.

Since the capital costs of Library services must be reduced by 10 per cent as per the requirements of the *Development Charges Act*, \$93,200 is deemed an ineligible cost and this amount must be paid by the City through revenues other than development charges.

Of the \$838,800 DC eligible costs, \$341,477 of the costs are eligible for recovery under the new DC by-law. An amount of \$497,323 is available in the Library DC reserve fund to offset the cost of the program.

The 2014–2023 DC costs eligible for recovery amount to \$341,477 which is allocated entirely against future residential development in the City of Niagara Falls. This results in an unadjusted development charge of \$36.94 per capita.

TABLE 3 CASH FLOW AND RESERVE FUND ANALYSIS

After cash flow and reserve fund consideration, the residential calculated charge increases to \$37.14 per capita.

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

LIBRARY SUMMARY						
10-year Hist.	2014 - 2023		Unadjusted		Adjusted	
Service Level	Development-Related Capital Program		Development Charge		Development Charge	
	Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
per capita						
\$420.89	\$932,000	\$341,477	\$36.94	\$0.00	\$37.14	\$0.00

APPENDIX B.1
TABLE 1 - PAGE 1

CITY OF NIAGARA FALLS
INVENTORY OF CAPITAL ASSETS
LIBRARY

BUILDINGS Branch Name	# of Square Feet											UNIT COST (\$/sq.ft.)	
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013			
Victoria Avenue Branch	47,365	47,365	47,365	47,365	47,365	47,365	47,365	47,365	47,365	47,365	47,365	47,365	\$275
Chippawa Branch	5,487	5,487	5,487	5,487	5,487	5,487	5,487	5,487	5,487	5,487	5,487	5,487	\$225
Stamford Centre Branch	5,967	5,967	5,967	5,967	5,967	5,967	5,967	5,967	5,967	5,967	5,967	5,967	\$225
Community Centre Branch	7,865	7,865	7,865	7,865	7,865	7,865	7,865	7,865	7,865	7,865	7,865	7,865	\$275
Total (sq.ft.)	66,684												
Total (\$000)	\$17,765.4												

LAND Branch Name	# of Acres											UNIT COST (\$/acre)	
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013			
Victoria Avenue Branch	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14	\$200,000
Chippawa Branch	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	\$200,000
Stamford Centre Branch	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	\$200,000
Community Centre Branch	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	\$200,000
Total (acre)	2.57												
Total (\$000)	\$514.2												

APPENDIX B.1
TABLE 1 - PAGE 2

CITY OF NIAGARA FALLS
INVENTORY OF CAPITAL ASSETS
LIBRARY

MATERIALS Type of Collection	# of Collection Materials											UNIT COST (\$/item)
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013		
Books	278,369	261,604	287,071	279,380	285,402	286,796	291,207	288,037	273,220	273,220		\$33
Periodicals	391	442	450	483	527	274	265	271	254	254		\$62
Microfilms	2,155	2,133	2,162	2,181	2,200	2,215	2,230	2,245	2,260	2,260		\$130
CD-ROMS	870	941	925	850	863	710	549	537	314	314		\$60
Video Tapes	11,300	8,669	8,707	7,880	6,926	6,622	5,469	4,033	3,385	3,385		\$5
Compact Discs	4,622	5,386	5,670	6,271	6,400	6,472	6,814	6,703	6,671	6,671		\$27
Talking Books/CD Books	2,850	3,470	3,704	4,294	4,368	3,748	3,685	4,312	3,553	3,553		\$103
Records & Other Audio Cassettes	1,266	1,218	821	266	262	224	790	87	42	42		\$0
DVDs	2,423	4,503	6,556	9,558	10,630	11,487	13,928	16,157	18,903	18,903		\$38
E-Books	-	50	60	70	444	650	2,071	13,078	32,486	32,486		\$52
Electronic Database Subscription	6	6	7	21	34	41	43	46	31	31		\$3,163
Video Games	-	-	-	-	92	109	309	440	593	593		\$59
E-Periodicals	-	-	-	-	-	-	42,387	39,462	21,388	21,388		\$60
Audiobooks (downloadable)	-	-	-	-	-	-	2,491	2,397	7,315	7,315		\$90
Playaways	-	-	-	-	-	-	146	320	605	605		\$55
Total (#)	304,252	288,422	316,133	311,254	318,148	319,348	372,384	378,125	371,020	371,020		
Total (\$000)	\$10,009.7	\$9,619.1	\$10,564.8	\$10,543.8	\$10,858.5	\$10,883.8	\$13,975.1	\$14,426.3	\$14,296.7	\$14,296.7		

FURNITURE AND EQUIPMENT Branch Name	Total Value of Furniture and Equipment (\$)							UNIT COST (\$/vehicle)			
	2004	2005	2006	2007	2008	2009	2010		2011	2012	2013
All Branches	\$3,866,200	\$4,083,100	\$4,313,700	\$4,529,000	\$4,530,000	\$4,531,171	\$4,575,281	\$4,635,388	\$4,995,741	\$4,995,741	
Total (\$000)	\$3,866.2	\$4,083.1	\$4,313.7	\$4,529.0	\$4,530.0	\$4,531.2	\$4,575.3	\$4,635.4	\$4,995.7	\$4,995.7	

VEHICLES Description	# of Vehicles							UNIT COST (\$/vehicle)				
	2004	2005	2006	2007	2008	2009	2010		2011	2012	2013	
Library Van	1	1	1	1	1	1	1	1	1	1		\$27,000
Total (#)	1	1	1									
Total (\$000)	\$27.0	\$27.0	\$27.0									

APPENDIX B.1
TABLE 1 - PAGE 3

CITY OF NIAGARA FALLS
CALCULATION OF SERVICE LEVELS
LIBRARY

Historic Population	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
	80,820	81,499	82,184	82,346	82,508	82,671	82,834	82,997	83,484	84,127

INVENTORY SUMMARY (\$000)

Buildings	\$17,765.4	\$17,765.4	\$17,765.4	\$17,765.4	\$17,765.4	\$17,765.4	\$17,765.4	\$17,765.4	\$17,765.4	\$17,765.4
Land	\$514.2	\$514.2	\$514.2	\$514.2	\$514.2	\$514.2	\$514.2	\$514.2	\$514.2	\$514.2
Materials	\$10,009.7	\$9,619.1	\$10,564.8	\$10,543.8	\$10,858.5	\$10,883.8	\$13,975.1	\$14,426.3	\$14,296.7	\$14,296.7
Furniture And Equipment	\$3,866.2	\$4,083.1	\$4,313.7	\$4,529.0	\$4,530.0	\$4,531.2	\$4,575.3	\$4,635.4	\$4,995.7	\$4,995.7
Library Van	\$27.0	\$27.0	\$27.0	\$27.0	\$27.0	\$27.0	\$27.0	\$27.0	\$27.0	\$27.0
Total (\$000)	\$32,182.5	\$32,008.8	\$33,185.1	\$33,379.4	\$33,695.1	\$33,721.5	\$36,857.0	\$37,368.3	\$37,599.0	\$37,599.0

SERVICE LEVEL (\$/capita)

Average
Service
Level

Buildings	\$219.81	\$217.98	\$216.17	\$215.74	\$215.32	\$214.89	\$214.47	\$214.05	\$212.80	\$211.17
Land	\$6.36	\$6.31	\$6.26	\$6.24	\$6.23	\$6.22	\$6.21	\$6.20	\$6.16	\$6.11
Materials	\$123.85	\$118.03	\$128.55	\$128.04	\$131.61	\$131.65	\$168.71	\$173.82	\$171.25	\$169.94
Furniture And Equipment	\$47.84	\$50.10	\$52.49	\$55.00	\$54.90	\$54.81	\$55.23	\$55.85	\$59.84	\$59.38
Library Van	\$0.33	\$0.33	\$0.33	\$0.33	\$0.33	\$0.33	\$0.33	\$0.33	\$0.32	\$0.32
Total (\$/capita)	\$398.20	\$392.75	\$403.79	\$405.36	\$408.39	\$407.90	\$444.95	\$450.24	\$450.37	\$446.93

CITY OF NIAGARA FALLS
CALCULATION OF MAXIMUM ALLOWABLE
LIBRARY

10-Year Funding Envelope Calculation	
10 Year Average Service Level 2004 - 2013	\$420.89
Net Population Growth 2014 - 2023	6,355
Maximum Allowable Funding Envelope	\$2,674,756
Less: Uncommitted Excess Capacity	\$0
Less: 10% Legislated Reduction	\$267,476
Discounted Maximum Allowable Funding Envelope	\$2,407,280

Excess Capacity Calculation	
Total Value of Inventory in 2013	\$37,599,003
Inventory Using Average Service Level	\$35,408,213
Excess Capacity	\$2,190,790
Excess Capacity:	Committed



CITY OF NIAGARA FALLS
DEVELOPMENT-RELATED CAPITAL PROGRAM
LIBRARY

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	2014-2023	Post 2023	
1.0 LIBRARY											
1.1 Material Acquisitions											
1.1.1 Provision for Additional Collection Materials	Various	\$ 919,000	\$ -	\$ 919,000	\$ -	\$ 91,900	\$ 827,100	\$ 485,623	\$ 341,477	\$ -	
Subtotal Material Acquisitions		\$ 919,000	\$ -	\$ 919,000	\$ -	\$ 91,900	\$ 827,100	\$ 485,623	\$ 341,477	\$ -	
1.2 Equipment											
1.2.1 Microfilm Reader	2014	\$ 13,000	\$ -	\$ 13,000	\$ -	\$ 1,300	\$ 11,700	\$ 11,700	\$ -	\$ -	
Subtotal Equipment		\$ 13,000	\$ -	\$ 13,000	\$ -	\$ 1,300	\$ 11,700	\$ 11,700	\$ -	\$ -	
TOTAL LIBRARY		\$ 932,000	\$ -	\$ 932,000	\$ -	\$ 93,200	\$ 838,800	\$ 497,323	\$ 341,477	\$ -	

Residential Development Charge Calculation	
Residential Share of 2014 - 2023 DC Eligible Costs	100% \$341,477
10-Year Growth in Population in New Units	9,243
Unadjusted Development Charge Per Capita	\$36.94
Non-Residential Development Charge Calculation	
Non-Residential Share of 2014 - 2023 DC Eligible Costs	0% \$0
10-Year Growth in Square Metres	194,750
Unadjusted Development Charge Per Square Metre	\$0.00

2014 - 2023 Net Funding Envelope	\$2,407,280
Uncommitted Reserve Fund Balance Balance as at December 31, 2013	\$497,323

APPENDIX B.1
TABLE 3

CITY OF NIAGARA FALLS
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
LIBRARY
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

LIBRARY	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	TOTAL
OPENING CASH BALANCE	\$0.0	(\$2.1)	(\$4.4)	(\$6.8)	(\$9.4)	(\$12.3)	(\$9.3)	(\$6.1)	(\$2.6)	(\$1.3)	
2014 - 2023 RESIDENTIAL FUNDING REQUIREMENTS											
- Library Services: Non Inflated	\$34.1	\$34.1	\$34.1	\$34.1	\$34.1	\$34.1	\$34.1	\$34.1	\$34.1	\$34.1	\$341.5
- Library Services: Inflated	\$34.1	\$34.8	\$35.5	\$36.2	\$37.0	\$37.7	\$38.5	\$39.2	\$40.0	\$40.8	\$373.9
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	864	864	864	864	864	1,007	1,007	1,007	951	951	9,243
REVENUE											
- DC Receipts: Inflated	\$32.1	\$32.7	\$33.4	\$34.1	\$34.7	\$41.3	\$42.1	\$43.0	\$41.4	\$42.2	\$377.0
INTEREST											
- Interest on Opening Balance	\$0.0	(\$0.1)	(\$0.2)	(\$0.4)	(\$0.5)	(\$0.7)	(\$0.5)	(\$0.3)	(\$0.1)	(\$0.1)	(\$3.0)
- Interest on In-year Transactions	(\$0.1)	(\$0.1)	(\$0.1)	(\$0.1)	(\$0.1)	\$0.1	\$0.1	\$0.1	\$0.0	\$0.0	(\$0.1)
TOTAL REVENUE	\$32.0	\$32.5	\$33.1	\$33.7	\$34.1	\$40.7	\$41.7	\$42.7	\$41.3	\$42.2	\$374.0
CLOSING CASH BALANCE	(\$2.1)	(\$4.4)	(\$6.8)	(\$9.4)	(\$12.3)	(\$9.3)	(\$6.1)	(\$2.6)	(\$1.3)	\$0.1	

2014 Adjusted Charge Per Capita
\$37.14

Allocation of Capital Program	
Residential Sector	100.0%
Non-Residential Sector	0.0%
Rates for 2014	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX B.2

FIRE PROTECTION

APPENDIX B.2
FIRE PROTECTION

The Niagara Falls Fire Department provides for fire suppression, emergency response, fire prevention and public education throughout the City.

TABLE 1 2004-2013 HISTORIC SERVICE LEVELS

The Fire Department inventory of capital assets includes the stations, other buildings/structures and land. The total space provided at the fire stations is 54,435 square feet and is valued at approximately \$9.35 million. The value of the other related fire buildings add \$1.39 million to the inventory. The land used for the stations and structures occupy roughly 12.41 acres of land which is valued at \$2.48 million. The department owns 35 vehicles with a total replacement value that amounts to \$9.09 million. Personal firefighting equipment amounts to \$796,500 and station equipment adds another \$895,600 to the inventory.

The current value of the capital infrastructure including fire halls, other buildings/structures, land, personal fighter fighting equipment, vehicles, furniture and equipment is approximately \$24.01 million and provides the City with a ten-year average historical service level of \$187.84 per capita and employment.

The calculated maximum allowable recoverable through development charges is \$1.77 million (9,445 net population and employment growth X historic service level of \$187.84).

No legislated 10 per cent reduction is required for Fire Protection services. However, the 2013 service level exceeds the 10-year average service level, and therefore uncommitted excess capacity of approximately \$386,547 is identified. As such, the discounted maximum allowable funding envelope of \$1.39 million is therefore brought forward to the development charges calculation.

**TABLE 2 2014 – 2023 DEVELOPMENT-RELATED CAPITAL PROGRAM &
CALCULATION OF THE UNADJUSTED DEVELOPMENT CHARGE**

The 2014-2023 development-related capital program consists of land acquisition and the construction of a new fire station with a value of \$1.00 million and \$3.21 million,

respectively. The remainder of the capital program is for a new truck for the new station for \$500,000 and new mobile data terminals for \$135,000 in 2016.

Altogether, the ten-year capital forecast for Fire Protection amounts to \$4.85 million. There are no replacement shares or benefit to existing shares identified and therefore the entire program is considered eligible for DC funding. \$2.14 million is available in the Fire Protection DC reserve fund. A portion of the capital program, \$1.31 million, is deemed a post-period benefit, and will be considered for recovery in subsequent development charge by-laws. The remaining \$1.39 million is related to development between 2014-2023 and, given that fire protection services is exempt from the 10 per cent reduction of capital costs imposed by the DCA, the full eligible amount is included in the present calculation.

The development-related cost is allocated 75 per cent, or \$1.04 million, against new residential development, and 25 per cent, or \$347,660, against non-residential development. The allocation between residential and non-residential development is based on shares of forecasted population and employment growth. This yields an unadjusted development charge of \$112.51 per capita and \$1.79 per square metre of non-residential gross floor area.

TABLE 3 CASH FLOW ANALYSIS

After cash flow consideration, the calculated residential charge increases to \$124.28 per capita and the non-residential charge also increases to \$1.98 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 Fire Protection development charge.

FIRE PROTECTION SUMMARY						
10-year Hist. Service Level per pop & emp	2014 - 2023		Unadjusted		Adjusted	
	Development-Related Total	Capital Program Net DC Recoverable	Development Charge		Development Charge	
			\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$187.84	\$4,845,000	\$1,387,602	\$112.51	\$1.79	\$124.28	\$1.98

CITY OF NIAGARA FALLS
INVENTORY OF CAPITAL ASSETS
FIRE PROTECTION

FIRE HALLS Station Name	# of Square Feet												UNIT COST (\$/sq. ft.)	
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2013	2013		
Station 1 - 5815 Morrison St.	11,335	11,335	11,335	18,919	18,919	18,919	18,919	18,919	18,919	18,919	18,919	18,919	18,919	\$150
Station 2 - 7036 McLeod Rd.	5,613	5,613	5,613	5,613	5,613	5,613	5,613	5,613	5,613	5,613	5,613	5,613	5,613	\$210
Station 3 - 3401 Dorchester Rd.	5,366	5,366	5,366	5,366	5,366	5,366	5,366	5,366	5,366	5,366	5,366	5,366	5,366	\$190
Station 4 - 8696 Banting Ave.	7,279	7,279	7,279	7,279	7,279	7,279	7,279	7,279	7,279	7,279	7,279	7,279	7,279	\$190
Station 5 - 11208 Sodom Rd.	8,388	8,388	8,388	8,388	8,388	8,388	8,388	8,388	8,388	8,388	8,388	8,388	8,388	\$170
Station 6 - 8037 Schisler Rd.	-	-	8,870	8,870	8,870	8,870	8,870	8,870	8,870	8,870	8,870	8,870	8,870	\$170
Total (sq.ft.)	37,981	37,981	46,851	54,435										
Total (\$000)	\$6,707.5	\$6,707.5	\$8,215.4	\$9,353.0										

OTHER BUILDINGS/STRUCTURES Description	Total Value of Buildings (\$)												
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2013	2013	
5815 Morrison Street													
Training Tower #1	\$197,300	\$197,300	\$197,300	\$197,300	\$197,300	\$197,300	\$197,300	\$197,300	\$197,300	\$197,300	\$197,300	\$197,300	\$197,300
Training Tower #2	\$56,900	\$56,900	\$56,900	\$56,900	\$56,900	\$56,900	\$56,900	\$56,900	\$56,900	\$56,900	\$56,900	\$56,900	\$56,900
Storage	\$25,500	\$25,500	\$25,500	\$25,500	\$25,500	\$25,500	\$25,500	\$25,500	\$25,500	\$25,500	\$25,500	\$25,500	\$25,500
Administration Office	\$752,000	\$752,000	\$752,000	\$752,000	\$752,000	\$752,000	\$752,000	\$752,000	\$752,000	\$752,000	\$752,000	\$752,000	\$752,000
Communication Tower	\$32,400	\$32,400	\$32,400	\$32,400	\$32,400	\$32,400	\$32,400	\$32,400	\$32,400	\$32,400	\$32,400	\$32,400	\$32,400
Firefighters Survival Building	\$72,700	\$72,700	\$72,700	\$72,700	\$72,700	\$72,700	\$72,700	\$72,700	\$72,700	\$72,700	\$72,700	\$72,700	\$72,700
8061 Schisler Road													
Storage (Former Station 6)	\$255,900	\$255,900	\$255,900	\$255,900	\$255,900	\$255,900	\$255,900	\$255,900	\$255,900	\$255,900	\$255,900	\$255,900	\$255,900
Total (\$000)	\$1,392.7	\$1,392.7	\$1,392.7	\$1,392.7	\$1,392.7	\$1,392.7	\$1,392.7	\$1,392.7	\$1,392.7	\$1,392.7	\$1,392.7	\$1,392.7	\$1,392.7

LAND Station Name	# of Acres												UNIT COST (\$/acre)	
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2013	2013		
Station 1 - 5815 Morrison St.	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18	\$200,000
Station 2 - 7036 McLeod Rd.	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	\$200,000
Station 3 - 3401 Dorchester Rd.	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	\$200,000
Station 4 - 8696 Banting Ave.	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	\$200,000
Station 5 - 11208 Sodom Rd.	4.66	4.66	4.66	4.66	4.66	4.66	4.66	4.66	4.66	4.66	4.66	4.66	4.66	\$200,000
Station 6 - 8037 Schisler Rd.	3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95	\$200,000
Total (acres)	12.41													
Total (\$000)	\$2,482.0													

CITY OF NIAGARA FALLS
INVENTORY OF CAPITAL ASSETS
FIRE PROTECTION

PERSONAL FIREFIGHTER EQUIPMENT Description	Total Value of Furniture & Equipment (\$)												UNIT COST (\$/outfit)
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2013		
Turn Out Gear / PPE	295	295	295	295	295	295	295	295	295	295	295	295	\$2,700
Total (#)	295	295	295	295	295	295	295	295	295	295	295	295	
Total (\$000)	\$796.5	\$796.5	\$796.5	\$796.5	\$796.5	\$796.5	\$796.5	\$796.5	\$796.5	\$796.5	\$796.5	\$796.5	

EQUIPMENT Branch Name	Total Value of Equipment (\$)											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2013	
SCBA	\$6,500	\$6,500	\$6,500	\$6,500	\$6,500	\$6,500	\$6,500	\$6,500	\$6,500	\$6,500	\$6,500	\$6,500
Air Compressor	\$0	\$0	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000
Cylinders	\$311,100	\$311,100	\$311,100	\$311,100	\$311,100	\$311,100	\$311,100	\$311,100	\$311,100	\$311,100	\$311,100	\$311,100
Terminal	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$85,000	\$85,000	\$85,000	\$85,000	\$85,000
Pages, Radios, Mobiles	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000
Defibrillators	\$14,000	\$214,000	\$214,000	\$214,000	\$214,000	\$214,000	\$214,000	\$214,000	\$214,000	\$214,000	\$214,000	\$214,000
Hazardous Materials Equipment	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000
Water Rescue Equipment	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000
Technical Rope Rescue Equipment	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
Forcible Entry Training Props	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000
Sea Containers	\$7,000	\$7,000	\$7,000	\$7,000	\$7,000	\$7,000	\$7,000	\$7,000	\$7,000	\$7,000	\$7,000	\$7,000
Washers	\$29,000	\$29,000	\$29,000	\$29,000	\$29,000	\$29,000	\$29,000	\$29,000	\$29,000	\$29,000	\$29,000	\$29,000
Total (\$000)	\$570.6	\$770.6	\$810.6	\$810.6	\$810.6	\$810.6	\$895.6	\$895.6	\$895.6	\$895.6	\$895.6	\$895.6

APPENDIX B.2
TABLE 1 - PAGE 3

CITY OF NIAGARA FALLS
INVENTORY OF CAPITAL ASSETS
FIRE PROTECTION

VEHICLES Vehicle Type	# of Vehicles												UNIT COST (\$/vehicle)	
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013				
Cars	10	10	10	10	10	10	10	10	10	10	10	10	10	\$48,552
Pickups	2	2	2	2	2	2	2	2	2	2	2	2	2	\$41,291
Vans	1	1	1	1	1	1	1	1	1	1	1	1	1	\$35,782
Trailers	2	2	2	2	2	2	2	2	2	2	2	2	2	\$6,046
Station 1 - 5815 Morrison St.														
Pumper 1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$472,686
Rescue 1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$466,166
Aerial 1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$1,185,977
Reserve Pumper 1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$419,700
Station 2 - 7036 McLeod Rd.														
Pumper 2	1	1	1	1	1	1	1	1	1	1	1	1	1	\$419,700
Rescue 2	1	1	1	1	1	1	1	1	1	1	1	1	1	\$390,000
Reserve Pumper 2	1	1	1	1	1	1	1	1	1	1	1	1	1	\$419,700
Station 3 - 3401 Dorchester Rd.														
Pumper 3	1	1	1	1	1	1	1	1	1	1	1	1	1	\$475,168
Reserve Pumper 3	1	1	1	1	1	1	1	1	1	1	1	1	1	\$419,700
Station 4 - 8696 Banting Ave.														
Pumper 4	1	1	1	1	1	1	1	1	1	1	1	1	1	\$394,700
Aerial 4	1	1	1	1	1	1	1	1	1	1	1	1	1	\$819,700
Rescue 4	1	1	1	1	1	1	1	1	1	1	1	1	1	\$380,000
Maine 1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$96,824
Maine 2	1	1	1	1	1	1	1	1	1	1	1	1	1	\$96,824
Station 5 - 11208 Sodom Rd.														
Pumper 5	1	1	1	1	1	1	1	1	1	1	1	1	1	\$419,700
Tanker 5	1	1	1	1	1	1	1	1	1	1	1	1	1	\$250,000
Rescue 5	1	1	1	1	1	1	1	1	1	1	1	1	1	\$350,000
Station 6 - 8037 Schisler Rd.														
Pumper 6	1	1	1	1	1	1	1	1	1	1	1	1	1	\$404,700
Tanker 6	1	1	1	1	1	1	1	1	1	1	1	1	1	\$246,990
Rescue 6	1	1	1	1	1	1	1	1	1	1	1	1	1	\$350,000
Total (#)	35													
Total (\$000)	\$9,094.2	\$9,094.2												

APPENDIX B.2
TABLE 1 - PAGE 4

CITY OF NIAGARA FALLS
CALCULATION OF SERVICE LEVELS
FIRE PROTECTION

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Historic Population	80,820	81,499	82,184	82,346	82,508	82,671	82,834	82,997	83,484	84,127
Historic Employment	40,232	41,220	42,232	41,986	41,741	41,498	41,256	41,015	41,339	41,658
Total Historic Population & Employment	121,052	122,719	124,416	124,332	124,249	124,169	124,090	124,012	124,823	125,785

INVENTORY SUMMARY (\$000)

