Report for Public Meeting

Prepared by Hemson for the City of Niagara Falls

2024 Development Charges Background Study

March 28, 2024

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List of Acronyms

AMP	Asset Management Plan
BTE	Benefit to Existing
COG	Cost of Growth
DCA	Development Charges Act
DC	Development Charges
GFA	Gross Floor Area
MCR	Municipal Comprehensive Review
PPB	Post-Period Benefit
PPU	Persons Per Unit

Executive Summary

A. Purpose of Development Charges Background Study

Hemson Consulting Ltd. was retained by the City of Niagara Falls to complete a Development Charges (DC) Background Study (herein referred to as the "DC Study"). This DC Study provides the basis and background to update the City's development charges to reflect the servicing needs of development in the City.

i. Study is Consistent with Development Charges Legislation

The City of Niagara Falls 2024 DC Study is presented as part of the process to lead to the approval of new DC By-law(s) in compliance with the Development Charges Act (DCA). The study is prepared in accordance with the DCA and associated regulations, including amendments that came into force through the More Homes, More Choice Act, the COVID-19 Economic Recovery Act, and the More Homes Built Faster Act (Bill 23).

ii. Key Steps of the Development Charges Calculation

The DCA in Ontario is the most prescriptive of all DC legislation in Canada with respect to recovering development-related costs. Several key steps are required to calculate DCs. These include:

- Preparing a development (growth) forecast;
- Establishing historical service levels;
- Determining the increased needs for services arising from development;
- Determining how these costs are attributed to development types (i.e. residential and non-residential); and
- Adjusting for a cash flow analysis.

iii. The Development-Related Capital Forecast is Subject to Change

It is recommended that Council adopt the development-related capital forecast developed for the purposes of the 2024 DC Study. However, it is recognized that the DC Study is a point-in-time analysis and there may be changes to project timing, scope and costs through the City's normal annual budget process.

B. Development Forecast

The table below provides a summary of the anticipated residential and non-residential growth over the 2024-2033 planning period which is used for all DC eligible services in the City. The development forecast is further discussed in Appendix A.

Development Forecast	2023 Estimate	10-Year Planning Horizon 2024 - 2033	
		Growth	Total at 2033
Residential			
Total Occupied Dwellings	39,273	8,069	47,342
Census Population	97,327	15,932	113,259
Population In New Dwellings		*21,798*	
Non-Residential			
Employment	38,930	6,373	45,303
Non-Residential Building Space (m^2)		353,103	

C. Development-Related Capital Program

The development-related capital program for all services in the City is based on a 10-year planning horizon of 2024-2033. The gross costs amount to $567.18 million where $296.68 million is eligible for recovery through

development charges. Details regarding the capital programs for each individual General Service are provided in Appendix B and for Engineered Services area provided in Appendix C of this report.

D. Calculated Development Charges

The table below provides a summary of the City-wide development charges for residential and non-residential development based on the aforementioned forecasts.

Service Type	Residential Rates by Unit Type			
	Single & Semi-Detached	Rows and Other Multiples	Apartments	Special Care/Special Need Dwellings
City-wide Services	$21,231	$14,621	$10,536	$6,438
Urban Area Services	$16,931	$11,660	$8,401	$5,133
Total Charge per Unit	**$38,162**	**$26,281**	**$18,937**	**$11,571**

Service	Non-Residential	
	$/square metre	$/square foot
City-wide Services	$58.28	$5.43
Urban Area Services	$79.96	$7.43
Total Charge per Square Metre	**$138.24**	**$12.86**

The calculated development charges will be phased-in over a 5-year time period in accordance with the DCA. The legislation requires that the following phase-in be applied to the fully calculated rates:

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

E. Cost of Growth Analysis

An overview of the long-term capital and operating costs as well as the asset management-related annual provisions for capital facilities and infrastructure to be included in the DC by-law is provided in Appendix E of the DC Study. This examination is required as one of the provisions of the DCA.

F. Development Charges Administration & Policy Considerations

i. City-wide vs Area-Specific DCs

As required by the Development Charges Act (DCA), consideration was given to the use of area rating. Consistent with the City's historical practice, the infrastructure identified for the general services has been calculated on a City-wide basis. Non-residential development charges for Engineered Services including Water, Sanitary Sewer and Storm Water Management were historically calculated on an area-specific basis and are now proposed to be calculated on a City-wide basis. Additional details are provided in Section 2 of this report.

ii. Changes Introduced as part of 2024 DC Background Study

As part of the City's 2024 DC Background Study update, the following changes have been introduced:

- A new residential rate category of "Special Care/Special Needs Dwelling" to align with the Region of Niagara's DC By-law;
- Removal of non-residential area-specific charges for Core Tourist Area and Outside the Core Tourist Area;
- Removal of Transit Services (uploaded to the Region);
- Services Related to a Highway: Roads and Related includes sidewalk infrastructure which was previously a standalone category of service;
- Reviewed DC By-law definitions and exemptions; and
- Alignment with new legislative changes.

G. Key Recommendations

- It is recommended that the City's 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 Council adopt the development-related capital forecast included in this background study, subject to annual review through the City's normal capital budget process; and
- No substantial changes to the City's prevailing local service definitions and policies are being considered.

H. 2024 Draft DC By-law(s) Available Under Separate Cover

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

1. Introduction

The Development Charges Act (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 DC 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 15-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 eligible and ineligible 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.

A. Legislative Context

The study is prepared in accordance with the DCA and associated regulations, including the amendments that came into force most recently on November 28, 2022 as per Bill 23: More Homes Built Faster Act, 2022. Key legislative changes include:

- Five-year mandatory phase-in of the calculated DC rates (beginning with a 20% reduction in Year 1, decreasing by 5% annually until Year 5);
- Historical service level standards have been extended from a 10 to 15-year planning period;
- DC by-laws now expire every 10 years instead of 5 years;
- The amount of interest paid on DC deferrals and freeze is capped at prime plus 1%;

- Costs associated with studies and affordable housing services are now ineligible for recovery through DCs;
- Municipalities must spend or allocate 60% of available DC reserve funds per year for roads, water and wastewater services; and
- Discounts for purpose built rentals based on the number of bedrooms.

The DCA was also amended to exempt affordable and attainable housing developments from the payment of DCs; however, the regulations which will define these types of units have not yet been released and therefore, these changes are not yet in force.

B. Relevant Analysis

The underlying assumptions and calculation methodologies contained in the DC Study have been informed by a range of inputs including the City's capital budget, existing master plans as well as ongoing master plan updates, and discussions with staff.

C. Consultation and Approval Process

The following provides a summary of the consultation and approval process undertaken to complete the DC Study. Following the release of the DC Study, consultation will continue with the public and development industry stakeholders prior to the passage of the new DC By-law(s) anticipated to occur in May 2024.

Timeline of Consultation and Approval Process

Description	Date
Council Information Session #1	October 24, 2023
Developer Information Session #1	November 1, 2023
Council Information Session #2	February 27, 2024

Description	Date
Developer Information Session #2	March 4, 2024
Public Release of DC Background Study	March 28, 2024
Statutory Public Meeting	April 30, 2024 (targeted)
Passage of 2024 DC By-law	May 28, 2024 (targeted)

D. Policy Changes Introduced as part of 2024 DC Background Study

As part of the City's 2024 DC Study update, the following changes have been introduced:

- A new residential rate category of "Special Care/Special Needs Dwelling" to align with the Region of Niagara's DC By-law;
- Removal of non-residential area-specific charges for Core Tourist Area and Outside the Core Tourist Area;
- Removal of Transit Services (uploaded to the Region);
- Services Related to a Highway: Roads and Related includes sidewalk infrastructure which was previously a standalone category of service;
- Reviewed DC By-law definitions and exemptions; and
- Alignment with new legislative changes.

2. The Methodology Aligns 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, the approach has been tailored 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 a city-wide approach for various services provided by the City. The DC Study provides an update to the historical service levels and the cost of providing future development-related capital infrastructure.

A. Consideration for Area Rated Services

In accordance with the DCA, Council must give consideration to the use of area rating, also known as area-specific development charges, as part of the development charges background study. The City of Niagara Falls has historically used a city-wide approach for residential development charges, a practice which is proposed to be brought forward as part of this DC Background Study update. However, non-residential charges for Engineered Services inclusive of Water, Sanitary Sewer and Stormwater Management have historically been calculated using an area-specific approach. As part of this update, after developing the draft 10-year capital program, and the associated draft DC rates, the rate for the Core Tourist Area and Outside the Core Tourist Area was nearly identical as a result of similar servicing needs arising from anticipated development. Therefore, it is recommended that a city-wide non-residential DC rate be implemented as part of the 2024 DC update.

The DC Study provides an update to the historical service levels and the cost of providing future development-related capital infrastructure.

B. 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.

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

- Library Services
- Fire Protection
- Parks and Recreation
- Services Related to a Highway: Public Works and Fleet
- Development-Related Studies
- Serviced Related to a Highway: Roads and Related
- Water
- Sanitary Sewer
- Storm Water Management

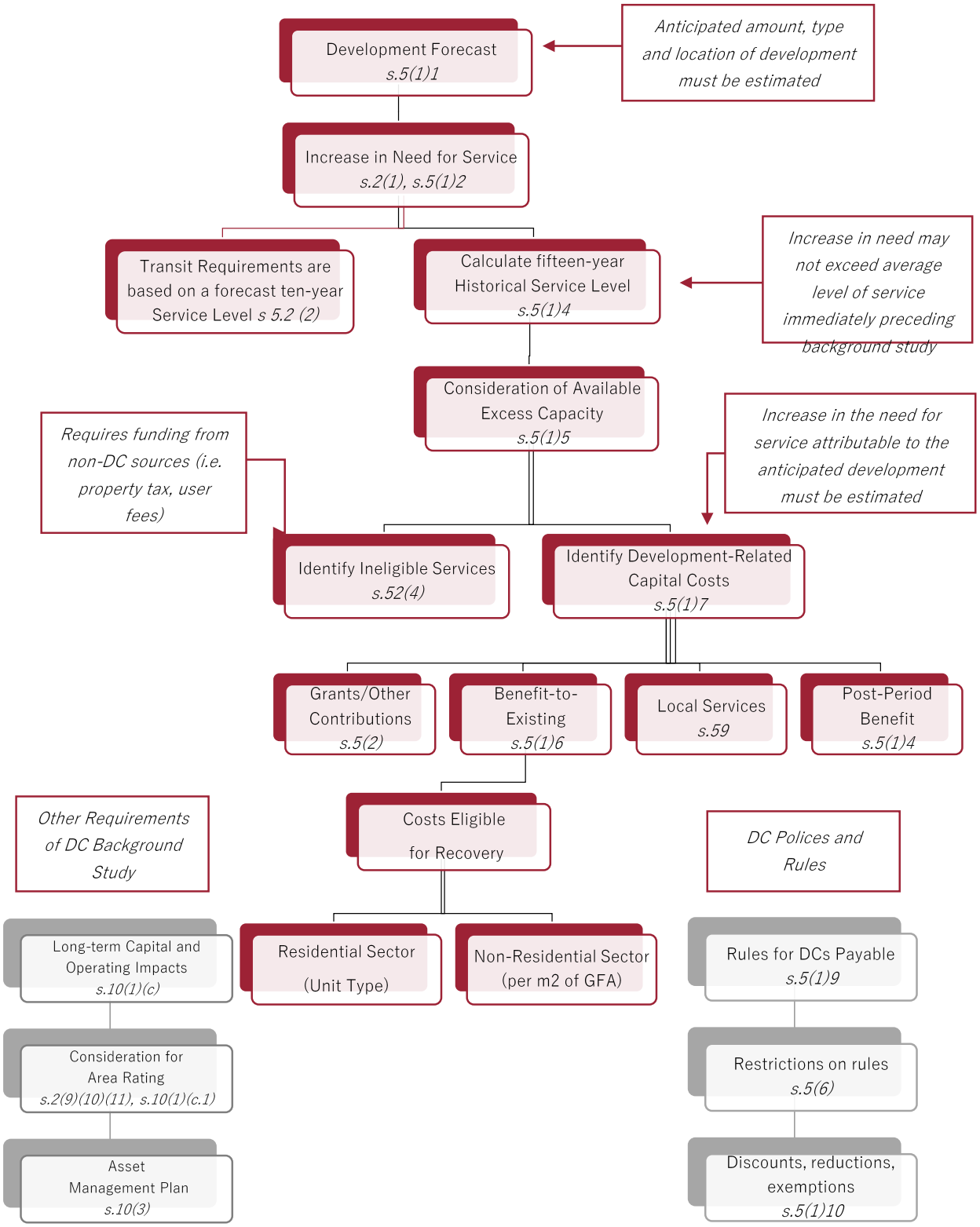
It is noted that at the time of writing the 2024 DC Study, Development-Related Studies are not DC eligible under the requirements of the DCA. However, it is anticipated that the Province may introduce changes to the legislation in order to allow municipalities to recover these costs. As such, a capital program and DC rate calculation has been included in this report.

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.

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 in Figure 1 below and discussed further in the following sections.

Figure 1: Overview of DC Background Study Process



i. Development Forecast

The first step in the methodology requires that a development forecast be prepared for the 10-year study period from 2024-2033.

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.

ii. Service Categories and Historical Service Levels

The DCA states that the increase in the need for service attributable to anticipated development:

> … must not include an increase that would result in the level of service exceeding the average level of that service provided in the City over the 15-year period immediately preceding the preparation of the background study…(s. 5. (1) 4.)

Historical 15-year average service levels thus form the basis for the development charges calculation. A review of the City's capital service levels for buildings, land, vehicles, equipment and others has therefore been prepared as a reference for the calculation so that the portion of future capital projects that may be included in the development charges can be determined. The historical service levels used in this study have been calculated based on the period from 2009-2023.

For the Engineered Services of Water, Sanitary Sewer, and Storm Water Management Services, historical service levels are less applicable and reference is made to the City's engineering standards as well as Provincial

health or environmental requirements. Historical service levels for the Services Related to a Highway: Roads and Related service have been included.

iii. Development-Related Capital Program and Analysis of DC Eligible Costs to be Recovered through 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.)

In conjunction with DCA, s. 5. (1) 4. referenced above, these sections have the effect of requiring that the development charge be calculated on the lesser of the historical 15-year average service levels or the service levels embodied in future plans of the City. The development-related capital program prepared for this study ensures that development charges are only imposed to help pay for projects that have been or are intended to be purchased or built in order to accommodate future anticipated development. It is not sufficient in the calculation of development charges merely to have had the service in the past. There must also be a demonstrated commitment to continue to emplace facilities or infrastructure in the future. In this regard, O. Reg. 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 program, 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 municipal funding for such non-DC-eligible shares of projects is also identified as part of the preparation of the development-related capital program.

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

iv. Attribution to Types of Development

The next step in the determination of development charges is the allocation of the development-related net capital costs between the residential and 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.

v. 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.

D. Operating & Capital Cost Impacts and Asset Management Plan Legislative Requirements

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

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

i. Asset Management Plan

> (3) The asset management plan shall,
>
> (a) deal with all assets whose capital costs are proposed to be funded under the development charge by-law;
>
> (b) demonstrate that all the assets mentioned in clause (a) are financially sustainable over their full life cycle;
>
> (c) contain any other information that is prescribed; and
>
> (d) be prepared in a prescribed manner.

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

3. Development Forecast

The 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 forecasts are premised on the City achieving the long-term population and employment targets identified in the Region of Niagara's 2022 Official Plan as quantified through the Municipal Comprehensive Review (MCR) process. The Region's Official Plan establishes minimum population and employment targets for Niagara Falls which are currently being reviewed as part of the City's new Official Plan. City staff, in consultation with regional staff, have undertaken an initial analysis to identify how and where projected and additional growth can be accommodated amongst its existing greenfield, urban expansions, and intensification nodes and corridor locations. The analysis provides for the potential of an additional 15,000 units above the current regional forecast to ensure the City's growth potential can remain responsive to market demands while focusing on capital investment in strategic locations and help inform the new Official Plan in its early phases of future urban structure.

The population and household growth determines the need for additional facilities and provides the foundation for the development-related capital program. Table 1 summarizes the population and household development forecast. The table shows that the City's Census population is forecast to increase by roughly 15,930 over the 10-year planning period and the number of dwellings will increase by 8,070 over the same period.

In addition to the net population forecast, a forecast of "population in new units" that will result from the addition of new housing units has been made. Population growth in new units is estimated by applying the following PPUs to the housing unit forecast:

- 3.30 for single and semi-detached units;
- 2.27 for multiples;
- 1.92 for large apartments; and
- 1.18 for small apartments.

In total, 21,800 is the forecasted population growth in new dwelling units over the 10-year planning period.

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 10-year development forecast, from 2024-2033, has been used for all DC 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:	50.0 m^2 per employee
Employment Land:	110.0 m^2 per employee
Major Office:	27.0 m^2 per employee

A summary of the GFA forecasts is provided in Table 1. The total GFA growth is forecast at 353,100 square metres over the 10-year period with an accompanying employment growth of 6,370.

TABLE 1

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

Development Forecast	2023 Estimate	10-Year Planning Horizon 2024 - 2033	
		Growth	Total at 2033
Residential			
Total Occupied Dwellings	39,273	8,069	47,342
Census Population	97,327	15,932	113,259
Population In New Dwellings		*21,798*	
Non-Residential			
Employment	38,930	6,373	45,303
Non-Residential Building Space (m^2)		353,103	

4. Summary of Historical Capital Service Levels

The DCA and O. Reg. 82/98 require that the development charges be set at a level no higher than the average service level provided in the City over the 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 15-years. Typically, service levels are measured as a ratio of inputs per capita or inputs per population and employment. With engineered services such as Water, Sanitary Sewer and Storm Water Management, engineering standards are used in lieu of inputs per capita and employee.

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

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

TABLE 2

CITY OF NIAGARA FALLS
SUMMARY OF AVERAGE HISTORICAL SERVICE LEVELS 2009 - 2023

Service	2009 - 2023 Service Level Indicator	
1.0 LIBRARY SERVICES	**$703.81**	**per capita**
Buildings	$372.71	per capita
Land	$12.01	per capita
Materials	$260.28	per capita
Furniture And Equipment	$58.14	per capita
Vehicles	$0.67	per capita
2.0 FIRE PROTECTION	**$589.37**	**per pop & emp**
Fire Halls	$293.40	per pop & emp
Other Buildings/Structures	$6.80	per pop & emp
Land	$41.46	per pop & emp
Personal Firefighter Equipment	$20.31	per pop & emp
Equipment	$18.70	per pop & emp
Vehicles	$208.70	per pop & emp
3.0 PARKS & RECREATION	**$4,276.44**	**per capita**
Indoor Recreation	$2,327.26	per capita
Parkland	$1,949.18	per capita
4.0 PUBLIC WORKS & FLEET	**$427.75**	**per pop & emp**
Buildings	$118.43	per pop & emp
Land	$62.23	per pop & emp
Fleet & Equipment	$247.09	per pop & emp
5.0 ROADS & RELATED	**$9,005.40**	**per pop & emp**
Roads	$8,261.93	per pop & emp
Bridges & Culverts	$563.56	per pop & emp
Traffic Control	$179.39	per pop & emp
Traffic Hardware	$0.52	per pop & emp

5. 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 2, 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 development forecasts summarized in Section 3 and detailed in Appendix A, City staff, in collaboration with the consultant has developed a development-related capital forecast which sets out projects that are required to service anticipated growth. For all services, the capital plan covers the 10-year period from 2024-2033.

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. However, it is 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 and Engineered Services

i. 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 $189.50 million.

Of the $189.50 million in net capital cost, 39%, or $74.83 million is related to **Parks and Recreation** services. A significant project in the capital program recovers for a new recreation centre as well as parks and trails in new developments. The remainder of the capital program fund various parkland and park facilities development.

Services Related to a Highway: Public Works & Fleet projects totals 38% of the General Services capital program cost. The most significant project in the capital program is the expansion and replacement of the Municipal Servicing centre for $68.00 million. The remainder of the capital program provides provisions for fleet and equipment.

The capital program for **Fire Protection** is recovering for an outstanding debenture associated with Station 7 as well as a provision for a future facility. The program amounts to $14.18 million.

The **Library Services** capital program includes for a major library expansion, new book vending machine, additional collection materials as well as equipment. The program amounts to $13.68 million.

The capital program associated with **Development-Related Studies** relates to the provision of development-related studies and amounts to $13.94 million over the next 10-years. These studies include additional development charges studies, a Fire Master Plan, a Recreation and Culture Master Plan, Development Charges Studies and planning related studies.

The capital forecast incorporates those projects identified to be related to development anticipated in the next 10 years. It is not implied that all of these costs are to be recovered from new development by way of development charges. 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 2033.

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.

ii. The Development-Related Capital Forecast for Engineered Services

Table 3 also provides the development-related capital recoveries for the engineered services of **Services Related to a Highway: Roads and Related**, **Water**, **Sanitary Sewer** and **Storm Water Management**. The total engineered capital program over the 2024-2033 period amounts to $377.68 million. **Roads and Related** projects account for 23%, or $85.77 million, of the total engineered capital program and includes road works, widening, road upgrades, environmental assessment studies and transportation master plan studies.

Storm Water Management projects account for 7% of the total Engineered Services capital program. The total $24.88 million provides for storm water management pond projects, construction, sewer separations as well as Master Servicing Plan and Wet Weather Management Study.

The **Sanitary Sewer** projects total over $163.16 million (43% of the total Engineered Services capital program). This program provides for the continued debt recovery from the cost to upgrade and expand the Garner Pumping Station as well as various sanitary sewers, pumping stations, inflow and infiltration (I&I) work and development-related studies.

The **Water** services capital program totals $103.87 million, or 28% of the total program. Water-related projects include storage, linear infrastructure (including the replacement and upgrades of existing infrastructure), and studies.

Details of the Engineered Services capital program are included in Appendix C of the DC Study.

TABLE 3

CITY OF NIAGARA FALLS
SUMMARY OF DEVELOPMENT-RELATED CAPITAL FORECAST
FOR GENERAL SERVICES 2024 - 2033
(in $000)

General Services	Gross Cost	Grants/ Subsidies	Municipal Cost
1.0 LIBRARY SERVICES	$13,675.2	$0.0	$13,675.2
2.0 FIRE PROTECTION	$14,181.5	$0.0	$14,181.5
3.0 PARKS & RECREATION	$74,831.3	$0.0	$74,831.3
4.0 SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS & FLEET	$72,875.0	$0.0	$72,875.0
5.0 DEVELOPMENT-RELATED STUDIES	$13,935.0	$0.0	$13,935.0
TOTAL GENERAL SERVICES (2024-2033)	**$189,498.0**	**$0.0**	**$189,498.0**
1.0 SERVICES RELATED TO A HIGHWAY: ROADS & RELATED	$85,765.8	$0.0	$85,765.8
2.0 WATER	$103,867.2	$0.0	$103,867.2
3.0 SANITARY SEWER	$163,163.8	$0.0	$163,163.8
4.0 STORM WATER MANAGEMENT	$24,883.7	$0.0	$24,883.7
TOTAL ENGINEERED SERVICES (2024-2033)	**$377,680.50**	**$0.0**	**$377,680.5**
TOTAL GENERAL AND ENGINEERED SERVICES (2024-2033)	**$567,178.50**	**$0.0**	**$567,178.5**

6. Development Charges are Calculated in Accordance with the DCA

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% 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 4. Further details of the calculation for each individual General Service category are available in Appendix B.

i. Unadjusted Residential and Non-Residential DC Rates for City-wide General Services

The capital forecast for General Services incorporates those projects identified to be related to development anticipated in the next 10 years. However, not all of the capital costs are to be recovered from new development by way of development charges. Table 4 shows that $28.73 million of the capital forecast relates to replacement of existing capital facilities or to shares of projects that provide benefit to the existing community. These portions of capital costs would have to be funded from property taxes and other non-development charges revenue sources.

An additional share of $11.07 million has been identified as available DC reserves and represents the revenues collected from previous DC By-laws and is removed from the chargeable capital costs. Another share of the forecast, $52.85 million, is either attributable to growth beyond the 2033 period (and can therefore only be recovered under future development charges studies) or represents a service level increase in the City.

The remaining $96.85 million is carried forward to the development charges calculation as a development-related cost. Of the development-related cost, $90.79 million has been allocated to new residential development, and $6.05 million has been allocated to new non-residential development. This results in an unadjusted charge of $4,165.32 per capita and $17.15 per square metre.

ii. Unadjusted Residential and Non-Residential Development for City-wide Engineered Services

Table 5 displays the development-related capital forecast for Services Related to a Highway: Roads and Related, Water, and Sanitary Sewer and Storm Water Services from 2024-2033. The net cost of the capital program amounts to $377.68 million; however, $131.33 million has been identified as an ineligible (BTE share) and will need to be funded from non-DC revenue

sources. A further $15.34 million is available in DC reserves and is removed from the calculation. Finally, $31.18 million is identified as a post-2033 benefit and will be included for recovery in subsequent DC Studies. After these adjustments, the total costs eligible for recovery amount to $199.83 million.

Of the $199.83 million in DC eligible costs, $154.62 million is allocated to benefit the future residential population and $45.21 million is allocated to non-residential development. The resulting residential development charge is $7,093.55 per capita and the non-residential charge is $128.02 per square metre.

TABLE 4

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

City-Wide	
10 Year Growth in Population in New Units	21,798
10 Year Growth in Square Metres	353,103

Service	Development-Related Capital Program (2024 - 2033)						Residential Share		Non-Residential Share	
	Total Project Cost ($000)	Grants/ Subsidies/ Other Contributions ($000)	Benefit to Existing Share ($000)	Available DC Reserves ($000)	Post 2033 ($000)	Total Cost Eligible For DC Recovery ($000)	%	($000)	%	($000)
1.0 LIBRARY SERVICES	$13,675.2	$0.0	$6,035.7	$644.5	$0.0	**$6,995.0**	100%	$6,995.0	0%	$0.00
Charge per Capita or Charge per Square Metre								$320.91		$0.00
2.0 FIRE PROTECTION	$14,181.5	$0.0	$0.0	$3,481.5	$0.0	**$10,700.0**	77%	$8,279.4	23%	$2,420.65
Charge per Capita or Charge per Square Metre								$379.83		$6.86
3.0 PARKS & RECREATION	$74,831.3	$0.0	$5,669.9	$6,067.1	$0.0	**$63,094.4**	100%	$63,094.4	0%	$0.00
Charge per Capita or Charge per Square Metre								$2,894.56		$0.00
4.0 SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS & FLEET	$72,875.0	$0.0	$11,076.6	$549.4	$51,708.1	**$9,541.0**	77%	$7,382.5	23%	$2,158.44
Charge per Capita or Charge per Square Metre								$338.69		$6.11
5.0 DEVELOPMENT-RELATED STUDIES	$13,935.0	$0.0	$5,949.0	$331.7	$1,137.5	**$6,516.8**	77%	$5,042.5	23%	$1,474.29
Charge per Capita or Charge per Square Metre								$231.33		$4.18
TOTAL 10-YEAR GENERAL SERVICES	**$189,498.00**	**$0.0**	**$28,731.2**	**$11,074.1**	**$52,845.6**	**$96,847.2**		**$90,793.8**		**$6,053.4**
General Services Unadjusted Development Charge Per Capita or Per Square Metre								**$4,165.32**		**$17.15**

TABLE 5

CITY OF NIAGARA FALLS
SUMMARY OF UNADJUSTED DEVELOPMENT CHARGES
FOR CITY-WIDE ENGINEERED SERVICES 2024 - 2033

City-Wide	
10 Year Growth in Population in New Units	21,798
10 Year Growth in Square Metres	353,103

Service	Development-Related Capital Program (in $000s)						Residential Share		Non-Residential Share	
	Total Project Cost	Grants/ Subsidies/ Other Contributions	Benefit to Existing Share	Available DC Reserves	Post 2033	Total Cost Eligible For DC Recovery	%	($000)	%	($000)
ENGINEERED SERVICES										
Services Related To A Highway: Roads & Related	$85,765.8	$0.0	$15,749.0	$7,064.3	$1,573.6	**$61,378.9**	77.4%	$47,493.2	22.6%	$13,885.70
Charge per Capita or Charge per Square Metre								$2,178.83		$39.32
Water	$103,867.2	$0.0	$51,311.1	$1,591.4	$2,467.8	**$48,496.9**	77.4%	$37,525.5	22.6%	$10,971.42
Charge per Capita or Charge per Square Metre								$1,721.55		$31.07
Sanitary Sewer	$163,163.8	$0.0	$47,965.4	$260.6	$27,137.7	**$87,800.2**	77.4%	$67,937.2	22.6%	$19,862.95
Charge per Capita or Charge per Square Metre								$3,116.73		$56.25
Storm Water Management	$24,883.7	$0.0	$16,303.6	$6,426.8	$0.0	**$2,153.3**	77.4%	$1,666.1	22.6%	$487.13
Charge per Capita or Charge per Square Metre								$76.44		$1.38
TOTAL ENGINEERED SERVICES	**$377,680.5**	**$0.0**	**$131,329.1**	**$15,343.1**	**$31,179.1**	**$199,829.3**		**$154,622.1**		**$45,207.2**
City-Wide Unadjusted Development Charge Per Capita or Per Square Metre								**$7,093.55**		**$128.02**

B. 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 6 summarizes the results of the cash flow adjustments for the residential development charges rates. As shown, the adjusted per capita rate increases by $312.92, from $11,258.87 per capita to $11,571.79 per capita after the cash flow analysis. Table 6 also provides the calculated rates by residential unit with the total charge per unit ranging from a high of $38,162 for a fully serviced single or semi-detached unit to a low of $11,571 for special care/special need dwellings. The charge for rows and other multiples is calculated at $26,281 and apartments is calculated at $18,937.

The calculated non-residential charge is shown in Table 7. The calculated adjusted charge per square metre is $138.24 and applies to all non-residential development on a City-wide basis.

C. Statutory Phase-in of Calculated Development Charges

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

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

Table 8 provides a summary of the 5-year phase in for the calculated residential and non-residential rates in the City of Niagara Falls.

D. Comparison of 2024 Newly Calculated Development Charges With Charges Currently in Force in Niagara Falls

Tables 9 and 10 present a comparison of the newly calculated residential and non-residential development charges with currently imposed development charge rates over the 5-year phase-in period as required by the DCA. As shown in Table 9, residential development charges for single and semi-detached units will increase from the current rate of $17,239 to $30,530 per unit in Year 1 once the new DC By-law is enacted. The rate will be phased in over the remaining four-year period. Rows and other multiples will increase from a current rate of $10,813 to $21,025 in Year 1 and finally $26,281 in Year 5. Apartments will increase from a current rate of $8,194 per unit to $15,150 in Year 1 and finally $18,937 in Year 5. No comparison of current versus calculated rates have been provided for the special care/special needs dwellings as this is a new residential rate category.

Table 10 shows the calculated versus current non-residential rates. The City currently has area-specific non-residential rates for the Core Tourist Area and Outside the Core Tourist Area which is proposed to be replaced by a city-wide non-residential rate. The rates will increase from $57.26 per square metre Outside the Core Tourist Area and $33.68 per square metre in the Core Tourist Area to $110.59 in Year 1 per square metre and $138.24 per square metre in Year 5.

It is important to note that the calculated DC rates will be subject to annual indexing in accordance with the rules in the draft DC By-law(s).

Overall, the calculated development charges rates will increase from the current rates in Niagara Falls. These increases are a result of the following:

- Comprehensive update of capital program costs as informed by the City's ongoing Master Servicing Plan update;
- Cost adjustments (increases) to reflect current estimates for projects;

- Update development forecast to account for new Secondary Plan areas and Council endorsed housing pledge to 2031;
- Changes in person per unit (PPU) assumptions;
- Changes in maximum permissible funding envelopes arising from 15-year historical service levels.

TABLE 6

CITY OF NIAGARA FALLS
2024 DEVELOPMENT CHARGES STUDY
RESIDENTIAL DEVELOPMENT CHARGES BY UNIT TYPE

Service	Unadjusted Charge Per Capita	Adjusted Charge Per Capita	Residential Rates by Unit Type (1)				Percentage of Charge
			Single & Semi-Detached	Rows and Other Multiples	Apartments	Special Care/Special Need Dwellings	
Development Related Studies	$231.33	$247.26	$815	$562	$405	$247	2.1%
Library Services	$320.91	$345.18	$1,138	$784	$565	$345	3.0%
Fire Protection	$379.83	$414.91	$1,368	$942	$679	$415	3.6%
Parks & Recreation	$2,894.56	$2,872.68	$9,474	$6,524	$4,701	$2,873	24.8%
Services Related To A Highway: Public Works & Fleet	$338.69	$365.98	$1,207	$831	$599	$366	3.2%
Services Related To A Highway: Roads & Related	$2,178.83	$2,192.00	$7,229	$4,978	$3,587	$2,192	18.9%
Subtotal City-wide Services	**$6,344.15**	**$6,438.01**	**$21,231**	**$14,621**	**$10,536**	**$6,438**	**55.6%**
Water	$1,721.55	$1,782.42	$5,878	$4,048	$2,917	$1,782	15.4%
Sanitary Sewer	$3,116.73	$3,292.94	$10,860	$7,479	$5,388	$3,293	28.5%
Storm Water Management	$76.44	$58.42	$193	$133	$96	$58	0.5%
Subtotal Urban Area Services	**$4,914.72**	**$5,133.78**	**$16,931**	**$11,660**	**$8,401**	**$5,133**	**44.4%**
TOTAL CHARGE PER UNIT	**$11,258.87**	**$11,571.79**	**$38,162**	**$26,281**	**$18,937**	**$11,571**	**100.0%**
(1) Based on Persons Per Unit Of:			3.30	2.27	1.64	1.00	

TABLE 7

CITY OF NIAGARA FALLS
2024 DEVELOPMENT CHARGES STUDY
NON-RESIDENTIAL DEVELOPMENT CHARGES PER SQUARE METRE

Service	Non-Residential Charge Per Square Metre		Non-Residential Charge Per Square Foot		Percentage of Charge
	Unadjusted Charge	Adjusted Charge	Unadjusted Charge	Adjusted Charge	
Development Related Studies	$4.18	$4.48	$0.39	$0.42	3.2%
Library Services	$0.00	$0.00	$0.00	$0.00	0.0%
Fire Protection	$6.86	$7.50	$0.64	$0.70	5.4%
Parks & Recreation	$0.00	$0.00	$0.00	$0.00	0.0%
Services Related To A Highway: Public Works & Fleet	$6.11	$6.63	$0.57	$0.62	4.8%
Services Related To A Highway: Roads & Related	$39.32	$39.68	$3.65	$3.69	28.7%
Subtotal City-wide Services	**$56.46**	**$58.28**	**$5.25**	**$5.43**	**42.2%**
Water	$31.07	$27.26	$2.89	$2.53	19.7%
Sanitary Sewer	$56.25	$51.64	$5.23	$4.80	37.4%
Storm Water Management	$1.38	$1.06	$0.13	$0.10	0.8%
Subtotal Urban Area Services	**$88.70**	**$79.96**	**$8.25**	**$7.43**	**57.8%**
TOTAL CHARGE PER SQUARE METRE	**$145.16**	**$138.24**	**$13.50**	**$12.86**	**100.0%**

TABLE 8

CITY OF NIAGARA FALLS
5-YEAR PHASE-IN OF CALCULATED DEVELOPMENT CHARGES

Charge Type	Year 1	Year 2	Year 3	Year 4	Year 5
Single & Semi-Detached $/unit	$30,530	$32,438	$34,346	$36,254	$38,162
Rows and Other Multiples $/unit	$21,025	$22,339	$23,653	$24,967	$26,281
Apartments $/unit	$15,150	$16,096	$17,043	$17,990	$18,937
Special Care/Special Need Dwellings $/unit	$9,257	$9,835	$10,414	$10,992	$11,571
Non-Residential $/m2	$110.59	$117.50	$124.41	$131.32	$138.24
Phase-in	*80%*	*85%*	*90%*	*95%*	*100%*

TABLE 9

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

Singles & Semis $/unit	Calculated	Change (%)
Current	**$17,239**	
Year 1 - 2024 (80%)	$30,530	77%
Year 2 - 2025 (85%)	$32,438	6%
Year 3 - 2026 (90%)	$34,346	6%
Year 4 - 2027 (95%)	$36,254	6%
Year 5 - 2028 (100%)	**$38,162**	**5%**

Rows & Other Multiples $/unit	Calculated	Change (%)
Current	**$10,813**	
Year 1 - 2024 (80%)	$21,025	94%
Year 2 - 2025 (85%)	$22,339	6%
Year 3 - 2026 (90%)	$23,653	6%
Year 4 - 2027 (95%)	$24,967	6%
Year 5 - 2028 (100%)	**$26,281**	**5%**

Apartments $/unit	Calculated	Change (%)
Current	**$8,194**	
Year 1 - 2024 (80%)	$15,150	85%
Year 2 - 2025 (85%)	$16,096	6%
Year 3 - 2026 (90%)	$17,043	6%
Year 4 - 2027 (95%)	$17,990	6%
Year 5 - 2028 (100%)	**$18,937**	**5%**

TABLE 10

CITY OF NIAGARA FALLS
COMPARISON OF CURRENT AND CALCULATED
UNIFORM NON-RESIDENTIAL DEVELOPMENT CHARGES

Non-Residential $/m2	Calculated	Change (%)
Current - Outside Core Tourist Area	**$57.26**	
Year 1 - 2024 (80%)	$110.59	93%
Year 2 - 2025 (85%)	$117.50	6%
Year 3 - 2026 (90%)	$124.41	6%
Year 4 - 2027 (95%)	$131.32	6%
Year 5 - 2028 (100%)	**$138.24**	**5%**

Non-Residential $/m2	Calculated	Change (%)
Current - Core Tourist Area	**$33.68**	
Year 1 - 2024 (80%)	$110.59	228%
Year 2 - 2025 (85%)	$117.50	6%
Year 3 - 2026 (90%)	$124.41	6%
Year 4 - 2027 (95%)	$131.32	6%
Year 5 - 2028 (100%)	**$138.24**	**5%**

7. Cost of Growth Analysis

This section provides a brief examination of the long-term capital and operating costs as well as the asset management related annual provisions for the capital facilities and infrastructure to be included in the 2024 DC By-law. This examination is required as one of the provisions of the DCA. Additional details on the cost of growth analysis, including asset management analysis, is included in Appendix E.

A. Asset Management Plan

Table 11 provides the calculated annual asset management contribution for both the gross capital expenditures and the share related to the 2024-2033 recoverable portion. The year 2034 has been included to calculate the annual contribution for the 2024-2033 period as the expenditures in 2033 will not trigger asset management contributions until 2034. As shown in Table 11, by 2034, the City should fund an additional $5.55 million per annum to fund the full life cycle costs of the new assets related to the General and Engineered Services supported under the DC By-law(s).