Fire Halls	\$6,707.5	\$6,707.5	\$8,215.4	\$9,353.0	\$9,353.0	\$9,353.0	\$9,353.0	\$9,353.0	\$9,353.0	\$9,353.0
Other Buildings/Structures	\$1,392.7	\$1,392.7	\$1,392.7	\$1,392.7	\$1,392.7	\$1,392.7	\$1,392.7	\$1,392.7	\$1,392.7	\$1,392.7
Land	\$2,482.0	\$2,482.0	\$2,482.0	\$2,482.0	\$2,482.0	\$2,482.0	\$2,482.0	\$2,482.0	\$2,482.0	\$2,482.0
Personal Firefighter Equipment	\$796.5	\$796.5	\$796.5	\$796.5	\$796.5	\$796.5	\$796.5	\$796.5	\$796.5	\$796.5
Equipment	\$570.6	\$770.6	\$810.6	\$810.6	\$810.6	\$895.6	\$895.6	\$895.6	\$895.6	\$895.6
Vehicles	\$9,094.2	\$9,094.2	\$9,094.2	\$9,094.2	\$9,094.2	\$9,094.2	\$9,094.2	\$9,094.2	\$9,094.2	\$9,094.2
Total (\$000)	\$21,043.5	\$21,243.5	\$22,791.4	\$23,929.0	\$23,929.0	\$23,929.0	\$24,014.0	\$24,014.0	\$24,014.0	\$24,014.0

SERVICE LEVEL (\$/pop & emp)

	Average Service Level										
Fire Halls	\$55.41	\$54.66	\$66.03	\$75.23	\$75.28	\$75.32	\$75.37	\$75.42	\$74.93	\$74.36	\$70.20
Other Buildings/Structures	\$11.50	\$11.35	\$11.19	\$11.20	\$11.21	\$11.22	\$11.22	\$11.23	\$11.16	\$11.07	\$11.24
Land	\$20.50	\$20.23	\$19.95	\$19.96	\$19.98	\$19.99	\$20.00	\$20.01	\$19.88	\$19.73	\$20.02
Personal Firefighter Equipment	\$6.58	\$6.49	\$6.40	\$6.41	\$6.41	\$6.41	\$6.42	\$6.42	\$6.38	\$6.33	\$6.43
Equipment	\$4.71	\$6.28	\$6.52	\$6.52	\$6.52	\$6.53	\$7.22	\$7.22	\$7.17	\$7.12	\$6.58
Vehicles	\$75.13	\$74.11	\$73.10	\$73.14	\$73.19	\$73.24	\$73.29	\$73.33	\$72.86	\$72.30	\$73.37
Total (\$/pop & emp)	\$173.84	\$173.11	\$183.19	\$192.46	\$192.59	\$192.71	\$193.52	\$193.64	\$192.38	\$190.91	\$187.84

CITY OF NIAGARA FALLS
CALCULATION OF MAXIMUM ALLOWABLE
FIRE PROTECTION

10-Year Funding Envelope Calculation	
10 Year Average Service Level 2004 - 2013	\$187.84
Net Population & Employment Growth 2014 - 2023	9.445
Maximum Allowable Funding Envelope	\$1,774,149
Less: Uncommitted Excess Capacity	\$386,547
Discounted Maximum Allowable Funding Envelope	\$1,387,602

Excess Capacity Calculation	
Total Value of Inventory in 2013	\$24,014,001
Inventory Using Average Service Level	\$23,627,454
Excess Capacity	\$386,547
Excess Capacity:	Uncommitted



CITY OF NIAGARA FALLS
DEVELOPMENT-RELATED CAPITAL PROGRAM
FIRE PROTECTION

Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs		Post 2023
					Replacement & BTE Shares	0% Reduction		Available DC Reserves	2014-2023	
2.0 FIRE PROTECTION										
2.1 Buildings, Land & Furnishings										
2.1.1 Land Acquisition for Station 7	2014	\$ 1,000,000	-	\$ 1,000,000	\$ -	\$ -	\$ 1,000,000	\$ 1,000,000	\$ -	\$ -
2.1.2 Construction of New Station 7	2016	\$ 3,210,000	-	\$ 3,210,000	\$ -	\$ -	\$ 3,210,000	\$ 506,876	\$ 1,387,602	\$ 1,315,522
Subtotal Buildings, Land & Furnishings		\$ 4,210,000	-	\$ 4,210,000	\$ -	\$ -	\$ 4,210,000	\$ 1,506,876	\$ 1,387,602	\$ 1,315,522
2.2 Vehicles										
2.2.1 Truck for Station 7	2016	\$ 500,000	-	\$ 500,000	\$ -	\$ -	\$ 500,000	\$ 500,000	\$ -	\$ -
Subtotal Vehicles		\$ 500,000	-	\$ 500,000	\$ -	\$ -	\$ 500,000	\$ 500,000	\$ -	\$ -
2.3 Equipment & Other										
2.3.1 Mobile Data Terminals	2016	\$ 135,000	-	\$ 135,000	\$ -	\$ -	\$ 135,000	\$ 135,000	\$ -	\$ -
Subtotal Vehicles		\$ 135,000	-	\$ 135,000	\$ -	\$ -	\$ 135,000	\$ 135,000	\$ -	\$ -
TOTAL FIRE PROTECTION		\$ 4,845,000	\$ -	\$ 4,845,000	\$ -	\$ -	\$ 4,845,000	\$ 2,141,876	\$ 1,387,602	\$ 1,315,522

Residential Development Charge Calculation		
Residential Share of 2014 - 2023 DC Eligible Costs	75%	\$1,039,942
10-Year Growth in Population in New Units		9,243
Unadjusted Development Charge Per Capita		\$112.51
Non-Residential Development Charge Calculation		
Non-Residential Share of 2014 - 2023 DC Eligible Costs	25%	\$347,660
10-Year Growth in Square Metres		194,750
Unadjusted Development Charge Per Square Metre		\$1.79

2014 - 2023 Net Funding Envelope	\$1,387,602
Uncommitted Reserve Fund Balance	\$2,141,876
Balance as at December 31, 2013	

CITY OF NIAGARA FALLS
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
FIRE PROTECTION
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

FIRE PROTECTION	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	TOTAL
OPENING CASH BALANCE	\$0.0	\$109.3	\$224.5	(\$764.6)	(\$690.6)	(\$610.4)	(\$503.3)	(\$387.6)	(\$262.6)	(\$136.2)	
2014 - 2023 RESIDENTIAL FUNDING REQUIREMENTS											
- Fire Protection: Non Inflated	\$0.0	\$0.0	\$1,039.9	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$1,039.9
- Fire Protection: Inflated	\$0.0	\$0.0	\$1,082.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$1,082.0
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	864	864	864	864	864	1,007	1,007	1,007	951	951	9,243
REVENUE											
- DC Receipts: Inflated	\$107.4	\$109.5	\$111.7	\$114.0	\$116.2	\$138.2	\$140.9	\$143.8	\$138.5	\$141.2	\$1,261.4
INTEREST											
- Interest on Opening Balance	\$0.0	\$3.8	\$7.9	(\$42.1)	(\$38.0)	(\$33.6)	(\$27.7)	(\$21.3)	(\$14.4)	(\$7.5)	(\$172.9)
- Interest on In-year Transactions	\$1.9	\$1.9	(\$26.7)	\$2.0	\$2.0	\$2.4	\$2.5	\$2.5	\$2.4	\$2.5	(\$6.6)
TOTAL REVENUE	\$109.3	\$115.2	\$92.9	\$73.9	\$80.2	\$107.0	\$115.7	\$125.0	\$126.5	\$136.2	\$1,082.0
CLOSING CASH BALANCE	\$109.3	\$224.5	(\$764.6)	(\$690.6)	(\$610.4)	(\$503.3)	(\$387.6)	(\$262.6)	(\$136.2)	\$0.0	

2014 Adjusted Charge Per Capita **\$124.28**

Allocation of Capital Program	
Residential Sector	74.9%
Non-Residential Sector	25.1%
Rates for 2014	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

CITY OF NIAGARA FALLS
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
FIRE PROTECTION
NON-RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

FIRE PROTECTION	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	TOTAL
OPENING CASH BALANCE	\$0.00	\$36.22	\$74.43	(\$256.50)	(\$232.25)	(\$205.85)	(\$170.47)	(\$132.33)	(\$90.97)	(\$46.42)	
2014 - 2023 NON-RESIDENTIAL FUNDING REQUIREMENTS											
- Fire Protection: Non Inflated	\$0.0	\$0.0	\$347.7	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$347.7
- Fire Protection: Inflated	\$0.0	\$0.0	\$361.7	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$361.7
NEW NON-RESIDENTIAL DEVELOPMENT											
- Growth in Square Metres	17,955	17,955	17,995	17,955	17,955	20,995	20,955	20,995	20,995	20,995	194,750
REVENUE											
- DC Receipts: Inflated	\$35.6	\$36.3	\$37.1	\$37.7	\$38.5	\$45.9	\$46.7	\$47.8	\$48.7	\$49.7	\$424.0
INTEREST											
- Interest on Opening Balance	\$0.0	\$1.3	\$2.6	(\$14.1)	(\$12.8)	(\$11.3)	(\$9.4)	(\$7.3)	(\$5.0)	(\$2.6)	(\$58.5)
- Interest on In-year Transactions	\$0.6	\$0.6	(\$8.9)	\$0.7	\$0.7	\$0.8	\$0.8	\$0.8	\$0.9	\$0.9	(\$2.2)
TOTAL REVENUE	\$36.2	\$38.2	\$30.8	\$24.3	\$26.4	\$35.4	\$38.1	\$41.4	\$44.5	\$48.0	\$363.3
CLOSING CASH BALANCE	\$36.2	\$74.4	(\$256.5)	(\$232.2)	(\$205.8)	(\$170.5)	(\$132.3)	(\$91.0)	(\$46.4)	\$1.6	

2014 Adjusted Charge Per Square Metre
\$1.98

Allocation of Capital Program	
Residential Sector	74.9%
Non-Residential Sector	25.1%
Rates for 2014	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX B.3

PARKS AND RECREATION

APPENDIX B.3

PARKS AND RECREATION

The City of Niagara Falls Recreation and Culture Department is responsible for the operations and maintenance of parkland, park facilities and indoor recreation facilities, and providing recreational programming to the residents of Niagara Falls. There are twelve indoor recreation facilities and various neighbourhood, community, city-wide and nature, and trail parkland found throughout the City.

TABLE 1 2004-2013 HISTORIC SERVICE LEVELS

The ten-year historic inventory of capital assets for indoor recreation facilities includes 464,238 square feet of indoor recreation building space, the largest facility being the Gale Centre. The current replacement value for the buildings is \$96.13 million. The land associated with the buildings amount to 35.32 acres, and is valued at \$7.06 million. The 16 vehicles and equipment associated with the arena facilities have a total value of \$792,000. In addition, the City has roughly 596 hectares of parkland, which consists of neighbourhood, community, city-wide, and nature, and trails. The total value of the parkland amounts to \$51.29 million.

The value of capital assets for Parks and Recreation totals \$155.28 million. The ten-year historic average service level is \$1,653.00 per capita, and multiplied by the ten-year forecast growth in net population, results in a maximum allowable funding envelope of \$10.50 million (6,355 net population growth X historic service level of \$1,653/capita). Parks and Recreation has a committed excess capacity equivalent to \$16.22 million. This amount is related to the construction of the Gale Centre and the debt, which is included in the capital program, is eligible for DC funding. As such, the calculated excess capacity is deemed to be committed, and no reduction has been made to the funding envelope.

Finally, Parks and Recreation is a service for which development-related capital costs must be reduced by ten per cent under the *DCA*. The resulting net maximum allowable funding envelope brought forward to the development charges calculation is reduced to \$9.45 million.

**TABLE 2 2014 – 2023 DEVELOPMENT-RELATED CAPITAL PROGRAM &
CALCULATION OF THE UNADJUSTED DEVELOPMENT CHARGE**

The 2014–2023 development-related capital program for Parks and Recreation is comprised of recovering for the remaining payments related to the construction of the Gale Centre, the installation of new arterial turf in a north end location and the creation of new parkland and park facilities which amounts to \$8.86 million. The growth-related portion of the remaining debt payments for the Gale Centre amounts to \$5.17 million.

The largest new project in the capital program is for the construction of new artificial turf in the north end which will replace an existing soccer field. The replacement share of \$500,000 has been netted off the total program cost.

Furthermore, the ten per cent reduction has not been applied to the debt recovery as this reduction has already been made in previous by-laws. However, a ten per cent reduction has been applied to the other projects in the capital works program and an amount of \$319,000 will be paid for using non-DC sources. The DC eligible portion of the capital program, \$8.04 million, will be partly paid for using existing reserve funds (\$1.04 million). The remaining portion, \$7.00 million, is brought forward to the development charges calculation.

The 2014–2023 DC costs eligible for recovery amounts to \$7.00 million which is allocated entirely against future residential development in the City of Niagara Falls. This results in an unadjusted development charge of \$757.65 per capita.

TABLE 3 CASH FLOW AND RESERVE FUND ANALYSIS

After cash flow and reserve fund consideration, the residential calculated charge increases to \$764.37 per capita. This is a reflection of the timing of the debenture payments and development charges revenues and the recovery of interest associated with the debenture.

The following table summarizes the calculation of the indoor recreation development charge:

PARKS AND RECREATION SUMMARY						
10-year Hist.	2014 - 2023		Unadjusted		Adjusted	
Service Level	Development-Related Capital Program		Development Charge		Development Charge	
		Net DC				
per capita	Total	Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$1,653.00	\$8,859,761	\$7,002,939	\$757.65	\$0.00	\$764.37	\$0.00

CITY OF NIAGARA FALLS
INVENTORY OF CAPITAL ASSETS
PARKS AND RECREATION
INDOOR RECREATION FACILITIES

BUILDINGS Facility Name	# of Square Feet											UNIT COST (\$/sq. ft.)	
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013			
Jack Bell Arena	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	\$200
Niagara Falls Memorial Arena	51,000	51,000	51,000	51,000	51,000	51,000	51,000	51,000	51,000	51,000	-	-	\$200
Chippawa/Wiloughby Memorial Arena	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	\$200
Stamford Memorial Arena	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	\$200
Coronation Centre for Seniors	18,000	18,000	18,000	18,000	18,000	18,000	18,000	18,000	18,000	18,000	18,000	18,000	\$175
MacBain Community Centre	94,280	94,280	94,280	94,280	94,280	94,280	94,280	94,280	94,280	94,280	94,280	94,280	\$300
FH Leslie Outdoor Pool	13,680	13,680	13,680	13,680	13,680	13,680	13,680	13,680	13,680	13,680	13,680	13,680	\$100
Prince Charles Outdoor Pool	10,989	10,989	10,989	10,989	10,989	10,989	10,989	10,989	10,989	10,989	10,989	10,989	\$100
EE Mitchelson Pool	10,989	10,989	10,989	10,989	10,989	10,989	10,989	10,989	10,989	10,989	10,989	10,989	\$100
Niagara Falls Lions Pool	10,989	10,989	10,989	10,989	10,989	10,989	10,989	10,989	10,989	10,989	10,989	10,989	\$100
Buck Hiinsberger Pool	10,311	10,311	10,311	10,311	10,311	10,311	10,311	10,311	10,311	10,311	10,311	10,311	\$100
Gale Centre	-	-	-	-	-	-	-	-	-	-	203,000	203,000	\$200
Total (sq.ft.)	312,238	515,238	464,238	464,238									
Total (\$000)	\$65,729.8	\$106,329.8	\$96,129.8	\$96,129.8									

LAND Facility Name	# of Acres											UNIT COST (\$/acre)	
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013			
Jack Bell Arena	4.09	4.09	4.09	4.09	4.09	4.09	4.09	4.09	4.09	4.09	4.09	4.09	\$200,000
Niagara Falls Memorial Arena	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	-	-	-	\$200,000
Chippawa/Wiloughby Memorial Arena	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	\$200,000
Coronation Centre for Seniors	2.43	2.43	2.43	2.43	2.43	2.43	2.43	2.43	2.43	2.43	2.43	2.43	\$200,000
MacBain Community Centre	8.45	8.45	8.45	8.45	8.45	8.45	8.45	8.45	8.45	8.45	8.45	8.45	\$200,000
FH Leslie Outdoor Pool	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	\$200,000
Prince Charles Outdoor Pool	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	\$200,000
EE Mitchelson Pool	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	\$200,000
Niagara Falls Lions Pool	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	\$200,000
Buck Hiinsberger Pool	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	\$200,000
Gale Centre	-	-	-	-	-	-	-	-	-	-	16.50	16.50	\$200,000
Total (acres)	22.35	38.85	35.32	35.32									
Total (\$000)	\$4,470.0	\$7,770.0	\$7,064.0	\$7,064.0									

CITY OF NIAGARA FALLS
INVENTORY OF CAPITAL ASSETS
PARKS AND RECREATION
INDOOR RECREATION FACILITIES

ARENA EQUIPMENT Description	# of Vehicles and Equipment											UNIT COST (\$/unit)
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013		
Pickups	3	3	3	3	3	3	3	3	3	3	3	\$28,000
Zambonis	5	5	5	5	5	5	5	5	5	6	6	\$100,000
Cargo Van	1	1	1	1	1	1	1	1	1	1	1	\$28,000
Articulating Lift	1	1	1	1	1	1	1	1	1	1	1	\$35,000
Fork Lift	1	1	1	1	1	1	1	1	1	1	1	\$15,000
Riding Floor Machine	1	1	1	1	1	1	1	1	1	1	1	\$12,000
Walking Floor Machine	3	3	3	3	3	3	3	3	3	3	3	\$6,000
Total (#)	15	15	15	15	15	15	15	15	15	16	16	
Total (\$000)	\$692.0	\$692.0	\$692.0	\$692.0	\$692.0	\$692.0	\$692.0	\$692.0	\$692.0	\$792.0	\$792.0	\$792.0

CITY OF NIAGARA FALLS
INVENTORY OF CAPITAL ASSETS
PARKS AND RECREATION
PARKLAND DEVELOPMENT

PARKLAND Park Type	# of Acres of Developed Area										UNIT COST (\$/acre)	
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013		
Neighbourhood	130	134	134	137	139	139	139	139	139	139	139	\$83,853
Community	113	113	113	113	113	113	113	113	113	113	113	\$92,334
City-wide and Nature	252	253	259	259	259	259	259	259	259	260	260	\$96,364
Trails Parkland	62	64	64	66	66	66	74	84	84	84	84	\$49,395
Total (ha)	557	564	570	575	577	577	585	595	596	596	596	
Total (\$000)	\$48,680.9	\$49,211.4	\$49,789.6	\$50,139.9	\$50,307.7	\$50,307.7	\$50,702.8	\$51,196.8	\$51,293.1	\$51,293.1	\$51,293.1	

CITY OF NIAGARA FALLS
CALCULATION OF SERVICE LEVELS
PARKS AND RECREATION

Historic Population	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
	80,820	81,499	82,184	82,346	82,508	82,671	82,834	82,997	83,484	84,127

INVENTORY SUMMARY (\$000)

Major Facilities & Land	\$70,891.8	\$70,891.8	\$70,891.8	\$70,891.8	\$70,891.8	\$70,891.8	\$114,791.8	\$114,791.8	\$103,985.8	\$103,985.8
Parkland	\$48,680.9	\$49,211.4	\$49,789.6	\$50,139.9	\$50,307.7	\$50,307.7	\$50,702.8	\$51,196.8	\$51,293.1	\$51,293.1
Total (\$000)	\$119,572.7	\$120,103.2	\$120,681.4	\$121,031.7	\$121,199.5	\$121,199.5	\$165,494.6	\$165,988.6	\$155,278.9	\$155,278.9

SERVICE LEVEL (\$/capita)

Average
Service
Level

Major Facilities & Land	\$877.16	\$869.85	\$862.60	\$860.90	\$859.21	\$857.52	\$1,385.81	\$1,383.08	\$1,245.58	\$1,236.06
Parkland	\$602.34	\$603.83	\$605.83	\$608.89	\$609.73	\$608.53	\$612.10	\$616.85	\$614.41	\$609.71
Total (\$/capita)	\$1,479.49	\$1,473.68	\$1,468.43	\$1,469.80	\$1,468.94	\$1,466.05	\$1,997.91	\$1,999.93	\$1,859.98	\$1,845.77

CITY OF NIAGARA FALLS
CALCULATION OF MAXIMUM ALLOWABLE
PARKS AND RECREATION

10-Year Funding Envelope Calculation	
10 Year Average Service Level 2004 - 2013	\$1,653.00
Net Population Growth 2014 - 2023	6,355
Maximum Allowable Funding Envelope	\$10,504,815
Less: Uncommitted Excess Capacity	\$0
Less: 10% Legislated Reduction	\$1,050,482
Discounted Maximum Allowable Funding Envelope	\$9,454,334

Excess Capacity Calculation	
Total Value of Inventory in 2013	\$155,278,929
Inventory Using Average Service Level	\$139,061,931
Excess Capacity	\$16,216,998
Excess Capacity:	Committed

CITY OF NIAGARA FALLS
DEVELOPMENT-RELATED CAPITAL PROGRAM
PARKS AND RECREATION

Project Description	Timing	Gross Project Cost	Grants/Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	Available DC Reserves	DC Eligible Costs 2014-2023	Post 2023
					Replacement & BTE Shares	10% Reduction				
3.0 PARKS AND RECREATION										
3.1 Indoor Recreation Facilities										
3.1.1 Gale Centre Debt Recovery (Growth-related portion)	Various	\$ 5,169,761	-	\$ 5,169,761	-	\$ -	\$ 5,169,761	\$ 516,976	\$ 4,652,785	\$ -
3.1.2 Artificial Turf in North End	2017	\$ 1,500,000	-	\$ 1,500,000	\$ 500,000	\$ 100,000	\$ 900,000	\$ -	\$ 900,000	\$ -
Subtotal Indoor Recreation Facilities		\$ 6,669,761	-	\$ 6,669,761	\$ 500,000	\$ 100,000	\$ 6,069,761	\$ 516,976	\$ 5,552,785	\$ -
3.2 Parkland & Park Facilities										
3.2.1 New neighbourhood park in Fernwood Subdivision	2014	\$ 250,000	-	\$ 250,000	-	\$ 25,000	\$ 225,000	\$ 225,000	\$ -	\$ -
3.2.2 Haulage Road Trail North Pedestrian Access Development	2014	\$ 20,000	-	\$ 20,000	-	\$ 2,000	\$ 18,000	\$ 18,000	\$ -	\$ -
3.2.3 Development of trails in woodlot at Fernwood Subdivision	2015	\$ 75,000	-	\$ 75,000	-	\$ 7,500	\$ 67,500	\$ 67,500	\$ -	\$ -
3.2.4 New neighbourhood park in Warren Woods Subdivision	2015	\$ 250,000	-	\$ 250,000	-	\$ 25,000	\$ 225,000	\$ 210,346	\$ 14,654	\$ -
3.2.5 Garner Trail Phase 4	2016	\$ 100,000	-	\$ 100,000	-	\$ 10,000	\$ 90,000	\$ -	\$ 90,000	\$ -
3.2.6 Chippawa West Trail Development	2016	\$ 220,000	-	\$ 220,000	-	\$ 22,000	\$ 198,000	\$ -	\$ 198,000	\$ -
3.2.7 New neighbourhood park in the Chippawa West Subdivision	2016	\$ 250,000	-	\$ 250,000	-	\$ 25,000	\$ 225,000	\$ -	\$ 225,000	\$ -
3.2.8 Development of nature trail and boardwalk in Edgewood woodlot	2017	\$ 75,000	-	\$ 75,000	-	\$ 7,500	\$ 67,500	\$ -	\$ 67,500	\$ -
3.2.9 Thundering Waters Trail Development	2018	\$ 200,000	-	\$ 200,000	-	\$ 20,000	\$ 180,000	\$ -	\$ 180,000	\$ -
3.2.10 New neighbourhood park in Thundering Waters Subdivision	2019	\$ 250,000	-	\$ 250,000	-	\$ 25,000	\$ 225,000	\$ -	\$ 225,000	\$ -
3.2.11 New neighbourhood park in Warren Woods Subdivision	2020	\$ 250,000	-	\$ 250,000	-	\$ 25,000	\$ 225,000	\$ -	\$ 225,000	\$ -
3.2.12 New neighbourhood park in Thundering Waters Subdivision	2021	\$ 250,000	-	\$ 250,000	-	\$ 25,000	\$ 225,000	\$ -	\$ 225,000	\$ -
Subtotal Parkland & Park Facilities		\$ 2,190,000	-	\$ 2,190,000	\$ -	\$ 219,000	\$ 1,971,000	\$ 520,846	\$ 1,450,154	\$ -
TOTAL PARKS AND RECREATION		\$ 8,859,761	\$ -	\$ 8,859,761	\$ 500,000	\$ 319,000	\$ 8,040,761	\$ 1,037,822	\$ 7,002,939	\$ -

Note 1: Principal payments need not be reduced by 10% as reduction has been made in prior DC By-laws.