TABLE 11

CITY OF NIAGARA FALLS
ANNUAL ASSET MANAGEMENT PROVISION BY 2034

Service	2024 - 2033 Capital Program		Calculated AMP Annual Provision by 2034	
	DC Related	Non-DC Related*	DC Related	Non-DC Related*
Library Services	$6,995,024	$6,680,157	$242,263	$158,699
Fire Protection	$10,700,003	$3,481,498	$191,197	$40,496
Parks & Recreation	$63,094,360	$11,736,959	$3,958,728	$824,834
Services Related To A Highway: Public Works & Fleet	$9,540,964	$63,334,036	$301,751	$1,288,562
Development-Related Studies	$6,516,806	$7,418,194	$0	$0
Services Related To A Highway: Roads & Related	$61,378,941	$24,386,854	$482,391	$196,196
Water	$48,496,935	$55,370,265	$136,099	$157,580
Sanitary Sewer	$87,800,161	$75,363,681	$228,698	$209,653
Storm Water Management	$2,153,250	$22,730,415	$5,366	$64,576
TOTAL	**$296,676,444**	**$270,502,059**	**$5,546,492**	**$2,940,595**

** Includes costs that will be recovered under future development charges studies (i.e. other development-related), ineligible shares and shares of projects funded from available reserve funds.*

B. Long-Term Capital and Operating Cost Impacts

i. Net Operating Costs for the City's Services Estimated to Increase over the Forecast Period

The City will experience estimated increase in net operating costs for additions associated with the planned capital program. These estimates are based on average costs derived from a review of recent budgets and the Financial Information Return (FIR) (additional details are included in Appendix E).

As described in Appendix E, by 2033, the City's net operating costs are estimated to increase by $6.55 million for property tax supported services. Increases in net operating costs will be experienced as new facilities are opened.

ii. Long-Term Capital Financing from Non-Development Charge Sources Totals $244.08 million for Tax Supported Assets

Table 12 summarizes the components of the development-related capital program that will require funding from non-development charges sources for tax supported assets. In total, $160.06 million will need to be financed from non-DC sources over the 2023-2032 planning period. In addition, $84.02 million in interim DC financing related to post-period shares of projects may be required or these costs may be recovered from other growth funding tools.

TABLE 12

CITY OF NIAGARA FALLS
LONG-TERM CAPITAL FINANCING FROM NON-DC SOURCES

	General Services	Development-Related Capital Program (2024 - 2033)				
		Net Municipal Cost ($000)	Replacement & Benefit to Existing ($000)	Available DC Reserves ($000)	Post-Period Benefit* ($000)	Total DC Eligible Costs for Recovery ($000)
1	LIBRARY SERVICES	$13,675.2	$6,035.7	$644.5	$0.0	$6,995.0
2	FIRE PROTECTION	$14,181.5	$0.0	$3,481.5	$0.0	$10,700.0
3	PARKS & RECREATION	$74,831.3	$5,669.9	$6,067.1	$0.0	$63,094.4
4	SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS & FLEET	$72,875.0	$11,076.6	$549.4	$51,708.1	$9,541.0
5	DEVELOPMENT-RELATED STUDIES	$13,935.0	$5,949.0	$331.7	$1,137.5	$6,516.8
TOTAL GENERAL SERVICES		**$189,498.0**	**$28,731.2**	**$11,074.1**	**$52,845.6**	**$96,847.2**

*Development related costs to be considered for funding from other tools and/or future DC Studies.

	Engineered Services	Development-Related Capital Program (2024 - 2033)				
		Net Municipal Cost ($000)	Replacement & Benefit to Existing ($000)	Available DC Reserves ($000)	Post-Period Benefit* ($000)	Total DC Eligible Costs for Recovery ($000)
1	SERVICES RELATED TO A HIGHWAY: ROADS & RELATED	$85,765.8	$15,749.0	$7,064.3	$1,573.6	$61,378.9
2	WATER	$103,867.2	$51,311.1	$1,591.4	$2,467.8	$48,496.9
3	SANITARY SEWER	$163,163.8	$47,965.4	$260.6	$27,137.7	$87,800.2
4	STORM WATER MANAGEMENT	$24,883.7	$16,303.6	$6,426.8	$0.0	$2,153.3
TOTAL ENGINEERED SERVICES		**$377,680.5**	**$131,329.1**	**$15,343.1**	**$31,179.1**	**$199,829.3**

*Development related costs to be considered for funding from other tools and/or future DC Studies.

TOTAL GENERAL AND ENGINEERED SERVICES	**$567,178.5**	**$160,060.2**	**$26,417.2**	**$84,024.6**	**$296,676.4**

iii. Program is Deemed Financially Sustainable

The calculated annual funding provision should be considered within the context of the City's projected growth. Over the next 10 years (to 2033) the City is projected to increase by nearly 8,070 households. In addition, the City will also add over 6,370 new employees that will result in approximately 353,100 square metres of additional non-residential building space.

This growth will have the effect of increasing the overall assessment base and additional user fee and charges revenues to offset the capital asset provisions required to replace the infrastructure proposed to be funded under the development charges by-law. The collection of these funds is intended to be allocated to the City's reserves for the future replacement of these assets.

In addition, as part of the annual budget update the City also contributes to asset replacement reserves and spends on yearly asset replacement needs as needed. Through this annual exercise, staff identify the required funding and propose mitigating measures in order to ensure there are sufficient funds in reserves over the long term. Life-cycle funding methodologies are also reviewed in order to ensure that the City is continuing to implement financially sustainable practices for funding the eventual replacement of assets.

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

8. Development Charges Administration and Considerations

This section sets out other considerations and legislative requirements relating to the DCA including administration and collection, recent legislative changes, and consideration for area rating.

A. Development Charges Amount Payable and Date of Payment

The total amount of a DC is the amount that would be determined under the by-law on the day of an application for site plan approval or the day of an application for rezoning or, if neither of these apply, the day of building permit issuance. Full details on determining the DCs payable in any particular case are provided in s.26, s.26.1 and s.26.2 of the DCA.

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

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

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

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

B. Reserve Funds

Under the DCA, a municipality that has passed a development charge by-law must establish a separate reserve fund for each service to which the development charge relates and pay each development charge it collects into the respective reserve fund. Beginning in 2023 and each calendar year thereafter, a municipality shall spend or allocate at least 60% of the monies in a reserve fund associated with Water supply, Wastewater services and Services Related to a Highway – which would include the City's Public Works and Roads and Related DC categories of service.

While the DCA does permit municipalities to borrow from the reserve fund, the amount borrowed is to be repaid with interest at a rate not less than the prescribed minimum interest rate. Additionally, money in the reserve fund is to be spent only on development-related capital costs.

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

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

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

As of November 28, 2022, there are several changes to the *DCA* due to the enactment and Royal Assent of Bill 23. A list of the changes that are now in force is provided below in Table 13.

Table 13: Bill 23 – DCA Changes in Force as of November 28, 2022

Section	Description
Section 2(1)	Exemptions for existing rental residential buildings and a range of residential units in existing and new houses.
Section 2(4)	Housing services are ineligible for DC funding (repeal of paragraph 17 of ss.2(4) of the *DCA*). Existing by-laws are deemed to be "amended" and no development charges can be collected for housing services from November 28, 2022 onward.
Section 4.2	Exemptions for non-profit housing development. This does not apply with respect to a DC payable before November 28, 2022.
Section 4.3	Exemption for inclusionary zoning residential units. This does not apply with respect to a DC payable before November 28, 2022.
Section 5(1)	Historical service level calculation period extended from 10 years to 15 years. Does not apply to by-laws in force prior to November 28, 2022.
Section 5(4)	Studies, including DC studies, are no longer a DC-eligible capital cost. Does not apply retroactively to by-laws that were in force prior to November 28, 2022.

Section	Description
Section 5(6) and Section 5(7)	DC by-laws passed on or after November 28, 2022 must be phased-in according to a prescribed schedule. The phase-in also applies retroactively to by-laws passed on or after **January 1, 2022** as well as to the DCs "frozen" under s.26.2 of the *DCA*.
Section 9(1)	Maximum life of a DC by-law extended from 5 years to 10 years. This does not apply to by-laws in-force before November 28, 2022.
Section 26.1	Deferral payments now apply to rental housing and institutional development. Interest on deferral payments is now capped at prime plus 1% in accordance with s.26.3.
Section 26.2	DCs for rental housing development are now discounted based on the number of bedrooms proposed. Interest on DC freeze now capped at prime plus 1% in accordance with section 26.3.
Section 26.3	Maximum interest rates are capped at prime plus 1%. This does not apply with respect to a DC that was payable before November 28, 2022.
Section 35	Municipalities are now required to spend or allocate at least 60% of reserve balances each year for Water Supply, Wastewater, and services related to a highway beginning in 2023.
Section 60(1)(s.4)	Additional services for which municipalities are required to spend or allocate at least 60% of reserve fund balances may be prescribed through Regulations (none are proposed as of yet).

Table 14 summarizes the *DCA* changes that will take effect at a date to be determined. It is noted that section 60(1)(l) of the *DCA* allows for future regulations to identify services for which land will be an ineligible capital cost. No regulations have been released in this regard.

Table 14: Bill 23 – DCA Changes Not Currently In Force

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

D. 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 develop reporting policies consistent with the requirements of the DCA;
- It is recommended that the by-laws permit the payment of a development charge in cash or through services-in-lieu agreements. The municipality is not obligated to enter into services-in-lieu agreements;
- 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 forecast included in this background study, subject to annual review through the City's normal capital budget process; and
- Changes to the City's prevailing local service definitions and policies are being considered.

Appendix A

Development Forecast

Appendix A – Development Forecast

This appendix provides the details of the development forecast used to prepare the 2024 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 tables:

Historical Development

Table A-1 Historical Population, Occupied Dwellings and Employment Summary
Table A-2 Historical Annual Housing Completions
Table A-3 Historical Annual Residential Building Permits
Table A-4 Historical Households by Period of Construction Showing Household Size

Forecast Development

Table A-5 Forecast Population, Household & Employment Summary
Table A-6 Forecast of Household Growth by Unit Type
Table A-7 Forecast Population Growth in New Households by Unit Type
Table A-8 Forecast Place of Work Employment
Table A-9 Forecast Non-Residential Space (Square Metres of Gross Floor Areas)

The forecasts were prepared by Hemson in consultation with City planning staff. The forecast is informed by a range of statistical data including Statistics Canada Census and National Household Survey data, and Canada Mortgage Housing Corporation (CMHC) housing market information and recent forecast work prepared as part of the City's ongoing Official Plan Review.

A. Forecast Approach and Key Assumptions

The 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.

i. Identified Forecast Targets

The forecasts are premised on the City achieving the long-term population and employment targets identified in the Region of Niagara's 2022 Official Plan as quantified through the Municipal Comprehensive Review (MCR) process. The Region's Official Plan establishes minimum population and employment targets for Niagara Falls which are currently being reviewed as part of the City's new Official Plan. City staff, in consultation with regional staff, have undertaken an initial analysis to identify how and where projected and additional growth can be accommodated amongst its existing greenfield, urban expansions, and intensification nodes and corridor locations. The analysis provides for the potential of an additional 15,000 units above the current regional forecast to ensure the City's growth potential can remain responsive to market demands while focusing capital investment in strategic locations and help inform the new Official Plan in its early phases of future urban structure.

ii. Total Population and Employment versus Census Population and Employment

Population figures used in the forecasts represent the population recorded in the Census ("Census population"). This definition excludes the Census net under-coverage (approximately 2.61% of the total population), which represents those who were missed or double-counted by the Census and which is included in the definition of population used in the Growth Plan, the Region's Official

Plan and the City's master plans. Population figures shown in the development forecast represent mid-year estimates. 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 10-year development forecast, from 2024-2033, has been used for all DC services in the City.

Household figures represent occupied private dwellings, and reflect the year in which the dwellings are anticipated to be occupied.

Employment figures used in DC studies utilize place of work employment values. Place of work employment considers where people work irrespective of their place of residence. The forecast is based on recent growth trends and input form City staff. Consideration has been given to tourism employment and its impact on forecast employment and non-residential space growth over the planning horizon. For DC forecast purposes, work at home employment is excluded from the calculations since the increased need for service is already captured in the residential forecast.

Employment is categorized based on land use:

- **Population-related employment** is employment that primarily serves the City's resident population. This category captures most retail and other commercial activities.
- **Employment land** employment refers to traditional industrial-type employment accommodated primarily in low-rise industrial buildings in business parks and industrial areas.
- **Major office** employment refers to office type employment contained within free standing buildings more than 20,000 net sq. ft. (1,858 m^2).
- **Rural Employment** refers to jobs scattered throughout rural areas and includes agricultural and primary industries plus uses typically found in urban employment areas, but not located on urban land designated for industrial or population-related uses.

B. Historical Trends in the City

Growth in the City of Niagara Falls has largely been driven by the City's location and attractiveness for tourism development. The City is located on the United States of America boarder and is situated in the heart of Niagara Region, making it an attractive municipality to live and work.

Historical development numbers presented in this report are based on Statistics Canada Census data and Canada Mortgage and Housing Corporation (CMHC) housing market information. The 15-year historical period used in the Development Charges Background Study is from 2009-2023. As 2021 was the date of the last Census, values for 2022 and 2023 are estimated.

i. Historical Residential Development

Table A-1 shows that between 2009 and 2023 the City's census population increased from 82,510 to 97,330, or 18%, with growth accelerating since 2016. Over the same period, the City's housing stock has increased by 6,430 dwelling units, an increase of 20%. As shown Tables A-2 and A-3, the majority of historical residential development in Niagara Falls has been characterized by ground-related units (e.g. single and semi-detached).

Table A-4 provides details on historical occupancy patterns for different unit types in the City by period of construction. The overall average occupancy level for single and semi-detached units is 2.68 persons per unit (PPU). Occupancy levels for recently constructed units, built between 2011 and 2021, are higher than the overall average and are used in the development charges calculations since they better reflect the number of people that are likely to reside in new development. The average PPU of single and semi-detached units built in the City between 2011 to 2021 is 3.30. Average PPUs for recently constructed row housing and apartments are 2.27 and 1.81, respectively. For the purpose of the development charges calculations, the following PPUs are assumed:

- **Single & Semi-Detached** = 3.30 PPU, based on occupancy levels for units constructed between 2011 and 2021.
- **Rows** = 1.85 PPU, based on occupancy levels for units constructed between 2011 and 2021.
- **Apartments** = 1.64 PPU, due to the limited sample size of recently constructed apartment units, the overall PPU for apartments is used.

ii. Historical Non-Residential Development

Historical employment in the City is shown in Table A-1. Overall employment declined in the City between 2006 and 2011. At the time of the 2021 Census, business closures and stay-at-home orders were still in effect. As such, a large portion of the labour force was unemployed and many others were working from home on a full-time basis, and often outside the City. Since that time, employment has started to return to pre-pandemic levels. Although employees have largely returned to their usual place of work, either full-time or under hybrid arrangements, it is evident that some shifts in work-at-home patterns will be long lasting. As such, the place of work employment in 2021 and for the remainder of the planning period has been restated to reflect a work at home assumption of 10%.

C. Forecast Results

This section describes the method used to establish the development forecast for the 10-year planning period of 2024-2033.

Development charges are levied on residential development as a charge per new unit. Therefore, for the residential forecast, a projection of both the population growth, commonly referred to as net population in the context of development charges studies, as well as the population in new units is required.

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

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

i. Residential Development Forecast

As shown in Table A-5, the City's Census population is forecast to grow from 97,330 in 2023 to 113,260 in 2033. The number of occupied dwellings is forecast to increase from 39,270 units in 2023 to 47,340 units in 2033.

A breakdown of forecast housing by unit type in the City is shown in Tables A-6. The share of housing growth between single and semi-detached (55%), row and other multiple (25%) and apartment units (20%) is anticipated to remain relatively consistent over the next 10-years.

As shown in Table A-7, population growth in the new units is estimated by applying the following PPUs to the housing unit forecast: 3.30 for single and semi-detached units; 2.27 for rows and other multiples; and 1.64 for apartments. Over the 10-year planning horizon, the population in new units is forecasted to be 21,800.

ii. Non-Residential Development Forecast

Non-residential development charges are calculated on a per unit of gross floor area basis. Therefore, as per the DCA, a forecast of future non-residential building space has been developed.

Approximately 353,100 square metres of new non-residential floor space is anticipated to be added over the 2024-2033 planning period. The majority of new space is anticipated to be needed to accommodate population-related employment (72%) and employment land employment (26%). The remaining space is associated with major office development in the City.

An assumed floor space per worker (FSW) for each employment category is applied to the new floorspace forecast in order to establish the number of associated employees. The following FSW assumptions have been used:

Population-Related	50m^2 per employee
Employment Land	110m^2 per employee
Major Office	27m^2 per employee

APPENDIX A - TABLE 1

CITY OF NIAGARA FALLS
HISTORICAL POPULATION, OCCUPIED DWELLINGS & EMPLOYMENT SUMMARY

Mid-Year	Census Population	Annual Growth	Occupied Dwellings	Annual Growth	Av. Household Size (PPU)	Place of Work Employment	Annual Growth	Activity Rate
2006	**82,184**		**32,495**		**2.53**	**40,669**		**49.5%**
2007	82,346	162	32,670	175	2.52	40,435	-234	49.1%
2008	82,508	162	32,846	176	2.51	40,202	-233	48.7%
2009	82,671	163	33,023	177	2.50	39,971	-231	48.3%
2010	82,834	163	33,201	178	2.49	39,741	-230	48.0%
2011	**82,997**	**163**	**33,382**	**181**	**2.49**	**39,512**	**-229**	**47.6%**
2012	83,988	991	33,847	465	2.48	39,692	180	47.3%
2013	84,991	1,003	34,319	472	2.48	39,873	181	46.9%
2014	86,006	1,015	34,797	478	2.47	40,054	181	46.6%
2015	87,033	1,027	35,282	485	2.47	40,236	182	46.2%
2016	**88,071**	**1,038**	**35,773**	**491**	**2.46**	**40,419**	**183**	**45.9%**
2017	89,305	1,234	36,168	395	2.47	39,874	-545	44.6%
2018	90,556	1,251	36,568	400	2.48	39,336	-538	43.4%
2019	91,825	1,269	36,972	404	2.48	38,805	-531	42.3%
2020	93,111	1,286	37,380	408	2.49	38,282	-523	41.1%
2021	**94,415**	**1,304**	**37,793**	**413**	**2.50**	**37,766**	**-516**	**40.0%**
2022	95,861	1,446	38,526	733	2.49	38,344	578	40.0%
2023	97,327	1,466	39,273	747	2.48	38,930	586	40.0%
Growth 2009 - 2023		14,819		6,427			(1,272)	

Source: Statistics Canada, Census of Canada

APPENDIX A - TABLE 2

CITY OF NIAGARA FALLS
HISTORICAL ANNUAL HOUSING COMPLETIONS

Year	CMHC Annual Housing Completions				Shares by Unit Type			
	Singles/Semis	Rows	Apts.	Total	Singles/Semis	Rows	Apts.	Total
2009	161	9	0	170	95%	5%	0%	100%
2010	257	22	75	354	73%	6%	21%	100%
2011	**189**	**55**	**2**	**246**	**77%**	**22%**	**1%**	**100%**
2012	155	41	0	196	79%	21%	0%	100%
2013	226	60	123	409	55%	15%	30%	100%
2014	271	109	0	380	71%	29%	0%	100%
2015	290	28	0	318	91%	9%	0%	100%
2016	**446**	**59**	**0**	**505**	**88%**	**12%**	**0%**	**100%**
2017	644	273	9	926	70%	29%	1%	100%
2018	310	237	56	603	51%	39%	9%	100%
2019	149	44	0	193	77%	23%	0%	100%
2020	226	139	39	404	56%	34%	10%	100%
2021	**117**	**100**	**168**	**385**	**30%**	**26%**	**44%**	**100%**
2022	207	218	421	846	24%	26%	50%	100%
2023	176	264	150	590	30%	45%	25%	100%
Growth 2009 - 2023	*3,824*	*1,658*	*1,043*	*6,525*	*59%*	*25%*	*16%*	*100%*
5 Year Average	*175*	*153*	*156*	*484*				

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

APPENDIX A - TABLE 3

CITY OF NIAGARA FALLS
HISTORICAL ANNUAL RESIDENTIAL BUILDING PERMITS

Year	Building Permits				Shares by Unit Type			
	Singles/Semis	Rows	Apts.	Total	Singles/Semis	Rows	Apts.	Total
2009	215	4	67	286	75%	1%	23%	100%
2010	205	21	78	304	67%	7%	26%	100%
2011	**187**	**96**	**99**	**382**	**49%**	**25%**	**26%**	**100%**
2012	219	110	1	330	66%	33%	0%	100%
2013	295	96	0	391	75%	25%	0%	100%
2014	295	120	1	416	71%	29%	0%	100%
2015	483	192	118	793	61%	24%	15%	100%
2016	**628**	**97**	**208**	**933**	**67%**	**10%**	**22%**	**100%**
2017	326	208	15	549	59%	38%	3%	100%
2018	194	90	222	506	38%	18%	44%	100%
2019	213	79	1	293	73%	27%	0%	100%
2020	89	213	354	656	14%	32%	54%	100%
2021	**284**	**351**	**248**	**883**	**32%**	**40%**	**28%**	**100%**
2022	165	426	18	609	27%	70%	3%	100%
2023	58	123	149	330	18%	37%	45%	100%
Growth 2009 - 2023	*3,856*	*2,226*	*1,579*	*7,661*	*50%*	*29%*	*21%*	*100%*
5 Year Average	*162*	*238*	*154*	*554*				

Source: Stats Can, Building Permit Data

APPENDIX A - TABLE 4

CITY OF NIAGARA FALLS
HISTORICAL HOUSEHOLDS BY PERIOD OF CONSTRUCTION SHOWING HOUSEHOLD SIZE

	Period of Construction													
	Pre 1945	1946-1960	1961-1970	1971-1980	1981-1990	1991-1995	1996-2000	2001-2005	2006-2010	2011-2016	2017-2021	Pre 2011	2011-2021	Total
Singles/Semis														
Household Population	8,335	12,700	9,100	11,055	7,630	2,885	3,840	3,630	3,775	4,045	5,750	62,950	9,795	72,745
Households	3,625	5,410	3,565	4,285	2,720	1,020	1,255	1,130	1,140	1,250	1,720	24,150	2,970	27,120
Household Size	2.30	2.35	2.55	2.58	2.81	2.83	3.06	3.21	3.31	3.24	3.34	2.61	3.30	2.68
Rows														
Household Population	100	295	620	1,080	1,045	440	320	455	310	985	1,025	4,665	2,010	6,675
Households	50	110	245	435	425	205	165	210	155	465	420	2,000	885	2,885
Household Size	2.00	2.68	2.53	2.48	2.46	2.15	1.94	2.17	2.00	2.12	2.44	2.33	2.27	2.31
Apartments (no duplex)														
Household Population	1,295	1,505	1,890	2,070	1,425	680	355	190	290	320	755	9,700	1,075	10,775
Households	800	915	1,195	1,320	875	410	190	110	175	145	450	5,990	595	6,585
Household Size	1.62	1.64	1.58	1.57	1.63	1.66	1.87	1.73	1.66	2.21	1.68	1.62	1.81	1.64
Duplex														
Household Population	885	665	230	275	175	85	40	0	20	0	0	2,375	0	2,375
Households	450	340	125	110	60	30	20	0	15	0	10	1,150	10	1,160
Household Size	1.97	1.96	1.84	2.50	2.92	2.83	2.00	0.00	1.33	0.00	0.00	2.07	0.00	2.05
All Units														
Household Population	10,615	15,165	11,840	14,480	10,275	4,090	4,555	4,275	4,395	5,350	7,530	79,690	12,880	92,570
Households	4,925	6,775	5,130	6,150	4,080	1,665	1,630	1,450	1,485	1,860	2,600	33,290	4,460	37,750
Household Size	2.16	2.24	2.31	2.35	2.52	2.46	2.79	2.95	2.96	2.88	2.90	2.39	2.89	2.45

Source: Statistics Canada

APPENDIX A - TABLE 5

CITY OF NIAGARA FALLS
FORECAST POPULATION, HOUSEHOLD & EMPLOYMENT SUMMARY

Mid-Year	Census Population	Census Pop'n Growth	Occupied Dwellings	Occupied Household Growth	Household Size	Employment by POW	Employment by POW Growth	Activity Rate	Work at Home	Annual Growth	Total w/ Work At Home	Annual Growth
2021	**94,415**		**37,793**		**2.50**	**37,766**		40.0%	**2,690**		**40,456**	
2022	95,861	1,446	38,526	733	2.49	38,344	578	40.0%	2,760	70	41,104	648
2023	97,327	1,466	39,273	747	2.48	38,930	586	40.0%	2,832	72	41,762	658
2024	98,813	1,486	40,034	761	2.47	39,524	594	40.0%	2,906	74	42,430	668
2025	100,320	1,507	40,810	776	2.46	40,127	603	40.0%	2,982	76	43,109	679
2026	**101,848**	**1,528**	**41,601**	**791**	**2.45**	**40,738**	**611**	**40.0%**	**3,060**	**78**	**43,798**	**689**
2027	103,397	1,549	42,407	806	2.44	41,358	620	40.0%	3,140	80	44,498	700
2028	104,969	1,572	43,229	822	2.43	41,987	629	40.0%	3,222	82	45,209	711
2029	106,563	1,594	44,067	838	2.42	42,625	638	40.0%	3,306	84	45,931	722
2030	108,179	1,616	44,921	854	2.41	43,271	646	40.0%	3,392	86	46,663	732
2031	**109,821**	**1,642**	**45,793**	**872**	**2.40**	**43,928**	**657**	**40.0%**	**3,479**	**87**	**47,407**	**744**
2032	111,527	1,706	46,561	768	2.40	44,610	682	40.0%	3,543	64	48,153	746
2033	113,259	1,732	47,342	781	2.39	45,303	693	40.0%	3,608	65	48,911	758
2024 - 2033		15,932		8,069			6,373			776		7,149

Source: City of Niagara Falls, Hemson Consulting Ltd. 2024

APPENDIX A - TABLE 6

CITY OF NIAGARA FALLS
FORECAST OF HOUSEHOLD GROWTH BY UNIT TYPE

Mid-Year	Annual Growth in Total Occupied Households				Shares By Unit Type			
	Singles & Semis	Rows & Other Multiples	Apartments	Total New Households	Singles & Semis	Rows & Other Multiples	Apartments	Total
2021								
2022	179	189	365	733	24%	26%	50%	100%
2023	223	334	190	747	30%	45%	25%	100%
2024	419	190	152	761	55%	25%	20%	100%
2025	426	194	156	776	55%	25%	20%	100%
2026	**433**	**198**	**160**	**791**	**55%**	**25%**	**20%**	**100%**
2027	441	202	164	806	55%	25%	20%	100%
2028	449	206	168	822	55%	25%	20%	100%
2029	457	210	172	838	55%	25%	21%	100%
2030	465	214	176	854	54%	25%	21%	100%
2031	**473**	**218**	**181**	**872**	**54%**	**25%**	**21%**	**100%**
2032	416	192	160	768	54%	25%	21%	100%
2033	423	195	163	781	54%	25%	21%	100%
2024 - 2033	4,401	2,017	1,650	8,069	*55%*	*25%*	*20%*	*100%*

Source: Niagara Region MCR, Hemson Consulting Ltd. 2024

APPENDIX A - TABLE 7

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

Mid-Year	Singles & Semis	Rows & Other Multiples	Apartments	Total Population in New Households
2021				
2022	591	429	597	1,617
2023	735	759	311	1,805
2024	1,380	432	249	2,062
2025	1,405	441	255	2,101
2026	**1,430**	**449**	**261**	**2,140**
2027	1,454	458	268	2,179
2028	1,480	467	274	2,221
2029	1,506	476	281	2,263
2030	1,532	485	288	2,305
2031	**1,562**	**495**	**295**	**2,352**
2032	1,373	436	261	2,070
2033	1,393	443	267	2,104
2024 - 2033	14,515	4,582	2,701	21,798
	3.30	2.27	1.64	

*Based on PPUs

Source: Hemson Consulting Ltd. 2024

APPENDIX A - TABLE 8

CITY OF NIAGARA FALLS
FORECAST PLACE OF WORK EMPLOYMENT

Mid-Year	Major Office	Annual Growth	Population Related	Annual Growth	Emp. Land Industrial	Annual Growth	Rural Employment	Annual Growth	Total for DC Study	Annual Growth	Work at Home Total Emp	Annual Growth	Total with Work at Home	Annual Growth
2021	**1,844**		**23,189**		**11,106**		**1,627**		**37,766**		**2,690**		**40,456**	
2022	1,860	16	23,647	458	11,187	81	1,650	23	38,344	578	2,760	70	41,104	648
2023	1,876	16	24,112	465	11,269	82	1,673	23	38,930	586	2,832	72	41,762	658
2024	1,892	16	24,584	472	11,351	82	1,697	24	39,524	594	2,906	74	42,430	668
2025	1,908	16	25,064	480	11,434	83	1,721	24	40,127	603	2,982	76	43,109	679
2026	**1,925**	**17**	**25,551**	**487**	**11,517**	**83**	**1,745**	**24**	**40,738**	**611**	**3,060**	**78**	**43,798**	**689**
2027	1,942	17	26,045	494	11,601	84	1,770	25	41,358	620	3,140	80	44,498	700
2028	1,959	17	26,547	502	11,686	85	1,795	25	41,987	629	3,222	82	45,209	711
2029	1,976	17	27,058	511	11,771	85	1,820	25	42,625	638	3,306	84	45,931	722
2030	1,993	17	27,575	517	11,857	86	1,846	26	43,271	646	3,392	86	46,663	732
2031	**2,010**	**17**	**28,103**	**528**	**11,943**	**86**	**1,872**	**26**	**43,928**	**657**	**3,479**	**87**	**47,407**	**744**
2032	2,027	17	28,655	552	12,030	87	1,898	26	44,610	682	3,543	64	48,153	746
2033	2,045	18	29,215	560	12,118	88	1,925	27	45,303	693	3,608	65	48,911	758
2024 - 2033		169		5,103		849		252		6,373		776		7,149

Source: Hemson Consulting Ltd., 2024

APPENDIX A - TABLE 9

CITY OF NIAGARA FALLS

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

CITY-WIDE FORECAST

Employment Density		
Major Office	27.0	m2 per employee
Population Related	50.0	m2 per employee
Emp. Land Industrial	110.0	m2 per employee
Other Rural Based	0.0	m2 per employee

Mid-Year	Major Office	Population Related	Emp. Land Industrial	Other Rural Based	Total for DC Study
2021					
2022	432	22,900	8,910	0	32,242
2023	432	23,250	9,020	0	32,702
2024	432	23,600	9,020	0	33,052
2025	432	24,000	9,130	0	33,562
2026	**459**	**24,350**	**9,130**	**0**	**33,939**
2027	459	24,700	9,240	0	34,399
2028	459	25,100	9,350	0	34,909
2029	459	25,550	9,350	0	35,359
2030	459	25,850	9,460	0	35,769
2031	**459**	**26,400**	**9,460**	**0**	**36,319**
2032	459	27,600	9,570	0	37,629
2033	486	28,000	9,680	0	38,166
2024 - 2033	4,563	255,150	93,390	0	353,103

Source: Hemson Consulting Ltd., 2024

Appendix B

General Services Technical Appendix

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. Seven General Services have been analysed as part of the Development Charges Background Study:

Appendix B.1	Library Services
Appendix B.2	Fire Protection Services
Appendix B.3	Parks and Recreation
Appendix B.4	Services Related to a Highway: Public Works
Appendix B.5	Development-Related Studies

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

A. 15-Year Historical Service Levels and Calculation of Maximum Allowable Funding Envelope

Table 1 presents the data used to determine the 15-year historical service level. The DCA and O. Reg. 82/98 require that development charges be set at a level no higher than the average service level provided in the City. This must be done over the 15-year period immediately preceding the preparation of the background study, on a service-by-service basis. For the purpose of this study, the historical inventory period has been defined as 2009 to 2023.

O. Reg. 82/98 requires that when defining and determining historical service levels both the quantity and quality of service be taken into consideration. In most cases, the service levels are initially established in quantitative terms.

For example, service levels for buildings are presented in terms of square feet. The qualitative aspect is introduced by considering the monetary value of the facility or service. In the case of buildings, for example, the cost would be shown in terms of cost per square foot to replace or construct a facility of the same quality. This approach helps to ensure that the 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, recent tenders and experience with costs to acquire or construct similar facilities, equipment and infrastructure in comparable municipalities.

The final page of Table 1 shows the calculation of the "maximum allowable" funding envelope. The maximum allowable is defined as the 15-year historical service level (expressed as either $/capita or $/population and employment) multiplied by the forecast increase in net population 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 15-year historical service level is maintained.

There is also a requirement in the DCA to consider "excess capacity" within the City's existing infrastructure that may be available to partially meet the future servicing requirements. If Council has expressed its intent before or at the time the capacity was created to recoup the cost of providing the capacity from new development, it is considered "committed excess capacity" under the DCA, and the associated capital cost is eligible for recovery. The development of the capital programs takes into consideration any available, or useable, servicing capacity with existing infrastructure. 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.

B. 15-Year Historical Service Levels and Calculation of Maximum Allowable Funding Envelope

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, the City's master plans and capital budgets, Hemson in collaboration with City staff has developed a development-related capital program which sets out the projects required to service anticipated growth for the 10-year period from 2024 to 2033.

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.

Although deemed development-related, not all of the net development-related capital program may be recoverable from development charges in the period from 2024 to 2033. For some of the services, a portion of the capital program will service growth that will not occur until after 2033. This portion of the capital program is either deemed "pre-built" service capacity to be considered as committed excess capacity to be recovered under future development, or is a service level increase.

The remaining portion of the net capital program represents the development-related cost that may be included in the development charge. In all cases, as required, this amount is equal to or less than the maximum allowable capital amount as calculated on the final page of Table 1. The result is the discounted development-related net capital cost that is eligible for recovery against growth over the period from 2024 to 2033.

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 services of Fire Protection Services, Services Related to a Highway: Public Works and Fleet, and Development-Related Studies, the growth-related costs have been apportioned as 77% residential and 23% non-residential. This apportionment is based on the anticipated shares of gross population (i.e. population growth in new units) and employment growth over the 10-year forecast period.

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

The residential share of the 2024-2033 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.

C. 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% is used for the funding requirements, an interest rate of 3.5% is used for positive opening balances, and a rate of 5.5% is used for negative opening balances.

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

Appendix B.1

Library Services

Library Services

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. The following discusses the individual components included in the Library Services category. The analysis is set out in the tables which follow.

Table B.1-1	Historical Service Levels and Calculation of 15-Year Average Service Level
Table B.1-2	2024-2033 Development-Related Capital Forecast and Calculation of the Growth-Related Net Capital Costs
Table B.1-3	Cash Flow Analysis

A. 15-Year Historical Service Levels and Calculation of Maximum Allowable Funding Envelope

Table B.1-1 displays the Library Board 15-year historical inventory for buildings, land, materials, and furniture and equipment (excluding computer equipment).

The total gross floor area of the Victoria Avenue Branch, Chippawa Branch, Stamford Centre Branch, and the Community Centre Branch total approximately 60,700 square feet with a replacement value of the library buildings is $30.36 million. The library buildings occupy approximately 2.43 acres of land worth $1.01 million. The materials found at the four branches, which include all collection materials, are valued at $8.71 million and the furniture and equipment is valued at $4.74 million. Finally, the library owns two vehicles which have a replacement value of $100,000.

The 2023 full replacement value of the inventory of capital assets for Library Services for the City amounts to $44.92 million and the 15-year historical average service level is $703.82 per capita.

The historical service level multiplied by the 10-year forecast of net population growth results in a 10-year maximum allowable funding envelope of $11.21 million (15,932 net population growth X historical service level of $703.82/capita). Table 1 provides a summary of the level of service and the calculation of the 10-year funding envelope from 2024 to 2033. The calculation of the maximum allowable funding envelope is summarized as follows:

10-Year Funding Envelope Calculation

15-Year Average Service Level (2009 – 2023)	$703.82
Net Population Growth (2024 – 2033)	15,932
Maximum Allowable Funding Envelope	**$11,213,260**

B. Development-Related Capital Program

The Library capital program includes three building-related projects dispersed throughout the 10-year planning period. These projects include a provision for replacing and expanding the Chippawa Branch (10,000 sq.ft.) for $10.00 million, a temporary Chippawa Branch for use while the larger undertaking of the expansion is being completed (1,500 sq.ft.) for $750,000, and the remaining cost recovery of the expansion of the Community Centre Library Branch for $176,000. A book vending machine for $57,000 is also included in the capital program. Approximately, $5.49 million has been removed from the eligible costs for the Chippawa Branch expansion as BTE share as the expansion also contains a replacement component, and reflects the current library space versus the expanded proposed library space.

The remainder of the Library Services capital program includes additions to the collection materials for each new branch, and new materials for the

Chippawa Branch for a total of $1.32 million. The BTE share for the Chippawa Branch expansion (55%) has been applied to the new materials for the Chippawa Branch.

Various equipment and vehicles have been included in the capital program, including equipment for the Chippawa Branch expansion, a new Library Van, Pickup Lockers, and customization of a Book Mobile. Approximately $330,000 of BTE shares have been identified for the projects.

In total, approximately $644,500 is available in DC reserves for Library Services and has been removed from the DC eligible costs. No post-period shares have been identified. Approximately $7.00 million of the DC costs are eligible for in-period recovery, and is allocated entirely against future residential development in the City of Niagara Falls. This results in an unadjusted development charge of $320.91 per capita.

C. Cash Flow Analysis

The current balance in the Library Services development charge reserve fund is approximately $644,500 and that is included as the opening balance. After cash flow adjustments, the residential calculated charge increases to $345.18 per capita. The increase reflects the front-ended nature of the capital program.

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

LIBRARY SERVICES SUMMARY

15-year Hist. Service Level per capita	2024 - 2033 Development-Related Capital Program Total	Net DC Recoverable	Unadjusted Development Charge $/capita	$/sq.m	**Adjusted Development Charge $/capita**	**$/sq.m**
$703.82	$13,675,181	$6,995,024	$320.91	$0.00	**$345.18**	**$0.00**

APPENDIX B.1
TABLE 1

CITY OF NIAGARA FALLS
INVENTORY OF CAPITAL ASSETS
LIBRARY SERVICES

BUILDINGS	# of Square Feet															UNIT COST
Branch Name	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	($/sq.ft.)
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	47,365	47,365	47,365	$500
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	5,487	5,487	5,487	$500
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	5,967	-	-	$500
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	7,865	7,865	7,865	$500
Total (sq.ft.)	**66,684**	**66,684**	**66,684**	**66,684**	**66,684**	**66,684**	**66,684**	**66,684**	**66,684**	**66,684**	**66,684**	**66,684**	**66,684**	**60,717**	**60,717**	
Total ($000)	**$33,342.0**	**$33,342.0**	**$33,342.0**	**$33,342.0**	**$33,342.0**	**$33,342.0**	**$33,342.0**	**$33,342.0**	**$33,342.0**	**$33,342.0**	**$33,342.0**	**$33,342.0**	**$33,342.0**	**$30,358.5**	**$30,358.5**	

LAND	# of Acres															UNIT COST
Branch Name	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	($/acre)
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	2.14	2.14	2.14	$416,000
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	0.11	0.11	0.11	$416,000
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	0.14	-	-	$416,000
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	0.18	0.18	0.18	$416,000
Total (acre)	**2.57**	**2.57**	**2.57**	**2.57**	**2.57**	**2.57**	**2.57**	**2.57**	**2.57**	**2.57**	**2.57**	**2.57**	**2.57**	**2.43**	**2.43**	
Total ($000)	**$1,069.5**	**$1,069.5**	**$1,069.5**	**$1,069.5**	**$1,069.5**	**$1,069.5**	**$1,069.5**	**$1,069.5**	**$1,069.5**	**$1,069.5**	**$1,069.5**	**$1,069.5**	**$1,069.5**	**$1,012.5**	**$1,012.5**	

APPENDIX B.1
TABLE 1

CITY OF NIAGARA FALLS
INVENTORY OF CAPITAL ASSETS
LIBRARY SERVICES

MATERIALS	# of Collection Materials															UNIT COST
Type of Collection	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	($/item)
Books	286,796	291,207	288,037	273,220	273,220	269,805	255,758	239,641	166,929	166,929	163,679	160,429	153,928	140,927	114,925	$57.36
Periodicals	14,405	14,433	14,462	14,634	14,809	14,986	11,102	11,617	5,502	5,502	5,161	4,820	4,139	2,775	48	$9
Microfilms	2,215	2,230	2,245	2,260	2,260	2,084	1,305	1,322	1,337	1,337	1,333	1,338	1,344	1,355	1,376	$380
CD-ROMS	710	549	537	314	314	125	123	28	23	23	-	-	-	-	-	$95
Video Tapes	6,622	5,469	4,033	3,385	3,385	1,532	1,520	73	58	58	46	34	22	10	-	$9
Compact Discs	6,472	6,814	6,703	6,671	6,671	6,682	6,003	5,770	4,831	4,831	4,738	4,646	4,460	4,089	3,347	$36
Talking Books/CD Books	3,748	3,685	4,312	3,553	3,553	3,886	4,110	4,034	3,097	3,097	3,059	3,020	2,944	2,791	2,484	$83
Records & Other Audio Cassettes	224	790	87	42	42	78	78	71	47	47	-	-	-	-	-	$0
DVDs	11,487	13,928	16,157	18,903	18,903	25,687	25,836	26,469	22,305	22,305	21,814	21,323	20,341	18,378	14,450	$49
Video Games	109	309	440	593	593	699	773	839	1,037	1,037	1,092	1,147	1,257	1,476	1,915	$90
E-Periodicals	-	42,387	39,462	21,388	21,388	51,992	49,234	10,433	10,237	10,237	17	-	24	33	21	$435
E-Books/Audiobooks (downloadable) - Annual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,181	$44
E-Books/Audiobooks (downloadable) - Total Titles	650	4,562	15,475	39,801	39,801	74,848	79,503	125,517	127,641	127,641	-	-	-	-	-	$2
E-Books/Audiobooks (downloadable) - Total Owned	-	-	-	-	-	-	-	-	-	-	5,067	4,901	7,001	7,790	8,142	$2
Playaways	-	146	320	605	605	886	921	1,011	812	812	824	837	861	910	1,008	$85
Electronic Database Subscription	41	43	46	31	31	18	38	19	19	19	18	15	15	8	8	$7,742
Streamable content	-	-	-	-	-	-	-	-	-	3	3	3	3	3	3	$13,737
Game Consoles	-	-	-	-	-	-	-	-	-	-	-	-	-	12	15	$320
Board Games	-	-	-	-	-	-	-	-	-	-	127	127	127	127	127	$40
Non-Traditional	-	-	-	-	-	-	-	-	-	-	115	115	115	115	115	$170
Hot Spots	-	-	-	-	-	-	-	-	-	-	-	-	10	10	10	$130
Chromebooks (lending)	-	-	-	-	-	-	-	-	-	-	-	-	40	40	40	$408
Launchpads	-	-	-	-	-	-	25	26	26	27	29	33	41	57	89	$200
Seeds	-	-	-	-	-	-	-	-	-	-	2,875	3,123	1,244	1,145	2,307	$0.31
Book Vending Machine	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	$57,000
Total (#)	**333,479**	**386,552**	**392,316**	**385,400**	**385,575**	**453,308**	**436,329**	**426,871**	**343,902**	**343,906**	**209,998**	**205,911**	**197,916**	**182,051**	**151,612**	
Total ($000)	**$18,971.5**	**$37,843.0**	**$36,608.4**	**$27,908.7**	**$27,910.2**	**$41,303.7**	**$39,147.7**	**$21,348.3**	**$16,735.7**	**$16,777.1**	**$11,882.1**	**$11,640.2**	**$11,247.8**	**$10,354.9**	**$8,708.3**	

FURNITURE AND EQUIPMENT	Total Value of Furniture and Equipment ($)														
Branch Name	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
All Branches	$5,201,352	$5,201,352	$5,201,352	$5,201,352	$5,201,352	$5,201,352	$5,201,352	$5,201,352	$5,201,352	$5,201,352	$5,201,352	$5,201,352	$5,201,352	$4,735,926	$4,735,926
Total ($000)	**$5,201.4**	**$5,201.4**	**$5,201.4**	**$5,201.4**	**$5,201.4**	**$5,201.4**	**$5,201.4**	**$5,201.4**	**$5,201.4**	**$5,201.4**	**$5,201.4**	**$5,201.4**	**$5,201.4**	**$4,735.9**	**$4,735.9**

VEHICLES	# of Vehicles															UNIT COST
Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	($/vehicle)
Library Van	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	$50,000
Total (#)	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**2**	**2**	**2**	
Total ($000)	**$50.0**	**$50.0**	**$50.0**	**$50.0**	**$50.0**	**$50.0**	**$50.0**	**$50.0**	**$50.0**	**$50.0**	**$50.0**	**$50.0**	**$100.0**	**$100.0**	**$100.0**	

APPENDIX B.1
TABLE 1

CITY OF NIAGARA FALLS
CALCULATION OF SERVICE LEVELS
LIBRARY SERVICES

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Historical Population	82,671	82,834	82,997	83,988	84,991	86,006	87,033	88,071	89,305	90,556	91,825	93,111	94,415	95,861	97,327

INVENTORY SUMMARY ($000)

Buildings	$33,342.0	$33,342.0	$33,342.0	$33,342.0	$33,342.0	$33,342.0	$33,342.0	$33,342.0	$33,342.0	$33,342.0	$33,342.0	$33,342.0	$33,342.0	$30,358.5	$30,358.5
Land	$1,069.5	$1,069.5	$1,069.5	$1,069.5	$1,069.5	$1,069.5	$1,069.5	$1,069.5	$1,069.5	$1,069.5	$1,069.5	$1,069.5	$1,069.5	$1,012.5	$1,012.5
Materials	$18,971.5	$37,843.0	$36,608.4	$27,908.7	$27,910.2	$41,303.7	$39,147.7	$21,348.3	$16,735.7	$16,777.1	$11,882.1	$11,640.2	$11,247.8	$10,354.9	$8,708.3
Furniture And Equipment	$5,201.4	$5,201.4	$5,201.4	$5,201.4	$5,201.4	$5,201.4	$5,201.4	$5,201.4	$5,201.4	$5,201.4	$5,201.4	$5,201.4	$5,201.4	$4,735.9	$4,735.9
Vehicles	$50.0	$50.0	$50.0	$50.0	$50.0	$50.0	$50.0	$50.0	$50.0	$50.0	$50.0	$50.0	$100.0	$100.0	$100.0
Total ($000)	**$58,634.4**	**$77,505.9**	**$76,271.3**	**$67,571.6**	**$67,573.1**	**$80,966.6**	**$78,810.6**	**$61,011.2**	**$56,398.6**	**$56,440.0**	**$51,545.0**	**$51,303.1**	**$50,960.7**	**$46,561.9**	**$44,915.3**

SERVICE LEVEL ($/capita)

																Average Service Level
Buildings	$403.31	$402.52	$401.73	$396.99	$392.30	$387.67	$383.10	$378.58	$373.35	$368.19	$363.10	$358.09	$353.14	$316.69	$311.92	$372.71
Land	$12.94	$12.91	$12.89	$12.73	$12.58	$12.44	$12.29	$12.14	$11.98	$11.81	$11.65	$11.49	$11.33	$10.56	$10.40	$12.01
Materials	$229.48	$456.85	$441.08	$332.29	$328.39	$480.24	$449.80	$242.40	$187.40	$185.27	$129.40	$125.01	$119.13	$108.02	$89.47	$260.28
Furniture And Equipment	$62.92	$62.79	$62.67	$61.93	$61.20	$60.48	$59.76	$59.06	$58.24	$57.44	$56.64	$55.86	$55.09	$49.40	$48.66	$58.14
Vehicles	$0.60	$0.60	$0.60	$0.60	$0.59	$0.58	$0.57	$0.57	$0.56	$0.55	$0.54	$0.54	$1.06	$1.04	$1.03	$0.67
Total ($/capita)	**$709.25**	**$935.68**	**$918.96**	**$804.54**	**$795.06**	**$941.41**	**$905.53**	**$692.75**	**$631.53**	**$623.26**	**$561.34**	**$550.99**	**$539.75**	**$485.72**	**$461.49**	**$703.82**

CITY OF NIAGARA FALLS
CALCULATION OF MAXIMUM ALLOWABLE
LIBRARY SERVICES

15-Year Funding Envelope Calculation	
15 Year Average Service Level 2009 - 2023	$703.82
Net Population Growth 2024 - 2033	15,932
Maximum Allowable Funding Envelope	**$11,213,260**

APPENDIX B.1
TABLE 2

CITY OF NIAGARA FALLS
DEVELOPMENT-RELATED CAPITAL PROGRAM
LIBRARY SERVICES

Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs		
					BTE (%)	Replacement & BTE Shares		Available DC Reserves	2024-2033	Post 2033
1.0 LIBRARY SERVICES										
1.1 Buildings, Land & Equipment										
1.1.1 Chippawa Project - Library Provision (10,000 sq. ft.)	2024 - 2027	$ 10,000,000	$ -	$ 10,000,000	55%	$ 5,487,000	$ 4,513,000	$ 644,457	$ 3,868,543	$ -
1.1.2 Novel Branch - Book Vending Machine	2026 - 2026	$ 57,000	$ -	$ 57,000	0%	$ -	$ 57,000	$ -	$ 57,000	$ -
1.1.3 Chippawa Temporary Branch (1,500 sq.ft.)	2024 - 2033	$ 750,000	$ -	$ 750,000	0%	$ -	$ 750,000	$ -	$ 750,000	$ -
1.1.4 Expansion of Community Centre (Library Portion)	2024 - 2033	$ 176,011	$ -	$ 176,011	0%	$ -	$ 176,011	$ -	$ 176,011	$ -
Subtotal Buildings, Land & Equipment		$ 10,983,011	$ -	$ 10,983,011		$ 5,487,000	$ 5,496,011	$ 644,457	$ 4,851,555	$ -
1.2 Collection Material Acquisitions										
1.2.1 Chippawa Project - Library Materials Provision	2024 - 2027	$ 400,000	$ -	$ 400,000	55%	$ 219,480	$ 180,520	$ -	$ 180,520	$ -
1.2.2 Provision for Additional Collection Materials	2024 - 2033	$ 919,000	$ -	$ 919,000	0%	$ -	$ 919,000	$ -	$ 919,000	$ -
Subtotal Collection Material Acquisitions		$ 1,319,000	$ -	$ 1,319,000		$ 219,480	$ 1,099,520	$ -	$ 1,099,520	$ -
1.3 Equipment & Vehicles										
1.3.1 Chippawa Project - Library Equipment Provision	2024 - 2027	$ 1,200,000	$ -	$ 1,200,000	27%	$ 329,220	$ 870,780	$ -	$ 870,780	$ -
1.3.2 Library Van	2025 - 2025	$ 50,000	$ -	$ 50,000	0%	$ -	$ 50,000	$ -	$ 50,000	$ -
1.3.3 Pickup Lockers	2026 - 2026	$ 55,000	$ -	$ 55,000	0%	$ -	$ 55,000	$ -	$ 55,000	$ -
1.3.4 Book Mobile Customization	2024 - 2024	$ 68,170	$ -	$ 68,170	0%	$ -	$ 68,170	$ -	$ 68,170	$ -
Subtotal Equipment & Vehicles		$ 1,373,170	$ -	$ 1,373,170		$ 329,220	$ 1,043,950	$ -	$ 1,043,950	$ -
TOTAL LIBRARY SERVICES		**$ 13,675,181**	**$ -**	**$ 13,675,181**		**$ 6,035,700**	**$ 7,639,481**	**$ 644,457**	**$ 6,995,024**	**$ -**

Residential Development Charge Calculation		
Residential Share of 2024 - 2033 DC Eligible Costs	100%	$6,995,024
10-Year Growth in Population in New Units		21,798
Unadjusted Development Charge Per Capita		**$320.91**
Non-Residential Development Charge Calculation		
Non-Residential Share of 2024 - 2033 DC Eligible Costs	0%	$0
10-Year Growth in Square Metres		353,103
Unadjusted Development Charge Per Square Metre		**$0.00**

2024 - 2033 Net Funding Envelope	$11,213,260
Uncommitted Reserve Fund Balance	
Balance as at December 31, 2023	$644,457

APPENDIX B.1
TABLE 3

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

LIBRARY SERVICES	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	TOTAL
OPENING CASH BALANCE ($000)	$644.5	($290.8)	($1,250.5)	($2,333.6)	($3,359.6)	($2,903.1)	($2,392.5)	($1,823.9)	($1,190.9)	($624.4)	
2024-2033 RESIDENTIAL FUNDING REQUIREMENTS											
- Library Services: Prior Growth	$161.1	$161.1	$161.1	$161.1	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$644.5**
- Library Services: Non Inflated	$1,482.6	$1,464.5	$1,526.5	$1,414.5	$184.5	$184.5	$184.5	$184.5	$184.5	$184.5	**$6,995.0**
- Library Services: Inflated	$1,643.7	$1,658.1	$1,755.8	$1,672.0	$199.7	$203.7	$207.8	$211.9	$216.2	$220.5	**$7,989.4**
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	2,062	2,101	2,140	2,179	2,221	2,263	2,305	2,352	2,070	2,104	**21,798**
REVENUE											
- DC Receipts: Inflated	$711.6	$739.7	$768.6	$798.3	$829.9	$862.5	$896.0	$932.6	$837.3	$867.9	**$8,244.3**
INTEREST											
- Interest on Opening Balance	$22.6	($16.0)	($68.8)	($128.3)	($184.8)	($159.7)	($131.6)	($100.3)	($65.5)	($34.3)	**($866.8)**
- Interest on In-year Transactions	($25.6)	($25.3)	($27.1)	($24.0)	$11.0	$11.5	$12.0	$12.6	$10.9	$11.3	**($32.7)**
TOTAL REVENUE	$708.5	$698.4	$672.6	$645.9	$656.2	$714.3	$776.4	$844.9	$782.6	$844.9	**$7,344.9**
CLOSING CASH BALANCE	($290.8)	($1,250.5)	($2,333.6)	($3,359.6)	($2,903.1)	($2,392.5)	($1,823.9)	($1,190.9)	($624.4)	$0.0	

2024 Adjusted Charge Per Capita	**$345.18**

Allocation of Capital Program	
Residential Sector	100.0%
Non-Residential Sector	0.0%
Rates for 2024	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Appendix B.2

Fire Protection Services

Fire Protection Services

The Niagara Falls Fire Department provides for fire suppression, emergency response, fire prevention and public education through six fire stations throughout the City. The following discusses the individual components included in the Protection Services category. The analysis is set out in the tables which follow.

Table B.2-1	Historical Service Levels and Calculation of 15-Year Average Service Level
Table B.2-2	2024-2033 Development-Related Capital Forecast and Calculation of the Growth-Related Net Capital Costs
Table B.2-3	Cash Flow Analysis

A. 15-Year Historical Service Levels and Calculation of Maximum Allowable Funding Envelope

The Fire Department inventory of capital assets includes stations, other buildings/ structures and land. The total space provided at the fire stations is approximately 63,463 square feet (which includes an adjustment for excess capacity associated with the recovery of the outstanding debenture for Station 7) and is valued at approximately $43.36 million. The value of the other related fire buildings adds an additional $1.28 million to the inventory. The land used for the stations and structures occupy roughly 13.76 acres of land which is valued at $5.73 million. Personal firefighting equipment amounts to $1.90 million and station equipment adds another $3.70 to the inventory. The department owns 41 vehicles with a total replacement value that amounts to $28.81 million.

The current value of the capital infrastructure including fire halls, other buildings/structures, land, personal fighter fighting equipment, furniture and

equipment and vehicles is approximately $84.76 million and creates an average service level of $589.36 per capita.

The historical service level multiplied by the 10-year forecast of net population and employment growth results in a 10-year maximum allowable funding envelope of $13.15 million (22,305 net population and employment growth X historical service level of $589.36/capita). Table 1 provides a summary of the level of service and the calculation of the 10-year funding envelope from 2024 to 2033. The calculation of the maximum allowable funding envelope is summarized as follows:

10-Year Funding Envelope Calculation

15-Year Average Service Level (2009 – 2023)	$589.36
Net Pop. Growth (2024 – 2033)	22,305
Maximum Allowable Funding Envelope	**$13,145,675**

B. Development-Related Capital Program

The 2024-2033 development-related capital program includes for the recovery of the outstanding debenture payments associated with Station 7 for $6.95 million. A provision for a future fire station, and associated vehicles and equipment for $7.00 million. The location is unidentified until the Fire Master Plan is complete. The remainder of the capital program is related to an emergency preparedness investment for $220,000, small equipment and tools for $3,260.

Altogether, the 10-year capital forecast for Fire Protection amounts to $14.18 million. There are no grants or subsidies, replacement shares or benefit to existing shares identified and therefore the entire program is considered eligible for DC funding. In total, $3.48 million is available in the Fire Services DC reserve fund and is removed from the DC eligible costs. No portions of post-period benefits have been identified. After these

adjustments, the remaining $10.70 million is deemed to be related to development between 2024 -2033 planning period.

The development-related cost is allocated 77%, or $8.28 million, against new residential development, and 23%, or $2.42, 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 $379.83 per capita and $6.86 per square metre of non-residential gross floor area.

C. Cash Flow Analysis

The current balance in the Fire Protection development charge reserve fund of $3.48 million is included in the cash-flow calculations. The interest associated with the outstanding debentures for Station 7 are also included in the analysis.

After cash flow consideration, the residential charge increases to $414.91 per capita, the non-residential charge increases to $7.50 per square metre. The increase reflects the timing of capital expenditures and development charge revenues.

The following table summarizes the calculation of the Fire Protection development charge:

FIRE PROTECTION SUMMARY

15-year Hist. Service Level per pop & emp	2024 - 2033 Development-Related Capital Program Total	Net DC Recoverable	Unadjusted Development Charge $/capita	$/sq.m	**Adjusted Development Charge $/capita**	**$/sq.m**
$589.36	$14,181,501	$10,700,003	$379.83	$6.86	**$414.91**	**$7.50**

APPENDIX B.2
TABLE 1

CITY OF NIAGARA FALLS
INVENTORY OF CAPITAL ASSETS
FIRE PROTECTION

FIRE HALLS	# of Square Feet															UNIT COST
Station Name	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	($/sq. ft.)
Station 1 - 5815 Morrison St.	18,919	18,919	18,919	18,919	18,919	18,919	18,919	18,919	18,919	18,919	18,919	18,919	18,919	18,919	18,919	$650
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	5,613	5,613	$650
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	6,866	6,866	6,866	6,866	6,866	$650
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	7,279	7,279	$650
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	8,388	8,388	$650
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	8,870	8,870	8,870	8,870	$650
Station 7 - 8530 Lundy's Lane	-	-	-	-	-	-	-	-	-	-	-	15,000	15,000	15,000	15,000	$930
Station 7 - 8530 Lundy's Lane (Excess Capacity)	-	-	-	-	-	-	-	-	-	-	-	*(7,472)*	*(7,472)*	*(7,472)*	*(7,472)*	*$930*
Total (sq.ft.)	**54,435**	**54,435**	**54,435**	**54,435**	**54,435**	**54,435**	**54,435**	**54,435**	**54,435**	**55,935**	**55,935**	**63,463**	**63,463**	**63,463**	**63,463**	
Total ($000)	**$35,382.8**	**$35,382.8**	**$35,382.8**	**$35,382.8**	**$35,382.8**	**$35,382.8**	**$35,382.8**	**$35,382.8**	**$35,382.8**	**$36,357.8**	**$36,357.8**	**$43,358.8**	**$43,358.8**	**$43,358.8**	**$43,358.8**	

OTHER BUILDINGS/STRUCTURES	Total Value of Buildings ($)														
Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
5815 Morrison Street															
Training Tower #1	$400,000	$400,000	$400,000	$400,000	$400,000	$400,000	$400,000	$400,000	$400,000	$400,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000
Confined Space	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000
Storage Garage	$65,000	$65,000	$65,000	$65,000	$65,000	$65,000	$65,000	$65,000	$65,000	$65,000	$65,000	$65,000	$65,000	$65,000	$65,000
Communication Tower	$75,000	$75,000	$75,000	$75,000	$75,000	$75,000	$75,000	$75,000	$75,000	$75,000	$75,000	$75,000	$75,000	$75,000	$75,000
Firefighters Survival Building	$75,000	$75,000	$75,000	$75,000	$75,000	$75,000	$75,000	$75,000	$75,000	$75,000	$75,000	$75,000	$75,000	$75,000	$75,000
Total ($000)	**$678.0**	**$678.0**	**$678.0**	**$678.0**	**$678.0**	**$678.0**	**$678.0**	**$678.0**	**$678.0**	**$678.0**	**$1,278.0**	**$1,278.0**	**$1,278.0**	**$1,278.0**	**$1,278.0**

LAND	# of Acres															UNIT COST
Station Name	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	($/acre)
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	1.18	1.18	$416,000
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	1.33	1.33	$416,000
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	0.79	0.79	$416,000
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	0.50	0.50	$416,000
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	4.66	4.66	$416,000
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	3.95	3.95	$416,000
Station 7 - 8530 Lundy's Lane	-	-	-	-	-	-	-	-	-	-	-	1.35	1.35	1.35	1.35	$416,000
Total (acres)	**12.41**	**12.41**	**12.41**	**12.41**	**12.41**	**12.41**	**12.41**	**12.41**	**12.41**	**12.41**	**12.41**	**13.76**	**13.76**	**13.76**	**13.76**	
Total ($000)	**$5,162.6**	**$5,162.6**	**$5,162.6**	**$5,162.6**	**$5,162.6**	**$5,162.6**	**$5,162.6**	**$5,162.6**	**$5,162.6**	**$5,162.6**	**$5,162.6**	**$5,725.0**	**$5,725.0**	**$5,725.0**	**$5,725.0**	

PERSONAL FIREFIGHTER EQUIPMENT	Total Value of Furniture & Equipment ($)															UNIT COST
Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	($/outfit)
Cost to Outfit a Firefighter	295	295	295	295	295	315	335	355	370	370	284	241	220	198	213	$8,885
Total (#)	**295**	**295**	**295**	**295**	**295**	**315**	**335**	**355**	**370**	**370**	**284**	**241**	**220**	**198**	**213**	
Total ($000)	**$2,621.1**	**$2,621.1**	**$2,621.1**	**$2,621.1**	**$2,621.1**	**$2,798.8**	**$2,976.5**	**$3,154.2**	**$3,287.5**	**$3,287.5**	**$2,523.3**	**$2,141.3**	**$1,950.3**	**$1,759.2**	**$1,892.5**	

APPENDIX B.2
TABLE 1

CITY OF NIAGARA FALLS
INVENTORY OF CAPITAL ASSETS
FIRE PROTECTION

EQUIPMENT	Total Value of Equipment ($)														
Branch Name	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
SCBA	$715,000	$715,000	$715,000	$715,000	$715,000	$750,000	$787,500	$826,875	$868,218	$900,000	$900,000	$900,000	$900,000	$900,000	$1,290,500
Air Compressor	$40,000	$40,000	$40,000	$40,000	$40,000	$44,000	$48,400	$53,240	$58,564	$64,420	$64,420	$64,420	$64,420	$64,420	$92,400
Cylinders	$311,100	$311,100	$311,100	$311,100	$311,100	$326,655	$342,987	$360,136	$378,142	$397,049	$397,049	$397,049	$397,049	$397,049	$569,300
Terminal	$0	$85,000	$85,000	$85,000	$85,000	$90,000	$95,000	$100,000	$105,000	$110,000	$110,000	$110,000	$110,000	$110,000	$157,700
Pagers, Radios, Mobiles	$492,000	$504,000	$516,000	$528,000	$540,000	$552,000	$564,000	$576,000	$588,000	$600,000	$600,000	$600,000	$600,000	$600,000	$860,300
Defibrillators	$214,000	$214,000	$214,000	$214,000	$214,000	$130,000	$130,000	$130,000	$130,000	$130,000	$130,000	$130,000	$130,000	$130,000	$186,400
Hazardous Materials Equipment	$36,000	$36,000	$36,000	$36,000	$36,000	$37,000	$38,000	$39,000	$40,000	$41,000	$41,000	$41,000	$41,000	$41,000	$58,800
Water Rescue Equipment	$30,000	$30,000	$30,000	$30,000	$30,000	$32,500	$35,000	$37,500	$40,000	$42,500	$42,500	$42,500	$42,500	$42,500	$60,900
Technical Rope Rescue Equipment	$100,000	$100,000	$100,000	$100,000	$100,000	$105,000	$110,000	$115,000	$120,000	$125,000	$125,000	$125,000	$125,000	$125,000	$179,200
Forcible Entry Training Props	$12,000	$12,000	$12,000	$12,000	$12,000	$12,500	$13,000	$13,500	$14,000	$14,500	$14,500	$14,500	$14,500	$14,500	$20,800
Sea Containers	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$28,700
Washers	$29,000	$29,000	$29,000	$29,000	$29,000	$35,000	$41,000	$47,000	$53,000	$60,000	$60,000	$60,000	$60,000	$60,000	$86,000
Trench Rescue Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$100,000	$100,000	$100,000	$100,000
Total ($000)	**$1,999.1**	**$2,096.1**	**$2,108.1**	**$2,120.1**	**$2,132.1**	**$2,134.7**	**$2,224.9**	**$2,318.3**	**$2,414.9**	**$2,504.5**	**$2,504.5**	**$2,604.5**	**$2,604.5**	**$2,604.5**	**$3,691.0**

VEHICLES	# of Vehicles															UNIT COST
Vehicle Type	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**($/vehicle)**
Cars	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	$45,000
Pickups	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	$70,000
Vans	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	$60,000
Trailers	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	$10,000
Trench Trailer	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	$20,000
Station 1 - 5815 Morrison St.																
Pumper 1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	$1,400,000
Rescue 1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	$1,400,000
Aerial 1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	$3,000,000
Reserve Pumper 1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	$1,400,000
Squad 1 (Truck)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	$250,000
Emergency Response Vessel (Zodiac Boat)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	$0
Station 2 - 7036 McLeod Rd.																
Aerial 2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	$2,000,000
Rescue 2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	$1,400,000
Reserve Pumper 2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	$1,400,000
Station 3 - 3401 Dorchester Rd.																
Pumper 3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	$1,400,000
Reserve Pumper 3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	$1,400,000
Rescue 3									1	1	1	1	1	1	1	$1,400,000
Station 4 - 8696 Banting Ave.																
Pumper 4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	$1,400,000
Engine 4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	$1,400,000
Rescue 4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	$700,000
Marine 1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	$250,000
Marine 2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	$250,000
Station 5 - 11208 Sodom Rd.																
Pumper 5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	$1,400,000
Tanker 5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	$1,000,000
Rescue 5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	$700,000
Station 6 - 8037 Schisler Rd.																
Pumper 6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	$1,400,000
Tanker 6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	$1,000,000
Rescue 6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	$700,000
Station 7 - 8530 Lundy's Lane																
Pumper 7	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	$1,400,000
Total (#)	**35**	**35**	**35**	**35**	**35**	**35**	**35**	**35**	**36**	**37**	**37**	**39**	**39**	**39**	**41**	
Total ($000)	**$25,670.0**	**$25,670.0**	**$25,670.0**	**$25,670.0**	**$25,670.0**	**$25,670.0**	**$25,670.0**	**$25,670.0**	**$27,070.0**	**$27,140.0**	**$27,140.0**	**$28,560.0**	**$28,560.0**	**$28,560.0**	**$28,810.0**	

APPENDIX B.2
TABLE 1

CITY OF NIAGARA FALLS
CALCULATION OF SERVICE LEVELS
FIRE PROTECTION

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Historical Population	82,671	82,834	82,997	83,988	84,991	86,006	87,033	88,071	89,305	90,556	91,825	93,111	94,415	95,861	97,327
Historical Employment	39,971	39,741	39,512	39,692	39,873	40,054	40,236	40,419	39,874	39,336	38,805	38,282	37,766	38,344	38,930
Total Historical Population & Employment	122,642	122,575	122,509	123,680	124,864	126,060	127,269	128,490	129,179	129,892	130,630	131,393	132,181	134,205	136,257

INVENTORY SUMMARY ($000)

Fire Halls	$35,382.8	$35,382.8	$35,382.8	$35,382.8	$35,382.8	$35,382.8	$35,382.8	$35,382.8	$35,382.8	$36,357.8	$36,357.8	$43,358.8	$43,358.8	$43,358.8	$43,358.8
Other Buildings/Structures	$678.0	$678.0	$678.0	$678.0	$678.0	$678.0	$678.0	$678.0	$678.0	$678.0	$1,278.0	$1,278.0	$1,278.0	$1,278.0	$1,278.0
Land	$5,162.6	$5,162.6	$5,162.6	$5,162.6	$5,162.6	$5,162.6	$5,162.6	$5,162.6	$5,162.6	$5,162.6	$5,162.6	$5,725.0	$5,725.0	$5,725.0	$5,725.0
Personal Firefighter Equipment	$2,621.1	$2,621.1	$2,621.1	$2,621.1	$2,621.1	$2,798.8	$2,976.5	$3,154.2	$3,287.5	$3,287.5	$2,523.3	$2,141.3	$1,950.3	$1,759.2	$1,892.5
Equipment	$1,999.1	$2,096.1	$2,108.1	$2,120.1	$2,132.1	$2,134.7	$2,224.9	$2,318.3	$2,414.9	$2,504.5	$2,504.5	$2,604.5	$2,604.5	$2,604.5	$3,691.0
Vehicles	$25,670.0	$25,670.0	$25,670.0	$25,670.0	$25,670.0	$25,670.0	$25,670.0	$25,670.0	$27,070.0	$27,140.0	$27,140.0	$28,560.0	$28,560.0	$28,560.0	$28,810.0
Total ($000)	**$71,513.5**	**$71,610.5**	**$71,622.5**	**$71,634.5**	**$71,646.5**	**$71,826.7**	**$72,094.7**	**$72,365.7**	**$73,995.7**	**$75,130.2**	**$74,966.1**	**$83,667.5**	**$83,476.5**	**$83,285.5**	**$84,755.3**

SERVICE LEVEL ($/pop & emp)

															Average Service Level
Fire Halls	$288.50	$288.66	$288.82	$286.08	$283.37	$280.68	$278.02	$275.37	$273.90	$279.91	$278.33	$329.99	$328.03	$323.08	$318.21	$293.40
Other Buildings/Structures	$5.53	$5.53	$5.53	$5.48	$5.43	$5.38	$5.33	$5.28	$5.25	$5.22	$9.78	$9.73	$9.67	$9.52	$9.38	$6.80
Land	$42.09	$42.12	$42.14	$41.74	$41.35	$40.95	$40.56	$40.18	$39.96	$39.75	$39.52	$43.57	$43.31	$42.66	$42.02	$41.46
Personal Firefighter Equipment	$21.37	$21.38	$21.39	$21.19	$20.99	$22.20	$23.39	$24.55	$25.45	$25.31	$19.32	$16.30	$14.75	$13.11	$13.89	$20.31
Equipment	$16.30	$17.10	$17.21	$17.14	$17.08	$16.93	$17.48	$18.04	$18.69	$19.28	$19.17	$19.82	$19.70	$19.41	$27.09	$18.70
Vehicles	$209.31	$209.42	$209.54	$207.55	$205.58	$203.63	$201.70	$199.78	$209.55	$208.94	$207.76	$217.36	$216.07	$212.81	$211.44	$208.70
Total ($/pop & emp)	**$583.11**	**$584.22**	**$584.63**	**$579.19**	**$573.80**	**$569.78**	**$566.47**	**$563.20**	**$572.82**	**$578.41**	**$573.88**	**$636.77**	**$631.53**	**$620.58**	**$622.03**	**$589.36**

CITY OF NIAGARA FALLS
CALCULATION OF MAXIMUM ALLOWABLE
FIRE PROTECTION

15-Year Funding Envelope Calculation	
15 Year Average Service Level 2009 - 2023	$589.36
Net Population & Employment Growth 2024 - 2033	22,305
Maximum Allowable Funding Envelope	**$13,145,675**

APPENDIX B.2
TABLE 2

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		
					BTE (%)	Replacement & BTE Shares		Available DC Reserves	2024-2033	Post 2033
2.0 FIRE PROTECTION										
2.1 Outstanding Debentures										
2.1.1 Station 7 - Principal Payment	2024 - 2024	$ 250,739	$ -	$ 250,739	0%	$ -	$ 250,739	$ 250,739	$ -	$ -
2.1.2 Station 7 - Principal Payment	2025 - 2025	$ 258,140	$ -	$ 258,140	0%	$ -	$ 258,140	$ 258,140	$ -	$ -
2.1.3 Station 7 - Principal Payment	2026 - 2026	$ 265,759	$ -	$ 265,759	0%	$ -	$ 265,759	$ 265,759	$ -	$ -
2.1.4 Station 7 - Principal Payment	2027 - 2027	$ 273,602	$ -	$ 273,602	0%	$ -	$ 273,602	$ 273,602	$ -	$ -
2.1.5 Station 7 - Principal Payment	2028 - 2028	$ 281,678	$ -	$ 281,678	0%	$ -	$ 281,678	$ 281,678	$ -	$ -
2.1.6 Station 7 - Principal Payment	2029 - 2029	$ 289,991	$ -	$ 289,991	0%	$ -	$ 289,991	$ 289,991	$ -	$ -
2.1.7 Station 7 - Principal Payment	2030 - 2030	$ 298,550	$ -	$ 298,550	0%	$ -	$ 298,550	$ -	$ 298,550	$ -
2.1.8 Station 7 - Principal Payment	2031 - 2031	$ 307,362	$ -	$ 307,362	0%	$ -	$ 307,362	$ -	$ 307,362	$ -
2.1.9 Station 7 - Principal Payment	2032 - 2032	$ 316,434	$ -	$ 316,434	0%	$ -	$ 316,434	$ -	$ 316,434	$ -
2.1.10 Station 7 - Principal Payment	2033 - 2033	$ 4,406,987	$ -	$ 4,406,987	0%	$ -	$ 4,406,987	$ -	$ 4,406,987	$ -
Subtotal Outstanding Debentures		$ 6,949,241	$ -	$ 6,949,241		$ -	$ 6,949,241	$ 1,619,909	$ 5,329,332	$ -
2.2 Buildings, Land and Equipment										
2.2.1 Provision for Future Fire Station - Location TBD through Fire Master Plan	2029 - 2033	$ 5,609,000	$ -	$ 5,609,000	0%	$ -	$ 5,609,000	$ 1,638,329	$ 3,970,671	$ -
2.2.2 Provision for Future Vehicles + Equipment - TBD through Fire Master Plan	2029 - 2033	$ 1,400,000	$ -	$ 1,400,000	0%	$ -	$ 1,400,000	$ -	$ 1,400,000	$ -
2.2.3 Emergency Preparedness Investment - DC eligible share only	2024 - 2027	$ 220,000	$ -	$ 220,000	0%	$ -	$ 220,000	$ 220,000	$ -	$ -
2.2.4 Small Equipment/Tools - Corporation - DC eligible share only	2024 - 2027	$ 3,260	$ -	$ 3,260	0%	$ -	$ 3,260	$ 3,260	$ -	$ -
Subtotal Buildings, Land and Equipment		$ 7,232,260	$ -	$ 7,232,260		$ -	$ 7,232,260	$ 1,861,589	$ 5,370,671	$ -
TOTAL FIRE PROTECTION		**$ 14,181,501**	**$ -**	**$ 14,181,501**		**$ -**	**$ 14,181,501**	**$ 3,481,498**	**$ 10,700,003**	**$ -**

Residential Development Charge Calculation		
Residential Share of 2024 - 2033 DC Eligible Costs	77%	$8,279,352
10-Year Growth in Population in New Units		21,798
Unadjusted Development Charge Per Capita		**$379.83**
Non-Residential Development Charge Calculation		
Non-Residential Share of 2024 - 2033 DC Eligible Costs	23%	$2,420,652
10-Year Growth in Square Metres		353,103
Unadjusted Development Charge Per Square Metre		**$6.86**

2024 - 2033 Net Funding Envelope	$13,145,675
Uncommitted Reserve Fund Balance	
Balance as at December 31, 2023	$3,481,498

APPENDIX B.2
TABLE 3

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

FIRE PROTECTION	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	TOTAL
OPENING CASH BALANCE ($000)	$2,693.9	$3,235.1	$3,824.6	$4,464.6	$5,157.8	$5,955.2	$5,592.2	$5,257.0	$4,930.1	$4,448.1	
2024-2033 RESIDENTIAL FUNDING REQUIREMENTS											
- Fire Protection: Prior Growth	$237.2	$242.9	$248.8	$254.9	$218.0	$477.9	$253.5	$253.5	$253.5	$253.5	**$2,693.9**
- Fire Protection: Non Inflated	$0.0	$0.0	$0.0	$0.0	$0.0	$831.1	$831.1	$831.1	$831.1	$831.1	**$4,155.7**
- Station 7 Debt (Principal)	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$231.0	$237.8	$244.8	$3,410.0	**$4,123.7**
- Fire Protection: Inflated	$237.2	$247.8	$258.9	$270.5	$235.9	$1,445.3	$1,452.5	$1,483.8	$1,515.7	$4,706.3	**$11,853.9**
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	2,062	2,101	2,140	2,179	2,221	2,263	2,305	2,352	2,070	2,104	**21,798**
REVENUE											
- DC Receipts: Inflated	$855.3	$889.1	$923.8	$959.6	$997.6	$1,036.7	$1,077.0	$1,121.0	$1,006.4	$1,043.3	**$9,909.8**
INTEREST											
- Interest on Opening Balance	$94.3	$113.2	$133.9	$156.3	$180.5	$208.4	$195.7	$184.0	$172.6	$155.7	**$1,594.6**
- Interest on In-year Transactions	$10.8	$11.2	$11.6	$12.1	$13.3	($11.2)	($10.3)	($10.0)	($14.0)	($100.7)	**($87.2)**
- Interest on Station 7	($182.0)	($176.3)	($170.4)	($164.3)	($158.1)	($151.6)	($145.0)	($138.2)	($131.2)	($840.08)	**($2,257.2)**
TOTAL REVENUE	$778.4	$837.3	$898.9	$963.6	$1,033.4	$1,082.3	$1,117.4	$1,156.8	$1,033.8	$258.1	**$9,160.0**
CLOSING CASH BALANCE	$3,235.1	$3,824.6	$4,464.6	$5,157.8	$5,955.2	$5,592.2	$5,257.0	$4,930.1	$4,448.1	($0.0)	

2024 Adjusted Charge Per Capita	**$414.91**

Allocation of Capital Program	
Residential Sector	77.4%
Non-Residential Sector	22.6%
Rates for 2024	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX B.2
TABLE 3

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

FIRE PROTECTION	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	TOTAL
OPENING CASH BALANCE ($000)	$787.62	$943.5	$1,112.5	$1,294.0	$1,489.2	$1,713.2	$1,595.4	$1,482.8	$1,369.9	$1,263.8	
2024-2033 NON-RESIDENTIAL FUNDING REQUIREMENTS											
- Fire Protection: Prior Growth	$69.4	$71.0	$72.7	$74.5	$63.7	$139.7	$74.1	$74.1	$74.1	$74.1	**$787.6**
- Fire Protection: Non Inflated	$0.0	$0.0	$0.0	$0.0	$0.0	$243.0	$243.0	$243.0	$243.0	$243.0	**$1,215.0**
- Station 7 Debt (Principal)	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$67.5	$69.5	$71.6	$997.0	**$1,205.6**
- Fire Protection: Inflated	$69.4	$72.4	$75.7	$79.1	$69.0	$422.6	$424.7	$433.8	$443.2	$1,376.0	**$3,465.7**
NEW NON-RESIDENTIAL DEVELOPMENT											
- Growth in Square Metres	33,052	33,562	33,939	34,399	34,909	35,359	35,769	36,319	37,629	38,166	**353,103**
REVENUE											
- DC Receipts: Inflated	$247.8	$256.7	$264.7	$273.7	$283.3	$292.7	$302.0	$312.8	$330.6	$342.0	**$2,906.2**
INTEREST											
- Interest on Opening Balance	$27.6	$33.0	$38.9	$45.3	$52.1	$60.0	$55.8	$51.9	$47.9	$44.2	**$456.8**
- Interest on In-year Transactions	$3.1	$3.2	$3.3	$3.4	$3.8	($3.6)	($3.4)	($3.3)	($3.1)	($28.4)	**($25.0)**
- Interest on Station 7	($53.2)	($51.5)	($49.8)	($48.0)	($46.2)	($44.3)	($42.4)	($40.4)	($38.4)	($245.6)	**($659.9)**
TOTAL REVENUE	$225.3	$241.4	$257.2	$274.3	$293.0	$304.8	$312.1	$321.0	$337.1	$112.2	**$2,678.1**
CLOSING CASH BALANCE	$943.5	$1,112.5	$1,294.0	$1,489.2	$1,713.2	$1,595.4	$1,482.8	$1,369.9	$1,263.8	$0.0	

2024 Adjusted Charge Per Square Metre	**$7.50**

Allocation of Capital Program	
Residential Sector	77.4%
Non-Residential Sector	22.6%
Rates for 2024	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Appendix B.3

Parks and Recreation

Parks and Recreation

The City of Niagara Falls Recreation, Culture and Facilities Division is responsible for the operations and maintenance of park facilities, indoor recreation facilities, athletic fields and providing recreational programming to residents of Niagara Falls, and the Parks Department is responsible for the operations and maintenance of parkland and trails. There are four indoor recreation facilities, four pools and various neighbourhood, community, City-wide and nature, and trail parkland found throughout the City. The following discusses the individual components included in the Parks and Recreation service category. The analysis is set out in the tables which follow.