Residential Development Charge Calculation	
Residential Share of 2014 - 2023 DC Eligible Costs	100%
10-Year Growth in Population in New Units	\$7,002,939
Unadjusted Development Charge Per Capita	9,243
	\$757.65
Non-Residential Development Charge Calculation	
Non-Residential Share of 2014 - 2023 DC Eligible Costs	0%
10-Year Growth in Square Metres	\$0
Unadjusted Development Charge Per Square Metre	194,750
	\$0.00

2014 - 2023 Net Funding Envelope \$9,454,334
Uncommitted Reserve Fund Balance \$1,037,822
Balance as at December 31, 2013

APPENDIX B.3
TABLE 3

CITY OF NIAGARA FALLS
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
PARKS AND RECREATION
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	TOTAL
PARKS AND RECREATION											
OPENING CASH BALANCE	\$0.00	\$671.96	\$829.11	\$463.07	(\$419.31)	(\$482.99)	(\$478.42)	(\$472.97)	(\$466.52)	(\$241.90)	
2014 - 2023 RESIDENTIAL FUNDING REQUIREMENTS											
- Parks And Recreation: Non Inflated	\$0.0	\$531.6	\$1,030.0	\$1,484.5	\$697.0	\$742.0	\$742.0	\$742.0	\$517.0	\$517.0	\$7,002.9
- Parks And Recreation: Inflated	\$0.0	\$542.3	\$1,071.6	\$1,575.3	\$754.4	\$819.2	\$835.6	\$852.3	\$605.7	\$617.8	\$7,674.3
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	864	864	864	864	864	1,007	1,007	1,007	951	951	9,243
REVENUE											
- DC Receipts: Inflated	\$660.4	\$673.6	\$687.1	\$700.8	\$714.9	\$849.8	\$866.8	\$884.2	\$851.7	\$868.7	\$7,758.0
INTEREST											
- Interest on Opening Balance	\$0.0	\$23.5	\$29.0	\$16.2	(\$23.1)	(\$26.6)	(\$26.3)	(\$26.0)	(\$25.7)	(\$13.3)	(\$72.2)
- Interest on In-year Transactions	\$11.6	\$2.3	(\$10.6)	(\$24.0)	(\$1.1)	\$0.5	\$0.5	\$0.6	\$4.3	\$4.4	(\$11.5)
TOTAL REVENUE	\$672.0	\$699.4	\$705.5	\$693.0	\$690.8	\$823.8	\$841.0	\$858.7	\$830.3	\$859.8	\$7,674.3
CLOSING CASH BALANCE	\$672.0	\$829.1	\$463.1	(\$419.3)	(\$483.0)	(\$478.4)	(\$473.0)	(\$466.5)	(\$241.9)	\$0.1	

2014 Adjusted Charge Per Capita
\$764.37

Allocation of Capital Program	
Residential Sector	100.0%
Non-Residential Sector	0.0%
Rates for 2014	
Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX B.4

PUBLIC WORKS AND FLEET

APPENDIX B.4

PUBLIC WORKS AND FLEET

The City of Niagara Falls Municipal Works Department is responsible for the design, operation, maintenance and ongoing rehabilitation of City infrastructure including roads and related infrastructure, and utilities infrastructure. The department also maintains an inventory of municipal infrastructure.

TABLE 1 2004-2013 HISTORIC SERVICE LEVELS

The ten-year historic inventory of capital assets for Public Works and Fleet includes 52,800 square feet of building space with a replacement value of \$11.16 million. The 34.48 acres of land associated with the Public Works buildings are valued at \$2.59 million. Finally, the 228 public works vehicles add an additional \$15.73 million to the value of the capital assets.

The total value of the Public Works and Fleet capital inventory is estimated to be \$29.48 million. The ten-year historic average service level is \$231.14 per capita and employment and this, multiplied by the ten-year forecast net population and employment growth (9,445), results in a ten-year maximum allowable funding envelope of \$2.18 million. Under the *Development Charges Act, 1997*, services related to a highway as defined in subsection 1(1) of the *Municipal Act, 2001*, need not to be reduced by the legislated ten per cent (as with other general services). The services and capital assets of Public Works and Fleet are considered to be related to a highway, and as such, the maximum allowable of \$2.18 million is not required to be reduced by ten per cent. However, an uncommitted excess capacity amount of \$406,151 has been identified for this service. As a result, the net maximum allowable funding envelope brought forward to the development charges calculation is \$1.78 million.

TABLE 2 2014 – 2023 DEVELOPMENT-RELATED CAPITAL PROGRAM AND CALCULATION OF THE UNADJUSTED DEVELOPMENT CHARGES

The ten-year development-related capital plan for Public Works and Fleet only includes the acquisition of new fleet and equipment at a cost of \$446,000. Of this amount, \$279,399 will be paid for by existing funds in the Public Works and Fleet DC reserve fund.

The remaining \$166,601 is considered to be the 2014-2023 development-related DC eligible costs. This amount is allocated 75 per cent, or \$124,859, to the residential sector and 25 per cent, or \$41,741, to the non-residential sector. This yields an unadjusted charge of \$13.51 per capita and \$0.21 per square metre, respectively.

TABLE 3 CASH FLOW ANALYSIS

After cash flow analysis, the residential charge increases to \$14.08 per capita and the non-residential charge increases to \$0.23 per square metre.

The following table summarizes the calculation of the Public Works and Fleet development charge.

PUBLIC WORKS & FLEET SUMMARY						
10-year Hist. Service Level per pop & emp	2014 - 2023		Unadjusted		Adjusted	
	Development-Related Total	Capital Program Net DC Recoverable	Development Charge		Development Charge	
			\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$231.14	\$446,000	\$166,601	\$13.51	\$0.21	\$14.08	\$0.23

CITY OF NIAGARA FALLS
INVENTORY OF CAPITAL ASSETS
PUBLIC WORKS & FLEET

BUILDINGS Facility Name	# of Square Feet													UNIT COST (\$/sq.ft.)	
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2013	2013			
Municipal Works Service Centre	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	\$245
Storage Buildings	18,000	18,000	18,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000	\$210
Wash Bay	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	\$210
Traffic/Sign Shop	900	900	900	900	900	900	900	900	900	900	900	900	900	900	\$210
Salt Storage Building	5,800	5,800	5,800	5,800	5,800	5,800	5,800	5,800	5,800	5,800	5,800	5,800	5,800	5,800	\$90
Small Engine Repair Shop	900	900	900	900	900	900	900	900	900	900	900	900	900	900	\$210
Total (#)	49,800	49,800	49,800	52,800											
Total (\$000)	\$10,532.0	\$10,532.0	\$10,532.0	\$11,162.0											

LAND Facility Name	# of Acres													UNIT COST (\$/acre)	
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2013	2013			
Land for all Public Works Buildings	34.48	34.48	34.48	34.48	34.48	34.48	34.48	34.48	34.48	34.48	34.48	34.48	34.48	34.48	\$75,000
Total (acre)	34.48														
Total (\$000)	\$2,586.0														

APPENDIX B.4
TABLE 1 - PAGE 2

CITY OF NIAGARA FALLS
INVENTORY OF CAPITAL ASSETS
PUBLIC WORKS & FLEET

FLEET & EQUIPMENT Description	# of Fleet											UNIT COST (\$/unit)
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013		
Cats	15	14	14	15	17	17	20	18	16	16	16	\$23,400
Mini-Vans	10	9	9	9	9	9	8	7	3	3	3	\$25,014
Pickups	31	33	36	36	38	37	38	39	40	40	40	\$22,400
Cargo Vans	19	19	20	21	19	22	23	22	28	28	28	\$23,985
Crew Cab Dumps	15	16	18	18	17	17	18	18	20	20	20	\$47,623
Service Trucks	2	2	2	2	2	2	2	2	2	2	2	\$94,324
Cube Vans	2	2	2	2	3	3	3	4	4	4	4	\$37,400
Dump Plows	10	9	9	9	9	9	9	9	8	8	8	\$172,400
Dump Sanders	12	13	13	11	12	12	14	14	19	19	19	\$211,400
Tandem Dumps	3	4	4	5	5	5	7	7	2	2	2	\$169,384
Small Dumps	2	2	-	-	-	-	-	-	-	-	-	\$57,415
Aerial Tree Unit	1	1	1	1	1	2	2	2	2	2	2	\$207,777
Utility Cranes/Boom	3	2	2	3	3	3	2	2	2	2	2	\$81,400
Sewer Rodder	1	1	1	-	-	-	-	-	-	-	-	\$28,040
Crew Cab Utility	3	4	4	5	5	5	5	5	5	5	5	\$79,863
Backhoes	4	5	4	5	4	4	4	4	6	6	6	\$90,948
Small Loaders	2	1	2	2	2	2	2	2	-	-	-	\$56,080
Front-end Loader	1	2	2	2	2	2	2	2	2	2	2	\$191,400
Tractors	7	7	8	8	8	8	8	9	10	10	10	\$71,400
Kubota/Trac Loader	4	4	4	4	4	4	4	4	4	4	4	\$66,400
Sidewalk Plows	5	5	7	7	8	8	8	10	10	10	10	\$142,268
Packer	1	1	1	1	-	-	-	-	-	-	-	\$200,287
Recycler	1	1	1	2	2	2	2	1	-	-	-	\$213,639
Leaf Loader	1	1	1	1	1	1	-	-	-	-	-	\$175,582
Leaf Trailer	1	1	1	1	1	1	-	-	-	-	-	\$93,467
Graders	2	2	2	2	2	2	2	2	2	2	2	\$261,400
Rollers	3	3	2	2	2	2	2	2	1	1	1	\$6,383

CITY OF NIAGARA FALLS
INVENTORY OF CAPITAL ASSETS
PUBLIC WORKS & FLEET

FLEET & EQUIPMENT Description	# of Fleet											UNIT COST (\$/unit)
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013		
Compressors	4	4	4	4	3	3	3	3	2	2		\$16,246
Snow Blower	1	1	1	1	1	1	1	1	1	1		\$140,000
Trailers	15	15	17	17	18	19	19	20	19	19		\$6,180
CB Cleaner	1	1	1	1	1	1	1	1	-	-		\$267,049
Haul-All	1	1	1	1	1	1	1	1	1	1		\$87,904
Sweepers	2	2	2	3	3	3	3	3	2	2		\$242,652
Welder	1	1	1	1	1	1	1	1	1	1		\$12,360
Flusher	1	1	1	-	-	-	-	-	-	-		\$186,934
Sidewalk Sweepers	2	2	2	2	3	3	3	3	3	3		\$46,434
Chippers	2	2	2	2	2	2	2	2	2	2		\$48,743
Gorman Pumps	2	2	2	2	3	3	3	3	3	3		\$65,000
Street Mowers	2	2	2	2	2	2	2	2	3	3		\$16,407
Sewer Cleaners	2	2	2	-	-	-	-	-	1	1		\$335,155
Asphalt Recycler	-	-	-	-	1	-	-	-	2	2		\$26,000
Valve Turner (Old Rodder)	-	-	1	1	1	1	1	1	2	2		\$54,267
Total (#)	197	200	209	211	216	219	227	227	228	228		
Total (\$000)	\$14,062.2	\$14,539.3	\$14,992.2	\$14,609.4	\$14,832.6	\$15,070.1	\$15,653.2	\$15,749.3	\$15,732.1	\$15,732.1		\$15,732.1

APPENDIX B.4
TABLE 1 - PAGE 4

CITY OF NIAGARA FALLS
CALCULATION OF SERVICE LEVELS
PUBLIC WORKS & FLEET

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Historic Population	80,820	81,499	82,184	82,346	82,508	82,671	82,834	82,997	83,484	84,127
Historic Employment	40,232	41,220	42,232	41,986	41,741	41,498	41,256	41,015	41,339	41,658
Total Historic Population & Employment	121,052	122,719	124,416	124,332	124,249	124,169	124,090	124,012	124,823	125,785

INVENTORY SUMMARY (\$000)

Buildings	\$10,532.0	\$10,532.0	\$10,532.0	\$11,162.0	\$11,162.0	\$11,162.0	\$11,162.0	\$11,162.0	\$11,162.0	\$11,162.0
Land	\$2,586.0	\$2,586.0	\$2,586.0	\$2,586.0	\$2,586.0	\$2,586.0	\$2,586.0	\$2,586.0	\$2,586.0	\$2,586.0
Fleet & Equipment	\$14,062.2	\$14,539.3	\$14,992.2	\$14,609.4	\$14,832.6	\$15,070.1	\$15,653.2	\$15,749.3	\$15,732.1	\$15,732.1
Total (\$000)	\$27,180.2	\$27,657.3	\$28,110.2	\$28,357.4	\$28,580.6	\$28,818.1	\$29,401.2	\$29,497.3	\$29,480.1	\$29,480.1

SERVICE LEVEL (\$/pop & emp)

	Average Service Level										
Buildings	\$87.00	\$85.82	\$84.65	\$89.78	\$89.84	\$89.89	\$89.95	\$90.01	\$89.42	\$88.74	\$88.51
Land	\$21.36	\$21.07	\$20.79	\$20.80	\$20.81	\$20.83	\$20.84	\$20.85	\$20.72	\$20.56	\$20.86
Fleet & Equipment	\$116.17	\$118.48	\$120.50	\$117.50	\$119.38	\$121.37	\$126.14	\$127.00	\$126.04	\$125.07	\$121.76
Total (\$/pop & emp)	\$224.53	\$225.37	\$225.94	\$228.08	\$230.03	\$232.09	\$236.93	\$237.86	\$236.18	\$234.37	\$231.14

CITY OF NIAGARA FALLS
CALCULATION OF MAXIMUM ALLOWABLE
PUBLIC WORKS & FLEET

10-Year Funding Envelope Calculation	
10 Year Average Service Level 2004 - 2013	\$231.14
Net Population & Employment Growth 2014 - 2023	9,445
Maximum Allowable Funding Envelope	\$2,183,117
Less: Uncommitted Excess Capacity	\$406,151
Discounted Maximum Allowable Funding Envelope	\$1,776,966

Excess Capacity Calculation	
Total Value of Inventory in 2013	\$29,480,096
Inventory Using Average Service Level	\$29,073,945
Excess Capacity	\$406,151
Excess Capacity:	Uncommitted

APPENDIX B.4
TABLE 2

CITY OF NIAGARA FALLS
DEVELOPMENT-RELATED CAPITAL PROGRAM
PUBLIC WORKS & FLEET

Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	Available DC Reserves	DC Eligible Costs		Post 2023
					Replacement & BTE Shares	0% Reduction			2014-2023	2023	
4.0 PUBLIC WORKS & FLEET											
4.1 Fleet and Equipment											
4.1.1 Truck Plow and Sander	2016	\$ 220,000	\$ -	\$ 220,000	\$ -	\$ -	\$ 220,000	\$ 220,000	\$ -	\$ -	-
4.1.2 Sidewalk Plow	2017	\$ 150,000	\$ -	\$ 150,000	\$ -	\$ -	\$ 150,000	\$ 59,399	\$ 90,601	\$ -	-
4.1.3 Riding Mower	2018	\$ 20,000	\$ -	\$ 20,000	\$ -	\$ -	\$ 20,000	\$ -	\$ 20,000	\$ -	-
4.1.4 1 Tonne Truck	2019	\$ 49,000	\$ -	\$ 49,000	\$ -	\$ -	\$ 49,000	\$ -	\$ 49,000	\$ -	-
4.1.5 Trailer	2020	\$ 7,000	\$ -	\$ 7,000	\$ -	\$ -	\$ 7,000	\$ -	\$ 7,000	\$ -	-
Subtotal Fleet and Equipment		\$ 446,000	\$ -	\$ 446,000	\$ -	\$ -	\$ 446,000	\$ 279,399	\$ 166,601	\$ -	-
TOTAL PUBLIC WORKS & FLEET		\$ 446,000	\$ -	\$ 446,000	\$ -	\$ -	\$ 446,000	\$ 279,399	\$ 166,601	\$ -	-

Residential Development Charge Calculation	
Residential Share of 2014 - 2023 DC Eligible Costs	75%
10-Year Growth in Population in New Units	\$124,859
Unadjusted Development Charge Per Capita	9,243
	\$13.51
Non-Residential Development Charge Calculation	
Non-Residential Share of 2014 - 2023 DC Eligible Costs	25%
10-Year Growth in Square Metres	\$41,741
Unadjusted Development Charge Per Square Metre	194,750
	\$0.21

2014 - 2023 Net Funding Envelope	\$1,776,966
Uncommitted Reserve Fund Balance Balance as at December 31, 2013	\$279,399

APPENDIX B.4
TABLE 3 - PAGE 1

CITY OF NIAGARA FALLS
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
PUBLIC WORKS & FLEET
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	TOTAL
PUBLIC WORKS & FLEET											
OPENING CASH BALANCE	\$0.00	\$12.41	\$25.46	\$39.28	(\$20.13)	(\$24.35)	(\$51.21)	(\$43.76)	(\$29.58)	(\$15.24)	
2014 - 2023 RESIDENTIAL FUNDING REQUIREMENTS											
- Public Works & Fleet: Non Inflated	\$0.0	\$0.0	\$0.0	\$67.9	\$15.0	\$36.7	\$5.2	\$0.0	\$0.0	\$0.0	\$124.9
- Public Works & Fleet: Inflated	\$0.0	\$0.0	\$0.0	\$72.1	\$16.2	\$40.5	\$5.9	\$0.0	\$0.0	\$0.0	\$134.7
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	864	864	864	864	864	1,007	1,007	1,007	951	951	9,243
REVENUE											
- DC Receipts: Inflated	\$12.2	\$12.4	\$12.7	\$12.9	\$13.2	\$15.7	\$16.0	\$16.3	\$15.7	\$16.0	\$143.1
INTEREST											
- Interest on Opening Balance	\$0.0	\$0.4	\$0.9	\$1.4	(\$1.1)	(\$1.3)	(\$2.8)	(\$2.4)	(\$1.6)	(\$0.8)	(\$7.4)
- Interest on In-year Transactions	\$0.2	\$0.2	\$0.2	(\$1.6)	(\$0.1)	(\$0.7)	\$0.2	\$0.3	\$0.3	\$0.3	(\$0.7)
TOTAL REVENUE	\$12.4	\$13.1	\$13.8	\$12.6	\$12.0	\$13.7	\$13.4	\$14.2	\$14.3	\$15.4	\$134.9
CLOSING CASH BALANCE	\$12.4	\$25.5	\$39.3	(\$20.1)	(\$24.3)	(\$51.2)	(\$43.8)	(\$29.6)	(\$15.2)	\$0.2	

2014 Adjusted Charge Per Capita **\$14.08**

Allocation of Capital Program	
Residential Sector	74.9%
Non-Residential Sector	25.1%
Rates for 2014	
Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%



CITY OF NIAGARA FALLS
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
PUBLIC WORKS & FLEET
NON-RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	TOTAL
PUBLIC WORKS & FLEET											
OPENING CASH BALANCE	\$0.00	\$4.17	\$8.59	\$13.27	(\$6.50)	(\$7.81)	(\$16.72)	(\$14.15)	(\$9.33)	(\$4.05)	
2014 - 2023 NON-RESIDENTIAL FUNDING REQUIREMENTS											
- Public Works: Non Inflated	\$0.0	\$0.0	\$0.0	\$22.7	\$5.0	\$12.3	\$1.8	\$0.0	\$0.0	\$0.0	\$41.7
- Public Works: Inflated	\$0.0	\$0.0	\$0.0	\$24.1	\$5.4	\$13.6	\$2.0	\$0.0	\$0.0	\$0.0	\$45.0
NON-RESIDENTIAL SPACE GROWTH											
- Growth in Square Metres	17,955	17,955	17,995	17,955	17,955	20,995	20,955	20,995	20,995	20,995	194,750
REVENUE											
- DC Receipts: Inflated	\$4.1	\$4.2	\$4.3	\$4.4	\$4.5	\$5.3	\$5.4	\$5.5	\$5.7	\$5.8	\$49.2
INTEREST											
- Interest on Opening Balance	\$0.0	\$0.1	\$0.3	\$0.5	(\$0.4)	(\$0.4)	(\$0.9)	(\$0.8)	(\$0.5)	(\$0.2)	(\$2.3)
- Interest on In-year Transactions	\$0.1	\$0.1	\$0.1	(\$0.5)	(\$0.0)	(\$0.2)	\$0.1	\$0.1	\$0.1	\$0.1	(\$0.2)
TOTAL REVENUE	\$4.2	\$4.4	\$4.7	\$4.3	\$4.1	\$4.6	\$4.5	\$4.8	\$5.3	\$5.7	\$46.7
CLOSING CASH BALANCE	\$4.2	\$8.6	\$13.3	(\$6.5)	(\$7.8)	(\$16.7)	(\$14.2)	(\$9.3)	(\$4.0)	\$1.6	

2014 Adjusted Charge Per Square Metre **\$0.23**

Allocation of Capital Program	
Residential Sector	74.9%
Non-Residential Sector	25.1%
Rates for 2014	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX B.5

TRANSIT SERVICES

APPENDIX B.5

TRANSIT SERVICES

The City of Niagara Falls Transit Service offers public transportation service to its residents via 23 bus routes.

TABLE 1 2004-2013 HISTORIC SERVICE LEVELS

Table 1 displays the Transit Services' ten-year historic inventory for vehicles, stops and shelters, and buildings. The square footage of the garage and bus terminal buildings amount to 36,044 square feet and has a current replacement value of \$7.59 million. The land which these buildings are situated upon amounts to 3.00 acres and has a replacement value of \$600,000. The fleet of 37 vehicles related to transit which includes small conventional, conventional and specialized buses but also includes vehicles for staff such as supervisor vans, sweepers and service vehicles valued at \$13.03 million.

Other transit infrastructure such as shelters and also equipment are included in the inventory of capital assets. In total, there are 75 bus shelters valued at \$600,000. Finally, a total of 45 pieces of equipment are included in this service, such as radios, fare boxes, surveillance and other servicing equipment. The equipment adds another \$922,900 to the inventory.

The total value of the Transit Services' capital assets is \$22.74 million. The ten-year average historic service level is calculated at \$177.29 per capita and employment. This, multiplied by the anticipated net population and employment growth in the City, yields a ten-year maximum allowable expenditure of \$1.67 million for the Transit Services.

An uncommitted excess capacity of \$439,157 has been identified for this service. As a result, the total excess capacity must be deducted from the funding envelope calculation.

Finally, Transit Services must be reduced by ten per cent as required under the *DCA* and amounts to a reduction of \$123,535. The resulting net maximum allowable funding envelope is \$1.11 million. This amount is brought forward to the development charge calculation.

**TABLE 2 2014 – 2023 DEVELOPMENT-RELATED CAPITAL PROGRAM AND
CALCULATION OF THE UNADJUSTED DEVELOPMENT CHARGES**

The projects in Transit Services' development-related capital program are the addition of a new bus maintenance and storage facility in 2014 for \$3.41 million and transit facility expansion in 2020 for \$1.00 million. The \$3.41 million for the new bus facility only represents the City's share of the expense. The remaining projects provides for the acquisition of five additional buses between 2015-2023 for \$2.50 million, and the development of a bus turn-around in Warren Woods Subdivision in 2015 for \$200,000.

The Transit Services capital program is netted down to \$5.66 million and this represents the DC eligible share. There is an \$824,100 replacement/benefit to existing share under the new bus maintenance facility which will replace the existing garage on Bridge Street. The replacement/benefit to existing share represents the portion of the new facility that replaces 25,100 square feet of the existing garage, which is approximately 25 per cent of the total square footage of the new facility. The legislated ten per cent discount amounts to \$629,040 and is netted off of the net municipal costs, leaving \$5.66 million as the total DC eligible costs. Of this amount, \$672,574 will be paid for by existing funds in the Transit Services DC reserve fund and \$3.88 million is considered to be related to growth beyond 2023. The remaining \$1.11 million is considered to be for development between 2014-2023 and will be recovered through this by-law.

As shown in Table 2, 75 per cent of the cost or \$833,251 is attributed to residential development, and 25 per cent of the cost or \$278,562 is attributed to non-residential development. This yields unadjusted development charges of \$90.15 per capita and \$1.43 per square metre of non-residential GFA.

TABLE 3 CASH FLOW ANALYSIS

The cash flow analysis is displayed in Table 3. It considers the timing of the projects against the timing of the development charge revenues to determine adjusted calculated rates. After cash flow consideration, the residential development charge for Transit Services is increased to \$105.86 per capita and the non-residential charge also increase to \$1.69 per square metre.