Table B.3-1 Historical Service Levels and Calculation of 15-Year Average Service Level

Table B.3-2 2024-2033 Development-Related Capital Forecast and Calculation of the Growth-Related Net Capital Costs

Table B.3-3 Cash Flow Analysis

A. 15-Year Historical Service Levels and Calculation of Maximum Allowable Funding Envelope

Table B.3-1 displays the Parks and Recreation 15-year historical inventory for buildings, land, equipment, park facilities, parkland, park buildings, and parks fleet. The building space associated with indoor recreation facilities amounts to 326,920 square feet (after adjusting for excess capacity associated with the recovery of outstanding debentures included for recovery in the capital program) and is valued at $170.40 million. The land associated with the buildings amount to 29.78 acres, and is valued at $12.39 million. The City also owns and operates four pools valued at $12.00 million with an associated land valued of $490,900. The 21 vehicles and equipment associated with the arena facilities have a total value of $1.70 million. In addition, the City has

roughly 1,048 acres of parkland, which consists of neighbourhood, community, city-wide and nature, and trails parkland. The total value amounts to $226.50 million.

The historical service level multiplied by the 10-year forecast of net population growth results in a 10-year maximum allowable funding envelope of $68.13 million (15,932 net population growth X historical service level of $4,276.44/capita). Table 1 provides a summary of the level of service and the calculation of the 10-year funding envelope from 2024 to 2033. The calculation of the maximum allowable funding envelope is summarized as follows:

10-Year Funding Envelope Calculation

15-Year Average Service Level (2009 – 2023)	$4,276.44
Net Pop. Growth (2024 – 2033)	15,932
Maximum Allowable Funding Envelope	**$68,132,242**

B. Development-Related Capital Program

The 2024–2033 development-related capital program for Parks & Recreation is comprised of the remaining debenture payments related to the construction of the MacBain Centre, new growth-related space for Chippawa, the creation and improvements of new parkland, park facilities, trails, and a new vehicle for a total amount of $74.83 million.

Replacement and BTE shares have been identified in the amount of $5.67 milion and have been removed from the DC eligible costs. The DC eligible portion of the capital program, $69.16 million, will be partly paid for using available DC reserve funds ($6.07 million). No shares of projects have been idenitifed as post-period shares eligible for recovery under future development charges studies. The remaining portion, $63.10 million, is brought forward to the development charges calculation.

The total 2024 – 2033 DC costs eligible for recovery amount to $63.10 million which is allocated entirely against future residential development in the City of Niagara Falls. This results in an unadjusted development charge of $2,894.56 per capita.

C. Cash Flow Analysis

The cash flow analysis accounts for the positive available reserve fund balance and also includes the recovery of interest payments associated with the MacBaine Centre debt.

After cash flow and reserve fund consideration, the residential calculated charge decreases to $2,872.68 per capita. This is a reflection of the timing of the capital program and development charges revenues.

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

PARKS & RECREATION SUMMARY						
15-year Hist. Service Level per capita	2024 - 2033 Development-Related Capital Program		Unadjusted Development Charge		**Adjusted Development Charge**	
	Total	Net DC Recoverable	$/capita	$/sq.m	**$/capita**	**$/sq.m**
$4,276.44	$74,831,319	$63,094,360	$2,894.56	$0.00	**$2,872.68**	**$0.00**

APPENDIX B.3
TABLE 1

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

BUILDINGS	# of Square Feet															UNIT COST
Facility Name	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	($/sq. ft.)
Jack Bell Arena	27,000	27,000	-	-	-	-	-	-	-	-	-	-	-	-	-	$470
Niagara Falls Memorial Arena	51,000	51,000	-	-	-	-	-	-	-	-	-	-	-	-	-	$470
Chippawa/Willoughby 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	35,000	35,000	35,000	$470
Stamford Memorial Arena	30,000	30,000	-	-	-	-	-	-	-	-	-	-	-	-	-	$470
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	18,000	18,000	-	$430
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	94,280	94,280	94,280	$430
MacBain Community Centre (Excess Capacity)	*(6,427)*	*(6,427)*	*(6,427)*	*(6,427)*	*(6,427)*	*(6,427)*	*(6,427)*	*(6,427)*	*(6,427)*	*(6,427)*	*(6,427)*	*(6,427)*	*(6,427)*	*(6,427)*	*(6,427)*	$430
Gale Centre	-	203,000	203,000	203,000	203,000	203,000	203,000	203,000	203,000	203,000	203,000	203,000	203,000	203,000	203,000	$570
Niagara Falls History Museum (Rec Portion Only)	-	-	-	-	1,067	1,067	1,067	1,067	1,067	1,067	1,067	1,067	1,067	1,067	1,067	$430
Total (sq.ft.)	**248,853**	**451,853**	**343,853**	**343,853**	**344,920**	**344,920**	**344,920**	**344,920**	**344,920**	**344,920**	**344,920**	**344,920**	**344,920**	**344,920**	**326,920**	
Total ($000)	**$112,726.8**	**$228,436.8**	**$177,676.8**	**$177,676.8**	**$178,135.6**	**$178,135.6**	**$178,135.6**	**$178,135.6**	**$178,135.6**	**$178,135.6**	**$178,135.6**	**$178,135.6**	**$178,135.6**	**$178,135.6**	**$170,395.6**	

BULDINGS LAND	# of Acres															UNIT COST
Facility Name	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	($/acre)
Jack Bell Arena/Stamford Memorial Arena	4.09	4.09	-	-	-	-	-	-	-	-	-	-	-	-	-	$416,000
Niagara Falls Memorial Arena	3.53	3.53	-	-	-	-	-	-	-	-	-	-	-	-	-	$416,000
Chippawa/Willoughby 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	2.40	2.40	2.40	$416,000
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	2.43	2.43	2.43	$416,000
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	8.45	8.45	8.45	$416,000
Gale Centre	-	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	$416,000
Total (acres)	**20.90**	**37.40**	**29.78**	**29.78**	**29.78**	**29.78**	**29.78**	**29.78**	**29.78**	**29.78**	**29.78**	**29.78**	**29.78**	**29.78**	**29.78**	
Total ($000)	**$8,694.4**	**$15,558.4**	**$12,388.5**	**$12,388.5**	**$12,388.5**	**$12,388.5**	**$12,388.5**	**$12,388.5**	**$12,388.5**	**$12,388.5**	**$12,388.5**	**$12,388.5**	**$12,388.5**	**$12,388.5**	**$12,388.5**	

APPENDIX B.3
TABLE 1

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

OUTDOOR POOLS	# of Pools															UNIT COST
Facility Name	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	($/unit)
FH Leslie Outdoor Pool	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	$3,000,000
Prince Charles Outdoor Pool	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	$3,000,000
EE Mitchelson Pool	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-	$3,000,000
Niagara Falls Lions Pool	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	$3,000,000
Buck Hinsberger Pool	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	$3,000,000
Total (#)	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**4**	
Total ($000)	**$15,000.0**	**$15,000.0**	**$15,000.0**	**$15,000.0**	**$15,000.0**	**$15,000.0**	**$15,000.0**	**$15,000.0**	**$15,000.0**	**$15,000.0**	**$15,000.0**	**$15,000.0**	**$15,000.0**	**$15,000.0**	**$12,000.0**	

OUTDOOR POOLS LAND	# of Acres															UNIT COST
Facility Name	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	($/acre)
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	0.41	0.41	0.41	$416,000
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	0.30	0.30	0.30	$416,000
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	0.27	0.27	-	$416,000
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	0.26	0.26	0.26	$416,000
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	0.21	0.21	0.21	$416,000
Total (acres)	**1.45**	**1.45**	**1.45**	**1.45**	**1.45**	**1.45**	**1.45**	**1.45**	**1.45**	**1.45**	**1.45**	**1.45**	**1.45**	**1.45**	**1.18**	
Total ($000)	**$603.2**	**$603.2**	**$603.2**	**$603.2**	**$603.2**	**$603.2**	**$603.2**	**$603.2**	**$603.2**	**$603.2**	**$603.2**	**$603.2**	**$603.2**	**$603.2**	**$490.9**	

RECREATION AND CULTURE EQUIPMENT	# of Vehicles and Equipment															UNIT COST
Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	($/unit)
Pickups	3	3	3	3	3	3	3	3	3	2	2	2	2	2	2	$55,000
Zambonis	5	5	5	7	7	7	7	7	7	7	7	7	7	7	7	$183,000
Cargo Van	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	$60,000
Articulating Lift	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	$65,000
Fork Lift	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	$80,000
Riding Floor Machine	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	$18,000
Walking Floor Machine	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	$12,000
Snow Blower	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	$4,100
Auto Pool Vacuum	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	$5,400
Total (#)	**16**	**16**	**16**	**18**	**18**	**19**	**19**	**19**	**19**	**19**	**19**	**19**	**21**	**21**	**21**	
Total ($000)	**$1,351.0**	**$1,351.0**	**$1,351.0**	**$1,717.0**	**$1,717.0**	**$1,729.0**	**$1,729.0**	**$1,729.0**	**$1,729.0**	**$1,692.0**	**$1,692.0**	**$1,692.0**	**$1,701.5**	**$1,701.5**	**$1,701.5**	

APPENDIX B.3
TABLE 1

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

PARKLAND	# of Acres of Developed Area															UNIT COST
Park Type	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	($/acre)
Neighbourhood	139	139	139	139	139	183	199	203	203	203	206	210	213	217	220	$300,000
Community	113	113	113	113	113	220	220	262	262	262	275	289	302	316	329	$250,000
City-wide and Nature	259	259	259	260	260	409	409	409	409	409	416	423	430	437	444	$175,000
Trails	27	29	31	33	36	38	40	42	44	46	49	51	53	55	55	$10,000
Total (acre)	**538**	**540**	**542**	**545**	**548**	**850**	**868**	**916**	**918**	**920**	**946**	**972**	**998**	**1,024**	**1,048**	
Total ($000)	**$115,545.0**	**$115,566.5**	**$115,588.1**	**$115,784.6**	**$115,806.2**	**$181,852.7**	**$186,674.2**	**$198,395.8**	**$198,417.3**	**$198,438.8**	**$204,055.4**	**$209,671.9**	**$215,288.5**	**$220,905.0**	**$226,500.0**	

APPENDIX B.3
TABLE 1

CITY OF NIAGARA FALLS
CALCULATION OF SERVICE LEVELS
PARKS & RECREATION

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Historical Population	82,671	82,834	82,997	83,988	84,991	86,006	87,033	88,071	89,305	90,556	91,825	93,111	94,415	95,861	97,327

INVENTORY SUMMARY ($000)

Indoor Recreation	$138,375.4	$260,949.4	$207,019.5	$207,385.5	$207,844.3	$207,856.3	$207,856.3	$207,856.3	$207,856.3	$207,819.3	$207,819.3	$207,819.3	$207,828.8	$207,828.8	$196,976.5
Parkland	$115,545.0	$115,566.5	$115,588.1	$115,784.6	$115,806.2	$181,852.7	$186,674.2	$198,395.8	$198,417.3	$198,438.8	$204,055.4	$209,671.9	$215,288.5	$220,905.0	$226,500.0
Total ($000)	**$253,920.4**	**$376,515.9**	**$322,607.5**	**$323,170.1**	**$323,650.4**	**$389,709.0**	**$394,530.5**	**$406,252.0**	**$406,273.6**	**$406,258.1**	**$411,874.7**	**$417,491.2**	**$423,117.2**	**$428,733.8**	**$423,476.5**

SERVICE LEVEL ($/capita)

																Average Service Level
Indoor Recreation	$1,673.81	$3,150.27	$2,494.30	$2,469.23	$2,445.49	$2,416.76	$2,388.25	$2,360.10	$2,327.49	$2,294.93	$2,263.21	$2,231.95	$2,201.23	$2,168.02	$2,023.86	$2,327.26
Parkland	$1,397.65	$1,395.16	$1,392.68	$1,378.59	$1,362.57	$2,114.42	$2,144.87	$2,252.68	$2,221.79	$2,191.34	$2,222.22	$2,251.85	$2,280.24	$2,304.43	$2,327.21	$1,949.18
Total ($/capita)	**$3,071.46**	**$4,545.43**	**$3,886.98**	**$3,847.81**	**$3,808.06**	**$4,531.18**	**$4,533.11**	**$4,612.78**	**$4,549.28**	**$4,486.26**	**$4,485.43**	**$4,483.80**	**$4,481.46**	**$4,472.45**	**$4,351.07**	**$4,276.44**

CITY OF NIAGARA FALLS
CALCULATION OF MAXIMUM ALLOWABLE
PARKS & RECREATION

15-Year Funding Envelope Calculation	
15 Year Average Service Level 2009 - 2023	$4,276.44
Net Population Growth 2024 - 2033	15,932
Maximum Allowable Funding Envelope	**$68,132,242**

APPENDIX B.3
TABLE 2

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

Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs		
					BTE (%)	Replacement & BTE Shares		Available DC Reserves	2024-2033	Post 2033
3.0 PARKS & RECREATION										
3.1 Outstanding Debt Recovery										
3.1.1 MacBain Centre Debt Recovery Principal Payment	2024 - 2024	$ 872,974	$ -	$ 872,974	0%	$ -	$ 872,974	$ -	$ 872,974	$ -
3.1.2 MacBain Centre Debt Recovery Principal Payment	2025 - 2025	$ 920,339	$ -	$ 920,339	0%	$ -	$ 920,339	$ -	$ 920,339	$ -
3.1.3 MacBain Centre Debt Recovery Principal Payment	2026 - 2026	$ 970,273	$ -	$ 970,273	0%	$ -	$ 970,273	$ -	$ 970,273	$ -
Subtotal Outstanding Debt Recovery		$ 2,763,587	$ -	$ 2,763,587		$ -	$ 2,763,587	$ -	$ 2,763,587	$ -
3.2 Vehicles and Equipment										
3.2.1 Parks 4x4 Truck	2029 - 2029	$ 140,000	$ -	$ 140,000	0%	$ -	$ 140,000	$ -	$ 140,000	$ -
Subtotal Vehicles and Equipment		$ 140,000	$ -	$ 140,000		$ -	$ 140,000	$ -	$ 140,000	$ -
3.3 Improvements										
3.3.1 Fern Park Tennis and Basketball Court Improvements	2025 - 2025	$ 250,000	$ -	$ 250,000	50%	$ 125,000	$ 125,000	$ 125,000	$ -	$ -
3.3.2 Patrick Cummings Memorial Sports Complex Multi-puropose Court Upgrade	2025 - 2025	$ 75,000	$ -	$ 75,000	75%	$ 56,250	$ 18,750	$ 18,750	$ -	$ -
Subtotal Improvements		$ 325,000	$ -	$ 325,000		$ 181,250	$ 143,750	$ 143,750	$ -	$ -
3.4 New Park/Facility										
3.4.1 Lundy's Lane/OPG Parkette	2026 - 2026	$ 1,500,000	$ -	$ 1,500,000	0%	$ -	$ 1,500,000	$ 1,500,000	$ -	$ -
3.4.2 Welland River Corridor Recreational Master Plan Implementation	2025 - 2025	$ 500,000	$ -	$ 500,000	50%	$ 250,000	$ 250,000	$ 250,000	$ -	$ -
3.4.3 West Lane District Splash Pad Development	2029 - 2030	$ 250,000	$ -	$ 250,000	0%	$ -	$ 250,000	$ -	$ 250,000	$ -
3.4.4 Drummond District Splash Pad Development	2031 - 2032	$ 250,000	$ -	$ 250,000	0%	$ -	$ 250,000	$ -	$ 250,000	$ -
3.4.5 New South Rectangular Fields	2028 - 2029	$ 580,000	$ -	$ 580,000	0%	$ -	$ 580,000	$ -	$ 580,000	$ -
3.4.6 New Cricket Facility	2026 - 2027	$ 3,650,000	$ -	$ 3,650,000	50%	$ 1,825,000	$ 1,825,000	$ -	$ 1,825,000	$ -
3.4.7 Synthetic Ice Skating Trail	2029 - 2030	$ 450,000	$ -	$ 450,000	50%	$ 225,000	$ 225,000	$ -	$ 225,000	$ -
3.4.8 Mountain Bike and BMX Facility	2032 - 2033	$ 450,000	$ -	$ 450,000	75%	$ 337,500	$ 112,500	$ -	$ 112,500	$ -
3.4.9 North End Skateboard Park Development	2033 - 2034	$ 575,000	$ -	$ 575,000	0%	$ -	$ 575,000	$ -	$ 575,000	$ -
Subtotal New Park/Facility		$ 8,205,000	$ -	$ 8,205,000		$ 2,637,500	$ 5,567,500	$ 1,750,000	$ 3,817,500	$ -

APPENDIX B.3
TABLE 2

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

Project Description		Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs		
						BTE (%)	Replacement & BTE Shares		Available DC Reserves	2024-2033	Post 2033
3.5 Facility Expansion/Improvement											
3.5.1	Charnwood Park Development	2025 - 2026	$ 480,000	$ -	$ 480,000	75%	$ 360,000	$ 120,000	$ -	$ 120,000	$ -
3.5.2	SCVFA Firemen's Park Improvements	2026 - 2028	$ 1,000,000	$ -	$ 1,000,000	0%	$ -	$ 1,000,000	$ -	$ 1,000,000	$ -
3.5.3	George Bukator Park Waterfront Improvements	2028 - 2029	$ 575,000	$ -	$ 575,000	75%	$ 431,250	$ 143,750	$ -	$ 143,750	$ -
3.5.4	MacBain Community Centre Skatboard Park Improvements	2026 - 2028	$ 450,000	$ -	$ 450,000	50%	$ 225,000	$ 225,000	$ -	$ 225,000	$ -
3.5.5	Jolly Cut Improvements	2031 - 2031	$ 500,000	$ -	$ 500,000	50%	$ 250,000	$ 250,000	$ -	$ 250,000	$ -
	Subtotal Facility Expansion/Improvement		$ 3,005,000	$ -	$ 3,005,000		$ 1,266,250	$ 1,738,750	$ -	$ 1,738,750	$ -
3.6 Natural Area Conservation											
3.6.1	Fernwood Woodlot Conservation	2029 - 2029	$ 40,000	$ -	$ 40,000	86%	$ 34,373	$ 5,627	$ -	$ 5,627	$ -
	Subtotal Natural Area Conservation		$ 40,000	$ -	$ 40,000		$ 34,373	$ 5,627	$ -	$ 5,627	$ -
3.7 New Trails											
3.7.1	Millennium Trail Section 2 - Phase 2	2024 - 2027	$ 562,522	$ -	$ 562,522	0%	$ -	$ 562,522	$ 562,522	$ -	$ -
3.7.2	NS&T Trail Implementation Phase 1A	2025 - 2026	$ 660,000	$ -	$ 660,000	10%	$ 66,000	$ 594,000	$ 594,000	$ -	$ -
3.7.3	NS&T Trail Implementation Phase 1B	2025 - 2025	$ 785,000	$ -	$ 785,000	10%	$ 78,500	$ 706,500	$ 706,500	$ -	$ -
3.7.4	NS&T Trail Implementation Phase 1D	2025 - 2025	$ 1,315,000	$ -	$ 1,315,000	10%	$ 131,500	$ 1,183,500	$ 163,313	$ 1,020,187	$ -
3.7.5	NS&T Trail Implementation Phase 2A	2027 - 2028	$ 1,270,000	$ -	$ 1,270,000	10%	$ 127,000	$ 1,143,000	$ -	$ 1,143,000	$ -
3.7.6	NS&T Trail Implementation Phase 1C	2028 - 2029	$ 3,375,000	$ -	$ 3,375,000	10%	$ 337,500	$ 3,037,500	$ -	$ 3,037,500	$ -
3.7.7	NS&T Trail Implementation Phase 3	2029 - 2030	$ 2,980,000	$ -	$ 2,980,000	10%	$ 298,000	$ 2,682,000	$ -	$ 2,682,000	$ -
3.7.8	Falls Ave Bridge Development	2026 - 2027	$ 450,000	$ -	$ 450,000	0%	$ -	$ 450,000	$ -	$ 450,000	$ -
3.7.9	Mitchell Line Trail Development	2027 - 2028	$ 915,000	$ -	$ 915,000	50%	$ 457,500	$ 457,500	$ -	$ 457,500	$ -
3.7.10	Hydro Corridor 9 Trail Development - West	2028 - 2029	$ 365,000	$ -	$ 365,000	0%	$ -	$ 365,000	$ -	$ 365,000	$ -
3.7.11	Hydro Corridor 15 Trail Development - East	2028 - 2029	$ 559,000	$ -	$ 559,000	0%	$ -	$ 559,000	$ -	$ 559,000	$ -
3.7.12	Clifton Hill to Murray Hill Trail Development	2028 - 2029	$ 1,848,000	$ -	$ 1,848,000	0%	$ -	$ 1,848,000	$ -	$ 1,848,000	$ -
3.7.13	Hydro Corridor 8 Trail Development - East	2029 - 2030	$ 796,000	$ -	$ 796,000	0%	$ -	$ 796,000	$ -	$ 796,000	$ -
3.7.14	NS&T Trail Implementation Phase 2B&2C	2030 - 2031	$ 545,000	$ -	$ 545,000	10%	$ 54,500	$ 490,500	$ -	$ 490,500	$ -
3.7.15	Hydro Corridor 15 Trail Development - West	2030 - 2031	$ 534,000	$ -	$ 534,000	0%	$ -	$ 534,000	$ -	$ 534,000	$ -
3.7.16	Seneca Street Trail Development	2031 - 2031	$ 50,000	$ -	$ 50,000	0%	$ -	$ 50,000	$ -	$ 50,000	$ -
3.7.17	Gary Hendershot Memorial Trail Extension	2031 - 2032	$ 768,000	$ -	$ 768,000	0%	$ -	$ 768,000	$ -	$ 768,000	$ -
3.7.18	Hydro Corridor 9 Trail Development - East	2032 - 2033	$ 879,000	$ -	$ 879,000	0%	$ -	$ 879,000	$ -	$ 879,000	$ -
	Subtotal New Trails		$ 18,656,522	$ -	$ 18,656,522		$ 1,550,500	$ 17,106,022	$ 2,026,335	$ 15,079,687	$ -

APPENDIX B.3
TABLE 2

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

Project Description		Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs		
						BTE (%)	Replacement & BTE Shares		Available DC Reserves	2024-2033	Post 2033
3.8 Parks and Trails in New Developments											
3.8.1	Willick Road Woodlot Management - DC eligible share only	2024 - 2027	$ 72,000	$ -	$ 72,000	0%	$ -	$ 72,000	$ 72,000	$ -	$ -
3.8.2	Warren Woods Trail - Warren Woods Avenue to Pin Oak Drive	2025 - 2025	$ 950,000	$ -	$ 950,000	0%	$ -	$ 950,000	$ 950,000	$ -	$ -
3.8.3	Warren Woods Woodlot Management	2025 - 2027	$ 225,000	$ -	$ 225,000	0%	$ -	$ 225,000	$ 225,000	$ -	$ -
3.8.4	Forestview/McLeod Subdivision Parks and Trails	2025 - 2027	$ 900,000	$ -	$ 900,000	0%	$ -	$ 900,000	$ 900,000	$ -	$ -
3.8.5	Patrick Cummings Memorial Sports Complex- South Development	2027 - 2027	$ 150,000	$ -	$ 150,000	0%	$ -	$ 150,000	$ -	$ 150,000	$ -
3.8.6	Riverfront Community (Thundering Waters) Trail Development	2028 - 2028	$ 400,000	$ -	$ 400,000	0%	$ -	$ 400,000	$ -	$ 400,000	$ -
3.8.7	Chippawa East Trails	2027 - 2027	$ 200,000	$ -	$ 200,000	0%	$ -	$ 200,000	$ -	$ 200,000	$ -
3.8.8	Warren Woods North Park Development	2029 - 2029	$ 750,000	$ -	$ 750,000	0%	$ -	$ 750,000	$ -	$ 750,000	$ -
3.8.9	Northwest Community Park Development	2028 - 2029	$ 2,150,000	$ -	$ 2,150,000	0%	$ -	$ 2,150,000	$ -	$ 2,150,000	$ -
3.8.10	Oakwood Drive Neighbourhood Park	2027 - 2027	$ 300,000	$ -	$ 300,000	0%	$ -	$ 300,000	$ -	$ 300,000	$ -
3.8.11	Kalar/Pin Oak Subdivision Park and Trails	2028 - 2028	$ 300,000	$ -	$ 300,000	0%	$ -	$ 300,000	$ -	$ 300,000	$ -
3.8.12	Downtown Niagara Falls GO Transit Station Secodary Plan Parks	2028 - 2029	$ 741,300	$ -	$ 741,300	0%	$ -	$ 741,300	$ -	$ 741,300	$ -
3.8.13	Riverfront Community Parks	2030 - 2032	$ 1,500,000	$ -	$ 1,500,000	0%	$ -	$ 1,500,000	$ -	$ 1,500,000	$ -
3.8.14	GrassyBrook Secondary Plan Parks	2030 - 2033	$ 6,226,920	$ -	$ 6,226,920	0%	$ -	$ 6,226,920	$ -	$ 6,226,920	$ -
3.8.15	Northwest Secondary Plan Parks	2030 - 2033	$ 2,483,355	$ -	$ 2,483,355	0%	$ -	$ 2,483,355	$ -	$ 2,483,355	$ -
3.8.16	Garner West Secondary Plan Parks	2030 - 2033	$ 5,633,880	$ -	$ 5,633,880	0%	$ -	$ 5,633,880	$ -	$ 5,633,880	$ -
3.8.17	Grand Niagara Secondary Plan Parks	2030 - 2033	$ 4,447,800	$ -	$ 4,447,800	0%	$ -	$ 4,447,800	$ -	$ 4,447,800	$ -
3.8.18	Southwest Hospital Secondary Plan Parks	2030 - 2033	$ 3,595,305	$ -	$ 3,595,305	0%	$ -	$ 3,595,305	$ -	$ 3,595,305	$ -
3.8.19	MTO/GNGH Secondary Plan Parks	2030 - 2033	$ 370,650	$ -	$ 370,650	0%	$ -	$ 370,650	$ -	$ 370,650	$ -
3.8.20	Future Secondary Plan Parks (Biggar/Montrose, West of Kalar, other)	2030 - 2033	$ 300,000	$ -	$ 300,000	0%	$ -	$ 300,000	$ -	$ 300,000	$ -
	Subtotal Parks and Trails in New Developments		$ 31,696,210	$ -	$ 31,696,210		$ -	$ 31,696,210	$ 2,147,000	$ 29,549,210	$ -
3.9 New Recreation Projects											
3.9.1	Chippawa Memorial Arena - New Growth Related Space	2026 - 2026	$ 10,000,000	$ -	$ 10,000,000	0%	$ -	$ 10,000,000	$ -	$ 10,000,000	$ -
	Subtotal New Recreation Projects		$ 10,000,000	$ -	$ 10,000,000		$ -	$ 10,000,000	$ -	$ 10,000,000	$ -
TOTAL PARKS & RECREATION			**$ 74,831,319**	**$ -**	**$ 74,831,319**		**$ 5,669,873**	**$ 69,161,445**	**$ 6,067,085**	**$ 63,094,360**	**$ -**

Residential Development Charge Calculation		
Residential Share of 2024 - 2033 DC Eligible Costs	100%	$63,094,360
10-Year Growth in Population in New Units		21,798
Unadjusted Development Charge Per Capita		**$2,894.56**
Non-Residential Development Charge Calculation		
Non-Residential Share of 2024 - 2033 DC Eligible Costs	0%	$0
10-Year Growth in Square Metres		353,103
Unadjusted Development Charge Per Square Metre		**$0.00**

2024 - 2033 Net Funding Envelope	$68,132,242
Uncommitted Reserve Fund Balance	
Balance as at December 31, 2023	$6,067,085

APPENDIX B.3
TABLE 3

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

PARKS & RECREATION	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	TOTAL
OPENING CASH BALANCE	$6,067.1	$11,119.0	$12,465.7	$3,539.9	$6,612.7	$6,577.4	$5,578.9	$3,307.3	$2,444.6	$938.6	
2024 - 2033 RESIDENTIAL FUNDING REQUIREMENTS											
- Parks & Recreation: Prior Growth	$158.6	$3,044.2	$2,330.6	$533.6	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$6,067.1**
- Parks & Recreation: Non Inflated	$0.0	$1,080.2	$11,605.8	$2,996.1	$6,620.9	$7,584.4	$8,753.2	$7,585.7	$7,269.2	$6,835.2	**$60,330.8**
- McBaine Debt Recovery (Principal)	$873.0	$920.3	$970.3	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$2,763.6**
- Parks & Recreation: Inflated	$1,031.60	$5,127.21	$15,469.77	$3,745.76	$7,166.63	$8,373.79	$9,857.56	$8,713.62	$8,517.06	$8,168.73	**$76,171.7**
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	2,062	2,101	2,140	2,179	2,221	2,263	2,305	2,352	2,070	2,104	**21,798**
REVENUE											
- DC Receipts: Inflated	$5,922.1	$6,155.8	$6,396.3	$6,643.9	$6,907.1	$7,177.9	$7,456.7	$7,761.3	$6,968.1	$7,223.3	**$68,612.5**
INTEREST											
- Interest on Opening Balance	$212.3	$389.2	$436.3	$123.9	$231.4	$230.2	$195.3	$115.8	$85.6	$32.8	**$2,052.8**
- Interest on In-year Transactions	$85.6	$18.0	($249.5)	$50.7	($7.1)	($32.9)	($66.0)	($26.2)	($42.6)	($26.0)	**($296.0)**
- Interest on McBaine	($136.4)	($89.1)	($39.1)	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**($264.6)**
TOTAL REVENUE	$6,083.6	$6,473.9	$6,544.0	$6,818.5	$7,131.4	$7,375.2	$7,585.9	$7,850.9	$7,011.1	$7,230.2	**$70,104.6**
CLOSING CASH BALANCE	$11,119.0	$12,465.7	$3,539.9	$6,612.7	$6,577.4	$5,578.9	$3,307.3	$2,444.6	$938.6	$0.0	

Note 1: Borrowed funds are not inflated.

2024 Adjusted Charge Per Capita	**$2,872.68**

Allocation of Capital Program	
Residential Sector	100.0%
Non-Residential Sector	0.0%
Rates for 2024	
Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Appendix B.4

Services Related to a Highway: Public Works and Fleet

Services Related to a Highway: 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 city-wide fleet. The analysis is set out in the tables which follow.

Table B.4-1	Historical Service Levels and Calculation of 15-Year Average Service Level
Table B.4-2	2024-2033 Development-Related Capital Forecast and Calculation of the Growth-Related Net Capital Costs
Table B.4-3	Cash Flow Analysis

A. 15-Year Historical Service Levels and Calculation of Maximum Allowable Funding Envelope

The 15-year historical inventory of capital assets for Public Works includes 53,083 square feet of building space with a replacement value of $15.16 million. The 20.32 acres of land associated with the Public Works buildings are valued at $8.45 million, and the total of 251 fleet and equipment amounts to $34.59 million.

The total replacement value of the Public Works capital infrastructure is estimated to be $58.20 million. The 15-year historical average service level is $427.75 per capita and employment and this, multiplied by the 10-year forecast net population and employment growth (22,305), results in a 10-year maximum allowable of $9.54 million. Table 1 provides a summary of the level of service and the calculation of the 10-year funding envelope from

2024 to 2033. The calculation of the maximum allowable funding envelope is summarized as follows:

10-Year Funding Envelope Calculation

15-Year Average Service Level (2008 – 2022)	$427.75
Net Pop. Growth (2023 – 2032)	22,305
Maximum Allowable Funding Envelope	**$9,540,964**

B. Development-Related Capital Program

The ten-year development-related capital plan for Public Works and Fleet includes the expansion and partial replacement of the Municipal Servicing Centre and the acquisition of new fleet and equipment at a cost of $72.88 million. In total, $11.08 million has been identified as benefitting existing development and has been netted off the calculation.

Approximately $549,401 will be funded from existing reserve funds. A further $51.71 million is deemed to provide a post-period benefit and will be considered for recovery in subsequent development charge by-laws. The remaining $9.54 million is considered to be the 2024-2033 development-related DC eligible costs. This amount is allocated 77 per cent, or $7.38 million, to the residential sector and 23 per cent, or $2.16 million, to the non-residential sector. This yields an unadjusted charge of $338.69 per capita and $6.11 per square metre, respectively.

C. Cash Flow Analysis

After cash flow and reserve fund analysis, the residential calculated charge increases to $365.98 per capita, the non-residential charge increases to $6.63 per square metre. This is a reflection of the timing of the capital program and development charges revenues.

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

SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS & FLEET SUMMARY

15-year Hist. Service Level per pop & emp	2024 - 2033 Development-Related Capital Program		Unadjusted Development Charge		**Adjusted Development Charge**	
	Total	Net DC Recoverable	$/capita	$/sq.m	**$/capita**	**$/sq.m**
$427.75	$72,875,000	$9,540,964	$338.69	$6.11	**$365.98**	**$6.63**

APPENDIX B.4
TABLE 1

CITY OF NIAGARA FALLS
INVENTORY OF CAPITAL ASSETS
SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS & FLEET

BUILDINGS	# of Square Feet															UNIT COST
Facility Name	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	($/sq.ft.)
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	22,000	$300
Storage Buildings	21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000	$300
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	2,200	$300
Traffic/Sign Shop	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	$300
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	5,800	$143.39
Small Engine Repair Shop	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	$300
Fill Station 1 (Service Center)	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	$885
Fill Station 2 (Chippawa)	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	$735
Total (sq.ft.)	**53,083**	**53,083**	**53,083**	**53,083**	**53,083**	**53,083**	**53,083**	**53,083**	**53,083**	**53,083**	**53,083**	**53,083**	**53,083**	**53,083**	**53,083**	
Total ($000)	**$15,156.7**	**$15,156.7**	**$15,156.7**	**$15,156.7**	**$15,156.7**	**$15,156.7**	**$15,156.7**	**$15,156.7**	**$15,156.7**	**$15,156.7**	**$15,156.7**	**$15,156.7**	**$15,156.7**	**$15,156.7**	**$15,156.7**	

LAND	# of Acres															UNIT COST
Facility Name	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	($/acre)
Municipal Works Service Centre (Grouped)	18.14	18.14	18.14	18.14	18.14	18.14	18.14	18.14	18.14	18.14	18.14	18.14	18.14	18.14	18.14	$416,000
Schisler Road (Portion of PW)	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	$416,000
Leased Land (Adjacent to Main Building)	-	-	-	-	-	-	-	-	-	-	-	1.58	1.58	1.58	1.58	$416,000
Total (acre)	**18.74**	**18.74**	**18.74**	**18.74**	**18.74**	**18.74**	**18.74**	**18.74**	**18.74**	**18.74**	**18.74**	**20.32**	**20.32**	**20.32**	**20.32**	
Total ($000)	**$7,795.8**	**$7,795.8**	**$7,795.8**	**$7,795.8**	**$7,795.8**	**$7,795.8**	**$7,795.8**	**$7,795.8**	**$7,795.8**	**$7,795.8**	**$7,795.8**	**$8,453.1**	**$8,453.1**	**$8,453.1**	**$8,453.1**	

FLEET & EQUIPMENT	# of Fleet															UNIT COST
Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	($/unit)
Aerial Tree Unit	2	2	2	2	2	2	2	1	2	2	2	2	2	2	2	$350,000
Asphalt Recycler (hot box)	-	-	-	2	2	2	2	2	2	2	2	2	2	2	2	$45,000
Backhoe Loaders	4	4	4	6	6	6	5	6	6	6	6	6	6	6	7	$225,000
Cargo Vans	22	23	22	28	28	25	25	25	26	26	10	10	10	10	10	$80,000
Cutaway Cube Van											2	2	2	2	2	$125,000
Small Passenger Veh (Cars/CUV's)	17	20	18	16	16	14	15	15	17	17	18	18	18	19	19	$45,000
Chippers	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	$100,000
Compressors	3	3	3	2	2	2	2	1	1	1	1	1	1	1	1	$40,000
Crew Cab Dumps	17	18	18	20	20	19	20	19	21	21	21	20	20	20	20	$120,000
Crew Cab w/ Utility Body	5	5	5	5	5	5	5	3	5	9	9	9	9	9	9	$145,000
Cube Vans	3	3	4	4	4	4	4	4	4	4	2	2	2	2	2	$120,000
Dump Plows	9	9	9	8	8	5	5	4	7	7	-	-	-	-	-	$342,000
Dump Sanders	12	14	14	19	19	19	19	19	19	19	-	-	-	-	-	$303,000
Excavator, rubber-tire	-	-	-	-	-	-	-	-	-	-	1	1	1	1	-	$300,000
Front-end Loader	2	2	2	2	2	2	2	2	2	3	3	3	3	7	10	$330,000
Trailer Mounted Heavy Duty Pump	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	$65,000
Graders	2	2	2	2	2	2	2	1	2	2	1	1	1	1	1	$400,000
Haul-All	1	1	1	1	1	1	-	1	1	1	2	2	2	2	2	$200,000
Tractor loader	4	4	4	4	4	4	3	3	3	3	-	-	-	-	-	$95,000
Tractors	8	8	9	10	10	8	9	12	14	14	5	5	5	6	6	$80,000
Med/Large Passenger Veh	9	8	7	3	3	2	2	2	1	1	1	1	1	1	20	$60,000
Pickups	37	38	39	40	40	34	36	36	38	39	38	38	38	38	38	$70,000
Rollers	2	2	2	1	1	1	1	1	2	2	1	1	1	1	1	$50,000

APPENDIX B.4
TABLE 1

CITY OF NIAGARA FALLS
INVENTORY OF CAPITAL ASSETS
SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS & FLEET

Service Trucks	2	2	2	2	2	2	2	2	3	3	2	2	2	2	2	$150,000
Sewer Cleaners (Vaccum Excavator)	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1	$800,000
Sidewalk Plows	8	8	10	10	10	9	10	12	12	12	11	11	11	11	11	$275,000
Sidewalk Sweepers	3	3	3	3	3	3	3	3	3	3	3	2	2	2	2	$250,000
Snow Blower	1	1	1	1	1	1	1	1	1	1	1	-	-	-	-	$201,000
Zero Turn Mowers	2	4	3	3	3	3	3	3	3	3	16	16	16	16	16	$20,000
Street Sweepers	3	3	3	2	2	-	2	2	2	2	2	2	2	2	2	$450,000
Tandem Dumps	5	7	7	2	2	2	2	1	1	2	-	-	-	-	-	$331,000
Tractors	8	8	9	10	10	8	9	12	14	14	-	-	-	-	-	$102,000
Trailers	19	19	20	19	19	19	17	17	17	17	17	17	17	17	17	$12,000
Utility Cranes/Boom Truck	3	2	2	2	2	2	2	1	1	1	1	3	3	3	3	$250,000
Valve Turner	1	1	1	2	2	2	2	2	1	1	1	1	1	1	1	$212,000
Welder	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	$55,000
Wheel Dumper	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	$85,000
Leaf Vacuum (Trailer Unit)	-	-	-	-	-	-	1	1	1	1	1	1	-	-	-	$14,000
Pavement Grinder	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	$35,000
Triaxle	-	-	-	-	-	-	-	-	1	1	2	2	2	2	2	$310,000
Gators and UTVs	-	-	-	-	-	-	-	-	2	2	5	5	5	5	5	$25,000
Roll-off Tandem Dump Plow	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	$500,000
Single Axle Dump / Plow	-	-	-	-	-	-	-	-	-	-	21	21	21	21	15	$360,000
Tandem Axle Dump / Plow	-	-	-	-	-	-	-	-	-	-	6	6	6	6	7	$450,000
Steamer/pressure washer	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	$60,000
Flail Mower Attachments	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	$50,000
Loader Broom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	$45,000
Road Widener	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	$120,000
Total (#)	**220**	**230**	**232**	**238**	**238**	**215**	**221**	**223**	**245**	**251**	**224**	**223**	**222**	**228**	**251**	
Total ($000)	**$28,946.0**	**$30,349.0**	**$31,033.0**	**$32,193.0**	**$32,193.0**	**$28,698.0**	**$29,865.0**	**$29,348.0**	**$32,946.0**	**$33,927.0**	**$32,416.0**	**$32,345.0**	**$32,331.0**	**$33,776.0**	**$34,586.0**	

APPENDIX B.4
TABLE 1

CITY OF NIAGARA FALLS
CALCULATION OF SERVICE LEVELS
SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS & FLEET

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Historical Population	82,671	82,834	82,997	83,988	84,991	86,006	87,033	88,071	89,305	90,556	91,825	93,111	94,415	95,861	97,327
Historical Employment	39,971	39,741	39,512	39,692	39,873	40,054	40,236	40,419	39,874	39,336	38,805	38,282	37,766	38,344	38,930
Total Historical Population & Employment	122,642	122,575	122,509	123,680	124,864	126,060	127,269	128,490	129,179	129,892	130,630	131,393	132,181	134,205	136,257

INVENTORY SUMMARY ($000)

Buildings	$15,156.7	$15,156.7	$15,156.7	$15,156.7	$15,156.7	$15,156.7	$15,156.7	$15,156.7	$15,156.7	$15,156.7	$15,156.7	$15,156.7	$15,156.7	$15,156.7	$15,156.7
Land	$7,795.8	$7,795.8	$7,795.8	$7,795.8	$7,795.8	$7,795.8	$7,795.8	$7,795.8	$7,795.8	$7,795.8	$7,795.8	$8,453.1	$8,453.1	$8,453.1	$8,453.1
Fleet & Equipment	$28,946.0	$30,349.0	$31,033.0	$32,193.0	$32,193.0	$28,698.0	$29,865.0	$29,348.0	$32,946.0	$33,927.0	$32,416.0	$32,345.0	$32,331.0	$33,776.0	$34,586.0
Total ($000)	**$51,898.5**	**$53,301.5**	**$53,985.5**	**$55,145.5**	**$55,145.5**	**$51,650.5**	**$52,817.5**	**$52,300.5**	**$55,898.5**	**$56,879.5**	**$55,368.5**	**$55,954.8**	**$55,940.8**	**$57,385.8**	**$58,195.8**

SERVICE LEVEL ($/pop & emp)

																Average Service Level
Buildings	$123.58	$123.65	$123.72	$122.55	$121.39	$120.23	$119.09	$117.96	$117.33	$116.69	$116.03	$115.35	$114.67	$112.94	$111.24	$118.43
Land	$63.57	$63.60	$63.63	$63.03	$62.43	$61.84	$61.25	$60.67	$60.35	$60.02	$59.68	$64.33	$63.95	$62.99	$62.04	$62.23
Fleet & Equipment	$236.02	$247.60	$253.31	$260.29	$257.82	$227.65	$234.66	$228.41	$255.04	$261.19	$248.15	$246.17	$244.60	$251.67	$253.83	$247.09
Total ($/pop & emp)	**$423.17**	**$434.85**	**$440.67**	**$445.87**	**$441.64**	**$409.73**	**$415.01**	**$407.04**	**$432.72**	**$437.90**	**$423.86**	**$425.86**	**$423.21**	**$427.60**	**$427.10**	**$427.75**

CITY OF NIAGARA FALLS
CALCULATION OF MAXIMUM ALLOWABLE
SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS & FLEET

15-Year Funding Envelope Calculation	
15 Year Average Service Level 2009 - 2023	$427.75
Net Population & Employment Growth 2024 - 2033	22,305
Maximum Allowable Funding Envelope	**$9,540,964**

APPENDIX B.4
TABLE 2

CITY OF NIAGARA FALLS
DEVELOPMENT-RELATED CAPITAL PROGRAM
SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS & FLEET

Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs		
					BTE (%)	Replacement & BTE Shares		Available DC Reserves	2024-2033	Post 2033
4.0 SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS & FLEET										
4.1 Buildings & Land										
4.1.1 Expansion and Replacement of Municipal Servicing Centre (Land - approx. 20 acres)	2025 - 2028	$ 6,000,000	$ -	$ 6,000,000	16%	$ 977,343	$ 5,022,657	$ -	$ 5,022,657	$ -
4.1.2 Expansion and Replacement of Municipal Servicing Centre (Building - approx. 750,000 sq.ft.)	2025 - 2028	$ 62,000,000	$ -	$ 62,000,000	16%	$ 10,099,215	$ 51,900,785	$ -	$ 192,708	$ 51,708,077
Subtotal Buildings & Land		$ 68,000,000	$ -	$ 68,000,000		$ 11,076,558	$ 56,923,442	$ -	$ 5,215,365	$ 51,708,077
4.2 Fleet										
4.2.1 Provision for Large Sized Fleet (Miscellaneous)	2024 - 2028	$ 200,000	$ -	$ 200,000	0%	$ -	$ 200,000	$ 200,000	$ -	$ -
4.2.2 Provision for Large Sized Fleet (Aerial Truck)	2024 - 2028	$ 350,000	$ -	$ 350,000	0%	$ -	$ 350,000	$ 349,401	$ 599	$ -
4.2.3 Provision for Large Sized Fleet (Backhoe)	2024 - 2028	$ 250,000	$ -	$ 250,000	0%	$ -	$ 250,000	$ -	$ 250,000	$ -
4.2.4 Provision for Large Sized Fleet (Triaxle)	2024 - 2028	$ 300,000	$ -	$ 300,000	0%	$ -	$ 300,000	$ -	$ 300,000	$ -
4.2.5 Provision for Large Sized Fleet (Sidewalk Plow)	2024 - 2028	$ 300,000	$ -	$ 300,000	0%	$ -	$ 300,000	$ -	$ 300,000	$ -
4.2.6 Provision for Large Sized Fleet (Roll-off Truck Plow and Sander)	2024 - 2028	$ 600,000	$ -	$ 600,000	0%	$ -	$ 600,000	$ -	$ 600,000	$ -
4.2.7 Vacuum Excavator	2026 - 2026	$ 1,000,000	$ -	$ 1,000,000	0%	$ -	$ 1,000,000	$ -	$ 1,000,000	$ -
4.2.8 Street Sweeper	2025 - 2025	$ 500,000	$ -	$ 500,000	0%	$ -	$ 500,000	$ -	$ 500,000	$ -
4.2.9 Rear Pack Garbage Truck	2025 - 2025	$ 400,000	$ -	$ 400,000	0%	$ -	$ 400,000	$ -	$ 400,000	$ -
4.2.10 Provision for Small & Medium Sized Fleet (e.g. Trucks)	2024 - 2024	$ 175,000	$ -	$ 175,000	0%	$ -	$ 175,000	$ -	$ 175,000	$ -
4.2.11 Provision for Small & Medium Sized Fleet (e.g. Trucks)	2025 - 2025	$ 175,000	$ -	$ 175,000	0%	$ -	$ 175,000	$ -	$ 175,000	$ -
4.2.12 Provision for Small & Medium Sized Fleet (e.g. Trucks)	2026 - 2026	$ 175,000	$ -	$ 175,000	0%	$ -	$ 175,000	$ -	$ 175,000	$ -
4.2.13 Provision for Small & Medium Sized Fleet (e.g. Trucks)	2027 - 2027	$ 175,000	$ -	$ 175,000	0%	$ -	$ 175,000	$ -	$ 175,000	$ -
4.2.14 Provision for Small & Medium Sized Fleet (e.g. Trucks)	2028 - 2028	$ 175,000	$ -	$ 175,000	0%	$ -	$ 175,000	$ -	$ 175,000	$ -
Subtotal Fleet		$ 4,775,000	$ -	$ 4,775,000		$ -	$ 4,775,000	$ 549,401	$ 4,225,599	$ -
4.3 Equipment										
4.3.1 Provision for Miscellaneous Equipment	2024 - 2033	$ 100,000	$ -	$ 100,000	0%	$ -	$ 100,000	$ -	$ 100,000	$ -
Subtotal Equipment		$ 100,000	$ -	$ 100,000		$ -	$ 100,000	$ -	$ 100,000	$ -
TOTAL SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS & FLEET		**$ 72,875,000**	**$ -**	**$ 72,875,000**		**$ 11,076,558**	**$ 61,798,442**	**$ 549,401**	**$ 9,540,964**	**$ 51,708,077**

Residential Development Charge Calculation		
Residential Share of 2024 - 2033 DC Eligible Costs	77%	$7,382,521
10-Year Growth in Population in New Units		21,798
Unadjusted Development Charge Per Capita		**$338.69**
Non-Residential Development Charge Calculation		
Non-Residential Share of 2024 - 2033 DC Eligible Costs	23%	$2,158,443
10-Year Growth in Square Metres		353,103
Unadjusted Development Charge Per Square Metre		**$6.11**

2024 - 2033 Net Funding Envelope	$9,540,964
Uncommitted Reserve Fund Balance	
Balance as at December 31, 2023	$549,401

APPENDIX B.4
TABLE 3

CITY OF NIAGARA FALLS
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS & FLEET
RESIDENTIAL DEVELOPMENT CHARGE
(in $000)

SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS & FLEET	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	TOTAL
OPENING CASH BALANCE ($000)	$425.1	$747.1	($682.6)	($2,272.3)	($3,121.3)	($4,014.3)	($3,313.3)	($2,537.8)	($1,680.3)	($878.6)	
2024-2033 RESIDENTIAL FUNDING REQUIREMENTS											
- Services Related To A Highway: Public Works & Fleet: Prior Growth	$85.0	$85.0	$85.0	$85.0	$85.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$425.1**
- Services Related To A Highway: Public Works & Fleet: Non Inflated	$367.6	$2,072.9	$2,150.3	$1,376.5	$1,376.5	$7.7	$7.7	$7.7	$7.7	$7.7	**$7,382.5**
- Services Related To A Highway: Public Works & Fleet: Inflated	$452.7	$2,201.1	$2,325.6	$1,551.0	$1,582.0	$8.5	$8.7	$8.9	$9.1	$9.2	**$8,156.8**
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	2,062	2,101	2,140	2,179	2,221	2,263	2,305	2,352	2,070	2,104	**21,798**
REVENUE											
- DC Receipts: Inflated	$754.5	$784.3	$814.9	$846.4	$880.0	$914.5	$950.0	$988.8	$887.7	$920.3	**$8,741.3**
INTEREST											
- Interest on Opening Balance	$14.9	$26.1	($37.5)	($125.0)	($171.7)	($220.8)	($182.2)	($139.6)	($92.4)	($48.3)	**($976.5)**
- Interest on In-year Transactions	$5.3	($39.0)	($41.5)	($19.4)	($19.3)	$15.9	$16.5	$17.1	$15.4	$15.9	**($33.1)**
TOTAL REVENUE	$774.6	$771.4	$735.8	$702.1	$689.0	$709.5	$784.2	$866.4	$810.7	$887.9	**$7,731.7**
CLOSING CASH BALANCE	$747.1	($682.6)	($2,272.3)	($3,121.3)	($4,014.3)	($3,313.3)	($2,537.8)	($1,680.3)	($878.6)	($0.0)	

2024 Adjusted Charge Per Capita	**$365.98**

Allocation of Capital Program	
Residential Sector	77.4%
Non-Residential Sector	22.6%
Rates for 2024	
Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX B.4
TABLE 3

CITY OF NIAGARA FALLS
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS & FLEET
NON-RESIDENTIAL DEVELOPMENT CHARGE
(in $000)

SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS & FLEET	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	TOTAL
OPENING CASH BALANCE	$124.3	$216.8	($203.8)	($673.3)	($927.8)	($1,196.8)	($1,002.0)	($788.2)	($552.9)	($288.8)	
2024 - 2033 NON-RESIDENTIAL FUNDING REQUIREMENTS											
- Services Related To A Highway: Public Works & Fleet: Prior Growth	$24.9	$24.9	$24.9	$24.9	$24.9	$0.0	$0.0	$0.0	$0.0	$0.0	**$124.3**
- Services Related To A Highway: Public Works & Fleet: Non Inflated	$107.5	$606.1	$628.7	$402.5	$402.5	$2.3	$2.3	$2.3	$2.3	$2.3	**$2,158.4**
- Services Related To A Highway: Public Works & Fleet: Inflated	$132.3	$643.5	$679.9	$453.5	$462.5	$2.5	$2.5	$2.6	$2.7	$2.7	**$2,384.8**
NON-RESIDENTIAL SPACE GROWTH											
- Growth in Square Metres	33,052	33,562	33,939	34,399	34,909	35,359	35,769	36,319	37,629	38,166	**353,103**
REVENUE											
- DC Receipts: Inflated	$219.0	$226.8	$233.9	$241.8	$250.3	$258.6	$266.9	$276.4	$292.1	$302.2	**$2,568.1**
INTEREST											
- Interest on Opening Balance	$4.4	$7.6	($11.2)	($37.0)	($51.0)	($65.8)	($55.1)	($43.3)	($30.4)	($15.9)	**($297.9)**
- Interest on In-year Transactions	$1.5	($11.5)	($12.3)	($5.8)	($5.8)	$4.5	$4.6	$4.8	$5.1	$5.2	**($9.7)**
TOTAL REVENUE	$224.8	$222.9	$210.5	$199.0	$193.5	$197.3	$216.4	$237.8	$266.7	$291.5	**$2,260.5**
CLOSING CASH BALANCE	$216.8	($203.8)	($673.3)	($927.8)	($1,196.8)	($1,002.0)	($788.2)	($552.9)	($288.8)	$0.0	

2024 Adjusted Charge Per Square Metre	**$6.63**

Allocation of Capital Program	
Residential Sector	77.4%
Non-Residential Sector	22.6%
Rates for 2024	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Appendix B.5

Development-Related Studies

Development-Related Studies

As of December 13, 2023, the Minister of Municipal Affairs and Housing has indicated further consultation to inform further potential changes to the DCA, one of which is related to a review of the removal of development related studies from recovery under the DCA. At the time of publishing this DC Background Study, studies have not yet been re-instated as an eligible capital cost, but in anticipation of a change of legislation, a Development Related Studies capital program has been included in this DC Background Study. The analysis is set out in the tables which follow.

Table B.5-1	2024-2033 Development-Related Capital Forecast and Calculation of the Growth-Related Net Capital Costs
Table B.5-2	Cash Flow Analysis

A. Development-Related Capital Program

The 2024–2033 development-related gross cost for Studies is $13.94 million and includes for studies related to Fire Services, Public Works & Engineered Services, Parks and Recreation, and Planning and Development.

Recognizing that not all studies under this service are entirely necessitated by new development in the City, benefit to existing shares have been identified and reduced from the net municipal costs. In total, the benefit to existing shares amount to $5.95 million and this amount will not be recovered through development charges. The City has an uncommitted reserve fund of approximately $331,656 which is applied towards the projects.

The remaining $6.52 million is related to growth between 2024 and 2033, which is allocated against future residential and non-residential development in the City of Niagara Falls. This results in unadjusted development charges of $231.33 per capita and $4.18 per square metre.

B. Cash Flow Analysis

The current balance in the Development Related Studies development charge reserve fund is $331,656 and that is included as the opening balance. After cash flow adjustments, the residential calculated charge increases to $247.26 per capita, and the non-residential calculated charge increases to $4.48 per square metre.

The following table summarizes the calculation of the Development Related Studies development charge:

DEVELOPMENT-RELATED STUDIES SUMMARY

2024 - 2033 Development-Related Capital Program		Unadjusted Development Charge		**Adjusted Development Charge**	
Total	Net DC Recoverable	$/capita	$/sq.m	**$/capita**	**$/sq.m**
$13,935,000	$6,516,806	$231.33	$4.18	$247.26	$4.48

APPENDIX B.5
TABLE 1

CITY OF NIAGARA FALLS
DEVELOPMENT-RELATED CAPITAL PROGRAM
DEVELOPMENT-RELATED STUDIES

Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs		
					BTE (%)	Replacement & BTE Shares		Available DC Reserves	2024-2033	Post 2033
5.0 DEVELOPMENT-RELATED STUDIES										
5.1 Fire Services										
5.1.1 Fire Master Plan / Community Risk Assessment (5 Year Update)	2024 - 2024	$ 150,000	$ -	$ 150,000	50%	$ 75,000	$ 75,000	$ -	$ 75,000	$ -
5.1.2 Fire Master Plan / Community Risk Assessment (5 Year Update)	2029 - 2029	$ 150,000	$ -	$ 150,000	50%	$ 75,000	$ 75,000	$ -	$ 75,000	$ -
Subtotal Fire Services		$ 300,000	$ -	$ 300,000		$ 150,000	$ 150,000	$ -	$ 150,000	$ -
5.2 Public Works & Engineered Services										
5.2.1 Master Servicing Plan (5yr cycle)	2024 - 2024	$ 600,000	$ -	$ 600,000	25%	$ 150,000	$ 450,000	$ 331,656	$ 118,344	$ -
5.2.2 Master Servicing Plan (5yr cycle)	2029 - 2029	$ 650,000	$ -	$ 650,000	25%	$ 162,500	$ 487,500	$ -	$ 487,500	$ -
Subtotal Public Works & Engineered Services		$ 1,250,000	$ -	$ 1,250,000		$ 312,500	$ 937,500	$ 331,656	$ 605,844	$ -
5.3 Parks and Recreation										
5.3.1 Recreation and Culture Master Plan	2026 - 2026	$ 150,000	$ -	$ 150,000	25%	$ 37,500	$ 112,500	$ -	$ 112,500	$ -
5.3.2 Mewburn Park Recreational Master Plan Development	2028 - 2028	$ 75,000	$ -	$ 75,000	25%	$ 18,750	$ 56,250	$ -	$ 56,250	$ -
5.3.3 M.F. Ker Park Master Plan	2026 - 2026	$ 80,000	$ -	$ 80,000	25%	$ 20,000	$ 60,000	$ -	$ 60,000	$ -
5.3.4 Urban Forest Study Phase 1	2024 - 2024	$ 100,000	$ -	$ 100,000	90%	$ 90,000	$ 10,000	$ -	$ 10,000	$ -
5.3.5 Urban Forest Study Phase 2	2025 - 2025	$ 150,000	$ -	$ 150,000	90%	$ 135,000	$ 15,000	$ -	$ 15,000	$ -
5.3.6 Woodland Management Plan Update	2029 - 2029	$ 90,000	$ -	$ 90,000	90%	$ 81,000	$ 9,000	$ -	$ 9,000	$ -
5.3.7 Park Washroom Study	2026 - 2026	$ 50,000	$ -	$ 50,000	90%	$ 45,000	$ 5,000	$ -	$ 5,000	$ -
Subtotal Parks and Recreation		$ 695,000	$ -	$ 695,000		$ 427,250	$ 267,750	$ -	$ 267,750	$ -

APPENDIX B.5
TABLE 1

CITY OF NIAGARA FALLS
DEVELOPMENT-RELATED CAPITAL PROGRAM
DEVELOPMENT-RELATED STUDIES

Project Description		Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs		
						BTE (%)	Replacement & BTE Shares		Available DC Reserves	2024-2033	Post 2033
5.4 Planning & Development											
5.4.1	Provision for Vulnerable Population Strategies	2024 - 2033	$ 50,000	$ -	$ 50,000	50%	$ 25,000	$ 25,000	$ -	$ 25,000	$ -
5.4.2	New Official Plan	2024 - 2024	$ 675,000	$ -	$ 675,000	50%	$ 337,500	$ 337,500	$ -	$ 337,500	$ -
5.4.3	Garner West Secondary Plan	2024 - 2024	$ 350,000	$ -	$ 350,000	0%	$ -	$ 350,000	$ -	$ 350,000	$ -
5.4.4	Northwest Secondary Plan	2024 - 2024	$ 350,000	$ -	$ 350,000	0%	$ -	$ 350,000	$ -	$ 350,000	$ -
5.4.5	MTO/Hospital Secondary Plan	2024 - 2024	$ 90,000	$ -	$ 90,000	0%	$ -	$ 90,000	$ -	$ 90,000	$ -
5.4.6	Update DC Background Study and CBC Strategy	2024 - 2024	$ 80,000	$ -	$ 80,000	0%	$ -	$ 80,000	$ -	$ 80,000	$ -
5.4.7	South NF/Grassy Brook Secondary Plan	2024 - 2027	$ 575,000	$ -	$ 575,000	0%	$ -	$ 575,000	$ -	$ 575,000	$ -
5.4.8	Affordable Housing Community Improvement Plan	2025 - 2025	$ 100,000	$ -	$ 100,000	90%	$ 90,000	$ 10,000	$ -	$ 10,000	$ -
5.4.9	South Hospital Secondary Plan	2025 - 2025	$ 900,000	$ -	$ 900,000	0%	$ -	$ 900,000	$ -	$ 900,000	$ -
5.4.10	Surplus Land Study	2025 - 2025	$ 100,000	$ -	$ 100,000	50%	$ 50,000	$ 50,000	$ -	$ 50,000	$ -
5.4.11	Comprehensive Zoning Bylaw Update	2026 - 2026	$ 500,000	$ -	$ 500,000	50%	$ 250,000	$ 250,000	$ -	$ 250,000	$ -
5.4.12	Inclusionary Zoning Study	2026 - 2026	$ 150,000	$ -	$ 150,000	90%	$ 135,000	$ 15,000	$ -	$ 15,000	$ -
5.4.13	Urban Design Guidelines	2026 - 2026	$ 500,000	$ -	$ 500,000	50%	$ 250,000	$ 250,000	$ -	$ 250,000	$ -
5.4.14	Lundy's Lane Secondary Plan	2026 - 2026	$ 500,000	$ -	$ 500,000	50%	$ 250,000	$ 250,000	$ -	$ 250,000	$ -
5.4.15	Nodes & Corridors Study (per new OP)	2026 - 2026	$ 500,000	$ -	$ 500,000	50%	$ 250,000	$ 250,000	$ -	$ 250,000	$ -
5.4.16	Housing Strategy Update	2027 - 2027	$ 125,000	$ -	$ 125,000	90%	$ 112,500	$ 12,500	$ -	$ 12,500	$ -
5.4.17	Tourist Core Secondary Plan	2027 - 2027	$ 500,000	$ -	$ 500,000	86%	$ 429,662	$ 70,338	$ -	$ 70,338	$ -
5.4.18	Industrial Land Secondary Plan	2027 - 2027	$ 500,000	$ -	$ 500,000	86%	$ 429,662	$ 70,338	$ -	$ 70,338	$ -
5.4.19	Future Secondary Plan	2028 - 2028	$ 600,000	$ -	$ 600,000	25%	$ 150,000	$ 450,000	$ -	$ 450,000	$ -
5.4.20	Nodes & Corridors Study (per new OP)	2029 - 2029	$ 500,000	$ -	$ 500,000	86%	$ 429,666	$ 70,334	$ -	$ 70,334	$ -
5.4.21	DC Background Study and CBC Strategy	2029 - 2029	$ 120,000	$ -	$ 120,000	0%	$ -	$ 120,000	$ -	$ 120,000	$ -
5.4.22	Future Secondary Plan	2030 - 2030	$ 600,000	$ -	$ 600,000	25%	$ 150,000	$ 450,000	$ -	$ 450,000	$ -
5.4.23	Workforce Housing Study	2030 - 2030	$ 125,000	$ -	$ 125,000	90%	$ 112,500	$ 12,500	$ -	$ 12,500	$ -
5.4.24	Employment Strategy Update	2031 - 2031	$ 300,000	$ -	$ 300,000	86%	$ 257,797	$ 42,203	$ -	$ 42,203	$ -
5.4.25	Housing Strategy Update	2032 - 2032	$ 125,000	$ -	$ 125,000	90%	$ 112,500	$ 12,500	$ -	$ 12,500	$ -
5.4.26	Official Plan 10 yr Update: Background Studies	2032 - 2032	$ 800,000	$ -	$ 800,000	50%	$ 400,000	$ 400,000	$ -	$ 400,000	$ -
5.4.27	Future Secondary Plan	2033 - 2033	$ 600,000	$ -	$ 600,000	25%	$ 150,000	$ 450,000	$ -	$ -	$ 450,000
5.4.28	Official Plan 10 yr Update	2033 - 2033	$ 675,000	$ -	$ 675,000	50%	$ 337,500	$ 337,500	$ -	$ -	$ 337,500
5.4.29	Downtown Secondary Plan	2033 - 2033	$ 700,000	$ -	$ 700,000	50%	$ 350,000	$ 350,000	$ -	$ -	$ 350,000
	Subtotal Planning & Development		$ 11,690,000	$ -	$ 11,690,000		$ 5,059,288	$ 6,630,712	$ -	$ 5,493,212	$ 1,137,500
TOTAL DEVELOPMENT-RELATED STUDIES			**$ 13,935,000**	**$ -**	**$ 13,935,000**		**$ 5,949,038**	**$ 7,985,962**	**$ 331,656**	**$ 6,516,806**	**$ 1,137,500**

Residential Development Charge Calculation		
Residential Share of 2024 - 2033 DC Eligible Costs	77%	$5,042,515
10-Year Growth in Population in New Units		21,798
Unadjusted Development Charge Per Capita		**$231.33**
Non-Residential Development Charge Calculation		
Non-Residential Share of 2024 - 2033 DC Eligible Costs	23%	$1,474,291
10-Year Growth in Square Metres		353,103
Unadjusted Development Charge Per Square Metre		**$4.18**

Uncommitted Reserve Fund Balance	
Balance as at December 31, 2023	$331,656

APPENDIX B.5
TABLE 2

CITY OF NIAGARA FALLS
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
DEVELOPMENT-RELATED STUDIES
RESIDENTIAL DEVELOPMENT CHARGE
(in $000)

DEVELOPMENT-RELATED STUDIES	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	TOTAL
OPENING CASH BALANCE ($000)	$256.6	($712.3)	($1,116.3)	($1,719.4)	($1,482.2)	($1,392.4)	($1,505.1)	($1,347.1)	($781.9)	($597.4)	
2024-2033 RESIDENTIAL FUNDING REQUIREMENTS											
- Development-Related Studies: Prior Growth	$256.6	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$256.6**
- Development-Related Studies: Non Inflated	$1,204.8	$867.6	$1,035.9	$231.7	$393.7	$591.4	$359.8	$34.6	$321.1	$1.9	**$5,042.5**
- Development-Related Studies: Inflated	$1,461.5	$884.9	$1,077.7	$245.9	$426.1	$653.0	$405.2	$39.7	$376.2	$2.3	**$5,572.6**
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	2,062	2,101	2,140	2,179	2,221	2,263	2,305	2,352	2,070	2,104	**21,798**
REVENUE											
- DC Receipts: Inflated	$509.7	$529.9	$550.6	$571.9	$594.5	$617.8	$641.8	$668.1	$599.8	$621.7	**$5,905.8**
INTEREST											
- Interest on Opening Balance	$9.0	($39.2)	($61.4)	($94.6)	($81.5)	($76.6)	($82.8)	($74.1)	($43.0)	($32.9)	**($577.0)**
- Interest on In-year Transactions	($26.2)	($9.8)	($14.5)	$5.7	$2.9	($1.0)	$4.1	$11.0	$3.9	$10.8	**($12.9)**
TOTAL REVENUE	$492.5	$480.9	$474.7	$483.0	$515.9	$540.3	$563.2	$605.0	$560.7	$599.7	**$5,315.9**
CLOSING CASH BALANCE	($712.3)	($1,116.3)	($1,719.4)	($1,482.2)	($1,392.4)	($1,505.1)	($1,347.1)	($781.9)	($597.4)	$0.0	

2024 Adjusted Charge Per Capita	**$247.26**

Allocation of Capital Program	
Residential Sector	77.4%
Non-Residential Sector	22.6%
Rates for 2024	
Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX B.5
TABLE 3

CITY OF NIAGARA FALLS
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
DEVELOPMENT-RELATED STUDIES
NON-RESIDENTIAL DEVELOPMENT CHARGE
(in $000)

DEVELOPMENT-RELATED STUDIES	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	TOTAL
OPENING CASH BALANCE	$75.0	($209.4)	($329.3)	($508.8)	($443.6)	($422.7)	($462.6)	($425.1)	($270.3)	($196.3)	
2024 - 2033 NON-RESIDENTIAL FUNDING REQUIREMENTS											
- Development-Related Studies: Prior Growth	$75.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$75.0**
- Development-Related Studies: Non Inflated	$352.3	$253.7	$302.9	$67.7	$115.1	$172.9	$105.2	$10.1	$93.9	$0.6	**$1,474.3**
- Development-Related Studies: Inflated	$427.3	$258.7	$315.1	$71.9	$124.6	$190.9	$118.5	$11.6	$110.0	$0.7	**$1,629.3**
NON-RESIDENTIAL SPACE GROWTH											
- Growth in Square Metres	33,052	33,562	33,939	34,399	34,909	35,359	35,769	36,319	37,629	38,166	**353,103**
REVENUE											
- DC Receipts: Inflated	$147.9	$153.2	$158.1	$163.4	$169.1	$174.7	$180.3	$186.7	$197.3	$204.2	**$1,735.1**
INTEREST											
- Interest on Opening Balance	$2.6	($11.5)	($18.1)	($28.0)	($24.4)	($23.2)	($25.4)	($23.4)	($14.9)	($10.8)	**($177.1)**
- Interest on In-year Transactions	($7.7)	($2.9)	($4.3)	$1.6	$0.8	($0.4)	$1.1	$3.1	$1.5	$3.6	**($3.7)**
TOTAL REVENUE	$142.9	$138.8	$135.6	$137.0	$145.5	$151.1	$155.9	$166.4	$184.0	$196.9	**$1,554.2**
CLOSING CASH BALANCE	($209.4)	($329.3)	($508.8)	($443.6)	($422.7)	($462.6)	($425.1)	($270.3)	($196.3)	($0.0)	

2024 Adjusted Charge Per Square Metre	**$4.48**

Allocation of Capital Program	
Residential Sector	77.4%
Non-Residential Sector	22.6%
Rates for 2024	
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

The City's Municipal Works department is responsible for a wide-range of public services in Niagara Falls including the design, construction maintenance and rehabilitation of 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 outlines of the engineered services that are included in the 2024 DC Study including: Services Related to a Highway: Roads and Related, Water, Sanitary Sewer and Storm Water Management services. As part of the 2024 DC Study update, Sidewalk infrastructure is now included as part of Roads and Related Services rather than a standalone category.

The technical tables for each service set out the capital forecast and the calculation of the development charges. The cost, quantum and description of the projects included in the forecast are based upon the City's 2024 capital budget, previous DC Background Studies, analysis provided as part of the City's ongoing Master Servicing Plan (MSP) review as well as discussions with Municipal Works staff. This appendix includes all engineering projects that will meet the servicing demands within the City. The development charges are calculated on a City-wide basis.

The planning horizon utilized for all engineering services is 2024-2033. The following appendices comprise the City's engineering related services:

C.1 Services Related to a Highway: Roads and Related
C.2 Water Services
C.3 Sanitary Sewer
C.4 Stormwater Management

Appendix C.1

Services Related to a Highway:

Roads & Related

Appendix C.1 – Roads and Related

This appendix provides a brief outline of the infrastructure included in the Services Related to A Highway: Roads development charge. The development-related projects outlined in this appendix are required to service the demands of new development to 2041. The benefits of the services are considered to be city-wide for the purposes of calculating the development charge.

The following discusses the individual components included in the Roads service category. The analysis is set out in the tables which follow.

Table C.1-1 15-Year Historical Service Levels and Calculation of Maximum Allowable Funding Envelope

Table C.1-2 2024-2033 Development-Related Capital Program

Table C.1-3 Calculation of the Unadjusted Development

Table C.1-4 Cash Flow Analysis

Table 1 15-Year Historical Service Levels and Calculation of Maximum Allowable Funding Envelope

Table 1 demonstrates that the City's current road infrastructure comprises of 340 lane kilometres of collector roads and approximately 212 lane kilometres of arterial roads. The service level also includes 64 bridges, 69 culverts, 182 traffic control assets and 11 units of traffic hardware (e.g. traffic counters, radar speed boards etc.).

The total inventory of capital assets in 2023 has a full replacement value of $1.14 billion. This produces a 15-year historical service level of $9,005.40 per capita and employment. The resulting maximum allowable funding envelope is $200.87 million.

Table 1 provides a summary of the level of service and the calculation of the 15-year historical service level. The calculation of the maximum allowable funding envelope is summarized as follows:

10-Year Funding Envelope Calculation

15-Year Average Service Level (2009 – 2023)	$9,005.40
Net Population & Employment Growth (2024 – 2033)	22,305
Maximum Allowable Funding Envelope	**$200,865,447**

The existing facilities have been examined and consideration has been given to whether or not "excess capacity" exists within the City's infrastructure that may be available to partially meet the future servicing requirements. It has been determined that no "uncommitted excess capacity" exists within the City's Roads and Related infrastructure, and as such, no adjustments have been made to the service level calculations.

Table 2 2024-2033 Development-Related Capital Program

Table 2 provides a summary of the City-wide development-related capital program for Roads and Related services. The capital program totals $85.77 million gross. The capital program includes environmental assessments, road widenings, road rehabilitations, new roads, additional lanes, new traffic signals, sidewalks and other capital improvements.

No grants or subsidies have been identified to help offset the cost of the program. Approximately, $15.75 million (18%) of the capital program is deemed to a BTE share and is removed from the calculation, and must be funded through non-DC revenue sources. A general description of the approach used to determine the benefit to existing shares for different project types is described below:

- **New roads and new road segments** – new road segments do not replace any existing assets and therefore are treated as 100% growth-related with no benefit to existing share adjustment.
- **Road upgrades** – for projects where an existing road segment is being upgraded, the benefit to existing share was determined based on the resurfacing/reconstruction of the length of the existing segment.
- **Sidewalks** – benefit to existing shares were assessed on a project-by-project basis with consideration for the increase in need for service being driven by development. BTE shares for sidewalks range from 25%-50% and are generally consistent with assumptions used in the 2019 DC Study.

A further $7.06 million is available in the Roads and Related DC reserve fund and is removed from the calculation. Another share of the program is deemed to benefit development beyond the 10-year planning horizon. The post-2033 share amounts to $1.57 million. These costs will be considered for development charge recovery through subsequent DC by-law reviews.

After these adjustments, the development-related share of the Roads and Related program is reduced to $61.38 million and is included in the DC calculation.

Table 3 Calculation of Unadjusted Development Charges

Tables 3 displays the DC recoverable costs apportioned to the residential and non-residential sectors. In total, 77%, or $47.49 million is apportioned to the residential sector and 23%, or $13.89 million is related to the non-residential sector based on shares of anticipated shares of population and employment growth.