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

TRANSIT SERVICES SUMMARY						
10-year Hist. Service Level per pop & emp	2014 - 2023		Unadjusted		Adjusted	
	Development-Related Capital Program		Development Charge		Development Charge	
	Total	Recoverable Net DC	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$177.29	\$7,114,500	\$1,111,812	\$90.15	\$1.43	\$105.86	\$1.69

CITY OF NIAGARA FALLS
INVENTORY OF CAPITAL ASSETS
TRANSIT SERVICES

BUILDINGS Facility Name	# of Square Feet												UNIT COST (\$/sq.ft.)	
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2013	2013		
Garage - 4320 Bridge St.	25,100	25,100	25,100	25,100	25,100	25,100	25,100	25,100	25,100	25,100	25,100	25,100	25,100	\$250
Bus Terminal	10,944	10,944	10,944	10,944	10,944	10,944	10,944	10,944	10,944	10,944	10,944	10,944	10,944	\$120
Total (sq.ft.)	36,044													
Total (\$000)	\$7,588.3													

LAND Facility Name	# of Acres												UNIT COST (\$/acre)	
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2013	2013		
Garage - 4320 Bridge St.	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	\$200,000
Bus Terminal	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	\$200,000
Total (acres)	3.00													
Total (\$000)	\$600.0													

SHELTERS Description	# of Shelters												UNIT COST (\$/unit)
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2013	2013	
Bus Shelters (Pattison Owned)	30	35	40	45	50	55	60	65	70	75	75	75	\$8,000
Total (#)	30	35	40	45	50	55	60	65	70	75	75	75	
Total (\$000)	\$240.0	\$280.0	\$320.0	\$360.0	\$400.0	\$440.0	\$480.0	\$520.0	\$560.0	\$600.0	\$600.0	\$600.0	

CITY OF NIAGARA FALLS
INVENTORY OF CAPITAL ASSETS
TRANSIT SERVICES

EQUIPMENT Description	# of Equipment											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013		
Parts Cleaner	1	1	1	1	1	1	1	1	1	1	1	1
Brake Lathe	1	1	1	1	1	1	1	1	1	1	1	1
Tire Machine	1	1	1	1	1	1	1	1	1	1	1	1
Main Air Compressor	1	1	1	1	1	1	1	1	1	1	1	1
Portable Hoist	1	1	1	1	1	1	1	1	1	1	1	1
Steam Cleaner	1	1	1	1	1	1	1	1	1	1	1	1
A/C Recovery System	1	1	1	1	1	1	1	1	1	1	1	1
Fareboxes	27	27	29	29	32	32	32	32	34	34	34	34
Welding/Cutting Equipment	1	1	1	1	1	1	1	1	1	1	1	1
Pressure Washer	1	1	1	1	1	1	1	1	1	1	1	1
Video Surveillance Equipment	-	-	1	1	1	1	1	1	1	1	1	1
Bus Wash Rack	1	1	1	1	1	1	1	1	1	1	1	1
Total (#)	37	37	40	40	43	43	43	43	45	45	45	45
Total (\$000)	\$779.9	\$779.9	\$840.4	\$840.4	\$889.9	\$889.9	\$889.9	\$889.9	\$922.9	\$922.9	\$922.9	\$922.9

VEHICLES Description	# of Vehicles											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013		
Sm. Conventional Buses	2	2	2	2	2	-	-	-	-	-	-	-
Conventional Buses	23	23	24	24	26	26	26	26	26	26	26	26
Specialized Buses	4	4	5	5	6	6	6	6	7	7	7	7
Power Boss Sweeper	1	1	1	1	1	1	1	1	1	1	1	1
Pick up Truck	-	-	-	-	-	1	1	1	1	1	1	1
Service Truck	1	1	1	1	1	1	1	1	1	1	1	1
Supervisor's Van	1	1	1	1	1	1	1	1	1	1	1	1
Total (#)	32	32	34	34	37	36	36	36	37	37	37	37
Total (\$000)	\$11,503.8	\$11,503.8	\$12,072.5	\$12,072.5	\$13,105.4	\$12,923.9	\$12,923.9	\$12,923.9	\$13,028.4	\$13,028.4	\$13,028.4	\$13,028.4

CITY OF NIAGARA FALLS
CALCULATION OF SERVICE LEVELS
TRANSIT SERVICES

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Historic Population	80,820	81,499	82,184	82,346	82,508	82,671	82,834	82,997	83,484	84,127
Historic Employment	40,232	41,220	42,232	41,986	41,741	41,498	41,256	41,015	41,339	41,658
Total Historic Population & Employment	121,052	122,719	124,416	124,332	124,249	124,169	124,090	124,012	124,823	125,785

INVENTORY SUMMARY (\$'000)

Buildings	\$7,588.3	\$7,588.3	\$7,588.3	\$7,588.3	\$7,588.3	\$7,588.3	\$7,588.3	\$7,588.3	\$7,588.3	\$7,588.3
Land	\$600.0	\$600.0	\$600.0	\$600.0	\$600.0	\$600.0	\$600.0	\$600.0	\$600.0	\$600.0
Shelters	\$240.0	\$280.0	\$320.0	\$360.0	\$400.0	\$440.0	\$480.0	\$520.0	\$560.0	\$600.0
Equipment	\$779.9	\$779.9	\$840.4	\$840.4	\$889.9	\$889.9	\$889.9	\$889.9	\$922.9	\$922.9
Vehicles	\$11,503.8	\$11,503.8	\$12,072.5	\$12,072.5	\$13,105.4	\$12,923.9	\$12,923.9	\$12,923.9	\$13,028.4	\$13,028.4
Total (\$'000)	\$20,712.0	\$20,752.0	\$21,421.2	\$21,461.2	\$22,583.6	\$22,442.1	\$22,482.1	\$22,522.1	\$22,699.6	\$22,739.6

SERVICE LEVEL (\$/pop & emp)	Average Service Level										
Buildings	\$62.69	\$61.83	\$60.99	\$61.03	\$61.07	\$61.11	\$61.15	\$61.19	\$60.79	\$60.33	\$61.22
Land	\$4.96	\$4.89	\$4.82	\$4.83	\$4.83	\$4.83	\$4.84	\$4.84	\$4.81	\$4.77	\$4.84
Shelters	\$1.98	\$2.28	\$2.57	\$2.90	\$3.22	\$3.54	\$3.87	\$4.19	\$4.49	\$4.77	\$3.38
Equipment	\$6.44	\$6.36	\$6.75	\$6.76	\$7.16	\$7.17	\$7.17	\$7.18	\$7.39	\$7.34	\$6.97
Vehicles	\$95.03	\$93.74	\$97.03	\$97.10	\$105.48	\$104.08	\$104.15	\$104.21	\$104.37	\$103.58	\$100.88
Total (\$/pop & emp)	\$171.10	\$169.10	\$172.17	\$172.61	\$181.76	\$180.74	\$181.18	\$181.61	\$181.85	\$180.78	\$177.29

CITY OF NIAGARA FALLS
CALCULATION OF MAXIMUM ALLOWABLE
TRANSIT SERVICES

10-Year Funding Envelope Calculation	
10 Year Average Service Level 2004 - 2013	\$177.29
Net Population & Employment Growth 2014 - 2031	9,445
Maximum Allowable Funding Envelope	\$1,674,504
Less: Uncommitted Excess Capacity	\$439,157
Less: 10% Legislated Reduction	\$123,535
Discounted Maximum Allowable Funding Envelope	\$1,111,812

Excess Capacity Calculation	
Total Value of Inventory in 2013	\$22,739,580
Inventory Using Average Service Level	\$22,300,423
Excess Capacity	\$439,157
Excess Capacity:	Uncommitted

APPENDIX B.5
TABLE 2

CITY OF NIAGARA FALLS
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	10% Reduction		Available DC Reserves	2014-2023	Post 2023
5.0 TRANSIT SERVICES										
5.1 Facilities										
5.1.1 New Bus Maintenance & Storage Facility	2014	\$ 3,414,500	\$ -	\$ 3,414,500	\$ 824,100	\$ 259,040	\$ 2,331,360	\$ 672,574	\$ 1,111,812	\$ 546,974
5.1.2 Transit Facility Expansion	2020	\$ 1,000,000	\$ -	\$ 1,000,000	\$ -	\$ 100,000	\$ 900,000	\$ -	\$ -	\$ 900,000
Subtotal Facilities		\$ 4,414,500	\$ -	\$ 4,414,500	\$ 824,100	\$ 359,040	\$ 3,231,360	\$ 672,574	\$ 1,111,812	\$ 1,446,974
5.2 Buses										
5.2.1 Additional Bus - Warren Woods Subdivision	2015	\$ 500,000	\$ -	\$ 500,000	\$ -	\$ 50,000	\$ 450,000	\$ -	\$ -	\$ 450,000
5.2.2 Additional Bus - Chippawa West Subdivision	2017	\$ 500,000	\$ -	\$ 500,000	\$ -	\$ 50,000	\$ 450,000	\$ -	\$ -	\$ 450,000
5.2.3 Additional Bus - Garner Estates & Thundering Waters	2019	\$ 500,000	\$ -	\$ 500,000	\$ -	\$ 50,000	\$ 450,000	\$ -	\$ -	\$ 450,000
5.2.4 Additional Bus - Fernwood Subdivision	2021	\$ 500,000	\$ -	\$ 500,000	\$ -	\$ 50,000	\$ 450,000	\$ -	\$ -	\$ 450,000
5.2.5 Additional Bus - Oldfied Subdivision	2023	\$ 500,000	\$ -	\$ 500,000	\$ -	\$ 50,000	\$ 450,000	\$ -	\$ -	\$ 450,000
Subtotal Buses		\$ 2,500,000	\$ -	\$ 2,500,000	\$ -	\$ 250,000	\$ 2,250,000	\$ -	\$ -	\$ 2,250,000
5.3 Other Transit Infrastructure										
5.3.1 Bus Turn-Around in Warren Woods Subdivision	2015	\$ 200,000	\$ -	\$ 200,000	\$ -	\$ 20,000	\$ 180,000	\$ -	\$ -	\$ 180,000
Subtotal Other Transit Infrastructure		\$ 200,000	\$ -	\$ 200,000	\$ -	\$ 20,000	\$ 180,000	\$ -	\$ -	\$ 180,000
TOTAL TRANSIT SERVICES		\$ 7,114,500	\$ -	\$ 7,114,500	\$ 824,100	\$ 629,040	\$ 5,661,360	\$ 672,574	\$ 1,111,812	\$ 3,876,974

Residential Development Charge Calculation	
Residential Share of 2014 - 2023 DC Eligible Costs	75%
10-Year Growth in Population in New Units	\$833,251
Unadjusted Development Charge Per Capita	9,243
	\$90.15
Non-Residential Development Charge Calculation	
Non-Residential Share of 2014 - 2023 DC Eligible Costs	25%
10-Year Growth in Square Metres	\$278,562
Unadjusted Development Charge Per Square Metre	194,750
	\$1.43

2014 - 2023 Net Funding Envelope	\$1,111,812
Uncommitted Reserve Fund Balance Balance as at December 31, 2013	\$672,574



APPENDIX B.5
TABLE 3 - PAGE 1

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

TRANSIT SERVICES	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	TOTAL
OPENING CASH BALANCE	\$0.00	(\$762.15)	(\$709.13)	(\$651.27)	(\$588.29)	(\$519.91)	(\$428.75)	(\$330.13)	(\$223.64)	(\$115.88)	
2014 - 2023 RESIDENTIAL FUNDING REQUIREMENTS											
- Transit Services: Non Inflated	\$833.3	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$833.3
- Transit Services: Inflated	\$833.3	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$833.3
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	864	864	864	864	864	1,007	1,007	1,007	951	951	9,243
REVENUE											
- DC Receipts: Inflated	\$91.5	\$93.3	\$95.2	\$97.1	\$99.0	\$117.7	\$120.1	\$122.5	\$118.0	\$120.3	\$1,074.7
INTEREST											
- Interest on Opening Balance	\$0.0	(\$41.9)	(\$39.0)	(\$35.8)	(\$32.4)	(\$28.6)	(\$23.6)	(\$18.2)	(\$12.3)	(\$6.4)	(\$238.1)
- Interest on In-year Transactions	(\$20.4)	\$1.6	\$1.7	\$1.7	\$1.7	\$2.1	\$2.1	\$2.1	\$2.1	\$2.1	(\$3.2)
TOTAL REVENUE	\$71.1	\$53.0	\$57.9	\$63.0	\$68.4	\$91.2	\$98.6	\$106.5	\$107.8	\$116.0	\$833.4
CLOSING CASH BALANCE	(\$762.1)	(\$709.1)	(\$651.3)	(\$588.3)	(\$519.9)	(\$428.8)	(\$330.1)	(\$223.6)	(\$115.9)	\$0.2	

2014 Adjusted Charge Per Capita **\$105.86**

Allocation of Capital Program	
Residential Sector	74.9%
Non-Residential Sector	25.1%
Rates for 2014	
Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX B.5
TABLE 3 - PAGE 2

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

TRANSIT SERVICES	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	TOTAL
OPENING CASH BALANCE	\$0.00	(\$255.09)	(\$237.58)	(\$218.49)	(\$197.74)	(\$175.25)	(\$145.00)	(\$112.37)	(\$77.04)	(\$38.95)	
2014 - 2023 NON-RESIDENTIAL FUNDING REQUIREMENTS											
- Transit Services: Non Inflated	\$278.6	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$278.6
- Transit Services: Inflated	\$278.6	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$278.6
NON-RESIDENTIAL SPACE GROWTH											
- Growth in Square Metres	17,955	17,955	17,995	17,955	17,955	20,995	20,955	20,995	20,995	20,995	194,750
REVENUE											
- DC Receipts: Inflated	\$30.3	\$31.0	\$31.6	\$32.2	\$32.8	\$39.2	\$39.9	\$40.8	\$41.6	\$42.4	\$361.8
INTEREST											
- Interest on Opening Balance	\$0.0	(\$14.0)	(\$13.1)	(\$12.0)	(\$10.9)	(\$9.6)	(\$8.0)	(\$6.2)	(\$4.2)	(\$2.1)	(\$80.2)
- Interest on In-year Transactions	(\$6.8)	\$0.5	\$0.6	\$0.6	\$0.6	\$0.7	\$0.7	\$0.7	\$0.7	\$0.7	(\$1.0)
TOTAL REVENUE	\$23.5	\$17.5	\$19.1	\$20.7	\$22.5	\$30.2	\$32.6	\$35.3	\$38.1	\$41.0	\$280.6
CLOSING CASH BALANCE	(\$255.1)	(\$237.6)	(\$218.5)	(\$197.7)	(\$175.2)	(\$145.0)	(\$112.4)	(\$77.0)	(\$39.0)	\$2.0	

2014 Adjusted Charge Per Square Metre
\$1.69

Allocation of Capital Program	
Residential Sector	74.9%
Non-Residential Sector	25.1%
Rates for 2014	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%



APPENDIX B.6

GENERAL GOVERNMENT

APPENDIX B.6

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 ten per cent when calculating the development charges.

**TABLE 1 2014 – 2023 DEVELOPMENT-RELATED CAPITAL PROGRAM AND
CALCULATION OF THE UNADJUSTED DEVELOPMENT CHARGES**

As shown on Table 1, the 2014–2023 development-related gross cost for general government is \$770,000. The bulk of the share of studies relate to Planning Studies (Fiscal Impact Analysis, Growth and Management Conformity, Growth Corridor, two Secondary Plans, and two Development Charge studies), while Library studies and a Fire Master Plan are also included.

An amount of \$185,000 has been identified as benefit to existing shares. The legislated ten per cent discount is then discounted, and amounts to \$58,500. The funds that are available in the DC reserves amount to \$392,998. The remaining amount of \$133,502 is eligible for development charges funding in the 2014-2023 planning period. This amount is included in the development charge calculation.

The total costs eligible for DC recovery amounts to \$133,502 and is allocated 75 per cent, or \$100,053 to the residential sector and 25 per cent, or \$33,449 to the non-residential sector based on shares of ten-year growth in population in new units and employment, and growth in square metres, respectively. The resulting unadjusted per capita residential charge is \$10.82 before cash flow adjustments. The non-residential unadjusted charge is \$0.17 per square metre.

TABLE 2 CASH FLOW ANALYSIS

After cash flow analysis, the residential charge increases to \$11.41 per capita and the non-residential charge increases to \$0.19 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					
2014 - 2023		Unadjusted		Adjusted	
Development-Related Capital Program		Development Charge		Development Charge	
Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$770,000	\$133,502	\$10.82	\$0.17	\$11.41	\$0.19

CITY OF NIAGARA FALLS
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		Post 2023
					Replacement & BTE Shares	10% Reduction		Available DC Reserves	2014-2023	
6.0 GENERAL GOVERNMENT										
6.1 Development-Related Studies										
6.1.1 Thundering Waters Secondary Plan	various	\$ 155,000	\$ -	\$ 155,000	\$ -	\$ 15,500	\$ 139,500	\$ 139,500	\$ -	\$ -
6.1.2 Fiscal Impact Analysis re: land use intensification	various	\$ 50,000	\$ -	\$ 50,000	\$ 25,000	\$ 2,500	\$ 22,500	\$ 22,500	\$ -	\$ -
6.1.3 Growth and Management Conformity	various	\$ 75,000	\$ -	\$ 75,000	\$ -	\$ 7,500	\$ 67,500	\$ 67,500	\$ -	\$ -
6.1.4 Fire Master Plan	various	\$ 90,000	\$ -	\$ 90,000	\$ 45,000	\$ 4,500	\$ 40,500	\$ 40,500	\$ -	\$ -
6.1.5 Development Charges Study	various	\$ 50,000	\$ -	\$ 50,000	\$ 25,000	\$ 2,500	\$ 22,500	\$ 22,500	\$ -	\$ -
6.1.6 Lyons Creek Rd and QEW Growth Corridor	various	\$ 75,000	\$ -	\$ 75,000	\$ 37,500	\$ 3,750	\$ 33,750	\$ 33,750	\$ -	\$ -
6.1.7 Chippawa Secondary Plan	various	\$ 150,000	\$ -	\$ 150,000	\$ -	\$ 15,000	\$ 135,000	\$ 66,748	\$ 68,252	\$ -
6.1.8 Development Charges Study	various	\$ 50,000	\$ -	\$ 50,000	\$ 25,000	\$ 2,500	\$ 22,500	\$ -	\$ 22,500	\$ -
6.1.9 Library Organizational structure and future needs study	2014	\$ 55,000	\$ -	\$ 55,000	\$ 27,500	\$ 2,750	\$ 24,750	\$ -	\$ 24,750	\$ -
6.1.10 Library Facility and Conditions Study	2015	\$ 20,000	\$ -	\$ 20,000	\$ -	\$ 2,000	\$ 18,000	\$ -	\$ 18,000	\$ -
TOTAL GENERAL GOVERNMENT		\$ 770,000	\$ -	\$ 770,000	\$ 185,000	\$ 58,500	\$ 526,500	\$ 392,998	\$ 133,502	\$ -

Residential Development Charge Calculation	
Residential Share of 2014 - 2023 DC Eligible Costs	75% \$100,053
10-Year Growth in Population in New Units	9,243
Unadjusted Development Charge Per Capita	\$10.82
Non-Residential Development Charge Calculation	
Non-Residential Share of 2014 - 2023 DC Eligible Costs	25% \$33,449
10-Year Growth in Square Metres	194,750
Unadjusted Development Charge Per Square Metre	\$0.17

Uncommitted Reserve Fund Balance
Balance as at December 31, 2013
\$392,998



APPENDIX B.6
TABLE 2 - PAGE 1

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

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	TOTAL
GENERAL GOVERNMENT											
OPENING CASH BALANCE	\$0.00	(\$15.88)	(\$27.64)	(\$25.88)	(\$23.96)	(\$21.88)	(\$17.80)	(\$13.45)	(\$8.71)	(\$4.37)	
2014 - 2023 RESIDENTIAL FUNDING REQUIREMENTS											
- General Government: Non Inflated	\$25.4	\$20.3	\$6.8	\$6.8	\$6.8	\$6.8	\$6.8	\$6.8	\$6.8	\$6.8	\$100.1
- General Government: Inflated	\$25.4	\$20.7	\$7.1	\$7.2	\$7.4	\$7.5	\$7.7	\$7.8	\$8.0	\$8.1	\$106.8
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	864	864	864	864	864	1,007	1,007	1,007	951	951	9,243
REVENUE											
- DC Receipts: Inflated	\$9.9	\$10.1	\$10.3	\$10.5	\$10.7	\$12.7	\$12.9	\$13.2	\$12.7	\$13.0	\$116.0
INTEREST											
- Interest on Opening Balance	\$0.0	(\$0.9)	(\$1.5)	(\$1.4)	(\$1.3)	(\$1.2)	(\$1.0)	(\$0.7)	(\$0.5)	(\$0.2)	(\$8.8)
- Interest on In-year Transactions	(\$0.4)	(\$0.3)	\$0.1	\$0.1	\$0.1	\$0.1	\$0.1	\$0.1	\$0.1	\$0.1	(\$0.1)
TOTAL REVENUE	\$9.5	\$8.9	\$8.8	\$9.1	\$9.4	\$11.6	\$12.0	\$12.6	\$12.3	\$12.8	\$107.1
CLOSING CASH BALANCE	(\$15.9)	(\$27.6)	(\$25.9)	(\$24.0)	(\$21.9)	(\$17.8)	(\$13.5)	(\$8.7)	(\$4.4)	\$0.3	

2014 Adjusted Charge Per Capita \$11.41

Allocation of Capital Program

Residential Sector 74.9%
Non-Residential Sector 25.1%

Rates for 2014

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

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

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	TOTAL
GENERAL GOVERNMENT											
OPENING CASH BALANCE	\$0.00	(\$5.21)	(\$9.01)	(\$8.25)	(\$7.50)	(\$6.65)	(\$5.10)	(\$3.40)	(\$1.57)	\$0.42	
2014 - 2023 NON-RESIDENTIAL FUNDING REQUIREMENTS											
- General Government: Non Inflated	\$8.5	\$6.8	\$2.3	\$2.3	\$2.3	\$2.3	\$2.3	\$2.3	\$2.3	\$2.3	\$33.4
- General Government: Inflated	\$8.5	\$6.9	\$2.4	\$2.4	\$2.5	\$2.5	\$2.6	\$2.6	\$2.7	\$2.7	\$35.7
NON-RESIDENTIAL SPACE GROWTH											
- Growth in Square Metres	17,955	17,955	17,995	17,955	17,955	20,995	20,955	20,995	20,995	20,995	194,750
REVENUE											
- DC Receipts: Inflated	\$3.4	\$3.5	\$3.6	\$3.6	\$3.7	\$4.4	\$4.5	\$4.6	\$4.7	\$4.8	\$40.8
INTEREST											
- Interest on Opening Balance	\$0.0	(\$0.3)	(\$0.5)	(\$0.5)	(\$0.4)	(\$0.4)	(\$0.3)	(\$0.2)	(\$0.1)	\$0.0	(\$2.6)
- Interest on In-year Transactions	(\$0.1)	(\$0.1)	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
TOTAL REVENUE	\$3.3	\$3.1	\$3.1	\$3.2	\$3.3	\$4.1	\$4.3	\$4.4	\$4.6	\$4.9	\$38.3
CLOSING CASH BALANCE	(\$5.2)	(\$9.0)	(\$8.3)	(\$7.5)	(\$6.7)	(\$5.1)	(\$3.4)	(\$1.6)	\$0.4	\$2.6	

2014 Adjusted Charge Per Square Metre **\$0.19**

Allocation of Capital Program	
Residential Sector	74.9%
Non-Residential Sector	25.1%
Rates for 2014	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX C

ENGINEERING INFRASTRUCTURE TECHNICAL APPENDIX

APPENDIX C
ENGINEERED SERVICES TECHNICAL APPENDIX
TECHNICAL APPENDIX

Municipal works is responsible for a multitude of public services in the City of Niagara Falls including the design, construction maintenance and rehabilitation of our local infrastructure. The department also provides review and inspection of services to facilitate new development and to maintain service standards to sustain the existing infrastructure.

This appendix provides a brief outline of the engineered services that are included in the Development Charges Study; roads, sidewalks, water, sanitary sewer and storm water management services. The following tables set out the capital forecast and the calculation of the development charge for engineered services. The cost, quantum and description of the projects included in the forecast are based upon servicing plans from the City's municipal works staff. This appendix includes all engineering projects that will meet the servicing demands within the City, including those projects deemed to benefit the Core Tourist Area (CTA). A non-residential forecast has been developed for the CTA and a corresponding list of works required to service the development in the CTA has also been developed.

The planning horizon utilized for all engineering services is from 2014 to 2023.

APPENDIX C.1

ROADS

APPENDIX C.1

ROADS

TABLE 1 2004-2013 HISTORIC SERVICE LEVELS

Table 1 demonstrates that the City's current road infrastructure comprises of 387 kilometres of collector roads and 210 kilometres of arterial roads. The service level also includes 71 bridges, and 75 culverts. 57 various traffic signals have been included in the inventory as well as 562 kilometres of sidewalks. Finally, traffic hardware such as traffic counters and radar speed boards have also been included in the inventory.

The total inventory of capital assets has a full replacement value of \$876.92 million. This produces a 10-year historical service level of \$6,706.57 per capita and employment. The resulting maximum allowable funding envelope is \$68.34 million ($\$6,706.57 \times 9,445$ net population and employment growth over the 10-year planning horizon). Calculated excess capacity in the amount of \$33.34 million has been identified in this service and as such, only \$30.00 million has been brought forward to the development charges calculations.

TABLE 2 2014 – 2023 DEVELOPMENT-RELATED CAPITAL PROGRAM

Table 2 provides a summary of the City-wide development-related capital program for roads and related services.

As shown in Table 2, the capital program totals \$21.33 million gross. The capital program includes EA studies, road widening, road rehabilitations, new roads, prior agreements, land purchases, turn lanes and other capital improvements.

No grants or subsidies have been identified to help offset the cost of the program. However, more than 20 per cent of the program is deemed to be the benefit to existing (BTE) share. In total, \$4.51 million has been identified as the BTE share and this amount is not recoverable through DCs and must be funded through non-DC revenue sources.

Another share of the program is deemed to benefit development beyond the ten-year planning horizon. The post-2023 share amounts to \$4.38 million. This share, however, is deemed to be related to new development and can be recovered through DC in subsequent by-law reviews.

The net growth-related share of the roads program is netted down to \$12.43 million and this amount is brought forward to the DC calculation.

TABLE 3 CALCULATION OF THE UNADJUSTED DEVELOPMENT CHARGES

Table 3 displays the shares of the roads program that are to be recovered through development charges. The development-related net capital cost for roads and related services is netted down by the portion of the program deemed to benefit existing development, and the shares of the program deemed to benefit development beyond the planning horizon of 2023. In addition, the current Roads reserves fund balance is in a positive position of \$2.05 million and these monies are utilized to fund roads projects that first occur in the program. Therefore, about \$10.38 million is included in the development charges calculation.

Tables 3 also displays the DC recoverable costs apportioned to the residential and non-residential sectors; 75%, or \$7.78 million to residential and 25%, or \$2.60 million to the non-residential, based on shares of anticipated shares of population and employment growth.

The residential sector's share of \$7.78 million in development-related net capital costs yields an "unadjusted" development charge of \$841.72 per capita. The non-residential sector's share of \$2.60 million in development-related net capital costs results in an unadjusted charge of \$13.36 per square metre of GFA for the non-residential sector.

TABLE 4 CASH FLOW ANALYSIS

After cash flow and reserve fund analysis, the residential and non-residential calculated charges both decrease to \$771.85 per capita and \$12.27 per square metre, respectively. This is a reflection of the timing of the capital program and development charges revenues.

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

ROADS AND RELATED SUMMARY						
10-year Hist.	2014 - 2023		Unadjusted		Adjusted	
Service Level per pop & emp	Development-Related Total	Capital Program Net DC Recoverable	Development Charge \$/capita	Development Charge \$/sq.m	Development Charge \$/capita	Development Charge \$/sq.m
\$6,706.57	\$21,329,085	\$10,380,904	\$841.72	\$13.36	\$771.85	\$12.27

CITY OF NIAGARA FALLS
INVENTORY OF CAPITAL ASSETS
ROADS AND RELATED

ROADS	# of Kilometres											UNIT COST (\$/km)	
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013			
Type of Road													
Collector Roads	338.3	340.7	346.5	348.0	353.6	359.7	365.7	369.4	386.8	386.8		\$1,050,000	
Arterial Roads	183.7	185.0	188.1	188.9	192.0	195.3	198.5	200.6	210.0	210.0		\$1,200,000	
Total (km)	521.9	525.7	534.6	536.9	545.6	554.9	564.2	570.0	596.8	596.8			
Total (\$000)	\$575,582.8	\$579,696.2	\$589,545.1	\$592,094.3	\$601,711.4	\$611,965.9	\$622,220.4	\$628,593.2	\$658,140.0	\$658,140.0		\$658,140.0	

BRIDGES & CULVERTS	# of Bridges & Culverts											UNIT COST (\$/unit)
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013		
Description												
Bridges	75	74	74	73	73	74	72	71	71	71	71	\$1,250,000
Culverts	72	73	74	74	75	75	75	75	75	75	75	\$250,000
Total (#)	147	147	148	147	148	149	147	146	146	146	146	
Total (\$000)	\$111,750.0	\$110,750.0	\$111,000.0	\$109,750.0	\$110,000.0	\$111,250.0	\$108,750.0	\$107,500.0	\$107,500.0	\$107,500.0	\$107,500.0	\$107,500.0

TRAFFIC SIGNALS	# of Traffic Signals											UNIT COST (\$/unit)
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013		
Description												
Signalized Intersections	44	44	46	46	48	48	48	49	50	50	50	\$200,000
Flashing Beacons	4	5	6	6	6	7	7	7	7	7	7	\$15,000
Total (#)	48	49	52	52	54	55	55	56	57	57	57	
Total (\$000)	\$8,860.0	\$8,875.0	\$9,290.0	\$9,290.0	\$9,690.0	\$9,705.0	\$9,705.0	\$9,905.0	\$10,105.0	\$10,105.0	\$10,105.0	\$10,105.0

SIDEWALKS	# of Kilometres											UNIT COST (\$/km)
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013		
Description												
Sidewalks	547.4	550.8	559.1	560.8	561.2	561.4	561.5	561.7	561.9	561.9	561.9	\$180,000
Total (km)	547.4	550.8	559.1	560.8	561.2	561.4	561.5	561.7	561.9	561.9	561.9	
Total (\$000)	\$98,532.0	\$99,144.0	\$100,638.0	\$100,944.0	\$101,016.0	\$101,052.0	\$101,070.0	\$101,106.0	\$101,142.0	\$101,142.0	\$101,142.0	\$101,142.0

TRAFFIC HARDWARE	# of Traffic Hardware											UNIT COST (\$/unit)
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013		
Description												
Traffic Counters	6	6	6	6	6	6	6	6	6	6	6	\$3,000
Radar Speed Boards	-	-	-	1	2	2	2	2	2	2	2	\$8,000
Total (#)	6	6	6	7	8	8	8	8	8	8	8	
Total (\$000)	\$18.0	\$18.0	\$18.0	\$26.0	\$34.0	\$34.0	\$34.0	\$34.0	\$34.0	\$34.0	\$34.0	\$34.0

APPENDIX C.1
TABLE 1 - PAGE 2

CITY OF NIAGARA FALLS
CALCULATION OF SERVICE LEVELS
ROADS AND RELATED

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Historic Population	80,820	81,499	82,184	82,346	82,508	82,671	82,834	82,997	83,484	84,127
Historic Employment	40,232	41,220	42,232	41,986	41,741	41,498	41,256	41,015	41,339	41,658
Total Historic Population & Employment	121,052	122,719	124,416	124,332	124,249	124,169	124,090	124,012	124,823	125,785

INVENTORY SUMMARY (\$000)

Roads	\$575,582.8	\$579,696.2	\$589,545.1	\$592,094.3	\$601,711.4	\$611,965.9	\$622,220.4	\$628,593.2	\$658,140.0	\$658,140.0
Bridges & Culverts	\$111,750.0	\$110,750.0	\$111,000.0	\$109,750.0	\$110,000.0	\$111,250.0	\$108,750.0	\$107,500.0	\$107,500.0	\$107,500.0
Traffic Signals	\$8,860.0	\$8,875.0	\$9,290.0	\$9,290.0	\$9,690.0	\$9,705.0	\$9,705.0	\$9,905.0	\$10,105.0	\$10,105.0
Sidewalks	\$98,532.0	\$99,144.0	\$100,638.0	\$100,944.0	\$101,016.0	\$101,052.0	\$101,070.0	\$101,106.0	\$101,142.0	\$101,142.0
Traffic Hardware	\$18.0	\$18.0	\$18.0	\$26.0	\$34.0	\$34.0	\$34.0	\$34.0	\$34.0	\$34.0
Total (\$000)	\$794,742.8	\$798,483.2	\$810,491.1	\$812,104.3	\$822,451.4	\$834,006.9	\$841,779.4	\$847,138.2	\$876,921.0	\$876,921.0

Average
Service
Level

SERVICE LEVEL (\$/pop & emp)

Roads	\$4,754.84	\$4,723.77	\$4,738.50	\$4,762.20	\$4,842.79	\$4,928.49	\$5,014.27	\$5,068.81	\$5,272.59	\$5,232.26
Bridges & Culverts	\$923.16	\$902.47	\$892.17	\$882.72	\$885.32	\$895.96	\$876.38	\$866.85	\$861.22	\$854.63
Traffic Signals	\$73.19	\$72.32	\$74.67	\$74.72	\$77.99	\$78.16	\$78.21	\$79.87	\$80.95	\$80.34
Sidewalks	\$813.96	\$807.89	\$808.88	\$811.89	\$813.01	\$813.83	\$814.49	\$815.29	\$810.28	\$804.09
Traffic Hardware	\$0.15	\$0.15	\$0.14	\$0.21	\$0.27	\$0.27	\$0.27	\$0.27	\$0.27	\$0.27
Total (\$/pop & emp)	\$6,565.30	\$6,506.60	\$6,514.36	\$6,531.74	\$6,619.38	\$6,716.71	\$6,783.62	\$6,831.10	\$7,025.32	\$6,971.59

CITY OF NIAGARA FALLS
CALCULATION OF MAXIMUM ALLOWABLE
ROADS AND RELATED

10-Year Funding Envelope Calculation	
10 Year Average Service Level 2004 - 2013	\$6,706.57
Net Population & Employment Growth 2014 - 2023	9,445
Maximum Allowable Funding Envelope	\$63,343,554
Less: Uncommitted Excess Capacity	\$33,335,093
Discounted Maximum Allowable Funding Envelope	\$30,008,461

Excess Capacity Calculation	
Total Value of Inventory in 2013	\$876,921,000
Inventory Using Average Service Level	\$843,585,907
Excess Capacity	\$33,335,093
Excess Capacity:	Uncommitted

CITY OF NIAGARA FALLS
DEVELOPMENT-RELATED CAPITAL PROGRAM
ROADS - CITY-WIDE

NO.	Infrastructure Requirement	Type of Improvement	Timing	Estimated Project Costs					Net Growth-Related	
				Gross Cost	Grants and Subsidies	Benefit to Existing Share	Post Period Allocation			
City-wide Roads Projects										
1	Kalar Road EA - Beaverdams to Thorold Stone Road	Study	2014 - 2018	\$100,000	\$0	0%	\$0	10%	\$10,000	\$90,000
2	Brown Road EA - Montrose Road to Kalar Road	Study	2014 - 2018	\$80,000	\$0	0%	\$0	10%	\$8,000	\$72,000
3	McLeod Road - Pin Oak Drive to Montrose Road	Widening	2014 - 2018	\$437,800	\$0	16%	\$67,859	10%	\$43,780	\$326,161
4	Oldfield Road - Drummond Road to Dorchester Road - EA	Study	2014 - 2018	\$100,000	\$0	0%	\$0	10%	\$10,000	\$90,000
5	Oldfield Road - Drummond Road to Dorchester Road	Rehabilitation	2014 - 2018	\$1,330,000	\$0	40%	\$532,000	10%	\$133,000	\$665,000
6	Dorchester Road - McLeod Road to Oldfield Road - EA	Study	2014 - 2018	\$80,000	\$0	0%	\$0	10%	\$8,000	\$72,000
7	Drummond Road - McLeod Road to Oldfield Road - EA	Study	2014 - 2018	\$80,000	\$0	0%	\$0	10%	\$8,000	\$72,000
8	Morrison Street - Dorchester Road to Drummond Road - EA	Study	2014 - 2018	\$100,000	\$0	0%	\$0	10%	\$10,000	\$90,000
9	Dorchester Road - Frederica Street to McLeod Road - EA	Study	2014 - 2018	\$100,000	\$0	0%	\$0	10%	\$10,000	\$90,000
10	Warren Woods - Road extension through Hydro Corridor	New Road	2014 - 2018	\$46,900	\$0	0%	\$0	10%	\$4,690	\$42,210
11	Kalar Road - Lundy's Lane to Beaverdams Road	Widening	2014 - 2018	\$1,464,700	\$0	16%	\$227,029	10%	\$146,470	\$1,091,202
12	Level Avenue - Dunn Street to Dixon Street	Rehabilitation	2014 - 2018	\$465,000	\$0	40%	\$186,000	10%	\$46,500	\$232,500
13	Portage Road - Main Street to Marineland Parkway - EA	Study	2014 - 2018	\$150,000	\$0	0%	\$0	10%	\$15,000	\$135,000
14	Brown Road - Kalar Road N to Montrose Road	Rehabilitation	2014 - 2018	\$1,964,600	\$0	40%	\$785,840	10%	\$196,460	\$982,300
15	Colangelo Estates - Temporary Road Access Purchase	Prior Agreement	2014 - 2018	\$276,860	\$0	0%	\$0	10%	\$27,686	\$249,174
16	Bridgewater Street Extension	Prior Agreement	2014 - 2018	\$90,000	\$0	0%	\$0	10%	\$9,000	\$81,000
17	McLeod Road - Pin Oak Drive to Kalar Road	Widening	2014 - 2018	\$1,101,700	\$0	0%	\$0	10%	\$110,170	\$991,530
18	Orchard Grove Pond Expansion - EA	Study	2014 - 2018	\$100,000	\$0	0%	\$0	10%	\$10,000	\$90,000
19	Montrose Road - McLeod to Kinsmen Court	Widening	2014 - 2018	\$71,500	\$0	16%	\$11,083	10%	\$7,150	\$63,268
20	McLeod - Kalar to Garner	Land Purchase	2014 - 2018	\$290,000	\$0	0%	\$0	10%	\$29,000	\$261,000
21	Kalar - McLeod to Brown	Land Purchase	2014 - 2018	\$1,191,625	\$0	0%	\$0	10%	\$119,163	\$1,072,463

APPENDIX C.1
TABLE 2

CITY OF NIAGARA FALLS
DEVELOPMENT-RELATED CAPITAL PROGRAM
ROADS - CITY-WIDE

NO.	Infrastructure Requirement	Type of Improvement	Timing	Estimated Project Costs					Net Growth-Related	
				Gross Cost	Grants and Subsidies	Benefit to Existing Share	Post Period Allocation	Net Growth-Related		
22	Lundys Lane / Garner Road Intersection Improvements	Turn Lanes	2014 - 2018	\$75,000	\$0	0%	\$0	10%	\$7,500	\$67,500
23	Drummond Road - McLeod Road to Oldfield Road	Rehabilitation	2019 - 2023	\$1,526,000	\$0	40%	\$610,400	25%	\$381,500	\$534,100
24	Mewburn Road - Scholfield Street to Mountain Road	Cap Improvement	2019 - 2024	\$614,100	\$0	17%	\$105,011	50%	\$307,050	\$202,039
25	Thundering Waters - Stanley Avenue Extension	Rehabilitation	2019 - 2024	\$1,687,900	\$0	40%	\$675,160	25%	\$421,975	\$590,765
26	Kalar Road - McLeod Road to Brown Road - EA	Study	2019 - 2024	\$100,000	\$0	0%	\$0	25%	\$25,000	\$75,000
27	Brown Road - Garner Road N to Kalar Road N - EA	Study	2019 - 2024	\$100,000	\$0	0%	\$0	50%	\$50,000	\$50,000
28	McLeod Road - Kalar Road to Garner Road - EA	Study	2019 - 2024	\$100,000	\$0	0%	\$0	25%	\$25,000	\$75,000
29	Allendale Avenue - Ferry Street to Dixon Street	Rehabilitation	2019 - 2024	\$1,370,200	\$0	40%	\$548,080	25%	\$342,550	\$479,570
30	Buchanan Avenue/Fallsview Boulevard - Livingstone Street to Highway 420- EA	Study	2019 - 2024	\$100,000	\$0	0%	\$0	50%	\$50,000	\$50,000
31	McLeod Road - Kalar Road to Garner Road - Reconstruction (Traffic Lights @ Garner)	Widening	2019 - 2024	\$1,437,400	\$0	16%	\$222,797	25%	\$359,350	\$855,253
32	Kalar Road - McLeod Road to Brown Road	Widening	2019 - 2024	\$1,545,900	\$0	16%	\$239,615	25%	\$386,475	\$919,811
33	Kalar Road- Brown Road to Chippawa Parkway	Widening	2019 - 2024	\$1,199,400	\$0	16%	\$185,907	50%	\$599,700	\$413,793
34	Fallsview Boulevard Realignment at Ferry Street	Land Purchase	2019 - 2024	\$1,025,000	\$0	0%	\$0	25%	\$256,250	\$768,750
35	Brown Road - Kalar Road N to 550m West	Widening	2019 - 2024	\$752,500	\$0	16%	\$116,638	25%	\$188,125	\$447,738
36	Heartland Forest Road - Brown Road to Chippawa Parkway	Study	2019 - 2024	\$75,000	\$0	0%	\$0	25%	\$18,750	\$56,250
Total City-wide Roads Projects				\$21,329,085	\$0		\$4,513,417		\$4,381,294	\$12,434,374

APPENDIX C.1
TABLE 3

CITY OF NIAGARA FALLS
SUMMARY OF UNADJUSTED RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT CHARGES
ROADS - CITY-WIDE
CITY-WIDE UNIFORM CHARGE

10-Year Growth in Population in New Units	9,243
10-Year Employment Growth	3,090
10-Year Growth in Square Metres	194,750

	Growth-Related Capital Forecast						Residential Share		Non-Residential Share	
	Total (Net of Grants/ Subsidies) (\$000)	Benefit to Existing Share (\$000)	Post Period Allocation (\$000)	Prior Growth (Reserve Fund Adjustment) (\$000)	Net Capital Costs After Discount (\$000)	%	\$000	%	\$000	
ROADS - CITY-WIDE										
Total City-wide Roads Projects	\$21,329.09	\$4,513.42	\$4,381.29	\$2,053.47	\$10,380.90	74.9%	\$7,780.00	25.1%	\$2,600.91	
TOTAL ROADS - CITY-WIDE	\$21,329.09	\$4,513.42	\$4,381.29	\$2,053.47	\$10,380.90		\$7,780.00		\$2,600.91	
Unadjusted Development Charge Per Capita (\$)									\$841.72	
Unadjusted Development Charge Per Sq. M. (\$)									\$13.36	

APPENDIX C.2

SIDEWALKS

APPENDIX C.2

SIDEWALKS

TABLE 1 2014 – 2023 DEVELOPMENT-RELATED CAPITAL PROGRAM

Table 2 provides a summary of the development-related capital program for sidewalks. A list of projects that will benefit development outside the core tourist area (CTA) and within the CTA have been developed by City staff.

As shown in Table 2, the capital program for sidewalks outside the CTA totals \$1.86 million gross. The capital program includes new improvements to existing roads and sidewalks in a new development area.

No grants or subsidies have been identified to help offset the cost of the program. However, roughly 34 per cent of the program is deemed to be the benefit to existing (BTE) share. In total, \$642,400 has been identified as the BTE share and this amount is not recoverable through DCs and must be funded through non-DC revenue sources.

Another share of the program is deemed to benefit development beyond the ten-year planning horizon. The post-2023 share amounts to \$326,800. This share, however, is deemed to be related to new development and can be recovered through DC in subsequent by-law reviews.

The net growth-related share of the OCTA sidewalks program is netted down to \$894,800 and this amount is brought forward to the DC calculation.

There are 7 sidewalks projected anticipated to be required within the core tourist area in the 10-year planning horizon. The total cost of the sidewalks within the CTA amounts to \$654,000. Only \$194,100 is considered to be development-related as \$327,000 is considered to be the BTE share and \$132,900 is deemed to be the post-period benefit share.

TABLES 2&3 CALCULATION OF THE UNADJUSTED DEVELOPMENT CHARGES

Tables 2 and 3 display the shares of the sidewalks program that are to be recovered through development charges. Table 2 displays the OCTA development-related net capital cost for sidewalks is netted down by the portion of the program deemed to benefit existing development, and the shares of the program deemed to benefit development beyond the planning horizon of 2023. In addition, the current OCTA sidewalks reserves fund balance is in a positive position of \$127,590 and these monies are utilized to fund OCTA sidewalk projects that first occur in the program. Therefore, about \$767,210 is included in the development charges calculation.

Tables 2 also displays the DC recoverable costs apportioned to the residential and non-residential sectors; 88%, or \$676,620 to residential and 12%, or \$90,590 to the non-residential, based on shares of anticipated shares of population and employment growth outside the core tourist area.

The residential sector's share of \$676,620 in development-related net capital costs yields an "unadjusted" development charge of \$73.20 per capita. The non-residential sector's share of \$90,590 in development-related net capital costs results in an unadjusted charge of \$0.98 per square metre of GFA for the non-residential sector.

Table 3 displays the CTA development-related net capital cost for sidewalks is netted down by the portion of the program deemed to benefit existing development, and the shares of the program deemed to benefit development beyond the planning horizon of 2023. In addition, the current CTA sidewalks reserves fund balance is in a positive position of \$51,270 and these monies are utilized to fund CTA sidewalk projects that first occur in the program. Therefore, about \$142,830 is included in the development charges calculation.

Tables 3 also display the DC recoverable costs are solely apportioned to the non-residential sectors as it is anticipated that there will be no residential growth occurring in the core tourist area. As such, the entire DC eligible cost of \$142,830 is recovered against non-residential growth in the CTA.

The non-residential sector's share of \$142,830 in development-related net capital costs results in an unadjusted charge of \$1.40 per square metre of GFA for the non-residential sector.

TABLE 4 CASH FLOW ANALYSIS

After cash flow and reserve fund analysis, the residential and non-residential calculated charges result in \$74.66 per capita and \$1.00 per square metre for the OCTA charge and \$1.36 for the CTA charge. This is a reflection of the timing of the capital program and development charges revenues.

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

2014 - 2023		SIDEWALKS SUMMARY			Adjusted		
		Residential	Unadjusted Development Charge		Development Charge		
Development-Related Capital Program	OCTA		CTA	Residential	OCTA	CTA	
Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/sq.m	\$/capita	\$/sq.m	\$/sq.m
\$2,518,000	\$1,088,900	\$73.20	\$0.98	\$1.40	\$74.66	\$1.00	\$1.36

APPENDIX C.2
TABLE 1
CITY OF NIAGARA FALLS
DEVELOPMENT-RELATED CAPITAL PROGRAM
SIDEWALKS

NO.	Infrastructure Requirement	Type of Improvement	Timing	Estimated Project Costs					Net Growth-Related	
				Gross Cost	Grants and Subsidies	Benefit to Existing Share	Post Period Allocation			
Sidewalks - Outside Core Tourist Area										
1	Mcleod Road - Kalar Road to Pin Oak Drive	New Improvement to Existing Road	2014 - 2018	\$110,000	\$0	40%	\$44,000	10%	\$11,000	\$55,000
2	Warren Woods Extension through Hydro Corridor	New Development - Greenfield Condition	2014 - 2018	\$8,000	\$0	0%	\$0	10%	\$800	\$7,200
3	Mcleod Road - Pin Oak Drive to Montrose Road	New Improvement to Existing Road	2014 - 2018	\$42,000	\$0	40%	\$16,800	10%	\$4,200	\$21,000
4	Kalar Road - Lundy's Lane to Beaverdams Road	New Improvement to Existing Road	2014 - 2018	\$162,000	\$0	40%	\$64,800	10%	\$16,200	\$81,000
5	Montrose Road - Mcleod Road to Hydro Corridor	New Improvement to Existing Road	2014 - 2018	\$200,000	\$0	40%	\$80,000	10%	\$20,000	\$100,000
6	Gamer Road- McGarry Street to McLeod Road	New Improvement to Existing Road	2014 - 2018	\$39,000	\$0	40%	\$15,600	10%	\$3,900	\$19,500
7	Oldfield Road- Dorchester Road to Drummond Road	New Improvement to Existing Road	2014 - 2018	\$94,500	\$0	40%	\$37,800	10%	\$9,450	\$47,250
8	Drummond Road - Mcleod Road to Oldfield Road	New Improvement to Existing Road	2014 - 2018	\$81,500	\$0	40%	\$32,600	10%	\$8,150	\$40,750
9	Dorchester Road - Oldfield Road to Hydro Corridor	New Improvement to Existing Road	2014 - 2018	\$24,500	\$0	40%	\$9,800	10%	\$2,450	\$12,250
10	Mcleod Road - Garner to Kalar	New Improvement to Existing Road	2014 - 2018	\$104,000	\$0	40%	\$41,600	10%	\$10,400	\$52,000
11	Portage Road - Marineland Parkway to Norton St	New Improvement to Existing Road	2014 - 2018	\$170,000	\$0	40%	\$68,000	10%	\$17,000	\$85,000
12	Lundy's Lane Intersection Improvements	New Improvement to Existing Road	2014 - 2018	\$200,000	\$0	40%	\$80,000	10%	\$20,000	\$100,000
13	Montrose Road - Mcleod Road to Canadian Drive	New Improvement to Existing Road	2019 - 2023	\$84,500	\$0	40%	\$33,800	50%	\$42,250	\$8,450
14	Thundering Waters - Stanley Avenue Extension	New Improvement to Existing Road	2019 - 2023	\$250,000	\$0	0%	\$0	25%	\$62,500	\$187,500
15	Mewburn Road - Schollfield Street to Mountain Road	New Improvement to Existing Road	2019 - 2023	\$100,000	\$0	40%	\$40,000	50%	\$50,000	\$10,000
16	Kalar Road- Brown Road to Chippawa Parkway	New Improvement to Existing Road	2019 - 2023	\$194,000	\$0	40%	\$77,600	25%	\$48,500	\$67,900
Subtotal Sidewalks - Outside Core Tourist Area				\$1,864,000	\$0		\$642,400		\$326,800	\$894,800

APPENDIX C.2
TABLE 1
CITY OF NIAGARA FALLS
DEVELOPMENT-RELATED CAPITAL PROGRAM
SIDEWALKS

NO.	Infrastructure Requirement	Type of Improvement	Timing	Estimated Project Costs					Net Growth-Related	
				Gross Cost	Grants and Subsidies	Benefit to Existing Share	Post Period Allocation			
Sidewalks - Core Tourist Area										
1	Fallsview District - Miscellaneous	New Improvement to Existing Road	2014 - 2018	\$100,000	\$0	50%	\$50,000	10%	\$10,000	\$40,000
2	Murray Street - Stanley Avenue to Main Street	New Improvement to Existing Road	2014 - 2018	\$12,500	\$0	50%	\$6,250	10%	\$1,250	\$5,000
3	Stanley Avenue - Murray Street to Main Street	New Improvement to Existing Road	2014 - 2018	\$21,500	\$0	50%	\$10,750	10%	\$2,150	\$8,600
4	Marineland Parkway - Allanthus Avenue to Portage Road	New Improvement to Existing Road	2014 - 2018	\$70,000	\$0	50%	\$35,000	10%	\$7,000	\$28,000
5	Fallsview District - Miscellaneous Locations	New Improvement to Existing Road	2019 - 2023	\$100,000	\$0	50%	\$50,000	25%	\$25,000	\$25,000
6	Falls Avenue - Stanley Avenue to Victoria Avenue (1,000 m x2)	New Improvement to Existing Road	2019 - 2023	\$200,000	\$0	50%	\$100,000	25%	\$50,000	\$50,000
7	Portage Road - Fallsview Boulevard to Marineland Parkway	New Improvement to Existing Road	2019 - 2023	\$150,000	\$0	50%	\$75,000	25%	\$37,500	\$37,500
Subtotal Sidewalks - Core Tourist Area				\$654,000	\$0		\$327,000		\$132,900	\$194,100
Total Sidewalk Projects				\$2,518,000	\$0		\$969,400		\$459,700	\$1,088,900

APPENDIX C.2
TABLE 2

CITY OF NIAGARA FALLS
SUMMARY OF UNADJUSTED RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT CHARGES
SIDEWALKS
OUTSIDE CORE TOURIST AREA

10-Year Growth in Population in New Units	9,243
10-Year Employment Growth	1,238
10-Year Growth in Square Metres	92,863