The residential sector's share of $47.49 million in development-related net capital costs yields an "unadjusted" development charge of $2,178.83 per

capita. The non-residential sector's share of $13.89 million in development-related net capital costs results in an unadjusted charge of $39.32 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 increase to $2,192.00 per capita and $39.68 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:

SERVICES RELATED TO A HIGHWAY: ROADS & RELATED SUMMARY

15-year Hist. Service Level per pop & emp	2024 - 2033 Development-Related Capital Program Total	Net DC Recoverable	Unadjusted Development Charge $/capita	$/sq.m	**Adjusted Development Charge $/capita**	**$/sq.m**
$9,005.40	$85,765,795	$61,378,941	$2,178.83	$39.32	$2,192.00	$39.68

APPENDIX C.1
TABLE 1

CITY OF NIAGARA FALLS
INVENTORY OF CAPITAL ASSETS
SERVICES RELATED TO A HIGHWAY: ROADS & RELATED

ROADS	# of Lane Kilometres															UNIT COST
Type of Road	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	($/km)
Collector Roads	359.7	365.7	369.4	386.8	386.8	338.0	338.2	340.4	340.4	340.4	340.4	340.4	340.4	340.4	340.4	$1,700,000
Arterial Roads	195.3	198.5	200.6	210.0	210.0	209.6	211.6	212.6	212.6	212.6	212.6	212.6	212.6	212.6	212.6	$2,200,000
Total (km)	**554.9**	**564.2**	**570.0**	**596.8**	**596.8**	**547.6**	**549.8**	**553.0**	**553.0**	**553.0**	**553.0**	**553.0**	**553.0**	**553.0**	**553.0**	
Total ($000)	**$1,041,013.4**	**$1,058,457.3**	**$1,069,298.1**	**$1,119,560.0**	**$1,119,560.0**	**$1,035,720.0**	**$1,040,460.0**	**$1,046,400.0**	**$1,046,400.0**	**$1,046,400.0**	**$1,046,400.0**	**$1,046,400.0**	**$1,046,400.0**	**$1,046,400.0**	**$1,046,400.0**	

BRIDGES & CULVERTS	# of Bridges & Culverts															UNIT COST
Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	($/unit)
Bridges	74	72	71	71	71	64	64	64	64	64	64	64	64	64	64	$600,000
Culverts	75	75	75	75	75	71	71	69	69	69	69	69	69	69	69	$450,000
Total (#)	**149**	**147**	**146**	**146**	**146**	**135**	**135**	**133**	**133**	**133**	**133**	**133**	**133**	**133**	**133**	
Total ($000)	**$78,150.0**	**$76,950.0**	**$76,350.0**	**$76,350.0**	**$76,350.0**	**$70,350.0**	**$70,350.0**	**$69,450.0**	**$69,450.0**	**$69,450.0**	**$69,450.0**	**$69,450.0**	**$69,450.0**	**$69,450.0**	**$69,450.0**	

TRAFFIC CONTROL	# of Traffic Signals															UNIT COST
Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	($/unit)
Signalized Intersections	48	48	49	50	50	48	48	48	48	48	48	49	49	49	49	$450,000
Flashing Beacons	7	7	7	7	7	12	12	12	12	12	12	12	12	12	12	$10,000
Pedestrian Crossovers	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	$200,000
Traffic Calming Measures	21	23	31	31	31	33	40	44	44	61	67	74	88	97	106	$15,000
Train Sensors	-	-	-	-	-	-	-	-	-	-	-	14	14	14	14	$40,000
Total (#)	**76**	**78**	**87**	**88**	**88**	**93**	**100**	**104**	**104**	**121**	**128**	**150**	**164**	**173**	**182**	
Total ($000)	**$21,985.0**	**$22,015.0**	**$22,585.0**	**$23,035.0**	**$23,035.0**	**$22,215.0**	**$22,320.0**	**$22,380.0**	**$22,380.0**	**$22,635.0**	**$22,925.0**	**$24,040.0**	**$24,250.0**	**$24,385.0**	**$24,520.0**	

TRAFFIC HARDWARE	# of Traffic Hardware															UNIT COST
Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	($/unit)
Traffic Counters	6	6	6	6	6	6	6	7	7	8	-	2	2	2	2	$5,000
Radar Speed Boards (Permanent)	2	2	2	2	2	4	5	5	5	5	5	5	5	5	5	$10,000
Radar Speed Boards (Portable)	-	-	-	-	-	-	-	-	-	-	-	4	4	4	4	$3,000
Total (#)	**8**	**8**	**8**	**8**	**8**	**10**	**11**	**12**	**12**	**13**	**5**	**11**	**11**	**11**	**11**	
Total ($000)	**$50.0**	**$50.0**	**$50.0**	**$50.0**	**$50.0**	**$70.0**	**$80.0**	**$85.0**	**$85.0**	**$90.0**	**$50.0**	**$72.0**	**$72.0**	**$72.0**	**$72.0**	

APPENDIX C.1
TABLE 1

CITY OF NIAGARA FALLS
CALCULATION OF SERVICE LEVELS
SERVICES RELATED TO A HIGHWAY: ROADS & RELATED

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Historical Population	82,671	82,834	82,997	83,988	84,991	86,006	87,033	88,071	89,305	90,556	91,825	93,111	94,415	95,861	97,327
Historical Employment	39,971	39,741	39,512	39,692	39,873	40,054	40,236	40,419	39,874	39,336	38,805	38,282	37,766	38,344	38,930
Total Historical Population & Employm	122,642	122,575	122,509	123,680	124,864	126,060	127,269	128,490	129,179	129,892	130,630	131,393	132,181	134,205	136,257

INVENTORY SUMMARY ($000)

Roads	$1,041,013.4	$1,058,457.3	$1,069,298.1	$1,119,560.0	$1,119,560.0	$1,035,720.0	$1,040,460.0	$1,046,400.0	$1,046,400.0	$1,046,400.0	$1,046,400.0	$1,046,400.0	$1,046,400.0	$1,046,400.0	$1,046,400.0
Bridges & Culverts	$78,150.0	$76,950.0	$76,350.0	$76,350.0	$76,350.0	$70,350.0	$70,350.0	$69,450.0	$69,450.0	$69,450.0	$69,450.0	$69,450.0	$69,450.0	$69,450.0	$69,450.0
Traffic Control	$21,985.0	$22,015.0	$22,585.0	$23,035.0	$23,035.0	$22,215.0	$22,320.0	$22,380.0	$22,380.0	$22,635.0	$22,925.0	$24,040.0	$24,250.0	$24,385.0	$24,520.0
Traffic Hardware	$50.0	$50.0	$50.0	$50.0	$50.0	$70.0	$80.0	$85.0	$85.0	$90.0	$50.0	$72.0	$72.0	$72.0	$72.0
Total ($000)	**$1,141,198.4**	**$1,157,472.3**	**$1,168,283.1**	**$1,218,995.0**	**$1,218,995.0**	**$1,128,355.0**	**$1,133,210.0**	**$1,138,315.0**	**$1,138,315.0**	**$1,138,575.0**	**$1,138,825.0**	**$1,139,962.0**	**$1,140,172.0**	**$1,140,307.0**	**$1,140,442.0**

SERVICE LEVEL ($/pop & emp)

															Average Service Level
Roads	$8,488.23	$8,635.18	$8,728.32	$9,052.07	$8,966.24	$8,216.09	$8,175.28	$8,143.82	$8,100.39	$8,055.92	$8,010.41	$7,963.89	$7,916.42	$7,797.03	$7,679.61	$8,261.93
Bridges & Culverts	$637.22	$627.78	$623.22	$617.32	$611.47	$558.07	$552.77	$540.51	$537.63	$534.67	$531.65	$528.57	$525.42	$517.49	$509.70	$563.56
Traffic Control	$179.26	$179.60	$184.35	$186.25	$184.48	$176.23	$175.38	$174.18	$173.25	$174.26	$175.50	$182.96	$183.46	$181.70	$179.95	$179.39
Traffic Hardware	$0.41	$0.41	$0.41	$0.40	$0.40	$0.56	$0.63	$0.66	$0.66	$0.69	$0.38	$0.55	$0.54	$0.54	$0.53	$0.52
Total ($/pop & emp)	**$9,305.12**	**$9,442.97**	**$9,536.30**	**$9,856.04**	**$9,762.58**	**$8,950.94**	**$8,904.05**	**$8,859.17**	**$8,811.92**	**$8,765.55**	**$8,717.94**	**$8,675.97**	**$8,625.84**	**$8,496.75**	**$8,369.79**	**$9,005.40**

CITY OF NIAGARA FALLS
CALCULATION OF MAXIMUM ALLOWABLE
SERVICES RELATED TO A HIGHWAY: ROADS & RELATED

15-Year Funding Envelope Calculation	
15 Year Average Service Level 2009 - 2023	$9,005.40
Net Population & Employment Growth 2024 - 2033	22,305
Maximum Allowable Funding Envelope	**$200,865,447**

APPENDIX C.1
TABLE 2

CITY OF NIAGARA FALLS
DEVELOPMENT-RELATED CAPITAL PROGRAM
SERVICES RELATED TO A HIGHWAY: ROADS AND RELATED

NO.	Description	Limits	Approx. Length (m)	Infrastructure	Timing	Gross Cost	Grants and Subsidies	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs		
									BTE %	BTE $		Available DC Reserve Funds	2024-2033	Post 2033
1	2023 Asphalt Overlay Program - DC				2024 - 2028	$480,793	$0	$480,793	0%	$0	$480,793	$0	$480,793	$0
2	2024 Asphalt Overlay Program - DC				2024 - 2028	$285,000	$0	$285,000	0%	$0	$285,000	$0	$285,000	$0
3	2025 Asphalt Overlay (DC) - Brown Road, Blackburn Parkway		1350		2025 - 2025	$2,295,000	$0	$2,295,000	29%	$675,000	$1,620,000	$0	$1,620,000	$0
4	Asphalt Overlay - Provision for Future Years				2026 2033	$4,000,000	$0	$4,000,000	29%	$1,176,471	$2,823,529	$0	$2,823,529	$0
5	Allendale Avenue (Ferry Street - Robinson Street)	Ferry Street - Robinson Street	365	Road Upgrade	2024 - 2028	$1,964,700	$0	$1,964,700	9%	$182,500	$1,782,200	$1,782,200	$0	$0
6	Beaverdams Road Reconstruction		1300		2024 - 2028	$3,192,000	$0	$3,192,000	20%	$650,000	$2,542,000	$0	$2,542,000	$0
7	Beechwood Road Improvements	Lundy's Lane to Brown Road	3200	Road Upgrade	2029 - 2033	$5,440,000	$0	$5,440,000	29%	$1,600,000	$3,840,000	$0	$3,840,000	$0
8	Biggar Road Improvements Phase 1 - DC DEBT TO BE ISSUED	Montrose Road to Unopen Road Allowance	850	Road Upgrade	2024 - 2028	$7,000,000	$0	$7,000,000	6%	$425,000	$6,575,000	$0	$6,575,000	$0
9	Biggar Road Improvements Phase 2	Unopen Road Allowance to Crowland Avenue	860	Road Upgrade	2029 - 2033	$1,462,000	$0	$1,462,000	29%	$430,000	$1,032,000	$0	$573,262	$458,738
10	Biggar Road Improvements Phase 3	Crowland Avenue to westerly City Limits	2090	Road Upgrade	2029 - 2033	$3,553,000	$0	$3,553,000	29%	$1,045,000	$2,508,000	$0	$1,393,160	$1,114,840
11	Brown Road Improvements	Beechwood Road to 550m West of Kalar Road	1330	Road Upgrade	2029 - 2033	$2,261,000	$0	$2,261,000	29%	$665,000	$1,596,000	$0	$1,596,000	$0
12	Chippawa Parkway Improvements Phase 2	1200m west of Stanley Avenue to Stanley Avenue	1200	Road Upgrade	2029 - 2033	$2,040,000	$0	$2,040,000	29%	$600,000	$1,440,000	$0	$1,440,000	$0
13	Chippawa Parkway Improvements Phase 1 (Cost Sharing)	Dorchester Road to 1200m west of Stanley Avenue	2700	Road Upgrade	2024 - 2028	$3,200,000	$0	$3,200,000	42%	$1,350,000	$1,850,000	$0	$1,850,000	$0
14	Dorchester Road (Frederica Street - McLeod Road) - EA	Frederica Street - McLeod Road		EA	2024 - 2028	$215,100	$0	$215,100	0%	$0	$215,100	$215,100	$0	$0
15	Dorchester Road (McLeod Road - Chippawa Parkway) and Chippawa Parkway (Dorchester Road - Stanley Avenue) - EA	McLeod Road - Stanley Avenue		Riverfront Development - Road/Capacity Improvements. & Roundabout at Oldfield Road	2024 - 2028	$258,100	$0	$258,100	0%	$0	$258,100	$258,100	$0	$0
16	Dorchester Road (Thorold Stone Road - Pinedale Drive) - EA	Thorold Stone Road - Pinedale Drive		EA	2024 - 2028	$250,000	$0	$250,000	0%	$0	$250,000	$250,000	$0	$0
17	Dorchester Road (Including Oldfield/Dorchester Intersection)	Oldfield Road to Chippawa Parkway	1000	Road/Intersection Upgrade	2024 2028	$2,700,000	$0	$2,700,000	19%	$500,000	$2,200,000	$0	$2,200,000	$0
18	Drummond Rd Improvements (Hydro Corridor to Mcleod Rd) DC DEBT TO BE ISSUED		425		2024 - 2028	$1,420,000	$0	$1,420,000	15%	$212,500	$1,207,500	$0	$1,207,500	$0
19	Drummond Rd Improvements (Hydro Corridor to Mcleod Rd)				2024 - 2028	$94,360	$0	$94,360	0%	$0	$94,360	$0	$94,360	$0
20	Dorchester & Oldfield Intersection EA Design				2024 - 2028	$115,992	$0	$115,992	0%	$0	$115,992	$0	$115,992	$0
21	Ferry Street @ Fallsview Boulevard			New Traffic Signal Install	2024 - 2028	$450,000	$0	$450,000	0%	$0	$450,000	$450,000	$0	$0

APPENDIX C.1
TABLE 2

CITY OF NIAGARA FALLS
DEVELOPMENT-RELATED CAPITAL PROGRAM
SERVICES RELATED TO A HIGHWAY: ROADS AND RELATED

NO.	Description	Limits	Approx. Length (m)	Infrastructure	Timing	Gross Cost	Grants and Subsidies	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs		
									BTE %	BTE $		Available DC Reserve Funds	2024-2033	Post 2033
22	Garner Road (Brown Road - Warren Woods Avenue)	Brown Road - Warren Woods Avenue	436	Road Upgrade	2024 - 2028	$702,600	$0	$702,600	31%	$218,000	$484,600	$484,600	$0	$0
23	Garner Road Improvements	McLeod Road to Lundy's Lane	2000	Road Upgrade	2029 - 2033	$5,400,000	$0	$5,400,000	19%	$1,000,000	$4,400,000	$0	$4,400,000	$0
24	Kalar Road Street Lighting Improvements (Brown Road to Hydro Corridor)				2024 - 2027	$41,650	$0	$41,650	0%	$0	$41,650	$0	$41,650	$0
25	Kalar Road (Lundy's Lane - Beaverdams Road)	Lundy's Lane - Beaverdams Road	740	Road Upgrade	2024 - 2028	$3,100,200	$0	$3,100,200	12%	$370,000	$2,730,200	$2,730,200	$0	$0
26	Kalar Road @ Beaverdams Road	Intersection		New Traffic Signal Install	2024 - 2028	$450,000	$0	$450,000	0%	$0	$450,000	$450,000	$0	$0
27	Kalar Road Improvements	Mountain Road to Throld Stone Road	2400	Road Upgrade	2029 - 2033	$4,080,000	$0	$4,080,000	29%	$1,200,000	$2,880,000	$0	$2,880,000	$0
28	McLeod Road (Kalar Road - Garner Road)	Kalar Road - Garner Road	1000		2024 - 2028	$3,476,900	$0	$3,476,900	0%	$0	$3,476,900	$25,411	$3,451,489	$0
29	McLeod Road @ Garner Road			New Traffic Signal Install	2024 - 2028	$450,000	$0	$450,000	0%	$0	$450,000	$0	$450,000	$0
30	McLeod Road - MCEA	Kalar Road to Townline Road			2024 - 2028	$250,000	$0	$250,000	0%	$0	$250,000	$0	$250,000	$0
31	McLeod Road Improvements (Garner Road to Townline Road)	Garner Road to Townline Road	2200	Road Upgrade	2029 - 2033	$5,740,000	$0	$5,740,000	19%	$1,100,000	$4,640,000	$0	$4,640,000	$0
32	Mewburn Road (Scholfield Street - Mountain Road)	Scholfield Street - Mountain Road	520	Road Upgrade	2029 - 2033	$880,600	$0	$880,600	30%	$260,000	$620,600	$0	$620,600	$0
33	Portage Road (Norton Street - Macklem Street)	Norton Street - Macklem Street	480	Road Upgrade (Design & Construction)	2029 - 2033	$1,851,900	$0	$1,851,900	13%	$240,000	$1,611,900	$0	$1,611,900	$0
34	Portage Road (Main Street - Marineland Parkway) - EA	Main Street - Marineland Parkway		TMP	2029 - 2033	$250,000	$0	$250,000	0%	$0	$250,000	$0	$250,000	$0
35	Portage Road (Marineland Parkway - Upper Rapids Road) - EA	Marineland Parkway - Upper Rapids Road		TMP	2029 - 2033	$250,000	$0	$250,000	0%	$0	$250,000	$0	$250,000	$0
36	Reixinger Road - Grassy Brook Area including Dell Road	Lyons Creek Road to QEW	2675		2024 - 2028	$3,745,000	$0	$3,745,000	0%	$0	$3,745,000	$0	$3,745,000	$0
37	Reixinger Road Extension/Street A	Montrose Road to West Limit	190	New Road	2024 - 2028	$450,000	$0	$450,000	0%	$0	$450,000	$0	$450,000	$0
38	Road Widenings for new South Niagara Hospital				2024 - 2028	$950,000	$0	$950,000	0%	$0	$950,000	$0	$950,000	$0
39	Robinson Street (Stanley Avenue - East Limit) - EA	Stanley Avenue - East Limit		New Developments	2024 - 2028	$250,000	$0	$250,000	0%	$0	$250,000	$0	$250,000	$0
40	Robinson Street @ Fallsview Boulevard			New Traffic Signal Install	2024 - 2028	$450,000	$0	$450,000	0%	$0	$450,000	$0	$450,000	$0
41	Transportation Master Plan Update				2024 - 2028	$450,000	$0	$450,000	0%	$0	$450,000	$0	$450,000	$0
42	Transportation Master Plan Update				2029 - 2033	$450,000	$0	$450,000	0%	$0	$450,000	$0	$450,000	$0
43	Willick Road (Sodom Road - Ort Road)	Sodom Road – Ort Road	1000	Road Upgrade	2024 - 2028	$2,541,400	$0	$2,541,400	20%	$500,000	$2,041,400	$0	$2,041,400	$0
44	Willick Road (Sodom Road - Ort Road)	Sodom Road – Ort Road	N/A	Box Culvert Crossing Replacement	2024 - 2028	$75,000	$0	$75,000	0%	$0	$75,000	$0	$75,000	$0
45	Willick Road (Sodom Road - Willoughby Drive)	Sodom Road - Willoughby Drive	1000	New Road	2024 - 2028	$2,455,400	$0	$2,455,400	0%	$0	$2,455,400	$0	$2,455,400	$0
46	Victoria Centre Streetscape Revitalization Phase 3 (Design)				2024 - 2028	$250,000	$0	$250,000	0%	$0	$250,000	$0	$250,000	$0
47	Drummond Road (McLeod Road - Hydro Corridor)	McLeod Road - Hydro Corridor		Sidewalk	2024 - 2028	$116,900	$0	$116,900	40%	$46,760	$70,140	$0	$70,140	$0
48	Heartland Forest Road (Brown Road - Chippawa Parkway)	Brown Road - Chippawa Parkway		Sidewalk	2024 - 2028	$278,200	$0	$278,200	40%	$111,280	$166,920	$0	$166,920	$0

APPENDIX C.1
TABLE 2

CITY OF NIAGARA FALLS
DEVELOPMENT-RELATED CAPITAL PROGRAM
SERVICES RELATED TO A HIGHWAY: ROADS AND RELATED

NO.	Description	Limits	Approx. Length (m)	Infrastructure	Timing	Gross Cost	Grants and Subsidies	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs		
									BTE %	BTE $		Available DC Reserve Funds	2024-2033	Post 2033
49	Kalar Road (Lundy's Lane - Beaverdams Road)	Lundy's Lane - Beaverdams Road		Sidewalk	2024 - 2028	$232,300	$0	$232,300	40%	$92,920	$139,380	$0	$139,380	$0
50	Mewburn Road (Scholfield Street - Mountain Road)	Scholfield Street - Mountain Road	520	Sidewalk	2024 - 2028	$143,400	$0	$143,400	40%	$57,360	$86,040	$0	$86,040	$0
51	New Sidewalk Construction	Misc Missing Links	1000	Sidewalk	2024 - 2028	$369,900	$0	$369,900	25%	$92,475	$277,425	$0	$277,425	$0
52	Thorold Stone Road Extension sidewalk/Multi-Use Path	Fourth Avenue to Victoria Avenue	1000	Sidewalk	2024 - 2028	$200,000	$0	$200,000	25%	$50,000	$150,000	$0	$150,000	$0
53	Chippawa Parkway Phase 1 Multi-Use Path	Dorchester Road to 1200m west of Stanley Avenue	2700	Sidewalk	2024 - 2028	$540,000	$0	$540,000	25%	$135,000	$405,000	$0	$405,000	$0
54	Chippawa Parkway Phase 2 Multi-Use Path	1200m west of Stanley Avenue to Stanley Avenue	1200	Sidewalk	2029 - 2033	$240,000	$0	$240,000	25%	$60,000	$180,000	$0	$180,000	$0
55	Dorchester Road Multi-Use Path	Oldfield Road to Chippawa Parkway	1000	Sidewalk	2024 - 2028	$200,000	$0	$200,000	25%	$50,000	$150,000	$0	$150,000	$0
56	Montrose Road Sdwk/Multi-use Path - DC DEBT TO BE ISSUED	Grassy Brook to Lyons Parkway	1500	Sidewalk	2024 - 2028	$300,000	$0	$300,000	25%	$75,000	$225,000	$0	$225,000	$0
57	Montrose Road Sdwk/Multi-use Path	Grassy Brook to McLeod	3200	Sidewalk	2029 - 2033	$640,000	$0	$640,000	25%	$160,000	$480,000	$0	$480,000	$0
58	Fallsview District - Miscellaneous Locations			Sidewalk	2029 - 2033	$143,400	$0	$143,400	50%	$71,700	$71,700	$71,700	$0	$0
59	Murray Street (Stanley Avenue - Main Street)	Stanley Avenue - Main Street	125	Sidewalk	2029 - 2033	$17,900	$0	$17,900	50%	$8,950	$8,950	$8,950	$0	$0
60	Stanley Avenue (Murray Street - Main Street)	Murray Street - Main Street		Sidewalk	2029 - 2033	$30,800	$0	$30,800	50%	$15,400	$15,400	$15,400	$0	$0
61	Falls Avenue (Stanley Avenue - Victoria Avenue) (1,000m x2)	Stanley Avenue - Victoria Avenue	2000	Sidewalk	2029 - 2033	$286,800	$0	$286,800	50%	$143,400	$143,400	$143,400	$0	$0
62	Fallsview Boulevard (Main Street - Dunn Street) - West Side Only	Main Street - Dunn Street	100	Sidewalk	2029 - 2033	$143,400	$0	$143,400	50%	$71,700	$71,700	$71,700	$0	$0
63	Portage Road (Fallsview Boulevard - Marineland Parkway)	Fallsview Boulevard - Marineland Parkway		Sidewalk	2029 - 2033	$215,100	$0	$215,100	50%	$107,550	$107,550	$107,550	$0	$0
TOTAL SERVICES RELATED TO HIGHWAY: ROAD AND RELATED SERVICES						**$85,765,795**	**$0**	**$85,765,795**		**$15,748,966**	**$70,016,830**	**$7,064,311**	**$61,378,941**	**$1,573,578**

2024 - 2033 Net Funding Envelope	$200,865,447
Reserve Fund Balance	
Balance as at December 31, 2023	$7,064,311

APPENDIX C.1
TABLE 3

CITY OF NIAGARA FALLS
SUMMARY OF UNADJUSTED RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT CHARGES
SERVICES RELATED TO A HIGHWAY: ROADS AND RELATED
CITY-WIDE UNIFORM CHARGE

10-Year Growth in Population in New Units	21,798
10-Year Employment Growth	6,373
10-Year Growth in Square Metres	353,103

	Growth-Related Capital Forecast								
	Total (Net of Grants/ Subsidies) ($000)	Benefit to Existing Share ($000)	Reserve Fund Adjustment ($000)	Post Period Allocation ($000)	Total Net Capital Costs After Discount ($000)	Residential Share		Non-Residential Share	
						%	$000	%	$000
SERVICES RELATED TO A HIGHWAY: ROADS AND RELATED									
TOTAL	$85,765.80	$15,748.97	$7,064.31	$1,573.58	$61,378.94	77.4%	$47,493.24	22.6%	$13,885.70
TOTAL SERVICES RELATED TO A HIGHWAY: ROADS AND RELATED	**$85,765.80**	**$15,748.97**	**$7,064.31**	**$1,573.58**	**$61,378.94**		**$47,493.24**		**$13,885.70**
Unadjusted Development Charge Per Capita ($)							**$2,178.83**		
Unadjusted Development Charge Per Square Metre ($)									**$39.32**

APPENDIX C.1
TABLE 4

CITY OF NIAGARA FALLS
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
SERVICES RELATED TO A HIGHWAY: ROADS & RELATED
RESIDENTIAL DEVELOPMENT CHARGE
(in $000)

SERVICES RELATED TO A HIGHWAY: ROADS & RELATED	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	TOTAL
OPENING CASH BALANCE	$5,466.2	$4,101.3	$1,434.2	($242.3)	($1,923.0)	($3,618.5)	($2,901.7)	($2,022.3)	($952.9)	($537.5)	
2024 - 2033 RESIDENTIAL FUNDING REQUIREMENTS											
- Services Related To A Highway: Roads & Related: Prior Growth	$1,028.4	$1,028.4	$1,028.4	$1,028.4	$1,028.4	$64.8	$64.8	$64.8	$64.8	$64.8	**$5,466.2**
- Services Related To A Highway: Roads & Related: Non Inflated	$5,004.9	$6,258.4	$5,278.0	$5,278.0	$5,269.9	$4,080.8	$4,080.8	$4,080.8	$4,080.8	$4,080.8	**$47,493.2**
- Services Related To A Highway: Roads & Related: Inflated	$6,033.3	$7,432.6	$6,561.2	$6,692.4	$6,817.6	$4,577.1	$4,668.6	$4,762.0	$4,857.2	$4,954.4	**$57,356.4**
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	2,062	2,101	2,140	2,179	2,221	2,263	2,305	2,352	2,070	2,104	**21,798**
REVENUE											
- DC Receipts: Inflated	$4,518.8	$4,697.2	$4,880.7	$5,069.6	$5,270.4	$5,477.1	$5,689.8	$5,922.3	$5,317.0	$5,511.7	**$52,354.6**
INTEREST											
- Interest on Opening Balance	$191.3	$143.5	$50.2	($13.3)	($105.8)	($199.0)	($159.6)	($111.2)	($52.4)	($29.6)	**($285.8)**
- Interest on In-year Transactions	($41.6)	($75.2)	($46.2)	($44.6)	($42.5)	$15.8	$17.9	$20.3	$8.0	$9.8	**($178.5)**
TOTAL REVENUE	$4,668.5	$4,765.5	$4,884.7	$5,011.7	$5,122.1	$5,293.8	$5,548.1	$5,831.4	$5,272.6	$5,491.9	**$51,890.2**
CLOSING CASH BALANCE	$4,101.3	$1,434.2	($242.3)	($1,923.0)	($3,618.5)	($2,901.7)	($2,022.3)	($952.9)	($537.5)	$0.0	

2024 Adjusted Charge Per Capita	**$2,192.00**

Allocation of Capital Program	
Residential Sector	77.4%
Non-Residential Sector	22.6%
Rates for 2024	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX C.1
TABLE 4

CITY OF NIAGARA FALLS
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
SERVICES RELATED TO A HIGHWAY: ROADS & RELATED
NON-RESIDENTIAL DEVELOPMENT CHARGE
(in $000)

SERVICES RELATED TO A HIGHWAY: ROADS & RELATED	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	TOTAL
OPENING CASH BALANCE	$1,598.2	$1,189.2	$393.6	($124.0)	($653.0)	($1,196.4)	($1,047.7)	($867.9)	($647.9)	($348.5)	
2024 - 2033 NON-RESIDENTIAL FUNDING REQUIREMENTS											
- Services Related To A Highway: Roads & Related: Prior Growth	$300.7	$300.7	$300.7	$300.7	$300.7	$18.9	$18.9	$18.9	$18.9	$18.9	**$1,598.2**
- Services Related To A Highway: Roads & Related: Non Inflated	$1,463.3	$1,829.8	$1,543.1	$1,543.1	$1,540.8	$1,193.1	$1,193.1	$1,193.1	$1,193.1	$1,193.1	**$13,885.7**
- Services Related To A Highway: Roads & Related: Inflated	$1,764.0	$2,173.1	$1,918.3	$1,956.7	$1,993.3	$1,338.2	$1,365.0	$1,392.3	$1,420.1	$1,448.5	**$16,769.4**
NEW NON-RESIDENTIAL DEVELOPMENT											
- Growth in Square Metres	33,052	33,562	33,939	34,399	34,909	35,359	35,769	36,319	37,629	38,166	**353,103**
REVENUE											
- DC Receipts: Inflated	$1,311.5	$1,358.4	$1,401.1	$1,448.5	$1,499.4	$1,549.1	$1,598.4	$1,655.4	$1,749.4	$1,809.9	**$15,380.8**
INTEREST											
- Interest on Opening Balance	$55.9	$41.6	$13.8	($6.8)	($35.9)	($65.8)	($57.6)	($47.7)	($35.6)	($19.2)	**($157.4)**
- Interest on In-year Transactions	($12.4)	($22.4)	($14.2)	($14.0)	($13.6)	$3.7	$4.1	$4.6	$5.8	$6.3	**($52.2)**
TOTAL REVENUE	$1,355.0	$1,377.6	$1,400.6	$1,427.7	$1,449.9	$1,486.9	$1,544.8	$1,612.3	$1,719.5	$1,797.0	**$15,171.3**
CLOSING CASH BALANCE	$1,189.2	$393.6	($124.0)	($653.0)	($1,196.4)	($1,047.7)	($867.9)	($647.9)	($348.5)	$0.0	

2024 Adjusted Charge Per Square Metre	**$39.68**

Allocation of Capital Program	
Residential Sector	77.4%
Non-Residential Sector	22.6%
Rates for 2024	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Appendix C.2

Water Services

Appendix C.2 – Water Services

This appendix provides a brief outline of the infrastructure included in the Water Services development charge. The development-related projects outlined in this appendix are required to service the demands of new development to 2033. The benefits of the services are considered to be City-wide for the purposes of calculating the development charge.

The following discusses the individual components included in the Water Services category. Water infrastructure included in the DC capital forecast are required to achieve health and safety standards as identified in relevant legislation including Provincial regulations, other relevant legislation as well as City. As such, in accordance with section 4(3) of O.Reg. 82/98, the 15-year historical service level does not apply.

The analysis is set out in the tables which follow. The tables include:

Table C.2-1 2024-2033 Development-Related Capital Program

Table C.2-2 Calculation of the Unadjusted Development Charges

Table C.2-3 Cash Flow Analysis

Table 1 2024–2033 Development-Related Capital Program

Table 1 provides a summary of the development-related capital program for Water services. As shown, the capital program relates to the construction of watermains and totals $103.87 million. The capital program includes watermains in new development areas, replaced and/or enhanced watermains and oversizing of watermains.

No grants or subsidies have been identified to help offset the cost of the program. Nearly $51.31 million (50%) of the program is deemed to be a BTE share and will need to be funded from other revenue sources. A general description of the approach used to determine the benefit to existing shares for different project types is described below:

- **Watermains for new development** – new watermains do not replace any existing assets and therefore are generally treated as 100% growth-related with no benefit to existing share adjustment. Some projects have a 50-70% BTE allocation recognizing that existing pipes will be replaced in order to service new development.

- **Watermain cast iron replacement program** – a BTE share of 90% has been applied to these projects recognizing that the replacement of these assets will create some additional capacity to service future development.

- **Watermain upgrade program** – a BTE share of 25% has been applied to these projects recognizing that the need to replace and upgrade these assets are primarily driven by future development.

Approximately $1.59 million is available in the Water Services DC reserve fund and is applied to shares of projects occurring in the initial years of the planning horizon. Another share of the program is deemed to benefit development beyond the 10-year planning horizon. The post-2033 share amounts to $2.47 million and is deemed to be related to new development and can be recovered as part of subsequent DC by-law reviews. After these adjustments, the DC eligible share brought forward to the DC calculation amounts to $48.50 million.

Tables 2 Calculation of Unadjusted Development Charges

Tables 2 displays the shares of the Water Services program that are to be recovered through development charges. Of the DC recoverable costs, 77% is apportioned to the residential sector and 23% is apportioned to the non-residential sector based on shares of anticipated shares of population and employment growth.

The residential sector's share of $37.53 million in development-related net capital costs yields an "unadjusted" development charge of $1,721.25 per capita. The non-residential sector's share of $10.97 million in development-related net capital costs results in an unadjusted charge of $31.07 per square metre of GFA for the non-residential sector.

Table 3 Cash Flow Analysis

After cash flow and reserve fund analysis, the residential and non-residential calculated charges result in $1,782.42 per capita and $27.26 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 Water Services development charge:

WATER SUMMARY

2024 - 2033 Development-Related Capital Program		Unadjusted Development Charge		**Adjusted Development Charge**	
Total	Net DC Recoverable	Residential $/capita	Non-Res $/sq.m	**Residential $/capita**	**Non-Res $/sq.m**
$103,867,200	$48,496,935	$1,721.55	$31.07	$1,782.42	$27.26

APPENDIX C.2
TABLE 1

CITY OF NIAGARA FALLS
DEVELOPMENT-RELATED CAPITAL PROGRAM
WATER SERVICES

NO.	Description	Limits	Approx. Length (m)	Infrastructure	Type of Improvement	Timing	Gross Cost	Grants and Subsidies	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible		
										BTE %	BTE $		Available DC Reserve Funds	2024-2033	Post 2033
1	Beechwood Road Watermain	Brown Road to Lundy's Lane	3200	Watermain	New Development	2029 - 2033	$4,160,000	$0	$4,160,000	0%	$0	$4,160,000	$0	$4,160,000	$0
2	Biggar Road (Montrose Road – Unopened Road Allowance (south side)) - Hospital - DC Debt to be issued	Montrose Road – Unopened Road Allowance (south side)	865	Watermain	New Development	2024 - 2028	$900,000	$0	$900,000	0%	$0	$900,000	$0	$900,000	$0
3	Biggar Road Watermain Trunk Phase 2	Unopened ROW to Crowland Avenue	900	Watermain	New Development	2029 - 2033	$900,000	$0	$900,000	0%	$0	$900,000	$0	$499,938	$400,062
4	Brown Road Watermain Phase 1	Westerly Garner Road to Montrose Road	2400	Watermain	Replacement/Upgrade	2024 - 2024	$3,120,000	$0	$3,120,000	25%	$780,000	$2,340,000	$1,591,389	$748,611	$0
5	Brown Road Watermain Phase 2	Beachwood Road to Westerly Garner Road	700	Watermain	New Development	2029 - 2033	$910,000	$0	$910,000	0%	$0	$910,000	$0	$910,000	$0
6	Chippawa Parkway (Dorchester Road – 1200m east of Stanley) Cost Sharing Only	Dorchester Road – 1200m east of Stanley	250	Watermain	New Development	2024 - 2028	$540,000	$0	$540,000	50%	$270,000	$270,000	$0	$270,000	$0
7	Chippawa Parkway (1200m east of Stanley to Don Murie Street) Looping	1200m east of Stanley to Don Murie Street	1100	Watermain	New Development	2028 - 2033	$1,100,000	$0	$1,100,000	50%	$550,000	$550,000	$0	$550,000	$0
8	Cast Iron Watermain Replacement Program Years 1-5	Ann St	306	Watermain	Replacement/Upgrade	2024 - 2028	$901,000	$0	$901,000	90%	$810,900	$90,100	$0	$90,100	$0
9	Cast Iron Watermain Replacement Program Years 1-5	Biamonte Crescent and Parkway	396	Watermain	Replacement/Upgrade	2024 - 2028	$1,165,000	$0	$1,165,000	90%	$1,048,500	$116,500	$0	$116,500	$0
10	Cast Iron Watermain Replacement Program Years 1-5	Burdette Drive	584	Watermain	Replacement/Upgrade	2024 - 2028	$1,719,000	$0	$1,719,000	90%	$1,547,100	$171,900	$0	$171,900	$0
11	Cast Iron Watermain Replacement Program Years 1-5	Douglas Crescent	345	Watermain	Replacement/Upgrade	2024 - 2028	$1,017,000	$0	$1,017,000	90%	$915,300	$101,700	$0	$101,700	$0
12	Cast Iron Watermain Replacement Program Years 1-5	Dorchester Road	807	Watermain	Replacement/Upgrade	2024 - 2028	$2,373,000	$0	$2,373,000	90%	$2,135,700	$237,300	$0	$237,300	$0
13	Cast Iron Watermain Replacement Program Years 1-5	Drummond Road	461	Watermain	Replacement/Upgrade	2024 - 2028	$1,356,000	$0	$1,356,000	90%	$1,220,400	$135,600	$0	$135,600	$0
14	Cast Iron Watermain Replacement Program Years 1-5	George Street	147	Watermain	Replacement/Upgrade	2024 - 2028	$749,000	$0	$749,000	90%	$674,100	$74,900	$0	$74,900	$0
15	Cast Iron Watermain Replacement Program Years 1-5	Kister Road	53	Watermain	Replacement/Upgrade	2024 - 2028	$1,557,000	$0	$1,557,000	90%	$1,401,300	$155,700	$0	$155,700	$0
16	Cast Iron Watermain Replacement Program Years 5 - 10	Arlington Avenue	303	Watermain	Replacement/Upgrade	2029 - 2033	$890,000	$0	$890,000	90%	$801,000	$89,000	$0	$89,000	$0
17	Cast Iron Watermain Replacement Program Years 5 - 10	Fifth Avenue	187	Watermain	Replacement/Upgrade	2029 - 2033	$551,000	$0	$551,000	90%	$495,900	$55,100	$0	$55,100	$0
18	Cast Iron Watermain Replacement Program Years 5 - 10	Fourth Avenue	186	Watermain	Replacement/Upgrade	2029 - 2033	$548,000	$0	$548,000	90%	$493,200	$54,800	$0	$54,800	$0
19	Cast Iron Watermain Replacement Program Years 5 - 10	Franklin Avenue	88	Watermain	Replacement/Upgrade	2029 - 2033	$259,000	$0	$259,000	90%	$233,100	$25,900	$0	$25,900	$0
20	Cast Iron Watermain Replacement Program Years 5 - 10	Gainsborough Avenue	303	Watermain	Replacement/Upgrade	2029 - 2033	$891,000	$0	$891,000	90%	$801,900	$89,100	$0	$89,100	$0
21	Cast Iron Watermain Replacement Program Years 5 - 10	Gladstone Avenue	185	Watermain	Replacement/Upgrade	2029 - 2033	$544,000	$0	$544,000	90%	$489,600	$54,400	$0	$54,400	$0
22	Cast Iron Watermain Replacement Program Years 5 - 10	Glendoone Street	256	Watermain	Replacement/Upgrade	2029 - 2033	$753,000	$0	$753,000	90%	$677,700	$75,300	$0	$75,300	$0
23	Cast Iron Watermain Replacement Program Years 5 - 10	Glengary Street	256	Watermain	Replacement/Upgrade	2029 - 2033	$753,000	$0	$753,000	90%	$677,700	$75,300	$0	$75,300	$0
24	Cast Iron Watermain Replacement Program Years 5 - 10	Grey Avenue	170	Watermain	Replacement/Upgrade	2029 - 2033	$502,000	$0	$502,000	90%	$451,800	$50,200	$0	$50,200	$0
25	Cast Iron Watermain Replacement Program Years 5 - 10	Hawkins Street	430	Watermain	Replacement/Upgrade	2029 - 2033	$1,267,000	$0	$1,267,000	90%	$1,140,300	$126,700	$0	$126,700	$0
26	Cast Iron Watermain Replacement Program Years 5 - 10	High Street	113	Watermain	Replacement/Upgrade	2029 - 2033	$333,000	$0	$333,000	90%	$299,700	$33,300	$0	$33,300	$0
27	Cast Iron Watermain Replacement Program Years 5 - 10	Houck Drive	153	Watermain	Replacement/Upgrade	2029 - 2033	$450,000	$0	$450,000	90%	$405,000	$45,000	$0	$45,000	$0
28	Cast Iron Watermain Replacement Program Years 5 - 10	Jepson Street	432	Watermain	Replacement/Upgrade	2029 - 2033	$1,271,000	$0	$1,271,000	90%	$1,143,900	$127,100	$0	$127,100	$0
29	Cast Iron Watermain Replacement Program Years 5 - 10	Main Street	503	Watermain	Replacement/Upgrade	2024 - 2028	$1,478,000	$0	$1,478,000	90%	$1,330,200	$147,800	$0	$147,800	$0
30	Cast Iron Watermain Replacement Program Years 5 - 10	Marlborough Place	387	Watermain	Replacement/Upgrade	2024 - 2028	$1,139,000	$0	$1,139,000	90%	$1,025,100	$113,900	$0	$113,900	$0
31	Cast Iron Watermain Replacement Program Years 5 - 10	Niagara River Parkway	583	Watermain	Replacement/Upgrade	2024 - 2028	$1,714,000	$0	$1,714,000	90%	$1,542,600	$171,400	$0	$171,400	$0
32	Cast Iron Watermain Replacement Program Years 5 - 10	Oxford Street	339	Watermain	Replacement/Upgrade	2024 - 2028	$996,000	$0	$996,000	90%	$896,400	$99,600	$0	$99,600	$0
33	Cast Iron Watermain Replacement Program Years 5 - 10	Peer Street	713	Watermain	Replacement/Upgrade	2029 - 2033	$2,096,000	$0	$2,096,000	90%	$1,886,400	$209,600	$0	$209,600	$0
34	Cast Iron Watermain Replacement Program Years 5 - 10	Portage Road	567	Watermain	Replacement/Upgrade	2029 - 2033	$1,664,000	$0	$1,664,000	90%	$1,497,600	$166,400	$0	$166,400	$0
35	Cast Iron Watermain Replacement Program Years 5 - 10	Queensway Gardens	167	Watermain	Replacement/Upgrade	2029 - 2033	$491,000	$0	$491,000	90%	$441,900	$49,100	$0	$49,100	$0
36	Cast Iron Watermain Replacement Program Years 5 - 10	Ramsey Road	550	Watermain	Replacement/Upgrade	2024 - 2028	$1,935,000	$0	$1,935,000	90%	$1,741,500	$193,500	$0	$193,500	$0
37	Cast Iron Watermain Replacement Program Years 5 - 10	Rolling Acres Drive and Crescent	337	Watermain	Replacement/Upgrade	2024 - 2028	$988,000	$0	$988,000	90%	$889,200	$98,800	$0	$98,800	$0
38	Cast Iron Watermain Replacement Program Years 5 - 10	Sixth Avenue	252	Watermain	Replacement/Upgrade	2029 - 2033	$742,000	$0	$742,000	90%	$667,800	$74,200	$0	$74,200	$0
39	Cast Iron Watermain Replacement Program Years 5 - 10	Slater Avenue	183	Watermain	Replacement/Upgrade	2029 - 2033	$539,000	$0	$539,000	90%	$485,100	$53,900	$0	$53,900	$0
40	Cast Iron Watermain Replacement Program Years 5 - 10	Thorold Stone Road	565	Watermain	Replacement/Upgrade	2029 - 2033	$1,658,000	$0	$1,658,000	90%	$1,492,200	$165,800	$0	$165,800	$0
41	Cast Iron Watermain Replacement Program Years 5 - 10	Twidale Avenue	240	Watermain	Replacement/Upgrade	2029 - 2033	$705,000	$0	$705,000	90%	$634,500	$70,500	$0	$70,500	$0
42	Cast Iron Watermain Replacement Program Years 5 - 10	Vine Street	412	Watermain	Replacement/Upgrade	2029 - 2033	$1,211,000	$0	$1,211,000	90%	$1,089,900	$121,100	$0	$121,100	$0
43	Garner West Expansion Lands Internal WM Loop - Cost Sharing Only	Beechwood Road to Garner Road (internal to the Expansion Lands)	1050	Watermain	New Watermain	2029 - 2033	$750,000	$0	$750,000	0%	$0	$750,000	$0	$750,000	$0
44	Grand Niagara Drive Watermain	Brown Road to Grassy Brook Road	1150	Watermain	New Development	2029 - 2033	$1,495,000	$0	$1,495,000	0%	$0	$1,495,000	$0	$1,495,000	$0
45	Kalar Road Watermain	Kalar Road - Mount Carmel to Mountain	1200	Watermain	New Watermain	2029 - 2033	$1,600,000	$0	$1,600,000	0%	$0	$1,600,000	$0	$1,600,000	$0
46	Lyon's Parkway (Easement) - Cost Sharing Only	Lyon's Parkway East Limit - Ort Road	180	Watermain	New Development	2024 - 2028	$180,000	$0	$180,000	0%	$0	$180,000		$180,000	$0
47	McLeod Road Watermain	McLeod Road - Matteo to Beechwood	790	Watermain	New Watermain	2029 - 2033	$550,000	$0	$550,000	0%	$0	$550,000	$0	$550,000	$0
48	Montrose Road Watermain Phase 1 - DC Debt to Be Issued	Reixinger Road to 100m south of Lyons Creek Road	700	Watermain	New Development	2024 - 2028	$650,000	$0	$650,000	0%	$0	$650,000	$0	$650,000	$0
49	Montrose Road Watermain Phase 2	100m south of Lyons Creek Road to Carl Road	950	Watermain	New Development	2024 - 2028	$1,235,000	$0	$1,235,000	0%	$0	$1,235,000	$0	$1,235,000	$0
50	NW Expansion Lands internal WM Loop - Cost Sharing Only	Kalar Road to Mountain Road (internal to the Expansion Lands)	1000	Watermain	New Watermain	2029 - 2033	$700,000	$0	$700,000	0%	$0	$700,000	$0	$700,000	$0
51	Ort Road - Cost Sharing Only	North Limit - Willick Road	255	Watermain	New Development	2024 - 2028	$255,000	$0	$255,000	0%	$0	$255,000	$0	$255,000	$0
52	Portage Road (Norton Street - Macklem Street) Upsize 150mm dia. to 300mm dia.	Norton Street - Macklem Street	480	Watermain	New Development	2029 - 2033	$1,047,300	$0	$1,047,300	70%	$733,110	$314,190	$0	$314,190	$0
53	Reixinger Road Extension/Street A - DC Debt to Be Issued	Montrose Road to West Limit	175	Watermain	New Development	2024 - 2028	$7,500,000	$0	$7,500,000	0%	$0	$7,500,000	$0	$7,500,000	$0
54	South Chippawa Watermain Phase 1 (Cost Sharing)	Mann Street to 355m south of Mann street	355	Watermain	New Development	2024 - 2028	$315,000	$0	$315,000	0%	$0	$315,000	$0	$315,000	$0
55	South Chippawa Watermain Phase 2	355m south of Mann street to Willick Road	200	Watermain	New Development	2024 - 2028	$355,000	$0	$355,000	0%	$0	$355,000	$0	$355,000	$0

APPENDIX C.2
TABLE 1

CITY OF NIAGARA FALLS
DEVELOPMENT-RELATED CAPITAL PROGRAM
WATER SERVICES

NO.	Description	Limits	Approx. Length (m)	Infrastructure	Type of Improvement	Timing	Gross Cost	Grants and Subsidies	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible		
										BTE %	BTE $		Available DC Reserve Funds	2024-2033	Post 2033
56	Thorold Stone Extension Watermain	Fourth Avenue to Victoria Avenue	215	Watermain	New Development	2024 - 2028	$579,500	$0	$579,500	0%	$0	$579,500	$0	$321,904	$257,596
57	Thorold Stone Road (Portage Road - CNR) Upsize 150mm dia. to 300mm dia.	Portage Road - CNR	555	Watermain	New Development	2029 - 2033	$682,500	$0	$682,500	70%	$477,750	$204,750	$0	$204,750	$0
58	Master Servicing Plan and Wet Weather Management Study				Study	2024 - 2028	$300,000	$0	$300,000	25%	$75,000	$225,000	$0	$225,000	$0
59	Master Servicing Plan and Wet Weather Management Study Update				Study	2029 - 2033	$200,000	$0	$200,000	25%	$50,000	$150,000	$0	$150,000	$0
60	Watermain Upgrade Program Years 1 -5	Banting Avenue	354	Watermain	Replacement/Upgrade	2024 - 2028	$965,000	$0	$965,000	25%	$241,250	$723,750	$0	$723,750	$0
61	Watermain Upgrade Program Years 1 -5	Beaverdams Road	537	Watermain	Replacement/Upgrade	2024 - 2028	$1,782,000	$0	$1,782,000	25%	$445,500	$1,336,500	$0	$1,336,500	$0
62	Watermain Upgrade Program Years 1 -5	Bridge Street	864	Watermain	Replacement/Upgrade	2024 - 2028	$2,341,000	$0	$2,341,000	25%	$585,250	$1,755,750	$0	$1,755,750	$0
63	Watermain Upgrade Program Years 1 -5	Erie Avenue	93	Watermain	Replacement/Upgrade	2024 - 2028	$570,000	$0	$570,000	25%	$142,500	$427,500	$0	$427,500	$0
64	Watermain Upgrade Program Years 5 - 10	Frederica Street	676	Watermain	Replacement/Upgrade	2029 - 2033	$1,836,000	$0	$1,836,000	50%	$918,000	$918,000	$0	$918,000	$0
65	Watermain Upgrade Program Years 5 - 10	Carlton Avenue	377	Watermain	Replacement/Upgrade	2024 - 2028	$1,024,000	$0	$1,024,000	25%	$256,000	$768,000	$0	$768,000	$0
66	Watermain Upgrade Program Years 5 - 10	Royal Manor Drive	1047	Watermain	Replacement/Upgrade	2024 - 2028	$3,394,000	$0	$3,394,000	25%	$848,500	$2,545,500	$0	$2,545,500	$0
67	Water Avenue		359	Watermain	Replacement/Upgrade	2024 - 2028	$1,058,000	$0	$1,058,000	90%	$952,200	$105,800	$0	$105,800	$0
68	Willick Road (Sodom Road - Ort Road)	Sodom Road – Ort Road	1000	Watermain	New Development	2024 - 2028	$1,935,800	$0	$1,935,800	0%	$0	$1,935,800	$0	$1,935,800	$0
69	Willick Road (Sodom Road - Willoughby Drive)	Sodom Road - Willoughby Drive	1000	Watermain	New Development	2024 - 2028	$1,935,800	$0	$1,935,800	0%	$0	$1,935,800	$0	$1,935,800	$0
70	Wiltshire Boulevard		771	Watermain	Replacement/Upgrade	2024 - 2028	$2,266,000	$0	$2,266,000	90%	$2,039,400	$226,600	$0	$226,600	$0
71	Cast Iron Watermain Replacement Program Years 1-5	Allendale Avenue	226	Watermain	Replacement/Upgrade	2024 - 2028	$664,000	$0	$664,000	50%	$332,000	$332,000	$0	$332,000	$0
71	Cast Iron Watermain Replacement Program Years 1-5	Kitchener Street	390	Watermain	Replacement/Upgrade	2024 - 2028	$1,147,000	$0	$1,147,000	90%	$1,032,300	$114,700	$0	$114,700	$0
71	Cast Iron Watermain Replacement Program Years 1-5	MacDonald Avenue	207	Watermain	Replacement/Upgrade	2024 - 2028	$611,000	$0	$611,000	90%	$549,900	$61,100	$0	$61,100	$0
71	Cast Iron Watermain Replacement Program Years 1-5	McLeod Road	338	Watermain	Replacement/Upgrade	2024 - 2028	$1,622,000	$0	$1,622,000	90%	$1,459,800	$162,200	$0	$90,100	$72,100
71	Cast Iron Watermain Replacement Program Years 1-5	Robinson Street	574	Watermain	Replacement/Upgrade	2024 - 2028	$2,032,000	$0	$2,032,000	50%	$1,016,000	$1,016,000	$0	$1,016,000	$0
71	Cast Iron Watermain Replacement Program Years 5 - 10	Allendale Avenue	308	Watermain	Replacement/Upgrade	2029 - 2033	$903,000	$0	$903,000	50%	$451,500	$451,500	$0	$451,500	$0
71	Cast Iron Watermain Replacement Program Years 5 - 10	Kitchener Street	269	Watermain	Replacement/Upgrade	2029 - 2033	$1,107,000	$0	$1,107,000	90%	$996,300	$110,700	$0	$110,700	$0
71	Lundy's Lane New Local Watermain	Lundy's Lane - Highland to Royal Manor	1220	Watermain	New Watermain	2024 - 2028	$3,288,000	$0	$3,288,000	50%	$1,644,000	$1,644,000	$0	$1,644,000	$0
71	Stanley Avenue (North Street - Ferry Street) Upsize 150mm dia. to 300mm dia.	North Street - Ferry Street	413	Watermain	Replacement with Enlargement	2029 - 2033	$513,300	$0	$513,300	70%	$359,310	$153,990	$0	$153,990	$0
71	Stanley Avenue WM Ph1 (Marineland Pkwy to Dunn St)		1150			2024 - 2028	$2,750,000	$0	$2,750,000	0%	$0	$2,750,000	$0	$1,527,588	$1,222,412
71	Stanley Avenue WM Ph2 (Dunn St to Murray St)		485			2024 - 2028	$1,160,000	$0	$1,160,000	0%	$0	$1,160,000	$0	$644,364	$515,636
71	Watermain Upgrade Program Years 1 -5	Clark Avenue	333	Watermain	Watermain Upgrade	2024 - 2028	$982,000	$0	$982,000	25%	$245,500	$736,500	$0	$736,500	$0
71	Watermain Upgrade Program Years 1 -5	Robinson Street	137	Watermain	Watermain Upgrade	2024 - 2028	$751,000	$0	$751,000	50%	$375,500	$375,500	$0	$375,500	$0
Total Watermain Projects							**$103,867,200**	**$0**	**$103,867,200**		**$51,311,070**	**$52,556,130**	**$1,591,389**	**$48,496,935**	**$2,467,806**

Reserve Fund Balance as of December 31, 2023	$1,591,389

APPENDIX C.2
TABLE 2

CITY OF NIAGARA FALLS
SUMMARY OF UNADJUSTED RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT CHARGES
WATER SERVICES
CITY-WIDE

10-Year Growth in Population in New Units	21,798
10-Year Employment Growth	6,373
10-Year Growth in Square Metres	353,103

	Growth-Related Capital Forecast					Residential Share		Non-Residential Share	
	Total (Net of Grants/ Subsidies) ($000)	Benefit to Existing Share ($000)	Reserve Fund Adjustment ($000)	Post Period Allocation ($000)	Total Net Capital Costs After Discount ($000)	%	$000	%	$000
WATER SERVICES									
Total Watermain Projects	$103,867.20	$51,311.07	$1,591.39	$2,467.81	$48,496.93	77.4%	$37,525.52	22.6%	$10,971.42
TOTAL WATER SERVICES	**$103,867.20**	**$51,311.07**	**$1,591.39**	**$2,467.81**	**$48,496.93**		**$37,525.52**		**$10,971.42**
Unadjusted Development Charge Per Capita ($)							**$1,721.55**		
Unadjusted Development Charge Per Sq. M. ($)									**$31.07**

APPENDIX C.2
TABLE 3

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

WATER	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	TOTAL
OPENING CASH BALANCE	$1,231.4	($1,965.3)	($3,406.8)	($4,879.4)	($6,382.4)	($7,988.7)	($6,545.6)	($4,900.1)	($3,025.9)	($1,604.5)	
2024 - 2033 RESIDENTIAL FUNDING REQUIREMENTS											
- Water: Prior Growth	$1,231.4	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$1,231.4**
- Water: Non Inflated	$5,596.1	$5,016.9	$5,016.9	$5,016.9	$5,087.8	$2,358.2	$2,358.2	$2,358.2	$2,358.2	$2,358.2	**$37,525.5**
- Water: Inflated	$6,827.5	$5,117.2	$5,219.6	$5,324.0	$5,507.2	$2,603.6	$2,655.7	$2,708.8	$2,763.0	$2,818.2	**$41,544.8**
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	2,062	2,101	2,140	2,179	2,221	2,263	2,305	2,352	2,070	2,104	**21,798**
REVENUE											
- DC Receipts: Inflated	$3,674.5	$3,819.5	$3,968.7	$4,122.4	$4,285.6	$4,453.7	$4,626.7	$4,815.7	$4,323.5	$4,481.9	**$42,572.1**
INTEREST											
- Interest on Opening Balance	$43.1	($108.1)	($187.4)	($268.4)	($351.0)	($439.4)	($360.0)	($269.5)	($166.4)	($88.2)	**($2,195.3)**
- Interest on In-year Transactions	($86.7)	($35.7)	($34.4)	($33.0)	($33.6)	$32.4	$34.5	$36.9	$27.3	$29.1	**($63.3)**
TOTAL REVENUE	$3,630.9	$3,675.7	$3,747.0	$3,820.9	$3,901.0	$4,046.7	$4,301.1	$4,583.0	$4,184.4	$4,422.7	**$40,313.5**
CLOSING CASH BALANCE	($1,965.3)	($3,406.8)	($4,879.4)	($6,382.4)	($7,988.7)	($6,545.6)	($4,900.1)	($3,025.9)	($1,604.5)	$0.0	

2024 Adjusted Charge Per Capita	**$1,782.42**

Allocation of Capital Program	
Residential Sector	77.4%
Non-Residential Sector	22.6%
Rates for 2024	
Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX C.2
TABLE 3

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

WATER	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	TOTAL
OPENING CASH BALANCE	$360.0	($448.5)	($741.3)	($1,044.5)	($1,356.1)	($1,697.4)	($1,446.0)	($1,161.0)	($835.6)	($441.9)	
2024 - 2033 NON-RESIDENTIAL FUNDING REQUIREMENTS											
- Water: Prior Growth	$360.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$360.0**
- Water: Non Inflated	$1,340.2	$1,170.8	$1,170.8	$1,170.8	$1,191.5	$657.1	$657.1	$657.1	$657.1	$657.1	**$9,329.4**
- Water: Inflated	$1,700.2	$1,194.2	$1,218.1	$1,242.5	$1,289.8	$725.4	$740.0	$754.8	$769.9	$785.2	**$10,420.0**
NON-RESIDENTIAL SPACE GROWTH											
- Growth in Square Metres	33,052	33,562	33,940	34,399	34,909	35,360	35,770	36,319	37,629	38,166	**353,106**
REVENUE											
- DC Receipts: Inflated	$901.1	$933.3	$962.6	$995.2	$1,030.1	$1,064.3	$1,098.2	$1,137.3	$1,201.9	$1,243.5	**$10,567.5**
INTEREST											
- Interest on Opening Balance	$12.6	($24.7)	($40.8)	($57.4)	($74.6)	($93.4)	($79.5)	($63.9)	($46.0)	($24.3)	**($491.9)**
- Interest on In-year Transactions	($22.0)	($7.2)	($7.0)	($6.8)	($7.1)	$5.9	$6.3	$6.7	$7.6	$8.0	**($15.6)**
TOTAL REVENUE	$891.7	$901.4	$914.9	$930.9	$948.4	$976.9	$1,024.9	$1,080.2	$1,163.5	$1,227.2	**$10,060.0**
CLOSING CASH BALANCE	($448.5)	($741.3)	($1,044.5)	($1,356.1)	($1,697.4)	($1,446.0)	($1,161.0)	($835.6)	($441.9)	$0.0	

2024 Adjusted Charge Per Square Metre	**$27.26**

Allocation of Capital Program	
Residential Sector	77.4%
Non-Residential Sector	22.6%
Rates for 2024	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Appendix C.3

Sanitary Sewer

Appendix C.3 – Sanitary Sewer

This appendix provides a brief outline of the infrastructure included in the Sanitary Sewer development charge. The development-related projects outlined in this appendix are required to service the demands of new development to 2033. The benefits of the services are considered to be City-wide for the purposes of calculating the development charge.

The following discusses the individual components included in the Sanitary Sewer service category. Sanitary Sewer infrastructure included in the DC capital forecast are required to achieve health and safety standards as identified in relevant legislation including Provincial regulations, other relevant legislation as well as City. As such, in accordance with section 4(3) of O.Reg. 82/98, the 15-year historical service level does not apply.

The analysis is set out in the tables which follow. The tables include:

Table C.3-1 2024-2033 Development-Related Capital Program

Table C.3-2 2024-2033 Development-Related Capital Program

Table C.3-3 Cash Flow Analysis

Table 1 2024-2033 Development-Related Capital Program

Table 1 provides a summary of the development-related capital program for sanitary sewers. As shown, the capital program for totals $163.16 million. The capital program includes sanitary sewers in new development areas, oversizing of sanitary sewers and inflow and infiltration reduction measures.

No grants or subsidies have been identified to help offset the cost of the program. In total, $47.97 million (29%) of the capital program is deemed to be the benefit to existing share and must be funded through non-DC revenue sources. Generally, net new infrastructure is fully attributable to

new development and therefore has a 0% BTE allocation. For projects which include sewer upgrades or separation, a BTE share of 25%-70% is used. A BTE share of 90% has been applied to the Valley Way Area Sewer Separations project ($42.88 million) recognizing that project is primarily related to the replacement of existing assets.

Approximately $260,600 is available in the DC reserve fund and is removed from the DC eligible costs. A further share of the program, $27.14 million, is deemed to benefit development beyond the 10-year planning horizon. This share is deemed to be related to new development and can be recovered through DCs in subsequent by-law reviews. After these adjustments, the eligible costs are reduced to $87.80 million and is brought forward to the DC calculation.

Table 2 Calculation of Unadjusted Development Charges

Table 2 displays the shares of the Sanitary Sewer program that are to be recovered through development charges. In total, 77%, or $67.94 million, of the DC eligible costs are attributable to residential development and 23%, or $19.86 million, is related to non-residential development based on shares of anticipated population and employment growth.

The residential sector's share of $67.94 million in development-related net capital costs yields an "unadjusted" development charge of $3,116.73 per capita. The non-residential sector's share of $19.86 million in development-related net capital costs results in an unadjusted charge of $56.25 per square metre of GFA for the non-residential sector.

Table 3 Cash Flow Analysis

After cash flow and reserve fund analysis, the residential and non-residential calculated charges result in $3,292.94 per capita and $51.64 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 Sanitary Sewer development charge:

SANITARY SEWER SUMMARY					
		Unadjusted		**Adjusted**	
2024 - 2033		Development Charge		**Development Charge**	
Development-Related Capital Program		Residential	Non-Res	**Residential**	**Non-Res**
Total	Net DC Recoverable	$/capita	$/sq.m	**$/capita**	**$/sq.m**
$163,163,843	$87,800,161	$3,116.73	$56.25	$3,292.94	$51.64

APPENDIX C.3
TABLE 1

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

NO.	Description	Limits	Approx. Length (m)	Infrastructure	Type of Improvement	Timing	Gross Cost	Grants and Subsidies	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible		
										BTE %	BTE $		Available DC Reserves	2024-2033	Post 2033
1	Biggar Road (Montrose Road – Unopened Road Allowance (south side)) - Hospital	Montrose Road – Unopened Road Allowance (south side)	865	Sanitary Sewer	New Development	2024 - 2028	$3,500,000	$0	$3,500,000	0%	$0	$3,500,000	$260,608	$3,239,392	$0
2	Biggar Road Sanitary Trunk Phase 2	Unopened ROW west to Crowland Avenue	900	Sanitary Sewer	Development	2029 - 2033	$3,500,000	$0	$3,500,000	0%	$0	$3,500,000	$0	$1,944,202	$1,555,798
3	Beechwood Road Local Trunk Sewer	Lundy's Lane to McLeod Road	1900	Sanitary Sewer	Development	2029 - 2033	$3,800,000	$0	$3,800,000	0%	$0	$3,800,000	$0	$3,800,000	$0
4	Corwin and Carlton Sewer Separations	Corwin - Erwin to Carlton, Carlton - Corwin to Dunn	525	Sanitary Sewer	Sewer Separation	2029 - 2033	$1,768,000	$0	$1,768,000	10%	$176,800	$1,591,200	$0	$1,591,200	$0
5	City-wide I&I Reduction Program		142177	Sanitary Sewer	I&I Reduction Measures	2024 - 2033	$41,027,177	$0	$41,027,177	10%	$4,102,718	$36,924,460	$0	$20,511,034	$16,413,426
6	Drop Connection to Regional Sanitary Tunnel @ Reixinger and Montrose	Montrose Road at Reixinger Road	1	Sanitary Sewer	Development	2029 - 2033	$450,000	$0	$450,000	0%	$0	$450,000	$0	$450,000	$0
7	Dorchester Road Sewer Upgrades	Dorchester Road - Mountain to Riall	812	Sanitary Sewer	Sewer Upgrade	2029 - 2033	$2,567,000	$0	$2,567,000	10%	$256,700	$2,310,300	$0	$2,310,300	$0
8	Frederica Street Sewer Diversion	Frederica Street - Prince Edward to Highland	347	Sanitary Sewer	Diversion Sewer	2029 - 2033	$897,000	$0	$897,000	50%	$448,500	$448,500	$0	$448,500	$0
9	Garner Road Sanitary Sewer - Cost Share Only	Angie Drive to Black Forest Crescent	1200	Sanitary Sewer	Development	2029 - 2033	$1,800,000	$0	$1,800,000	0%	$0	$1,800,000	$0	$1,800,000	$0
10	Garner Road Sanitary Sewer - Cost share Only	Warren Woods Avenue to Brown Road	430	Sanitary Sewer	Development	2024 - 2028	$645,000	$0	$645,000	0%	$0	$645,000	$0	$645,000	$0
11	Garner Pumping Stations - Principal Only				Debenture	2024 - 2030	$4,190,743	$0	$4,190,743	0%	$0	$4,190,743	$0	$4,190,743	$0
12	Kalar Road Sewer Upgrade	Kalar Road - Thorold Stone Road to Mount Carmel	2300	Sanitary Sewer	Sewer Upgrade	2029 - 2033	$14,000,000	$0	$14,000,000	0%	$0	$14,000,000	$0	$14,000,000	$0
13	Lyon's Parkway (Easement)	Lyon's Parkway East Limit - Ort Road	180	Sanitary Sewer	New Development	2024 - 2028	$270,000	$0	$270,000	0%	$0	$270,000	$0	$270,000	$0
14	Montrose Road Sanitary Sewer Phase 1 Debt to be issued	Reixinger Road to 110m south of Lyons Creek Road	790	Sanitary Sewer	Development	2024 - 2028	$3,500,000	$0	$3,500,000	0%	$0	$3,500,000	$0	$3,500,000	$0
15	Montrose Road Sanitary Sewer Phase 2	110m south of Lyons Creek Road to Carl Road	790	Sanitary Sewer	Development	2024 - 2028	$3,000,000	$0	$3,000,000	0%	$0	$3,000,000	$0	$3,000,000	$0
16	North Sodom Road Sanitary Sewer Upsizing	Sodom Road - Weinbrenner Road to Lyons Creek Road	400	Sanitary Replacement	Existing and Development	2024 - 2028	$2,500,000	$0	$2,500,000	0%	$0	$2,500,000	$0	$2,500,000	$0
17	Ort Road	North Limit - Willick Road	255	Sanitary Sewer	New Development	2024 - 2028	$382,500	$0	$382,500	0%	$0	$382,500	$0	$382,500	$0
18	Portage Road (Norton Street - Macklem Street)	Norton Street - Macklem Street	480	Sanitary Sewer	Rehabilitation	2029 - 2033	$814,500	$0	$814,500	70%	$570,150	$244,350	$0	$244,350	$0
19	Reixinger Road Extension (West)/Street A Debt to be issued	Montrose Road to West Limit	160	Sanitary Sewer	Development	2024 - 2028	$900,000	$0	$900,000	0%	$0	$900,000	$0	$900,000	$0
20	South Niagara Falls Infiltration & Inflow Study to High Lift Sewage Pumping Station				Study	2024 - 2028	$130,823	$0	$130,823	10%	$13,082	$117,740	$0	$117,740	$0
21	South Niagara Falls Sanitary Sewer Servicing Study				Study	2024 - 2028	$150,000	$0	$150,000	0%	$0	$150,000	$0	$150,000	$0
22	South Sodom Road Sanitary Sewer (Weinbrenner Road to Mann Street) - Cost Sharing Only	Sodom Road - Weinbrenner Road to Mann Street	310	Sanitary Sewer	Development	2024 - 2028	$400,000	$0	$400,000	0%	$0	$400,000	$0	$400,000	$0
23	South Chippawa Sanitary Sewer (Mann Street internal Chippawa East Development to Willick Road) - Cost Sharing Only	Internal Development between Mann Street and Willick Road	900	Sanitary Sewer	Development	2024 - 2028	$300,000	$0	$300,000	0%	$0	$300,000	$0	$300,000	$0

APPENDIX C.3
TABLE 1

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

NO.	Description	Limits	Approx. Length (m)	Infrastructure	Type of Improvement	Timing	Gross Cost	Grants and Subsidies	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible		
										BTE %	BTE $		Available DC Reserves	2024-2033	Post 2033
24	South Garner Hydro Corridor Sewer - Cost Sharing	Hydro Corridor - Garner Road to Beachwood Road	1000	Sanitary Sewer	Development	2029 - 2033	$1,500,000	$0	$1,500,000	0%	$0	$1,500,000	$0	$833,230	$666,770
25	Thorold Stone Road Extension	Fourth Avenue to Victoria Avenue	230	Sanitary Sewer	Development	2024 - 2028	$760,000	$0	$760,000	0%	$0	$760,000	$0	$760,000	$0
26	Valley Way Area Sewer Separations	Valley Way between Victoria and Stanley	15649	Sanitary Sewer	Sewer Separation	2024 - 2033	$42,883,000	$0	$42,883,000	90%	$38,594,700	$4,288,300	$0	$2,382,092	$1,906,208
27	Willick Road (Sodom Road - Ort Road)	Sodom Road – Ort Road	1000	Sanitary Sewer	New Development	2024 - 2028	$2,150,900	$0	$2,150,900	0%	$0	$2,150,900	$0	$2,150,900	$0
28	Willick Road (Sodom Road - Willoughby Drive)	Sodom Road - Willoughby Drive	1000	Sanitary Sewer	New Development	2024 - 2028	$2,150,900	$0	$2,150,900	0%	$0	$2,150,900	$0	$2,150,900	$0
29	Master Servicing Plan and Wet Weather Management Study				Study	2024 - 2028	$300,000	$0	$300,000	25%	$75,000	$225,000	$0	$225,000	$0
30	Master Servicing Plan and Wet Weather Management Study Update				Study	2029 - 2033	$200,000	$0	$200,000	25%	$50,000	$150,000	$0	$150,000	$0
31	Willoughby Drive Sewer Diversion	Willoughby Drive - Cattell to Weinbrenner	599	Sanitary Sewer	Diversion Sewer	2024 - 2028	$1,442,000	$0	$1,442,000	0%	$0	$1,442,000	$0	$1,442,000	$0
32	Woodington, Woodgate, Woodfield Sewer Upgrades	Woodfield - Mountain to Woodington, Woodington - Woodfield to Woodgate, Woodgate - Woodington to Dorchester	743	Sanitary Sewer	Sewer Upgrade	2029 - 2033	$1,890,000	$0	$1,890,000	10%	$189,000	$1,701,000	$0	$1,701,000	$0
33	Allendale Avenue (Ferry Street - Robinson Street)	Ferry Street - Robinson Street	365	Sanitary Replacement	Sewer Separation	2024 - 2028	$874,000	$0	$874,000	50%	$437,000	$437,000	$0	$437,000	$0
34	Alex Avenue Sewer Upgrade	Alex Avenue - McLeod to Frontenac	139	Sanitary Sewer	Sewer Upgrade	2024 - 2028	$336,000	$0	$336,000	0%	$0	$336,000	$0	$186,643	$149,357
35	Clark Avenue (Ferry Street - Robinson Street) Upsize 250mm dia. to 300mm dia.	Ferry Street - Robinson Street	350	Sanitary Replacement	Replacement with Enlargement	2024 - 2028	$355,500	$0	$355,500	70%	$248,850	$106,650	$0	$106,650	$0
36	I&I Reduction Program		142177	Sanitary Sewer	I&I Reduction Measures	2024 - 2033	$10,000,000	$0	$10,000,000	10%	$1,000,000	$9,000,000	$0	$4,999,377	$4,000,623
37	McLeod Road Sewer Upgrade	McLeod Road - Stanley to Drummond	1078	Sanitary Sewer	Sewer Upgrade	2024 - 2028	$5,114,000	$0	$5,114,000	25%	$1,278,500	$3,835,500	$0	$2,130,568	$1,704,932
38	Robinson Street (Stanley Avenue to East Limit)	Stanley Avenue - East Limit	438	Sanitary Replacement	Development	2024 - 2028	$1,048,800	$0	$1,048,800	50%	$524,400	$524,400	$0	$524,400	$0
39	Stanley Avenue Twin Sewer	Stanley Avenue - Livingston to McLeod	639	Sanitary Sewer	Twin Sewer	2024 - 2028	$1,666,000	$0	$1,666,000	0%	$0	$1,666,000	$0	$925,440	$740,560
Total Sanitary Sewer Projects							**$163,163,843**	**$0**	**$163,163,843**		**$47,965,400**	**$115,198,443**	**$260,608**	**$87,800,161**	**$27,137,674**

Reserve Fund Balance as of December 31, 2023	$260,608

APPENDIX C.3
TABLE 2

CITY OF NIAGARA FALLS
SUMMARY OF UNADJUSTED RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT CHARGES
SANITARY SEWER SERVICES
CITY-WIDE

10-Year Growth in Population in New Units	21,798
10-Year Employment Growth	6,373
10-Year Growth in Square Metres	353,103

	Growth-Related Capital Forecast					Residential Share		Non-Residential Share	
	Total (Net of Grants/ Subsidies) ($000)	Benefit to Existing Share ($000)	Reserve Fund Adjustment ($000)	Post Period Allocation ($000)	Total Net Capital Costs After Discount ($000)	%	$000	%	$000
SANITARY SEWER SERVICES									
Total Sanitary Sewer Projects	$163,163.84	$47,965.40	$260.61	$27,137.67	$87,800.16	77.4%	$67,937.21	22.6%	$19,862.95
TOTAL SANITARY SEWER SERVICES	**$163,163.84**	**$47,965.40**	**$260.61**	**$27,137.67**	**$87,800.16**		**$67,937.21**		**$19,862.95**
Unadjusted Development Charge Per Capita ($)							**$3,116.73**		
Unadjusted Development Charge Per Sq. M. ($)									**$56.25**

APPENDIX C.3
TABLE 3

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

SANITARY SEWER	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	TOTAL
OPENING CASH BALANCE	$201.7	($371.1)	($813.7)	($1,118.0)	($1,271.8)	($1,251.9)	($1,491.5)	($1,557.5)	($407.9)	($276.7)	
2024 - 2033 RESIDENTIAL FUNDING REQUIREMENTS											
- Sanitary Sewer: Prior Growth	$40.3	$40.3	$40.3	$40.3	$40.3	$0.0	$0.0	$0.0	$0.0	$0.0	**$201.7**
- Sanitary Sewer: Non Inflated	$6,713.8	$6,713.8	$6,713.8	$6,713.8	$6,713.8	$7,151.6	$7,151.6	$6,688.3	$6,688.3	$6,688.3	**$67,937.2**
- Garner Pumping Station - Principal	$463.2	$463.2	$463.2	$463.2	$463.2	$463.2	$463.2	$0.0	$0.0	$0.0	**$3,242.7**
- Sanitary Sewer: Inflated	$7,217.39	$7,352.5	$7,490.3	$7,630.8	$7,774.1	$8,359.1	$8,517.1	$7,682.8	$7,836.4	$7,993.2	**$77,853.7**
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	2,062	2,101	2,140	2,179	2,221	2,263	2,305	2,352	2,070	2,104	**21,798**
REVENUE											
- DC Receipts: Inflated	$6,788.4	$7,056.3	$7,332.1	$7,615.9	$7,917.5	$8,228.0	$8,547.6	$8,896.8	$7,987.5	$8,280.0	**$78,650.1**
INTEREST											
- Interest on Opening Balance	$7.1	($20.4)	($44.8)	($61.5)	($70.0)	($68.9)	($82.0)	($85.7)	($22.4)	($15.2)	**($463.8)**
- Interest on In-year Transactions	($11.8)	($8.1)	($4.3)	($0.4)	$2.5	($3.6)	$0.5	$21.2	$2.6	$5.0	**$3.6**
- Garner Pumping Station -Interest	($139.0)	($118.0)	($97.0)	($77.0)	($56.0)	($36.0)	($15.0)	$0.0	$0.0	$0.0	**($538.0)**
TOTAL REVENUE	$6,644.7	$6,909.8	$7,186.0	$7,477.0	$7,794.1	$8,119.6	$8,451.1	$8,832.4	$7,967.7	$8,269.8	**$77,652.0**
CLOSING CASH BALANCE	($371.1)	($813.7)	($1,118.0)	($1,271.8)	($1,251.9)	($1,491.5)	($1,557.5)	($407.9)	($276.7)	$0.0	

2024 Adjusted Charge Per Capita	**$3,292.94**

Allocation of Capital Program	
Residential Sector	77.4%
Non-Residential Sector	22.6%
Rates for 2024	
Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX C.3
TABLE 3

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

SANITARY SEWER	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	TOTAL
OPENING CASH BALANCE	$59.0	$23.5	$17.9	$36.7	$86.3	$171.5	($60.3)	($277.8)	($254.4)	($148.2)	
2024 - 2033 NON-RESIDENTIAL FUNDING REQUIREMENTS											
- Sanitary Sewer: Prior Growth	$11.8	$11.8	$11.8	$11.8	$11.8	$0.0	$0.0	$0.0	$0.0	$0.0	**$59.0**
- Sanitary Sewer: Non Inflated	$1,654.8	$1,654.8	$1,654.8	$1,654.8	$1,654.8	$1,977.8	$1,977.8	$1,842.4	$1,842.4	$1,842.4	**$17,756.7**
- Garner Pumping Station - Principal	$59.4	$59.4	$59.4	$59.4	$59.4	$59.4	$59.4	$0.0	$0.0	$0.0	**$416.0**
- Sanitary Sewer: Inflated	$1,726.01	$1,759.34	$1,793.34	$1,828.02	$1,863.39	$2,243.10	$2,286.77	$2,116.32	$2,158.64	$2,201.81	**$19,976.7**
NON-RESIDENTIAL SPACE GROWTH											
- Growth in Square Metres	33,052	33,562	33,940	34,399	34,909	35,360	35,770	36,319	37,629	38,166	**353,106**
REVENUE											
- DC Receipts: Inflated	$1,706.8	$1,767.8	$1,823.5	$1,885.1	$1,951.3	$2,016.1	$2,080.2	$2,154.4	$2,276.8	$2,355.4	**$20,017.6**
INTEREST											
- Interest on Opening Balance	$2.1	$0.8	$0.6	$1.3	$3.0	$6.0	($3.3)	($15.3)	($14.0)	($8.1)	**($26.9)**
- Interest on In-year Transactions	($0.5)	$0.1	$0.5	$1.0	$1.5	($6.2)	($5.7)	$0.7	$2.1	$2.7	**($3.8)**
- Garner Pumping Station - Interest	($17.8)	($15.1)	($12.5)	($9.9)	($7.2)	($4.6)	($2.0)	$0.0	$0.0	$0.0	
TOTAL REVENUE	$1,690.6	$1,753.7	$1,812.2	$1,877.6	$1,948.6	$2,011.2	$2,069.3	$2,139.8	$2,264.8	$2,350.0	**$19,917.8**
CLOSING CASH BALANCE	$23.5	$17.9	$36.7	$86.3	$171.5	($60.3)	($277.8)	($254.4)	($148.2)	$0.0	

2024 Adjusted Charge Per Square Metre	**$51.64**

Allocation of Capital Program	
Residential Sector	77.4%
Non-Residential Sector	22.6%
Rates for 2024	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Appendix C.4

Storm Water Management

Appendix C.4 – Storm Water Management

This appendix provides a brief outline of the infrastructure included in the Storm Water Management development charge. The development-related projects outlined in this appendix are required to service the demands of new development to 2033. The benefits of the services are considered to be City-wide for the purposes of calculating the development charge.