	Growth-Related Capital Forecast						
	Total (Net of Grants/ Subsidies) (\$000)	Benefit to Existing Share (\$000)	Post Period Allocation (\$000)	Prior Growth (Reserve Fund Adjustment) (\$000)	Total Net Capital Costs After Discount (\$000)	Residential	Non-Residential
						Share \$000	Share \$000
						%	%
SIDEWALKS							
Subtotal Sidewalks - Outside Core Tourist Area	\$1,864.00	\$642.40	\$326.80	\$127.59	\$767.21	88.2%	11.8%
TOTAL SIDEWALKS	\$1,864.00	\$642.40	\$326.80	\$127.59	\$767.21	\$676.62	\$90.59
Unadjusted Development Charge Per Capita (\$)						\$73.20	
Unadjusted Development Charge Per Sq. Ml. (\$)						\$0.98	

APPENDIX C.2
TABLE 3

CITY OF NIAGARA FALLS
SUMMARY OF UNADJUSTED RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT CHARGES
SIDEWALKS
CORE TOURIST AREA

10-Year Employment Growth	1,853
10-Year Growth in Square Metres	101,888

	Growth-Related Capital Forecast								
	Total (Net of Grants/ Subsidies) (\$000)	Benefit to Existing Share (\$000)	Post Period Allocation (\$000)	Prior Growth (\$000)	Total Net Capital Costs After Discount (\$000)	Residential Share		Non-Residential Share	
						%	\$000	%	\$000
SIDEWALKS									
Subtotal Sidewalks - Core Tourist Area	\$654.00	\$327.00	\$132.90	\$51.27	\$142.83	0.0%	\$0.00	100.0%	\$142.83
TOTAL SIDEWALKS	\$654.00	\$327.00	\$132.90	\$51.27	\$142.83		\$0.00		\$142.83
Unadjusted Development Charge Per Sq. M. (\$)									\$1.40

APPENDIX C.2
TABLE 4 - PAGE 1

CITY OF NIAGARA FALLS
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
SIDEWALKS
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

SIDEWALKS	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	TOTAL
OPENING CASH BALANCE	\$112.5	\$70.2	\$25.5	(\$21.8)	(\$72.0)	(\$126.1)	(\$102.8)	(\$77.6)	(\$50.4)	(\$26.2)	
2014 - 2023 RESIDENTIAL FUNDING REQUIREMENTS											
- Sidewalks: Non Inflated	\$109.5	\$109.5	\$109.5	\$109.5	\$109.5	\$48.3	\$48.3	\$48.3	\$48.3	\$48.3	\$789.1
- Sidewalks: Inflated	\$109.5	\$111.7	\$114.0	\$116.2	\$118.6	\$53.3	\$54.4	\$55.5	\$56.6	\$57.7	\$847.5
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	864	864	864	864	864	1,007	1,007	1,007	951	951	9,243
REVENUE											
- DC Receipts: Inflated	\$64.5	\$65.8	\$67.1	\$68.5	\$69.8	\$83.0	\$84.7	\$86.4	\$83.2	\$84.9	\$757.9
INTEREST											
- Interest on Opening Balance	\$3.9	\$2.5	\$0.9	(\$1.2)	(\$4.0)	(\$6.9)	(\$5.7)	(\$4.3)	(\$2.8)	(\$1.4)	(\$18.9)
- Interest on In-year Transactions	(\$1.2)	(\$1.3)	(\$1.3)	(\$1.3)	(\$1.3)	\$0.5	\$0.5	\$0.5	\$0.5	\$0.5	(\$3.9)
TOTAL REVENUE	\$67.2	\$67.0	\$66.7	\$66.0	\$64.5	\$76.6	\$79.6	\$82.7	\$80.9	\$83.9	\$735.0
CLOSING CASH BALANCE	\$70.2	\$25.5	(\$21.8)	(\$72.0)	(\$126.1)	(\$102.8)	(\$77.6)	(\$50.4)	(\$26.2)	\$0.1	

2014 Adjusted Charge Per Capita
\$74.66

Allocation of Capital Program	
Residential Sector	88.2%
Non-Residential Sector	11.8%
Rates for 2014	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX C.2
TABLE 4 - PAGE 2

CITY OF NIAGARA FALLS
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
SIDEWALKS - OUTSIDE CORE TOURIST AREA
NON-RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	TOTAL
SIDEWALKS - OCTA											
OPENING CASH BALANCE	\$15.07	\$9.36	\$3.26	(\$3.05)	(\$9.86)	(\$17.16)	(\$14.07)	(\$10.86)	(\$7.31)	(\$3.52)	
2014 - 2023 NON-RESIDENTIAL FUNDING REQUIREMENTS											
- Sidewalks - Octa: Non Inflated	\$14.7	\$14.7	\$14.7	\$14.7	\$14.7	\$6.5	\$6.5	\$6.5	\$6.5	\$6.5	\$105.7
- Sidewalks - Octa: Inflated	\$14.7	\$15.0	\$15.3	\$15.6	\$15.9	\$7.1	\$7.3	\$7.4	\$7.6	\$7.7	\$113.5
NON-RESIDENTIAL SPACE GROWTH											
- Growth in Square Metres	8,550	8,550	8,631	8,550	8,550	10,023	9,941	10,023	10,023	10,023	92,863
REVENUE											
- DC Receipts: Inflated	\$8.6	\$8.7	\$9.0	\$9.1	\$9.3	\$11.1	\$11.2	\$11.5	\$11.7	\$12.0	\$102.2
INTEREST											
- Interest on Opening Balance	\$0.5	\$0.3	\$0.1	(\$0.2)	(\$0.5)	(\$0.9)	(\$0.8)	(\$0.6)	(\$0.4)	(\$0.2)	(\$2.7)
- Interest on In-year Transactions	(\$0.2)	(\$0.2)	(\$0.2)	(\$0.2)	(\$0.2)	\$0.1	\$0.1	\$0.1	\$0.1	\$0.1	(\$0.5)
TOTAL REVENUE	\$9.0	\$8.9	\$8.9	\$8.8	\$8.6	\$10.2	\$10.5	\$11.0	\$11.4	\$11.9	\$99.0
CLOSING CASH BALANCE	\$9.4	\$3.3	(\$3.1)	(\$9.9)	(\$17.2)	(\$14.1)	(\$10.9)	(\$7.3)	(\$3.5)	\$0.6	

2014 Adjusted Charge Per Square Metre \$1.00

Allocation of Capital Program	
Residential Sector	88.2%
Non-Residential Sector	11.8%
Rates for 2014	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX C.2
TABLE 4 - PAGE 3

CITY OF NIAGARA FALLS
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
SIDEWALKS - CORE TOURST AREA
NON-RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	TOTAL
SIDEWALKS - CTA											
OPENING CASH BALANCE	\$51.27	\$49.44	\$47.43	\$45.20	\$42.96	\$40.50	\$33.34	\$25.84	\$17.76	\$9.27	
2014 - 2023 NON-RESIDENTIAL FUNDING REQUIREMENTS											
- Sidewalks - Cta: Non Inflated	\$16.3	\$16.3	\$16.3	\$16.3	\$16.3	\$22.5	\$22.5	\$22.5	\$22.5	\$22.5	\$194.1
- Sidewalks - Cta: Inflated	\$16.3	\$16.6	\$17.0	\$17.3	\$17.7	\$24.8	\$25.3	\$25.8	\$26.4	\$26.9	\$214.2
NON-RESIDENTIAL SPACE GROWTH											
- Growth in Square Metres	9,405	9,405	9,364	9,405	9,405	10,973	11,014	10,973	10,973	10,973	101,888
REVENUE											
- DC Receipts: Inflated	\$12.8	\$13.0	\$13.2	\$13.6	\$13.8	\$16.5	\$16.9	\$17.1	\$17.5	\$17.8	\$152.2
INTEREST											
- Interest on Opening Balance	\$1.8	\$1.7	\$1.7	\$1.6	\$1.5	\$1.4	\$1.2	\$0.9	\$0.6	\$0.3	\$12.7
- Interest on In-year Transactions	(\$0.1)	(\$0.1)	(\$0.1)	(\$0.1)	(\$0.1)	(\$0.2)	(\$0.2)	(\$0.2)	(\$0.2)	(\$0.2)	(\$1.7)
TOTAL REVENUE	\$14.5	\$14.6	\$14.8	\$15.1	\$15.2	\$17.7	\$17.8	\$17.8	\$17.9	\$17.9	\$163.2
CLOSING CASH BALANCE	\$49.4	\$47.4	\$45.2	\$43.0	\$40.5	\$33.3	\$25.8	\$17.8	\$9.3	\$0.3	

2014 Adjusted Charge Per Square Metre \$1.36

Allocation of Capital Program	
Residential Sector	0.0%
Non-Residential Sector	100.0%
Rates for 2014	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX C.3

WATER

APPENDIX C.3

WATER

TABLE 1 2014 – 2023 DEVELOPMENT-RELATED CAPITAL PROGRAM

Table 1 provides a summary of the development-related capital program for watermains. A list of projects that will benefit development outside the core tourist area (OCTA) and within the core tourist area (CTA) have been developed by City staff.

As shown in Table 1, the capital program for OCTA watermains totals \$3.99 million gross. The capital program includes watermains in new development areas and oversizing of watermains.

No grants or subsidies have been identified to help offset the cost of the program. However, roughly 50 per cent of the program is deemed to be the benefit to existing (BTE) share. In total, \$1.94 million has been identified as the BTE share and this amount is not recoverable through DCs and must be funded through non-DC revenue sources.

Another share of the program is deemed to benefit development beyond the ten-year planning horizon. The post-2023 share amounts to \$654,221. This share, however, is deemed to be related to new development and can be recovered through DCs in subsequent by-law reviews.

The net growth-related share of the OCTA water program is netted down to \$1.40 million and this amount is brought forward to the DC calculation. Also included in the OCTA capital program are 2 water-related studies that amount to \$355,000, of which, \$255,000 is deemed to be growth-related.

There are 6 watermain projects anticipated to be required within the core tourist area in the 10-year planning horizon. The total cost of the watermains within the CTA amounts to \$2.81 million. Only \$337,620 is considered to be development-related as \$1.97 million is considered to be the BTE share and \$506,430 is deemed to be the post-period benefit share.

TABLES 2&3 CALCULATION OF THE UNADJUSTED DEVELOPMENT CHARGES

Tables 2 and 3 display the shares of the water program that are to be recovered through development charges. Table 2 displays the OCTA development-related net capital cost for water is netted down by the portion of the program deemed to benefit existing development, and the shares of the program deemed to benefit development beyond the planning horizon of 2023. In addition, the current OCTA water reserves fund balance is in a positive position of

\$379,010 and these monies are utilized to fund OCTA watermain projects that first occur in the program. Therefore, about \$1.28 million is included in the development charges calculation.

Tables 2 also displays the DC recoverable costs apportioned to the residential and non-residential sectors; 88%, or \$1.13 million to residential and 12%, or \$150,740 to the non-residential, based on shares of anticipated shares of population and employment growth outside the core tourist area.

The residential sector's share of \$1.12 million in development-related net capital costs yields an "unadjusted" development charge of \$121.81 per capita. The non-residential sector's share of \$150,740 in development-related net capital costs results in an unadjusted charge of \$1.62 per square metre of GFA for the non-residential sector.

Table 3 displays the CTA development-related net capital cost for water is netted down by the portion of the program deemed to benefit existing development, and the shares of the program deemed to benefit development beyond the planning horizon of 2023. In addition, the current CTA water reserves fund balance is in a positive position of \$49,330 and these monies are utilized to fund CTA watermain projects that first occur in the program. Therefore, about \$288,290 is included in the development charges calculation.

Tables 3 also display the DC recoverable costs are solely apportioned to the non-residential sectors as it is anticipated that there will be no residential growth occurring in the core tourist area. As such, the entire DC eligible cost of \$288,290 is recovered against non-residential growth in the CTA.

The non-residential sector's share of \$288,290 in development-related net capital costs results in an unadjusted charge of \$2.83 per square metre of GFA for the non-residential sector.

TABLE 4 CASH FLOW ANALYSIS

After cash flow and reserve fund analysis, the residential and non-residential calculated charges result in \$107.73 per capita and \$1.44 per square metre for the OCTA charge and \$3.00 for the CTA charge. This is a reflection of the timing of the capital program and development charges revenues.

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

WATER SUMMARY							
2014 - 2023		Unadjusted Development Charge			Adjusted Development Charge		
Development-Related Capital Program	Residential	OCTA	CTA	Residential	OCTA	CTA	
Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/sq.m	\$/capita	\$/sq.m	\$/sq.m
\$7,162,855	\$1,993,284	\$121.81	\$1.62	\$2.83	\$107.73	\$1.44	\$3.00

APPENDIX C.3
TABLE 1
CITY OF NIAGARA FALLS
DEVELOPMENT-RELATED CAPITAL PROGRAM
WATER SERVICES

NO.	Infrastructure Requirement	Type of Improvement	Timing	Estimated Project Costs					Net Growth-Related	
				Gross Cost	Grants and Subsidies	Benefit to Existing Share	Post Period Allocation			
Watermains - Outside Core Tourist Area										
1	Warren Woods - Phase 2 Oversizing- Development Agreement	New Development	2013 - 2018	\$71,650	\$0	0%	\$0	5%	\$3,583	\$68,068
2	Warren Woods - Extension through Hydro Corridor	New Development	2013 - 2018	\$26,200	\$0	0%	\$0	5%	\$1,310	\$24,890
3	Montrose Road - McLeod Road to Hydro Corridor - Loop	New Development	2013 - 2018	\$710,100	\$0	50%	\$355,050	5%	\$35,505	\$319,545
4	Chippawa West - Phase 2 Subdivision - Sodom Road Oversizing- Development Agreement	New Development	2013 - 2018	\$21,855	\$0	0%	\$0	5%	\$1,093	\$20,762
5	Portage Road - Norton Street to Macklem Street - Boathouse Development - oversizing (150-300)	Replacement with Enlargement	2013 - 2018	\$405,500	\$0	70%	\$283,850	18%	\$72,990	\$48,660
6	Dorchester Road - Jill Drive to Mcleod Road - oversize (150-300)	Replacement with Enlargement	2013 - 2018	\$313,600	\$0	70%	\$219,520	18%	\$56,448	\$37,632
7	Oldfield Road - Drummond Road to Dorchester Road - oversize	New Development	2013 - 2018	\$143,750	\$0	0%	\$0	5%	\$7,188	\$136,563
8	Warren Woods - Phase 3 & 4 - oversize - within the subdivision from Brown Rd. to the Garner/Hydro corridor location	New Development	2013 - 2018	\$330,000	\$0	0%	\$0	5%	\$16,500	\$313,500
9	Thorold Stone Road - Portage Road to CNR (150 - 300 dia.)	Replacement with Enlargement	2018 - 2023	\$476,000	\$0	70%	\$333,200	18%	\$85,680	\$57,120
10	Thundering Waters - Stanley Avenue Extension - Marineland Parkway to Drummond - Loop	New	2018 - 2023	\$964,500	\$0	50%	\$482,250	25%	\$241,125	\$241,125
11	Marineland Parkway - Watermain Loop	New	2019 - 2023	\$381,200	\$0	50%	\$190,600	25%	\$95,300	\$95,300
12	Dorchester loop - Stanley to Bukator Park (Ph. 1)	New	2018 - 2023	\$150,000	\$0	50%	\$75,000	25%	\$37,500	\$37,500
Subtotal Watermains - Outside Core Tourist Area				\$3,994,355	\$0		\$1,939,470		\$654,221	\$1,400,664

City-wide Water Studies										
1	NF Water Distribution Master Plan	Study	2014 - 2018	\$200,000	\$0	50%	\$100,000	0%	\$0	\$100,000
2	Thundering Waters Master Servicing Study	Study	2014 - 2018	\$155,000	\$0	0%	\$0	0%	\$0	\$155,000
Subtotal City-wide Water Studies				\$355,000	\$0		\$100,000		\$0	\$255,000



CITY OF NIAGARA FALLS
DEVELOPMENT-RELATED CAPITAL PROGRAM
WATER SERVICES

NO.	Infrastructure Requirement	Type of Improvement	Timing	Estimated Project Costs					Net Growth-Related	
				Gross Cost	Grants and Subsidies	Benefit to Existing Share	Post Period Allocation			
Watermains - Core Tourist Area										
1	Robinson Street - Stanley Ave to Main Street (150 - 300 dia.)	Replacement with Enlargement	2014 - 2018	\$426,800	\$0	70%	\$298,760	18%	\$76,824	\$51,216
2	Clark Avenue - Ferry Street to Robinson Street (150 - 300 dia.)	Replacement with Enlargement	2014 - 2018	\$464,500	\$0	70%	\$325,150	18%	\$83,610	\$55,740
3	Robinson Street - Stanley Avenue to Jolley Crescent (150 - 300 dia)	Replacement with Enlargement	2014 - 2018	\$369,000	\$0	70%	\$258,300	18%	\$66,420	\$44,280
4	Main St. - Robison to Stanley (150 - 300 dia)	Replacement with Enlargement	2014 - 2018	\$609,300	\$0	70%	\$426,510	18%	\$109,674	\$73,116
5	Allendale - Ferry to Dixon (150 - 300 diam)	Replacement with Enlargement	2014 - 2018	\$585,900	\$0	70%	\$410,130	18%	\$105,462	\$70,308
6	Stanley Ave. - North St. to Ferry St. (150 - 300 dia)	Replacement with Enlargement	2019 - 2023	\$358,000	\$0	70%	\$250,600	18%	\$64,440	\$42,960
Subtotal Watermains - Core Tourist Area				\$2,813,500	\$0		\$1,969,450		\$506,430	\$337,620

Total Watermain Projects	\$7,162,855	\$0	\$4,008,920	\$1,160,651	\$1,993,284
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APPENDIX C.3
TABLE 2

CITY OF NIAGARA FALLS
SUMMARY OF UNADJUSTED RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT CHARGES
WATER SERVICES
OUTSIDE CORE TOURIST AREA

10-Year Growth in Population in New Units	9,243
10-Year Employment Growth	1,238
10-Year Growth in Square Metres	92,863

	Growth-Related Capital Forecast						Residential Share		Non-Residential Share	
	Total (Net of Grants/ Subsidies) (\$000)	Benefit to Existing Share (\$000)	Post Period Allocation (\$000)	Prior Growth (Reserve Fund Adjustment) (\$000)	Total Net Capital Costs After Discount (\$000)	%	Residential Share		Non-Residential Share	
							\$000	%	\$000	%
WATER SERVICES										
Subtotal Watermains - Outside Core Tourist Area	\$3,994.36	\$1,939.47	\$654.22	\$379.01	\$1,021.66	88.2%	\$901.02	11.8%	\$120.63	
Subtotal City-wide Water Studies	\$355.00	\$100.00	\$0.00	\$0.00	\$255.00	88.2%	\$224.89	11.8%	\$30.11	
TOTAL WATER SERVICES	\$4,349.36	\$2,039.47	\$654.22	\$379.01	\$1,276.66		\$1,125.91		\$150.74	
Unadjusted Development Charge Per Capita (\$)							\$121.81			\$1.62
Unadjusted Development Charge Per Sq. M. (\$)										

APPENDIX C.3
TABLE 3

CITY OF NIAGARA FALLS
SUMMARY OF UNADJUSTED RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT CHARGES
WATER SERVICES
CORE TOURIST AREA

10-Year Employment Growth	1,853
10-Year Growth in Square Metres	101,888

	Growth-Related Capital Forecast								
	Total (Net of Grants/ Subsidies) (\$000)	Benefit to Existing Share (\$000)	Post Period Allocation (\$000)	Prior Growth (Reserve Fund Adjustment) (\$000)	Total Net Capital Costs After Discount (\$000)	Residential Share		Non-Residential Share	
						%	\$000	%	\$000
WATER SERVICES Subtotal Watermains - Core Tourist Area	\$2,813.50	\$1,969.45	\$506.43	\$49.33	\$288.29	0.0%	\$0.00	100.0%	\$288.29
TOTAL WATER SERVICES	\$2,813.50	\$1,969.45	\$506.43	\$49.33	\$288.29		\$0.00		\$288.29
Unadjusted Development Charge Per Sq. M. (\$)									\$2.83

APPENDIX C.3
TABLE 4 - PAGE 1

CITY OF NIAGARA FALLS
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
WATER
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

WATER	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	TOTAL
OPENING CASH BALANCE	\$334.26	\$248.96	\$158.67	\$63.25	(\$37.47)	(\$199.38)	(\$162.78)	(\$123.20)	(\$80.52)	(\$41.72)	
2014 - 2023 RESIDENTIAL FUNDING REQUIREMENTS											
- Water: Non Inflated	\$187.5	\$187.5	\$187.5	\$187.5	\$236.9	\$66.2	\$66.2	\$66.2	\$66.2	\$66.2	\$1,317.6
- Water: Inflated	\$187.5	\$191.2	\$195.1	\$199.0	\$256.4	\$73.0	\$74.5	\$76.0	\$77.5	\$79.1	\$1,409.3
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	864	864	864	864	864	1,007	1,007	1,007	951	951	9,243
REVENUE											
- DC Receipts: Inflated	\$93.1	\$94.9	\$96.8	\$98.8	\$100.8	\$119.8	\$122.2	\$124.6	\$120.0	\$122.4	\$1,093.4
INTEREST											
- Interest on Opening Balance	\$11.7	\$8.7	\$5.6	\$2.2	(\$2.1)	(\$11.0)	(\$9.0)	(\$6.8)	(\$4.4)	(\$2.3)	(\$7.3)
- Interest on In-year Transactions	(\$2.6)	(\$2.6)	(\$2.7)	(\$2.8)	(\$4.3)	\$0.8	\$0.8	\$0.9	\$0.7	\$0.8	(\$11.0)
TOTAL REVENUE	\$102.2	\$101.0	\$99.7	\$98.3	\$94.5	\$109.7	\$114.1	\$118.7	\$116.3	\$120.9	\$1,075.1
CLOSING CASH BALANCE	\$249.0	\$158.7	\$63.2	(\$37.5)	(\$199.4)	(\$162.8)	(\$123.2)	(\$80.5)	(\$41.7)	\$0.1	

2014 Adjusted Charge Per Capita **\$107.73**

Allocation of Capital Program		
Residential Sector		88.2%
Non-Residential Sector		11.8%
Rates for 2014		
Inflation Rate:		2.0%
Interest Rate on Positive Balances		3.5%
Interest Rate on Negative Balances		5.5%



APPENDIX C.3
TABLE 4 - PAGE 2

CITY OF NIAGARA FALLS
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
WATER - OUTSIDE CORE TOURIST AREA
NON-RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	TOTAL
WATER - OCTA											
OPENING CASH BALANCE	\$44.75	\$33.16	\$20.96	\$8.11	(\$5.52)	(\$27.42)	(\$22.70)	(\$17.72)	(\$12.16)	(\$6.19)	
2014 - 2023 NON-RESIDENTIAL FUNDING REQUIREMENTS											
- Water - Octa: Non Inflated	\$25.1	\$25.1	\$25.1	\$25.1	\$31.7	\$8.9	\$8.9	\$8.9	\$8.9	\$8.9	\$176.4
- Water - Octa: Inflated	\$25.1	\$25.6	\$26.1	\$26.6	\$34.3	\$9.8	\$10.0	\$10.2	\$10.4	\$10.6	\$188.7
NON-RESIDENTIAL SPACE GROWTH											
- Growth in Square Metres	8,550	8,550	8,631	8,550	8,550	10,023	9,941	10,023	10,023	10,023	92,863
REVENUE											
- DC Receipts: Inflated	\$12.3	\$12.6	\$12.9	\$13.1	\$13.3	\$15.9	\$16.1	\$16.6	\$16.9	\$17.2	\$146.9
INTEREST											
- Interest on Opening Balance	\$1.6	\$1.2	\$0.7	\$0.3	(\$0.3)	(\$1.5)	(\$1.2)	(\$1.0)	(\$0.7)	(\$0.3)	(\$1.3)
- Interest on In-year Transactions	(\$0.4)	(\$0.4)	(\$0.4)	(\$0.4)	(\$0.6)	\$0.1	\$0.1	\$0.1	\$0.1	\$0.1	(\$1.5)
TOTAL REVENUE	\$13.5	\$13.4	\$13.3	\$13.0	\$12.4	\$14.5	\$15.0	\$15.7	\$16.3	\$17.0	\$144.1
CLOSING CASH BALANCE	\$33.2	\$21.0	\$8.1	(\$5.5)	(\$27.4)	(\$22.7)	(\$17.7)	(\$12.2)	(\$6.2)	\$0.2	

2014 Adjusted Charge Per Square Metre \$1.44

Allocation of Capital Program	
Residential Sector	88.2%
Non-Residential Sector	11.8%
Rates for 2014	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX C.3
TABLE 4 - PAGE 3

CITY OF NIAGARA FALLS
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
WATER - CORE TOURIST AREA
NON-RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	TOTAL
WATER - CTA											
OPENING CASH BALANCE	\$49.33	\$19.48	(\$12.01)	(\$45.66)	(\$81.71)	(\$120.41)	(\$99.75)	(\$77.23)	(\$53.06)	(\$26.95)	
2014 - 2023 NON-RESIDENTIAL FUNDING REQUIREMENTS											
- Water - Cta: Non Inflated	\$58.9	\$58.9	\$58.9	\$58.9	\$58.9	\$8.6	\$8.6	\$8.6	\$8.6	\$8.6	\$337.6
- Water - Cta: Inflated	\$58.9	\$60.1	\$61.3	\$62.5	\$63.8	\$9.5	\$9.7	\$9.9	\$10.1	\$10.3	\$356.1
NON-RESIDENTIAL SPACE GROWTH											
- Growth in Square Metres	9,405	9,405	9,364	9,405	9,405	10,973	11,014	10,973	10,973	10,973	101,888
REVENUE											
- DC Receipts: Inflated	\$28.2	\$28.8	\$29.2	\$29.9	\$30.5	\$36.3	\$37.2	\$37.8	\$38.6	\$39.3	\$335.8
INTEREST											
- Interest on Opening Balance	\$1.7	\$0.7	(\$0.7)	(\$2.5)	(\$4.5)	(\$6.6)	(\$5.5)	(\$4.2)	(\$2.9)	(\$1.5)	(\$26.0)
- Interest on In-year Transactions	(\$0.8)	(\$0.9)	(\$0.9)	(\$0.9)	(\$0.9)	\$0.5	\$0.5	\$0.5	\$0.5	\$0.5	(\$2.0)
TOTAL REVENUE	\$29.1	\$28.6	\$27.7	\$26.5	\$25.1	\$30.1	\$32.2	\$34.0	\$36.2	\$38.3	\$307.8
CLOSING CASH BALANCE	\$19.5	(\$12.0)	(\$45.7)	(\$81.7)	(\$120.4)	(\$99.8)	(\$77.2)	(\$53.1)	(\$26.9)	\$1.1	

2014 Adjusted Charge Per Square Metre \$3.00

Allocation of Capital Program	
Residential Sector	0.0%
Non-Residential Sector	100.0%
Rates for 2014	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX C.4

SANITARY SEWER

APPENDIX C.4
SANITARY SEWER

TABLE 1 2014 – 2023 DEVELOPMENT-RELATED CAPITAL PROGRAM

Table 1 provides a summary of the development-related capital program for sanitary sewers. A list of projects that will benefit development outside the core tourist area (OCTA) and within the core tourist area (CTA) has been developed by City staff.

As shown in Table 1, the capital program for OCTA sanitary sewers totals \$14.38 million gross. The largest recovery in the sanitary sewer capital program is for the debt related to the Grassy Brook / Garner Southwest pumping station. Ten year worth of debt payments have been included for recovery through this by-law review at a total amount of \$9.23 million. The new projects in the capital program include sanitary sewers in new development areas and oversizing of sanitary sewers.

No grants or subsidies have been identified to help offset the cost of the program. However, roughly 16 per cent of the program is deemed to be the benefit to existing (BTE) share. In total, \$2.27 million has been identified as the BTE share and this amount is not recoverable through DCs and must be funded through non-DC revenue sources.

Another share of the program is deemed to benefit development beyond the ten-year planning horizon. The post-2023 share amounts to \$814,325. This share, however, is deemed to be related to new development and can be recovered through DCs in subsequent by-law reviews.

The net growth-related share of the OCTA sanitary sewer program is netted down to \$11.29 million and this amount is brought forward to the DC calculation. Also included in the OCTA capital program are 3 sanitary sewer-related studies that amount to \$450,000, of which, \$350,000 is deemed to be growth-related.

There are 2 sanitary sewer projects anticipated to be required within the core tourist area in the 10-year planning horizon. The total cost of the sanitary sewer within the CTA amounts to \$339,100. Only \$88,116 is considered to be development-related as \$189,946 is considered to be the BTE share and \$61,038 is deemed to be the post-period benefit share.

TABLES 2&3 CALCULATION OF THE UNADJUSTED DEVELOPMENT CHARGES

Tables 2 and 3 display the shares of the sanitary sewer program that are to be recovered through development charges. Table 2 displays the OCTA development-related net capital cost for

sanitary sewer is netted down by the portion of the program deemed to benefit existing development, and the shares of the program deemed to benefit development beyond the planning horizon of 2023. In addition, the current OCTA sanitary sewer reserves fund balance is in a positive position of \$814,330 and these monies are utilized to fund OCTA sanitary sewer projects that first occur in the program. Therefore, about \$9.65 million is included in the development charges calculation.

Tables 2 also displays the DC recoverable costs apportioned to the residential and non-residential sectors; 88%, or \$8.51 million to residential and 12%, or \$1.14 million to the non-residential, based on shares of anticipated shares of population and employment growth outside the core tourist area.

The residential sector's share of \$8.51 million in development-related net capital costs yields an "unadjusted" development charge of \$920.56 per capita. The non-residential sector's share of \$1.14 million in development-related net capital costs results in an unadjusted charge of \$12.27 per square metre of GFA for the non-residential sector.

Table 3 displays the CTA development-related net capital cost for sanitary sewer is netted down by the portion of the program deemed to benefit existing development, and the shares of the program deemed to benefit development beyond the planning horizon of 2023. In addition, the current CTA sanitary sewer reserves fund balance is in a positive position of \$18,300 and these monies are utilized to fund CTA sanitary sewer projects that first occur in the program. Therefore, about \$69,820 is included in the development charges calculation.

Tables 3 also display the DC recoverable costs are solely apportioned to the non-residential sectors as it is anticipated that there will be no residential growth occurring in the core tourist area. As such, the entire DC eligible cost of \$69,820 is recovered against non-residential growth in the CTA.

The non-residential sector's share of \$69,820 in development-related net capital costs results in an unadjusted charge of \$0.69 per square metre of GFA for the non-residential sector.

TABLE 4 CASH FLOW ANALYSIS

After cash flow and reserve fund analysis, the residential and non-residential calculated charges result in \$913.84 per capita and \$12.20 per square metre for the OCTA charge and \$0.67 for the CTA charge. This is a reflection of the timing of the capital program and development charges revenues.

The following table summarizes the calculation of the Sanitary Sewer development charge:

SANITARY SEWER SUMMARY							
2014 - 2023		Unadjusted Development Charge			Adjusted Development Charge		
Development-Related Capital Program	Residential	OCTA	CTA	Residential	OCTA	CTA	
Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/sq.m	\$/capita	\$/sq.m	\$/sq.m
\$15,166,960	\$11,729,451	\$920.56	\$12.27	\$0.69	\$913.84	\$12.20	\$0.67

CITY OF NIAGARA FALLS
DEVELOPMENT-RELATED CAPITAL PROGRAM
SANITARY SEWER SERVICES

NO.	Infrastructure Requirement	Type of Improvement	Timing	Estimated Project Costs					Net Growth-Related	
				Gross Cost	Grants and Subsidies	Benefit to Existing Share	Post Period Allocation			
Sanitary Sewers - Outside Core Tourist Area										
1	Grassy Brook / Garner Southwest Pumping Station	Debt	2014 - 2023	\$9,230,960	\$0	0%	\$0	0%	\$9,230,960	
2	Warren Woods Extension through Hydro Corridor	New Development	2014 - 2018	\$25,200	\$0	0%	\$0	5%	\$23,940	
3	Cattell Drive Sewer Diversion & Storage Capacity	Replacement with Enlargement	2014 - 2018	\$2,800,000	\$0	70%	\$1,960,000	18%	\$336,000	
4	Willoughby Drive - Weinbrenner Road to Cattell Drive	Replacement with Enlargement	2014 - 2018	\$446,000	\$0	70%	\$312,200	18%	\$53,520	
5	Garner Road- Sanitary Sewer Extension- McGarry Drive to Hydro	New Development	2014 - 2018	\$238,200	\$0	0%	\$0	5%	\$226,290	
6	Warren Woods Ph. 3 & 4 - oversizing - along Brown Road & within dev't to the Garner Road/Hydro Corridor location	New Development	2014 - 2018	\$984,500	\$0	0%	\$0	5%	\$935,275	
7	Kinsmen Crt. Sanitary Sewer Extension	New Development	2014 - 2018	\$50,000	\$0	0%	\$0	5%	\$47,500	
8	Marineland Parkway - Stanley Avenue to Allanthus Avenue	New Development	2019 - 2023	\$303,000	\$0	0%	\$0	5%	\$287,850	
9	Mewburn Road PS - Land Purchase - from previous DC Study	Sewermains (New)	2019 - 2023	\$300,000	\$0	0%	\$0	50%	\$150,000	
Subtotal Sanitary Sewers - Outside Core Tourist Area				\$14,377,860	\$0		\$2,272,200		\$814,325	\$11,291,335

City-wide Sanitary Sewer Studies										
NO.	Infrastructure Requirement	Type of Improvement	Timing	Gross Cost	Grants and Subsidies	Benefit to Existing Share	Post Period Allocation	Net Growth-Related		
1	NF - Pollution Control Plan Update	Study	2014 - 2018	\$200,000	\$0	50%	\$100,000	0%	\$100,000	
2	City-Wide Master Sanitary Sewer Servicing Plan	Study	2014 - 2018	\$200,000	\$0	0%	\$0	0%	\$200,000	
3	Chippawa Sanitary Sewer Analysis	Study	2014 - 2018	\$50,000	\$0	0%	\$0	0%	\$50,000	
Subtotal City-wide Sanitary Sewer Studies				\$450,000	\$0		\$100,000		\$0	\$350,000

Sanitary Sewers - Core Tourist Area										
NO.	Infrastructure Requirement	Type of Improvement	Timing	Gross Cost	Grants and Subsidies	Benefit to Existing Share	Post Period Allocation	Net Growth-Related		
1	Clark Avenue - Ferry Street to Robinson Street (250 - 300 dia.)	Replacement with Enlargement	2014 - 2018	\$247,900	\$0	70%	\$173,530	18%	\$44,622	
2	Victoria Avenue - Walnut Street to Bender Street (300 - 375 dia.)	Replacement with Enlargement	2019 - 2023	\$91,200	\$0	18%	\$16,416	18%	\$58,368	
Subtotal Sanitary Sewers - Core Tourist Area				\$339,100	\$0		\$189,946		\$61,038	\$88,116

Total Sanitary Sewer Projects				\$15,166,960	\$0		\$2,562,146		\$875,363	\$11,729,451
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APPENDIX C.4
TABLE 2

CITY OF NIAGARA FALLS
SUMMARY OF UNADJUSTED RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT CHARGES
SANITARY SEWER SERVICES
OUTSIDE CORE TOURIST AREA

10-Year Growth in Population in New Units	9,243
10-Year Employment Growth	1,238
10-Year Growth in Square Metres	92,863

	Growth-Related Capital Forecast							Residential Share		Non-Residential Share	
	Total of Grants/ Subsidies (\$000)	Benefit to Existing Share (\$000)	Post Period Allocation (\$000)	Prior Growth (Reserve Fund Adjustment) (\$000)	Total Net Capital Costs After Discount (\$000)	%	Share	%	Share	%	
											\$000
SANITARY SEWER SERVICES											
Subtotal Sanitary Sewers - Outside Core Tourist Area	\$14,377.86	\$2,272.20	\$814.33	\$1,993.38	\$9,297.95	88.2%	\$8,200.09	11.8%	\$1,097.87		
Subtotal City-wide Sanitary Sewer Studies	\$450.00	\$100.00	\$0.00	\$0.00	\$350.00	88.2%	\$308.67	11.8%	\$41.33		
TOTAL SANITARY SEWER SERVICES	\$14,827.86	\$2,372.20	\$814.33	\$1,993.38	\$9,647.95		\$8,508.76		\$1,139.20		
Unadjusted Development Charge Per Capita (\$)							\$920.56				
Unadjusted Development Charge Per Sq. M. (\$)									\$12.27		

APPENDIX C.4
TABLE 3

SUMMARY OF UNADJUSTED RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT CHARGES
CITY OF NIAGARA FALLS
SANITARY SEWER SERVICES
CORE TOURIST AREA

10-Year Employment Growth	1,853
10-Year Growth in Square Metres	101,888

	Growth-Related Capital Forecast							Residential Share	Non-Residential Share		
	Total (Net of Grants/ Subsidies) (\$000)	Benefit to Existing Share (\$000)	Post Period Allocation (\$000)	Prior Growth (Reserve Fund Adjustment) (\$000)	Total Net Capital Costs After Discount (\$000)	Residential Share				Non-Residential Share	
						%	\$000			%	\$000
SANITARY SEWER SERVICES											
Subtotal Sanitary Sewers - Core Tourist Area	\$339.10	\$189.95	\$61.04	\$18.30	\$69.82	0.0%	\$0.00	100.0%	\$69.82		
TOTAL SANITARY SEWER SERVICES	\$339.10	\$189.95	\$61.04	\$18.30	\$69.82		\$0.00		\$69.82		
Unadjusted Development Charge Per Sq. M. (\$)									\$0.69		

APPENDIX C.4
TABLE 4 - PAGE 1

CITY OF NIAGARA FALLS
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
SANITARY SEWER
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

SANITARY SEWER	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	TOTAL
OPENING CASH BALANCE	\$1,758.01	\$1,436.87	\$1,096.75	\$737.01	\$356.69	(\$45.12)	(\$15.15)	\$17.11	\$51.53	\$26.48	
2014 - 2023 RESIDENTIAL FUNDING REQUIREMENTS											
- Sanitary Sewer: Non Inflated	\$1,162.0	\$1,162.0	\$1,162.0	\$1,162.0	\$1,162.0	\$891.3	\$891.3	\$891.3	\$891.3	\$891.3	\$10,266.8
- Sanitary Sewer: Inflated	\$1,162.0	\$1,185.3	\$1,209.0	\$1,233.1	\$1,257.8	\$984.1	\$1,003.8	\$1,023.9	\$1,044.3	\$1,065.2	\$11,168.5
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	864	864	864	864	864	1,007	1,007	1,007	951	951	9,243
REVENUE											
- DC Receipts: Inflated	\$789.6	\$805.3	\$821.5	\$837.9	\$854.6	\$1,016.0	\$1,036.3	\$1,057.1	\$1,018.2	\$1,038.6	\$9,275.1
INTEREST											
- Interest on Opening Balance	\$61.5	\$50.3	\$38.4	\$25.8	\$12.5	(\$2.5)	(\$0.8)	\$0.6	\$1.8	\$0.9	\$188.5
- Interest on In-year Transactions	(\$10.2)	(\$10.4)	(\$10.7)	(\$10.9)	(\$11.1)	\$0.6	\$0.6	\$0.6	(\$0.7)	(\$0.7)	(\$53.0)
TOTAL REVENUE	\$840.9	\$845.1	\$849.2	\$852.8	\$856.0	\$1,014.1	\$1,036.0	\$1,058.3	\$1,019.3	\$1,038.8	\$9,410.6
CLOSING CASH BALANCE	\$1,436.9	\$1,096.8	\$737.0	\$356.7	(\$45.1)	(\$15.1)	\$17.1	\$51.5	\$26.5	\$0.0	

2014 Adjusted Charge Per Capita
\$913.84

Allocation of Capital Program	
Residential Sector	88.2%
Non-Residential Sector	11.8%
Rates for 2014	
Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX C.4
TABLE 4 - PAGE 2

CITY OF NIAGARA FALLS
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
SEWER - OUTSIDE CORE TOURIST AREA
NON-RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

SEWER - OCTA	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	TOTAL
OPENING CASH BALANCE	\$235.37	\$190.92	\$143.88	\$95.21	\$42.65	(\$12.89)	(\$10.30)	(\$8.62)	(\$5.61)	(\$2.38)	
2014 - 2023 NON-RESIDENTIAL FUNDING REQUIREMENTS											
- Sewer - Octa: Non Inflated	\$155.6	\$155.6	\$155.6	\$155.6	\$155.6	\$119.3	\$119.3	\$119.3	\$119.3	\$119.3	\$1,374.6
- Sewer - Octa: Inflated	\$155.6	\$158.7	\$161.9	\$165.1	\$168.4	\$131.8	\$134.4	\$137.1	\$139.8	\$142.6	\$1,495.3
NON-RESIDENTIAL SPACE GROWTH											
- Growth in Square Metres	8,550	8,550	8,631	8,550	8,550	10,023	9,941	10,023	10,023	10,023	92,863
REVENUE											
- DC Receipts: Inflated	\$104.3	\$106.4	\$109.6	\$110.7	\$112.9	\$135.0	\$136.6	\$140.5	\$143.3	\$146.1	\$1,245.4
INTEREST											
- Interest on Opening Balance	\$8.2	\$6.7	\$5.0	\$3.3	\$1.5	(\$0.7)	(\$0.6)	(\$0.5)	(\$0.3)	(\$0.1)	\$22.6
- Interest on In-year Transactions	(\$1.4)	(\$1.4)	(\$1.4)	(\$1.5)	(\$1.5)	\$0.1	\$0.0	\$0.1	\$0.1	\$0.1	(\$7.0)
TOTAL REVENUE	\$111.1	\$111.6	\$113.2	\$112.5	\$112.9	\$134.3	\$136.1	\$140.1	\$143.1	\$146.0	\$1,261.0
CLOSING CASH BALANCE	\$190.9	\$143.9	\$95.2	\$42.6	(\$12.9)	(\$10.3)	(\$8.6)	(\$5.6)	(\$2.4)	\$1.0	

2014 Adjusted Charge Per Square Metre \$12.20

Allocation of Capital Program	
Residential Sector	88.2%
Non-Residential Sector	11.8%
Rates for 2014	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

CITY OF NIAGARA FALLS
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
SEWER - CORE TOURIST AREA
NON-RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

SEWER - CTA	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	TOTAL
OPENING CASH BALANCE	\$18.30	\$19.30	\$20.31	\$21.33	\$22.47	\$23.63	\$19.53	\$15.24	\$10.62	\$5.78	
2014 - 2023 NON-RESIDENTIAL FUNDING REQUIREMENTS											
- Sewer - Cta: Non Inflated	\$5.9	\$5.9	\$5.9	\$5.9	\$5.9	\$11.7	\$11.7	\$11.7	\$11.7	\$11.7	\$88.1
- Sewer - Cta: Inflated	\$5.9	\$6.1	\$6.2	\$6.3	\$6.4	\$12.9	\$13.1	\$13.4	\$13.7	\$14.0	\$98.0
NON-RESIDENTIAL SPACE GROWTH											
- Growth in Square Metres	9,405	9,405	9,364	9,405	9,405	10,973	11,014	10,973	10,973	10,973	101,888
REVENUE											
- DC Receipts: Inflated	\$6.3	\$6.4	\$6.5	\$6.7	\$6.8	\$8.1	\$8.3	\$8.4	\$8.6	\$8.8	\$74.9
INTEREST											
- Interest on Opening Balance	\$0.6	\$0.7	\$0.7	\$0.7	\$0.8	\$0.8	\$0.7	\$0.5	\$0.4	\$0.2	\$6.2
- Interest on In-year Transactions	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	(\$0.1)	(\$0.1)	(\$0.1)	(\$0.1)	(\$0.1)	(\$0.7)
TOTAL REVENUE	\$6.9	\$7.1	\$7.2	\$7.5	\$7.6	\$8.8	\$8.9	\$8.8	\$8.8	\$8.9	\$80.4
CLOSING CASH BALANCE	\$19.3	\$20.3	\$21.3	\$22.5	\$23.6	\$19.5	\$15.2	\$10.6	\$5.8	\$0.7	

2014 Adjusted Charge Per Square Metre \$0.67

Allocation of Capital Program	
Residential Sector	0.0%
Non-Residential Sector	100.0%
Rates for 2014	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX C.5

STORM WATER MANAGEMENT

APPENDIX C.5

STORM WATER MANGEMENT

TABLE 1 2014 – 2023 DEVELOPMENT-RELATED CAPITAL PROGRAM

Table 1 provides a summary of the development-related capital program for storm water management. A list of projects that will benefit development outside the core tourist area (OCTA) and within the core tourist area (CTA) has been developed by City staff.

As shown in Table 1, the capital program for OCTA storm water management totals \$13.24 million gross. The capital program includes new improvements to existing roads, new storm sewers in new development areas, EA studies and sewer separations.

No grants or subsidies have been identified to help offset the cost of the program. However, roughly 28 per cent of the program is deemed to be the benefit to existing (BTE) share. In total, \$3.75 million has been identified as the BTE share and this amount is not recoverable through DCs and must be funded through non-DC revenue sources.

Another share of the program is deemed to benefit development beyond the ten-year planning horizon. The post-2023 share amounts to \$2.28 million. This share, however, is deemed to be related to new development and can be recovered through DCs in subsequent by-law reviews.

The net growth-related share of the OCTA sanitary sewer program is netted down to \$7.21 million and this amount is brought forward to the DC calculation. Also included in the OCTA capital program are 2 storm water management-related studies that amount to \$450,000, of which, \$300,000 is deemed to be growth-related.

There are 6 storm water management projects anticipated to be required within the core tourist area in the 10-year planning horizon. The total cost of the storm water management within the CTA amounts to \$2.36 million. Only \$224,343 is considered to be development-related as \$2.13 million is considered to be the BTE share and \$11,808 is deemed to be the post-period benefit share.

TABLES 2&3 CALCULATION OF THE UNADJUSTED DEVELOPMENT CHARGES

Tables 2 and 3 display the shares of the storm water management program that are to be recovered through development charges. Table 2 displays the OCTA development-related net capital cost for storm water management is netted down by the portion of the program deemed to benefit existing development, and the shares of the program deemed to benefit development

beyond the planning horizon of 2023. In addition, the current OCTA storm water management reserves fund balance is in a positive position of \$1.97 million and these monies are utilized to fund OCTA storm water management projects that first occur in the program. Therefore, about \$5.54 million is included in the development charges calculation.

Tables 2 also displays the DC recoverable costs apportioned to the residential and non-residential sectors; 88%, or \$4.89 million to residential and 12%, or \$654,080 to the non-residential, based on shares of anticipated shares of population and employment growth outside the core tourist area.

The residential sector's share of \$4.89 million in development-related net capital costs yields an "unadjusted" development charge of \$528.55 per capita. The non-residential sector's share of \$654,080 in development-related net capital costs results in an unadjusted charge of \$7.04 per square metre of GFA for the non-residential sector.

Table 3 displays the CTA development-related net capital cost for storm water management is netted down by the portion of the program deemed to benefit existing development, and the shares of the program deemed to benefit development beyond the planning horizon of 2023. In addition, the current CTA storm water management reserves fund balance is in a positive position of \$44,510 and these monies are utilized to fund CTA storm water management projects that first occur in the program. Therefore, about \$179,830 is included in the development charges calculation.

Tables 3 also display the DC recoverable costs are solely apportioned to the non-residential sectors as it is anticipated that there will be no residential growth occurring in the core tourist area. As such, the entire DC eligible cost of \$179,830 is recovered against non-residential growth in the CTA.

The non-residential sector's share of \$179,830 in development-related net capital costs results in an unadjusted charge of \$1.77 per square metre of GFA for the non-residential sector.

TABLE 4 CASH FLOW ANALYSIS

After cash flow and reserve fund analysis, the residential and non-residential calculated charges result in \$521.50 per capita and \$6.96 per square metre for the OCTA charge and \$1.91 for the CTA charge. This is a reflection of the timing of the capital program and development charges revenues.