The following discusses the individual components included in the Storm Water Management service category. The analysis is set out in the tables which follow. The tables include:

Table C.3-1 2024-2033 Development-Related Capital Program

Table C.3-2 2024-2033 Development-Related Capital Program

Table C.3-3 Cash Flow Analysis

Table 1 2024-2033 Development-Related Capital Program

Table 1 provides a summary of the development-related capital program for Storm Water Management which totals $24.88 million. The capital program includes new improvements to existing roads, new storm sewers in new development areas, EA studies and sewer separation.

No grants or subsidies have been identified to help offset the cost of the program. In total, $16.30 million (66%) has been identified as the BTE share and must be funded through non-DC revenue sources. New net storm water infrastructure projects are fully attributed to future development and therefore have no BTE allocation. For other projects, the BTE share allocation ranges from 25%-83%.

Approximately $6.43 million is available in the Storm Water DC reserve fund and is applied to projects occurring in the initial years of the planning horizon. No post-period shares have been identified as the infrastructure is fully attributable to

development occurring over the 10-year planning horizon. After these adjustments, the DC eligible cost is reduced to $2.15 million.

Table 2 Calculation of Unadjusted Development Charges

Tables 2 display the shares of the Storm Water Management program that are to be recovered through development charges. In total, 77%, or $1.67 million, of the DC eligible costs are attributable to residential development and 23%, or $487,100, is related to non-residential development based on shares of anticipated population and employment growth.

The residential sector's share of $1.67 million in development-related net capital costs yields an "unadjusted" development charge of $76.44 per capita. The non-residential sector's share of $487,000 million in development-related net capital costs results in an unadjusted charge of $1.38 per square metre of GFA for the non-residential sector.

Table 3 Cash Flow Analysis

After cash flow and reserve fund analysis, the residential and non-residential calculated charges result in $58.42 per capita and $1.06 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 Storm Water Management development charge:

STORM WATER MANAGEMENT SUMMARY

2024 - 2033		Unadjusted Development Charge		**Adjusted Development Charge**	
Development-Related Capital Program		Residential	Non-Res	**Residential**	**Non-Res**
Total	Net DC Recoverable	$/capita	$/sq.m	**$/capita**	**$/sq.m**
$24,883,665	$2,153,250	$76.44	$1.38	$58.42	$1.06

APPENDIX C.4
TABLE 1

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

NO.	Description	Limits	Approx. Length (m)	Infrastructure	Type of Improvement	Timing	Gross Cost	Grants and Subsidies	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible		
										BTE %	BTE $		Available DC Reserve Funds	2024-2033	Post 2033
1	Beaverdams SWM Facility - Land Purchase, Design & Construction	N/A	N/A	Pond c/w Crossings	SWMP	2024 - 2028	$2,868,000	$0	$2,868,000	83%	$2,379,176	$488,824	$488,824	$0	$0
2	Biggar Road Trunk Storm Sewer Phase 1 - DC DEBT TO BE ISSUED	Montrose Road to Unopen Road Allowance	850m	New Storm Sewer	Development	2024 - 2028	$800,000	$0	$800,000	0%	$0	$800,000	$800,000	$0	0%
3	Biggar Road Trunk Storm Sewer Phase 2	Unopened ROW west to Crowland Avenue	850m	New Storm Sewer	Development	2029 - 2033	$800,000	$0	$800,000	0%	$0	$800,000	$800,000	$0	0%
4	Corwin Crescent	Erwin Avenue - OPG Canal	1000	Trunk Sewer & Outfall	Sewer Separation	2029 - 2033	$10,754,300	$0	$10,754,300	83%	$8,921,330	$1,832,970	$1,722,544	$110,426	$0
5	Hodgson Subdivision Sewer Separation Strategy - DC Eligible Share	N/A			Design	2024 - 2028	169,865	$0	$169,865	0%	$0	$169,865	$169,865	$0	$0
6	Montrose Road Phase 1 - DC DEBT TO BE ISSUED	Grassy Brook to Lyons Parkway	1500m	New Storm Sewer	Development	2024 - 2028	$400,000	$0	$400,000	0%	$0	$400,000	$400,000	$0	0%
7	Portage Road (Norton Street - Macklem Street) Upsize Storm Outlet	Norton Street - Macklem Street	480	Storm Sewer	Replacement with Enlargement	2029 - 2033	$1,247,500	$0	$1,247,500	83%	$1,034,875	$212,625	$0	$212,625	$0
8	Reixinger Road Extension - DC DEBT TO BE ISSUED	Montrose Road to West Limit	150m	New Storm Sewer	Development	2024 - 2028	$125,000	$0	$125,000	0%	$0	$125,000	$125,000	$0	0%
9	Thompson Creek Watershed Master Plan				Study	2024 - 2028	$215,100	$0	$215,100	0%	$0	$215,100	$215,100	$0	$0
10	Thorold Stone Road Ext Cost Sharing	Fourth Avenue to Victoria Avenue	700m	New Storm Sewer	Development	2029 - 2033	$1,000,000	$0	$1,000,000	0%	$0	$1,000,000	$0	$1,000,000	0%
11	Thompson Creek EA/Design	McLeod South			EA Study	2029 - 2033	$250,000	$0	$250,000	0%	$0	$250,000	$0	$250,000	0%
12	Valley Way (Second Avenue to Drop Shaft/Tunnel @ Stanley Ave)	N/A	920	Trunk Sewer & Outfall	Sewer Separation	2024 - 2028	$3,584,800	$0	$3,584,800	83%	$2,973,804	$610,996	$610,996	$0	$0
13	New OPG Outlets	Misc.		Storm Outlets	Development	2029 - 2033	$430,200	$0	$430,200	0%	$0	$430,200	$0	$430,200	$0
14	Master Servicing Plan and Wet Weather Management Study				Study	2024 - 2028	$300,000	$0	$300,000	25%	$75,000	$225,000	$225,000	$0	$0
15	Master Servicing Plan and Wet Weather Management Study Update				Study	2029 - 2033	$200,000	$0	$200,000	25%	$50,000	$150,000	$0	$150,000	$0
16	Allendale Avenue (Ferry Street - Robinson Street)	Ferry Street - Robinson Street	365	New Storm Sewer	Sewer Separation	2024 - 2028	$1,178,400	$0	$1,178,400	50%	$589,200	$589,200	$589,200	$0	$0
17	Robinson Street (Stanley Avenue to East Limit)	Stanley Avenue - East Limit	438	New Storm Sewer	Sewer Separation	2024 - 2028	$560,500	$0	$560,500	50%	$280,250	$280,250	$280,250	$0	$0
Total Storm Water Management Projects							**$24,883,665.08**	**$0**	**$24,883,665**		**$16,303,636**	**$8,580,029**	**$6,426,778**	**$2,153,250**	**$0**

Reserve Fund Balance as of December 31, 2023	$6,426,778

APPENDIX C.4
TABLE 2

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

10-Year Growth in Population in New Units	21,798
10-Year Employment Growth	6,373
10-Year Growth in Square Metres	353,103

	Growth-Related Capital Forecast					Residential Share		Non-Residential Share	
	Total (Net of Grants/ Subsidies) ($000)	Benefit to Existing Share ($000)	Reserve Fund Adjustment ($000)	Post Period Allocation ($000)	Total Net Capital Costs After Discount ($000)	%	$000	%	$000
STORM WATER MANAGEMENT SERVICES									
Total Storm Water Management Projects	$24,883.67	$16,303.64	$6,426.78	$0.00	$2,153.25	77.4%	$1,666.12	22.6%	$487.13
TOTAL STORM WATER MANAGEMENT SERVICES	**$24,883.67**	**$16,303.64**	**$6,426.78**	**$0.00**	**$2,153.25**		**$1,666.12**		**$487.13**
Unadjusted Development Charge Per Capita ($)							**$76.44**		
Unadjusted Development Charge Per Sq. M. ($)									**$1.38**

APPENDIX C.4
TABLE 3

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

STORM WATER MANAGEMENT	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	TOTAL
OPENING CASH BALANCE	$4,972.9	$4,649.8	$4,308.0	$3,946.5	$3,564.6	$3,161.7	$2,601.5	$2,011.1	$1,389.6	$712.7	
2024 - 2033 RESIDENTIAL FUNDING REQUIREMENTS											
- Storm Water Management: Prior Growth	$604.20	$604.2	$604.2	$604.2	$604.2	$390.4	$390.4	$390.4	$390.4	$390.4	**$4,972.9**
- Storm Water Management: Non Inflated	$0.00	$0.0	$0.0	$0.0	$0.0	$333.2	$333.2	$333.2	$333.2	$333.2	**$1,666.1**
- Storm Water Management: Inflated	$604.2	$616.3	$628.6	$641.2	$654.0	$798.9	$814.9	$831.2	$847.8	$864.8	**$7,301.8**
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	2,062	2,101	2,140	2,179	2,221	2,263	2,305	2,352	2,070	2,104	**21,798**
REVENUE											
- DC Receipts: Inflated	$120.4	$125.2	$130.1	$135.1	$140.5	$146.0	$151.6	$157.8	$141.7	$146.9	**$1,395.3**
INTEREST											
- Interest on Opening Balance	$174.0	$162.7	$150.8	$138.1	$124.8	$110.7	$91.1	$70.4	$48.6	$24.9	**$1,096.1**
- Interest on In-year Transactions	($13.3)	($13.5)	($13.7)	($13.9)	($14.1)	($18.0)	($18.2)	($18.5)	($19.4)	($19.7)	**($162.4)**
TOTAL REVENUE	$281.2	$274.4	$267.1	$259.3	$251.1	$238.7	$224.4	$209.7	$170.9	$152.1	**$2,329.0**
CLOSING CASH BALANCE	$4,649.8	$4,308.0	$3,946.5	$3,564.6	$3,161.7	$2,601.5	$2,011.1	$1,389.6	$712.7	($0.0)	

2024 Adjusted Charge Per Capita	**$58.42**

Allocation of Capital Program	
Residential Sector	77.4%
Non-Residential Sector	22.6%
Rates for 2024	
Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX C.4
TABLE 3

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

STORM WATER MANAGEMENT	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	TOTAL
OPENING CASH BALANCE	$1,453.9	$1,359.2	$1,258.7	$1,152.2	$1,039.5	$920.5	$755.0	$580.3	$396.2	$203.2	
2024 - 2033 NON-RESIDENTIAL FUNDING REQUIREMENTS											
- Storm Water Management: Prior Growth	$176.65	$176.7	$176.7	$176.7	$176.7	$114.1	$114.1	$114.1	$114.1	$114.1	**$1,453.9**
- Storm Water Management: Non Inflated	$0.0	$0.0	$0.0	$0.0	$0.0	$97.4	$97.4	$97.4	$97.4	$97.4	**$487.1**
- Storm Water Management: Inflated	$176.7	$180.2	$183.8	$187.5	$191.2	$233.6	$238.3	$243.0	$247.9	$252.8	**$2,134.9**
NON-RESIDENTIAL SPACE GROWTH											
- Growth in Square Metres	33,052	33,562	33,940	34,399	34,909	35,360	35,770	36,319	37,629	38,166	**353,106**
REVENUE											
- DC Receipts: Inflated	$34.9	$36.1	$37.3	$38.5	$39.9	$41.2	$42.5	$44.0	$46.5	$48.2	**$409.2**
INTEREST											
- Interest on Opening Balance	$50.9	$47.6	$44.1	$40.3	$36.4	$32.2	$26.4	$20.3	$13.9	$7.1	**$319.2**
- Interest on In-year Transactions	($3.9)	($4.0)	($4.0)	($4.1)	($4.2)	($5.3)	($5.4)	($5.5)	($5.5)	($5.6)	**($47.5)**
TOTAL REVENUE	$81.9	$79.7	$77.3	$74.8	$72.1	$68.1	$63.6	$58.9	$54.9	$49.6	**$680.9**
CLOSING CASH BALANCE	$1,359.2	$1,258.7	$1,152.2	$1,039.5	$920.5	$755.0	$580.3	$396.2	$203.2	($0.0)	

2024 Adjusted Charge Per Square Metre	**$1.06**

Allocation of Capital Program	
Residential Sector	77.4%
Non-Residential Sector	22.6%
Rates for 2024	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Appendix D

Reserve Fund Balances

Development Charges Reserve Fund Unallocated Balances

The DCA 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 fund the growth-related net capital costs identified in this study. The opening balances of the development charges reserve funds are as of December 31, 2023 since the first capital year of the study is 2024.

As shown on Table 1, the December 31, 2023 total reserve fund balance was in a positive position of $26.42 million. The application of each of the reserve funds is discussed in the appendix section related to each service.

APPENDIX D
TABLE 1
DEVELOPMENT CHARGE RESERVE FUND BALANCES
YEAR ENDING DECEMBER 31, 2023

Service	Reserve Fund Balance as at Dec. 31, 2023
Library Services	$644,457
Fire Protection	$3,481,498
Parks & Recreation	$6,067,085
Services Related To A Highway: Public Works & Fleet	$549,401
General Government	$331,656
Services Related To A Highway: Roads & Related	$7,064,311
Water	$1,591,389
Sanitary Sewer	$260,608
Storm Water Management	$6,426,778
Total Development Charge Reserves	**$26,417,183**

Appendix E

Cost of Growth – All Services

Cost of Growth Analysis – All Services

A. Asset Management Plan

The DCA requires that municipalities complete an Asset Management Plan before passing a development charges by-law. A key function of the Asset Management Plan, as required by the legislation, is to demonstrate that all assets funded under the development charges by-law are financially sustainable over their full life cycle.

Asset Types

A summary of the future municipal-owned assets and estimated useful life assumptions for eligible DC services considered as part of the study are outlined in Table 1 and Table 2. Although all capital assets considered in the study have been identified, not all assets necessitate future replacement or ongoing maintenance activities. The exception and the justification is as follows:

- Some of the works identified may represent one-time expenditures and may be temporary in nature. Therefore, the assets would not be required to be replaced and no ongoing operation and maintenance costs exist. Such assets are identified as "not a long-term asset" in the table.
- Some projects do not relate to the emplacement of a tangible capital asset– some examples include the acquisition of land or the undertaking of development-related studies. These projects/costs do not necessarily require future replacement or ongoing maintenance. Such projects are identified as "not infrastructure" in the table.
- For assets that have been constructed (i.e. recovery of past debenture commitments) it is assumed that the related contribution is already included within the City's annual provision (see below for additional details). As such, these projects are identified as "not applicable" in the table.

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

Table 1 í Summary of Municipal Assets Considered City-wide for General Services

Service	Estimated Useful Life
Library Services	
Buildings	50 years
Building Projects	25 years
Materials, Equipment and Fleet	15 years
Fire Services	
Debentures	N/A
Buildings	50 years
Vehicles and Equipment	15 years
Parks and Recreation	
Debentures	N/A
Vehicles and Equipment	15 years
Improvements	15 years
New Parks & Facilities	15 years
Facility Expansions & Improvements	15 years
Natural Area Conservation	15 years
New Trails	15 years
Parks & Trails	15 years
Buildings	50 years

Service	Estimated Useful Life
Services Related to a Highway: Public Works and Fleet	
Land	N/A
Buildings	50 years
Fleet and Equipment	15 years
Development-Related Studies	
Studies	N/A

Table 2 í Summary of Municipal Assets Considered for Engineered Services

Service	Estimated Useful Life
Services Related to a Highway: Roads and Related	
Roads	50 years
Sidewalks	40 years
Water	
New and Upgraded Watermains	75 years
Studies	N/A
Sanitary Sewer	
Debentures	N/A
Studies	N/A
All Sewer Projects	75 years
Stormwater Management	
Studies	N/A
All Stormwater Projects	75 years

Annual Provision

When assets require rehabilitation or are due for replacement, the source of funds is limited to reserves or contributions from operating. Capital expenditures to carry out the rehabilitation and replacement of aging

infrastructure are not growth-related and are therefore not eligible for funding through development charge revenues or other developer contributions.

Based on the information obtained from City's current Asset Management Plans and City staff regarding useful life assumptions and the capital cost of acquiring and/or emplacing each asset, a provision for infrastructure replacement has been calculated for both the general and engineered services, excluding transit related infrastructure. Provisions for infrastructure replacement are initially calculated for each asset based on their useful life and the anticipated cost of replacement. The aggregate of all individual provisions form the required annual capital provision. In calculating the annual provisions, a number of assumptions are made to account for inflation (2.0 per cent) and interest (3.5 per cent).

Consistent with the requirements of the DCA, assets that are proposed to be funded under the development charges by-law have been included in the analysis. As a result, the total calculated annual provision for development charge related infrastructure has been netted down to consider the replacement of existing infrastructure or benefit-to-existing development. However, for reference, the annual replacement provisions associated with the non-development charge funded costs, including costs related to the benefit-to-existing and post-period benefit have also been calculated.

Table 3 provides the calculated annual asset management contribution for both the gross capital expenditures and the share related to the 2024-2033 DC recoverable portion. The year 2034 has been included to calculate the annual contribution for the 2024-2033 period as the expenditures in 2033 will not trigger asset management contributions until 2034. As shown in Table 3, by 2034, the City will need to fund an additional $5.54 million per annum in order to properly fund the full life cycle costs of the new assets related to the general services supported under the development charges by-law.

Table 3 – Calculated Annual Provision by 2034 for General and Engineered Services

Service	2024 - 2033 Capital Program		Calculated AMP Annual Provision by 2034	
	DC Related	Non-DC Related*	DC Related	Non-DC Related*
Library Services	$6,995,024	$6,680,157	$242,263	$158,699
Fire Protection	$10,700,003	$3,481,498	$191,197	$40,496
Parks & Recreation	$63,094,360	$11,736,959	$3,958,728	$824,834
Services Related To A Highway: Public Works & Fleet	$9,540,964	$63,334,036	$301,751	$1,288,562
Development-Related Studies	$6,516,806	$7,418,194	$0	$0
Services Related To A Highway: Roads & Related	$61,378,941	$24,386,854	$482,391	$196,196
Water	$48,496,935	$55,370,265	$136,099	$157,580
Sanitary Sewer	$87,800,161	$75,363,681	$228,698	$209,653
Storm Water Management	$2,153,250	$22,730,415	$5,366	$64,576
TOTAL	**$296,676,444**	**$270,502,059**	**$5,546,492**	**$2,940,595**

** Includes costs that will be recovered under future development charges studies (i.e. other development-related), ineligible shares and shares of projects funded from available reserve funds.*

Financial Sustainability of the Program

Future Revenue Growth

The calculated annual funding provision should be considered within the context of the City's projected growth. Over the next ten years (to 2033), the City is projected to increase by approximately 8,070 households. In addition, the City will also add nearly 6,370 new employees that will result in approximately 353,100 square metres of additional non-residential building space.

This growth will have the effect of increasing the overall assessment base and additional user fee and charges revenues to offset the capital asset provisions required to replace the infrastructure proposed to be funded under the development charges by-law. The collection of these funds is intended to be allocated to the City's reserves for the future replacement of these assets. This is aligned with the City's current asset management plan practices.

B. Long-Term Capital and Operating Impact Analysis

As shown in Table 4, by 2033, the City's net operating costs are estimated to increase by $6.55 million for property tax supported services. Increases in net operating costs will be experienced as new facilities are opened. Operating and maintenance costs will also increase as additions to the City's road network are made.

Table 5 summarizes the components of the development-related capital forecast that will require funding from non-DC sources. In total, $160.06 million will need to be financed from non-DC sources over the 2024-2033 planning period. In addition, $84.02 million in interim DC financing related to post-period shares of projects may be required or these costs may be recovered from other growth funding tools.

The share of the development-related capital forecast requiring funding from non-DC sources of $160.06 million is related to replacement of existing City facilities with newer and larger facilities that will benefit the existing community. Council is made aware of these factors so that they understand the operating and capital costs that will not be covered by DCs as it adopts the development-related capital forecast set out in the study.

C. The Program is Deemed Financially Sustainable

In summary, the asset management plan and long-term capital and operating analysis included in this appendix demonstrates that the City can afford to invest and operate the identified general and engineered services infrastructure over the 10-year and long-term planning period.

In addition, as part of the annual budget update the City also contributes to asset replacement reserves and spends on yearly asset replacement needs as needed.

Through this annual exercise, staff identify the required funding and propose mitigating measures in order to ensure there are sufficient funds in reserves over the long term. Life-cycle funding methodologies are also reviewed in order to ensure that the City is continuing to implement financially sustainable practices for funding the eventual replacement of assets.

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

APPENDIX E

TABLE 4

CITY OF NIAGARA FALLS

COST OF GROWTH ANALYSIS

ESTIMATED NET OPERATING COST OF THE PROPOSED

2024-2033 DEVELOPMENT-RELATED CAPITAL PROGRAM

(in constant 2024 dollars)

Category	Cost Driver (in $2024)			Additional Operating Costs	Source and Commentary
	$	unit meaure	Quantity	at 2033	
Library Services				**$862,500**	
- Building Expansions	$75	per sq.ft.	11,500	$862,500	Based on 2022 FIR and 2024 Capital Program
		library space			
Fire Protection				**$2,157,250**	
- Building Expansions	$250	per sq.ft.	8,629	$2,157,250	Based on 2022 FIR and 2024 Capital Program
		fire space			
Parks & Recreation				**$1,325,200**	
- Buildings, Land & Furnishings	$20	per $1,000 of total	$ 10,000,000	$200,000	Based on 2022 FIR and 2024 Capital Program
		infrastructure value			
- Park Development and Facilities	$20	per $1,000 of total	$ 56,260,000	$1,125,200	Based on 2022 FIR and 2024 Capital Program
		infrastructure value			
Services Related To A Highway: Public Works & Fleet				**$1,235,969**	
- Buildings, Land and Fleet	$20	per $1,000 of total	$ 61,798.44	$1,235,969	Based on operating assumptions in comparable municipalities and 2024 Capital Program
		infrastructure value			
Development-Related Studies				**$0**	
No additional operating costs	$0	No additional costs	$ -	$0	N/A
Services Related To A Highway: Roads & Related				**$968,280**	
- Development-Related Roads Infrastructure	$120	per household	8,069	$968,280	Based on 2022 FIR and 2024 Capital Program
TOTAL ESTIMATED OPERATING COSTS				**$6,549,199**	

APPENDIX E
TABLE 5

CITY OF NIAGARA FALLS
SUMMARY OF UNADJUSTED RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT CHARGES

	General Services	Development-Related Capital Program (2024 - 2033)				
		Net Municipal Cost ($000)	Replacement & Benefit to Existing ($000)	Available DC Reserves ($000)	Post-Period Benefit* ($000)	Total DC Eligible Costs for Recovery ($000)
1	LIBRARY SERVICES	$13,675.2	$6,035.7	$644.5	$0.0	$6,995.0
2	FIRE PROTECTION	$14,181.5	$0.0	$3,481.5	$0.0	$10,700.0
3	PARKS & RECREATION	$74,831.3	$5,669.9	$6,067.1	$0.0	$63,094.4
4	SERVICES RELATED TO A HIGHWAY: PUBLIC WORKS & FLEET	$72,875.0	$11,076.6	$549.4	$51,708.1	$9,541.0
5	DEVELOPMENT-RELATED STUDIES	$13,935.0	$5,949.0	$331.7	$1,137.5	$6,516.8
TOTAL GENERAL SERVICES		**$189,498.0**	**$28,731.2**	**$11,074.1**	**$52,845.6**	**$96,847.2**

*Development related costs to be considered for funding from other tools and/or future DC Studies.

	Engineered Services	Development-Related Capital Program (2024 - 2033)				
		Net Municipal Cost ($000)	Replacement & Benefit to Existing ($000)	Available DC Reserves ($000)	Post-Period Benefit* ($000)	Total DC Eligible Costs for Recovery ($000)
1	SERVICES RELATED TO A HIGHWAY: ROADS & RELATED	$85,765.8	$15,749.0	$7,064.3	$1,573.6	$61,378.9
2	WATER	$103,867.2	$51,311.1	$1,591.4	$2,467.8	$48,496.9
3	SANITARY SEWER	$163,163.8	$47,965.4	$260.6	$27,137.7	$87,800.2
4	STORM WATER MANAGEMENT	$24,883.7	$16,303.6	$6,426.8	$0.0	$2,153.3
TOTAL ENGINEERED SERVICES		**$377,680.5**	**$131,329.1**	**$15,343.1**	**$31,179.1**	**$199,829.3**

*Development related costs to be considered for funding from other tools and/or future DC Studies.

TOTAL GENERAL AND ENGINEERED SERVICES		**$567,178.5**	**$160,060.2**	**$26,417.2**	**$84,024.6**	**$296,676.4**

Appendix F

Local Service Definitions

Draft

Local Service Definitions

The following guidelines set out in general terms the size and nature of infrastructure projects that are included in the City of Niagara Falls Development Charges Background Study. The following principles apply to the Local Service Definitions:

1. In order to receive Development Charge (hereinafter referred to as "DCs or DC") funding, the project must be listed in the most current City of Niagara Falls Development Charges Background Study.
2. Any infrastructure project that does not add additional capacity over and above the capacity requirement for a development, will be the sole responsibility of the developer.
3. An infrastructure project that provides servicing or capacity for more than one development is not necessarily required to be fully or partially funded from DCs. If a project is considered fully or partially local in nature, the City will require the benefiting land owners to fund the works directly.

The following policy guidelines are general principles by which staff will be guided in considering development application's eligibility for full or partial funding from DCs. Each application will be considered on its own merits having regards to, among other factors:

- the nature, type and location of the development within any existing plan and proposed development in its surrounding area;
- these policy guidelines;
- the location and type of services required and their relationship to the proposed development; and
- the existing and proposed development in the area, and subsection 59(2) of the Development Charges Act, 1997, S.O. 1997, c.27 (hereinafter referred to as the "DCA").

These local service policy guidelines are subject to review and amendment by the City from time to time which may be independent of any amendment or update to the City's DC By-law(s).

The detailed engineering requirements for all work and/or development are governed by the City of Niagara Falls Official Plan, or, if not specified in the said Official Plan, by the City's approved Master Servicing Plans and other similar long-range capital planning documents, or in accordance with the City's Engineering Design Manual and in accordance with the Ministry of Environment, Conservation and Parks Design Criteria for Sanitary Sewers, Storm Sewers and Forcemains for alterations Authorized under an Environmental Compliance Approval.

1. Roads and Related Services

1.1. Roads

All roads internal to a development are a direct developer responsibility under s.59 of the DCA (as a local service).

Improvements to collector/arterial roads external to the development (rural to urbanize or widening) shall be included in the DC calculation.

Improvements to a rural road external to the development to an urban standard local road is a direct developer responsibility under s.59 of the *DCA* (as a local service).Local roads are defined as being two-lane and generally have a 20.0m right-of-way width with curb and gutter and an 8.0m wide asphalt platform.

Road classification are as defined in the City's Engineering Design Manual and Official Plan documents, as amended from time to time, and can be located on the City's website.

1.2. Traffic Signals

Traffic signalization for a development will be included as part of the road costing funded through DCs. Only oversized components are recoverable through DCs. Local service equivalent costs are considered to be a direct developer responsibility under s.59 of the DCA (as a local service).

1.3. Intersection Improvements

Intersection improvements, including but not limited to roundabouts, within specific developments and all works necessary to connect entrances (private and specific development) to the roadway are a direct developer responsibility under s.59 of DCA (as a local service).

Intersections involving City roads and Provincial highways are included in DC calculation to the extent that they are a City responsibility.

Intersection improvements on other roads due to development increasing traffic shall be included in the DC calculation.

1.4. Subdivision/Site Entrances and Related

Entrances and all related costs (including but not limited to signalization, turning lanes, utilities and extensions, etc.), no matter the class of the abutting/effected municipal road, are a direct developer responsibility under s.59 of the DCA (as a local service).

1.5. Streetlights

Streetlights internal to a development are a direct developer responsibility under s.59 of the DCA (as a local service).

Streetlights external to a development but required to extend connectivity to the development are a direct developer responsibility under s.59 of the DCA (as a local service).

1.6. Sidewalks

Sidewalks internal to a development or site are a direct developer responsibility under s.59 of the DCA (as a local service).

Sidewalks external to a development that are required to extend connectivity to the development are a direct developer responsibility under s.59 of the DCA (as a local service).

New sidewalks external to the development that are related to growth shall be included in the DC calculation to the extent permitted under s.5(1) of the DCA.

1.7. Active Transportation Infrastructure

Active transportation infrastructure, including but not limited to trails, bike lanes and pedestrian paths, where requested by the City, internal to a development are a direct developer responsibility under s.59 of the DCA (as a local service).

Active transportation infrastructure external to a development that is required to extend connectivity to the development are a direct developer responsibility under s.59 of the DCA (as a local service).

New active transportation external to the development that are related to growth shall be included in the DC calculation to the extent permitted under s.5(1) of the DCA.

1.8. Noise Abatement Measures

Noise abatement measures internal to a development shall be a direct developer responsibility under s.59 of the DCA (as a local service).

Noise abatement measures external to a development that are required to extend connectivity to, or mitigate impacts from, the development, are a direct developer responsibility unders.59 of the DCA (as a local service).

1.9. Street Tree Planting

Street tree planting, as required in the City's Engineering Design Manual, is a direct responsibility of the developer under s.59 of the DCA (as a local service).

1.10. Land Required by the City for Road Allowances

Lands required by the City for planned road allowances within the development shall be dedicated to the City pursuant to the provisions of the Planning Act, R.S.O. 1990, c.P.13.

Land required by the City for planned road allowances outside of the development not required by the development, and that is not dedicated to the City in accordance with the provisions of the Planning Act, shall be included in the DC calculation to the extent permitted under s.5(1) of the DCA.

Additional land required by the City for bridges or grade separations (beyond normal dedication requirements under the Planning Act) shall be included in the DC calculation to the extent identified and included in the most current DC Background Study.

2. Water Services

2.1. Watermains

Watermains up to 250 mm in size, whether internal or external to a development to service the development are a direct responsibility of the developer under s.59 of the DCA (as a local service), unless a larger size is required to support the development in which case the larger size watermain shall be a direct responsibility of the developer under s.59 of the DCA (as a local service).

Watermains greater than 250 mm in size that are required for growth and not to support the development shall be included in the DC calculation to

the extent permitted under s.5(1) of the DCA. The amount of DC cost contribution for watermains within a development shall be calculated using tendered unit prices and shall be the difference between the cost of the actual pipe diameter and the cost of a 250 mm pipe diameter including a 10% engineering/contract administration and inspection fee. Only watermains and valves will be included in the DC calculation. Any costs related to the depth of pipe are a direct developer responsibility under s.59 of the DCA (as a local service).

An easement required by the City for the construction, maintenance and replacement of a watermain and its appurtenances not granted to the City through the approval process of the development in accordance with the provisions of the Planning Act, shall be included in the DC calculation to the extent permitted under s.5(1) of the DCA. The value of the easement shall be based on an up to date appraisal completed by a professional recognized through an accredited recognition obtained at the developer's cost.

New or replacement watermains external to the development that are required for growth, shall be included in the DC calculation to the extent permitted under s.5(1) of the DCA.

Connections to trunk mains and pumping stations to service the development are a direct developer responsibility under s.59 of the DCA (as a local service).

Watermains of any size that are external to the development and are required to connect the development to an existing watermain of suitable capacity are a direct developer responsibility under s.59 of the DCA (as a local service).

3. Wastewater Services

3.1. Sanitary Sewers

Sanitary sewers up to 250 mm in size, whether internal or external to a development, are considered to be a developer responsibility under s.59 of the DCA (as a local service) unless a larger size is required to support the development in which case the larger size sanitary sewer shall be a direct responsibility of the developer under s.59 of the DCA (as a local service).

Sanitary sewers, whether internal or external to a development, greater than 250 mm in size or located at a depth greater than 4m not required by the development but as a result of the upsizing of the sanitary sewer and/or depth required for growth shall be included in the DC calculation to the extent permitted under s.5(1) of the DCA.

Sanitary sewers larger than 250 mm or located at a depth greater than 4m that will service upstream properties shall be included in the DC calculation based on the tendered unit prices and shall be the difference between the cost of the actual pipe diameter and the cost of a 250 mm pipe and/or the cost greater to install the sanitary sewer below 4m in depth including a 10% engineering/contract administration and inspection fee. All other sanitary sewers and appurtenances with respect to oversizing are a direct developer responsibility under s.59 of the DCA (as a local service).

All sanitary sewer upsizing not included in the most current DC Background Study will be invoiced to upstream development as part of future approval under the Planning Act. Sanitary sewer cost breakdowns will be distributed based on proportioning designed population/hectare.

An easement required by the City for the construction, maintenance and replacement of a sanitary sewer and its appurtenances not granted to the City through the approval process of the development in accordance with the provisions of the Planning Act, shall be included in the DC calculation to the

extent permitted under s.5(1) of the DCA. The value of the easement shall be based on an up to date appraisal completed by a professional recognized through an accredited recognition obtained at the developer's cost.

External sanitary sewers of any size required by the development to connect to an existing collection sewer of suitable capacity are considered to be a direct developer responsibility under s.59 of the DCA (as a local service).

3.2. Pumping Stations

New permanent or expanded sanitary pumping stations required for growth shall be included in the DC calculation to the extent permitted under s.5(1) of the DCA.

All others are deemed temporary and are a direct developer responsibility under s.59 of the DCA (as a local service).

Sanitary sewers of any size required to connect a pumping station or treatment plant to the City's collection network are considered to be DC projects and will be included in the DC calculations.

The detailed engineering requirements of the above items are governed by the approved detailed Engineering Design Manual for the City.

3.3. Stormwater Drainage

Drainage systems internal or external to the development, needed to safely convey flows of the development to a suitable outlet, are a direct developer responsibility under s.59 of the DCA (as a local service).

Drainage system upsizing of storm sewers greater then a 600mm in size and for all storm maintenance hole and appurtenances upsizing greater then 1200mm not required by the development but as a result of the upsizing of the storm sewer to allow for upstream post development collected flows for properties in the drainage area. The upsizing of the drainage system will be included in the DC calculations based on post development accumulated

run-off for properties that fall within the drainage area. All upsizing not included in the most current DC Background Study will be invoiced to upstream development as part of future approval under the Planning Act.

An easement required by the City for the construction, maintenance and replacement of a storm sewer and its appurtenances not granted to the City through the approval process of the development in accordance with the provisions of the Planning Act, shall be included in the DC calculation to the extent permitted under s.5(1) of the DCA. The value of the easement shall be based on an up to date appraisal completed by a professional recognized through an accredited recognition obtained at the developer's cost.

Storm drainage infrastructure deemed to be temporary by the City is a direct developer responsibility under s.59 of the DCA (as a local service).

Installation of private storm drain connections or private storm systems is a direct developer responsibility under s.59 of the DCA (as a local service).

Stormwater facilities required by the development for quality, volume and/or quantity management, including downstream erosion works, inclusive of land and all associated infrastructure, such as storm water facility planting and appurtenances, maintenance access roads/trails and perimeter fencing is a direct developer responsibility under s.59 of the DCA (as a local service).

Upsizing of Stormwater Management Facilities to allow for upstream post development collected flows for properties within the drainage area shall be included in the DC calculations. All upsizing not included in the most current DC Background Study will be invoiced to upstream development as part of future approval under the Planning Act.

Land required by the City for construction, maintenance and replacement shall be paid out based on an up to date appraisal completed by a professional recognized through an accredited recognition.

DC calculations will be based on accumulated run-off for properties that fall within the drainage area and proportioned based on the difference of pre to post development accumulated run-off.

Erosion works, inclusive of all restoration requirements, related to a proposed development is a direct developer responsibility under s.59 of the DCA (as a local service).

Retrofitting of an existing Stormwater Management Facility to accommodate flows required as part of a development is a direct developer responsibility under s.59 of the DCA (as a local service).

4. Parkland Development

For the purpose of parkland development, local service includes the requirement for the developer to undertake the preparation of a conceptual park plan which sets out, among other things, the proposed grading to demonstrate that the proposed park size, configuration and topography will allow for the construction of the park facilities to the satisfaction of the City.

The developer is required to dedicate parkland or provide cash-in-lieu of parkland to the City, consistent with the Planning Act provisions. Dedicated parkland or cash-in-lieu of parkland are a direct developer responsibility under s.59 of the DCA (as a local service) and will not be included in the DC calculation.

In accordance with the City's policy, parkland development costs not determined to be parkland or cash-in-lieu of parkland as noted above, including detailed design and contract administration, finished grading, sodding, park furniture, electrical, water, sanitary sewer, signage, plant material, walkways, play courts, parking lots, sports fields, playground equipment, water play equipment, recreational trails, park shelters, lighting and any other parkland development components shall be included in the DC calculations.

Appendix G

Proposed Draft 2024 DC By-Law

(Available Under Separate Cover)