The following table summarizes the calculation of the Storm Water Management development charge:

STORM WATER MANAGEMENT SUMMARY							
2014 - 2023		Unadjusted Development Charge			Adjusted Development Charge		
Development-Related Capital Program		Residential	OCTA	CTA	Residential	OCTA	CTA
Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/sq.m	\$/capita	\$/sq.m	\$/sq.m
\$16,048,036	\$7,734,024	\$528.55	\$7.04	\$1.77	\$521.50	\$6.96	\$1.91

APPENDIX C.5
TABLE 1
CITY OF NIAGARA FALLS
DEVELOPMENT-RELATED CAPITAL PROGRAM
STORM WATER MANAGEMENT SERVICES

NO.	Infrastructure Requirement	Type of Improvement	Timing	Estimated Project Costs					Net Growth-Related	
				Gross Cost	Grants and Subsidies	Benefit to Existing Share	Post Period Allocation			
Storm Water Management - Outside Core Tourist Area										
1	McLeod Road - Kalar Road to Pin Oak Drive	New Improvement to Existing Road	2014 - 2018	\$99,500	\$0	40%	\$39,800	3%	\$2,985	\$56,715
2	Warren Woods Phase 1 & 2 Oversizing & Pond Const'n & Eng.	New Development - Greenfield Condition	2014 - 2018	\$837,066	\$0	0%	\$0	5%	\$41,853	\$795,213
3	McLeod Road - Pin Oak Drive to Monstrose Road	New Improvement to Existing Road	2014 - 2018	\$161,700	\$0	40%	\$64,680	3%	\$4,851	\$92,169
4	Beaverdams Road EA - Kalar Road to Lundys Lane	Study	2014 - 2018	\$100,000	\$0	0%	\$0	5%	\$5,000	\$95,000
5	Beaverdams Road/Kalar Road - SWM Pond - EA	Study	2014 - 2018	\$75,000	\$0	0%	\$0	5%	\$3,750	\$71,250
6	Beaverdams Road/Kalar Road - SWM Pond - Land and Construction	New Improvement to Existing Road	2014 - 2018	\$1,806,100	\$0	40%	\$722,440	3%	\$54,183	\$1,029,477
7	Drummond Road - Oldfield Road to McLeod Road	New Improvement to Existing Road	2014 - 2018	\$285,000	\$0	40%	\$114,000	3%	\$8,550	\$162,450
8	Oldfield Road - Dorchester Road to Drummond Road	New Improvement to Existing Road	2014 - 2018	\$1,260,000	\$0	40%	\$504,000	3%	\$37,800	\$718,200
9	Level Avenue - Dixon Street to Dunn Street	New Improvement to Existing Road	2014 - 2018	\$235,100	\$0	40%	\$94,040	3%	\$7,053	\$134,007
10	Kalar Road - Lundys Lane to Beaverdams Road	New Improvement to Existing Road	2014 - 2018	\$760,700	\$0	40%	\$304,280	3%	\$22,821	\$433,599
11	Marinelli Subdivision - Sewer Oversizing- Development Agreement	New Development - Greenfield Condition	2014 - 2018	\$26,140	\$0	0%	\$0	0%	\$0	\$26,140
12	Haulage Road - Stormsceptor - Quality Control	New Development - Greenfield Condition	2014 - 2018	\$25,000	\$0	0%	\$0	5%	\$1,250	\$23,750
13	Drummond/Oldfield Subdivision - Oversizing	New Development - Greenfield Condition	2014 - 2018	\$260,000	\$0	0%	\$0	5%	\$13,000	\$247,000
14	Orchard Grove Pond Expansion - Construction	New Improvement to Existing Road	2014 - 2018	\$250,000	\$0	40%	\$100,000	3%	\$7,500	\$142,500
15	Montrose Road - McLeod Rd. to Kinsmen Ct. - Oversizing	New Development - Greenfield Condition	2014 - 2018	\$423,570	\$0	0%	\$0	5%	\$21,179	\$402,392
16	Warren Woods - Phase 3 and 4 Oversizing- Development Agreement	New Development - Greenfield Condition	2019 - 2023	\$265,160	\$0	0%	\$0	25%	\$66,290	\$198,870
17	Brown Road - Montrose Road to Kalar Road N	New Improvement to Existing Road	2019 - 2023	\$875,800	\$0	40%	\$350,320	25%	\$218,950	\$306,530
18	Kalar Road - McLeod Road to Brown Road	New Improvement to Existing Road	2019 - 2023	\$1,039,300	\$0	40%	\$415,720	25%	\$259,825	\$363,755
19	McLeod Road - Kalar Road to Garner Road	New Improvement to Existing Road	2019 - 2023	\$854,700	\$0	40%	\$341,880	25%	\$213,675	\$299,145
20	Kalar Road - Brown Road to Chippawa Parkway	New Improvement to Existing Road	2019 - 2023	\$808,300	\$0	40%	\$323,320	25%	\$202,075	\$282,905
21	Thundering Waters - Stanley Avenue Extension	New Development - Greenfield Condition	2019 - 2023	\$1,107,000	\$0	0%	\$0	50%	\$553,500	\$553,500
22	Mewburn Road Reconstruction - Scholfield Street to Mountain Road	New Improvement to Existing Road	2019 - 2023	\$443,900	\$0	40%	\$177,560	50%	\$221,950	\$44,390



APPENDIX C.5
TABLE 1

CITY OF NIAGARA FALLS
DEVELOPMENT-RELATED CAPITAL PROGRAM
STORM WATER MANAGEMENT SERVICES

NO.	Infrastructure Requirement	Type of Improvement	Timing	Estimated Project Costs					Net Growth-Related	
				Gross Cost	Grants and Subsidies	Benefit to Existing Share	Post Period Allocation			
23	Warren Woods - SWM Pond - Brown Road at Kalar Road - Land and Construction	New Development - Greenfield Condition	2019 - 2023	\$744,000	\$0	0%	\$0	25%	\$186,000	\$558,000
24	Brown Road - Kalar Road N to 550m West	New Improvement to Existing Road	2019 - 2023	\$493,500	\$0	40%	\$197,400	25%	\$123,375	\$172,725
Subtotal Storm Water Management - Outside Core Tourist Area				\$13,236,536	\$0		\$3,749,440		\$2,277,415	\$7,209,681

City-wide Storm Water Management Studies										
1	City-wide Master Drainage Plan	Study	2014 - 2018	\$300,000	\$0	50%	\$150,000	0%	\$0	\$150,000
2	Thompson Creek Watershed Master Plan	Study	2018 - 2023	\$150,000	\$0	0%	\$0	0%	\$0	\$150,000
Subtotal City-wide Storm Water Management Studies				\$450,000	\$0		\$150,000		\$0	\$300,000

Storm Water Management - Core Tourist Area										
1	North Street - Stanley Avenue to Slater Avenue	Sewer Separation	2014 - 2018	\$237,400	\$0	90%	\$213,660	1%	\$1,187	\$22,553
2	Robinson Street - Main Street to Stanley Avenue	Sewer Separation	2014 - 2018	\$448,400	\$0	90%	\$403,560	1%	\$2,242	\$42,598
3	Allendale Avenue - Robinson Street to Ferry Street	Sewer Separation	2014 - 2018	\$821,800	\$0	90%	\$739,620	1%	\$4,109	\$78,071
4	Robinson Street - Stanely Avenue to Jolley Crescent	Sewer Separation	2014 - 2018	\$390,900	\$0	90%	\$351,810	1%	\$1,955	\$37,136
5	Spring Street - Stanley Avenue to Desson Avenue	Sewer Separation	2014 - 2018	\$188,500	\$0	90%	\$169,650	1%	\$943	\$17,908
6	Forsythe Street Storm- Stanley Avenue to Slater Street	Sewer Separation	2014 - 2018	\$274,500	\$0	90%	\$247,050	1%	\$1,373	\$26,078
Subtotal Storm Water Management - Core Tourist Area				\$2,361,500	\$0		\$2,125,350		\$11,808	\$224,343

Total Storm Water Management Projects				\$16,048,036	\$0		\$6,024,790		\$2,289,222	\$7,734,024
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APPENDIX C.5
TABLE 2

CITY OF NIAGARA FALLS
SUMMARY OF UNADJUSTED RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT CHARGES
STORM WATER MANAGEMENT SERVICES
OUTSIDE CORE TOURIST AREA

10-Year Growth in Population in New Units	9,243
10-Year Employment Growth	1,238
10-Year Growth in Square Metres	92,863

	Growth-Related Capital Forecast						Residential Share		Non-Residential Share	
	Total (Net of Grants/ Subsidies) (\$000)	Benefit to Existing Share (\$000)	Post Period Allocation (\$000)	Prior Growth (Reserve Fund Adjustment) (\$000)	Total Net Capital Costs After Discount (\$000)	%	(\$000)	%	(\$000)	%
STORM WATER MANAGEMENT SERVICES										
Subtotal Storm Water Management - Outside Core Tourist Area	\$13,236.54	\$3,749.44	\$2,277.41	\$1,970.20	\$5,239.48	88.2%	\$4,620.82	11.8%	\$618.66	
Subtotal City-wide Storm Water Management Studies	\$450.00	\$150.00	\$0.00	\$0.00	\$300.00	88.2%	\$264.58	11.8%	\$35.42	
TOTAL STORM WATER MANAGEMENT SERVICES	\$13,686.54	\$3,899.44	\$2,277.41	\$1,970.20	\$5,539.48		\$4,885.40		\$654.08	
Unadjusted Development Charge Per Capita (\$)							\$528.55			
Unadjusted Development Charge Per Sq. M. (\$)									\$7.04	

APPENDIX C.5
TABLE 3

CITY OF NIAGARA FALLS
SUMMARY OF UNADJUSTED RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT CHARGES
STORM WATER MANAGEMENT SERVICES
CORE TOURIST AREA

10-Year Employment Growth	1,853
10-Year Growth in Square Metres	101,888

	Growth-Related Capital Forecast						Total		
	Total (Net of Grants/ Subsidies) (\$000)	Benefit to Existing Share (\$000)	Post Period Allocation (\$000)	Prior Growth (Reserve Fund Adjustment) (\$000)	Net Capital Costs After Discount (\$000)	Residential Share		Non-Residential Share	
						%	\$000	%	\$000
STORM WATER MANAGEMENT SERVICES Subtotal Storm Water Management - Core Tourist Area	\$2,361.50	\$2,125.35	\$11.81	\$44.51	\$179.83	0.0%	\$0.00	100.0%	\$179.83
TOTAL STORM WATER MANAGEMENT SERVICES	\$2,361.50	\$2,125.35	\$11.81	\$44.51	\$179.83		\$0.00		\$179.83
Unadjusted Development Charge Per Sq. M. (\$)									\$1.77

APPENDIX C.5
TABLE 4 - PAGE 1

CITY OF NIAGARA FALLS
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
STORM WATER MANAGEMENT
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	TOTAL
STORM WATER MANAGEMENT											
OPENING CASH BALANCE	\$1,737.57	\$1,431.34	\$1,107.05	\$763.92	\$401.17	(\$6.65)	\$7.33	\$22.23	\$37.92	\$19.50	
2014 - 2023 RESIDENTIAL FUNDING REQUIREMENTS											
- Storm Water Management: Non Inflated	\$807.8	\$807.8	\$807.8	\$807.8	\$829.9	\$512.4	\$512.4	\$512.4	\$512.4	\$512.4	\$6,623.0
- Storm Water Management: Inflated	\$807.8	\$824.0	\$840.5	\$857.3	\$898.3	\$565.7	\$577.0	\$588.5	\$600.3	\$612.3	\$7,171.7
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	864	864	864	864	864	1,007	1,007	1,007	951	951	9,243
REVENUE											
- DC Receipts: Inflated	\$450.6	\$459.6	\$468.8	\$478.2	\$487.7	\$579.8	\$591.4	\$603.2	\$581.1	\$592.7	\$5,293.1
INTEREST											
- Interest on Opening Balance	\$60.8	\$50.1	\$38.7	\$26.7	\$14.0	(\$0.4)	\$0.3	\$0.8	\$1.3	\$0.7	\$193.1
- Interest on In-year Transactions	(\$9.8)	(\$10.0)	(\$10.2)	(\$10.4)	(\$11.3)	\$0.2	\$0.3	\$0.3	(\$0.5)	(\$0.5)	(\$52.1)
TOTAL REVENUE	\$501.6	\$499.7	\$497.3	\$494.5	\$490.5	\$579.7	\$591.9	\$604.2	\$581.9	\$592.8	\$5,434.1
CLOSING CASH BALANCE	\$1,431.3	\$1,107.0	\$763.9	\$401.2	(\$6.7)	\$7.3	\$22.2	\$37.9	\$19.5	\$0.0	

2014 Adjusted Charge Per Capita **\$521.50**

Allocation of Capital Program	
Residential Sector	88.2%
Non-Residential Sector	11.8%
Rates for 2014	
Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%



APPENDIX C.5
TABLE 4 - PAGE 2

CITY OF NIAGARA FALLS
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
STORM WATER MANAGEMENT - OUTSIDE CORE TOURIST AREA
NON-RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	TOTAL
STORM - OCTA											
OPENING CASH BALANCE	\$232.63	\$190.78	\$146.48	\$100.21	\$50.72	(\$4.91)	(\$3.89)	(\$3.45)	(\$2.31)	(\$1.09)	
2014 - 2023 NON-RESIDENTIAL FUNDING REQUIREMENTS											
- Storm - Octa: Non Inflated	\$108.2	\$108.2	\$108.2	\$108.2	\$111.1	\$68.6	\$68.6	\$68.6	\$68.6	\$68.6	\$886.7
- Storm - Octa: Inflated	\$108.2	\$110.3	\$112.5	\$114.8	\$120.3	\$75.7	\$77.3	\$78.8	\$80.4	\$82.0	\$960.2
NON-RESIDENTIAL SPACE GROWTH											
- Growth in Square Metres	8,550	8,550	8,631	8,550	8,550	10,023	9,941	10,023	10,023	10,023	92,863
REVENUE											
- DC Receipts: Inflated	\$59.5	\$60.7	\$62.5	\$63.2	\$64.4	\$77.0	\$77.9	\$80.1	\$81.7	\$83.4	\$710.4
INTEREST											
- Interest on Opening Balance	\$8.1	\$6.7	\$5.1	\$3.5	\$1.8	(\$0.3)	(\$0.2)	(\$0.2)	(\$0.1)	(\$0.1)	\$24.4
- Interest on In-year Transactions	(\$1.3)	(\$1.4)	(\$1.4)	(\$1.4)	(\$1.5)	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	(\$6.9)
TOTAL REVENUE	\$66.3	\$66.0	\$66.3	\$65.3	\$64.6	\$76.8	\$77.7	\$79.9	\$81.6	\$83.4	\$727.8
CLOSING CASH BALANCE	\$190.8	\$146.5	\$100.2	\$50.7	(\$4.9)	(\$3.9)	(\$3.4)	(\$2.3)	(\$1.1)	\$0.3	

2014 Adjusted Charge Per Square Metre \$6.96

Allocation of Capital Program		
Residential Sector		88.2%
Non-Residential Sector		11.8%
Rates for 2014		
Inflation Rate		2.0%
Interest Rate on Positive Balances		3.5%
Interest Rate on Negative Balances		5.5%

APPENDIX C.5
TABLE 4 - PAGE 3

CITY OF NIAGARA FALLS
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
STORM WATER MANAGEMENT - CORE TOURIST AREA
NON-RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	TOTAL
STORM - CTA											
OPENING CASH BALANCE	\$44.51	\$18.46	(\$9.11)	(\$38.47)	(\$69.88)	(\$103.70)	(\$85.90)	(\$66.51)	(\$45.64)	(\$23.12)	
2014 - 2023 NON-RESIDENTIAL FUNDING REQUIREMENTS											
- Storm - Cta: Non Inflated	\$44.9	\$44.9	\$44.9	\$44.9	\$44.9	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$224.3
- Storm - Cta: Inflated	\$44.9	\$45.8	\$46.7	\$47.6	\$48.6	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$233.5
NON-RESIDENTIAL SPACE GROWTH											
- Growth in Square Metres	9,405	9,405	9,364	9,405	9,405	10,973	11,014	10,973	10,973	10,973	101,888
REVENUE											
- DC Receipts: Inflated	\$18.0	\$18.3	\$18.6	\$19.1	\$19.4	\$23.1	\$23.7	\$24.1	\$24.6	\$25.0	\$213.9
INTEREST											
- Interest on Opening Balance	\$1.6	\$0.6	(\$0.5)	(\$2.1)	(\$3.8)	(\$5.7)	(\$4.7)	(\$3.7)	(\$2.5)	(\$1.3)	(\$22.1)
- Interest on In-year Transactions	(\$0.7)	(\$0.8)	(\$0.8)	(\$0.8)	(\$0.8)	\$0.4	\$0.4	\$0.4	\$0.4	\$0.4	(\$1.7)
TOTAL REVENUE	\$18.8	\$18.2	\$17.3	\$16.2	\$14.8	\$17.8	\$19.4	\$20.9	\$22.5	\$24.2	\$190.0
CLOSING CASH BALANCE	\$18.5	(\$9.1)	(\$38.5)	(\$69.9)	(\$103.7)	(\$85.9)	(\$66.5)	(\$45.6)	(\$23.1)	\$1.0	

2014 Adjusted Charge Per Square Metre **\$1.91**

Allocation of Capital Program

Residential Sector 0.0%
Non-Residential Sector 100.0%

Rates for 2014

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

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 opening balances of the development charges reserve funds as at December 31, 2013. All of the available reserve fund balances are therefore accounted for in this study.

As shown on Table 1, the December 31, 2013 total reserve fund balance was in a positive position of \$11.71 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 NIAGARA FALLS
DEVELOPMENT CHARGE RESERVE FUND BALANCE BY ACCOUNT
YEAR ENDING DECEMBER 31, 2013**

Service	Reserve Fund Balance as at Dec. 31, 2013	2014 Capital Budget Draws	Uncommitted Reserve Funds
General Government	\$392,998	\$0	\$392,998
Library	\$497,323	\$0	\$497,323
Fire Protection	\$2,141,876	\$0	\$2,141,876
Parks And Recreation	\$1,037,822	\$0	\$1,037,822
Public Works & Fleet	\$279,399	\$0	\$279,399
Transit Services	\$672,574	\$0	\$672,574
Roads And Related	\$2,053,471	\$0	\$2,053,471
Sidewalks	\$178,855	\$0	\$178,855
Water	\$428,340	\$0	\$428,340
Sanitary Sewer	\$2,011,679	\$0	\$2,011,679
Storm Water Management	\$2,014,713	\$0	\$2,014,713
Total Development Charge Reserves	\$11,709,050	\$0	\$11,709,050

APPENDIX E

LONG-TERM CAPITAL AND OPERATING IMPACTS

APPENDIX E
TABLE 1

CITY OF NIAGARA FALLS
ESTIMATED NET OPERATING COST OF THE PROPOSED
DEVELOPMENT-RELATED CAPITAL PROGRAM
(in constant 2013 dollars)

	Net Cost (in 2013\$)	Estimated Operating Costs (\$000)																		
		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023									
Library																				
- No additional operating costs		\$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
Fire Protection																				
- New Station 7 (10,700 sq.ft.)	\$300	\$0.0	\$0.0	\$3,210.0	\$3,210.0	\$3,210.0	\$3,210.0	\$3,210.0	\$3,210.0	\$3,210.0	\$3,210.0	\$3,210.0	\$3,210.0	\$3,210.0	\$3,210.0	\$3,210.0	\$3,210.0	\$3,210.0	\$3,210.0	\$3,210.0
Parks And Recreation																				
- Park Development and Amenities	\$0.05	\$39.3	\$81.4	\$135.8	\$240.4	\$276.2	\$314.6	\$352.9	\$391.3	\$417.1	\$443.0									
		\$39.3	\$81.4	\$135.8	\$240.4	\$276.2	\$314.6	\$352.9	\$391.3	\$417.1	\$443.0									
Public Works & Fleet																				
- Additional Fleet	\$0.05	\$0.0	\$0.0	\$11.0	\$18.5	\$19.5	\$22.0	\$22.3	\$22.3	\$22.3	\$22.3	\$22.3	\$22.3	\$22.3	\$22.3	\$22.3	\$22.3	\$22.3	\$22.3	\$22.3
		\$0.0	\$0.0	\$11.0	\$18.5	\$19.5	\$22.0	\$22.3	\$22.3	\$22.3	\$22.3	\$22.3	\$22.3	\$22.3	\$22.3	\$22.3	\$22.3	\$22.3	\$22.3	\$22.3
Transit Services																				
- New Bus Maintenance & Storage Facility (104,000 sq.ft.)	\$5	\$394.5	\$394.5	\$394.5	\$394.5	\$394.5	\$394.5	\$394.5	\$394.5	\$394.5	\$394.5	\$394.5	\$394.5	\$394.5	\$394.5	\$394.5	\$394.5	\$394.5	\$394.5	\$394.5
- Additional Buses	\$120,000	\$0.0	\$120.0	\$120.0	\$240.0	\$240.0	\$360.0	\$360.0	\$480.0	\$480.0	\$480.0	\$480.0	\$480.0	\$480.0	\$480.0	\$480.0	\$480.0	\$480.0	\$480.0	\$480.0
ROADS AND RELATED																				
- Development-Related Roads Infrastructure	\$275	\$82.5	\$165.0	\$247.5	\$330.0	\$412.5	\$508.8	\$605.0	\$701.3	\$797.5	\$893.8									
		\$82.5	\$165.0	\$247.5	\$330.0	\$412.5	\$508.8	\$605.0	\$701.3	\$797.5	\$893.8									
TOTAL ESTIMATED OPERATING COSTS		\$516.3	\$760.9	\$4,118.8	\$4,433.4	\$4,552.7	\$4,809.8	\$4,944.7	\$5,199.3	\$5,321.4	\$5,563.5									

**APPENDIX E
TABLE 2 - PAGE 1
CITY OF NIAGARA FALLS
SUMMARY OF TAX SUPPORTED FUNDING REQUIREMENTS**

Net Capital Cost of Development-Related Projects	2014 (\$000)	2015 (\$000)	2016 (\$000)	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)	2022 (\$000)	2023 (\$000)	TOTAL (\$000)
LIBRARY											
Total Net Cost (1)	104.9	91.9	91.9	91.9	91.9	91.9	91.9	91.9	91.9	91.9	932.0
Net Cost From Development Charges (2)	34.1	34.1	34.1	34.1	34.1	34.1	34.1	34.1	34.1	34.1	341.5
Net Cost From Non-DC Sources	70.8	57.8	57.8	57.8	57.8	57.8	57.8	57.8	57.8	57.8	590.5
- Discount Portion (3)	10.5	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	93.2
- Available DC Reserves (4)	60.3	48.6	48.6	48.6	48.6	48.6	48.6	48.6	48.6	48.6	497.3
- Replacement & Benefit to Existing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
- For Post 2023 Development (5)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FIRE PROTECTION											
Total Net Cost (1)	1,000.0	0.0	3,845.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4,845.0
Net Cost From Development Charges (2)	0.0	0.0	1,387.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,387.6
Net Cost From Non-DC Sources	1,000.0	0.0	2,457.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3,457.4
- 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)	1,000.0	0.0	1,141.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2,141.9
- 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 2023 Development (5)	0.0	0.0	1,315.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,315.5
PARKS AND RECREATION											
Total Net Cost (1)	787.0	842.0	1,087.0	2,092.0	717.0	767.0	767.0	767.0	517.0	517.0	8,859.8
Net Cost From Development Charges (2)	0.0	531.6	1,030.0	1,484.5	697.0	742.0	742.0	742.0	517.0	517.0	7,002.9
Net Cost From Non-DC Sources	787.0	310.3	57.0	607.5	20.0	25.0	25.0	25.0	0.0	0.0	1,856.8
- Discount Portion (3)	27.0	32.5	57.0	107.5	20.0	25.0	25.0	25.0	0.0	0.0	319.0
- Available DC Reserves (4)	294.7	329.5	51.7	51.7	51.7	51.7	51.7	51.7	51.7	51.7	1,037.8
- Replacement & Benefit to Existing	0.0	0.0	0.0	500.0	0.0	0.0	0.0	0.0	0.0	0.0	500.0
- For Post 2023 Development (5)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PUBLIC WORKS & FLEET											
Total Net Cost (1)	0.0	0.0	220.0	150.0	20.0	49.0	7.0	0.0	0.0	0.0	446.0
Net Cost From Development Charges (2)	0.0	0.0	0.0	90.6	20.0	49.0	7.0	0.0	0.0	0.0	166.6
Net Cost From Non-DC Sources	0.0	0.0	220.0	59.4	0.0	0.0	0.0	0.0	0.0	0.0	279.4
- 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	220.0	59.4	0.0	0.0	0.0	0.0	0.0	0.0	279.4
- 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 2023 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 2023 development-related net capital costs may be eligible for development charges in future DC by-laws, but interim financing of this share may be required



APPENDIX E
TABLE 2 - PAGE 2
CITY OF NIAGARA FALLS
SUMMARY OF TAX SUPPORTED FUNDING REQUIREMENTS

Net Capital Cost of Development-Related Projects	2014 (\$000)	2015 (\$000)	2016 (\$000)	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)	2022 (\$000)	2023 (\$000)	TOTAL (\$000)
TRANSIT SERVICES											
Total Net Cost (1)	3,414.5	700.0	0.0	500.0	0.0	500.0	1,000.0	500.0	0.0	500.0	7,114.5
Net Cost From Development Charges (2)	1,111.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,111.8
Net Cost From Non-DC Sources	2,302.7	700.0	0.0	500.0	0.0	500.0	1,000.0	500.0	0.0	500.0	6,002.7
- Discount Portion (3)	259.0	70.0	0.0	50.0	0.0	50.0	100.0	50.0	0.0	50.0	629.0
- Available DC Reserves (4)	672.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	672.6
- Replacement & Benefit to Existing	824.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	824.1
- For Post 2023 Development (5)	547.0	630.0	0.0	450.0	0.0	450.0	900.0	450.0	0.0	450.0	3,877.0
GENERAL GOVERNMENT											
Total Net Cost (1)	124.5	89.5	69.5	69.5	69.5	69.5	69.5	69.5	69.5	69.5	770.0
Net Cost From Development Charges (2)	33.8	27.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	133.5
Net Cost From Non-DC Sources	90.7	62.4	60.4	60.4	60.4	60.4	60.4	60.4	60.4	60.4	636.5
- Discount Portion (3)	8.1	7.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	58.5
- Available DC Reserves (4)	39.3	39.3	39.3	39.3	39.3	39.3	39.3	39.3	39.3	39.3	393.0
- Replacement & Benefit to Existing	43.3	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	185.0
- For Post 2023 Development (5)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ROADS AND RELATED											
Total Net Cost (1)	1,939.1	1,939.1	1,939.1	1,939.1	1,939.1	1,989.8	1,989.8	1,989.8	1,989.8	1,989.8	19,644.5
Net Cost From Development Charges (2)	1,383.3	1,383.3	1,383.3	1,383.3	1,383.3	937.5	937.5	937.5	937.5	937.5	11,603.7
Net Cost From Non-DC Sources	555.9	555.9	555.9	555.9	555.9	1,052.3	1,052.3	1,052.3	1,052.3	1,052.3	8,040.8
- 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	362.0	362.0	362.0	362.0	362.0	470.9	470.9	470.9	470.9	470.9	4,164.5
- For Post 2023 Development (5)	193.9	193.9	193.9	193.9	193.9	581.3	581.3	581.3	581.3	581.3	3,876.3
TOTAL MUNICIPAL SERVICES											
Total Net Cost (1)	7,370.0	3,662.5	7,252.5	4,842.5	2,837.5	3,467.1	3,925.1	3,418.1	2,668.1	3,168.1	42,611.8
Net Cost From Development Charges (2)	2,563.0	1,976.1	3,844.1	3,001.6	2,143.5	1,771.7	1,729.7	1,722.7	1,497.7	1,497.7	21,747.6
Net Cost From Non-DC Sources	4,807.0	1,686.4	3,408.5	1,841.0	694.1	1,695.5	2,195.5	1,695.5	1,170.5	1,670.5	20,864.1
- Discount Portion (3)	304.7	119.1	71.6	172.1	34.6	89.6	139.6	89.6	14.6	64.6	1,099.7
- Available DC Reserves (4)	2,066.8	417.4	1,501.4	199.0	139.6	139.6	139.6	139.6	139.6	139.6	5,022.0
- Replacement & Benefit to Existing	1,229.3	377.7	377.7	877.7	377.7	486.7	486.7	486.7	486.7	486.7	5,673.6
- For Post 2023 Development (5)	740.9	823.9	1,509.4	643.9	193.9	1,031.3	1,481.3	1,031.3	581.3	1,031.3	9,068.8

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 2023 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

HEMSON

APPENDIX F

***PROPOSED DRAFT 2014 DC BY-LAW
(AVAILABLE UNDER SEPARATE COVER)***